

***Waltham Housing Authority***  
110 POND STREET  
WALTHAM, MASSACHUSETTS 02451-4505  
TEL: (781) 894-3357; TDD: (781) 894-3357; FAX: (781) 894-7595

JOHN F. GOLLINGER  
Executive Director

May 18, 2021

Community Preservation Commission  
119 School Street #5  
Government Center  
Waltham, MA 02451

RE: Beaverbrook Roof Replacement #315161

WHA was awarded 1.2 million in funding on or about November 2019. This was for roofing projects at Prospect Hill Terrace and The Beaverbrook Development on Grove St. Due to the current pricing of materials, Covid safety precautions and the discovery of hazardous materials, the price of the job at Beaverbrook has significantly increased. The current request would provide the additional funding necessary to meet the unforeseen conditions.

As stated previously, WHA's existing roofing system has reached the end of its expected service life. WHA provides low-income housing to a 60 Elderly/Disabled at this development. Our goal is to keep our housing portfolio sustainable through funding from The Waltham Community Preservation Committee and The Department of Housing and Development.

Thank you in advance for your consideration in this matter.

Sincerely,



Mark A. Johnson  
Assistant Executive Director  
Waltham Housing Authority

# Waltham Housing Authority

## Prospect Hill Terrace

\$36,000.00 Architectural Fees

\$370,000.00 Construction Costs

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**\$406,000.00** Total Project – PHT

## Beaverbrook Project

\$110,551.00 Architectural/Eng Fees  
(Attachments 00-06)

\$1,454,499.78 Construction Costs  
(Attachment 07)

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**\$1,565,050.78** Estimated Project – BB

WHA original award was for \$1,200,000, for both properties. **\$406,000.00** was spent leaving \$794,000.00 for the Beaverbrook project. However, costs have increased much more than expected due to Covid and our shortfall is \$771,050.78. Please see below for calculations.

\$1,565,050.78 - Estimated Project Costs (refer to Attachments 00-07)

\$794,000.00 - Balance of funding from original CPC award of 1,200,000

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**\$771,050.78 Additional Funding Request, please see attached packet for additional documents and estimates.**

**City of Waltham Massachusetts  
Community Preservation Act  
Community Housing  
Funding Application WCPA-2**



**SECTION I APPLICANT/DEVELOPER INFORMATION**

Contact Person/Primary Applicant <sup>(1)</sup> Waltham Housing Authority

Organization, if applicable Same as above

Co-Applicant, if applicable <sup>(1)</sup> None

Owner of project (if not developer/sponsor) <sup>(2)</sup> \_\_\_\_\_

Mailing Address 110 Pond Street

Daytime Phone (Contact Person/Primary Applicant) 781-894-3357 X267

Email address markj@walhouse.org

Fax number 781-894-7595

Developer (if different than applicant) None

Developer mailing address \_\_\_\_\_

Developer daytime phone \_\_\_\_\_

Developer email address \_\_\_\_\_

Developer fax number \_\_\_\_\_

**SECTION II PROJECT INFORMATION**

Project Name 667-2 Beaverbrook Development Grove Street

Address of Project Beaverbrook Apartments

298-324 Grove Street Waltham, MA 02453

Assessor's Parcel ID R 061 024 0002

(see <http://waltham.patriotproperties.com/default.asp> to look up parcel ID by address)

Type of CPA-funded project (check all that apply):

☐ Creation

☒ Preservation

☐ Support

☐ Acquisition

☐ Rehabilitation and Restoration

Brief project description Provide an efficient roofing & gutter system by installing a new EPDM

Roofing System with new Center Drains. WHA's existing roofing system has reached its expected  
service life. WHA provides low income housing to a 60 Elderly/Disabled at this development.

Our goal is to keep our housing portfolio sustainable through funding from DHCD & CPC.

## PROJECT FUNDING

City Funding Sources	\$	Purpose
CDBG/Housing Development		
Community Preservation Fund		
Other Waltham City funds		
<b>Total amount of City funding requested</b>	<b>771,050.78</b>	
<b>Estimated total Development Costs</b>		

## TYPE OF HOUSING (check all that apply and provide Number of units)

Housing Target Class	Housing Target	
Homeownership	<input type="checkbox"/> Single Family	
	<input type="checkbox"/> Condominium	
	<input type="checkbox"/> Cooperative	
	<input checked="" type="checkbox"/> Other <u>Disabled</u>	
Rental	<input type="checkbox"/> Individual/Family	
	<input type="checkbox"/> Group home/congregate	
	<input type="checkbox"/> Other _____	
Targeted Population	<input type="checkbox"/> Individual/Family	
	<input type="checkbox"/> Special needs/Identify needs	
	<input checked="" type="checkbox"/> Elderly	
	<input type="checkbox"/> Homeless	
	<input type="checkbox"/> At risk of homelessness	
	<input type="checkbox"/> Other <u>Total</u>	<b>60</b>

Const. 0 - 0

A/E 660,499.78 +

110,551.00 +

771,050.78 \*

A/E - attach...

00 - 06



**UNITS OF HOUSING**

Unit style	Total # units	# units <= 30% AMI	# units <= 50% AMI	# units <= 80% AMI	# units <= 80-100% AMI	Market Rent(s)	Market Sale Price(s)
SRO	0						
1 BR	60						
2 BR							
3 BR							
4 BR							
Other							

Key: &lt;= is "less than or equal"

**SECTION III SITE INFORMATION**Lot size (ft<sup>2</sup>) \_\_\_\_\_

Zoning district(s) \_\_\_\_\_

Ward 5

Do you have site control (e.g. Purchase and Sales Agreement, option to purchase, deed? Note: Community Preservation Fund applicants are required to submit evidence of site control with the application.)



Yes



No

**ZONING:** If applicable, explain what zoning relief is required (e.g. a zoning variance, special permit) and why.

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**ENVIRONMENTAL:** Please describe any anticipated environmental issues/concerns with the site. If the site contains known environmental hazards, provide a remediation plan.**Please find attached in this packet.**How old is the existing building (or buildings), if applicable? 60 years old

Are there (or will there be) children under the age of seven living on the premises?



Yes



No

**DISLOCATION:** Will the project temporarily or permanently displace or require relocation of existing tenants?

If yes, please describe any outreach efforts and/or notifications to residents to date.

N/A

**HISTORIC:** Is the property listed in the National Register of Historic Places, located in a local historic district, National Register Historic District or eligible for listing in the National Register?

- ☐ Yes; identify district(s): \_\_\_\_\_
- ☒ No

## SECTION IV PROJECT SCHEDULE (AFTER APPROPRIATION OF CPA FUNDS)

Milestone	Date
Inform Ward Councillors and immediate abutters of proposed plans	10/1/2019
Pre-development (design, zoning, permitting)	12/1/2019
Acquisition	
Rehabilitation/construction	07/31/2021
Marketing/outreach	
Expected date of project completion	10/31/2021
Full Occupancy	
Other significant milestone to implementation_____	
Other significant milestone to implementation_____	
Other significant milestone to implementation_____	

## SECTION V FINANCING AND OPERATING BUDGET

**PROJECT BUDGET:** Submit proforma development and operating budgets. Include all anticipated sources and uses of financing for the project. The operating budget must detail operating income and expenses. Detail the hard and soft costs. Identify contingencies. Applicants may use their own format or any of those used by Massachusetts affordable housing lenders and agencies. Refer to the attached Developer's Checklist which lists all the information required for submission.

**CAPITAL NEEDS ASSESMENT:** Community Preservation Funds may not be used for housing-related maintenance costs. All applicants seeking Community Preservation Funds for community housing must submit a capital needs assessment with their application, unless the project is new construction or substantial rehabilitation.

**CITY OF WALTHAM ASSESSORS PROPERTY APPRAISAL AND DATA:** Applicants must provide an "as is" appraisal of the project building(s) that provides satisfactory evidence that the purchase price of the project building(s) does not exceed fair market value. In addition, all applicants for housing funds must summarize data from the Waltham Assessors Department identifying the assessed value of the project building(s) and comparable properties in the neighborhood and/or City.

**PROOF OF FINANCIAL COMMITMENT (INCLUDING COMMITMENTS FOR HOUSING**

**SUBSIDIES):** If the Applicant does not have financing, describe what sources of financing are planned and the time frame that funds are expected to be available, with conditions, deadlines, limitations, and any and all restrictions related to the commitment of non-City sources of funding. If receiving housing subsidies, submit commitment letters or explain when the applicant will seek housing subsidies and from what source(s).

**SECTION VI PROJECT DESCRIPTION**

Attach answers to the following questions. Applications will be returned as incomplete if all requested information is not provided. Include supporting materials as necessary.

**GOALS:** What are the goals of the proposed project?

**COMMUNITY NEED:** Why is this project needed? Does it address needs in existing City plans?

**COMMUNITY SUPPORT:** What is the nature and level of support for this project? Include letters of support and any petitions. Is a neighborhood outreach program planned?

**CREDENTIALS:** In Section IV, some critical steps to completion and success of the project were estimated. How will the experiences of the Applicant(s) contribute to the success of this project?

**SUCCESS FACTORS:** How will the success of this project be measured? Be specific.

**MAINTENANCE:** If ongoing maintenance is required for your project, how will it be funded? (Note that CPA Funds may not be used for maintenance, but maintenance is an important consideration for all projects.)

**ADDITIONAL INFORMATION:** Provide the following additional information, as applicable.

**OTHER CITY AGENCIES:** If actions for acceptance or approval are required from other City Departments, Boards, Commissions, Committees or others, include the reference (s) or proof of the status of their actions. If plans or documents are available from those agencies, provide a reference copy or public location for CPA review.

**COMBINATION COMMUNITY HOUSING/COMMUNITY PRESERVATION PROJECTS:**

If seeking Community Preservation Funds for a project combining community housing with any other Community Preservation categories (historic, open space, recreation), also submit a complete **Historic, Open Space and Recreation Funding Application WCPA-1**. Items which are common to both Forms can be filled by reference to "WCPA-1".

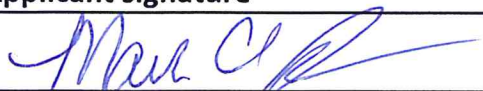
**LEVERAGED ADDITIONAL BENEFITS:** Provide information indicating how this project can be used to achieve additional community benefits.

**Superscripted Notes:**

(1) City Property: If the proposal is located on City-owned land, either the Primary Applicant or Co-Applicant must be the City Board, Commission or Department that has custody of the land.

(2) Appraisals: If the requested funds are for a real estate acquisition, an independent appraisal will be required which the non-City Applicant, if applicable, will be required to fund. No funding decisions will be made without an independent appraisal. Additional appraisals may be required for final approval.

I verify that all information stated in this application is true and accurate.

Applicant signature	Date
	5/25/2021

ASSISTANT EXECUTIVE DIRECTOR  
WALTHAM HOUSING AUTHORITY

**FOR COMMUNITY PRESERVATION COMMITTEE USE ONLY**Application received on 5-25-2021Application received by Julie TooleDate Project presented to CPC for Submission Acceptance Process 5-26-2021

Was Project accepted for Consideration? \_\_\_\_\_

If accepted for Consideration, Project Public Hearing date \_\_\_\_\_

Following meeting Date for decision to recommend for funding \_\_\_\_\_

Was project recommended for funding to the City Council? \_\_\_\_\_

Was project funded by the City Council? \_\_\_\_\_

If project funded by the City Council, for how much? \_\_\_\_\_

Date funding Contract signed with applicant \_\_\_\_\_

**APPLICATION SUBMISSION REQUIREMENTS**

Proposals for Community Preservation Act funding must be submitted using the City of Waltham's Application forms WCPA-1 and WCPA-2.

If the proposal is exclusively a community housing project, applicants must submit WCPA-2. If the proposal combines community housing with any other funding category, both WCPA-2 and the WCPA-1 must be submitted. Otherwise applicants can submit just WCPA-1.

All information requested on the application forms must be included with the proposal at the time of submission or it will not be accepted for consideration. Applications may not include any handwritten information.

Applications and all supporting documentation must be submitted as hardcopy with eleven (11) copies (including one unbound for reproduction) to the official mailing address as specified in Article VI. If an Application is recommended for funding by the CPC, then an additional 17 copies must be provided for use by the City Council.

Applicants are encouraged to include any maps, diagrams, and/or photographs pertaining to the project. Letters of support for the project from community organizations or other sources may also be submitted.

Applicants will also submit an electronic version of each and every document submitted in their application if available, either on CD or USB flash drive, preferably in Portable Document Format (PDF) or other commonly used file formats (eg. .doc, .docx, .xls, .xlsx, .jpeg).

Applicants should include actual quotes for project costs whenever possible. If not available, estimates may be used, provided the basis of the estimate is fully explained.

Applicants should pursue matching or supplemental funds from state, federal and/or private sources when available.

Applicants should detail who will be responsible for project implementation and management. Their relevant experience should be included in the narrative. Please be sure that project management costs have been included in the overall project budget.



**DEVELOPER CHECKLIST**

☒ Submit the information required for **Community Housing Application WCPA-2** and if necessary **Historic, Open Space and Recreation Funding Application WCPA-1**. Applications for CPA funding should be submitted to:

Community Preservation Committee (CPC)  
C/O Community Preservation Act Program Manager  
Waltham City Hall  
610 Main St.  
Waltham MA 02452

Or in person, with an appointment, to the Community Preservation Act Program Manager at 11 Carter St..  
Telephone: 781-314-3117

**REQUIRED FOR ALL HOUSING PROJECTS:**

- ☐ Completed WCPA-2 funding requires: ten (10) bound copies, one (1) unbound copy for reproductions, and one electronic copy (CD or thumb drive not in Read-Only status). J.O.
- ☒ Development pro forma and operating budgets
- ☒ Preliminary site plan locating existing buildings and parking.
- ☒ Letters of community support, if available.
- ☒ Site approval (eligibility) letter if project requires City applicant or co-applicant.
- ☒ Remediation plan approved by the Conservation Commission if site contains known environmental hazards.
- ☐ Appraisal of the property (required for acquisition only).
- ☐ Commitment letter for housing subsidies or explanation when applicant will seek housing subsidies and from what source(s).
- ☐ Plan to cultivate community support.
- ☐ Proof of hazard insurance (required at closing).

**REQUIRED FOR COMMUNITY HOUSING PROJECTS REQUESTING COMMUNITY PRESERVATION FUNDS:**

- ☐ Evidence of site control.
- ☐ Capital needs assessment if applicant is applying for funds to create community housing, unless the project is new construction or substantial rehabilitation.
- ☐ Description of project involving other Community Preservation categories (historic preservation, open space, recreation).

## FUNDING TERMS

### Community Preservation Funds:

- Deferred loans
- Deed restrictions

### Housing Development Funds:

- Deferred loans
- Deed restrictions

### Housing Rehabilitation Funds:

- Direct loans limited to funding construction.
- Grants for lead paint, asbestos, and other hazard remediation; and removal of architectural barriers for the disabled.

## NOTES:

For informational purposes only. Terms are subject to change without notice.

Terms acceptable to the CPC, City Mayor and City Council may vary widely and have not been determined for FY 2007-08 at this time.

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## Work Order/Scope of Services Signature Page

January 13, 2020

**APPROVED WORK ORDER NO. 7141.5091.201908291949**

**DHCD Project # 315161**

**Waltham Housing Authority, 315-667-02**

**Roof Replacement - Mult Roofs - Membrane Roof Replacement - CPA**

### Submission Schedule & Payment Schedule

Milestone	Submittal Due	No. of Meetings	Payment
Schematic Design	5 weeks from the signed planning document	2	\$14,850.00
Construction Docs 100%	5 weeks from last written approval	0	\$20,790.00
Bidding	12 weeks	1	\$2,970.00
Construction	12 weeks	8	\$17,820.00
Close-Out & Warranty	9 months from Substantial Completion	1	\$2,970.00
<b>Designer / Total Designer Fees</b>			<b>\$59,400.00</b>
<b>Estimated Construction Cost</b>			<b>\$792,000.00</b>

- Note: Whole or partial re-submissions are due within 2 weeks of DHCD "Non Approval" memo.
- Note: DHCD requires 2 weeks to review each Design submission.

The Designer shall invoice the LHA according to the above schedule. Upon receipt of the Designer's invoice the LHA shall verify the milestone has been satisfactorily achieved and shall then forward said invoice to DHCD for final approval. The LHA shall pay the Designer upon receipt of DHCD's written approval.

IN WITNESS WHEREOF, the Authority, with the prior approval of the Department, and the Designer have caused this Contract to be executed by their respective authorized officers.

### Work Order Execution

Title	Name	Status	Execution Date
Design Consultant	Franco Garofalo	Document Executed	8/29/2019
House Doctor Administrator	Simone Early	Document Approved	8/30/2019
Waltham Housing Authority	Mark Johnson	Document Executed	12/23/2019
House Doctor Administrator	Simone Early	Document Executed	12/30/2019



April 28, 2020

Attn: Mark Johnson, Assistant Director  
Waltham Housing Authority (WHA)  
110 Pond Street  
Waltham, MA 02451

Via e/mail: [markj@walhouse.org](mailto:markj@walhouse.org)

Project: Waltham Housing Authority – Beaver Brook Apartments 667-2  
DHCD# 315161  
Re: Additional Architectural Services

Dear Mr. Johnson,

Thank you for the opportunity to submit this proposal to provide Architectural services for the above referenced Project.

The scope of work included in this proposal consist of:

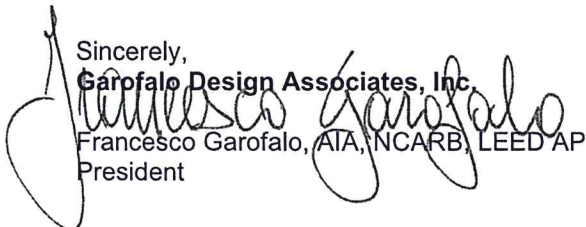
1. Survey and document existing canopies conditions and provide investigative report with recommendations and preliminary cost estimates.
2. Coordinate and schedule additional roof tests for ACM testing.

Listed below is a cost breakdown:

TASK:	EST. HRS	RATE	SUB TOTAL
<b>ROOF CANOPIES:</b>			
Site survey	8	\$ 140.00	\$ 1,120.00
Existing condition drawings	24	\$ 85.00	\$ 2,040.00
Report w/ recommendations	12	\$ 140.00	\$ 1,680.00
Preliminary Cost Estimate	8	\$ 140.00	\$ 1,120.00
<b>ROOF TEST CUTS FOR ACM TESTING:</b>			
Prepare and solicit cost proposals	6	\$ 140.00	\$ 840.00
Site visit for roof test cuts	6	\$ 140.00	\$ 840.00
Review & distribute ACM report	2	\$ 140.00	\$ 280.00
<b>TOTAL ARCH. ESTIMATED COST</b>			<b>\$ 7,920.00</b>

GDA will start working on the additional services upon receipt of a notice to proceed letter from WHA.

Should you have any questions or comments please call me at 781/587-2170.

Sincerely,  
  
Francesco Garofalo, AIA, NCARB, LEED AP  
President

FILE: GDA#19113 DESIGN OUT

July 10, 2020

Attn: Mark Johnson, Assistant Director  
Waltham Housing Authority (WHA)  
110 Pond Street  
Waltham, MA 02451  
[markj@walhouse.org](mailto:markj@walhouse.org)

Project: Waltham Housing Authority – Beaver Brook Apartments 667-2  
DHCD# 315161  
Re: Removal of Roof Canopies & Related Work – A/E Services Proposal

Dear Mr. Johnson,

Thank you for the opportunity to submit this proposal to provide Architectural services for the above referenced Project.

In general, the scope consists of removal of existing roof canopies, steel columns, wood framing, provide new soffits framing, attic vent, restore disturbed brick veneer, restore concrete and asphalt pavement and related work. Remove existing lighting and provide new lighting as per code requirement.

Listed below is a cost breakdown:

TASK:	EST. HRS	RATE	SUB TOTAL
<b>ROOF CANOPIES:</b>			
Site Survey	16	\$ 140.00	\$ 2,240.00
Existing Conditions Drawings	24	\$ 140.00	\$ 3,360.00
100% Construction Documents	80	\$ 140.00	\$ 11,200.00
Construction Administration	30	\$ 140.00	\$ 4,200.00
Sub Total			\$ 21,000.00
<i>Structural Engineering (Allowance)</i>			\$ 2,000.00
<i>Electrical Engineering (Allowance)</i>			\$ 7,500.00
<i>Hazardous Material Testing (Allowance)</i>			\$ 1,500.00
<b>TOTAL A/E ESTIMATED COST</b>			<b>\$ 32,000.00</b>

NOTE: A/E fee above does not include Haz Mat Design and Construction Administration if services is required.

GDA will start working on the additional services upon receipt of a notice to proceed letter from WHA.

Should you have any questions or comments please call me at 781/587-2170.

Sincerely,  
  
Francesco Garofalo, AIA, NCARB, LEED AP  
President

FILE: GDA#19113 DESIGN OUT

03

**PROPOSAL  
FOR  
ASBESTOS CONSULTING SERVICES  
AT THE  
WALTHAM HOUSING, DHCD #315161**

**SCOPE OF SERVICES:**

**TASK I (Asbestos Design and CA Services):**

- A. Prepare Contract Specifications based on the recommendations as accepted by the client.
- B. Prepare addenda, respond to RFIs, and provide any additional information.

**TASK II (Asbestos Construction Monitoring and Air Sampling Services):**

- A. The designer will attend a pre-construction conference prior to start of work. The conference establishes specific scheduling requirements, logistical arrangements, chain of command, and emergency procedures and phone numbers.
- B. The Project Monitor will provide on-site asbestos abatement and observe the contractor's practices and procedures during the removal process.
- C. The Project Monitor will attend meetings during asbestos abatement activities.
- D. The Project Monitor will collect and analyze air samples in accordance with Federal and State regulations as follows:
  - ◆ Background and general area air samples by Phase Contrast Microscopy (PCM) inside the building during abatement activities.
  - ◆ Clearance air samples by PCM as required by Federal and State regulations. PCM samples will be collected and analyzed using the NIOSH method 7400.
- E. Produce a final report including daily logs and sample results.

**PAYMENTS:**

UEC will submit invoices every thirty (30) days based on percentage of work completed. Invoices shall be paid within ten (10) days from client's receipt of payment from the owner, but not later than 90 days. This proposal is subject to UEC Standard Agreement and Payments Terms and Conditions.

**FEES FOR SERVICES:**

**TASK I (Asbestos Design Services):**

Lump Sum Fee of

\$1,100.00

**TASK II (Asbestos Construction Monitoring and Air Sampling Services):**

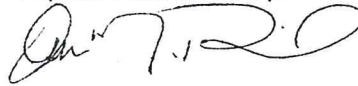
Fees for services will be charged on time charge basis as follows.

Submittals Review	\$ 300.00
Per hour (regular time) x 40 hours/including travel time @ \$43.75 per hour	\$1,750.00
Designer Project Manager (per hour) x 2 Hours @ \$80.00	\$ 160.00
Per PCM Air Sample x 60 Samples @ \$15.00 per sample	\$ 900.00
Report	\$ 300.00

Total Fee based on 5 shifts

\$ 3,410.00

Proposal Authorized By:



\_\_\_\_\_  
Ammar M. Dieb  
President

Proposal Accepted by:

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Mr. Franco Garofalo, Principal  
Garofalo Design Associates, Inc.  
384 Lowell Street, Unit 105 A&B  
Wakefield, MA 01880



February 28, 2020

Mark Johnson  
Assistant Executive Director  
Waltham Housing Authority (WHA)  
110 Pond Street  
Waltham, MA 02451  
Via e/mail: [markj@walhouse.org](mailto:markj@walhouse.org)

Project: Waltham Housing Authority – Beaver Brook Apartments 667-2  
DHCD# 315161  
Re: Roof Test Cuts – BID RESULTS

Dear Mr. Johnson:

Listed below are received bids from roofing Contractors to perform; roofing test cuts as per GDA's RFP (dated 2/13/2020) at the above referenced Project.

**ROOFING CONTRACTOR:**

**Kidd-Luukko Corp.**  
M.D.M. Engineering, Inc.  
One-Way Roofing

**BID AMOUNT:**

**\$3,071.00**

\$3,500.00

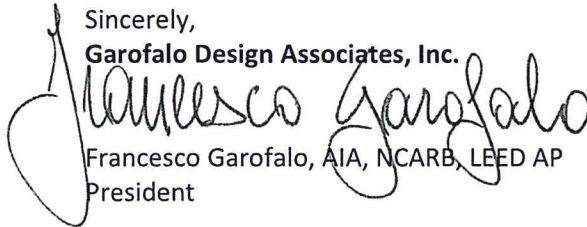
No Response

GDA recommends Kidd-Luukko Corp. bid of \$3,071.00 to the WHA to perform roof test cuts.

Please provide a written approval and directive to schedule roof test cuts with Kidd-Luukko Corp.

Should you have any questions or comments please call me at 781/587-2170.

Sincerely,  
**Garofalo Design Associates, Inc.**

  
Francesco Garofalo, AIA, NCARB, LEED AP  
President

FILE: GDA#19113 DESIGN OUT

May 20, 2020

Mark Johnson  
Assistant Executive Director  
Waltham Housing Authority (WHA)  
110 Pond Street  
Waltham, MA 02451  
Via e/mail: [markj@walhouse.org](mailto:markj@walhouse.org)

Project: Waltham Housing Authority – Beaver Brook Apartments 667-2  
DHCD# 315161  
Re: Roof Test Cuts: TWO – BID RESULTS

Dear Mr. Johnson:

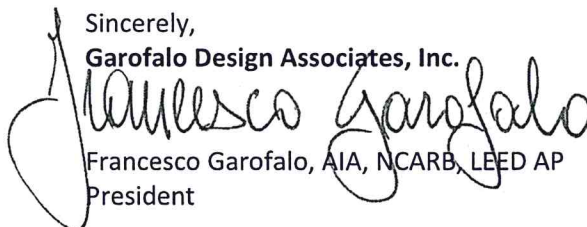
Listed below are received bids from roofing Contractors to perform; roofing test cuts as per GDA's RFP (dated 3/30/2020) at the above referenced Project.

<u>ROOFING CONTRACTOR:</u>	<u>BID AMOUNT:</u>
M.D.M. Engineering, Inc.	\$2,400
One-Way Roofing	No Response
WPI Construction, Inc.	No Response

GDA recommends MDM bid of \$2,400.00 to the WHA to perform roof test cuts.

Please provide a written approval and directive to schedule roof test cuts with MDM Engineering, Inc.

Should you have any questions or comments please call me at 781/587-2170.

Sincerely,  
**Garofalo Design Associates, Inc.**  
  
Francesco Garofalo, AIA, NCARB, LEED AP  
President

FILE: GDA#19113 DESIGN OUT



51 Sawmill Road, Dudley, MA 01571 - MDMENGINC@Yahoo.com - (Phone)-508-949-1616 - (Fax)-508-949-3176

Date: 4/30/20

Attention: Franco Garofalo - Garofalo Design Associates Incorporated

Re: Quote - Waltham Housing Authority – Beaver Brook Apartments 667-2 DHCD# 315161

Scope Of Work:

Perform test cuts/investigate existing roof conditions.

Cost - \$2,400.00

06



April 30, 2020

Mr. Franco Garofalo, Principal  
Garofalo Design Associates, Inc.  
384 Lowell Street, Unit 105 A&B  
Wakefield, MA 01880

Reference: Asbestos Testing Services  
Waltham Housing, DHCD #315161

Dear Mr. Garofalo:

Thank you for the opportunity for Universal Environmental Consultants (UEC) to provide professional services.

We are pleased to submit our proposal for the above referenced project.

Should this proposal meet with your approval, kindly execute and return the enclosed proposal.

Please do not hesitate to call me at (508) 628-5486 if you have questions about this proposal or our services.

Very truly yours,

Universal Environmental Consultants

A handwritten signature in black ink, appearing to read "Ammar M. Dieb", is written over a horizontal line.

Ammar M. Dieb  
President

UEC:\Proposals\IDM\Garofalo-Waltham Housing-Roof-T.DOC

Enclosure



**PROPOSAL  
FOR  
ASBESTOS TESTING SERVICES  
AT THE  
WALTHAM HOUSING, DHCD #315161**

**SCOPE OF SERVICES:**

- A. **Bulk Samples Collection** – Collect bulk samples from suspect roofing, flashing and caulking materials and forward the samples to a Massachusetts licensed laboratory for analysis for asbestos by Polarized Light Microscopy (PLM). It is estimated that a total of forty (40) samples will be collected.
- B. **Prepare Final Report** – Prepare a final report with samples results and recommendations for the recommended actions.

**PAYMENTS:**

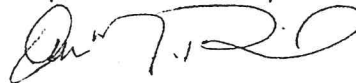
UEC will submit one invoice. Invoices shall be paid within ten (10) days from client's receipt of payment from the owner, but not later than 90 days. This proposal is subject to UEC Standard Agreement and Payments Terms and Conditions.

**FEE FOR SERVICES:**

Lump Sum Fee including all sampling of

\$1,250.00

Proposal Authorized By:



\_\_\_\_\_  
Ammar M. Dieb  
President

Proposal Accepted by:

Signature:

Name:



\_\_\_\_\_  
Mr. Franco Garofalo, Principal  
Garofalo Design Associates, Inc.  
384 Lowell Street, Unit 105 A&B  
Wakefield, MA 01880

07

**PROJECT:**

Waltham H. A.  
 Roofing Replacement @ Beaver Brook  
 DHCD # 315161

1/27/2021

**Garofalo Design Associates, Inc.**

384 Lowell St. Unit 105 AB  
 Wakefield, MA 01880

100% CD COST ESTIMATE			
SUMMARY:		EST. COST	ELECT. FSB
COMMUNITY BUILDING #1		\$ 123,172.17	
BUILDING #2		\$ 67,328.42	
BUILDING #3		\$ 67,328.42	
BUILDING #4		\$ 80,705.27	
BUILDING #5		\$ 67,328.42	
BUILDING #6		\$ 101,338.59	
BUILDING #7		\$ 101,338.59	
BUILDING #8		\$ 29,504.46	
BUILDING #9		\$ 29,504.46	
BUILDING #10		\$ 101,338.59	
BUILDING #11		\$ 101,338.59	
BUILDING #12		\$ 67,328.42	
BUILDING #13		\$ 80,705.27	
BUILDING #14		\$ 67,328.42	
BUILDING #15		\$ 67,328.42	
CANOPIES DEMOLITION & SITE WORK		\$ 152,649.38	
ELECTRICAL (FSB)			\$ 135,394.47
G.C. MARK UP	10%	\$ 148,933.92	
<b>TOTAL ESTIMATED COST</b>		<b>\$ 1,454,499.78</b>	

**PROJECT:**

Waltham Housing Authority  
Roofing Replacement @ Beaver Brook  
DHCD # 315161

Garofalo Design Associates, Inc.

384 Lowell St. Unit 105 AB

Wakefield, MA 01880

COMMUNITY BUILDING #1 & CANOPIES						
DIV.	SCOPE		QTY	UNIT	COST	SUBTOTAL
<b>2</b>	<b>EXISTING CONDITIONS</b>					
	Dumpster and debris disposal		1	LS	\$ 1,500.00	\$ 1,500.00
	Mobilization		1	LS	\$ 1,500.00	\$ 1,500.00
	Aerial Lift		1	LS	\$ 1,500.00	\$ 1,500.00
	<b>Community Bldg.:</b> Remove exist. EPDM roof system to wood deck		3,500	SF	\$ 2.75	\$ 9,625.00
	<b>Canopies:</b> Remove exist. EPDM roof system to wood deck		500	SF	\$ 2.75	\$ 1,375.00
<b>6</b>	<b>WOOD, PLASTICS, COMPOSITES</b>					
	Selective replacement of roof sheathing	2.50%	88	SF	\$ 4.75	\$ 415.63
	Block off roof skylight & related work		1	EA	\$ 850.00	\$ 850.00
<b>7</b>	<b>THERMAL AND MOISTURE PROTECTION</b>					
	<b>COMMUNITY BLDG. ROOFS</b>					
	Provide 60 mil PVC membrane w/; vapor retardant, cover board, crickets, tapered insul., perimeter wd blocking & edge metal		3,500	SF	\$ 14.50	\$ 50,750.00
	<b>CANOPIES ROOF:</b>					
	Provide 60 mil PVC membrane w/; cover board, tapered insul., perimeter wd blocking & edge metal		500	SF	\$ 12.50	\$ 6,250.00
	Community Bldg.: Alum. brake metal w/ wd blocking		365	LF	\$ 25.00	\$ 9,125.00
	Canopies.: Alum. brake metal w/ wd blocking (rake)		210	LF	\$ 25.00	\$ 5,250.00
	Canopies.: Alum. soffit vent		500	SF	\$ 8.50	\$ 4,250.00
<b>9</b>	<b>FINISHES</b>					
	Painting steel columns		9	EA	\$ 85.00	\$ 765.00
<b>22</b>	<b>PLUMBING</b>					
	Removal & replace existing roof drains.		4	EA	\$ 750.00	\$ 3,000.00
	Extension of plumbing vents.		2	EA	\$ 150.00	\$ 300.00
<b>23</b>	<b>MECHANICAL</b>					
	Reinstall exist. vent w/ new zinc coating		1	LS	\$ 150.00	\$ 150.00
<b>26</b>	<b>ELECTRICAL</b>					
	Temporary remove & reinstall lighting		1	LS	\$ -	\$ -
	<b>SUB TOTAL</b>					<b>\$ 96,605.63</b>
	General Conditions	7.5%				\$ 7,245.42
	Overhead & Profit	20%				\$ 19,321.13
	<b>TOTAL COST</b>					<b>\$ 123,172.17</b>

PROJECT:  
Waltham Housing Authority  
Roofing Replacement @ Beaver Brook  
DHCD # 315161

Garofalo Design Associates, Inc.  
384 Lowell St. Unit 105 AB  
Wakefield, MA 01880

BUILDING #2, 3, 5, 12, 14 & 15:						
DIV.	SCOPE		QTY	UNIT	COST	SUBTOTAL
<b>2</b>	<b>EXISTING CONDITIONS</b>					
	Dumpster and debris disposal		1	LS	\$ 500.00	\$ 500.00
	Mobilization		1	LS	\$ 500.00	\$ 500.00
	Aerial Lift		-	LS	\$ 500.00	\$ -
	Remove exist. EPDM & T+G roof systems to exist. wd. deck		2,464	SF	\$ 3.75	\$ 9,240.00
<b>6</b>	<b>WOOD, PLASTICS, COMPOSITES</b>					
	Fascia wd framing (Front Elevation)		77	LF	\$ 6.50	\$ 500.50
	Fascia wd framing (Rear Elevation)		77	LF	\$ 4.50	\$ 346.50
	Selective replacement of roof sheathing	2.50%	62	SF	\$ 4.75	\$ 292.60
<b>7</b>	<b>THERMAL AND MOISTURE PROTECTION ROOFS</b>					
	Provide 60 mil PVC membrane w/; vapor retardant, cover board, wd blocking & edge metal		2,464	SF	\$ 12.50	\$ 30,800.00
	Rain disperser		154	LF	\$ 8.50	\$ 1,309.00
	Roof exhaust vent - 14" diam		4	EA	\$ 275.00	\$ 1,100.00
	Soffit alum vent (24" W)		308	SF	\$ 8.50	\$ 2,618.00
	Alum. brake metal w/ wd blocking (rake)		70	LF	\$ 25.00	\$ 1,750.00
	Alum. brake metal w/ wd blocking (fascia)		154	LF	\$ 25.00	\$ 3,850.00
<b>22</b>	<b>PLUMBING</b>					
	Extension of plumbing vents.		2	EA	\$ -	\$ -
	<b>SUB TOTAL</b>					\$ 52,806.60
	General Conditions	7.5%				\$ 3,960.50
	Overhead & Profit	20%				\$ 10,561.32
	<b>TOTAL COST</b>					\$ 67,328.42
	<b>BLDG.: 2, 3, 5, 12, 14 &amp; 15</b>		<b>6</b>			\$ 403,970.49
	<b>TOTAL COST</b>					\$ 403,970.49

**PROJECT:**  
**Waltham Housing Authority**  
**Roofing Replacement @ Beaver Brook**  
**DHCD # 315161**

**Garofalo Design Associates, Inc.**  
 384 Lowell St. Unit 105 AB  
 Wakefield, MA 01880

<b>BUILDING #4 &amp; 13:</b>						
<b>DIV.</b>	<b>SCOPE</b>		<b>QTY</b>	<b>UNIT</b>	<b>COST</b>	<b>SUBTOTAL</b>
<b>2</b>	<b>EXISTING CONDITIONS</b>					
	Dumpster and debris disposal		1	LS	\$ 500.00	\$ 500.00
	Mobilization		1	LS	\$ 500.00	\$ 500.00
	Aerial Lift		-	LS	\$ 500.00	\$ -
	Remove exist. EPDM & T+G roof systems to exist. wd. deck		3,000	SF	\$ 3.75	\$ 11,250.00
<b>6</b>	<b>WOOD, PLASTICS, COMPOSITES</b>					
	Fascia wd framing (Front Elevation)		91	LF	\$ 6.50	\$ 591.50
	Fascia wd framing (Rear Elevation)		91	LF	\$ 4.50	\$ 409.50
	Selective replacement of roof sheathing	2.50%	75	SF	\$ 4.75	\$ 356.25
	Block off skylight opening		1	EA	\$ 150.00	\$ 150.00
<b>7</b>	<b>THERMAL AND MOISTURE PROTECTION ROOFS</b>					
	Provide 60 mil PVC membrane w/; vapor retardant, cover board, wd blocking & edge metal		3,000	SF	\$ 12.50	\$ 37,500.00
	Rain disperser		182	LF	\$ 8.50	\$ 1,547.00
	Roof exhaust vent - 14" diam		4	EA	\$ 275.00	\$ 1,100.00
	Soffit alum vent (24" W)		364	SF	\$ 8.50	\$ 3,094.00
	Alum. brake metal w/ wd blocking (rake)		70	LF	\$ 25.00	\$ 1,750.00
	Alum. brake metal w/ wd blocking (fascia)		182	LF	\$ 25.00	\$ 4,550.00
<b>22</b>	<b>PLUMBING</b>					
	Extension of plumbing vents.		2	EA	\$ -	\$ -
	<b>SUB TOTAL</b>					\$ 63,298.25
	General Conditions	7.5%				\$ 4,747.37
	Overhead & Profit	20%				\$ 12,659.65
	<b>TOTAL COST</b>					<b>\$ 80,705.27</b>
	<b>BLDG.: 4 &amp; 13</b>		<b>2</b>			<b>\$ 161,410.54</b>
	<b>TOTAL COST</b>					<b>\$ 161,410.54</b>

PROJECT:  
Waltham Housing Authority  
Roofing Replacement @ Beaver Brook  
DHCD # 315161

Garofalo Design Associates, Inc.  
384 Lowell St. Unit 105 AB  
Wakefield, MA 01880

BUILDING #6, 7, 10 & 11						
DIV.	SCOPE		QTY	UNIT	COST	SUBTOTAL
<b>2</b>	<b>EXISTING CONDITIONS</b>					
	Dumpster and debris disposal		1	LS	\$ 500.00	\$ 500.00
	Mobilization		1	LS	\$ 500.00	\$ 500.00
	Aerial Lift		-	LS	\$ 500.00	\$ -
	Remove exist. EPDM & T+G roof systems to exist. wd. deck		3,800	SF	\$ 3.75	\$ 14,250.00
<b>6</b>	<b>WOOD, PLASTICS, COMPOSITES</b>					
	Fascia wd framing (Front Elevation)		115	LF	\$ 6.50	\$ 747.50
	Fascia wd framing (Rear Elevation)		115	LF	\$ 4.50	\$ 517.50
	Selective replacement of roof sheathing	2.50%	95	SF	\$ 4.75	\$ 451.25
<b>7</b>	<b>THERMAL AND MOISTURE PROTECTION</b>					
	<b>ROOFS</b>					
	Provide 60 mil PVC membrane w/; vapor retardant, cover board, crickets, wd blocking & edge metal		3,800	SF	\$ 12.50	\$ 47,500.00
	Rain disperser		230	LF	\$ 8.50	\$ 1,955.00
	Roof exhaust vent - 14" diam		6	EA	\$ 275.00	\$ 1,650.00
	Soffit alum vent (24" W)		460	SF	\$ 8.50	\$ 3,910.00
	Alum. brake metal w/ wd blocking (rake)		70	LF	\$ 25.00	\$ 1,750.00
	Alum. brake metal w/ wd blocking (fascia)		230	LF	\$ 25.00	\$ 5,750.00
<b>22</b>	<b>PLUMBING</b>					
	Extension of plumbing vents.		2	EA	\$ -	\$ -
	<b>SUB TOTAL</b>					\$ 79,481.25
	General Conditions	7.5%				\$ 5,961.09
	Overhead & Profit	20%				\$ 15,896.25
	<b>TOTAL COST</b>					\$ 101,338.59
	<b>BLDG.: 6, 7, 10 &amp; 11</b>		<b>4</b>			\$ 405,354.38
	<b>TOTAL COST</b>					\$ 405,354.38

**PROJECT:**  
**Waltham Housing Authority**  
**Roofing Replacement @ Beaver Brook**  
**DHCD # 315161**

**Garofalo Design Associates, Inc.**  
 384 Lowell St. Unit 105 AB  
 Wakefield, MA 01880

<b>BUILDING #8 &amp; 9</b>						
<b>DIV.</b>	<b>SCOPE</b>		<b>QTY</b>	<b>UNIT</b>	<b>COST</b>	<b>SUBTOTAL</b>
<b>2</b>	<b>EXISTING CONDITIONS</b>					
	Dumpster and debris disposal		1	LS	\$ 500.00	\$ 500.00
	Mobilization		1	LS	\$ 500.00	\$ 500.00
	Aerial Lift		-	LS	\$ 500.00	\$ -
	Remove exist. EPDM & T+G roof systems to exist. wd. deck		1,000	SF	\$ 3.75	\$ 3,750.00
<b>6</b>	<b>WOOD, PLASTICS, COMPOSITES</b>					
	Fascia wd framing (Front Elevation)		31	LF	\$ 6.50	\$ 201.50
	Fascia wd framing (Rear Elevation)		31	LF	\$ 4.50	\$ 139.50
	Selective replacement of roof sheathing	2.50%	25	SF	\$ 4.75	\$ 118.75
<b>7</b>	<b>THERMAL AND MOISTURE PROTECTION</b>					
	<b>ROOFS</b>					
	Provide 60 mil PVC membrane w/; vapor retardant, cover board, wd blocking & edge metal		1,000	SF	\$ 12.50	\$ 12,500.00
	Rain disperser		62	LF	\$ 8.50	\$ 527.00
	Roof exhaust vent - 14" diam		2	EA	\$ 275.00	\$ 550.00
	Soffit alum vent (24" W)		124	SF	\$ 8.50	\$ 1,054.00
	Alum. brake metal w/ wd blocking (rake)		70	LF	\$ 25.00	\$ 1,750.00
	Alum. brake metal w/ wd blocking (fascia)		62	LF	\$ 25.00	\$ 1,550.00
<b>22</b>	<b>PLUMBING</b>					
	Extension of plumbing vents.		2	EA	\$ -	\$ -
	<b>SUB TOTAL</b>					\$ 23,140.75
	General Conditions	7.5%				\$ 1,735.56
	Overhead & Profit	20%				\$ 4,628.15
	<b>TOTAL COST</b>					\$ 29,504.46
	<b>BLDG.: 8 &amp; 9</b>		<b>2</b>			\$ 59,008.91
	<b>TOTAL COST</b>					\$ 59,008.91



**PROJECT:**  
**Waltham Housing Authority**  
**Roofing Replacement @ Beaver Brook**  
**DHCD # 315161**

**Garofalo Design Associates, Inc.**  
 384 Lowell St. Unit 105 AB  
 Wakefield, MA 01880

<b>CANOPIES DEMOLITION &amp; RELATED WORK</b>						
<b>DIV.</b>	<b>SCOPE</b>		<b>QTY</b>	<b>UNIT</b>	<b>COST</b>	<b>SUBTOTAL</b>
<b>2</b>	<b>EXISTING CONDITIONS</b>					
	Dumpster and debris disposal		1	LS	\$ 5,000.00	\$ 5,000.00
	Mobilization		1	LS	\$ 1,500.00	\$ 1,500.00
	Aerial Lift		-	LS	\$ 500.00	\$ -
	Basement concrete cores		1	LS	\$ 1,000.00	\$ 1,000.00
	Tectum Ceiling Panels Abatement (ACM)		2,700	SF	\$ 4.50	\$ 12,150.00
	Sealant Abatement (ACM)		200	LF	\$ 9.75	\$ 1,950.00
	Selective demolition of roof canopies & overhangs		4,000	SF	\$ 7.75	\$ 31,000.00
<b>3</b>	<b>CONCRETE</b>					
	Concrete light posts piers		39	EA	\$ 525.00	\$ 20,475.00
<b>31</b>	<b>EARTHWORK</b>					
	Trenching / excavation		1,800	LF	\$ 12.50	\$ 22,500.00
	Trench backfill		1,800	LF	\$ 6.75	\$ 12,150.00
	Lawn restoration		1	LS	\$ 6,500.00	\$ 6,500.00
	Asphalt pavement restoration		1	LS	\$ 5,500.00	\$ 5,500.00
	<b>SUB TOTAL</b>					\$ 119,725.00
	General Conditions	7.5%				\$ 8,979.38
	Overhead & Profit	20%				\$ 23,945.00
	<b>TOTAL COST</b>					<b>\$ 152,649.38</b>



**PROJECT:**  
**Waltham Housing Authority**  
**Roofing Replacement @ Beaver Brook**  
**DHCD # 315161**

**Garofalo Design Associates, Inc.**  
 384 Lowell St. Unit 105 AB  
 Wakefield, MA 01880

ELECTRICAL EXTERIOR LIGHTING						
DIV.	SCOPE		QTY	UNIT	COST	SUBTOTAL
<b>2</b>	<b>EXISTING CONDITIONS</b>					
	Dumpster and debris disposal		1	LS	\$ 500.00	\$ 500.00
	Mobilization		1	LS	\$ 1,500.00	\$ 1,500.00
	Aerial Lift		-	LS	\$ 500.00	\$ -
<b>26</b>	<b>ELECTRICAL</b>					
	Wire, copper, solid, 600 volt, type XHHW, normal installation conditions in wireway, conduit, cable tray		48	LS	\$ 125.32	\$ 6,015.36
	PVC conduit, schedule 40, 1" diameter, to 10' H incl terminations, fittings & supports		1,800	LF	\$ 9.31	\$ 16,758.00
	Panelboards, 1 phase 3 wire, mai lugs, 120/240 V, 100 amp, 14 circuits, NQOD, incl 20 A pole bolt-on brakers		2	EA	\$ 2,254.75	\$ 4,509.50
	Time switches, astonomic dial		4	EA	\$ 552.22	\$ 2,208.88
	Pole Mounted Luminaries		39	EA	\$ 1,800.00	\$ 70,200.00
	Replace existing lighth fixtures w/ new wiring at Canopies		6	EA	\$ 750.00	\$ 4,500.00
	Temporary remove and reinstall exist. light fixtures & conduits at Community Bldg.		1	LS	\$ 2,500.00	\$ 2,500.00
	<b>SUB TOTAL</b>					\$ 106,191.74
	General Conditions	7.5%				\$ 7,964.38
	Overhead & Profit	20%				\$ 21,238.35
	<b>TOTAL COST</b>					<b>\$ 135,394.47</b>

SECTION 02 28 20  
ASBESTOS REMEDIATION

R-  
Part  
A.

PART I - GENERAL

1.01 GENERAL PROVISIONS

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

1.02 RELATED WORK UNDER OTHER SECTIONS

- A. Environmental Procedures.

1.03 DESCRIPTION OF WORK:

- A. The work includes the removal and disposal of asbestos containing materials (ACM) as indicated in Part 3 of this Section.
- B. The General Contractor shall retain the services of a Massachusetts licensed asbestos abatement contractor. The asbestos contractor must include in his scope of work all required services included in Part 3.

1.04 POTENTIAL ASBESTOS HAZARD & DEBRIS

- A. 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 ACM, take appropriate continuous measures as necessary to protect all building occupants from the potential hazard of exposure to airborne asbestos. Such measures shall include the procedures and methods described herein, and compliance with regulations of applicable federal, state, and local agencies.
- B. If the Contractor failed to comply with the requirements of the specifications, the Owner's Representative (Asbestos Project Monitor) may present a written stop of work order. The Contractor must immediately and automatically stop all work until authorized in writing by the Asbestos Project Monitor to commence work. All costs related to delays shall be at the Contractor's expense.

1.05 DEFINITIONS

- A. Abatement: Procedures to control fiber release from ACM. Includes encapsulation, enclosure, and removal.
- B. Air Monitoring: The process of measuring the fiber content of a specific volume of air in a stated period of time.
- C. Area Monitoring: Sampling of asbestos fiber concentrations within the asbestos control area and outside the asbestos control area, which is representative of the airborne concentrations of asbestos fibers, which may reach the breathing zone.
- D. Asbestos: The name given to a number of naturally occurring hydrated mineral silicates that possess a unique crystalline structure are incombustible and are separable into fibers. Asbestos includes Chrysotile, Crocidolite, Amosite, Anthophyllite, and Actinolite.

- E. ACM: Any material containing more than 1% or greater by weight of asbestos of any type or mixture of types. State laws may vary in their definition of asbestos containing material.
- F. Barrier: Any surface that seals off the work area to inhibit the movement of fibers.
- G. Critical Barrier: A solid, asbestos impermeable partition erected so as to constitute a work area closure; the outer perimeter of an asbestos work area, usually erected across corridors or other open spaces to complete containment.
- H. Designer: Commonwealth of Massachusetts licensed Designer Ammar Dieb, Universal Environmental Consultants (AD-900326).
- I. Enclosure: All herein specified procedures necessary to complete enclosure of all ACM behind airtight, impermeable, permanent barriers.
- J. Friable Asbestos Material: Material that contains more than one percent asbestos by weight and that can be crumbled, pulverized, or reduced to powder by hand pressure when dry.
- K. HEPA Filter: A High Efficiency Particulate Absolute (HEPA) filter capable of trapping and retaining 99.97% of asbestos fibers greater than 0.3 microns in length.
- L. Asbestos Project Monitor: An Asbestos Project Monitor certified in the Commonwealth of Massachusetts to perform monitoring.
- M. Removal: All herein specified procedures necessary to strip all ACM from the designated areas and to dispose of these materials at an acceptable site.
- N. Respirator: A device designed to protect the wearer from the inhalation of harmful atmospheres.
- O. Visible Emissions: Any emissions containing particulate asbestos material that are visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.
- P. Wet Cleaning: The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning tools which have been dampened with water, and by afterwards disposing of these cleaning tools as asbestos contaminated waste.
- Q. Work Area: Any area indicated on the Drawings as asbestos abatement areas or as areas containing friable asbestos material.
- R. Worker Decontamination Enclosure System: A decontamination enclosure system for workers, typically consisting of a clean room, a shower room, and an equipment room.

#### 1.06 STOP WORK

- A. 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.
- B. Keep driveways, parking, and entrances serving premises clear and available to Owner, Owner's employees, traffic, upon Owner occupancy, and emergency vehicles at all times. Do not use these areas for parking or storage of materials, unless authorized in writing by the Owner

- C. Smoking or open fires will not be permitted within the building enclosure or on the premises

#### 1.07 CONTRACTOR'S USE OF THE EXISTING BUILDING

- A. Keep existing driveways and entrances serving the premises clear and available to the Owner and his employees at all times. Do not use these areas for parking or storage of materials, unless authorized in writing by the Owner.
- B. Smoking or open fires will not be permitted within the building enclosure or on the premises.

#### 1.08 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

- A. Provide a full time Site Supervisor for work under this Section with all appropriate state licenses, who is experienced in administration and supervision of asbestos abatement projects including work practices, protective measures for building and personnel and disposal procedures. This person is the Competent Person in accordance with 29 CFR 1926 for the Contractor and is the Contractor's representative responsible for compliance with all applicable federal, state, and local regulations, particularly those relating to ACM. This person shall have completed a course at an EPA Training Center or equivalent certificate course in asbestos abatement procedures, have had a minimum of two years on the job training and meet all additional requirements set forth in 29 CFR 1926 for a Competent Person.
- B. The Site Supervisor must be certified by the State of Massachusetts. Asbestos Contractor shall provide proof of such certification to the Asbestos Project Monitor not less than 10 days prior to commencing any work.

#### 1.09 SPECIAL REPORTS

- A. Except as otherwise indicated, submit special reports directly to the Asbestos Project Monitor within one day of occurrence requiring special report, with copies to all others affected by the occurrence.
- B. When an event of unusual and significant nature occurs at the site (examples: failure of negative pressure system, rupture of temporary enclosures, unauthorized entry into work areas), prepare and submit a special report listing date and time of event, chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. When such events are known or predictable in advance, advise the Asbestos Project Monitor in advance at earliest possible date.
- C. Prepare and submit special reports of significant accidents, at the site and anywhere else work is in progress related to this project. Record and document data and actions; comply with industry standards. For this purpose, a significant accident is defined to include events where personal injury is sustained, or property loss of substance is sustained, or where the event posed a significant threat of loss or personal injury.

#### 1.10 CONTINGENCY PLAN

- A. Prepare a contingency plan for emergencies including fire, accident, power failure or any other event that may require modification of decontamination or work area isolation procedures. Include in the plan specific procedures for decontamination or work area isolation. A copy of the plan shall be submitted to and approved by the Asbestos Project Monitor prior to any work being done.

- B. Post in the clean room of the decontamination unit and in the Contractor's office trailer telephone numbers and locations of emergency services including but not limited to fire, ambulance, doctor, hospital, and police.

#### 1.11 PERMITS AND NOTIFICATIONS

- A. Secure necessary permits in conjunction with asbestos removal, hauling, and disposition and provide timely notification as may be required by federal, state, regional, and local authorities. Notify the Department of Environmental Protection (DEP) and the Massachusetts Department of Labor Standards (DLS) and provide copies of the notification to the Designer, Asbestos Project Monitor, and the State Environmental Regulatory Agency 10 working days (Document Submission Date) prior to commencement of the work.
- B. No later than the Document Submission Date, notify the local fire, police, and Health Departments, in writing, of proposed asbestos abatement work. Advise the fire department of the nature of the asbestos abatement work, and the necessity that all firefighting personnel who may enter the work site in the case of fire wear self-contained breathing apparatus. Provide one copy of the notices to the Asbestos Project Monitor prior to commencing the work.
- C. No later than the Document Submission Date, submit proof satisfactory to the Asbestos Project Monitor that all required permits, site location, and arrangements for transport and disposal of asbestos containing or contaminated materials, supplies, and the like have been obtained.

#### 1.12 SAFETY COMPLIANCE

- A. Comply with laws, ordinances, rules, and regulations of federal, state, regional, and local authorities regarding handling, storing, transporting, and disposing of asbestos waste materials.
- B. Comply with the applicable requirements of the current issue of 29CFR 1926.1101 and 40CFR 61, Subparts A and B. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting the work.

#### 1.13 RESPIRATOR PROGRAM

- A. Establish a respirator program by ANSI Z88.2 and 29 CFR 1926.1101 (h), 1926.103, and 1910.134.

#### 1.14 PERSONNEL PROTECTION

- A. Prior to commencement of work, workers shall be instructed in and shall be knowledgeable of the hazards of asbestos exposure; use and fitting of respirators; use of showers; entry and exit from work areas, and all aspects of work procedures and protective measures.
- B. All asbestos abatement workers shall receive training and shall be accredited per 40 CFR 763.90(g). Training and accreditation shall be in accordance with 40 CFR 763, Appendix C to Subpart E. Training shall also be provided to meet the requirements of OSHA Regulations contained in 29 CFR 1926.

- C. Prior to the start of work, the Asbestos Contractor shall provide medical examinations for all employees in accordance with 29CFR 1926.1101 (m). All employees hired by the Asbestos Contractor after start of work shall have medical examinations in accordance with this paragraph before being put to work.
- D. Maintain complete and accurate records of employee's medical examinations, during employment and make records of the required medical examinations available for inspection and copying to: The Assistant Secretary of OSHA, the Director of The National Institute for Occupation Safety and Health (NIOSH), authorized representatives of either of them, and an employee's physician upon the request of the employee or former employee.
- E. Provide personnel exposed to airborne concentrations of asbestos fibers with fire retardant disposable protective whole-body clothing, head coverings, gloves, and foot coverings. Provide gloves to protect hands. Make sleeves secure at the wrists and make foot coverings secure at the ankles by the use of tape. Asbestos Contractor shall require and monitor the use of complete protective clothing. A competent person designated by the Asbestos Contractor in accordance with 29CFR 1926.1101 shall periodically examine protective clothing worn by employees in the work area for rips or tears. When rips or tears are detected, they shall be immediately mended or replaced.
- F. Provide goggles to personnel engaged in asbestos operations when the use of a full-face respirator is not required.
- G. Provide authorized visitors with suitable protective clothing, headgear, eye protection and footwear, whenever they are required to enter the work area, to a maximum of 3 changes for 3 visitors per day. One of the sets of protective clothing shall be available for full time use by the Asbestos Project Monitor.
- H. Provide all persons with personally issued and marked respiratory equipment approved by NIOSH and OSHA. The appropriate respiratory protection shall be selected according to the most recent Massachusetts regulations.
- I. Once all visible asbestos material has been removed during decontamination, cartridge type respirators will be allowed during the final cleanup provided the measured airborne concentrations do not exceed 0.1 fibers per cubic centimeter. Where respirators with disposable filters are employed, provide sufficient filters for replacement to the worker or applicable regulation.
- J. If the permissible respirators fail to provide sufficient protection against volatiles Organic Compounds, emitted by any sealant used, the services of a qualified Certified Industrial Hygienist will be procured, at the Asbestos Contractor's expense, to determine proper respiratory protection. The Owner and Asbestos Project Monitor will not be liable for the cost of increased respiratory protection.
- K. Select respirators from those approved by the Mine Safety and Health Administration (MSHA), Department of Labor, or the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services. All personnel wearing negative pressure respirators shall have respirator fit tests within the last six months and signed statements shall be available.

#### 1.15 REFERENCE STANDARDS

- A. Unless otherwise indicated, all referenced standards shall be the latest edition available at the time of bidding. Requirements of this Section shall in no way invalidate the minimum requirements of the referenced standards. Comply with the provisions of the following codes and standards, except as otherwise shown or specified. Where conflict among requirements or with this Section exists, the more stringent requirements shall apply.
- B. U.S. Department of Labor, Occupational Safety and Health Administration, (OSHA) requirements, which govern asbestos abatement work or hauling and disposal of asbestos waste materials.
- C. U.S. Environmental Protection Agency (EPA) requirements, which govern asbestos abatement work or hauling and disposal of asbestos waste materials.
- D. U.S. Department of Environmental Protection (DEP) and the Massachusetts Department of Labor Standards (DLS).

#### 1.16 SUBMITTALS

- A. No work may commence until submittals have been approved by the Designer. Complete submittals are to be submitted no less 10-working days prior to desired commencement of the work. The submittals shall include the following:
  - 1. Submit all licenses and certification required.
  - 2. Submit written evidence that the landfill to be used for disposal of asbestos is approved for disposal of asbestos by the EPA.
  - 3. Submit all required items previously listed in this section.
  - 4. Secure necessary permits in conjunction with asbestos removal, hauling, and disposition and provide timely notification as may be required by federal, state, regional, and local authorities. Notify the Department of Environmental Protection (DEP) and the Massachusetts Department of Labor Standards (DLS) and provide copies of the notification.
  - 5. Notify the local fire, police, and Health Departments, in writing, of proposed asbestos abatement work. Advise the fire department of the nature of the asbestos abatement work, and the necessity that all firefighting personnel who may enter the work site in the case of fire wear self-contained breathing apparatus. Provide one copy of the notices.
  - 6. Submit proof that all required permits, site location, and arrangements for transport and disposal of asbestos containing or contaminated materials, supplies, and the like have been obtained.
  - 7. The Contractor shall submit a plan for managing the waste including all collection, storage, disposal, and decontamination practices/waste disposal.
  - 8. Submit medical examinations for all employees in accordance with 29CFR 1926.1101 (m). All employees hired by the Asbestos Contractor after start of work shall have medical examinations in accordance with this paragraph before being put to work.
  - 9. Provide MSDS for all used products on this Project.
  - 10. Submit the negative pressure system. Include in the submittal at a minimum:
    - a. Number of negative air machines required and the calculations necessary to determine the number of machines.
    - b. Description of projected airflow within the work area and methods required providing adequate airflow in all portions of the work area.
    - c. Location of machines in the work area.
    - d. Location of pressure differential measurement equipment.
    - e. Manufacturers product data on equipment used to monitor pressure differential.



11. Submit the form of security and safety log, which will be maintained on the project.
12. Submit written evidence that the landfill to be used for disposal of asbestos is approved for disposal of asbestos by the Department of Environmental Protection.
13. Submit proof that training requirements as specified in 29CFR 1926.1101 (k) (3) and by appropriate state agencies has been complied with.
14. Submit a description of the plans for construction of decontamination enclosure systems and for isolation of the work areas in compliance with this specification and all applicable regulations.
15. Submit a detailed schedule including work dates, work shift time, number of employees, dates of start and completion of all work activities (including mobilization, work area preparation, asbestos abatement, inspection and clearance monitoring, each phase of refinishing, and final inspections). Schedule shall be updated with each partial payment request.

#### 1.17 REPORTING

- A. Maintain on site a daily log documenting the dates and time of the following items, as well as other significant events:
  1. Minutes of meetings: purpose, attendees, and brief discussion
  2. Visitations: authorized and unauthorized
  3. Personnel: by name, entering and leaving the work area
  4. Special or unusual events
  5. Personnel air monitoring tests and results
- B. Documentation with confirmation signature of the Asbestos Project Monitor of the following:
  1. Inspection of work area preparation prior to start of removal and daily thereafter.
  2. Removal of any polyethylene barriers.
  3. Removal of waste materials from work area and transport and disposal at approved site.
  4. Decontamination of equipment.
  5. Waste Shipment Records. No final payment will be approved until all above documents have been submitted.
- C. Provide two bound copies of this log to the Asbestos Project Monitor with the application for final payment.

#### 1.18 AIR MONITORING

- A. Throughout the entire removal and cleaning operations, air monitoring will be conducted to ensure that the Asbestos Contractor is complying with the EPA and OSHA regulations and any applicable state and local government regulations. The Owner will provide an Asbestos Project Monitor (Universal Environmental Consultants) to take air samples at the job site at no cost to the Asbestos Contractor.
- B. The purpose of the Asbestos Project Monitor's air monitoring will be to detect faults in the work area isolation such as:
  1. Contamination of the building outside of the work area with airborne asbestos fibers,
  2. Failure of filtration or rupture in the negative pressure system,
  3. Contamination of the exterior of the building with airborne asbestos fibers.
  4. Should any of the above occur, the Asbestos Contractor should immediately cease asbestos abatement activities until the fault is corrected. Work shall not recommence until authorized by the Asbestos Project Monitor.



- C. The Asbestos Project Monitor will monitor airborne fiber counts in the work area. The purpose of this air monitoring will be to detect airborne fiber counts higher than the Action Level of 0.10- f/cc which may significantly challenge the ability of the work area isolation procedures to protect the balance of the building from contamination by airborne fibers.
- D. The Asbestos Contractor shall be responsible for providing his/her own personnel monitoring within the work area in accordance with CFR 1926.1101.

#### 1.19 AIRBORNE FIBER COUNTS

- A. If any air sample taken outside of the work area exceeds the base line (background) conducted by the Asbestos Project Monitor, Immediately and automatically stop all work. If this air sample was taken inside the building and outside of critical barriers around the work area, immediately erect new critical barriers to isolate the affected area from the balance of the building.
  - 1. Respiratory protection shall be worn in affected area.
  - 2. Leave critical barriers in place until completion of work and ensure that the operation of the negative pressure system in the work area results in a flow of air from the balance of the building into the affected area.
  - 3. A final inspection after removal of poly shall be completed by the Asbestos Contractor's Supervisor and the Asbestos Project Monitor.
- B. The following procedure shall be used to resolve any disputes regarding fiber types when work has been stopped due to excessive airborne fiber counts. "Airborne Fibers" referred to above include all fibers regardless of composition as counted in the NIOSH 7400 Procedure. If work has stopped due to high airborne fiber counts, air samples will be secured in the same area by the Asbestos Project Monitor for analysis by Transmission Electron microscopy (TEM). Airborne Fibers counted in samples analyzed by TEM shall be only asbestos fibers, but of any diameter and length. Subsequent to analysis by TEM the number of "Airborne Fibers" shall be determined by multiplying the number of fibers, regardless of composition, counted by the NIOSH 7400 procedure by a number equal to asbestos fibers counted divided by all fibers counted in the TEM analysis.
- C. If TEM is used to arrive at the basis for determining "Airborne Fiber" counts in accordance with the above paragraph, and if the average of airborne asbestos fibers in all samples taken outside the work area exceeds the base line, then the cost of such sampling and analysis will be born by the Asbestos Contractor.

### PART 2 - PRODUCTS

#### 2.01 MATERIALS

- A. Plastic Sheet: 6 mil minimum thickness, unless otherwise specified, in sizes to minimize the frequency of joints.
- B. Tape: Capable of sealing joints of adjacent sheets of plastic and for attachment of plastic sheet to finished or unfinished surfaces of dissimilar materials and capable of adhering under dry and wet conditions, including use of amended water. Provide tape, which minimizes damage to surface finishes.
- C. Cleaning Materials: Use materials recommended by manufacturer of surface to be cleaned. Use cleaning materials only on surfaces recommended by the cleaning material manufacturer.

## 2.02 EQUIPMENT

- A. Supply the required number of asbestos air filtration units to the site in accordance with these specifications.

## 2.03 DANGER SIGNS AND LABELS

- A. Display danger signs at each location where airborne concentrations of asbestos fibers may be in excess of 0.010 fibers/cc. Post signs at such a distance from such a location so that an employee may read the signs and take necessary protective steps before entering the area marked by the signs.
- B. The sign shall also contain a pictorial representation of possible danger or hazard, such as a skull and cross bone, or other suitable warning as approved by the Asbestos Project Monitor. Sign shall meet the requirements of 29CFR 1926.200. A sample of the signs to be used shall be submitted to the Asbestos Project Monitor for approval prior to beginning work area preparation.
- C. Affix danger labels to all raw materials, mixtures, scrap, waste, debris, and other products containing asbestos fibers, or to their containers.

## 2.04 PERSONNEL DECONTAMINATION UNIT

- A. Prior to any asbestos abatement work, including placement of plastic on walls that will contact or disturb asbestos containing surfaces, or removal of light fixtures or any items on asbestos containing surfaces, construct a Personnel Decontamination Unit consisting of a serial arrangement of connected rooms or spaces, Changing Room, Shower Room, and Equipment Room. Require all persons without exception to pass through this decontamination unit for entry into and exiting from the work area for any purpose.
- B. Build suitable framing or use existing rooms, with the Asbestos Project Monitor written approval, connected with framed in tunnels if necessary; line with 6 mil plastic; seal with tape at all lap joints in the plastic for all enclosures and decontamination enclosure system rooms. Decontamination units and access tunnels constructed outside shall be constructed with tops made of 5/8" plywood or approved equal. In all cases, access between contaminated and uncontaminated rooms or areas shall be through an airlock. In all cases, access between any two rooms within the decontamination enclosure systems shall be through a curtained doorway.
- C. Provide a changing (clean) room for the purpose of changing into protective clothing. Construct using polyethylene sheeting, at least 6-mil in thickness, to provide an airtight seal between the Clean Room and the rest of the building. Locate so that access to work area from Clean Room is through Shower Room. Separate Clean Room from the building by a sheet polyethylene flapped doorway.
- D. Require workers to remove all street clothes in this room, dress in clean disposable coveralls, and don respiratory protection equipment. Do not allow asbestos contaminated items to enter this room. Require workers to enter this room either from outside the structure dressed in street clothes, or naked from the showers.
- E. An existing room may be utilized as the changing room if it is suitably located and of a configuration whereby workmen may enter the Clean Room directly from the Shower Room. Protect all surfaces of room with sheet plastic. Authorization for this shall be obtained from the Asbestos Project Monitor in writing prior to start of construction.

1. Maintain floor of changing room dry and clean at all times. Do not allow overflow water from shower to wet floor in Changing Room.
  2. Damp wipe all surfaces twice after each shift change with a disinfectant solution.
  3. Provide a continuously adequate supply of disposable bath towels.
  4. Provide posted information for all emergency phone numbers and procedures.
  5. Provide one storage locker per employee.
  6. Provide all other components indicated in the Asbestos Remediation.
- F. Provide a completely watertight operational shower to be used for transit by cleanly dressed workers heading for the work area from the changing room, or for showering by workers headed out of the Work Area after undressing in the Equipment Room.
- G. Construct room by providing a shower pan and 2 shower walls in a configuration that will cause water running down walls to drip into pan. Install a freely draining wooden floor in shower pan at elevation of top of pan.
1. Separate this room from the rest of the building with airtight walls fabricated of 6-mil polyethylene.
  2. Separate this room from the Clean and Equipment Rooms with airtight walls fabricated of 6-mil polyethylene.
  3. Provide showerhead and controls.
  4. Provide temporary extensions of existing hot and cold water and drainage, as necessary for a complete and operable shower.
  5. Provide a soap dish and a continuously adequate supply of soap and maintain in sanitary condition.
  6. Arrange so that water from showering does not splash into the Clean or Equipment Rooms.
  7. Arrange water shut off and drain pump operation controls so that a single individual can shower without assistance from either inside or outside of the work area.
  8. Provide flexible hose shower head.
  9. Pump wastewater to drain and provide 20 micron and 5-micron wastewater filters in line to drain or wastewater storage. Locate filter hose inside shower unit so that water lost during filter changes is caught by shower pan and pumped to exterior filtering system.
- H. Provide equipment room for contaminated area; work equipment, footwear and additional contaminated work clothing are to be left here. This is a change and transit area for workers. Separate this room from the work area by a 6-mil polyethylene flap doorway.
1. Separate this room from the rest of the building with airtight walls fabricated of 6-mil polyethylene.
  2. Separate this room from the Shower Room and work area with airtight walls fabricated of 6-mil polyethylene.
- I. Separate work area from the equipment Room by polyethylene barriers. If the airborne asbestos level in the work area is expected to be high, add an intermediate cleaning space between the Equipment room and the work area. Damp wipe clean all surfaces after each shift change.

## 2.05 EQUIPMENT DECONTAMINATION UNITS

- A. In areas with only one access, it may be impossible to utilize a separate Equipment Decontamination Unit. In this case, all equipment and waste materials will exit through the Personnel Decontamination Chambers.

- B. When two accesses to the work area are available, provide an Equipment Decontamination Unit consisting of a serial arrangement of rooms, Clean Room, Holding Room, Washroom for removal of equipment and material from work area. Do not allow personnel to enter or exit work area through Equipment Decontamination Unit.
- C. Provide an enclosed shower unit located in work area just outside Washroom as an equipment, bag, and container cleaning station.
- D. Provide Washroom for cleaning of bagged or containered asbestos containing waste materials passed from the work area. Construct Washroom of 2 by 4-inch (minimum) wood framing and polyethylene sheeting, at least 6-mil in thickness and located so that packaged materials, after being wiped clean can be passed to the Holding Room. Separate this room from the work area by flaps of 6-mil polyethylene sheeting, or rigid self-closing doors.
- E. Provide Holding Room as a drop location for bagged ACM passed from the Washroom. Construct Holding Room of 2 by 4-inch (minimum) wood framing and polyethylene sheeting, at least 6-mil in thickness and located so that bagged materials cannot be passed from the Washroom through the Holding Room to the Clean Room.
- F. Provide Clean Room to isolate the Holding Room from the building exterior. Construct Clean Room of 2 by 4-inch (minimum) wood framing and polyethylene sheeting, at least 6-mil in thickness and locate to provide access to the Holding Room from the building exterior. Separate this room from the exterior by flaps of 6 mil polyethylene sheeting, or rigid self-closing doors.

### PART 3 - EXECUTION

#### 3.01 SCOPE OF WORK:

It is anticipated that the asbestos abatement project may be performed in several phases. It is the asbestos contractor's responsibility to coordinate with the project schedule prepared by the General Contractor and shall comply with the commencement and completion dates allocated. Changing, decreasing, and increasing of phases, size, location, and scope of work shall not constitute compensation by the Owner or any of his representatives.

Location	Type of ACM	Approximate Quantities
Canopies	Tectum Panels and Related Mastic Caulking/Sealant	2,700 SF 200 LF

#### Specific Notes:

1. It is the Asbestos Contractor's responsibility to review the demolition drawings, notes and construction documents prepared by the Architect. The contractor must include in his/her bid the entire scope of work listed above. Means and methods of removal will be at the discretion of the contractor with prior approval by the Designer. All work in this section shall be performed by the Asbestos Contractor at no additional cost to the Owner.
2. Remove and dispose as ACM of the tectum panels and related mastic. Remove, decontaminate, and dispose of all mounted fixtures.
3. Remove and properly dispose of caulking/sealant. Perform required selective demolition to access the caulking/sealant.
4. Caulking/sealant was found to contain asbestos and assumed to contain >1ppm of PCB's.

### 3.02 JOB CONDITIONS

- A. Do not commence asbestos abatement work until:
  - 1. Arrangements have been made for disposal of waste at an acceptable site. Submittal shall be made no later than the Document Submission Date.
  - 2. Arrangements have been made for containing and disposal of wastewater resulting from wet stripping or filtering through a 5-micron filter.
- B. All materials resulting from abatement work, except as specified otherwise shall become the property of the Asbestos Contractor and shall be disposed of as specified herein.
- C. Pre-clean all areas prior to commencement of any work.
- D. Clean all routes used to transport waste.

### 3.03 INSPECTION AND PREPARATION

- A. Examine the areas and conditions under which asbestos will be abated and notify the Asbestos Project Monitor in writing of conditions detrimental to the proper and timely completion of the work.
- B. Before any work commences, post danger signs in and around the Work Area to comply with 29 CFR 1926.1101 (k)(l) per federal and state regulations.

### 3.04 WORK PROCEDURE

- A. Perform asbestos related work in accordance with 29CFR 1926.1101 and as specified herein. Use wet removal procedures. Personnel shall wear and utilize protective clothing and equipment as specified herein. Personnel of other trades not engaged in the removal and demolition of asbestos shall not be exposed at any time to airborne concentrations of asbestos unless all the personnel protection provisions of this specification are complied with by the trade personnel. Provide and post the decontamination and work procedures to be followed by workers, as described hereinafter.
- B. Each worker and authorized visitor shall, upon entering the job site, remove street clothes in the Clean Change Room and put on a respirator and clean protective clothing before entering the equipment room or the work area. All workers shall remove gross contamination before leaving the work area. All clothing such as coveralls, head covers, boots shall be removed and properly disposed of before leaving equipment room. With the exception of bathing suites and respirators, the workers shall proceed to the Shower Room. Under the shower, respirators shall be removed and cleaned. Cleaned respirators shall be placed in suitable clean plastic bags and carried by employees to Clean Room. Soap, towels shall be furnished by the Asbestos Contractor. The Asbestos Contractor shall maintain proper sanitary conditions. The Asbestos Contractor's designated competent person shall insure that these practices are being adhered to.
- C. Following showering and drying off, each worker and authorized visitor shall dispose of towels as contaminated waste and proceed directly to the Clean Change Room and dress in clean clothes at the end of each day's work, or before eating, smoking, or drinking. Before re-entering the work area from the Clean Change Room, each worker and authorized visitor shall put on the applicable respirator and shall dress in clean protective clothing. Contaminated work footwear shall be stored in the equipment room when not in use in the work area. Upon completion of asbestos abatement, dispose of footwear as contaminated waste.

- D. Contaminated work footwear shall be stored in the equipment room when not in use in the work area. Upon completion of asbestos abatement, dispose of footwear as contaminated waste or double bag for use at next site.
- E. Workers removing waste containers from the Equipment Decontamination Enclosure shall enter the holding area from outside wearing a respirator and dressed in clean coveralls. No worker shall use this system as a means to leave or enter the washroom or the work area.
- F. Workers shall be fully protected with respirators and protective clothing immediately prior to the first disturbance of asbestos containing or contaminated materials and until final cleanup is completed. This includes the removal of any equipment in contact with ACM such as lights, HVAC grills and other related structures.

### 3.05 PREPARATION OF THE WORK AREA

- A. Seal off the work area by sealing large openings such as open doors, elevator doors, and passageways with a critical barrier. The critical barrier shall constitute the outermost boundary of the asbestos abatement project work area. Plastic sheeting on open framing is not a suitable critical barrier. Critical barriers may be erected of a suitable solid construction material such as plywood, sheetrock, gypsum board, or other related materials.
- B. Prior to any asbestos abatement work, clean the proposed work areas using HEPA filtered vacuum equipment and wet cleaning methods as appropriate. Methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters will not be permitted. Dispose of all cloths, which are used for cleaning as contaminated waste.
- C. Place all tools, scaffolding and staging necessary for the work in the area to be isolated prior to erection of plastic sheeting temporary enclosure.
- D. Shut down electric power. Provide temporary power and lighting and ensure safe installation of temporary power sources and equipment per applicable electrical code requirements. Provide 24-volt safety lighting and provide ground-fault interrupter circuits as power source for lights and electrical equipment.
- E. Seal off all openings, including but not limited to corridors, doorways, windows, skylights, ducts, grills, diffusers, and any other penetrations of the work areas, with 6-mil plastic sheeting and sealed with tape.
- F. Prior to any abatement activities seal all floor and ceiling openings or penetrations that have not already been sealed. This includes penetrations through ceiling and floor slabs, both empty holes and holes accommodating items such as cables, pipes, ducts, conduit and expansion joints in floors and wall and floor slab assemblies.
- G. Use combination fire stop foam and fire stop sealant equivalent to Dow Corning Fire Stop Foam and Dow Corning Fire Stop Sealant. Material shall be applied in accordance with manufacturer's recommendations.
- H. Maintain emergency and fire exits from the work areas, or establish alternative exits satisfactory to the local fire officials. Coordinate work with local fire and police departments, and Asbestos Project Monitor.



- I. Shut down and isolate heating, cooling, ventilating air systems in the contaminated areas to prevent contamination and fiber dispersal to other areas of the structure. During the work, seal vents within the work area with solid barriers, such as plywood and tape and plastic sheeting, or as indicated on the drawings.
- J. Remove all HVAC system filters. Pack disposable filters in sealable double 6 mil plastic bags for burial in the approved waste disposal site; replace with new filters after final cleanup. Wet clean permanent filters; reinstall after final cleanup.
- K. Before work is begun, clean all items, which can be removed without disrupting the asbestos material. Pre-clean movable furniture, [carpeting, clocks, speakers, books, and other objects] within the proposed areas using HEPA filtered vacuum equipment and/or wet cleaning methods as appropriate; remove such objects from work areas to a temporary location.
- L. Pre-clean non-removable furniture, book shelving, equipment, heat fans, fire alarms, pipes, ductwork, wires and conduits, lockers, skylights, speakers, and other fixed objects within the proposed work areas, using HEPA filtered vacuum equipment and wet cleaning methods as appropriate prior to abatement activities, and enclose with minimum 6 mil plastic sheeting sealed with tape.
- M. Remove and clean all ceiling mounted objects, such as lights, HVAC grills and other items not previously sealed off, that interfere with asbestos abatement. Use localized water spraying or HEPA filtered vacuum equipment during fixture removal to reduce fiber dispersal.
- N. The Asbestos Contractor will be required to supply a certified plumber to be available should any questions or problems arise.

### 3.06 MAINTENANCE OF ENCLOSURE SYSTEMS

- A. Ensure that barriers and plastic linings are effectively sealed and taped. Repair damaged barriers and remedy defects immediately upon discovery. Visually inspect enclosures at the beginning of each work period.
- B. Use smoke methods to test effectiveness of barriers when directed by the Asbestos Project Monitor.

### 3.07 CONTROL ACCESS

- A. Permit access to the work area only through the Decontamination Unit. All other means of access shall be closed off, warning signs displayed on the clean side of the sealed access.
- B. Large openings such as open doorways shall be sealed as a critical barrier. The critical barrier shall constitute the outmost boundary of the asbestos abatement work area.
- C. Plastic sheeting on open framing is not a suitable critical barrier. All cracks, seams, and openings in critical barriers shall be caulked or otherwise sealed, so as to prevent the movement of asbestos fibers out.

### 3.08 ISOLATION OF WORK AREA

- A. Completely separate the work area from other portions of the building and the outside by sheet plastic barriers at least 6 mil in thickness.

- B. Individually seal all ventilation openings (supply and exhaust), lighting fixtures, clocks, doorways, windows, convectors and speakers, and other openings into the work area with duct tape alone or with polyethylene sheeting at least 6 mil in thickness, taped securely in place with duct tape. Maintain seal until all work including work area decontamination is completed. All lighting fixtures shall have had power shut off.
- C. Provide sheet plastic barriers at least 6-mil in thickness needed to complete seal openings from the work area into adjacent areas. Seal the perimeter of all sheet plastic barriers with duct tape.

### 3.09 COVERING OF FLOOR AND WALL SURFACES

- A. Clean all contaminated furniture, equipment, and or supplies with a HEPA filtered vacuum cleaner or by wet cleaning prior to being moved or covered. All equipment, furniture, stored items in work area is to be deemed contaminated unless specifically declared as uncontaminated in writing by the Asbestos Project Monitor. Clean all surfaces in work area with a HEPA filtered vacuum or by wet wiping prior to the installation of any sheet plastic.
- B. Cover floor of work area with 2 individual layers of clear polyethylene sheeting, each at least 6 mil in thickness, turned up walls at least 12 inches. Form sharp right angle-bend at junction of floor and wall so that there is no radius, which could be stepped on causing the wall attachment to be pulled loose. Duct tape all seams in floor covering. Locate seams in top layer six feet from, or at right angles to, seams in bottom layer. Install sheeting so that top layer can be removed independently of bottom layer.
- C. Remove all general construction items such as cabinets, casework, doors and window trim, moldings, ceilings, and trim which cover the surface of the work to prevent interference with the work. Clean, decontaminate and reinstall, unless otherwise indicated, all such materials, upon completion of all removal work with materials, finishes, and workmanship to match existing installations before start of work.
- D. Cover all walls in work area with two (2) layers of polyethylene sheeting, at least 6- mil in thickness, mechanically supported and sealed with duct tape. Tape all joints including the joining with the floor covering with duct tape or as otherwise indicated on the Asbestos Remediation or in writing by the Asbestos Project Monitor. There shall be no seams in the plastic sheet at wall to floor joints.
- E. If the enclosure barrier is breached in any manner that could allow the passage of asbestos debris or airborne fibers, then add affected area to the work area, enclose it and decontaminate it.

### 3.10 NEGATIVE PRESSURE

- A. Establish negative pressure in the work area by installation of High Efficiency Particulate Air (HEPA) filter air-purifying devices. Comply with ANSI Z9.2, Local Exhaust Ventilation Requirements. Maintain system in operation 24 hours per day until decontamination of the work area is completed and area has been certified clean by air monitoring tests and visual inspections. Discharge of asbestos fibers to the outside of the building will not be permitted.

- B. Size negative air pressure system(s) to provide a minimum of one air change every 15 minutes for the area under negative pressure. Locate the exhaust unit(s) so that makeup air enters the work area primarily through the decontamination unit and traverses the work area as much as possible. The intent is to provide the air change specified in each work area (room), not just the specified negative pressure. Place the end of the unit or its exhaust duct through an opening in the plastic barrier or wall covering. Seal the plastic around the unit or duct with tape.
- C. The system shall maintain an air pressure differential of minus 0.02 inch of water. Test the negative pressure system prior to any abatement actions to ensure that the 0.02-inch differential is present. The Asbestos Project Monitor may require the use of ventilation smoke tubes to check the system performance.

### 3.11 REMOVAL OF ASBESTOS CONTAINING MATERIALS

- A. Thoroughly wet ACM to be removed prior to stripping to reduce fiber dispersal into the air. Accomplish wetting by a fine spray (mist) of amended water or removal Encapsulant. Saturate material sufficiently to wet to the substrate without causing excess dripping. Allow time for water or removal Encapsulant to penetrate material thoroughly. If a removal Encapsulant is used, apply in strict accordance with manufacturer's written instructions.
- B. Mist work area continuously with amended water whenever necessary to reduce airborne fiber levels.
- C. Remove saturated ACM in small sections from all areas. Do not allow material to dry out. As it is removed, simultaneously pack material while still wet into disposal bags. Twist neck of bags bend over and seal with minimum three wraps of duct tape. Clean outside and move to wash down station adjacent to material decontamination unit.

### 3.12 DECONTAMINATION OF WORK AREA

- A. Maintain premises and public properties free from accumulation of waste, debris, and rubbish, caused by operations. Remove visible accumulations of asbestos material and debris. Wet clean all surfaces within the work area.
- B. Remove the plastic sheets from walls and floors only. Take proper care in folding up plastic sheeting to minimize dispersal of residual asbestos containing debris.
- C. Leave the windows, doors, and HVAC vents sealed. Maintain HEPA filtered negative air pressure systems, air filtration and decontamination enclosure systems in service.
- D. Remove all debris from floor of work area. This includes all trash, scraps of lumber, pipes, and all visible asbestos debris. The asbestos debris is primarily deteriorated pipe insulation that has fallen to the ground. Dispose of all debris removed as asbestos contaminated waste. HEPA vacuum the entire floor.
- E. Clean all surfaces in the work area and any other contaminated areas with water and with HEPA filtered vacuum equipment. After cleaning the work area, wait 24 hours to allow for settlement of dust, and again wet clean and clean with HEPA filtered vacuum equipment all surfaces in the work area. After completion of the second cleaning operation, perform a complete visual inspection of the work area to ensure that the work area is free of visible asbestos debris. The negative pressure system may be shut down only after clean air has been achieved.

- F. Include sealed drums and all equipment used in the work area in the cleanup and remove from work areas, via the equipment decontamination enclosure system, at an appropriate time in the clean sequence.
- G. Conduct cleaning and disposal operations to comply with applicable ordinances and antipollution laws. Do not burn or bury rubbish and waste materials on job site. Do not dispose of volatile wastes in storm or sanitary drains. Do not dispose of wastes into streams or waterways.
- H. Store volatile wastes in covered metal containers during work hours and remove from premises at end of workday. Prevent accumulation of wastes, which create hazardous conditions. Provide adequate ventilation during use of volatile or noxious substances.
- I. If the Asbestos Project Monitor, within 24 hours after the second cleaning, finds visible accumulations of asbestos debris in the work area, repeat the wet cleaning until the work area is in compliance, at no additional expense to the Owner.
- J. Remove the first layer of plastic sheet from walls and floors only. Take proper care in folding up plastic sheeting to minimize dispersal of residual asbestos containing debris.
- K. Leave the windows, doors, and HVAC vents sealed. Maintain HEPA filtered negative air pressure systems, air filtration and decontamination enclosure systems in service.
- L. Following the final visual inspection by the Asbestos Project Monitor, after the removal of asbestos-containing materials and decontamination of work areas, and while space enclosures systems remain in place, seal all surfaces from which asbestos-containing material have been removed to assure immobilization of any remaining fibers. Use a colored sealant so that complete coverage may be ensured by a visible inspection by the Asbestos Project Monitor to verify that ACM has been adequately removed. Apply sealer in accordance with manufacturer's recommendations using airless spray equipment.

### 3.13 WORK AREA CLEARANCE

- A. The work is complete when the work area is visually clean and airborne fiber levels have been reduced to the level specified below. When this has occurred, the Asbestos Contractor will notify the Asbestos Project Monitor that the area is ready for clearance.
- B. The number and volume of air samples taken, and analytical methods used by the Asbestos Project Monitor will be in accordance with applicable regulations.
- C. The Owner will pay for the initial testing required for clearance. Should the initial testing fail, the Contractor will reimburse the Owner for the cost of all additional testing based on \$90.00 per hour for project monitor, \$30.00 per each PCM.

### 3.14 DISPOSAL OF ACM AND ASBESTOS CONTAMINATED WASTE

- A. To prevent exceeding available storage capacity on site, remove sealed and labeled containers of asbestos waste and dispose of such containers at an authorized disposal site in accordance with the requirements of disposal authority.
- B. Comply with 29 CFR 1926.1101.

- C. Seal all asbestos and asbestos contaminated waste material with double thickness 6-mil, sealable plastic bags. Label the bags; transport and dispose of all in accordance with the applicable OSHA and EPA regulations. At the conclusion of the job, place all polyethylene material, tape, cleaning material and clothing in the plastic lined drum. Seal, correctly label, and dispose of as asbestos waste material.
- D. Transport the bags to the approved waste disposal site. Asbestos Contractor shall obtain trip tickets at the landfill to document disposal of asbestos containing materials. A form shall be signed, not initialed, by all parties. Copies of all trip tickets shall be submitted to the Asbestos Project Monitor.
- E. If a rental vehicle is used to transport asbestos waste, Asbestos Contractor shall provide to the vehicle's owner a written statement as to the intended use of the vehicle. A copy of such notice, signed by the vehicle owner, shall be provided to the Asbestos Project Monitor prior to transporting materials in the vehicle. Two layers of 6-mil plastic sheet shall be placed on the floor and walls of the rental vehicle prior to loading any containers of asbestos waste.
- F. Consider wastewater from showers and sinks to be contaminated waste and dispose of in accordance with this Section unless water has been filtered through a 5-micron filter.

### 3.15 DISPOSAL OF NON-CONTAMINATED WASTE

- A. Remove from the site all non-contaminated debris and rubbish resulting from demolition operations. Transport materials removed from demolished areas and dispose of off site in a legal manner.
- B. During progress of work, clean site, and public properties, and dispose of waste materials, debris, and rubbish. Provide on-site containers for collection of waste materials, debris, and rubbish. Remove waste materials, debris, and rubbish from site and legally dispose of at public or private dumping areas off Owner's property.

END OF SECTION

SECTION 02 35 43

ENVIRONMENTAL PROCEDURES

R-  
Part  
B.

PART 1 - GENERAL

1.01 GENERAL

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

1.02 RELATED WORK UNDER OTHER SECTIONS

- A. Asbestos Remediation.

1.03 HAZARDOUS MATERIALS PROCEDURE

A. Asbestos

1. Asbestos Materials Exist On-Site: Asbestos Containing Materials (ACM) were found on the exterior of each building. ACM affected by the renovation/demolition project are included under this contract. The General Contractor shall formally notify each Sub-Contractor that there are ACM existing in the building and care shall be taken not to disturb ACM to remain.
2. The General Contractor shall retain the services of a Massachusetts licensed asbestos abatement contractor to perform the work.
3. Responsible Person On-Site: The General Contractor shall designate one of its senior on-site employees to be in charge of any coordination between the Architect, the General Contractor, and all Sub-Contractors with respect to hazardous materials.
4. Unknown and inaccessible ACM: During the work of the Contract, it is possible that previously unknown asbestos materials may be discovered in currently concealed locations.
5. Notification: If the General Contractor and any Sub-Contractor discover or encounter any ACM during the performance of the work, the General Contractor shall immediately:
  - a. Stop work, notify the architect about the presence of suspect ACM and request instructions for proper action, and
  - b. Take whatever steps and measures are necessary to reduce, control or eliminate the risk of exposure of workers and the public to the ACM.
  - c. Every effort will be made to obtain DEP (12 working day notification period) waivers to remove hidden or unforeseen ACM by the asbestos contractor. The General Contractor and/or the Sub-Contractor shall allow sufficient time for the removal of the ACM at no additional charges to the owner for delays and should waivers be denied.
6. Responsibility for Hazardous Material Discovery: It is the sole responsibility of the General Contractor and all Sub-Contractors to undertake whatever measures, methods or procedures are necessary, required or otherwise appropriate to safeguard the health and safety of all workers and members of the public with respect to identification and discovery of previously unknown hazardous materials during the work of the Project.
7. Indemnification: To the fullest extent permitted by law, the General Contractor and all Sub-Contractors shall indemnify and hold harmless the Owner and the Architect and their agents and employees from and against all claims, damages, losses and expenses including, but not limited to, attorneys' fees arising out of or relating to the performance of the Work, including the discovery or identification of any hazardous materials, provided that any such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to damage to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom; and is



caused in whole or in part by any negligent act or omission of the General Contractor, any Sub-Contractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified.

B. Lead:

1. The General Contractor and all Sub-Contractors shall be made aware that lead based paint exists on all painted surfaces.
2. General Contractor and all Sub-Contractors must comply with EPA RRP regulations to ensure full compliance.
3. All the work of this Contract shall conform to the standard set by all applicable Federal, State and Local laws, regulations, ordinance, and guidelines in such from in which they exist at the time of the work on the Contract and as may be required by subsequent regulations.
4. The General Contractor and all Sub-Contractors are solely responsible for means and methods, and techniques used for lead control. The General Contractor and all Sub-Contractors shall collect debris and to properly remove and dispose of lead contaminated soil around the building due to demolition activities.
5. The General Contractor and all Sub-Contractors shall at his own cost and expense comply with all laws, ordinance, rules, and regulations of Federal, State, Regional and Local authorities during Sub-, prepping, sanding, cutting, burning, scraping, painting over, grinding and regarding handling, storing, and disposing of lead and lead contaminated waste material.
6. The General Contractor and all Sub-Contractors shall submit to the Architect prior to commencing of work the following:
  - a. Written respiratory and notification program
  - b. Written lead compliance program in accordance with OSHA regulations including:
    1. Training requirement certifications.
    2. Supervisor qualifications.
    3. Written compliance program specific to this project
    4. Respirators fit test records.
    5. Medical surveillance certificates.
7. The EPA and the DEP require debris with lead to be tested in accordance with the Toxicity Characteristic Leaching Procedure (TCLP) to determine the potential for significant amounts of lead to leach out of the waste. If the results are below the DEP standard (5.0 ppm), the waste may be disposed of in a conventional landfill for Sub-debris. If, however, the TCLP results are above the DEP standard, the waste must be disposed of in a DEP approved, hazardous waste landfill. The General Contractor and all Sub-Contractors shall at own cost and expense perform all required testing of waste by the TCLP. The General Contractor and all Sub-Contractors must submit to the Owner copy of tests performed and all waste shipment records prior to disposing of debris. The Owner reserves the right to have own TCLP samples collected to verify results. All disposal costs shall be at the General Contractor and all Sub-Contractors' responsibility.
8. The following references are cited as current applicable publications. This project is subject to compliance with all regulations including but not limited to:
  - a. Commonwealth of Massachusetts, Department of Labor and Work Force Development 454 CMR 11.00, Structural Painting Safety Code, as currently amended.
  - b. Commonwealth of Massachusetts, Department of Environmental Protection, and Hazardous Materials Regulations at 310 CMR 30.00 as currently amended.
  - c. U. S. Department of Labor, Occupational Safety and Health Administration Title 29 CFR 1910.1025 and 29 CFR Part 1926.62.
  - d. Commonwealth of Massachusetts, Department of Labor and Work Force Development 454 CMR 22.00.

- e. Commonwealth of Massachusetts, Department of Environmental Protection, 310 CMR 6.0-8.0.
  - f. Commonwealth of Massachusetts, Department of Environmental Protection ABC rubble rules.
9. All above regulations are applicable to this project. Where there is a conflict between this section and the applicable regulations, the more stringent requirement shall prevail.

PART 2 – PRODUCTS                      Not Used

PART 3 – EXECUTION                      Not Used

END OF SECTION



## Asbestos Identification Laboratory

165 New Boston St., Ste 227  
Woburn, MA 01801  
781-932-9600

Web: [www.asbestosidentificationlab.com](http://www.asbestosidentificationlab.com)  
Email: [mikemanning@asbestosidentificationlab.com](mailto:mikemanning@asbestosidentificationlab.com)

Batch: 55435



August 20, 2020

Ammar Dieb  
Universal Environmental Consultants  
12 Brewster Road  
Framingham, MA 01702

**Project Name:** Beaver Brook Apts., Waltham, MA  
**Project Number:**  
**Date Sampled:** 2020-08-20  
**Work Received:** 2020-08-20  
**Work Analyzed:** 2020-08-20

R-  
Part  
C

**Analysis Method:** BULK PLM ANALYSIS EPA/600/R-93/116

Dear Ammar Dieb,

Asbestos Identification Laboratory has completed the analysis of the samples from your office for the above referenced project. The information and analysis contained in this report have been generated using the EPA /600/R-93/116 Method for the Determination of Asbestos in Bulk Building Materials. Materials or products that contain more than 1% of any kind or combination of asbestos are considered an asbestos containing building material as determined by the EPA. This Polarized Light Microscope (PLM) technique may be performed either by visual estimation or point counting. Point counting provides a determination of the area percentage of asbestos in a sample. If the asbestos is estimated to be less than 10% by visual estimation of friable material, the determination may be repeated using the point counting technique. The results of the point counting supersede visual PLM results. Results in this report only relate to the items tested. This report may not be used by the customer to claim product endorsement by NVLAP or any other U.S. Government Agency.

Laboratory results represent the analysis of samples as submitted by the customer. Information regarding sample location, description, area, volume, etc., was provided by the customer. Asbestos Identification Laboratory is not responsible for sample collection activities or analytical method limitations. Unless notified in writing to return samples, Asbestos Identification Laboratory discards customer samples after 30 days. Samples containing subsamples or layers will be analyzed separately when applicable. Reports are kept at Asbestos Identification Laboratory for three years. This report shall not be reproduced, except in full, without the written consent of Asbestos Identification Laboratory.

- NVLAP Lab Code: 200919-0
- Massachusetts Certification License: AA000208
- State of Connecticut, Department of Public Health Approved Environmental Laboratory Registration Number: PH-0142
- State of Maine, Department of Environmental Protection Asbestos Analytical Laboratory License Number: LB-0078(Bulk) LA-0087(Air)
- State of Rhode Island and Providence Plantations. Department of Health Certification: AAL-121
- State of Vermont, Department of Health Environmental Health License AL934461

Thank you Ammar Dieb for your business.

Michael Manning  
Owner/Director

August 20, 2020

Ammar Dieb  
Universal Environmental Consultants  
12 Brewster Road  
Framingham, MA 01702

**Project Name:** Beaver Brook Apts., Waltham, MA  
**Project Number:**  
**Date Sampled:** 2020-08-20  
**Work Received:** 2020-08-20  
**Work Analyzed:** 2020-08-20

**Analysis Method:** BULK PLM ANALYSIS EPA/600/R-93/116

FieldID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
1 616893	Ceiling Panel	Rest Area Next Unit #304	multi	Cellulose 70 Non-Fibrous 30	Detected Chrysotile < 1
2 616894	Ceiling Panel	Rest Area Next Unit #304	multi	Cellulose 70 Non-Fibrous 30	Detected Chrysotile < 1
3 616895	Ceiling Panel	Rest Area Next Unit #304	multi	Cellulose 70 Non-Fibrous 30	Detected Chrysotile < 1
4 616896	Black Caulking	On Top Brick Wall Exterior Unit #292	black	Non-Fibrous 100	None Detected
5 616897	Black Caulking	On Top Brick Wall Exterior Unit #292	black	Non-Fibrous 100	None Detected
6 616898	Black Caulking	On Top Brick Wall Exterior Unit #292	black	Non-Fibrous 100	None Detected
7 616899	Ceiling Panel	Rest Area Next Unit #306	multi	Cellulose 70 Non-Fibrous 30	Detected Chrysotile < 1
8 616900	Ceiling Panel	Rest Area Next Unit #306	multi	Cellulose 70 Non-Fibrous 30	Detected Chrysotile < 1
9 616901	Ceiling Panel	Rest Area Next Unit #306	multi	Cellulose 70 Non-Fibrous 30	Detected Chrysotile < 1
10 616902	Caulking	On Wood Beams Corners Corridors	multi	Non-Fibrous 98	Detected Chrysotile 2
11 616903	Caulking	On Wood Beams Corners Corridors	multi	Non-Fibrous 98	Detected Chrysotile 2
12 616904	Caulking	On Wood Beams Corners Corridors	multi	Non-Fibrous 98	Detected Chrysotile 2

Thursday 20 August  
Analyzed by:

*Erik Bogas*

End of Report  
Batch: 55435

Page 1 of 1

# CHAIN OF CUSTODY

Universal Environmental Consultants  
12 Brewster Road  
Framlingham, MA 01702  
Tel: (508) 628-5486 - Fax: (508) 628-5488  
adleb@uec-env.com

Same day results

Town/City: Waltham MA Building Name: Beaver Brook APTS

Sample	Result	Description of Material	Sample Location	
1		Ceiling Panel	RES. AREA NEXT UNIT # 304	900 SF
2		Ceiling Panel	RES. AREA NEXT UNIT # 304	—
3		Ceiling Panel	RES. AREA NEXT UNIT # 304	—
4		Black Caulking	on TOP BRICK wall EXTERIOR unit # 292	6 LF
5		Black Caulking	on TOP BRICK wall EXTERIOR unit # 292	—
6		Black Caulking	on TOP BRICK wall EXTERIOR unit # 292	—
7		Ceiling Panel	RES. AREA NEXT UNIT # 306	900 SF
8		Ceiling Panel	RES. AREA NEXT UNIT # 306	—
9		Ceiling Panel	RES. AREA NEXT UNIT # 306	—
10		Caulking	on wood BEAMS corner corridors	
11		Caulking	on wood BEAMS corner corridors	
12		Caulking	on wood BEAMS corner corridors	

Reported By: Enrick Esirada Date: 8-20-20 Due Date: \_\_\_\_\_  
Received By: [Signature] Date: 8/20/2020

**EMSL Analytical, Inc.**

5 Constitution Way, Unit A Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

http://www.EMSL.com / bostonlab@emsl.com

**EMSL Order:** 132003429**Customer ID:** UEC63**Customer PO:****Project ID:****Attention:** Ammar Dieb

Universal Environmental Consultants

12 Brewster Road

Framingham, MA 01702

**Phone:** (617) 984-9772**Fax:** (508) 628-5488**Received Date:** 05/28/2020 2:00 PM**Analysis Date:** 05/29/2020**Collected Date:****Project:** Beaver Brook Apts. - Roof - , 292 Grove St, Waltham, MA**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy**

Sample	Description	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u> % Type
			% Fibrous	% Non-Fibrous	
1 132003429-0001	At Brick Flashing Comm. Building - Caulking	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
2 132003429-0002	At Brick Flashing Comm. Building - Caulking	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
3 132003429-0003	Community Building - Roof Core	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
4 132003429-0004	T-2 - Roof Core	Black/Yellow Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
5 132003429-0005	T-3 - Roof Core	Black/Yellow Fibrous Homogeneous	5% Glass	95% Non-fibrous (Other)	None Detected
6 132003429-0006	T-4 - Roof Core	Black/Yellow Fibrous Homogeneous	5% Glass	95% Non-fibrous (Other)	None Detected
7 132003429-0007	T-5 - Roof Core	Black/Yellow Fibrous Homogeneous	5% Glass	95% Non-fibrous (Other)	None Detected
8 132003429-0008	T-6 - Roof Core	Brown/Black/Yellow Fibrous Homogeneous	25% Cellulose 5% Glass	70% Non-fibrous (Other)	None Detected
9 132003429-0009	T-7 - Roof Core	Black/Yellow Fibrous Homogeneous	20% Cellulose 5% Glass	75% Non-fibrous (Other)	None Detected
10 132003429-0010	T-8 - Roof Core	Black/Yellow Fibrous Homogeneous	20% Cellulose 5% Glass	75% Non-fibrous (Other)	None Detected
11 132003429-0011	Stack Pipe T-6 Roof - Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12 132003429-0012	Stack Pipe Comm. Building Roof - Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13 132003429-0013	Stack Pipe Building 11 Roof - Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
14 132003429-0014	Stack Pipe Roof 4 - Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
15 132003429-0015	Curb Cut Roof Building 4 - Mastic	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
16 132003429-0016	Under Roof Between Building 5-11 - Tectum	Tan/White Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected

Initial report from: 05/29/2020 14:48:23





## EMSL Analytical, Inc.

5 Constitution Way, Unit A Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

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

EMSL Order: 132003429

Customer ID: UEC63

Customer PO:

Project ID:

Analyst(s)

Elizabeth Stutts (16)

Steve Grise, Laboratory Manager  
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method"), but augmented with procedures outlined in the 1993 ("final") version of the method. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. All samples received in acceptable condition unless otherwise noted. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-139, VT AL998919, Maine Bulk Asbestos LB-0039

Initial report from: 05/29/2020 14:48:23

**DRAFT**

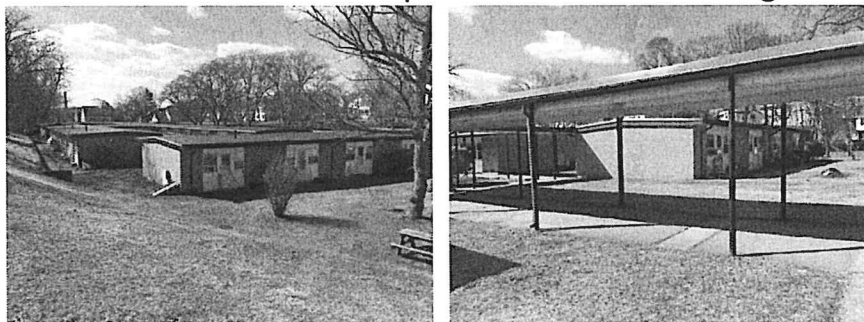
## **REQUEST FOR ARCHITECTURAL SERVICES (RFS)**

The Department's Project # 315161

### **Waltham Housing Authority**

**Beaver Brook Apartments, 667-2**

**Membrane Roof Replacement - CPA Funding**



March 27, 2019

**Invitation:** The Waltham Housing Authority, through the Massachusetts Department of Housing and Community Development (Department) is seeking the services of a qualified "Designer" within the meaning of M.G.L. Chapter 7C, Section 44, to provide professional design and construction administration services for membrane roof replacements at the Beaver Brook Elderly Development, 667-2 in Waltham, Massachusetts.

The construction budget for this project is **\$ 850,000.00** and the Design Fee for RFS Basic Services is **\$ 65,000.00**

For additional information on minimum Designer qualifications see the Section J. in this RFS.

#### **A. Background:**

The Beaver Brook Elderly Development is comprised of 14 single story brick clad buildings and a single story community building. The development was built in 1959. The low slope membrane roof was replaced in 1986 and is at the end of its useful life. The project will involve complete replacement of the membrane roofs, upgrading of the rigid insulation and replacement of all roof drainage systems. The LHA does have a copy of the original construction drawings for this development and are available on [biddocsonline.com](http://biddocsonline.com). Asbestos/Lead testing is not required for this project.

## **B. Project Goals and General Scope:**

The goal of the project is to provide the Authority with a long term maintenance free roofing system. The scope of work will include complete roof replacement system that includes stripping the existing deck, deteriorated deck replacement as required, new insulation, flashings and blocking. The roofing system must have a minimum of 30 year warranty.

## **C. Work Included in Basic Services:**

Unless specifically excluded, the Designer's Basic Services consist of the tasks described in the Contract for Designer Services as modified in this RFS (attached hereto as Attachment A) including all investigative work, design work, preparation of construction documents, bidding phase administration, Owner-Contractor contract administration and other related work reasonably inferred (in the opinion of the Authority and the Department) as being necessary to meet the project's stated scope and goals. A copy of the Department's Contract for Designer Services can be found at <https://www.mass.gov/service-details/designer-selection>.

Basic Services specifically include (but are not limited to) the following items that are included in the Designer fee listed in this RFS and shall be performed during the phases specified in Section E below:

- 1. Architecture and Engineering Services.** Unless specifically stated otherwise, all architecture and landscape architecture as well as all civil, structural, electrical, plumbing and mechanical engineering services incidental and required to fulfill the project goals and general scope as described herein are included as Basic Services. This includes review of the Department's Design and Construction Guidelines and Standards which can be found on the Departments web page.

**To find the DHCD Design and Construction Guidelines and Standards go to**  
<https://www.mass.gov/service-details/design-construction-guidelines-standards>

- 2. Existing Conditions.** Sufficient documentation of existing building dimensions, details, and general existing conditions is a Basic Service. The Designer is to verify the existing conditions by inspecting all of the existing units/buildings. Existing drawings of the development are available and the Design Fee calculation has been adjusted to include verification and additional drawing.
- 3. Cost Estimating.** Detailed construction cost estimates as required in Section E. of this RFS, whether done by the Designer or a sub-consultant or subcontractor to the Designer, are part of Basic Services. In addition, where project cost estimates generated during the design process exceed the approved construction budget listed in the contract, as amended in writing by the Department, it shall be the responsibility of the Designer, as part of Basic Services to research and propose ways to reduce such costs while still meeting the Department's guidelines and standards and the intended goals of this RFS.

In instances where the Designer's cost estimate ultimately changes from what was determined in a previously approved phase, the designer is required to articulate the reasons for the change such as specific scope increases, increased quantities increased unit costs, a change in the process or other applicable circumstances.

- 4. Revisions and Re-submissions of "Non-Approved" work.** The Authority and the Department will review, and the Department will issue written comments on all formal Designer submissions required by Section E. of the RFS. The Designer shall incorporate the results of these comments into the design as a condition of the approval of each phase and provide a written response regarding each comment.

**Work that in the written opinion of the Authority and the Department is found to be “Not Approved” shall be revised and resubmitted at no additional cost.** Upon the recommendation of the Department, the Authority may require revisions and/or resubmissions where submitted designs or construction documents:

- a. Do not meet the Department’s written requirements for submission content specified in this RFS,
  - b. Do not meet building code, Massachusetts bid law, or other regulatory requirements,
  - c. Do not adequately or accurately reflect the project’s goals, scope, or tasks as specified in this RFS,
  - d. Are not sufficiently clear or complete enough to allow for proper bidding and construction,
  - e. Do not utilize, or have not been shown to be equal in quality to the Department’s Design Guidelines and Construction Standards which are available on the Departments web site at <https://www.mass.gov/service-details/design-construction-guidelines-standards> .
  - f. Do not, in the opinion of the Department, reflect the most cost-effective means of meeting project goals and scope or provide a solution which meets the schedule established for the project.
5. **Land Surveys.** The costs of detailed land surveys are not included as Basic Services. Where surveys are required, however, the drafting of survey specifications, assistance in obtaining the services of a qualified surveyor, and the coordination of the survey’s work are considered part of Basic Services.
6. **Project Representative.** Project Representative fees are reimbursable expenses and are not included in the Designer fee listed in this RFS, however the hiring and supervision of a Project Representative by the Designer is a part of Basic Services.

At this time it is **not** anticipated that a Project Representative will be required for this project.

7. **Record Drawings.** The Designer is responsible for the drafting and archiving of Record Drawings, based on information supplied by the construction contractor and/or Project Representative. See Section E.8 below for instructions on archiving.
8. **Lead Based Paint abatement Service.** LBP testing and inspection services will be provided as a reimbursable to the Designer, but the Designer’s costs for procurement, coordination, administering of this consultant are part of basic services. The analysis and clarification of test and inspection results, recommendations for action, preparation of project specifications relating to these recommendations, construction administration and assistance in the scheduling of post-abatement certification inspections are Basic Services, as is the obtaining of any The Department of Public Health LBP abatement waivers.
9. **Asbestos Abatement Service.** Asbestos abatement testing and inspection services will be provided as a reimbursable to the Designer, but the Designer’s costs for procurement of, coordination, administering this consultant are part of basic services. The analysis and clarification of test and inspection results, recommendations for action, preparation of project specifications relating to these recommendations, construction administration, and assistance in the scheduling of post-abatement certification inspections, are Basic Services. If necessary coordination with The Department of Public Health and the Department of Occupational Safety is also part of Basic Services.
10. **Recycling.** Preparation of a Waste Management plan that includes an analysis of the waste that will be generated by this construction project, including demolition will be provided as a reimbursable to the Designer. This shall include developing a the list of materials to be recycled, recommendations for action, preparation of project specifications relating to these recommendations, and construction administration and monitoring as well as necessary coordination with The Department of Environmental Protection.

Procurement of and coordination with the waste management consultant will be part of Basic Services. Such coordination work may involve the clarification of recommendations, and assistance in the scheduling of necessary inspections before payments to the Contractor.

## 11. Project Phasing/Tenant Relocation. NOT REQUIRED

### D. Specific Reimbursable Exclusions from Basic Services:

1. **Land Surveys.** The cost of land surveys of the site will be a Reimbursable Service to the Designer but the Designer's costs for procuring and administering this consultant are part of basic services.
2. **Lead Based Paint Inspection and Testing.** Performing lead-based paint testing and inspections will be provided as a Reimbursable Service to the Designer but the Designer's costs for procuring and administering this consultant are part of basic services.
3. **Asbestos Abatement Service.** Asbestos testing and inspections will be provided as a Reimbursable Service to the Designer and includes the costs of performing any necessary air clearance tests, but the Designer's costs for procuring and administering this consultant are part of basic services.
4. **Recycling.** The services of a Waste Management consultant to prepare a Waste Management plan and monitor compliance of this plan during the Construction Phase will be a Reimbursable Service to the Designer but the Designer's costs for procuring and administering this consultant are part of basic services.
5. **Destructive Testing and Investigation** - The cost of Destructive testing and other extraordinary investigations of the site will be a Reimbursable Service to the Designer, but the Designer's costs for procuring and administering this consultant are part of basic services.

### E. Project Phases and Work Plan:

Work under this RFS is divided into the Project Phases as listed in Articles 16 and 17 of the Contract for Designer Services and as augmented below. Each Project Phase may consist of one or more required submissions, and may include site visits, meetings with the Authority, the Department, and others, or other tasks as described.

The following apply to every phase unless specifically waived by the Authority and Department:

- ☐ After a review by the Authority and Department, written approval of each phase will be made in accordance with Article 2.3 of the Contract for Designer. If after this review the submission is "Not Approved" the Designer will be required to re-submit the deliverables for each phase in accordance with the comments included in the non-approval letter.
- ☐ Approval of each phase will not occur without successful completion of the required deliverables for each phase and shall precede Work on subsequent phases
- ☐ Each Design Submission shall include a written response to any comments or recommendations included with the approval of the preceding phase.
- ☐ Each submission shall include both a hard copy and electronic copy of the submittal delivered to the Housing Authority and to DHCD. The submittal is not considered complete until the full submittal is delivered. Submissions to DHCD that are made electronically should be emailed in PDF format to [DHCDDesignSubmission@mass.gov](mailto:DHCDDesignSubmission@mass.gov) and to the Housing Authority at [jgoll@walhouse.org](mailto:jgoll@walhouse.org). A copy of the standard DHCD A/E Document Submission Transmittal Form is to be included and can be found at <https://www.mass.gov/service-details/design-construction-guidelines-standards>. Hardcopy submissions to DHCD should be addressed to the attention of Andrew Clinton, Capital Projects Coordinator.

- ☐ Document and explain the reasons for any proposed changes in the project scope, schedule or budget which have occurred since the approval of the preceding design submission.
- ☐ Meet with the Authority and Department to review and resolve any issues, or discuss alternative design approaches.

The following phases will be required for this project:

**1. Schematic Design/ Kick Off Phase:**

- a. Schedule, conduct and prepare minutes of a schematic design meeting with Authority and Department representatives to review the project. Prior to the kick off meeting the Designer shall:
  - i. Collect and study all available drawings, reports, maintenance reports, and other existing data pertaining to the project.
  - ii. Interview Authority maintenance staff.
  - iii. Conduct a thorough on-site survey of conditions relating to the project.
  - iv. Coordinate appropriate destructive testing required to verify the existing conditions. Destructive testing is a reimbursable expense however soliciting a contractor, coordination of testing and analysis of results is part of basic service.
  - v. Analyze all applicable codes, regulations and the DHCD Design and Construction Guidelines and Standards and any special design standards supplied by the Housing Authority.
  - vi. Meet with local building officials as required. – coordinate the meeting with the Authority.
  - vii. **Milestone Work Product Submission:** Prepare and deliver a formal “Schematic Design” Submission which is due within the time defined in the approval of the previous phase.

This submission shall include sketches, plans and details which clearly show the premise on which the design is based and shall:

- 1) Incorporate or respond to the information gathered during staff interviews.
- 2) Provide a written update of the status of the following:
  - a) Confirmation of the sufficiency and adequacy of the existing plans and other data provided by the Authority that such information is sufficient to prepare contract documents required to meet the goals and objectives of this project. This confirmation shall include a written report of the results of any supplemental investigation, research, testing or selective demolition.
  - b) Summary of the codes and regulations that apply to this project including MAAB regulations.
  - c) Summary of the applicable DHCD Design and Construction Guidelines and Standards.
  - d) Summary of progress on the waste management plan
- 3) Include a cost estimate in a format acceptable to the Department which allows for tracking of estimate changes over the life of this contract. This cost estimate shall be structured to identify any required filed subcontractors and include an individual breakdown for each sub-trade.
- 4) Include a list of anticipated drawings.
- 5) Determine which ebidding host will be used.



## 2. Construction Documents Phase:

- a. If required by the Authority, meet with DHCD and the Authority to review and select design options developed in previous design review phases.

- b. **Milestone Work Product Submission:** Prepare and deliver a formal “Construction Document Submissions” at the

50%, and 100% level of completion.

Each submission shall:

- i. Document any additional design decisions made since the approval of the preceding phase.
  - ii. Include a single set of Contract Documents for Construction which shall be used for the solicitation of competitive bids in accordance with MGL Chapter 149 Section 44A-J bid requirements which shall include at a minimum:
    - 1) Drawings prepared to a scale that is a minimum 1/8”=1’0” which include plans, elevations, details, and cross sections as may be deemed necessary by the Department.
    - 2) Starting with the 100% CD submission, incorporate the Department’s most current “front end” materials into the Project Manual including:
      - a) Procurement and Contracting Requirements
      - b) The Department’s General Conditions
      - c) Division 1 Specification of General Requirements(This material is available on the Department’s web site <https://www.mass.gov/public-housing-modernization-documentation/need-to-know>
    - 3) The Technical Specifications in a format acceptable to the Department. These specifications shall clearly identify each filed sub-bid trade.
  - iii. Include a revised cost estimate prepared in a format acceptable to the Department as part of the 50% CD and 100% CD submission.  
Issue an update for the 100% submission.  
This cost estimate shall be structured to identify any required filed subcontractors and includes a individual breakdown for each sub-trade.
- c. The Bid Sets of construction documents shall:
    - i. Incorporate the comments included with the 100% CD approval,
    - ii. Include a revised Advertisement reflecting the correct bidding schedule developed in coordination with the Authority and Department,
    - iii. Include and up to date Prevailing Wage and
    - iv. Include the necessary ebidding documentation to be uploaded to the ebidding host. Information for ebidding vendors and their process is located on the DHCD Public Housing Bidding Information webpage at: <https://www.mass.gov/service-details/public-housing-bidding-information>

## 3. Bidding Phase:

See Article 17.5 of the Contract for Designer Services, in addition:

- a. Participate in the Contractor and Subcontractor prequalification process as a member of the prequalification committee, under the direction of the Department. (for projects over \$10 million)
- b. The project shall be bid electronically. Information for e-bidding vendors and their process is located on the DHCD information for bidding webpage at: <https://www.mass.gov/service-details/public-housing-bidding-information>
- c. Provide technical assistance to the Authority relative to questions and requests for clarifications received from potential bidders.
- d. **Milestone Work Product:**
  - i. Prepare and place the project into the Central Register;
  - ii. Schedule, attend and conduct a pre-bid conference.
  - iii. Take bidder questions and prepare addenda for the Department's review and approval prior to issue.
  - iv. Distribute addenda approved by the Department to prospective bidders in accordance with M.G.L. c149 §44A-J.
  - v. Make recommendations to the Authority regarding the award of a Construction Contract including a written review of the contractor's qualification and recommendations. These recommendations must be submitted to the DHCD PM and the Housing Authority within 7 days of the bid opening.
  - vi. Archive the Bid Documents: The Designer shall prepare and transmit a PDF version of the bid set documents (including addenda) to BidDocsONLINE to be archived. (BidDocs is DHCD's vendor for digital archiving.) The PDF documents shall be forwarded via email to [support@biddocsonline.com](mailto:support@biddocsonline.com). If the documents are too large to email, please forward a CD to BidDocsONLINE, P.O. Box 51, Groton, MA 01450. All documents should be accompanied by a transmittal indicating the Housing Authority, the project name, the development name and number, the DHCD number and the Designer's contact information.

#### 4. Construction Administration Phase:

- a. **Milestone Work Product:** In addition to the items specified in Article 17.7 of the Contract for Designer Services and required in the Department's Construction Handbook, the Designer shall:
  - i. Conduct regularly scheduled job meetings at the project site to observe the quality and progress of the work. Include the Housing Authority and their representatives. Furnish to the Authority, the DHCD Construction Advisor and the DHCD Architect/Engineer a written field report for every such visit, including the minutes of the job meeting, and a summary of any RFI or Change Orders discussed.
  - ii. Issue clarification sketches as required to answer all questions from the Contractor.
  - iii. Review and act upon shop drawings, in a timely manner, as submitted by the contractor.
  - iv. Provide consultation and technical assistance in the interpretation of contract documents.
  - v. Review construction process to ensure compliance with construction documents.
  - vi. Review and recommend action relative to Contractor's Request for Payments.
  - vii. Ensure that all necessary inspections and approvals from appropriate regulatory authorities are secured.

viii. Prepare punch lists and final contractor payment/completion documents.

- b. On average, these tasks are expected to approximate **16** hours per week during the Construction Administration Phase, exclusive of project closeout.

**1. Warranty Phase:**

- a. The Designer shall schedule with the Housing Authority and perform an inspection of the subject project approximately nine months from the date of Substantial Completion. The Designer shall invite the General Contractor, the DHCD Architect/Engineer and the DHCD Construction Advisor. Only the Designer and the Housing Authority are required to attend.
- b. **Milestone Work Product Submission:** The Designer shall write a report noting any possible one year warranty claims against the General Contractor. The report shall be sent to the Housing Authority, the RCAT if applicable, the General Contractor, the DHCD Construction Advisor and the DHCD Architect/Engineer.

**2. Update the Capital Planning System Phase:**

See Article 17.6 of the Contract for Designer Services.

**3. Completion Phase:**

See Article 17.8 of the Contract for Designer Services. Special attention is directed to 17.8.8. The Designer shall transmit one pdf file of the as-built set of documents to Biddocsonline to be archived. The pdf documents shall be forwarded via email to [support@biddocsonline.com](mailto:support@biddocsonline.com). If the documents are too large to email, please forward a CD to BidDocs ONLINE, P.O. Box 51, Groton, MA 01450. All documents should be accompanied by a transmittal indicating the Housing Authority, the project name, the development name and number, the DHCD number and the designer's contact information.

**F. Required Designer Performance Times and Formal Submissions:**

The Designer performance times listed in the table below are requirements of this RFS, not estimates. Unless otherwise stated, performance times listed below include the time required for any meetings necessary for the production of the submission. Non-approved submissions must be resubmitted within the time period shown. A resubmission may consist of additional information requested by the reviewer(s), a partial resubmission, or complete resubmission. In some cases, the Department reviewer(s) may request that the resubmission material be due at a meeting. If so, the resubmission deadline will also be the deadline for the meeting.

**Submissions must be complete.** If, for example, a submission requires a cost estimate that has not been included, the Department reviewer will notify the Designer of the missing item, and the submission will not be reviewed at the Department until the cost estimate is received.

The Designer's adherence to the performance times listed below will be part of the Department's performance evaluation of the Designer's work, which will be conducted at the end of the Project.

## **Designer Performance Times Table**

	<b><u>Within/Weeks</u></b>	
• The Schematic Design Submission	<u>8</u>	of receipt of the last written approval
• The 50% CD Submission	<u>6</u>	of receipt of the last written approval
• The 100% CD Submission	<u>4</u>	of receipt of the last written approval
• Whole or partial resubmissions are due	<u>2</u>	after the Department's "Non Approval" memo
One Record Set of the Bid Documents is		
• due at the Department	<u>2</u>	after 100% CD approval
• The Warranty Inspection is to be done	<u>9</u>	Months after substantial completion

### **G. Estimated Duration:**

1. The estimated total duration of the Contract for Designer Services (exclusive of the Completion Phase) is **50** weeks calculated as follows

Design Phases listed above	<u>27</u>	weeks
Bidding Phase of	<u>13</u>	weeks, and
Construction Administration Phase of	<u>10</u>	weeks
<b>Estimated Total Duration (Exclusive of Warranty and Completion Phase)</b>	<u>50</u>	<b>weeks</b>

2. The durations for the Bidding and Construction Administration Phases are estimates only based on the Department's experience with prior similar projects. Actual durations may vary according to the extent of required document revisions, time required for non-Department regulatory approvals, and the construction contractor's performance.
3. Such variances in estimated time will not, in and of themselves, constitute a justification for an increased Fee for Basic Services, nor are they a substitute for the requirements shown in the Designer Performance Times Table (Section F, above.)

### **H. Department Contract Requirements and Coordination:**

This RFS will be appended to and become part (Attachment A) of the Department's standard Contract for Designer Services. Any items or conditions described in the RFS that appear to contradict the Contract shall be brought to the attention of the Authority and the Department as soon as possible prior to execution of the Contract.

1. The successful RFS applicant will be required to execute the Department's standard Contract for Designer Services which can be found on the Department's website <https://www.mass.gov/service-details/designer-selection>.

2. The successful RFS applicant will be required to submit to the Department a certificate of professional liability insurance indicating minimum coverage in the amount of no less than what is required by the Contract for Designer Services or \$250,000.00, whichever is higher.

#### **I. Payment Schedule and Fee Explanation:**

The Department sets the Fee for Basic Services for each job based on a number of factors such as extent of effort required, job complexity, specialized knowledge required, estimated construction cost, comparison with past project fees, and other considerations. As construction cost is but one of several factors, a final construction figure in excess of the initial construction estimate will not, in and of itself, constitute a justification for an increased designer fee.

Upon completion of each Project Milestone listed below, the Authority shall make progress payments for Basic Services. Satisfactory completion will be indicated by written acceptance and approval of the Project Milestones by the Authority and the Department. The amount of such progress payments are represented in the following schedule as a percentage of the Fee for Basic Services (as amended) found on page one of the Contract for Designer Services. The actual amount of each payment shall be the cumulative percentage of the total Fee for Basic Services earned as of the last completed Project Milestone, reduced by the amount of any previous payments for Basic Services:

#### **Designer Fee Payment Schedule**

Project Milestone	Value of each Milestone as a % of total fee	Cumulative % of total fee earned as of the completion of each Milestone
Execution of Contract	5%	5%
Schematic Design approval	20%	25%
100% Construction Documents approval	20%	45%
General Bid Opening	10%	55%
Certificate of Substantial Completion	40%	95%
Certificate of Final Completion	5%	100%
<b>Total</b>	<b>100%</b>	

#### **J. Minimum Qualifications:**

To be eligible for selection, the Designer must meet all the following qualifications:

1. Be a qualified Architecture or Engineering firm (within the meaning of M.G.L. Chapter 7C, Section 44), with Massachusetts registration.
2. Be a firm employing a Massachusetts registered architect responsible for and being in control of the work under this contract. In addition, have the Project Manager be a Massachusetts registered architect.
3. Be experienced in roofing projects on state funded projects. (Note: to receive credit for this requirement, a list of past jobs meeting the criteria, must be included on the application. Indicate whether the jobs listed were performed directly by the applicant, or by a sub-consultant).

4. Have Massachusetts licensed or registered member(s) of the design team who will be responsible for the following: (Firm's name, individual's name and professional registration or license number, as applicable, must be listed in the application for each category of work)

1. Architecture

**N.B. - Applicants should address each category of work listed in paragraph J. 4 in their application whether it is to be performed by in-house staff or by sub-consultant(s).**

**Failure to address each category will result in the elimination of the applicant from consideration on this project!**

5. Applicants must have an up-to-date Master File Brochure (AE-4) on file at the Department by the time of the Designer Selection Committee meeting to review the applications.

**K. Preferred qualifications:**

1. Be an architectural or engineering firm.
2. Be experienced in roofing projects at state-aided public housing developments in the Commonwealth of Massachusetts. (To receive credit, projects must be listed on the application.)  
(To receive credit, name and registration number must be listed on the application.)

**L. Proposal requirements:**

Persons or firms interested in applying must meet the following requirements:

1. Submit 15 (fifteen) copies of the Application for Designer Services (AE-3) to the Waltham Housing Authority.
  - a. Applications should be accompanied by a concise cover letter that is a maximum of two pages in length. A copy of the cover letter should be attached to each copy of the application.
  - b. Applicants may supplement this proposal with graphic materials and photographs that best demonstrate design capabilities of the team proposed for this project.  
**Limit additional information to a maximum of 3 - 8½"x 11" pages, double-sided.**
  - c. Applicants are advised that professional references are very important in the designer selection process. Outdated or incomplete reference information places the applicant at a distinct disadvantage. To achieve the best possible chance of being selected, the applicant must ensure that relevant projects appear in the A/E3 form, and must verify the client contact information is current, accurate and that the reference is available for contact.
2. Submit application and direct all questions to:

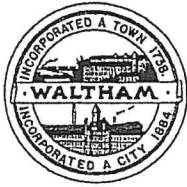
*Mr. John F. Gollinger*

*Waltham Housing Authority  
110 Pond Street  
Waltham, MA 02451-4505*

3. Applications are due no later than 2:00 PM, on Date.



4. Application forms must identify the names and registration numbers (if applicable) of any personnel listed as a "Minimum" or "Preferred" Requirement in Sections J and K, above.



CITY OF WALTHAM  
PLANNING DEPARTMENT  
HOUSING DIVISION

ROBERT J. WATERS JR.  
HOUSING SUPERVISOR

25 LEXINGTON STREET  
WALTHAM, MASSACHUSETTS 02452  
Phone 781-314-3380 Fax 781-314-3385

November 20, 2018

Community Preservation Committee  
M. Justin Barrett, Jr.  
610 Main Street  
Waltham, MA 02452

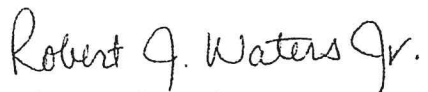
Dear Mr. Barrett;

The Housing Office is in support of the Waltham Housing Authority applications to the Community Preservation Committee for funds to replace the roofing systems at the Beaverbrook Elderly Apartments and the Prospect Terrace Family Housing.

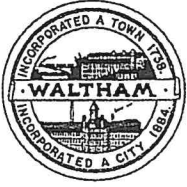
Beaverbrook Elderly Housing is part of a larger project that is being completed in conjunction with this office and the federal HOME Investment Partnership Program. Mayor Jeannette McCarthy has approved the use of Federal HOME funds to complete extensive renovations at this site beyond the roofing system, to include kitchen renovations, community room renovations, accessible improvements to walkways and apartments, accessible bathrooms in the community room and complete handicap accessibility on 2-4 units. A Community Preservation Award would provide match to the federal HOME funding and provide much needed improvements and vastly improve the living conditions for your tenants.

In the past this office has administered CPC funding awards and we are very willing to assist the CPC Committee with the administration of any funding awards you may approve for the Beaverbrook Elderly Apartments and Prospect Terrace family housing. Please feel free to contact me if I can be of any further assistance.

Sincerely,



Robert J. Waters Jr.  
Housing Supervisor



CITY OF WALTHAM  
PLANNING DEPARTMENT  
HOUSING DIVISION

ROBERT J. WATERS JR.  
HOUSING SUPERVISOR

25 LEXINGTON STREET  
WALTHAM, MASSACHUSETTS 02452  
Phone 781-314-3380 Fax 781-314-3385

November 20, 2018

Waltham Housing Authority  
Mr. John Gollinger, Executive Director  
110 Pond Street  
Waltham, MA 02452

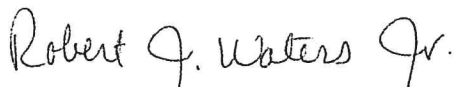
Dear John;

The Housing Office is in support of your application to the Community Preservation Committee for funding to replace the roofing systems at the Beaverbrook Elderly Apartments and the Prospect Terrace Family Housing.

As you know, the Beaverbrook Elderly Housing roofing project is part of a larger project you are completing in conjunction with this office and the federal HOME Investment Partnership Program. Mayor Jeannette McCarthy has approved the use of Federal HOME funds to complete extensive renovations at this site beyond the roofing system, to include kitchen renovations, community room renovations, accessible improvements to walkways and apartments, accessible bathrooms in the community room and complete handicap accessibility on 2-4 units. A Community Preservation Award would provide match to the federal HOME funding and provide much needed improvements and vastly improve the living conditions for your tenants.

We have in the past administered CPC funding that has been awarded to the Housing Authority and we are very willing to assist the CPC Committee with the administration of any funding awards they may approve for the Beaverbrook Elderly Apartments and Prospect Terrace family housing. Please feel free to contact me if I can be of any further assistance to the Waltham Housing Authority and the Community Preservation Committee.

Sincerely,



Robert J. Waters Jr.  
Housing Supervisor



RECEIVED

OCT 30 2018

MASS. HIST. COMM  
RC.65401

## City of Waltham Planning Department

119 School Street

Waltham, Massachusetts 02451


(p): 781-314-3370 | (f): 781-314-3376

October 29, 2018

Massachusetts Historical Commission  
220 Morrissey Blvd.  
Boston, Mass 02125

After review of MHC files and the materials you submitted, it has been determined that this project is unlikely to affect significant historic or archaeological resources.

RC. 65401

  
Jonathan K. Patton  
Archaeologist / Preservation Planner  
Massachusetts Historical Commission

11/7/18  
Date

**Re: Historical Review 292 – 24 Grove Street**

Dear Historical Commission,

The City of Waltham needs the assistance of the MHC to review a property built around 1959. Due to the age of the property and our obligation to consult with MHC prior to disbursing Federal Home Investment Partnership (HOME) funding we are seeking your assistance.

The proposed project description is as follows:

- 60 units built in 1959 located in the Bleachery district of the City, owned by the Waltham Housing Authority.

Rehabilitation project to include:

- New roof
- ADA walkways
- 60 units to be rehabbed with Kitchen remodels, required electrical upgrades to current code, bathroom ADA bars
- Adding entry way (front and back) ADA railings and exterior door awnings
- Updating exterior lighting throughout the community, and security system installed to protect development residents.
- Community room roofing, flooring throughout
- Convert the two existing restrooms into two ADA bathrooms, windows and doors.
- Parking lot repaving.
- ADA rehabilitation to 4 units for full accessibility.

A map of the area and the property assessment card is attached for your review. If you have any questions or require additional information please do not hesitate to contact me via email [amason@city.waltham.ma.us](mailto:amason@city.waltham.ma.us) or phone 781-314-3374. Thank you for your review.

Sincerely,  
Amanda Mason  
Consultant, Waltham Planning Department