



CONSULTANTS
Occupational Hygiene & Environment

ASBESTOS SURVEY 2023 ANNUAL UPDATE REPORT

Queensway Health Centre
150 Sherway Drive
Toronto, Ontario
M9C 1A5

Presented to:

Trillium Health Partners
100 Queensway West
Mississauga, Ontario
L5B 1B8

March 2023

OHE Project No.: 28418

Submitted by:

OHE Consultants
Occupational Hygiene & Environment
311 Matheson Blvd. East
Mississauga, Ontario
L4Z 1X8



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1. INTRODUCTION

OHE Consultants (OHE) was retained by Trillium Health Partners (THP) to prepare an annual update for the previously issued building survey for the presence of Asbestos-Containing Materials (ACMs) at the Queensway Health Centre (QHC) located at 150 Sherway Drive, Toronto, Ontario (herein referred to as the “Subject Location”). The purpose of this update is to fulfill the annual update requirements of the Asbestos Management Program in accordance with Ontario Regulation 278/05, The Regulation Respecting Asbestos on Construction Projects and in Buildings and Repair Operations.

This report is provided as a supplement to the OHE Survey Report issued in October 2008 and readers are referred to the previous October 2008 initial report for complete survey methodologies, scope, findings, recommendations, limitations, etc.

This report provides a summary of the work (i.e. asbestos abatement projects, bulk sampling projects and designated substances and hazardous material survey projects) that was completed by OHE at the Subject Location between March 2022 and February 2023. Any survey or abatement activities completed subsequent to this period will be captured as part of the next annual update (to be completed in February of 2024).

The following sections present the annual survey update scope of work, a summary of projects reviewed as part of the update activities and the assessment results and recommendations. These findings are presented in the form of updated drawings in Appendix A. Recommendations include supplemental corrective actions as presented in Appendix B.

It should be noted that the updated drawing set (see Appendix A) includes areas where friable and/or non-friable ACMs have been identified within the Subject Location based on OHE’s review of survey data collected up to February 2023. This updated drawing set is intended to supersede and replace the sets previously issued as part of the OHE Survey Report issued in April 2022.

2. DESCRIPTION OF WORK

2.1. Scope of Work

The scope of work involved a review of OHE reports and documentation regarding onsite asbestos abatement projects and projects which required bulk sampling and analysis of building materials for the presence of asbestos during the subject period. Following the review of these documents, drawings showing the location of asbestos-containing materials were updated and an updated corrective action table was prepared (where applicable). An area-by-area resurvey of identified friable and non-friable

ACMs was completed at the Subject Location. The resurvey included a site visit and visual inspection of the identified ACMs to document changes in status/condition.

Following the asbestos review and the site inspection, the information was collected and analyzed and the findings were presented in this report.

2.2. Summary of OHE Projects

The following is a summary of OHE projects (in order by OHE Project #) that were performed at the Subject Location and were either asbestos abatement projects or required the bulk sampling and analysis of building materials for the presence of asbestos (e.g. project-specific Designated Substance Surveys).

2.2.1. *OHE Project 28256 – Temp CT Trailer Project, Ground Floor*
Pre-Renovation Hazardous Building Materials Survey, November 2022

2.2.2. *OHE Project 28360 – DI Renovation Project, Ground Floor*
Pre-Renovation Hazardous Building Materials Survey, January 2023

3. ASSESSMENT RESULTS

Asbestos-containing materials were noted to be in good conditions. As such, no corrective actions are required at this time.

In cases where asbestos was identified in some but not all samples of similar materials, the conservative approach was applied and all such material was assumed and reported to contain asbestos. When a renovation or demolition project is planned, we recommend a detailed sampling of suspected asbestos-containing material to confirm the presence of asbestos. Materials that are removed through renovations should be replaced with non-asbestos-containing materials only. This must be documented. Confirmatory sampling will not be required on any new products if the manufacturer supplies written confirmation that these materials are asbestos free.

As the original survey and reassessment were non-destructive in nature, asbestos may be present in areas not accessible for view and identification. In situations where the asbestos-containing materials extend into a non-accessible area, the materials were assumed to also be present in those areas and have been reported as such. Contractors and maintenance personnel should be warned of the possibility of undisclosed asbestos when breaking into enclosed areas. Friable and non-friable materials discovered in these areas should be treated as asbestos-containing until proven otherwise.

4. RECOMENDATIONS

As part of the Asbestos Management Program already in place for this building, in accordance with the requirements of Ontario Regulation 278/05, **THP** should ensure that the following compliance measures are implemented and/or maintained:

1. A copy of the base survey and update reports must be kept on the premises to reflect areas where asbestos-containing material is located;
2. A record of the locations where asbestos-containing material has been removed during renovations must be kept on the premises;
3. Provide any person who is an occupier of the building, written notice of any information in the report that relates to the area occupied by the person;
4. Provide any employer with whom the **THP** arranges or contracts for work written notice of the information in the report, if the work,
 - a. may involve material mentioned in the record, or
 - b. may be carried on in close proximity to such material and may disturb it;
5. Advise the workers employed by the **THP** who work in the building of the information in the record, if the workers may do work that,
 - a. involves material mentioned in the report, or
 - b. is to be carried on in close proximity to such material and may disturb it;
6. Establish and maintain, for the training and instruction of every worker employed by the **THP** who works in the building and may do work described in item 4 above, a program dealing with,
 - a. the hazards of asbestos exposure,
 - b. the use, care and disposal of protective equipment and clothing to be used and worn when doing the work,
 - c. personal hygiene to be observed when doing the work, and

- d. the measures and procedures prescribed by this Regulation;
- 7. Develop a written program, including a management allocation of internal responsibilities, standard forms for reporting concerns and work practices or procedures to be followed;
- 8. The survey report shall be updated as follows:
 - a. at least once in each 12-month period (continuing in February 2024); and
 - b. whenever the **THP** becomes aware of new information relating to the matters the report deals with.

5. GENERAL STATEMENT OF LIMITATIONS

The information and opinions rendered in this report are for use exclusively by the **Trillium Health Partners**. OHE reserves the right to review and comment on any interpretation of the data or conclusions derived by the **Trillium Health Partners**. No other representation, either expressed or implied, is included in this report.

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

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

Dated March 2023

OHE Consultants

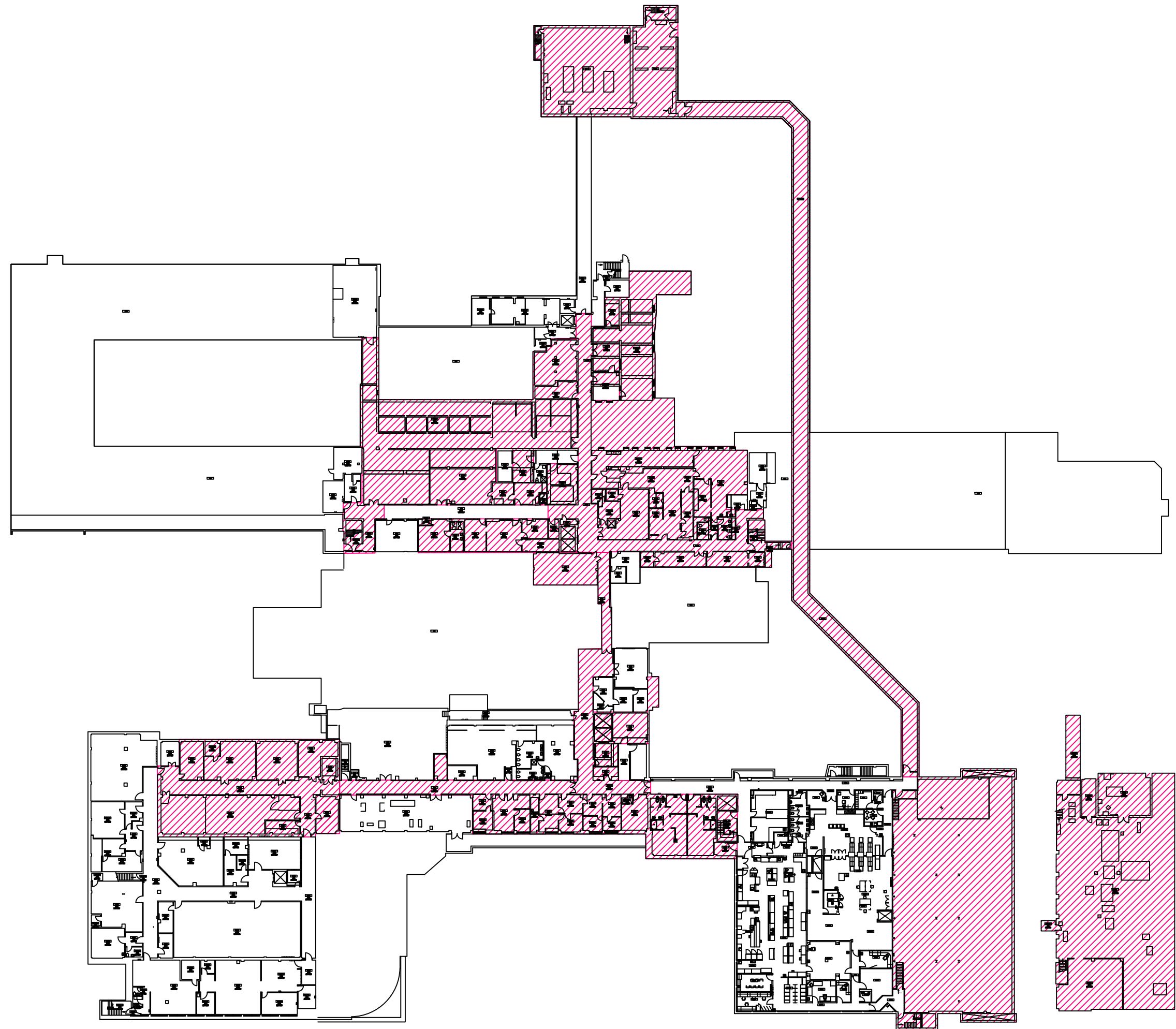
Occupational Hygiene & Environment

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Senior Project Manager

Reviewed by:
Michal Zitnik, M.H.Sc., ROH, CIH
Vice President

Drawings



Legend:

 Mechanical Systems
Insulation

Notes:
Locations of site features are approximate and may vary from that shown

Drawing Title:

Friable
Asbestos-Containing Materials

Client Address:

Trillium Health Partners
100 Queensway West
Mississauga, ON

Project Location:

Basement
Queensway Health Centre
150 Sherway Drive
Toronto, Ontario

Project No: 28418

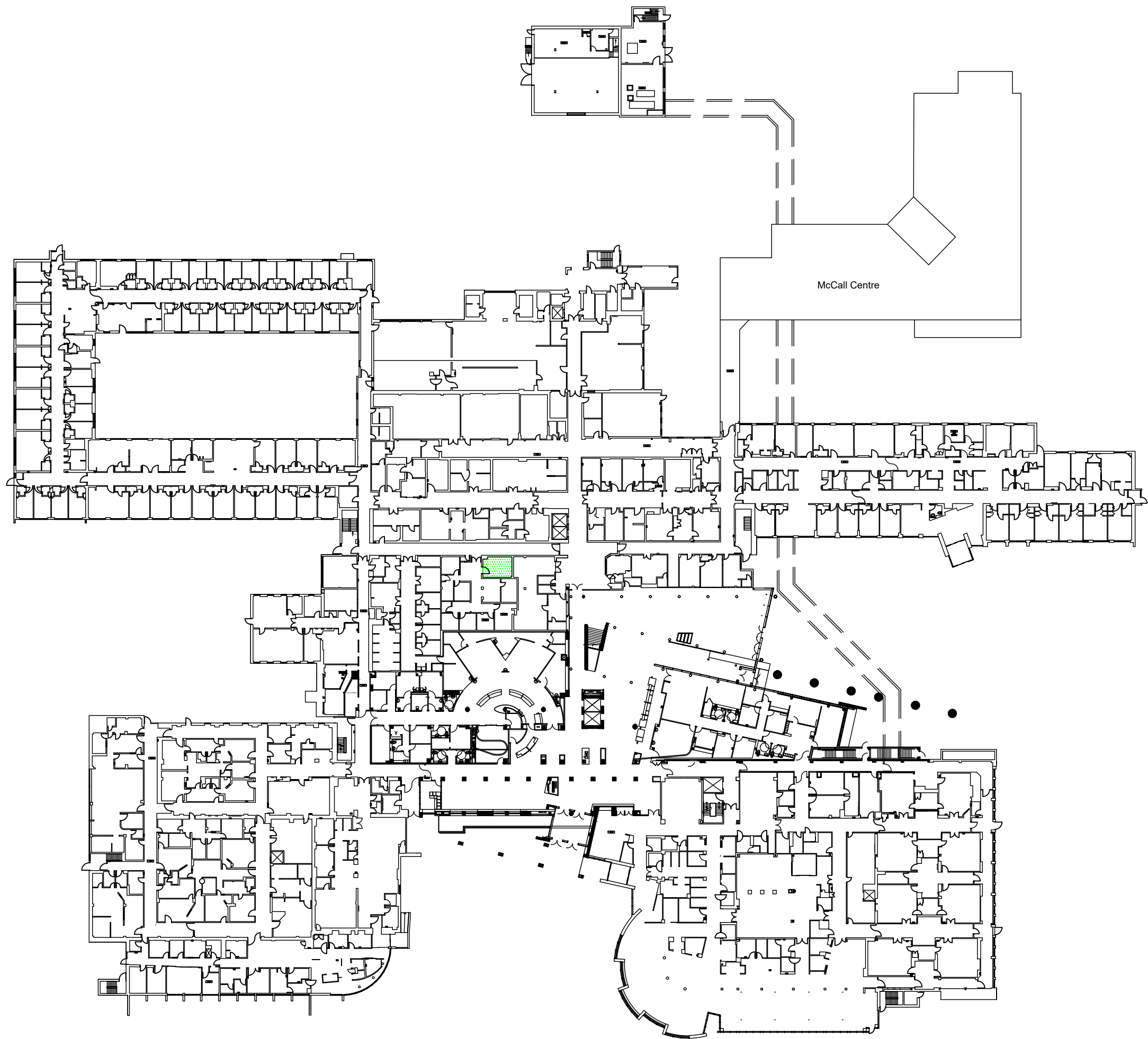
Date: March 2023
Scale: NTS
Drawn By: NB
Approved By: MZ




Drawing No:

1.1





Legend:

 Texture Coat

NOTE:
All Mechanical Systems
Insulation present in all the
locations shown in this
drawing shall be assumed
asbestos-containing.

Notes:
Locations of site features are
approximate and may vary from that
shown

Drawing Title:

**Friable
Asbestos-Containing Materials**

Client Address:

**Trillium Health Partners
100 Queensway West
Mississauga, ON**

Project Location:


**Main Floor
Queensway Health Centre
150 Sherway Drive
Toronto, Ontario**

Project No: 28418

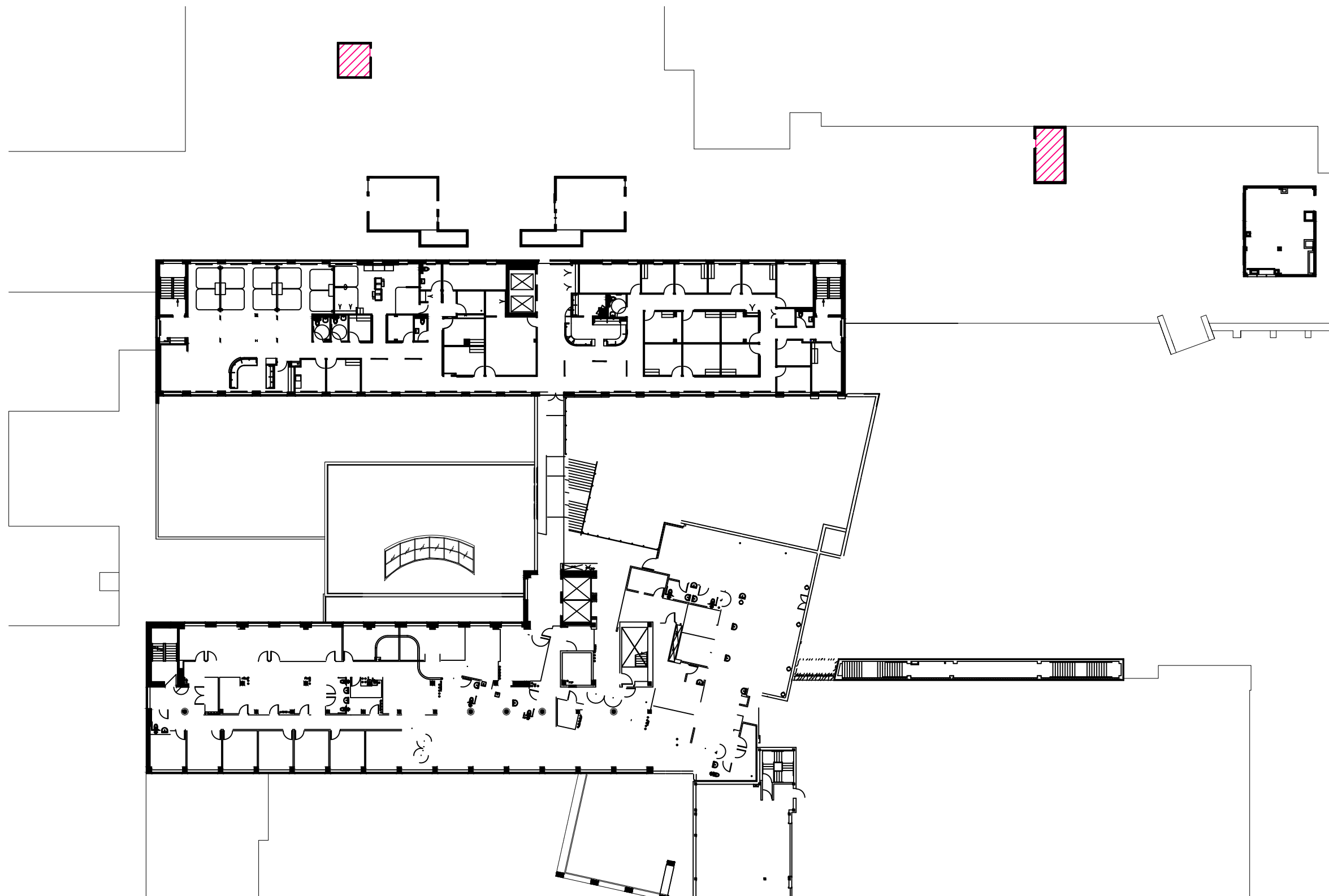
Date: March 2023
Scale: NTS
Drawn By: NB
Approved By: MZ

Drawing No:


1.2



JH CONSULTANTS
Occupational Hygiene & Environment



Legend:

 Mechanical Systems
Insulation

Notes:
Locations of site features are approximate and may vary from that shown

Drawing Title:

**Friable
Asbestos-Containing Materials**


Client Address:

Trillium Health Partners
100 Queensway West
Mississauga, ON


Project Location:

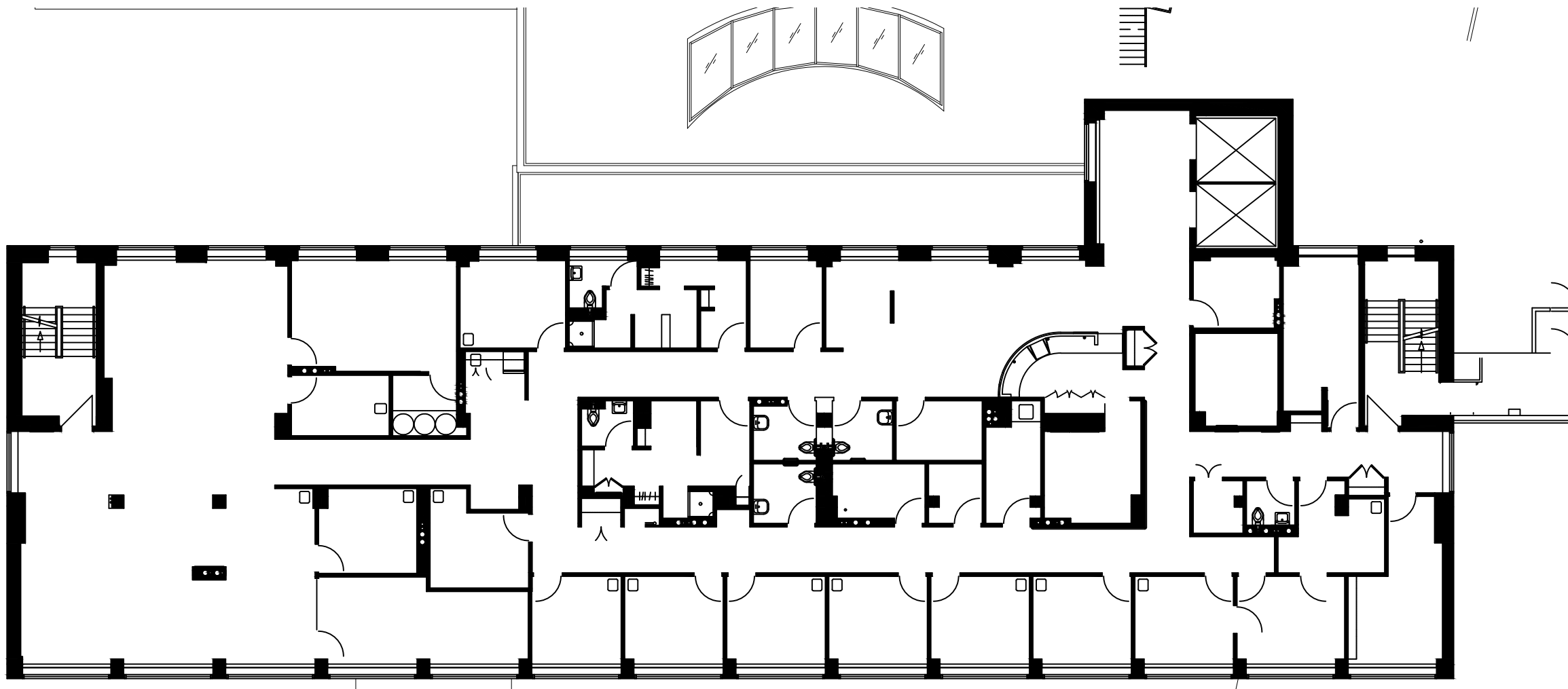
Second Floor
Queensway Health Centre
150 Sherway Drive
Toronto, Ontario

Project No: 28418



Date: March 2023	Drawing No: 1.3
Scale: NTS	
Drawn By: NB	
Approved By: MZ	





Legend:

NOTE:
All Mechanical Systems
Insulation present in all the
locations shown in this
drawing shall be assumed
asbestos-containing.

Notes:
Locations of site features are
approximate and may vary from that
shown

Drawing Title:

Friable
Asbestos-Containing Materials

Client Address:

Trillium Health Partners
100 Queensway West
Mississauga, ON

Project Location:

Third Floor
Queensway Health Centre
150 Sherway Drive
Toronto, Ontario

Project No: 28418



Date: March 2023

Drawing No:

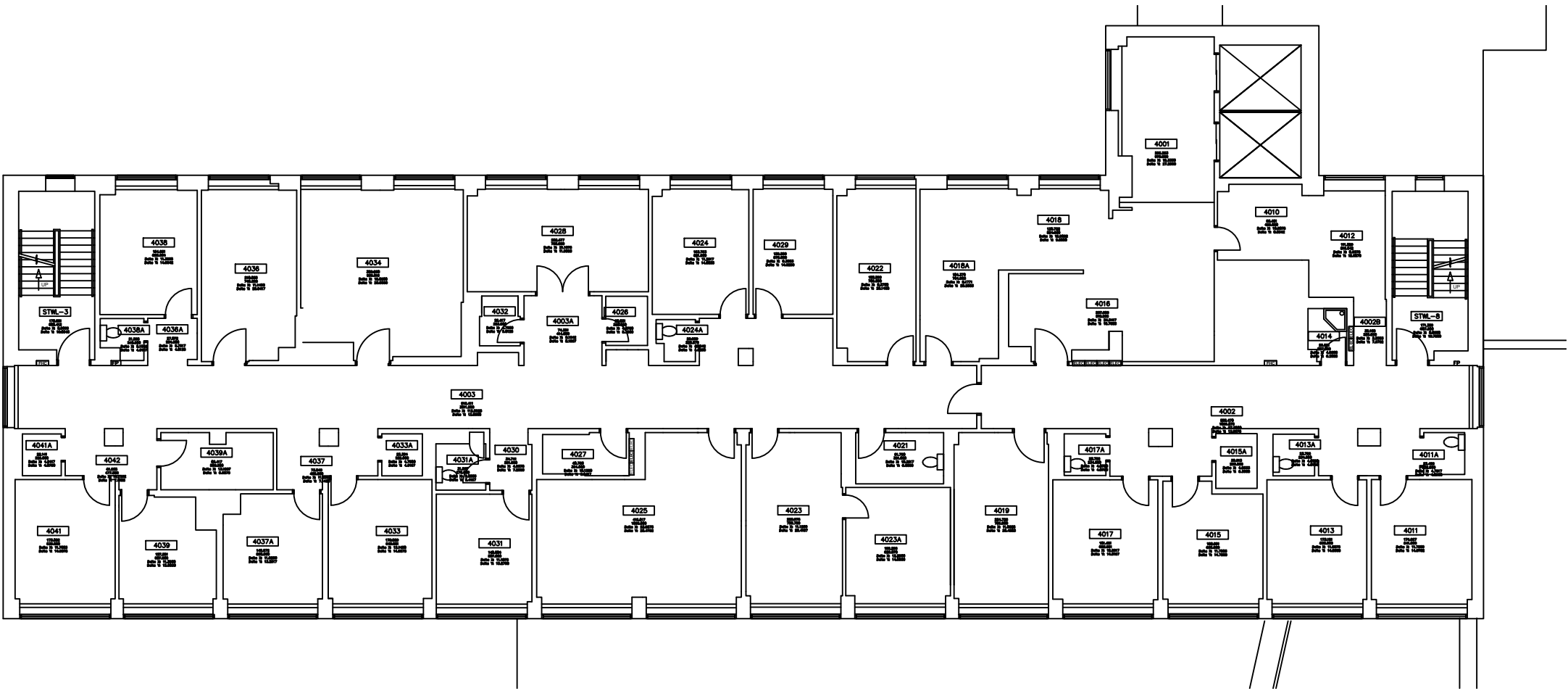
Scale: NTS

Drawn By: NB

Approved By: MZ

1.4





Legend:

NOTE:
All Mechanical Systems
Insulation present in all the
locations shown in this
drawing shall be assumed
asbestos-containing.

Notes:
Locations of site features are
approximate and may vary from that
shown

Drawing Title:

Friable
Asbestos-Containing Materials

Client Address:

Trillium Health Partners
100 Queensway West
Mississauga, ON

Project Location:

Fourth Floor
Queensway Health Centre
150 Sherway Drive
Toronto, Ontario

Project No: 28418



Date: March 2023

Drawing No:

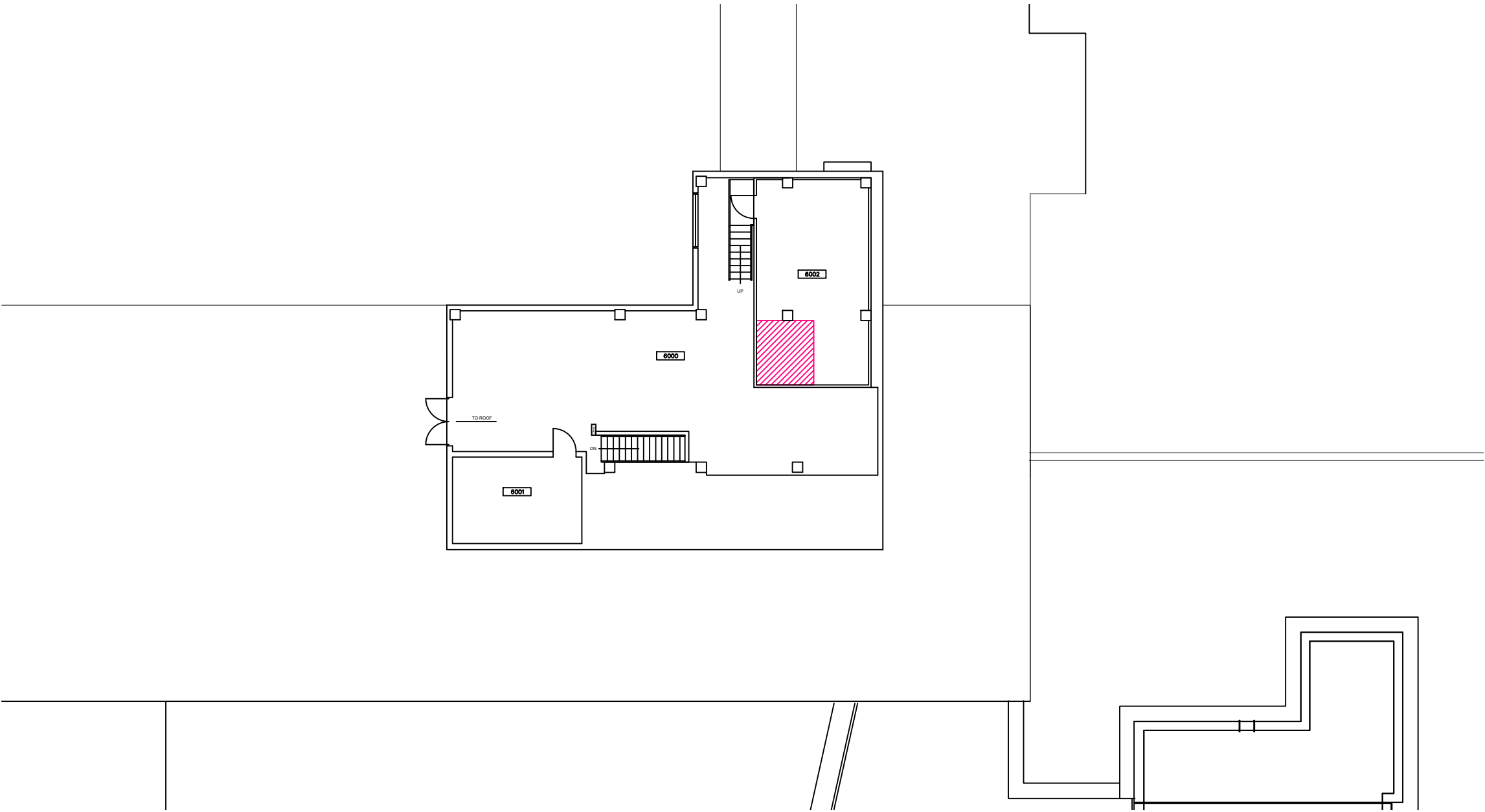
Scale: NTS

Drawn By: NB


Approved By: MZ

1.5





Legend:

 Mechanical Systems
Insulation

Notes:
Locations of site features are
approximate and may vary from that
shown

Drawing Title:

**Friable
Asbestos-Containing Materials**

Client Address:

**Trillium Health Partners
100 Queensway West
Mississauga, ON**

Project Location:

**Penthouse
Queensway Health Centre
150 Sherway Drive
Toronto, Ontario**

Project No: 28418



Date: March 2023

Drawing No:

Scale: NTS

Drawn By: NB

Approved By: MZ

1.7





Legend:

- Vinyl Floor Tiles (VFT)
- Transite Pipe
- Vinyl Sheet Flooring (VSF)
- Transite Ceiling Board

NOTE:
All Drywall Joint Compound present in all the locations shown in this drawing shall be assumed asbestos-containing.

Notes:
Locations of site features are approximate and may vary from that shown

Drawing Title:
Non-Friable Asbestos-Containing Materials

Client Address:
Trillium Health Partners
100 Queensway West
Mississauga, ON

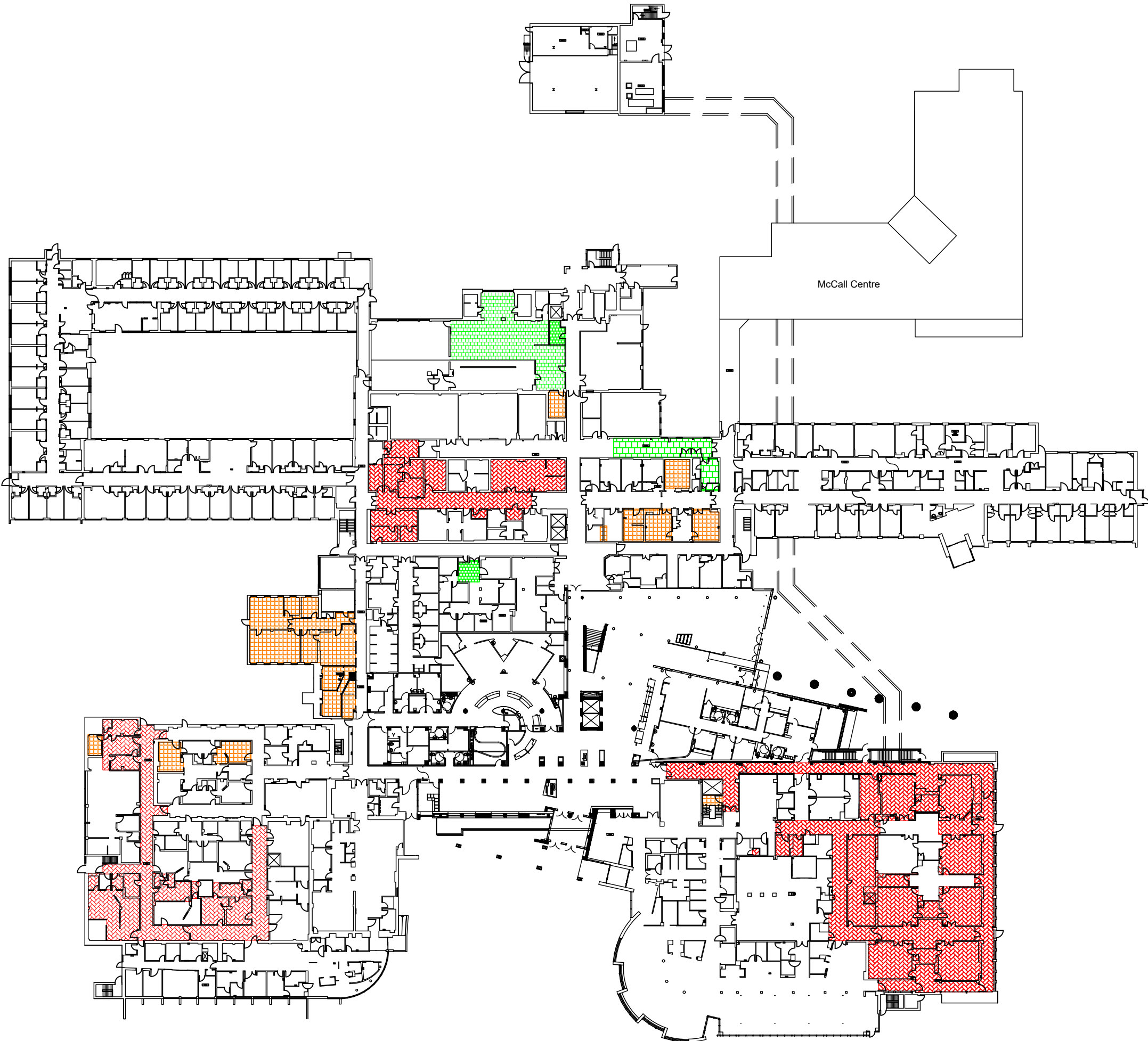
Project Location:
Basement
Queensway Health Centre
150 Sherway Drive
Toronto, Ontario

Project No: 28418

Date: March 2023
Scale: NTS
Drawn By: NB
Approved By: MZ

Drawing No:
2.1

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Occupational Hygiene & Environment



- Legend:
- Transite Ceiling Board
 - Vinyl Floor Tiles (VFT)
 - Vinyl Sheet Flooring (VSF)

NOTE:
All Drywall Joint Compound present in all the locations shown in this drawing shall be assumed asbestos-containing.

Notes:
Locations of site features are approximate and may vary from that shown

Drawing Title:
Non-Friable Asbestos-Containing Materials

Client Address:
**Trillium Health Partners
100 Queensway West
Mississauga, ON**

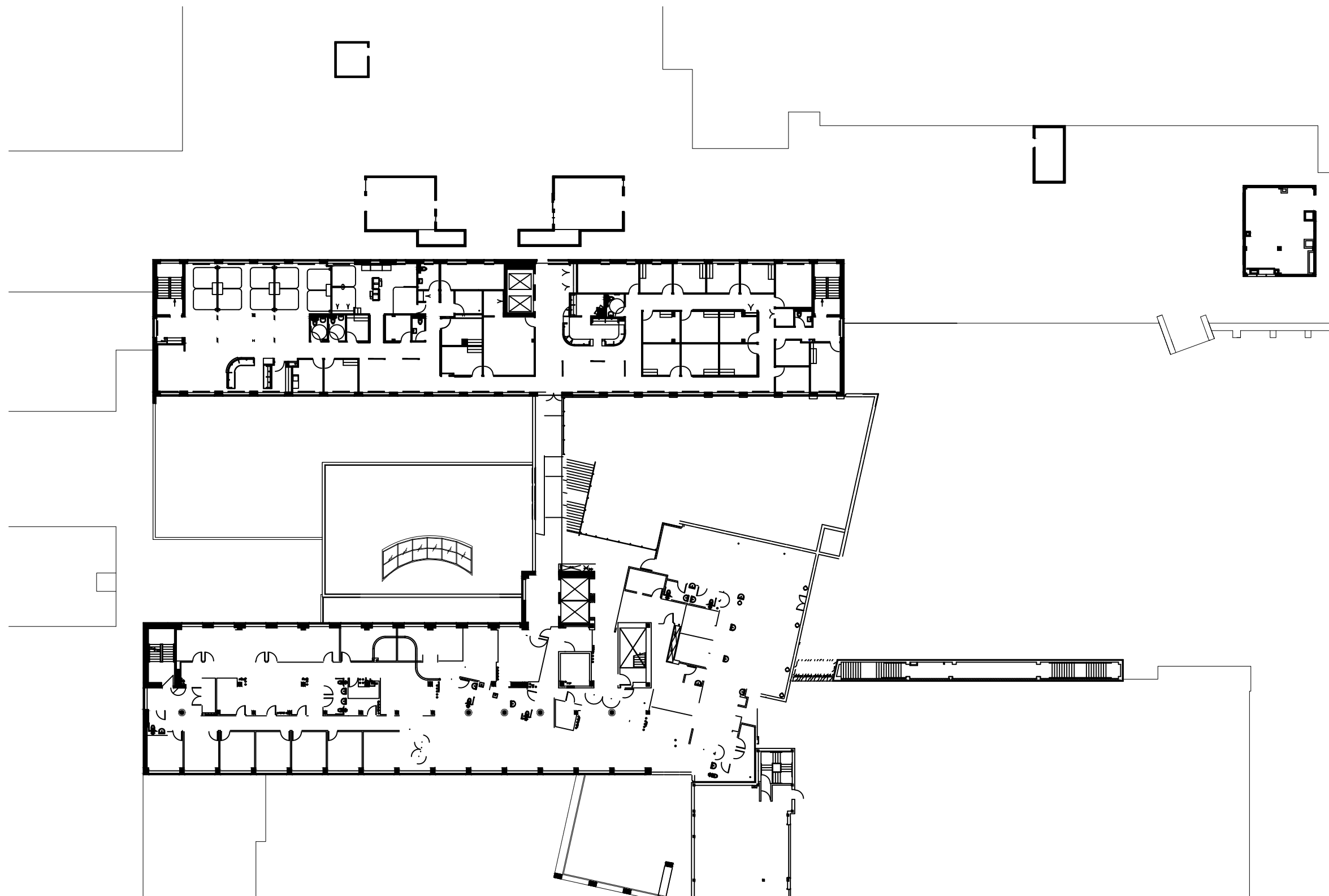
Project Location:
**Main Floor
Queensway Health Centre
150 Sherway Drive
Toronto, Ontario**

Project No: 28418

Date: March 2023
Scale: NTS
Drawn By: NB
Approved By: MZ

Drawing No:
2.2





Legend:

NOTE:
All Drywall Joint Compound
present in all the locations
shown in this drawing shall
be assumed
asbestos-containing.

Notes:
Locations of site features are
approximate and may vary from that
shown

Drawing Title:

Non-Friable
Asbestos-Containing Materials

Client Address:

Trillium Health Partners
100 Queensway West
Mississauga, ON

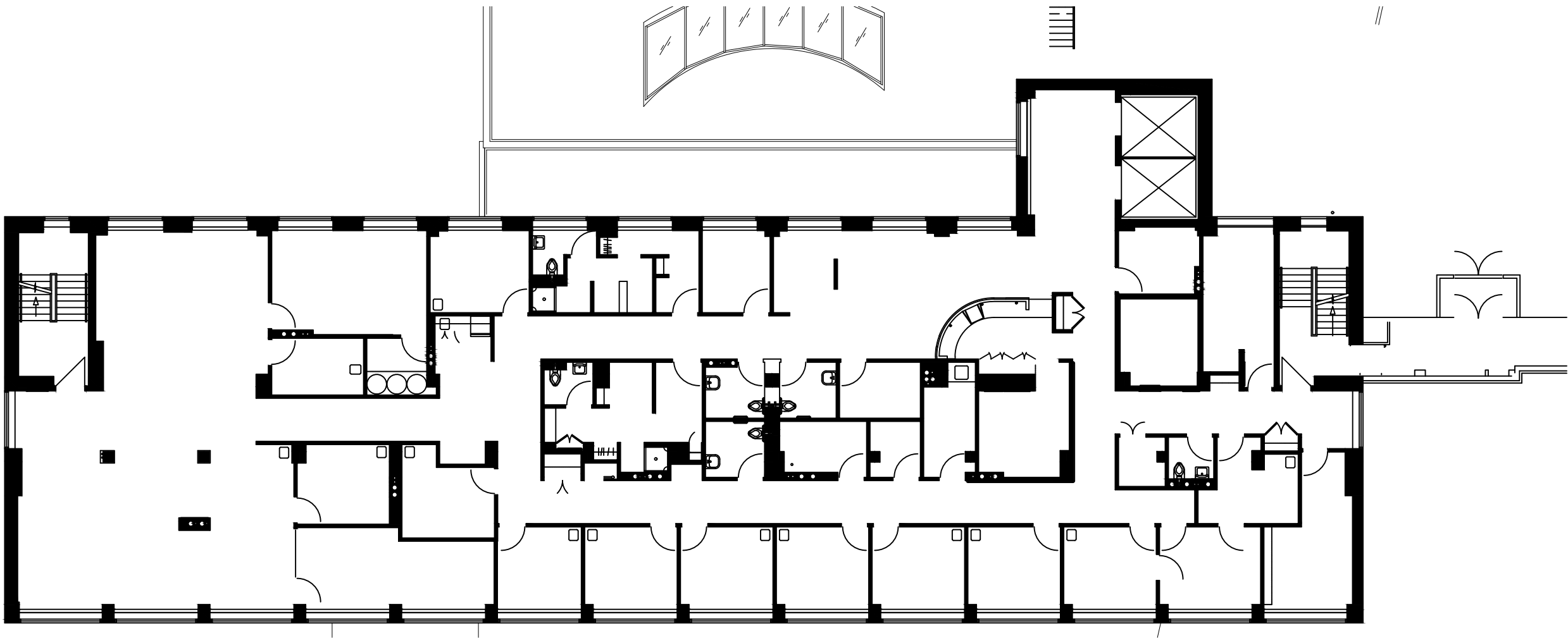
Project Location:
Second Floor
Queensway Health Centre
150 Sherway Drive
Toronto, Ontario

Project No: 28418

Date: March 2023
Scale: NTS
Drawn By: NB
Approved By: MZ

Drawing No:

2.3



Legend:

NOTE:
All Drywall Joint Compound
present in all the locations
shown in this drawing shall
be assumed
asbestos-containing.

Notes:
Locations of site features are
approximate and may vary from that
shown

Drawing Title:

Non-Friable
Asbestos-Containing Materials

Client Address:

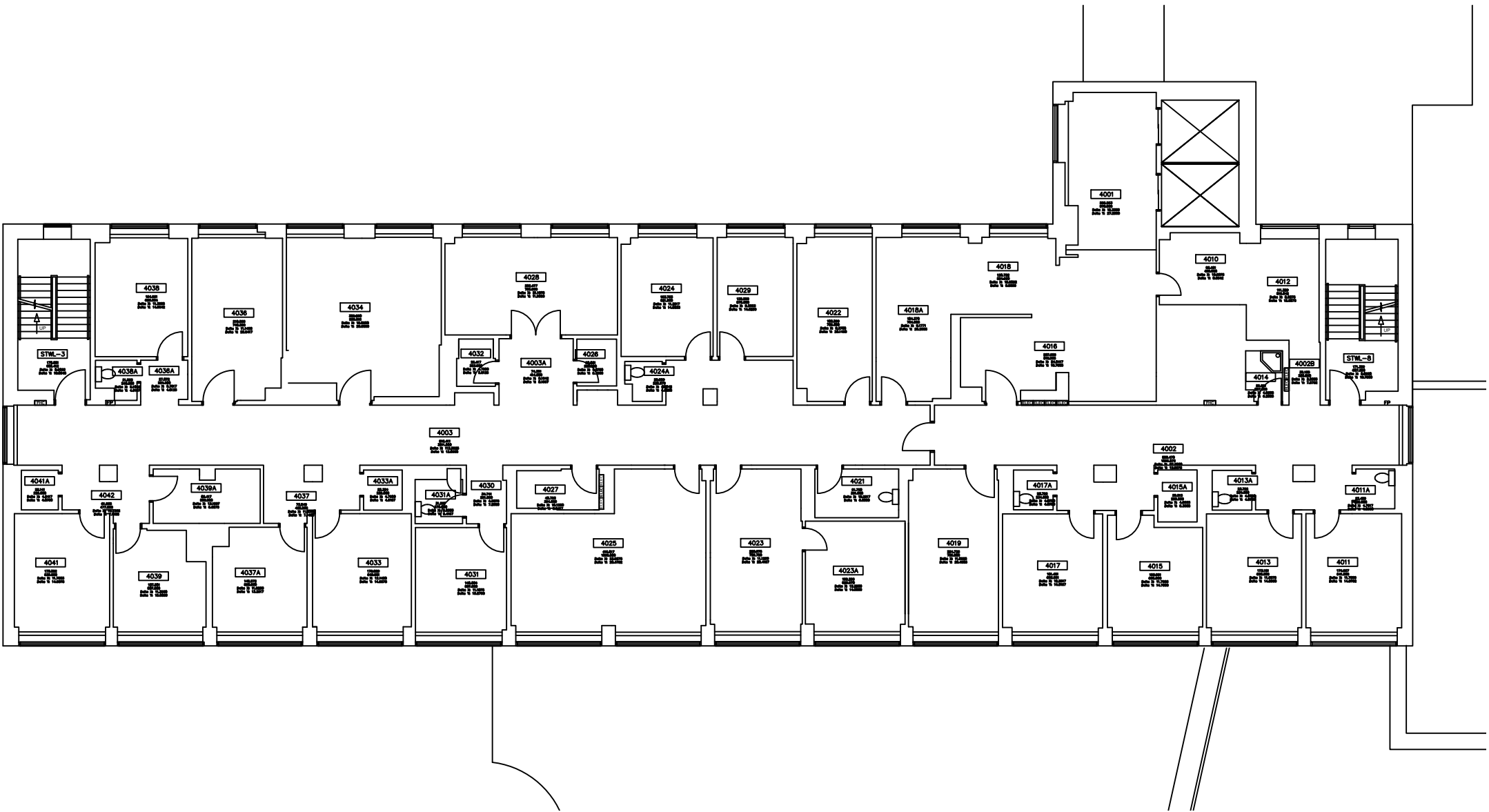
Trillium Health Partners
100 Queensway West
Mississauga, ON

Project Location:

Third Floor
Queensway Health Centre
150 Sherway Drive
Toronto, Ontario

Project No: 28418	N 2.4
Date: March 2023	
Scale: NTS	
Drawn By: NB	
Approved By: MZ	





Legend:

NOTE:
All Drywall Joint Compound
present in all the locations
shown in this drawing shall
be assumed
asbestos-containing.

Notes:
Locations of site features are
approximate and may vary from that
shown

Drawing Title:

Non-Friable
Asbestos-Containing Materials

Client Address:

Trillium Health Partners
100 Queensway West
Mississauga, ON

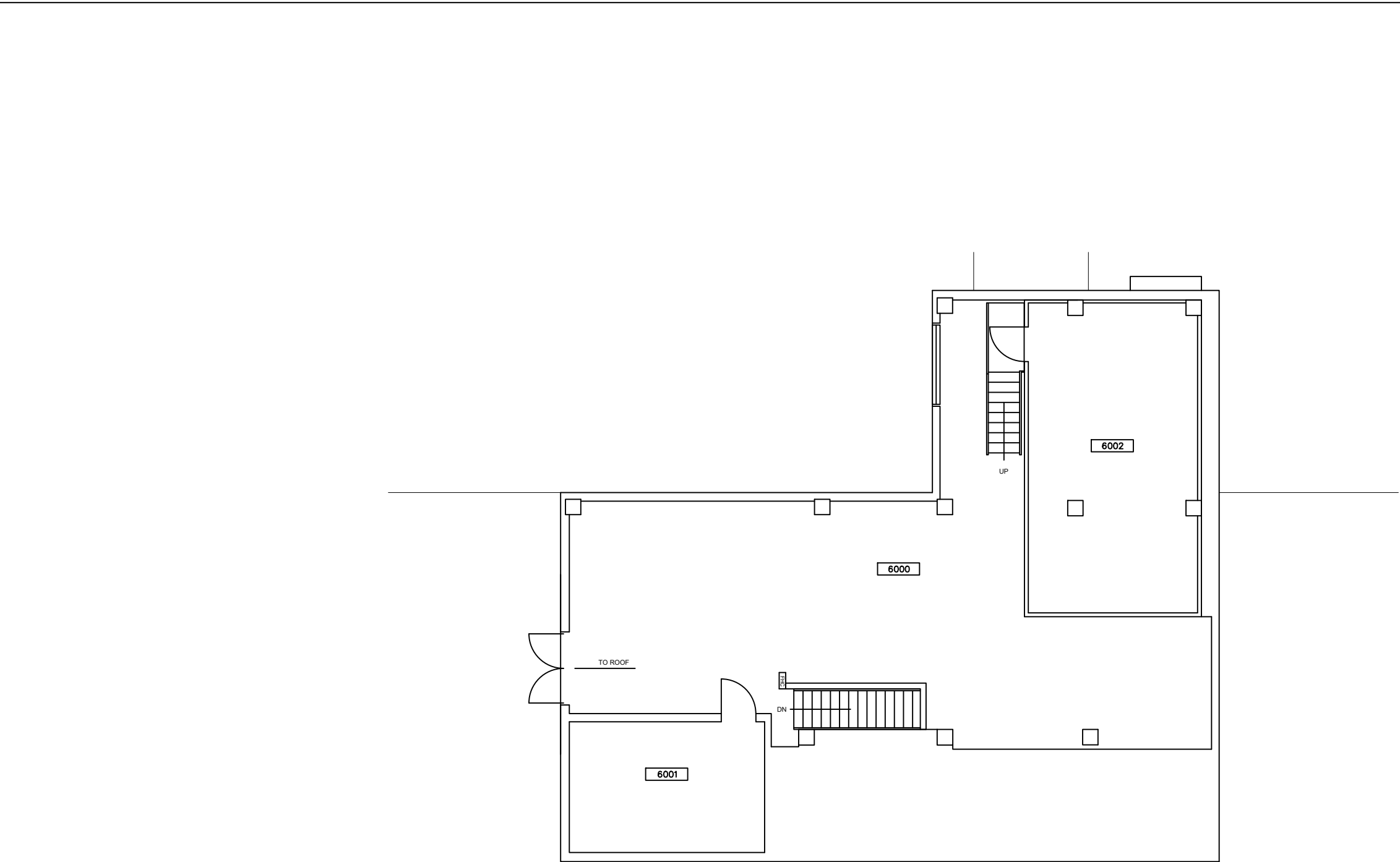
Project Location:

Fourth Floor
Queensway Health Centre
150 Sherway Drive
Toronto, Ontario

Project No: 28418
Date: March 2023
Scale: NTS
Drawn By: NB
Approved By: MZ
Drawing No:

2.5





Legend:

NOTE:
All Drywall Joint Compound
present in all the locations
shown in this drawing shall
be assumed
asbestos-containing.

Notes:
Locations of site features are
approximate and may vary from that
shown

Drawing Title:

Non-Friable
Asbestos-Containing Materials

Client Address:

Trillium Health Partners
100 Queensway West
Mississauga, ON

Project Location:

Penthouse
Queensway Health Centre
150 Sherway Drive
Toronto, Ontario

Project No: 28418		<div>N</div> <div>2.7</div>
Date: March 2023	Drawing No:	
Scale: NTS		
Drawn By: NB		
Approved By: MZ		



Initial Asbestos Survey Report (2008)

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Professional Engineers
Ontario

Building Survey for the Presence of Asbestos-Containing Materials

Trillium Health Centre

West Toronto Site

150 Sherway Drive
Toronto, Ontario
M9C 1A5

Presented to:

Mr. Kurt Bromhall, Facilities Manager

Trillium Health Centre
100 Queensway West
Mississauga, ON
L5B 1B8

October 2008

OHE Project No.: MA1014

Submitted by:

OHE Consultants

Occupational Hygiene & Environment
496 South Service Road
Mississauga, Ontario
L5G 2S5

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EXECUTIVE SUMMARY

OHE Consultants (OHE) was retained by Mr. Kurt Bromhall, Facilities Manager, Trillium Health Centre (THC), to conduct a building survey for the presence of asbestos-containing materials (ACMs) at THC's West Toronto Site located at 150 Sherway Drive, Toronto, Ontario. The purpose of the survey is to provide a foundation for an Asbestos Management Program.

The site survey included the collection of 140 bulk samples of materials suspected of containing asbestos. In addition, a review of an existing asbestos survey report previously prepared by other consultant parties was completed. Based on the findings of OHE's review of the previous report, the positive results (i.e. indicating that the materials tested contained asbestos) from past sampling and analysis were not retested to avoid duplication of efforts.

Of the 140 samples collected by OHE, ten (10) samples were found to contain asbestos as follows:

Sprayed Fireproofing/Trowelled Fireproofing

Sprayed fireproofing (SFP) was observed throughout the subject location. Sixteen (16) samples of SFP material were collected as part of the survey. No asbestos was detected in any of the SFP samples collected and analyzed. Trowelled fireproofing was observed in various locations in the subject location. Three (3) samples of trowelled fireproofing were collected as part of the survey. No asbestos was detected in any of the samples collected and analyzed.

Texture Coat

Texture coat was observed throughout the subject location. Nine (9) samples of texture coat were collected as part of the survey. OHE Sample MA1014-43A, collected in Hallway 1108 on the main floor, was found to contain 2% Chrysotile asbestos. No asbestos was detected in any of the remaining texture coat samples collected and analyzed.

Thermal Pipe Insulation

Samples of Thermal Pipe Insulation (TPI) were not collected as part of this survey. However, TPI materials were sampled as part of other survey activities for the property as follows:

OHE Sample MA1071-1A (Air-cel), MA1071-2A (Mag-Block), MA1071-3A (parging cement on pipe fittings) collected on November 30, 2007 from Crawlspace #7 were found to contain 50%, 70% and 60% Chrysotile asbestos, respectively.

Mechanical Air Duct Insulation

Mechanical Air Duct Insulation (MADI) (in the form of paper rap and parging cement) was observed in the basement of the subject location. One sample of MADI was collected as part of the survey. OHE Sample MA1014-38A, collected from the duct wrap in hallway 279C in the basement, was found to contain 15% Chrysotile asbestos. All other mechanical duct insulation are considered asbestos-containing as per data from past sampling and analysis by other parties. Therefore, additional MADI was not resampled to avoid duplication of efforts.

Boiler Breeching

Boiler Breeching (BB) was observed in the basement of the subject location. Three (3) samples of BB were collected as part of the survey. OHE Sample MA1014-38A, collected from the boiler in BH-2 in the basement, was found to contain 30% Amosite and 10% Chrysotile asbestos. The other samples in this sample set were not analyzed as per O. Reg. 278/05.

Tank Insulation

Tank Insulation (TI) was observed in the basement of the subject location. The TI is considered asbestos-containing as per data from past sampling and analysis by other parties. Therefore, TI was not resampled to avoid duplication of efforts.

Vinyl Floor Tiles

Vinyl Floor Tiles (VFTs) were observed throughout the subject location. Twenty four (24) samples of VFTs were collected as part of the survey. OHE Sample MA1014-25A, collected in Room B333 in the basement, was found to contain 1% Chrysotile asbestos. Sample MA1014-26A, collected in Room B333 in the basement, was found to contain 1% Chrysotile asbestos. Sample MA1014-28A, collected in Room 305 in the basement, was found to contain 8% Chrysotile asbestos. Sample MA1014-30A, collected in Room 338 in the basement, was found to contain 3% Chrysotile asbestos. No asbestos was detected in any of the remaining VFTs samples collected and analyzed.

Vinyl Sheet Flooring

Vinyl sheet flooring was observed throughout the subject location. Twenty four (24) samples of vinyl sheet flooring were collected as part of the survey. OHE Sample MA1014-2A, collected in Room 1657A on the main floor, was found to contain 15% Chrysotile asbestos. No asbestos was detected in any of the remaining vinyl sheet flooring samples collected and analyzed.

Suspended Ceiling Tiles/Stick-on Tiles

Suspended ceiling tiles and Stick-on tiles were observed throughout the subject location. Thirty two (32) samples of suspended ceiling tiles and Stick-on tiles were collected during the survey. No asbestos was detected in any of the samples collected and analyzed. The Stick-on Tiles in other locations are considered asbestos-containing as per data from past sampling and analysis by other parties. Therefore, Stick-on Tiles were not resampled to avoid duplication of efforts.

Hard Plaster / Cement Parging

Hard plaster finishes and cement parging were observed throughout the subject location. Twenty (20) samples of hard plaster finishes and cement parging were collected during the survey. No asbestos was detected in any of the samples collected and analyzed.

Drywall Joint Filling Compound

Drywall joint filling compound was observed throughout the subject location. The drywall joint compound is considered asbestos-containing as per data from past sampling and analysis. Therefore, drywall joint compound was not resampled to avoid duplication of efforts.

Roofing Tar, Felt and other Rooftop Items

Historically, asbestos is known to be present in roofing felts and tar material. Before conducting any roof related work, we recommend that a detailed sampling program of the roof felts and tar be carried out to determine if the felts and tar contain asbestos.

No samples of the roofing materials and associated materials and equipment were collected during the survey to avoid damaging roofing membranes and associated materials and equipment. Any such materials and equipment shall be considered asbestos-containing until bulk sampling and analysis

proves otherwise.

Asbestos Cement Products

Asbestos cement products (in the form of transite boards and transite pipes) were observed throughout the basement and the main floor in the subject location. Three samples (3) of transite board were collected during the survey. OHE Sample #MA1014-22A collected in Room 310B in the basement, was found to contain 20% Chrysotile asbestos. The other samples in this sample set were not analyzed as per O. Reg. 278/05. Transite pipes were also observed during the survey. No samples were collected of transite pipes to avoid damaging the material.

Other ACM

Heat Shields in incandescent light fixtures were observed in the subject location. One sample of a representative heat shield was collected during the survey. OHE Sample #MA1014-51 collected in Room 4014 on the fourth floor, was found to contain 20% Chrysotile asbestos.

An Asbestos Management Program is required for this building in accordance with the requirements of Ontario Regulation 278/05 as follows:

1. A copy of this report must be kept on the premises to reflect areas where asbestos-containing material is located;
2. A record of the locations where asbestos-containing material has been removed during renovations must be kept on the premises;
3. Provide any person who is an occupier of the building, with a written notice of any information in the report that relates to the area occupied by the person;
4. Provide any employer with whom **Trillium Health Centre** arranges or contracts for work with a written notice of the information in the report, if the work,
 - a. may involve material mentioned in the record, or
 - b. may be carried on in close proximity to such material and may disturb it;

5. Advise the workers employed by **Trillium Health Centre** who work in the building of the information in the record, if the workers may do work that,
 - a. involves material mentioned in the report, or
 - b. is to be carried on in close proximity to such material and may disturb it;
6. Establish and maintain, for the training and instruction of every worker employed by **Trillium Health Centre** who works in the building and may do work described in item 4 above, a program dealing with,
 - a. the hazards of asbestos exposure,
 - b. the use, care and disposal of protective equipment and clothing to be used and worn when doing the work,
 - c. personal hygiene to be observed when doing the work, and
 - d. the measures and procedures prescribed by this Regulation;
7. Develop a written program, including a management allocation of internal responsibilities, standard forms for reporting concerns and work practices or procedures to be followed;
8. The survey report shall be updated as follows:
 - a. at least once in each 12-month period (i.e. commencing in Winter 2009); and
 - b. whenever **Trillium Health Centre** becomes aware of new information relating to the matters addressed in this report.

1.0 INTRODUCTION

OHE Consultants (OHE) was retained by Mr. Kurt Bromhall, Facilities Manager, Trillium Health Centre (THC), to conduct a building survey for the presence of Asbestos-Containing Materials (ACMs) in the West Toronto site located at 150 Sherway Drive, Toronto, Ontario. The purpose of the survey is to provide a foundation for an Asbestos Management Program.

The site inspection was conducted by Mr. Rob Ammouri, B.Sc., Project Consultant of OHE with assistance provided by Facilities, Security and other departmental Personnel.

The scope of work entailed:

- A review of existing asbestos survey reports prepared by other parties and THC 's site plans, existing procedures, etc.;
- An inspection of accessible areas of the building to identify materials which could contain asbestos;
- Bulk sampling and analysis of representative materials suspected of containing asbestos; and
- An assessment of the condition of the asbestos-containing material with recommendations for appropriate corrective action (if required).

1.1 Report Outline

The building survey is structured as follows:

- Section 2 - Background Information on Asbestos, provides a brief discussion of the properties, uses and hazards associated with asbestos exposure.
- Section 3 - Asbestos Regulation - Ontario, covers the applicable provincial regulations and responsibilities of the building owner.
- Section 4 - Building Survey for Asbestos-Containing Materials, summarizes the building inspection methodology, the bulk sample analysis methodology and the survey findings.

- Section 5 – Assessment of Asbestos-Containing Materials, covers the criteria used to determine the condition of asbestos-containing material, the sample analysis results and the recommendations for corrective action.
- Section 6 - Discussion, covers the rationale for the methodology used in interpreting the data and the results obtained.
- Section 7 - Recommendations, summarizes the recommended course of action (if required).

2.0 BACKGROUND INFORMATION ON ASBESTOS

Asbestos is a term applied to a family of fibrous minerals divided into two geological groups, serpentines and amphiboles. These minerals are naturally occurring and are found in every mountain formation throughout the world. Only six forms of asbestos were used commercially. These are chrysotile, the only serpentine asbestos type, and amosite, crocidolite, anthophyllite, tremolite and actinolite which are amphibole asbestos forms.

There are over 3,000 separate uses of asbestos identified in existing literature. Each use is dependent upon the physical and chemical properties of a particular asbestos type. The desirable properties of asbestos fibres differ with each type of asbestos and include:

Fire retardance	Resistance to acids and alkalis	High tensile strength
Filter action	Thermal insulating qualities	Friction and wear resistance
Cohesion	Reinforcement	Filler

Asbestos is rarely found in pure form in a product and all products are divided into two broad categories based on hardness; "friable materials" and "non-friable materials or manufactured products". "Friable materials" are defined as materials that, when dry, can be crumbled, pulverized or powdered by hand pressure. This classification includes materials such as sprayed fireproofing, thermal insulation applications, acoustical texturized material and refractory or non-friable materials that have been made to become friable.

"Non-friable materials" are generally hard and do not readily release fibres. Most asbestos-containing material types are found in this category and are typically included in the following broad

classes as cement products, felts, cloths, floor and roof coverings, friction products and ceiling tiles.

Asbestos fibres when inhaled may cause various respiratory diseases including primarily Asbestosis, Mesothelioma and Lung Cancer. All of these diseases can result in an early death. Due to this affliction, the use of asbestos has become regulated across Canada and some products are now prohibited. The location of asbestos-containing materials must be identified in report form so that work undertaken on these materials is conducted in a safe manner and debris is safely handled.

3.0 ASBESTOS REGULATIONS - ONTARIO

Three regulations govern the control, handling, transport and disposal of asbestos in Ontario:

- Ontario Regulation 278/05 (formerly O.Reg. 838/90) The Regulation Respecting Asbestos on Construction Projects and in Buildings and Repair Operations (refer to Section 3.1);
- Ontario Regulation 347 (as amended) under the Environmental Protection Act (refer to Section 3.2); and
- The Regulations Respecting the Handling and Offering for Transport and Transporting of Dangerous Goods (refer to Section 3.3).

A copy of Regulation 278/05 is provided in Appendix E.

3.1 Ontario Regulation 278/05

Ontario Regulation 278/05 applies to buildings with regards to maintenance, renovations or demolition work where asbestos-containing materials are or may be disturbed.

The major requirements of the asbestos management program for the building owner include:

- Preparation and maintenance of a record of the location of asbestos-containing materials in the building;
- Notification of the building's tenants of the location of such material;
- Establishment of a training program for those employees of the owner who may work in close proximity to and disturb the material;

- Periodic inspection of the material to determine its condition;
- Remedial action on material that has deteriorated following the precautions and procedures prescribed by the regulation as Type 1, Type 2 and Type 3; and
- Removal of asbestos-containing materials to the extent practicable prior to demolition of a building or part thereof.

The regulation prescribes work to be conducted according to three procedure types. The procedure to be followed depends on the type of material and the regulation provides instruction on how the work must be performed.

The following is a summary of the three types of classification of asbestos work:

Classification of Asbestos Work in Ontario

The following are Type 1 operations:

1. Installing or removing ceiling tiles that are asbestos-containing material, if the tiles cover an area less than 7.5 square metres and are installed or removed without being broken, cut, drilled, abraded, ground, sanded or vibrated.
2. Installing or removing non-friable asbestos-containing material, other than ceiling tiles, if the material is installed or removed without being broken, cut, drilled, abraded, ground, sanded or vibrated.
3. Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing material if,
 - i. the material is wetted to control the spread of dust or fibres, and
 - ii. the work is done only by means of non-powered hand-held tools.
4. Removing less than one square metre of drywall in which joint-filling compounds that are asbestos-containing material have been used.

The following are Type 2 operations:

1. Removing all or part of a false ceiling to obtain access to a work area, if asbestos-containing material is likely to be lying on the surface of the false ceiling.

2. The removal or disturbance of one square metre or less of friable asbestos-containing material during the repair, alteration, maintenance or demolition of all or part of machinery or equipment or a building, aircraft, locomotive, railway car, vehicle or ship.
3. Enclosing friable asbestos-containing material.
4. Applying tape or a sealant or other covering to pipe or boiler insulation that is asbestos-containing material.
5. Installing or removing ceiling tiles that are asbestos-containing material, 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.
6. Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing material if,
 - i. the material is not wetted to control the spread of dust or fibres, and
 - ii. the work is done only by means of non-powered hand-held tools.
7. Removing one square metre or more of drywall in which joint filling compounds that are asbestos-containing material have been used.
8. Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing material if the work is done by means of power tools that are attached to dust-collecting devices equipped with HEPA filters.
9. Removing insulation that is asbestos-containing material from a pipe, duct or similar structure using a glove bag.
10. Cleaning or removing filters used in air handling equipment in a building that has sprayed fireproofing that is asbestos-containing material.
11. An operation that;
 - i. is not mentioned in any of paragraphs 1 to 10,
 - ii. may expose a worker to asbestos, and
 - iii. is not classified as a Type 1 or Type 3 operation.

The following are Type 3 operations:

1. The removal or disturbance of more than one square metre of friable asbestos-containing material during the repair, alteration, maintenance or demolition of all or part of a building, aircraft, ship, locomotive, railway car or vehicle or any machinery or equipment.
2. The spray application of a sealant to friable asbestos-containing material.
3. Cleaning or removing air handling equipment, including rigid ducting but not including filters, in a building that has sprayed fireproofing that is asbestos-containing material.

4. Repairing, altering or demolishing all or part of a kiln, metallurgical furnace or similar structure that is made in part of refractory materials that are asbestos-containing materials.
5. Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing material, if the work is done by means of power tools that are not attached to dust-collecting devices equipped with HEPA filters.
6. Repairing, altering or demolishing all or part of any building in which asbestos is or was used in the manufacture of products, unless the asbestos was cleaned up and removed before March 16, 1986.

3.2 Ontario Regulation 347

Ontario Regulation 347 (as amended) applies to the transport of asbestos waste from the location of generation to a landfill site. The regulation also prescribes procedures on how the asbestos waste is to be buried at the landfill site.

The major requirements to the building owner are as follows:

- To ensure that the waste is appropriately packaged and labelled;
- The transport vehicle is appropriately placarded;
- That the asbestos waste is transported on the same day as received by the landfill site; and
- That the route of travel is the most direct.

The building owners are held responsible for their asbestos waste as prescribed in the regulation until it is accepted by the waste disposal site.

3.3 The Transportation Of Dangerous Goods Regulations

These regulations govern the packaging mode of transport labelling, placarding and documentation of asbestos waste while in transport. The labelling requirements differ from Ontario Regulation 347.

The major requirement to the building owner is to ensure the waste meets the packaging requirements and that a bill of lading accompanies the shipment.

4.0 BUILDING SURVEY FOR ASBESTOS-CONTAINING MATERIALS

This section of the report summarizes the building inspection methodology, the bulk sample analysis methodology and the location of asbestos-containing materials in the building.

4.1 Survey Methodology

The survey consisted of an extensive examination of all accessible areas of the building to identify materials which could contain asbestos. The materials suspected of containing asbestos were assessed based on the surveyor's knowledge regarding the historical use of asbestos in building materials, through published data and through previous experiences. Accessible is defined as an area above a suspended ceiling tile, within an access hatch or behind a closed door, not impeded by any structure, article or thing. An area enclosed by cement block, plaster, solid lumber, etc., where minor demolition is required to gain entry is considered non-accessible. The walk through survey was augmented with layout drawings where available. The locations of the surveyed rooms can be found on Drawings 1.1 to 1.15 in Appendix A.

OHE's approach to the work followed procedures specified in Ontario Regulation 278/05 as well as our own in-house protocols. The examination of materials was largely performed visually with some occasion where physical contact was necessary to assess the condition or examine for underlying layers. No destructive examinations were performed as part of this survey.

Bulk samples were collected for subsequent analysis during the building review. A small volume of material (approximately one teaspoon full) was removed either from a damaged section of suspect material or cut out of intact material and then repaired by sealing with an appropriate surfacing compound, tape, paint or plaster to prevent fibre release. The collected samples were placed in plastic bags and sealed until they were opened by an independent laboratory. Section 4.2 provides a brief description of the methods employed by the laboratory for the identification of asbestos.

4.2 Bulk Sample Analysis Methodology

Bulk samples of suspect asbestos-containing materials were analyzed in accordance with a US EPA method for the determination of asbestos content in bulk materials, EPA Method 600/R-93/116. The EPA Method requires that the samples be analyzed using the Polarized Light Microscopy (PLM)

technique. Percentage of asbestos in the sample is measured as perceived by the analyst in comparison to standard area projections and is greatly influenced by the analyst's experience. The method is useful for the qualitative identification of asbestos (type) and the semi-quantitative (% estimates) determination of asbestos content in bulk samples.

The asbestos bulk samples were analyzed by EMSL Analytical, Inc., an independent and NVLAP accredited laboratory. To ensure quality results, the independent laboratory chosen must successfully participate in an "Asbestos Proficiency Analytical Testing Program" and as such, the laboratory is responsible for their findings.

4.3 Building Description

The building is a multi-storey structure. It consists of 5 floors with a basement and a roof level. The basement, the second floor and the roof level contain mechanical rooms, which house the boilers, electrical rooms, sprinkler controls and other mechanical systems components.

4.4 Survey Findings

Locations where the samples were collected are identified on Drawings 2.1 to 2.13 found in Appendix A. A summary of the bulk sample analysis results are presented in Table A found in Appendix B. The laboratory analysis report is found in Appendix C.

For the purpose of the Asbestos Management Program, the following findings include the bulk sampling and analysis of samples collected during the survey conducted on November 30, 2007 and additional samples collected by OHE Consultants between December 2007 and March 2008. The samples were collected as part of other ongoing and completed projects within the facility by OHE and others as follows:

- OHE Project No.:MA1071-Crawlspace #7 Designated Substances Survey; and
- Pinchin Environmental Project No.:R13038.

Asbestos was identified by OHE in 10 of the 140 samples analyzed and the results have been extrapolated to provide a reasonable estimate of the locations and the extent of the asbestos-containing material in the building. It should be noted that O. Reg. 278/05 s.3 sets out the minimum

number of bulk material samples to be collected from an area of homogeneous material. It should also be noted that, although 140 samples were collected as part of the survey, not all of the 140 samples required analysis. As detailed in O. Reg. 278/05 s.4: *if analysis establishes that a bulk material sample contains 0.5 per cent or more asbestos by dry weight, s.4 a) it is not necessary to analyze other bulk material samples taken from the same area of homogeneous material, s.4 b) the entire area of homogeneous material from which the bulk materials sample was taken is deemed to be asbestos-containing material.* The locations of the identified ACMs (both friable and non-friable) are identified on the Drawings 3.1 to 4.14 in Appendix A. Selected photographs taken during the survey can be found in Appendix F.

No samples were taken of glass fibre applications as this material can be positively identified visually and does not contain asbestos.

The following is a brief discussion of the suspect asbestos-containing materials identified and sampled.

4.4.1 Sprayed/Trowelled and/or Repair Fireproofing Material

Five sample sets consisting of 19 samples, (OHE sample sets MA1014-3, MA1014-11, MA1014-12, MA1014-15, and MA1014-44), of sprayed/trowelled fireproofing material were collected during the survey for asbestos. No asbestos was detected in any of the 19 samples analyzed.

4.4.2 Texture Coat Material

Texture coat material was observed throughout the building. Three sample sets consisting of 9 samples, (OHE sample sets MA1014-23, MA1014-43 and MA1014-49) were collected during the investigation.

MA1014-43A, collected from the main floor hallway 1108 ceiling, was found to contain 2% Chrysotile asbestos. The remaining samples from these sample sets were not analyzed as per O. Reg. 278/05.

No asbestos was detected in the remaining 2 sample sets collected and analyzed.

4.4.3 Thermal Pipe Insulation

Samples of thermal pipe insulation (TPI) were not collected as part of this survey. However, TPI materials were sampled as part of other survey activities for the property as follows:

OHE Sample MA1071-1A, (Air-cel), MA1071-2A, (Mag-Block), MA1071-3A, (parging cement on pipe fittings) collected on November 30, 2007 from Crawlspace #7 were found to contain 50%, 70% and 60% Chrysotile asbestos, respectively.

4.4.4 Mechanical Air Duct Insulation

Mechanical Air Duct Insulation (MADI) (in the form of paper rap and parging cement) was observed in the basement the subject location. One sample of MADI was collected as part of the survey. OHE Sample MA1014-38A, collected from the duct wrap in hallway 279C in the basement, was found to contain 15% Chrysotile asbestos. All other mechanical duct insulation are considered asbestos-containing as per data from past sampling and analysis by other parties. Therefore, additional MADI was not resampled to avoid duplication of efforts.

4.4.5 Boiler Breeching

Boiler Breeching (BB) was observed in the basement the subject location. Three (3) samples of BB were collected as part of the survey. OHE Sample MA1014-38A, collected from the boiler in BH-2 in the basement, was found to contain 30% Amosite and 10% Chrysotile asbestos. The other samples in this sample set were not analyzed as per O. Reg. 278/05.

4.4.6 Tank Insulation

Tank Insulation (TI) was observed in the basement of the subject location. The TI is considered asbestos-containing as per data from past sampling and analysis by other parties. Therefore, TI was not resampled to avoid duplication of efforts.

4.4.7 Vinyl Floor Tiles/Vinyl Sheet Flooring

Vinyl Floor Tiles (VFTs) and Vinyl Sheet Flooring (VSF) were observed throughout the building. Nine sample sets of VFTs consisting of 27 samples, (OHE sample sets MA1014-14, MA1014-25, MA1014-26, MA1014-28, MA1014-30, MA1014-31, MA1014-33, MA1014-39, and MA1014-48) and six sample sets of VSF consisting of 18 samples, (OHE sample sets MA1014-2, MA1014-8, MA1014-18, MA1014-40, MA1014-45 – MA1014-47 and MA1014-59) were collected during the survey.

Sample MA1014-2A, collected from the main floor hallway 1657A, was found to contain 15% Chrysotile asbestos. Sample MA1014-25A, collected from the basement, Room B333, was found to contain 1% Chrysotile asbestos. Sample MA1014-26A, collected from the basement, Room B333, was found to contain 1% Chrysotile asbestos. Sample MA1014-28A, collected from the basement, Room 305, was found to contain 8% Chrysotile asbestos. Sample MA1014-30A, collected from the basement, Room 338, was found to contain 3% Chrysotile asbestos. The remaining samples from these sample sets were not analyzed as per O. Reg. 278/05.

No asbestos was detected in the remaining 10 sample sets collected and analyzed.

In cases of demolition and/or renovations, all VFTs and VSF which may be concealed beneath carpeting shall be assumed asbestos containing until proven otherwise by both sampling and analysis.

4.4.8 Suspended Ceiling Tile & Stick-on Ceiling Tiles

Suspended ceiling tiles and Stick-on ceiling tiles were observed throughout the building. A total of eight sample sets consisting of 24 samples, (OHE sample sets MA1014-4, MA1014-6, MA1014-7, MA1014-9, MA1014-10, MA1014-36 – MA1014-41 and MA1014-42) were collected as part of the survey. No asbestos was detected in any of the 24 samples collected and analyzed.

In cases of demolition and/or renovations, all ceiling tiles other than those sampled shall be assumed asbestos containing until proven otherwise by both sampling and analysis.

4.4.9 Hard Plaster/ Cement Parging

Hard plaster and cement parging were observed throughout the building. A total of four sample sets consisting of 20 samples, (OHE sample sets MA1014-13, MA1014-27, MA1014-52 and MA1014-53) were collected as part of the survey. No asbestos was detected in any of the 20 samples collected and analyzed.

4.4.10 Drywall Joint Filling Compound

Drywall joint filling compound was observed throughout the facility. The drywall joint filling compound was not sampled during this survey since it was sampled as part of separate survey activities for the site and was found to be asbestos containing. Therefore, all drywall joint filling compound shall be considered asbestos-containing until proven otherwise by bulk sampling and analysis.

In cases of demolition and/or renovations, all drywall joint filling compound shall be assumed asbestos containing until proven otherwise by both sampling and analysis.

4.4.11 Roofing Tar, Felt and other Rooftop Items

Historically, asbestos is known to be present in roofing felts and tar material. Before conducting any roof related work, we recommend that a detailed sampling program of the roof felts and tar be carried out to determine if the felts and tar contain asbestos.

No samples of the roofing materials and associated materials and equipment were collected during the survey to avoid damaging roofing membranes and associated materials and equipment. Any such materials and equipment shall be considered asbestos-containing until bulk sampling and analysis proves otherwise.

4.4.12 Asbestos Cement Products

Asbestos cement products (in the form of transite boards and transite pipes) were observed throughout the basement and the main floor in the subject location. Three samples (3) of transite board were collected during the survey. OHE Sample #MA1014-22A collected in

Room 310B in the basement, was found to contain 20% Chrysotile asbestos. The other samples in this sample set were not analyzed as per O. Reg. 278/05. Transit pipes were also observed during the survey. No samples were collected of transit pipes to avoid damaging the material.

4.4.13 Other ACMs

Heat Shields in incandescent light fixtures were observed in the subject location. One sample of a representative heat shield was collected during the survey. OHE Sample #MA1014-51 collected in Room 4014 on the fourth floor, was found to contain 20% Chrysotile asbestos.

5.0 ASSESSMENT OF ASBESTOS-CONTAINING MATERIALS

This section covers the assessment of the condition of asbestos-containing materials including the criteria used, the assessment results and the recommendations for corrective actions.

5.1 Assessment of Asbestos-Containing Materials Methodology

The assessment of asbestos-containing materials involves the evaluation of a number of factors by the surveyor including:

- | | |
|-----------------------------|--|
| • Asbestos content | • Water damage |
| • Condition of the material | • Activity and vibration |
| • Accessibility | • Presence in air plenum/direct air stream |

Where asbestos-containing material is found to be in good condition, firmly bound and not likely to deteriorate or fall, the recommended procedure is to evaluate the condition of the material on a periodic basis (which should be at least once a year unless specified more frequently) in order to detect gradual deterioration. This process is referred to as an "Operation and Maintenance Program".

Damaged material is identified by surface crumbling, blistering, water stains, gouges, marring or being otherwise abraded. The accumulation of powder dust or debris similar in appearance to the suspect material can be used as confirmatory evidence.

In situations where the asbestos-containing materials are found to have deteriorated or likely to fall, the following are the four abatement options that may be specified in this report:

1. **Cleaning.** The cleaning of asbestos-containing debris may be performed using a High Efficiency Particulate Air (HEPA) filter vacuum cleaner or by damp wiping techniques. All fallen asbestos material must be cleaned upon discovery. In situations where the material will continue to fall due to deterioration, damage or abrasion, additional corrective work is required, i.e., the material must be repaired, permanently enclosed or removed.
2. **Repairs.** This option is usually selected in situations where damage to the asbestos-containing material is of a minor nature and is not likely to reoccur due to accessibility or activity. This method of repair is chosen in situations where performing the repair activities will not cause significant disturbance to the underlying material. Typical repairs include the repair of thermal insulation by the application of mastic (paint adhesive) to lagging (canvas cloth). The repair of sprayed fireproofing or acoustical texturized material can involve the application of an encapsulant to limited areas of abraded or damaged material. If this option is followed, the sprayed material must be capable of supporting the additional weight of the encapsulant.
3. **Enclosure.** An enclosure consists of the construction of a physical barrier, typically constructed from drywall or metal sheeting. This option is applicable in situations where the removal of materials with asbestos is not practicable, is of a high financial cost, or where damage is likely to occur without a protective barrier. Where the installation of the barrier is likely to disturb the asbestos-containing materials, the work must be performed in isolation from the building's normal environment.
4. **Removal.** This option is recommended in situations where the asbestos-containing material is damaged beyond repair and the material is highly likely to be damaged due to nearby activities, by renovation or during demolition. The precautions employed may vary depending on the volume of the material to be removed and whether the material is friable or not. Typical programs can include the use of glove bags for limited amounts of thermal pipe insulation or minor amounts of fireproofing may be removed within a small polyethylene lined enclosure. For larger amounts of asbestos, more stringent protocols are used and consist of attached shower facilities, the establishment of a negative pressure differential, a filtration system for the air and monitoring for exposure to asbestos fibres.

5.2 Assessment Results and Recommendations

There are various locations in which asbestos-containing materials were found to be damaged and in poor and/or fair condition. A corrective actions table has been generated to indicate the locations of the material and the appropriate corrective action. The corrective actions can be found in Table B presented in Appendix D.

6.0 DISCUSSION

Renovations and removal of any asbestos-containing material must be recorded to ensure the status of the building is kept current.

Friable and non-friable asbestos-containing materials have been identified in the subject building. As such, an asbestos management program is required for which this report will form the foundation. This report presumes that materials from a common construction time and addition that have a high degree of similarity (i.e. in appearance, colour and texture) have a similar asbestos content. This presumption is based on normal construction practice.

Friable asbestos-containing materials have been identified in thermal pipe insulation, texture coat material, mechanical duct insulation, boiler breeching and tank insulation. The locations of the identified friable asbestos-containing materials can be found on Drawings 3.1 to 3.7 in Appendix A. Non-friable asbestos-containing materials or manufactured products have been identified in vinyl floor tiles, vinyl sheet flooring, stick on tiles, drywall joint filling compound, asbestos cement products and incandescent light shield. The locations of identified non-friable asbestos-containing materials can be found on Drawings 4.1 to 4.14 in Appendix A. Asbestos is assumed to be present in roofing felts and tar. Samples of these materials were not collected to avoid leaks and damage to the subject items.

In cases where asbestos was identified in some but not all samples of similar materials, the conservative approach was applied and all such material was assumed and reported to contain asbestos. When a renovation is planned, we recommend a detailed sampling of suspected asbestos-containing material to confirm the presence of asbestos. Materials that are removed through renovations should be replaced with non-asbestos-containing materials only. This must be

documented. Confirmatory sampling will not be required on any new products if the manufacturer supplies written confirmation that these materials are asbestos free.

As the survey was non-destructive in nature, asbestos may be present in areas not accessible for view and identification. In situations where the asbestos-containing materials extend into a non-accessible area, the materials were assumed to also be present in those areas and have been reported as such. Contractors and maintenance personnel should be warned of the possibility of undisclosed asbestos when breaking into enclosed areas. Friable and non-friable materials discovered in these areas should be treated as asbestos-containing until proven otherwise.

Lastly, the AMP should account for those materials previously identified as asbestos-containing (i.e. in the 2000 Pinchin report) as these materials were not resampled as part of this survey and, as such, are not itemized in the attached analytical summary Table A. A complete list of all materials previously identified as ACM are itemized in the attached analytical summary in Appendix B, which will need to be included in an updated inventory list to be maintained as part of the AMP.

7.0 RECOMMENDATIONS

An Asbestos Management Program is required for this building in accordance with the requirements of Ontario Regulation 278/05 as follows:

1. A copy of this report must be kept on the premises to reflect areas where asbestos-containing material is located;
2. A record of the locations where asbestos-containing material has been removed during renovations must be kept on the premises;
3. Provide any person who is an occupier of the building, with a written notice of any information in the report that relates to the area occupied by the person;
4. Provide any employer with whom **Trillium Health Centre** arranges or contracts for work with a written notice of the information in the report, if the work,
 - a. may involve material mentioned in the record, or

- b. may be carried on in close proximity to such material and may disturb it;
- 5. Advise the workers employed by **Trillium Health Centre** who work in the building of the information in the record, if the workers may do work that,
 - a. involves material mentioned in the report, or
 - b. is to be carried on in close proximity to such material and may disturb it;
- 6. Establish and maintain, for the training and instruction of every worker employed by **Trillium Health Centre** who works in the building and may do work described in item 4 above, a program dealing with,
 - a. the hazards of asbestos exposure,
 - b. the use, care and disposal of protective equipment and clothing to be used and worn when doing the work,
 - c. personal hygiene to be observed when doing the work, and
 - d. the measures and procedures prescribed by this Regulation;
- 7. Develop a written program, including a management allocation of internal responsibilities, standard forms for reporting concerns and work practices or procedures to be followed;
- 8. The survey report shall be updated as follows:
 - a. at least once in each 12-month period (i.e. commencing in Winter 2009); and
 - b. whenever **Trillium Health Centre** becomes aware of new information relating to the matters addressed in this report.

8.0 LIMITATIONS OF THE SURVEY

Areas in the subject location that were non-accessible to OHE and not surveyed as a result included all areas under construction in addition to the following locations: Basement Rooms # 231, 200, 281, 263, 261, 240, 242 and 244; Main floor Rooms #1204A, 1142, 1148, 1353A, 1142 and 1733; Fifth floor Room # 5020A.

In the performance of the Asbestos Survey, OHE has exercised a degree of thoroughness and competence that is consistent with the profession. OHE believes the information presented in this report to be factual at the time of the survey for the building sections that were accessible to the surveyor.

Due to the nature of building construction, especially in a building that has been renovated and developed extensively, some limitations exist as to the identification of pockets of asbestos-containing materials. Professional judgment has been exercised in gathering and analyzing the information obtained. We cannot warrant or guarantee that the conclusions we reach are absolutely complete or accurate however, we commit ourselves to care and competence in reaching those conclusions.

The information provided by this report is intended for the sole use of Trillium Health Centre. OHE reserves the right to review and comment on any interpretation of the data or conclusions derived by Trillium Health Centre. No other warranty or representation, either expressed or implied, is included in this report.

Dated October 2008

OHE Consultants

Occupational Hygiene & Environment



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Senior Consultant

Drawings

LEGEND

00

Room x Room Locations

Notes: Locations of site features are approximate and may vary from that shown

Client:

Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:

West Toronto Site
Basement (North Centre)
150 Sherway Drive
Toronto , ON

Drawing Showing Room By Room Locations

Reviewed By

FA

Drawn By

CS

Project N°

MA1014

Date

Oct 2008

Scale

NTS

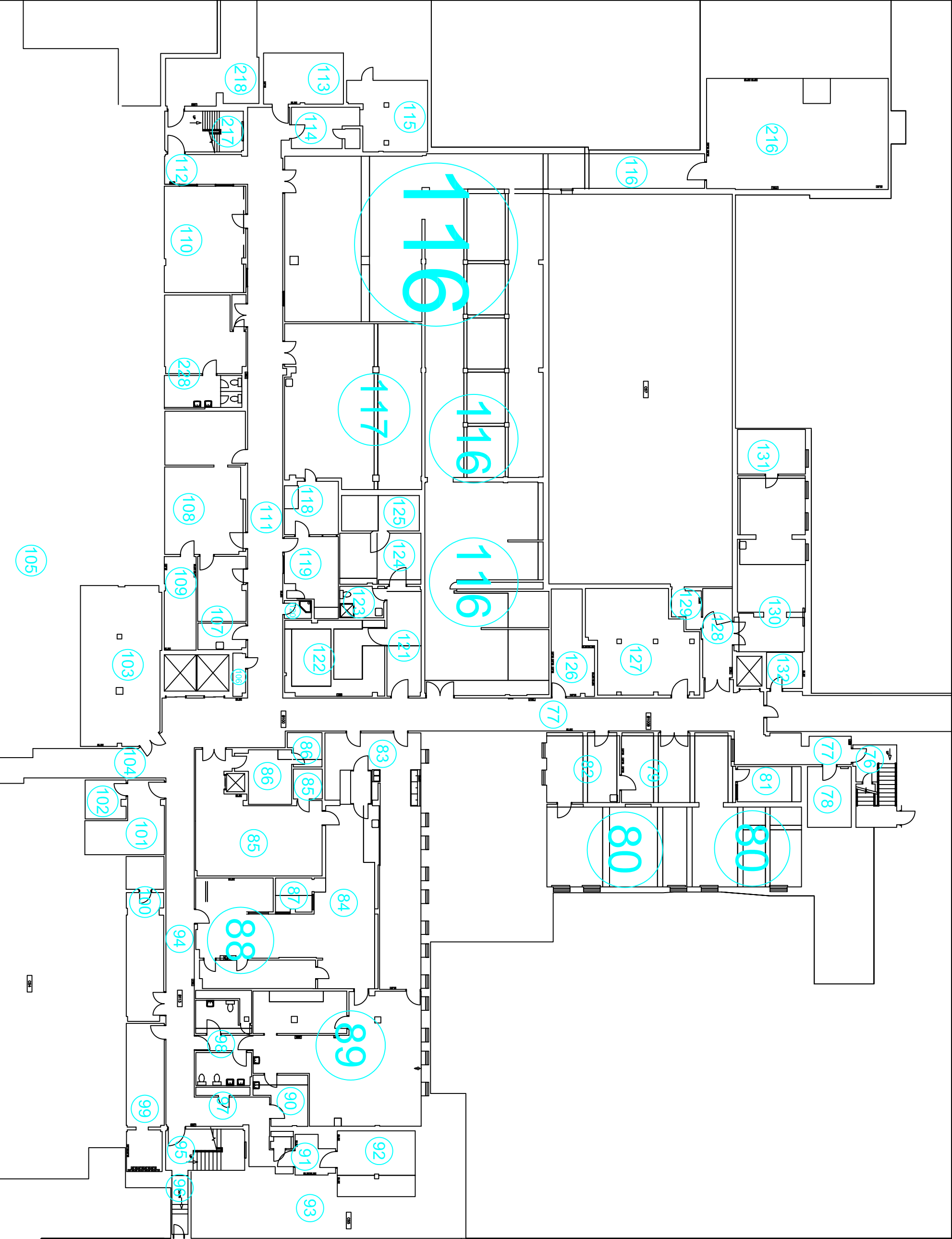
DWG N°

1.1

OHIE

CONSULTANTS

Occupational Hygiene & Environment



LEGEND

00 Room x Room
Locations

Notes: Locations of site features are approximate and may vary from that shown

Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:
West Toronto Site
Basement (South East Corner)
150 Sherway Drive
Toronto , ON

Drawing Showing
Room By Room
Locations

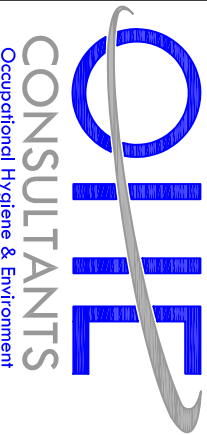
Reviewed By
FA
Drawn By
FB



Project N°
MA 1014

Date
Oct 2008
Scale
NTS

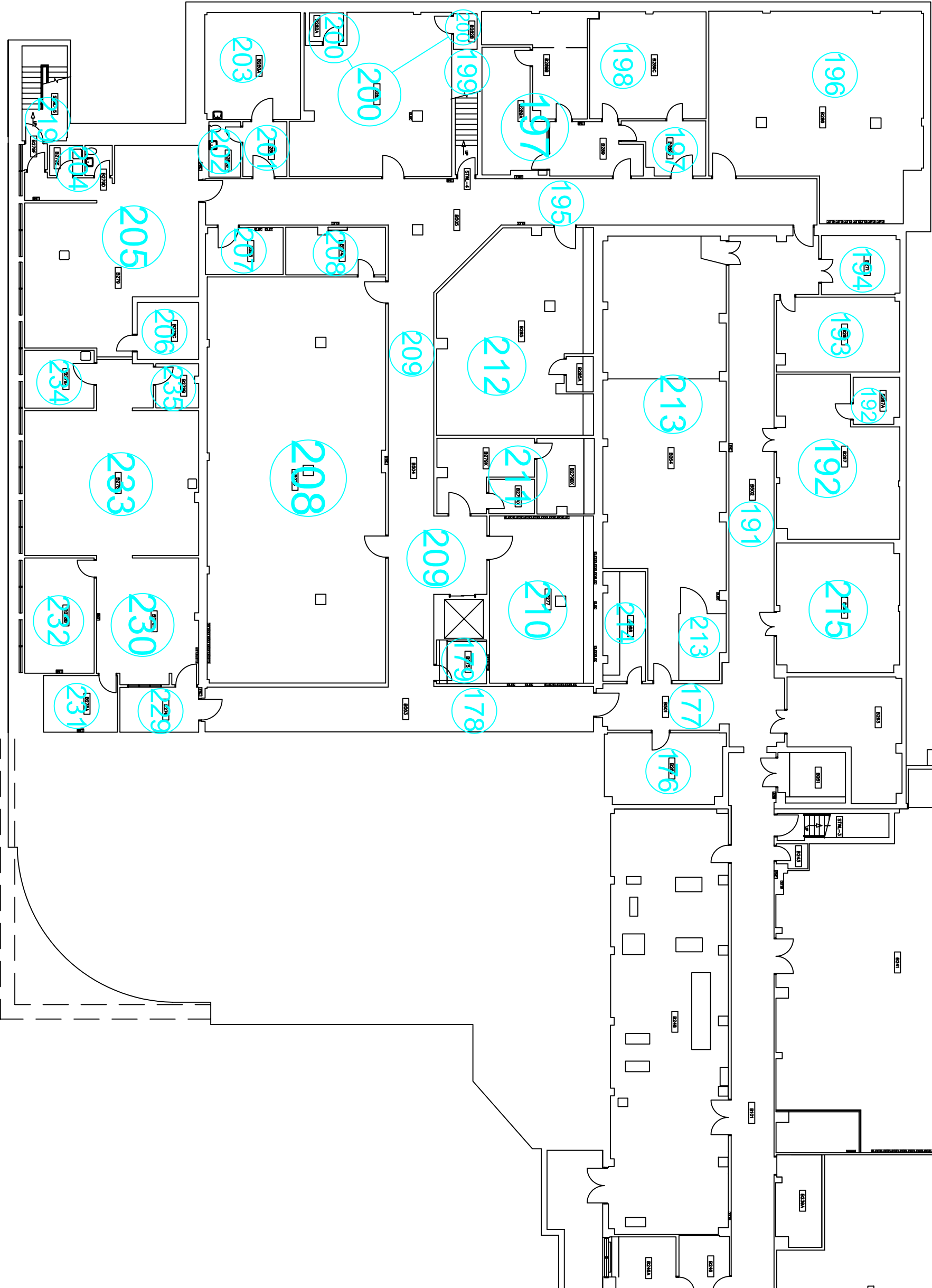
DWG N°
1.2





LEGEND


00 Room x Room Locations

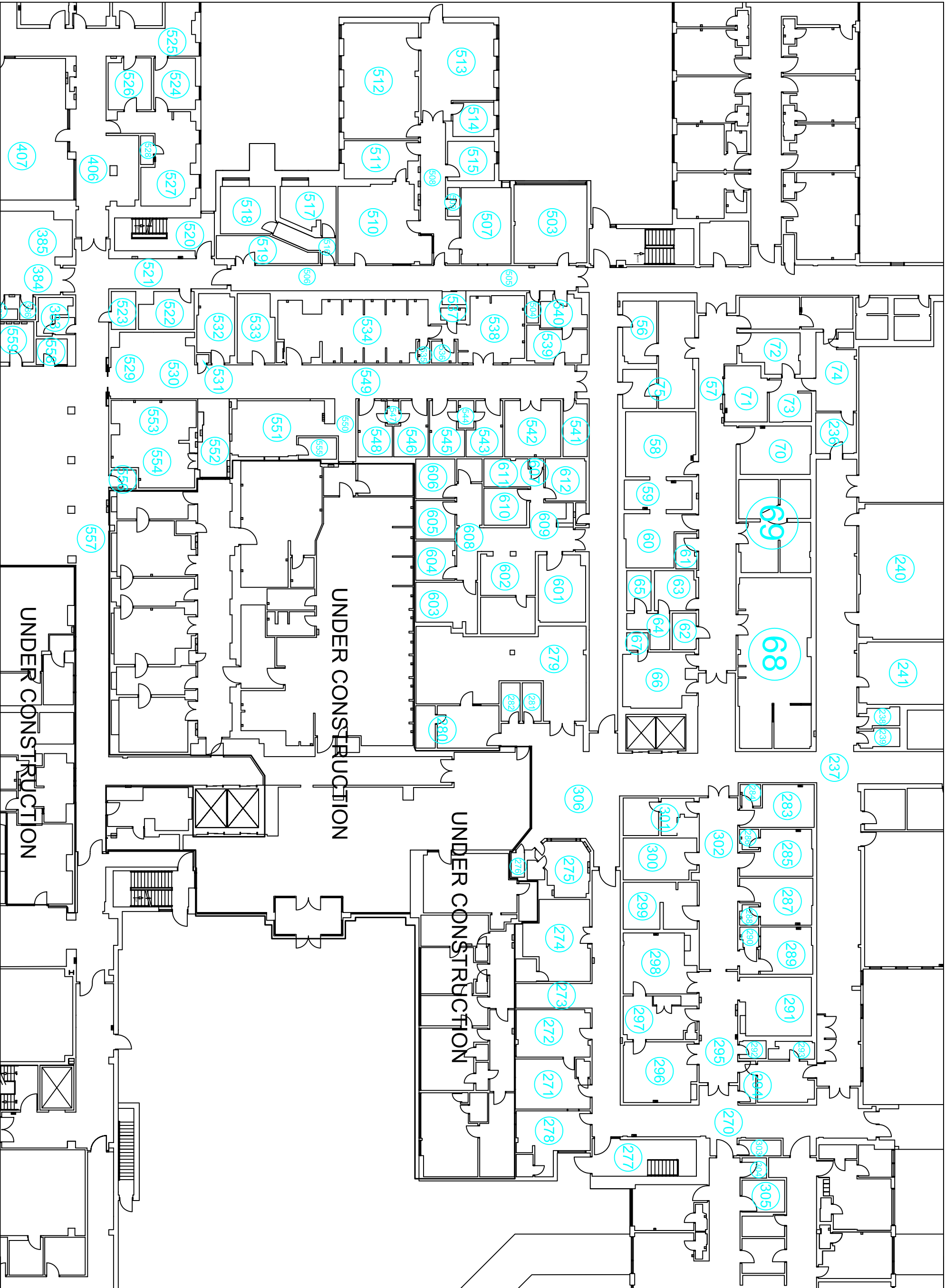


Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:
West Toronto Site
Basement (South West Corner)
150 Sherway Drive
Toronto , ON

Drawing Showing
Room By Room
Locations

Reviewed By	FA	
Drawn By	FB	
Project N°	MA1014	
Date	Oct 2008	DWG N°
Scale	NTS	1.4



LEGEND

00

Room x Room Locations

Client:

Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:

West Toronto Site
Main Floor (Centre)
150 Sherway Drive
Toronto , ON

Drawing Showing Room By Room Locations

Reviewed By

FA

Drawn By

CS

Project N°

MA1014

Date

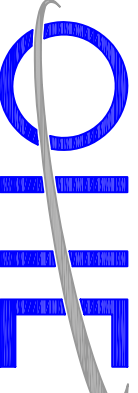
Oct 2008

DWG N°

Scale

NTS

1.5

CONSULTANTS
Occupational Hygiene & Environment

LEGEND

00

Room x Room Locations

Client:

Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:

West Toronto Site
Main Floor
(North West Corner)
150 Sherway Drive
Toronto , ON

Drawing Showing Room By Room Locations

Reviewed By

FA

Drawn By

CS

Project N°

MA1014

Date

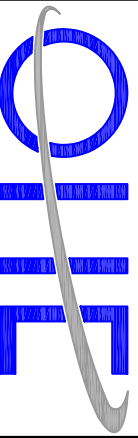
Oct 2008

DWG N°

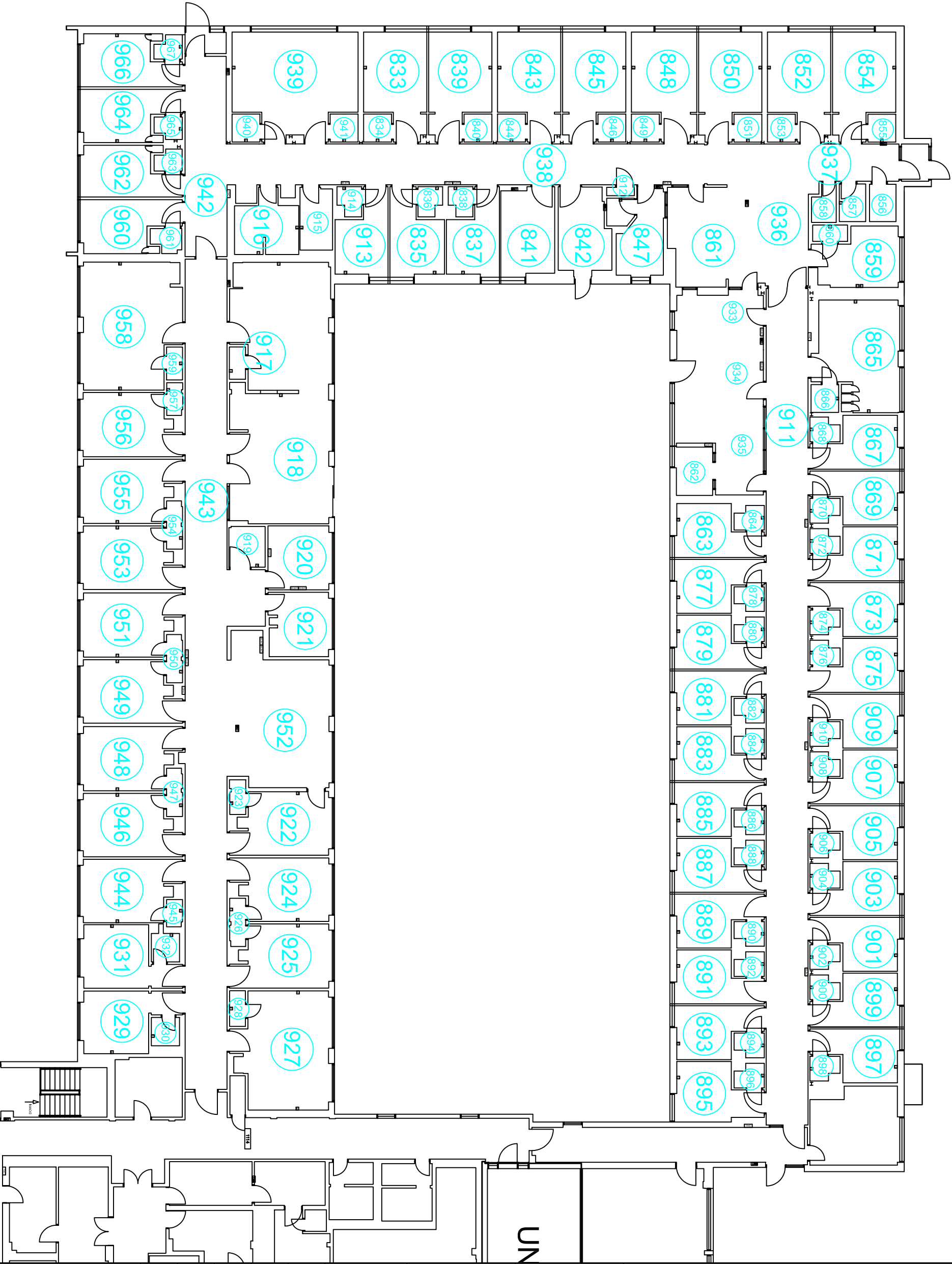
Scale

NTS

1.6



CONSULTANTS
Occupational Hygiene & Environment





LEGEND

00 Room x Room
Locations

Client:

Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:

West Toronto Site
Main Floor
(South East Corner)
150 Sherway Drive
Toronto , ON

Drawing Showing
Room By Room
Locations

Reviewed By

FA

Drawn By

CS

Project N°

MA1014

Date

Oct 2008

Scale

NTS

DWG N°

1.7



LEGEND



Client:

**Trillium Health Centre
100 Queensway West
Mississauga, ON**

Project Location:
West Toronto Site
Main Floor
(South West Corner)
150 Sherway Drive
Toronto, ON

Drawing Showing Room By Room Locations

Reviewed By	N
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Project N°	4447014
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Date	DWG N°
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DWG N°

Oct 2008

Scale	MITC
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8

Locations

Mississauga, ON

Toronto, ON

Room By Room

Locations

FA



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Project N° 111101

DWG N°

Oct 2008

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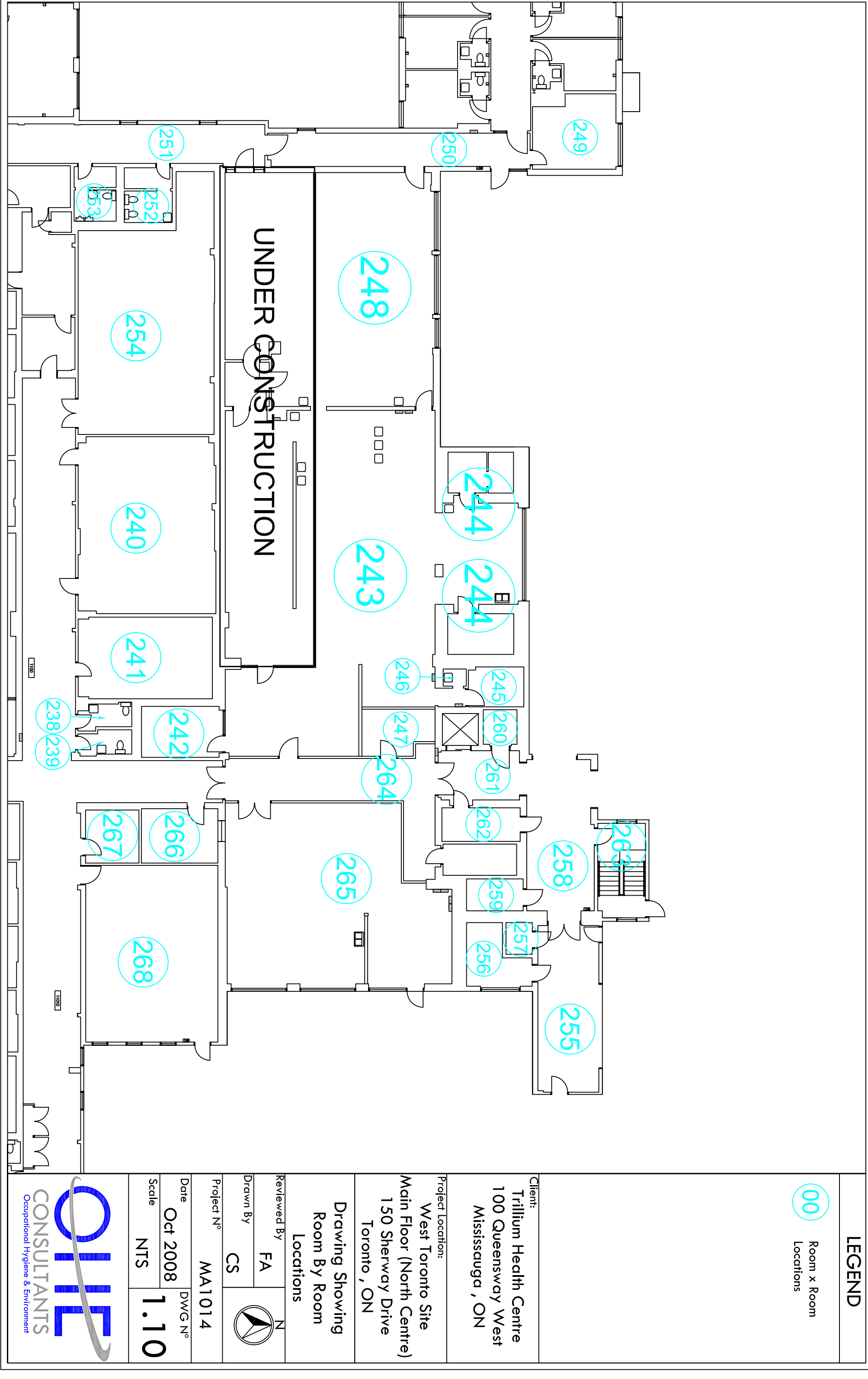
1.9



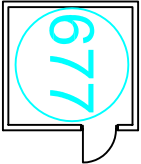
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1202

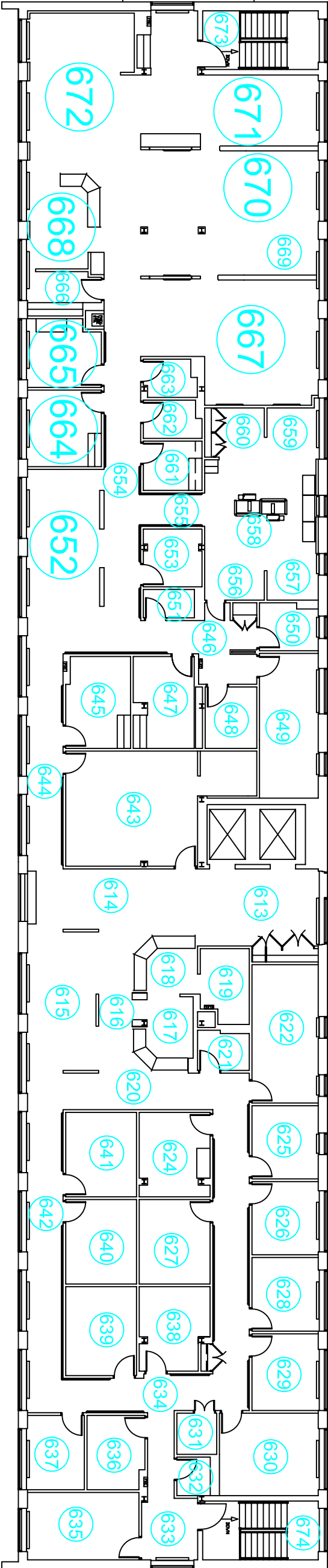
1202A



LEGEND



Room x Room
Locations



Client:

Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:

West Toronto Site
Second Floor (Centre)
150 Sherway Drive
Toronto , ON

Drawing Showing
Room By Room
Locations

Reviewed By

FA

Drawn By

CS



Project N°

MA1014

Date

Oct 2008

DWG N°

Scale

NTS

1.11



LEGEND

00

Room x Room Locations

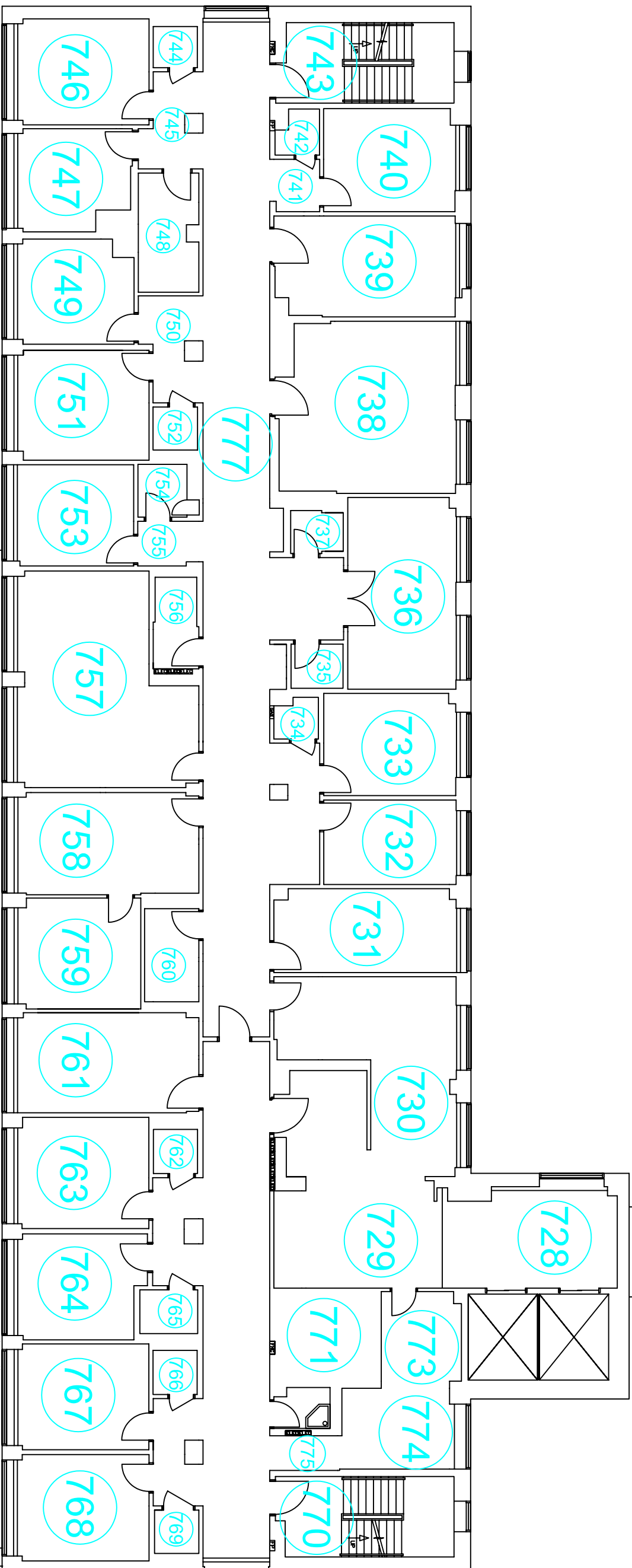
Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:
West Toronto Site
(Third Floor)
150 Sherway Drive
Toronto , ON

Drawing Showing Room By Room Locations	
Reviewed By	FA
Drawn By	CS
Project N° MA1014	
Date	Oct 2008
Scale	NTS
DWG N° 1.12	

LEGEND

00
Room x Room
Locations



**Trillium Health Centre
100 Queensway West
Mississauga, ON**

**West Toronto Site
(Fourth Floor)**

150 Sherway Drive
Toronto, ON

Drawing Showing Room By Room

Locations

FA

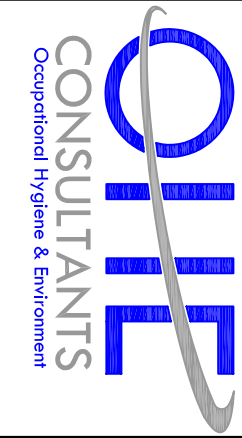
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Date _____ DWG N° _____

Scale	NITC
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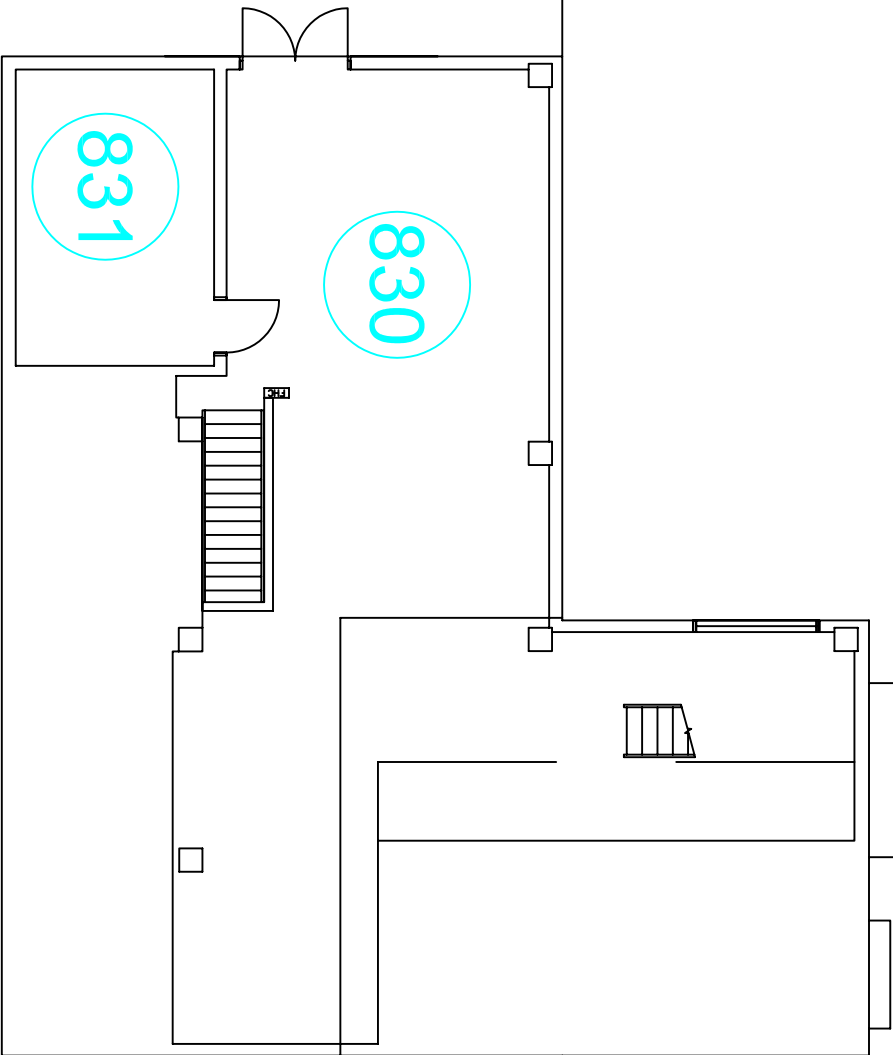
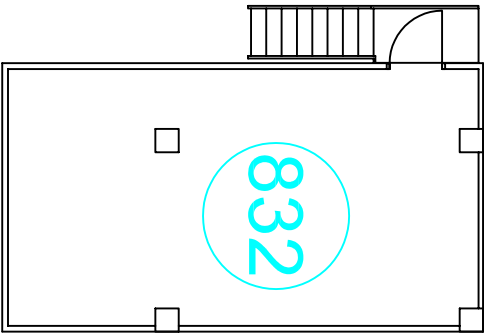
215





LEGEND

00 Room x Room
Locations



Client:

Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:

West Toronto Site
(Roof)
150 Sherway Drive
Toronto , ON

Drawing Showing
Room By Room
Locations

Reviewed By

FA

Drawn By

CS

Project N°

MA1014

Date

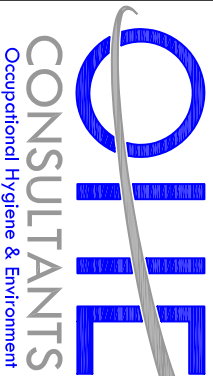
Oct 2008

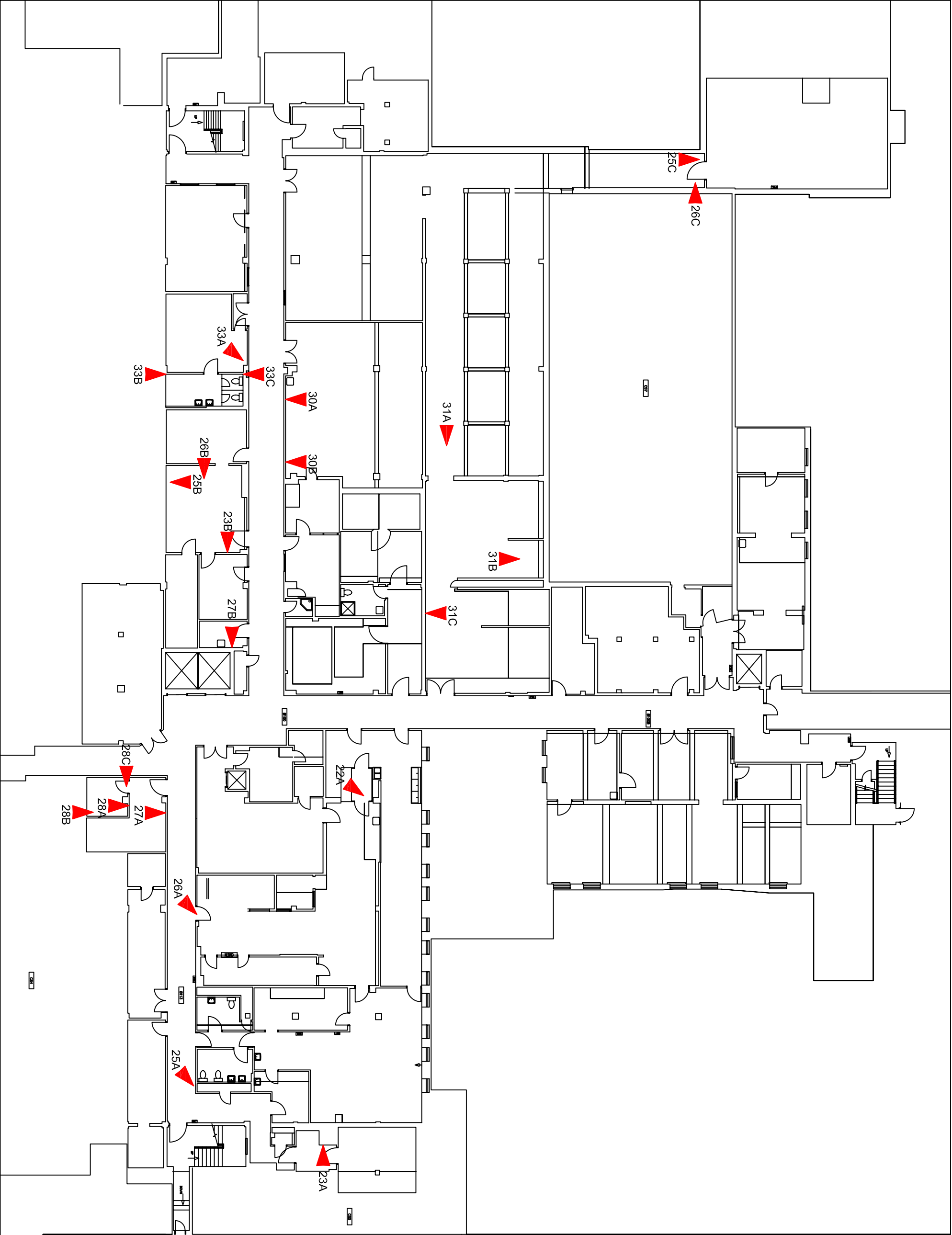
DWG N°

Scale

NTS

1.15





LEGEND

XX Bulk Sample Location

Notes: Locations of site features are approximate and may vary from that shown

Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:
West Toronto Site
Basement (North Centre)
150 Sherway Drive
Toronto , ON

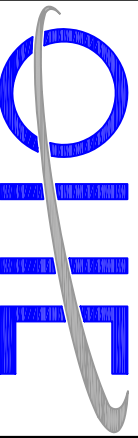
Drawing Showing
Bulk Sample
Locations

Reviewed By
FA
Drawn By
CS

Project N°
MA1014

Date
Oct 2008

Scale
NTS



OHLE
CONSULTANTS
Occupational Hygiene & Environment

LEGEND

XX  Bulk Sample Location


Notes: Locations of site features are approximate and may vary from that shown

Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:
West Toronto Site
Basement (North Centre)
150 Sherway Drive
Toronto , ON

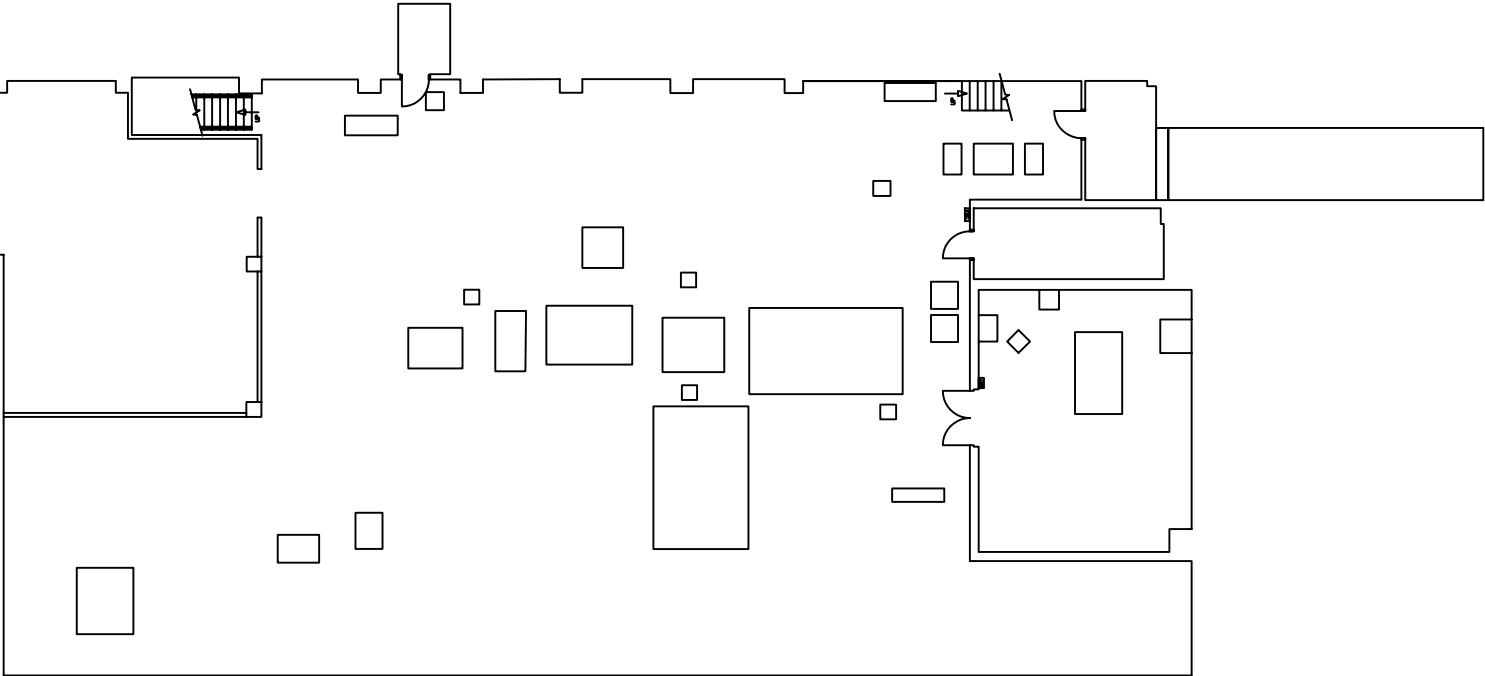
Drawing Showing
Bulk Sample
Locations

Reviewed By	FA
Drawn By	FB


N

Project N°
MA1014

Date	Oct 2008	DWG N°
Scale	NTS	2.2



LEGEND


XX  Bulk Sample Location

Notes: Locations of site features are approximate and may vary from that shown

Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

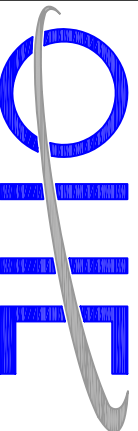
Project Location:
West Toronto Site
Basement (South Centre)
150 Sherway Drive
Toronto , ON

Drawing Showing
Bulk Sample
Locations

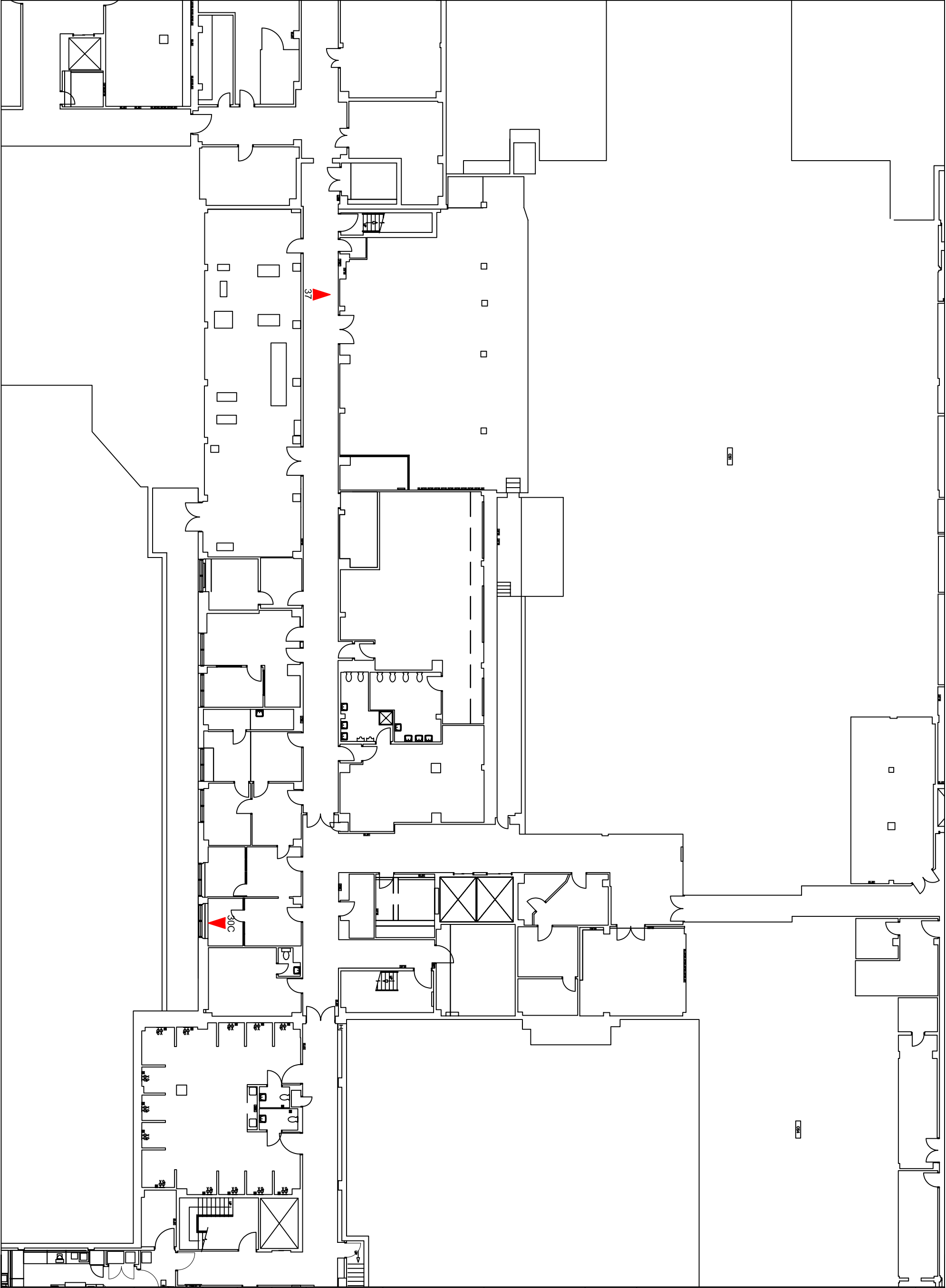
Reviewed By	FA	N
Drawn By	FB	

Project N°
MA 1014

Date	DWG N°
Oct 2008	
Scale	2.3
NTS	



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Occupational Hygiene & Environment





Notes: Locations of site features are approximate and may vary from that shown

Client:

**Trillium Health Centre
100 Queensway West
Mississauga, ON**

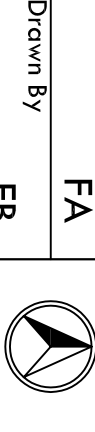
Project Location:

West Toronto Site
Basement (South West Corner)
150 Sherway Drive
Toronto, ON

Drawing Showing Bulk Sample Locations

Reviewed By N

FA



Project N° 444 707 4


Date	DWG N°
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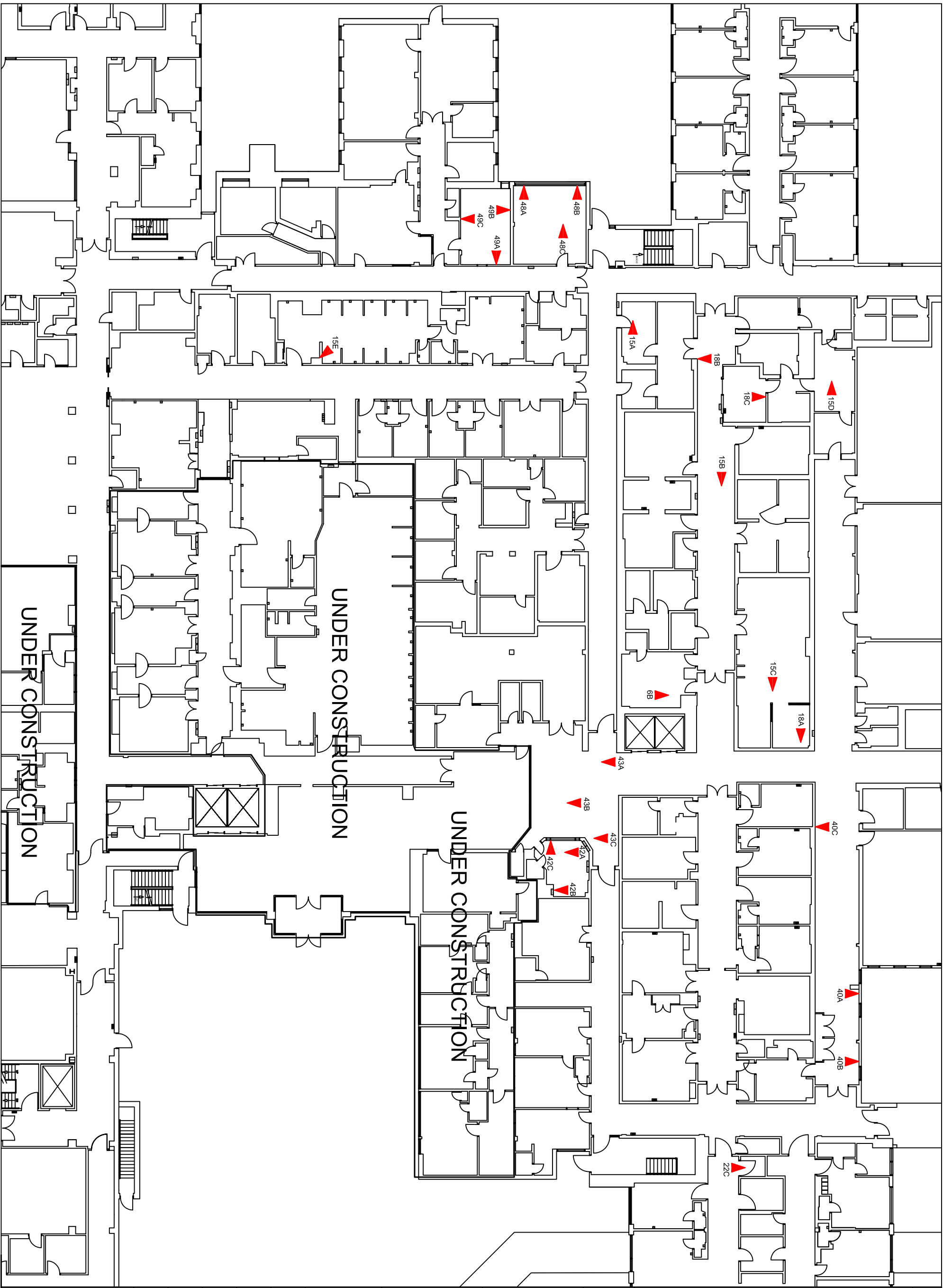
Oct 2008

Scale	2.4
NITC	

Z



XX  **Bulk Sample Location**



Notes: Locations of site features are approximate and may vary from that shown

Client:

**Trillium Health Centre
100 Queensway West
Mississauga, ON**

Project Location:

**West Toronto Site
Main Floor (Centre)
150 Sherway Drive
Toronto, ON**

Drawing Showing Bulk Sample Locations

Reviewed By

FA



Project N°

MA1014

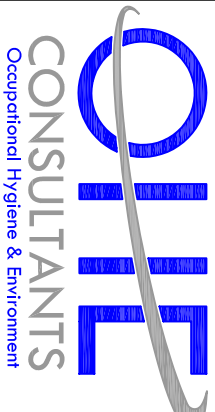
Date _____

DWG N°

Oct 2008

Scale

2.5



LEGEND

XX ▲ Bulk Sample Location

Notes: Locations of site features are approximate and may vary from that shown


Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:
West Toronto Site
Main Floor
(North West Corner)
150 Sherway Drive
Toronto , ON

Drawing Showing
Bulk Sample
Locations

Reviewed By
FA
Drawn By
CS

N



Project N°
MA1014

Date
Oct 2008
Scale
NTS

DWG N°

2.6



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Occupational Hygiene & Environment



XX Bulk Sample Location

Notes: Locations of site features are approximate and may vary from that shown

Client:

**Trillium Health Centre
100 Queensway West
Mississauga, ON**

Project Location:
West Toronto Site
Main Floor
(South East Corner)
150 Sherway Drive
Toronto, ON

Drawing Showing Bulk Sample Locations

Reviewed By

FA



Drawn By

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Project N°

MA1014

Date _____

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Oct 2008

Scale

2.7



LEGEND


XX ▲ Bulk Sample Location

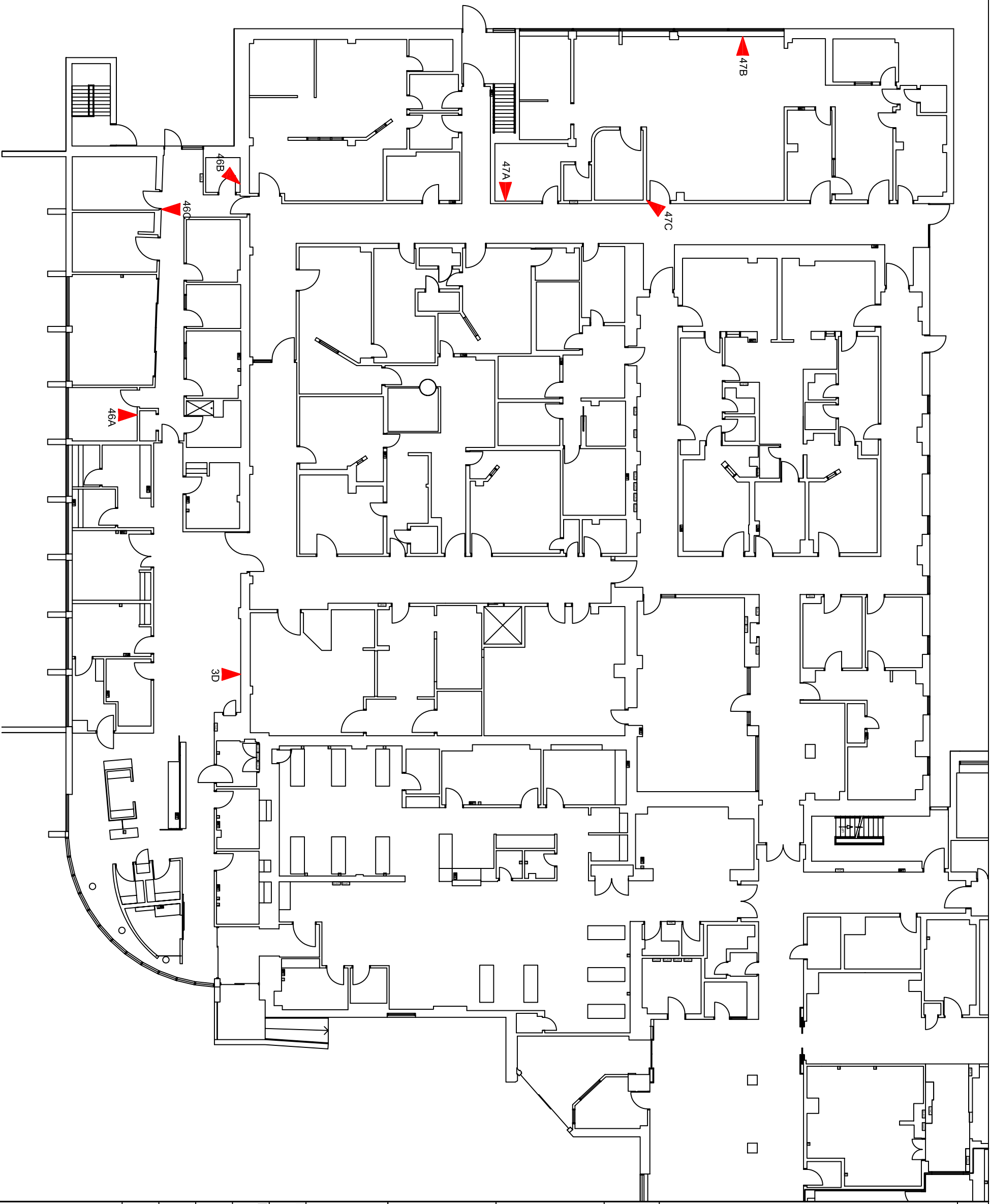
Notes: Locations of site features are approximate and may vary from that shown

Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:
West Toronto Site
Main Floor
(South West Corner)
150 Sherway Drive
Toronto , ON

Drawing Showing
Bulk Sample Locations

Reviewed By	FA	
Drawn By	CS	
Project N°	MA1014	
Date	Oct 2008	DWG N°
Scale	NTS	2.8



LEGEND

XX ▲ Bulk Sample Location

Notes: Locations of site features are approximate and may vary from that shown

Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:
West Toronto Site
Main Floor (East Wing)
150 Sherway Drive
Toronto , ON

Drawing Showing
Bulk Sample Locations

Reviewed By	FA	<div>N</div>
Drawn By	CS	

Project N°
MA1014

Date	Oct 2008	DWG N°
Scale	NTS	2.9



LEGEND

XX  **Bulk Sample Location**

Notes: Locations of site features are approximate and may vary from that shown

Client:

**Trillium Health Centre
100 Queensway West
Mississauga , ON**

Project Location:

West Toronto Site
Main Floor (North Centre)
150 Sherway Drive
Toronto, ON

Drawing Showing Bulk Sample Locations

Reviewed By

FA



Drawn By

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Project N°

MA1014

Date _____

Oct 2008

41A

41C


41B

Oct 2000	2.10
Scale	NTS

Scale

 $\frac{Z}{s}$ 

LEGEND


XX  Bulk Sample Location

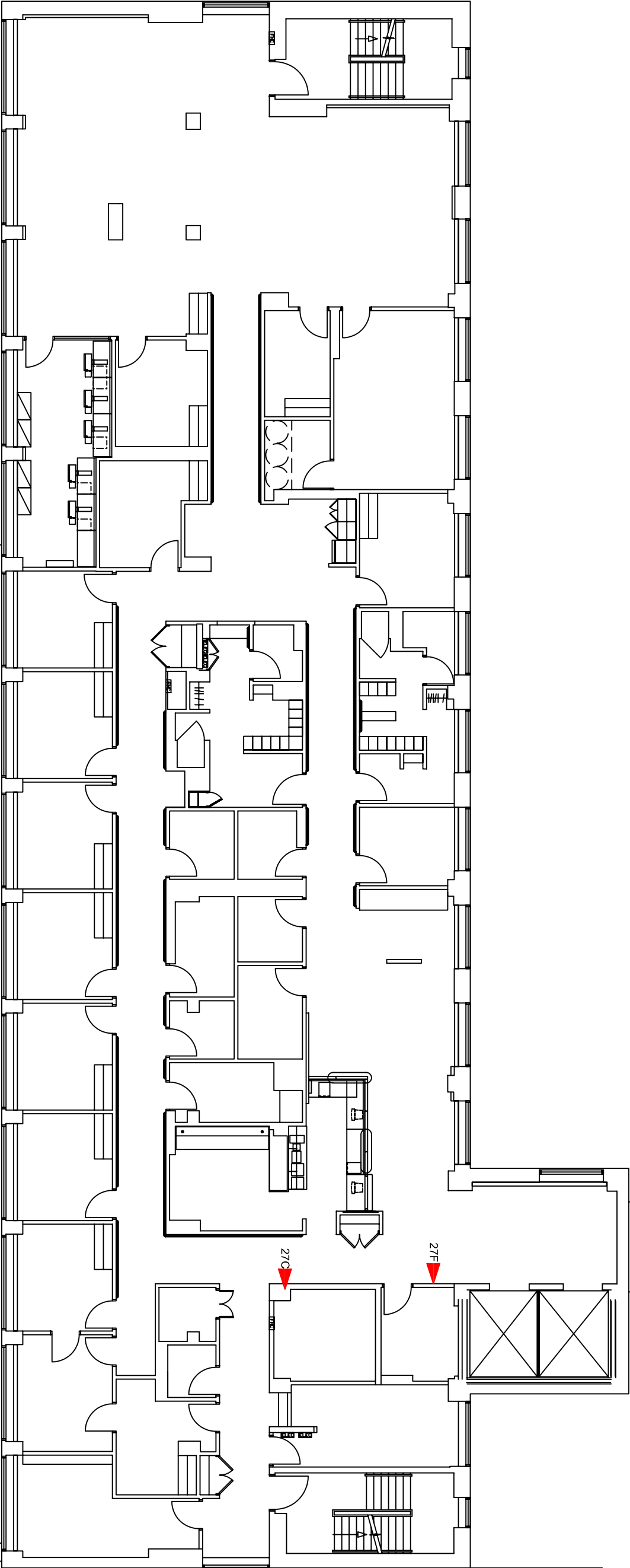
Notes: Locations of site features are approximate and may vary from that shown

Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON


Project Location:
West Toronto Site
(Third Floor)
150 Sherway Drive
Toronto , ON

Drawing Showing
Bulk Sample Locations

Reviewed By	FA	
Drawn By	CS	
Project N°	MA1014	
Date	Oct 2008	DWG N°
Scale	NTS	2.11



LEGEND


XX  Bulk Sample Location

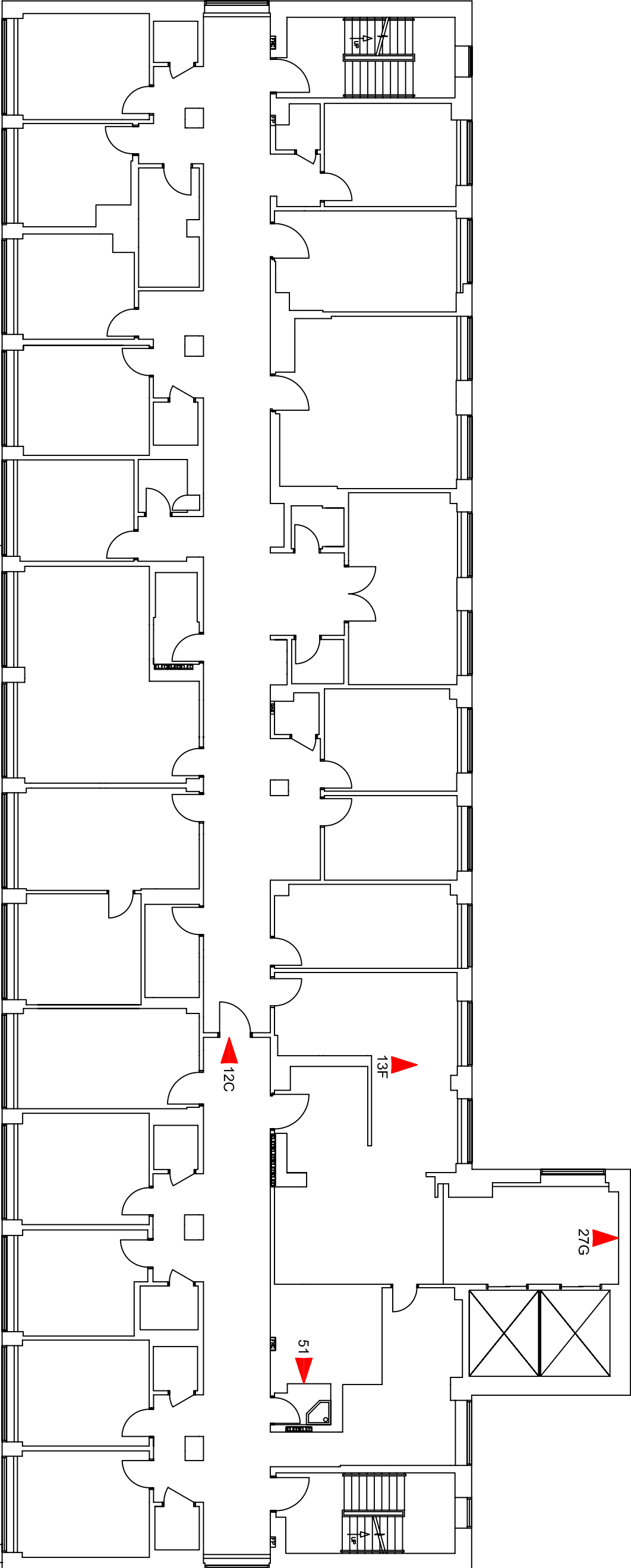
Notes: Locations of site features are approximate and may vary from that shown

Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:
West Toronto Site
(Fourth Floor)
150 Sherway Drive
Toronto , ON

Drawing Showing
Bulk Sample Locations

Reviewed By	FA	
Drawn By	CS	
Project N°	MA1014	
Date	Oct 2008	DWG N°
Scale	NTS	2.12



LEGEND

XX ▲ Bulk Sample Location

Notes: Locations of site features are approximate and may vary from that shown

Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:
West Toronto Site
(5th Floor)
150 Sherway Drive
Toronto , ON


Drawing Showing
Bulk Sample Locations

Reviewed By

FA

Drawn By

CS



Project N°

MA1014

Date

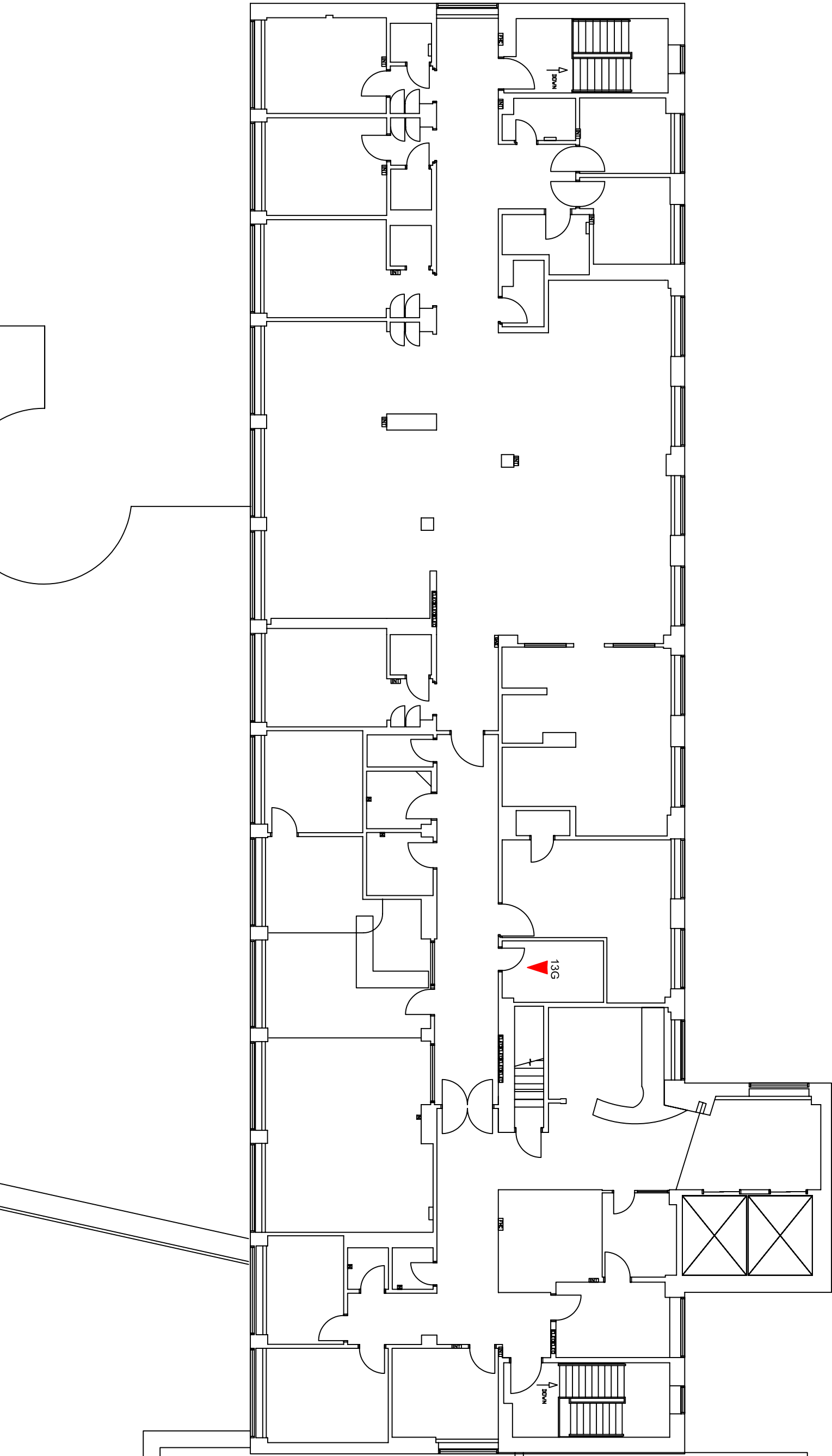
Oct 2008

DWG N°

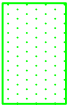
Scale

NTS

2.13



LEGEND


 Texture Coat

Notes: Locations of site features are approximate and may vary from that shown

Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

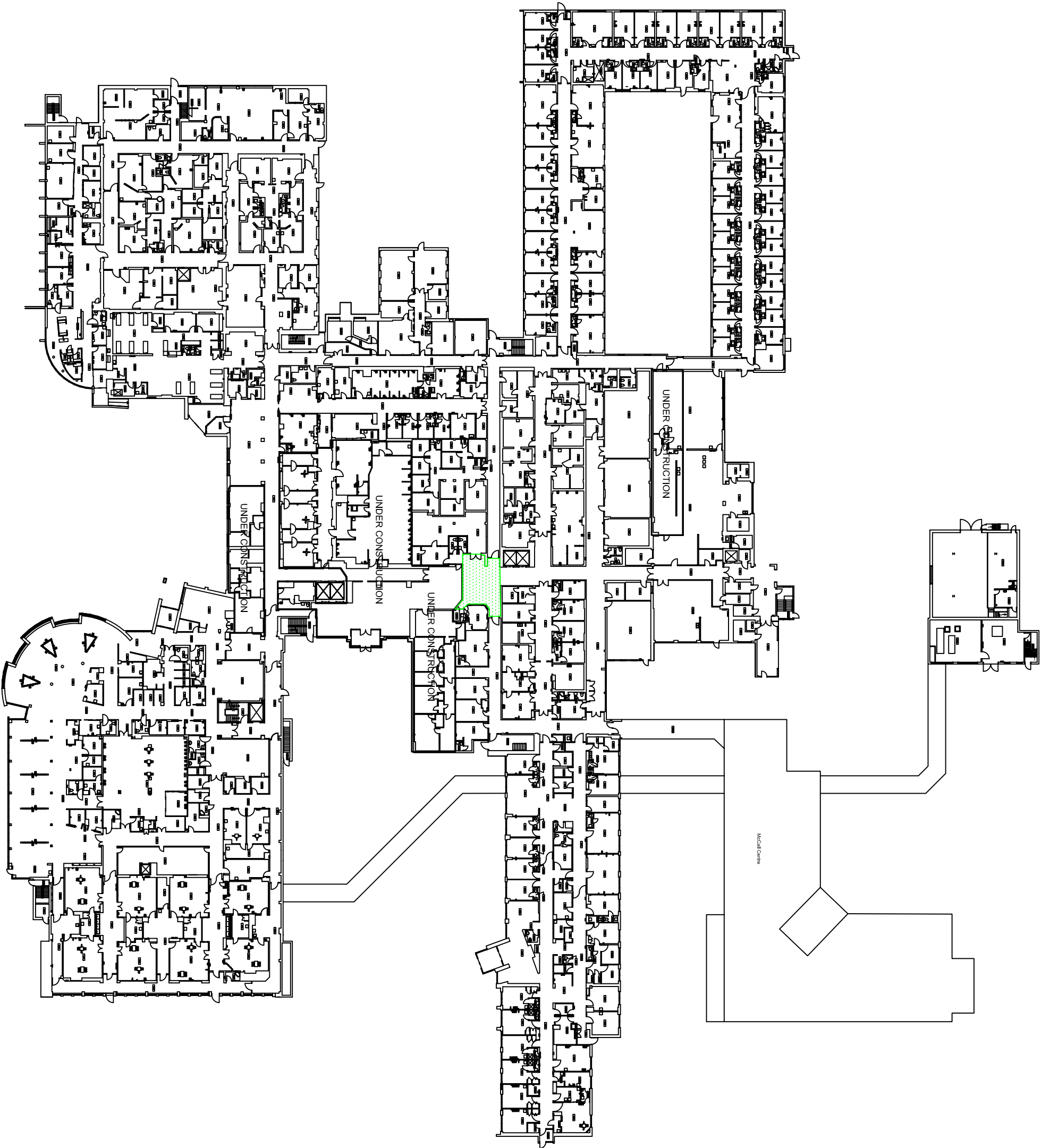
Project location:
Trillium Health Centre
(Main Floor)
West Toronto Site
150 Sherway Drive
Toronto , ON

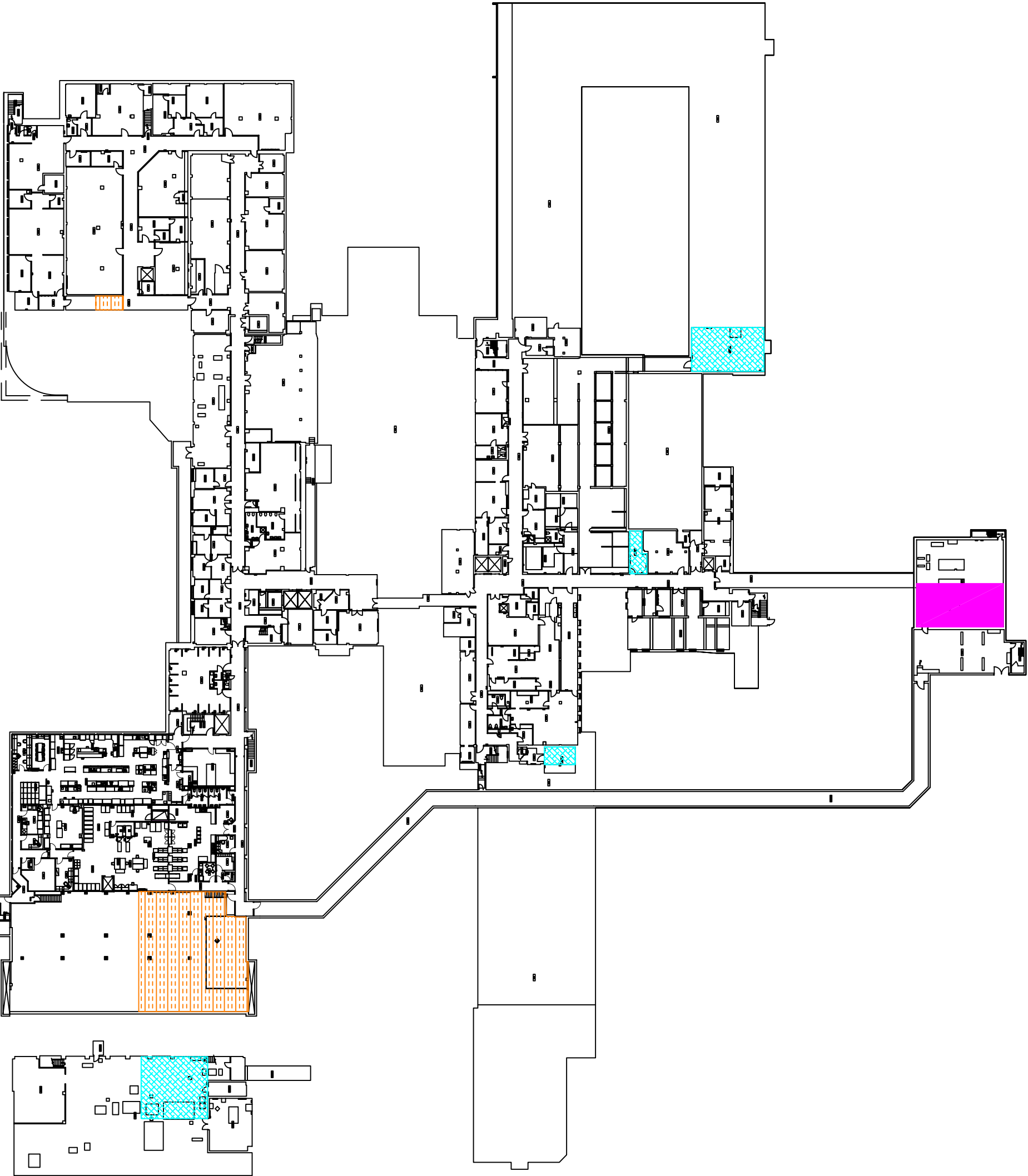
Drawing Showing Friable
Asbestos-Containing
Materials

Reviewed By	FA	
Drawn By	FB	

Project N°
MA1014

Date	Oct 2008	DWG N°
Scale	NTS	3.1





LEGEND

- Mechanical System Insulation
- Mechanical Air-Duct Insulation
- Boiler Breeding
- Tank Insulation

NOTE:
1. All Thermal Pipe Insulation present in all the locations shown in this drawing shall be assumed Asbestos-Containing.

Notes: Locations of site features are approximate and may vary from that shown

Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:
Trillium Health Centre
(Basement)
West Toronto Site
150 Sherway Drive
Toronto , ON

Drawing Showing Friable Asbestos-Containing Materials	
Reviewed By	FA
Drawn By	FB
Project N° MA1014	
Date	Oct 2008
Scale	NTS
DWG N° 3.2	

LEGEND

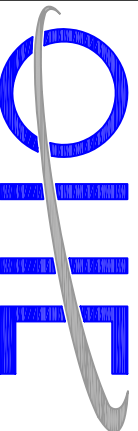
- Mechanical System Insulation
- Thermal Pipe Insulation
- Under Construction

Notes: Locations of site features are approximate and may vary from that shown

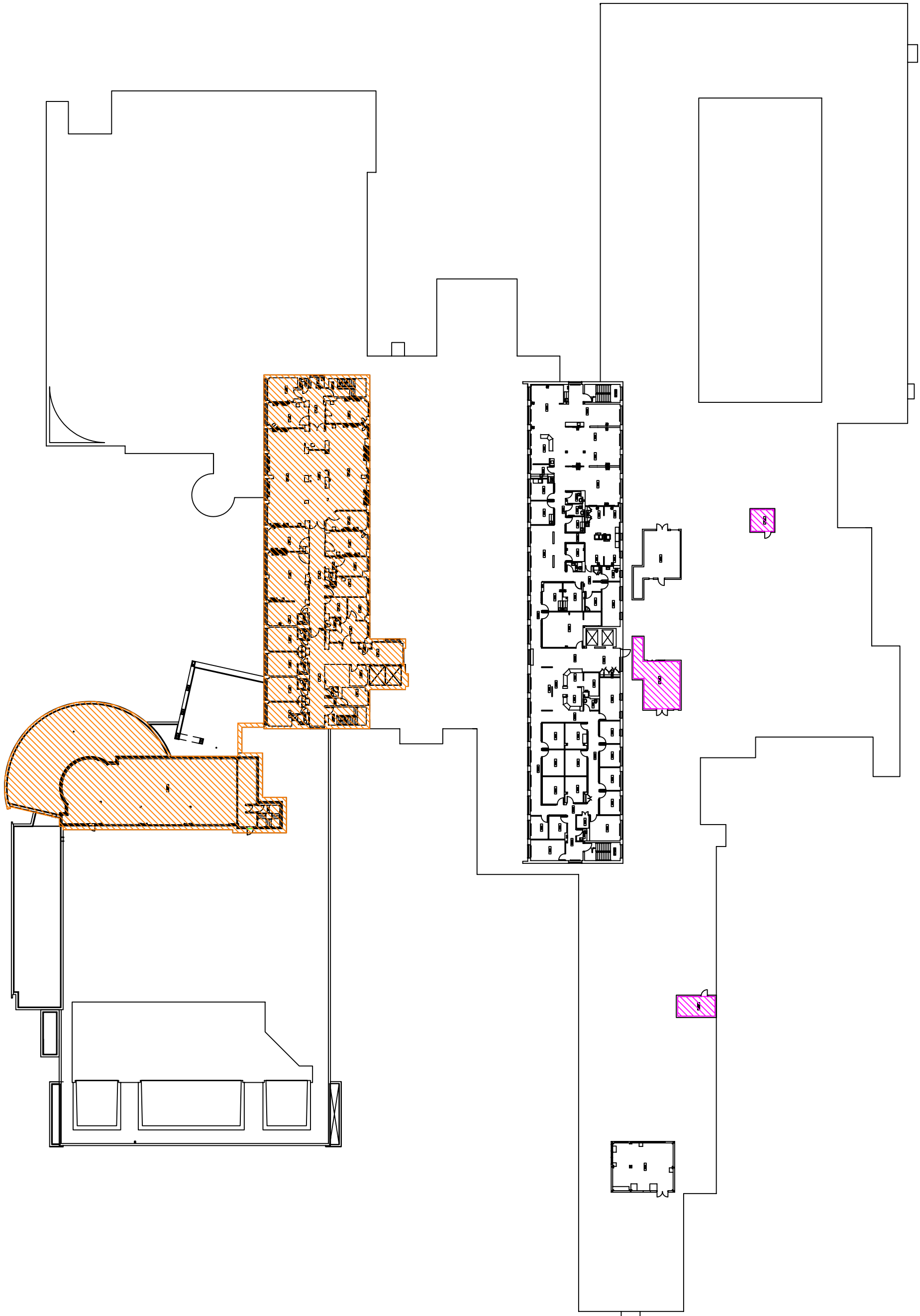
Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:
Trillium Health Centre
(Second Floor)
West Toronto Site
150 Sherway Drive
Toronto , ON

Drawing Showing Friable Asbestos-Containing Materials	
Reviewed By	FA
Drawn By	FB
Project N° MA1014	
Date	Oct 2008
Scale	NTS
DWG N° 3.3	




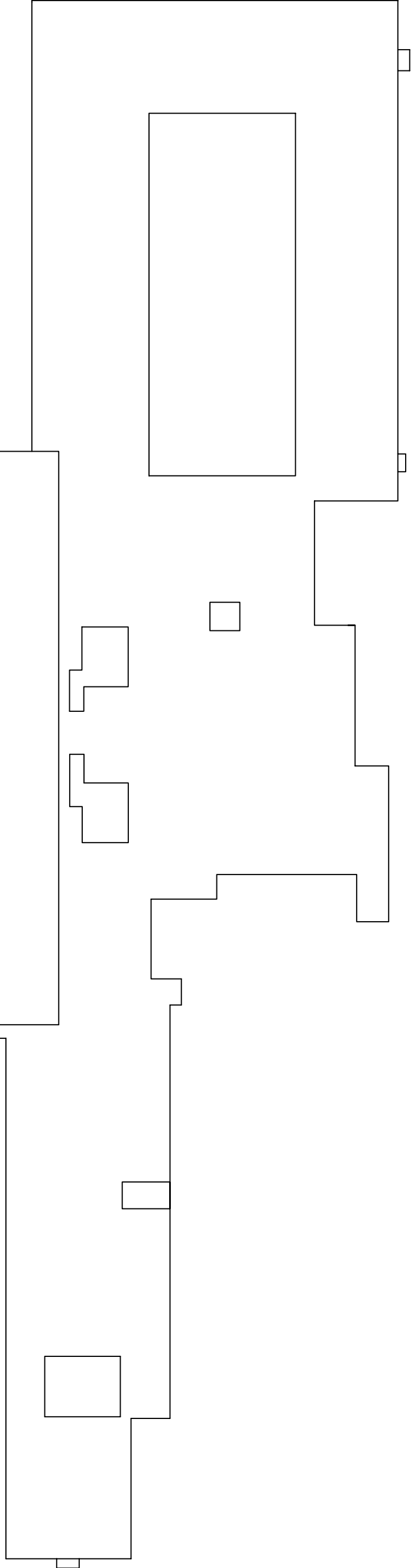
OHIE
CONSULTANTS
Occupational Hygiene & Environment



LEGEND

Mechanical System Insulation

 Thermal Pipe
Insulation




Notes: Locations of site features are approximate and may vary from that shown

Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:
Trillium Health Centre
(3rd Floor)
West Toronto Site
150 Sherway Drive
Toronto , ON

Drawing Showing
Friable
Asbestos-Containing
Materials

Reviewed By
FA
Drawn By
FB


Project N°
MA1014
Date
Oct 2008
DWG N°
Scale
NTS
3.4

LEGEND


Mechanical System Insulation

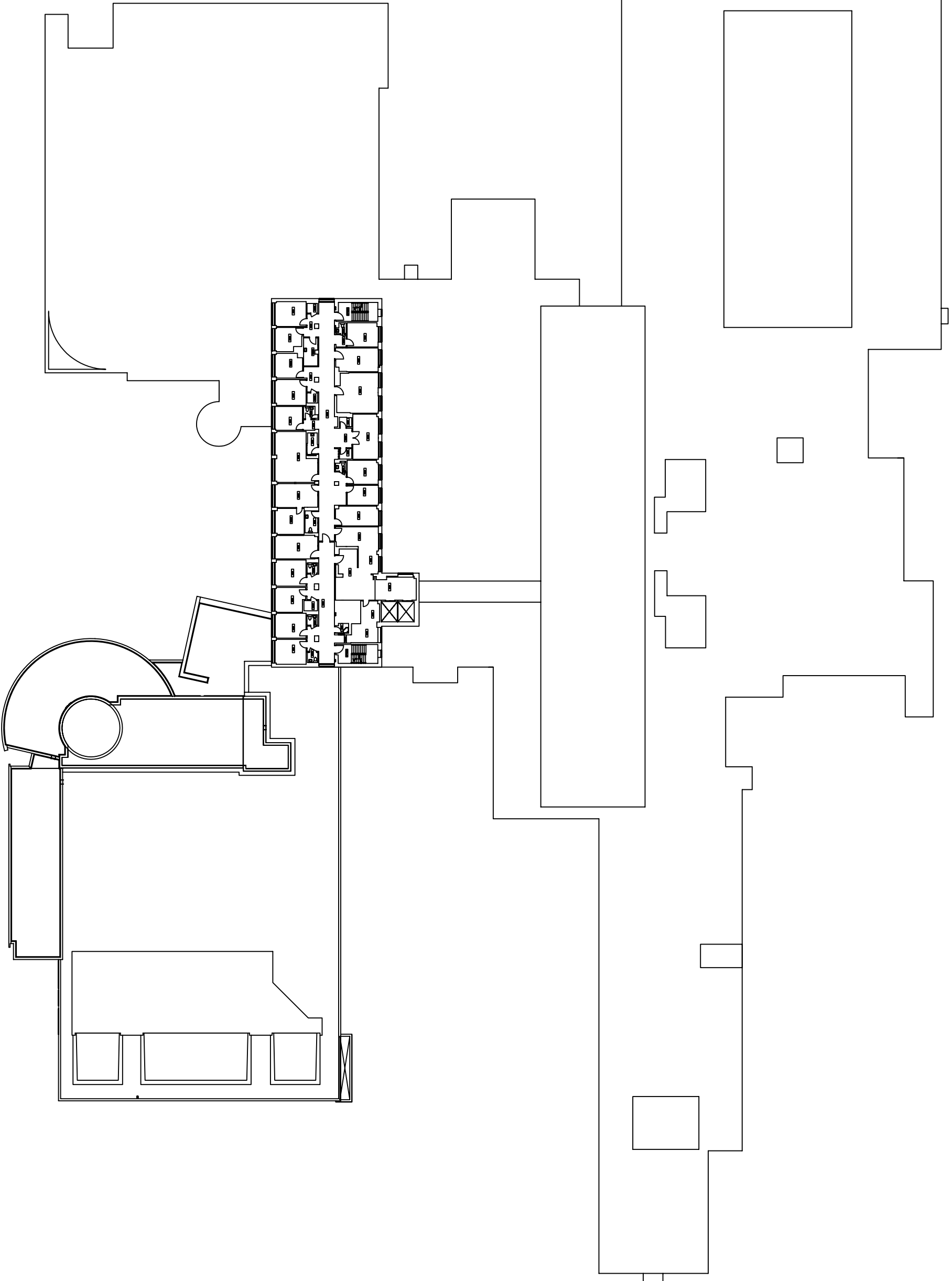
NOTE:
1. All Thermal Pipe Insulation present in all the locations shown in this drawing shall be assumed
Asbestos-Containing.

Notes: Locations of site features are approximate and may vary from that shown

Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:
Trillium Health Centre
(4th Floor)
West Toronto Site
150 Sherway Drive
Toronto , ON

Drawing Showing Friable Asbestos-Containing Materials	
Reviewed By	FA
Drawn By	FB
	
Project N° MA1014	
Date	Oct 2008
Scale	NTS
DWG N° 3.5	



LEGEND


Mechanical System Insulation

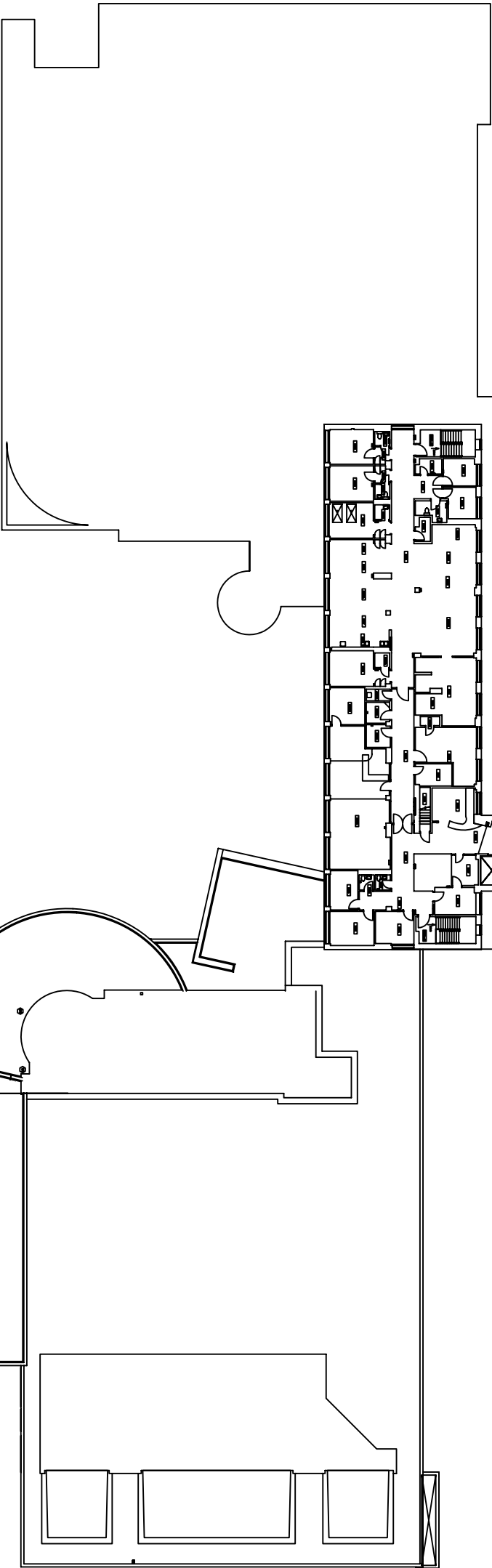
NOTE:
1. All Thermal Pipe Insulation present in all the locations shown in this drawing shall be assumed
Asbestos-Containing.

Notes: Locations of site features are approximate and may vary from that shown

Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON


Project Location:
Trillium Health Centre
(5th Floor)
West Toronto Site
150 Sherway Drive
Toronto , ON

Drawing Showing Friable Asbestos-Containing Materials	
Reviewed By	FA
Drawn By	FB
	
Project N° MA1014	
Date	Oct 2008
Scale	NTS
DWG N° 3.6	



LEGEND

Mechanical System Insulation


 Thermal Pipe
Insulation

Notes: Locations of site features are approximate and may vary from that shown

Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

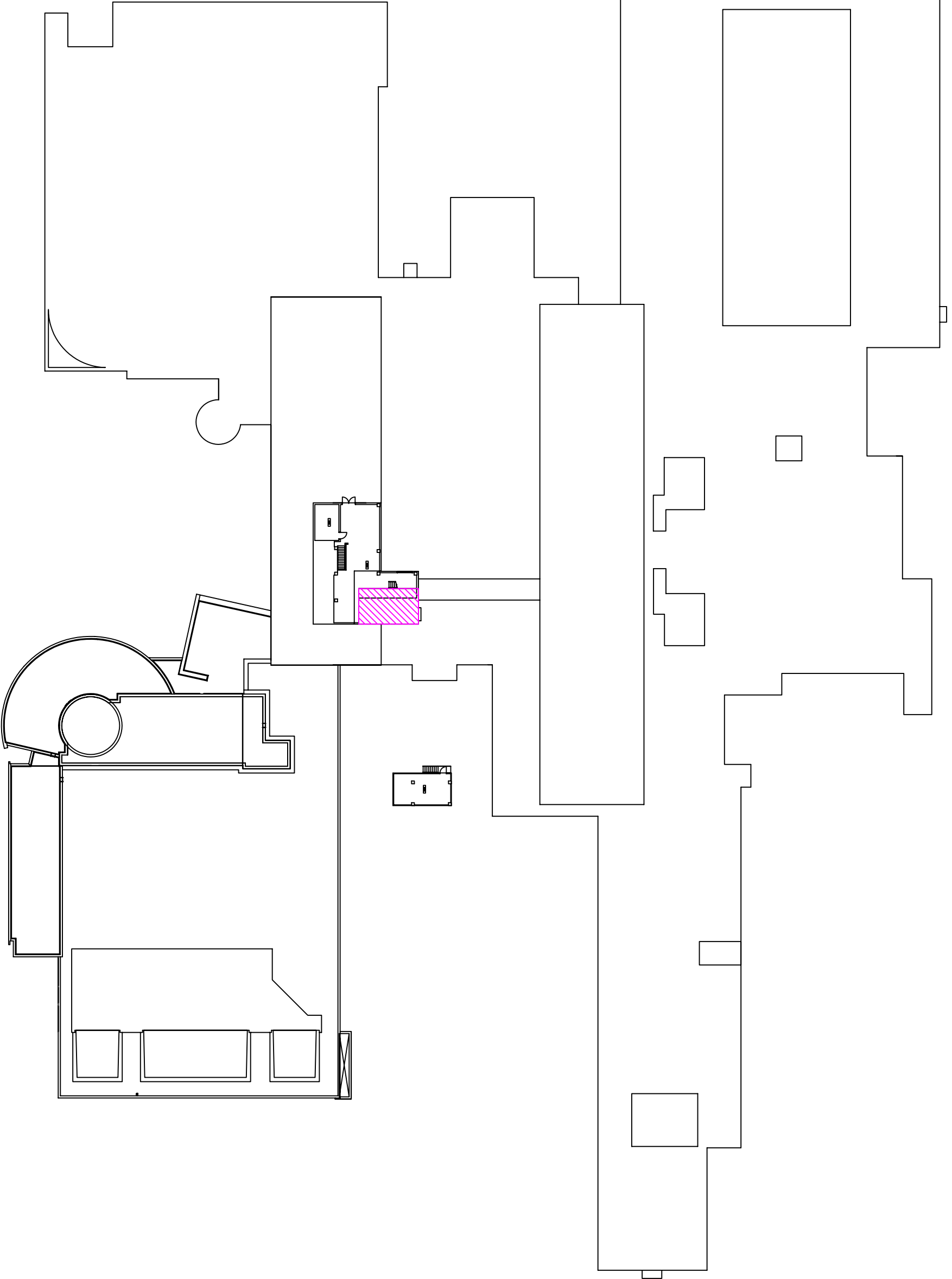
Project Location:
Trillium Health Centre
(Roof)
West Toronto Site
150 Sherway Drive
Toronto , ON

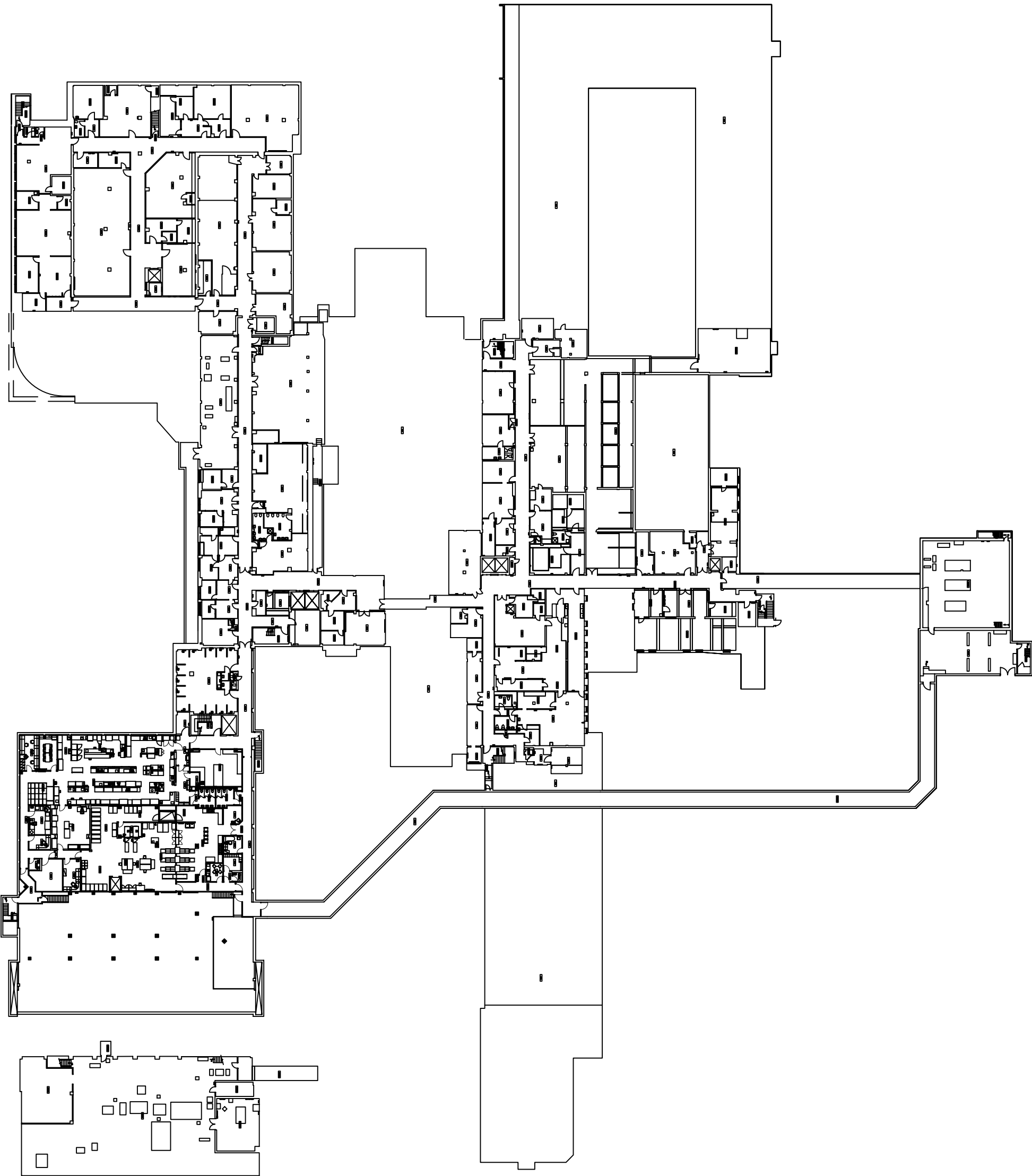
Drawing Showing
Friable
Asbestos-Containing
Materials

Reviewed By	FA	
Drawn By	FB	

Project N°
MA1014

Date	Oct 2008	DWG N°
Scale	NTS	3.7





LEGEND

Drywall Joint Filling Compound

NOTE:
1. All Drywall Joint Filling Compound present in all the locations shown in this drawing shall be assumed Asbestos-Containing.

Notes: Locations of site features are approximate and may vary from that shown

Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:
Trillium Health Centre
(Basement)
West Toronto Site
150 Sherway Drive
Toronto , ON

Drawing Showing
Non-Friable
Asbestos-Containing
Materials

Reviewed By
FA
Drawn By
FB
N

Project N°
MA1014

Date
Oct 2008
Scale
NTS
DWG N°
4.1

LEGEND

Drywall Joint Filling Compound


NOTE:
1. All Drywall Joint Filling Compound present in all the locations shown in this drawing shall be assumed Asbestos-Containing.

Notes: Locations of site features are approximate and may vary from that shown

Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

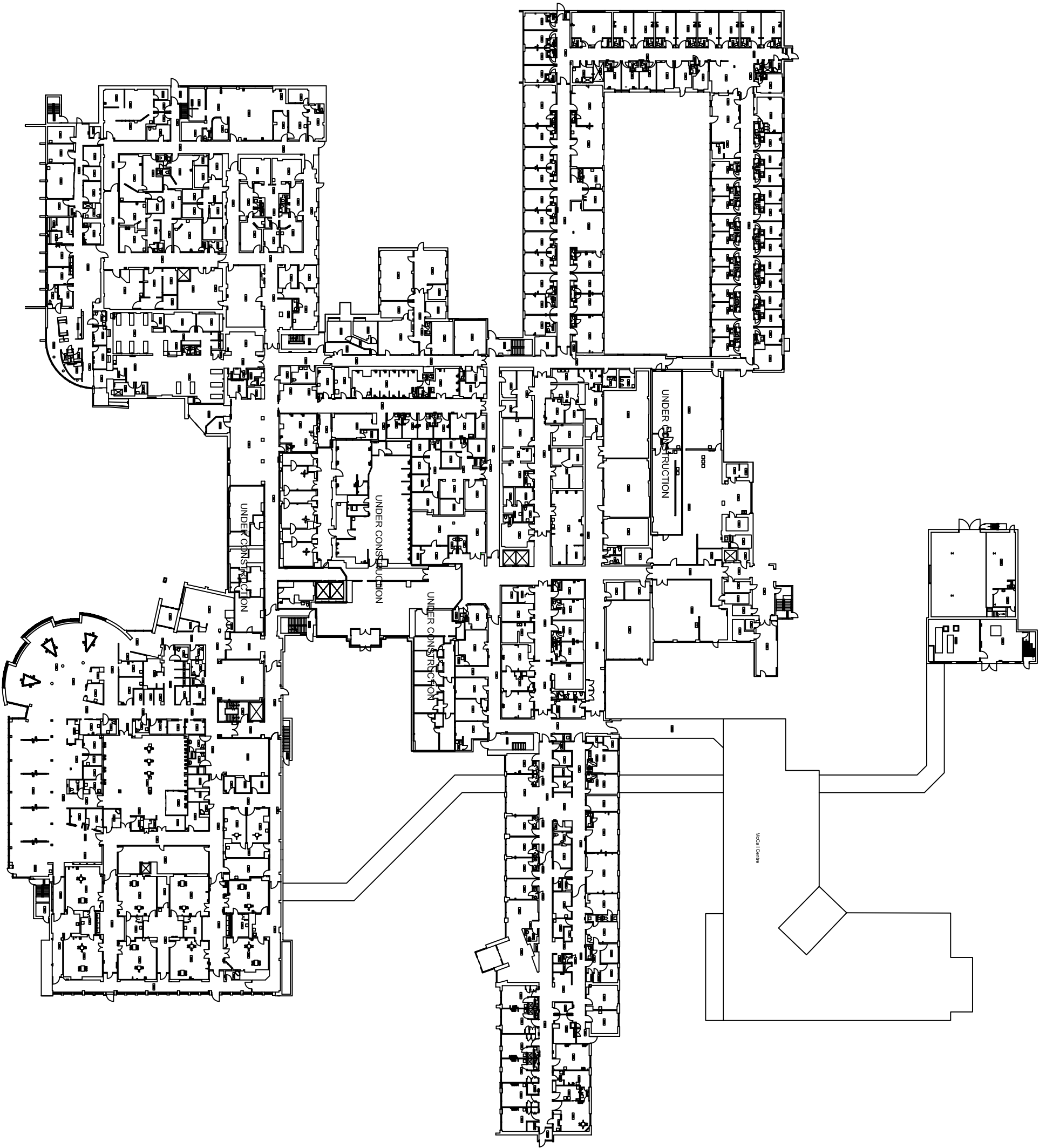
Project location:
Trillium Health Centre
(Main Floor)
West Toronto Site
150 Sherway Drive
Toronto , ON

Drawing Showing
Non-Friable
Asbestos-Containing
Materials

Reviewed By
FA
N
Drawn By
FB


Project N°
MA1014

Date
Oct 2008
DWG N°
Scale
NTS
4.2



LEGEND


Drywall Joint Filling Compound

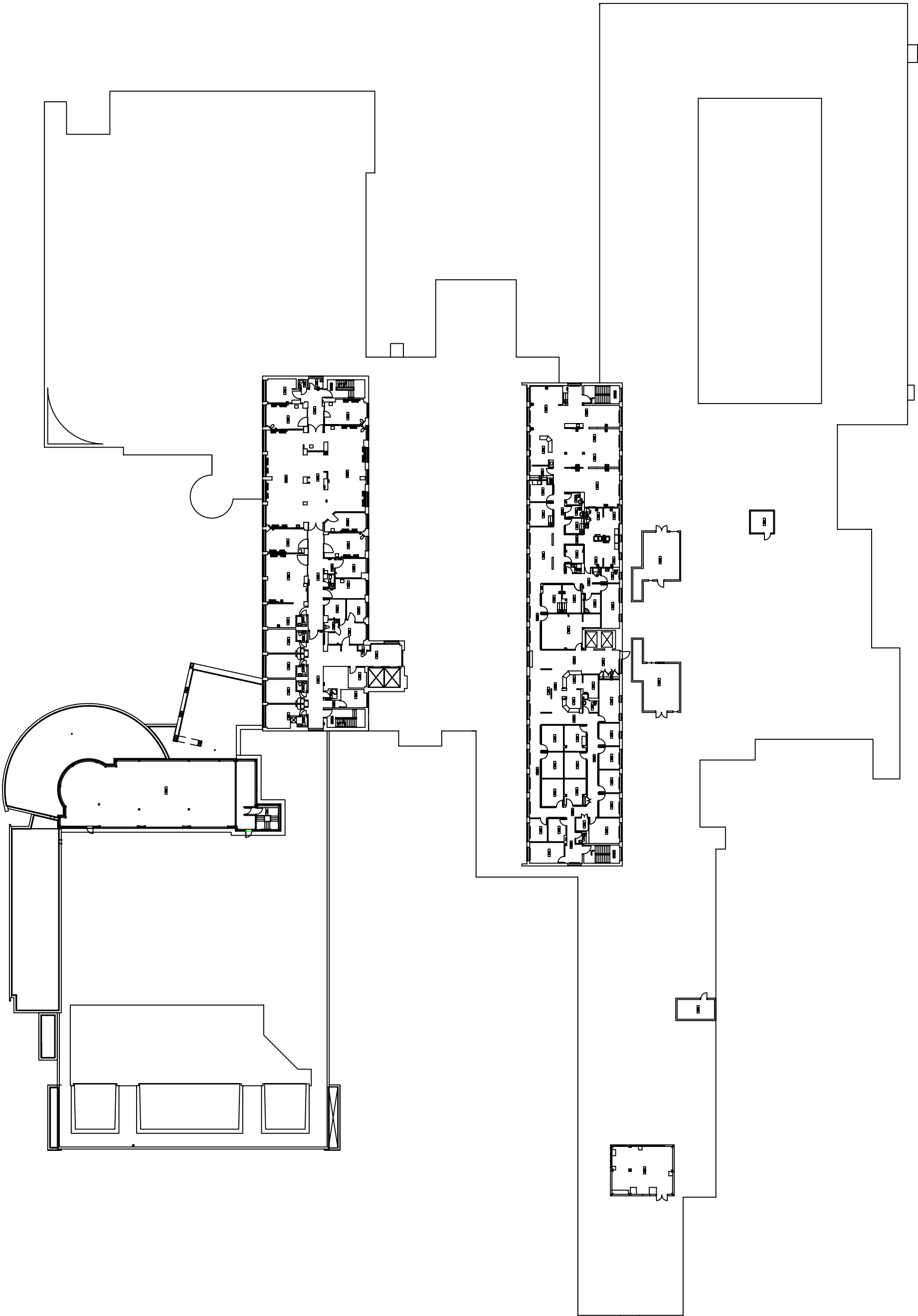
NOTE:
1. All Drywall Joint Filling Compound present in all the locations shown in this drawing shall be assumed Asbestos-Containing.

Notes: Locations of site features are approximate and may vary from that shown

Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:
Trillium Health Centre
(Second Floor)
West Toronto Site
150 Sherway Drive
Toronto , ON

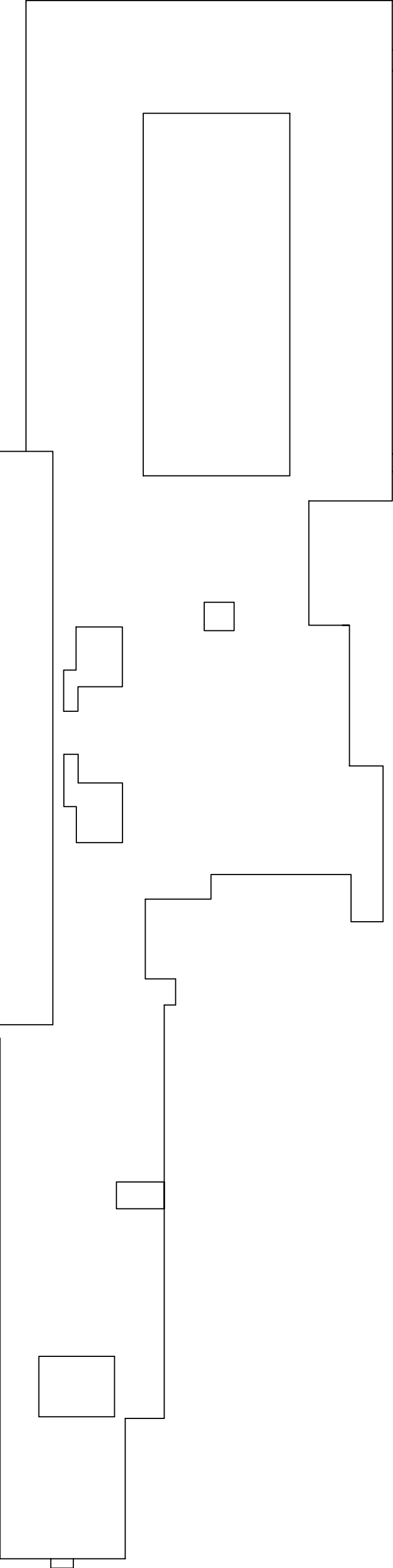
Reviewed By		FA	
Drawn By			
Project N°		FB	
Date		MA1014	N
Oct 2008		DWG N°	
Scale		NTS	4.3



LEGEND

Drywall Joint Filling Compound

NOTE:
1. All Drywall Joint Filling Compound present in all the locations shown in this drawing shall be assumed Asbestos-Containing.

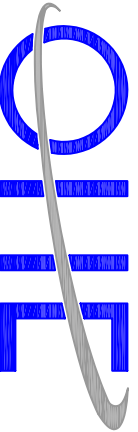


Notes: Locations of site features are approximate and may vary from that shown

Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:
Trillium Health Centre
(3rd Floor)
West Toronto Site
150 Sherway Drive
Toronto , ON

Drawing Showing Non-Friable Asbestos-Containing Materials	
Reviewed By	FA
Drawn By	FB
Project N° MA1014	
Date	Oct 2008
Scale	NTS
DWG N° 4.4	



OHIE
CONSULTANTS
Occupational Hygiene & Environment

LEGEND

Drywall Joint Filling Compound

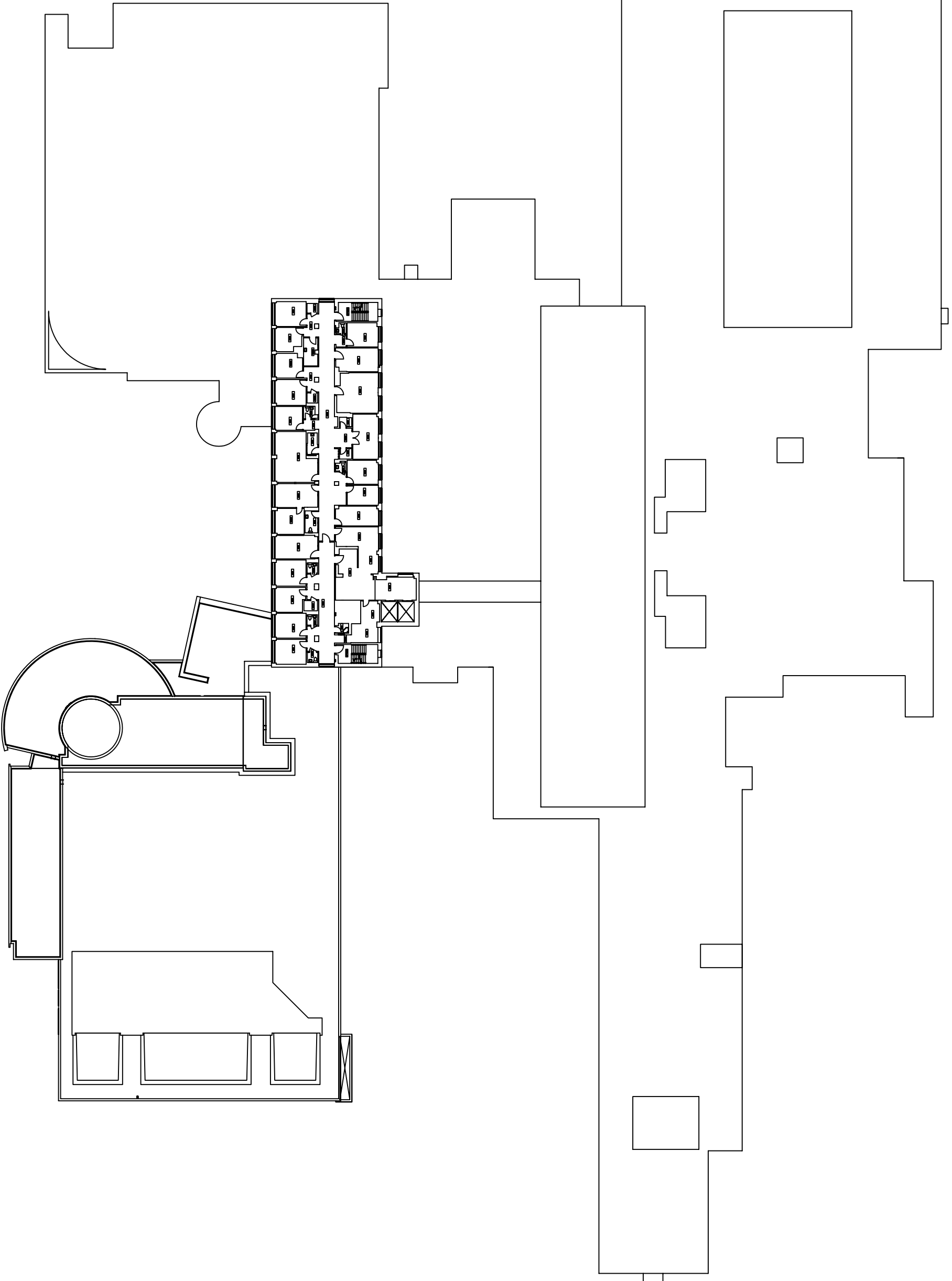
NOTE:
1. All Drywall Joint Filling Compound present in all the locations shown in this drawing shall be assumed Asbestos-Containing.

Notes: Locations of site features are approximate and may vary from that shown

Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:
Trillium Health Centre
(4th Floor)
West Toronto Site
150 Sherway Drive
Toronto , ON

Drawing Showing Non-Friable Asbestos-Containing Materials	
Reviewed By	FA
Drawn By	FB
Project N° MA1014	
Date	Oct 2008
Scale	NTS
DWG N° 4.5	



LEGEND


Drywall Joint Filling Compound

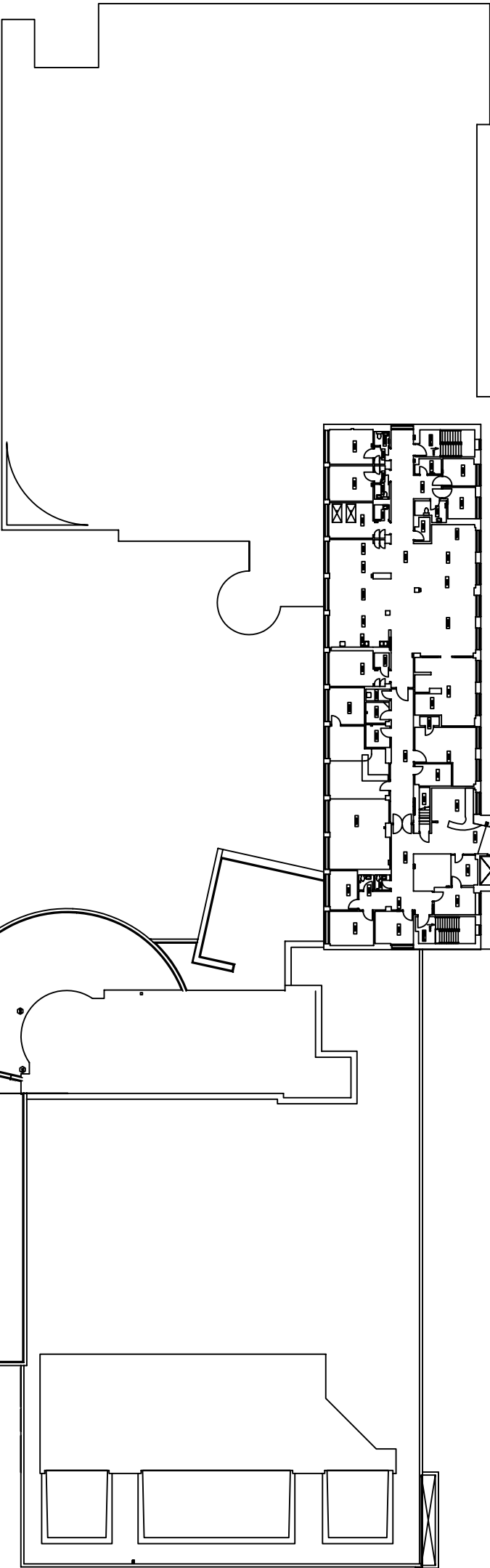
NOTE:
1. All Drywall Joint Filling Compound present in all the locations shown in this drawing shall be assumed Asbestos-Containing.

Notes: Locations of site features are approximate and may vary from that shown

Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:
Trillium Health Centre
(5th Floor)
West Toronto Site
150 Sherway Drive
Toronto , ON

Reviewed By		FA	
Drawn By			
Project N°		FB	
Date		MA1014	N
Oct 2008		DWG N°	
Scale	NTS	4.6	



LEGEND

Drywall Joint Filling Compound

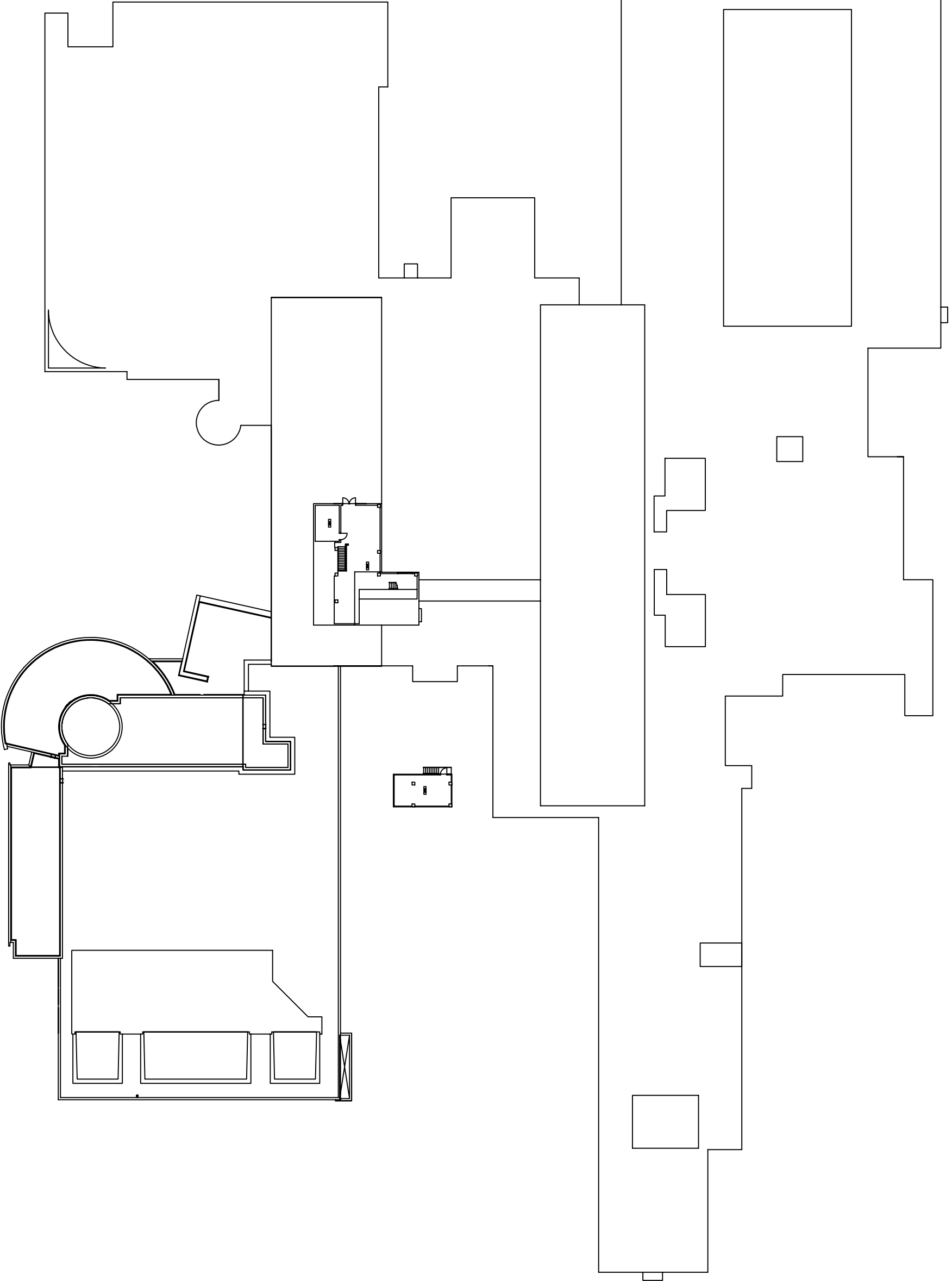
NOTE:
1. All Drywall Joint Filling Compound present in all the locations shown in this drawing shall be assumed Asbestos-Containing.

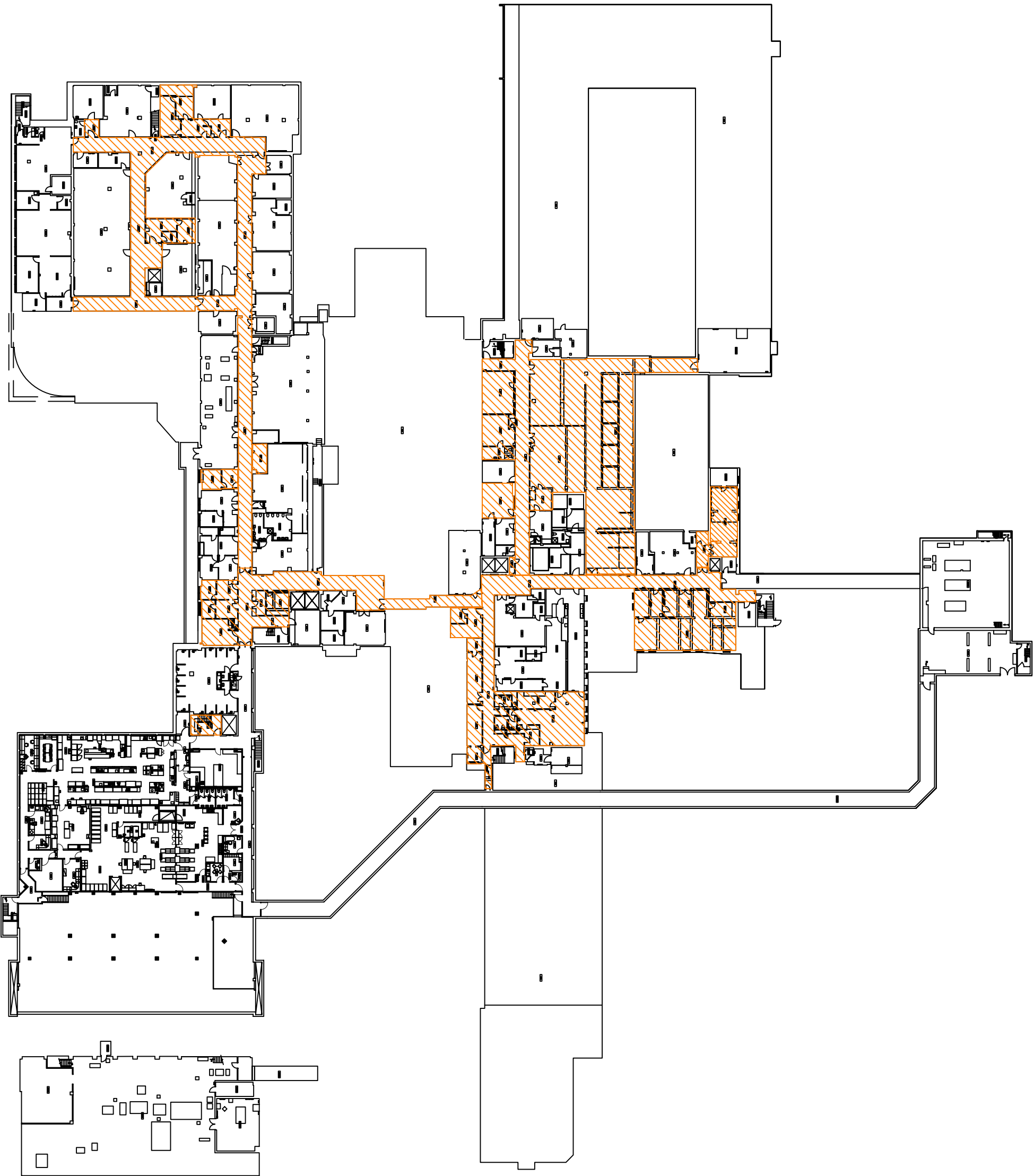
Notes: Locations of site features are approximate and may vary from that shown

Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:
Trillium Health Centre
(Roof)
West Toronto Site
150 Sherway Drive
Toronto , ON

Drawing Showing Non-Friable Asbestos-Containing Materials	
Reviewed By	FA
Drawn By	FB
Project N° MA1014	
Date	Oct 2008
Scale	NTS
DWG N° 4.7	





LEGEND

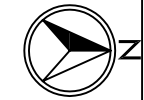
 Vinyl Floor Tiles (VFT)

Notes: Locations of site features are approximate and may vary from that shown

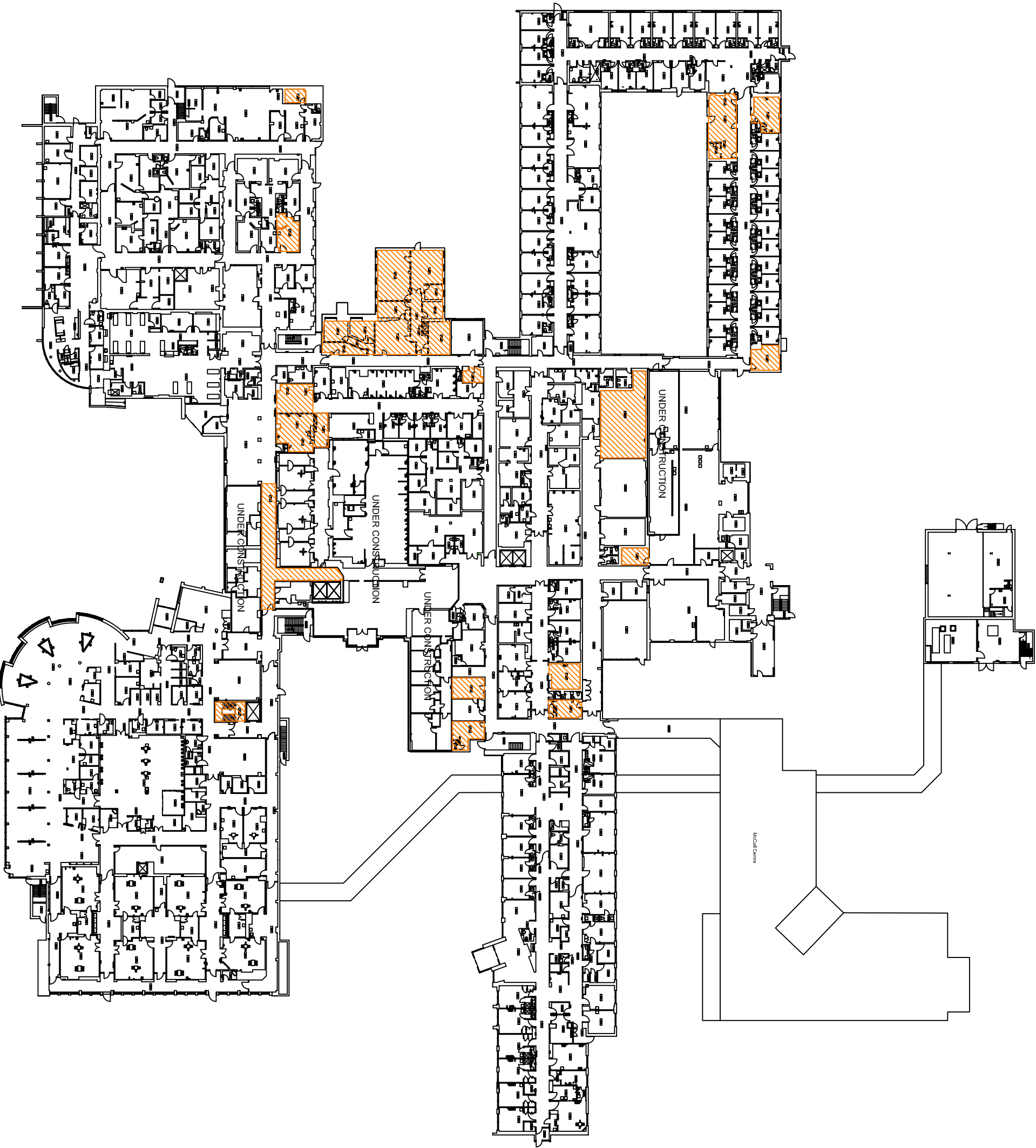
Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:
Trillium Health Centre
(Basement)
West Toronto Site
150 Sherway Drive
Toronto , ON

Drawing Showing
Non-Friable
Asbestos-Containing
Materials

Reviewed By
FA
Drawn By
FB


Project N°
MA1014
Date
Oct 2008
DWG N°
Scale
NTS
4.8



LEGEND


 Vinyl Floor Tiles (VFT)

Notes: Locations of site features are approximate and may vary from that shown

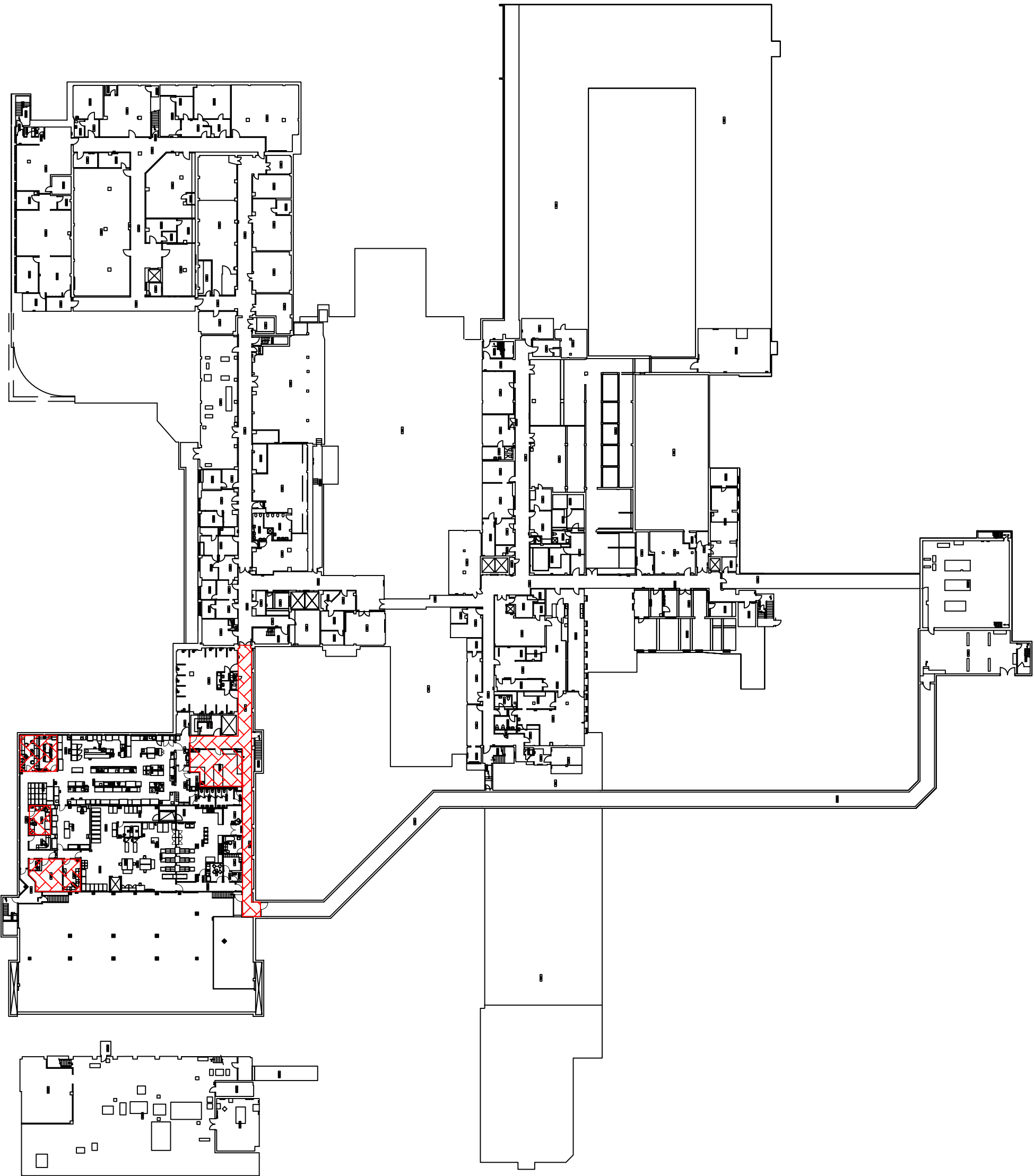
Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

Project location:
Trillium Health Centre
(Main Floor)
West Toronto Site
150 Sherway Drive
Toronto , ON

Drawing Showing
Non-Friable
Asbestos-Containing
Materials

Reviewed By
FA
Drawn By
FB


Project N°
MA1014
Date
Oct 2008
DWG N°
Scale
NTS
4.9



LEGEND


 Vinyl Sheet
Flooring (VSF)

Notes: Locations of site features are approximate and may vary from that shown

Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

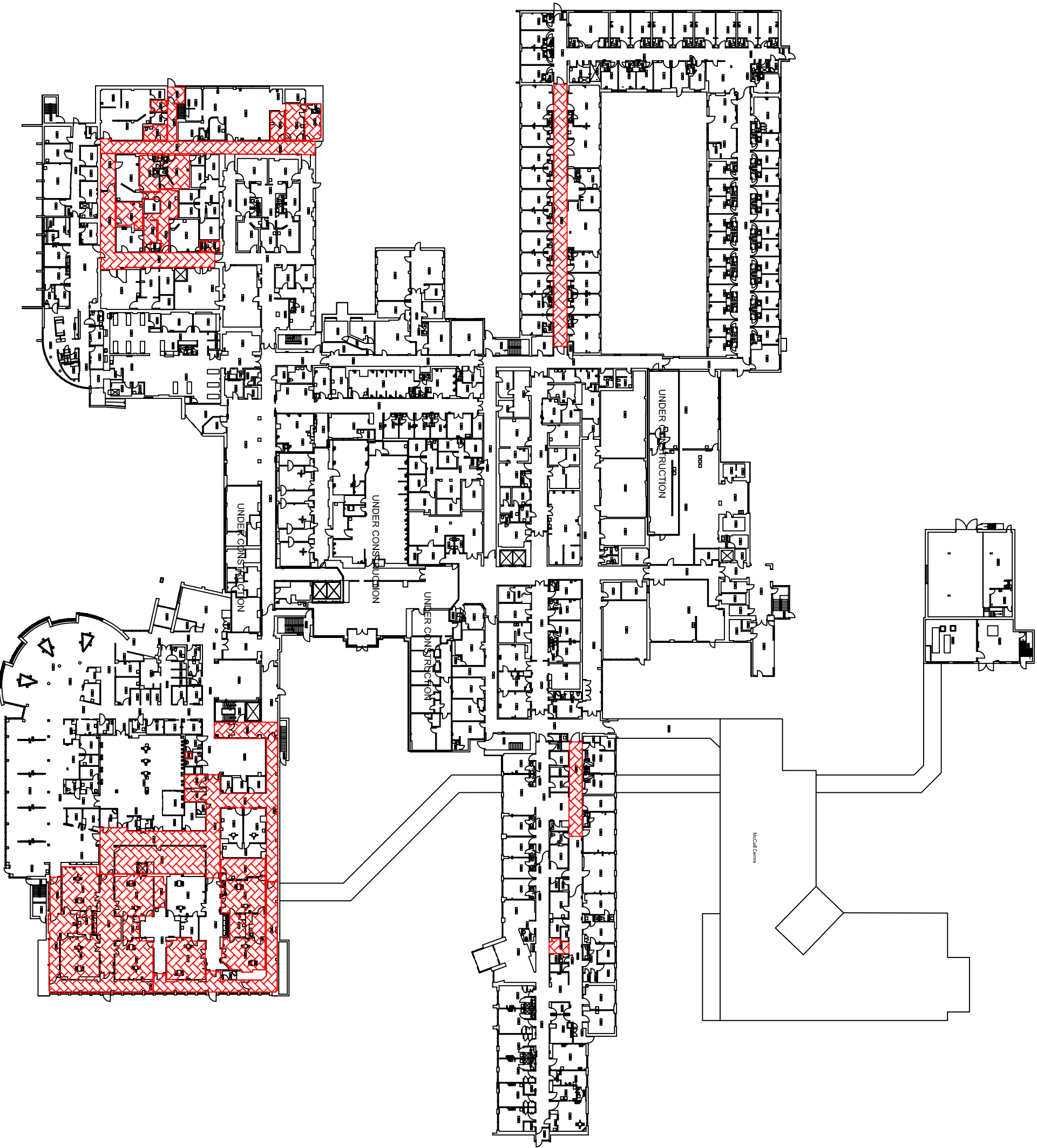
Project Location:
Trillium Health Centre
(Basement)
West Toronto Site
150 Sherway Drive
Toronto , ON

Drawing Showing
Non-Friable
Asbestos-Containing
Materials

Reviewed By
FA
Drawn By
FB


Project N°
MA1014

Date
Oct 2008
Scale
NTS
DWG N°
4.10



LEGEND


 Vinyl Sheet Flooring (VSF)

Notes: Locations of site features are approximate and may vary from that shown

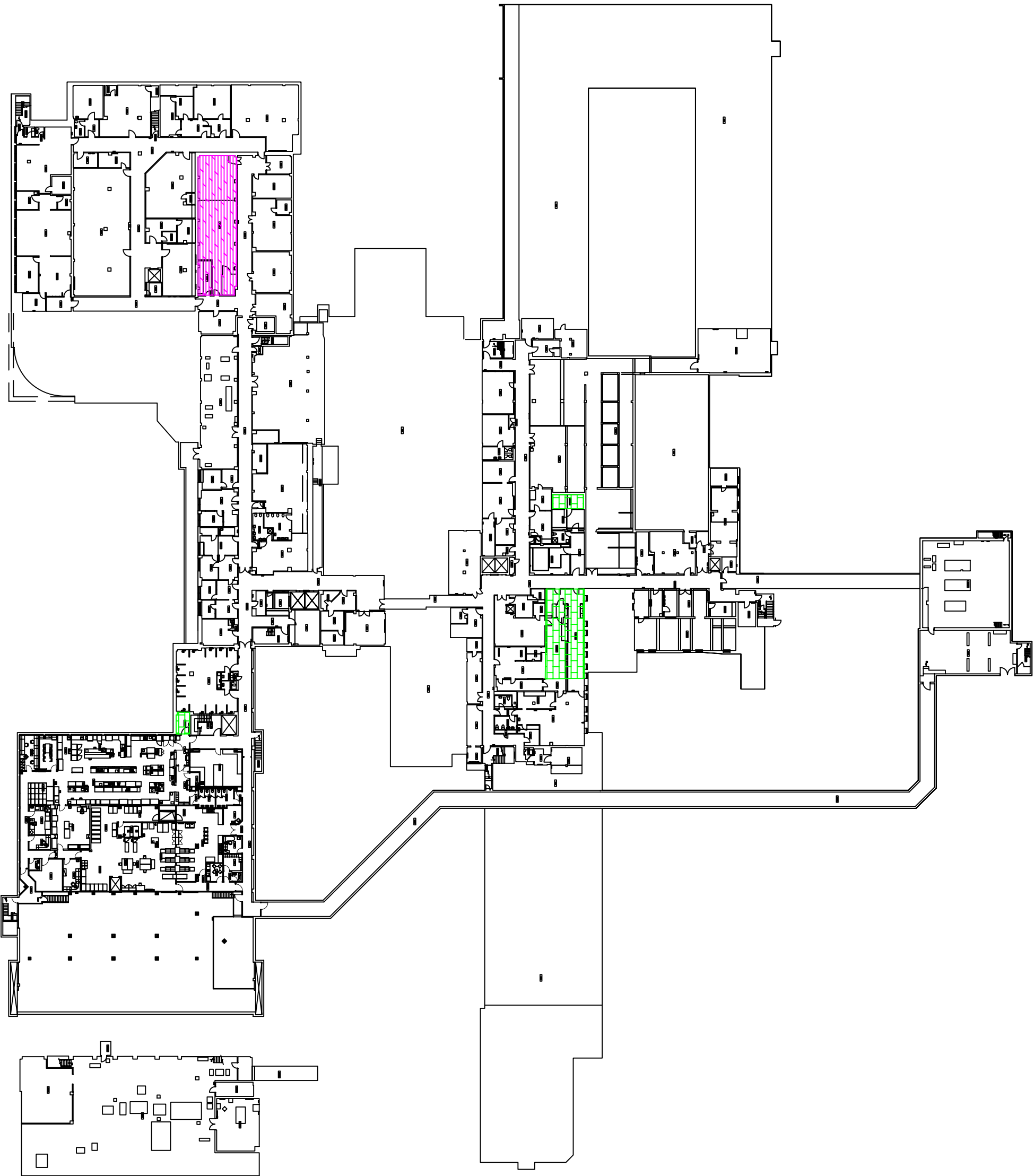
Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

Project location:
Trillium Health Centre
(Main Floor)
West Toronto Site
150 Sherway Drive
Toronto , ON

Drawing Showing
Non-Friable
Asbestos-Containing
Materials

Reviewed By
FA
Drawn By
FB


Project N°
MA1014
Date
Oct 2008
Scale
NTS
DWG N°
4.11



LEGEND

 Transite Ceiling Board


 Transite Pipe

Notes: Locations of site features are approximate and may vary from that shown

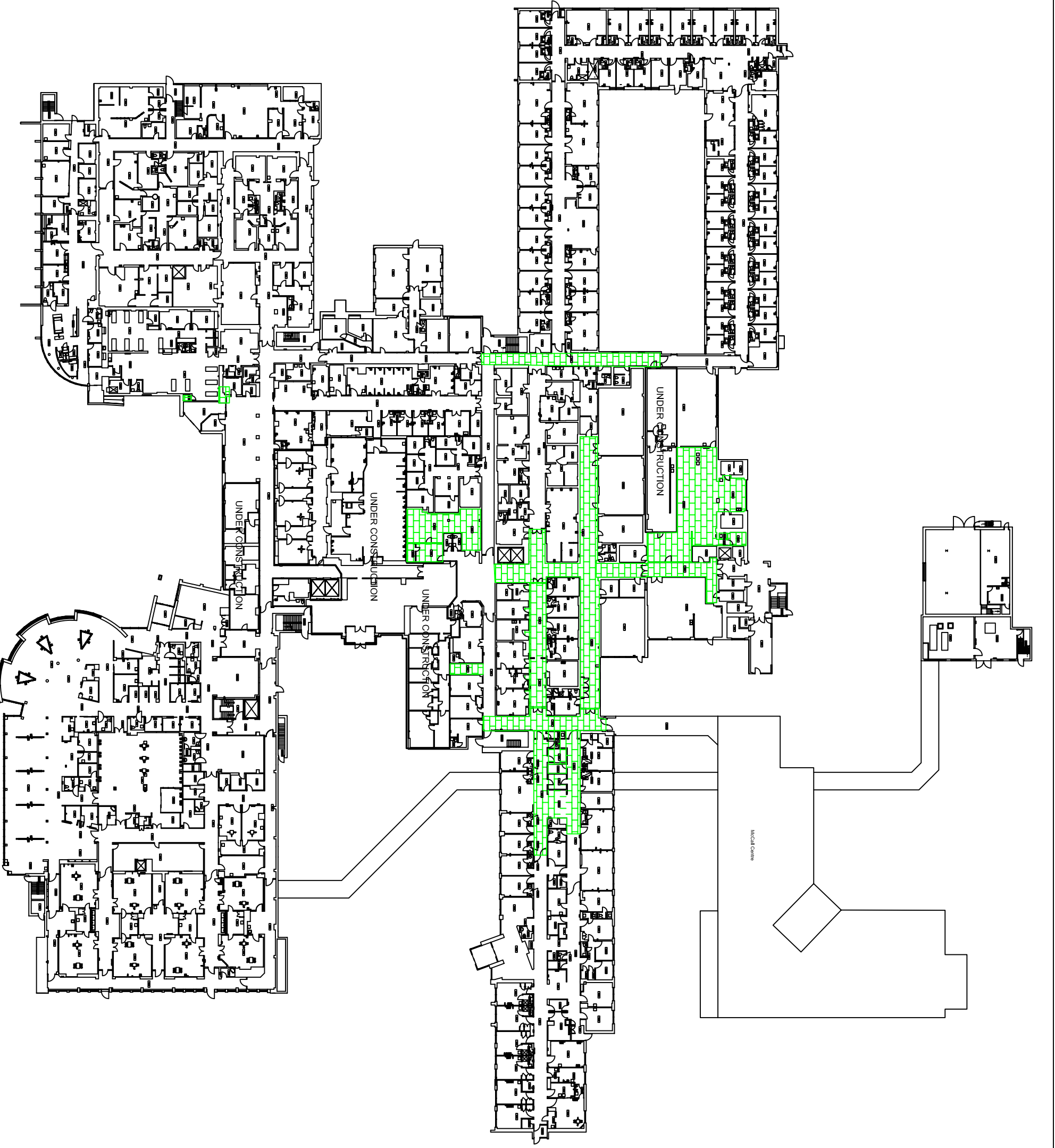
Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:
Trillium Health Centre
(Basement)
West Toronto Site
150 Sherway Drive
Toronto , ON

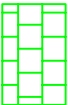
Drawing Showing
Non-Friable
Asbestos-Containing
Materials

Reviewed By
FA
Drawn By
FB


Project N°
MA1014
Date
Oct 2008
Scale
NTS
DWG N°
4.12



LEGEND


 Transite Ceiling Board

Notes: Locations of site features are approximate and may vary from that shown

Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

Project Location:
Trillium Health Centre
(Main Floor)
West Toronto Site
150 Sherway Drive
Toronto , ON


Drawing Showing
Non-Friable
Asbestos-Containing
Materials

Reviewed By
FA
Drawn By
FB


Project N°
MA1014

Date
Oct 2008
Scale
NTS
DWG N°
4.13

LEGEND


 Ceiling Tiles

Notes: Locations of site features are approximate and may vary from that shown

Client:
Trillium Health Centre
100 Queensway West
Mississauga , ON

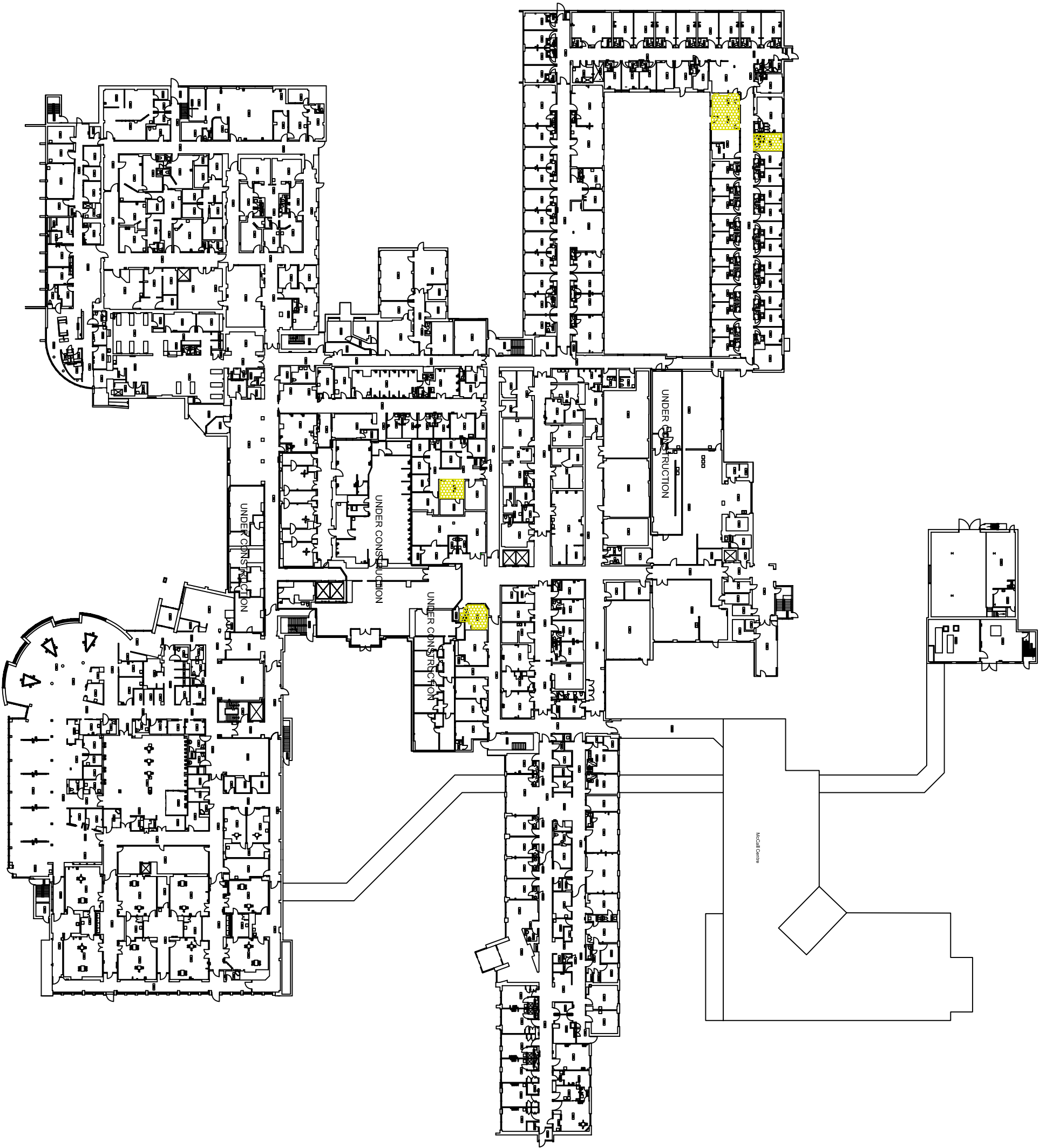
Project location:
Trillium Health Centre
(Main Floor)
West Toronto Site
150 Sherway Drive
Toronto , ON

Drawing Showing
Non-Friable
Asbestos-Containing
Materials

Reviewed By
FA
Drawn By
FB


Project N°
MA1014

Date
Oct 2008
Scale
NTS
DWG N°
4.14



**Results of Analysis of Bulk Samples
for the Presence of Asbestos**

Table A
Summary of Analysis of Bulk Samples
by Polarized Light Microscopy (PLM) with Dispersion Staining
Project No.: MA1014

Collected December 2007 – March 2008

OHE Sample Number	Sample Description	Sample Location	Analysis Results (% and Type of Asbestos)
MA1014-2A	Vinyl sheet flooring – light brown with beige and white squares	Main floor, 1657A	15% Chrysotile
MA1014-2B	Vinyl sheet flooring – light brown with beige and white squares	Main floor, 1686	Not Analyzed
MA1014-2C	Vinyl sheet flooring – light brown with beige and white squares	Main floor, 1663	Not Analyzed
MA1014-3A	Sprayed fireproofing-grey	Main floor, hallway 1657	None Detected
MA1014-3B	Sprayed fireproofing-grey	Main floor, hallway 1658	None Detected
MA1014-3C	Sprayed fireproofing-grey	Mechanical room 7	None Detected
MA1014-3D	Sprayed fireproofing-grey	Main floor, hallway in women's health centre	None Detected
MA1014-3E	Sprayed fireproofing-grey	Main floor, 1669	None Detected
MA1014-3F	Sprayed fireproofing-grey	Main floor, 1681	None Detected
MA1014-3G	Sprayed fireproofing-grey	Main floor, 1662A	None Detected
MA1014-4A	Suspended ceiling tile – 2'x4' with small holes	Main floor, hallway 1657	None Detected
MA1014-4B	Suspended ceiling tile – 2'x4' with small holes	Main floor, hallway 1656	None Detected
MA1014-4C	Suspended ceiling tile – 2'x4' with small holes	Main floor, hallway 1658	None Detected
MA1014-5A	Dark grey sealer material	Main floor, hallway 1657, mechanical duct joint	None Detected
MA1014-5B	Dark grey sealer material	Main floor, 1673A, mechanical duct joint	None Detected
MA1014-5C	Dark grey sealer material	Main floor, 1656, mechanical duct joint	None Detected
MA1014-6A	Suspended ceiling tile – 2'x4' with small random fissures	Main floor, 1657A	None Detected
MA1014-6B	Suspended ceiling tile – 2'x4' with small random fissures	Main floor, 1167	None Detected
MA1014-6C	Suspended ceiling tile – 2'x4' with small random fissures	Main floor, 1154	None Detected

Table A (Continued)
Summary of Analysis of Bulk Samples
by Polarized Light Microscopy (PLM) with Dispersion Staining
Project No.: MA1014

Collected December 2007 – March 2008

OHE Sample Number	Sample Description	Sample Location	Analysis Results (% and Type of Asbestos)
MA1014-7A	Suspended ceiling tile – 2'x4' with rough finish	Main floor, 1673A	None Detected
MA1014-7B	Suspended ceiling tile – 2'x4' with rough finish	Main floor, 1675	None Detected
MA1014-7C	Suspended ceiling tile – 2'x4' with rough finish	Main floor, 1727	None Detected
MA1014-8A	Vinyl sheet flooring – beige with green and orange streaks	Main floor, 1740	None Detected
MA1014-8B	Vinyl sheet flooring – beige with green and orange streaks	Main floor, 1742	None Detected
MA1014-8C	Vinyl sheet flooring – beige with green and orange streaks	Main floor, 1742	None Detected
MA1014-9A	Suspended ceiling tile – 2'x4' with random holes and wide fissures	Main floor, 1742	None Detected
MA1014-9B	Suspended ceiling tile – 2'x4' with random holes and wide fissures	Main floor, 1742	None Detected
MA1014-9C	Suspended ceiling tile – 2'x4' with random holes and wide fissures	Main floor, 1742	None Detected
MA1014-10A	Suspended ceiling tile – 2'x4' with wide grooves, holes and fissures	Main floor, 1734	None Detected
MA1014-10B	Suspended ceiling tile – 2'x4' with wide grooves, holes and fissures	Main floor, 1736	None Detected
MA1014-10C	Suspended ceiling tile – 2'x4' with wide grooves, holes and fissures	Main floor, 1736	None Detected
MA1014-11	Fire proofing patch – beige	Main floor, 1730	None Detected
MA1014-12A	Sprayed fireproofing-grey	Main floor, 1725	None Detected
MA1014-12B	Sprayed fireproofing-grey	Main floor, 1723	None Detected
MA1014-12C	Sprayed fireproofing-grey	Fourth floor, 4002	None Detected
MA1014-13A	Plaster material on ceiling	Main floor, 1682	None Detected
MA1014-13B	Plaster material on ceiling	Main floor, 1684	None Detected
MA1014-13C	Plaster material on ceiling	Main floor, 1692	None Detected

Table A (Continued)
Summary of Analysis of Bulk Samples
by Polarized Light Microscopy (PLM) with Dispersion Staining
Project No.: MA1014

Collected December 2007 – March 2008

OHE Sample Number	Sample Description	Sample Location	Analysis Results (% and Type of Asbestos)
MA1014-13D	Plaster material on ceiling	Main floor, 1085	None Detected
MA1014-13E	Plaster material on ceiling	Main floor, 1081	None Detected
MA1014-13F	Plaster material on ceiling	Fourth floor, 4018	None Detected
MA1014-13G	Plaster material on ceiling	Fifth floor, 5011	None Detected
MA1014-14A	Vinyl floor tile, 12"x12" – beige with black web	Main floor, 1685	None Detected
MA1014-14B	Vinyl floor tile, 12"x12" – beige with black web	Main floor, 1658A	None Detected
MA1014-14C	Vinyl floor tile, 12"x12" – beige with black web	Main floor, 1658	None Detected
MA1014-15A	Sprayed fireproofing-cream	Main floor, 1155	None Detected
MA1014-15B	Sprayed fireproofing-cream	Main floor, 1103	None Detected
MA1014-15C	Sprayed fireproofing-cream	Main floor, 1158	None Detected
MA1014-15D	Sprayed fireproofing-cream	Main floor, 1144	None Detected
MA1014-15E	Sprayed fireproofing-cream	Main floor, 1464	None Detected
MA1014-18A	Vinyl sheet flooring – light grey with beige, grey and brown spots	Main floor, 1158A	None Detected
MA1014-18B	Vinyl sheet flooring – light grey with beige, grey and brown spots	Main floor, 1103	None Detected
MA1014-18C	Vinyl sheet flooring – light grey with beige, grey and brown spots	Main floor, 1152	None Detected
MA1014-22A	Transite board, 2'x2' - with large holes	Basement,310B	20% Chrysotile
MA1014-22B	Transite board, 2'x2' - with large holes	Basement,225	Not Analyzed
MA1014-22C	Transite board, 2'x2' - with large holes	Main floor, 1211A	Not Analyzed

Table A (Continued)
Summary of Analysis of Bulk Samples
by Polarized Light Microscopy (PLM) with Dispersion Staining
Project No.: MA1014

Collected December 2007 – March 2008

OHE Sample Number	Sample Description	Sample Location	Analysis Results (% and Type of Asbestos)
MA1014-23A	Texture coat on wall	Basement, 302	None Detected
MA1014-23B	Texture coat on wall	Basement, 333	None Detected
MA1014-23C	Texture coat on wall	Main floor, 1020	None Detected
MA1014-25A	Vinyl floor tile, 12"x12" – light brown with brown and white spots and black mastic	Basement, room B 333	1% Chrysotile
MA1014-25B	Vinyl floor tile, 12"x12" – light brown with brown and white spots and black mastic	Basement, hallway B 113	Not Analyzed
MA1014-25C	Vinyl floor tile, 12"x12" – light brown with brown and white spots and black mastic	Basement, hallway to room B 329A	Not Analyzed
MA1014-26A	Vinyl floor tile, 12"x12" – beige with brown and white spots and black mastic	Basement, room B 333	1% Chrysotile
MA1014-26B	Vinyl floor tile, 12"x12" – beige with brown and white spots and black mastic	Basement, hallway B 113	Not Analyzed
MA1014-26C	Vinyl floor tile, 12"x12" – beige with brown and white spots and black mastic	Basement, hallway to room B 329A	Not Analyzed
MA1014-27A	Plaster material on wall	Basement,305	None Detected
MA1014-27B	Plaster material on wall	Basement,331A	None Detected
MA1014-27C	Plaster material on wall	Third floor, 3040E	None Detected
MA1014-27D	Plaster material on wall	Main floor, 1085	None Detected
MA1014-27E	Plaster material on wall	Main floor, 1081	None Detected
MA1014-27F	Plaster material on wall	Third floor, 3000	None Detected
MA1014-27G	Plaster material on wall	Fourth floor, 4001	None Detected

Table A (Continued)
Summary of Analysis of Bulk Samples
by Polarized Light Microscopy (PLM) with Dispersion Staining
Project No.: MA1014

Collected December 2007 – March 2008

OHE Sample Number	Sample Description	Sample Location	Analysis Results (% and Type of Asbestos)
MA1014-28A	Vinyl floor tile, 9"x9" – dark grey with white specks	Basement, 305	8% Chrysotile
MA1014-28B	Vinyl floor tile, 9"x9" – dark grey with white specks	Basement, 307	Not Analyzed
MA1014-28C	Vinyl floor tile, 9"x9" – dark grey with white specks	Basement, 307	Not Analyzed
MA1014-30A	Vinyl floor tile 9"x9" – light grey, green with black specks	Basement, 338	3% Chrysotile
MA1014-30B	Vinyl floor tile 9"x9" – light grey, green with black specks	Basement, 338	Not Analyzed
MA1014-30C	Vinyl floor tile 9"x9" – light grey, green with black specks	Basement, 236A	Not Analyzed
MA1014-31A	Vinyl floor tile, 12"x12" – light grey with black and white specks	Basement, 329	None Detected
MA1014-31B	Vinyl floor tile, 12"x12" – light grey with black and white specks	Basement, 329	None Detected
MA1014-31C	Vinyl floor tile, 12"x12" – light grey with black and white specks	Basement, 329	None Detected
MA1014-33A	Vinyl floor tile, 12"x12" – blue with dark blue specks	Basement, 339	None Detected
MA1014-33B	Vinyl floor tile, 12"x12" – blue with dark blue specks	Basement, 337	None Detected
MA1014-33C	Vinyl floor tile, 12"x12" – blue with dark blue specks	Basement, 337	None Detected
MA1014-36A	Suspended ceiling tile – 2'x2' with random holes and deep fissures	Basement, 278A	None Detected
MA1014-36B	Suspended ceiling tile – 2'x2' with random holes and deep fissures	Basement, 276A	None Detected
MA1014-36C	Suspended ceiling tile – 2'x2' with random holes and deep fissures	Basement, 278	None Detected
MA1014-37	Paper wrap on duct – grey	Basement, 279C	15% Chrysotile
MA1014-38A	Parging cement on boiler breeching	BH-2	30% Amosite 10% Chrysotile
MA1014-38B	Parging cement on boiler breeching	BH-2	Not Analyzed
MA1014-38C	Parging cement on boiler breeching	BH-2	Not Analyzed

Table A (Continued)
Summary of Analysis of Bulk Samples
by Polarized Light Microscopy (PLM) with Dispersion Staining
Project No.: MA1014

Collected December 2007 – March 2008

OHE Sample Number	Sample Description	Sample Location	Analysis Results (% and Type of Asbestos)
MA1014-39A	Vinyl floor tile, 12"x12" – light grey with grey streaks	Basement, 280B	None Detected
MA1014-39B	Vinyl floor tile, 12"x12" – light grey with grey streaks	Basement, 279C	None Detected
MA1014-39C	Vinyl floor tile, 12"x12" – light grey with grey streaks	Basement, 279E	None Detected
MA1014-40A	Vinyl sheet flooring – dark green with beige and green spots	Main floor, hallway 1101D	None Detected
MA1014-40B	Vinyl sheet flooring – dark green with beige and green spots	Main floor, hallway 1101D	None Detected
MA1014-40C	Vinyl sheet flooring – dark green with beige and green spots	Main floor, hallway 1101D	None Detected
MA1014-41A	Acoustic ceiling tile, 12"x12" – with large holes	Main floor, 1143	None Detected
MA1014-41B	Acoustic ceiling tile, 12"x12" – with large holes	Main floor, 1147	None Detected
MA1014-41C	Acoustic ceiling tile, 12"x12" – with large holes	Main floor, 1147	None Detected
MA1014-42A	Stick on ceiling tile, 12"x12"	Main floor, 1183	None Detected
MA1014-42B	Stick on ceiling tile, 12"x12"	Main floor, 1183	None Detected
MA1014-42C	Stick on ceiling tile, 12"x12"	Main floor, 1183	None Detected
MA1014-43A	Texture coat on ceiling	Main floor, hallway 1108	2% Chrysotile
MA1014-43B	Texture coat on ceiling	Main floor, hallway 1108	Not Analyzed
MA1014-43C	Texture coat on ceiling	Main floor, hallway 1108	Not Analyzed
MA1014-44A	Trowelled fireproofing material on joists	Main floor, hallway 1207B	None Detected
MA1014-44B	Trowelled fireproofing material on joists	Main floor, hallway 1204	None Detected
MA1014-44C	Trowelled fireproofing material on joists	Main floor, hallway 1232	None Detected

Table A (Continued)
Summary of Analysis of Bulk Samples
by Polarized Light Microscopy (PLM) with Dispersion Staining
Project No.: MA1014

Collected December 2007 – March 2008

OHE Sample Number	Sample Description	Sample Location	Analysis Results (% and Type of Asbestos)
MA1014-45A	Vinyl sheet flooring – light brown with grey specks	Main floor, hallway 1204	None Detected
MA1014-45B	Vinyl sheet flooring – light brown with grey specks	Main floor, 1240	None Detected
MA1014-45C	Vinyl sheet flooring – light brown with grey specks	Main floor, hallway 310	None Detected
MA1014-46A	Vinyl sheet flooring – beige with cream spots	Main floor, 1605	None Detected
MA1014-46B	Vinyl sheet flooring – beige with cream spots	Main floor, 1607A	None Detected
MA1014-46C	Vinyl sheet flooring – beige with cream spots	Main floor, 1607	None Detected
MA1014-47A	Vinyl sheet flooring – peach with white, green and orange spots	Main floor, 1607	None Detected
MA1014-47B	Vinyl sheet flooring – peach with white, green and orange spots	Main floor, 1552	None Detected
MA1014-47C	Vinyl sheet flooring – peach with white, green and orange spots	Main floor, 1544	None Detected
MA1014-48A	Vinyl floor tile, 12"x12" – maroon with maroon and white spots	Main floor, 1407	None Detected
MA1014-48B	Vinyl floor tile, 12"x12" – maroon with maroon and white spots	Main floor, 1407	None Detected
MA1014-48C	Vinyl floor tile, 12"x12" – maroon with maroon and white spots	Main floor, 1407	None Detected
MA1014-49A	Texture coat on ceiling	Main floor, 1472	0.25% Chrysotile
MA1014-49B	Texture coat on ceiling	Main floor, 1472	0.25% Chrysotile
MA1014-49C	Texture coat on ceiling	Main floor, 1472	0.25% Chrysotile
MA1014-51	Incandescent light heat shield	Fourth floor, 4014	20% Chrysotile
MA1014-52A	Parging cement – around pipe penetration	Main floor, 1087A	None Detected
MA1014-52B	Parging cement – around pipe penetration	Main floor, 1079A	None Detected
MA1014-52C	Parging cement – around pipe penetration	Main floor, 1014	None Detected

Table A (Continued)
Summary of Analysis of Bulk Samples
by Polarized Light Microscopy (PLM) with Dispersion Staining
Project No.: MA1014

Collected December 2007 – March 2008

OHE Sample Number	Sample Description	Sample Location	Analysis Results (% and Type of Asbestos)
MA1014-53A	Parging cement on second ceiling above ceiling tiles	Main floor, 1084	None Detected
MA1014-53B	Parging cement on second ceiling above ceiling tiles	Main floor, 1080	None Detected
MA1014-53C	Parging cement on second ceiling above ceiling tiles	Main floor, 1074	None Detected
MA1014-56A	Silver wrap with brown and black layer on pipe straight	Main floor, hallway 1004	None Detected
MA1014-56B	Silver wrap with brown and black layer on pipe straight	Main floor, hallway 1004	None Detected
MA1014-56C	Silver wrap with brown and black layer on pipe straight	Main floor, hallway 1001	None Detected
MA1014-57A	Silver wrap with brown layer on duct	Main floor, 1070	None Detected
MA1014-57B	Silver wrap with brown layer on duct	Main floor, 1068	None Detected
MA1014-57C	Silver wrap with brown layer on duct	Main floor, 1064	None Detected
MA1014-59A	Vinyl sheet flooring – pink with white and brown streaks	Main floor, hallway 1000A	None Detected
MA1014-59B	Vinyl sheet flooring – pink with white and brown streaks	Main floor, hallway 1000A	None Detected
MA1014-59C	Vinyl sheet flooring – pink with white and brown streaks	Main floor, hallway 1000A	None Detected

Laboratory Analysis Report

**EMSL Analytical, Inc.**

490 Rowley Road, Depew, NY 14043

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Project: **MA1014**

Customer ID: OHEI93
Customer PO:
Received: 02/02/08 10:20 AM
EMSL Order: 140800436

EMSL Proj:
Analysis Date: 2/5/2008
Report Date: 2/5/2008

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Location	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
MA1014-25A 140800436-0001	basement, room B 333, floor	Brown Fibrous Homogeneous		99% Non-fibrous (other)	1% Chrysotile
MA1014-25A 140800436-0001A	mastic	Black Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (other)	None Detected
MA1014-25B 140800436-0002	basement, hallway B 113, floor				Stop Positive (Not Analyzed)
MA1014-25B 140800436-0002A	mastic	Black Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
MA1014-25C 140800436-0003	basement, hallway to room B 329A, floor				Stop Positive (Not Analyzed)
MA1014-25C 140800436-0003A	mastic				Not Analyzed
No mastic present					
MA1014-26A 140800436-0004	basement, room B 333, floor	Gray Fibrous Homogeneous		99% Non-fibrous (other)	1% Chrysotile
MA1014-26A 140800436-0004A	mastic	Black Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (other)	None Detected

Analyst(s)

Andrew Maciejewski (10)
Tom Hanes (2)

Rhonda McGee, Laboratory Manager
or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. Samples reported as <1% or none detected may require additional testing by TEM to confirm asbestos quantities. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.

Analysis performed by EMSL Buffalo (NVLAP #200056-0), NY ELAP #11606

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Sample	Location	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
MA1014-26B 140800436-0005	basement, hallway B 113, floor				Stop Positive (Not Analyzed)
MA1014-26B 140800436-0005A	mastic	Black Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (other)	None Detected
MA1014-26C 140800436-0006	basement, hallway to room B 329A, floor				Stop Positive (Not Analyzed)
MA1014-26C 140800436-0006A	mastic				Not Analyzed
No mastic present					

Analyst(s)

Andrew Maciejewski (10)
Tom Hanes (2)

Rhonda McGee, Laboratory Manager
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Project: **THC West Toronto Site MA1014**

Customer ID: OHEI93
Customer PO:
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EMSL Order: 080802595

EMSL Proj:
Analysis Date: 9/15/2008
Report Date: 9/16/2008

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Location	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
MA1014-2A 080802595-0001	Vinyl Sheet Flooring	Gray Fibrous Homogeneous	10% Cellulose	75% Non-fibrous (other)	15% Chrysotile
MA1014-2B 080802595-0002	Vinyl Sheet Flooring				Stop Positive (Not Analyzed)
MA1014-2C 080802595-0003	Vinyl Sheet Flooring				Stop Positive (Not Analyzed)
MA1014-3A 080802595-0004	Fireproofing	Gray Fibrous Homogeneous	50% Glass	50% Non-fibrous (other)	None Detected
MA1014-3B 080802595-0005	Fireproofing	Gray Fibrous Homogeneous	45% Glass	55% Non-fibrous (other)	None Detected
MA1014-3C 080802595-0006	Fireproofing	Gray Fibrous Homogeneous	40% Glass	60% Non-fibrous (other)	None Detected
MA1014-3D 080802595-0007	Fireproofing	Gray Fibrous Homogeneous	65% Glass	35% Non-fibrous (other)	None Detected
MA1014-3E 080802595-0008	Fireproofing	Gray Fibrous Homogeneous	50% Glass	50% Non-fibrous (other)	None Detected

Analyst(s)

Brian Walczak (30)
Orlando J. Ivey II (103)

Ed Cahill
or other approved signatory

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Analysis performed by EMSL Ann Arbor (NVLAP #101048-4)

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Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Location	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
MA1014-3F 080802595-0009	Fireproofing	Gray Fibrous Homogeneous	40% Glass	60% Non-fibrous (other)	None Detected
MA1014-3G 080802595-0010	Fireproofing	Gray Fibrous Homogeneous	45% Glass	55% Non-fibrous (other)	None Detected
MA1014-4A 080802595-0011	Ceiling Tile	Gray Fibrous Homogeneous	50% Cellulose 30% Glass	20% Non-fibrous (other)	None Detected
MA1014-4B 080802595-0012	Ceiling Tile	Gray Fibrous Homogeneous	40% Cellulose 20% Glass	40% Non-fibrous (other)	None Detected
MA1014-4C 080802595-0013	Ceiling Tile	Gray Fibrous Homogeneous	40% Cellulose 30% Glass	30% Non-fibrous (other)	None Detected
MA1014-5A 080802595-0014	Sealer	Gray Fibrous Homogeneous	2% Glass	98% Non-fibrous (other)	None Detected
MA1014-5B 080802595-0015	Sealer	Gray Fibrous Homogeneous	2% Glass	98% Non-fibrous (other)	None Detected
MA1014-5C 080802595-0016	Sealer	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

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Sample	Location	Appearance	<u>Non-Asbestos</u>			<u>Asbestos</u>
			%	Fibrous	% Non-Fibrous	% Type
MA1014-6A 080802595-0017	Ceiling Tile	White/Gray Fibrous Homogeneous	30% 40%	Cellulose Glass	30% Non-fibrous (other)	None Detected
MA1014-6B 080802595-0018	Ceiling Tile	White/Gray Fibrous Homogeneous	20% 45%	Cellulose Glass	35% Non-fibrous (other)	None Detected
MA1014-6C 080802595-0019	Ceiling Tile	Gray Fibrous Homogeneous	70% 10%	Cellulose Glass	20% Non-fibrous (other)	None Detected
MA1014-7A 080802595-0020	Ceiling Tile	White/Gray Fibrous Homogeneous	20% 40%	Cellulose Glass	40% Non-fibrous (other)	None Detected
MA1014-7B 080802595-0021	Ceiling Tile	White/Gray Fibrous Homogeneous	15% 40%	Cellulose Glass	45% Non-fibrous (other)	None Detected
MA1014-7C 080802595-0022	Ceiling Tile	Gray Fibrous Homogeneous	50% 20%	Cellulose Glass	30% Non-fibrous (other)	None Detected
MA1014-8A 080802595-0023	Vinyl Sheet Flooring	Cream/Green Fibrous Heterogeneous	2%	Cellulose	98% Non-fibrous (other)	None Detected
MA1014-8B 080802595-0024	Vinyl Sheet Flooring	Cream/Green Fibrous Heterogeneous	<1%	Cellulose	100% Non-fibrous (other)	None Detected

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Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Location	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
MA1014-8C 080802595-0025	Vinyl Sheet Flooring	Cream Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MA1014-9A 080802595-0026	Ceiling Tile	White/Gray Fibrous Homogeneous	20% Cellulose 40% Glass	40% Non-fibrous (other)	None Detected
MA1014-9B 080802595-0027	Ceiling Tile	White/Gray Fibrous Homogeneous	20% Cellulose 40% Glass	40% Non-fibrous (other)	None Detected
MA1014-9C 080802595-0028	Ceiling Tile	Gray Fibrous Homogeneous	40% Cellulose 30% Glass	30% Non-fibrous (other)	None Detected
MA1014-10A 080802595-0029	Ceiling Tile	White/Gray Fibrous Homogeneous	20% Cellulose 50% Glass	30% Non-fibrous (other)	None Detected
MA1014-10B 080802595-0030	Ceiling Tile	White/Gray Fibrous Homogeneous	20% Cellulose 45% Glass	35% Non-fibrous (other)	None Detected
MA1014-10C 080802595-0031	Ceiling Tile	Gray Fibrous Homogeneous	70% Cellulose 10% Glass	20% Non-fibrous (other)	None Detected
MA1014-11 080802595-0032	Fireproofing Patch	Gray Fibrous Homogeneous	40% Cellulose <1% Glass	60% Non-fibrous (other)	None Detected

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Sample	Location	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
MA1014-12A 080802595-0033	Fireproofing	Gray Fibrous Homogeneous	50% Glass	50% Non-fibrous (other)	None Detected
MA1014-12B 080802595-0034	Fireproofing	Gray Fibrous Homogeneous	45% Glass	55% Non-fibrous (other)	None Detected
MA1014-12C 080802595-0035	Fireproofing	Gray Fibrous Homogeneous	50% Glass	50% Non-fibrous (other)	None Detected
MA1014-13A 080802595-0036	Finish Coat	White Non-Fibrous Layers: 1		100% Non-fibrous (other)	None Detected
MA1014-13A 080802595-0036A	Brown Coat	Gray Fibrous Layers: 2		100% Non-fibrous (other)	None Detected
MA1014-13B 080802595-0037	Finish Coat	White Non-Fibrous Layers: 1		100% Non-fibrous (other)	None Detected
MA1014-13B 080802595-0037A	Brown Coat	Gray Fibrous Layers: 2		100% Non-fibrous (other)	None Detected
MA1014-13C 080802595-0038	Finish Coat	White Non-Fibrous Layers: 1		100% Non-fibrous (other)	None Detected

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Sample	Location	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
MA1014-13C 080802595-0038A	Brown Coat	Gray Non-Fibrous Layers: 2		100% Non-fibrous (other)	None Detected
MA1014-13D 080802595-0039	Finish Coat	Gray/White Non-Fibrous Layers: 1		100% Non-fibrous (other)	None Detected
MA1014-13D 080802595-0039A	Brown Coat	Gray Fibrous Layers: 2	<1% Cellulose	100% Non-fibrous (other)	None Detected
MA1014-13E 080802595-0040	Finish Coat	Gray Non-Fibrous Layers: 1		100% Non-fibrous (other)	None Detected
MA1014-13E 080802595-0040A	Brown Coat	Gray Non-Fibrous Layers: 2		100% Non-fibrous (other)	None Detected
MA1014-13F 080802595-0041	Finish Coat	White/Gray Fibrous Layers: 1	<1% Cellulose	100% Non-fibrous (other)	None Detected
MA1014-13F 080802595-0041A	Brown Coat	Gray Non-Fibrous Layers: 2		100% Non-fibrous (other)	None Detected
MA1014-13G 080802595-0042	Finish Coat	White/Gray Non-Fibrous Layers: 1		100% Non-fibrous (other)	None Detected

Analyst(s)

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Sample	Location	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
MA1014-13G 080802595-0042A	Brown Coat	Gray Non-Fibrous Layers: 2		100% Non-fibrous (other)	None Detected
MA1014-14A 080802595-0043	Vinyl Floor Tile	Beige Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MA1014-14B 080802595-0044	Vinyl Floor Tile	Beige Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MA1014-14C 080802595-0045	Vinyl Floor Tile	Beige Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MA1014-15A 080802595-0046	Fireproofing	Gray Fibrous Homogeneous	30% Glass	70% Non-fibrous (other)	None Detected
MA1014-15B 080802595-0047	Fireproofing	Gray Fibrous Homogeneous	40% Glass	60% Non-fibrous (other)	None Detected
MA1014-15C 080802595-0048	Fireproofing	Gray Fibrous Homogeneous	45% Glass	55% Non-fibrous (other)	None Detected
MA1014-15D 080802595-0049	Fireproofing	Gray Fibrous Homogeneous	50% Glass	50% Non-fibrous (other)	None Detected

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Sample	Location	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
MA1014-15E 080802595-0050	Fireproofing	Gray Fibrous Homogeneous	50% Glass	50% Non-fibrous (other)	None Detected
MA1014-18A 080802595-0051	Vinyl Sheet Flooring	Gray/Beige Fibrous Homogeneous	5% Cellulose 10% Glass	85% Non-fibrous (other)	None Detected
MA1014-18B 080802595-0052	Vinyl Sheet Flooring	Gray/Beige Fibrous Homogeneous	4% Cellulose 10% Glass	86% Non-fibrous (other)	None Detected
MA1014-18C 080802595-0053	Vinyl Sheet Flooring	Gray Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (other)	None Detected
MA1014-22A 080802595-0054	Transite Board	Gray Fibrous Homogeneous		80% Non-fibrous (other)	20% Chrysotile
MA1014-22B 080802595-0055	Transite Board				Stop Positive (Not Analyzed)
MA1014-22C 080802595-0056	Transite Board				Stop Positive (Not Analyzed)
MA1014-23A 080802595-0057	Texture	Gray Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected

Analyst(s)

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Project: **THC West Toronto Site MA1014**

Customer ID: OHEI93
Customer PO:
Received: 09/04/08 10:32 AM
EMSL Order: 080802595

EMSL Proj:
Analysis Date: 9/15/2008
Report Date: 9/16/2008

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Location	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
MA1014-23B 080802595-0058	Texture	Gray Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
MA1014-23C 080802595-0059	Texture	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MA1014-27A 080802595-0060	Finish Coat	Beige Non-Fibrous Layers: 1		100% Non-fibrous (other)	None Detected
MA1014-27A 080802595-0060A	Brown Coat	Gray Fibrous Layers: 2	2% Cellulose	98% Non-fibrous (other)	None Detected
MA1014-27B 080802595-0061	Finish Coat	Gray Non-Fibrous Layers: 1		100% Non-fibrous (other)	None Detected
MA1014-27B 080802595-0061A	Brown Coat	White Fibrous Layers: 2	3% Cellulose	97% Non-fibrous (other)	None Detected
MA1014-27C 080802595-0062	Finish Coat	White/Gray Non-Fibrous Layers: 1		100% Non-fibrous (other)	None Detected
MA1014-27C 080802595-0062A	Brown Coat	Gray Non-Fibrous Layers: 2		100% Non-fibrous (other)	None Detected

Analyst(s)

Brian Walczak (30)
Orlando J. Ivey II (103)

Ed Cahill
or other approved signatory

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Sample	Location	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
MA1014-27D 080802595-0063	Finish Coat	Gray/White Non-Fibrous Layers: 1		100% Non-fibrous (other)	None Detected
MA1014-27D 080802595-0063A	Brown Coat	Gray Fibrous Layers: 2	<1% Cellulose	100% Non-fibrous (other)	None Detected
MA1014-27E 080802595-0064	Finish Coat	Gray Non-Fibrous Layers: 1		100% Non-fibrous (other)	None Detected
MA1014-27E 080802595-0064A	Brown Coat	Gray Fibrous Layers: 2	2% Cellulose	98% Non-fibrous (other)	None Detected
MA1014-27F 080802595-0065	Finish Coat	Beige/Gray Non-Fibrous Layers: 1		100% Non-fibrous (other)	None Detected
MA1014-27F 080802595-0065A	Brown Coat	Gray Fibrous Layers: 2	<1% Cellulose	100% Non-fibrous (other)	None Detected
MA1014-27G 080802595-0066	Finish Coat	Gray Fibrous Layers: 1	<1% Cellulose	100% Non-fibrous (other)	None Detected
MA1014-27G 080802595-0066A	Brown Coat	Gray Fibrous Layers: 2	2% Cellulose	98% Non-fibrous (other)	None Detected

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Sample	Location	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
MA1014-28A 080802595-0067	Vinyl Floor Tile	Gray Fibrous Homogeneous		92% Non-fibrous (other)	8% Chrysotile
MA1014-28B 080802595-0068	Vinyl Floor Tile				Stop Positive (Not Analyzed)
MA1014-28C 080802595-0069	Vinyl Floor Tile				Stop Positive (Not Analyzed)
MA1014-30A 080802595-0070	Vinyl Floor Tile	Gray Fibrous Homogeneous		97% Non-fibrous (other)	3% Chrysotile
MA1014-30B 080802595-0071	Vinyl Floor Tile				Stop Positive (Not Analyzed)
MA1014-30C 080802595-0072	Vinyl Floor Tile				Stop Positive (Not Analyzed)
MA1014-31A 080802595-0073	Vinyl Floor Tile	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MA1014-31B 080802595-0074	Vinyl Floor Tile	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

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Sample	Location	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
MA1014-31C 080802595-0075	Vinyl Floor Tile	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MA1014-33A 080802595-0076	Vinyl Floor Tile	Blue Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MA1014-33B 080802595-0077	Vinyl Floor Tile	Blue Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MA1014-33C 080802595-0078	Vinyl Floor Tile	Blue Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MA1014-36A 080802595-0079	Ceiling Tile	White/Gray Fibrous Homogeneous	10% Cellulose 40% Glass	50% Non-fibrous (other)	None Detected
MA1014-36B 080802595-0080	Ceiling Tile	White/Gray Fibrous Homogeneous	10% Cellulose 45% Glass	45% Non-fibrous (other)	None Detected
MA1014-36C 080802595-0081	Ceiling Tile	Gray Fibrous Homogeneous	40% Cellulose 30% Glass	30% Non-fibrous (other)	None Detected
MA1014-37 080802595-0082	Paper Wrap	Gray/Silver Fibrous Homogeneous	30% Cellulose	55% Non-fibrous (other)	15% Chrysotile

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Sample	Location	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
MA1014-38A 080802595-0083	Parging	White/Gray Fibrous Homogeneous		60% Non-fibrous (other)	30% Amosite 10% Chrysotile
MA1014-38B 080802595-0084	Parging				Stop Positive (Not Analyzed)
MA1014-38C 080802595-0085	Parging				Stop Positive (Not Analyzed)
MA1014-39A 080802595-0086	Vinyl Floor Tile	Gray Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MA1014-39B 080802595-0087	Vinyl Floor Tile	Gray Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MA1014-39C 080802595-0088	Vinyl Floor Tile	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MA1014-40A 080802595-0089	Vinyl Sheet Flooring	Green/Beige Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
MA1014-40B 080802595-0090	Vinyl Sheet Flooring	Green/Beige Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (other)	None Detected

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Sample	Location	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
MA1014-40C 080802595-0091	Vinyl Sheet Flooring	Green Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
MA1014-41A 080802595-0092	Ceiling Tile	White/Gray Fibrous Homogeneous	15% Cellulose 50% Glass	35% Non-fibrous (other)	None Detected
MA1014-41B 080802595-0093	Ceiling Tile	White/Gray Fibrous Homogeneous	10% Cellulose 40% Glass	50% Non-fibrous (other)	None Detected
MA1014-41C 080802595-0094	Ceiling Tile	Gray Fibrous Homogeneous	30% Cellulose 40% Glass	30% Non-fibrous (other)	None Detected
MA1014-42A 080802595-0095	Ceiling Tile	Gray Fibrous Homogeneous	10% Cellulose 50% Glass	40% Non-fibrous (other)	None Detected
MA1014-42B 080802595-0096	Ceiling Tile	Gray Fibrous Homogeneous	7% Cellulose 30% Glass	63% Non-fibrous (other)	None Detected
MA1014-42C 080802595-0097	Ceiling Tile	Gray Fibrous Homogeneous	5% Cellulose 80% Glass	15% Non-fibrous (other)	None Detected
MA1014-43A 080802595-0098	Texture	White/Gray Fibrous Homogeneous	4% Cellulose	94% Non-fibrous (other)	2% Chrysotile

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Sample	Location	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
MA1014-43B 080802595-0099	Texture				Stop Positive (Not Analyzed)
MA1014-43C 080802595-0100	Texture				Stop Positive (Not Analyzed)
MA1014-44A 080802595-0101	Fireproofing	Gray Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (other)	None Detected
MA1014-44B 080802595-0102	Fireproofing	Gray Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (other)	None Detected
MA1014-44C 080802595-0103	Fireproofing	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MA1014-45A 080802595-0104	Vinyl Sheet Flooring	Brown Fibrous Homogeneous	2% Glass	98% Non-fibrous (other)	None Detected
MA1014-45B 080802595-0105	Vinyl Sheet Flooring	Brown Fibrous Homogeneous	3% Glass	97% Non-fibrous (other)	None Detected
MA1014-45C 080802595-0106	Vinyl Sheet Flooring	Brown Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

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Sample	Location	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
MA1014-46A 080802595-0107	Vinyl Sheet Flooring	Beige/Cream Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (other)	None Detected
MA1014-46B 080802595-0108	Vinyl Sheet Flooring	Beige/Cream Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (other)	None Detected
MA1014-46C 080802595-0109	Vinyl Sheet Flooring	Beige/Cream Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (other)	None Detected
MA1014-47A 080802595-0110	Vinyl Sheet Flooring	Peach Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (other)	None Detected
MA1014-47B 080802595-0111	Vinyl Sheet Flooring	Peach Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (other)	None Detected
MA1014-47C 080802595-0112	Vinyl Sheet Flooring	Peach Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MA1014-48A 080802595-0113	Vinyl Floor Tile	Tan/Red Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MA1014-48B 080802595-0114	Vinyl Floor Tile	Tan/Red Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

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			% Fibrous	% Non-Fibrous	% Type
MA1014-48C 080802595-0115	Vinyl Floor Tile	Red Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MA1014-51 080802595-0119	Light Backing	White/Gray Fibrous Homogeneous	10% Cellulose	70% Non-fibrous (other)	20% Chrysotile
MA1014-52A 080802595-0120	Parging	Gray Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (other)	None Detected
MA1014-52B 080802595-0121	Parging	Gray Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (other)	None Detected
MA1014-52C 080802595-0122	Parging	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MA1014-53A 080802595-0123	Parging	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MA1014-53B 080802595-0124	Parging	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MA1014-53C 080802595-0125	Parging	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

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Sample	Location	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
MA1014-56A 080802595-0126	Wrap	Silver/Black Fibrous Homogeneous	20% Cellulose 5% Glass	75% Non-fibrous (other)	None Detected
MA1014-56B 080802595-0127	Wrap	Silver/Black Fibrous Homogeneous	15% Cellulose 5% Glass	80% Non-fibrous (other)	None Detected
MA1014-56C 080802595-0128	Wrap	Black/Silver Fibrous Homogeneous	10% Cellulose 5% Glass	85% Non-fibrous (other)	None Detected
MA1014-57A 080802595-0129	Wrap	Silver/Brown Fibrous Homogeneous	45% Glass	55% Non-fibrous (other)	None Detected
MA1014-57B 080802595-0130	Wrap	Silver/Brown Fibrous Homogeneous	40% Glass	60% Non-fibrous (other)	None Detected
MA1014-57C 080802595-0131	Wrap	Silver/Pink Fibrous Homogeneous	60% Glass	40% Non-fibrous (other)	None Detected
MA1014-59A 080802595-0132	Vinyl Sheet Flooring	Pink/White Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (other)	None Detected
MA1014-59B 080802595-0133	Vinyl Sheet Flooring	Pink/White Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (other)	None Detected

Analyst(s)

Brian Walczak (30)
Orlando J. Ivey II (103)

Ed Cahill
or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. The limit of detection as stated in the method is 1%. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.

Analysis performed by EMSL Ann Arbor (NVLAP #101048-4)

**EMSL Analytical, Inc.**

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Project: **THC West Toronto Site MA1014**

Customer ID: OHEI93
Customer PO:
Received: 09/04/08 10:32 AM
EMSL Order: 080802595

EMSL Proj:
Analysis Date: 9/15/2008
Report Date: 9/16/2008

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Location	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
MA1014-59C 080802595-0134	Vinyl Sheet Flooring	Pink/Tan Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (other)	None Detected

Analyst(s)

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Orlando J. Ivey II (103)

Ed Cahill
or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. The limit of detection as stated in the method is 1%. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.

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EMSL Proj:
Analysis Date: 9/15/2008
Report Date: 9/16/2008

Asbestos Analysis of Bulk Material via EPA 600/R-93/116. Quantitation using 400 Point Count Procedure.

Sample	Location	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
MA1014-49A 080802595-0116	Texture	White Fibrous Homogeneous		99.75% Non-fibrous (other)	0.25% Chrysotile
MA1014-49B 080802595-0117	Texture	White/Gray Fibrous Homogeneous		99.75% Non-fibrous (other)	0.25% Chrysotile
MA1014-49C 080802595-0118	Texture	White Fibrous Homogeneous		99.75% Non-fibrous (other)	0.25% Chrysotile

Analyst(s)

Brian Walczak (1)
Orlando J. Ivey II (2)

Ed Cahill
or other approved signatory

Disclaimer: Some samples may contain asbestos fibers present in dimensions below PLM resolution limits. The limit of detection as stated in the method is 0.25%. EMSL Analytical Inc suggests that samples reported as <0.25% or none detected undergo additional analysis via TEM. The above test report relates only to the items tested. This report may not be reproduced, except in full, without written approval of EMSL Analytical Inc. This test report must not be used by the client to claim product endorsement by NVLAP or any agency of the United States Government. EMSL Analytical Inc., bears no responsibility for sample collection activities, analytical method limitations, or the accuracy of results when requested to separate layered samples. EMSL Analytical Inc., liability is limited to the cost of sample analysis. The test results contained within this report meet the requirements of NELAC unless otherwise noted. Samples received in good condition unless otherwise noted.

Analysis performed by EMSL Ann Arbor (NVLAP #101048-4)

Corrective Action Table/Recommendations

Table B
Identification of Damaged Asbestos Containing Materials with
Suggested Corrective Action

Item No.	Location	Material Identification	Asbestos	Material Condition	Suggested Corrective Action
1	Basement Mechanical Room #7	MSI: parging cement on pipe fittings and duct	Chrysotile	Deteriorated/ Damaged (12 – 14 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
2	Basement Tunnel B700	MSI: parging cement on pipe fittings; magblock & air-cel on straights	Chrysotile Amosite	Deteriorated/ Damaged (12 – 14 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
3	Basement Chiller Room #BH-1	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged (10 – 12 items)	Repair following Type 2 Removal Operation Procedures
4	Basement Mechanical Room #1	MSI: parging cement on pipe fittings; magblock & air-cel on straights; boiler breeching insulation	Chrysotile Amosite	Deteriorated/ Damaged (40 – 50 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
5	Basement Elevator Room #B225	Transite Board	Chrysotile	Deteriorated/ Damaged (20SF)	Remove following Type 1 Removal Operation Procedures
6	Basement Hallway#B652	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged (2 – 4 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
		Drywall	Chrysotile	Deteriorated/ Damaged (50 SF)	Remove following Type 2 Removal Operation Procedures
7	Basement Room #B325	MSI: parging cement on pipe fittings; magblock & air-cel on straights	Chrysotile Amosite	Deteriorated/ Damaged (4 – 6 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal

Table B (Continued)

**Identification of Damaged Asbestos Containing Materials with
Suggested Corrective Action**

Item No.	Location	Material Identification	Asbestos	Material Condition	Suggested Corrective Action
8	Basement Paint Shop #B323A	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged (4 – 6 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
		Vinyl Floor Tiles	Chrysotile	Damaged	Remove following Type 1 Removal Operation Procedures
		Drywall	Chrysotile	Deteriorated/ Damaged (10SF)	Remove following Type 1 Removal Operation Procedures
9	Basement Room #B260	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged (2 items)	Repair following Type 2 Removal Operation Procedures
10	Basement Mechanical Room #2	MSI: parging cement on pipe fittings; magblock & air-cel on straights	Chrysotile Amosite	Deteriorated/ Damaged (8 – 10 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
11	Basement Room #334A	MSI: parging cement on pipe fittings; magblock & air-cel on straights	Chrysotile Amosite	Deteriorated/ Damaged (6 – 8 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
12	Basement Room #B344	MSI: parging cement on pipe fittings; magblock & air-cel on straights	Chrysotile Amosite	Deteriorated/ Damaged (4 – 6 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
13	Basement Stairwell #1 Room	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged (2 – 4 items)	Type 2 Clean-up or Type 2 Glove-bag Removal
14	Basement Mechanical Room#22	MSI: parging cement on Tank	Chrysotile	Deteriorated/ Damaged	Type 2 Clean-up and Repair
15	Basement Mechanical Room #3	MSI: parging cement on pipe fittings; magblock & air-cel on straights	Chrysotile Amosite	Deteriorated/ Damaged (60 – 80 items)	Type 3 Removal Operation Procedures

Table B (Continued)

**Identification of Damaged Asbestos Containing Materials with
Suggested Corrective Action**

Item No.	Location	Material Identification	Asbestos	Material Condition	Suggested Corrective Action
16	Basement Compressors room #B323	MSI: parging cement on pipe fittings; magblock & air-cel on straights	Chrysotile Amosite	Deteriorated/ Damaged (4 – 6 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
		Vinyl Floor Tiles	Chrysotile	Damaged	Remove following Type 1 Removal Operation Procedures
17	Basement Medical Storage Room #B329 and Closet	MSI: parging cement on pipe fittings; magblock & air-cel on straights	Chrysotile Amosite	Deteriorated/ Damaged (10 – 12 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
		Vinyl Floor Tiles	Chrysotile	Damaged	Remove following Type 1 Removal Operation Procedures
18	Basement Room #264	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged (8 – 10 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
19	Basement Elevator Room #B100C	MSI: parging cement on pipe fittings; air-cel on straights	Chrysotile	Deteriorated/ Damaged (2 – 4 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
20	Basement Room #B323B	MSI: parging cement on pipe fittings; magblock & air-cel on straights	Chrysotile Amosite	Deteriorated/ Damaged (2 – 4 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
21	Basement Mechanical Room #5	MSI: parging cement on pipe fittings; magblock & air-cel on straights	Chrysotile Amosite	Deteriorated/ Damaged (20 – 30 items)	Type 3 Removal Operation Procedures
22	Basement Room #337/ 339	MSI: parging cement on pipe fittings; air-cel on straights	Chrysotile	Deteriorated/ Damaged (12 – 14 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
23	Basement Room #B263	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged (4 – 6 items)	Type 2 Clean-up and Type 2 Glove-bag Removal

Table B (Continued)

**Identification of Damaged Asbestos Containing Materials with
Suggested Corrective Action**

Item No.	Location	Material Identification	Asbestos	Material Condition	Suggested Corrective Action
24	Basement Hallway #B502	Vinyl Floor Tiles	Chrysotile	Damaged	Remove following Type 1 Removal Operation Procedures
25	Basement Room #B310A	MSI: parging cement on pipe fittings; air-cel on straights	Chrysotile	Deteriorated/ Damaged (2 – 4 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
26	Basement Room #B326	MSI: parging cement on pipe fittings; air-cel on straights	Chrysotile	Deteriorated/ Damaged (2 – 4 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
27	Basement Janitors Room #B111A	MSI: parging cement on pipe fittings; air-cel on straights	Chrysotile	Deteriorated/ Damaged (2 – 4 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
28	Basement Hallway # B110	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged (12– 14 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
29	Basement Hallway # B110	Vinyl Floor Tiles	Chrysotile	Damaged	Remove following Type 1 Removal Operation Procedures
30	Basement Room #B350	MSI: parging cement on pipe fittings; air-cel on straights	Chrysotile	Deteriorated/ Damaged (4 – 6 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
31	Basement Room #B341	MSI: parging cement on pipe fittings; air-cel on straights	Chrysotile	Deteriorated/ Damaged (6 – 8 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
32	Basement Hallway #B505	Vinyl Floor Tiles	Chrysotile	Damaged	Remove following Type 1 Removal Operation Procedures
33	Basement Room #320	MSI: parging cement on pipe fittings; magblock & air-cel on straights	Chrysotile Amosite	Deteriorated/ Damaged (18 – 20 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal

Table B (Continued)

**Identification of Damaged Asbestos Containing Materials with
Suggested Corrective Action**

Item No.	Location	Material Identification	Asbestos	Material Condition	Suggested Corrective Action
34	Basement Hallway #B100	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged (18 – 20 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
		Vinyl Floor Tiles	Chrysotile	Damaged	Remove following Type 1 Removal Operation Procedures
35	Basement Room #B352	MSI: parging cement on pipe fittings; air-cel on straights	Chrysotile	Deteriorated/ Damaged (4 – 6 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
		Drywall	Chrysotile	Damaged (10SF)	Remove following Type 1 Removal Operation Procedures
36	Basement Room #B310B	MSI: parging cement on pipe fittings; air-cel on straights	Chrysotile	Deteriorated/ Damaged (8 – 10 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
		Transite Board	Chrysotile	Deteriorated/ Damaged (20 SF)	Remove following Type 1 Removal Operation Procedures
37	Basement Hallway #111	MSI: parging cement on pipe fittings; magblock & air-cel on straights	Chrysotile Amosite	Deteriorated/ Damaged (18 – 20 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
		Vinyl Floor Tiles	Chrysotile	Damaged	Remove following Type 1 Removal Operation Procedures
38	Basement Room #322	MSI: parging cement on pipe fittings; magblock & air-cel on straights	Chrysotile Amosite	Deteriorated/ Damaged (18 – 20 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
		Drywall	Chrysotile	Deteriorated/ Damaged (50 SF)	Remove following Type 2 Removal Operation Procedures

Table B (Continued)

**Identification of Damaged Asbestos Containing Materials with
Suggested Corrective Action**

Item No.	Location	Material Identification	Asbestos	Material Condition	Suggested Corrective Action
39	Basement Room #B318A,B,C	MSI: parging cement on pipe fittings; magblock & air-cel on straights	Chrysotile Amosite	Deteriorated/ Damaged (10 – 12 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
		Drywall	Chrysotile	Deteriorated/ Damaged (200 SF)	Remove following Type 2 Removal Operation Procedures
40	Basement Room #B302A, B302B	MSI: parging cement on pipe fittings; air-cel on straights	Chrysotile	Deteriorated/ Damaged (8 – 10 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
41	Basement Room #B310, B310A, B310B	MSI: parging cement on pipe fittings; magblock & air-cel on straights	Chrysotile Amosite	Deteriorated/ Damaged (10 – 12 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
		Drywall	Chrysotile	Deteriorated/ Damaged (100 SF)	Remove following Type 2 Removal Operation Procedures
42	Basement Hallway #113	MSI: parging cement on pipe fittings; magblock & air-cel on straights	Chrysotile Amosite	Deteriorated/ Damaged (20 – 25 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
		Vinyl Floor Tiles	Chrysotile	Damaged	Remove following Type 1 Removal Operation Procedures
43	Basement Mechanical Room #4	MSI: parging cement on pipe fittings; magblock & air-cel on straights	Chrysotile Amosite	Deteriorated/ Damaged (18 – 20 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
44	Basement Room#B315	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged (2– 4 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal

Table B (Continued)

**Identification of Damaged Asbestos Containing Materials with
Suggested Corrective Action**

Item No.	Location	Material Identification	Asbestos	Material Condition	Suggested Corrective Action
45	Basement Room#B308,B308A	MSI: parging cement on pipe fittings; air-cel on straights	Chrysotile	Deteriorated/ Damaged (18 – 20 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
		Vinyl Floor Tiles	Chrysotile	Damaged	Remove following Type 1 Removal Operation Procedures
46	Basement Boiler Room #B300,	MSI: parging cement on pipe fittings; magblock & air-cel on straights	Chrysotile Amosite	Deteriorated/ Damaged (4 – 6 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
47	Basement Room#B301,301A	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged (12– 14 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
48	Basement Room#B303,303A	MSI: air-cel on straights	Chrysotile	Deteriorated/ Damaged (3-5 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
49	Basement Room# 307	Vinyl Floor Tiles	Chrysotile	Damaged	Remove following Type 1 Removal Operation Procedures
50	Basement Room#700A	MSI: parging cement on pipe fittings; air-cel on straights	Chrysotile	Deteriorated/ Damaged (2– 4 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
		Vinyl Floor Tiles	Chrysotile	Damaged	Remove following Type 1 Removal Operation Procedures
51	Basement Room #B333A	MSI: parging cement on pipe fittings; magblock & air-cel on straights	Chrysotile Amosite	Deteriorated/ Damaged (10-12 items)	Type 2 Clean-up and Type 2 Glove- bag Removal
52	Basement Mechanical Room #2	MSI: parging cement on pipe fittings & tank; magblock & air-cel on straights	Chrysotile Amosite	Deteriorated/ Damaged (20 – 30 items)	Type 3 Removal Operation Procedures

Table B (Continued)

**Identification of Damaged Asbestos Containing Materials with
Suggested Corrective Action**

Item No.	Location	Material Identification	Asbestos	Material Condition	Suggested Corrective Action
53	Basement Room #B305	MSI: parging cement on pipe fittings; air-cel on straights	Chrysotile	Deteriorated/ Damaged (8 – 10 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
		Vinyl Floor Tiles	Chrysotile	Damaged	Remove following Type 1 Removal Operation Procedures
54	Basement Room #B111B	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged (2 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
		Vinyl Floor Tiles	Chrysotile	Damaged	Remove following Type 1 Removal Operation Procedures
55	Basement Room #B333	MSI: parging cement on pipe fittings; magblock & air-cel on straights	Chrysotile Amosite	Deteriorated/ Damaged (12 – 14 items)	Type 2 Clean-up and Type 2 Glove-bag Removal
		Vinyl Floor Tiles	Chrysotile	Damaged	Remove following Type 1 Removal Operation Procedures
56	Basement Room #B352	MSI: parging cement on pipe fittings; air-cel on straights	Chrysotile	Deteriorated/ Damaged (4 – 6 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
		Drywall	Chrysotile	Damaged (100 SF)	Remove following Type 2 Removal Operation Procedures
57	Basement Room #B338	MSI: parging cement on pipe fittings; air-cel on straights	Chrysotile	Deteriorated/ Damaged (4 – 6 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
		Vinyl Floor Tiles	Chrysotile	Damaged	Remove following Type 1 Removal Operation Procedures

Table B (Continued)

**Identification of Damaged Asbestos Containing Materials with
 Suggested Corrective Action**

Item No.	Location	Material Identification	Asbestos	Material Condition	Suggested Corrective Action
58	Basement Room#B336	MSI: air-cel on straights	Chrysotile	Deteriorated/ Damaged (2 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
59	Main Floor Room #1159	MSI: anti sweat & air-cel on straights	Chrysotile	Deteriorated Debris (1-2 items)	Type 2 Clean-up or Type 2 Glove-bag Removal
60	Main Floor Room #1133	MSI: parging cement on pipe fittings; air-cel on straights	Chrysotile	Deteriorated/ Damaged (6 – 8 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
61	Main Floor Room #1137	MSI: parging cement on pipe fittings; air-cel on straights	Chrysotile	Deteriorated/ Damaged (12 – 14 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
62	Main Floor Room #1177	MSI: air-cel on straights	Chrysotile	Deteriorated/ Damaged (2 – 4 items)	Type 2 Clean-up and Type 2 Glove-bag Removal
63	Main Floor Room #1175	MSI: air-cel on straights	Chrysotile	Deteriorated/ Damaged (2 items)	Type 2 Clean-up and Type 2 Glove-bag Removal
64	Main Floor Room #1173	MSI: air-cel on straights	Chrysotile	Deteriorated/ Damaged (2 – 4 items)	Type 2 Clean-up and Type 2 Glove-bag Removal
65	Main Floor Room #1211A	Transite Board	Chrysotile	Deteriorated/ Damaged (40SF)	Remove following Type 1 Removal Operation Procedures
66	Main Floor Room #1614	MSI: parging cement on pipe fittings; air-cel on straights	Chrysotile	Deteriorated/ Damaged (2-3 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
67	Main Floor Room #1401	Light Backing	Chrysotile	Deteriorated/ Damaged	Remove following Type 1 Removal Operation Procedures
68	Main Floor Room #1181	MSI: air-cel on straights	Chrysotile	Debris	Type 2 Clean-up Operation Procedures
69	Main Floor Hallway #1701A	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged 8-10 items	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal

Table B (Continued)

**Identification of Damaged Asbestos Containing Materials with
Suggested Corrective Action**

Item No.	Location	Material Identification	Asbestos	Material Condition	Suggested Corrective Action
70	Main Floor Hallway #1101	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged 8-10 items	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
71	Main Floor Room#1112D	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged 2-4 items	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
72	Main Floor Hallway #1350/1350A	Transite Board	Chrysotile	Deteriorated/ Damaged (20SF)	Remove following Type 1 Removal Operation Procedures
73	Main Floor Room #1350B	MSI: air-cel on straights	Chrysotile	Deteriorated/ Damaged (4-6 items)	Type 2 Clean-up and Type 2 Glove-bag Removal
74	Second Floor Mechanical Room #14	MSI: parging cement on pipe fittings; magblock & air-cel on straights	Chrysotile Amosite	Deteriorated/ Damaged (3 – 5 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
75	Fourth Floor Room #4024A	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged 2-4 items	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
76	Fourth Floor Room #4028	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged 2-4 items	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
77	Fourth Floor Room #4036	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged 2-4 items	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
78	Fourth Floor Room #4039	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged 4-6 items	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
79	Fourth Floor Room #4019	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged 2 items	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal

Table B (Continued)

**Identification of Damaged Asbestos Containing Materials with
 Suggested Corrective Action**

Item No.	Location	Material Identification	Asbestos	Material Condition	Suggested Corrective Action
80	Fourth Floor Room #4015A	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged (1 item)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
81	Fourth Floor Hallway #4002	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged (12-15 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
82	Fourth Floor Hallway #4003	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged (12-15 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
83	Fourth Floor Room #4014	Incandescent Light Heat Shield (Paper Backing)	Chrysotile	Deteriorated/ Damaged (1 item)	Remove following Type 1 Removal Operation Procedures
84	Fifth Floor Room #5036	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged (6 – 8 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
85	Fifth Floor Room #5026	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged (1 item)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
86	Fifth Floor Room #5021	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged (2 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
87	Fifth Floor Hallway #5005	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged (2-4 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal
88	Fifth Floor Hallway #5004	MSI: parging cement on pipe fittings	Chrysotile	Deteriorated/ Damaged (2 items)	Type 2 Clean-up and Repair or Type 2 Glove-bag Removal

Notes:

MSI = Mechanical System Insulation

Copy of Ontario Regulation 278/05

**Occupational Health and Safety Act
Loi sur la santé et la sécurité au travail**

ONTARIO REGULATION 278/05

No Amendments

**DESIGNATED SUBSTANCE — ASBESTOS ON CONSTRUCTION
PROJECTS AND IN BUILDINGS AND REPAIR OPERATIONS**

This Regulation is made in English only.

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<u>Table 1</u>	Bulk material samples
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Definitions

1. (1) In this Regulation,

“asbestos” means any of the fibrous silicates listed in subsection (2);

“asbestos-containing material” means material that contains 0.5 per cent or more asbestos by dry weight;

“building” means any structure, vault, chamber or tunnel including, without limitation, the electrical, plumbing, heating and air handling equipment (including rigid duct work) of the structure, vault, chamber or tunnel;

“competent worker”, in relation to specific work, means a worker who,

- (a) is qualified because of knowledge, training and experience to perform the work,
- (b) is familiar with the Act and with the provisions of the regulations that apply to the work, and
- (c) has knowledge of all potential or actual danger to health or safety in the work;

“demolition” includes dismantling and breaking up;

“examine”, when used with reference to material, means to carry out procedures in accordance with section 3 to establish its asbestos content and to establish the type of asbestos, and “examination” has a corresponding meaning;

“friable material” means material that,

- (a) when dry, can be crumbled, pulverized or powdered by hand pressure, or
- (b) is crumbled, pulverized or powdered;

“HEPA filter” means a high efficiency particulate aerosol filter that is at least 99.97 per cent efficient in collecting a 0.3 micrometre aerosol;

“homogeneous material” means material that is uniform in colour and texture;

“joint health and safety committee” means,

- (a) a joint health and safety committee established under section 9 of the Act,
- (b) a similar committee described in subsection 9 (4) of the Act, or
- (c) the workers or their representatives who participate in an arrangement, program or system described in subsection 9 (4) of the Act;

“occupier” has the same meaning as in the *Occupiers’ Liability Act*;

“Type 1 operation” means an operation described in subsection 12 (2);

“Type 2 operation” means an operation described in subsection 12 (3);

“Type 3 operation” means an operation described in subsection 12 (4). O. Reg. 278/05, s. 1 (1).

(2) The fibrous silicates referred to in the definition of “asbestos” in subsection (1) are:

1. Actinolite.
2. Amosite.
3. Anthophyllite.
4. Chrysotile.
5. Crocidolite.
6. Tremolite. O. Reg. 278/05, s. 1 (2).

Application

2. (1) This Regulation applies to,
- (a) every project, its owner, and every constructor, employer and worker engaged in or on the project;
 - (b) the repair, alteration or maintenance of a building, the owner of the building, and every employer and worker engaged in the repair, alteration or maintenance;
 - (c) every building in which material that may be asbestos-containing material has been used, and the owner of the building;
 - (d) the demolition of machinery, equipment, aircraft, ships, locomotives, railway cars and vehicles, and every employer and worker engaged in the demolition; and
 - (e) subject to subsection (3),
 - (i) work described in subsection (2) in which asbestos-containing material is likely to be handled, dealt with, disturbed or removed, and
 - (ii) every employer and worker engaged in the work.
- O. Reg. 278/05, s. 2 (1).

- (2) Clause (1) (e) applies to,
- (a) the repair, alteration or maintenance of machinery, equipment, aircraft, ships, locomotives, railway cars and vehicles; and
 - (b) work on a building that is necessarily incidental to the repair, alteration or maintenance of machinery or equipment. O. Reg. 278/05, s. 2 (2).

(3) This Regulation does not apply to an employer to whom Regulation 837 of the Revised Regulations of Ontario, 1990 (Designated Substance — Asbestos) applies in respect of those workers employed by the employer and engaged in the activities described in clause (1) (e) if the employer has on or before December 16, 1985 put into effect and maintained measures and procedures

to control the exposure of workers to asbestos and has incorporated the same in an asbestos control program in accordance with Regulation 837 of the Revised Regulations of Ontario, 1990. O. Reg. 278/05, s. 2 (3).

(4) This Regulation does not apply to an owner of a private residence occupied by the owner or the owner's family or to an owner of a residential building that contains not more than four dwelling units, one of which is occupied by the registered owner or family of the registered owner. O. Reg. 278/05, s. 2 (4).

Adoption of standard

3. (1) For the purposes of this Regulation, the method and procedures for establishing whether material is asbestos-containing material and for establishing its asbestos content and the type of asbestos shall be in accordance with the following standard:

1. U.S. Environmental Protection Agency. Test Method EPA/600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials. June 1993. O. Reg. 278/05, s. 3 (1).

(2) The procedures required by subsection (1) shall be carried out on bulk material samples that are randomly collected by a competent worker and are representative of each area of homogeneous material. O. Reg. 278/05, s. 3 (2).

(3) The minimum number of bulk material samples to be collected from an area of homogeneous material is set out in Table 1. O. Reg. 278/05, s. 3 (3).

(4) If analysis establishes that a bulk material sample contains 0.5 per cent or more asbestos by dry weight,

(a) it is not necessary to analyze other bulk material samples taken from the same area of homogeneous material; and

(b) the entire area of homogeneous material from which the bulk material sample was taken is deemed to be asbestos-containing material. O. Reg. 278/05, s. 3 (4).

Restrictions re sprayed material, insulation, sealants

4. (1) No person shall apply or install or cause to be applied or installed, by spraying, material containing 0.1 per cent or more asbestos by dry weight that can become friable. O. Reg. 278/05, s. 4 (1).

(2) No person shall apply or install or cause to be applied or installed, as thermal insulation, material containing 0.1 per cent or more asbestos by dry weight that can become friable. O. Reg. 278/05, s. 4 (2).

(3) A liquid sealant shall not be applied to friable asbestos-containing material if,

- (a) the material has visibly deteriorated; or
- (b) the material's strength and its adhesion to the underlying materials and surfaces are insufficient to support its weight and the weight of the sealant. O. Reg. 278/05, s. 4 (3).

Information for workers

5. (1) This section applies whenever a worker is to do work that,

- (a) involves material that,
 - (i) is asbestos-containing material,
 - (ii) is being treated as if it were asbestos-containing material,
 - (iii) is the subject of advice under section 9 or a notice under subsection 10 (8); or
- (b) is to be carried on in close proximity to material described in clause (a) and may disturb it. O. Reg. 278/05, s. 5 (1).

(2) The constructor or employer shall advise the worker and provide him or her with the following information:

1. The location of all material described in clause (1) (a).
2. For each location, whether the material is friable or non-friable.
3. In the case of sprayed-on friable material, for each location,
 - i. if the material is known to be asbestos-containing material, the type of asbestos, if known, or
 - ii. in any other case, a statement that the material will be treated as though it contained a type of asbestos other than chrysotile. O. Reg. 278/05, s. 5 (2).

Demolition

6. (1) The demolition of all or part of machinery, equipment, a building, aircraft, locomotive, railway car, vehicle or ship shall be carried out or continued only when any asbestos-containing material that may be disturbed during the work has been removed to the extent practicable. O. Reg. 278/05, s. 6 (1).

(2) Subsection (1) does not apply so as to prevent work necessary to gain access to the asbestos-containing material that is to be removed, if the workers doing the work are protected from the hazard. O. Reg. 278/05, s. 6 (2).

Ongoing asbestos management in buildings, two-year transitional period

7. (1) This section does not apply on or after November 1, 2007.
O. Reg. 278/05, s. 7 (1).

(2) Subsection (3) applies if,

- (a) the owner of a building treats friable material that has been used in the building for any purpose related to it, including insulation and fireproofing, as if it were asbestos-containing material;
- (b) the owner of a building has been advised under section 9 of the discovery of friable material that may be asbestos-containing material;
- (c) the owner of a building knows or ought reasonably to know that friable asbestos-containing material has been used in a building for any purpose related to the building, including insulation, and fireproofing;
- (d) an examination under subsection (8) or section 10 establishes, or would have established if carried out as required, that friable asbestos-containing material has been used in a building for any purpose related to the building, including insulation and fireproofing; or
- (e) a constructor or employer notifies the owner of a building, in accordance with subsection 10 (8), of the discovery of friable material that may be asbestos-containing material and that was not referred to in a report prepared under subsection 10 (4). O. Reg. 278/05, s. 7 (2).

(3) If this subsection applies, the owner shall,

- (a) prepare and keep on the premises a record containing the information set out in subsection (4);
- (b) give any other person who is an occupier of the building written notice of any information in the record that relates to the area occupied by the person;
- (c) give any employer with whom the owner arranges or contracts for work that is not described in clause 10 (1) (a) written notice of the information in the record, if the work,
 - (i) may involve material mentioned in the record, or
 - (ii) may be carried on in close proximity to such material and may disturb it;
- (d) advise the workers employed by the owner who work in the building of the information in the record, if the workers may do work that,
 - (i) involves material mentioned in the record, or
 - (ii) is to be carried on in close proximity to such material and may disturb it;

(e) establish and maintain, for the training and instruction of every worker employed by the owner who works in the building and may do work described in clause (d), a program dealing with,

- (i) the hazards of asbestos exposure,
- (ii) the use, care and disposal of protective equipment and clothing to be used and worn when doing the work,
- (iii) personal hygiene to be observed when doing the work, and
- (iv) the measures and procedures prescribed by this Regulation; and

(f) inspect the material mentioned in the record at reasonable intervals in order to determine its condition. O. Reg. 278/05, s. 7 (3).

(4) The record shall contain the following information:

1. The location of all material described in clauses (2) (a), (b), (c), (d) and (e).
2. In the case of sprayed-on material, for each location,
 - i. if the material is known to be asbestos-containing material, the type of asbestos, if known, or
 - ii. in any other case, a statement that the material will be treated as though it contained a type of asbestos other than chrysotile. O. Reg. 278/05, s. 7 (4).

(5) The owner shall update the record described in clause (3) (a),

- (a) at least once in each 12-month period; and
- (b) whenever the owner becomes aware of new information relating to the matters the record deals with. O. Reg. 278/05, s. 7 (5).

(6) If updating under subsection (5) results in any change to the record, clauses (3) (b), (c) and (d) apply with necessary modifications. O. Reg. 278/05, s. 7 (6).

(7) An occupier who receives a notice under clause (3) (b) is responsible for performing the duties set out in clauses (3) (d) and (e) with respect to the occupier's own workers. O. Reg. 278/05, s. 7 (7).

(8) If it is readily apparent that friable material used in a building as fireproofing or acoustical or thermal insulation has fallen and is being disturbed so that exposure to the material is likely to occur,

- (a) the owner shall cause the material to be examined to establish whether it is asbestos-containing material; and

(b) until it has been established whether the material is asbestos-containing material, no further work involving the material shall be done. O. Reg. 278/05, s. 7 (8).

(9) Subsection (8) does not apply if the work is carried out in accordance with this Regulation as though the material were asbestos-containing material and, in the case of sprayed-on material, as though it contained a type of asbestos other than chrysotile. O. Reg. 278/05, s. 7 (9).

(10) If the examination mentioned in subsection (8) establishes that the material is asbestos-containing material, or if the material is treated as though it were asbestos-containing material as described in subsection (9),

(a) the owner shall cause the fallen material to be cleaned up and removed; and

(b) if it is readily apparent that material will continue to fall because of the deterioration of the fireproofing or insulation, the owner shall repair, seal, remove or permanently enclose the fireproofing or insulation. O. Reg. 278/05, s. 7 (10).

(11) Subsection (10) does not apply if the fallen material is confined to an area that is,

(a) above a closed false ceiling; and

(b) not part of a return air plenum. O. Reg. 278/05, s. 7 (11).

Ongoing asbestos management in buildings after transitional period

8. (1) This section applies on and after November 1, 2007. O. Reg. 278/05, s. 8 (1).

(2) Subsection (3) applies if,

(a) the owner of a building treats material that has been used in the building for any purpose related to it, including insulation, fireproofing and ceiling tiles, as if it were asbestos-containing material;

(b) the owner of a building has been advised under section 9 of the discovery of material that may be asbestos-containing material;

(c) the owner of a building knows or ought reasonably to know that asbestos-containing material has been used in a building for any purpose related to the building, including insulation, fireproofing and ceiling tiles;

(d) an examination under subsection (8) or section 10 establishes, or would have established if carried out as required, that asbestos-containing material has been used in a building for any purpose related to the building, including insulation, fireproofing and ceiling tiles; or

(e) a constructor or employer advises the owner of a building, in accordance with subsection 10 (8), of the discovery of material that may be asbestos-containing material and that was not referred to in a report prepared under subsection 10 (4). O. Reg. 278/05, s. 8 (2).

(3) If this subsection applies, the owner shall,

(a) prepare and keep on the premises a record containing the information set out in subsection (4);

(b) give any other person who is an occupier of the building written notice of any information in the record that relates to the area occupied by the person;

(c) give any employer with whom the owner arranges or contracts for work that is not described in clause 10 (1) (a) written notice of the information in the record, if the work,

(i) may involve material mentioned in the record, or

(ii) may be carried on in close proximity to such material and may disturb it;

(d) advise the workers employed by the owner who work in the building of the information in the record, if the workers may do work that,

(i) involves material mentioned in the record, or

(ii) is to be carried on in close proximity to such material and may disturb it;

(e) establish and maintain, for the training and instruction of every worker employed by the owner who works in the building and may do work described in clause (d), a program dealing with,

(i) the hazards of asbestos exposure,

(ii) the use, care and disposal of protective equipment and clothing to be used and worn when doing the work,

(iii) personal hygiene to be observed when doing the work, and

(iv) the measures and procedures prescribed by this Regulation; and

(f) inspect the material mentioned in the record at reasonable intervals in order to determine its condition. O. Reg. 278/05, s. 8 (3).

(4) The record shall contain the following information:

1. The location of all material described in clauses (2) (a), (b), (c), (d) and (e).
 2. For each location, whether the material is friable or non-friable.
 3. In the case of friable sprayed-on material, for each location,
 - i. if the material is known to be asbestos-containing material, the type of asbestos, if known, or
 - ii. in any other case, a statement that the material will be treated as though it contained a type of asbestos other than chrysotile. O. Reg. 278/05, s. 8 (4).
- (5) The owner shall update the record described in clause (3) (a),
- (a) at least once in each 12-month period; and
 - (b) whenever the owner becomes aware of new information relating to the matters the record deals with. O. Reg. 278/05, s. 8 (5).
- (6) If updating under subsection (5) results in any change to the record, clauses (3) (b), (c) and (d) apply with necessary modifications. O. Reg. 278/05, s. 8 (6).
- (7) An occupier who receives a notice under clause (3) (b) is responsible for performing the duties set out in clauses (3) (d) and (e) with respect to the occupier's own workers. O. Reg. 278/05, s. 8 (7).
- (8) If it is readily apparent that friable material used in a building as fireproofing or acoustical or thermal insulation has fallen and is being disturbed so that exposure to the material is likely to occur,
- (a) the owner shall cause the material to be examined to establish whether it is asbestos-containing material; and
 - (b) until it has been established whether the material is asbestos-containing material, no further work involving the material shall be done. O. Reg. 278/05, s. 8 (8).
- (9) Subsection (8) does not apply if the work is carried out in accordance with this Regulation as though the material were asbestos-containing material and, in the case of friable sprayed-on material, as though it contained a type of asbestos other than chrysotile. O. Reg. 278/05, s. 8 (9).
- (10) If the examination mentioned in subsection (8) establishes that the material is asbestos-containing material, or if the material is treated as though it were asbestos-containing material as described in subsection (9),
- (a) the owner shall cause the fallen material to be cleaned up and removed; and

(b) if it is readily apparent that material will continue to fall because of the deterioration of the fireproofing or insulation, the owner shall repair, seal, remove or permanently enclose the fireproofing or insulation. O. Reg. 278/05, s. 8 (10).

(11) Subsection (10) does not apply if the fallen material is confined to an area that is,

- (a) above a closed false ceiling; and
- (b) not part of a return air plenum. O. Reg. 278/05, s. 8 (11).

Responsibility of employer other than owner

9. An employer whose workers work in a building of which the employer is not the owner shall advise the owner if the workers discover material that may be asbestos-containing material in the building. O. Reg. 278/05, s. 9.

Owner's responsibilities before requesting tender or arranging work

10. (1) An owner shall comply with subsections (2), (3), (4), (5) and (6) before,

- (a) requesting tenders for the demolition, alteration or repair of all or part of machinery, equipment, or a building, aircraft, locomotive, railway car, vehicle or ship; or
- (b) arranging or contracting for any work described in clause (a), if no tenders are requested. O. Reg. 278/05, s. 10 (1).

(2) Unless clause (3) (a) or (b) applies, the owner shall have an examination carried out in accordance with section 3 to establish whether any material that is likely to be handled, dealt with, disturbed or removed, whether friable or non-friable, is asbestos-containing material. O. Reg. 278/05, s. 10 (2).

(3) An examination under subsection (2) is not required if,

- (a) the owner,
 - (i) already knows that the material is not asbestos-containing material, or
 - (ii) already knows that the material is asbestos-containing material and, in the case of sprayed-on friable material, knows the type of asbestos; or
- (b) the work is being arranged or contracted for in accordance with this Regulation as though the material were asbestos-containing material and, in the case of sprayed-on friable material, as though it contained a type of asbestos other than chrysotile. O. Reg. 278/05, s. 10 (3).

(4) Whether an examination is required under subsection (2) or not, the owner shall have a report prepared,

(a) stating whether,

(i) the material is or is not asbestos-containing material, or

(ii) the work is to be performed in accordance with this Regulation as though the material were asbestos-containing material and, in the case of sprayed-on friable material, as though it contained a type of asbestos other than chrysotile;

(b) describing the condition of the material and stating whether it is friable or non-friable; and

(c) containing drawings, plans and specifications, as appropriate, to show the location of the material identified under clause (a). O. Reg. 278/05, s. 10 (4).

(5) An owner shall give any prospective constructor a copy of the complete report prepared under subsection (4). O. Reg. 278/05, s. 10 (5).

(6) Subsection (5) applies, with necessary modifications, with respect to,

(a) a constructor and a prospective contractor; and

(b) a contractor and a prospective subcontractor. O. Reg. 278/05, s. 10 (6).

(7) Subsections (8), (9) and (10) apply if, during work described in clause (1) (a), material is discovered that,

(a) was not referred to in the report prepared under subsection (4); and

(b) may be asbestos-containing material. O. Reg. 278/05, s. 10 (7).

(8) The constructor or employer shall immediately notify, orally and in writing,

(a) an inspector at the office of the Ministry of Labour nearest the workplace;

(b) the owner;

(c) the contractor; and

(d) the joint health and safety committee or the health and safety representative, if any, for the workplace. O. Reg. 278/05, s. 10 (8).

(9) The written notice referred to in subsection (8) shall include the information referred to in clauses 11 (3) (a) to (f). O. Reg. 278/05, s. 10 (9).

(10) No work that is likely to involve handling, dealing with, disturbing or removing the material referred to in subsection (7) shall be done unless,

- (a) it has been determined under section 3 whether the material is asbestos-containing material; or
- (b) the work is performed in accordance with this Regulation as though the material were asbestos-containing material and, in the case of sprayed-on friable material, as though it contained a type of asbestos other than chrysotile. O. Reg. 278/05, s. 10 (10).

(11) Subsection (10) does not prohibit handling, dealing with, disturbing or removing material for the sole purpose of determining whether it is asbestos-containing material. O. Reg. 278/05, s. 10 (11).

Advance notice re Type 3 operations and certain Type 2 operations

11. (1) Before commencing a Type 3 operation, the constructor, in the case of a project, and the employer, in any other case, shall notify, orally and in writing, an inspector at the office of the Ministry of Labour nearest the workplace of the operation. O. Reg. 278/05, s. 11 (1).

(2) Subsection (1) also applies with respect to a Type 2 operation described in paragraph 9 of subsection 12 (3) in which one square metre or more of insulation is to be removed. O. Reg. 278/05, s. 11 (2).

(3) The written notice required by subsection (1) shall set out,

- (a) the name and address of the person giving the notice;
 - (b) the name and address of the owner of the place where the work will be carried out;
 - (c) the municipal address or other description of the place where the work will be carried out sufficient to permit the inspector to locate the place, including the location with respect to the nearest public highway;
 - (d) a description of the work that will be carried out;
 - (e) the starting date and expected duration of the work; and
 - (f) the name and address of the supervisor in charge of the work.
- O. Reg. 278/05, s. 11 (3).

Type 1, Type 2 and Type 3 operations

12. (1) For the purposes of this Regulation, operations that may expose a worker to asbestos are classified as Type 1, Type 2 and Type 3 operations. O. Reg. 278/05, s. 12 (1).

(2) The following are Type 1 operations:

1. Installing or removing ceiling tiles that are asbestos-containing material, if the tiles cover an area less than 7.5 square metres and are installed or removed without being broken, cut, drilled, abraded, ground, sanded or vibrated.
2. Installing or removing non-friable asbestos-containing material, other than ceiling tiles, if the material is installed or removed without being broken, cut, drilled, abraded, ground, sanded or vibrated.
3. Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing material if,
 - i. the material is wetted to control the spread of dust or fibres, and
 - ii. the work is done only by means of non-powered hand-held tools.
4. Removing less than one square metre of drywall in which joint-filling compounds that are asbestos-containing material have been used. O. Reg. 278/05, s. 12 (2).

(3) The following are Type 2 operations:

1. Removing all or part of a false ceiling to obtain access to a work area, if asbestos-containing material is likely to be lying on the surface of the false ceiling.
2. The removal or disturbance of one square metre or less of friable asbestos-containing material during the repair, alteration, maintenance or demolition of all or part of machinery or equipment or a building, aircraft, locomotive, railway car, vehicle or ship.
3. Enclosing friable asbestos-containing material.
4. Applying tape or a sealant or other covering to pipe or boiler insulation that is asbestos-containing material.
5. Installing or removing ceiling tiles that are asbestos-containing material, 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.
6. Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing material if,
 - i. the material is not wetted to control the spread of dust or fibres, and
 - ii. the work is done only by means of non-powered hand-held tools.

7. Removing one square metre or more of drywall in which joint filling compounds that are asbestos-containing material have been used.

8. Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing material if the work is done by means of power tools that are attached to dust-collecting devices equipped with HEPA filters.

9. Removing insulation that is asbestos-containing material from a pipe, duct or similar structure using a glove bag.

10. Cleaning or removing filters used in air handling equipment in a building that has sprayed fireproofing that is asbestos-containing material.

11. An operation that,

i. is not mentioned in any of paragraphs 1 to 10,

ii. may expose a worker to asbestos, and

iii. is not classified as a Type 1 or Type 3 operation. O. Reg. 278/05, s. 12 (3).

(4) The following are Type 3 operations:

1. The removal or disturbance of more than one square metre of friable asbestos-containing material during the repair, alteration, maintenance or demolition of all or part of a building, aircraft, ship, locomotive, railway car or vehicle or any machinery or equipment.

2. The spray application of a sealant to friable asbestos-containing material.

3. Cleaning or removing air handling equipment, including rigid ducting but not including filters, in a building that has sprayed fireproofing that is asbestos-containing material.

4. Repairing, altering or demolishing all or part of a kiln, metallurgical furnace or similar structure that is made in part of refractory materials that are asbestos-containing materials.

5. Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing material, if the work is done by means of power tools that are not attached to dust-collecting devices equipped with HEPA filters.

6. Repairing, altering or demolishing all or part of any building in which asbestos is or was used in the manufacture of products, unless the asbestos was cleaned up and removed before March 16, 1986. O. Reg. 278/05, s. 12 (4).

(5) Work on ceiling tiles, drywall or friable asbestos-containing material is classified according to the total area on which work is done consecutively in a room or enclosed area, even if the work is divided into smaller jobs. O. Reg. 278/05, s. 12 (5).

(6) The following provisions apply if a dispute arises as to the classification of an operation under this section:

1. A party to the dispute may notify an inspector at the office of the Ministry of Labour nearest the workplace of the dispute.
2. The party who notifies the inspector shall promptly inform the other parties that the inspector has been notified.
3. Work on the operation shall cease until the inspector has given a decision under paragraph 4.
4. The inspector shall, as soon as possible, investigate the matter and give the parties a decision in writing. O. Reg. 278/05, s. 12 (6).

(7) Nothing in subsection (6) affects an inspector's power to issue an order for a contravention of this Regulation. O. Reg. 278/05, s. 12 (7).

Respirators

13. (1) A respirator provided by an employer and used by a worker in a Type 1, Type 2 or Type 3 operation,

- (a) shall be fitted so that there is an effective seal between the respirator and the worker's face, unless the respirator is equipped with a hood or helmet;
- (b) shall be assigned to a worker for his or her exclusive use, if practicable;
- (c) shall be used and maintained in accordance with written procedures that are established by the employer and are consistent with the manufacturer's specifications;
- (d) shall be cleaned, disinfected and inspected after use on each shift, or more often if necessary, when issued for the exclusive use of one worker, or after each use when used by more than one worker;
- (e) shall have damaged or deteriorated parts replaced prior to being used by a worker; and
- (f) when not in use, shall be stored in a convenient, clean and sanitary location. O. Reg. 278/05, s. 13 (1).

(2) The following additional requirements apply to a respirator of the supplied air type:

1. The compressed air used for breathing shall meet the standards set out in Table 1 of CSA Standard Z180.1-00, Compressed Breathing Air and Systems (March, 2000).

2. If an oil-lubricated compressor is used to supply breathing air, a continuous carbon monoxide monitor equipped with an alarm shall be provided.

3. If an ambient breathing air system is used, the air intake shall be located in accordance with Appendix B of the standard referred to in paragraph 1. O. Reg. 278/05, s. 13 (2).

(3) If respirators are used in the workplace,

(a) the employer shall establish written procedures regarding the selection, use and care of respirators; and

(b) a copy of the procedures shall be provided to and reviewed with each worker who is required to wear a respirator. O. Reg. 278/05, s. 13 (3).

(4) A worker shall not be assigned to an operation requiring the use of a respirator unless he or she is physically able to perform the operation while using the respirator. O. Reg. 278/05, s. 13 (4).

Measures and procedures, Type 1 operations

14. The following measures and procedures apply to Type 1 operations:

1. Before beginning work, visible dust shall be removed with a damp cloth or a vacuum equipped with a HEPA filter from any surface in the work area, including the thing to be worked on, if the dust on that surface is likely to be disturbed.

2. The spread of dust from the work area shall be controlled by measures appropriate to the work to be done including the use of drop sheets of polyethylene or other suitable material that is impervious to asbestos.

3. In the case of an operation mentioned in paragraph 4 of subsection 12 (2), the material shall be wetted before and kept wet during the work to control the spread of dust or fibres, unless wetting would create a hazard or cause damage.

4. A wetting agent shall be added to water that is to be used to control the spread of dust and fibres.

5. Frequently and at regular intervals during the doing of the work and immediately on completion of the work,

i. dust and waste shall be cleaned up and removed using a vacuum equipped with a HEPA filter, or by damp mopping or wet sweeping, and placed in a container as described in paragraph 5 of section 15, and

ii. drop sheets shall be wetted and placed in a container as described in paragraph 5 of section 15, as soon as practicable after subparagraph i has been complied with.

6. Drop sheets shall not be reused.

7. After the work is completed, polyethylene sheeting and similar materials used for barriers and enclosures shall not be reused, but shall be wetted and placed in a container as described in paragraph 5 of section 15 as soon as practicable after paragraph 5 of this section has been complied with.

8. After the work is completed, barriers and portable enclosures that will be reused shall be cleaned, by using a vacuum equipped with a HEPA filter or by damp wiping, as soon as practicable after paragraphs 5 and 7 have been complied with.

9. Barriers and portable enclosures shall not be reused unless they are rigid and can be cleaned thoroughly.

10. Compressed air shall not be used to clean up and remove dust from any surface.

11. Eating, drinking, chewing or smoking shall not be permitted in the work area.

12. If a worker requests that the employer provide a respirator to be used by the worker, the employer shall provide the worker with a NIOSH approved respirator in accordance with Table 2, and the worker shall wear and use the respirator.

13. If a worker requests that the employer provide protective clothing to be used by the worker, the employer shall provide the worker with protective clothing as described in paragraph 12 of section 15, and the worker shall wear the protective clothing.

14. A worker who is provided with protective clothing shall, before leaving the work area,

i. decontaminate his or her protective clothing by using a vacuum equipped with a HEPA filter, or by damp wiping, before removing the protective clothing,

ii. if the protective clothing will not be reused, place it in a container as described in paragraph 5 of section 15.

15. Facilities for the washing of hands and face shall be made available to workers and shall be used by every worker when leaving the work area. O. Reg. 278/05, s. 14.

Measures and procedures, Type 2 and Type 3 operations

15. The following measures and procedures apply to Type 2 operations and to Type 3 operations:

1. The work area shall be identified by clearly visible signs warning of an asbestos dust hazard.
2. Signs required by paragraph 1 shall be posted in sufficient numbers to warn of the hazard and shall state in large clearly visible letters that,
 - i. there is an asbestos dust hazard, and
 - ii. access to the work area is restricted to persons wearing protective clothing and equipment.
3. A wetting agent shall be added to water that is to be used to control the spread of dust and fibres.
4. Eating, drinking, chewing or smoking shall not be permitted in the work area.
5. Containers for dust and waste shall be,
 - i. dust tight,
 - ii. suitable for the type of waste,
 - iii. impervious to asbestos,
 - iv. identified as asbestos waste,
 - v. cleaned with a damp cloth or a vacuum equipped with a HEPA filter immediately before being removed from the work area, and
 - vi. removed from the workplace frequently and at regular intervals.
6. Frequently and at regular intervals during the doing of the work and immediately on completion of the work,
 - i. dust and waste shall be cleaned up and removed using a vacuum equipped with a HEPA filter, or by damp mopping or wet sweeping, and placed in a container as described in paragraph 5, and

ii. drop sheets shall be wetted and placed in a container as described in paragraph 5, as soon as practicable after subparagraph i has been complied with.

7. Drop sheets shall not be reused.

8. After the work is completed, polyethylene sheeting and similar materials used for barriers and enclosures shall not be reused, but shall be wetted and placed in a container as described in paragraph 5 as soon as practicable after paragraph 6 has been complied with.

9. After the work is completed, barriers and portable enclosures that will be reused shall be cleaned, by using a vacuum equipped with a HEPA filter or by damp wiping, as soon as practicable after paragraphs 6 and 8 have been complied with.

10. Barriers and portable enclosures shall not be reused unless they are rigid and can be cleaned thoroughly.

11. The employer shall provide every worker who will enter the work area with a NIOSH approved respirator in accordance with Table 2 and the worker shall wear and use the respirator.

12. Protective clothing shall be provided by the employer and worn by every worker who enters the work area, and the protective clothing,

i. shall be made of a material that does not readily retain nor permit penetration of asbestos fibres,

ii. shall consist of head covering and full body covering that fits snugly at the ankles, wrists and neck, in order to prevent asbestos fibres from reaching the garments and skin under the protective clothing,

iii. shall include suitable footwear, and

iv. shall be repaired or replaced if torn.

13. Compressed air shall not be used to clean up and remove dust from any surface.

14. Only persons wearing protective clothing and equipment shall enter a work area where there is an asbestos dust hazard. O. Reg. 278/05, s. 15.

Additional measures and procedures, Type 2 operations

16. In addition to the measures and procedures prescribed by section 15, the following measures and procedures apply to Type 2 operations:

1. If the operation is one mentioned in paragraph 1 of subsection 12 (3), the friable material that is likely to be disturbed shall be cleaned up and removed by using a vacuum equipped with a HEPA filter when access to the work area is obtained.

2. Before commencing work that is likely to disturb friable asbestos-containing material that is crumbled, pulverized or powdered and that is lying on any surface, the friable material shall be cleaned up and removed by damp wiping or by using a vacuum equipped with a HEPA filter.

3. Friable asbestos-containing material that is not crumbled, pulverized or powdered and that may be disturbed or removed during the work shall be thoroughly wetted before the work and kept wet during the work, unless wetting would create a hazard or cause damage.

4. Subject to paragraph 5, the spread of dust from a work area shall be controlled by measures appropriate to the work to be done, including the use of drop sheets of polyethylene or other suitable material that is impervious to asbestos.

5. If the operation is one mentioned in paragraph 1 or 2 of subsection 12 (3) and is carried on indoors, the spread of dust from the work area shall be prevented, if practicable, by,

- i. using an enclosure of polyethylene or other suitable material that is impervious to asbestos (including, if the enclosure is opaque, one or more transparent window areas to allow observation of the entire work area from outside the enclosure), if the work area is not enclosed by walls,
- ii. disabling the mechanical ventilation system serving the work area, and
- iii. sealing the ventilation ducts to and from the work area.

6. Before leaving the work area, a worker shall,

- i. decontaminate his or her protective clothing by using a vacuum equipped with a HEPA filter, or by damp wiping, before removing the protective clothing, and
- ii. if the protective clothing will not be reused, place it in a container as described in paragraph 5 of section 15.

7. Facilities for the washing of hands and face shall be made available to workers and shall be used by every worker when leaving the work area. O. Reg. 278/05, s. 16.

Additional measures and procedures, glove bag operations

17. In addition to the measures and procedures prescribed by sections 15 and 16, the following measures and procedures apply to Type 2 operations referred to in paragraph 9 of subsection 12 (3):

1. The work area shall be separated from the rest of the workplace by walls, barricades, fencing or other suitable means.
2. The spread of asbestos-containing material from the work area shall be prevented by disabling the mechanical ventilation system serving the work area and sealing all openings or voids, including ventilation ducts to and from the working area.
3. Surfaces below the work area shall be covered with drop sheets of polyethylene or other suitable material that is impervious to asbestos.
4. 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.
5. 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.
6. 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.

7. 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.

8. The glove bag shall be inspected for damage or defects,

i. immediately before it is attached to the pipe, duct or other similar structure, and

ii. at regular intervals during its use.

9. If damage or defects are observed when the glove bag is inspected under subparagraph 8 i, the glove bag shall not be used and shall be disposed of.

10. If damage or defects are observed when the glove bag is inspected under subparagraph 8 ii or at any other time,

i. the use of the glove bag shall be discontinued,

ii. the inner surface of the glove bag and the contents, if any, shall be thoroughly wetted,

iii. the glove bag and the contents, if any, shall be removed and placed in a container as described in paragraph 5 of section 15, and

iv. the work area shall be cleaned by vacuuming with a vacuum equipped with a HEPA filter before removal work is resumed.

11. When the removal work is completed,

i. 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,

ii. the pipe, duct or similar structure shall be wiped down and sealed with a suitable encapsulant,

iii. the glove bag, with the waste inside, shall be placed in a container as described in paragraph 5 of section 15, and

- iv. the work area shall be cleaned by damp wiping or by cleaning with a vacuum equipped with a HEPA filter. O. Reg. 278/05, s. 17.

Additional measures and procedures, Type 3 operations

18. (1) In addition to the measures and procedures prescribed by section 15, the following measures and procedures apply to Type 3 operations:

- 1. The work area shall be separated from the rest of the workplace by walls, the placing of barricades or fencing or other suitable means.
- 2. Subsection (2) applies to an operation mentioned in paragraph 5 of subsection 12 (4).
- 3. Subsection (3) applies to an operation mentioned in paragraph 1, 2, 3 or 4 of subsection 12 (4) that is carried on outdoors.
- 4. Subsection (4) applies to an operation mentioned in paragraph 1, 2, 3, 4 or 6 of subsection 12 (4) that is carried on indoors. O. Reg. 278/05, s. 18 (1).

(2) In the case of an operation mentioned in paragraph 5 of subsection 12 (4), the following measures and procedures also apply:

- 1. The spread of dust from the work area shall be prevented by,
 - i. using enclosures of polyethylene or other suitable material that is impervious to asbestos (including, if the enclosure material is opaque, one or more transparent window areas to allow observation of the entire work area from outside the enclosure), if the work area is not enclosed by walls, and
 - ii. using curtains of polyethylene sheeting or other suitable material that is impervious to asbestos, fitted on each side of each entrance or exit from the work area.
- 2. Unless the operation is carried on outdoors, or inside a building that is to be demolished and will not be entered by any person except the workers involved in the operation and the workers involved in the demolition, the spread of dust from the work area shall also be prevented by,
 - i. creating and maintaining within the enclosed area, by installing a ventilation system equipped with a HEPA filtered exhaust unit, a negative air pressure of 0.02 inches of water, relative to the area outside the enclosed area,

ii. ensuring that replacement air is taken from outside the enclosed area and is free from contamination with any hazardous dust, vapour, smoke, fume, mist or gas, and

iii. using a device, at regular intervals, to measure the difference in air pressure between the enclosed area and the area outside it.

3. The ventilation system referred to in subparagraph 2 i shall be inspected and maintained by a competent worker before each use to ensure that there is no air leakage, and if the filter is found to be damaged or defective, it shall be replaced before the ventilation system is used.

4. Before leaving the work area, a worker shall,

i. decontaminate his or her protective clothing by using a vacuum equipped with a HEPA filter, or by damp wiping, before removing the protective clothing, and

ii. if the protective clothing will not be reused, place it in a container as described in paragraph 5 of section 15.

5. Facilities for the washing of hands and face shall be made available to workers and shall be used by every worker when leaving the work area. O. Reg. 278/05, s. 18 (2).

(3) In the case of an operation mentioned in paragraph 1, 2, 3 or 4 of subsection 12 (4) that is carried on outdoors, the following measures and procedures also apply:

1. If practicable, any asbestos-containing material to be removed shall be thoroughly wetted before and during removal, unless wetting would create a hazard or cause damage.

2. Dust and waste shall not be permitted to fall freely from one work level to another.

3. If practicable, the work area shall be washed down with water after completion of the clean-up and removal described in paragraph 6 of section 15.

4. Temporary electrical power distribution systems for tools and equipment involved in wet removal operations shall be equipped with ground fault circuit interrupters.

5. A decontamination facility shall be located as close as practicable to the work area and shall consist of,

- i. a room suitable for changing into protective clothing and for storing contaminated protective clothing and equipment,
- ii. a shower room as described in paragraph 7 of subsection (4), and
- iii. a room suitable for changing into street clothes and for storing clean clothing and equipment.

6. The rooms described in subparagraphs 5 i, ii and iii shall be arranged in sequence and constructed so that any person entering or leaving the work area must pass through each room.

7. When leaving the work area, a worker shall enter the decontamination facility and shall, in the following order,

- i. decontaminate his or her protective clothing by using a vacuum equipped with a HEPA filter, or by damp wiping, before removing the protective clothing,
- ii. if the protective clothing will not be reused, place it in a container as described in paragraph 5 of section 15,
- iii. shower, and
- iv. remove and clean the respirator. O. Reg. 278/05, s. 18 (3).

(4) In the case of an operation mentioned in paragraph 1, 2, 3, 4 or 6 of subsection 12 (4) that is carried on indoors, the following measures and procedures also apply:

1. Friable asbestos-containing material that is crumbled, pulverized or powdered and that is lying on any surface in the work area shall be cleaned up and removed using a vacuum equipped with a HEPA filter or by damp wiping and everything shall be removed from the work area or covered with polyethylene sheeting or other suitable material that is impervious to asbestos.

2. The spread of dust from the work area shall be prevented by an enclosure of polyethylene or other suitable material that is impervious to asbestos, if the work area is not enclosed by walls, and by a decontamination facility consisting of a series of interconnecting rooms including,

- i. a room suitable for changing into protective clothing and for storing contaminated protective clothing and equipment,
- ii. a shower room as described in paragraph 7,

iii. a room suitable for changing into street clothes and for storing clean clothing and equipment, and

iv. curtains of polyethylene sheeting or other suitable material that is impervious to asbestos, fitted to each side of the entrance or exit to each room.

3. The rooms described in subparagraphs 2 i, ii and iii shall be arranged in sequence and constructed so that any person entering or leaving the work area must pass through each room.

4. The mechanical ventilation system serving the work area shall be disabled and all openings or voids, including ventilation ducts to or from the work area, shall be sealed by tape or other appropriate means.

5. Unless the operation is carried on inside a building that is to be demolished and will not be entered by any person except the workers involved in the operation and the workers involved in the demolition, the spread of dust from the work area shall also be prevented by,

i. creating and maintaining within the enclosed area, by installing a ventilation system equipped with a HEPA filtered exhaust unit, a negative air pressure of 0.02 inches of water, relative to the area outside the enclosed area,

ii. ensuring that replacement air is taken from outside the enclosed area and is free from contamination with any hazardous dust, vapour, smoke, fume, mist or gas, and

iii. using a device, at regular intervals, to measure the difference in air pressure between the enclosed area and the area outside it.

6. The ventilation system referred to in subparagraph 5 i shall be inspected and maintained by a competent worker before each use to ensure that there is no air leakage, and if the filter is found to be damaged or defective, it shall be replaced before the ventilation system is used.

7. The shower room in the decontamination facility shall,

i. be provided with hot and cold water or water of a constant temperature that is not less than 40° Celsius or more than 50° Celsius,

ii. have individual controls inside the room to regulate water flow and, if there is hot and cold water, individual controls inside the room to regulate temperature,

- iii. be capable of providing adequate supplies of hot water to maintain a water temperature of at least 40° Celsius, and
 - iv. be provided with clean towels.
- 8. When leaving the work area, a worker shall enter the decontamination facility and shall, in the following order,
 - i. decontaminate his or her protective clothing by using a vacuum equipped with a HEPA filter, or by damp wiping, before removing the protective clothing,
 - ii. if the protective clothing will not be reused, place it in a container as described in paragraph 5 of section 15,
 - iii. shower, and
 - iv. remove and clean the respirator.
- 9. If practicable, existing electrical power distribution systems that are not water-tight shall be de-energized and locked out where wet removal operations are to be carried out.
- 10. Temporary electrical power distribution systems for tools and equipment involved in wet removal operations shall be equipped with ground fault circuit interrupters.
- 11. Friable asbestos-containing material shall be thoroughly wetted before and during removal, unless wetting would create a hazard or cause damage.
- 12. The work area shall be inspected by a competent worker for defects in the enclosure, barriers and decontamination facility,
 - i. at the beginning of each shift,
 - ii. at the end of a shift if there is no shift that begins immediately after the first-named shift, and
 - iii. at least once each day on days when there are no shifts.
- 13. Defects observed during an inspection under paragraph 12 shall be repaired immediately and no other work shall be carried out in the work area until the repair work is completed.
- 14. If practicable, dust and waste shall be kept wet.
- 15. On completion of the work,
 - i. negative air pressure shall be maintained if required by subparagraph 5 i,

ii. the inner surface of the enclosure and the work area inside the enclosure shall be cleaned by a thorough washing or by vacuuming with a vacuum equipped with a HEPA filter,

iii. equipment, tools and other items used in the work shall be cleaned with a damp cloth or by vacuuming with a vacuum equipped with a HEPA filter or they shall be placed in a container as described in paragraph 5 of section 15 before being removed from the enclosure, and

iv. a visual inspection shall be conducted by a competent worker to ensure that the enclosure and the work area inside the enclosure are free from visible dust, debris or residue that may contain asbestos.

16. Once the work area inside the enclosure is dry after the steps set out in subparagraphs 15 ii, iii and iv have been completed, clearance air testing shall be conducted by a competent worker in accordance with subsection (5), unless the operation is carried on inside a building that is to be demolished and will not be entered by any person except the workers involved in the operation and the workers involved in the demolition.

17. The barriers, enclosure and decontamination facility shall not be removed or dismantled until,

i. cleaning has been done as described in paragraph 15, and

ii. if clearance air testing is required, it has been completed and the work area inside the enclosure has passed the clearance air test. O. Reg. 278/05, s. 18 (4).

(5) The following rules apply to clearance air testing:

1. Sample collection and analysis shall be done,

i. using the phase contrast microscopy method, in accordance with subsection (6), or

ii. using the transmission electron microscopy method, in accordance with subsection (7).

2. If the work area inside the enclosure fails the clearance air test, the steps set out in subparagraphs 15 ii, iii and iv of subsection (4) shall be repeated and the work area shall be allowed to dry before a further test is carried out, unless paragraph 6 of subsection (6) applies. O. Reg. 278/05, s. 18 (5).

(6) Clearance air testing using the phase contrast microscopy method shall be carried out in accordance with U.S. National Institute of Occupational Safety and Health Manual of Analytical Methods, Method 7400, Issue 2: Asbestos and other Fibres by PCM (August 15, 1994), using the asbestos fibre counting rules, and shall comply with the following requirements:

1. Testing shall be based on samples taken inside the enclosure.
2. Forced air shall be used, both before and during the sampling process, to ensure that fibres are dislodged from all surfaces inside the enclosure before sampling begins and are kept airborne throughout the sampling process.
3. At least 2,400 litres of air shall be drawn through each sample filter, even though the standard mentioned above provides for a different amount.
4. The number of air samples to be collected shall be in accordance with Table 3.
5. The work area inside the enclosure passes the clearance air test only if every air sample collected has a concentration of fibres that does not exceed 0.01 fibres per cubic centimetres of air.
6. If the work area inside the enclosure fails a first test that is done using the phase contrast microscopy method, the samples may be subjected to a second analysis using transmission electron microscopy in accordance with the standard mentioned in subsection (7).
7. When a second analysis is done as described in paragraph 6, the work area inside the enclosure passes the clearance air test only if every air sample collected has a concentration of asbestos fibres that does not exceed 0.01 fibres per cubic centimetre of air. O. Reg. 278/05, s. 18 (6).

(7) Clearance air testing using the transmission electron microscopy method shall be carried out in accordance with U.S. National Institute of Occupational Safety and Health Manual of Analytical Methods, Method 7402, Issue 2: Asbestos by TEM (August 15, 1994), and shall comply with the following requirements:

1. Testing shall be based on samples taken inside the enclosure and samples taken outside the enclosure but inside the building.
2. Forced air shall be used inside the enclosure, both before and during the sampling process, to ensure that fibres are dislodged from all surfaces before sampling begins and are kept airborne throughout the sampling process.

3. At least 2,400 litres of air shall be drawn through each sample filter, even though the standard mentioned above provides for a different amount.

4. At least five air samples shall be taken inside each enclosure and at least five air samples shall be taken outside the enclosure but inside the building.

5. Sampling inside and outside the enclosure shall be conducted concurrently.

6. The work area inside the enclosure passes the clearance air test if the average concentration of asbestos fibres in the samples collected inside the enclosure is statistically less than the average concentration of asbestos fibres in the samples collected outside the enclosure, or if there is no statistical difference between the two average concentrations. O. Reg. 278/05, s. 18 (7).

(8) Within 24 hours after the clearance air testing results are received,

(a) the owner and the employer shall post a copy of the results in a conspicuous place or places,

(i) at the workplace, and

(ii) if the building contains other workplaces, in a common area of the building; and

(b) a copy shall be provided to the joint health and safety committee or the health and safety representative, if any, for the workplace and for the building. O. Reg. 278/05, s. 18 (8).

(9) The owner of the building shall keep a copy of the clearance air testing results for at least one year after receiving them. O. Reg. 278/05, s. 18 (9).

Instruction and training

19. (1) The employer shall ensure that instruction and training in the following subjects are provided by a competent person to every worker working in a Type 1, Type 2 or Type 3 operation:

1. The hazards of asbestos exposure.

2. Personal hygiene and work practices.

3. The use, cleaning and disposal of respirators and protective clothing. O. Reg. 278/05, s. 19 (1).

(2) The joint health and safety committee or the health and safety representative, if any, for the workplace shall be advised of the time and place

where the instruction and training prescribed by subsection (1) are to be carried out. O. Reg. 278/05, s. 19 (2).

(3) Without restricting the generality of paragraph 3 of subsection (1), the instruction and training related to respirators shall include instruction and training related to,

- (a) the limitations of the equipment;
- (b) inspection and maintenance of the equipment;
- (c) proper fitting of a respirator; and
- (d) respirator cleaning and disinfection. O. Reg. 278/05, s. 19 (3).

Note: Section 20 comes into force on November 1, 2007. See: O. Reg. 278/05, s. 26 (2).

Asbestos abatement training programs

20. (1) The employer shall ensure that,

- (a) every worker involved in a Type 3 operation has successfully completed the Asbestos Abatement Worker Training Program approved by the Ministry of Training, Colleges and Universities; and
- (b) every supervisor of a worker involved in a Type 3 operation has successfully completed the Asbestos Abatement Supervisor Training Program approved by the Ministry of Training, Colleges and Universities. O. Reg. 278/05, s. 20 (1).

(2) The employer shall ensure that every worker and supervisor successfully completes the appropriate program required under subsection (1) before performing or supervising the work to which the program relates. O. Reg. 278/05, s. 20 (2).

(3) A document issued by the Ministry of Training, Colleges and Universities, showing that a worker has successfully completed a program mentioned in subsection (1), is conclusive proof, for the purposes of this section, of his or her successful completion of the program. O. Reg. 278/05, s. 20 (3).

(4) In accordance with the *Agreement on Internal Trade, 1995* and the *Protocols of Amendment*, a worker shall be deemed to hold a document showing successful completion referred to in subsection (3) if he or she has successfully completed equivalent training in another province or territory of Canada, as determined by the Director. O. Reg. 278/05, s. 20 (4).

Asbestos work report

21. (1) The employer of a worker working in a Type 2 operation or a Type 3 operation shall complete an asbestos work report in a form obtained from the Ministry for each such worker,

- (a) at least once in each 12-month period; and
- (b) immediately on the termination of the employment of the worker. O. Reg. 278/05, s. 21 (1).

(2) As soon as the asbestos work report is completed, the employer shall,

- (a) forward it to the Provincial Physician, Ministry of Labour, and
- (b) give a copy to the worker. O. Reg. 278/05, s. 21 (2).

(3) For the purposes of clause (2) (a), the employer may deliver the report to the Provincial Physician in person or send it by ordinary mail, by courier or by fax. O. Reg. 278/05, s. 21 (3).

Asbestos Workers Register

22. (1) The Provincial Physician, Ministry of Labour, shall establish and maintain an Asbestos Workers Register listing the name of each worker for whom an employer submits an asbestos work report under section 21. O. Reg. 278/05, s. 22 (1).

(2) On the recommendation of the Provincial Physician, a worker who is listed in the Register may volunteer to undergo the prescribed medical examination described in paragraph 1 of subsection (4). O. Reg. 278/05, s. 22 (2).

(3) A worker who has undergone the prescribed medical examination described in paragraph 1 of subsection (4) may volunteer to undergo subsequent examinations of the same type if they are recommended by his or her physician. O. Reg. 278/05, s. 22 (3).

(4) The following medical examinations are prescribed for the purposes of subsection 26 (3) of the Act:

- 1. An examination consisting of a medical questionnaire, chest x-rays and pulmonary function tests.
- 2. A subsequent examination that consists of the components described in paragraph 1, is recommended by the worker's physician and takes place at least two years after the most recent examination. O. Reg. 278/05, s. 22 (4).

(5) A worker who is removed from exposure to asbestos because an examination discloses that he or she may have or has a condition resulting from exposure to asbestos and suffers a loss of earnings as a result of the removal from exposure to asbestos is entitled to compensation for the loss in the manner and to

the extent provided by the *Workplace Safety and Insurance Act, 1997*. O. Reg. 278/05, s. 22 (5).

Use of equivalent measure or procedure

23. A constructor, in the case of a project, or the employer, in any other case, may vary a measure or procedure required by this Regulation if the following conditions are satisfied:

1. The measure or procedure, as varied, affords protection for the health and safety of workers that is at least equal to the protection that would be provided by complying with this Regulation.
2. The constructor or employer gives written notice of the varied measure or procedure, in advance, to the joint health and safety committee or the health and safety representative, if any, for the workplace. O. Reg. 278/05, s. 23.

Notice to inspector

24. (1) When this Regulation requires written notice to an inspector at an office of the Ministry of Labour, the notice shall be given,

- (a) by delivering it to the office in person;
- (b) by sending it by ordinary mail, by courier or by fax, or
- (c) by sending the notice to the inspector by electronic means that are acceptable to the Ministry. O. Reg. 278/05, s. 24 (1).

(2) When this Regulation requires oral notice to an inspector at an office of the Ministry of Labour, the notice shall be given,

- (a) in person;
- (b) by telephoning the inspector; or
- (c) by sending the notice to the inspector by electronic means that are acceptable to the Ministry. O. Reg. 278/05, s. 24 (2).

25. Omitted (revokes other Regulations). O. Reg. 278/05, s. 25.

26. Omitted (provides for coming into force of provisions of this Regulation). O. Reg. 278/05, s. 26.

TABLE 1 BULK MATERIAL SAMPLES

Subsection 3 (3)

Item	Type of material	Size of area of homogeneous material	Minimum number of bulk material samples to be collected
1.	Surfacing material, including without limitation material that is applied to surfaces by spraying, by troweling or otherwise, such as acoustical plaster on ceilings and fireproofing materials on structural members	Less than 90 square metres	3
		90 or more square metres, but less than 450 square metres	5
		450 or more square metres	7
2.	Thermal insulation, except as described in item 3	any size	3
3.	Thermal insulation patch	Less than 2 linear metres or 0.5 square metres	1
4.	Other material	Any size	3

O. Reg. 278/05, Table 1.

TABLE 2 RESPIRATORS

Paragraph 12 of section 14 and paragraph 11 of section 15

Column 1		Column 2
Work Category		Required respirator
Type 1 Operations		
Worker requests that the employer provide a respirator to be used by the worker, as described in paragraph 12 of section 14		Air purifying half-mask respirator with N-100, R-100 or P-100 particulate filter
Type 2 Operations		
Work described in paragraph 1 of subsection 12 (3)		One of the following: <ul style="list-style-type: none"> - Air purifying full-facepiece respirator with N-100, R-100 or P-100 particulate filter - Powered air purifying respirator equipped with a tight-fitting facepiece (half or full-facepiece) and a high efficiency filter or N-100, P-100 or R-100 particulate filter - Negative pressure (demand) supplied air respirator equipped with a full-facepiece - Continuous flow supplied air respirator equipped with a tight fitting facepiece (half or full-facepiece)
Work described in paragraphs 2 to 7 and 9 to 11 of subsection 12 (3)		Air purifying half-mask respirator with N-100, R-100 or P-100 particulate filter
Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable material containing asbestos by means of power tools, if the tool is attached to a dust collecting device equipped with a HEPA filter as described in paragraph 8 of subsection 12 (3)	Material is not wetted	One of the following: <ul style="list-style-type: none"> - Air purifying full-facepiece respirator with N-100, R-100 or P-100 particulate filter - Powered air purifying respirator equipped with a tight-fitting facepiece (half or full-facepiece) and a high efficiency filter or N-100, P-100 or R-100 particulate filter - Negative pressure (demand) supplied air respirator equipped with a full-facepiece

		- Continuous flow supplied air respirator equipped with a tight fitting facepiece (half or full-facepiece)
	Material is wetted to control spread of fibre	Air purifying half-mask respirator with N-100, R-100 or P-100 particulate filter
Type 3 Operations		
Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable material containing asbestos by means of power tools, if the tool is not attached to a dust collecting device equipped with a HEPA filter as described in paragraph 5 of subsection 12 (4)	Material is not wetted	Pressure demand supplied air respirator equipped with a half mask
	Material is wetted to control spread of fibre	One of the following: <ul style="list-style-type: none"> - Air purifying full-facepiece respirator with N-100, R-100 or P-100 particulate filter - Powered air purifying respirator equipped with a tight-fitting facepiece (half or full-facepiece) and a high efficiency filter or N-100, P-100 or R-100 particulate filter - Negative pressure (demand) supplied air respirator equipped with a full-facepiece - Continuous flow supplied air respirator equipped with a tight fitting facepiece (half or full-facepiece)
Work with friable material containing asbestos, as described in paragraphs 1 to 4 and 6 of subsection 12 (4)	Material is not wetted	Pressure demand supplied air respirator equipped with a full facepiece
Work with friable material, as described in paragraphs 1 to 4 and 6 of subsection 12 (4), that contains a type of asbestos other than chrysotile	Material was applied or installed by spraying, and is	Pressure demand supplied air respirator equipped with a half mask
Work with friable material, as described in paragraphs 1 to 4 and 6 of subsection 12 (4), that contains only chrysotile asbestos	wetted to control spread of fibre	One of the following: <ul style="list-style-type: none"> - Air purifying full-facepiece respirator with N-100, R-100 or P-100 particulate filter - Powered air purifying respirator equipped with a tight-fitting facepiece (half or full-facepiece) and a high efficiency filter or N-100, P-100 or R-100 particulate filter - Negative pressure (demand) supplied air respirator equipped with a full-facepiece - Continuous flow supplied air respirator equipped with a tight fitting facepiece (half or full-facepiece)
Work with friable material containing asbestos, as described in paragraphs 1 to 4 and 6 of subsection 12 (4)	Material was not applied or installed by spraying, and is wetted to control spread of fibre	One of the following: <ul style="list-style-type: none"> - Air purifying full-facepiece respirator with N-100, R-100 or P-100 particulate filter - Powered air purifying respirator equipped with a tight-fitting facepiece (half or full-facepiece) and a high efficiency filter or N-100, P-100 or R-100 particulate filter - Negative pressure (demand) supplied air respirator equipped with a full-facepiece - Continuous flow supplied air respirator equipped with a tight fitting facepiece (half or full-facepiece)

O. Reg. 278/05, Table 2.

TABLE 3
AIR SAMPLES

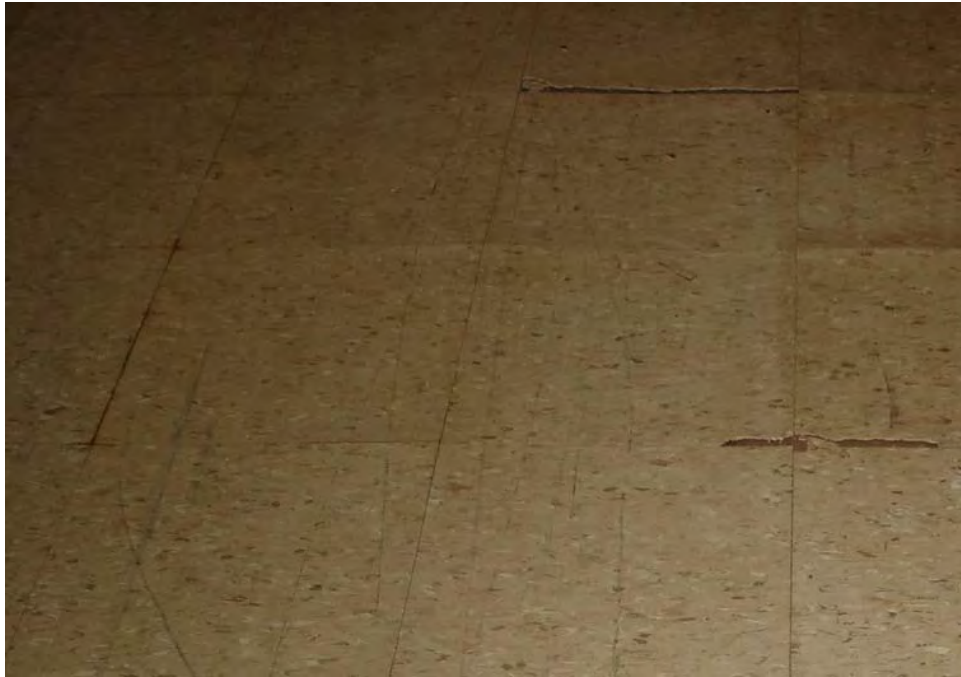
Paragraph 4 of subsection 18 (6)

Minimum number of air samples to be taken from each enclosure	Area of enclosure
2	10 square metres or less
3	More than 10 but less than 500 square metres
5	500 square metres or more

O. Reg. 278/05, Table 3.

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Site Photographs



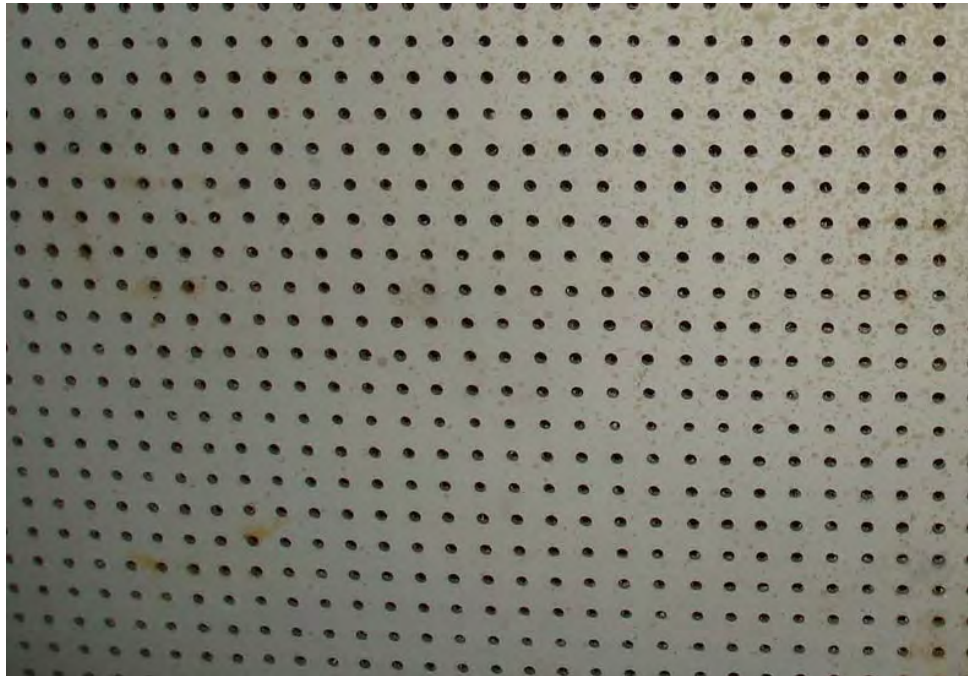
Photograph 1: View of asbestos-containing floor tile identified in the basement, hallway B113 (OHE Sample MA1014-25B).



Photograph 2: View of additional type of asbestos-containing floor tile identified in the basement, hallway B113 (OHE Sample MA1014-26B).



Photograph 3: View of asbestos-containing vinyl sheet flooring identified on the Main floor, room 1657A (OHE Sample MA1014-2A).



Photograph 4: View of asbestos-containing transite board identified on the Main floor, 1211A (OHE Sample MA1014-22C).



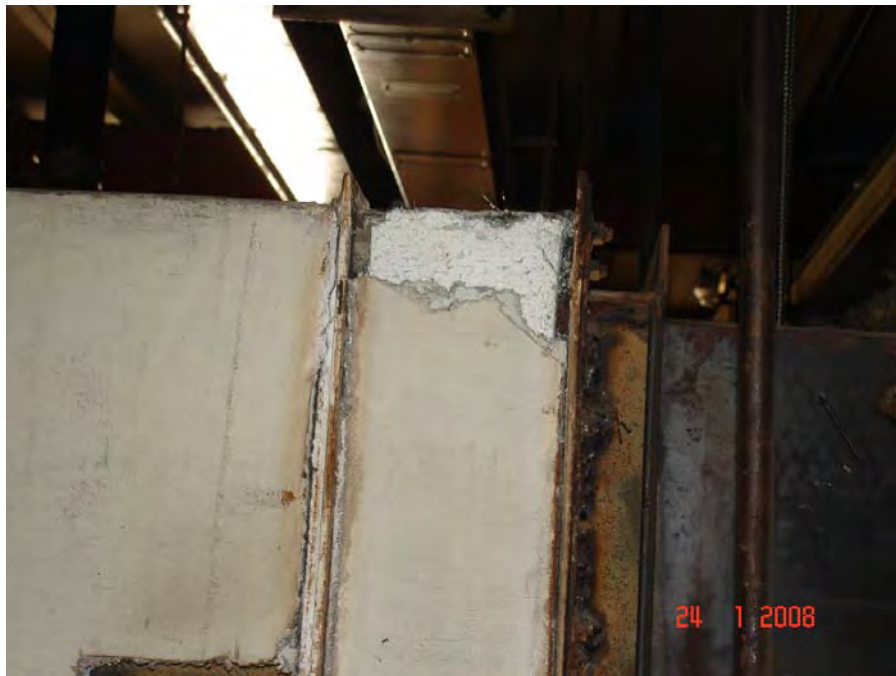
Photograph 5: View of asbestos-containing floor tile identified in the basement, Room 305 (OHE Sample MA1014-28A).



Photograph 6: View of asbestos-containing floor tile identified in the basement, room 338 (OHE Sample MA1014-30A).



Photograph 7: View of asbestos-containing mechanical air duct insulation identified in the basement, hallway 279C (OHE Sample MA1014-37).



Photograph 8: View of asbestos-containing mechanical insulation on boiler breeching identified in the basement, BH-2 (OHE Sample MA1014-38A).



Photograph 9: View of asbestos-containing heat shield on an incandescent light fixture identified on the fourth floor, room 4014 (OHE Sample MA1014-51).



Photograph 10: View of asbestos-containing texture coat on ceiling identified on the main floor, hallway 1108 (OHE Sample MA1014-43A).