

June 11, 2020

Mr. Kenneth Weston
Oak Point Associates
231 Main Street
Biddeford, ME 04005

Re: Portsmouth City Hall, Electrical Renovation Project
Limited Building Survey Findings
RPF File No. 209860

Dear Mr. Weston:

On May 8, 2020 and May 15, 2020, RPF Environmental, Inc. (RPF) conducted limited surveys at the Portsmouth City Hall located at 1 Junkins Avenue in Portsmouth, NH. The surveys were performed in affected areas of the building, as designated by you or your site representative, for accessible hazardous building material as indicated herein. Below is a summary of findings, discussion of the results and preliminary recommendations for proper management of the identified hazardous building material. Attached to this report are the survey data tables, laboratory results, survey methodologies and limitations.

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

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

Summary of Findings

The areas of the building included in this survey were limited to the accessible lower level rooms, corridors, and spaces detailed in the project drawings for the electrical upgrade project provided by your office. No other spaces or areas within the building were included in this survey.

The scope of the survey included accessible ACBM in accordance with the initial asbestos inspection requirements prior to renovation or demolition work as stated in the State regulations and applicable federal regulations. In addition, the survey included screening for lead paint (LP).

Asbestos

Existing survey and testing information provided by the City of Portsmouth to RPF during this project includes limited surveys performed on April 13, 2018, October 31, 2019, and January 24, 2020 by RPF Environmental. Confirmation testing of these materials was beyond the scope of this survey. Based on the review of the existing survey records, the following materials were previously inspected:

Materials Sampled and Found to Contain Asbestos

- 9" Floor Tile and Black Mastic
- Wall Paneling Adhesive

Materials Sampled and Found to Not Contain Asbestos

- Covebase and Adhesive
- Wallpaper
- Duct Tape
- Spray-On Fireproofing

In addition, several types of additional suspect ACBM were observed by RPF in the affected areas, including friable and nonfriable suspect material. Based on the testing performed by RPF, asbestos was detected in the 9" white floor tile.

Lead Paint

Based on the year of construction and extent of renovation conducted over the years, it is reasonable to assume that some lead paint (LP) is present. RPF conducted limited spot testing of paint and LP was confirmed to be present on various building components. The intent of the lead testing was for potential lead hazardous waste disposal screening purposes only.

Depending on the extent of renovation and final construction plans, proper abatement and/or management of the materials will be required in accordance with applicable State and federal regulations. Renovation and demolition plans should be reviewed by a certified industrial hygienist and a licensed project designer for possible asbestos impact issues. Based on the impact assessment and planned usage, technical specifications should be prepared for abatement, as applicable. A management plan should also be prepared to address any asbestos or other hazardous material scheduled to remain after construction.

Discussion of Findings

Asbestos-Containing Building Material

Asbestos is the name for a group of naturally occurring minerals that separate into strong, very fine fibers. The adverse health effects associated with asbestos exposure have been extensively studied for many years.

Results of these studies and epidemiological investigations have demonstrated that inhalation of asbestos fibers may lead to increased risk of developing one or more diseases. In all cases, extreme care must be used not to disturb asbestos-containing materials or to create fiber release episodes.

In the accessible locations surveyed, RPF identified twenty (20) homogeneous groups of accessible suspect asbestos-containing building material. Suspect materials were identified based on current industry standards, EPA, and other guideline listings of potential suspect ACM.

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

- White 9” Floor Tile and Black Mastic
- Plaster
- Gypsum Board and Joint Compound
- Wide Grey Cove Base and Yellow Adhesive
- Yellow Carpet Adhesive
- White Joint Compound
- White Canvas Wrapped Exhaust Pipe Insulation
- Beige 12” floor Tile and Yellow Mastic
- Black Tar Paper
- Tan Carpet Adhesive
- Yellow Cove Base Adhesive on thin Grey Vinyl
- Bottom Layer White Floor Tile with Yellow and Black Mastic

A total of forty-three (43) samples were extracted from the different groups of suspect material in accordance with EPA sampling protocols. Of the samples collected by RPF, asbestos was detected in one (1) groups of suspect ACM.

Table 1 below includes a list of ACM identified in the accessible areas surveyed, EPA category listings, and asbestos content. A listing of the different homogenous groups of suspect material identified, samples collected, and analytical results is included in Appendix A.

Building Material	Location	Approximate Quantity	EPA Category	Asbestos Results
White 9” Floor Tile & Mastic	1 st floor, Rooms 135 and 137	350 square feet	Category II Nonfriable	5% Chrysotile

The ACM identified during this survey consists of nonfriable material which was observed to be in good to fair condition and, left undisturbed and properly managed, is unlikely to cause any major fiber release episodes.

Although the standard polarized light method of analysis was completed pursuant to current state and federal regulations, it is recommended that some of the black mastic samples, that were found to be non-detected for asbestos as detailed on the attached results, be confirmed using gravimetric preparation methods for nonfriable ACM for more definitive results. If you would like to arrange for this additional lab work, please contact our office as soon as possible.

The structure was in current use at the time of the survey and full destructive or exploratory survey methods were not feasible. Additionally, the scope of this survey was isolated to only those areas designated as part of the electrical upgrade project. Suspect materials encountered at the site subsequent to this survey, which are not included on the enclosed listings of suspect material sampled, should be assumed to be ACBM until proper testing proves otherwise (for example prior to any disturbance due to maintenance, renovation or demolition activity). Please notify RPF in this event to arrange for proper testing and assessments. Please reference the attached methodology and limitations.

Lead Paint Screening

Based on the type and age of building construction, it is reasonable to assume that various painted surfaces contain some lead. It is not uncommon in buildings such as this and that have had various renovation and upgrades to have both lead containing paint and non lead containing paint. Lead is a toxic metal that was used for many years in paint and other products found in and around buildings and homes. Exposure to lead may cause a range of health effects, from behavioral problems and learning disabilities, to seizures and death. Children six years old and under are most at risk; however, adults are also susceptible to the effects of lead over exposure.

For the purposes of this survey, RPF performed screening for lead in paint using a Niton X-Ray Fluorescence (XRF) Meter of various interior painted surfaces within the affected areas. The results of this lead screening are included at Table 2 of Appendix A. The results of this testing showed lead concentrations in various interior painted surfaces at ranging from 0.01 to 6.3 milligrams per square centimeter (mg/cm^2). The intent of the lead testing was for potential lead hazardous waste disposal screening purposes only. Based on this limited testing, it should be assumed that other painted surfaces at the site may also contain lead.

Current State of New Hampshire Lead Poisoning regulations consider any paint that contains greater than $1.0 \text{ mg}/\text{cm}^2$ to be lead-based paint. However, the intent of this survey was for construction purposes only and preliminary demolition waste stream implications, not for compliance with State, HUD, or any regulatory abatement order.

Any surfaces with lead present should be managed in accordance with current rules and guidelines, including but not limited to OSHA worker safety rules and State and EPA waste handling and disposal regulations. U.S. Occupational Safety and Health Administration (OSHA) construction rules do not specify any "safe" or acceptable levels of lead within paint for the purposes of occupational exposures. Therefore, construction work involving paint found to contain lead must be completed in accordance with OSHA regulations, not limited to the lead standard, 29 CFR 1926.62. Contractors completing work in areas found to contain lead, or where it is reasonable to assume lead may be present, should be notified of the presence (and potential presence) of lead and proper work protocols should be used.

As lead was found to be present in the screening, proper waste testing with TCLP extraction for lead and potentially other toxic materials should also be completed prior to disposal of any waste generated in accordance with current EPA requirements. Oftentimes it is recommended that pre-

demolition TCLP testing be completed such that waste can be segregated as required during demolition activity. Construction/demolition waste that is found to contain lead greater or equal to 5.0 milligrams per liter (mg/L) by TCLP analysis must be handled and treated as hazardous waste.

Please also note that construction and renovation work involving lead paint in housing and child-occupied facilities built before 1978 is also regulated under the EPA Renovation, Repair, and Painting (RRP) rule. Any contractors conducting such work must be properly certified and must use lead safe work methods pursuant to the EPA RRP rule. In addition, pursuant to Title X requirements landlords and sellers are required to disclose the results of lead inspections to tenants and purchasers, and to provide the warning notice and pamphlets in accordance with Title X and State requirements.

Conclusions

Based on the survey findings, the affected areas of the building were found to contain ACBM and LP.

In accordance with current regulatory requirements, ACBM that may be impacted or disturbed (such that asbestos fiber release occurs) by renovation, demolition or other such activity must be removed by qualified, licensed firms. Although regulations for removal of nonfriable ACBM are somewhat less stringent than the requirements for friable ACBM, it should be noted that nonfriable ACBM that is subjected to grinding, abrasion, and other forces, could be rendered friable. In this event, the nonfriable ACBM would be re-categorized friable ACBM.

ACBM that will not be impacted by renovation or demolition activity may be left in place if managed properly and if the materials are maintained in good condition. ACBM to remain in the building should be included in an asbestos management plan and operations and maintenance (O&M) program detailing the measures to be used to safely occupy the building until the ACBM is fully removed. An accredited Management Planner should prepare the O&M Program in accordance with the guidelines set forth in 40 CFR Part 763 (ASHERA).

Work impacting LP must be performed in accordance with current State and federal standards, including but not limited safe work practices, engineering controls, proper waste packaging, and proper disposal. Work involving LP may require notification of tenants, if rented or leased space, prior to start of work.

Sufficiently in advance of the start of renovation and/or remediation work, abatement project design should be completed. As part the initial design steps any planned renovation and demolition activity should be reviewed for potential impact on ACBM. Asbestos removal is highly regulated at the State and federal level, and in some cases, at the local level also. Notification to NH Air Resources is required 10-days prior to the start of abatement work and demolition. Only qualified, trained, and licensed firms, as applicable, should be engaged to complete asbestos removal or other abatement activity. Asbestos abatement work must be designed (abatement specifications or work plan prepared) by accredited personnel.

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

Documentation of current ACBM conditions and in-depth hazard assessment is beyond the scope-of-work for this initial survey. With the exception of the specific testing and analysis detailed herein, no other samples of materials, oil, water, ground water, air, or other suspect hazardous materials were collected in the course of this inspection that supports or denies these conclusions. No additional services beyond those explicitly stated herein were performed and none should be inferred or implied. The summary and conclusions are based on reasonably ascertainable information as described in this report. RPF Environmental, Inc. makes no guarantees, warranties, or references regarding this property or the condition of the property after the period of this report.

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

Sincerely,
RPF ENVIRONMENTAL, INC.



Brianna Ham, CMI
EH&S Consultant

Enclosures:
Appendix A: Data and Analytical Tables
Appendix B: Drawings and Photographs
Appendix C: Summary of Methodology and Limitations

209860 PCH 051520 Report

APPENDIX A

TABLE 1

OAK POINT ASSOCIATES
Portsmouth Police Department
1 Junkins Avenue, Portsmouth, NH
Limited Survey of Various Rooms in the Basement and 1st Floor

Polarized Light Microscopy – EPA 600/R-93/116 Method
 Samples Collected: May 8, 2020

Sample ID	Description	Asbestos Content
050820-HG1a - A	9" Floor tile, white with black, 1st floor, Room 135	5% Chrysotile
050820-HG1a - B	Mastic, black, 1st floor, Room 135	None Detected
050820-HG1b - A	9" Floor tile, white with black, 1st floor, Room 137	*SFP
050820-HG1b - B	Mastic, black, 1st floor, Room 137	None Detected
050820-HG2a - A	Plaster finish, white, 1 st floor, Room 135, wall	None Detected
050820-HG2a - B	Plaster base, gray, 1st floor, Room 135, wall	None Detected
050820-HG2b - A	Plaster finish, white, 1st floor, Hallway outside Room 121, ceiling	None Detected
050820-HG2b - B	Plaster base, gray, 1st floor, Hallway outside Room 121, ceiling	None Detected
050820-HG2c - A	Plaster finish, white, 1st floor, Room 125, wall	None Detected
050820-HG2c - B	Plaster base, gray, 1st floor, Room 125, wall	None Detected
050820-HG3a	Gypsum and Joint Compound, white, 1st floor, Room 123, wall	None Detected
050820-HG3b	Gypsum and Joint Compound, white, 1st floor, Room 126, wall	None Detected
050820-HG5a	Carpet Adhesive, yellow, 1st floor, Room 135	None Detected
050820-HG5b	Carpet Adhesive, yellow, 1st floor, Room 135	None Detected
050820-HG8a	Joint Compound, white, 1st floor, Room 125, around pipes	None Detected
050820-HG8b	Joint Compound, white, 1st floor, Room 126, around pipes	None Detected
050820-HG9a	Canvas wrapped exhaust pipe insulation, white, 1st floor, Room 125	None Detected
050820-HG9b	Canvas wrapped exhaust pipe insulation, white, 1st floor, Room 125	None Detected
050820-HG9c	Canvas wrapped exhaust pipe insulation, white, 1st floor, Room 125	None Detected

Notes:

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

TABLE 1
(continued)

OAK POINT ASSOCIATES
Portsmouth Police Department
1 Junkins Avenue, Portsmouth, NH
Limited Survey of Various Rooms in the Basement and 1st Floor

Polarized Light Microscopy – EPA 600/R-93/116 Method
 Samples Collected: May 8, 2020

Sample ID	Description	Asbestos Content
050820-HG10a - A	12" Floor Tile, top layer beige, 1st floor, hallway outside Room 124	None Detected
050820-HG10a - B	Mastic, yellow, 1st floor, hallway outside Room 124	None Detected
050820-HG10b - A	12" Floor Tile, beige, 1st floor, hallway outside Room 125	None Detected
050820-HG10b - B	Mastic, yellow, 1st floor, hallway outside Room 125	None Detected
050820-HG11a	Tar Paper, black, 1st floor, Room 123	None Detected
050820-HG11b	Tar Paper, black, 1st floor, Room 123	None Detected
050820-HG12a	Carpet Adhesive, tan, 1st floor, Room 121/121A	None Detected
050820-HG12b	Carpet Adhesive, tan, 1st floor, Room 121/121A	None Detected
050820-HG13a	Covebase adhesive, yellow, 1st floor, hallway outside training room	None Detected
050820-HG13b	Covebase adhesive, yellow, 1st floor, hallway outside training room	None Detected
050820-HG14a - A	Mastic, yellow top layer, 1st floor, hallway outside Room 124	None Detected
050820-HG14a - B	Floor Tile, bottom layer white, 1st floor, hallway outside Room 124	None Detected
050820-HG14a - C	Mastic, mixed colors, 1st floor, hallway outside Room 124	None Detected
050820-HG14b - A	Mastic, yellow top layer, 1st floor, hallway outside Room 124	None Detected
050820-HG14b - B	Floor Tile, bottom layer white, 1st floor, hallway outside Room 124	None Detected
050820-HG14b - C	Mastic, mixed colors, 1st floor, hallway outside Room 124	None Detected

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Notes:

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

TABLE 2

OAK POINT ASSOCIATES
Portsmouth Police Department
1 Junkins Avenue, Portsmouth, NH
Limited Survey of Various Rooms in the Basement and 1st Floor

XRF TEST RESULTS

Sample Collected: May 15, 2020

Component	Substrate	Color	Location	Result (mg/cm ²)
Calibration	--	--	SRM 2573	0.90
Calibration	--	--	SRM 2573	1.00
Calibration	--	--	SRM 2573	0.90
Wall	Concrete	Gray	Basement, B16C, southeast wall	0.00
Wall	Concrete	Gray	Basement, B16C, northwest wall	0.00
Floor	Concrete	Gray	Basement, B16C	0.00
Wall	Plaster	Light pink	1 st floor, Room 137	0.00
Wall	Gypsum	Red	1 st floor, Room 137	0.00
Door frame	Metal	Gray	1 st floor, Room 135	0.06
Wall with wallpaper	Gypsum	Tan	1 st floor, room 135	0.00
Floor	Concrete	Gray	1 st floor, Room 121/121A	0.60
Wall	Plaster	White	1 st floor, Room 121/121A	0.30
Wall	Gypsum	White	1 st floor, Room 121/121A	0.00
Door	Metal	Pink	1 st floor, Room 121/121A	0.00
Door frame	Metal	White	1 st floor, Room 123	0.00
Wall	Gypsum	White	1 st floor, Room 123	0.00
Door frame	Metal	Gray	1 st floor, hallway outside Room 121	0.28
Wall with wallpaper	Gypsum	Gray	1 st floor, hallway outside Room 121	0.17
Wall	Plaster	White	1 st floor, hallway outside Room 121	0.14
Wall	Gypsum	Beige	1 st floor, Room 126	0.00
Door frame	Metal	Brown	1 st floor, Room 126	0.01
Door	Metal	Black	1 st floor, Room 126	0.01

**TABLE 2
(continued)**

**OAK POINT ASSOCIATES
 Portsmouth Police Department
 1 Junkins Avenue, Portsmouth, NH
 Limited Survey of Various Rooms in the Basement and 1st Floor**

XRF TEST RESULTS

Sample Collected: May 15, 2020

Component	Substrate	Color	Location	Result (mg/cm ²)
Wall	Plaster	Pink	1 st floor, Room 126	0.00
Wall	Plaster	Pink	1 st floor, Room 125	0.07
Wall	Plaster	Pink	1 st floor, Room 125	5.60
Wall	Plaster	Pink	1 st floor, Room 125	6.30
Pipe	Metal	Pink	1 st floor, Room 125	0.01
Door frame	Metal	Gray	1 st floor, hallway by training room	0.00
Wall	Brick	Gray	1 st floor, hallway by training room	0.00
Calibration	--	--	SRM 2573	1.00
Calibration	--	--	SRM 2573	1.10
Calibration	--	--	SRM 2573	0.90

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Notes:

- Lead based paint as defined by current state lead poisoning prevention regulations, is any paint that contains in excess of 1.0 mg/cm² of lead. OSHA does not currently establish a percent lead for lead paint.
- mg/cm² milligrams per centimeter square; cps means hertz measurement
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

APPENDIX B

75% SUBMISSION

 NOT FOR CONSTRUCTION

DESIGNED BY: KTW

 DRAWN BY: BML

 CHECKED BY: KTW

 PROJECT: 21904.15

CITY OF PORTSMOUTH

 1 Jenkins Avenue

 Portsmouth, NH 03801

CITY HALL ELECTRICAL RENOVATIONS

 1 Jenkins Avenue

 Portsmouth, NH 03801

REMOVALS FLOOR PLANS

SCALE: AS NOTED

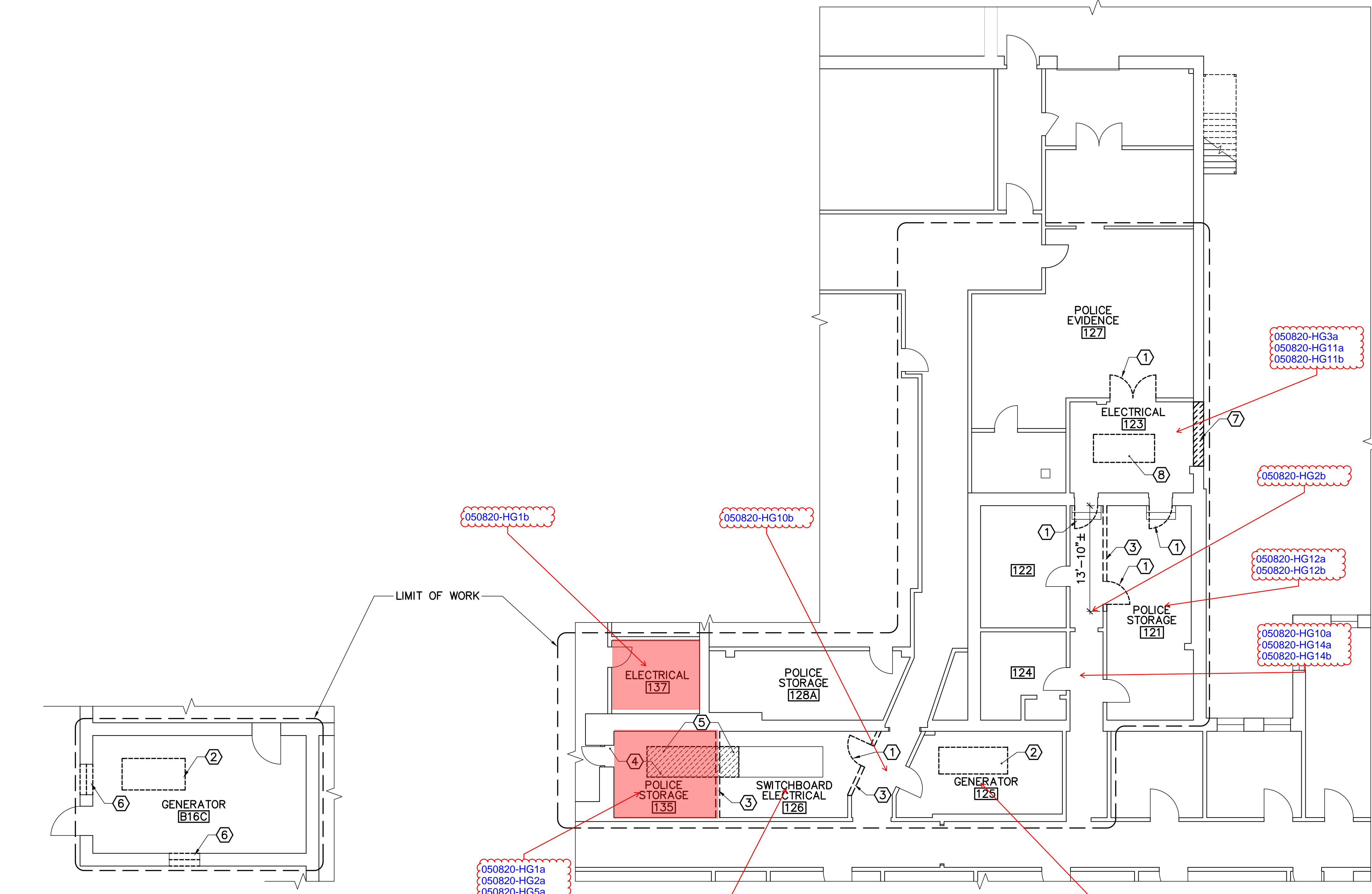
 DATE: 03/02/2020

 DWG.: **AD101**

 SHEET: **X** OF .

REMOVALS KEYNOTES:

- ① REMOVE DOOR, FRAME AND ASSOCIATED HARDWARE. PREP OPENING FOR INFILL.
- ② REMOVE 5 1/2" TALL REINFORCED CONCRETE PAD.
- ③ REMOVE PARTITION IN ITS ENTIRETY. PATCH WALL, FLOOR, AND CEILING FINISHES WHERE DISTURBED.
- ④ REMOVE CARPET FLOORING.
- ⑤ REMOVE REINFORCED CONCRETE SLAB AS REQUIRED TO ACCESS CABLE TRAY/TRENCH BELOW AND COMPLETE SCOPE OF WORK. COORDINATE WITH ELECTRICAL TRADE.
- ⑥ REMOVE MTL LOUVERS AND PREP OPENING FOR INFILL.
- ⑦ CORE DRILL FOR ELECTRICAL CONDUIT, COORDINATE LOCATION AND QUANTITY WITH ELECTRICAL TRADE.
- ⑧ REMOVE 4" TALL REINFORCED CONCRETE PAD.

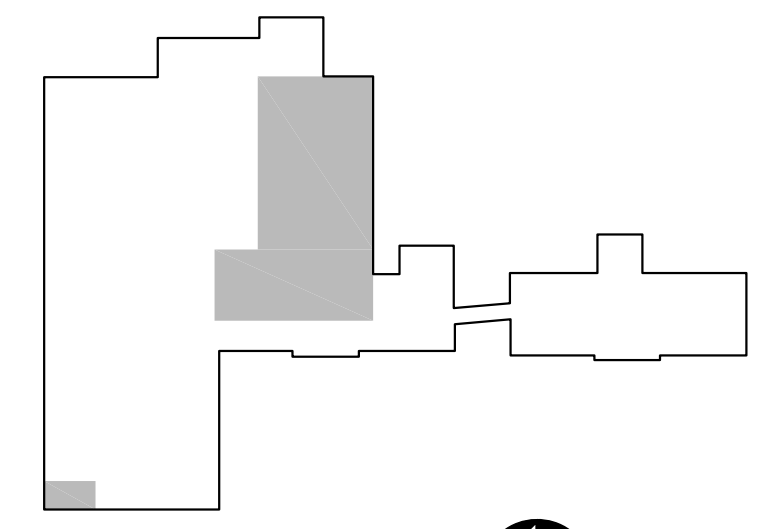


1 PARTIAL BASEMENT REMOVALS FLOOR PLAN

 AD101/ SCALE: 1/8"=1'-0"

2 PARTIAL FIRST FLOOR REMOVALS PLAN

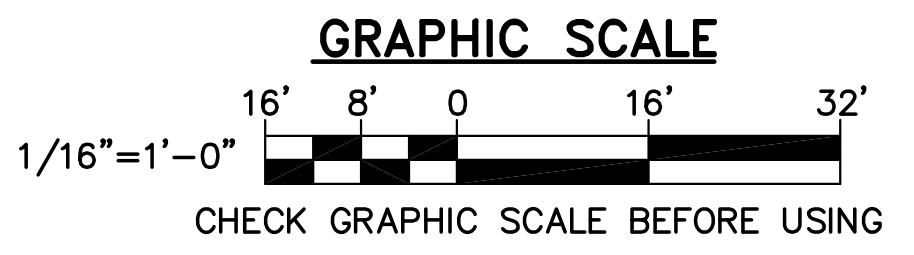
 AD101/ SCALE: 1/8"=1'-0"



KEYPLAN

 NOT TO SCALE

 PLAN NORTH



REMOVALS KEYNOTES:

- ① REMOVE DOOR, FRAME AND ASSOCIATED HARDWARE. PREP OPENING FOR INFILL.
- ② REMOVE 5 1/2" TALL REINFORCED CONCRETE PAD.
- ③ REMOVE PARTITION IN ITS ENTIRETY. PATCH WALL, FLOOR, AND CEILING FINISHES WHERE DISTURBED.
- ④ REMOVE CARPET FLOORING.
- ⑤ REMOVE REINFORCED CONCRETE SLAB AS REQUIRED TO ACCESS CABLE TRAY/TRENCH BELOW AND COMPLETE SCOPE OF WORK. COORDINATE WITH ELECTRICAL TRADE.
- ⑥ REMOVE MTL LOUVERS AND PREP OPENING FOR INFILL.
- ⑦ CORE DRILL FOR ELECTRICAL CONDUIT, COORDINATE LOCATION AND QUANTITY WITH ELECTRICAL TRADE.
- ⑧ REMOVE 4" TALL REINFORCED CONCRETE PAD.

75% SUBMISSION
NOT FOR CONSTRUCTION

KTW
 BML
 KTW
 DESIGNED BY:
 DRAWN BY:
 CHECKED BY:
 PROJECT: 21904.15

CITY OF PORTSMOUTH
 1 Jenkins Avenue
 Portsmouth, NH 03801

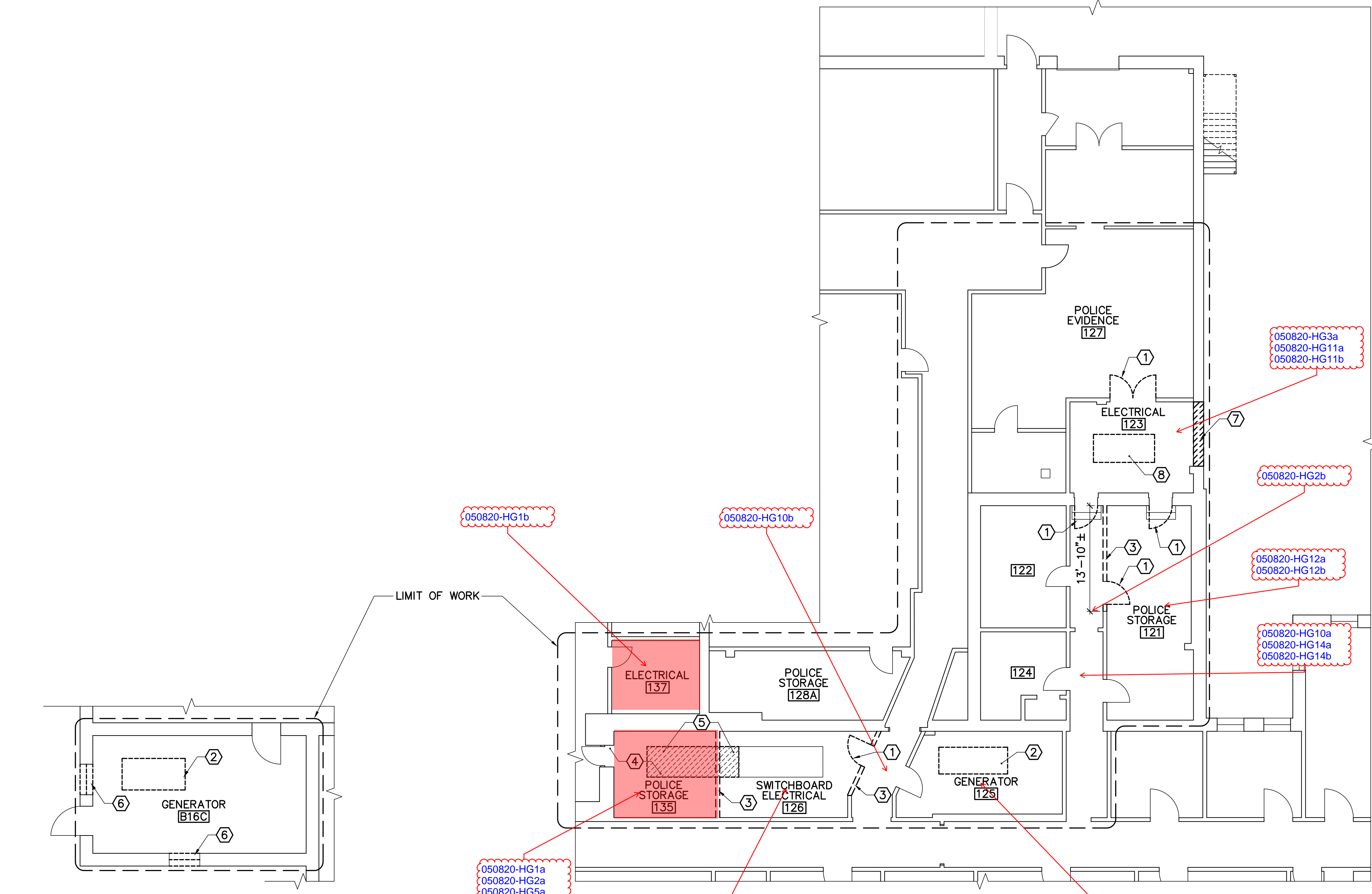
**CITY HALL
 ELECTRICAL RENOVATIONS**
 1 Jenkins Avenue
 Portsmouth, NH 03801

REMOVALS FLOOR PLANS

SCALE: AS NOTED
 DATE: 03/02/2020

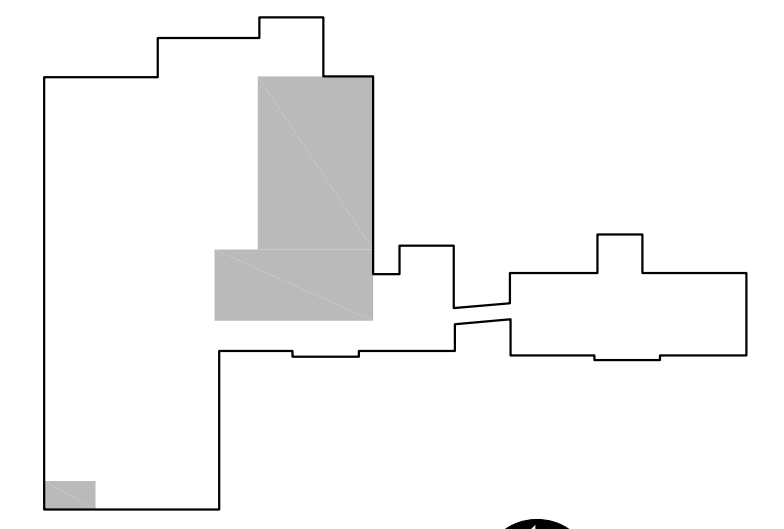
DWG.: **AD101**

SHEET: **X** OF .

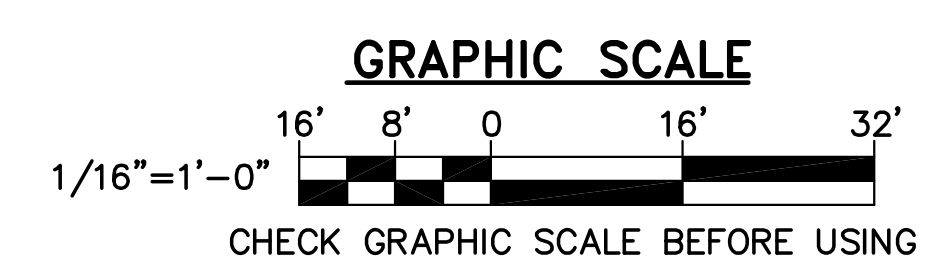


1 PARTIAL BASEMENT REMOVALS FLOOR PLAN
AD101/ SCALE: 1/8"=1'-0"

2 PARTIAL FIRST FLOOR REMOVALS PLAN
AD101/ SCALE: 1/8"=1'-0"



KEYPLAN
 NOT TO SCALE PLAN NORTH





1. Room 137, ACBM white 9” floor tile and mastic present.



2. Room 137, electrical components present.



3. View of Room 135.



4. ACBM white 9” floor tile and mastic present under the carpet in Room 135.



5. Room 125, lead paint present.



6. White canvas insulation on exhaust pipe in Room 125, no asbestos detected.

APPENDIX B: SITE PHOTOGRAPHS

Site Address:
Portsmouth City Hall
1 Junkins Avenue, Portsmouth, NH.



www.airpf.com
603-942-5432

Project No. 209860



7. Hallway outside Rooms 125 and 126.



8. View of Room 126.



9. Basement Room B16C.



10. Spray-on fireproofing present, previously tested and had no asbestos detected.



11. Hallway outside Rooms 121 and 123.



12. Non-asbestos tar paper present in Room 123.

APPENDIX B: SITE PHOTOGRAPHS

Site Address:
Portsmouth City Hall
1 Junkins Avenue, Portsmouth, NH.



www.airpf.com
603-942-5432

Project No. 209860

APPENDIX C

Summary of Methodology: Asbestos-Containing Building Materials Survey

EPA accredited inspector(s) surveyed accessible space in the building or site areas included within the RPF Scope of Work (SOW) to identify suspect asbestos-containing building material (ACBM). Suspect ACBM was inventoried and categorized into homogeneous groups of materials. To the extent indicated in the report, samples were then extracted from the different groups of homogeneous materials in accordance with applicable State and federal rules and regulations. For surveys in which the SOW included full inspections of the affect space, sampling methodologies were based on the requirements set forth in 40 CFR Part 763 (EPA) and 29 CFR Part 1926.1101 (OSHA). For preliminary or limited surveys, findings apply to only the affected material or space as indicated in the RPF SOW and Report and additional inspection and testing will be required to satisfy regulatory obligations associated with renovation, demolition, maintenance and other occupational safety and health requirements. Sampling methodologies used are as set forth in 40 CFR Part 763 (EPA):

- Surfacing Material: 3 bulk samples from each homogenous area and/or material that is 1,000 square feet or less. 5 bulk samples from each homogenous area that is greater than 1,000 square feet but less than or equal to 5000 square feet. 7 bulk samples from each homogenous area that is greater than 5,000 square feet.
- Thermal System Insulation: 3 bulk samples from each homogenous area. 1 bulk sample from each homogenous area of patched thermal system insulation if the patched section is less than 6 linear or square feet. Samples sufficient to determine whether the material is ACM from each insulated mechanical system where cement is utilized on tees, elbows, or valves.
- Miscellaneous ACM: 3 samples from each miscellaneous material. 1 sample if the amount of miscellaneous material is less than 6 square or linear feet.

Collected samples were individually placed into sealed containers, labeled, and submitted with proper chain of custody forms to the RPF NVLAP-accredited vendor laboratory. Sample containers and tools were cleaned after each sample was collected. Samples were analyzed for asbestos content using polarized light microscopy (PLM). Although PLM is the method currently recognized in State and federal regulations for asbestos identification in bulk samples, PLM may not be sensitive enough to detect all of the asbestos fibers in certain types of materials, such as floor tile and other nonfriable ACBM. In the event that more definitive results are requested in cases of with negative or trace results of asbestos are detected, RPF recommends that confirmation testing be completed using transmission electron microscopy.

For each homogeneous group of suspect material, a “stop at first positive” (SFP) method may have been employed during the analysis. The SFP method is based on current EPA sampling protocols and means that if one sample within a homogeneous group of suspect material is found to contain >1% asbestos, then further analysis of that specific homogenous group samples is terminated and the entire homogeneous group of material is considered to be ACBM regardless of the other sample results. This is based on the potential for inconsistent mix of asbestos in the product yielding varying findings across the different individual samples collected from the same homogeneous group. Unless otherwise noted in the report, sample groups found to have 1% to <10% asbestos content are assumed to be ACBM; to rebut this assumption further analysis with point count methods are required.

Inaccessible and hidden areas, including but not limited to wall/floor/ceiling cavity space, space with obstructed access (such as fiberglass insulation above suspended ceilings), sub floors, interiors of mechanical and process equipment, and similar spaces were not included in the inspection and care should be used when accessing these areas in the future. Unless otherwise noted in the RPF Report, destructive survey techniques were not employed during this survey.

In the event that additional suspect materials are encountered that are not addressed in this report, the materials should be properly tested by an accredited inspector. For example, during renovation and demolition it is likely that additional suspect material will be encountered and such suspect materials should be assumed to be hazardous until proper inspection and testing occurs.

RPF followed applicable industry standards; however, various assumptions and limitations of the methods can result in missed materials or misidentification of materials due several factors including but not limited to: inaccessible space due to physical or safety constraints, space that is difficult to reach to fully inspection, assumptions regarding the determination of homogenous groups of suspect material, assumptions regarding attempts to conduct representative sampling, and potential for varying mixtures and layers of material sampled not being representative of all areas of similar material. Also reference the Limitations document attached to the report.

Summary of Methodology: Lead in Paint Survey

Screening for lead in paint (LP) was performed using bulk sampling of paint or using an X-Ray Fluorescence (XRF) meter for in situ measurements of various painted surfaces. For bulk sampling, samples for determinations were collected by scraping lead paint chips from the substrate. The surveyor attempted to sample layers of paint down to the substrate surface at each sample location. Samples were placed into proper sample containers, the containers were then sealed, labeled and shipped with chain of custody to the RPF AIHA accredited vendor laboratory. The samples were analyzed for total lead content using SW 846 3050B - NIOSH Method 7420. For XRF screening, the device was used and calibrated in accordance with the equipment and industry guidelines applicable for the specific testing performed.

Unless specific TCLP waste characterizations were included in the RPF Scope of Work (SOW), further analysis of waste streams for toxicity characteristics including, but not necessarily limited to lead, may be required prior to disposal of the waste stream. Other toxics may also be present including other heavy metals and PCBs and it may also be necessary to conduct waste characterization for these materials.

Sampling was limited to the specific components as listed in the RPF Report and testing and survey was not completed on every different surface in every room or area in the building. In addition unless otherwise noted in the RPF Report, surface dust, air and soil testing were not conducted during this survey. In order to conduct thorough hazard assessments for lead exposures, representative surface dust testing and air monitoring throughout the building, LBP testing of all surfaces in the building, and representative soil testing in the exterior areas should be completed. This type of testing and analysis was beyond the SOW for the initial survey

The intent of this survey is for lead in construction purposes, not for lead abatement, lead inspections, or lead hazard assessments in residential situations. Specific survey and inspection protocols are required for residential lead-based paint inspections that were not included in the RPF SOW.

RPF followed applicable industry standards for construction related identification in nonresidential settings; however, RPF does not warrant or certify that all lead or other hazardous materials in or on the building has been identified and included in this report. Various assumptions and limitations of the methods can result in missed materials or misidentification of materials due several factors including but not limited to: inaccessible space due to physical or safety constraints, space that is difficult to reach to inspect or sample, assumptions regarding the determination of homogenous or like types of paint, assumptions regarding attempts to conduct representative sampling, and potential for varying mixtures and layers of material sampled not being representative of all areas of similar appearing material. Also reference the Limitations document attached to the report.

LIMITATIONS

1. The observations and conclusions presented in the Report were based solely upon the services described herein, and not on scientific tasks or procedures beyond the RPF Environmental, Inc. Scope of Work (SOW) as discussed in the proposal and/or agreement. The conclusions and recommendations are based on visual observations and testing, limited as indicated in the Report, and were arrived at in accordance with generally accepted standards of industrial hygiene practice and asbestos professionals. The nature of this survey or monitoring service was limited as indicated herein and in the report or letter of findings. Further testing, survey, and analysis is required to provide more definitive results and findings.
2. For site survey work, observations were made of the designated accessible areas of the site as indicated in the Report. While it was the intent of RPF to conduct a survey to the degree indicated, it is important to note that not all suspect ACM material in the designated areas were specifically assessed and visibility was limited, as indicated, due to the presence of furnishings, equipment, solid walls and solid or suspended ceilings throughout the facility and/or other site conditions. Asbestos or hazardous material may have been used and may be present in areas where detection and assessment is difficult until renovation and/or demolition proceeds. Access and observations relating to electrical and mechanical systems within the building were restricted or not feasible to prevent damage to the systems and minimize safety hazards to the survey team.
3. Although assumptions may have been stated regarding the potential presence of inaccessible or concealed asbestos and other hazardous material, full inspection findings for all asbestos and other hazardous material requires the use of full destructive survey methods to identify possible inaccessible suspect material and this level of survey was not included in the SOW for this project. For preliminary survey work, sampling and analysis as applicable was limited and a full survey throughout the site was not performed. Only the specific areas and /or materials indicated in the report were included in the SOW. This inspection did not include a full hazard assessment survey, full testing or bulk material, or testing to determine current dust concentrations of asbestos in and around the building. Inspection results should not be used for compliance with current EPA and State asbestos in renovation/demolition requirements unless specifically stated as intended for this use in the RPF report and considering the limitations as stated therein and within this limitations document.
4. Where access to portions of the surveyed area was unavailable or limited, RPF renders no opinion of the condition and assessment of these areas. The survey results only apply to areas specifically accessed by RPF during the survey. Interiors of mechanical equipment and other building or process equipment may also have asbestos and other hazardous material present and were not included in this inspection. For renovation and demolition work, further inspection by qualified personnel will be required during the course of construction activity to identify suspect material not previously documented at the site or in this survey report. Bordering properties were not investigated and comprehensive file review and research was not performed.
5. For lead in paint, observations were made of the designated accessible areas of the site as indicated in the Report. Limited testing may have been performed to the extent indicated in the text of the report. In order to conduct thorough hazard assessments for lead exposures, representative surface dust testing, air monitoring and other related testing throughout the building, should be completed. This type of in depth testing and analysis was beyond the scope of services for the initial inspection. For lead surveys with XRF readings, it is recommended that surfaces found to have LBP or trace amount of lead detected with readings of less than 4 mg/cm² be confirmed using laboratory analysis if more definitive results are required. Substrate corrections involving destructive sampling or damage to existing surfaces (to minimize XRF read-through) were not completed. In some instances, destructive testing may be required for more accurate results. In addition, depending on the specific thickness of the paint films on different areas of a building component, differing amounts of wear, and other factors, XRF readings can vary slightly, even on the same building component. Unless otherwise specifically stated in the scope of services and final report, lead testing performed is not intended to comply with other state and federal regulations pertaining to childhood lead poisoning regulations.

6. Air testing is to be considered a “snap shot” of conditions present on the day of the survey with the understanding that conditions may differ at other times or dates or operational conditions for the facility. Results are also limited based on the specific analytical methods utilized. For phase contrast microscopy (PCM) total airborne fiber testing, more sensitive asbestos-specific analysis using transmission electron microscopy (TEM) can be performed upon request.
7. For asbestos bulk and dust testing, although polarize light microscopy (PLM) is the method currently recognized in State and federal regulations for asbestos identification in bulk samples, some industry studies have found that PLM may not be sensitive enough to detect all of the asbestos fibers in certain nonfriable material, vermiculate type insulation, soils, surface dust, and other materials requiring more sensitive analysis to identify possible asbestos fibers. In the event that more definitive results are requested, RPF recommends that confirmation testing be completed using TEM methods or other analytical methods as may be applicable to the material. Detection of possible asbestos fibers may be made more difficult by the presence of other non-asbestos fibrous components such as cellulose, fiber glass, etc., by binder/matrix materials which may mask or obscure fibrous components, and/or by exposure to conditions capable of altering or transforming asbestos. PLM can show significant bias leading to false negatives and false positives for certain types of materials. PLM is limited by the visibility of the asbestos fibers. In some samples the fibers may be reduced to a diameter so small or masked by coatings to such an extent that they cannot be reliably observed or identified using PLM.
8. For hazardous building material inspection or survey work, RPF followed applicable industry standards; however, RPF does not warrant or certify that all asbestos or other hazardous materials in or on the building has been identified and included in this report. Various assumptions and limitations of the methods can result in missed materials or misidentification of materials due to several factors including but not limited to: inaccessible space due to physical or safety constraints, space that is difficult to reach to fully inspect, assumptions regarding the determination of homogenous groups of suspect material, assumptions regarding attempts to conduct representative sampling, and potential for varying mixtures and layers of material sampled not being representative of all areas of similar material.
9. Full assessments often requires multiple rounds of sampling over a period of time for air, bulk material, surface dust and water. Such comprehensive testing was beyond the scope of RPF services. In addition clearance testing for abatement, as applicable, was based on the visual observations and limited ambient area air testing as indicated in the report and in accordance with applicable state and federal regulations. The potential exists that microscopic surface dust remains with contaminant present even in the event that the clearance testing meets the state and federal requirements. Likewise for building surveys, visual observations are not sufficient alone to detect possible contaminant in settled dust. Unless otherwise specifically indicated in the report, surface dust testing was not included in the scope of the RPF services.
10. For abatement or remediation monitoring services: RPF is not responsible for observations and test for specific periods of work that RPF did not perform full shift monitoring of construction, abatement or remediation activity. In the event that problems occurred or concerns arouse regarding contamination, safety or health hazards during periods RPF was not onsite, RPF is not responsible to provide documentation or assurances regarding conditions, safety, air testing results and other compliance issues. RPF may have provided recommendations to the Client, as needed, pertaining to the Client’s Contractor compliance with the technical specifications, schedules, and other project related issues as agreed and based on results of RPF monitoring work. However, actual enforcement, or waiving of, contract provisions and requirements as well as regulatory liabilities shall be the responsibility of Client and Client’s Contractor(s). Off-site abatement activities, such as waste transportation and disposal, were not monitored or inspected by RPF.
11. For services limited to clearance testing following abatement or remediation work by other parties: The testing was limited to clearance testing only and as indicated in the report and a site assessment for possible environmental health and safety hazards was not performed as part of the scope of this testing. Client, or Client’s abatement contractor as applicable, was responsible for performing visual inspections

of the work area to determine completeness of work prior to air clearance testing by RPF.

12. For site work, including but not limited to air clearance testing services, in which RPF did not provide full site safety and health oversight, abatement design, full shift monitoring of all site activity, RPF expresses no warranties, guarantees or certifications of the abatement work conducted by the Client or other employers at the job site(s), conditions during the work, or regulatory compliance, with the exception of the specific airborne concentrations as indicated by the air clearance test performed by RPF during the conditions present for the clearance testing. Unless otherwise specifically noted in the RPF Report, visual inspections and air clearance testing results apply only to the specific work area and conditions present during the testing. RPF did not perform visual inspections of surfaces not accessible in the work area due to the presence of containment barriers or other obstructions. In these instances, some contamination may be present following RPF clearance testing and such contamination may be exposed during and after removal of the containment barriers or other obstructions following RPF testing services. Client or Client's Contractor is responsible for using appropriate care and inspection to identify potential hazards and to remediate such hazards as necessary to ensure compliance and a safe environment.
13. The survey was limited to the material and/or areas as specifically designated in the report and a site assessment for other possible environmental health and safety hazards or subsurface pollution was not performed as part of the scope of this site inspection. Typically, hazardous building materials such as asbestos, lead paint, PCBs, mercury, refrigerants, hydraulic fluids and other hazardous product and materials may be present in buildings. The survey performed by RPF only addresses the specific items as indicated in the Report.
14. For mold and moisture survey services, RPF services did not include design or remediation of moisture intrusion. Some level of mold will remain at the site regardless of RPF testing and Contractor or Client cleaning efforts. RPF testing associated with mold remediation and assessments is limited and may or may not be representative of other surfaces and locations at the site. Mold growth will occur if moisture intrusion deficiencies have not been fully remedied and if the site or work areas are not maintained in a sufficiently dry state. Porous surfaces in mold contaminated areas which are not removed and disposed of will likely result in future spore release, allergen sources, or mold contamination.
15. Existing reports, drawings, and analytical results provided by the Client to RPF, as applicable, were not verified and, as such, RPF has relied upon the data provided as indicated, and has not conducted an independent evaluation of the reliability of these data.
16. Where sample analyses were conducted by an outside laboratory, RPF has relied upon the data provided, and has not conducted an independent evaluation of the reliability of this data.
17. All hazard communication and notification requirements, as required by U.S. OSHA regulation 29 CFR Part 1926, 29 CFR Part 1910, and other applicable rules and regulations, by and between the Client, general contractors, subcontractors, building occupants, employees and other affected persons were the responsibility of the Client and are not part of the RPF SOW.
18. The applicability of the observations and recommendations presented in this report to other portions of the site was not determined. Many accidents, injuries and exposures and environmental conditions are a result of individual employee/employer actions and behaviors, which will vary from day to day, and with operations being conducted. Changes to the site and work conditions that occur subsequent to the RPF inspection may result in conditions which differ from those present during the survey and presented in the findings of the report.