# ASBESTOS & LEAD ABATEMENT COMPLETION REPORT

## JOHN FISHER PUBLIC SCHOOL
## 40 ERSKINE AVENUE
## TORONTO, ONTARIO

**Presented to:**

Toronto District School Board
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**October 25, 2017 (revised)**

**ECOH Project Number: 17201-PR4**

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## APPENDICES

# 1. INTRODUCTION

ECOH Management Inc. (ECOH) was retained by Toronto District School Board (TDSB) to conduct inspection and air monitoring services during asbestos & lead abatement work being completed throughout John Fisher Public School, located at 40 Erskine Avenue, Toronto, Ontario. Asbestos & lead abatement work was required to facilitate renovations throughout the school. The asbestos abatement scope of work for this project included the removal of all accessible friable asbestos-containing pipe insulation, duct insulation and ceiling tiles following Type 2 (glove bag and full enclosure) and Type 3 asbestos safety precautions. Asbestos-related work was performed following Ontario Regulation 278/05, "*Asbestos on Construction Projects and in Buildings and Repair Operations*" - made under the Occupation Health and Safety Act. The lead abatement scope of work for this project included the removal of all accessible flaking lead paint and all lead contaminated ceiling tiles following Class 2 lead safety precautions. Lead-related work was performed following Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014.

This report provides a summary of work completed as part of the asbestos and lead abatement project. All abatement-related work was completed by High Point Environmental Services Inc. (Highpoint). The abatement work commenced on June 17, 2017, and the final episode of abatement inspected by ECOH was completed on July 27, 2017.

All abatement work including removal, waste transport and disposal was conducted by Highpoint in accordance with project specifications and the following guidelines and regulations.

- Ontario Regulation 278/05, Regulation respecting Asbestos on Construction Projects and in Buildings and Repair Operations,
- Government of Ontario – Dangerous Goods Transportation Act and Regulations,
- Government of Ontario – Environmental Protection Act and Regulations,
- Government of Ontario – Regulations for Construction Projects, Regulation 213/91,
- Government of Ontario – WHMIS Regulations RRO 1990 Reg. 860,
- Government of Ontario – Ontario Occupational Health and Safety Act RSO 1990 c0.1, as amended,
- Ontario Ministry of Labour Guideline – Lead on Construction Projects, April 2011
- Environmental Abatement Council of Ontario (EACO) – Lead Guideline for Construction, Renovation, Maintenance or Repair, October 2014
- Office of the Fire Commissioner of Canada, and
- Electrical Safety Code, latest edition.

All the asbestos and lead abatement work was completed satisfactorily and according to established procedures and specifications scope of work. It is acceptable for the abatement work areas to be re-established to resume normal day-to-day activities.

# 2. DESCRIPTION OF WORK

## 2.1 Scope of Work

The project included the removal or disturbance of all accessible friable asbestos-containing pipe insulation, duct insulation and ceiling tiles and all accessible flaking lead paint and lead contaminated ceiling tiles.

Asbestos and lead abatement work was completed to facilitate renovations completed at the school. Abatement work was completed on the interior of the building. Scaffold systems were erected to provide access to elevated work areas.

Project specifications issued for this abatement work are included in Appendix A.

All accessible friable asbestos-containing pipe insulation, duct insulation and asbestos-containing ceiling tiles in the work areas were removed by Highpoint using Type 2 and Type 3 asbestos safety precautions (refer to Appendix C for post abatement drawings). All accessible flaking lead paint and all lead contaminated ceiling tiles in the work area were removed by Highpoint using Class 2 lead safety precautions.

## 2.2 On-Site Asbestos & Lead Abatement Inspections

On-site inspections consisted of visual pre-contamination inspections, inspections during removal work, visual clearance inspections, and clearance air monitoring, for the duration of the asbestos and lead removal project. The purpose of the inspections is to ensure that asbestos and lead related work is executed properly and is in compliance with specifications and applicable regulations.

The following activities were carried out during the on-site inspection:

- Interaction with the contractor's site supervisor and other trades to formulate a progress action plan and to determine the work schedule,
- Inspection of the enclosure before the start of the asbestos and/or lead operations to ensure that the site is properly isolated, required facilities and equipment are set up and are operating properly, that negative air pressure has been established (if required) and that all worker protection and safety measures are in place,
- Inspections during asbestos and lead removal operations to ensure that site isolation is properly maintained, that required facilities and equipment continue to operate properly, that negative air pressure is maintained (if required) and that all worker protection and safety measures are being implemented,
- Visual clearance inspection and clearance air monitoring of the enclosures prior to dismantling,
- Final visual inspection of the work area after the enclosure is dismantled and notifying the contractor of any observed deficiencies to be rectified,
- Verification that asbestos and lead waste is properly bagged, transported and disposed of, and
- Preparation of daily activities reports. The report is usually completed at the end of each inspection and includes the following:
    - A summary of findings regarding each of the above-mentioned activities,
    - Results of the air monitoring, if collected, and
    - Any issues and problems arising from site operations and a summary of the means by which they were resolved.

A total of 20 daily inspection reports were prepared during this project. Additionally, a General Inspection Report was prepared to detail health & safety facilities and work practices required on a daily basis. Deviations from health & safety facilities and work practices, as noted within the General Inspection Report, are detailed within daily inspection reports. The inspection reports are included in Appendix B.

## 2.3 Asbestos Air Monitoring and Analysis

### 2.3.1 Methodology for Sample Collection

Air sampling was carried out using AC-powered constant-flow high volume vacuum pumps. The sampling equipment is calibrated prior to use with a DryCal® DC-Lite primary flow meter (using a filter cassette in-line) at a target flow rate of 15 litres/minute.

Samples were collected on a mixed cellulose ester (MCE) membrane filter with 0.8 micrometre pore size and 25-millimetre diameter. The filter was mounted inside a three-piece filter cassette with two-inch cowl. The volume of air collected for each sample was adjusted based on the anticipated airborne fibre level to achieve an adequate loading of fibres on the surface of the filter.

### 2.3.2 Methodology for Sample Analysis

Analysis of the air samples was performed shortly following completion of air sample collection using procedures specified in the National Institute for Occupational Safety and Health (NIOSH) Manual of Analytical Methods, Method 7400, Issue 2: Asbestos and other Fibres by Phase Contrast Microscopy (PCM) (August 15, 1994), using the asbestos fibre counting rules. It is important to note that asbestos fibres are not identified in this method. All fibers longer than 5 micrometres and with length-to-width ratios of 3-to-1 or greater are included in the count. Therefore, if fibreglass, cellulose, or gypsum fibres are also present, the PCM method will overestimate the true asbestos concentration.

### 2.3.3 Asbestos Air Monitoring Guidelines

The Ministry of the Environment has established 0.04 asbestos fibres per cubic centimetre (f/cc) of air as the 24-hour average ambient air quality criterion (for asbestos) for the general public. In order to ensure that building occupants are not exposed to fibre concentrations higher than those acceptable for the general public, ECOH has adopted the 0.04 f/cc value as an action level for air samples collected inside occupied buildings (i.e. referred to as "occupied" samples).

Regulation 278/05, "Designated Substance – Regulation respecting *Asbestos on Construction Projects and in Buildings and Repair Operations*", made under the Ontario Occupational Health and Safety Act, establishes a Type 3 asbestos abatement clearance concentration that shall not exceed 0.01 f/cc in any sample collected within the Type 3 work area.

# 3. RESULTS

## 3.1 Asbestos-Related Work

Highpoint performed all work within the specified schedule. Minor deficiencies were corrected immediately at the direction of, and to the satisfaction of, the on-site inspector during the project. All episodes of clearance air monitoring completed during this project, prior to providing authorization to dismantle a Type 3 work area, were reported as "less than" the meaningful limit of detection for the volume of air collected, which is below the Ministry of Labour air clearance criterion of less than 0.01 f/cc.

Results of air clearances are included in daily inspection reports. The inspection reports are included in Appendix B.

## 3.2 Removal of Asbestos-Containing Materials

Removal of asbestos-containing materials was successfully completed by Highpoint in accordance

with project specifications and applicable guidelines and regulations.

Asbestos-containing pipe insulation may still be present in concealed locations (i.e. wall cavities, steel duct coverings, etc.). Refer to Appendix D for photos.

### 3.3 Lead-Related Work

Highpoint performed all work within the specified schedule. Minor deficiencies were corrected immediately at the direction of, and to the satisfaction of, the on-site inspector during the project.

### 3.4 Removal of Lead-Containing Materials

Removal of lead-containing or lead contaminated materials was successfully completed by Highpoint in accordance with project specifications and applicable guidelines.

## 4. CLOSE OUT REPORT PROJECT DOCUMENTATION

Project documentation is provided in Appendices as follows:

Appendix A ABATEMENT SPECIFICATIONS

- Pre-Renovation Designated Substance and Hazardous Material Assessment
- Abatement Scope of Work Sketch

Appendix B ASBESTOS-RELATED INSPECTION REPORTS

- General Inspection Report
- Daily Inspection Reports #01 to #20

Appendix C POST ABATEMENT DRAWINGS

Appendix D SITE PHOTOGRAPHS (REMAINING FRIABLE ACMs)

# 5. LIMITATIONS OF THE PROJECT

The information and opinions rendered in this report are for use exclusively by Toronto District School Board. ECOH Management Inc. (ECOH) reserves the right to review and comment on any interpretation of the data or conclusions derived by Toronto District School Board. No other representation, either expressed or implied, is included in this report.

ECOH has exercised a degree of thoroughness and competence that is consistent with the profession during the execution of the project. ECOH considers the opinions and information as they are presented in this report to be factual at the time of the investigation of the subject location.

ECOH relied on professional judgment while gathering and analyzing the information obtained. ECOH cannot warrant or guarantee that the conclusions reached are absolutely complete or accurate. However, ECOH commits itself to care and competence in reaching those conclusions.

Sincerely,

**ECOH**
**Environmental Consulting**
**Occupational Health**

**Zafar Iqbal, B.Eng. (Civil)**
**Senior Project Manager**

# APPENDIX A

ABATEMENT SPECIFICATIONS

- Pre-Renovation Designated Substance and Hazardous Material Assessment
- Abatement Scope of Work Sketch

ECOH
Environmental Consulting
Occupational Health

# PRE-RENOVATION DESIGNATED SUBSTANCES AND HAZARDOUS MATERIALS SURVEY

## Toronto District School Board
## John Fisher Public School
## 40 Erskine Avenue
## Toronto, Ontario
## SAP # 3597

**Presented To:**

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**Project Number: 17201-PR4**

June 2017

# EXECUTIVE SUMMARY

ECOH Management Inc. (ECOH) was retained by the Toronto District School Board (TDSB) to conduct a Pre-Renovation Designated Substance and Hazardous Materials Survey in specified areas at John Erskine Public School (TDSB SAP Facility #3597), located at 40 Erskine Avenue, Toronto, Ontario, hereafter referred to as the "Project Area". ECOH understands that TDSB is planning to complete major renovations (i.e. roofing, HVAC, exterior, etc.) throughout the facility. Please refer to Project Drawings in Appendix II for A) Project Area locations, provided by ECOH, and B) Construction drawings provided by Dialog as per TDSB project requirements.

This survey report fulfils requirements set forth within the Ministry of Labour codes and the Ontario Occupational Health and Safety Act to inform workers of the presence of Designated Substances and other hazardous materials prior to renovation or demolition.

Ms. Alfonsina Del Pozo and Mr. Elliott Dametto of ECOH visited the site on June 8th and 14th, 2017. This executive summary provides a brief overview of the key survey findings and associated recommendations. Detailed information regarding the findings and recommendations are discussed in the body of the report. Please refer to the "Asbestos Building Materials Reassessment Survey" (dated April 2017) in the facility's pink binder for further facility details.

## KEY FINDINGS & RECOMMENDATIONS

### Asbestos

The following table describes Asbestos-Containing Materials present within the Project Area. Please note that due to the extent of additions/renovations throughout the building, extensive sampling would be required to determine asbestos content/presence in all plaster finishes. As such, all plaster throughout the building (where sampling was previously not completed) and project area is to be considered **Asbestos-Containing** until extensive sampling can determine otherwise.

| Material | System | Asbestos Content | Asbestos Abatement Procedures |
|---|---|---|---|
| Drywall Joint Compound | Walls, Ceilings Columns, Bulkhead | **Presumed (Various Locations)** | Type 1 (manually) or Type 2 (power tool with HEPA attachment) |
| Plaster | Walls, Ceilings, Columns, Bulkheads | **Presumed (Various Locations)** | Type 1 (manually) or Type 2 (power tool with HEPA attachment) |
| Parging Cement Fittings | Piping | **75% Chrysotile Asbestos** | Type 2/Glove Bag or Type 3 |

# EXECUTIVE SUMMARY

| Material | System | Asbestos Content | Asbestos Abatement Procedures |
|---|---|---|---|
| Aircell On Straight Run Pipe | Piping | **75% Chrysotile Asbestos** | Type 2/Glove Bag or Type 3 |
| Cellulose & Tar Paper on Straight Run Pipe | Piping | **6% Chrysotile Asbestos** | Type 2/Glove Bag or Type 3 |
| 2'x4' Pinholes with Large Length-Wise Fissures Lay-In Ceiling Tile | Ceiling | **2.1% Chrysotile Asbestos** | Type 2 removal |
| Transite Asbestos Cement Panels | Exterior Soffit | **Presumed** | Type 1 (manually) or Type 2 (power tool with HEPA attachment) |
| 12"x12" Tan with Burgundy Specks Vinyl Floor Tile | Floor | **Presumed** | Type 1 (manually) or Type 2 (power tool with HEPA attachment) |
| 12"x12" Blue with White Streaks Vinyl Floor Tile | Floor | **Presumed** | Type 1 (manually) or Type 2 (power tool with HEPA attachment) |
| 12"x12" Grey with White Smears Vinyl Floor Tile | Floor | **Presumed** | Type 1 (manually) or Type 2 (power tool with HEPA attachment) |
| 12"x12" Olive with White & Grey Streaks Vinyl Floor Tile | Floor | **Presumed** | Type 1 (manually) or Type 2 (power tool with HEPA attachment) |
| 12"x12" Beige with Brown & Tan Smears Vinyl Floor Tile | Floor | **Presumed** | Type 1 (manually) or Type 2 (power tool with HEPA attachment) |

# EXECUTIVE SUMMARY

| Material | System | Asbestos Content | Asbestos Abatement Procedures |
|---|---|---|---|
| 12”x12” Green/Teal Smear Pattern Vinyl Floor Tile | Floor | **Presumed** | Type 1 (manually) or Type 2 (power tool with HEPA attachment) |
| 12”x12” White with Blue Streaks Vinyl Floor Tile | Floor | **Presumed** | Type 1 (manually) or Type 2 (power tool with HEPA attachment) |
| 12”x12” Dark Blue with White Streaks Vinyl Floor Tile | Floor | **Presumed** | Type 1 (manually) or Type 2 (power tool with HEPA attachment) |
| 12”x12” Yellow with White Streaks Vinyl Floor Tile | Floor | **Presumed** | Type 1 (manually) or Type 2 (power tool with HEPA attachment) |
| 12”x12” Purple with Dark Purple Flecks Vinyl Floor Tile | Floor | **Presumed** | Type 1 (manually) or Type 2 (power tool with HEPA attachment) |
| 12”x12” Light Blue with Dark Blue and White Flecks Vinyl Floor Tile | Floor | **Presumed** | Type 1 (manually) or Type 2 (power tool with HEPA attachment) |
| 12”x12” Red Vinyl Floor Tile | Floor | **Presumed** | Type 1 (manually) or Type 2 (power tool with HEPA attachment) |
| Grey with Burgundy, White and Brown Smears Vinyl Sheet Flooring | Floor | **Presumed** | Type 1 (manually) or Type 2 (power tool with HEPA attachment) |
| Bell & Spigot Joints | Piping | **Presumed** | Type 2 |

# EXECUTIVE SUMMARY

| Material | System | Asbestos Content | Asbestos Abatement Procedures |
|---|---|---|---|
| Brown & Silver Caulking | Duct | **Presumed** | Type 1 (manually) or Type 2 (power tool with HEPA attachment) |
| Exterior Grey Door Caulking | Other | **3% Chrysotile Asbestos** | Type 1 (manually) or Type 2 (power tool with HEPA attachment) |
| Exterior Grey Window Caulking | Other | **5% Chrysotile Asbestos** | Type 1 (manually) or Type 2 (power tool with HEPA attachment) |
| Interior Window Caulking | Other | **Presumed** | Type 1 (manually) or Type 2 (power tool with HEPA attachment) |
| Firedoor | Other | **Presumed** | Type 1 (manually) or Type 2 (power tool with HEPA attachment) |
| Asbestos Chalkboard | Other | **Presumed** | Type 1 (manually) or Type 2 (power tool with HEPA attachment) |
| Roofing Materials | Roof | **Presumed** | Type 1 (manually) or Type 2 (power tool with HEPA attachment) |

- Removal or disturbance of materials presumed/confirmed to be asbestos requires Asbestos Safety Precautions found in the Regulation respecting *Asbestos on Construction Projects and in Buildings and Repair Operations*, Ontario Regulation 278/05.
- Removal or disturbance of materials confirmed to be Non-Asbestos does not require Asbestos Safety Precautions but should employ other appropriate health and safety precautions, which may include dust suppression methods.
- During work of the project, if additional materials are revealed beyond what are described in this report, or as described in the existing inventory of asbestos-containing materials (i.e. materials not

identified or materials that are not homogenous to those identified or materials that become revealed during the work), additional testing for asbestos-content should be completed immediately and prior to disturbance of the material. Alternatively, materials can be assumed to contain asbestos, if not sampled and analyzed, and the appropriate level of asbestos safety precautions must be implemented.

**Mould**

- Approximately twenty (20) ceiling tiles with mould were observed within the Hub Room (48293), Classroom 20 (48329) and Gym Foyer Corridor (102487).

**Lead**

Flaking paints were observed on walls and ceilings throughout the building.

The lead content of the paints throughout the Project Area vary from "lead-containing" (0.1% to 0.5%) to "lead-based (greater than 0.5%). For the purposes of this project, all of the paint should be considered "lead-based" (i.e.: greater than 0.5% or 5000ppm).

No other major sources of lead or lead-containing products were observed during the survey; however, lead may be present in:

- Wiring connectors and electric cable sheathing,
- Piping and solder joints on piping,
- Ceramic Tiles.

- Renovation, demolition or general construction work involving the removal of Lead-Based materials shall be conducted in accordance with the Ministry of Labour document "*Guideline - Lead on Construction Projects*", dated April 2011. Non-lead-based paints (i.e. trace concentrations of lead below 1.0 $mg/cm^2$, 0.5%, or 5000 ppm, by dry weight) can be completed without lead specific safety precautions provided that:
  - Work does not include 'fume generating activities' (heat producing) such as welding, torching, burning, high temperature cutting, etc.,
  - Dust levels are maintained below 3 $mg/m^3$, and
  - General health and safety construction procedures are implemented, which would include dust suppression methods, proper respiratory protection (minimum of a 1/2-face respirator) and protective clothing, as is appropriate for the work being completed.

**Mercury**

Mercury may be present in minor quantities within the Project Area in the forms below. Items suspected to contain mercury were noted to be in good condition.

- As a vapour within fluorescent tubes lights or compact fluorescent lamp (CFL) bulbs,
- As a possible constituent of thermostats, and
- As a possible constituent of paints and adhesives.

The presence of mercury within assembled units (e.g. fluorescent light bulbs and thermostat bulbs) should not be considered a hazard provided that the assembled units remain sealed and intact. Avoid direct skin contact with mercury and avoid inhalation of mercury vapour. Dispose of mercury following applicable legislative requirements.

**Polychlorinated Biphenyls (PCBs)**

Polychlorinated biphenyls (PCBs) may be present in fluorescent light ballasts. Light ballasts are presumed to contain PCBs must be disposed of following the requirements of the Ontario Environmental Protection

Act, Ontario Regulation 362: PCB Waste Management and Ontario Regulation 347: General-Waste Management (as amended by O. Reg. 558/00).

**Silica**

Free Crystalline Silica in the form of common construction sand is present in all concrete and masonry products within the project area. Any work involving the disturbance of materials that may contain silica should be conducted following recommendations detailed in the Ministry of Labour document "*Guideline - Silica on Construction Projects*", dated April 2011.

**Ozone Depleting Substances (ODS)**

Ozone Depleting Substances (ODS) may be present in refrigeration equipment in the Project Area. Removal and disposal of refrigerator equipment that may contain ODS (i.e. Refrigerant Waste) must follow applicable legislative requirements, including those in Ontario's General Waste Management Regulation (O. Reg. 347/90).

**Other Designated Substances and Hazardous Materials**

Arsenic, Acrylonitrile, Benzene, Coke Oven Emissions, Ethylene Oxide, Isocyanates, and Vinyl Chloride Monomer were not noted in significant quantities or forms, if at all, during this survey.

Complete commentary on each of the designated substances in the project area can be found in the body of this report. The executive summary is not intended to substitute for the complete report, nor does it discuss some of the specific issues documented in the report.

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# 1. INTRODUCTION AND REGULATORY REQUIREMENTS

## 1.1 Introduction and Scope

ECOH Management Inc. (ECOH) was retained by the Toronto District School Board (TDSB) to conduct a Pre-Renovation Designated Substance and Hazardous Materials Survey in specified areas at John Erskine Public School (TDSB SAP Facility #3597), located at 40 Erskine Avenue, Toronto, Ontario, hereafter referred to as the "Project Area". ECOH understands that TDSB is planning to complete major renovations (i.e. roofing, HVAC, exterior, etc.) throughout the facility. Please refer to Project Drawings in Appendix II for A) Project Area locations, provided by ECOH, and B) Construction drawings provided by Dialog as per TDSB project requirements

This survey report fulfils requirements set forth within the Ministry of Labour codes and the Ontario Occupational Health and Safety Act to inform workers of the presence of Designated Substances and other hazardous materials prior to renovation or demolition.

| **Table 1 - Specific Site Information** | |
|---|---|
| **Toronto District School Board** | |
| **JOHN FISHER JUNIOR PUBLIC SCHOOL** | **SAP ID#: 3597** |
| Approximate Size ($ft^2$): 62450 | # of Levels (floors) including Basement(s): 3 |
| Region: NE | Use: Elementary School |
| Construction Date: 1887 | Addition(s) (year of construction): 1890, 1909, 1914, 1920, 1928, 1970, 1986 |
| Initial Golder Survey: Dec. 12-13, 2006 | ECOH Reassessment: June 15, 2011, April 2017 |

Ms. Alfonsina Del Pozo and Mr. Elliott Dametto of ECOH visited the site on June 8th and 14th, 2017. This executive summary provides a brief overview of the key survey findings and associated recommendations. Detailed information regarding the findings and recommendations are discussed in the body of the report. Please refer to the "Asbestos Building Materials Reassessment Survey" (dated March 2017) in the facility's pink binder for further facility details.

The survey included an investigation for the presence of designated substances, including:

- → ***Acrylonitrile***
- → ***Arsenic***
- → ***Asbestos***
- → ***Benzene***
- → ***Coke Oven Emissions***
- → ***Ethylene Oxide***
- → ***Isocyanates***
- → ***Lead***
- → ***Mercury***
- → ***Silica***
- → ***Vinyl Chloride Monomer***

And for hazardous materials, including:

- → ***Polychlorinated Biphenyls (PCBs)***
- → ***Mould***
- → ***Ozone Depleting Substances (ODSs)***
- → ***Other Hazardous Materials***

John Fisher Public School is a two-storey building (not including basement) with a construction area total of approximately 62,450$ft^2$ (5,802 $m^2$).

The building was originally constructed in 1887 with an addition reportedly constructed in 1890, 1909, 1914, 1920, 1928, 1970 and 1986. The Project Area, as per the information provided by Dialog and TDSB, consists of specific corridor sections and rooms on all levels. Refer to Appendix I for specific Project Area locations.

### 1.2 Regulatory Requirements

A Designated Substances and Hazardous Materials Report were completed to fulfil the Owner's requirements under Section 30 of the Ontario Occupational Health and Safety Act. Prior to tendering project work in a building, the building owner must provide this report to contractors tendering on the work.

Ministry of Labour Regulation 278/05, *Regulation respecting Asbestos on Construction Projects and in Buildings and Repair Operations*, controls the disturbance of asbestos materials on construction projects. Ministry of Environment Regulation, R.R.O. 347, controls the disposal of asbestos waste. The Ministry of Labour has also issued guidelines for the control of Lead and Silica on construction projects, these entitled, *Guideline - Lead on Construction Projects* and *Guideline - Silica on Construction Projects*.

There are no specific Ministry of Labour regulations for control of the remaining Designated Substances on construction projects. However, the Ministry of Labour actively enforces the general duty clause of the Occupational Health and Safety Act which protects workers and provides guidance on exposure monitoring, permissible exposure levels, medical monitoring, etc., for all Designated Substances in an occupational setting.

## 2. SURVEY METHODOLOGY

### 2.1 General Approach

During the survey, the surveyor looked for the most common applications of building materials made with Designated Substances based on historical applications. The investigation performed was generally non-intrusive in nature (i.e. with the exception of test cuts, the investigation did not include demolition of building systems to verify concealed conditions).

### 2.2 Asbestos Survey Methodology

#### 2.2.1 Asbestos Sampling Strategy and Analytical Methods

Where sampling was required, bulk samples of potential asbestos containing materials collected for analysis during the designated substances and hazardous materials survey were collected as per the requirements of Ontario Regulation 278/05; multiple samples (ranging from 1 to 7 depending on quantity and type of material) are required to confirm the absence of asbestos. Only one positive result (i.e. confirming the presence of asbestos) is required to classify a material as asbestos-containing. Therefore, ECOH's sampling strategy involves the collection of sufficient numbers of samples to meet regulatory requirements, followed by instructions to the laboratory to cease analysis when one sample within a series has already proven positive for asbestos.

Sampling required a small volume of material to be removed either from a damaged section of suspect material or cut from intact material and then repaired by sealing with tape to prevent fibre release. The collected samples were placed in plastic bags and sealed during shipment to an independent laboratory. A formal chain of custody procedure was maintained between ECOH and the sub-contract laboratory during sample transport. Samples were then analysed following the analytical procedure prescribed by the Regulation 278/05 U.S. Environmental Protection Agency Test Method EPA/600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials. June 1993. Although not required by provincial regulation, all laboratories used by

ECOH are accredited under the U.S. National Voluntary Laboratory Accreditation Program (NVLAP) to ensure consistent, accurate and defendable results.

### 2.2.2 Asbestos Survey Omissions from Scope

When conducting an asbestos survey, it is standard practice to assume that certain building materials potentially contain asbestos. Depending on the material, this assumption is undertaken for one or more of the following reasons:

- The material is inaccessible (i.e., underground piping, between piping systems, etc.);
- There is an inherent danger in sampling the material (i.e., high voltage wires);
- Sampling will compromise the integrity of the building structure or envelope (i.e., Window / door Caulking).

Therefore, for the purpose of this survey, ECOH has assumed that the following materials, if present, are asbestos containing:

- Roofing Materials
- High voltage wiring
- Underground services or piping
- Gaskets

In addition, no identification was made of asbestos products used in manufacturing processes or operations (i.e. manufacturing equipment, laboratories, etc.).

### 2.2.3 Asbestos Survey Inventory Sheets

ECOH's surveyors utilized previously completed asbestos survey data for each room entered provided in the "Asbestos Building Materials Reassessment Survey" (dated October 2013) in the facility's pink binder. The quantity and physical condition of the ACM (confirmed/ presumed) were verified.

## 2.3 Lead Methodology

Although no regulations exist in Ontario to defined a lead-based paint, guidelines indicate that paints containing lead at, or above, 5000 parts per million (i.e. 0.5% lead concentration by dry weight) are considered to be a lead-based.

Materials presumed to be lead-based were visually identified in the Project Area.

## 2.4 Mould Assessment

Mould assessment of the Project Area was conducted in accordance with industry-accepted protocols. Protocols include:

- Canadian Construction Association, Standard Construction Document CCA 82, 2004; "*Mould Guidelines for the Canadian Construction Industry*".
- ASTM D7338 – 10; *Standard Guide for Assessment of Fungal Growth in Buildings.*
- New York City Department of Health and Mental Hygiene: Bureau of Environmental & Occupational Disease Epidemiology; "*Guidelines on Assessment and Remediation of Fungi in Indoor Environments*", 2008.
- Institute of Inspection Cleaning and Restoration (IICRC): S520, December 2003; "*Standard and Reference Guide for Professional Mould Remediation*".

Although there are no regulatory requirements or guidelines in Ontario for such an assessment, the preceding protocols have become accepted as the industry standard by most experts, consultants, and the Ontario Ministry of Labour.

### 2.5 Survey of Other Hazardous Materials

Materials or equipment suspected of containing ODS, PCBs, UFFI and other Designated Substances are identified by appearance, age and knowledge of historic applications.

## 3. FINDINGS AND DISCUSSION

### 3.1 Asbestos

The following outlines the extent to which asbestos-containing material (ACM) was identified in the Project Area. The discussion is organized under the headings of materials that are generally suspected of containing asbestos. Please refer to Appendix II for representative photographs of ACM building materials.

### 3.1.1 Thermal Mechanical Insulation (Friable)

Non-Asbestos and **Asbestos-Containing** mechanical insulations are present in the Project Area. The following presents a brief description of the mechanical insulations and the systems to which they are applied.

#### *3.1.1.1 Piping systems:*

Straight sections of pipe observed throughout the Project Area are either not insulated, insulated with Non-Asbestos materials (i.e. fibreglass), or insulated with an **Asbestos-Containing** material;

- Aircell on straight run pipe is present in the Project Area. This material was previously sampled, reflected in the facility's Pink Binder - "Asbestos Building Materials Reassessment Survey" (dated April 2017), and determined to be **75% Chrysotile Asbestos.** This material may be disturbed during the renovations.
- Cellulose & tar paper on straight run pipe is present in the Project Area. This material was previously sampled, reflected in the facility's Pink Binder - "Asbestos Building Materials Reassessment Survey" (dated April 2017), and determined to be **25% Chrysotile Asbestos.** This material may be disturbed during the renovations.

Pipe fittings/systems are present throughout the Project Area and are either not insulated, insulated with Non-Asbestos materials (i.e. fibreglass), or insulated with an **Asbestos-Containing** material;

- Parging cement fitting are present in the Project Area. This material was previously sampled, reflected in the facility's Pink Binder - "Asbestos Building Materials Reassessment Survey" (dated April 2017), and determined to be **75% Chrysotile Asbestos.** This material may be disturbed during the renovations.

Additional straight runs and fittings may be present throughout the Project Area in concealed areas such as above ceilings, within wall cavities, and other inaccessible areas.

#### *3.1.1.2 Duct Systems:*

Duct systems observed throughout the Project Area are either not insulated or insulated with Non-Asbestos materials (i.e. fiberglass or cement over duct), or insulated with an **Asbestos-Containing** material;

- White duct insulation (parging cement) over fibreglass is present in Floor 2 Classroom 20 (48329). This material was sampled and determined to be **50% Chrysotile Asbestos.** This material may be disturbed during the renovations.

#### *3.1.1.3 Mechanical Equipment:*

Mechanical equipment (i.e. radiators, boilers, etc.) is present throughout the Project Area and is either not insulated or insulated with Non-Asbestos materials (i.e. fibreglass), The mechanical equipment is not expected to be disturbed during the planned renovations.

### 3.1.2 Spray Fireproofing (Friable)

Two (2) visually distinct types of sprayed fireproofing are present in the Project Area;

- Orange/brown sprayed fireproofing was previously sampled, reflected in the facility's Pink Binder - "Asbestos Building Materials Reassessment Survey" (dated April 2017) and was determined by laboratory analysis to be Non-Asbestos. This material is expected to be disturbed during the renovations.
- White sprayed fireproofing was sampled and determined to be Non-Asbestos. This material is expected to be disturbed during the renovations.

### 3.1.3 Texture Coat (Friable)

Texture coat is present on the exterior of the Project Area and was previously sampled, reflected in the facility's Pink Binder - "Asbestos Building Materials Reassessment Survey" (dated April 2017) and was determined by laboratory analysis to be Non-Asbestos. This material is expected to be disturbed during the renovations.

### 3.1.4 Acoustic Ceiling Tile (Non-Friable)

Eight (8) visually distinct types of ceiling tiles are present in the Project Area. One (1) visually distinct ceiling tile is confirmed to be asbestos-containing:

- **Asbestos-containing** Lay-in Ceiling Tiles (2'x4' Pinholes with Large) are present in various locations throughout the Project Area. This material was previously sampled, reflected in the facility's Pink Binder - "Asbestos Building Materials Reassessment Survey" (dated April 2017) and determined by laboratory analysis to **2.1% Chrysotile & 0.5% Amosite Asbestos**. This material is expected to be disturbed during the renovations.
- Seven (7) visually distinct ceiling tiles were also observed throughout the Project Area and were previously sampled, reflected in the facility's Pink Binder - "Asbestos Building Materials Reassessment Survey" (dated April 2017) and was determined by laboratory analysis to be Non-Asbestos. This material is expected to be disturbed during the renovations.

### 3.1.5 Vinyl Floor Tiles (VFT) (Non-Friable)

Visually distinct types of vinyl floor tiles and associated mastics are present in locations throughout the Project Area. The following vinyl floor tiles have been previously sampled and confirmed to be Non-Asbestos;

- 12"x12" Peach Smear Pattern,
- 12"x12" Beige with Burgundy Smudges,
- 12"x12" Beige with Faint Brown Streaks and
- 12"x12" White with Grey and Black Smear Pattern.

All other types of vinyl floor tiles are presumed to be **Asbestos-Containing** unless sampled and determined otherwise by laboratory analysis. These materials are expected to be disturbed during renovations.

### 3.1.6 Vinyl Sheet Flooring (VSF) (Non-Friable)

Visually distinct types of vinyl sheet flooring and associated mastics are present in locations throughout the Project Area. The following vinyl sheet flooring have been previously sampled and confirmed to be Non-Asbestos;

- Beige with Cream and Red Streaks and
- Green with White Streaks.

All other types of vinyl sheet flooring are presumed to be **Asbestos-Containing** unless sampled and determined otherwise by laboratory analysis. These materials are expected to be disturbed during renovations.

### 3.1.7 Caulking (Non-Friable)

Visually distinct types of interior and exterior caulkings are present in the Project Area;

- Grey exterior window caulking was previously sampled, reflected in the facility's Pink Binder - "Asbestos Building Materials Reassessment Survey" (dated April 2017) and determined by laboratory analysis to **5% Chrysotile Asbestos**. This material is expected to be disturbed during the renovations.
- Grey exterior door caulking was previously sampled, reflected in the facility's Pink Binder - "Asbestos Building Materials Reassessment Survey" (dated April 2017) and determined by laboratory analysis to **3% Chrysotile Asbestos**. This material is not expected to be disturbed during the renovations.
- Interior window caulking is presumed to be **Asbestos-Containing** unless sampled and determined otherwise by laboratory analysis. This material is not expected to be disturbed during renovations.
- Silver and brown duct caulking is presumed to be **Asbestos-Containing** unless sampled and determined otherwise by laboratory analysis. This material is not expected to be disturbed during renovations.

### 3.1.8 Brick Mortar (Non-Friable)

Brick mortar is present on the exterior of the Project Area and was previously sampled, reflected in the facility's Pink Binder - "Asbestos Building Materials Reassessment Survey" (dated April 2017) and was determined by laboratory analysis to be Non-Asbestos. This material is expected to be disturbed during the renovations.

### 3.1.9 Drywall Joint Compound (DJC) and Plaster (Non-Friable)

Drywall joint compound is presumed to be **Asbestos-Containing** throughout the Project Area with the exception of the Gymnasium Entrance Foyer (48288).

Plaster is presumed to be **Asbestos-Containing** throughout the Project Area with the exception of the following locations;

- Basement HVAC/Fan Room (73540) – Ceiling
- Floor 1 Stairwell Exit 3 (48268) – Ceiling
- Basement Corridor (73647)
- Basement Mechanical Room (84161)

- Floor 1 Storage Room (48322)
- Floor 2 Classroom 13 (48337)
- Basement Boys Washroom (73544)
- Basement Lunch Room C (73653)
- Basement Boiler/Furnace Room (73642)
- Basement Lunchroom/Room A (73542) – Ceiling
- Floor 1 Classroom 6 (48298) – Wall & Ceiling
- Floor 1 Corridor by Library (102492) – Wall
- Floor 1 Classroom/Library (48321) – Wall
- Floor 1 Library (48271) – Library
- Basement Lunchroom/Room C (73653) – Ceiling
- Floor 2 Classroom 16 (48344) – Wall
- Floor 2 Coat/Shoe Area (48345) – Wall

Due to the extent of additions/renovations throughout the building, extensive sampling would be required to determine asbestos content/presence in all drywall and plaster finishes. As such, all drywall and plaster throughout the building and Project Area aside from the areas mentioned above are to be considered **Asbestos-Containing** until further sampling can determine otherwise. This material is expected to be disturbed during the renovations.

### 3.1.10 Cement Transite (Non-Friable)

Transite panels are present on the exterior ceiling of the Project Area (location 48385-1). This material was sampled and determined to be Non-Asbestos. This material is expected to be disturbed during the renovations.

Transite panels are present in the walls of the Floor 2 Classroom 19 (48325). This material is presumed to be **Asbestos-Containing** unless sampled and determined otherwise by laboratory analysis. This material is expected to be disturbed during the renovations.

### 3.1.11 Other

Expansion joint compound is present in the Floor 1 Stairwell Exit 2 (48308). This material was previously sampled, reflected in the facility's Pink Binder - "Asbestos Building Materials Reassessment Survey" (dated April 2017) and was determined by laboratory analysis to be Non-Asbestos. This material is expected to be disturbed during the renovations.

All roofing materials are presumed to be **Asbestos-Containing** unless sampled and determined otherwise by laboratory analysis. This material is expected to be disturbed during the renovations.

Bell and spigot joint are present throughout the Project Area. This material is presumed to be **Asbestos-Containing** unless sampled and determined otherwise by laboratory analysis. This material is not expected to be disturbed during the renovations.

Firedoors and chalkboards are present throughout the Project Area. This material is presumed to be **Asbestos-Containing** unless sampled and determined otherwise by laboratory analysis. This material is not expected to be disturbed during the renovations.

### 3.2 Mould

Mould was observed on ceiling tiles in the following locations;

- Floor 1 Hub Room (48293) – 8 Ceiling Tiles,
- Floor 2 Classroom 20 (48329) – 6 Ceiling Tiles, and
- Floor 1 Gym Foyer Corridor (102487) – 6 Ceiling Tiles.

### 3.3 Lead

Flaking paints were observed on walls and ceilings throughout the building.

The lead content of the paints throughout the Project Area vary from "lead-containing" (0.1% to 0.5%) to "lead-based (greater than 0.5%). For the purposes of this project, all of the paint should be considered "lead-based" (i.e.: greater than 0.5% or 5000ppm).

No other major sources of lead or lead-containing products were observed during the survey; however, lead may be present in:

- Wiring connectors and electric cable sheathing,
- Piping and solder joints on piping,
- Ceramic Tiles.

### 3.4 Mercury

Mercury may be present in minor quantities within the Project Area in the forms below. Items suspected to contain mercury were noted to be in good condition.

- As a vapour within fluorescent tubes lights or compact fluorescent lamp (CFL) bulbs,
- As a possible constituent of thermostats, and
- As a possible constituent of paints and adhesives.

### 3.5 Polychlorinated Biphenyls (PCBs).

Polychlorinated biphenyls (PCBs) may be present in fluorescent light ballasts. During the disposal of fluorescent light ballasts, ballasts should be disassembled to observe serial codes and then compared to standard PCB Identifier Code literature.

Ballasts with unidentifiable serial codes, or from manufactures who are not included in the standard PCB Identifier Code literature, or which are not clearly labelled as "PCB Free", or for which no date is clearly visible (ballasts dated 1981 or later do not contain PCBs) must be assumed to contain PCBs.

### 3.6 Silica

Free crystalline silica, in the form of common construction sand, is present in all concrete and masonry products within the Project Area.

### 3.7 Ozone Depleting Substances (ODS)

Ozone Depleting Substances (ODS) may be present in refrigeration equipment in the Project Area.

### 3.8 Other Environmental Considerations

The environmental audit also included an investigation for the following compounds, none of which were found to be present:

- Acrylonitrile
- Arsenic
- Benzene
- Coke Oven Emissions
- Ethylene Oxides
- Isocyanates
- Vinyl Chloride Monomer

Please note: paint, adhesives and plastics present throughout the project area may contain trace amounts of Acrylonitrile, Arsenic, Benzene, Ethylene Oxides, Isocyanates, Lead, Mercury and Vinyl Chloride Monomer. However, none of these materials were observed in a hazardous or unsafe condition. Dust suppression and personal protection procedures should be implemented during the demolition of materials that may contain any of the above-mentioned substances.

## 4. RECOMMENDATIONS

The following recommendations meet requirements of the Occupational Health and Safety Act. Asbestos recommendations meet the requirements of the Designated Substance – Regulation respecting *Asbestos on Construction Projects and in Buildings and Repair Operations*, Ontario Regulation 278/05. Based upon the observations of this assessment, ECOH offers the following recommendations.

### 4.1 Asbestos

The following recommendations meet requirements of the Occupational Health and Safety Act. Asbestos recommendations meet the requirements of the Designated Substance – Regulation respecting *Asbestos on Construction Projects and in Buildings and Repair Operations*, Ontario Regulation 278/05. Based upon the results of ECOH's investigations, ECOH offers the following recommendations;

Prior to demolition, renovations or any disturbances, building materials confirmed to be **Asbestos-Containing** must be removed using asbestos safety procedures detailed within Ontario Regulation 278/05, Regulation respecting *Asbestos on Construction Projects and in Buildings and Repair Operations* – made under the Occupational Health and Safety Act.

- Regarding the removal or disturbance of Non-Friable **Asbestos-Containing** materials, if required;
  - Type 1 Asbestos Safety Precautions should be utilized for the disturbance or removal of the non-friable **Asbestos-Containing** materials, provided that the materials are wetted to control the spread of dust or fibres, and work is only done by means of non-powered hand-held tools.
  - Type 2 Asbestos Safety Precautions should be utilized for the disturbance removal of non-friable **Asbestos-Containing** materials if the work is done by means of power tools that are attached to dust-collecting devices equipped with HEPA filters.
  - Type 3 Asbestos Safety Precautions should be utilized for the disturbance removal of non-friable **Asbestos-Containing** materials, if the work is done by means of power tools that are not attached to dust-collecting devices equipped with HEPA filters
- Regarding the removal or disturbance of Non-Friable **Asbestos-Containing** materials (**ceiling tiles**) if required;
  - Type 1 Asbestos Safety Precautions should be utilized for the disturbance or removal of **Asbestos-Containing** ceiling tiles, provided that the tiles cover an area less than 7.5 square metres and are removed or disturbed without being broken, cut, drilled, abraded ground sanded or vibrated.
  - Type 2 Asbestos Safety Precautions should be utilized for the disturbance or removal of **Asbestos-Containing** ceiling tiles, if the tiles cover an area of 7.5 square metres or more

and are installed or removed without being broken, cut, drilled, abraded, ground, sanded or vibrated.

- Regarding the removal or disturbance of Non-Friable **Asbestos-Containing** Materials (drywall joint compound and plaster), if required;
  - Type 1 Asbestos Safety Precautions should be utilized for the disturbance or removal of less than one square meter of drywall in which joint-filling compound that is **Asbestos-Containing** have been used or **Asbestos-Containing** plaster; provided that materials are wetted to control the spread of dust or fibres and work is done only by means of non-powered hand-held tools.
  - Type 2 Asbestos Safety Precautions should be utilized for the disturbance or removal of one square meter or more of drywall in which joint-filling compound that is **Asbestos-Containing** have been used or **Asbestos-Containing** plaster; if the work is done by means of power tools that are attached to dust-collecting devices equipped with HEPA filters.
  - Type 3 Asbestos Safety Precautions should be utilized for the disturbance removal of drywall in which joint-filling compound that is **Asbestos-Containing** have been used or **Asbestos-Containing** plaster; if the work is done by means of power tools that are not attached to dust-collecting devices equipped with HEPA filters.
- Regarding the removal or disturbance of Friable **Asbestos-Containing** Materials (parging cement fittings, aircell, cellulose & tar paper, and duct insulation), if required;
  - Type 2 Asbestos Safety Precautions should be utilized for the disturbance or removal of one square meter or less of the aforementioned **Asbestos-Containing** material or if any of the aforementioned materials are being disturbed or removed by the use of power tools that are attached to dust collecting devices equipped with HEPA filters.
  - Type 2 Glove Bag Asbestos Safety Precautions can be utilized for the disturbance or removal of the aforementioned **Asbestos-Containing** materials.
  - Type 3 Asbestos Safety Precautions should be utilized for the disturbance or removal or more than one square meter of the aforementioned **Asbestos-Containing** materials or if any of the aforementioned materials are being disturbed or removed by the use of powered hand tools.
- Any demolition, renovation or maintenance activities involving materials found NOT to contain asbestos, should implement general health and safety precautions including, in part, the use of dust suppression techniques and appropriate respiratory protection.
- During work, if additional materials are revealed beyond what are described in the existing asbestos survey report or in this report (i.e. materials not identified, materials that are not homogenous to those identified, or materials that become revealed during the work), additional testing for asbestos-content should be completed immediately and prior to disturbance of the material. Alternatively, these materials can be assumed to contain asbestos and the appropriate level of asbestos safety precautions must be implemented.

## 4.2 Mould

All remediation work should be conducted in accordance with the following, the EACO 2015 Mould Abatement Guidelines or similar industry accepted documents. Demolition of a building containing mould-affected building materials can be undertaken if appropriate measures are taken to protect the worker and avoid cross-contamination to adjacent spaces.

- Level 1 mould abatement precautions should be utilized for the removal of less than 10 $ft^2$ of mould growth on building materials or finishes.

- Level 2 mould abatement precautions should be utilized for the removal of between 10 $ft^2$ and 100 $ft^2$ of mould growth on building materials or finishes.
- Level 3 mould abatement precautions should be utilized for the removal of more than 100 $ft^2$ of mould growth on building materials or finishes.

### 4.3 Lead

Any work involving the disturbance of building materials confirmed to contain lead (e.g. wiring connectors, electric cable sheathing, and soldering joints on copper piping) should be conducted following recommendations detailed within the Ministry of Labour document "*Guideline - Lead on Construction Projects*", dated April 2011.

- Measures and procedures for Type 1 lead-containing operations should be utilized for the;
  - Removal of lead-containing coatings with a chemical gel or paste and fibrous laminated cloth wrap,
  - Removal of lead-containing coatings or materials using a power tool that has an effective dust collection system equipped with a HEPA filter, or
  - Removal of lead-containing coatings or materials with a non-powered hand tool, other than manual scraping and sanding.
- Measures and procedures for Type 2a lead-containing operations should be utilized for the;
  - Removal of lead-containing coatings or materials by scraping or sanding using non-powered hand tools, or
  - Manual demolition of lead-painted plaster walls or building components by striking a wall with a sledge hammer or similar tool.
- Measures and procedures for Type 3a lead-containing operations should be utilized for the;
  - Welding or high temperature cutting of lead-containing coating or materials indoors or outdoors if the work is not short-term, repeated, and if the material has not been stripped prior to welding or high temperature cutting, or
  - Removal of lead-containing coatings or materials using power tools without an effective dust collection system equipped with a HEPA filter,

Renovation, demolition or general construction work involving the removal of non-lead-based paints (i.e. trace concentrations of lead below 1.0mg/$cm^2$, 0.5%, or 5000 ppm, by dry weight) can be completed without lead specific safety precautions provided that:

- Work does not include 'fume generating activities' (heat producing) such as welding, torching, burning, high temperature cutting, etc.,
- Dust levels are maintained below 3 mg/$m^3$, and
- General health and safety construction procedures are implemented, which would include dust suppression methods, proper respiratory protection (minimum of a 1/2-face respirator) and protective clothing, as is appropriate for the work being completed.

### 4.4 Mercury

The presence of mercury within assembled units (e.g. fluorescent light bulbs and thermostat bulbs) should not be considered a hazard provided that the assembled units remain sealed and intact. Avoid direct skin contact with mercury and avoid inhalation of mercury vapour. Dispose of mercury following applicable legislative requirements.

### 4.5 Polychlorinated Biphenyls (PCB)

Light ballasts confirmed or assumed to contain polychlorinated biphenyls (PCBs) must be disposed of following the requirements of the Ontario Environmental Protection Act, Ontario Regulation 362: PCB Waste Management and Ontario Regulation 347: General-Waste Management (as amended by O. Reg. 558/00).

### 4.6 Silica

Any work involving the disturbance of materials that may contain silica should be conducted following recommendations detailed in the Ministry of Labour document "*Guideline - Silica on Construction Projects*", dated April 2011.

### 4.7 Ozone Depleting Substances (ODS)

Removal and disposal of refrigerator equipment that may contain ODS (i.e. Refrigerant Waste) must follow applicable legislative requirements, including those in Ontario's General Waste Management Regulation (O. Reg. 347/90).

## 5. STATEMENT OF LIMITATIONS

Due to the nature of building construction, some limitations exist as to the possible thoroughness of the pre-renovation survey. The field observations, measurements and analysis are considered sufficient in detail and scope to form a reasonable basis for the findings and conclusions presented in this report. The findings and conclusions drawn by ECOH Management Inc. (ECOH), concerning the designated substance survey, are limited to the specific scope of work for which ECOH was retained and are based solely on information generated as a result of the specific scope of work authorized Toronto District School Board. The results of the designated substance survey are limited to visual inspection of areas made accessible to ECOH personnel and information obtained from facility personnel, when obtained.

ECOH warrants that the findings and conclusions contained herein have been made in accordance with generally accepted evaluation methods in the industry and applicable regulations at the time of the performance of the designated substance survey. However, there is no warranty, expressed or implied, that this building survey has uncovered all environmental considerations on the subject site. In addition, ECOH cannot guarantee the completeness or accuracy of information supplied by a third party.

This report was prepared by ECOH for Toronto District School Board. The material in it reflects ECOH's professional interpretation of information available at the time of report preparation. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties.

**ECOH**
Environmental Consulting
Occupational Health

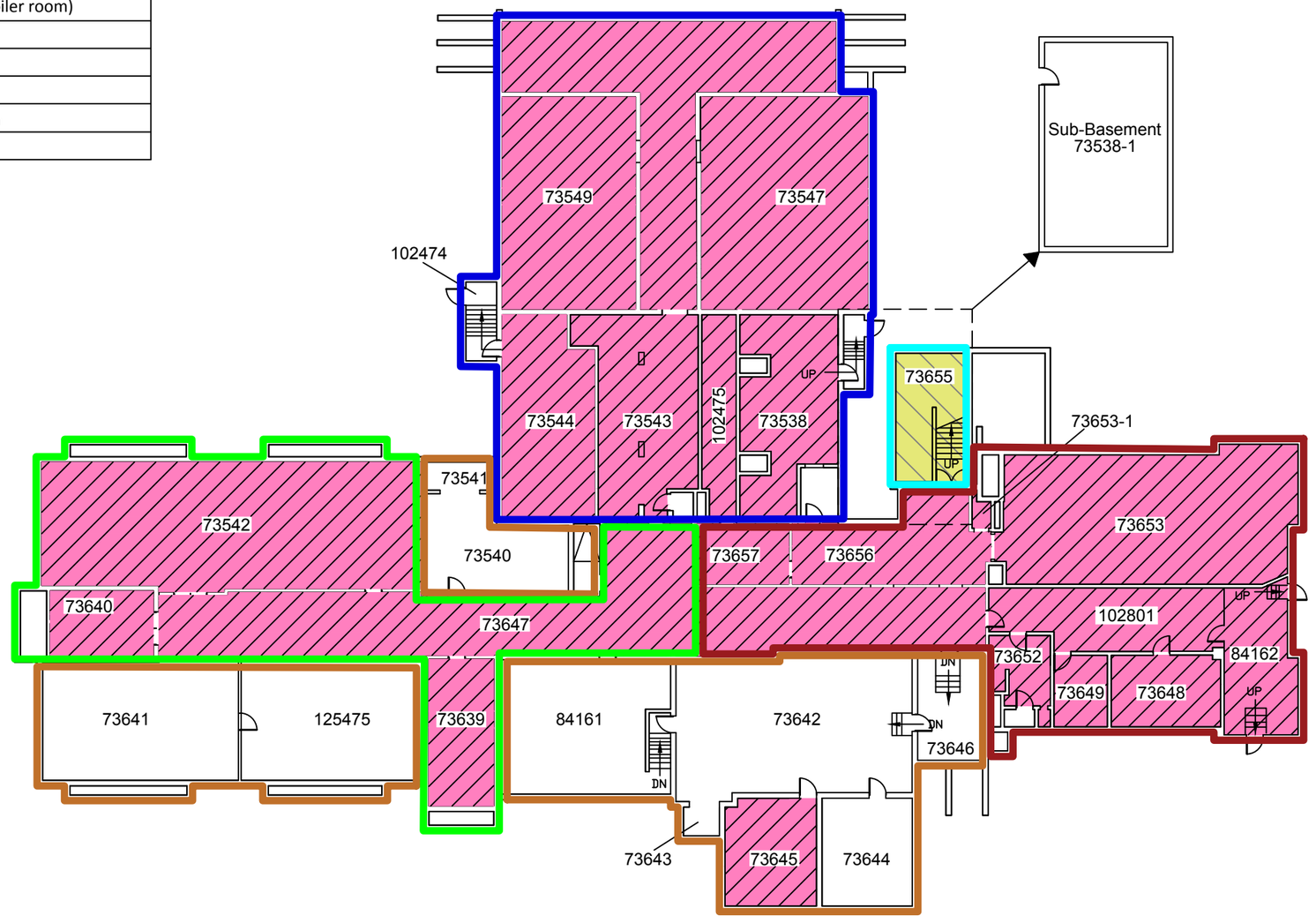
| **Prepared By:** | **Reviewed By:** |
|---|---|
|  |  |
| Mahir Bholat, B.Sc. | Zafar Iqbal, B.Eng. |
| **Senior Environmental Scientist** | **Senior Project Manager** |

# APPENDIX I

**PROJECT DRAWINGS**

| Location # | Description |
|---|---|
| 73538 | Basement: Washroom - Girls (girls washroom) |
| 73538-1 | Basement: Sub-Basement (includes staircase to location) |
| 73540 | Basement: HVAC/Fan Room |
| 73541 | Basement: HVAC/Fan Room |
| 73542 | Basement: Lunchroom (lunch room A) |
| 73543 | Basement: Storage Room |
| 73544 | Basement: Washroom - Boys (boys washroom) |
| 73547 | Basement: Crawlspace |
| 73548 | Basement: Crawlspace |
| 73549 | Basement: Crawlspace |
| 73639 | Basement: Electrical Room |
| 73640 | Basement: Stairwell (Exit 2) |
| 73641 | Basement: Classroom B1 |
| 73642 | Basement: Boiler / Furnace Room (boiler room) |
| 73643 | Basement: Old Elevator Shaft |
| 73644 | Basement: Incinerator Room |
| 73645 | Basement: Storage Room |
| 73646 | Basement: Main Water Shutoff Room |
| 73647 | Basement: Corridor |

| | |
|---|---|
| 73648 | Basement: Kitchen (lunch room) |
| 73649 | Basement: Caretakers Office (chief caretakers office) |
| 73652 | Basement: Washroom (staff washroom) |
| 73653 | Basement: Lunchroom (lunch room c) |
| 73653-1 | Basement: Mechanical Chase |
| 73655 | Basement: Stairwell (corridor) |
| 73656 | Basement: Entrance Foyer (hallway and stairs landing) |
| 73657 | Basement: Storage Room |
| 84161 | Basement: Mechanical Room |
| 84162 | Basement: Storage Room (cage) |
| 102474 | Basement: Stairwell |
| 102475 | Basement: Mechanical Chase |
| 102801 | Basement: Caretakers Room |
| 125475 | Basement: Classroom B2 |




## Legend

**Description of Asbestos-Containing Materials**

- ACM Pipe Insulation
- ACM Ceiling Tiles
- Work Area # 1
- Work Area # 4
- Work Area # 5
- Work Area # 6
- Work Area # 7

Exterior ID: 48385-1
Roof ID: 48385

Reference
Drawings based on plans provided by the Toronto District School Board

# Figure BA

**LOCATION:**
40 Erskine Avenue
Toronto, Ontario

**BUILDING NAME:**
John Fisher Jr. Public School - 3597

## ACM Location Plan
## Basement

| | | | |
|---|---|---|---|
| CLIENT: Toronto District School Board | | | |
| PROJECT NUMBER: 17201-PR4 | DATE: February 2017 | DRW BY: CAB | |
| CAD FILE: FIG1-4 P17201-PR4 John Fisher | SCALE: Not To Scale | CHK BY: ZI | |

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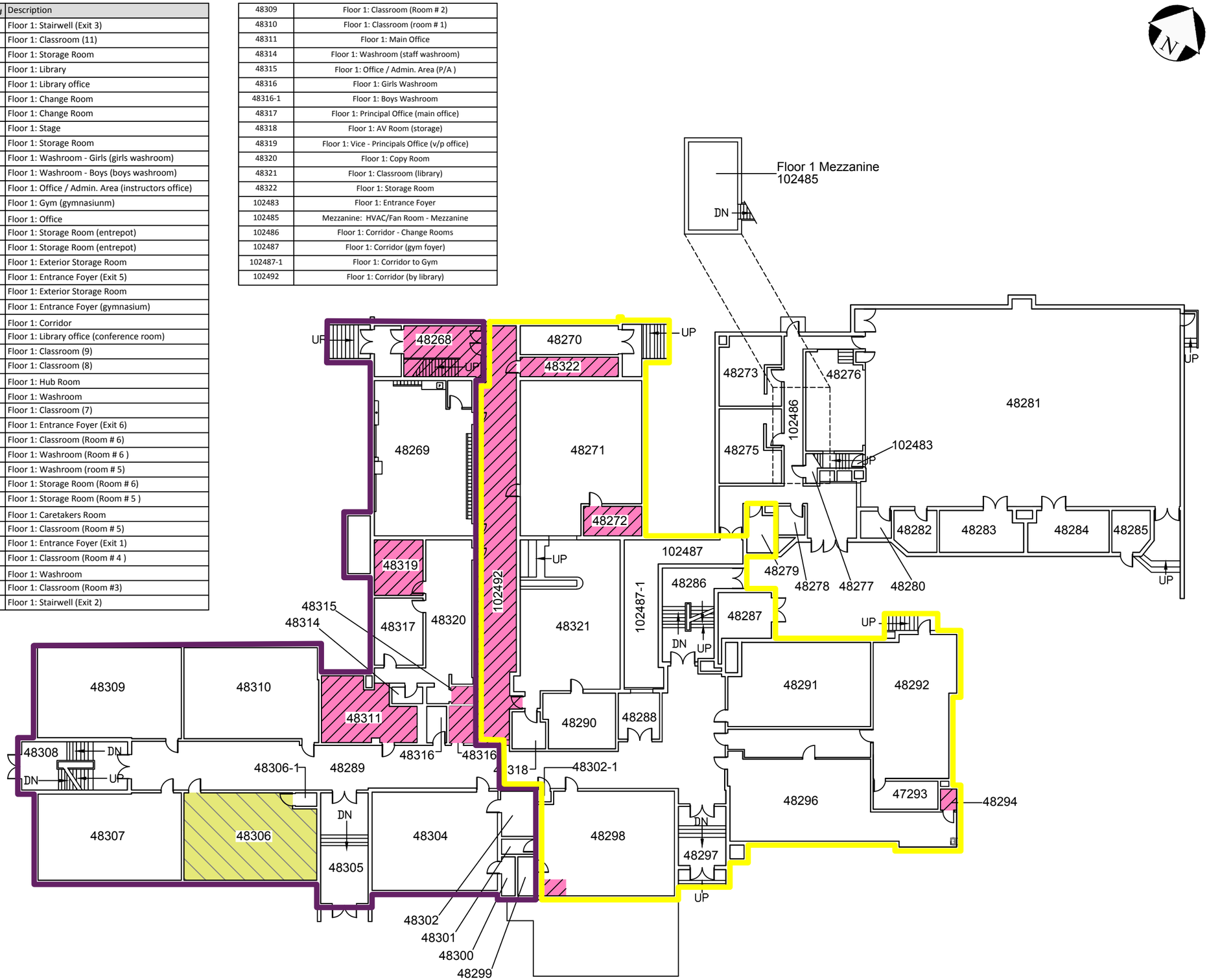
| Location # | Description |
|---|---|
| 48268 | Floor 1: Stairwell (Exit 3) |
| 48269 | Floor 1: Classroom (11) |
| 48270 | Floor 1: Storage Room |
| 48271 | Floor 1: Library |
| 48272 | Floor 1: Library office |
| 48273 | Floor 1: Change Room |
| 48275 | Floor 1: Change Room |
| 48276 | Floor 1: Stage |
| 48277 | Floor 1: Storage Room |
| 48278 | Floor 1: Washroom - Girls (girls washroom) |
| 48279 | Floor 1: Washroom - Boys (boys washroom) |
| 48280 | Floor 1: Office / Admin. Area (instructors office) |
| 48281 | Floor 1: Gym (gymnasiunm) |
| 48282 | Floor 1: Office |
| 48283 | Floor 1: Storage Room (entrepot) |
| 48284 | Floor 1: Storage Room (entrepot) |
| 48285 | Floor 1: Exterior Storage Room |
| 48286 | Floor 1: Entrance Foyer (Exit 5) |
| 48287 | Floor 1: Exterior Storage Room |
| 48288 | Floor 1: Entrance Foyer (gymnasium) |
| 48289 | Floor 1: Corridor |
| 48290 | Floor 1: Library office (conference room) |
| 48291 | Floor 1: Classroom (9) |
| 48292 | Floor 1: Classroom (8) |
| 48293 | Floor 1: Hub Room |
| 48294 | Floor 1: Washroom |
| 48296 | Floor 1: Classroom (7) |
| 48297 | Floor 1: Entrance Foyer (Exit 6) |
| 48298 | Floor 1: Classroom (Room # 6) |
| 48299 | Floor 1: Washroom (Room # 6 ) |
| 48300 | Floor 1: Washroom (room # 5) |
| 48301 | Floor 1: Storage Room (Room # 6) |
| 48302 | Floor 1: Storage Room (Room # 5 ) |
| 48302-1 | Floor 1: Caretakers Room |
| 48304 | Floor 1: Classroom (Room # 5) |
| 48305 | Floor 1: Entrance Foyer (Exit 1) |
| 48306 | Floor 1: Classroom (Room # 4 ) |
| 48306-1 | Floor 1: Washroom |
| 48307 | Floor 1: Classroom (Room #3) |
| 48308 | Floor 1: Stairwell (Exit 2) |

| | |
|---|---|
| 48309 | Floor 1: Classroom (Room # 2) |
| 48310 | Floor 1: Classroom (room # 1) |
| 48311 | Floor 1: Main Office |
| 48314 | Floor 1: Washroom (staff washroom) |
| 48315 | Floor 1: Office / Admin. Area (P/A ) |
| 48316 | Floor 1: Girls Washroom |
| 48316-1 | Floor 1: Boys Washroom |
| 48317 | Floor 1: Principal Office (main office) |
| 48318 | Floor 1: AV Room (storage) |
| 48319 | Floor 1: Vice - Principals Office (v/p office) |
| 48320 | Floor 1: Copy Room |
| 48321 | Floor 1: Classroom (library) |
| 48322 | Floor 1: Storage Room |
| 102483 | Floor 1: Entrance Foyer |
| 102485 | Mezzanine: HVAC/Fan Room - Mezzanine |
| 102486 | Floor 1: Corridor - Change Rooms |
| 102487 | Floor 1: Corridor (gym foyer) |
| 102487-1 | Floor 1: Corridor to Gym |
| 102492 | Floor 1: Corridor (by library) |




# Legend

**Description of Asbestos-Containing Materials**

- ACM Pipe Insulation
- ACM Ceiling Tiles
- Work Area # 2
- Work Area # 3

Exterior ID: 48385-1
Roof ID: 48385

Reference
Drawings based on plans provided by the Toronto District School Board

## Figure 1

**LOCATION:**
40 Erskine Avenue
Toronto, Ontario

**BUILDING NAME:**
John Fisher Jr. Public School - 3597

## Asbestos Abatement Plan
## Floor 1

| | | | |
|---|---|---|---|
| CLIENT: | Toronto District School Board | | |
| PROJECT NUMBER: 17363 | DATE: February 2017 | DRW BY: CAB | |
| CAD FILE: FIG1-4 P17201-PR4 John Fisher | SCALE: Not To Scale | CHK BY: ZI | |

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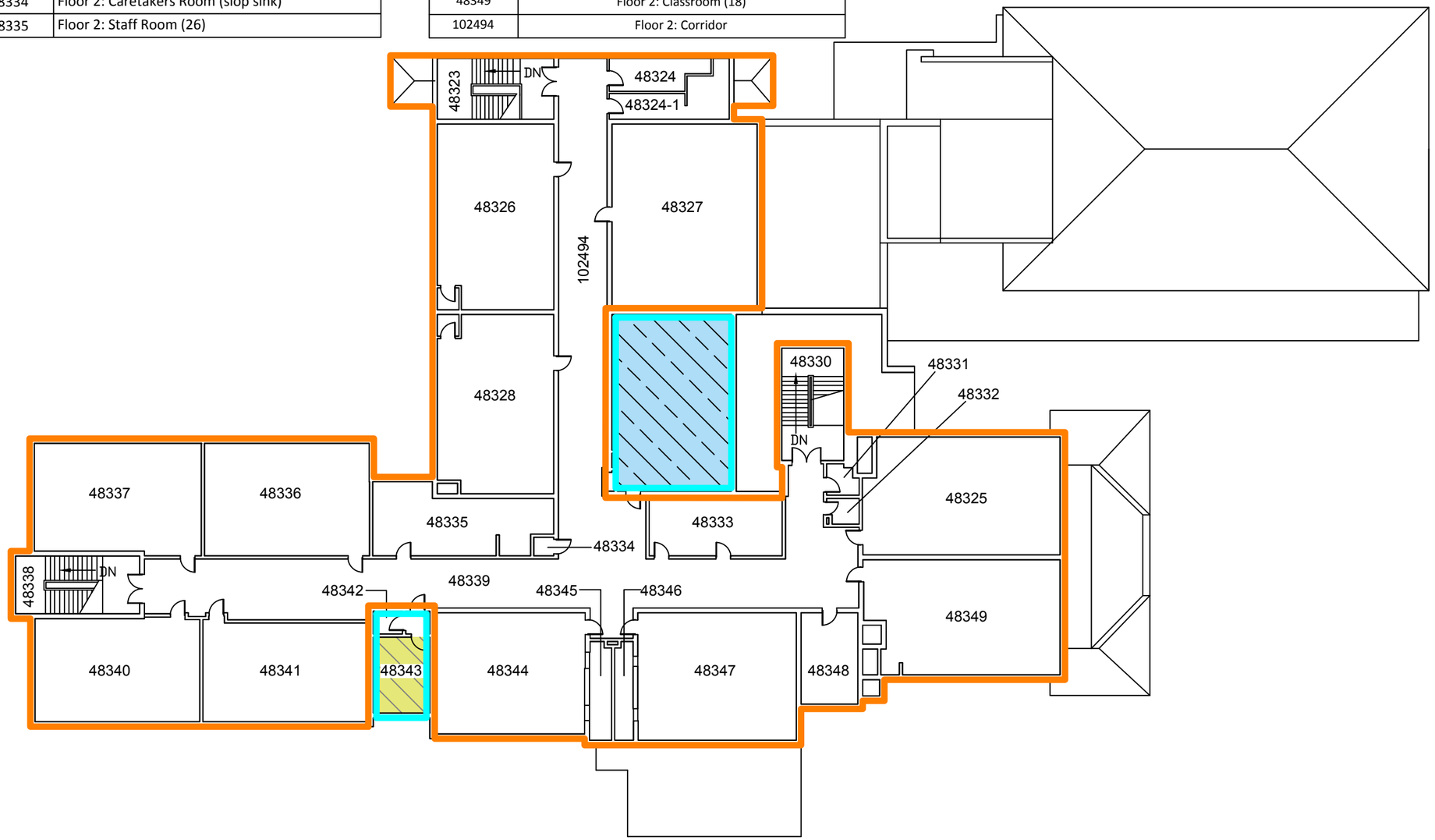
| Location # | Description |
|---|---|
| 48323 | Floor 2: Stairwell (Exit 3) |
| 48324 | Floor 2: Washroom - Mens |
| 48324-1 | Floor 2: Washroom - Womens |
| 48325 | Floor 2: Classroom (19) |
| 48326 | Floor 2: Classroom (22) |
| 48327 | Floor 2: Music Classroom |
| 48328 | Floor 2: Classroom (21) |
| 48329 | Floor 2: Classroom (20) |
| 48330 | Floor 2: Entrance Foyer (Exit 5) |
| 48331 | Floor 2: Washroom (staff washroom) |
| 48332 | Floor 2: Storage Room |
| 48333 | Floor 2: Spec. Ed Classroom (20A) |
| 48334 | Floor 2: Caretakers Room (slop sink) |
| 48335 | Floor 2: Staff Room (26) |

| | |
|---|---|
| 48336 | Floor 2: Classroom (12) |
| 48337 | Floor 2: Classroom (13) |
| 48338 | Floor 2: Stairwell (Exit 2) |
| 48339 | Floor 2: Corridor |
| 48340 | Floor 2: Classroom (14) |
| 48341 | Floor 2: Classroom (15) |
| 48342 | Floor 2: Washroom |
| 48343 | Floor 2: Remedial Room |
| 48344 | Floor 2: Classroom (16) |
| 48345 | Floor 2: Coat/Shoe Area (closet) |
| 48346 | Floor 2: Coat/Shoe Area (closet) |
| 48347 | Floor 2: Classroom (17) |
| 48348 | Floor 2: French Connection Office |
| 48349 | Floor 2: Classroom (18) |
| 102494 | Floor 2: Corridor |




## Legend

**Description of Asbestos-Containing Materials**

- ACM Pipe Insulation
- ACM Ceiling Tiles
- Duct Insulation and Pipe Insulation
- Work Area # 1
- Work Area # 8

Exterior ID: 48385-1
Roof ID: 48385

Reference
Drawings based on plans provided by the Toronto District School Board

# Figure 2

**LOCATION:**
40 Erskine Avenue
Toronto, Ontario

**BUILDING NAME:**
John Fisher Jr. Public School - 3597

## Asbestos Abatement Plan
## Floor 2

| | | | |
|---|---|---|---|
| CLIENT: Toronto District School Board | | | |
| PROJECT NUMBER: 17201-PR4 | DATE: February 2017 | DRW BY: CAB | |
| CAD FILE: FIG1-4 P17201-PR4 John Fisher | SCALE: Not To Scale | CHK BY: ZI | |

ECOH
Environmental Consulting
Occupational Health

# APPENDIX II

## SITE PHOTOGRAPHS

| **Client Name:** | **Site Location:** | **Project No.** |
|---|---|---|
| Toronto District School Board | John Fisher Jr. Public School (Facility SAP: 3597) | 17201-PR4 |

**Photo No. 1.**

**Date: June 14, 2017**

**Description:**
Representative photos

Flecking paint on walls is present throughout the Project Area.

**Photo No. 2.**

**Date: June 14, 2017**

**Description:**

Representative photo of flaking paint above ceiling.

| **Client Name:** | **Site Location:** | **Project No.** |
|---|---|---|
| Toronto District School Board | John Fisher Jr. Public School (Facility SAP: 3597) | 17201-PR4 |

**Photo No. 3.**

**Date: June 14, 2017**

**Description:**
Representative Photo

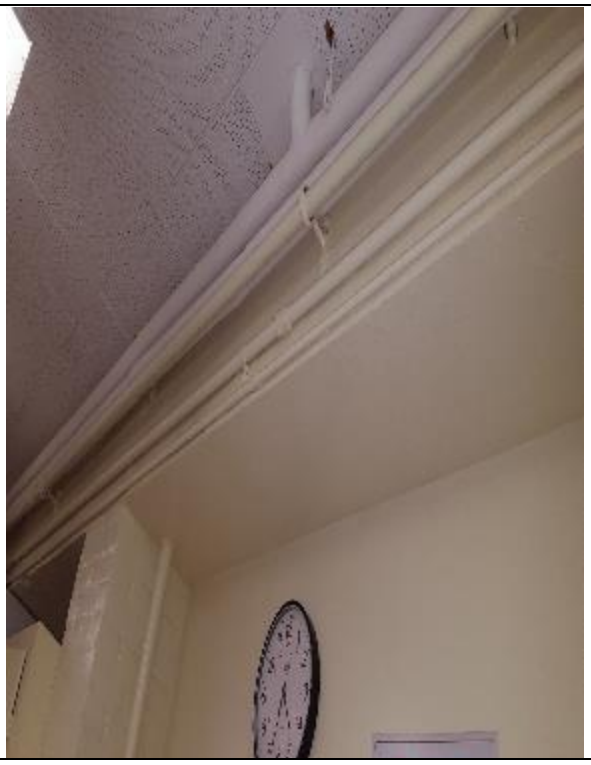
Flecking paint on floor is present throughout the Project Area

**Photo No. 4.**

**Date: June 14, 2017**

**Description:**
Representative Photo

Asbestos containing pipe insulation are present throughout the Project Area.



| **Client Name:** | **Site Location:** | **Project No.** |
|---|---|---|
| Toronto District School Board | John Fisher Jr. Public School (Facility SAP: 3597) | 17201-PR4 |

| | |
|---|---|
| **Photo No. 5.**<br>**Date: June 14, 2017**<br>**Description:**<br>Representative Photo<br><br>Basement: Crawlspace (Location 73548)<br><br>Insulation on straight-run pipe and pipe insulation debris is present throughout the Work Area 6. |  |

| | |
|---|---|
| **Photo No. 6.**<br>**Date: June 14, 2017**<br>**Description:**<br><br>Representative Photo<br><br>Mould damage on ceiling tile present throughout the Project Area. |  |

| **Client Name:** | **Site Location:** | **Project No.** |
|---|---|---|
| Toronto District School Board | John Fisher Jr. Public School (Facility SAP: 3597) | 17201-PR4 |

| | |
|---|---|
| **Photo No. 7.**<br>**Date: June 14, 2017**<br>**Description:**<br>Representative Photo<br>Poor condition plaster present throughout the Project Area. |  |

# SURVEY FOR LEAD IN BUILDING MATERIALS

## Toronto District School Board
## John Fisher Public School
## 40 Erskine Avenue
## Toronto, Ontario
## SAP # 3597

**Presented To:**

Toronto District School Board
Facility Services
401 Alliance Avenue
Toronto, Ontario
M6N 2J1

**Prepared By:**

**ECOH**
75 Courtneypark Drive West
Mississauga, Ontario
L5W0E3

**Project Number: 17201-PR1**

July 11, 2017

# TABLE OF CONTENTS

# 1. INTRODUCTION AND REGULATORY REQUIREMENTS

## 1.1 Introduction and Scope

ECOH Management Inc. (ECOH) was retained by the Toronto District School Board (TDSB) to conduct a survey for lead in building materials in specified parts of the John Fisher Public School (TDSB SAP Facility #3597), located at 40 Erskine Avenue, Toronto, Ontario, hereafter referred to as the "Project Area". This survey was requested to fulfil employer obligations under section 30 of the Ontario Occupational Health and Safety Act (OHSA) to carry out a designated substances survey prior to renovations or demolition. Lead is a designated substance and TDSB is planning to complete major renovations (i.e. roofing, HVAC, exterior, etc.) throughout the facility, and hence the survey.

Ms. Alfonsina Del Pozo and Mr. Elliott Dametto of ECOH carried out the survey on April 11th and June 8th and 14th, 2017.

John Fisher Public School is a two-storey building (not including basement) with a total square footage of approximately 62,450ft$^2$ (5,802 m$^2$). The building was originally constructed in 1887 with additions reportedly constructed in 1890, 1909, 1914, 1920, 1928, 1970 and 1986.

## 1.2 Regulatory Requirements

It is a requirement under Section 30 of the Ontario Occupational Health and Safety Act that prior to tendering project work in the building, the building owner must carry out a designated substances survey and provide that report to contractors tendering on the work.

Guidelines for the control of lead on construction projects are provided by the Ministry of Labour: *Guideline - Lead on Construction Projects*, and the Environmental Abatement Council of Ontario (EACO): *Lead Guideline – for Construction, Renovation, Maintenance or Repair*.

# 2. SURVEY METHODOLOGY

## 2.1 General Approach

The survey included visual inspections and non-intrusive assessment for the presence of building materials that could potentially contain lead.

## 2.2 Lead-in-Paint Guidelines

No regulations exist in Ontario specifying minimum amount of lead-in-paint for a paint to be classified as lead-based-paint. However, EACO (Environmental Abatement Council of Ontario) guidelines titled "*Lead Guideline for Construction, Renovation, Maintenance and Repair* (2014)" classifies lead containing paints as follows:

1. Lead-based paints or surface coatings: Paint containing at least 0.5% lead by dry weight (i.e. concentrations of lead at or above 0.5% or 5000 parts per million [ppm]).

2. Paints or surface coatings that contain concentrations of lead greater than 0.1% by dry weight (>1000 ppm), and less than 0.5% by dry weight (<5000 ppm).

3. Low-level lead paints or surface coatings: Paints or surface coatings that contain concentrations of lead at, or below, 0.1% by dry weight (<1000 ppm).

## 3. FINDINGS AND DISCUSSION

The lead containing paints were identified in the building. A wide variety and colours of paints were observed on walls and ceilings throughout the building. The condition of the paints varied widely between flaking and solid intact paint on a variety of substrates.

Small chips of the paint were carefully removed using a clean spatula and transferred into a clean plastic bag. The sample location and paint colour were recorded, and the sample was given a unique identifier. The sampling information was uploaded in a chain-of-custody (COC) forms. The samples along with COC were shipped to EMSL Canada Inc. – an accredited laboratory for analysis by Flame Atomic Absorption Spectroscopy.

Table 1 details the laboratory results for the collected samples. For visual amplification, the analytical results are colour coded according to the three classes recommended by EACO (Low-level lead, lead-containing and lead-based paints are delineated through colour-coding). The laboratory analytical report is presented in Appendix I.

**Table 1: Lead Bulk Samples**

| Sample Number | Location | Colour | Analytical Results (ppm) |
|---|---|---|---|
| 17311-39-PR1-Pb-01 | 1st Floor -Stairwell-Exit 2 (Loc. No. 48308) | Blue Oil-Based Paint | 2600 |
| 17311-39-PR1-Pb-02 | 2nd Floor -Corridor (Loc. No. 48339) | Light Blue Oil-Based Paint | 3200 |
| 17311-39-PR1-Pb-03 | Basement-Corridor (Loc. No. 73647) | Grey Oil-Based Paint | 1900 |
| 17311-39-PR1-Pb-04 | Basement-Incinerator Room (loc. No.73644) | Off-White/Green Oil-Based Paint | 2400 |
| 17311-39-PR1-Pb-05 | 2nd Floor -Coat/Shoe Area (Loc. No. 48345) | Yellow Water-Based Paint | 53000 |
| 17311-39-PR1-Pb-06 | Basement-Corridor (Loc. No. 73647) | Off-White Oil-Based Paint | < 90 |
| 17311-39-PR1-Pb-07 | 1st Floor - Classroom 17 (Loc. No. 48347) | Pale Light Blue Oil-Based Paint | 850 |
| 17311-39-PR1-Pb-08 | 1st Floor -Storage Room (Loc. No. 48301) | Olive Water-Based Paint | 300 |
| 17311-39-PR1-Pb-09 | 1st Floor -Classroom 3 (Loc. No. 48307) | White Water-Based Paint | 610 |
| 17311-39-PR1-Pb-10 | 2nd Floor -Classroom 20 (Loc. No. 48329) | White Oil-Based Paint | 1100 |
| 17201-Pb-11 | 2nd Floor 2-Remedial Room (Loc. No. 48343) | Teal Oil-Based Paint | 8500 |
| 17201-Pb-12 | 1st Floor -Library (Loc. No. 48271) | Tan Oil-Based Paint | 1900 |

| Table 1: Lead Bulk Samples | | | |
|---|---|---|---|
| **Sample Number** | **Location** | **Colour** | **Analytical Results (ppm)** |
| 17201-Pb-13 | 1st Floor -Classroom 11 (Loc. No. 48269) | Tan Water-Based Paint | 2300 |
| 17201-Pb-14 | 1st Floor -Library Office (Loc. No. 48290) | Light Brown Oil-Based Paint | 1800 |
| 17201-Pb-15 | 2nd Floor -French Connection Office (Loc. No. 48348) | Pale Beige-Oil Based Paint | 2300 |
| 17201-Pb-16 | 2nd Floor -Classroom 18 (Loc. No. 48349) | Electric Blue Oil-Based Paint | < 180 |
| 17201-Pb-17 | 1st Floor - Classroom 6 (Loc. No. 48298) | Pale Green Oil-Based Paint | 360 |
| 17201-Pb-18 | Basement-Boiler Furnace Room (Loc. No. 73642) | Red Oil-Based Paint | < 90 |
| 17201-Pb-19 | 2nd Floor -Classroom 19 (Loc. No. 48325) | Turquoise Oil-Based Paint | 3200 |
| Color Coding | | | |
| | *Lead-Based paint i.e. >5000ppm lead* | | |
| | *Lead-Containing paint i.e. >1000ppm - <5000ppm lead* | | |
| | *Low-Lead paint i.e. <1000ppm lead* | | |

Based on the sample analyses tabulated in Table 1, the following picture of the paints in the school emerges:

- Low-level lead containing paints (lead content < 1000 ppm):
  - off-white, oil-based paint,
  - pale blue, oil-based paint,
  - olive, water-based paint,
  - white, water-based paint,
  - electric blue, oil-based paint,
  - pale green, oil-based paint, and
  - red, oil-based paint.
- Lead-containing paints (lead content 1000-5000 ppm):
  - blue, oil-based paint,
  - light blue, oil-based paint,
  - grey, oil-based paint,
  - off-white/green, oil-based paint,

- white, oil-based paint,
- tan, oil-based paint,
- tan, water-based paint,
- light brown, oil-based paint,
- pale beige, oil-based paint, and
- turquoise, oil-based paint.

- Lead-based paints (lead content >5000 ppm):
  - teal, oil-based paint, and
  - yellow, water-based paint.

No other major sources of lead or lead-containing products were observed during the survey. However, lead may be present in:

- Wiring connectors and electric cable sheathing,
- Piping and solder joints on piping, and
- Ceramic tiles.

## 4. RECOMMENDATIONS

Based upon the findings and sample analyses, ECOH offers the following recommendations:

### 4.1 Lead

Any work involving the disturbance of building materials confirmed to contain lead should be conducted following recommendations detailed within the Ministry of Labour document "*Guideline - Lead on Construction Projects*" (April 2011) and the Environmental Abatement Council of Ontario (EACO) *Lead Guideline – for Construction, Renovation, Maintenance or Repair* (2014). ECOH should be consulted prior to the completion of any work operation not specifically listed below, to confirm that the planned measures and procedures for the operation are sufficient.

- Measures and procedures for **Type/Class 1** lead operations should be utilized for the:
  - Removal of leaded coatings with a chemical gel or paste and fibrous laminated cloth wrap,
  - Removal of leaded coatings or materials with a non-powered hand tool, where the material remains chiefly intact and is not crumbled, pulverized or powdered.
- Measures and procedures for **Type/Class 2a** lead operations should be utilized for the:
  - Removal of leaded coatings or materials by scraping or sanding using non-powered hand tools,

- Removal of leaded coatings or materials using a power tool that has an effective, purpose-built dust collection system equipped with a HEPA filter. Effective implies that the dust collection system must maintain airborne lead concentrations <0.05 mg/m$^3$.
- Manual demolition of leaded plaster walls or building components by striking a wall with a sledge hammer or similar tool.
- Welding or high-temperature cutting of leaded paints and surface coatings. This operation is considered a Type/Class 2a operation only if it is short-term, not repeated, and if the material has been stripped prior to welding or high-temperature cutting. Otherwise, it is a Type/Class 3a operation.

- Measures and procedures for **Type/Class 3a** lead operations should be utilized for:
  - Welding or high-temperature cutting of leaded coatings or materials indoors, or
  - Welding or high-temperature cutting of leaded coatings or materials outdoors if the conditions listed for Type/Class 2a outdoor welding/cutting operations are not met, or
  - Removal of leaded coatings or materials using power tools without an effective dust collection system equipped with a HEPA filter.

Renovation, demolition or general construction work involving the removal of low-lead paints (i.e. trace concentrations of lead below 0.1% by dry weight, or 1000 ppm) can be completed without lead specific safety precautions provided that:

- Work does not include 'fume generating activities' (heat producing) such as welding, torching, burning, high temperature cutting, etc.,
- Dust levels are maintained below 3 mg/m$^3$, and
- General health and safety construction procedures are implemented. This would include dust suppression methods, proper respiratory protection (minimum of a 1/2-face respirator) and protective clothing, as appropriate for the work being completed.

## 5. STATEMENT OF LIMITATIONS

Due to the nature of building construction, some limitations exist as to the possible thoroughness of the survey for lead in building materials. The field observations, measurements and analysis are considered sufficient in detail and scope to form a reasonable basis for the findings and conclusions presented in this report. The findings and conclusions drawn by ECOH Management Inc. (ECOH), concerning the survey for lead in building materials, are limited to the specific scope of work for which ECOH was retained and are based solely on information generated as a result of the specific scope of work authorized Toronto District School Board. The results of the survey for lead in building materials are limited to visual inspection of areas made accessible to ECOH personnel and information obtained from facility personnel, when obtained.

ECOH warrants that the findings and conclusions contained herein have been made in accordance with generally accepted evaluation methods in the industry and applicable regulations at the time of the performance of the survey for lead in building materials. However, there is no warranty, expressed or implied, that this building survey has uncovered all environmental considerations on the subject site. In addition, ECOH cannot guarantee the completeness or accuracy of information supplied by a third party.

This report was prepared by ECOH for Toronto District School Board. The material in it reflects ECOH's professional interpretation of information available at the time of report preparation. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties.

**ECOH**
Environmental Consulting
Occupational Health

**Prepared By:**

Alfonsina Del Pozo, B.Sc.
**Environmental Scientist**

**Reviewed By:**

Craig Maunder, M.Sc., CIH
**Project Manager**

# APPENDIX I

## LABORATORY RESULTS

**EMSL Canada Inc.**
**2756 Slough Street, Mississauga, ON L4T 1G3**
Phone/Fax: 289-997-4602 / (289) 997-4607
http://www.EMSL.com torontolab@emsl.com

| | |
|---|---|
| EMSL Canada Or | 551703820 |
| CustomerID: | 55ECOH45 |
| CustomerPO: | 17201 |
| ProjectID: | |

Attn: **Alfonsina Del Pozo**
**ECOH Management, Inc.**
**75 Courtneypark Drive West**
**Unit 1**
**Mississauga, ON L5W 0E3**

| | |
|---|---|
| Phone: | (905) 795-2800 |
| Fax: | (905) 795-2870 |
| Received: | 04/12/17 9:00 AM |
| Collected: | 4/12/2017 |

Project: **17201 - TDSB (JOHN FISHER JPS)**

# Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)*

| *Client Sample Description* | *Lab ID* | *Collected* | *Analyzed* | *Lead Concentration* |
|---|---|---|---|---|
| 17201-PB-01 | *551703820-0001* | 4/11/2017 | 4/12/2017 | 2600 ppm |
| | Site: Floor 1-Stairwell-Exit 2 (Loc. No. 48308)<br>Desc: Blue Oil-Based Paint | | | |
| 17201-PB-02 | *551703820-0002* | 4/11/2017 | 4/12/2017 | 3200 ppm |
| | Site: Floor 2-Corridor (Loc.No. 48339)<br>Desc: Light Blue Oil-Based Paint | | | |
| 17201-PB-03 | *551703820-0003* | 4/11/2017 | 4/12/2017 | 1900 ppm |
| | Site: Basement-Corridor (Loc.No. 73647)<br>Desc: Grey Oil-Based Paint | | | |
| 17201-PB-04 | *551703820-0004* | 4/11/2017 | 4/12/2017 | 2400 ppm |
| | Site: Basement-Incinerator Room (loc. No.73644)<br>Desc: Off-White/Green Oil-Based Paint | | | |
| 17201-PB-05 | *551703820-0005* | 4/11/2017 | 4/12/2017 | 53000 ppm |
| | Site: Floor 2-Coat/Shoe Area (Loc.No. 48345)<br>Desc: Yellow Water-Based Paint | | | |
| 17201-PB-06 | *551703820-0006* | 4/11/2017 | 4/12/2017 | <90 ppm |
| | Site: Basement-Corridor (Loc.No. 73647)<br>Desc: Off-White Oil-Based Paint | | | |
| 17201-PB-07 | *551703820-0007* | 4/11/2017 | 4/12/2017 | 850 ppm |
| | Site: Floor 1- Classroom 17 (Loc. No. 48347)<br>Desc: Pale Light Blue Oil-Based Paint | | | |
| 17201-PB-08 | *551703820-0008* | 4/11/2017 | 4/12/2017 | 300 ppm |
| | Site: Floor 1-Storage Room (Loc.No. 48301)<br>Desc: Olive Water-Based Paint | | | |
| 17201-PB-09 | *551703820-0009* | 4/11/2017 | 4/12/2017 | 610 ppm |
| | Site: Floor 1-Classroom 3 (Loc. No. 48307)<br>Desc: White Water-Based Paint | | | |
| 17201-PB-10 | *551703820-0010* | 4/12/2017 | 4/12/2017 | 1100 ppm |
| | Site: Floor 2-Ciassroom 20 (Loc. No. 48329)<br>Desc: White Oil-Based Paint | | | |

Rowena Fanto, Lead Supervisor
or other approved signatory

*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.010 % wt based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements unless specifically indicated otherwise. Definitions of modifications are available upon request.

Samples analyzed by EMSL Canada Inc. Mississauga, ON A2LA Accredited Environmental Testing Cert #2845.08

Report Amended: 06/22/2017 13:51:25 Replaces the Inital Report 04/13/2017 08:11:49. Reason Code: Client-Change to Location

**EMSL Canada Inc.**
**2756 Slough Street, Mississauga, ON L4T 1G3**
Phone/Fax: 289-997-4602 / (289) 997-4607
http://www.EMSL.com torontolab@emsl.com

| | |
|---|---|
| EMSL Canada Or | 551706801 |
| CustomerID: | 55ECOH45 |
| CustomerPO: | 17201-PR1-TDSB |
| ProjectID: | |

Attn: **Alfonsina Del Pozo**
**ECOH Management, Inc.**
**75 Courtneypark Drive West**
**Unit 1**
**Mississauga, ON L5W 0E3**

Phone: (905) 795-2800
Fax: (905) 795-2870
Received: 06/21/17 11:25 AM
Collected: 6/14/2017

Project: **17201-PR1-TDSB (John Fisher JPS)**

## Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)*

| *Client Sample Description* | *Lab ID* | *Collected* | *Analyzed* | *Lead Concentration* |
|---|---|---|---|---|
| 17201-PB-11 | *551706801-0001* | 6/14/2017 | 6/21/2017 | 8500 ppm |
| | Site: Floor 2 - Remedial Room (Loc No 48343) - Teal oil-based paint | | | |
| 17201-PB-12 | *551706801-0002* | 6/14/2017 | 6/21/2017 | 1900 ppm |
| | Site: Floor 1 - Library (Loc No 48271) - Tan oil-based paint | | | |
| 17201-PB-13 | *551706801-0003* | 6/14/2017 | 6/21/2017 | 2300 ppm |
| | Site: Floor 1 - Classroom 11 (Loc No 48269) - Tan water-based paint | | | |
| 17201-PB-14 | *551706801-0004* | 6/14/2017 | 6/21/2017 | 1800 ppm |
| | Site: Floor 1 - Library office (Loc No 48290) - Light brown oil-based paint | | | |
| 17201-PB-15 | *551706801-0005* | 6/14/2017 | 6/21/2017 | 2300 ppm |
| | Site: Floor 2 - French connection office (Loc No 48348) - Pale beige oil-based paint | | | |
| 17201-PB-16 | *551706801-0006* | 6/14/2017 | 6/21/2017 | <180 ppm |
| | Site: Floor 2 - Classroom 18 (Loc No 48349) - Electric blue old based paint | | | |
| 17201-PB-17 | *551706801-0007* | 6/14/2017 | 6/21/2017 | 360 ppm |
| | Site: Floor 1 -Classroom/room 6 ( Loc No 48298) - Pale green oil-based paint | | | |
| 17201-PB-18 | *551706801-0008* | 6/14/2017 | 6/21/2017 | <90 ppm |
| | Site: Basement - Boiler furnace room (Loc No 73642) - Red oil-based paint | | | |
| 17201-PB-19 | *551706801-0009* | 6/14/2017 | 6/21/2017 | 3200 ppm |
| | Site: Floor 2 - Classroom 19 (Loc No 48325) - Turquoise oil-based paint | | | |

The reporting limit is based upon the sample weight received.

Rowena Fanto, Lead Supervisor
or other approved signatory

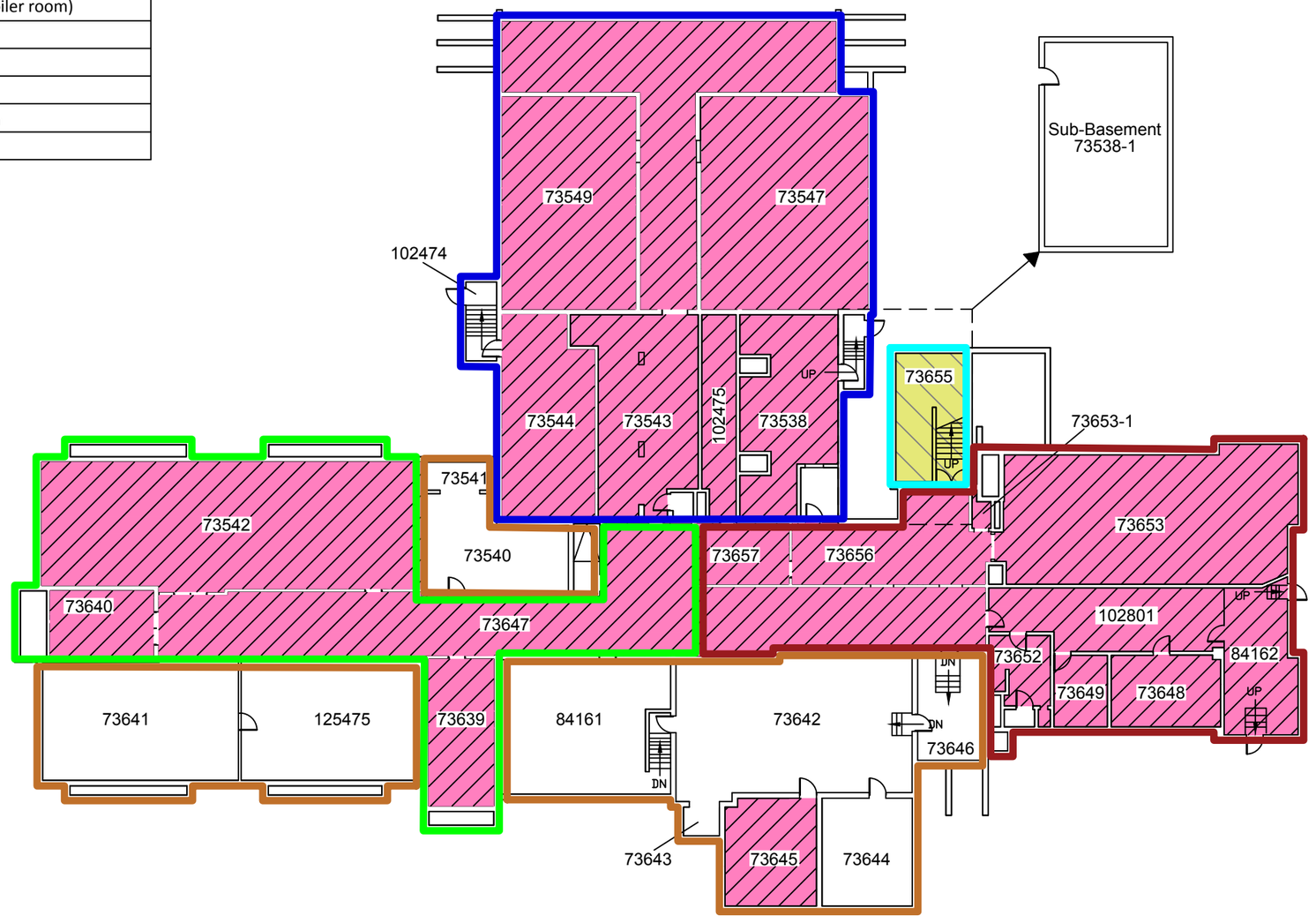
*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.010 % wt based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements unless specifically indicated otherwise. Definitions of modifications are available upon request.

Samples analyzed by EMSL Canada Inc. Mississauga, ON A2LA Accredited Environmental Testing Cert #2845.08

Initial report from 06/22/2017 08:42:53

| Location # | Description |
|---|---|
| 73538 | Basement: Washroom - Girls (girls washroom) |
| 73538-1 | Basement: Sub-Basement (includes staircase to location) |
| 73540 | Basement: HVAC/Fan Room |
| 73541 | Basement: HVAC/Fan Room |
| 73542 | Basement: Lunchroom (lunch room A) |
| 73543 | Basement: Storage Room |
| 73544 | Basement: Washroom - Boys (boys washroom) |
| 73547 | Basement: Crawlspace |
| 73548 | Basement: Crawlspace |
| 73549 | Basement: Crawlspace |
| 73639 | Basement: Electrical Room |
| 73640 | Basement: Stairwell (Exit 2) |
| 73641 | Basement: Classroom B1 |
| 73642 | Basement: Boiler / Furnace Room (boiler room) |
| 73643 | Basement: Old Elevator Shaft |
| 73644 | Basement: Incinerator Room |
| 73645 | Basement: Storage Room |
| 73646 | Basement: Main Water Shutoff Room |
| 73647 | Basement: Corridor |

| | |
|---|---|
| 73648 | Basement: Kitchen (lunch room) |
| 73649 | Basement: Caretakers Office (chief caretakers office) |
| 73652 | Basement: Washroom (staff washroom) |
| 73653 | Basement: Lunchroom (lunch room c) |
| 73653-1 | Basement: Mechanical Chase |
| 73655 | Basement: Stairwell (corridor) |
| 73656 | Basement: Entrance Foyer (hallway and stairs landing) |
| 73657 | Basement: Storage Room |
| 84161 | Basement: Mechanical Room |
| 84162 | Basement: Storage Room (cage) |
| 102474 | Basement: Stairwell |
| 102475 | Basement: Mechanical Chase |
| 102801 | Basement: Caretakers Room |
| 125475 | Basement: Classroom B2 |




## Legend

**Description of Asbestos-Containing Materials**

- ACM Pipe Insulation
- ACM Ceiling Tiles
- Work Area # 1
- Work Area # 4
- Work Area # 5
- Work Area # 6
- Work Area # 7

Exterior ID: 48385-1
Roof ID: 48385

Reference
Drawings based on plans provided by the Toronto District School Board

# Figure BA

**LOCATION:**
40 Erskine Avenue
Toronto, Ontario

**BUILDING NAME:**
John Fisher Jr. Public School - 3597

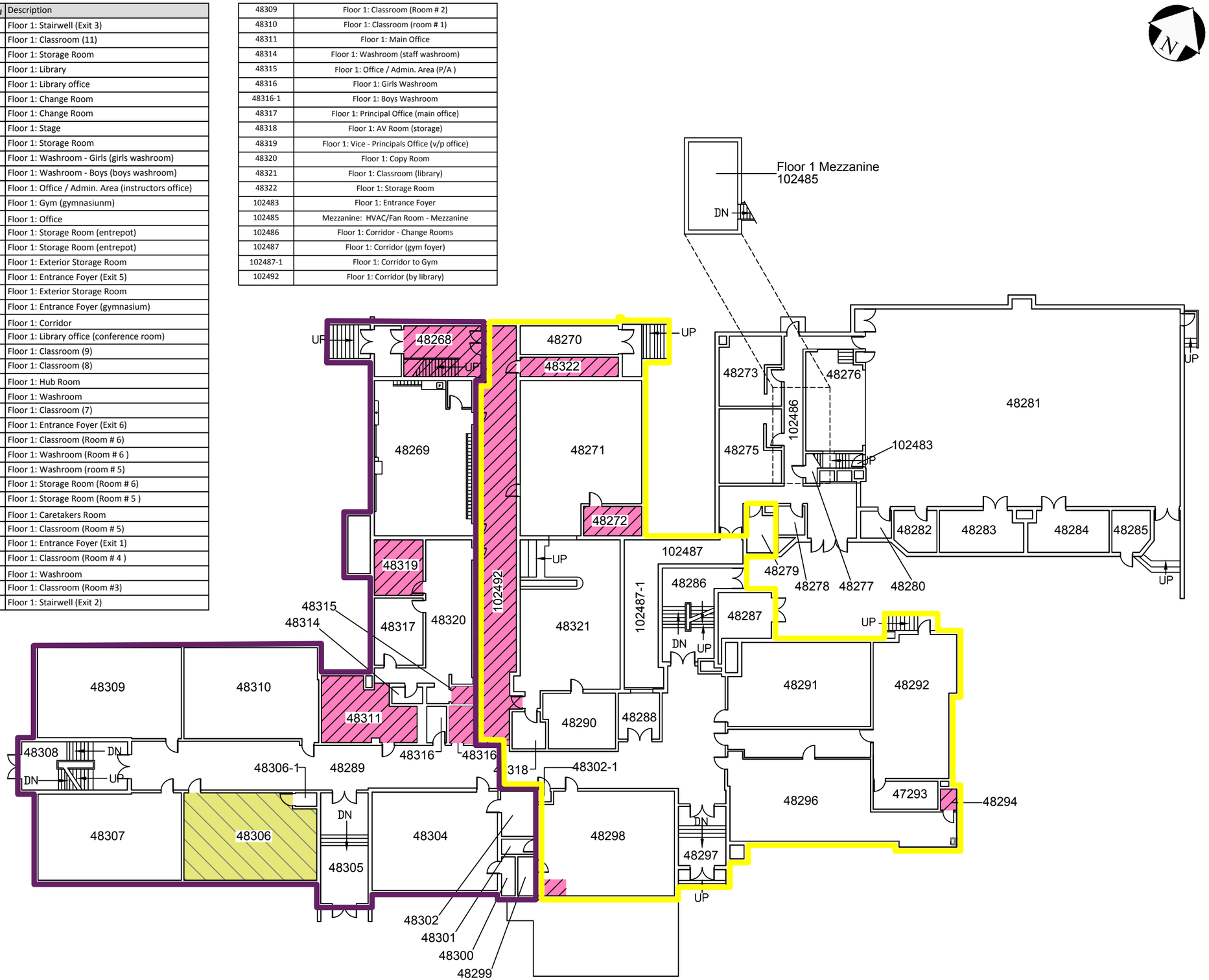
## ACM Location Plan
## Basement

| | | | |
|---|---|---|---|
| CLIENT: Toronto District School Board | | | |
| PROJECT NUMBER: 17201-PR4 | DATE: February 2017 | DRW BY: CAB | |
| CAD FILE: FIG1-4 P17201-PR4 John Fisher | SCALE: Not To Scale | CHK BY: ZI | |

ECOH
Environmental Consulting
Occupational Health

| Location # | Description |
|---|---|
| 48268 | Floor 1: Stairwell (Exit 3) |
| 48269 | Floor 1: Classroom (11) |
| 48270 | Floor 1: Storage Room |
| 48271 | Floor 1: Library |
| 48272 | Floor 1: Library office |
| 48273 | Floor 1: Change Room |
| 48275 | Floor 1: Change Room |
| 48276 | Floor 1: Stage |
| 48277 | Floor 1: Storage Room |
| 48278 | Floor 1: Washroom - Girls (girls washroom) |
| 48279 | Floor 1: Washroom - Boys (boys washroom) |
| 48280 | Floor 1: Office / Admin. Area (instructors office) |
| 48281 | Floor 1: Gym (gymnasiunm) |
| 48282 | Floor 1: Office |
| 48283 | Floor 1: Storage Room (entrepot) |
| 48284 | Floor 1: Storage Room (entrepot) |
| 48285 | Floor 1: Exterior Storage Room |
| 48286 | Floor 1: Entrance Foyer (Exit 5) |
| 48287 | Floor 1: Exterior Storage Room |
| 48288 | Floor 1: Entrance Foyer (gymnasium) |
| 48289 | Floor 1: Corridor |
| 48290 | Floor 1: Library office (conference room) |
| 48291 | Floor 1: Classroom (9) |
| 48292 | Floor 1: Classroom (8) |
| 48293 | Floor 1: Hub Room |
| 48294 | Floor 1: Washroom |
| 48296 | Floor 1: Classroom (7) |
| 48297 | Floor 1: Entrance Foyer (Exit 6) |
| 48298 | Floor 1: Classroom (Room # 6) |
| 48299 | Floor 1: Washroom (Room # 6 ) |
| 48300 | Floor 1: Washroom (room # 5) |
| 48301 | Floor 1: Storage Room (Room # 6) |
| 48302 | Floor 1: Storage Room (Room # 5 ) |
| 48302-1 | Floor 1: Caretakers Room |
| 48304 | Floor 1: Classroom (Room # 5) |
| 48305 | Floor 1: Entrance Foyer (Exit 1) |
| 48306 | Floor 1: Classroom (Room # 4 ) |
| 48306-1 | Floor 1: Washroom |
| 48307 | Floor 1: Classroom (Room #3) |
| 48308 | Floor 1: Stairwell (Exit 2) |

| | |
|---|---|
| 48309 | Floor 1: Classroom (Room # 2) |
| 48310 | Floor 1: Classroom (room # 1) |
| 48311 | Floor 1: Main Office |
| 48314 | Floor 1: Washroom (staff washroom) |
| 48315 | Floor 1: Office / Admin. Area (P/A ) |
| 48316 | Floor 1: Girls Washroom |
| 48316-1 | Floor 1: Boys Washroom |
| 48317 | Floor 1: Principal Office (main office) |
| 48318 | Floor 1: AV Room (storage) |
| 48319 | Floor 1: Vice - Principals Office (v/p office) |
| 48320 | Floor 1: Copy Room |
| 48321 | Floor 1: Classroom (library) |
| 48322 | Floor 1: Storage Room |
| 102483 | Floor 1: Entrance Foyer |
| 102485 | Mezzanine: HVAC/Fan Room - Mezzanine |
| 102486 | Floor 1: Corridor - Change Rooms |
| 102487 | Floor 1: Corridor (gym foyer) |
| 102487-1 | Floor 1: Corridor to Gym |
| 102492 | Floor 1: Corridor (by library) |




# Legend

**Description of Asbestos-Containing Materials**

- ACM Pipe Insulation
- ACM Ceiling Tiles
- Work Area # 2
- Work Area # 3

Exterior ID: 48385-1
Roof ID: 48385

Reference
Drawings based on plans provided by the Toronto District School Board

## Figure 1

**LOCATION:**
40 Erskine Avenue
Toronto, Ontario

**BUILDING NAME:**
John Fisher Jr. Public School - 3597

## Asbestos Abatement Plan
## Floor 1

| | | | |
|---|---|---|---|
| CLIENT: | Toronto District School Board | | |
| PROJECT NUMBER: 17363 | DATE: February 2017 | DRW BY: CAB | |
| CAD FILE: FIG1-4 P17201-PR4 John Fisher | SCALE: Not To Scale | CHK BY: ZI | |

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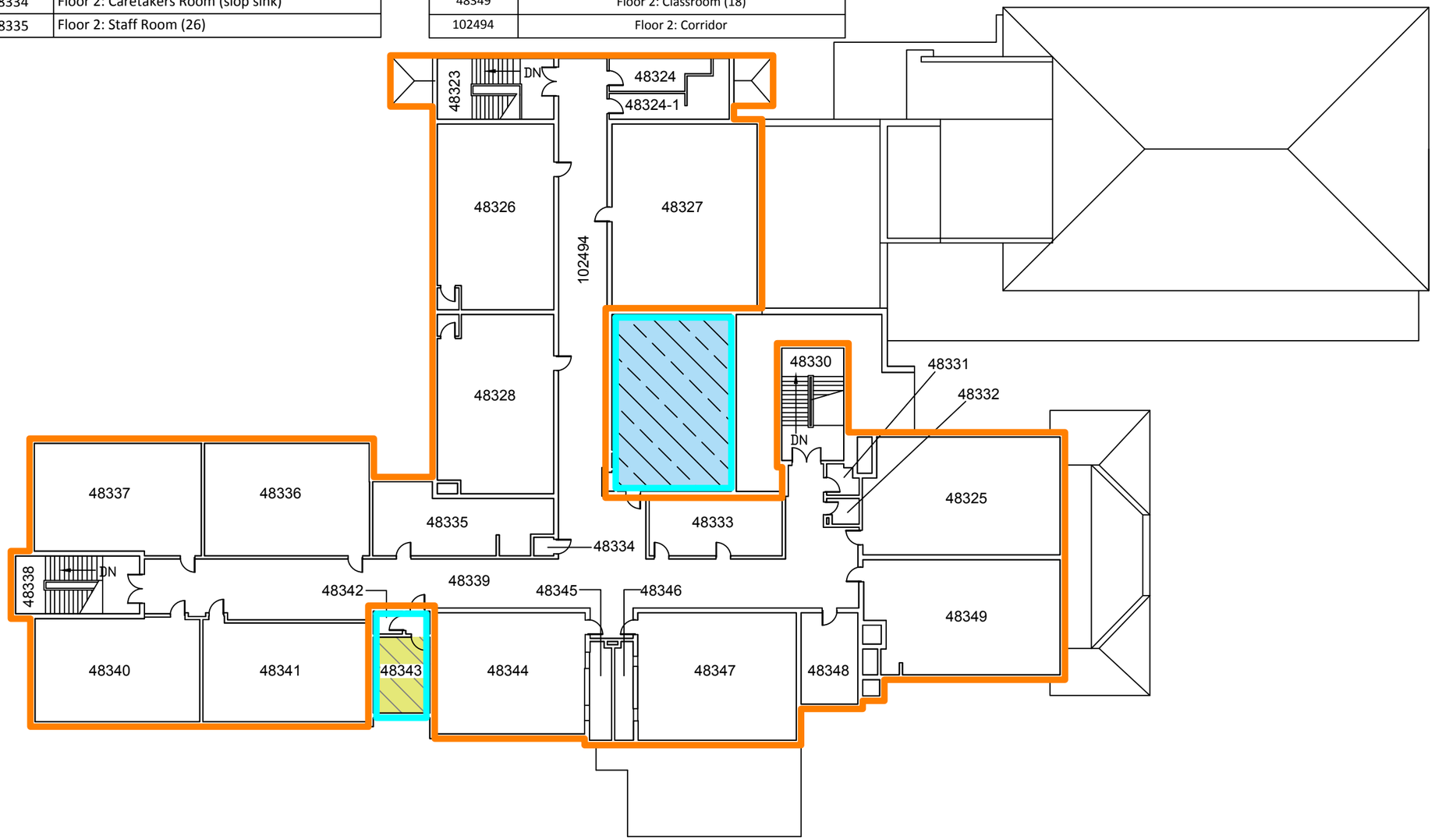
| Location # | Description |
|---|---|
| 48323 | Floor 2: Stairwell (Exit 3) |
| 48324 | Floor 2: Washroom - Mens |
| 48324-1 | Floor 2: Washroom - Womens |
| 48325 | Floor 2: Classroom (19) |
| 48326 | Floor 2: Classroom (22) |
| 48327 | Floor 2: Music Classroom |
| 48328 | Floor 2: Classroom (21) |
| 48329 | Floor 2: Classroom (20) |
| 48330 | Floor 2: Entrance Foyer (Exit 5) |
| 48331 | Floor 2: Washroom (staff washroom) |
| 48332 | Floor 2: Storage Room |
| 48333 | Floor 2: Spec. Ed Classroom (20A) |
| 48334 | Floor 2: Caretakers Room (slop sink) |
| 48335 | Floor 2: Staff Room (26) |

| | |
|---|---|
| 48336 | Floor 2: Classroom (12) |
| 48337 | Floor 2: Classroom (13) |
| 48338 | Floor 2: Stairwell (Exit 2) |
| 48339 | Floor 2: Corridor |
| 48340 | Floor 2: Classroom (14) |
| 48341 | Floor 2: Classroom (15) |
| 48342 | Floor 2: Washroom |
| 48343 | Floor 2: Remedial Room |
| 48344 | Floor 2: Classroom (16) |
| 48345 | Floor 2: Coat/Shoe Area (closet) |
| 48346 | Floor 2: Coat/Shoe Area (closet) |
| 48347 | Floor 2: Classroom (17) |
| 48348 | Floor 2: French Connection Office |
| 48349 | Floor 2: Classroom (18) |
| 102494 | Floor 2: Corridor |




## Legend

**Description of Asbestos-Containing Materials**

- ACM Pipe Insulation
- ACM Ceiling Tiles
- Duct Insulation and Pipe Insulation
- Work Area # 1
- Work Area # 8

Exterior ID: 48385-1
Roof ID: 48385

Reference
Drawings based on plans provided by the Toronto District School Board

# Figure 2

**LOCATION:**
40 Erskine Avenue
Toronto, Ontario

**BUILDING NAME:**
John Fisher Jr. Public School - 3597

## Asbestos Abatement Plan
## Floor 2

| | | | |
|---|---|---|---|
| CLIENT: Toronto District School Board | | | |
| PROJECT NUMBER: 17201-PR4 | DATE: February 2017 | DRW BY: CAB | |
| CAD FILE: FIG1-4 P17201-PR4 John Fisher | SCALE: Not To Scale | CHK BY: ZI | |

ECOH
Environmental Consulting
Occupational Health

# APPENDIX B

ASBESTOS-RELATED INSPECTION REPORTS

- General Inspection Report
- Daily Inspection Reports #01 to

| | | | | |
|---|---|---|---|---|
| **Client:** | Toronto District School Board | **Project No.:** | 17201-PR4 | **General Inspection Report** |
| **Project Location:** | John Fisher Public School (TDSB SAP No. 3597) 40 Erskine Avenue, Toronto, Ontario | | **Date:** | July 4, 2017 |
| **Inspector:** | Various ECOH Personnel | | **Page:** | 1 of 7 |

ECOH Management Inc. (ECOH) was retained by Toronto District School Board (TDSB) to conduct inspection and air monitoring services during abatement work requiring removal of hazardous materials within various locations at John Fisher Public School, located at 40 Erskine Avenue, Toronto, Ontario. Asbestos-related work is performed following Ontario Regulation 278/05, *Asbestos on Construction Projects and in Buildings and Repair Operations* - made under the Occupation Health and Safety Act. Lead abatement work is performed following requirements of the Ontario Ministry of Labour document: "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document: "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014. All abatement-related work is completed by High Point Environmental Services Inc. Please refer to Daily Inspection Reports for additional project-specific details and work completed on a day-to-day basis.

## Pre-Removal Inspections:

1. The requirements for site isolation and work procedures in each work area are discussed with the Abatement Contractor supervisor on a frequent and regular basis.
2. Prior to commencing any asbestos removal work the enclosure and/or work area is inspected for integrity and compliance with required asbestos safety precautions. Pre-contamination visual inspection ensures that all health and safety facilities had been adequately established and that all equipment, tools and supplies are on-site and working properly.
3. Pre-contamination inspection for Type 1 asbestos work must reveal the following health and safety measures, precautions and procedures;
    a. The spread of dust from the work area shall be controlled by measures appropriate for the work being completed.
    b. Wetting agent to minimize airborne fibres and dust levels during work must be on-site.
    c. Prior to commencing work, any visible debris shall be removed by damp wiping and/or using a vacuum equipped with a HEPA filter.
    d. Respirators and disposable protective clothing are not mandatory for Type 1 work. However, if workers request, the employer shall provide National Institute of Occupational Safety and Health (NIOSH) approved respirators (i.e. half face air purifying respirators with N-100, R-100 or P-100 particulate filters, or better) and disposable protective clothing. Respirators and disposable protective clothing must be available on-site.
4. Pre-contamination inspection for Type 2 asbestos work (full enclosure) must reveal all the items listed for Type 1 asbestos work, as applicable, and additionally must reveal the following health & safety measures, precautions and procedures;
    a. Clearly visible signs, distributed in sufficient numbers, indicating warning of an asbestos dust hazard.

b. National Institute of Occupational Safety and Health (NIOSH) approved respirators, suitable for the type of asbestos abatement work being completed, must be available and properly used by all people entering the asbestos work area (i.e. half-face respirators, full-face respirators, positive pressure powered air purifying respirator (PAPR), or better).
c. Protective clothing must be available and properly used by all people entering the asbestos work area. Protective clothing shall be made of material that does not readily retain nor permit penetration of asbestos fibres, consist of head covering and fully body covering that fits snugly at the ankles, wrists and neck, and shall include suitable footwear.
d. Prior to establishing the work area and/or commencing enclosure set-up, any asbestos-containing debris within the work area must be removed by damp wiping and/or using a vacuum equipped with a HEPA filter.
e. Prior to commencing enclosure set-up, any other ACM that may be disturbed by the enclosure set-up work, must be thoroughly wetted (unless wetting creates a hazard or cause damage).
f. The spread of dust from the work area shall be controlled by measures appropriate for the asbestos work being completed, and shall include the use of drop sheets and/or an enclosure of polyethylene. For work requiring an enclosure, polyethylene is layered on all surfaces within the work area, which may include walls, floors, ceilings and any other objects in the work area (i.e. mechanical equipment, furniture, electrical components, etc.)
g. Mechanical ventilation systems serving the work area shall be disabled and ventilation ducts, to and from the work area, must be sealed.
h. Facilities for washing hands and face shall be made available to people leaving the work area.

5. Pre-contamination inspection for Type 2 asbestos work using a glove bag must reveal all the items listed for Type 2 full enclosure asbestos work, as applicable, and additionally must reveal the following health & safety measures, precautions and procedures;
    a. The work area shall be separated from the rest of the workplace by walls, barricades, fencing or other suitable means.
    b. Surfaces below the work area shall be covered with drop sheets of polyethylene or other suitable material that is impervious to asbestos.
    c. The glove bag shall be made of material that is impervious to asbestos and sufficiently strong to support the weight of material the bag will hold.
    d. The glove bag shall be equipped with,
        i. Sleeves and gloves that are permanently sealed to the body of the bag to allow the worker to access and deal with the insulation and maintain a sealed enclosure throughout the work period,
        ii. Valves or openings to allow insertion of a vacuum hose and the nozzle of a water sprayer while maintaining the seal to the pipe, duct or similar structure,
        iii. A tool pouch with a drain,
        iv. A seamless bottom and a means of sealing off the lower portion of the bag, and
        v. A high strength double throw zipper and removable straps, if the bag is to be moved during the removal operation.

e. A glove bag shall not be used to remove insulation from a pipe, duct or similar structure if,
    i. it may not be possible to maintain a proper seal for any reason including, without limitation,
        A. the condition of the insulation, or
        B. the temperature of the pipe, duct or similar structure, or
    ii. the bag could become damaged for any reason including, without limitation,
        A. the type of jacketing, or
        B. the temperature of the pipe, duct or similar structure.

f. Immediately before the glove bag is attached, the insulation jacketing or coating shall be inspected for damage or defects, and if any damage or defect is present, it shall be repaired using Type 2 asbestos safety precautions.

g. The glove bag shall be inspected for damage or defects immediately before it is attached to the pipe, duct or other similar structure. If damage or defects are observed when the glove bag is inspected, the glove bag shall not be used and shall be disposed of.

6. Pre-contamination inspection for Type 3 asbestos work must reveal all the items listed for Type 2 asbestos work, as applicable, and additionally must reveal the following health & safety measures, precautions and procedures;

    a. The enclosure of polyethylene shall include a decontamination facility consisting of a series of interconnecting rooms including a room suitable for storing contaminated protective clothing and equipment, a shower room and a room suitable for changing into street clothes and storing clean equipment. The rooms shall be separated by overlapping and weighted flaps made of polyethylene sheeting and shall be arranged in sequence so that any person entering or leaving the work area must pass through each room.

    b. The shower room in the decontamination facility shall supply hot and cold water, have individual controls for temperature control, be capable of supplying adequate supplies of hot water and be supplied with disposable clean towels. Wastewater from the shower shall be either bagged or filtered prior to being directed to a sanitary drain.

    c. The enclosure of polyethylene shall also include a three-chamber waste decontamination and transfer station. The chambers shall be separated by overlapping and weighted flaps made of polyethylene sheeting.

    d. Negative air pressure within the work area must be created and maintained by installing a ventilation system equipped with a HEPA filtered exhaust unit. The ventilation units must be Dioctylphthalate (DOP)/Poly Alfo Olefin (PAO) tested and vented to the exterior of the building. The ventilation system must be inspected and maintained throughout the operation at all times. Negative pressure required is 0.02 inches of water column, relative to the area outside the enclosed work area. Monitoring of negative pressure must be completed at regular intervals using a manometer.

    e. Existing electrical power distribution must be de-energized and a temporary electrical power distribution must be installed with ground fault circuit interrupters (GFCI).

**7.** Deviation from any of the proceeding health & safety measures and precautions will be detailed in daily inspection reports.

**General Work Procedures:**

8. The requirements for removal work procedures are discussed with the Abatement Contractor site supervisor on a daily basis.
9. Visual inspections are completed frequently and at regular intervals during the course of removal work to observe work procedures. Visual inspections during asbestos removal work, Type 1, or Type 2 (full enclosure and glove bag) and/or Type 3, must reveal the following;
    a. Eating, drinking, chewing or smoking shall not be permitted in the work area.
    b. Compressed air must not be used to clean up and remove dust from any surface.
    c. Only persons wearing protective clothing and suitable respiratory protection shall enter the work area.
    d. Water containing a wetting agent shall be used to control the spread of dust and fibres.
    e. ACM scheduled for removal shall be thoroughly wetted before and during removal (unless wetting creates a hazard or cause damage).
    f. When using the glove bag removal methodology;
        i. The glove bag shall be inspected for damage or defects at regular intervals during its use.
        ii. If damage or defects are observed when the glove bag is inspected,
            A. the use of the glove bag shall be discontinued,
            B. the inner surface of the glove bag and the contents, if any, shall be thoroughly wetted,
            C. the glove bag and the contents, if any, shall be removed and placed in an appropriate asbestos waste container, and
            D. the work area shall be cleaned by vacuuming with a vacuum equipped with a HEPA filer before removal work is resumed.
        iii. When the removal work is completed,
            A. The inner surface of the glove bag and the waste inside shall be thoroughly wetted and the air inside the bag shall be removed through an elasticized valve, by means of a vacuum equipped with a HEPA filter,
            B. The pipe, duct or similar structure shall be wiped down and sealed with a suitable encapsulant,
            C. The glove bag, with the waste inside, shall be placed in an appropriate asbestos waste container, and
            D. The work area shall be cleaned by damp wiping or by cleaning with a vacuum equipped with a HEPA filter.
    g. The integrity of the enclosure, including the decontamination facility and waste decontamination and transfer station, shall be maintained at all times. Defects in the enclosure and/or perimeter

seals must be repaired immediately and no other work shall be carried out in the work area until the repair work is completed.

h. Protective clothing shall be repaired or replaced if torn.

i. Asbestos waste shall be kept wet until it can be placed into disposal bags. Waste shall be cleaned up and removed frequently and at regular intervals during the removal work. All waste is to be double bagged, and independently sealed, prior to leaving the work site. All waste, when removed from the decontamination and transfer station, shall be taken immediately to the waste bin.

j. Workers leaving a Type 2 work area (full enclosure or glove bag) shall decontaminate their protective clothing using a vacuum equipped with a HEPA filter, or by damp wiping, before removing the protective clothing. If the protective clothing will not be reused, place it in a suitable asbestos waste container. Additionally, for workers leaving a Type 3 work area, they shall enter the shower and then remove and clean the respirator.

10. Deviation from any of the proceeding work procedures will be detailed in daily inspection reports.

**Asbestos Air Monitoring Methodology**

11. Occupied air monitoring may be performed outside work areas or enclosures during work.

12. Air samples are collected using a constant-flow high volume air-sampling pump. The sampling equipment is calibrated prior to use with a primary flow meter (using a filter cassette in-line) at a target flow rate of 15 litres/minute.

13. Samples are collected on a mixed cellulose ester (MCE) membrane filter with 0.8-micrometer pore size and 25-millimeter diameter. The filter was mounted inside a three-piece filter cassette with a two-inch cowl.

14. Analysis of the air samples is performed following completion of air sample collection using procedures specified in the National Institute for Occupational Safety and Health (NIOSH) Manual of Analytical Methods, Method 7400, Issue 2: Asbestos and other Fibres by Phase Contrast Microscopy (PCM) (August 15, 1994), using the asbestos fibre counting rules. It is important to note that asbestos fibres are not identified in this method. All fibers longer than 5 micrometres and with length-to-width ratios of 3-to-1 or greater are included in the count. Therefore, if fibreglass, cellulose, or gypsum fibres are also present, the PCM method will overestimate the true asbestos concentration.

15. ECOH participates in the American Industrial Hygiene Association (AIHA) Industrial Hygiene Proficiency Analytical Testing (IHPAT) Program, Laboratory ID Number 20399.

16. Regulation 490/09, "*Designated Substances*", made under the Ontario Occupational Health and Safety Act, establishes the occupational exposure limit (OEL) for airborne asbestos at 0.1 fibres per cubic centimetre (f/cc).

    The Ministry of the Environment has established 0.04 f/cc of air as the 24-hour average ambient air quality criterion (for asbestos) for the general public. To ensure that building occupants are not exposed to fibre concentrations higher than those acceptable for the general public, ECOH has adopted the 0.04 f/cc value as an action level for air samples collected inside occupied buildings (i.e. referred to as "occupied" samples).

Regulation 278/05, "*Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*", made under the Ontario Occupational Health and Safety Act, establishes a Type 3 asbestos abatement clearance concentration that shall not exceed 0.01 f/cc in any sample collected within the Type 3 work area.

**Lead Pre-Removal Inspections:**

17. The requirements for site isolation and work procedures in each work area are discussed with the Highpoint supervisor on a frequent and regular basis.
18. Prior to commencing abatement work, the work area(s) are inspected for integrity and compliance with required precautions for working safely with lead. Pre-contamination visual inspection ensures that health and safety engineering controls (i.e. work area enclosures or barriers) have been adequately established and that all equipment, tools and supplies are on-site and working properly.
19. Pre-contamination (lead) inspection must include compliance with the following health & safety measures and precautions for Class 2 lead abatement operations:
    a. Clearly visible signs, warning of lead hazards, must be distributed in sufficient numbers at work area entrances.
    b. National Institute of Occupational Safety and Health (NIOSH) approved respirators, suitable for the type of lead abatement being completed, must be made available for use by all people entering the work area where lead abatement is conducted, upon their request.
    c. Protective clothing must be made available for use by all people entering the work area where lead abatement is conducted, upon their request. Protective clothing shall be made of material that will prevent skin contamination, and shall consist, in part, of coveralls or full-body work clothing with head covering. Clothing must fit snugly at the ankles, wrists and neck, and shall include suitable footwear.
    d. Drop sheets shall be used below all lead operations that may produce dust, chips, or debris containing lead.
    e. Protective dust-impermeable gloves, impermeable to any hazardous chemicals used during cleaning, shall be worn by all workers entering the work area.
    f. Facilities for washing hands and face shall be made available to people leaving the work area.

**Lead General Work Procedures:**

1. The requirements for removal work procedures are discussed with the site supervisor on a daily basis.
2. Visual inspections are completed frequently at regular intervals throughout the removal work, to observe work procedures. Visual inspections during lead removal work must include the following:
    a. Eating, drinking, chewing or smoking shall not be permitted in the work area.

b. Compressed air must not be used to clean up and remove dust from any surface.

c. Only persons wearing protective dust-impermeable and chemical-resistant gloves shall enter the work area.

d. Protective clothing that is worn shall be repaired or replaced if torn.

e. Wetting of materials shall be conducted whenever possible to control dust. The addition of wetting agents should be considered. Wetting should not be used if it may create a hazard or cause damage.

f. All equipment, tools, respirators and clothing shall be cleaned by damp wiping, or with a vacuum equipped with a HEPA filter, prior to removal from the work area.

g. Waste shall be placed in a container suitable for lead waste with a label indicating that it contains lead waste.

h. Dust and waste should be cleaned up at regular intervals and placed in a container that is;

    i. Dust tight,

    ii. Suitable for the type of waste,

    iii. Identified as containing lead waste,

    iv. Cleaned with a damp cloth or a vacuum equipped with a HEPA filter immediately before being removed from the work area,

    v. Removed from the workplace frequently and at regular intervals,

    vi. Evaluated for lead-content and disposed of in accordance with applicable regulations.

i. Workers leaving a Class 2 work area shall decontaminate their clothing (or protective clothing, if worn) using a vacuum equipped with a HEPA filter, or by damp wiping, before removing the protective clothing. If the protective clothing will not be reused, it will be placed in a suitable lead containing waste container.

Deviation from any of the preceding work procedures will be detailed in daily inspection reports.
If you have any questions, please do not hesitate to ECOH head office at 905-795-2800.

**ECOH**
Environmental Consulting
Occupational Health

Zafar Iqbal, B.Eng. (Civil)
**Senior Project Manager**

ECOH Environmental Consulting Occupational Health

# Inspection Report#1

| | | | |
|---|---|---|---|
| **Client:** | Toronto District School Board | **Report Date:** | June 18, 2017 |
| **Project Location:** | John Fisher Public School<br>(TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, ON | **Project No.:** | 17201-PR4 |
| **Inspector:** | Mr. Mahir Bholat / Mr. Zafar Iqbal | **Page:** | Page **1** of **6** |

ECOH Management Inc. (ECOH) was retained by Toronto District School Board (TDSB) to provide inspection services prior to, during, and after the removal of asbestos-containing pipe insulation within various floor 1 classrooms (Loc. 48306, 48307, 48309 and 48310) and 2nd floor corridor (Loc. 48339) at John Fisher Public School, located at 40 Erskine Avenue, Toronto, Ontario.

Mr. Zafar Iqbal and Mr. Mahir Bholat of ECOH were on site to conduct visual inspections during the abatement on June 17 and 18, 2017. All abatement work was conducted by Highpoint Environmental Services Inc. (Highpoint) following applicable Asbestos Safety Precautions, as per Ontario Regulation 278/05, "*Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*." under the Occupational Health and Safety Act. The scope of abatement work included:

**Table 1. Scope of Work**
**Scheduled Asbestos Abatement Work – June 17 and 18, 2017**

| Location Number | Abatement | Asbestos Procedures |
|---|---|---|
| 1st Floor Room 4 (48306) | Removal of Asbestos-Containing Pipe Insulation from 3 Pipes (Approximately 45-50 ft) | Type 2 enclosure & Glove-Bag |
| 1st Floor Room 3 (48307) | Removal of Asbestos-Containing Pipe Insulation from 3 Pipes (Approximately 45-50 ft) | Type 2 enclosure & Glove-Bag |
| 1st Floor Room 2 (48309) | Removal of Asbestos-Containing Pipe Insulation from 4 Pipes (Approximately 65-60 ft) | Type 2 enclosure & Glove-Bag |
| 1st Floor Room 1 (48310) | Removal of Asbestos-Containing Pipe Insulation from 3 Pipes (Approximately 45-50 ft) | Type 2 enclosure & Glove-Bag |
| Corridor 2nd Floor (48339) | Removal of Asbestos-Containing Pipe Insulation from 2 Pipes (Approximately 10-15 ft) | Type 2 enclosure & Glove-Bag |

**Site Inspection:**

1. The ECOH inspector arrived on-site on June 17 and 18, 2017 at approximately 8:00 am.
2. The ECOH inspector met with the Abatement Site Supervisor to discuss the scheduled abatement activities, containment procedures, and the prescribed health and safety precautions for the work being performed. It was agreed that Glove-Bag was the most practical method of removal. In an abundance of caution, ECOH requested that the Glove-Bag abatement be conducted inside a Type 2 enclosure. This is an added precaution that exceeds regulatory requirements.
3. Prior to commencing setup, visible dust and debris in the work areas was removed by damp wiping and by using a vacuum equipped with a HEPA filter (Photo 1).
4. Highpoint constructed ten (10) full Type 2 (Photo 2) enclosures and ten (10) glove bag (Photo 3) enclosures (inside the Type 2 enclosures) to isolate and contain the work areas (Room# 4 (48306), Room# 3 (48307), Room# 2 (48309), Room# 1 (48310) and 2nd Floor Corridor (48339).

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|  |  |  |
| **Photo 1:** Clean-up of Dust & Debris Prior to Setup | **Photo 2**: Enclosure Setup | **Photo 3:**Glove Bag Enclosure Setup Inside the Full Enclosure |

5. Prior to commencing removal, ECOH performed a pre-contamination visual inspection of each Type 2 enclosure and Glove-Bag enclosure. Minor deficiencies observed by the ECOH inspector in the enclosures and/or perimeter seals were brought to the attention of the HighPoint Site Foreman and repaired immediately.
6. Highpoint was given verbal authorization by the ECOH inspector to commence abatement work.
7. Visual inspections were completed during abatement to observe work procedures (Photos 4 – 6).
8. ECOH offers the following observations of abatement activities:
    a) National Institute of Occupational Safety and Health (NIOSH) approved respirators, suitable for the type of asbestos abatement work being completed, were properly used by all people entering the asbestos work area (i.e. half-face respirators, full-face respirators, or better).
    b) Protective clothing was properly used by the abatement contractor. Protective clothing was made of material that does not readily retain nor permit penetration of asbestos fibres, consisted of head covering and full body covering, fitting snugly at the ankles, wrists and neck, and included suitable footwear.
    c) The spread of dust from the work area was controlled by measures appropriate for the asbestos work being completed, and included a full enclosure and the use of a glove bag inside each enclosure.
    d) Negative air pressure was established inside each enclosure using vacuums equipped with HEPA-filters. The vacuums had been recently inspected and "DOP" (Di-Octyl Phthalate) tested.
    e) The mechanical ventilation systems serving the work areas were shut off.
    f) Existing washroom facilities were utilized for washing hands and face for people leaving the work areas.
    g) Eating, drinking, chewing or smoking within the work area was not observed.
    h) Only persons wearing protective clothing and suitable respiratory protection entered the work areas.
    i) Water, containing a wetting agent, was used to control the spread of dust.

j) Asbestos materials scheduled for removal were wetted to reduce dust levels.

k) The integrity of the enclosures and glove bags were maintained at all times.

l) All waste was double bagged, and independently sealed, prior to leaving the work site.

| | | |
|---|---|---|
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| **Photo 4:** Persons During Removal Work | **Photo 5**: Asbestos Waste Double Bagged | **Photo 6:** After Removal, Inside Glove Bag |

9. When leaving the enclosure, Highpoint personnel decontaminated their protective clothing using a vacuum equipped with a HEPA filter and wet wiping procedures. Workers disposed of their protective clothing, and removed and cleaned their respirators

10. Following the removal of asbestos-containing pipe insulation, Highpoint cleaned the underlying surfaces and the inside of the enclosures using a vacuum equipped with a HEPA filter and wet wiping procedures.

11. ECOH performed a visual inspection of each work area upon completion of the work. All work was noted to have been completed satisfactorily, and the work areas were found to be clean and free of visible dust and debris. Highpoint was verbally authorized by the ECOH inspector to apply lock down agent throughout the work areas and tear down after a suitable drying and settling period (Photos 7 & 8).

| | | |
|---|---|---|
|  |  |  |
| **Photo 7:** Pipes After Removing Glove Bags | **Photo 8**: Tear Down of Type 2 Full Enclosure | **Photo 9:** Pipes Reinsulated with New Fibreglass Insulation |

12. Following the removal of the Type 2 enclosures, all parties (ECOH, Highpoint foreman, School Caretaker and the TDSB Health & Safety Inspector) performed a final walkthrough to ensure all pipes where removal occurred had been reinsulated with new fibreglass insulation and that all areas were left as found (Photo 9 & 10).
13. ECOH collected five (5) occupied air samples (sample 17201-PR4-PCM-01 to 05) to assess airborne fiber concentrations during the removal work. The results for the air monitoring analysis are reported in Table 1 (Photo 11).

**Photo 10:** Final Mopping and Vacuuming

**Photo 11**: Occupied Air Sample Collected

**AIR MONITORING:**

1. ECOH collected five (5) occupied PCM air samples[i] according to ECOH's standard procedure[ii]. The results are reported in Table 1.
2. Air monitoring results (reported below) indicated the fibre concentrations in the collected samples were well below ECOH's action limit of 0.04 f/cc[iii].

**Table 1: Air Monitoring**

| Sample No. | Sample Date | Sample Type | Location | Volume of Air (L) | Result (F/cc) | Pass /Fail |
|---|---|---|---|---|---|---|
| 17201-PR4-PCM-01 | June 17, 2017 | Occupied | Classroom# 2 – Loc. 48309 Adjacent to Work Areas | 2475 | <0.01 | Pass |
| 17201-PR4-PCM-02 | June 18, 2017 | Occupied | Classroom# 3 – Loc. 48307 Adjacent to Work Areas | 2550 | <0.01 | Pass |
| 17201-PR4-PCM-03 | June 18, 2017 | Occupied | Classroom# 1 – Loc. 48310 Adjacent to Work Areas | 2693 | <0.01 | Pass |
| 17201-PR4-PCM-04 | June 18, 2017 | Occupied | Classroom# 4 – Loc. 48306 Adjacent to Work Areas | 2475 | <0.01 | Pass |

| | | | |
|---|---|---|---|
| **Client:** | Toronto District School Board | **Report Date:** | June 18, 2017 |
| **Project Location:** | John Fisher Public School<br>(TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, ON | **Project No.:** | 17201-PR4 |
| **Inspector:** | Mr. Mahir Bholat / Mr. Zafar Iqbal | **Page:** | Page **5** of **6** |

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|---|---|---|---|---|---|---|
| 17201-PR4-PCM-05 | June 18, 2017 | Occupied | 2nd Floor Corridor – Loc. 48339 Adjacent to Work Areas | 2453 | <0.01 | Pass |

**Conclusions and Recommendations:**

Visual inspections and air monitoring indicate that asbestos-related work in the above noted work areas were performed safely and successfully, that control measures were effective, and that all health and safety requirements were met as outlined in applicable provisions of Ontario Regulation 278/05, "*Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*." Abatement activities are now complete for this phase of the work and all work areas are safe for occupancy.

We trust that this report meets with your requirements and we thank you for the opportunity to be of service. Should you have any questions, please do not hesitate to contact the undersigned at (905) 795-2800.

**ECOH**
Environmental Consulting
Occupational Health

**Prepared by:**

**Mahir Bholat, B.Sc.**
**Senior Environmental Scientist**

**Reviewed by:**

**Zafar Iqbal, B.Eng. (Civil)**
**Senior Project Manager**

[i] ECOH classifies air samples collected outside an abatement work area (i.e. outside an enclosure/work area or in the vicinity of a glove bag operation) as "occupied" air samples. These samples are collected to ensure that the abatement work is not increasing the building occupants' risk of exposure to airborne asbestos fibres.

[ii] Air samples are collected using a constant-flow high volume air-sampling pump. The sampling equipment is calibrated before sampling to a flow rate of 15 liters/minute with a primary standard electronic bubblemeter or a DryCal® DC-Lite primary flow meter, using a filter cassette in-line. Samples are collected on a mixed cellulose ester (MCE) membrane filter with 0.8-micrometer pore size and 25-millimeter diameter. The filter is mounted inside a three-piece filter cassette with a two-inch cowl.

All air samples are analyzed by the Phase Contrast Microscopy (PCM) method, in accordance with the "A" set of counting rules, following procedures specified in the National Institute for Occupational Safety and Health (NIOSH) method # 7400. It is important to note that fibre type is not identified through the use of this method. All particles with lengths of 5 micrometres or longer, and with length-to-width ratios of 3-1 or greater, are included in the count. Therefore, if the air contains other fibres with these ratios, such as fiberglass, cellulose, or gypsum, the PCM method will overestimate the true asbestos concentration.

ECOH participates in the American Industrial Hygiene Association (AIHA) Industrial Hygiene Proficiency Analytical Testing (IHPAT) Program, Laboratory ID Number 20399.

[iii] Regulation 490/09, "*Designated Substances*", made under the Ontario Occupational Health and Safety Act, establishes the occupational exposure limit (OEL) for airborne asbestos at 0.1 fibres per cubic centimetre (f/cc) (during asbestos-related work not associated with a "construction" project).

The Ministry of the Environment has established 0.04 f/cc of air as the 24-hour average ambient air quality criterion (for asbestos) for the general public. In order to ensure that building occupants are not exposed to fibre concentrations higher than those acceptable for the general public, ECOH has adopted the 0.04 f/cc value as an action level for air samples collected inside occupied buildings (i.e. referred to as "occupied" samples).

Regulation 278/05, "Designated Substance – Regulation respecting *Asbestos on Construction Projects and in Buildings and Repair Operations*", made under the Ontario Occupational Health and Safety Act, establishes a Type 3 asbestos abatement clearance concentration that shall not exceed 0.01 f/cc in any sample collected within the Type 3 work area.

ECOH Environmental Consulting Occupational Health

# Inspection Report#2

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|---|---|---|---|
| **Client:** | Toronto District School Board | **Report Date:** | June 25, 2017 |
| **Project Location:** | John Fisher Public School<br>(TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, ON | **Project No.:** | 17201-PR4 |
| **Inspector:** | Mr. Mahir Bholat / Mr. Elliot Dametto | **Page:** | Page **1** of **6** |

ECOH Management Inc. (ECOH) was retained by Toronto District School Board (TDSB) to provide inspection services prior to, during, and after the removal of asbestos-containing pipe insulation within various floor 1 rooms, entrance foyers, corridor (Loc. 48298, 48304, 48305, 48297 and 48289) and 2nd floor rooms (Loc. 48333 and 48343) at John Fisher Public School, located at 40 Erskine Avenue, Toronto, Ontario.

Mr. Mahir Bholat and Mr. Elliot Dametto of ECOH were on site to conduct visual inspections during the abatement on June 23 to 25, 2017. All abatement work was conducted by Highpoint Environmental Services Inc. (Highpoint) following applicable Asbestos Safety Precautions, as per Ontario Regulation 278/05, "*Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*." under the Occupational Health and Safety Act. The scope of abatement work included:

**Table 1. Scope of Work**
**Scheduled Asbestos Abatement Work – June 23, 24 and 25, 2017**

| Location Number | Abatement | Asbestos Procedures |
|---|---|---|
| 1st Floor Corridor (48289) | Removal of Asbestos-Containing Pipe Insulation from 2 Pipes (Approximately 40-45 ft) | Type 2 enclosure & Glove-Bag |
| 1st Floor Entrance Foyer (Exit 6) (48297) | Removal of Asbestos-Containing Pipe Insulation from 2 Pipes (Approximately 30-35 ft) | Type 2 enclosure & Glove-Bag |
| 1st Floor Classroom 6 (48298) | Removal of Asbestos-Containing Pipe Insulation from 1 Pipe (Approximately 45-50 ft) | Type 2 enclosure & Glove-Bag |
| 1st Floor Classroom 5 (48304) | Removal of Asbestos-Containing Pipe Insulation from 1 Pipe (Approximately 15-20 ft) | Type 2 enclosure & Glove-Bag |
| 1st Floor Entrance Foyer (Exit 1) (48305) | Removal of Asbestos-Containing Pipe Insulation from 4 Pipes (Approximately 50-55 ft) and Parging Cement Fittings (Approximately 15) | Type 2 enclosure & Glove-Bag |
| 2nd Floor Room 20A (48333) | Removal of Asbestos-Containing Pipe Insulation from 1 Pipes (Approximately 5-10 ft) | Type 2 enclosure & Glove-Bag |
| 2nd Floor Remedial Room (48343) | Removal of Asbestos-Containing Pipe Insulation from 1 Pipes (Approximately 5-10 ft) and Parging Cement Fittings (Approximately 1) | Type 2 enclosure & Glove-Bag |

**Site Inspection:**

1. The ECOH inspector arrived on-site on June 23, 2017 at 6:00 pm and June 24 and 25, 2017 at approximately 8:00 am.
2. The ECOH inspector met with the Abatement Site Supervisor to discuss the scheduled abatement activities, containment procedures, and the prescribed health and safety precautions for the work being performed. It was agreed that Glove-Bag was the most practical method of removal. In an abundance of caution, ECOH requested that the Glove-Bag abatement be conducted inside a Type 2 enclosure. This is an added precaution that exceeds regulatory requirements.
3. Prior to commencing setup, visible dust and debris in the work areas was removed by damp wiping and by using a vacuum equipped with a HEPA filter (Photo 1).

4. Highpoint constructed nine (9) full Type 2 (Photo 2) enclosures and nine (9) glove bag (Photo 3) enclosures (inside the Type 2 enclosures) to isolate and contain the work areas (enclosures in 1st Floor Corridor (48289), Entrance Foyer (Exit 6) (48297), Classroom# 6 (48298), Classroom# 5 (48304), Entrance Foyer (Exit 1) (48305), Special Education Room# 20A (48333) and Remedial Room (48343).

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|---|---|---|
|  |  |  |
| **Photo 1:** Clean-up of Dust & Debris Prior to Setup | **Photo 2**: Enclosure Setup | **Photo 3:** Glove Bag Enclosure Setup Inside the Full Enclosure |

5. Prior to commencing removal, ECOH performed a pre-contamination visual inspection of each Type 2 enclosure and Glove-Bag enclosure. Minor deficiencies observed by the ECOH inspector in the enclosures and/or perimeter seals were brought to the attention of the Highpoint Site Foreman and repaired immediately.
6. Highpoint was given verbal authorization by the ECOH inspector to commence abatement work.
7. Visual inspections were completed during abatement to observe work procedures (Photos 4 – 6).
8. ECOH offers the following observations of abatement activities:
    a) National Institute of Occupational Safety and Health (NIOSH) approved respirators, suitable for the type of asbestos abatement work being completed, were properly used by all people entering the asbestos work area (i.e. half-face respirators, full-face respirators, or better).
    b) Protective clothing was properly used by the abatement contractor. Protective clothing was made of material that does not readily retain nor permit penetration of asbestos fibres, consisted of head covering and full body covering, fitting snugly at the ankles, wrists and neck, and included suitable footwear.
    c) The spread of dust from the work area was controlled by measures appropriate for the asbestos work being completed, and included a full enclosure and the use of a glove bag inside each enclosure.
    d) Negative air pressure was established inside each enclosure using vacuums equipped with HEPA-filters. The vacuums had been recently inspected and "DOP" (Di-Octyl Phthalate) tested.
    e) The mechanical ventilation systems serving the work areas were shut off.

f) Existing washroom facilities were utilized for washing hands and face for people leaving the work areas.

g) Eating, drinking, chewing or smoking within the work area was not observed.

h) Only persons wearing protective clothing and suitable respiratory protection entered the work areas.

i) Water, containing a wetting agent, was used to control the spread of dust.

j) Asbestos materials scheduled for removal were wetted to reduce dust levels.

k) The integrity of the enclosures and glove bags were maintained at all times.

l) All waste was double bagged, and independently sealed, prior to leaving the work site.

| | | |
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| **Photo 4:** Persons During Removal Work | **Photo 5**: Asbestos Waste Double Bagged | **Photo 6:** After Removal, Inside Glove Bag |

9. When leaving the enclosure, Highpoint personnel decontaminated their protective clothing using a vacuum equipped with a HEPA filter and wet wiping procedures. Workers disposed of their protective clothing, and removed and cleaned their respirators

10. Following the removal of asbestos-containing pipe insulation, Highpoint cleaned the underlying surfaces and the inside of the enclosures using a vacuum equipped with a HEPA filter and wet wiping procedures.

11. ECOH performed a visual inspection of each work area upon completion of the work. It was observed that one pipe in Classroom #6 (48298) was inside a vertical bulkhead, so only partial removal of insulation on this pipe occurred. All other work was noted to have been completed satisfactorily, and the work areas were found to be clean and free of visible dust and debris. Highpoint was verbally authorized by the ECOH inspector to apply lock down agent throughout the work areas and tear down after a suitable drying and settling period (Photos 7 & 8).

**Photo 7:** Pipes After Removing Glove Bags

**Photo 8**: Tear Down of Type 2 Full Enclosure

**Photo 9:** Pipes Reinsulated with New Fibreglass Insulation

12. Following the removal of the Type 2 enclosures, all parties (ECOH, Highpoint foreman, School Caretaker and the TDSB Health & Safety Inspector) performed a final walkthrough to ensure all pipes where removal occurred had been reinsulated with new fibreglass insulation and that all areas were left as found (Photo 9 & 10).
13. ECOH collected eight (8) occupied air samples (sample 17201-PR4-PCM-06 to 12) to assess airborne fiber concentrations during the removal work. The results for the air monitoring analysis are reported in Table 1 (Photo 11).

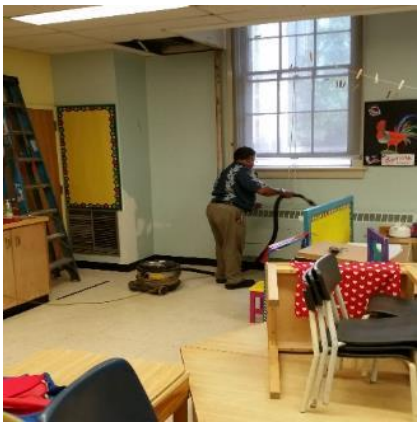

**Photo 10:** Final Mopping and Vacuuming

**Photo 11**: Occupied Air Sample Collected

| | | | |
|---|---|---|---|
| **Client:** | Toronto District School Board | **Report Date:** | June 25, 2017 |
| **Project Location:** | John Fisher Public School<br>(TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, ON | **Project No.:** | 17201-PR4 |
| **Inspector:** | Mr. Mahir Bholat / Mr. Elliot Dametto | **Page:** | Page **5** of **6** |

**AIR MONITORING:**

1. ECOH collected eight (8) occupied PCM air samples[i] according to ECOH's standard procedure[ii]. The results are reported in Table 1.
2. Air monitoring results (reported below) indicated the fibre concentrations in the collected samples were well below ECOH's action limit of 0.04 f/cc[iii].

**Table 1: Air Monitoring**

| Sample No. | Sample Date | Sample Type | Location | Volume of Air (L) | Result (F/cc) | Pass/ Fail |
|---|---|---|---|---|---|---|
| 17201-PR4-PCM-06 | June 24, 2017 | Occupied | 1st Floor Corridor – Loc. 48289 Adjacent to Work Areas | 2425 | <0.01 | Pass |
| 17201-PR4-PCM-07 | June 24, 2017 | Occupied | Classroom# 6 – Loc. 48298 Adjacent to Work Areas | 2429 | <0.01 | Pass |
| 17201-PR4-PCM-08 | June 24, 2017 | Occupied | Classroom# 5 – Loc. 48304 Adjacent to Work Areas | 2485 | <0.01 | Pass |
| 17201-PR4-PCM-09 | June 24, 2017 | Occupied | 1st Floor Corridor – Loc. 48289 Adjacent to Work Areas | 2455 | <0.01 | Pass |
| 17201-PR4-PCM-10 | June 25, 2017 | Occupied | Remedial Room – Loc. 48343 Adjacent to Work Areas | 2666 | <0.01 | Pass |
| 17201-PR4-PCM-11 | June 25, 2017 | Occupied | Classroom# 20A – Loc. 48333 Adjacent to Work Areas | 2410 | <0.01 | Pass |
| 17201-PR4-PCM-12 | June 25, 2017 | Occupied | 1st Floor Corridor – Loc. 48289 Adjacent to Work Areas | 2425 | <0.01 | Pass |
| 17201-PR4-PCM-13 | June 25, 2017 | Occupied | Classroom# 6 – Loc. 48298 Adjacent to Work Areas | 2520 | <0.01 | Pass |

**Conclusions and Recommendations:**

Visual inspections and air monitoring indicate that asbestos-related work in the above noted work areas were performed safely and successfully, that control measures were effective, and that all health and safety requirements were met as outlined in applicable provisions of Ontario Regulation 278/05, "*Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*." Abatement activities are now complete for this phase of the work and all work areas are safe for occupancy.

We trust that this report meets with your requirements and we thank you for the opportunity to be of service. Should you have any questions, please do not hesitate to contact the undersigned at (905) 795-2800.

| | | | |
|---|---|---|---|
| **Client:** | Toronto District School Board | **Report Date:** | June 25, 2017 |
| **Project Location:** | John Fisher Public School<br>(TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, ON | **Project No.:** | 17201-PR4 |
| **Inspector:** | Mr. Mahir Bholat / Mr. Elliot Dametto | **Page:** | Page **6** of **6** |

**ECOH**
Environmental Consulting
Occupational Health

**Prepared by:**

**Elliot Dametto, B.Sc.**
**Environmental Scientist**

**Reviewed by:**

**Zafar Iqbal, B.Eng. (Civil)**
**Senior Project Manager**

[i] ECOH classifies air samples collected outside an abatement work area (i.e. outside an enclosure/work area or in the vicinity of a glove bag operation) as "occupied" air samples. These samples are collected to ensure that the abatement work is not increasing the building occupants' risk of exposure to airborne asbestos fibres.

[ii] Air samples are collected using a constant-flow high volume air-sampling pump. The sampling equipment is calibrated before sampling to a flow rate of 15 liters/minute with a primary standard electronic bubblemeter or a DryCal® DC-Lite primary flow meter, using a filter cassette in-line. Samples are collected on a mixed cellulose ester (MCE) membrane filter with 0.8-micrometer pore size and 25-millimeter diameter. The filter is mounted inside a three-piece filter cassette with a two-inch cowl.

All air samples are analyzed by the Phase Contrast Microscopy (PCM) method, in accordance with the "A" set of counting rules, following procedures specified in the National Institute for Occupational Safety and Health (NIOSH) method # 7400. It is important to note that fibre type is not identified through the use of this method. All particles with lengths of 5 micrometres or longer, and with length-to-width ratios of 3-1 or greater, are included in the count. Therefore, if the air contains other fibres with these ratios, such as fiberglass, cellulose, or gypsum, the PCM method will overestimate the true asbestos concentration.

ECOH participates in the American Industrial Hygiene Association (AIHA) Industrial Hygiene Proficiency Analytical Testing (IHPAT) Program, Laboratory ID Number 20399.

[iii] Regulation 490/09, "*Designated Substances*", made under the Ontario Occupational Health and Safety Act, establishes the occupational exposure limit (OEL) for airborne asbestos at 0.1 fibres per cubic centimetre (f/cc) (during asbestos-related work not associated with a "construction" project).

The Ministry of the Environment has established 0.04 f/cc of air as the 24-hour average ambient air quality criterion (for asbestos) for the general public. In order to ensure that building occupants are not exposed to fibre concentrations higher than those acceptable for the general public, ECOH has adopted the 0.04 f/cc value as an action level for air samples collected inside occupied buildings (i.e. referred to as "occupied" samples).

Regulation 278/05, "Designated Substance – Regulation respecting *Asbestos on Construction Projects and in Buildings and Repair Operations*", made under the Ontario Occupational Health and Safety Act, establishes a Type 3 asbestos abatement clearance concentration that shall not exceed 0.01 f/cc in any sample collected within the Type 3 work area.

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| **Client:** | Toronto District School Board | **Project No.:** | 17201-PR4 | **Inspection Report #03** |
| **Project Location:** | John Fisher Public School (TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, Ontario | | **Date:** | July 4, 2017 |
| **Inspector:** | Mr. Mahir Bholat / Mr. Elliot Dametto | | **Page:** | 1 of 2 |

ECOH Management Inc. (ECOH) was retained by Toronto District School Board (TDSB) to conduct inspection and air monitoring services during abatement work requiring removal of hazardous materials within various locations at John Fisher Public School, located at 40 Erskine Avenue, Toronto, Ontario. Asbestos-related work is performed following Ontario Regulation 278/05, *Asbestos on Construction Projects and in Buildings and Repair Operations* - made under the Occupation Health and Safety Act. Lead-related work is performed following Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014. All abatement-related work is completed by High Point Environmental Services Inc. (Highpoint). The purpose of the ECOH inspections are to ensure that abatement work is carried out following the appropriate level of health and safety measures, precautions and procedures. Please refer to General Inspection Report for additional project-specific details.

## Site Inspection:

1. The ECOH inspector arrived on-site on July 4, 2017 at 8:30 am.
2. The ECOH inspector met with the Abatement Site Supervisor to discuss the scheduled abatement activities, containment procedures, and the prescribed health and safety precautions for the work being performed. No abatement was scheduled to take place on this day; however, Type 2 (Loc. 48343) and Type 3 (Loc. 48329) full enclosure setup was started on the second floor.
3. Prior to commencing setup, visible dust and debris in the work areas were removed by damp wiping and by using a vacuum equipped with a HEPA filter.
4. Highpoint will continue setup on July 5, 2017.

## Conclusions and Recommendations:

Visual inspections and air monitoring (as required) will take place during the abatement process to ensure that asbestos and lead related work in the above noted work areas are performed safely and successfully, that control measures are effective, and that all health and safety requirements are met as outlined in applicable provisions of Ontario Regulation 278/05, "*Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*" and Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014.

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| **Client:** | Toronto District School Board | **Project No.:** | 17201-PR4 | **Inspection Report #03** |
| **Project Location:** | John Fisher Public School (TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, Ontario | | **Date:** | July 4, 2017 |
| **Inspector:** | Mr. Mahir Bholat / Mr. Elliot Dametto | | **Page:** | 2 of 2 |

We trust that this report meets with your requirements and we thank you for the opportunity to be of service. Should you have any questions, please do not hesitate to contact the undersigned at (905) 795-2800.

**ECOH**
Environmental Consulting
Occupational Health

**Prepared by:**

**Elliot Dametto, B.Sc.**
**Environmental Scientist**

**Reviewed by:**

**Zafar Iqbal, B.Eng. (Civil)**
**Senior Project Manager**

ECOH
Environmental Consulting
Occupational Health

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|---|---|---|---|---|
| **Client:** | Toronto District School Board | **Project No.:** | 17201-PR4 | **Inspection Report #04** |
| **Project Location:** | John Fisher Public School (TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, Ontario | | **Date:** | July 5, 2017 |
| **Inspector:** | Mr. Zafar Iqbal / Mr. Elliot Dametto | | **Page:** | 1 of 2 |

ECOH Management Inc. (ECOH) was retained by Toronto District School Board (TDSB) to conduct inspection and air monitoring services during abatement work requiring removal of hazardous materials within various locations at John Fisher Public School, located at 40 Erskine Avenue, Toronto, Ontario. Asbestos-related work is performed following Ontario Regulation 278/05, *Asbestos on Construction Projects and in Buildings and Repair Operations* - made under the Occupation Health and Safety Act. Lead-related work is performed following Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014. All abatement-related work is completed by High Point Environmental Services Inc. (Highpoint). The purpose of the ECOH inspections are to ensure that abatement work is carried out following the appropriate level of health and safety measures, precautions and procedures. Please refer to General Inspection Report for additional project-specific details.

## Site Inspection:

1. The ECOH inspector arrived on-site on July 5, 2017 at 9:00 am.
2. The ECOH inspector met with the Abatement Site Supervisor to discuss the scheduled abatement activities, containment procedures, and the prescribed health and safety precautions for the work being performed. No abatement was scheduled to take place on this day; Highpoint continued Type 2 (Loc. 48343) and Type 3 (Loc. 48329) full enclosure setup on the second floor.
3. Highpoint will complete setup and ECOH will be on-site to perform pre-contamination inspections on July 6, 2017.

## Conclusions and Recommendations:

Visual inspections and air monitoring (as required) will take place during the abatement process to ensure that asbestos and lead related work in the above noted work areas are performed safely and successfully, that control measures are effective, and that all health and safety requirements are met as outlined in applicable provisions of Ontario Regulation 278/05, "*Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*" and Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014.

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| **Client:** | Toronto District School Board | **Project No.:** | 17201-PR4 | **Inspection Report #04** |
| **Project Location:** | John Fisher Public School (TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, Ontario | | **Date:** | July 5, 2017 |
| **Inspector:** | Mr. Zafar Iqbal / Mr. Elliot Dametto | | **Page:** | 2 of 2 |

We trust that this report meets with your requirements and we thank you for the opportunity to be of service. Should you have any questions, please do not hesitate to contact the undersigned at (905) 795-2800.

**ECOH**
Environmental Consulting
Occupational Health

**Prepared by:**

**Elliot Dametto, B.Sc.**
**Environmental Scientist**

**Reviewed by:**

**Zafar Iqbal, B.Eng. (Civil)**
**Senior Project Manager**

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| **Client:** | Toronto District School Board | **Project No.:** | 17201-PR4 | **Inspection Report #05** |
| **Project Location:** | John Fisher Public School (TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, Ontario | | **Date:** | July 6, 2017 |
| **Inspector:** | Mr. Mahir Bholat | | **Page:** | 1 of 2 |

ECOH Management Inc. (ECOH) was retained by Toronto District School Board (TDSB) to conduct inspection and air monitoring services during abatement work requiring removal of hazardous materials within various locations at John Fisher Public School, located at 40 Erskine Avenue, Toronto, Ontario. Asbestos-related work is performed following Ontario Regulation 278/05, *Asbestos on Construction Projects and in Buildings and Repair Operations* - made under the Occupation Health and Safety Act. Lead-related work is performed following Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014. All abatement-related work is completed by High Point Environmental Services Inc. (Highpoint). The purpose of the ECOH inspections are to ensure that abatement work is carried out following the appropriate level of health and safety measures, precautions and procedures. Please refer to General Inspection Report for additional project-specific details.

**Site Inspection:**

1. The ECOH inspector arrived on-site on July 6, 2017 at 10:00 am.
2. The ECOH inspector met with the Abatement Site Supervisor to discuss the scheduled abatement activities, containment procedures, and the prescribed health and safety precautions for the work being performed.
3. ECOH performed pre-contamination inspections for the Type 2 (Loc. 48343) and Type 3 (Loc. 48329) enclosures on the second floor to ensure enclosure integrity and compliance with required asbestos safety precautions.
4. ECOH inspection also ensured that health and safety facilities have been adequately established and that equipment, tools and supplies are on-site and functioning properly.
5. All other trades and contractors on-site were informed that lead and asbestos abatement on the second floor was set to commence.
6. The visual pre-contamination inspections completed by ECOH for the Type 2 and Type 3 work areas revealed no deficiencies. ECOH provided verbal authorization to commence the abatement work.
7. Highpoint commenced removal work of asbestos-containing ceiling tiles and flaking lead paint within the Type 2 (Loc. 48343) enclosure and asbestos-containing duct insulation, flaking lead paint, and lead contaminated ceiling tiles within the Type 3 (Loc. 48329) enclosure on the second floor following all appropriate health and safety measures.
8. Periodic inspections during the work revealed that all appropriate asbestos and lead safety precautions were in place during abatement.
9. ECOH will be on-site to perform final visual inspections for both work areas on July 7, 2017.
10. Please refer to the General Inspection Report for details regarding removal work.

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| **Client:** | Toronto District School Board | **Project No.:** | 17201-PR4 | **Inspection Report #05** |
| **Project Location:** | John Fisher Public School (TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, Ontario | | **Date:** | July 6, 2017 |
| **Inspector:** | Mr. Mahir Bholat | | **Page:** | 2 of 2 |

**Conclusions and Recommendations:**

Visual inspections indicate that asbestos and lead related work in the above noted work areas were performed safely and successfully, that control measures were effective, and that all health and safety requirements were met as outlined in applicable provisions of Ontario Regulation 278/05, "*Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*" and Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014.

We trust that this report meets with your requirements and we thank you for the opportunity to be of service. Should you have any questions, please do not hesitate to contact the undersigned at (905) 795-2800.

**ECOH**
Environmental Consulting
Occupational Health

**Prepared by:**

**Mahir Bholat, B.Sc.**
**Senior Environmental Scientist**

**Reviewed by:**

**Zafar Iqbal, B.Eng. (Civil)**
**Senior Project Manager**

ECOH
Environmental Consulting
Occupational Health

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| **Client:** | Toronto District School Board | **Project No.:** | 17201-PR4 | **Inspection Report #06** |
| **Project Location:** | John Fisher Public School (TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, Ontario | | **Date:** | July 7, 2017 |
| **Inspector:** | Mr. Mahir Bholat | | **Page:** | 1 of 2 |

ECOH Management Inc. (ECOH) was retained by Toronto District School Board (TDSB) to conduct inspection and air monitoring services during abatement work requiring removal of hazardous materials within various locations at John Fisher Public School, located at 40 Erskine Avenue, Toronto, Ontario. Asbestos-related work is performed following Ontario Regulation 278/05, *Asbestos on Construction Projects and in Buildings and Repair Operations* - made under the Occupation Health and Safety Act. Lead-related work is performed following Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014. All abatement-related work is completed by High Point Environmental Services Inc. (Highpoint). The purpose of the ECOH inspections are to ensure that abatement work is carried out following the appropriate level of health and safety measures, precautions and procedures. Please refer to General Inspection Report for additional project-specific details.

**Site Inspection:**

1. The ECOH inspector arrived on-site on July 7, 2017 at 11:00 am.
2. The ECOH inspector met with the Abatement Site Supervisor to discuss the scheduled abatement activities, containment procedures, and the prescribed health and safety precautions for the work being performed.
3. ECOH performed pre-contamination inspections for the Class 2 work areas on the second floor (Loc. 48336, 48337, 48340, 48341, and 48339) to ensure compliance with required lead safety precautions.
4. ECOH inspection also ensured that health and safety facilities have been adequately established and that equipment, tools and supplies are on-site and functioning properly.
5. All other trades and contractors on-site were informed of all locations where lead and asbestos abatement on the second floor was taking place.
6. The visual pre-contamination inspections completed by ECOH for the Class 2 work areas revealed no deficiencies. ECOH provided verbal authorization to commence the abatement work in those areas.
7. Periodic inspections during the work revealed that all appropriate asbestos and lead safety precautions were in place during abatement.
8. Highpoint completed removal work of asbestos-containing ceiling tiles and flaking lead paint within Loc. 48343 and asbestos-containing duct insulation, flaking lead paint, and lead contaminated ceiling tiles within Loc. 48329 on the second floor.
9. ECOH performed a final visual inspection of both work areas (Loc. 48343 and 48329) upon completion of the work. All work was noted to have been completed satisfactorily, and the work areas were found to be clean and free of visible dust and debris. Highpoint was given authorization to apply lock down agent throughout the work areas.
10. Highpoint was given authorization to tear down the Type 2 (Loc. 48343) enclosure after a suitable

drying period.

11. ECOH will be on-site to perform clearance air sampling within the Type 3 (Loc. 48329) enclosure on July 10, 2017. TDSB health and safety was notified.
12. Please refer to the General Inspection Report for details regarding removal work.

**Conclusions and Recommendations:**

Visual inspections indicate that asbestos and lead related work in the above noted work areas were performed safely and successfully, that control measures were effective, and that all health and safety requirements were met as outlined in applicable provisions of Ontario Regulation 278/05, "*Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*" and Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014.

We trust that this report meets with your requirements and we thank you for the opportunity to be of service. Should you have any questions, please do not hesitate to contact the undersigned at (905) 795-2800.

**ECOH**
Environmental Consulting
Occupational Health

**Prepared by:**

**Mahir Bholat, B.Sc.**
**Senior Environmental Scientist**

**Reviewed by:**

**Zafar Iqbal, B.Eng. (Civil)**
**Senior Project Manager**

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| **Client:** | Toronto District School Board | **Project No.:** | 17201-PR4 | **Inspection Report #07** |
| **Project Location:** | John Fisher Public School (TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, Ontario | | **Date:** | July 10, 2017 |
| **Inspector:** | Mr. Mahir Bholat / Mr. Elliott Dametto | | **Page:** | 1 of 3 |

ECOH Management Inc. (ECOH) was retained by Toronto District School Board (TDSB) to conduct inspection and air monitoring services during abatement work requiring removal of hazardous materials within various locations at John Fisher Public School, located at 40 Erskine Avenue, Toronto, Ontario. Asbestos-related work is performed following Ontario Regulation 278/05, *Asbestos on Construction Projects and in Buildings and Repair Operations* - made under the Occupation Health and Safety Act. Lead-related work is performed following Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014. All abatement-related work is completed by High Point Environmental Services Inc. (Highpoint). The purpose of the ECOH inspections are to ensure that abatement work is carried out following the appropriate level of health and safety measures, precautions and procedures. Please refer to General Inspection Report for additional project-specific details.

**Site Inspection:**

1. The ECOH inspector arrived on-site on July 10, 2017 at 8:00 am.
2. The ECOH inspector met with the Abatement Site Supervisor to discuss the scheduled abatement activities, containment procedures, and the prescribed health and safety precautions for the work being performed.
3. The ECOH inspector performed a visual inspection of the Type 3 (Loc. 48329) asbestos abatement work area to ensure that all seals remained intact and all equipment was properly functioning. ECOH observed no deficiencies. Negative air pressure was maintained inside the enclosure before, during and after sampling using negative air machines equipped with a HEPA-filter.
4. Clearance air samples were collected following "forced air" methods (aggressive air sampling) within the work area. Air was aggressively disturbed with the use of mobile fans and leaf blowers.
5. Following the aggressive air disturbance, fans were positioned centrally within the work area and activated to keep any fibres airborne throughout the sampling procedure. Clearance air sampling results for the Type 3 Asbestos Abatement Work are presented in Table 1.
6. Highpoint continued Class 2 lead work on the second floor (Loc. 48336, 48337, 48340, 48341, and 48339) and began setup of Class 2 work areas (Loc. 48307, 48309, and 48310) and Type 2 (Loc. 48306) full enclosure setup on the first floor.
7. All other trades and contractors on-site were informed of all locations where lead and asbestos abatement on the first and second floor was taking place.
8. Periodic inspections during the work revealed that all appropriate asbestos and lead safety precautions were in place during abatement.
9. ECOH will be on-site to perform inspections on July 11, 2017.
10. Please refer to the General Inspection Report for details regarding removal work.

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| **Client:** | Toronto District School Board | **Project No.:** | 17201-PR4 | **Inspection Report #07** |
| **Project Location:** | John Fisher Public School (TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, Ontario | | **Date:** | July 10, 2017 |
| **Inspector:** | Mr. Mahir Bholat / Mr. Elliott Dametto | | **Page:** | 2 of 3 |

## Air Monitoring:

1. ECOH collected three (3) clearance PCM air samples within the Type 3 Asbestos Abatement work area (Classroom 20 – Location # 48329) on July 10th, 2017, as detailed in Table 1.
2. Air monitoring results for all clearance air samples collected in the Type 3 Asbestos Abatement Work Area were below the Ontario Ministry of Labour Type 3 Asbestos Abatement clearance criterion of 0.01f/cc.
3. ECOH informed the Abatement Site Supervisor that they could remove the work area.
4. Clearance air sample results are included in Table 1 below.

**Table 1. Clearance Air Sample Results**

| Sample Number | Location | Volume of Air (L) | Result (F/cc) | Pass/ Fail |
|---|---|---|---|---|
| 17201-PR4-PCM-14 | Classroom 20 (Location # 48329)<br>Inside Type 3 Work Area | 2495 | <0.01 | Pass |
| 17201-PR4-PCM-15 | Classroom 20 (Location # 48329)<br>Inside Type 3 Work Area | 2518 | <0.01 | Pass |
| 17201-PR4-PCM-16 | Classroom 20 (Location # 48329)<br>Inside Type 3 Work Area | 2532 | <0.01 | Pass |

## Conclusions and Recommendations:

Visual inspections and air monitoring results indicate that asbestos and lead related work in the above noted work areas were performed safely and successfully, that control measures were effective, and that all health and safety requirements were met as outlined in applicable provisions of Ontario Regulation 278/05, "*Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*" and Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014.

We trust that this report meets with your requirements and we thank you for the opportunity to be of service. Should you have any questions, please do not hesitate to contact the undersigned at (905) 795-2800.

**ECOH**
Environmental Consulting
Occupational Health

**Prepared by:**

**Mahir Bholat, B.Sc.**
**Senior Environmental Scientist**

**Reviewed by:**

**Zafar Iqbal, B.Eng. (Civil)**
**Senior Project Manager**

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| **Client:** | Toronto District School Board | **Project No.:** | 17201-PR4 | **Inspection Report #08** |
| **Project Location:** | John Fisher Public School (TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, Ontario | | **Date:** | July 11, 2017 |
| **Inspector:** | Mr. Mahir Bholat | | **Page:** | 1 of 2 |

ECOH Management Inc. (ECOH) was retained by Toronto District School Board (TDSB) to conduct inspection and air monitoring services during abatement work requiring removal of hazardous materials within various locations at John Fisher Public School, located at 40 Erskine Avenue, Toronto, Ontario. Asbestos-related work is performed following Ontario Regulation 278/05, *Asbestos on Construction Projects and in Buildings and Repair Operations* - made under the Occupation Health and Safety Act. Lead-related work is performed following Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014. All abatement-related work is completed by High Point Environmental Services Inc. (Highpoint). The purpose of the ECOH inspections are to ensure that abatement work is carried out following the appropriate level of health and safety measures, precautions and procedures. Please refer to General Inspection Report for additional project-specific details.

**Site Inspection:**

1. The ECOH inspector arrived on-site on July 11, 2017 at 11:00 am.
2. The ECOH inspector met with the Abatement Site Supervisor to discuss the scheduled abatement activities, containment procedures, and the prescribed health and safety precautions for the work being performed.
3. ECOH performed pre-contamination inspections for the Class 2 lead work areas (Loc. 48307, 48309, and 48310) and Type 2 (Loc. 48306) asbestos work area on the first floor, to ensure enclosure integrity and compliance with required lead and asbestos safety precautions.
4. ECOH inspection also ensured that health and safety facilities have been adequately established and that equipment, tools and supplies are on-site and functioning properly.
5. All other trades and contractors on-site were informed that lead and asbestos abatement on the first floor was set to commence.
6. The visual pre-contamination inspections completed by ECOH for the Class 2 lead work and Type 2 asbestos work areas revealed no deficiencies. ECOH provided verbal authorization to commence the abatement work.
7. Highpoint commenced Class 2 lead work on the first floor (Loc. 48307, 48309, and 48310) to facilitate the removal of flaking lead paint and lead contaminated ceiling tiles and Type 2 asbestos work (Loc. 48306) to facilitate the removal of flaking lead paint and asbestos containing ceiling tiles.
8. Periodic inspections during the work revealed that all appropriate lead and asbestos safety precautions were in place during abatement.
9. Highpoint completed Class 2 lead work on the second floor (Loc. 48336, 48337, 48340, 48341, and 48339).
10. ECOH performed a final visual inspection of the second floor work areas (Loc. 48336, 48337, 48340, 48341, and 48339) upon completion of the work. All work was noted to have been

completed satisfactorily, and the work areas were found to be clean and free of visible dust and debris. Highpoint was given authorization to tear down the work areas.

11. Highpoint began setup of Type 2 glove bag enclosures inside Type 2 full enclosures on the West side of the basement (Loc. 73647 and 73544) to facilitate the removal of asbestos-containing pipe insulation and flaking lead paint.
12. ECOH will be on-site to perform inspections on July 12, 2017.
13. Please refer to the General Inspection Report for details regarding removal work.

**Conclusions and Recommendations:**

Visual inspections indicate that asbestos and lead related work in the above noted work areas were performed safely and successfully, that control measures were effective, and that all health and safety requirements were met as outlined in applicable provisions of Ontario Regulation 278/05, "*Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*" and Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014.

We trust that this report meets with your requirements and we thank you for the opportunity to be of service. Should you have any questions, please do not hesitate to contact the undersigned at (905) 795-2800.

**ECOH**
Environmental Consulting
Occupational Health

**Prepared by:**

**Mahir Bholat, B.Sc.**
**Senior Environmental Scientist**

**Reviewed by:**

**Zafar Iqbal, B.Eng. (Civil)**
**Senior Project Manager**

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| **Client:** | Toronto District School Board | **Project No.:** | 17201-PR4 | **Inspection Report #09** |
| **Project Location:** | John Fisher Public School (TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, Ontario | | **Date:** | July 12, 2017 |
| **Inspector:** | Mr. Mahir Bholat | | **Page:** | 1 of 2 |

ECOH Management Inc. (ECOH) was retained by Toronto District School Board (TDSB) to conduct inspection and air monitoring services during abatement work requiring removal of hazardous materials within various locations at John Fisher Public School, located at 40 Erskine Avenue, Toronto, Ontario. Asbestos-related work is performed following Ontario Regulation 278/05, *Asbestos on Construction Projects and in Buildings and Repair Operations* - made under the Occupation Health and Safety Act. Lead-related work is performed following Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014. All abatement-related work is completed by High Point Environmental Services Inc. (Highpoint). The purpose of the ECOH inspections are to ensure that abatement work is carried out following the appropriate level of health and safety measures, precautions and procedures. Please refer to General Inspection Report for additional project-specific details.

**Site Inspection:**

1. The ECOH inspector arrived on-site on July 12, 2017 at 10:00 am.
2. The ECOH inspector met with the Abatement Site Supervisor to discuss the scheduled abatement activities, containment procedures, and the prescribed health and safety precautions for the work being performed.
3. ECOH performed pre-contamination inspections for the Type 2 glove bag enclosures inside Type 2 full enclosure work areas (Loc. 73647 and 73544) in the basement, to ensure enclosure integrity and compliance with required lead and asbestos safety precautions.
4. ECOH inspection also ensured that health and safety facilities have been adequately established and that equipment, tools and supplies are on-site and functioning properly.
5. All other trades and contractors on-site were informed that lead and asbestos abatement within the basement was set to commence.
6. The visual pre-contamination inspections completed by ECOH for the Type 2 asbestos work areas revealed no deficiencies. ECOH provided verbal authorization to commence the abatement work.
7. Highpoint commenced Type 2 abatement work in the basement (Loc. 73647 and 73544) to facilitate the removal of asbestos-containing pipe insulation and flaking lead paint.
8. Periodic inspections during the work revealed that all appropriate lead and asbestos safety precautions were in place during abatement.
9. Highpoint completed Class 2 lead work and Type 2 asbestos work on the first floor (Loc. 48306, 48307, 48309, and 48310).
10. ECOH performed a final visual inspection of the first floor work areas (Loc. 48306, 48307, 48309, and 48310) upon completion of the work. All work was noted to have been completed satisfactorily, and the work areas were found to be clean and free of visible dust and debris. Highpoint was given authorization to tear down the work areas.
11. Highpoint began setup of Type 2 glove bag enclosures inside Type 2 full enclosures on the East

and North side of the basement (Loc. 73653 and 73538) and on the first floor (Loc. 48271, 48272, 48321, 48290, and 48318) to facilitate the removal of asbestos-containing pipe insulation, flaking lead paint and lead contaminated ceiling tiles.

12. ECOH will be on-site to perform inspections on July 14, 2017.
13. Please refer to the General Inspection Report for details regarding removal work.

**Conclusions and Recommendations:**

Visual inspections indicate that asbestos and lead related work in the above noted work areas were performed safely and successfully, that control measures were effective, and that all health and safety requirements were met as outlined in applicable provisions of Ontario Regulation 278/05, "*Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*" and Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014.

We trust that this report meets with your requirements and we thank you for the opportunity to be of service. Should you have any questions, please do not hesitate to contact the undersigned at (905) 795-2800.

**ECOH**
Environmental Consulting
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**Prepared by:**

**Mahir Bholat, B.Sc.**
**Senior Environmental Scientist**

**Reviewed by:**

**Zafar Iqbal, B.Eng. (Civil)**
**Senior Project Manager**

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| **Client:** | Toronto District School Board | **Project No.:** | 17201-PR4 | **Inspection Report #10** |
| **Project Location:** | John Fisher Public School (TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, Ontario | | **Date:** | July 14, 2017 |
| **Inspector:** | Mr. Mahir Bholat | | **Page:** | 1 of 2 |

ECOH Management Inc. (ECOH) was retained by Toronto District School Board (TDSB) to conduct inspection and air monitoring services during abatement work requiring removal of hazardous materials within various locations at John Fisher Public School, located at 40 Erskine Avenue, Toronto, Ontario. Asbestos-related work is performed following Ontario Regulation 278/05, *Asbestos on Construction Projects and in Buildings and Repair Operations* - made under the Occupation Health and Safety Act. Lead-related work is performed following Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014. All abatement-related work is completed by High Point Environmental Services Inc. (Highpoint). The purpose of the ECOH inspections are to ensure that abatement work is carried out following the appropriate level of health and safety measures, precautions and procedures. Please refer to General Inspection Report for additional project-specific details.

**Site Inspection:**

1. The ECOH inspector arrived on-site on July 14, 2017 at 10:30 am.
2. The ECOH inspector met with the Abatement Site Supervisor to discuss the scheduled abatement activities, containment procedures, and the prescribed health and safety precautions for the work being performed.
3. ECOH performed pre-contamination inspections for the Type 2 glove bag enclosures inside Type 2 full enclosure work areas on the East and North side of the basement (Loc. 73653 and 73538) and on the first floor (Loc. 48271, 48272, 48321, 48290, and 48318), to ensure enclosure integrity and compliance with required lead and asbestos safety precautions.
4. ECOH inspection also ensured that health and safety facilities have been adequately established and that equipment, tools and supplies are on-site and functioning properly.
5. All other trades and contractors on-site were informed that lead and asbestos abatement within the basement and 1st floor was set to commence.
6. The visual pre-contamination inspections completed by ECOH for the Type 2 asbestos work areas revealed no deficiencies. ECOH provided verbal authorization to commence the abatement work.
7. Highpoint commenced Type 2 abatement work in the East and North side of the basement (Loc. 73653 and 73538) and on the first floor (Loc. 48271, 48272, 48321, 48290, and 48318) to facilitate the removal of asbestos-containing pipe insulation, flaking lead paint and lead contaminated ceiling tiles.
8. Periodic inspections during the work revealed that all appropriate lead and asbestos safety precautions were in place during abatement.
9. Highpoint completed Type 2 asbestos work in the basement (Loc. 73647 and 73544).
10. ECOH performed a final visual inspection of the basement work areas (Loc. 73647 and 73544) upon completion of the work. Two (2) locations of pipe insulation (approximately 3 feet each) present in the corridor (Loc. 73647) outside the door of the electrical room and within steel duct

coverings could not be removed due to access. This material will be capped and reinsulated and is not expected to pose a hazard. All other work was noted to have been completed satisfactorily, and the work areas were found to be clean and free of visible dust and debris. Highpoint was given authorization to apply lock down and to tear down the work areas after a suitable drying period.

11. Highpoint began setup of Class 2 work areas (Loc. 48328, 48324, 48324-1, 48327, 48332, 48344, 48345, 48346, 48347, 48348 and 102494) and Type 2 glove bag enclosure inside Type 2 full enclosure setup (Loc. 48333) on the second floor to facilitate the removal of asbestos-containing pipe insulation (only in Loc. 48333), flaking lead paint, and lead contaminated ceiling tiles.
12. ECOH will be on-site to perform inspections on July 15, 2017.
13. Please refer to the General Inspection Report for details regarding removal work.

**Conclusions and Recommendations:**

Visual inspections indicate that asbestos and lead related work in the above noted work areas were performed safely and successfully, that control measures were effective, and that all health and safety requirements were met as outlined in applicable provisions of Ontario Regulation 278/05, "*Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*" and Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014.

We trust that this report meets with your requirements and we thank you for the opportunity to be of service. Should you have any questions, please do not hesitate to contact the undersigned at (905) 795-2800.

**ECOH**
Environmental Consulting
Occupational Health

**Prepared by:**

**Mahir Bholat, B.Sc.**
**Senior Environmental Scientist**

**Reviewed by:**

**Zafar Iqbal, B.Eng. (Civil)**
**Senior Project Manager**

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| **Client:** | Toronto District School Board | **Project No.:** | 17201-PR4 | **Inspection Report #11** |
| **Project Location:** | John Fisher Public School (TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, Ontario | | **Date:** | July 15, 2017 |
| **Inspector:** | Mr. Elliot Dametto | | **Page:** | 1 of 2 |

ECOH Management Inc. (ECOH) was retained by Toronto District School Board (TDSB) to conduct inspection and air monitoring services during abatement work requiring removal of hazardous materials within various locations at John Fisher Public School, located at 40 Erskine Avenue, Toronto, Ontario. Asbestos-related work is performed following Ontario Regulation 278/05, *Asbestos on Construction Projects and in Buildings and Repair Operations* - made under the Occupation Health and Safety Act. Lead-related work is performed following Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014. All abatement-related work is completed by High Point Environmental Services Inc. (Highpoint). The purpose of the ECOH inspections are to ensure that abatement work is carried out following the appropriate level of health and safety measures, precautions and procedures. Please refer to General Inspection Report for additional project-specific details.

**Site Inspection:**

1. The ECOH inspector arrived on-site on July 15, 2017 at 10:00 am.
2. The ECOH inspector met with the Abatement Site Supervisor to discuss the scheduled abatement activities, containment procedures, and the prescribed health and safety precautions for the work being performed.
3. ECOH performed pre-contamination inspections for the Class 2 work areas (Loc. 48328, 48324, 48324-1, 48327, 48332, 48344, 48345, 48346, 48347, 48348 and 102494) and Type 2 glove bag enclosure inside Type 2 full enclosure setup (Loc. 48333) on the second floor, to ensure enclosure integrity and compliance with required lead and asbestos safety precautions.
4. ECOH inspection also ensured that health and safety facilities have been adequately established and that equipment, tools and supplies are on-site and functioning properly.
5. All other trades and contractors on-site were informed that lead and asbestos abatement within the basement and 1st floor was set to commence.
6. The visual pre-contamination inspections completed by ECOH for the Type 2 asbestos work areas revealed no deficiencies. ECOH provided verbal authorization to commence the abatement work.
7. Highpoint commenced Class 2 lead abatement work (Loc. 48328, 48324, 48324-1, 48327, 48332, 48344, 48345, 48346, 48347, 48348 and 102494) and Type 2 asbestos abatement work (Loc. 48333) on the second floor to facilitate the removal of asbestos-containing pipe insulation (only in Loc. 48333), flaking lead paint, and lead contaminated ceiling tiles.
8. Periodic inspections during the work revealed that all appropriate lead and asbestos safety precautions were in place during abatement.
9. Highpoint completed Type 2 abatement work in the East and North side of the basement (Loc. 73653 and 73538) and on the first floor (Loc. 48271, 48272, 48321, 48290, and 48318).
10. ECOH performed a final visual inspection of the East and North side of the basement (Loc. 73653 and 73538) and first floor (Loc. 48271, 48272, 48321, 48290, and 48318) work areas. All other

work was noted to have been completed satisfactorily, and the work areas were found to be clean and free of visible dust and debris. Highpoint was given authorization to apply lock down and to tear down the work areas after a suitable drying period.

11. Highpoint began setup of Type 2 glove bag enclosures inside Type 2 full enclosures (Loc. 48311, 48314, 48315, 48316, 48316-1, 48317, 48319, 48320, and 48269) on the first floor to facilitate the removal of asbestos-containing pipe insulation, flaking lead paint, and lead contaminated ceiling tiles.
12. ECOH will be on-site to perform inspections on July 17, 2017.
13. Please refer to the General Inspection Report for details regarding removal work.

**Conclusions and Recommendations:**

Visual inspections indicate that asbestos and lead related work in the above noted work areas were performed safely and successfully, that control measures were effective, and that all health and safety requirements were met as outlined in applicable provisions of Ontario Regulation 278/05, "*Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*" and Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014.

We trust that this report meets with your requirements and we thank you for the opportunity to be of service. Should you have any questions, please do not hesitate to contact the undersigned at (905) 795-2800.

**ECOH**
Environmental Consulting
Occupational Health

**Prepared by:**

**Elliot Dametto, B.Sc.**
**Environmental Scientist**

**Reviewed by:**

**Zafar Iqbal, B.Eng. (Civil)**
**Senior Project Manager**

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| **Client:** | Toronto District School Board | **Project No.:** | 17201-PR4 | **Inspection Report #12** |
| **Project Location:** | John Fisher Public School (TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, Ontario | | **Date:** | July 17, 2017 |
| **Inspector:** | Mr. Elliot Dametto | | **Page:** | 1 of 2 |

ECOH Management Inc. (ECOH) was retained by Toronto District School Board (TDSB) to conduct inspection and air monitoring services during abatement work requiring removal of hazardous materials within various locations at John Fisher Public School, located at 40 Erskine Avenue, Toronto, Ontario. Asbestos-related work is performed following Ontario Regulation 278/05, *Asbestos on Construction Projects and in Buildings and Repair Operations* - made under the Occupation Health and Safety Act. Lead-related work is performed following Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014. All abatement-related work is completed by High Point Environmental Services Inc. (Highpoint). The purpose of the ECOH inspections are to ensure that abatement work is carried out following the appropriate level of health and safety measures, precautions and procedures. Please refer to General Inspection Report for additional project-specific details.

**Site Inspection:**

1. The ECOH inspector arrived on-site on July 17, 2017 at 10:00 am.
2. The ECOH inspector met with the Abatement Site Supervisor to discuss the scheduled abatement activities, containment procedures, and the prescribed health and safety precautions for the work being performed.
3. ECOH performed pre-contamination inspections for the Type 2 glove bag enclosures inside Type 2 full enclosures (Loc. 48311, 48314, 48315, 48316, 48316-1, 48317, 48319, 48320, and 48269) on the first floor, to ensure enclosure integrity and compliance with required lead and asbestos safety precautions.
4. ECOH inspection also ensured that health and safety facilities have been adequately established and that equipment, tools and supplies are on-site and functioning properly.
5. All other trades and contractors on-site were informed that lead and asbestos abatement on the second floor was set to commence.
6. The visual pre-contamination inspections completed by ECOH for the Type 2 asbestos work area revealed no deficiencies. ECOH provided verbal authorization to commence the abatement work.
7. Highpoint commenced Type 2 glove bag enclosures inside Type 2 full enclosures (Loc. 48311, 48314, 48315, 48316, 48316-1, 48317, 48319, 48320, and 48269) abatement work on the first floor to facilitate the removal of asbestos-containing pipe insulation, flaking lead paint, and lead contaminated ceiling tiles.
8. Periodic inspections during the work revealed that all appropriate lead and asbestos safety precautions were in place during abatement.
9. Highpoint completed Class 2 abatement work (Loc. 48328, 48324, 48324-1, 48327, 48344, 48345, 48346, 48347, 48348 and 102494) and Type 2 abatement work (Loc. 48333) on the second floor.
10. ECOH performed a final visual inspection of the Class 2 abatement work areas (Loc. 48328,

48324, 48324-1, 48327, 48332, 48344, 48345, 48346, 48347, 48348 and 102494) and Type 2 abatement work areas (Loc. 48333) on the second floor upon completion of the work. All work was noted to have been completed satisfactorily, and the work areas were found to be clean and free of visible dust and debris. Highpoint was given authorization to apply lock down and to tear down the work areas after a suitable drying period.

11. Highpoint began setup of Class 2 work areas (Loc. 73641, 125475, 84161, 73642, 73643, 73644 and 73646) and Type 2 glove bag enclosure inside Type 2 full enclosure setup (Loc. 73542, 73640, 73639, and 73645) within the basement to facilitate the removal of asbestos-containing pipe insulation (only in Loc. 73542, 73640, 73639, and 73645) and flaking lead paint.
12. ECOH will be on-site to perform inspections on July 18, 2017.
13. Please refer to the General Inspection Report for details regarding removal work.

**Conclusions and Recommendations:**

Visual inspections indicate that asbestos and lead related work in the above noted work areas were performed safely and successfully, that control measures were effective, and that all health and safety requirements were met as outlined in applicable provisions of Ontario Regulation 278/05, "*Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*" and Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014.

We trust that this report meets with your requirements and we thank you for the opportunity to be of service. Should you have any questions, please do not hesitate to contact the undersigned at (905) 795-2800.

**ECOH**
Environmental Consulting
Occupational Health

**Prepared by:**

**Elliot Dametto, B.Sc.**
**Environmental Scientist**

**Reviewed by:**

**Zafar Iqbal, B.Eng. (Civil)**
**Senior Project Manager**

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| **Client:** | Toronto District School Board | **Project No.:** | 17201-PR4 | **Inspection Report #13** |
| **Project Location:** | John Fisher Public School (TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, Ontario | | **Date:** | July 18, 2017 |
| **Inspector:** | Mr. Mahir Bholat | | **Page:** | 1 of 2 |

ECOH Management Inc. (ECOH) was retained by Toronto District School Board (TDSB) to conduct inspection and air monitoring services during abatement work requiring removal of hazardous materials within various locations at John Fisher Public School, located at 40 Erskine Avenue, Toronto, Ontario. Asbestos-related work is performed following Ontario Regulation 278/05, *Asbestos on Construction Projects and in Buildings and Repair Operations* - made under the Occupation Health and Safety Act. Lead-related work is performed following Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014. All abatement-related work is completed by High Point Environmental Services Inc. (Highpoint). The purpose of the ECOH inspections are to ensure that abatement work is carried out following the appropriate level of health and safety measures, precautions and procedures. Please refer to General Inspection Report for additional project-specific details.

**Site Inspection:**

1. The ECOH inspector arrived on-site on July 18, 2017 at 10:30 am.
2. The ECOH inspector met with the Abatement Site Supervisor to discuss the scheduled abatement activities, containment procedures, and the prescribed health and safety precautions for the work being performed.
3. ECOH performed pre-contamination inspections for the Class 2 work areas (Loc. 73641, 125475, 84161, 73642, 73643, 73644 and 73646) and Type 2 glove bag enclosure inside Type 2 full enclosures (Loc. 73542, 73640, 73639, and 73645) within the basement, to ensure enclosure integrity and compliance with required lead and asbestos safety precautions.
4. ECOH inspection also ensured that health and safety facilities have been adequately established and that equipment, tools and supplies are on-site and functioning properly.
5. All other trades and contractors on-site were informed that lead and asbestos abatement on the second floor was set to commence.
6. The visual pre-contamination inspections completed by ECOH for the Class 2 lead work areas and Type 2 asbestos work areas revealed no deficiencies. ECOH provided verbal authorization to commence the abatement work.
7. Highpoint commenced Class 2 (Loc. 73641, 125475, 84161, 73642, 73643, 73644 and 73646) and Type 2 (Loc. 73542, 73640, 73639, and 73645) abatement work within the basement to facilitate the removal of asbestos-containing pipe insulation and flaking lead paint.
8. Periodic inspections during the work revealed that all appropriate lead and asbestos safety precautions were in place during abatement.
9. Highpoint completed Type 2 glove bag enclosures inside Type 2 full enclosures (Loc. 48311, 48314, 48315, 48316, 48316-1, 48317, 48319, 48320, and 48269) abatement work on the first floor.
10. ECOH performed a final visual inspection of the Type 2 abatement work areas (Loc. 48311,

48314, 48315, 48316, 48316-1, 48317, 48319, 48320, and 48269) on the first floor upon completion of the work. All work was noted to have been completed satisfactorily, and the work areas were found to be clean and free of visible dust and debris. Highpoint was given authorization to apply lock down and to tear down the work areas after a suitable drying period.

11. Highpoint began setup of Class 2 work areas (Loc. 48289, 48291, 48292, 48296, 48299, 48300, 48301, 48302, 48304 and 47293) and Type 2 glove bag enclosure inside Type 2 full enclosure setup (Loc. 102492 and 48294) on the first floor to facilitate the removal of asbestos-containing pipe insulation (only in Loc. 102492 and 48294), flaking lead paint, and lead contaminated ceiling tiles.
12. ECOH will be on-site to perform inspections on July 19, 2017.
13. Please refer to the General Inspection Report for details regarding removal work.

**Conclusions and Recommendations:**

Visual inspections indicate that asbestos and lead related work in the above noted work areas were performed safely and successfully, that control measures were effective, and that all health and safety requirements were met as outlined in applicable provisions of Ontario Regulation 278/05, "*Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*" and Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014.

We trust that this report meets with your requirements and we thank you for the opportunity to be of service. Should you have any questions, please do not hesitate to contact the undersigned at (905) 795-2800.

**ECOH**
Environmental Consulting
Occupational Health

**Prepared by:**

**Mahir Bholat, B.Sc.**
**Senior Environmental Scientist**

**Reviewed by:**

**Zafar Iqbal, B.Eng. (Civil)**
**Senior Project Manager**

ECOH
Environmental Consulting
Occupational Health

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| **Client:** | Toronto District School Board | **Project No.:** | 17201-PR4 | **Inspection Report #14** |
| **Project Location:** | John Fisher Public School (TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, Ontario | | **Date:** | July 19, 2017 |
| **Inspector:** | Mr. Mahir Bholat | | **Page:** | 1 of 2 |

ECOH Management Inc. (ECOH) was retained by Toronto District School Board (TDSB) to conduct inspection and air monitoring services during abatement work requiring removal of hazardous materials within various locations at John Fisher Public School, located at 40 Erskine Avenue, Toronto, Ontario. Asbestos-related work is performed following Ontario Regulation 278/05, *Asbestos on Construction Projects and in Buildings and Repair Operations* - made under the Occupation Health and Safety Act. Lead-related work is performed following Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014. All abatement-related work is completed by High Point Environmental Services Inc. (Highpoint). The purpose of the ECOH inspections are to ensure that abatement work is carried out following the appropriate level of health and safety measures, precautions and procedures. Please refer to General Inspection Report for additional project-specific details.

**Site Inspection:**

1. The ECOH inspector arrived on-site on July 19, 2017 at 12:00 pm.
2. The ECOH inspector met with the Abatement Site Supervisor to discuss the scheduled abatement activities, containment procedures, and the prescribed health and safety precautions for the work being performed.
3. ECOH performed pre-contamination inspections for the Class 2 work areas (Loc. 48289, 48291, 48292, 48296, 48299, 48300, 48301, 48302, 48304 and 47293) and Type 2 glove bag enclosure inside Type 2 full enclosure setup (Loc. 102492 and 48294) on the first floor, to ensure enclosure integrity and compliance with required lead and asbestos safety precautions.
4. ECOH inspection also ensured that health and safety facilities have been adequately established and that equipment, tools and supplies are on-site and functioning properly.
5. All other trades and contractors on-site were informed that lead and asbestos abatement on the second floor was set to commence.
6. The visual pre-contamination inspections completed by ECOH for the Class 2 lead work areas and Type 2 asbestos work areas revealed no deficiencies. ECOH provided verbal authorization to commence the abatement work.
7. Highpoint commenced Class 2 (Loc. 48289, 48291, 48292, 48296, 48299, 48300, 48301, 48302, 48304 and 47293) and Type 2 (Loc. 102492 and 48294) abatement work on the first floor to facilitate the removal of asbestos-containing pipe insulation (only in Loc. 102492 and 48294), flaking lead paint, and lead contaminated ceiling tiles.
8. Periodic inspections during the work revealed that all appropriate lead and asbestos safety precautions were in place during abatement.
9. Highpoint completed Class 2 work (Loc. 73641, 125475, 84161, 73642, 73643, 73644 and 73646) and Type 2 glove bag enclosure inside Type 2 full enclosure work (Loc. 73542, 73640, 73639, and 73645) within the basement.

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| **Client:** | Toronto District School Board | **Project No.:** | 17201-PR4 | **Inspection Report #14** |
| **Project Location:** | John Fisher Public School (TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, Ontario | | **Date:** | July 19, 2017 |
| **Inspector:** | Mr. Mahir Bholat | | **Page:** | 2 of 2 |

10. ECOH performed a final visual inspection of the Class 2 (Loc. 73641, 125475, 84161, 73642, 73643, 73644 and 73646) and Type 2 abatement work areas (Loc. 73542, 73640, 73639, and 73645) within the basement upon completion of the work. All work was noted to have been completed satisfactorily, and the work areas were found to be clean and free of visible dust and debris. Highpoint was given authorization to apply lock down and to tear down the work areas after a suitable drying period.
11. Highpoint began setup of Class 2 work areas (Loc. 73540 and 73541) and Type 2 glove bag enclosure inside Type 2 full enclosure setup (Loc. 73657, 73656, 73655 and 73653-1) within the basement to facilitate the removal of asbestos-containing pipe insulation (only in Loc. 73657, 73656, 73655 and 73653-1), asbestos-containing ceiling tiles (only in Loc. 73655), and flaking lead paint.
12. ECOH will be on-site to perform inspections on July 20, 2017.
13. Please refer to the General Inspection Report for details regarding removal work.

## Conclusions and Recommendations:

Visual inspections indicate that asbestos and lead related work in the above noted work areas were performed safely and successfully, that control measures were effective, and that all health and safety requirements were met as outlined in applicable provisions of Ontario Regulation 278/05, "*Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*" and Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014.

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**ECOH**
Environmental Consulting
Occupational Health

**Prepared by:**

**Mahir Bholat, B.Sc.**
**Senior Environmental Scientist**

**Reviewed by:**

**Zafar Iqbal, B.Eng. (Civil)**
**Senior Project Manager**

ECOH
Environmental Consulting
Occupational Health

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| **Client:** | Toronto District School Board | **Project No.:** | 17201-PR4 | **Inspection Report #15** |
| **Project Location:** | John Fisher Public School (TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, Ontario | | **Date:** | July 20, 2017 |
| **Inspector:** | Mr. Mahir Bholat | | **Page:** | 1 of 2 |

ECOH Management Inc. (ECOH) was retained by Toronto District School Board (TDSB) to conduct inspection and air monitoring services during abatement work requiring removal of hazardous materials within various locations at John Fisher Public School, located at 40 Erskine Avenue, Toronto, Ontario. Asbestos-related work is performed following Ontario Regulation 278/05, *Asbestos on Construction Projects and in Buildings and Repair Operations* - made under the Occupation Health and Safety Act. Lead-related work is performed following Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014. All abatement-related work is completed by High Point Environmental Services Inc. (Highpoint). The purpose of the ECOH inspections are to ensure that abatement work is carried out following the appropriate level of health and safety measures, precautions and procedures. Please refer to General Inspection Report for additional project-specific details.

**Site Inspection:**

1. The ECOH inspector arrived on-site on July 20, 2017 at 11:00 am.
2. The ECOH inspector met with the Abatement Site Supervisor to discuss the scheduled abatement activities, containment procedures, and the prescribed health and safety precautions for the work being performed.
3. ECOH performed pre-contamination inspections for the Class 2 work areas (Loc. 73540 and 73541) and Type 2 glove bag enclosure inside Type 2 full enclosures (Loc. 73657, 73656, 73655 and 73653-1) within the basement, to ensure enclosure integrity and compliance with required lead and asbestos safety precautions.
4. ECOH inspection also ensured that health and safety facilities have been adequately established and that equipment, tools and supplies are on-site and functioning properly.
5. All other trades and contractors on-site were informed that lead and asbestos abatement on the second floor was set to commence.
6. The visual pre-contamination inspections completed by ECOH for the Class 2 lead work areas and Type 2 asbestos work areas revealed no deficiencies. ECOH provided verbal authorization to commence the abatement work.
7. Highpoint commenced Class 2 (Loc. 73540 and 73541) and Type 2 (Loc. 73657, 73656, 73655 and 73653-1) abatement work within the basement to facilitate the removal of asbestos-containing pipe insulation (only in Loc. 73657, 73656, 73655 and 73653-1), asbestos-containing ceiling tiles (only in Loc. 73655), and flaking lead paint.
8. Periodic inspections during the work revealed that all appropriate lead and asbestos safety precautions were in place during abatement.
9. Highpoint completed Class 2 work (Loc. 48289, 48291, 48292, 48296, 48299, 48300, 48301, 48302, 48304 and 47293) and Type 2 glove bag enclosure inside Type 2 full enclosure work (Loc. 102492 and 48294) on the first floor.

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| **Client:** | Toronto District School Board | **Project No.:** | 17201-PR4 | **Inspection Report #15** |
| **Project Location:** | John Fisher Public School (TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, Ontario | | **Date:** | July 20, 2017 |
| **Inspector:** | Mr. Mahir Bholat | | **Page:** | 2 of 2 |

10. ECOH performed a final visual inspection of the Class 2 (Loc. 48289, 48291, 48292, 48296, 48299, 48300, 48301, 48302, 48304 and 47293) and Type 2 abatement work areas (Loc. 102492 and 48294) on the first floor upon completion of the work. All work was noted to have been completed satisfactorily, and the work areas were found to be clean and free of visible dust and debris. Highpoint was given authorization to apply lock down and to tear down the work areas after a suitable drying period.
11. Highpoint began setup of Class 2 work areas (Loc. 48298, 48308, 48305, 48297, 48266, 104287 and 104287-1) on the first floor and Type 2 glove bag enclosure inside Type 2 full enclosure setup (Loc. 73652, 73648, 73649 and 73543) within the basement to facilitate the removal of asbestos-containing pipe insulation, flaking lead paint, and lead contaminated ceiling tiles.
12. ECOH will be on-site to perform inspections on July 21, 2017.
13. Please refer to the General Inspection Report for details regarding removal work.

## Conclusions and Recommendations:

Visual inspections indicate that asbestos and lead related work in the above noted work areas were performed safely and successfully, that control measures were effective, and that all health and safety requirements were met as outlined in applicable provisions of Ontario Regulation 278/05, "*Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*" and Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014.

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**ECOH**
Environmental Consulting
Occupational Health

**Prepared by:**

**Mahir Bholat, B.Sc.**
**Senior Environmental Scientist**

**Reviewed by:**

**Zafar Iqbal, B.Eng. (Civil)**
**Senior Project Manager**

ECOH
Environmental Consulting
Occupational Health

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| **Client:** | Toronto District School Board | **Project No.:** | 17201-PR4 | **Inspection Report #16** |
| **Project Location:** | John Fisher Public School (TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, Ontario | | **Date:** | July 21, 2017 |
| **Inspector:** | Mr. Elliot Dametto | | **Page:** | 1 of 2 |

ECOH Management Inc. (ECOH) was retained by Toronto District School Board (TDSB) to conduct inspection and air monitoring services during abatement work requiring removal of hazardous materials within various locations at John Fisher Public School, located at 40 Erskine Avenue, Toronto, Ontario. Asbestos-related work is performed following Ontario Regulation 278/05, *Asbestos on Construction Projects and in Buildings and Repair Operations* - made under the Occupation Health and Safety Act. Lead-related work is performed following Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014. All abatement-related work is completed by High Point Environmental Services Inc. (Highpoint). The purpose of the ECOH inspections are to ensure that abatement work is carried out following the appropriate level of health and safety measures, precautions and procedures. Please refer to General Inspection Report for additional project-specific details.

**Site Inspection:**

1. The ECOH inspector arrived on-site on July 21, 2017 at 10:00 am.
2. The ECOH inspector met with the Abatement Site Supervisor to discuss the scheduled abatement activities, containment procedures, and the prescribed health and safety precautions for the work being performed.
3. ECOH performed pre-contamination inspections for the Class 2 work areas (Loc. 48298, 48308, 48305, 48297, 48266, 102487 and 102487-1) on the first floor and Type 2 glove bag enclosure inside Type 2 full enclosure setup (Loc. 73652, 73648, 73649 and 73543) within the basement, to ensure enclosure integrity and compliance with required lead and asbestos safety precautions.
4. ECOH inspection also ensured that health and safety facilities have been adequately established and that equipment, tools and supplies are on-site and functioning properly.
5. All other trades and contractors on-site were informed that lead and asbestos abatement within the basement and first floor was set to commence.
6. The visual pre-contamination inspections completed by ECOH for the Class 2 lead work areas and Type 2 asbestos work areas revealed no deficiencies. ECOH provided verbal authorization to commence the abatement work.
7. Highpoint commenced Class 2 abatement (Loc. 48298, 48308, 48305, 48297, 48266, 102487 and 102487-1) on the first floor and Type 2 abatement (Loc. 73652, 73648, 73649 and 73543) within the basement to facilitate the removal of asbestos-containing pipe insulation, flaking lead paint, and lead contaminated ceiling tiles.
8. Periodic inspections during the work revealed that all appropriate lead and asbestos safety precautions were in place during abatement.
9. Highpoint completed Class 2 work (Loc. 73540 and 73541) and Type 2 glove bag enclosure inside Type 2 full enclosure work (Loc. 73657, 73656, 73655 and 73653-1) within the basement.
10. ECOH performed a final visual inspection of the Class 2 (Loc. 73540 and 73541) and Type 2

abatement work areas (Loc. 73657, 73656, 73655 and 73653-1) within the basement upon completion of the work. All work was noted to have been completed satisfactorily, and the work areas were found to be clean and free of visible dust and debris. Highpoint was given authorization to apply lock down and to tear down the work areas after a suitable drying period.

11. Highpoint began setup of Class 2 work areas (Loc. 48323, 48330 and 48338) on the second floor and Type 2 glove bag enclosure inside Type 2 full enclosure setup (Loc. 102801, 102475 and 84162) within the basement to facilitate the removal of asbestos-containing pipe insulation, flaking lead paint, and lead contaminated ceiling tiles.
12. ECOH will be on-site to perform inspections on July 22, 2017.
13. Please refer to the General Inspection Report for details regarding removal work.

## Conclusions and Recommendations:

Visual inspections indicate that asbestos and lead related work in the above noted work areas were performed safely and successfully, that control measures were effective, and that all health and safety requirements were met as outlined in applicable provisions of Ontario Regulation 278/05, "*Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*" and Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014.

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**ECOH**
Environmental Consulting
Occupational Health

**Prepared by:**

**Elliot Dametto, B.Sc.**
**Environmental Scientist**

**Reviewed by:**

**Zafar Iqbal, B.Eng. (Civil)**
**Senior Project Manager**

ECOH
Environmental Consulting
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| **Client:** | Toronto District School Board | **Project No.:** | 17201-PR4 | **Inspection Report #17** |
| **Project Location:** | John Fisher Public School (TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, Ontario | | **Date:** | July 22, 2017 |
| **Inspector:** | Mr. Elliot Dametto | | **Page:** | 1 of 2 |

ECOH Management Inc. (ECOH) was retained by Toronto District School Board (TDSB) to conduct inspection and air monitoring services during abatement work requiring removal of hazardous materials within various locations at John Fisher Public School, located at 40 Erskine Avenue, Toronto, Ontario. Asbestos-related work is performed following Ontario Regulation 278/05, *Asbestos on Construction Projects and in Buildings and Repair Operations* - made under the Occupation Health and Safety Act. Lead-related work is performed following Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014. All abatement-related work is completed by High Point Environmental Services Inc. (Highpoint). The purpose of the ECOH inspections are to ensure that abatement work is carried out following the appropriate level of health and safety measures, precautions and procedures. Please refer to General Inspection Report for additional project-specific details.

**Site Inspection:**

1. The ECOH inspector arrived on-site on July 22, 2017 at 1:00 pm.
2. The ECOH inspector met with the Abatement Site Supervisor to discuss the scheduled abatement activities, containment procedures, and the prescribed health and safety precautions for the work being performed.
3. ECOH performed pre-contamination inspections for the Class 2 work areas (Loc. 48323, 48330 and 48338) on the second floor and Type 2 glove bag enclosure inside Type 2 full enclosure setup (Loc. 102801, 102475 and 84162) within the basement, to ensure enclosure integrity and compliance with required lead and asbestos safety precautions.
4. ECOH inspection also ensured that health and safety facilities have been adequately established and that equipment, tools and supplies are on-site and functioning properly.
5. All other trades and contractors on-site were informed that lead and asbestos abatement within the basement and second floor was set to commence.
6. The visual pre-contamination inspections completed by ECOH for the Class 2 lead work areas and Type 2 asbestos work areas revealed no deficiencies. ECOH provided verbal authorization to commence the abatement work.
7. Highpoint commenced Class 2 abatement (Loc. 48323, 48330 and 48338) on the second floor and Type 2 abatement (Loc. 102801, 102475 and 84162) within the basement to facilitate the removal of asbestos-containing pipe insulation, flaking lead paint, and lead contaminated ceiling tiles.
8. Periodic inspections during the work revealed that all appropriate lead and asbestos safety precautions were in place during abatement.
9. Highpoint completed Class 2 work (Loc. 48298, 48308, 48305, 48297, 48266, 102487 and 102487-1) on the first floor and Type 2 glove bag enclosure inside Type 2 full enclosure work (Loc. 73652, 73648, 73649 and 73543) within the basement.
10. ECOH performed a final visual inspection of the Class 2 (Loc. 48298, 48308, 48305, 48297,

48266, 102487 and 102487-1) on the first floor and Type 2 abatement work areas (Loc. 73652, 73648, 73649 and 73543) within the basement upon completion of the work. All work was noted to have been completed satisfactorily, and the work areas were found to be clean and free of visible dust and debris. Highpoint was given authorization to apply lock down and to tear down the work areas after a suitable drying period.

11. Highpoint began setup of Type 2 glove bag enclosure inside Type 2 full enclosure setup (Loc. 48322 and 48268) on the first floor to facilitate the removal of asbestos-containing pipe insulation and flaking lead paint.
12. ECOH will be on-site to perform inspections on July 24, 2017.
13. Please refer to the General Inspection Report for details regarding removal work.

## Conclusions and Recommendations:

Visual inspections indicate that asbestos and lead related work in the above noted work areas were performed safely and successfully, that control measures were effective, and that all health and safety requirements were met as outlined in applicable provisions of Ontario Regulation 278/05, "*Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*" and Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014.

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**ECOH**
Environmental Consulting
Occupational Health

**Prepared by:**

**Mahir Bholat, B.Sc.**
**Senior Environmental Scientist**

**Reviewed by:**

**Zafar Iqbal, B.Eng. (Civil)**
**Senior Project Manager**

ECOH
Environmental Consulting
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| **Client:** | Toronto District School Board | **Project No.:** | 17201-PR4 | **Inspection Report #18** |
| **Project Location:** | John Fisher Public School (TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, Ontario | | **Date:** | July 24, 2017 |
| **Inspector:** | Mr. Mahir Bholat | | **Page:** | 1 of 2 |

ECOH Management Inc. (ECOH) was retained by Toronto District School Board (TDSB) to conduct inspection and air monitoring services during abatement work requiring removal of hazardous materials within various locations at John Fisher Public School, located at 40 Erskine Avenue, Toronto, Ontario. Asbestos-related work is performed following Ontario Regulation 278/05, *Asbestos on Construction Projects and in Buildings and Repair Operations* - made under the Occupation Health and Safety Act. Lead-related work is performed following Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014. All abatement-related work is completed by High Point Environmental Services Inc. (Highpoint). The purpose of the ECOH inspections are to ensure that abatement work is carried out following the appropriate level of health and safety measures, precautions and procedures. Please refer to General Inspection Report for additional project-specific details.

**Site Inspection:**

1. The ECOH inspector arrived on-site on July 24, 2017 at 12:00 pm.
2. The ECOH inspector met with the Abatement Site Supervisor to discuss the scheduled abatement activities, containment procedures, and the prescribed health and safety precautions for the work being performed.
3. ECOH performed pre-contamination inspections for the Type 2 glove bag enclosure inside Type 2 full enclosure setup (Loc. 48322 and 48268) on the first floor, to ensure enclosure integrity and compliance with required lead and asbestos safety precautions.
4. ECOH inspection also ensured that health and safety facilities have been adequately established and that equipment, tools and supplies are on-site and functioning properly.
5. All other trades and contractors on-site were informed that lead and asbestos abatement on the first floor was set to commence.
6. The visual pre-contamination inspections completed by ECOH for the Type 2 asbestos work areas revealed no deficiencies. ECOH provided verbal authorization to commence the abatement work.
7. Highpoint commenced Type 2 abatement (Loc. 48322 and 48268) on the first floor, to facilitate the removal of asbestos-containing pipe insulation and flaking lead paint.
8. Periodic inspections during the work revealed that all appropriate lead and asbestos safety precautions were in place during abatement.
9. Highpoint completed Class 2 work (Loc. 48323, 48330 and 48338) on the second floor and Type 2 glove bag enclosure inside Type 2 full enclosure work (Loc. 102801, 102475 and 84162) within the basement.
10. ECOH performed a final visual inspection of the Class 2 (Loc. 48323, 48330 and 48338) on the second floor and Type 2 abatement work areas (Loc. 102801, 102475 and 84162) within the basement upon completion of the work. All work was noted to have been completed satisfactorily, and the work areas were found to be clean and free of visible dust and debris.

Highpoint was given authorization to apply lock down and to tear down the work areas after a suitable drying period.

11. Highpoint began setup of Class 2 work areas (Loc. 102474) and Type 2 glove bag enclosure inside Type 2 full enclosure setup (Loc. 73547 and 73549) within the basement to facilitate the removal of asbestos-containing pipe insulation and flaking lead paint.
12. ECOH will be on-site to perform inspections on July 26, 2017.
13. Please refer to the General Inspection Report for details regarding removal work.

**Conclusions and Recommendations:**

Visual inspections indicate that asbestos and lead related work in the above noted work areas were performed safely and successfully, that control measures were effective, and that all health and safety requirements were met as outlined in applicable provisions of Ontario Regulation 278/05, "*Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*" and Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014.

We trust that this report meets with your requirements and we thank you for the opportunity to be of service. Should you have any questions, please do not hesitate to contact the undersigned at (905) 795-2800.

**ECOH**
Environmental Consulting
Occupational Health

**Prepared by:**

**Mahir Bholat, B.Sc.**
**Senior Environmental Scientist**

**Reviewed by:**

**Zafar Iqbal, B.Eng. (Civil)**
**Senior Project Manager**

| | | | | |
|---|---|---|---|---|
| **Client:** | Toronto District School Board | **Project No.:** | 17201-PR4 | **Inspection Report #19** |
| **Project Location:** | John Fisher Public School (TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, Ontario | | **Date:** | July 26, 2017 |
| **Inspector:** | Mr. Mahir Bholat | | **Page:** | 1 of 2 |

ECOH Management Inc. (ECOH) was retained by Toronto District School Board (TDSB) to conduct inspection and air monitoring services during abatement work requiring removal of hazardous materials within various locations at John Fisher Public School, located at 40 Erskine Avenue, Toronto, Ontario. Asbestos-related work is performed following Ontario Regulation 278/05, *Asbestos on Construction Projects and in Buildings and Repair Operations* - made under the Occupation Health and Safety Act. Lead-related work is performed following Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014. All abatement-related work is completed by High Point Environmental Services Inc. (Highpoint). The purpose of the ECOH inspections are to ensure that abatement work is carried out following the appropriate level of health and safety measures, precautions and procedures. Please refer to General Inspection Report for additional project-specific details.

**Site Inspection:**

1. The ECOH inspector arrived on-site on July 26, 2017 at 10:00 am.
2. The ECOH inspector met with the Abatement Site Supervisor to discuss the scheduled abatement activities, containment procedures, and the prescribed health and safety precautions for the work being performed.
3. ECOH performed pre-contamination inspections for the Class 2 work area (Loc. 102474) and Type 2 glove bag enclosure inside Type 2 full enclosure setup (Loc. 73547 and 73549) within the basement, to ensure enclosure integrity and compliance with required lead and asbestos safety precautions.
4. ECOH inspection also ensured that health and safety facilities have been adequately established and that equipment, tools and supplies are on-site and functioning properly.
5. All other trades and contractors on-site were informed that lead and asbestos abatement within the basement was set to commence.
6. The visual pre-contamination inspections completed by ECOH for the Class 2 lead work areas and Type 2 asbestos work areas revealed no deficiencies. ECOH provided verbal authorization to commence the abatement work.
7. Highpoint commenced Class 2 abatement (Loc. 102474) and Type 2 abatement (Loc. 73547 and 73549) within the basement, to facilitate the removal of asbestos-containing pipe insulation and flaking lead paint.
8. Periodic inspections during the work revealed that all appropriate lead and asbestos safety precautions were in place during abatement.
9. Highpoint completed Type 2 glove bag enclosure inside Type 2 full enclosure work (Loc. 48322 and 48268) on the first floor.
10. ECOH performed a final visual inspection of the Type 2 abatement work areas (Loc. 48322 and 48268) on the first floor upon completion of the work. All work was noted to have been

completed satisfactorily, and the work areas were found to be clean and free of visible dust and debris. Highpoint was given authorization to apply lock down and to tear down the work areas after a suitable drying period.

11. ECOH will be on-site to perform inspections on July 27, 2017.
12. Please refer to the General Inspection Report for details regarding removal work.

**Conclusions and Recommendations:**

Visual inspections indicate that asbestos and lead related work in the above noted work areas were performed safely and successfully, that control measures were effective, and that all health and safety requirements were met as outlined in applicable provisions of Ontario Regulation 278/05, "*Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*" and Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014.

We trust that this report meets with your requirements and we thank you for the opportunity to be of service. Should you have any questions, please do not hesitate to contact the undersigned at (905) 795-2800.

**ECOH**
Environmental Consulting
Occupational Health

**Prepared by:**

**Mahir Bholat, B.Sc.**
**Senior Environmental Scientist**

**Reviewed by:**

**Zafar Iqbal, B.Eng. (Civil)**
**Senior Project Manager**

ECOH
Environmental Consulting
Occupational Health

| | | | | |
|---|---|---|---|---|
| **Client:** | Toronto District School Board | **Project No.:** | 17201-PR4 | **Inspection Report #20** |
| **Project Location:** | John Fisher Public School (TDSB SAP No. 3597)<br>40 Erskine Avenue, Toronto, Ontario | | **Date:** | July 27, 2017 |
| **Inspector:** | Mr. Mahir Bholat | | **Page:** | 1 of 2 |

ECOH Management Inc. (ECOH) was retained by Toronto District School Board (TDSB) to conduct inspection and air monitoring services during abatement work requiring removal of hazardous materials within various locations at John Fisher Public School, located at 40 Erskine Avenue, Toronto, Ontario. Asbestos-related work is performed following Ontario Regulation 278/05, *Asbestos on Construction Projects and in Buildings and Repair Operations* - made under the Occupation Health and Safety Act. Lead-related work is performed following Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April 2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014. All abatement-related work is completed by High Point Environmental Services Inc. (Highpoint). The purpose of the ECOH inspections are to ensure that abatement work is carried out following the appropriate level of health and safety measures, precautions and procedures. Please refer to General Inspection Report for additional project-specific details.

## Site Inspection:

1. The ECOH inspector arrived on-site on July 27, 2017 at 1:00 pm.
2. The ECOH inspector met with the Abatement Site Supervisor to discuss the scheduled abatement activities, containment procedures, and the prescribed health and safety precautions for the work being performed.
3. Highpoint completed Class 2 work (Loc. 102474) and Type 2 glove bag enclosure inside Type 2 full enclosure work (Loc. 73547 and 73549) within the basement.
4. ECOH performed a final visual inspection of the Class 2 abatement work area (Loc. 102474) and Type 2 abatement work areas (Loc. 73547 and 73549) within the basement upon completion of the work. All work was noted to have been completed satisfactorily, and the work areas were found to be clean and free of visible dust and debris. Highpoint was given authorization to apply lock down and to tear down the work areas after a suitable drying period.
5. ECOH and Highpoint performed a final walkthrough inspection of all the work areas to confirm all abatement work was completed as per the Scope of Work and no issues were identified.
6. All accessible friable asbestos-containing pipe insulation, flaking lead paint, and lead contaminated ceiling tiles have been removed.
7. Abatement work for this project is now complete.
8. Please refer to the General Inspection Report for details regarding removal work.

## Conclusions and Recommendations:

Visual inspections indicate that asbestos and lead related work in the above noted work areas were performed safely and successfully, that control measures were effective, and that all health and safety requirements were met as outlined in applicable provisions of Ontario Regulation 278/05, "*Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*" and Ontario Ministry of Labour document; "*Guideline - Lead on Construction Projects*", dated April

2011, and the Environmental Abatement Council of Ontario (EACO) document; "*Lead Guideline for Construction, Renovation, Maintenance or Repair*", dated October 2014. Abatement activities are now complete and all areas are safe for occupancy.

We trust that this report meets with your requirements and we thank you for the opportunity to be of service. Should you have any questions, please do not hesitate to contact the undersigned at (905) 795-2800.

**ECOH**
Environmental Consulting
Occupational Health

**Prepared by:**

**Mahir Bholat, B.Sc.**
**Senior Environmental Scientist**

**Reviewed by:**

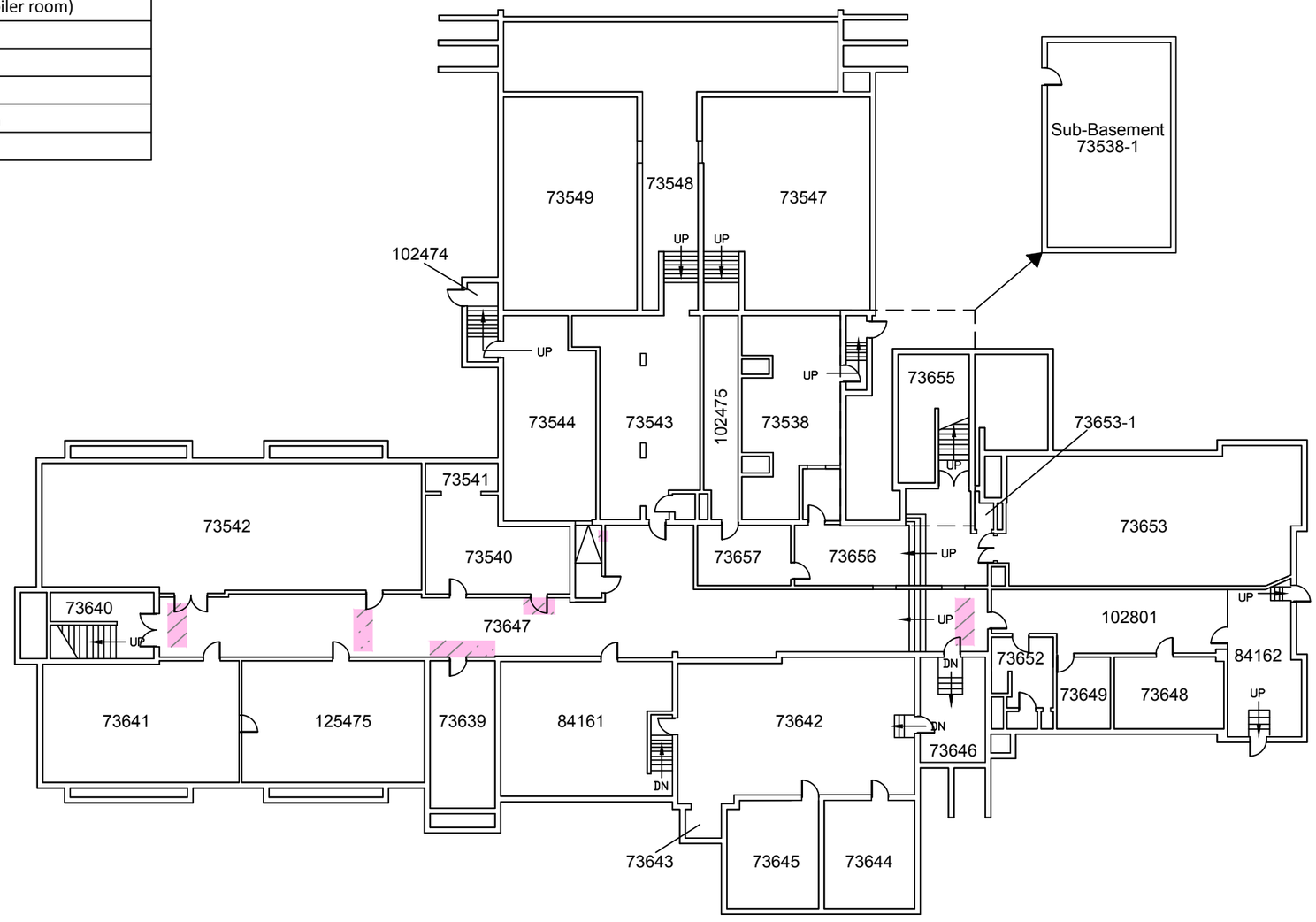
**Zafar Iqbal, B.Eng. (Civil)**
**Senior Project Manager**

# APPENDIX C

POST ABATEMENT DRAWINGS

| Location # | Description |
|---|---|
| 73538 | Basement: Washroom - Girls (girls washroom) |
| 73538-1 | Basement: Sub-Basement (includes staircase to location) |
| 73540 | Basement: HVAC/Fan Room |
| 73541 | Basement: HVAC/Fan Room |
| 73542 | Basement: Lunchroom (lunch room A) |
| 73543 | Basement: Storage Room |
| 73544 | Basement: Washroom - Boys (boys washroom) |
| 73547 | Basement: Crawlspace |
| 73548 | Basement: Crawlspace |
| 73549 | Basement: Crawlspace |
| 73639 | Basement: Electrical Room |
| 73640 | Basement: Stairwell (Exit 2) |
| 73641 | Basement: Classroom B1 |
| 73642 | Basement: Boiler / Furnace Room (boiler room) |
| 73643 | Basement: Old Elevator Shaft |
| 73644 | Basement: Incinerator Room |
| 73645 | Basement: Storage Room |
| 73646 | Basement: Main Water Shutoff Room |
| 73647 | Basement: Corridor |

| | |
|---|---|
| 73648 | Basement: Kitchen (lunch room) |
| 73649 | Basement: Caretakers Office (head caretakers office) |
| 73652 | Basement: Washroom (staff washroom) |
| 73653 | Basement: Lunchroom (lunch room c) |
| 73653-1 | Basement: Mechanical Chase |
| 73655 | Basement: Stairwell (corridor) |
| 73656 | Basement: Entrance Foyer (hallway and stairs landing) |
| 73657 | Basement: Storage Room |
| 84161 | Basement: Mechanical Room |
| 84162 | Basement: Storage Room (cage) |
| 102474 | Basement: Stairwell |
| 102475 | Basement: Mechanical Chase |
| 102801 | Basement: Caretakers Room |
| 125475 | Basement: Classroom B2 |




# Legend

**Description of Asbestos-Containing Materials**

ACM Pipe Insulation
(Concealed / Inaccessible Areas)

Exterior ID: 48385-1
Roof ID: 48385

Reference
Drawings based on plans provided by the Toronto District School Board

## Figure BA

**LOCATION:**
40 Erskine Avenue
Toronto, Ontario

**BUILDING NAME:**
John Fisher Jr. Public School - 3597

## Basement Plan

| | | | |
|---|---|---|---|
| CLIENT: Toronto District School Board | | | |
| PROJECT NUMBER: 17201-PR4 | DATE: October 2017 | DRW BY: MS | |
| CAD FILE: FIG1-4 P17363 John Fisher | SCALE: Not To Scale | CHK BY: MB | |

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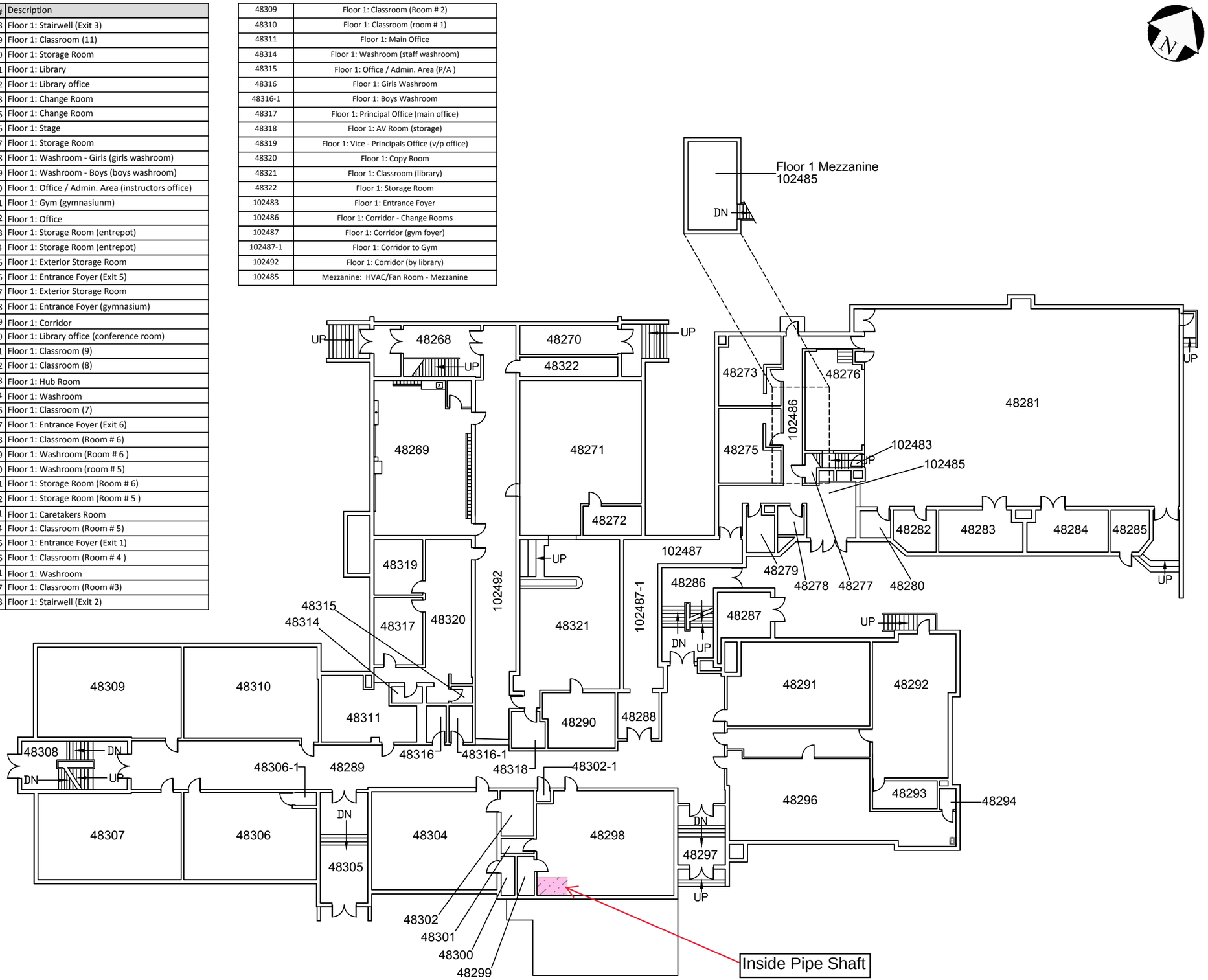
| Location # | Description |
|---|---|
| 48268 | Floor 1: Stairwell (Exit 3) |
| 48269 | Floor 1: Classroom (11) |
| 48270 | Floor 1: Storage Room |
| 48271 | Floor 1: Library |
| 48272 | Floor 1: Library office |
| 48273 | Floor 1: Change Room |
| 48275 | Floor 1: Change Room |
| 48276 | Floor 1: Stage |
| 48277 | Floor 1: Storage Room |
| 48278 | Floor 1: Washroom - Girls (girls washroom) |
| 48279 | Floor 1: Washroom - Boys (boys washroom) |
| 48280 | Floor 1: Office / Admin. Area (instructors office) |
| 48281 | Floor 1: Gym (gymnasiunm) |
| 48282 | Floor 1: Office |
| 48283 | Floor 1: Storage Room (entrepot) |
| 48284 | Floor 1: Storage Room (entrepot) |
| 48285 | Floor 1: Exterior Storage Room |
| 48286 | Floor 1: Entrance Foyer (Exit 5) |
| 48287 | Floor 1: Exterior Storage Room |
| 48288 | Floor 1: Entrance Foyer (gymnasium) |
| 48289 | Floor 1: Corridor |
| 48290 | Floor 1: Library office (conference room) |
| 48291 | Floor 1: Classroom (9) |
| 48292 | Floor 1: Classroom (8) |
| 48293 | Floor 1: Hub Room |
| 48294 | Floor 1: Washroom |
| 48296 | Floor 1: Classroom (7) |
| 48297 | Floor 1: Entrance Foyer (Exit 6) |
| 48298 | Floor 1: Classroom (Room # 6) |
| 48299 | Floor 1: Washroom (Room # 6 ) |
| 48300 | Floor 1: Washroom (room # 5) |
| 48301 | Floor 1: Storage Room (Room # 6) |
| 48302 | Floor 1: Storage Room (Room # 5 ) |
| 48302-1 | Floor 1: Caretakers Room |
| 48304 | Floor 1: Classroom (Room # 5) |
| 48305 | Floor 1: Entrance Foyer (Exit 1) |
| 48306 | Floor 1: Classroom (Room # 4 ) |
| 48306-1 | Floor 1: Washroom |
| 48307 | Floor 1: Classroom (Room #3) |
| 48308 | Floor 1: Stairwell (Exit 2) |

| | |
|---|---|
| 48309 | Floor 1: Classroom (Room # 2) |
| 48310 | Floor 1: Classroom (room # 1) |
| 48311 | Floor 1: Main Office |
| 48314 | Floor 1: Washroom (staff washroom) |
| 48315 | Floor 1: Office / Admin. Area (P/A ) |
| 48316 | Floor 1: Girls Washroom |
| 48316-1 | Floor 1: Boys Washroom |
| 48317 | Floor 1: Principal Office (main office) |
| 48318 | Floor 1: AV Room (storage) |
| 48319 | Floor 1: Vice - Principals Office (v/p office) |
| 48320 | Floor 1: Copy Room |
| 48321 | Floor 1: Classroom (library) |
| 48322 | Floor 1: Storage Room |
| 102483 | Floor 1: Entrance Foyer |
| 102486 | Floor 1: Corridor - Change Rooms |
| 102487 | Floor 1: Corridor (gym foyer) |
| 102487-1 | Floor 1: Corridor to Gym |
| 102492 | Floor 1: Corridor (by library) |
| 102485 | Mezzanine: HVAC/Fan Room - Mezzanine |




# Legend

**Description of Asbestos-Containing Materials**

ACM Pipe Insulation
(Concealed / inaccessible Areas)

Exterior ID: 48385-1
Roof ID: 48385

Reference
Drawings based on plans provided by the Toronto District School Board

## Figure 1

**LOCATION:**

40 Erskine Avenue
Toronto, Ontario

**BUILDING NAME:**

John Fisher Jr. Public School - 3597

## First Floor Plan

| | | | |
|---|---|---|---|
| CLIENT: Toronto District School Board | | | |
| PROJECT NUMBER: 17201-PR4 | DATE: October 2017 | DRW BY: MS | |
| CAD FILE: FIG1-4 P17363 John Fisher | SCALE: Not To Scale | CHK BY: MB | |

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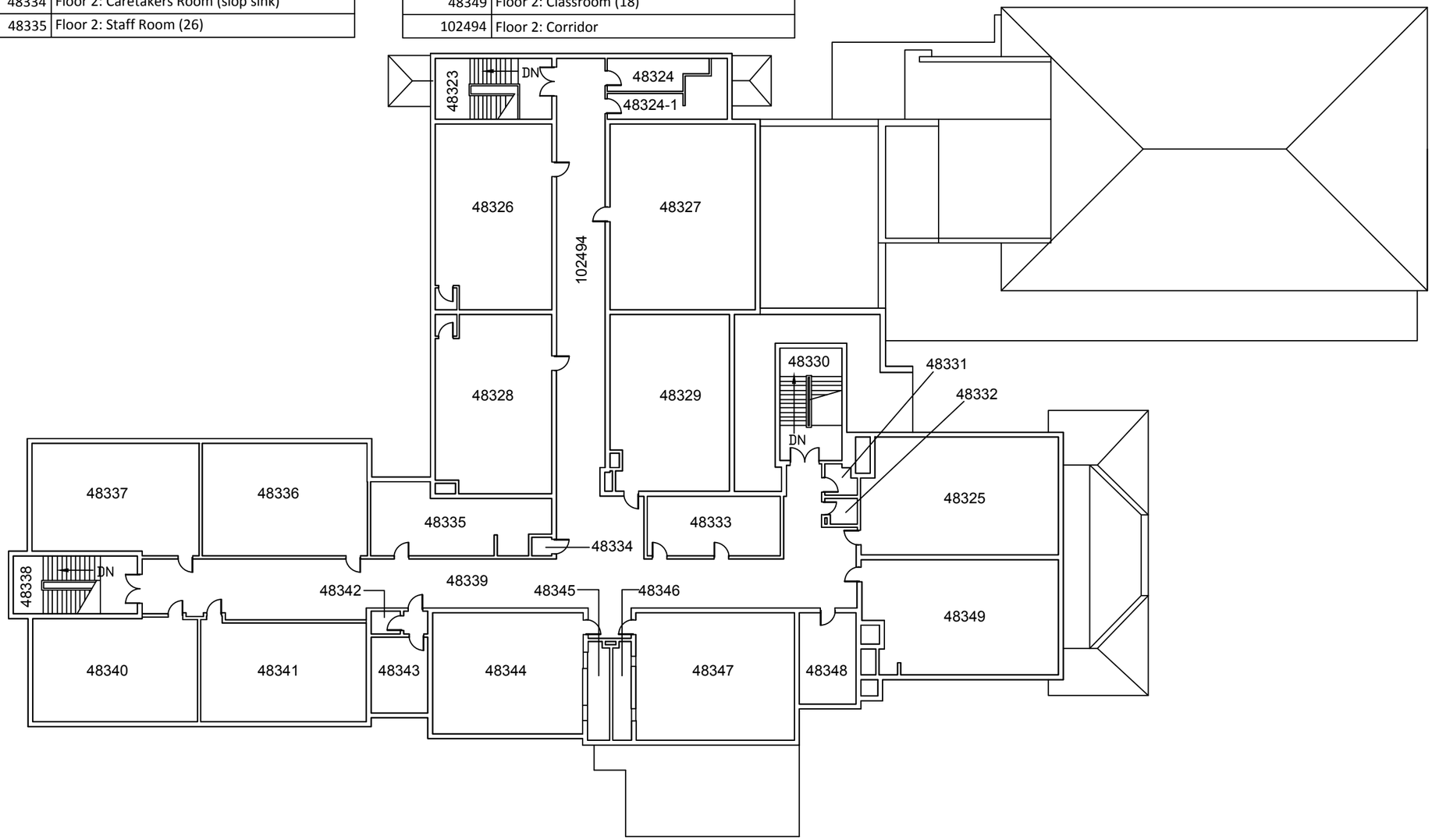
| Location # | Description |
|---|---|
| 48323 | Floor 2: Stairwell (Exit 3) |
| 48324 | Floor 2: Washroom - Mens |
| 48324-1 | Floor 2: Washroom - Womens |
| 48325 | Floor 2: Classroom (19) |
| 48326 | Floor 2: Classroom (22) |
| 48327 | Floor 2: Music Classroom |
| 48328 | Floor 2: Classroom (21) |
| 48329 | Floor 2: Classroom (20) |
| 48330 | Floor 2: Entrance Foyer (Exit 5) |
| 48331 | Floor 2: Washroom (staff washroom) |
| 48332 | Floor 2: Storage Room |
| 48333 | Floor 2: Spec. Ed Classroom (20A) |
| 48334 | Floor 2: Caretakers Room (slop sink) |
| 48335 | Floor 2: Staff Room (26) |

| | |
|---|---|
| 48336 | Floor 2: Classroom (12) |
| 48337 | Floor 2: Classroom (13) |
| 48338 | Floor 2: Stairwell (Exit 2) |
| 48339 | Floor 2: Corridor |
| 48340 | Floor 2: Classroom (14) |
| 48341 | Floor 2: Classroom (15) |
| 48342 | Floor 2: Washroom |
| 48343 | Floor 2: Remedial Room |
| 48344 | Floor 2: Classroom (16) |
| 48345 | Floor 2: Coat/Shoe Area (closet) |
| 48346 | Floor 2: Coat/Shoe Area (closet) |
| 48347 | Floor 2: Classroom (17) |
| 48348 | Floor 2: French Connection Office |
| 48349 | Floor 2: Classroom (18) |
| 102494 | Floor 2: Corridor |




# Legend

**Description of Asbestos-Containing Materials**

Exterior ID: 48385-1
Roof ID: 48385

Reference
Drawings based on plans provided by the Toronto District School Board

## Figure 2

**LOCATION:**
40 Erskine Avenue
Toronto, Ontario

**BUILDING NAME:**
John Fisher Jr. Public School - 3597

## Second Floor Plan

| | | | |
|---|---|---|---|
| CLIENT: Toronto District School Board | | | |
| PROJECT NUMBER: 17201-PR4 | DATE: October 2017 | DRW BY: MS |
| CAD FILE: FIG1-4 P17363 John Fisher | SCALE: Not To Scale | CHK BY: MB |

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Occupational Health

# APPENDIX D

SITE PHOTOGRAPHS (REMAINING FRIABLE ACMs)

| Client Name: | Site Location: | Project No. |
|---|---|---|
| Toronto District School Board | John Fisher Jr. Public School (Facility SAP: 3597) | 17201-PR4 |

**Photo No. 1.**

**Description:**

Aircell insulation present above Electrical Room door in the Basement Corridor. Material has been encapsulated as it was not able to be removed.

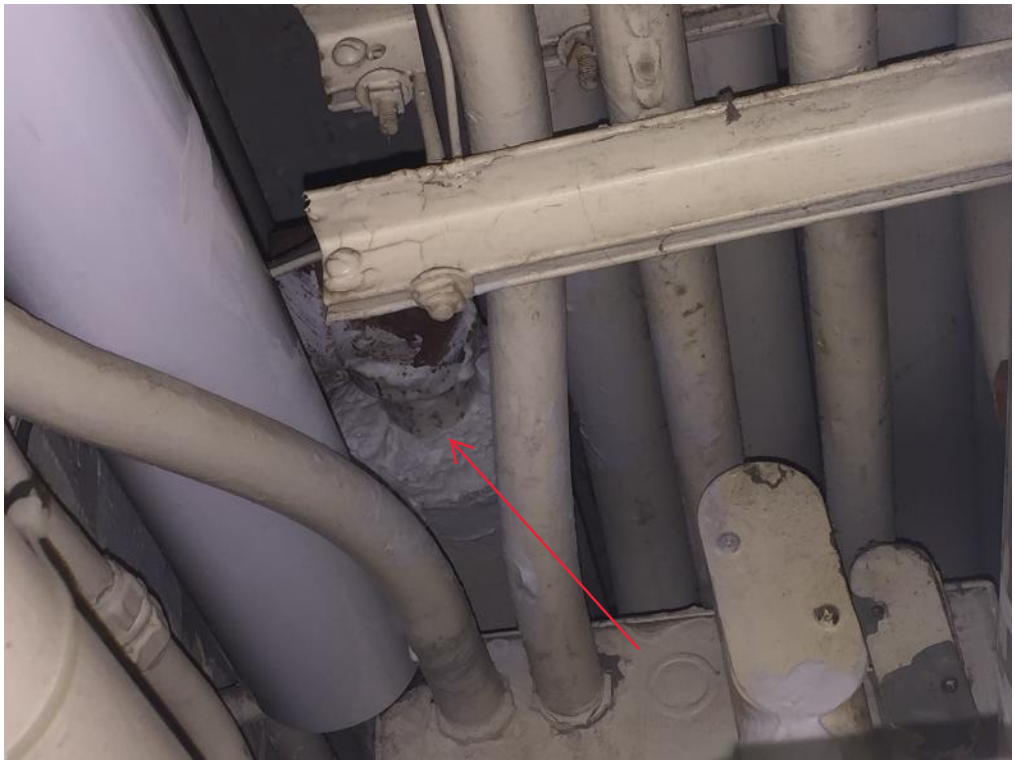

**Photo No. 2.**

**Description:**

Pipe insulation suspected to be present inside duct casing. Open sections in the Basement Corridor were caulked (to best extent possible).

| Client Name: | Site Location: | Project No. |
|---|---|---|
| Toronto District School Board | John Fisher Jr. Public School (Facility SAP: 3597) | 17201-PR4 |

**Photo No. 3.**

**Description:**

Pipe insulation suspected to be present inside duct casing. Open sections in the Basement Corridor were caulked and covered (to best extent possible).

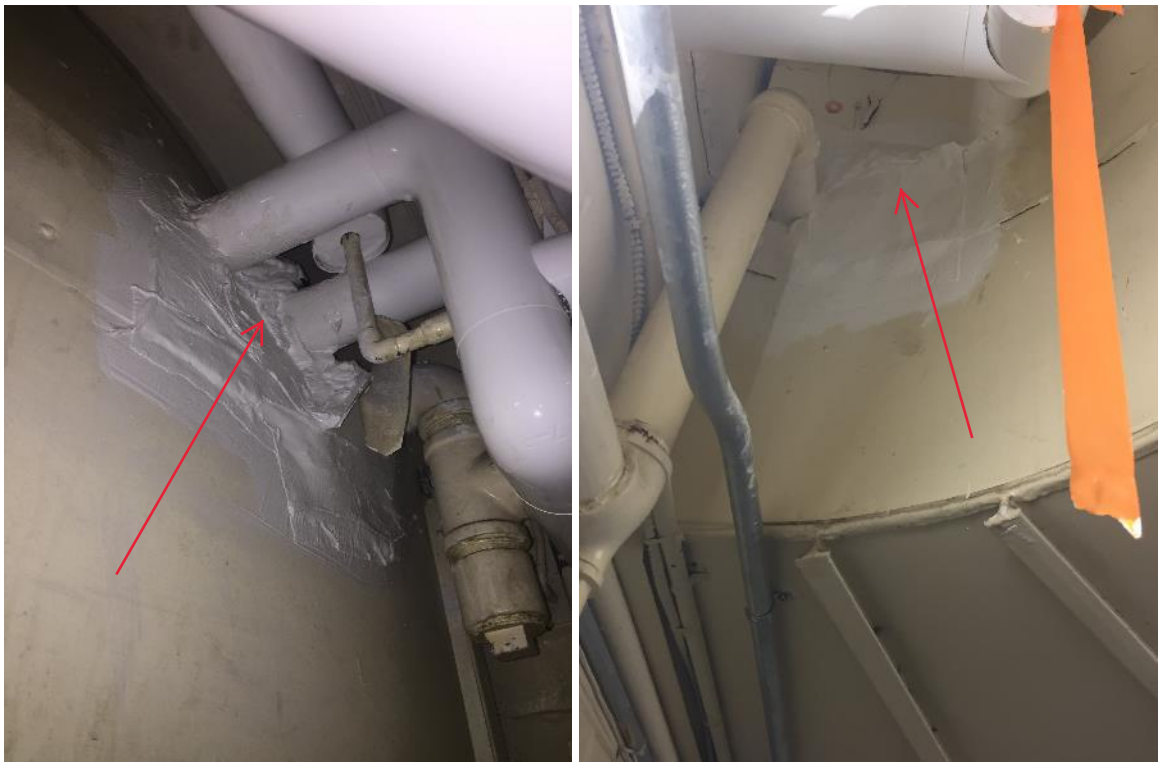

**Photo No. 4.**

**Description:**

Pipe insulation suspected to be present inside duct casing. Open sections in the Basement Corridor were caulked and covered (to best extent possible).