City of Cambridge
PURCHASING DEPARTMENT

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TO: **All Bidders**

FROM: **City of Cambridge**

DATE: **June 18, 2024**

RE: **File No. 11606 – 689 Massachusetts Avenue Limited Renovations- Addendum No. 1**

This addendum is comprised of the following:

1. **Filed Sub Bid Opening Postponed – New Bid Opening Date**
2. **Second Pre-Bid Meeting**
3. **Specification Changes**
4. **Drawing Changes**
5. **Questions and Answers**
6. **Pre-bid sign in sheet (attached)**

Filed Sub Bid Opening Postponed – New Bid Opening Date:

The filed sub bid opening has been postponed. The new bid opening date is June 27, 2024 at 2:00pm

Second Pre-bid Meeting:

Date: June 20, 2024
Time: 1:30 PM
Place: 689 Massachusetts Ave
Cambridge, MA 02139

Specification Changes:

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1. **Remove "(part of 090007) next to 092110 Gypsum Board Assemblies**
2. **Add Appendix A : Limited Hazardous Building Materials Inspection Report**

Division 09 – Finishes

3. **092110 : Remove "(Part of Work of Section 090007 – Painting and Coating, Trade Bid Required)"**

Appendices

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4. Add Appendix A : Limited Hazardous Building Materials Inspection Report

Drawing Changes:

1. Drawing A2.1, A2.2 : Add clarifying note for bidders to "Assume replacement of 25% of ACT for existing damaged, stained or missing tiles, typ." (095110)

2. Drawing A1.0, A1.3, A2.1, A2.2: Clarify note to "Salvage existing ACT at areas required for HVAC scope of work. Replace ACT tiles damaged as part of HVAC scope of work as required" (095110)

The following questions were asked and answered:

Question 1: Section 092110 Gyp Board - is listed as File Sub Bid Trade - This is normally not the case - Please confirm that General contractor is not to include this trade item? Also please clarify that Section 095100 Acoustical Ceiling is not to be provided by File Sub Trade

Response: See revised sections and table of contents attached.

Question 2: General Terms and Condition 00800 page 18 5.9 and 5.10: We are interpreting that this is a Sales tax Exempt Project and that GC are not to carry Building Permit cost- Please confirm our assumption.

Response: Correct, this is tax exempt and all City permitting fees are waived.

Question 3: Please clarify the Project Start Date, Project Finish Date and specific dollar amount of Liquidated Damages that may apply.

Response: Anticipated project start date is on or before seven days following receipt of "Notice to Proceed" and to be substantially completed within four months adjusted depending on lead times for materials. There are no liquidated damages.

Question 4: Drawing A1.3 - refers to Appedix A - Abatement Report - We cannot find the report. Also we need specification of Asebstos Abatement

Response: See Attached Report

All other details remain the same.

Elizabeth Unger
Purchasing Agent **Addendum No. 1**

PROJECT MANUAL

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* Trade Bid Required

END OF TABLE OF CONTENTS

SECTION 092110

GYPSUM BOARD ASSEMBLIES

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:

1. Interior gypsum wallboard and ceilings.
2. Acoustic insulation (sound attenuation batts) in gypsum wallboard assemblies.
3. Non-load-bearing steel framing.
4. Marking and identification for fire- and smoke-partitions
5. Drywall ceilings.
6. Mold and moisture resistant drywall ceilings.
7. Wall and ceiling repair as indicated on Drawings and as agreed to with the Owner and Architect.
8. Wall and ceiling patching and filling Drawings and as agreed to with the Owner and Architect.

B. Sustainable Design Intent: Comply with project requirements intended to achieve sustainable design, measured and documented according to the LEED Green Building Rating System, of the US Green Building Council. Refer to Section 018110 - SUSTAINABLE DESIGN REQUIREMENTS for certification level and certification requirements.

C. Related Work: The following items are not included in this Section and are specified under the designated Sections:

1. Section 079200 – JOINTS AND SEALANTS

1.3 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide fire stop tracks capable of withstanding deflection within limits and under conditions indicated.

1. Design framing system to maintain clearances at openings, to allow for construction tolerances, and to accommodate live load deflection of primary building structure.
2. Provide metal framing engineered to meet code requirements, project requirements, required heights, and the following deflection criteria. For gypsum board assemblies without applied rigid finishes L/240; for gypsum board assemblies with applied rigid finishes such as tile, stone, wood paneling L/360. Lateral load 5 psf except at shafts.

Lateral load at shafts shall be required based on analysis of equipment and systems using shafts

3. Provide fire stop tracks capable of withstanding deflection within limits and under conditions indicated.

B. Marking and Identification for Fire- and Smoke-Partitions: Fire walls, fire barriers, fire partitions, smoke barriers, smoke partitions and other walls required to have protected openings or penetrations shall be effectively and permanently identified with signs or stenciling. Such identification shall:

1. Be located in accessible concealed floor, floor-ceiling or attic spaces; and
2. Locate within 15 feet of end of each wall and repeat at intervals not exceeding 30 feet measured horizontally along the wall or partition; and
3. Include lettering not less than 3 inches in height with a minimum 3/8 inch stroke in contrasting color, incorporating the suggested wording: "FIRE AND/OR SMOKE BARRIER - PROTECT ALL OPENINGS," or other wording.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated.

B. LEED Submittals:

1. MRc2, Building Product Disclosure and Optimization, Environmental Product Declarations (EPD):

a. Option 1: For metal framing, submit industry-wide EPDs.
b. Option 1: For gypsum board and metal framing, submit product-specific Type III EPDs.

2. MRc3, Building Product Disclosure and Optimization, Sourcing of Raw Materials:

a. General: For credit achievement calculation, submit location of products sourced (extracted, manufactured, and purchased), indicating number of miles from the project site.
b. Option 1: For gypsum board, submit corporate sustainability reports (CSR).
c. Option 2, Leadership Extraction Practices:

1) Extended Producer Responsibility: For gypsum board, submit evidence of reclamation and recycling programs.
2) Recycled Content: Submit percentages by weight of postconsumer and preconsumer recycled content for products having recycled content. Include statement indicating costs for each product having recycled content.

3. MRc4, Building Product Disclosure and Optimization, Material Ingredients:

a. Option 1, Material Ingredient Reporting: For gypsum boards and acoustical insulation, submit Health Product Declarations (HPD) or Declare product labels.

4. EQc2, Low-Emitting Materials, General Emissions Evaluation: Building products must be

tested and determined compliant in accordance with California Department of Public Health (CDPH) Standard Method v1.2–2017.

a. For adhesives and sealants, submit test results, including TVOC emissions and VOC content.
b. For gypsum board, acoustic insulation, and joint compounds, submit GreenGuard Gold certification.
c. For wet-applied products, submit volume used.

C. Shop Drawings: If materials and systems other than those specified and those indicated on the Drawings are proposed for use, submit shop drawings signed and sealed by a structural engineer licensed in the jurisdiction of the project certifying proposed systems meet code requirements, project requirements and the following deflection criteria:

1. For gypsum board assemblies without applied rigid finishes L/240; for gypsum board assemblies with applied rigid finishes such as tile, stone, wood paneling L/360. Lateral load 5 psf except at shafts. Lateral load at shafts shall be required based on analysis of equipment and systems using shaft.

D. Samples: Full-size Sample in 12-inch-long length for each trim accessory indicated.

1.5 QUALITY ASSURANCE

A. Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.

B. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

C. Mockups: Before beginning gypsum board installation, install mockups of at least 100 sq. ft. in surface area to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Install mockups for the following:

a. Each level of gypsum board finish indicated for use in exposed locations.
b. Each texture finish indicated.

2. Apply or install final decoration indicated, including painting and wallcoverings, on exposed surfaces for review of mockups.
3. Simulate finished lighting conditions for review of mockups.
4. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.6 STORAGE AND HANDLING

A. Store materials inside under cover and keep them dry and protected against damage from weather, condensation, direct sunlight, construction traffic, and other causes. Stack panels flat to

prevent sagging.

1.7 PROJECT CONDITIONS

A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.

B. Do not install interior products until installation areas are enclosed and conditioned.

C. Do not install panels that are wet, those that are moisture damaged, and those that are mold damaged.

1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 – PRODUCTS

2.1 NON-LOAD-BEARING STEEL FRAMING, GENERAL

A. Framing Members, General: Comply with ASTM C 754 for conditions indicated.

1. Steel Sheet Components: Comply with ASTM C 645 requirements for metal, unless otherwise indicated.
2. Protective Coating: Manufacturer's standard corrosion-resistant zinc coating, unless otherwise indicated.
3. Recycled Content: Use minimum recycled content of 25%.

2.2 SUSPENSION SYSTEM COMPONENTS

A. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.0625-inch-diameter wire, or double strand of 0.0475-inch-diameter wire.

B. Hanger Attachments to Concrete:

1. Anchors: Fabricated from corrosion-resistant materials with holes or loops for attaching wire hangers and capable of sustaining, without failure, a load equal to 5 times that imposed by construction as determined by testing according to ASTM E 488 by an independent testing agency.

a. Type: Postinstalled, expansion anchor.

C. Wire Hangers: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.162-inch diameter.

D. Carrying Channels: Cold-rolled, commercial-steel sheet with a base-metal thickness of 0.0538 inch and minimum 1/2-inch-wide flanges with depth as required for span and loading and indicated on Drawings.

E. Furring Channels (Furring Members): 0.0538-inch bare-steel thickness, with minimum 1/2-inch-

wide flanges, 3/4 inch deep.

F. Grid Suspension System for Ceilings: ASTM C 645, direct-hung system composed of main beams and cross-furring members that interlock.

1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include the following or approved equal:

a. Armstrong World Industries, Inc.; Drywall Grid Systems.
b. Chicago Metallic Corporation; Drywall Furring System.
c. USG Corporation; Drywall Suspension System.

2. Performance Requirements: Ceiling support system shall support a live load of 6 psf minimum at L/240.

2.3 STEEL FRAMING FOR FRAMED ASSEMBLIES

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include the following or approved equal:

1. California Expanded Metals Co. (CEMCO).
2. EB Metal U.S.
3. Marino\WARE.
4. Studco Building Systems.

B. Steel Studs and Runners: ASTM C 645.

1. Minimum Base-Steel (Uncoated) Thickness: 0.0296 inches (20 gage).
2. Dimpled studs meeting performance values for equivalent standard studs are acceptable.

C. Slip-Type Head Joints: Where indicated, provide one of the following:

1. Single Long-Leg Runner System: ASTM C 645 top runner with 2-inch- deep flanges in thickness not less than indicated for studs, installed with studs friction fit into top runner and with continuous bridging located within 12 inches of the top of studs to provide lateral bracing.
2. Double-Runner System: ASTM C 645 top runners, inside runner with 2-inch-deep flanges in thickness not less than indicated for studs and fastened to studs, and outer runner sized to friction fit inside runner.
3. Deflection Track / Deflection Clip: Steel sheet top runner manufactured to prevent cracking of finishes applied to interior partition framing resulting from deflection of structure above; in thickness not less than indicated for studs and in width to accommodate depth of studs.

a. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include the following or approved equal:

1) Brady Innovations; Sliptrack Systems.
2) California Expanded Metals Co. (CEMCO); CST Slotted Tracks.
3) Clark Dietrich Building Systems; MaxTrak Slotted Deflection Track.
4) Steel Network Inc. (The); VertiTrack VT Series.

D. Fire Stop Tracks: Top runner manufactured to allow partition heads to expand and contract with movement of the structure while maintaining continuity of fire-resistance-rated assembly indicated; in thickness compatible with studs and in width to accommodate depth of studs.

1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include the following or approved equal:

a. California Expanded Metals Co. (CEMCO); FAS-TRK 1000 Slotted Tracks.
b. Clark Dietrich Building Systems; BlazeFrame Fire Stop Deflection Track.
c. Fire Trak Corp.; Fire Trak attached to studs with Fire Trak Slip Clip.
d. GCPAT; FlameSafe FlowTrack System.

E. Flat Strap and Backing Plate: Steel sheet for blocking and bracing in length and width indicated.

1. Minimum Base-Metal Thickness: 0.0312 inch (20 gauge).

F. Cold-Rolled Channel Bridging: 0.0538-inch bare-steel thickness, with minimum 1/2-inch- wide flanges.

1. Depth: 1-1/2 inches.
2. Clip Angle: Not less than 1-1/2 by 1-1/2 inches, 0.068-inch-thick, galvanized steel.

G. Hat-Shaped, Rigid Furring Channels: ASTM C 645.

1. Minimum Base-Metal Thickness: 0.0312 inch (20 gauge).
2. Depth: 1-1/2 inches.

H. Resilient Furring Channels: 1/2-inch-deep, steel sheet members designed to reduce sound transmission. Strictly comply with manufacturer's installation instruction.

1. Basis-of-Design: ClarkDietrich RC Deluxe, asymmetrical configuration or approved equal.

I. Resilient Sound Isolation Clips: Provide galvanized steel and resilient material sound-isolation clips, or approved equal:

1. Kinetics Noise Control Co.; IsoMax.
2. PAC International, Inc.; RSIC-1.
3. Pliteq, Inc.; GenieClip RST.
4. Studco Building Systems; Resilmount A237R.

J. Spring Isolation Hangers: Provide galvanized and coated spring hanger system, or approved equal:

1. Kinetics Noise Control Co.; ICW for wood framing, ICC for metal framing.
2. PAC International, Inc.; RSIC--SI-CRC Pro Series.

K. Z-Shaped Furring: With slotted or nonslotted web, face flange of 1-1/4 inches wall attachment flange of 7/8 inch, minimum bare-metal thickness of 0.0179 inch, and depth required to fit insulation thickness indicated.

L. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.

M. Isolation Strip at Exterior Walls: Adhesive-backed, closed-cell foam strips that allow fastener penetration without foam displacement, 1/8 inch thick, in width to suit steel stud size.

2.4 INTERIOR GYPSUM BOARD

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include the following or approved equal:

1. CertainTeed Gypsum, Inc.
2. National Gypsum Company.
3. United States Gypsum Company (USG).

B. Gypsum Wallboard: ASTM C 1396.

1. Basis of Design: USG; SHEETROCK EcoSmart Panels.

    a. MRc2, Building Product Disclosure and Optimization, Environmental Product Declarations (EPD): Type III EPD.
    b. EQc2, Low-Emitting Materials, General Emissions Evaluation: GreenGuard Gold certification.

2. Thickness: 1/2 inch and 5/8” (to match surrounding construction)
3. Long Edges: Tapered.

C. Gypsum Wallboard, Fire-Resistant Type X: ASTM C 1396.

1. Basis of Design: USG; SHEETROCK EcoSmart Panels Firecode X.

    a. MRc2, Building Product Disclosure and Optimization, Environmental Product Declarations (EPD): Type III EPD.
    b. MRc4, Building Product Disclosure and Optimization, Material Ingredients: Health Product Declaration (HPD) or Declare product labels.
    c. EQc2, Low-Emitting Materials, General Emissions Evaluation: GreenGuard Gold certification.

2. Thickness: ½” and 5/8 inch (to match surrounding construction) .
3. Long Edges: Tapered.

D. Moisture- and Mold-Resistant Gypsum Board: ASTM C 1396. With moisture- and mold-resistant core and paper surfaces.

1. Basis of Design: USG; SHEETROCK EcoSmart Mold Tough Firecode X.

    a. MRc2, Building Product Disclosure and Optimization, Environmental Product Declarations (EPD): Type III EPD.
    b. MRc4, Building Product Disclosure and Optimization, Material Ingredients: Declare product labels.
    c. EQc2, Low-Emitting Materials, General Emissions Evaluation: GreenGuard Gold certification.

2. Core: ½ inch and 5/8 inch, Type X (to match surrounding construction)
3. Long Edges: Tapered.
4. Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.

2.5 TRIM ACCESSORIES

A. Interior Trim: ASTM C 1047.

1. Material: Galvanized or aluminum-coated steel sheet or rolled zinc.
2. Shapes:

    a. Cornerbead.
    b. Bullnose bead.
    c. LC-Bead: J-shaped; exposed long flange receives joint compound.
    d. Expansion (control) joint.
    e. Curved-Edge Cornerbead: With notched or flexible flanges.

B. Aluminum Trim: Extruded accessories of profiles and dimensions indicated.

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a. Fry Reglet Corp.
    b. Gordon, Inc.
    c. Pittcon Industries.

2. Aluminum: Alloy and temper with not less than the strength and durability properties of ASTM B 221, Alloy 6063-T5.
3. Finish: Corrosion-resistant primer compatible with joint compound and finish materials specified.
4. Reveal at Masonry: Fry Reglet; DRMF 8221, or approved equal.

2.6 JOINT TREATMENT MATERIALS

A. General: Comply with ASTM C 475/C 475M.

B. Joint Tape:

1. Interior Gypsum Wallboard: Paper.

C. Joint Compound for Interior Gypsum Wallboard and Patching and Repair areas: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.

1. Prefilling: At open joints, rounded or beveled panel edges, and damaged surface areas, use setting-type taping compound.
2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use setting-type taping compound.
3. Fill Coat: For second coat, use setting-type, sandable topping compound.
4. Finish Coat: For third coat, use setting-type, sandable topping compound.
5. Skim Coat: For final coat of Level 4 finish, use setting-type, sandable topping compound.

2.7 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.

B. Laminating Adhesive: Adhesive or joint compound recommended for directly adhering gypsum panels to continuous substrate.

1. Basis of Design: Henkel; OSI F38 Drywall and Panel Adhesive.
2. Low-Emitting Materials: Provide adhesives in compliance with the requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
3. VOC Content: 50 g/L or less.
4. Methylene chloride and perchloroethylene may not be intentionally added to adhesives.
5. Do not use adhesives that contain urea formaldehyde.

C. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.

1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch thick.
2. For fastening cementitious tile backing units, use screws of type and size recommended by panel manufacturer.

D. Acoustic Insulation, Sound Attenuation (Batts) Blankets: ASTM C 665, Type I (blankets without membrane facing) produced by combining thermosetting resins with mineral fibers manufactured from glass, slag wool, or rock wool.

1. Available Products: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. Knauf Insulation; EcoBatt.
b. Owens Corning; EcoTouch SAB.
c. Owens Corning; Thermafiber SAFB FF.
d. Rockwool (formerly Roxul); AFB evo.

2. MRc2, Building Product Disclosure and Optimization, Environmental Product Declarations (EPD).
3. MRc3, Recycled Content: Use minimum recycled content of 25%.
4. MRc4, Building Product Disclosure and Optimization, Material Ingredients: Health Product Declaration (HPD) or Declare product labels.
5. EQc2, Low-Emitting Materials, General Emissions Evaluation: GreenGuard Gold certification.
6. Fire-Resistance-Rated Assemblies: Comply with mineral-fiber requirements of assembly.

E. Acoustical Sealant: Manufacturer's standard nondrying, nonhardening, nonskinning, nonstaining, gunnable, joint sealant complying with ASTM C834. Product effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E90.

1. Available Products, for Concealed and Exposed Joints: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. Pecora Corp.; AC-20 FTR Acoustical and Insulation Sealant.
b. Specified Technologies, Inc.; Smoke N Sound Acoustical Sealant.
c. USG; SHEETROCK Acoustical Sealant.

2. Available Products, for Concealed Joints Only: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. OSI (a division of Henkel); Pro-Series SC-175.
b. Pecora Corp.; BA-98.
c. Tremco, Inc.; Tremco Acoustical/Curtainwall Sealant.

3. Low-Emitting Materials: Provide sealants in compliance with the requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
4. VOC Content, Architectural Sealants: 250 g/L or less.
5. Methylene chloride and perchloroethylene may not be intentionally added to sealants.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames and framing, for compliance with requirements and other conditions affecting performance.

B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 SCOPE - GENERAL

A. PATCHING:

1. As indicated in Section 3.8 and in the Drawing the Contractor shall provide and install wall and ceiling patching. The quantity included in the scope of work shall be 100 square feet of total area. Work scope beyond this scope area and as agreed to with the Owner shall be in accordance with the Unit Price value provided with the Contractor's Bid Form. Refer to Unit Prices Section 012200.

B. PATCHING:

1. As indicated in Section 3.9 and in the Drawings the Contractor shall provide and install wall and ceiling repair. The quantity included in the scope of work shall be two-hundred 250 square feet of total area. . Work scope beyond this scope area and as agreed to with the Owner shall be in accordance with the Unit Price value provided with the Contractor's Bid Form. Refer to Unit Prices Section 012200.

3.3 INSTALLATION, GENERAL

A. Installation Standard: ASTM C 754. Also comply with requirements in ASTM C 840 that apply to framing installation.

B. Install supplementary framing, and blocking to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction.

3.4 APPLYING AND FINISHING PANELS, GENERAL

A. Comply with ASTM C 840.

B. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch of open space between panels. Do not force into place.

C. Locate edge and end joints over supports where intermediate supports or gypsum board back blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.

D. Form control and expansion joints with space between edges of adjoining gypsum panels.

E. Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced internally.

1. Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. in area.
2. Fit gypsum panels around ducts, pipes, and conduits.
3. Where partitions intersect structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by structural members; allow 1/4- to 3/8-inch- wide joints to install sealant.

F. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except floors. Provide 1/4- to 1/2-inch- wide spaces at these locations, and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.

G. Attachment to Steel Framing: Attach panels so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.

3.5 APPLYING INTERIOR GYPSUM BOARD

A. Single-Layer Application:

1. On partitions/walls, apply gypsum panels to minimize end joints.
2. On Z-furring members, apply gypsum panels vertically (parallel to framing) with no end joints. Locate edge joints over furring members.
3. Fastening Methods: Apply gypsum panels to supports with steel drill screws.

B. Multilayer Application:

1. On partitions/walls, apply gypsum board indicated for base layers and face layers vertically (parallel to framing) with joints of base layers located over stud or furring member and face-layer joints offset at least one stud or furring member with base-layer joints, unless otherwise indicated or required by fire-resistance-rated assembly. Stagger joints on opposite sides of partitions.
2. On Z-furring members, apply base layer vertically (parallel to framing) and face layer either vertically (parallel to framing) or horizontally (perpendicular to framing) with vertical joints offset at least one furring member. Locate edge joints of base layer over furring members.
3. Fastening Methods: Fasten base layers and face layers separately to supports with screws.

C. Laminating to Substrate: Where gypsum panels are indicated as directly adhered to a substrate (other than studs, joists, furring members, or base layer of gypsum board), comply with gypsum board manufacturer's written recommendations and temporarily brace or fasten gypsum panels until fastening adhesive has set.

D. Curved Surfaces:

1. Install panels horizontally (perpendicular to supports) and unbroken, to extent possible, across curved surface plus 12-inch-long straight sections at ends of curves and tangent to

them.

2. For double-layer construction, fasten base layer to studs with screws 16 inches o.c. Center gypsum board face layer over joints in base layer, and fasten to studs with screws spaced 12 inches o.c.

3.6 INSTALLING TRIM ACCESSORIES

A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.

B. Control Joints: Install control joints according to ASTM C 840 and in specific locations approved by Architect for visual effect.

C. Interior Trim: Install in the following locations:

1. Cornerbead: Use at outside corners, unless otherwise indicated.
2. LC-Bead: Use at exposed panel edges.
3. Curved-Edge Cornerbead: Use at curved openings.

D. Aluminum Trim: Install in locations indicated on Drawings.

3.7 FINISHING GYPSUM BOARD

A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.

B. Prefill open joints, rounded or beveled edges, and damaged surface areas.

C. Apply joint tape over gypsum board joints, except those with trim having flanges not intended for tape.

D. Gypsum Board Finish Levels: Finish panels to levels indicated below:

1. Level 1: Ceiling plenum areas and concealed areas not exposed to view.
2. Level 2: Panels that are substrate for tile.
3. Level 3: Not Used.
4. Level 4: Panel surfaces that will be exposed to view (typical panels).
5. Level 5: Where indicated on Drawings.

E. Cementitious Tile Backing Units: Finish according to manufacturer's written instructions.

3.8 PATCHING:

A. Remove all existing anchors, inserts, hangings, devices, and other wall materials that will interfere with providing a smooth and even wall surface for the application of painted finishes.

B. Provide patching at all GWB or plaster walls and ceilings defined as areas of 12 square-inches or less. Areas requiring patching in excess of 12 square-inches may require repair as indicated in Section 3.9.

Patching is required at all holes, cracks, and surface damage from the removal of existing anchors, devices, and other wall materials inserts, as defined above.
Refer to Section 3.7 for finishing requirements at patching areas.

3.9 REPAIRS:

A. Areas requiring Repairs shall be as indicated on the Drawings, as agreed to with the Owner and Architect, and as required to provide a smooth, even, surface for the application of a painted finish on ceilings and walls. Repairs are required at walls and ceilings damaged by water intrusion, deterioration, cracked, and areas damaged by the removal of the existing resilient wall base, or otherwise beyond the limits described in PATCHING, Section 3.8 and as agreed to with the Owner and Architect.

B. Repair areas require the removal and disposal of damaged, loose, and protruding paint, plaster or GWB materials that will not otherwise provide a sound surface for the support of a plaster fill or laminated or anchored GWB.

C. Water damaged wall and ceiling areas may require the addition of a GWB layer at the Contractor's option in agreement with the Owner to provide the specified smooth surface finish. The GWB layer shall be anchored or laminated per 2.5.C to the existing wall and all edges finished in the specified trim accessory where abutting non-similar materials. As an option to the GWB layer addition the damaged plaster or GWB may be removed, and the resulting areas filled with plaster or skim coated to provide the specified smooth surfaces.

D. Cracked wall and ceiling areas shall be gouged out to a solid adherent surface depth and filled with the specified joint compound and reinforcing mesh or tape. Repair shall be blended with surrounding wall and ceiling surfaces to provide a smooth, even, invisible transition to the surrounding surfaces.

3.10 PROTECTION

A. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.

B. Remove and replace panels that are wet, moisture damaged, or exhibit mold growth. Repair of damaged panels in place is not acceptable.

1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION

Limited Hazardous Building Materials Inspection Report

689 Massachusetts Avenue
Cambridge, Massachusetts

CambridgeSeven
Cambridge, Massachusetts

May 2023

FUSS & O'NEILL

Fuss & O'Neill, Inc.
108 Myrtle Street, Suite 502
Quincy, MA 02171

Project No. 20230186.A20

FUSS & O'NEILL

May 15, 2023

Ms. Stefanie Greenfield
Principal
CambridgeSeven
1050 Massachusetts Ave.
Cambridge, MA 02138

RE: Limited Hazardous Building Materials Inspection
Commercial Property
689 Massachusetts Avenue, Cambridge, Massachusetts
Fuss & O'Neill Project No. 20230186.A20

Dear Ms. Greenfield

Enclosed is the Limited Hazardous Building Materials Inspection Summary Report for the inspection conducted at 689 Massachusetts Avenue located in Cambridge, Massachusetts.

On April 25 and 26, 2023, Fuss & O'Neill, Inc. state-certified Asbestos Inspectors performed a limited asbestos inspection, a lead-based paint screening, a fluorescent light ballast and mercury-containing equipment inventory, and a presumed polychlorinated biphenyl (PCB)-containing source building materials inventory prior to proposed renovation activities.

The information summarized in this report is solely for the abovementioned materials only. The work was performed in accordance with our revised written scope of services dated March 17, 2023

If you should have any questions regarding the contents of the enclosed report, please do not hesitate to contact me at 401-595-8270. Thank you for this opportunity to have served your environmental needs.

Sincerely,

Jonathan L. Hand
Project Manager

Enclosure

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1 Introduction

On April 25 and 26, 2023, Fuss & O'Neill, Inc. (Fuss & O'Neill) representatives, Ms. Anna Gibbons and Mr. Tylar Pelletier, performed a limited hazardous building materials inspection prior to proposed renovation activities at 689 Massachusetts Avenue located in Cambridge, Massachusetts (the "Site").

A limited hazardous building materials inspection was previously conducted at the Site and applicable information has been utilized during this inspection. Existing documents include a "Limited Hazardous Building Materials Inspection" report prepared by Fuss & O'Neill dated March 2023. Relevant results and conclusions from this report have been included.

1.1 Scope of Work

The work was performed for CambridgeSeven (the "Client") in accordance with our revised written scope of services dated March 17, 2023. This report is subject to the limitations presented in *Appendix A*. The scope of work included the following:

- Limited Asbestos-Containing Materials (ACM) Inspection;
- Lead-Based Paint (LBP) Screening;
- Fluorescent Light Ballast and Mercury-Containing Equipment Inventory; and
- Polychlorinated Biphenyl (PCB)-Source Building Materials Inventory (Visual Only).

Limited destructive investigations were conducted at the Client's request. Specific concealed areas that were inspected included the following:

Lower Level – Mechanical Spaces:

- Electrical equipment and related items
- Mechanical equipment and insulation
- Elevator Pit areas

Level One – Existing Bank Area

- Porcelain tile, grout, and setting material(s)

Roof and Penthouse

- Elevator Equipment
- Headhouse siding – beneath metal siding with paint
- Headhouse roofing material and insulation
- Mechanical equipment (note equipment may be removed for building electrification) + mechanical at lower level roofs
- Roof Membrane & Insulation
- Roof flashing materials (multiple) & Sealants

Exterior:

- Sealants – windows and other areas

- Crack areas that have been repaired
- Sidewalk clock paint
- Painted brick at north addition.

Fuss & O'Neill retained Silktown Roofing of Manchester, Connecticut (Silktown) to perform the roof cores and subsequently patch core locations. Silktown is a Massachusetts-licensed professional roofing contractor.

We excluded collection and analysis of suspect materials for polychlorinated biphenyls (PCBs) during this inspection. Sampling for PCBs is presently not mandated by the United States Environmental Protection Agency (EPA); however, significant liability risk for disposing of PCB-containing wastes exists. Recent knowledge of PCBs within these matrices has become more prevalent, especially with remediation contractors, waste haulers, and disposal facilities. Many property owners have become subject to large changes in schedule, scope, and costs as a result of failure to identify PCBs prior to renovation or demolition activities. For the purpose of this inspection, potential PCB-containing source building materials (as recommended by the EPA) have been presumed to contain regulated concentrations of PCBs.

1.2 Building Description

The Site building is a three-story stone-veneer structure with a building footprint of approximately 33,450 square feet. It was reportedly constructed in 1904 and the most recent renovation date is unknown. Interior finishes consist of vinyl floor tile, sheet flooring, ceramic tile, plaster wall systems, and suspended ceiling systems. Exterior finishes include stone masonry, brick, and a tar-gravel roofing system.

2 Limited Asbestos Inspection

A property owner or operator must ensure that a thorough asbestos inspection is performed prior to possible disturbance of suspect ACM during renovation or demolition activities. This is a requirement of the United States Environmental Protection Agency (EPA) National Emission Standards for Hazardous Air Pollutants (NESHAP) regulation located at Title 40 CFR, Part 61, Subpart M.

On April 25 & 26, 2023, Ms. Gibbons and Mr. Pelletier of Fuss & O'Neill conducted the limited inspection of visible and accessible areas. Ms. Gibbons and Mr. Pelletier are both Commonwealth of Massachusetts Department of Labor Standards (MADLS)-licensed Asbestos Inspectors. Refer to *Appendix B* for copies of each Asbestos Inspector's license and EPA accreditation.

2.1 Methodology

The inspection was conducted by visually inspecting for suspect ACM and touching each of the suspect ACM. The suspect ACM were grouped into three EPA NESHAP categories: Friable; Category I Non-Friable, and Category II Non-Friable.

- Friable is defined as material that contains greater than one percent (> 1%) asbestos that, when dry, **can** be crumbled, pulverized, or reduced to powder by hand pressure.

- Category I Non-Friable refers to material that contains > 1% asbestos (i.e., packings, gaskets, resilient floor coverings, and asphalt roofing products) that when dry **cannot** be crumbled, pulverized, or reduced to powder by hand pressure.
- Category II Non-Friable refers to any non-friable material excluding Category I materials that contain > 1% asbestos that when dry **cannot** be crumbled, pulverized, or reduced to powder by hand pressure.

The suspect ACM were also categorized into their applications including: Thermal System Insulation (TSI), Surfacing ACM, and Miscellaneous ACM. TSI includes those materials used to prevent heat loss/gain or water condensation on mechanical systems. Examples of TSI include, but are not limited to, pipe insulation, boiler insulation, duct insulation, mudded pipe fitting insulation, etc. Surfacing ACM includes those ACM that are sprayed-on, troweled-on, or otherwise applied to an existing surface. Surfacing ACM is commonly used for fireproofing, decorative, and acoustical applications. Miscellaneous ACM include those not listed as TSI or Surfacing ACM, such as sheet flooring, floor tiles, ceiling tiles, caulking, mastics, construction adhesives, etc.

The EPA recommends collecting suspect ACM samples in a manner sufficient to determine asbestos content and separating suspect ACM into homogenous material types (similar in color, texture, and date of application). The EPA NESHAP regulation does not specifically identify a minimum number of samples to be collected for each homogeneous material, but the NESHAP regulation does recommend the use of sampling protocols included in EPA Title 40 CFR, Part 763, Subpart E: Asbestos Hazard Emergency Response Act (AHERA).

The EPA AHERA regulation requires a specific number of samples be collected based on the material type and quantity present. This regulation includes the following protocol:

1. Surfacing Materials (e.g., plaster, spray-applied fireproofing, etc.) shall be collected in a randomly-distributed manner representing each homogenous area based on the overall quantity as follows:

    a. At least three (3) bulk samples collected from each homogenous area that is less than or equal to 1,000 square feet.
    b. At least five (5) bulk samples collected from each homogenous area that is greater than 1,000 square feet but less than or equal to 5,000 square feet.
    c. At least seven (7) bulk samples collected from each homogenous area that is greater than 5,000 square feet.

2. Thermal System Insulation (e.g., pipe insulation, tank insulation, etc.) shall be collected in a randomly-distributed manner representing each homogenous area. At least three (3) bulk samples shall be collected of each homogenous material type. Also, at least one (1) bulk sample of any patching material applied to TSI, presuming the patched area is less than six linear or square feet, shall be collected.

3. Miscellaneous Materials (e.g., floor tile, mastic, cement board, caulking, glazing, etc.) should have at least two (2) bulk samples collected of each homogenous material type. Sample collection shall be conducted in a manner sufficient to determine the asbestos content of the homogenous material type as determined by the inspector.

Suspect ACM samples were collected, and proper chain-of-custody forms were prepared for transmission of collected samples to EMSL Analytical, Inc. (EMSL), for analysis. EMSL is a Commonwealth of Massachusetts-licensed and American Industrial Hygiene Association (AIHA)-accredited Asbestos Analytical Laboratory. Initial asbestos sample analysis was conducted using the EPA Interim Method for the Determination of Asbestos in Bulk Building Materials (EPA/600/R-93/116) via Polarized Light Microscopy with Dispersion Staining (PLM/DS). Analysis was stopped upon receipt of the first positive asbestos result of each different suspect homogenous material type.

The EPA recommends that non-friable, organically-bound (NOB) materials (e.g., asphaltic-based materials, adhesives, caulking, etc.) undergo further confirmatory analysis utilizing Transmission Electron Microscopy (TEM). Ten (10) of the collected NOB samples were analyzed by TEM.

If samples of suspect ACM could not be collected, these materials were assumed to contain asbestos and quantities were approximated.

2.2 Results

The EPA, the Occupational Safety and Health Administration (OSHA), and the MADLS define a material that contains > 1% asbestos (by PLM/DS analysis) as an ACM. The Massachusetts Department of Environmental Protection (MassDEP) further defines ACM as materials containing greater than or equal to (≥) 1% asbestos. MassDEP also defines an asbestos-containing waste material (ACWM) as:

- ACM removed during renovation or demolition activities;
- Materials contaminated by an ACM during renovation or demolition activities; or
- ACM on and/or in facility components that are inoperable or have been taken out of service.

The MassDEP further defines waste material containing any amount of asbestos as an ACWM, which must be managed and disposed of as such. Materials that are identified as "none detected" are specified as not containing asbestos.

Utilizing the EPA, OSHA, MADLS, and MassDEP protocols and criteria, the following materials were determined to be **ACM**:

- 9" x 9" Brown Floor Tile
- 24" x 18" Black Floor Tile
- Black Floor Tile Mastic
- Black Stick Pin Adhesive
- Black Asphaltic Built-Up Roofing Material
- White Exterior Window Caulking
- Black Roofing Paper-Like Material on Lower Roof with Original Copper Components
- White Interior Window Glazing Compound
- Brown Mastic on Stair Tread

The white exterior joint/ door caulking at storefront window system was determined to be **ACWM**.

Refer to **Table 1**, attached, for the detailed list of ACM, ACWM, and non-ACM identified by sample identification, material type, sample location, and asbestos content as part of this inspection. Refer to **Table 2**, attached, for the identified ACM and ACWM inventory. A sample locations diagram has been included in this report.

Refer to *Appendix C* and *Appendix D* for the asbestos laboratory analytical reports with chain-of-custody forms and sample locations diagram, respectively.

2.3 Conclusions and Recommendations

Based on visual observations, sample collection, and laboratory analysis, ACM/ACWM were identified at the Site.

Prior to disturbance, ACM and ACWM that would likely be impacted by the proposed renovation activities must first be abated by a MADLS-licensed Asbestos Abatement Contractor. This is a requirement of MADLS, MassDEP, and EPA NESHAP regulations governing asbestos abatement.

Due to the inability to effectively separate some types of multi-layered ACM from non-ACM, these materials are considered asbestos-contaminated and must be managed as ACWM for removal and disposal purposes.

If suspect materials are encountered during renovation activities that are not identified in this report as being non-ACM, they shall be assumed to be ACM until laboratory analysis indicates otherwise.

If ACM are to remain at the Site following renovation/demolition activities, Fuss & O'Neill recommends the development of a written Operations and Maintenance Program (to manage ACM in place) in accordance with OSHA regulations.

This report is not intended to be utilized as a bidding or a project specification document. This report is designed to aid the building owner, architect, construction manager, general contractor(s), and asbestos abatement contractor(s) in locating ACM and ACWM.

3 Lead-Based Paint Screening

On April 25 and 26, 2023, Ms. Gibbons and Mr. Pelletier of Fuss & O'Neill performed an LBP screening associated with painted building components at the Site that may be disturbed during renovation activities. Fuss & O'Neill used an X-ray fluorescence (XRF) spectrum analyzer to perform the LBP screening. The screening was conducted in accordance with generally-accepted industry standards for non-residential (i.e., not child-occupied) buildings.

3.1 Methodology

A Radiation Monitoring Device Model LPA-1 (Serial Number 3241R) was utilized for the LBP screening. The instrument was calibrated according to the manufacturer's Performance Characteristic Sheet (PCS) prior to each use.

For the purpose of this LBP screening, representative, coated building components were tested for LBP. Individual repainting efforts are not always discernable in such a limited program. LBP issues involving properties that are not residential are only regulated to a limited degree for worker protection relating to LBP-disturbing work activities and waste disposal.

Worker protection is regulated by OSHA regulations, as well as MADLS regulations. These regulations include air monitoring of workers to determine exposure levels when disturbing lead-containing paint. A LBP screening cannot determine a safe level of lead, but is intended to provide guidance for implementing industry standards for lead in paint at identified locations. Contractors may better determine worker exposure to airborne lead by understanding the different concentrations of LBP on representative components and surfaces. Air monitoring can then be performed during activities that disturb paint on representative surfaces.

The EPA Resource Conservation and Recovery Act (RCRA) and MassDEP regulate lead-containing waste disposal. If lead is determined to be present, representative composite samples of the anticipated waste stream must be collected and analyzed using the Toxicity Characteristic Leaching Procedure (TCLP). The results are compared to a threshold value of 5.0 milligrams per liter (mg/L). If TCLP sample analytical results exceed this value, the waste is characterized as hazardous lead waste. If the result is below the threshold value, the waste material is not considered hazardous and may be disposed of as construction and demolition debris.

A level of paint exceeding 1.0 milligram of lead per square centimeter (mg/cm^2) of surface area is considered toxic or dangerous by EPA and the Massachusetts Department of Public Health (MADPH) child-occupied residential standards. For the purpose of this screening, the level of 1.0 mg/cm^2 has been utilized as a guide to segregate coated building materials from general demolition debris for disposal purposes.

3.2 XRF Screening Results

The LBP screening indicated consistent painting trends associated with representative building components that may be impacted by potential renovation activities. The following building components were determined to contain levels of lead ≥ 1.0 mg/cm^2:

Basement:

- White Plaster Wall - Stairway
- White Plaster Wall – Stairway Landing
- Light Pink Plaster Wall – Storage Room
- Cream Metal Vault Panel – Open Office
- White Plaster Wall – Inside Vault
- Teal Plater Wall - Storage
- White Brick Wall – Mechanical Room
- Grey Brick Wall – Mechanical Room
- Grey-Blue Brick Wall – Boiler Room

1st Floor:

- Pink Metal Interior Door – Main Bank Vault with Stairs
- Pink Metal Stairs – Main Bank Vault with Stairs
- Stairs Pink Plaster Wall – Main Bank Vault without Stairs

- Off-White Plaster Wall – Vault #1
- Grey Metal Door Frame – Vault #1
- Off-White Cinder Block Wall – Vault #2
- Off-White Metal Stairs – Vault #2
- Off-White Metal Door – Vault #3

Refer to *Appendix E* for the XRF lead-based paint screening field data sheets.

3.3 Discussion

OSHA published a Lead in Construction Standard (OSHA Lead Standard) Title 29 CFR, Part 1926.62 in May of 1993. This Standard sets no limit for the content of lead in paint below which the OSHA standards do not apply. The OSHA Lead Standards are task-based and are also based on airborne exposures and blood lead levels.

The results of this LBP screening are intended to provide guidance to contractors for occupational lead exposure controls. Building components coated with lead levels above industry standards may cause exposures to lead above OSHA standards during proposed demolition/renovation activities. The results of this screening are also intended to provide insight into waste disposal requirements, in accordance with EPA RCRA regulations. At the Client's request, a TCLP sample to characterize the expected waste that may result from possible selective demolition/renovation activities was not collected as part of this inspection.

3.4 Conclusions and Recommendations

Based on our LBP screening results, LBP was identified on coated building components located at the Site.

Contractors must be made aware that OSHA has not established a level of lead in a material below which OSHA Title 29 CFR, Part 1926.62 does not apply. Contractors shall comply with exposure assessment criteria, interim worker protection, and other requirements of the regulation as necessary to protect workers during any renovation and/or demolition activities that will impact LBP.

If disturbed by renovation activities, LBP-coated building components should be segregated from the general demolition waste stream for sample collection and analysis by TCLP to determine proper off-site waste disposal. If disturbed and managed off-site, non-porous LBP-coated building materials (i.e., metals) may be segregated and recycled as scrap metal. Metal LBP-coated building components cannot be subject to grinding, sawing, drilling, sanding, or torch cutting.

The building is not considered a "child-occupied facility" and therefore, it is not subject to lead safe renovation requirements.

The building is presently characterized as a commercial property, which is not subject to the MADPH Childhood Lead Poisoning Prevention Program (CLPPP) Regulation 105 CMR 460.000. The Site may be renovated using procedures required in accordance with OSHA Title 29 CFR, Part 1926.62 and MADLS Regulation 454 CMR 22.11. In addition, the building is not considered a "child-occupied facility" and therefore, is not subject to MADPH CLPPP regulations.

Note that the information contained in this report concerning the presence or absence of lead in paint does not constitute a comprehensive lead inspection in accordance with MADPH CLPPP regulations. The screened painted surfaces represent only a portion of those surfaces that would be screened to determine whether the premises are in compliance with the aforementioned regulations, which are specific to a child-occupied residence only, and not applicable to buildings of this type and current use.

4 Fluorescent Light Ballasts and Mercury-Containing Equipment

4.1 Fluorescent Light Ballasts

Fluorescent light ballasts manufactured prior to 1979 may contain capacitors that contain PCBs. Light ballasts installed as late as 1985 may contain PCB capacitors. Fluorescent light ballasts that are not labeled as "No PCBs" must be assumed to contain PCBs unless proven otherwise by quantitative analysis. Capacitors in fluorescent light ballasts labeled as non-PCB-containing may contain diethylhexyl phthalate (DEHP). DEHP was the primary substitute to replace PCBs for small capacitors in fluorescent lighting ballasts in use until 1991. DEHP is a toxic substance, a suspected carcinogen, and is listed under RCRA and the Superfund Law as a hazardous waste. Therefore, Superfund liability exists for landfilling both PCB- and DEHP-containing light ballasts. These listed materials are considered hazardous waste under RCRA and require special handling and disposal considerations.

4.2 Mercury-Containing Equipment

Fluorescent lamps/tubes are presumed to contain mercury vapor, which is a hazardous substance to both human health and the environment. Thermostatic controls and electrical switch gear may contain a vial or bulb of liquid mercury associated with the control. Mercury-containing equipment is regulated for proper disposal by EPA RCRA regulations.

4.3 Results

On April 25 and 26, 2023, Ms. Gibbons and Mr. Pelletier of Fuss & O'Neill performed a visual inspection of representative fluorescent light fixtures in-place to identify possible PCB-containing ballasts in the building. The inspection involved visually inspecting labels on representative light ballasts to identify manufacture dates and labels indicating "No PCBs". Ballasts manufactured after 1991 were not listed as PCB- or DEHP-containing ballasts and were not quantified for disposal. An in-place inventory of the fluorescent lamps/tubes and other mercury-containing equipment was completed concurrently. Refer to **Table 3**, attached, for an inventory of fluorescent light ballast and mercury-containing equipment identified during the inspection.

4.4 Conclusions and Recommendations

PCB and DEHP-containing fluorescent light ballasts and mercury-containing equipment were identified in the building during this inspection.

Fluorescent light ballasts marked as "No PCBs" with date labels indicating manufacture prior to 1991 are presumed to contain DEHP. DEHP-containing ballasts must be segregated for proper packaging, transporting, and disposal as non-PCB hazardous waste. Note that disposal requirements for DEHP-containing ballasts are slightly varied, and disposal costs are slightly less, when compared to PCB-containing light ballasts.

According to the EPA, mercury-containing equipment is characterized as a hazardous waste and mercury lamps/tubes are characterized as a Universal Waste. The mercury-containing equipment and fluorescent lamps/tubes identified in the proposed renovation areas must be recycled, reclaimed, or disposed as hazardous waste or Universal Waste prior to disturbance.

5 Presumed Polychlorinated Biphenyls (PCBs) Source Building Materials

5.1 Background

On April 25 and 26, 2023, Ms. Gibbons and Mr. Pelletier of Fuss & O'Neill completed a presumed PCB-containing source building materials inventory.

Sample collection and analysis of building materials for PCBs is presently not mandated by the EPA. However, significant liability risk exists for improperly disposing of PCB-containing waste materials. Recent knowledge and awareness of PCBs within matrices such as caulking, glazing compounds, paints, adhesives, and ceiling tiles has become more prevalent, especially among remediation contractors, waste haulers, and disposal facilities. The EPA recommends sample collection and analysis of caulking and glazing compounds installed between 1950 and 1980 to determine PCB concentration.

The EPA requirements apply and require removal of PCBs once identified, regardless of project intent as an unauthorized use of PCBs. Once it is determined that PCBs are present and a building is to remain for re-use, the EPA still requires PCB-containing material removal. If PCBs are present at certain concentrations, additional sampling and analysis of adjacent surfaces in contact with PCB sources, or which may have been contaminated from a source of PCBs (e.g., masonry, soil), must also be performed or remediated.

EPA requirements apply only if PCBs are present in concentrations above a specified level. Presently, PCB-containing materials at concentrations equal to or greater than (≥) 50 part per million (ppm), or equivalent units of milligrams per kilogram (mg/kg), are regulated. Note materials containing ≥ 1, ppm but less than (<) 50 ppm may also be regulated unless proven to be an "Excluded PCB Product". The definition of an Excluded PCB Product includes those products, or source of the products, containing < 50 ppm concentration PCBs that were legally manufactured, processed, distributed in commerce, or used before October 1, 1984.

5.2 Results

Utilizing the EPA guidelines, a presumed PCB-containing source building materials inventory by material type, location, and quantity is included in **Table 4**, attached.

5.3 Conclusions and Recommendations

Identified materials should be presumed to contain regulated concentrations (≥ 50 ppm) of PCBs until sample analysis indicates otherwise. These materials should be removed and disposed of at an EPA-approved facility as regulated PCB Bulk Product Waste.

Report prepared by Environmental Technician, Anna Gibbons.

Reviewed by:

Jonathan L. Hand
Project Manager

Neal P. McMorrow
Assistant Project Manager

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Tables

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Table 1
Suspect Asbestos-Containing Materials Laboratory Analytical Data Summary

689 Massachusetts Avenue
Cambridge, Massachusetts

CambridgeSeven
May 2023
Fuss & O'Neill Reference No. 20230186.A20

Sample Number	Material Type	NESHAP Category	Sample Location	Result	Comments
01A-AG-042523	**9" x 9" Brown Floor Tile**	**Cat 1 NF**	**Basement**	**3.0% Chrysotile**	
01B-AG-042523	**9" x 9" Brown Floor Tile**	**Cat 1 NF**	**Basement**	**Pos Stop**	
02A-AG-042523	**Black Floor Tile Mastic**	**Cat 2 NF**	**Basement**	**8.0% Chrysotile**	**Associated with Sample Group 01**
02B-AG-042523	**Black Floor Tile Mastic**	**Cat 2 NF**	**Basement**	**Pos Stop**	
03A-AG-042523	**24" x 18" Black Floor Tile**	**Cat 1 NF**	**Basement**	**3.0% Chrysotile**	
03B-AG-042523	**24" x 18" Black Floor Tile**	**Cat 1 NF**	**Basement**	**Pos Stop**	
04A-AG-042523	**Black Floor Tile Mastic**	**Cat 2 NF**	**Basement**	**8.0% Chrysotile**	**Associated with Sample Group 03**
04B-AG-042523	**Black Floor Tile Mastic**	**Cat 2 NF**	**Basement**	**Pos Stop**	
05A-AG-042523	9" x 9" Gray with White Streaks Floor Tile	Non-ACM	Basement	ND	
05B-AG-042523	9" x 9" Gray with White Streaks Floor Tile	Non-ACM	Basement	ND	
06A-AG-042523	Brown Floor Tile Mastic	Non-ACM	Basement	ND	Associated with Sample Group 05
06B-AG-042523	Brown Floor Tile Mastic	Non-ACM	Basement	ND	
07A-AG-042523	2' x 4' White Dot & Fissure Ceiling Tile	Non-ACM	Basement	ND	
07B-AG-042523	2' x 4' White Dot & Fissure Ceiling Tile	Non-ACM	Basement	ND	
08A-AG-042523	2' x 2' White Dot & Fissure Ceiling Tile	Non-ACM	Basement	ND	
08B-AG-042523	2' x 2' White Dot & Fissure Ceiling Tile	Non-ACM	Basement	ND	
09A-AG-042523	12" x 12" Off-White Floor Tile	Non-ACM	Basement	ND	
09B-AG-042523	12" x 12" Off-White Floor Tile	Non-ACM	Basement	ND	
10A-AG-042523	Black Floor Tile Mastic	Non-ACM	Basement	ND	Associated with Sample Group 09
10B-AG-042523	Black Floor Tile Mastic	Non-ACM	Basement	ND	
11A-AG-042523	Gray Thin-Set Mortar on Beige Ceramic Tile	Non-ACM	Basement	ND	
11B-AG-042523	Gray Thin-Set Mortar on Beige Ceramic Tile	Non-ACM	Basement	ND	
12A-AG-042523	Gray Grout on Beige Ceramic Tile	Non-ACM	Basement	ND	
12B-AG-042523	Gray Grout on Beige Ceramic Tile	Non-ACM	Basement	ND	
13A-AG-042523	White Wall Skim Coat Plaster	Non-ACM	Basement	ND	
13B-AG-042523	White Wall Skim Coat Plaster	Non-ACM	Basement	ND	
13C-AG-042523	White Wall Skim Coat Plaster	Non-ACM	Basement	ND	
13D-AG-042523	White Wall Skim Coat Plaster	Non-ACM	1st Floor	ND	
13E-AG-042523	White Wall Skim Coat Plaster	Non-ACM	1st Floor	ND	
13F-AG-042523	White Wall Skim Coat Plaster	Non-ACM	Stairway to Penthouse	ND	
13G-AG-042523	White Wall Skim Coat Plaster	Non-ACM	Stairway to Penthouse	ND	

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Table 1
Suspect Asbestos-Containing Materials Laboratory Analytical Data Summary

Sample Number	Material Type	NESHAP Category	Sample Location	Result	Comments
14A-AG-042523	Gray Wall Rough Coat Plaster	Non-ACM	Basement	ND	
14B-AG-042523	Gray Wall Rough Coat Plaster	Non-ACM	Basement	ND	
14C-AG-042523	Gray Wall Rough Coat Plaster	Non-ACM	Basement	ND	
14D-AG-042523	Gray Wall Rough Coat Plaster	Non-ACM	1st Floor	ND	
14E-AG-042523	Gray Wall Rough Coat Plaster	Non-ACM	1st Floor	ND	
14F-AG-042523	Gray Wall Rough Coat Plaster	Non-ACM	Stairway to Penthouse	ND	
14G-AG-042523	Gray Wall Rough Coat Plaster	Non-ACM	Stairway to Penthouse	ND	
15A-AG-042523	White Troweled on Skim Coat Plaster on I-Beam	Non-ACM	Basement	ND	
15B-AG-042523	White Troweled on Skim Coat Plaster on I-Beam	Non-ACM	Basement	ND	
15C-AG-042523	White Troweled on Skim Coat Plaster on I-Beam	Non-ACM	Basement	ND	
16A-AG-042523	Gray Duct-Seam Sealant	Non-ACM	Basement Ductwork	ND	
16B-AG-042523	Gray Duct-Seam Sealant	Non-ACM	Basement Ductwork	ND	
17A-AG-042523	White Parging Cement	Non-ACM	Basement	ND	
17B-AG-042523	White Parging Cement	Non-ACM	Basement	ND	
18A-AG-042523	Black Dampproofing Mastic on Brick	Non-ACM	Basement	ND	
18B-AG-042523	Black Dampproofing Mastic on Brick	Non-ACM	Basement	ND	
19A-AG-042523	3" Black Baseboard	Non-ACM	Basement	ND	
19B-AG-042523	3" Black Baseboard	Non-ACM	Basement	ND	
20A-AG-042523	Yellow Baseboard Mastic	Non-ACM	Basement	ND	Associated with Sample Group 19
20B-AG-042523	Yellow Baseboard Mastic	Non-ACM	Basement	ND	
21A-AG-042523	2' x 2' White Textured Ceiling Tiles	Non-ACM	1st Floor	ND	
21B-AG-042523	2' x 2' White Textured Ceiling Tiles	Non-ACM	1st Floor	ND	
22A-AG-042523	Blue Pattern Linoleum Sheet Floor	Non-ACM	1st Floor	ND	
22B-AG-042523	Blue Pattern Linoleum Sheet Floor	Non-ACM	1st Floor	ND	
23A-AG-042523	Tan Floor Mastic	Non-ACM	1st Floor	ND	Associated with Sample Group 22
23B-AG-042523	Tan Floor Mastic	Non-ACM	1st Floor	ND	
24A-AG-042523	3" Black Baseboard	Non-ACM	1st Floor	ND	
24B-AG-042523	3" Black Baseboard	Non-ACM	1st Floor	ND	
25A-AG-042523	Yellow Baseboard Mastic	Non-ACM	1st Floor	ND	Associated with Sample Group 24
25B-AG-042523	Yellow Baseboard Mastic	Non-ACM	1st Floor	ND	
26A-AG-042523	3" Green Baseboard	Non-ACM	1st Floor	ND	
26B-AG-042523	3" Green Baseboard	Non-ACM	1st Floor	ND	
27A-AG-042523	Yellow Baseboard Mastic	Non-ACM	1st Floor	ND	Associated with Sample Group 26
27B-AG-042523	Yellow Baseboard Mastic	Non-ACM	1st Floor	ND	
28A-AG-042523	12" x 12" Off-White Floor Tile	Non-ACM	1st Floor	ND	

Table 1
Suspect Asbestos-Containing Materials Laboratory Analytical Data Summary

Sample Number	Material Type	NESHAP Category	Sample Location	Result	Comments
28B-AG-042523	12" x 12" Off-White Floor Tile	Non-ACM	1st Floor	ND	
29A-AG-042523	Yellow Floor Tile Mastic	Non-ACM	1st Floor	ND	Associated with Sample Group 26
29B-AG-042523	Yellow Floor Tile Mastic	Non-ACM	1st Floor	ND	
30A-AG-042523	Gray Sheet Flooring	Non-ACM	1st Floor	ND	
30B-AG-042523	Gray Sheet Flooring	Non-ACM	1st Floor	ND	
31A-AG-042523	White Sheet Flooring Adhesive	Non-ACM	1st Floor	ND	Associated with Sample Group 30
31B-AG-042523	White Sheet Flooring Adhesive	Non-ACM	1st Floor	ND	
32A-AG-042523	3" Off-White Baseboard	Non-ACM	1st Floor	ND	
32B-AG-042523	3" Off-White Baseboard	Non-ACM	1st Floor	ND	
33A-AG-042523	Yellow Baseboard Mastic	Non-ACM	1st Floor	ND	Associated with Sample Group 32
33B-AG-042523	Yellow Baseboard Mastic	Non-ACM	1st Floor	ND	
34A-AG-042523	White Gypsum Wallboard	Non-ACM	1st Floor	ND	
34B-AG-042523	White Gypsum Wallboard	Non-ACM	2nd Floor	ND	
35A-AG-042523	White Stair Tread Adhesive	Non-ACM	1st Floor	ND	
35B-AG-042523	White Stair Tread Adhesive	Non-ACM	1st Floor	ND	
36A-AG-042523	12" x 12" White Textured Ceiling Tiles	Non-ACM	1st Floor	ND	
36B-AG-042523	12" x 12" White Textured Ceiling Tiles	Non-ACM	1st Floor	ND	
37A-AG-042523	White Decorative Ceiling Plaster	Non-ACM	1st Floor	ND	
37B-AG-042523	White Decorative Ceiling Plaster	Non-ACM	1st Floor	ND	
37C-AG-042523	White Decorative Ceiling Plaster	Non-ACM	1st Floor	ND	
37D-AG-042523	White Decorative Ceiling Plaster	Non-ACM	2nd Floor	ND	
37E-AG-042523	White Decorative Ceiling Plaster	Non-ACM	2nd Floor	ND	
38A-AG-042523	**Black Stick Pin Adhesive**	**Cat 2 NF**	**1st Floor**	**25.0% Chrysotile**	
38B-AG-042523	**Black Stick Pin Adhesive**	**Cat 2 NF**	**1st Floor**	**Pos Stop**	
39A-AG-042523	3" Gray Baseboard	Non-ACM	1st Floor	ND	
39B-AG-042523	3" Gray Baseboard	Non-ACM	1st Floor	ND	
40A-AG-042523	Gray Sink Undercoating	Non-ACM	1st Floor	ND	
40B-AG-042523	Gray Sink Undercoating	Non-ACM	1st Floor	ND	TEM
41A-AG-042523	Gray Thin-Set Mortar	Non-ACM	1st Floor	ND	
41B-AG-042523	Gray Thin-Set Mortar	Non-ACM	1st Floor	ND	
42A-AG-042523	Gray Grout associated with 12" x 24" Ceramic Floor Tiles	Non-ACM	1st Floor	ND	
42B-AG-042523	Gray Grout associated with 12" x 24" Ceramic Floor Tiles	Non-ACM	1st Floor	ND	
43A-AG-042623	3" Gray Baseboard	Non-ACM	2nd Floor	ND	
43B-AG-042623	3" Gray Baseboard	Non-ACM	2nd Floor	ND	
44A-AG-042623	Yellow Baseboard Mastic	Non-ACM	2nd Floor	ND	Associated with Sample Group 43

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Table 1
Suspect Asbestos-Containing Materials Laboratory Analytical Data Summary

Sample Number	Material Type	NESHAP Category	Sample Location	Result	Comments
44B-AG-042623	Yellow Baseboard Mastic	Non-ACM	2nd Floor	ND	
45A-AG-042623	6" Gray Baseboard	Non-ACM	2nd Floor	ND	
45B-AG-042623	6" Gray Baseboard	Non-ACM	2nd Floor	ND	
46A-AG-042623	12" x 12" Red Floor Tile	Non-ACM	2nd Floor Kitchen	ND	
46B-AG-042623	12" x 12" Red Floor Tile	Non-ACM	2nd Floor Kitchen	ND	
47A-AG-042623	Gray Floor Tile Mastic	Non-ACM	2nd Floor Kitchen	ND	Associated with Sample Group 46
47B-AG-042623	Gray Floor Tile Mastic	Non-ACM	2nd Floor Kitchen	ND	
48A-AG-042623	2' x 2' White Pin & Fissure Ceiling Tiles	Non-ACM	2nd Floor Ceiling	ND	
48B-AG-042623	2' x 2' White Pin & Fissure Ceiling Tiles	Non-ACM	3rd Floor Ceiling	ND	
49A-AG-042623	Gray Leveling Compound on Wood	Non-ACM	2nd Floor Kitchen	ND	
49B-AG-042623	Gray Leveling Compound on Wood	Non-ACM	2nd Floor Kitchen	ND	
50A-AG-042623	6" Gray Baseboard	Non-ACM	3rd Floor	ND	
50B-AG-042623	6" Gray Baseboard	Non-ACM	3rd Floor	ND	
51A-AG-042623	Old Residual Brown Baseboard Mastic	Non-ACM	3rd Floor	ND	Associated with Sample Group 50
51B-AG-042623	Old Residual Brown Baseboard Mastic	Non-ACM	3rd Floor	ND	
52A-AG-042623	12" x 12" Orange Floor Tile	Non-ACM	3rd Floor	ND	
52B-AG-042623	12" x 12" Orange Floor Tile	Non-ACM	3rd Floor	ND	
53A-AG-042623	Yellow Floor Tile Mastic	Non-ACM	3rd Floor	ND	Associated with Sample Group 52
53B-AG-042623	Yellow Floor Tile Mastic	Non-ACM	3rd Floor	ND	
54A-AG-042623	Orange Baseboard	Non-ACM	3rd Floor	ND	
54B-AG-042623	Orange Baseboard	Non-ACM	3rd Floor	ND	
55A-AG-042623	Gray Chimney Flashing Caulking	Non-ACM	Roof at 3rd Floor	ND	
55B-AG-042623	Gray Chimney Flashing Caulking	Non-ACM	Roof at 3rd Floor	ND	
56A-AG-042623	Black Upper Barrier on Soft Concrete Deck	Non-ACM	Penthouse Roof	ND	
56B-AG-042623	Black Upper Barrier on Soft Concrete Deck	Non-ACM	Penthouse Roof	ND	
57A-AG-042623	Black Pipe Vent Sealant	Non-ACM	Main Roof	ND	
57B-AG-042623	Black Pipe Vent Sealant	Non-ACM	Roof at 3rd Floor	ND	
58A-AG-042623	**Black Asphaltic Built-Up Roofing Material**	**Non-ACM**	**Main Roof**	**ND**	**Positive Due to Homogenous Sample 58B**
58B-AG-042623	**Black Asphaltic Built-Up Roofing Material**	**Cat 1 NF**	**Roof at 3rd Floor**	**5.0% Chrysotile**	
59A-AG-042623	Black Coal-Tar Pitch Roofing Paper	Non-ACM	Main Roof	ND	
59B-AG-042623	Black Coal-Tar Pitch Roofing Paper	Non-ACM	Roof at 3rd Floor	ND	
60A-AG-042623	Black Exterior Door Caulking	Non-ACM	Penthouse Door System	ND	TEM
60B-AG-042623	Black Exterior Door Caulking	Non-ACM	Penthouse Door System	ND	TEM
61A-AG-042623	Black/Brown Fiberboard/Paper on Roof Deck	Non-ACM	Lower Roof	ND	

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Table 1
Suspect Asbestos-Containing Materials Laboratory Analytical Data Summary

Sample Number	Material Type	NESHAP Category	Sample Location	Result	Comments
61B-AG-042623	Black/Brown Fiberboard/Paper on Roof Deck	Non-ACM	Lower Roof	ND	
62A-AG-042623	**White Exterior Window Caulking**	**Cat 2 NF**	**Penthouse Window Systems**	**5.0% Chrysotile**	
62B-AG-042623	**White Exterior Window Caulking**	**Cat 2 NF**	**Penthouse Window Systems**	**Pos Stop**	
63A-AG-042623	**Black Paper-Like Roofing Material**	**Cat 1 NF**	**Lower Roof Section with Original Copper Components**	**3.0% Chrysotile**	
63B-AG-042623	**Black Paper-Like Roofing Material**	**Cat 1 NF**	**Lower Roof Section with Original Copper Components**	**Pos Stop**	
64A-AG-042623	**White Interior Window Glazing Compound**	**Cat 2 NF**	**Penthouse Window Systems**	**3.0% Chrysotile**	
64B-AG-042623	**White Interior Window Glazing Compound**	**Cat 2 NF**	**Penthouse Window Systems**	**Pos Stop**	
65A-AG-042623	Gray Caulking on Deposit Box	Non-ACM	Exterior	ND	TEM
65B-AG-042623	Gray Caulking on Deposit Box	Non-ACM	Exterior	ND	TEM
66A-AG-042623	Black/Gray Exterior Window Caulking	Non-ACM	Window Systems	ND	TEM
66B-AG-042623	Black/Gray Exterior Window Caulking	Non-ACM	Window Systems	ND	TEM
67A-AG-042623	Gray Caulking on Metal Trim	Non-ACM	Storefront Window System at Main Entrance	ND	
67B-AG-042623	Gray Caulking on Metal Trim	Non-ACM	Storefront Window System at Main Entrance	ND	
68A-AG-042623	White Joint/Door Caulking	Non-ACM	Storefront Window System at Main Entrance	ND	TEM
68B-AG-042623	**White Joint/Door Caulking**	**ACWM**	**Storefront Window System at Main Entrance**	**<0.1% Chrysotile**	**TEM**
69A-AG-042623	**Brown Stair Tread Mastic**	**Cat 2 NF**	**Stairs**	**2.0% Chrysotile**	
69B-AG-042623	**Brown Stair Tread Mastic**	**Cat 2 NF**	**Stairs**	**Pos Stop**	
70A-AG-042623	3" Pink Baseboard	Non-ACM	Stairs	ND	
70B-AG-042623	3" Pink Baseboard	Non-ACM	Stairs	ND	
71A-AG-042623	Light Brown Baseboard Mastic	Non-ACM	Stairs	ND	Associated with Sample Group 70
71B-AG-042623	Light Brown Baseboard Mastic	Non-ACM	Stairs	ND	
72A-AG-042623	Gray Rough Coat Ceiling	Non-ACM	1st Floor Vault Stairs	ND	
72B-AG-042623	Gray Rough Coat Ceiling	Non-ACM	1st Floor Vault Stairs	ND	
73A-AG-042623	Brown Jute Sheet Flooring	Non-ACM	1st Floor Vault Stairs	ND	
73B-AG-042623	Brown Jute Sheet Flooring	Non-ACM	1st Floor Vault Stairs	ND	
74A-AG-042623	Gray Block Mortar	Non-ACM	Exterior at Main Entrance	ND	
74B-AG-042623	Gray Block Mortar	Non-ACM	Exterior at Main Entrance	ND	
75A-AG-042623	Gray Repair Mortar on Sandstone	Non-ACM	Exterior	ND	
75B-AG-042623	Gray Repair Mortar on Sandstone	Non-ACM	Exterior	ND	

Cat 1 NF = Category I Non-Friable Material
Cat 2 NF = Category II Non-Friable Material
Pos Stop = Positive Stop
ND = None Detected
ACM = Asbestos-Containing Material
ACWM = Asbestos-Containing Waste Material
TEM = Transmission Electron Microscopy

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Table 2
Asbestos-Containing Materials Inventory Summary

689 Massachusetts Avenue
Cambridge, Massachusetts

CambridgeSeven
May 2023
Fuss & O'Neill Reference No. 20230186.A20

Asbestos-Containing Material Type	Locations(s)	Asbestos Content	Estimated Total Quantity	Comments
9" x 9" Brown Floor Tile	Basement	3.0% Chrysotile	45 SF	
24" x 18" Black Floor Tile		3.0% Chrysotile		
Black Floor Tile Mastic		8.0% Chrysotile		
Black Stick Pin Adhesive	1st Floor	25.0% Chrysotile	~250 SF	Refer to Mechanical Drawing to Determine the Material Quantity
Black Asphaltic Built-Up Roofing Material	Roof at 3rd Floor	5.0% Chrysotile	675 SF	
White Exterior Window Caulking	Penthouse Window Systems	5.0% Chrysotile	2 EA	
White Interior Window Glazing Compound		3.0% Chrysotile		
Black Paper-Like Roofing Material	Lower Roof Section with Original Copper Components	3.0% Chrysotile	1,500 SF	
White Joint/Door Caulking	Storefront Window System at Main Entrance	<0.1% Chrysotile	1 EA	ACWM
Brown Stair Tread Mastic	Stairs	2.0% Chrysotile	20 SF	
Elevator Brake Pads	Elevators	Assumed ACM	1 System	
Elevator Doors	Elevators	Assumed ACM	1 System	

EA = Each, SF = Square Feet
ACM = Asbestos-Containing Material
ACWM = Asbestos-Containing Waste Material

Table 3
Fluorescent Light Ballast and Mercury-Containing Equipment Inventory Summary

Type	Estimated Quantity
Presumed DEHP-Containing	15
Presumed PCB-Containing	53
2' Light Tube	2
4' Light Tube	82

Table 4
Presumed PCB-Containing Source Building Materials Summary

Material Type	Location	Estimated Quantity
Window Glazing Compound & Caulking*	Penthouse Window Systems	2 EA
Joint/Door Caulking*	Storefront Window System at Main Entrance	1 EA
Window Caulking	Main Building Window Systems	63 EA
Door Glazing Compound & Caulking	Exterior Door Systems	4 EA

EA = Each

* Denotes material type is an asbestos-containing material or asbestos-containing waste material.

Appendix A

Limitations

FUSS & O'NEILL

APPENDIX A

689 Massachusetts Avenue
Cambridge, Massachusetts

1. This environmental report has been prepared for the exclusive use of the Client, and is subject to, and is issued in connection with, the general terms and conditions of the revised written Agreement (March 17, 2023) and all of its provisions. Any use or reliance upon information provided in this report, without the specific written authorization of the Client and Fuss & O'Neill, shall be at the User's individual risk. This report should not be used as an abatement specification. All quantities of materials identified during this inspection are approximate.
2. Fuss & O'Neill has obtained and relied upon laboratory analytical results in conducting the inspection. This information was used to form conclusions regarding the types and quantities of ACM that must be managed prior to renovation or demolition activities that may disturb these materials at the subject property(ies). Fuss & O'Neill has not performed an independent review of the reliability of this laboratory data.
3. Unless otherwise noted, only suspect hazardous materials associated within or located on the building (aboveground) were included in this inspection. Suspect hazardous materials may exist below the ground surfaces that were not included in the scope of work of this inspection. Fuss & O'Neill cannot guarantee all asbestos or suspect hazardous materials were identified within the areas included in the scope of work. Only visible and accessible areas were included in the scope of work for this inspection.
4. The findings, observations, and conclusions presented in this report are limited by the scope of services outlined in our original Agreement, which reflects schedule and budgetary constraints imposed by the Client. Furthermore, the assessment has been conducted in accordance with generally accepted environmental practices. No other warranty, expressed or implied, is made.
5. The conclusions presented in this report are based solely upon information gathered by Fuss & O'Neill to date. Should further environmental or other relevant information be discovered at a later date, the Client should immediately bring the information to Fuss & O'Neill's attention. Based upon an evaluation and assessment of relevant information, Fuss & O'Neill may modify the report and its conclusions.

Appendix B

Fuss & O'Neill Asbestos Inspector Licenses and EPA Accreditations

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS

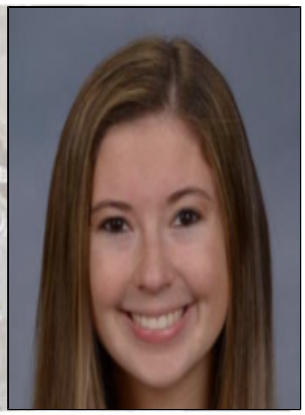
Michael Flanagan
Director

ASBESTOS INSPECTOR

Anna Gibbons
Eff.Date: 03/27/2023
Exp.Date: 03/26/2024
AI901175

Member C.O.N.E.S.

24



This is to certify that

Anna C. Gibbons

90 Summer Street, Apt 2, Somerville, MA 02143

INSTITUTE FOR ENVIRONMENTAL EDUCATION

has completed the requisite training, and has passed an examination for accreditation as:

Asbestos Inspector

pursuant to Title II of the Toxic Substance Control Act, 15 U.S.C. 2646

Course Location
Institute for Environmental Education
16 Upton Drive Wilmington, MA 01887

January 17-19, 2023
Course Dates

23-4778-102-503604
Certificate Number

January 19, 2023
Examination Date

January 19, 2024
Expiration Date

Training Director

Pelletier, T
AI900995

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS

Michael Flanagan
Director

Asbestos Inspector

TYLAR J PELLETIER

Eff. Date 10/20/22
Exp. Date 10/20/23
AI900995
Member of C.O.N.E.S.
BOSR BOS

23

This is to certify that

Tylar J. Pelletier

933 McKinstry Avenue, Chicopee, MA 01020

has completed requisite training by Video Conference, and has passed an examination for reaccreditation as:

Asbestos Inspector Refresher

pursuant to Title II of the Toxic Substance Control Act, 15 U.S.C. 2646

Course Location

Zoom Video Conference

Institute for Environmental Education 16 Upton Drive Wilmington, MA 01887

March 3, 2023
Course Dates

March 03, 2023
Examination Date

23-4801-106-402724
Certificate Number

March 03, 2024
Expiration Date

Training Director

Appendix C

Asbestos Laboratory Analytical Reports and Chain-of-Custody Forms

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:	132302813
Customer ID:	ENVI54
Customer PO:	20233086.A20
Project ID:	

Attention:	Jon Hand	**Phone:**	
	Fuss & O'Neill, Inc.	**Fax:**	
	146 Hartford Road	**Received Date:**	04/27/2023 12:15 PM
	Manchester, CT 06040	**Analysis Date:**	05/04/2023
		Collected Date:	04/25/2023 - 04/26/2023

Project: 20233086.A20 - 689 Massachusetts Avenue; Cambridge, MA

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
01A-AG-042523 *132302813-0001*	Basement - 9x9 Brown Floor Tile	Brown Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
01B-AG-042523 *132302813-0002*	Basement - 9x9 Brown Floor Tile				Positive Stop (Not Analyzed)
02A-AG-042523 *132302813-0003*	Basement - Black Mastic assoc. w. 01A	Black Non-Fibrous Homogeneous		92% Non-fibrous (Other)	8% Chrysotile
02B-AG-042523 *132302813-0004*	Basement - Black Mastic assoc. w. 01B				Positive Stop (Not Analyzed)
03A-AG-042523 *132302813-0005*	Basement - 24x18 Black Floor Tile	Black Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
03B-AG-042523 *132302813-0006*	Basement - 24x18 Black Floor Tile				Positive Stop (Not Analyzed)
04A-AG-042523 *132302813-0007*	Basement - Black Mastic assoc. w. 03A	Black Non-Fibrous Homogeneous		92% Non-fibrous (Other)	8% Chrysotile
04B-AG-042523 *132302813-0008*	Basement - Black Mastic assoc. w. 03B				Positive Stop (Not Analyzed)
05A-AG-042523 *132302813-0009*	Basement - 9x9 Gray w. White Streaks Floor Tile	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
05B-AG-042523 *132302813-0010*	Basement - 9x9 Gray w. White Streaks Floor Tile	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
06A-AG-042523 *132302813-0011*	Basement - Brown Mastic assoc. w. 05A	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
06B-AG-042523 *132302813-0012*	Basement - Brown Mastic assoc. w. 05B	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
07A-AG-042523 *132302813-0013*	Basement - 2x4 White Dot & Fissure Ceiling Tile	Gray/White Fibrous Homogeneous	60% Cellulose 25% Min. Wool	15% Non-fibrous (Other)	None Detected
07B-AG-042523 *132302813-0014*	Basement - 2x4 White Dot & Fissure Ceiling Tile	Gray/White Fibrous Homogeneous	60% Cellulose 25% Min. Wool	15% Non-fibrous (Other)	None Detected
08A-AG-042523 *132302813-0015*	Basement - 2x2 White Dot & Fissure Ceiling Tile	Gray/White Fibrous Homogeneous	60% Cellulose 25% Min. Wool	15% Non-fibrous (Other)	None Detected
08B-AG-042523 *132302813-0016*	Basement - 2x2 White Dot & Fissure Ceiling Tile	Gray/White Fibrous Homogeneous	60% Cellulose 25% Min. Wool	15% Non-fibrous (Other)	None Detected

Initial report from: 05/04/2023 16:16:41

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:	132302813
Customer ID:	ENVI54
Customer PO:	20233086.A20
Project ID:	

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
09A-AG-042523 *132302813-0017*	Basement - 12x12 Off-White Floor Tile	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
09B-AG-042523 *132302813-0018*	Basement - 12x12 Off-White Floor Tile	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
10A-AG-042523 *132302813-0019*	Basement - Black Mastic assoc. w. 09A	Black/Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
10B-AG-042523 *132302813-0020*	Basement - Black Mastic assoc. w. 09B	Black/Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
11A-AG-042523 *132302813-0021*	Basement - Gray Thinset on Beige Ceramic Tile	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
11B-AG-042523 *132302813-0022*	Basement - Gray Thinset on Beige Ceramic Tile	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12A-AG-042523 *132302813-0023*	Basement - Gray Grout on Beige Ceramic Tile	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12B-AG-042523 *132302813-0024*	Basement - Gray Grout on Beige Ceramic Tile	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13A-AG-042523 *132302813-0025*	Basement - White Skim Coat	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13B-AG-042523 *132302813-0026*	Basement - White Skim Coat	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13C-AG-042523 *132302813-0027*	Basement - White Skim Coat	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13D-AG-042523 *132302813-0028*	1st Floor - White Skim Coat	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13E-AG-042523 *132302813-0029*	1st Floor - White Skim Coat	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13F-AG-042523 *132302813-0030*	Stairway to Penthouse - White Skim Coat	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13G-AG-042523 *132302813-0031*	Stairway to Penthouse - White Skim Coat	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
14A-AG-042523 *132302813-0032*	Basement - Gray Rough Coat	Gray Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
14B-AG-042523 *132302813-0033*	Basement - Gray Rough Coat	Gray Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
14C-AG-042523 *132302813-0034*	Basement - Gray Rough Coat	Gray Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
14D-AG-042523 *132302813-0035*	1st Floor - Gray Rough Coat	Gray Non-Fibrous Homogeneous	2% Hair	98% Non-fibrous (Other)	None Detected

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
14E-AG-042523 *132302813-0036*	1st Floor - Gray Rough Coat	Gray Fibrous Homogeneous	2% Hair	98% Non-fibrous (Other)	None Detected
14F-AG-042523 *132302813-0037*	Stairway to Penthouse - Gray Rough Coat	Gray Fibrous Homogeneous	2% Hair	98% Non-fibrous (Other)	None Detected
14G-AG-042523 *132302813-0038*	Stairway to Penthouse - Gray Rough Coat	Gray Fibrous Homogeneous	2% Hair	98% Non-fibrous (Other)	None Detected
15A-AG-042523 *132302813-0039*	Basement - White Troweled on Skim Coat on High Beam	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
15B-AG-042523 *132302813-0040*	Basement - White Troweled on Skim Coat on High Beam	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
15C-AG-042523 *132302813-0041*	Basement - White Troweled on Skim Coat on High Beam	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
16A-AG-042523 *132302813-0042*	Basement Ducts - Gray Duct Seam Sealant	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
16B-AG-042523 *132302813-0043*	Basement Ducts - Gray Duct Seam Sealant	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
17A-AG-042523 *132302813-0044*	Basement - White Parging Cement	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
17B-AG-042523 *132302813-0045*	Basement - White Parging Cement	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
18A-AG-042523 *132302813-0046*	Basement - Black Dampproofing Mastic on Brick	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
18B-AG-042523 *132302813-0047*	Basement - Black Dampproofing Mastic on Brick	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
19A-AG-042523 *132302813-0048*	Basement - 3" Black Cove Base	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
19B-AG-042523 *132302813-0049*	Basement - 3" Black Cove Base	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
20A-AG-042523 *132302813-0050*	Basement - Yellow Mastic assoc. w. 19A	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
20B-AG-042523 *132302813-0051*	Basement - Yellow Mastic assoc. w. 19B	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
21A-AG-042523 *132302813-0052*	1st Floor - 2x2 White Textured Ceiling Tiles	Gray/White Fibrous Homogeneous	50% Cellulose 35% Min. Wool	15% Non-fibrous (Other)	None Detected
21B-AG-042523 *132302813-0053*	1st Floor - 2x2 White Textured Ceiling Tiles	Gray/White Fibrous Homogeneous	50% Cellulose 35% Min. Wool	15% Non-fibrous (Other)	None Detected
22A-AG-042523 *132302813-0054*	1st Floor - Blue Pattern Linoleum Sheet Floor	Gray/Green Fibrous Homogeneous	25% Cellulose	75% Non-fibrous (Other)	None Detected

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
22B-AG-042523 *132302813-0055*	1st Floor - Blue Pattern Linoleum Sheet Floor	Gray/Green Fibrous Homogeneous	25% Cellulose	75% Non-fibrous (Other)	None Detected
23A-AG-042523 *132302813-0056*	1st Floor - Tan Mastic assoc. w. 22A	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
23B-AG-042523 *132302813-0057*	1st Floor - Tan Mastic assoc. w. 22B	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
24A-AG-042523 *132302813-0058*	1st Floor - 3" Black Cove Base	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
24B-AG-042523 *132302813-0059*	1st Floor - 3" Black Cove Base	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
25A-AG-042523 *132302813-0060*	1st Floor - Yellow Mastic assoc. w. 24A	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
25B-AG-042523 *132302813-0061*	1st Floor - Yellow Mastic assoc. w. 24B	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
26A-AG-042523 *132302813-0062*	1st Floor - 3" Green Cove Base	Gray/Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
26B-AG-042523 *132302813-0063*	1st Floor - 3" Green Cove Base	Gray/Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
27A-AG-042523 *132302813-0064*	1st Floor - Yellow Mastic assoc. w. 26A	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
27B-AG-042523 *132302813-0065*	1st Floor - Yellow Mastic assoc. w. 26B	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
28A-AG-042523 *132302813-0066*	1st Floor - 12x12 Off-White Floor Tile	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
28B-AG-042523 *132302813-0067*	1st Floor - 12x12 Off-White Floor Tile	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
29A-AG-042523 *132302813-0068*	1st Floor - Yellow Mastic assoc. w. 28A	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
29B-AG-042523 *132302813-0069*	1st Floor - Yellow Mastic assoc. w. 28B	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
30A-AG-042523 *132302813-0070*	1st Floor - Gray Sheet Layer Flooring	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
30B-AG-042523 *132302813-0071*	1st Floor - Gray Sheet Layer Flooring	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
31A-AG-042523 *132302813-0072*	1st Floor - White Adhesive assoc. w. 30A	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
31B-AG-042523 *132302813-0073*	1st Floor - White Adhesive assoc. w. 30B	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
32A-AG-042523 *132302813-0074*	1st Floor - 3" Off-White Cove Base	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
32B-AG-042523 *132302813-0075*	1st Floor - 3" Off-White Cove Base	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
33A-AG-042523 *132302813-0076*	1st Floor - Yellow Mastic assoc. w. 32A	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
33B-AG-042523 *132302813-0077*	1st Floor - Yellow Mastic assoc. w. 32B	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
34A-AG-042523 *132302813-0078*	1st Floor - White Gypsum Wallboard	Brown/White Fibrous Homogeneous	15% Cellulose 2% Glass	83% Non-fibrous (Other)	None Detected
34B-AG-042523 *132302813-0079*	2nd Floor - White Gypsum Wallboard	Brown/White Fibrous Homogeneous	15% Cellulose 2% Glass	83% Non-fibrous (Other)	None Detected
35A-AG-042523 *132302813-0080*	1st Floor - White Stair Tread Adhesive	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
35B-AG-042523 *132302813-0081*	1st Floor - White Stair Tread Adhesive	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
36A-AG-042523 *132302813-0082*	1st Floor - 12x12 White Textured Ceiling Tiles	Gray/White Fibrous Homogeneous	25% Cellulose 55% Min. Wool	20% Non-fibrous (Other)	None Detected
36B-AG-042523 *132302813-0083*	1st Floor - 12x12 White Textured Ceiling Tiles	Gray/White Fibrous Homogeneous	25% Cellulose 55% Min. Wool	20% Non-fibrous (Other)	None Detected
37A-AG-042523 *132302813-0084*	1st Floor - White Decorative Plaster	White Fibrous Homogeneous	3% Hair	97% Non-fibrous (Other)	None Detected
37B-AG-042523 *132302813-0085*	1st Floor - White Decorative Plaster	White Fibrous Homogeneous	3% Hair	97% Non-fibrous (Other)	None Detected
37C-AG-042523 *132302813-0086*	1st Floor - White Decorative Plaster	White Fibrous Homogeneous	3% Hair	97% Non-fibrous (Other)	None Detected
37D-AG-042523 *132302813-0087*	2nd Floor - White Decorative Plaster	White Fibrous Homogeneous	3% Hair	97% Non-fibrous (Other)	None Detected
37E-AG-042523 *132302813-0088*	2nd Floor - White Decorative Plaster	White Fibrous Homogeneous	3% Hair	97% Non-fibrous (Other)	None Detected
38A-AG-042523 *132302813-0089*	1st Floor - Black Stick Pin Adhesive	Brown Fibrous Homogeneous		75% Non-fibrous (Other)	25% Chrysotile
38B-AG-042523 *132302813-0090*	1st Floor - Black Stick Pin Adhesive				Positive Stop (Not Analyzed)
39A-AG-042523 *132302813-0091*	1st Floor - 3" Gray Cove Base	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
39B-AG-042523 *132302813-0092*	1st Floor - 3" Gray Cove Base	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
40A-AG-042523 *132302813-0093*	1st Floor - Gray Undercoat Sink	Gray Non-Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
40B-AG-042523 *132302813-0094*	1st Floor - Gray Undercoat Sink	Gray Non-Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
41A-AG-042523 *132302813-0095*	1st Floor - Gray Thinset	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
41B-AG-042523 *132302813-0096*	1st Floor - Gray Thinset	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
42A-AG-042523 *132302813-0097*	1st Floor - Gray Grout assoc. w. 12x24 Ceramic Tiles	Gray Non-Fibrous Homogeneous	1% Glass	99% Non-fibrous (Other)	None Detected
42B-AG-042523 *132302813-0098*	1st Floor - Gray Grout assoc. w. 12x24 Ceramic Tiles	Gray Non-Fibrous Homogeneous	1% Glass	99% Non-fibrous (Other)	None Detected
43A-AG-042623 *132302813-0099*	2nd Floor - 3" Gray Cove Base	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
43B-AG-042623 *132302813-0100*	2nd Floor - 3" Gray Cove Base	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
44A-AG-042623 *132302813-0101*	2nd Floor - Yellow Mastic assoc. w. 43A	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
44B-AG-042623 *132302813-0102*	2nd Floor - Yellow Mastic assoc. w. 43B	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
45A-AG-042623 *132302813-0103*	2nd Floor - 6" Gray Cove Base	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
45B-AG-042623 *132302813-0104*	2nd Floor - 6" Gray Cove Base	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
46A-AG-042623 *132302813-0105*	2nd Floor Kitchen - 12x12 Red Floor Tile	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
46B-AG-042623 *132302813-0106*	2nd Floor Kitchen - 12x12 Red Floor Tile	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
47A-AG-042623 *132302813-0107*	2nd Floor Kitchen - Gray Mastic assoc. w. 46A	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
47B-AG-042623 *132302813-0108*	2nd Floor Kitchen - Gray Mastic assoc. w. 46B	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
48A-AG-042623 *132302813-0109*	2nd Floor Ceiling - 2x2 White Pin & Fissure Ceiling Tiles	Tan Fibrous Homogeneous	50% Cellulose 30% Min. Wool	20% Non-fibrous (Other)	None Detected
48B-AG-042623 *132302813-0110*	3rd Floor Ceiling - 2x2 White Pin & Fissure Ceiling Tiles	Tan Fibrous Homogeneous	50% Cellulose 30% Min. Wool	20% Non-fibrous (Other)	None Detected
49A-AG-042623 *132302813-0111*	2nd Floor Kitchen - Gray Leveling Compound on Wood	Gray Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
49B-AG-042623 *132302813-0112*	2nd Floor Kitchen - Gray Leveling Compound on Wood	Gray Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
50A-AG-042623 *132302813-0113*	3rd Floor - 6" Gray Cove Base	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
50B-AG-042623 *132302813-0114*	3rd Floor - 6" Gray Cove Base	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
51A-AG-042623 *132302813-0115*	3rd Floor - Old Residual Brown Mastic assoc. w. 50A	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
51B-AG-042623 *132302813-0116*	3rd Floor - Old Residual Brown Mastic assoc. w. 50B	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
52A-AG-042623 *132302813-0117*	3rd Floor - 12x12 Orange Floor Tile	Orange Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
52B-AG-042623 *132302813-0118*	3rd Floor - 12x12 Orange Floor Tile	Orange Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
53A-AG-042623 *132302813-0119*	3rd Floor - Yellow Mastic assoc. w. 52A	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
53B-AG-042623 *132302813-0120*	3rd Floor - Yellow Mastic assoc. w. 52B	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
54A-AG-042623 *132302813-0121*	3rd Floor - Orange Cove Base	Orange Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
54B-AG-042623 *132302813-0122*	3rd Floor - Orange Cove Base	Orange Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
55A-AG-042623 *132302813-0123*	Roof - Gray Chimney Flashing Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
55B-AG-042623 *132302813-0124*	Roof - Gray Chimney Flashing Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
56A-AG-042623 *132302813-0125*	Penthouse Roof - Black Upper Barrier on Soft Concrete Deck	Black Fibrous Homogeneous	75% Cellulose	25% Non-fibrous (Other)	None Detected
56B-AG-042623 *132302813-0126*	Penthouse Roof - Black Upper Barrier on Soft Concrete Deck	Black Fibrous Homogeneous	75% Cellulose	25% Non-fibrous (Other)	None Detected
57A-AG-042623 *132302813-0127*	Main Roof - Black Pipe Vent Sealant	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
57B-AG-042623 *132302813-0128*	Main Roof - Black Pipe Vent Sealant	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
58A-AG-042623 *132302813-0129*	Main Roof - Black Asphaltic Built-up	Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
58B-AG-042623 *132302813-0130*	Lower-Upper Roof - Black Asphaltic Built-up	Black Fibrous Homogeneous	40% Cellulose	55% Non-fibrous (Other)	5% Chrysotile
59A-AG-042623 *132302813-0131*	Main Roof - Black Coat Tar Pitch Paper	Black Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
59B-AG-042623 *132302813-0132*	Lower-Upper Roof - Black Coat Tar Pitch Paper	Black Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
60A-AG-042623 *132302813-0133*	Penthouse Door - Black Exterior Door Caulking	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
60B-AG-042623 *132302813-0134*	Penthouse Door - Black Exterior Door Caulking	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
61A-AG-042623 *132302813-0135*	Lower Roof - Black/Brown Fiberboard/Paper on Roof Deck	Brown/Black Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
61B-AG-042623 *132302813-0136*	Lower Roof - Black/Brown Fiberboard/Paper on Roof Deck	Brown/Black Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
62A-AG-042623 *132302813-0137*	Penthouse Windows - White Window Caulking Exterior	Tan/White Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
62B-AG-042623 *132302813-0138*	Penthouse Windows - White Window Caulking Exterior				Positive Stop (Not Analyzed)
63A-AG-042623 *132302813-0139*	Lower Roof - Black Jute/Paper Material on Copper Roof	Brown/Black Fibrous Homogeneous	12% Glass	85% Non-fibrous (Other)	3% Chrysotile
63B-AG-042623 *132302813-0140*	Lower Roof - Black Jute/Paper Material on Copper Roof				Positive Stop (Not Analyzed)
64A-AG-042623 *132302813-0141*	Penthouse Window - White Interior Window Glazing	Tan Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
64B-AG-042623 *132302813-0142*	Penthouse Window - White Interior Window Glazing				Positive Stop (Not Analyzed)
65A-AG-042623 *132302813-0143*	Exterior - Gray Caulking on Deposit Front of Building	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
65B-AG-042623 *132302813-0144*	Exterior - Gray Caulking on Deposit Box	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
66A-AG-042623 *132302813-0145*	Exterior - Black/Gray Exterior Window Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
66B-AG-042623 *132302813-0146*	Exterior - Black/Gray Exterior Window Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
67A-AG-042623 *132302813-0147*	Exterior Front Entrance - Gray Caulking on Metal Trim	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 05/04/2023 16:16:41

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:	132302813
Customer ID:	ENVI54
Customer PO:	20233086.A20
Project ID:	

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
67B-AG-042623 *132302813-0148*	Exterior Front Entrance - Gray Caulking on Metal Trim	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
68A-AG-042623 *132302813-0149*	Exterior Front Entrance - White Joint/Door Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
68B-AG-042623 *132302813-0150*	Exterior Front Entrance - White Joint/Door Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
69A-AG-042623 *132302813-0151*	Stairs - Brown Mastic on Stair Tread	Brown Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
69B-AG-042623 *132302813-0152*	Stairs - Brown Mastic on Stair Tread				Positive Stop (Not Analyzed)
70A-AG-042623 *132302813-0153*	Stairs - 3" Pink Cove Base	Pink Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
70B-AG-042623 *132302813-0154*	Stairs - 3" Pink Cove Base	Pink Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
71A-AG-042623 *132302813-0155*	Stairs - Light Brown Mastic assoc. w. 70A	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
71B-AG-042623 *132302813-0156*	Stairs - Light Brown Mastic assoc. w. 70B	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
72A-AG-042623 *132302813-0157*	1st Floor Vault Stairs - Gray Rough Coat Ceiling	Gray Fibrous Homogeneous	2% Cellulose 2% Hair	96% Non-fibrous (Other)	None Detected
72B-AG-042623 *132302813-0158*	1st Floor Vault Stairs - Gray Rough Coat Ceiling	Gray Fibrous Homogeneous	2% Cellulose 2% Hair	96% Non-fibrous (Other)	None Detected
73A-AG-042623 *132302813-0159*	1st Floor Vault Stairs - Brown Jute Sheet Flooring	Various Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
73B-AG-042623 *132302813-0160*	1st Floor Vault Stairs - Brown Jute Sheet Flooring	Various Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
74A-AG-042623 *132302813-0161*	Exterior - Gray Mortar Front Entrance	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
74B-AG-042623 *132302813-0162*	Exterior - Gray Mortar Front Entrance	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
75A-AG-042623 *132302813-0163*	Exterior - Gray Repair Mortar on Sandstone	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
75B-AG-042623 *132302813-0164*	Exterior - Gray Repair Mortar on Sandstone	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 05/04/2023 16:16:41

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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:	132302813
Customer ID:	ENVI54
Customer PO:	20233086.A20
Project ID:	

Analyst(s)

Ava Kopellas (20)
John McCarthy (87)
Kevin McKenzie (48)

Steve Grise, Laboratory Manager
or Other Approved Signatory

Initial report from: 05/04/2023 16:16:41

EMSL Analytical, Inc.
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Tel/Fax: (781) 933-8411 / (781) 933-8412
http://www.EMSL.com / bostonlab@emsl.com

EMSL Order: 132302813
Customer ID: ENVI54
Customer PO: 20233086.A20
Project ID:

Attention: Jon Hand
Fuss & O'Neill, Inc.
146 Hartford Road
Manchester, CT 06040

Phone:
Fax:
Received Date: 04/27/2023 12:15 PM
Analysis Date: 05/08/2023
Collected Date: 04/25/2023 - 04/26/2023

Project: 20233086.A20 - 689 Massachusetts Avenue; Cambridge, MA

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
40B-AG-042523 *132302813-0094*	1st Floor - Gray Undercoat Sink	Gray Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
60A-AG-042623 *132302813-0133*	Penthouse Door - Black Exterior Door Caulking	Black Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
60B-AG-042623 *132302813-0134*	Penthouse Door - Black Exterior Door Caulking	Black Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
65A-AG-042623 *132302813-0143*	Exterior - Gray Caulking on Deposit Front of Building	Gray Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
65B-AG-042623 *132302813-0144*	Exterior - Gray Caulking on Deposit Box	Gray Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
66A-AG-042623 *132302813-0145*	Exterior - Black/Gray Exterior Window Caulking	Gray Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
66B-AG-042623 *132302813-0146*	Exterior - Black/Gray Exterior Window Caulking	Gray Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
68A-AG-042623 *132302813-0149*	Exterior Front Entrance - White Joint/Door Caulking	Gray Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
68B-AG-042623 *132302813-0150*	Exterior Front Entrance - White Joint/Door Caulking	Gray Non-Fibrous Homogeneous	100.0 Other	None	<0.1% Chrysotile

Analyst(s)

Steve Grise (9)

Steve Grise, Laboratory Manager
or other approved signatory

Samples analyzed by EMSL Analytical, Inc. Woburn, MA

Initial report from: 05/08/2023 17:33:49

OrderID: 132302813

FUSS & O'NEILL

EMSL Customer No. ENVI54

132302813

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Phone (617) 282-4675 Fax (617) 282-8253

Asbestos Bulk Sample Chain-of-Custody Form

Sheet 1 of 11

Project Name: 689 Mass Ave **Project No.:** 20230186 **Task:** A20

Building Name/Number: — **Project Manager:** Jon Hand

Site Address: 689 Massachusetts Ave, Cambridge MA **Total # of Samples:** 164

Sample ID (#-Date-Initials)	Material Type (Material, Size, Color, Description)	Sample Location	Comments/ Quantities
01A-AG-042523	brown 9x9 floor tile	Basement	
01B-AG	〃	〃	
02A	black mastic asso w/ 01A	〃	
02B	〃 01B	〃	
03A	black 24x18 floor tile	〃	
03B	〃	〃	
04A	black mastic asso w/ 03A	〃	
04B	〃	〃	
05A	grey w/ white streaks 9x9 floor tile	〃	
05B	〃	〃	
06A	brown mastic asso w/ 05A	〃	
06B	〃 05B	〃	
07A	2x4 dot + fissur white ceiling tile	〃	
07B		〃	
08A	2x2 dot + fissur white ceiling tile	〃	
08B	〃	〃	

Analysis Method: ☒ PLM ☐ TEM ☐ Other _____ **Turnaround Time:** 1 week

Email Results to: jhand @fando.com **Do Not Mail Hard Copy Report** **FAX Results to:** 888-838-1160.

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated. Do not point count. If NOB group samples are **ALL** negative by PLM, analyze the sample denoted with a star (★) by **TEM NOB** on a 48 hr turnaround time. Analyze a **MAXIMUM** of 10 samples by **TEM in noted order.**

Samples Collected by: Anna Gibbons **Date:** 04/25/23 - 04/26/23

Samples Sent by: Anna Gibbons **Date:** 04/27/23 **Time:** _____

Shipped To: ☒ EMSL ☐ Other _____

Method of Shipment: ☐ Fed Ex ☒ Lab Drop Off ☐ Other _____

REC'D EMSL-BOSTON APR 27 2023

walk in

OrderID: 132302813

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Asbestos Bulk Sample Chain-of-Custody Form

Sheet 2 of 11

Project Name: 689 Mass Ave **Project No.:** _____ **Task:** _____

Building Name/Number: _____ **Project Manager:** _____

Site Address: _____ **Total # of Samples:** 164

Sample ID (#-Date-Initials)	Material Type (Material, Size, Color, Description)	Sample Location	Comments/ Quantities
09A-AG 042523	off white 12x12 floor tile	Basement	under carpet
09B	↓	↓	↓
10A	black mastic cusco at 09A		
10B	↓ 09B		
11A	grey thin set on beige ceramic tile		
11B	↓		
12A	grey grout on beige ceramic tile		
12B	↓	↓	
13A	white skim coat	Basement	
13B	↓	↓	
13C	↓	↓	
13D	↓	1st Floor	
13E	↓	↓	
13F	↓	Stairway to Penthouse	
13G	↓	↓	
14A	grey rough coat	Basement	

Analysis Method: ☒ PLM ☐ TEM ☐ Other _____ Turnaround Time: _____

Email Results to: _____@fando.com **Do Not Mail Hard Copy Report** **FAX Results to: 888-838-1160.**

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated. Do not point count. If NOB group samples are **ALL** negative by PLM, analyze the sample denoted with a star (★) by **TEM NOB** on a [ ] turnaround time. Analyze a **MAXIMUM** of [ ] samples by **TEM in noted order.**

Samples Collected by: _____ **Date:** _____

Samples Sent by: _____ **Date:** _____ **Time:** _____

Shipped To: ☒ EMSL ☐ Other _____

Method of Shipment: ☐ Fed Ex ☐ Lab Drop Off ☐ Other _____

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Asbestos Bulk Sample Chain-of-Custody Form

Sheet 3 of 11

Project Name: 689 Mass Ave **Project No.:** _____ **Task:** _____

Building Name/Number: _____ **Project Manager:** _____

Site Address: _____ **Total # of Samples:** 164

Sample ID (#-Date-Initials)	Material Type (Material, Size, Color, Description)	Sample Location	Comments/ Quantities
14 B "AG 042523"	grey rough coat	Basement	
14 C	"	"	
14 D		1st Floor	
14 E		"	
14 F		Stairway to Penthouse	
14 G	"	"	
15A	White trowled on skim coat on high beam	Basement	
15 B	"	"	
15 C	"	"	
16A	grey duct seam sealant	Basement Ducts	
16B	"	"	
17A	white parging cement	Basement	
17B	"	"	
18A	black dampproofing mastic on brick		
18B	"	"	
19A	3in black cove base	Basement	

Analysis Method: ☒ PLM ☐ TEM ☐ Other _____ Turnaround Time: _____

Email Results to: _____@fando.com **Do Not Mail Hard Copy Report** **FAX Results to: 888-838-1160.**

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated. Do not point count. If NOB group samples are **ALL** negative by PLM, analyze the sample denoted with a star (★) by **TEM NOB** on a [ ] turnaround time. Analyze a **MAXIMUM** of [ ] samples by **TEM in noted order.**

Samples Collected by: _____ **Date:** _____

Samples Sent by: _____ **Date:** _____ **Time:** _____

Shipped To: ☒ EMSL ☐ Other _____

Method of Shipment: ☐ Fed Ex ☐ Lab Drop Off ☐ Other _____

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Asbestos Bulk Sample Chain-of-Custody Form

Sheet 4 of 11

Project Name: 689 Mass Ave **Project No.:** _____ **Task:** _____

Building Name/Number: _____ **Project Manager:** _____

Site Address: _____ **Total # of Samples:** 164

Sample ID (#-Date-Initials)	Material Type (Material, Size, Color, Description)	Sample Location	Comments/ Quantities
19B "AG 042523"	〃	Basement	
20A	yellow mastic asso w/ 19A	〃	
20B	〃 19B	〃	
21A	2x2 white textured ceiling tiles	1st Floor	
21B	〃	〃	
22A	blue pattern linoleum sheet floor	〃	
22B	〃	〃	
23A	asso tan mastic w/ 22A	〃	
23B	22B	〃	
24A	black 3in cove base	〃	
24B	〃	〃	
25A	yellow mastic asso w/ 24A	〃	
25B	24B	〃	
26A	3in green cove base	〃	
26B	〃	〃	
27A	yellow mastic asso w/ 26A	〃	

Analysis Method: ☒ PLM ☐ TEM ☐ Other _____ Turnaround Time: _____

Email Results to: _____@fando.com **Do Not Mail Hard Copy Report** **FAX Results to: 888-838-1160.**

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated. Do not point count. If NOB group samples are **ALL** negative by PLM, analyze the sample denoted with a star (★) by **TEM NOB** on a [ ] turnaround time. Analyze a **MAXIMUM** of [ ] samples by **TEM in noted order.**

Samples Collected by: _____ **Date:** _____

Samples Sent by: _____ **Date:** _____ **Time:** _____

Shipped To: ☒ EMSL ☐ Other _____

Method of Shipment: ☐ Fed Ex ☐ Lab Drop Off ☐ Other _____

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Asbestos Bulk Sample Chain-of-Custody Form

Sheet 5 of 11

Project Name: 689 Mass Ave **Project No.:** _____ **Task:** _____

Building Name/Number: _____ **Project Manager:** _____

Site Address: _____ **Total # of Samples:** 164

Sample ID (#-Date-Initials)	Material Type (Material, Size, Color, Description)	Sample Location	Comments/ Quantities
27B AG 042523	1 26B	First Floor	
28A	off white 12x12 floor tile		
28B	1		
29A	yellow mastic asso w/ 28A		
29B	1 28B		
30A	grey sheet layer flooring		
30B	1		
30A	white adhesive asso w/ 30A		
31B	1 30B		
32A	off white cove base 8in		
32B	1		
33A	yellow mastic asso w/ 32A		
33B	1 32B	—	
34A	white gypsum wall board	1st Floor	
34B	1	2nd Floor	
35A	white stair tred adhesive	1st Floor	

Analysis Method: ☒ PLM ☐ TEM ☐ Other _____ Turnaround Time: _____

Email Results to: _____@fando.com **Do Not Mail Hard Copy Report** **FAX Results to: 888-838-1160.**

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated. Do not point count. If NOB group samples are **ALL** negative by PLM, analyze the sample denoted with a star (★) by **TEM NOB** on a [ ] turnaround time. Analyze a **MAXIMUM** of [ ] samples by **TEM in noted order.**

Samples Collected by: _____ **Date:** _____

Samples Sent by: _____ **Date:** _____ **Time:** _____

Shipped To: ☒ EMSL ☐ Other _____

Method of Shipment: ☐ Fed Ex ☐ Lab Drop Off ☐ Other _____

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Asbestos Bulk Sample Chain-of-Custody Form

Sheet 6 of 11

Project Name: 689 Mass Ave **Project No.:** _____ **Task:** _____

Building Name/Number: _____ **Project Manager:** _____

Site Address: _____ **Total # of Samples:** 164

Sample ID (#-Date-Initials)	Material Type (Material, Size, Color, Description)	Sample Location	Comments/ Quantities
35B AG042523	1	1st Floor	
36A	white textured 12×12 ceiling tiles	1st Floor	
36B	1	1	
37A	white decorative plaster	1st Floor	
37B	1	1	
37C	1	1	
37D	1	2nd Floor	
37E	1	1	
38A	black stick pin adhesive	1st Floor	
38B			
39A	grey 3in cove base	1st Floor	
39B	1	1	
40A	grey undercoat sink	1st Floor	
40B	1	1	
41A	grey thinset	1st Floor	
41B	1	1	

Analysis Method: ☒ PLM ☐ TEM ☐ Other _____ Turnaround Time: _____

Email Results to: _____@fando.com **Do Not Mail Hard Copy Report** **FAX Results to: 888-838-1160.**

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated. Do not point count. If NOB group samples are **ALL** negative by PLM, analyze the sample denoted with a star (★) by **TEM NOB** on a [ ] turnaround time. Analyze a **MAXIMUM** of [ ] samples by **TEM in noted order.**

Samples Collected by: _____ **Date:** _____

Samples Sent by: _____ **Date:** _____ **Time:** _____

Shipped To: ☒ EMSL ☐ Other _____

Method of Shipment: ☐ Fed Ex ☐ Lab Drop Off ☐ Other _____

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Asbestos Bulk Sample Chain-of-Custody Form

Sheet 7 of 11

Project Name: 689 Mass Ave **Project No.:** _____ **Task:** _____

Building Name/Number: _____ **Project Manager:** _____

Site Address: _____ **Total # of Samples:** 164

Sample ID (#-Date-Initials)	Material Type (Material, Size, Color, Description)	Sample Location	Comments/ Quantities
42A-AG042523	grey grout	1st Floor	asso w/ 12 x 24 ceramic tiles
42B	↓	↓	↓
43A "AG042623"	grey 3in coveabase	2nd Floor	
43B	↓	↓	
44A	yellow mastic asso w/ 43A		
44B	↓ 43B		
45A	grey 6in coveabase		same yellow mastic as 44
45B	↓		
46A	red 12x12 floor tiles	2nd Floor kitchen	
46B	↓	↓	
47A	grey mastic asso w/ 46A		
47B	↓ 46B	↓	
48A	White 2x2 pin & fissure ceiling tiles	2nd Floor ceiling	
48B	↓	& 3rd Floor ceiling	
49A	grey leveling compound on wood	2nd Floor kitchen	
49B	↓	↓	

Analysis Method: ☒ PLM ☐ TEM ☐ Other _____ Turnaround Time: _____

Email Results to: _____@fando.com **Do Not Mail Hard Copy Report** **FAX Results to: 888-838-1160.**

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated. Do not point count. If NOB group samples are **ALL** negative by PLM, analyze the sample denoted with a star (★) by **TEM NOB** on a [ ] turnaround time. Analyze a **MAXIMUM** of [ ] samples by **TEM in noted order.**

Samples Collected by: _____ **Date:** _____

Samples Sent by: _____ **Date:** _____ **Time:** _____

Shipped To: ☒ EMSL ☐ Other _____

Method of Shipment: ☐ Fed Ex ☐ Lab Drop Off ☐ Other _____

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Asbestos Bulk Sample Chain-of-Custody Form

Sheet 8 of 11

Project Name: 689 Mass Ave **Project No.:** _____ **Task:** _____

Building Name/Number: _____ **Project Manager:** _____

Site Address: _____ **Total # of Samples:** 164

Sample ID (#-Date-Initials)	Material Type (Material, Size, Color, Description)	Sample Location	Comments/ Quantities
50A "AG042623"	grey bin cove base	3rd Floor	mastic already tested
50B	〃	〃	〃
51A	old residual brown mastic asso w/ 50A	〃	
51B	〃 50B	〃	
52A	orange 12x12 floor tile	〃	
52B	〃	〃	
53A	yellow mastic asso w/ 12x12 52A	〃	
53B	〃 52B	〃	
54A	orange cove base	〃	mastic already tested
54B	〃	〃	〃
55A	gray chimney flashing caulking	Roof	
55B	〃	〃	
56A	black upper barrier on soft concrete deck	Penthouse Roof	
56B	〃	〃	
57A	black pipe vent sealant	Main Roof	
57B	〃	〃	

Analysis Method: ☒ PLM ☐ TEM ☐ Other _____ Turnaround Time: _____

Email Results to: _____@fando.com **Do Not Mail Hard Copy Report** **FAX Results to: 888-838-1160.**

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated. Do not point count. If NOB group samples are **ALL** negative by PLM, analyze the sample denoted with a star (★) by **TEM NOB** on a [ ] turnaround time. Analyze a **MAXIMUM** of [ ] samples by **TEM in noted order.**

Samples Collected by: _____ **Date:** _____

Samples Sent by: _____ **Date:** _____ **Time:** _____

Shipped To: ☒ EMSL ☐ Other _____

Method of Shipment: ☐ Fed Ex ☐ Lab Drop Off ☐ Other _____

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Asbestos Bulk Sample Chain-of-Custody Form

Sheet 9 of 11

Project Name: 689 Mass Ave **Project No.:** _____ **Task:** _____

Building Name/Number: _____ **Project Manager:** _____

Site Address: _____ **Total # of Samples:** 164

Sample ID (#-Date-Initials)	Material Type (Material, Size, Color, Description)	Sample Location	Comments/ Quantities
58A "AG-042623"	black asphaltic built-up	Main Roof	
58B	〃	lower-upper Roof	
59A	black coal tar pitch paper	Main roof	
59B	〃	lower-upper roof	
*60A	back exterior door caulking	Penthouse door	
*60B	〃	〃	
61A	black brown fiberboard/paper on roof deck	lower lower roof	
61B	〃	〃	
*62A	white window caulking exterior	penthouse windows	
*62B	〃	〃	
63A	tar/paper material black on copper roof	lower roof	
63B	〃	〃	
*64A	white interior window glazing	penthouse window	
*64B	〃	〃	
*65A	grey caulking on deposit front of Building	Exterior	
*65B	〃 deposit box	〃	

Analysis Method: ☒ PLM ☐ TEM ☐ Other _____ Turnaround Time: _____

Email Results to: _____@fando.com **Do Not Mail Hard Copy Report** **FAX Results to: 888-838-1160.**

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated. Do not point count. If NOB group samples are **ALL** negative by PLM, analyze the sample denoted with a star (★) by **TEM NOB** on a [ ] turnaround time. Analyze a **MAXIMUM** of [ ] samples by **TEM in noted order.**

Samples Collected by: _____ **Date:** _____

Samples Sent by: _____ **Date:** _____ **Time:** _____

Shipped To: ☒ EMSL ☐ Other _____

Method of Shipment: ☐ Fed Ex ☐ Lab Drop Off ☐ Other _____

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132302813

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108 Myrtle Street, Suite 502, Quincy, MA 02171 Phone (617) 282-4675 Fax (617) 282-8253

Asbestos Bulk Sample Chain-of-Custody Form

Sheet 10 of 11

Project Name: 689 Mass Ave **Project No.:** _____ **Task:** _____

Building Name/Number: _____ **Project Manager:** _____

Site Address: _____ **Total # of Samples:** 164

Sample ID (#-Date-Initials)	Material Type (Material, Size, Color, Description)	Sample Location	Comments/ Quantities
* 66A "AG 042623"	black/grey exterior window caulking	"Exterior"	
* 66B			
67A	grey caulking on metal trim	Front enterance	
67B			
* 68A	white joint/door caulking		
* 68B			
69A	brown mastic on stair tread	Stairs	
69B			
70A	pink/tan coved base		
70B			
71A	light brown mastic asso w/ 70A		
71B	70B		
72A	grey rough coat ceiling	1st Floor Vault Stairs	
72B			
73A	brown jute sheet flooring		
73B			

Analysis Method: ☒ PLM ☐ TEM ☐ Other _____ Turnaround Time: _____

Email Results to: _____@fando.com **Do Not Mail Hard Copy Report** **FAX Results to: 888-838-1160.**

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated. Do not point count. If NOB group samples are **ALL** negative by PLM, analyze the sample denoted with a star (★) by **TEM NOB** on a [ ] turnaround time. Analyze a **MAXIMUM** of [ ] samples by **TEM in noted order.**

Samples Collected by: _____ **Date:** _____

Samples Sent by: _____ **Date:** _____ **Time:** _____

Shipped To: ☒ EMSL ☐ Other _____

Method of Shipment: ☐ Fed Ex ☐ Lab Drop Off ☐ Other _____

REC'D EMSL-BOSTON APR 27 2023

OrderID: 132302813

FUSS & O'NEILL

EMSL Customer No. ENVI54

132302813

www.fando.com

108 Myrtle Street, Suite 502, Quincy, MA 02171 Phone (617) 282-4675 Fax (617) 282-8253

Asbestos Bulk Sample Chain-of-Custody Form

Sheet 11 of 11

Project Name: 689 Mass Ave **Project No.:** _____ **Task:** _____

Building Name/Number: _____ **Project Manager:** _____

Site Address: _____ **Total # of Samples:** 164

Sample ID (#-Date-Initials)	Material Type (Material, Size, Color, Description)	Sample Location	Comments/ Quantities
74A "AG-042623"	grey motar front enterance	Exterior	
74B	↓	↓	
75A	grey repair motar on sandstone		
75B ↓		↓	

Analysis Method: ☒ PLM ☐ TEM ☐ Other _____ Turnaround Time: _____

Email Results to: _____@fando.com **Do Not Mail Hard Copy Report** **FAX Results to: 888-838-1160.**

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated. Do not point count. If NOB group samples are **ALL** negative by PLM, analyze the sample denoted with a star (★) by **TEM NOB** on a [ ] turnaround time. Analyze a **MAXIMUM** of [ ] samples by **TEM in noted order.**

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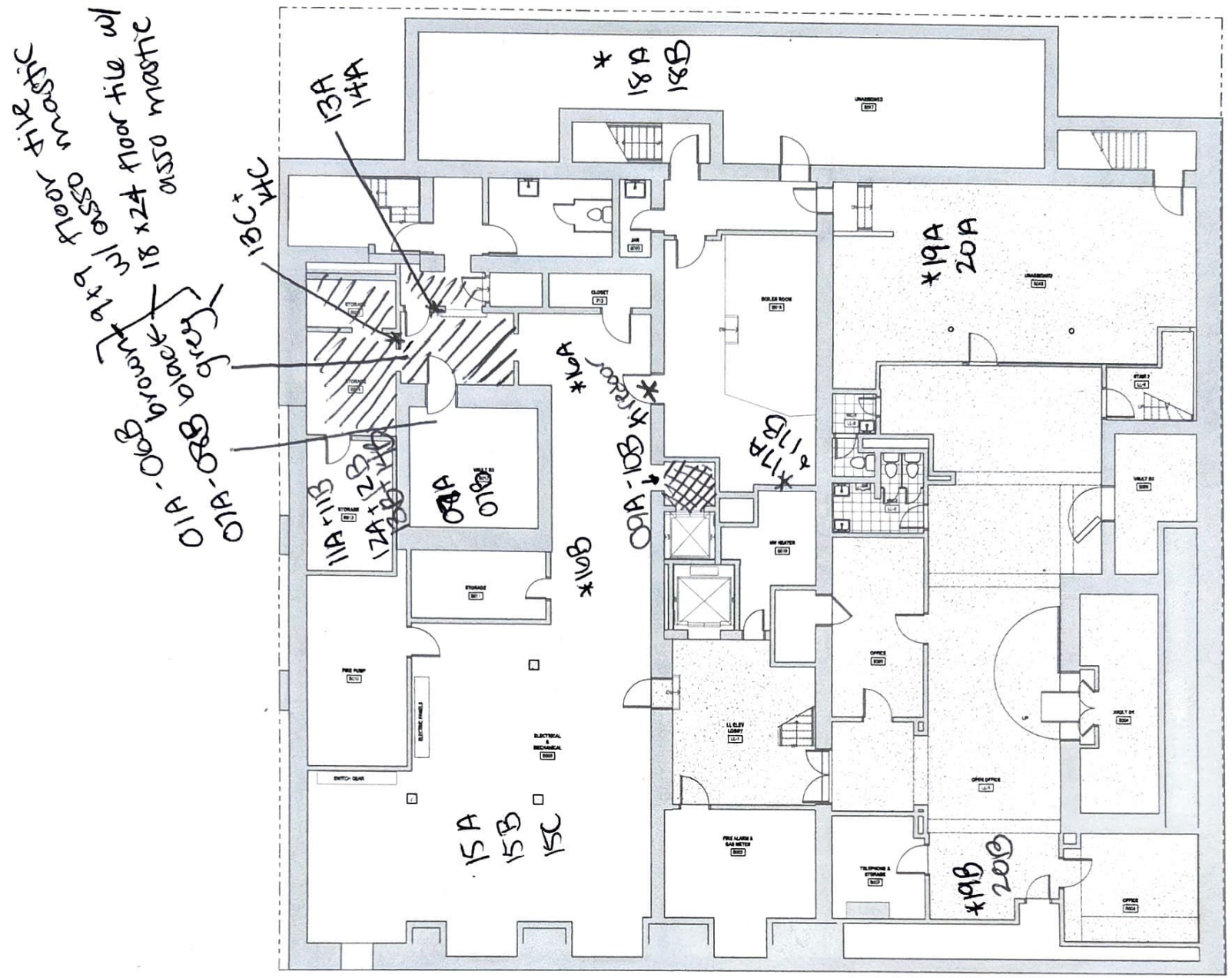
Method of Shipment: ☐ Fed Ex ☐ Lab Drop Off ☐ Other _____

REC'D EMSL-BOSTON APR 27 2023

Appendix D

Sample Locations Diagram



1 BASEMENT-EXISTING CONDITIONS
1/4" = 1'-0"

City of Cambridge
Municipal Offices
598 Massachusetts Avenue

SD PROGRESS SET

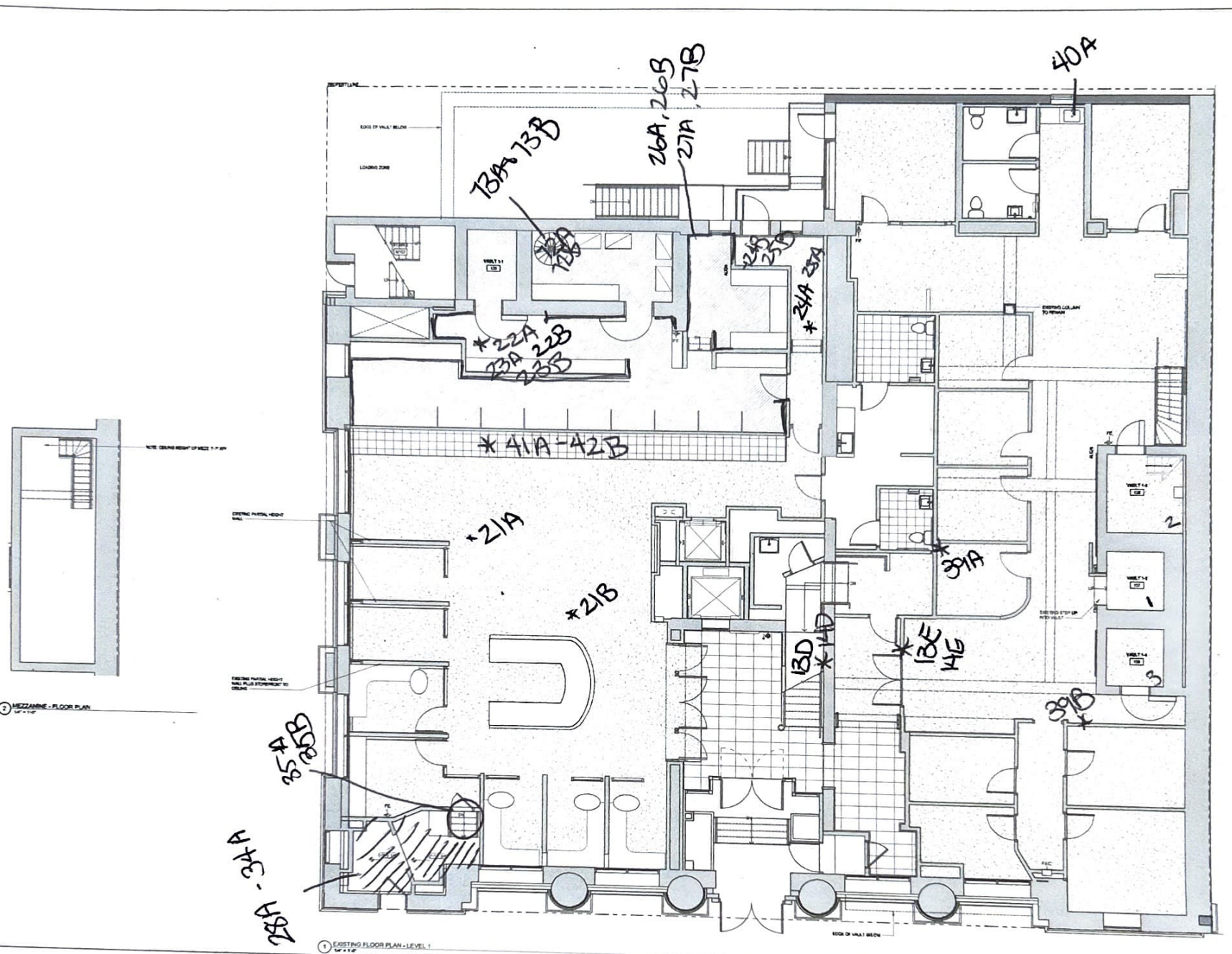
CambridgeSeven
Architects and Planners

	2205.005
	Municipal Offices
	WG/DM JP
	04/18/2023
	1/4" = 1'-0"

EXISTING CONDITIONS - LOWER LEVEL

EX-1.0

4/24/2023 10:47:42 AM



City of Cambridge
Municipal Offices
806 Massachusetts Avenue

SD PROGRESS SET

CambridgeSeven
Architects and Planners

	2265.005
	Municipal Offices
	WG/DM JP
	04/18/2023
	1/4" = 1'-0"

EXISTING CONDITIONS - FIRST FLOOR PLAN

EX-1.1

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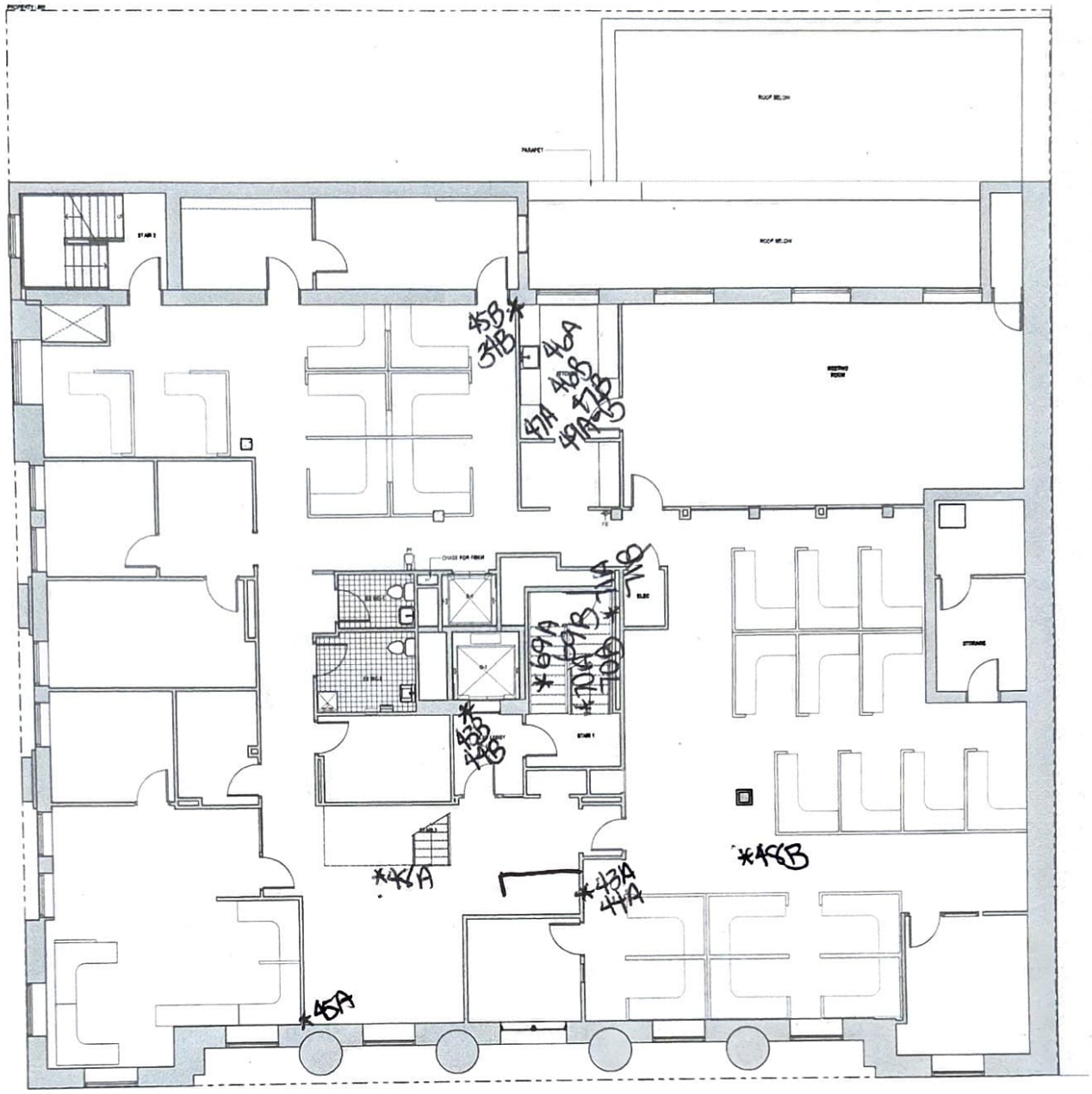


1 EXISTING FLOOR PLAN - LEVEL 2
1/8" = 1'-0"

4/24/2023 10:47:44 AM

City of Cambridge
Municipal Offices
806 Massachusetts Avenue

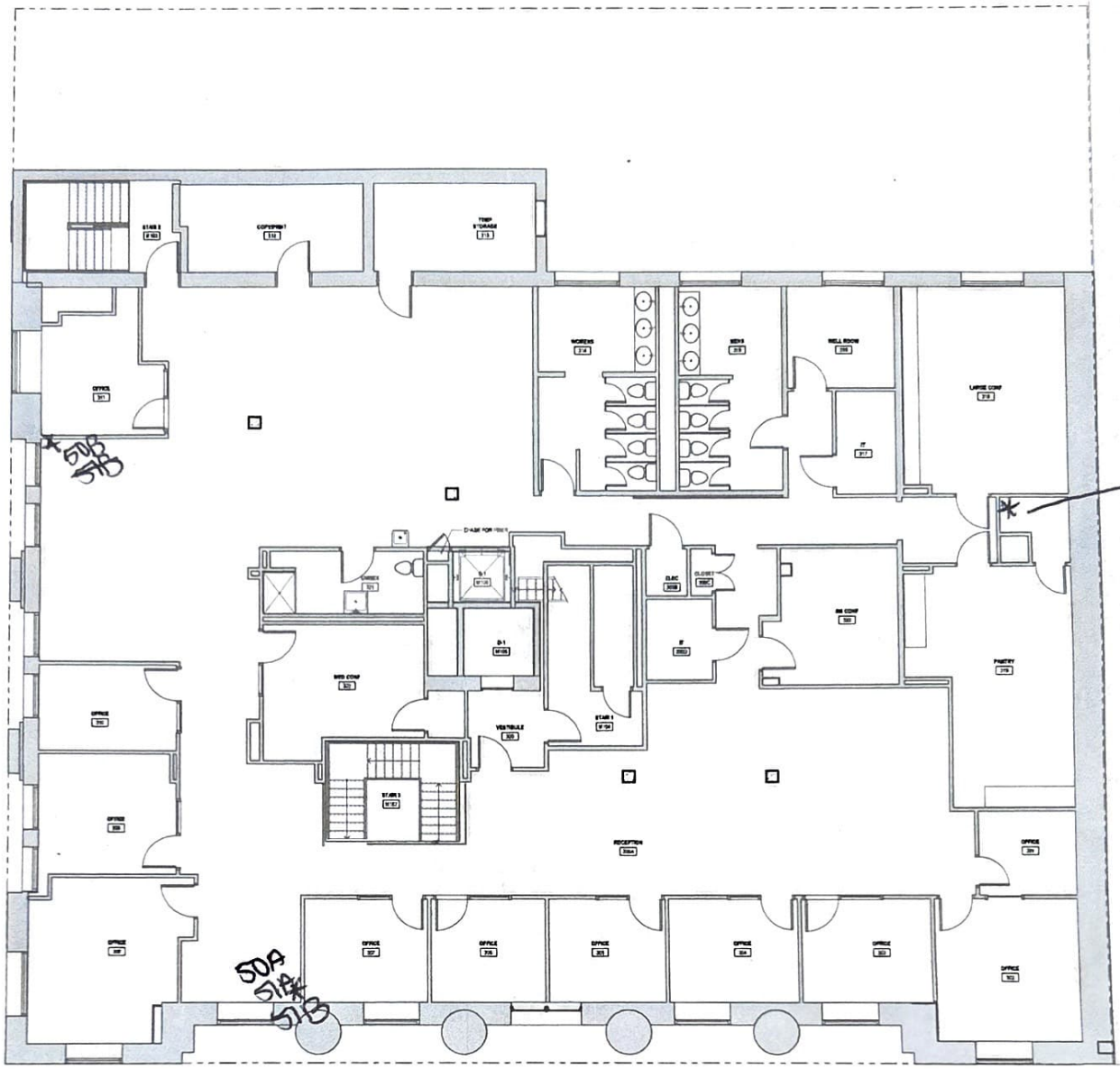
SD PROGRESS SET

CambridgeSeven
Architects and Planners

2306.005
Municipal Offices
WG/DM JP
04/18/2023
1/8" = 1'-0"

EXISTING CONDITIONS - SECOND FLOOR PLAN

EX-1.2



1 EXISTING FLOOR PLAN - LEVEL 3
3/8" = 1'-0"

City of Cambridge
Municipal Offices
795 Massachusetts Avenue

SD PROGRESS SET

CambridgeSeven
Architects and Planners

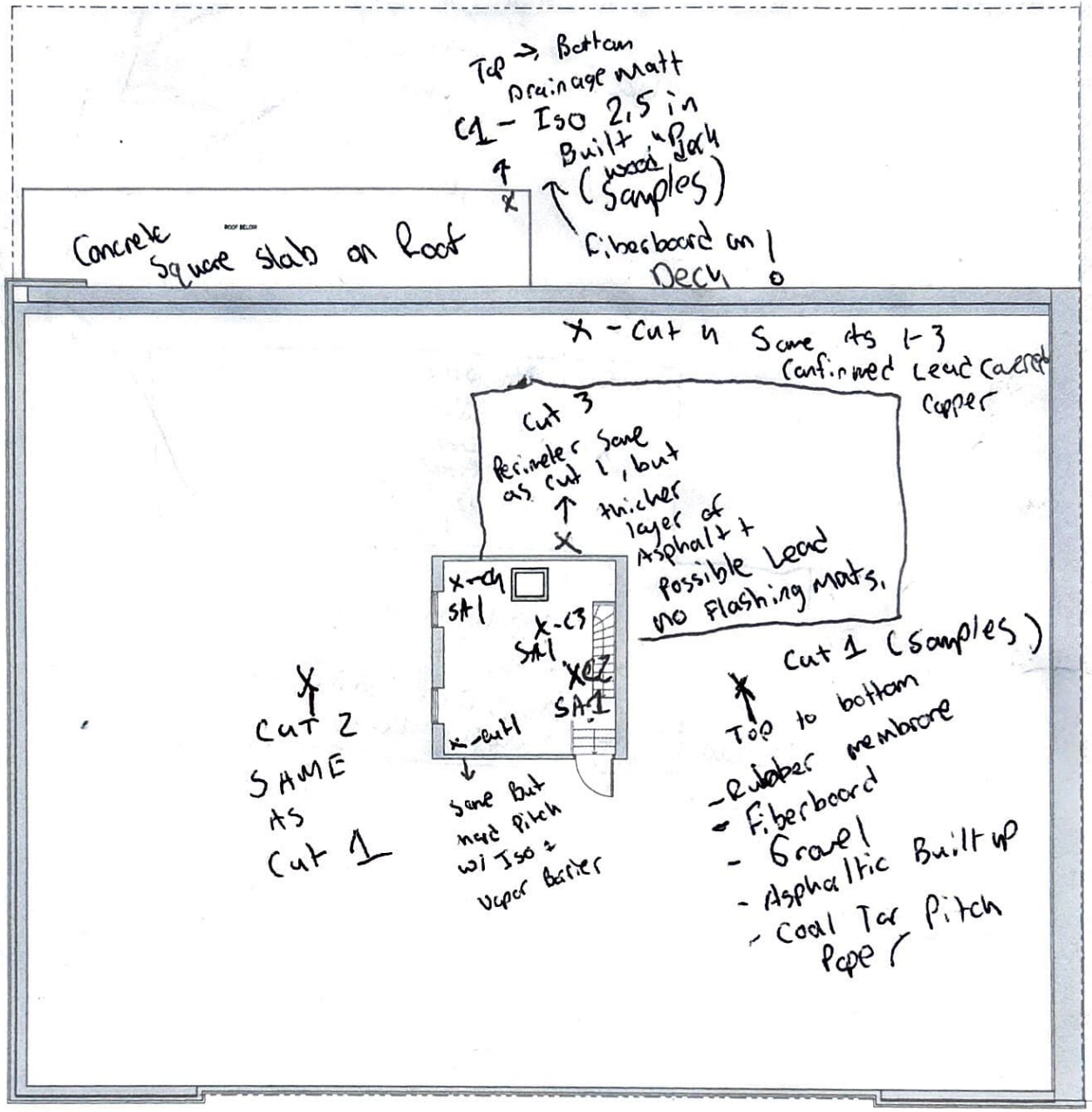
2295.005
Municipal Offices
WG/CM JP
04/18/2023
1/8" = 1'-0"

EXISTING CONDITIONS - THIRD FLOOR PLAN

EX-1.3

4/24/2023 10:47:45 AM

SA = Same as



1 EXISTING FLOOR PLAN - ROOF

City of Cambridge
Municipal Offices
689 Massachusetts Avenue

SD PROGRESS SET

CambridgeSeven
Architects and Planners

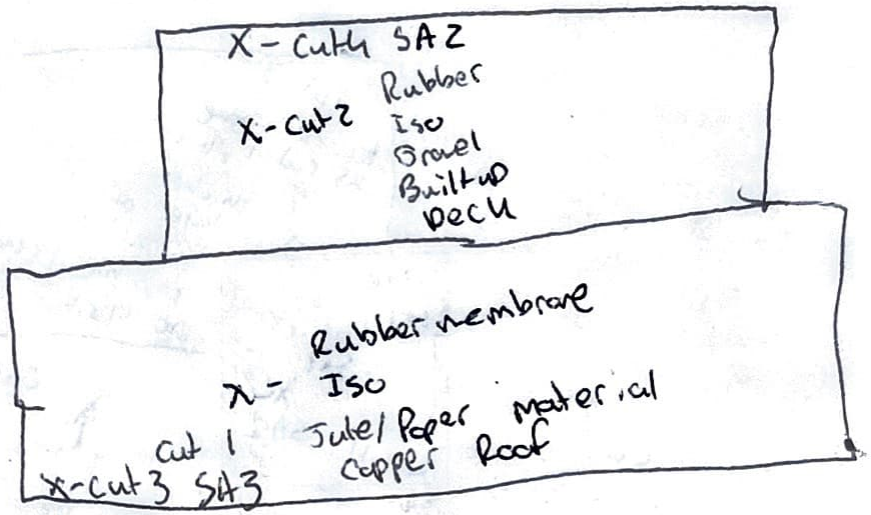
2205.005
Municipal Offices
WG/DM JP
04/18/2023
1/4" = 1'-0"

EXISTING CONDITIONS - ROOF PLAN

EX-1.4

4/24/2023 10:47:45 AM

Lower Roof


X-cut4 SA2
X-cut2
Rubber
Iso
Gravel
Built up
Deck
Rubber membrane
X-
Iso
Jute/Paper
Copper
material
Roof
cut 1
X-cut3 SA3

Appendix E

XRF Lead-Based Paint Screening Field Data Sheets

FUSS & O'NEILL
108 Myrtle Street, Suite 502, Quincy, MA 02171
www.fando.com
(617) 282-4675

XRF Lead-Based Paint Screening Field Data Sheet

Inspector: Anna Gibbons **XRF Model:** RMD – LPA-1 **Serial:** 1395

Project Name: 689 Mass Ave **Date:** 4/26/23

Building Name/Number: _____ **Project Number:** 20230186.A20

Site Address: 689 Massachusetts Ave, Cambridge MA **Project Manager:** Dustin Diedricksen

XRF Calibration Check - RMD (0.7 to 1.3 mg/cm² inclusive)

	First Reading	Second Reading	Third Reading	Average
Start Check	1.0	1.0	1.0	1.0
Finish Check	1.0	1.0	1.0	1.0

Room	Side	Surface/Component	Color	Substrate*	XRF Reading	Positive
Outside Clock	—	Clock Base	Green	Metal	0.0	
Basement Stairway		Wall	White	Plaster	9.9	✓
Landing						✓
Stair Landing		Door	off White	Metal	0.0	
Open office		Wall	White	Plaster	0.0	
Storage Room		Wall	Light Pink		9.9	✓
		Door	Cream	Metal	0.0	
		Door Frame		Wood		
Open office		Vault Panel	Cream	Metal	7.1	✓
Inside Vault		Wall	White	Plaster	6.2	✓
Storage			Teal		2.2	✓
Boiler Room		Door	Pink	Metal	0.0	
		Door Frame				
Mechanical Room		Wall	White	Brick	5.5	✓
			Red		0.0	
			Grey		2.4	✓
Elevator Area		Door	White	Metal	0.0	
~~Boiler Room~~		Door Frame				
Boiler Room		Wall	Grey/Blue	Brick	9.9	✓
Bathroom		Wall	White	SheetRock	0.0	
1st Floor Entrance		Wall		Plaster		

* Substrate Type: M = Metal, W = Wood, P = Plaster, D = Drywall, C = Concrete, B = Brick, CMU = Concrete Masonry Unit, A = Aluminum, CT = Ceramic Tile
N/A = Not Accessible, N/C = Not Coated, COV = Covered, VR = Vinyl Replacement, POS = Positive

FUSS & O'NEILL
108 Myrtle Street, Suite 502, Quincy, MA 02171
www.fando.com
(617) 282-4675

XRF Lead-Based Paint Screening Field Data Sheet

Page ___ of ___

Project Name: 689 Mass Ave **Project Number:** _____

Room	Side	Surface/Component	Color	Substrate*	XRF Reading	Positive
"1st Floor" Main Bank	R	Wall	White	Plaster	0.0	
Vault w/stairs	R	Interior Door	Pink	Metal	6.5	✓
		Wall	White	Brick	0.6	
		Stairs	Pink	Metal	9.9	✓
Vault w/o Stairs	R	Wall	Pink	Plaster	9.9	✓
Main Bank			White	Sheet Rock	0.0	
"Offices" Vault 1	R	Wall	Off-white	Plaster	9.9	✓
		Door Frame	Grey	Metal	5.3	✓
~~Vault 2~~	~~R~~	~~Wall~~	~~Pink~~	~~Plaster~~	~~9.9~~	~~✓~~
Vault 2	R	Wall	Off-white	Cinder block	1.0	✓
~~Open Space~~		Stairs		Metal	9.9	✓
Open Space		Wall	White	Sheet Rock	0.0	
~~Vault 3~~		Door	Grey	Plaster	0.1	
Vault B		Wall	Off-white	Cinder Block	0.0	
		Door		Metal	3.3	✓
Stairs		Wall	White	Plaster	0.0	
"2nd Floor"		Wall	White	Sheet Rock		
			Red			
			Blue			
			Yellow			
		Window Sill	Blue	Metal	0.0	
		Window Frame				
3rd Floor		Wall	White	Sheet Rock	0.0	
			Red			
			Blue			
			Yellow			

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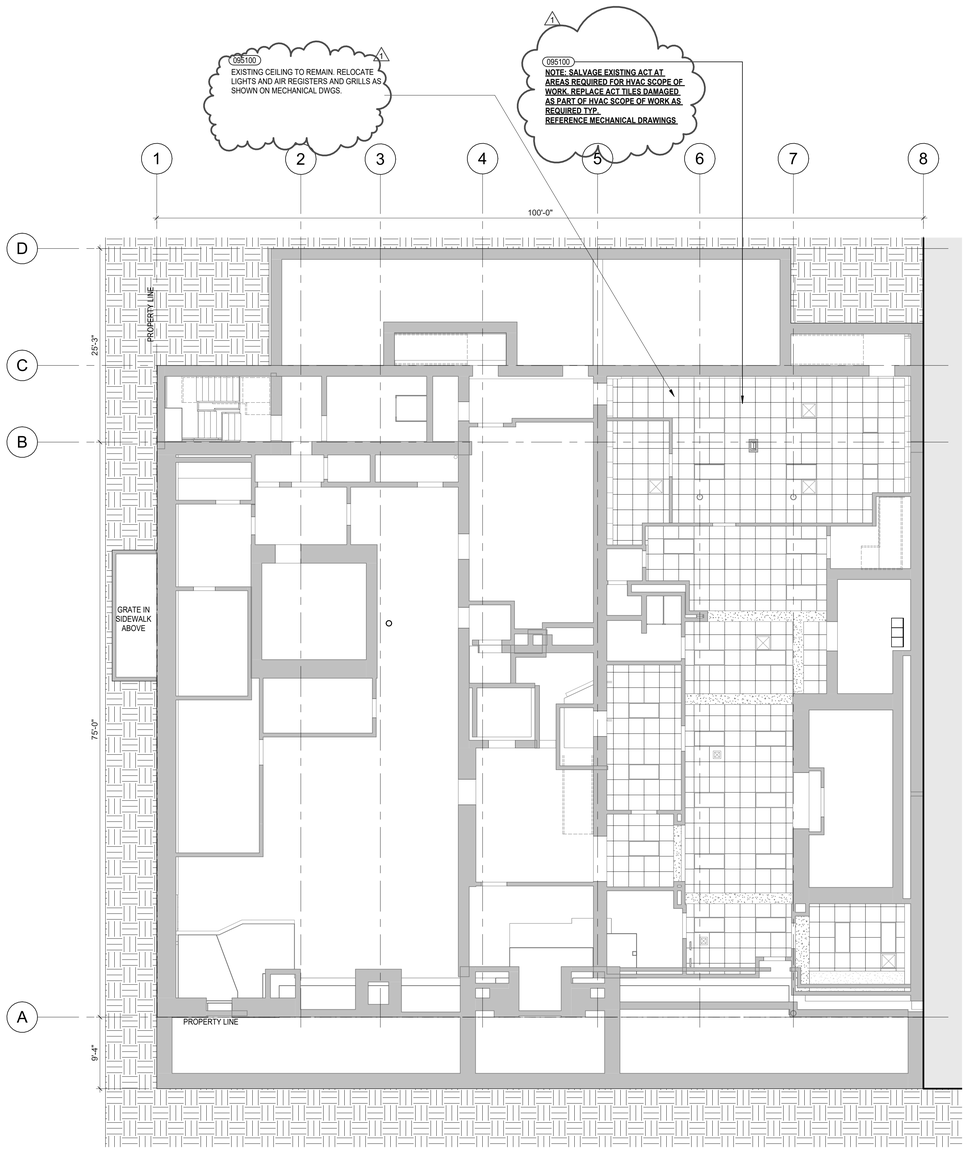
N/A = Not Accessible, N/C = Not Coated, COV = Covered, VR = Vinyl Replacement, POS = Positive

689 Mass Ave – Limited Renovation June 12, 2024

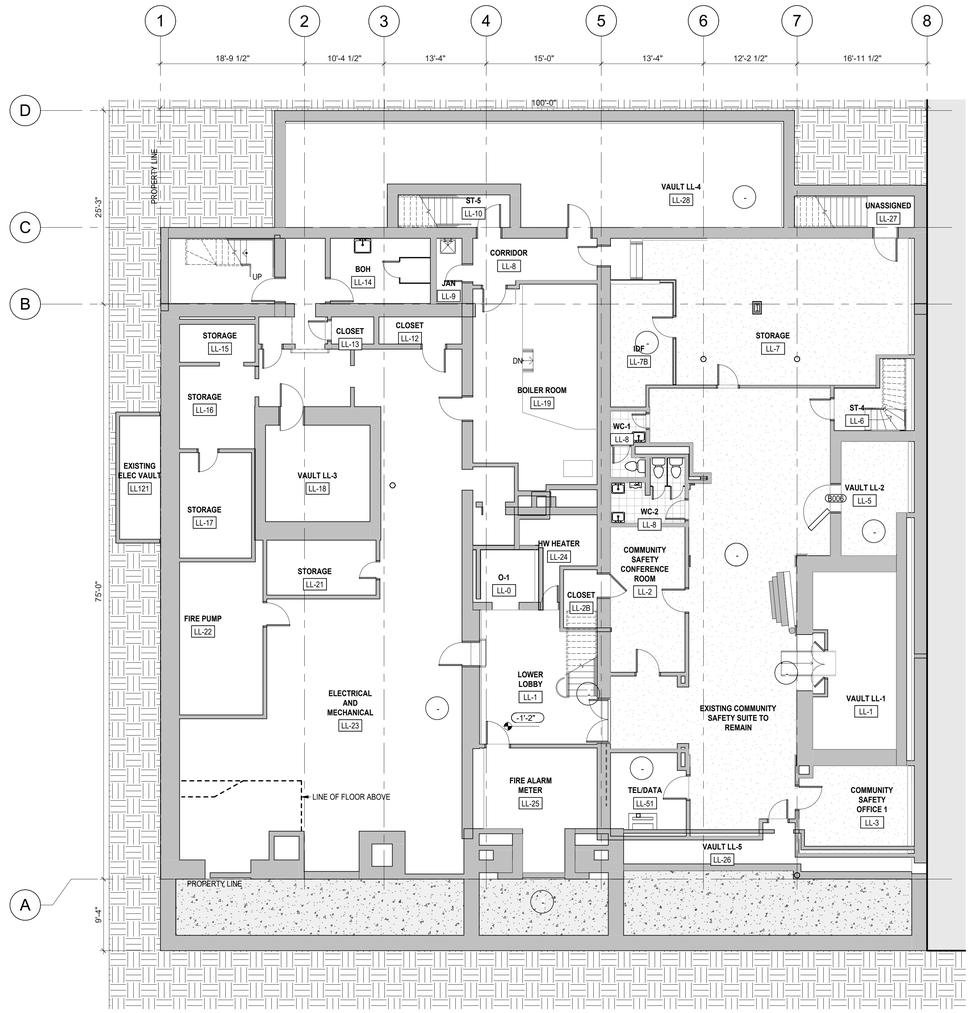
Pre-Bid Walkthrough Sign-in Sheet

Name	Affiliation	Contact Information
Joshua Addio	Frontline	jaddio@frontlineinc.info
Arvi Patel	H J Russell	774-27-1135
Gianni Pistorino	Unified	508 734 0477
Omar Bauta	Frontline	617 861 1806
Alan Chan	Paul J Ryan	781-843-1900 - alan@pauljryanco.com
Josh Conroy	TRAC Builders	estimating@TRACBuilders.com
J.P. Lawrence	CoC	JLawrence@CambridgeMA.gov
M DeVoe	CoC	mdevoe@cambridgema.gov
~~[illegible]~~	~~[illegible]~~	~~[illegible]~~
~~[illegible]~~	~~[illegible]~~	~~[illegible]~~
Danielle McDonough	Cambridge Seven	dmcdonough@cambridgeseven.com



3 LOWER LEVEL - REFLECTED CEILING PLAN
1/8" = 1'-0"

FOR REFERENCE ONLY. NO ARCHITECTURAL SCOPE AT LOWER LEVEL BEYOND ACT REPLACEMENT AS REQUIRED. REFER TO MEP DRAWINGS FOR MEP SCOPE



1 LOWER LEVEL - FLOOR PLAN
1/8" = 1'-0"

FOR REFERENCE ONLY. NO ARCHITECTURAL SCOPE AT LOWER LEVEL BEYOND ACT REPLACEMENT AS REQUIRED. REFER TO MEP DRAWINGS FOR MEP SCOPE

6/17/2024 2:32:23 PM

GENERAL NOTES - DEMOLITION

1. DEMOLITION DRAWINGS ARE PROVIDED FOR THE CONTRACTORS GENERAL REFERENCES ONLY AND MAY NOT REPRESENT ALL DEMOLITION REQUIRED FOR NEW WORK. DEMOLITION REQUIRED MAY INCLUDE, BUT IS NOT LIMITED TO SCOPE OF WORK SHOWN ON THE CONTRACT DOCUMENTA, CONTRACTTOR SHALL BE RESPONSIBLE FOR ANY WORK REQUIRED TO CONSTRUCT AND MAKE FULLY OPERATIONALNY AND ALL WORK INDICATED ON THE CONSTRUCTION DOCUMENTS.
2. CONTRACTOR SHALL BRING ANY UNANTICIPATED HIDDEN CONDITIONS UNVOCERED DURING THE COURSE OF DEMOLITION TO THE ATTENTION OF THE OWNER AND ARCHITECT IMMEDIATELY.
3. DEMOLITION NOTES BELOW APPLY TO THE ENTIRE PLAN AREA SHOWN WITHIN THE SCOPE OF WORK LINE.
4. COORDINATE DEMOLITION WITH NEW WORK. CONTRACTOR TO REVIEW CONSTRUCTION DOCUMENTS WITH EXISTING CONDITIONS AND NOTIFY ARCHITECT IMMEDIATELY OF ANY CONFLICTS.
5. CONTRATOR TO MAINTAIN SECURITY OF ALL SPACES DURING DEMOLITION AND THROUGHOUT CONSTRUCTION
6. EXISTING CARPET AND ASSOCIATED BASES TO BE DEMOLISHED UNLESS OTHERWISE NOTED.
7. EXISTING TILES, RESILIENT FLOORING AND ASSOCIATED BASED TO REMAIN UNLESS OTHERWISE NOTED. PROTECT DURING CONSTRUCTION.
8. EXISTING DOORS, FRAMES AND HARDWARE TO REMAIN THROUGHOUT. PROTECT HARDWARE AND HINGES DURING PAINTING.
9. THRESHOLDS TO BE REPLACED AS NEEDED FOR NEW FLOORING
10. STRIP WALLCOVERING FROM WALLS TO REMAIN, UNLESS NOTED OTHERWISE
11. CAREFULLY REMOVE ALL ABANDONED MISCELLANEOUS ACCESSORIES, SIGNAGE, APPURTENANCES, HOOKS, BRACKETS, SHELVING, ETC.
12. EXISTING WINDOW TREATEMENTS AND HARDWARE TO REMAIN. COVER AND PROTECT DURING CONSTRUCTION.
13. FIRE EXTINGUISHERS AND CABINETS TO REMAIN.
14. PROTECT EXISTING CEILINGS TO REMAIN.
15. FIRE ALARM SHALL REMAIN IN OPERATION DURING CONSTRUCTION.
16. COORDINATE REMOVAL AND/OR RELOCATION OF FIRE ALARM EQUIPMENT WITH ARCHITECT AND ENGINEER

CONSTRUCTION GENERAL NOTES

1. ALL DIMENSIONS ARE FACE OF FINISH TO FACE OF FINISH, UNLESS NOTED OTHERWISE
2. ALL PAINTED TRIM 3 COAT SEMI-GLOSS FINISH/ ALL GWB PRIMED, PAINTED 2 COAT EGGSHELL - REFER TO FINISH SCHEDULE
3. INSTALL FLUSH-MOUNTED THRESHOLD BETWEEN EXISTING AND NEW FLOOR MATERIAL, TBD
4. ALL NECESSARY BLOCKING TO BE PROVIDED AS REQUIRED, FULLY CONCEALED, SECURE FOR INTENDED USE
5. SUBMIT FOR APPROVAL TWO SAMPLES OF ALL FINISH MATERIALS
6. VERIFY ALL APPLIANCE/EQUIPMENT SIZES FOR FIT PRIOR TO FABRICATION OF SURROUNDING CABINETRY
7. SEE DEMO PLAN FOR EXISTING TO REMAIN (ETR) PARTITIONS

FINISH PLAN NOTES

1. REFER TO FINISH LEGEND & FINISH SCHEDULE FOR GENERAL MATERIAL SPECIFICATION REQUIREMENTS AND INSTALLATION INSTRUCTIONS.
2. SUBMIT SAMPLES OF FINISH MATERIALS AS SPECIFIED TO ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION
3. ALL SURFACE MOUNTED WIREMOLD, PLUGMOLD, CONDUIT AND PIPING SHALL BE PAINTED TO MATCH ADJACENT WALL
4. SUBMIT CARPET SEAMING DIAGRAM FOR ARCHITECTS APPROVAL PRIOR TO INSTALLATION.
5. STRAIGHT RUBBER BASE PROFILE WHERE USED AT CARPETING, COVER RUBBER BASE PROFILE WHERE USED AT HARD FLOORS
6. ALL RUBBER BASE TO BE ROLLED GOOD UNLESS NOTED OTHERWISE
7. PREPARE ALL EXISTING GWB FOR FINAL FINISH. PATCH AND REPAIR AS REQUIRED.
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9. FLOOR PREP WHERE REQUIRED SHALL BE LATEX LEVELING COMPOUND
10. STABILIZE ALL LOOSE EXISTING SUBFLOORING OR FLOORING TO REMAIN
11. CONTRACTOR SHALL ADVISE ARCHITECT OF ANY CONFLICTS BEFORE PROCEEDING WITH AFFECTED WORK.

CITY OF CAMBRIDGE MUNICIPAL OFFICES LIMITED RENOVATION 689 Massachusetts Ave Cambridge, MA 02139

DEMOLITION LEGEND

- EXISTING TO REMAIN
- EXISTING TO BE DEMOLISHED
- FLOORING TO BE REMOVED
- CARPET TO BE REMOVED

NOTE: REFER TO SPECIFICATION APPENDIX A FOR LIMITED HAZARDOUS MATERIALS TESTING REPORT. ALL KNOWN OR SUSPECTED ACM AND ACWM THAT MAY BE DISTURBED BY CONSTRUCTION ACTIVITIES MUST FIRST BE ABATED BY A MADLS-LICENSED ASBESTOS ABATEMENT SUBCONTRACTOR.

CONSTRUCTION LEGEND

- NEW CONSTRUCTION
- EXISTING TO REMAIN

LINE STYLES

- LIMIT OF ARCHITECTURAL SCOPE OF WORK
- DEMOLISHED
- ACCENT PAINT, PT-7
- NEW CONSTRUCTION
- PARTIAL HEIGHT WALL

AREA N.I.C.
CPT-1
CPT-2

Number	Revision	Date
1	Addendum 1	06/18/2024

ISSUED FOR BID

CambridgeSeven
Architects and Planners

Job #	2406
Project	689 Massachusetts Ave Cambridge, MA 02139
Drawn By	DM
Checked	SG
Date	05/23/2024
Scale	1/8" = 1'-0"

Drawing Title:
LOWER LEVEL - EXISTING PLAN AND RCP

A1.0

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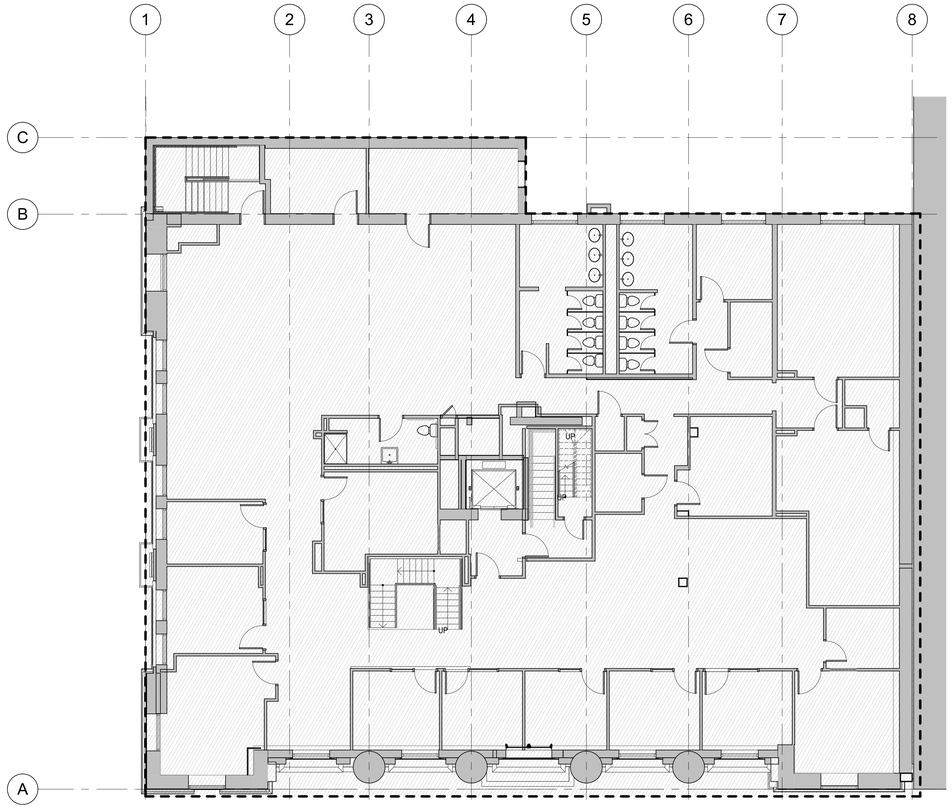
11. CONTRACTOR SHALL ADVISE ARCHITECT OF ANY CONFLICTS BEFORE PROCEEDING WITH AFFECTED WORK.

2 LEVEL 3 - EXISTING RCP
1/8" = 1'-0"

FOR REFERENCE ONLY. NO ARCHITECTURAL SCOPE AT LEVEL 3 BEYOND ACT REPLACEMENT AS REQUIRED. REFER TO MEP DRAWINGS FOR MEP SCOPE



1 LEVEL 3 - EXISTING PLAN
1/8" = 1'-0"

FOR REFERENCE ONLY. NO ARCHITECTURAL SCOPE AT LEVEL 3 BEYOND ACT REPLACEMENT AS REQUIRED. REFER TO MEP DRAWINGS FOR MEP SCOPE

CITY OF CAMBRIDGE MUNICIPAL OFFICES LIMITED RENOVATION 689 Massachusetts Ave Cambridge, MA 02139

DEMOLITION LEGEND

- EXISTING TO REMAIN
- EXISTING TO BE DEMOLISHED
- FLOORING TO BE REMOVED
- CARPET TO BE REMOVED

NOTE: REFER TO SPECIFICATION APPENDIX A FOR LIMITED HAZARDOUS MATERIALS TESTING REPORT. ALL KNOWN OR SUSPECTED ACM AND ACWM THAT MAY BE DISTURBED BY CONSTRUCTION ACTIVITIES MUST FIRST BE ABATED BY A MADLS-LICENSED ASBESTOS ABATEMENT SUBCONTRACTOR.

CONSTRUCTION LEGEND

- NEW CONSTRUCTION
- EXISTING TO REMAIN

LINE STYLES

- LIMIT OF ARCHITECTURAL SCOPE OF WORK
- DEMOLISHED
- ACCENT PAINT, PT-7
- NEW CONSTRUCTION
- PARTIAL HEIGHT WALL

AREA N.I.C.
CPT-1
CPT-2

Number	Revision	Date
1	Addendum 1	06/18/2024

ISSUED FOR BID

CambridgeSeven
Architects and Planners

Job # 2406
Project 689 Massachusetts Ave Cambridge, MA 02139
Drawn By DM Checked JP
Date 05/23/2024
Scale 1/8" = 1'-0"
Drawing Title
LEVEL 3 EXISTING PLAN AND RCP

A1.3

6/17/2024 2:32:43 PM

FINISH LEGEND

FINISH ID	TYPE	MFR	STYLE	MODEL	COLOR	NOTES
CARPET BASIS-OF-DESIGN (REFER TO SPECIFICATIONS)						
CPT-1	CARPET TILE	MANNINGTON	18"x36"	AUTOMATA CRYPTOGRAM	OSCILLATOR (31373)	VERTICAL ASHLAR INSTALLATION METHOD
CPT-2	CARPET TILE	MANNINGTON	12"x36"	AUTOMATA RULE	INPUT (13379)	VERTICAL ASHLAR INSTALLATION METHOD
PAINT BASIS-OF-DESIGN (REFER TO SPECIFICATIONS)						
PT-1	CEILING PAINT	BENJAMIN MOORE	FLAT	ULTRA SPEC 500	OC-65 CHANTILLY LACE	
PT-2	WALL PAINT	BENJAMIN MOORE	EGGSHELL	ULTRA SPEC 500	OC-65 CHANTILLY LACE	
PT-3	TRIM PAINT	BENJAMIN MOORE	SEMI GLOSS	ULTRA SPEC 500	OC-65 CHANTILLY LACE	
PT-4	MR PAINT	BENJAMIN MOORE	SEMI GLOSS	ULTRA SPEC 500	OC-65 CHANTILLY LACE	
PT-5	WALL BASE PAINT	BENJAMIN MOORE	SEMI GLOSS	ULTRA SPEC 500	COLOR MATCH WB-1.1	Similar to 2134-30 Iron Mountain
PT-6	RAILING PAINT	BENJAMIN MOORE	SEMI GLOSS	ULTRA SPEC 500	COLOR MATCH WB-1.1	Similar to 2134-30 Iron Mountain
PT-7	ACCENT PAINT - WALL	BENJAMIN MOORE	EGGSHELL	ULTRA SPEC 500	HUDSON BAY	
PT-8	ACCENT PAINT - DOOR	BENJAMIN MOORE	SEMI GLOSS	ULTRA SPEC 500	HUDSON BAY	
WALL BASE BASIS-OF-DESIGN (REFER TO SPECIFICATIONS)						
WB-1	RESILIENT WALL BASE	JOHNSONITE	4"	BASEWORKS	CHARCOAL	
WB-2	RESILIENT WALL BASE	JOHNSONITE	6"	BASEWORKS	CHARCOAL	
ACOUSTICAL CEILING TILE BASE BASIS-OF-DESIGN (REFER TO SPECIFICATIONS)						
ACT-1	CEILING TILE	ARMSTRONG	2'x2'	MATCH EXISTING	WHITE	MATCH EXISTING

FINISH SCHEDULE - LEVEL 2

ROOM NO	ROOM NAME	CEILING	FLOOR	BASE FINISH N	BASE FINISH E	BASE FINISH S	BASE FINISH W	WALL FINISH N	WALL FINISH E	WALL FINISH S	WALL FINISH W	Comments
200	SHARED COLLAB	ACT-1	CPT-2	WB-2	WB-2	WB-2	WB-2	PT-2	PT-2	PT-2	PT-2	
200B	CLOSET	ACT-1	CPT-2	WB-2	WB-2	WB-2	WB-2	PT-2	PT-2	PT-2	PT-2	
201	EQUITY & INCLUSION	ACT-1	CPT-2	WB-2	WB-2	PT-5	WB-2	PT-2	PT-2	PT-2	PT-2	
202	EQUITY & INCLUSION INVESTIGATOR	ACT-1	CPT-2	WB-2	WB-2	PT-5	WB-2	PT-2	PT-2	PT-2	PT-2	
203	EQUITY & INCLUSION DIRECTOR	ACT-1	CPT-2	WB-2	WB-2	PT-5	WB-2	PT-2	PT-2	PT-2	PT-2	
204	MEETING	ACT-1	CPT-2	WB-2	WB-2	WB-2	WB-2	PT-2	PT-2	PT-2	PT-2	
204B	STORAGE	ACT-1	CPT-2	WB-2	WB-2	WB-2	WB-2	PT-2	PT-2	PT-2	PT-2	
205	EXG ELEC	-	-	-	-	-	-	PT-2	PT-2	PT-2	PT-2	
206	EXISTING MEETING ROOM	ACT-1	CPT-2	WB-2	WB-2	WB-2	WB-2	PT-2	PT-2	PT-2 / GL-1	PT-2	
206B	CL	ACT-1	CPT-2	WB-2	WB-2	WB-2	WB-2	PT-2	PT-2	PT-2	PT-2	
207	COMMISSION OPEN DESKING	ACT-1	CPT-2	WB-2	WB-2	WB-2	WB-2	PT-2	PT-2	PT-2	PT-2	
208	WOMEN RIGHTS DIRECTOR	ACT-1	CPT-2	WB-2	WB-2	WB-2	WB-2	PT-2	PT-2	PT-2	PT-2	
209	AMERICAN FREEDMAN	ACT-1	CPT-2	WB-2	WB-2	WB-2	WB-2	PT-2	PT-2	PT-2	PT-2	
210	SHARED CORRIDOR	ACT-1	CPT-2	WB-2	WB-2	WB-2	WB-2	PT-2	PT-2	PT-2	PT-2	
211	COMMUNITY SAFETY	ACT-1	CPT-2	WB-2	WB-2	WB-2	PT-2	PT-2	PT-2	PT-2	PT-2	
212	DGBVP	ACT-1	CPT-2	WB-2	WB-2	WB-2	PT-2	PT-2	PT-2	PT-2	PT-2	
213	PEACE COMMISSION	ACT-1	CPT-2	WB-2	WB-2	WB-2	WB-2	PT-2	PT-2	PT-2	PT-2	
214	HUMAN RIGHTS INVESTIGATOR	ACT-1	CPT-2	WB-2	WB-2	WB-2	PT-2	PT-2	PT-2	PT-2	PT-2	
215	HUDDLE	ACT-1	CPT-2	WB-2	WB-2	WB-2	WB-2	PT-2	PT-2	PT-2	PT-2	
216	HUMAN RIGHTS COMMISSION	ACT-1	CPT-2	WB-2	WB-2	PT-5	WB-2	PT-2	PT-2	PT-2	PT-2	
217	HUMAN RIGHTS DIRECTOR	ACT-1	CPT-2	WB-2	WB-2	PT-5	WB-2	PT-2	PT-2	PT-2	PT-2	
218	IDF 2	ACT-1	CPT-2	WB-2	WB-2	WB-2	WB-2	PT-2	PT-2	PT-2	PT-2	
219	EXISTING SHARED BREAK AREA	ACT-1	-	-	-	-	-	PT-2	PT-2	PT-2	PT-2	

GENERAL NOTES - DEMOLITION

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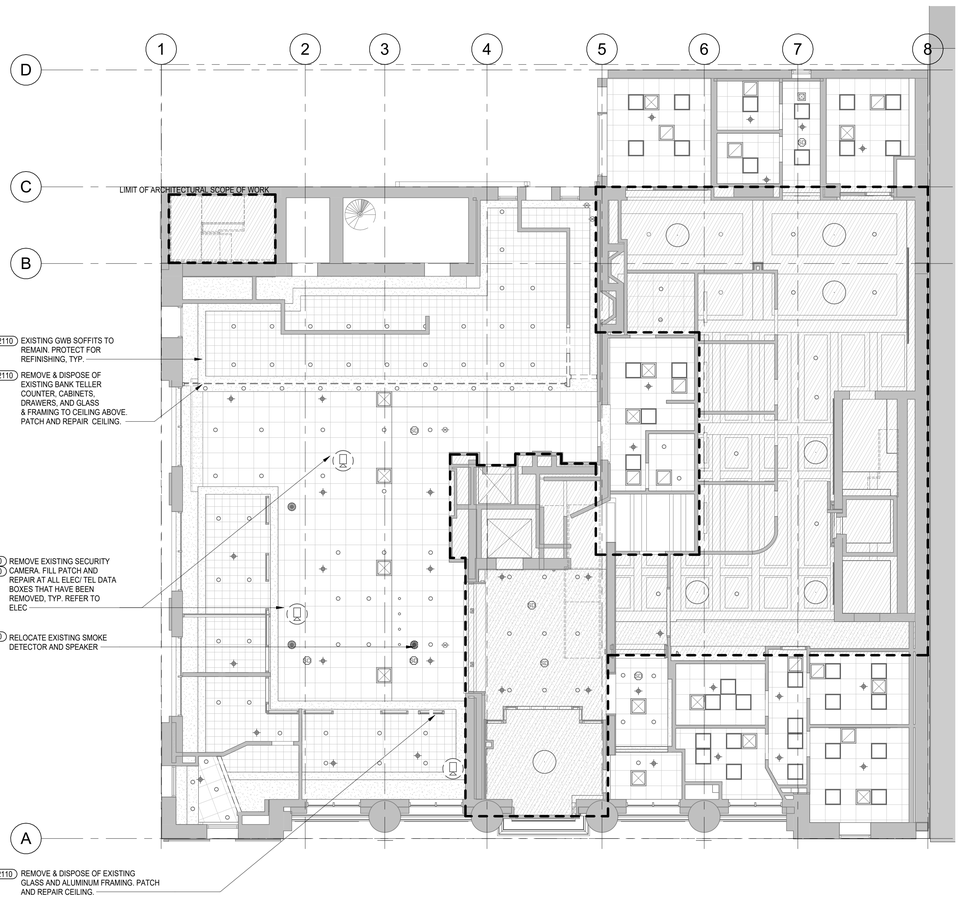
3. DEMOLITION NOTES BELOW APPLY TO THE ENTIRE PLAN AREA SHOWN WITHIN THE SCOPE OF WORK LINE.
4. COORDINATE DEMOLITION WITH NEW WORK. CONTRACTOR TO REVIEW CONSTRUCTION DOCUMENTS WITH EXISTING CONDITIONS AND NOTIFY ARCHITECT IMMEDIATELY OF ANY CONFLICTS.
5. CONTRATOR TO MAINTAIN SECURITY OF ALL SPACES DURING DEMOLITION AND THROUGHOUT CONSTRUCTION
6. EXISTING CARPET AND ASSOCIATED BASES TO BE DEMOLISHED UNLESS OTHERWISE NOTED.
7. EXISTING TILES, RESILIENT FLOORING AND ASSOCIATED BASED TO REMAIN UNLESS OTHERWISE NOTED. PROTECT DURING CONSTRUCTION.
8. EXISTING DOORS, FRAMES AND HARDWARE TO REMAIN THROUGHOUT. PROTECT HARDWARE AND HINGES DURING PAINTING.
9. THRESHOLDS TO BE REPLACED AS NEEDED FOR NEW FLOORING
10. STRIP WALLCOVERING FROM WALLS TO REMAIN, UNLESS NOTED OTHERWISE
11. CAREFULLY REMOVE ALL ABANDONED MISCELLANEOUS ACCESSORIES, SIGNAGE, APPURTENANCES, HOOKS, BRACKETS, SHELVING, ETC.
12. EXISTING WINDOW TREATEMENTS AND HARDWARE TO REMAIN. COVER AND PROTECT DURING CONSTRUCTION.
13. FIRE EXTINGUISHERS AND CABINETS TO REMAIN.
14. PROTECT EXISTING CEILINGS TO REMAIN.
15. FIRE ALARM SHALL REMAIN IN OPERATION DURING CONSTRUCTION.
16. COORDINATE REMOVAL AND/OR RELOCATION OF FIRE ALARM EQUIPMENT WITH ARCHITECT AND ENGINEER

CONSTRUCTION GENERAL NOTES

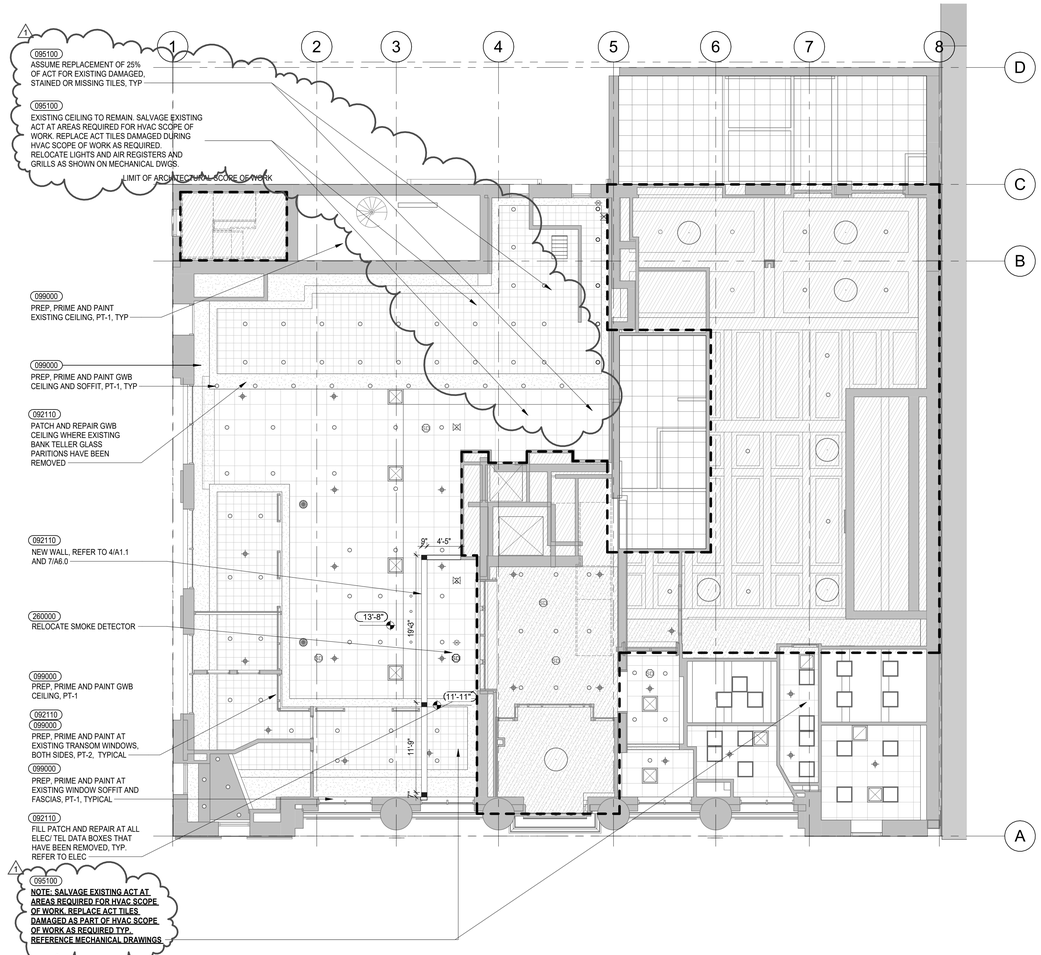
1. ALL DIMENSIONS ARE FACE OF FINISH TO FACE OF FINISH, UNLESS NOTED OTHERWISE
2. ALL PAINTED TRIM 3 COAT SEMI-GLOSS FINISH/ ALL GWB PRIMED, PAINTED 2 COAT EGGSHELL - REFER TO FINISH SCHEDULE
3. INSTALL FLUSH-MOUNTED THRESHOLD BETWEEN EXISTING AND NEW FLOOR MATERIAL, TBD
4. ALL NECESSARY BLOCKING TO BE PROVIDED AS REQUIRED, FULLY CONCEALED, SECURE FOR INTENDED USE
5. SUBMIT FOR APPROVAL TWO SAMPLES OF ALL FINISH MATERIALS
6. VERIFY ALL APPLIANCE/EQUIPMENT SIZES FOR FIT PRIOR TO FABRICATION OF SURROUNDING CABINETRY
7. SEE DEMO PLAN FOR EXISTING TO REMAIN (ETR) PARTITIONS

FINISH PLAN NOTES

1. REFER TO FINISH LEGEND & FINISH SCHEDULE FOR GENERAL MATERIAL SPECIFICATION REQUIREMENTS AND INSTALLATION INSTRUCTIONS.
2. SUBMIT SAMPLES OF FINISH MATERIALS AS SPECIFIED TO ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION
3. ALL SURFACE MOUNTED WIREMOLD, PLUGMOLD, CONDUIT AND PIPING SHALL BE PAINTED TO MATCH ADJACENT WALL
4. SUBMIT CARPET SEAMING DIAGRAM FOR ARCHITECTS APPROVAL PRIOR TO INSTALLATION.
5. STRAIGHT RUBBER BASE PROFILE WHERE USED AT CARPETING, COVER RUBBER BASE PROFILE WHERE USED AT HARD FLOORS
6. ALL RUBBER BASE TO BE ROLLED GOOD UNLESS NOTED OTHERWISE
7. PREPARE ALL EXISTING GWB FOR FINAL FINISH. PATCH AND REPAIR AS REQUIRED.
8. ALL WALLS TO BE PAINTED PT-2 AND RECIEVE WB-1 U.O.N
9. FLOOR PREP WHERE REQUIRED SHALL BE LATEX LEVELING COMPOUND
10. STABILIZE ALL LOOSE EXISTING SUBFLOORING OR FLOORING TO REMAIN
11. CONTRACTOR SHALL ADVISE ARCHITECT OF ANY CONFLICTS BEFORE PROCEEDING WITH AFFECTED WORK.



2 LEVEL 1 - REFLECTED CEILING PLAN DEMOLITION
1/8" = 1'-0"



1 LEVEL 1 - REFLECTED CEILING PLAN - CONSTRUCTION
1/8" = 1'-0"

CITY OF CAMBRIDGE MUNICIPAL OFFICES LIMITED RENOVATION
689 Massachusetts Ave Cambridge, MA 02139

DEMOLITION LEGEND

- EXISTING TO REMAIN
- EXISTING TO BE DEMOLISHED
- FLOORING TO BE REMOVED
- CARPET TO BE REMOVED

NOTE: REFER TO SPECIFICATION APPENDIX A FOR LIMITED HAZARDOUS MATERIALS TESTING REPORT. ALL KNOWN OR SUSPECTED ACM AND ACWM THAT MAY BE DISTURBED BY CONSTRUCTION ACTIVITIES MUST FIRST BE ABATED BY A MADLS-LICENSED ASBESTOS ABATEMENT SUBCONTRACTOR.

CONSTRUCTION LEGEND

- NEW CONSTRUCTION
- EXISTING TO REMAIN

LINE STYLES

- LIMIT OF ARCHITECTURAL SCOPE OF WORK
- DEMOLISHED
- ACCENT PAINT, PT-7
- NEW CONSTRUCTION
- PARTIAL HEIGHT WALL

AREA N.I.C.
CPT-1
CPT-2

Number	Revision	Date
1	Addendum 1	06/18/2024

ISSUED FOR BID

CambridgeSeven
Architects and Planners

Job # 2406
Project 689 Massachusetts Ave Cambridge, MA 02139
Drawn By DM Checked SG
Date 05/23/2024
Scale 1/8" = 1'-0"
Drawing Title
LEVEL 1 - REFLECTED CEILING PLAN

A2.1

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FINISH LEGEND

FINISH ID	TYPE	MFR	STYLE	MODEL	COLOR	NOTES
CARPET BASIS-OF-DESIGN (REFER TO SPECIFICATIONS)						
CPT-1	CARPET TILE	MANNINGTON	18"x36"	AUTOMATA CRYPTOGRAM	OSCILLATOR (31373)	VERTICAL ASHLAR INSTALLATION METHOD
CPT-2	CARPET TILE	MANNINGTON	12"x36"	AUTOMATA RULE	INPUT (13379)	VERTICAL ASHLAR INSTALLATION METHOD
PAINT BASIS-OF-DESIGN (REFER TO SPECIFICATIONS)						
PT-1	CEILING PAINT	BENJAMIN MOORE	FLAT	ULTRA SPEC 500	OC-65 CHANTILLY LACE	
PT-2	WALL PAINT	BENJAMIN MOORE	EGGSHELL	ULTRA SPEC 500	OC-65 CHANTILLY LACE	
PT-3	TRIM PAINT	BENJAMIN MOORE	SEMI GLOSS	ULTRA SPEC 500	OC-65 CHANTILLY LACE	
PT-4	MR PAINT	BENJAMIN MOORE	SEMI GLOSS	ULTRA SPEC 500	OC-65 CHANTILLY LACE	
PT-5	WALL BASE PAINT	BENJAMIN MOORE	SEMI GLOSS	ULTRA SPEC 500	COLOR MATCH WB-1.1	Similar to 2134-30 Iron Mountain
PT-6	RAILING PAINT	BENJAMIN MOORE	SEMI GLOSS	ULTRA SPEC 500	COLOR MATCH WB-1.1	Similar to 2134-30 Iron Mountain
PT-7	ACCENT PAINT - WALL	BENJAMIN MOORE	EGGSHELL	ULTRA SPEC 500	HUDSON BAY	
PT-8	ACCENT PAINT - DOOR	BENJAMIN MOORE	SEMI GLOSS	ULTRA SPEC 500	HUDSON BAY	
WALL BASE BASIS-OF-DESIGN (REFER TO SPECIFICATIONS)						
WB-1	RESILIENT WALL BASE	JOHNSONITE	4"	BASEWORKS	CHARCOAL	
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ACOUSTICAL CEILING TILE BASE BASIS-OF-DESIGN (REFER TO SPECIFICATIONS)						
ACT-1	CEILING TILE	ARMSTRONG	2'x2'	MATCH EXISTING	WHITE	MATCH EXISTING

FINISH SCHEDULE - LEVEL 2

ROOM NO	ROOM NAME	CEILING	FLOOR	BASE FINISH N	BASE FINISH E	BASE FINISH S	BASE FINISH W	WALL FINISH N	WALL FINISH E	WALL FINISH S	WALL FINISH W	Comments
200	SHARED COLLAB	ACT-1	CPT-2	WB-2	WB-2	WB-2	WB-2	PT-2	PT-2	PT-2	PT-2	
200B	CLOSET	ACT-1	CPT-2	WB-2	WB-2	WB-2	WB-2	PT-2	PT-2	PT-2	PT-2	
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205	EXG ELEC	-	-	-	-	-	-	PT-2	PT-2	PT-2	PT-2	
206	EXISTING MEETING ROOM	ACT-1	CPT-2	WB-2	WB-2	WB-2	WB-2	PT-2	PT-2	PT-2 / GL-1	PT-2	
206B	CL	ACT-1	CPT-2	WB-2	WB-2	WB-2	WB-2	PT-2	PT-2	PT-2	PT-2	
207	COMMISSION OPEN DESKING	ACT-1	CPT-2	WB-2	WB-2	WB-2	WB-2	PT-2	PT-2	PT-2	PT-2	
208	WOMEN RIGHTS DIRECTOR	ACT-1	CPT-2	WB-2	WB-2	WB-2	WB-2	PT-2	PT-2	PT-2	PT-2	
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215	HUDDLE	ACT-1	CPT-2	WB-2	WB-2	WB-2	WB-2	PT-2	PT-2	PT-2	PT-2	
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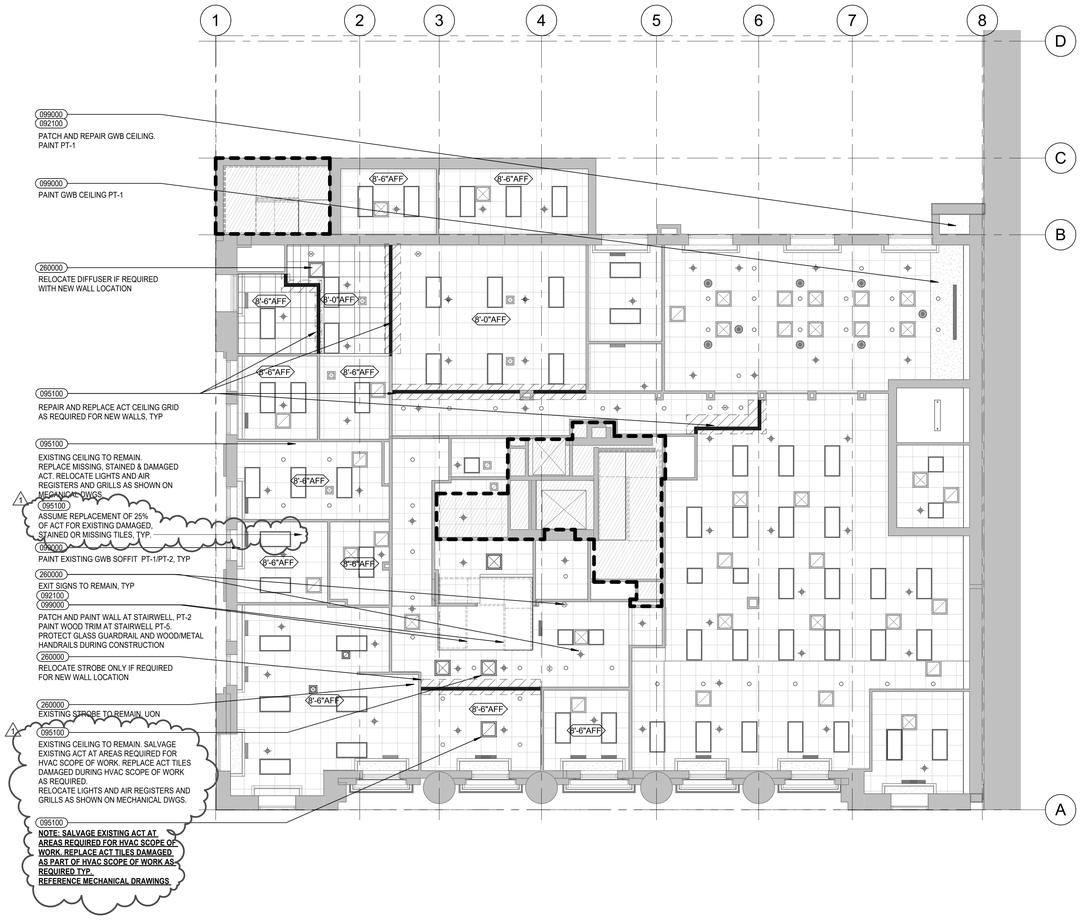
2 LEVEL 2 - DEMOLITION RCP
1/8" = 1'-0"



1 LEVEL 2 - CONSTRUCTION RCP
1/8" = 1'-0"

CITY OF CAMBRIDGE MUNICIPAL OFFICES LIMITED RENOVATION 689 Massachusetts Ave Cambridge, MA 02139

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- EXISTING TO BE DEMOLISHED
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CONSTRUCTION LEGEND

- NEW CONSTRUCTION
- EXISTING TO REMAIN

LINE STYLES

- LIMIT OF ARCHITECTURAL SCOPE OF WORK
- DEMOLISHED
- ACCENT PAINT, PT-7
- NEW CONSTRUCTION
- PARTIAL HEIGHT WALL

AREA N.I.C.
CPT-1
CPT-2

Number	Revision	Date
1	Addendum 1	06/18/2024

ISSUED FOR BID

CambridgeSeven
Architects and Planners

Job # 2406
Project 689 Massachusetts Ave Cambridge, MA 02139
Drawn By DM Checked SG
Date 05/23/2024
Scale 1/8" = 1'-0"

Drawing Title
LEVEL 2 - REFLECTED CEILING PLANS

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