



**Harold Funk Architect
Inc.**

**Occupational Hygiene Report
Asbestos Assessment
Sinclair Park CC**

O H G
Consulting

Occupational Hygiene Report

**Asbestos Inventory
Sinclair Park CC**

**Harold Funk Architect Inc.
401-55 Donald St.**

OHG Project Number 09-J-768

Date of Survey: October 27, 2009

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Incorporates ADDENDUM: November 26, 2009

Survey Performed by:

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Harold Funk Architect Inc. - 401-55 Donald St.

Asbestos Inventory Sinclair Park CC

SCOPE OF PROJECT

This project was carried out to determine if there were asbestos containing materials in the designated area and to develop a remediation plan.

OBSERVATIONS / CONCLUSIONS

As mentioned suspect asbestos containing materials were sampled. This consisted of pipe fittings (elbows, valves) on the hot water pipes from the boiler, and wall, ceiling, and flooring materials.

Table 1 below shows the results of the asbestos sampling program. Where similar appearing materials were present in other areas they were not assessed but assumed to be the same as the materials sampled.

TABLE 1: Sampling data showing the location and asbestos content of the samples submitted for analysis.

Sample #	Location	Description	Asbestos content (%)
1	Basement Electrical Room – Ceiling Tile	White	Not Present
2	Basement Furnace Room – Plaster	Tan	Not Present
3	Main Floor – Floor Tile	Tan	2% Chrysotile
	Main Floor – Floor Tile Mastic	Black	Not present
4	Main Floor Washroom – Floor Tile	Red	Not present
5	Main Floor Washroom – Plaster	White	<1% Chrysotile
6	Main Floor Furnace Room – Flooring	Grey Transite	15% Chrysotile
7	Main Floor Multipurpose Room - Ceiling	White	Not present
8	Main Floor Multipurpose Room - Plaster	White	Not present
		Tan	Not present
		White	2% Chrysotile

At the same time, painted surfaces were tested with a spot test. All spot tests indicated no detectable levels of lead.

DISCUSSION

1. Since all lead levels were below the level of detection, no special precautions are required during deconstruction of the building.
2. The floor tiles on the main floor contain 2% chrysotile and can be removed as a Type 1 material.
3. The main floor furnace roof has transite on the floor. This is a non-friable material and if removed carefully to reduce breakage, it can be removed as a Type 1 material.
4. Samples of joint compound collected on the main floor contained asbestos and must be treated as a non-friable Type 2 material.
5. Vermiculite insulation was found to be present in the attic space. The City of Winnipeg's policy regarding this form of insulation is to assume that it is an asbestos containing material due to the unreliability of sample collection and analysis. While Workplace Safety and Health allows vermiculite insulation to be removed as a modified Type 2 abatement, it is recommended that a Type 3 abatement be conducted due to the planned occupancy of other parts of the building.

Asbestos Remediation Specifications Sinclair Park CC

1.0 BACKGROUND

The Sinclair Park CC is to be rebuilt, and parts of the existing building will be deconstructed to make room for the upgrades. The process calls for reuse of as much building materials as possible, therefore the deconstruction process will be done so as not to contaminate the salvaged building with asbestos. Also, the parts of the building (most of the basement and the gymnasium) to remain must not be contaminated. Therefore all work will be done as at least a Type 2 project.

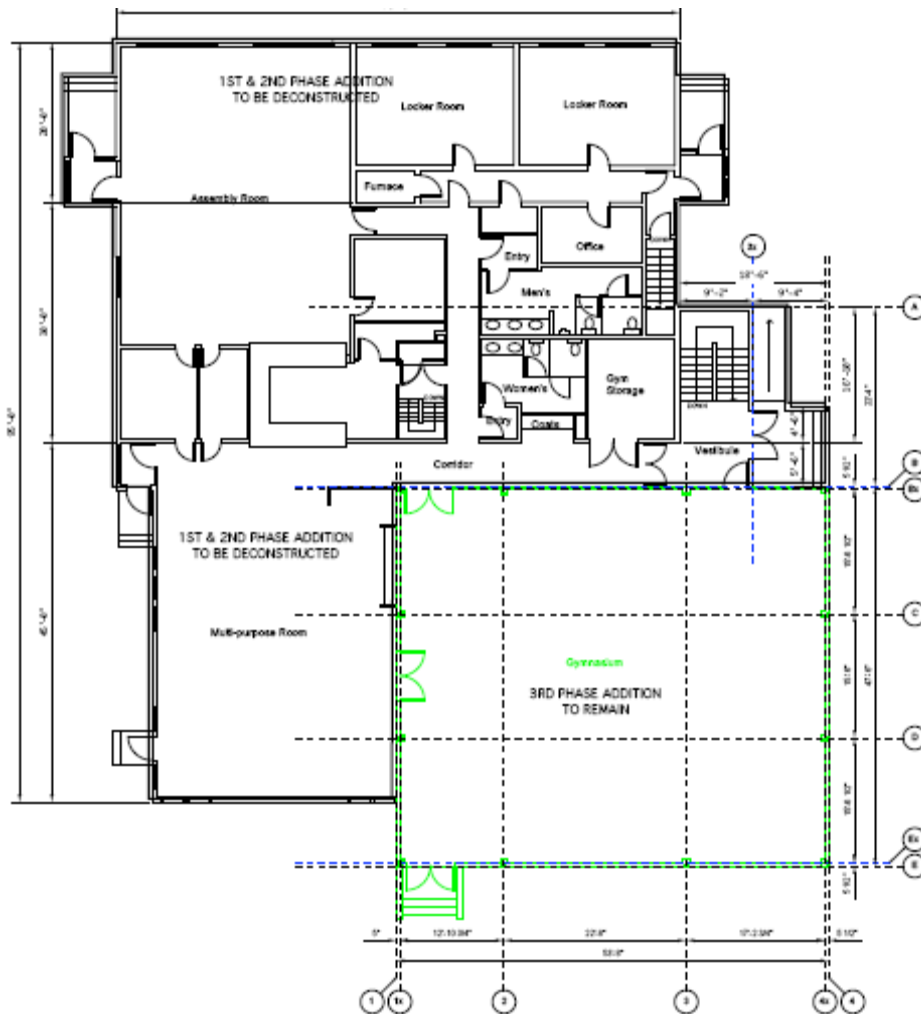


Figure 1: Main Floor

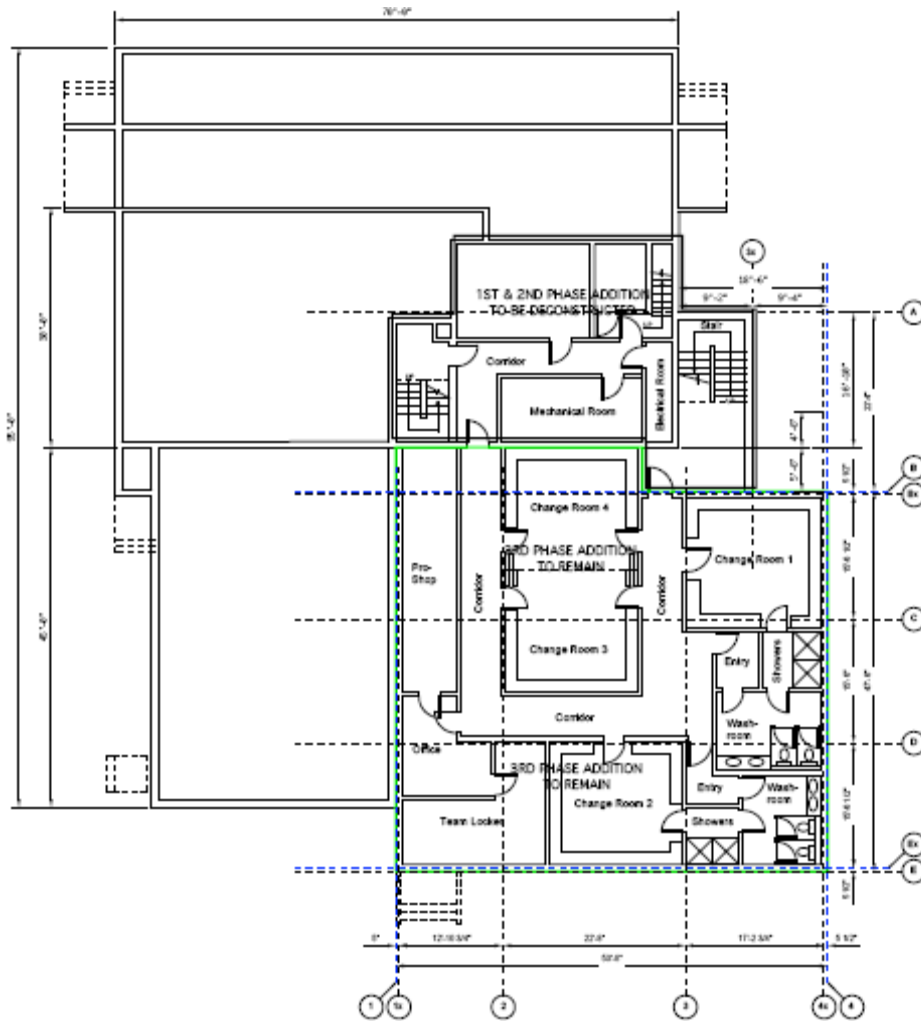


Figure 2: Basement

2.0 SCOPE OF WORK

This project calls for the removal of asbestos containing floor tiles and the drywall with asbestos in the joint filler.

3.0 CONTRACTOR RESPONSIBILITIES

In addition to the task specific responsibilities, the following general responsibilities must be met.

1. It should be noted that the following remediation specifications are performance standards, and do not provide detailed specifications as to how the site must be remediated. The successful contractor must be familiar with asbestos remediation procedures.
2. The hoarding must be installed and maintained so that those parts of the building that are not to be deconstructed will remain uncontaminated. If

this is not done, the areas in question will be damp mopped or HEPA vacuumed on completion of the project.

4.0 ASBESTOS ABATEMENT AND DISPOSAL

Requirements as set out in "Manitoba Guidelines For Working With Asbestos" will apply. Areas will be cleaned to 0.01f/cc before being declared acceptable for occupancy.

The Contractor will review the project with the Workplace Safety and Health Branch and develop appropriate abatement procedures. The contractor will then submit an abatement plan to the project manager, which is fully in compliance with the requirements of the appropriate authorities. The appropriate authorities are deemed to include, but not necessarily limited to the following:

- Workplace Safety and Health Branch of the Manitoba Department of Labour with respect to on-site exposure to hazardous materials;
- Manitoba Conservation with respect to potential impact on the surrounding community of off-site migration and dispersion of hazardous materials as well as disposal of hazardous and potentially hazardous materials; and
- City of Winnipeg relative to disposal of asbestos contaminated material at the City of Winnipeg Brady Street Landfill.
- Since the Canteen opens into a public access area, so far as reasonably practicable, the work will be carried out during periods of low occupancy.

5.0 ASBESTOS CLEANUP GUIDELINES

This work will be carried out as both a Type 2 and Type 3 project. In addition to the site specific responsibilities, the following general responsibilities must be met where a Type 2 or Type 3 removal process is used.

1. All exterior openings from the work area, including vents and doors, must be adequately sealed with adhesive tape or isolated by two layers of impervious plastic sheeting to prevent the escape of asbestos dust.
2. A reduced pressure will be maintained within the Asbestos Work Area (>0.02 in. w.g.) established by extracting air directly from Asbestos Work Area and discharging it to the exterior of the building. The air must be passed through a HEPA filter prior to extraction. The volume of air extracted must be sufficient to provide one (1) air change every 20 minutes during wet removal and once every 15 minutes during dry removal while ensuring that at all times, air movement flows into the Asbestos Work Area. All asbestos will be removed from the beams.
3. A power source will be provided for a differential pressure recorder at any entrance to the work area.

4. All work will be carried out in accordance with applicable Federal and Provincial legislation.
5. The contractor will submit a copy of his plan of work to the project manager prior to commencing work. The work plan will include, but is not limited to:
 - General preventive methods;
 - Proposed abatement and disposal procedures for each area;
 - Proposed work schedule;
 - Names and addresses of the persons who will do the work;
 - Copies of the worker's license or permit to work with asbestos;
 - Personal protection including copies of respirator fit test results for workers at the site;
 - Methods for cleaning of premises;
 - Disposal of waste materials;
 - Information, labelling, education and training; and
 - Handling of materials during abatement activities.
9. The contractor will maintain a daily sign-in/out roster for all persons entering the site, and a list of supervisors for each day.
10. The contractor must be insured or bonded against liability incurred during the project.

CONTRACTOR RESPONSIBILITIES

In addition to the task specific responsibilities, the following general responsibilities must be met.

1. For the work carried out as a Type II project.
 - (a) Eating, drinking, chewing or smoking is prohibited in the work area.
 - (b) The contaminated area must be identified by clearly visible signs warning of the mold work and hazards.
 - (c) Compressed air must not used to clean up or remove dust and debris from contaminated surfaces.
 - (e) The spread of dust from the work area must be prevented by the construction of a two room entry.
 - (f) The entry unit must consist of two of interconnecting rooms including
 - a clean room suitable for changing into or from street clothes and for storing clean clothing and equipment;
 - an equipment room suitable for changing into protective clothing and for storage of contaminated protective clothing and equipment.
 - The entry unit must be constructed such that overlapping curtains of polyethylene sheeting or other suitable material are fitted to each side of the entrance or exit to each room.

- (g) The entry unit must be arranged in sequence and constructed so that every person entering or leaving the work area must pass through each room of the entry unit.
- (h) The entry unit must be constructed of two layers of a minimum of 6-mil polyethylene, or other suitable material, with reinforced polyethylene on the floor.
- (i) The entry unit must be constructed inside the two areas to be cleaned so as not to interfere with building access.
- (j) The work area must be kept at a minimum pressure differential of -0.02 inches of water gauge relative to the air outside of the enclosure at all times during the operation by use of an appropriately sized ventilation unit equipped with a HEPA filter.
- (k) All mechanical ventilation in the contaminated area, except that required to maintain the negative pressure, must be disabled.
- (l) At least two layers of 6-mil polyethylene must be placed over all openings in the contaminated area.
- (m) Wet handling techniques must be used to control dust on the surfaces of any contaminated materials, unless wetting creates a hazard or causes damage.
- (n) Electrical circuits inside the contaminated area must be deactivated unless equipped with ground-fault circuit interrupters.
- (o) Where the surfaces mentioned above can not be wetted, a vacuum cleaner equipped with a HEPA filter, or other means that does not create airborne dust, must be used to control the spread of dust.
- (p) All dust and waste must be cleaned up frequently and immediately upon completion of the work by wet sweeping or wet mopping and must be double-bagged in 6-mil polyethylene bags, securely tied and disposed of as contaminated waste.
- (q) All surfaces inside the negative pressure enclosure must be adequately cleaned with a detergent solution prior to dismantling of the negative pressure enclosure.
- (r) All polyethylene sheets used to form the negative pressure enclosure and covering all openings inside the contaminated area must be folded to contain any remaining debris and double-bagged in 6-mil

polyethylene bags, securely tied and disposed of as contaminated waste.

- (s) Only persons wearing protective clothing and respiratory protection are allowed to enter the contaminated area.
- (t) All persons inside the contaminated area must wear at a minimum a half mask with high efficiency particle filter and organic vapour cartridge.
- (u) All persons must decontaminate their protective clothing and respirators by using a vacuum cleaner equipped with a HEPA filter, or by wet wiping after completing the work and before leaving the contaminated area.
- (v) Contaminated protective clothing that will not be re-used must be disposed of as contaminated waste.
- (w) Washing facilities for hand and face must be made available to workers in the work area, and workers must wash before leaving the work area.

2. For the work carried out as a Type III project.

- (a) Eating, drinking, chewing or smoking is prohibited in the work area.
- (b) The contaminated area must be identified by clearly visible signs warning of the mold work and hazards.
- (c) Compressed air must not used to clean up or remove dust and debris from contaminated surfaces.
- (d) The spread of dust from the work area must be prevented by the construction of a three room entry.
- (e) The entry unit must consist of three of interconnecting rooms including
 - a clean room suitable for changing into or from street clothes and for storing clean clothing and equipment;
 - a shower room; and,
 - an equipment room suitable for changing into protective clothing and for storage of contaminated protective clothing and equipment.
 - The entry unit must be constructed such that overlapping curtains of polyethylene sheeting or other suitable material are fitted to each side of the entrance or exit to each room.

- (f) The shower room in the worker decontamination unit:
 - must have an adequate supply of hot and cold water or water of a constant temperature that is not less than 40 C or more than 50 C;
 - must have individual controls inside the room to regulate water flow or temperature if there is hot and cold water; and,
 - must have clean towels.
- (g) The entry unit must be arranged in sequence and constructed so that every person entering or leaving the work area must pass through each room of the entry unit.
- (h) The entry unit must be constructed of two layers of a minimum of 6-mil polyethylene, or other suitable material, with reinforced polyethylene on the floor.
- (i) The entry unit must be constructed inside the area to be cleaned so as not to interfere with building access.
- (j) The work area must be kept at a minimum pressure differential of - 0.02 inches of water gauge relative to the air outside of the enclosure at all times during the operation by use of an appropriately sized ventilation unit equipped with a HEPA filter.
- (k) All mechanical ventilation in the contaminated area, except that required to maintain the negative pressure, must be disabled.
- (l) At least two layers of 6-mil polyethylene must be placed over all openings in the contaminated area.
- (m) Wet handling techniques must be used to control dust on the surfaces of any contaminated materials, unless wetting creates a hazard or causes damage.
- (n) Electrical circuits inside the contaminated area must be deactivated unless equipped with ground-fault circuit interrupters.
- (o) Where the surfaces mentioned above can not be wetted, a vacuum cleaner equipped with a HEPA filter, or other means that does not create airborne dust, must be used to control the spread of dust.
- (p) All dust and waste must be cleaned up frequently and immediately upon completion of the work by wet sweeping or wet mopping and must be double-bagged in 6-mil polyethylene bags, securely tied and disposed of as contaminated waste.

- (q) All surfaces inside the negative pressure enclosure must be adequately cleaned with a detergent solution prior to dismantling of the negative pressure enclosure.
- (r) All polyethylene sheets used to form the negative pressure enclosure and covering all openings inside the contaminated area must be folded to contain any remaining debris and double-bagged in 6-mil polyethylene bags, securely tied and disposed of as contaminated waste.
- (s) Only persons wearing protective clothing and respiratory protection are allowed to enter the contaminated area.
- (t) All persons inside the contaminated area must wear at a minimum a full face powered air purifying respirator with high efficiency particle filter cartridge.
- (u) All persons must decontaminate their protective clothing and respirators by using a vacuum cleaner equipped with a HEPA filter, or by wet wiping after completing the work and before leaving the contaminated area.
- (v) Contaminated protective clothing that will not be re-used must be disposed of as contaminated waste.
- (w) Washing facilities for hand and face must be made available to workers in the work area, and workers must wash before leaving the work area.