Bersch & Associates Ltd.

FIRE HALL #1
125 IDYLWYLD DRIVE SOUTH
SASKATOON, SASKATCEHWAN

ASBESTOS SURVEY REPORT
JULY 2016

Prepared for: Hazel Fernandez – City of Saskatoon
Prepared by: Bersch & Associates Ltd.
Project No. B67.16

1.0 INTRODUCTION

Bersch & Associates Ltd. was retained by John Hiltz – Project Coordinator – Infrastructure Services Department with the City of Saskatoon to conduct an asbestos survey of the Fire Hall #1 located at 125 Idylwyld Drive S, Saskatoon, SK. The purpose of the survey was to identify and label the asbestos containing materials located on the site. Dustin Fraess & Brad Berschiminsky of Bersch & Associates Ltd. conducted the survey of the Fire Hall in July 2016. Following the asbestos abatement performed in 2012 we have re-inspected the site allowing for us to update this report. This report gives an account of the results of the inspection and our firm's recommendations on control options to be implemented to bring the Fire Hall #1 into compliance with the Province of Saskatchewan Occupational Health and Safety Act and Regulations.

2.0 METHODOLOGY

On February 2, 2011, Dustin Fraess & Brad Berschiminsky of Bersch & Associates Ltd. began conducting a survey of Fire Hall #1. The re-inspection of the Fire Hall #1 was performed in July 2016. The primary documents for guidance and criteria in this survey were the Province of Saskatchewan "Occupational Health and Safety Act and Regulations, 1996", Province of Saskatchewan, "Management of Asbestos", and the U.S. Environmental Protection Agency "Guidance for Controlling Asbestos Containing Materials in Buildings. The USEPA document identifies factors associated with the "condition" and the "potential for disturbance or erosion" of asbestos containing materials (ACM). These factors help to define potential for exposure of ACM and were used to make a qualitative evaluation of the material. It should be noted that the recommendation of a "Management" Asbestos Abatement Action is based upon the premise that renovations are not scheduled in that area that will potentially result in the disruption or violation to the asbestos containing material. In the event that renovations are scheduled that impact upon the areas containing asbestos materials then pre-removal of the asbestos containing materials may be necessary.

In total, 61 (sixty-one) bulk samples of the suspect asbestos containing materials were collected from the Fire Hall. Chrysotile asbestos was detected in 14 (fourteen) of the samples collected. Refer to Appendix I for a copy of the Bulk Analysis Report. All bulk samples collected were analyzed by Bersch & Associates Ltd. laboratory in accordance with the current USEPA 600/R-93/116 Method for the analysis of asbestos in building materials using polarized light microscopy and dispersion staining techniques. The detection limit of this method is listed as greater than 1% by volume.

3.0 EXECUTIVE SUMMARY

The survey of the Fire Hall #1 located at 125 Idylwyld Drive S, Saskatoon, Saskatchewan entailed the inspection of all suspect asbestos containing material (ACM) located within the facility. Materials inspected included mechanical equipment insulating materials, gaskets, wall boards, flooring, bulletin boards, ceiling tiles and wall plaster. The block walls were also checked in various locations for the presence of vermiculite insulation. As a result, vermiculite block wall infill material was not observed at any of the locations inspected. Laboratory results indicated that "Chrysotile" asbestos is present within the Fire Hall #1. Refer to Appendix I for Bulk Sample Analysis results. All accessible ACM within the facility was clearly identified to eliminate uncertainty of asbestos content. The identification of this material is as follows:

- Unmarked insulation (including pipe runs, vessels, fittings, and pipe hangers) shall be considered asbestos-free. ***Pipeline fittings, mud compound at pipeline hangers and expansion gaskets marked with a red dot of spray paint found in otherwise unlabelled areas are asbestos containing.***

- Asbestos-containing ***Sheet flooring and Transite Board above doorways and lining the exterior of the building have not been identified with paint but rather are shown on the floor plans in Appendix II.*** Each surfacing material has been assigned a color on the floor plans with all such material to be considered asbestos containing material.

- Any unmarked pipeline fitting material located within bulk heads, wall cavities, beneath the existing floor covering or other inaccessible areas should be considered asbestos-containing until testing of the material can determine the presence or absence of asbestos.

Throughout the survey of the Fire Hall, asbestos containing materials were assessed and given a priority rating of One, Two, Three or Four, with "One" being the items requiring the most immediate attention. Photographs have been attached in *Appendix III* of this report to assist in the identification of the asbestos materials present within the Fire Hall.

4.0 SURVEY RESULTS:

The following information is a list of observations of the asbestos containing materials located throughout the #1 Fire Hall facility.

.1 BASEMENT LEVEL – BOILER ROOM

1. There is one expansion gasket along the ductwork identified as containing asbestos. The gasket is located at the connection of Return Fan AH-1A to the right upon entry into the Boiler Room. The expansion gasket has been identified with a red dot of spray paint. See photograph #2 in *Appendix III*.

PRIORITY: **THREE**
CONDITION: **GOOD**
POTENTIAL FOR DISTURBANCE: **LOW/ MODERATE**
ACTION: **MANAGE**

.2 BASEMENT LEVEL – B02 CORRIDOR

1. Transite board containing asbestos is present above the doorways entering into rooms B05, B06, B07, Boiler Room and the Stairwell double doors. The asbestos board is in good condition and the management of this material is recommended. The board has not been identified with a label but is identified on the floor plans in *Appendix II*. See photograph #4 in *Appendix III.* Please Note: B04 and B05 are now one room. The dividing wall is removed. The asbestos door jamb label is located on the door frame of B04.

PRIORITY: **FOUR**
CONDITION: **LOW**
POTENTIAL FOR DISTURBANCE: **LOW**
ACTION: **MANAGE**

.3 MAIN LEVEL – 100 VESTIBULE

1. Asbestos containing Transite Board is present above the doorways leading into 101 Stairwell and the exterior entry door. The Board has not been identified with a label but is identified on the floor plans in *Appendix II*. See photograph #4 in *Appendix III.*

PRIORITY: **FOUR**
CONDITION: **LOW**
POTENTIAL FOR DISTURBANCE: **LOW**
ACTION: **MANAGE**

.4 MAIN LEVEL – 130 – COMPRESSOR STORAGE

1. Asbestos containing sheet flooring covers the floor of the entire room. The flooring is in good to moderate condition with the recommendation of management of the floor covering material. See photograph #3 in *Appendix III.*

PRIORITY:	**THREE**
CONDITION:	**MODERATE/ GOOD**
POTENTIAL FOR DISTURBANCE:	**LOW**
ACTION:	**MANAGE**

.5 MAIN FLOOR – 114 CORRIDOR

1. Asbestos containing Transite Board is present above the doorway leading into 118 Apparatus Room. The Board has not been identified with a label but is identified on the floor plans in *Appendix II*. See photograph #4 in *Appendix III.*

PRIORITY:	**FOUR**
CONDITION:	**GOOD**
POTENTIAL FOR DISTURBANCE:	**LOW**
ACTION:	**MANAGE**

.6 SECOND FLOOR – 200 CORRIDOR

1. Asbestos containing Transite Board is present above the doorways leading into rooms 210a, 210b and 216. The Board has not been identified with a label but is identified on the floor plans in *Appendix II*. See photograph #4 in *Appendix III.*

PRIORITY:	**FOUR**
CONDITION:	**GOOD**
POTENTIAL FOR DISTURBANCE:	**LOW**
ACTION:	**MANAGE**

.7 EXTERIOR OF BUILDING

1. Asbestos containing Transite Board is present lining the exterior of the south and east sides of the building. On the south side of the building the board is present surrounding the main entry windows. It is also located at the upper and lower fascia, soffit and wall surface surrounding the second floor windows. On the east side of the building the board is present on the upper and lower fascia, soffit and wall surface surrounding the second floor windows. The board is also surrounding the top of the hose tower. The board is painted light and dark blue and has not been identified with an "asbestos" label but is identified on the floor plans in *Appendix II*. See photographs #4, #6 and #7 in *Appendix III.*

   PRIORITY: FOUR
   CONDITION: GOOD
   POTENTIAL FOR DISTURBANCE: LOW
   ACTION: MANAGE

The remaining rooms in the building which have not been identified in the section above have no identified ACM. Although it should be noted there may be pipeline fittings within the wall cavities, bulkheads or any other area considered to be inaccessible at the time of our inspection that should be treated as asbestos until testing proves otherwise. Asbestos sheet flooring may be present below the carpet in rooms where identification was not possible due to damaging the carpet. The concrete block walls were inspected in B07, 101, 129 and two areas in 118 for the presence of vermiculite insulation. No such material was observed during our inspection. If encountered during renovations or demolition the material should be tested for asbestos. The roof membrane of the building should be tested at the time of renovations. It was not tested at this time due to the destructive nature the sampling would require.

5.0 ASBESTOS ABATEMENT DISCUSSION

Asbestos is a known carcinogen and any release of asbestos fibres into the atmosphere creates a potential health hazard. Although the mechanism and epidemiology of asbestos carcinogenisis is not yet well defined, accumulating evidence suggests the significance of exposure at even very low fibre concentrations and hence human exposure should be kept to a minimum. It should be noted however that asbestos is a natural mineral and a measurable background concentration can be detected in any location sampled (inside buildings, outside buildings, urban, rural, etc.). The recommendations of the report are therefore intended to keep the potential exposure to an absolute minimum with the knowledge that a zero exposure is not possible.

Asbestos containing materials have been used in a wide variety of applications. Of particular concern, is the group of so called friable products. A friable product is one that can be crumbled or reduced to powder or smaller fragments by hand pressure. Publications from the U.S.E.P.A. as early as 1977 have indicated the potential hazard of asbestos exposure in buildings containing these friable products. The two main uses of friable asbestos products are as spray insulation

(thermal, acoustic or fireproofing) on deck and/or beams or as thermal insulation on piping or mechanical equipment. A large amount of non-friable asbestos containing materials have also been used in building construction such as asbestos cement board and asbestos containing vinyl flooring.

The mere presence of a friable asbestos containing material does not imply that there is an actual presence of elevated airborne fibre. As numerous studies have indicated, elevated asbestos fibre levels are generally found when settled dust or the actual asbestos containing material itself is disturbed by maintenance, renovation, inadvertent contact or vibration. The factors considered in the Environmental Protection Agency (USEPA) exposure assessment (condition of material, water damage, activity, movement, exposed surface area, accessibility, friability and presence in an air stream) often give some indication of the likelihood of fibre release but are not in any way definitive in determining whether a hazard exists or not. That is, even if the most friable product exists in a building, elevated fibre levels will not likely occur unless there is some disturbance by physical contact, vibration or an air stream. Asbestos containing pipe or mechanical insulation is not considered friable unless the jacketing is deteriorated or is disturbed by maintenance or renovation. There are four possible approaches to control exposure to airborne asbestos once a friable material is identified in a building. These methods briefly are as follows:

A) Removal - Asbestos material is removed and disposed of by burial and replaced by non-asbestos materials.

B) Encapsulation - Asbestos material is coated with a bridging or penetrating sealant.

C) Enclosure - Asbestos containing materials are separated from the building environment by physical airtight and waterproof barriers.

D) Management and Custodial Control - The Province of Saskatchewan Human Resources, Labor and Employment Branch under the Occupational health and Safety Regulations publish a document outlining “The Management of Asbestos”. In the guide for compliance, an action plan is outlined for management of the asbestos materials identified and in summary is:

1. Identification. The Occupational Health & Safety Regulations state that all asbestos containing building materials be clearly marked “ASBESTOS” (where practical) to warn others of the possible exposure to asbestos fibres if disturbed.

2. Inspection on regular basis is conducted to determine the ongoing condition of the material. As per the Occupational Health & Safety Regulations, 1996 an employer shall ensure that all friable asbestos containing material and all sprayed-on asbestos surfaces are regularly inspected by the employer, or owner and are inspected at least annually by a competent person to confirm that the material is not releasing, and is not likely to release, asbestos dust into the atmosphere. Maintenance staff should be instructed to bring to attention any problem areas they note during daily activities.

3. Development of Written Work Procedures for maintenance personnel to Control the Hazard of Asbestos, or often arrangements are made for a qualified contractor to conduct the necessary removal/repair prior to the regular staff conducting maintenance. An Asbestos Control Plan needs to be developed that protects the health and safety of all workers in the event of the dispersal of asbestos dust into the atmosphere at a place of employment or worksite. A brief summary of the Asbestos Control Plan is found under Section 337 (2) of the Occupational Health and Safety Regulations, 1996.

4. Asbestos Abatement Awareness and Low Risk Process Training if the regular maintenance personnel are required to conduct asbestos related activities.

6.0 CONCLUSION

The above recommendations are the most reasonable and cost effective means of controlling the asbestos containing materials located in the Fire Hall #1. **It should be noted that all pipe fitting compound and mechanical insulating material enclosed in wall cavities and bulkheads should be considered to contain asbestos material until bulk sampling proves otherwise.** Since no inspection work which involved damaging or destroying building components was undertaken during the inspection, ACM may be enclosed in drywall/plaster wall cavities, ceiling spaces or within block wall cavities. Asbestos flooring may be present beneath carpeted rooms where identification was not possible due to the damage required to inspect beneath the carpets. The roof membrane should be tested during the upcoming renovation to the cooling system. The asbestos board found lining the building may remain in place until renovation or demolition require disturbance of the material. The remediation of any asbestos materials should be performed by qualified personal.

Although Bersch & Associates Ltd. has recommended the management of the majority of the pipeline fittings identified throughout the facility as a control option, the owner may consider removing the asbestos mud compound throughout the facility for two reasons: 1) The number of asbestos containing fittings present is limited considering the overall building therefore by removing the identified fittings will not pose a significant expense. 2) The removal of the remaining pipeline fittings identified as containing asbestos shall eliminate the potential for future disturbance to the material.

7.0 REFERENCES

.1 Province of Saskatchewan "The Occupational Health and Safety Act and The Occupational Health and Safety Regulations", December, 1996.

.2 Province of Saskatchewan Human Resources, Labor, and Employment "The Management of Asbestos" January 1991.

.3 USEPA, 1985. U.S. Environmental Protection Agency, "Guidance for Controlling Asbestos-Containing Materials in Buildings". Washington, DC: Office of Toxic Substances, USEPA.

.4 Environment Management and Protection Act, Saskatchewan Environment, October 2002

.5 United States of America, NIOSH, Midwest Center for Occupational Health & Safety, "Asbestos Training for Building Inspectors and Management Planners"

.6 Hazardous Substances and waste Dangerous Goods Regulations, Saskatchewan Environment, April 1989

APPENDIX I

BULK SAMPLE ANALYSIS

August 9, 2019

City of Saskatoon
1101 Avenue P North,
Saskatoon, SK
S7L 7K6

ATTENTION: Nathan Hahn

SUBJECT: Bulk Sample Analysis Report

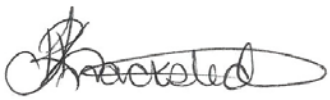
Please find attached the laboratory results for the bulk samples collected on August 2, 2019 from Fire Hall #1 in Saskatoon, Saskatchewan. The samples were analyzed for the identification of asbestos. Asbestos **was not** detected within the samples.

The results for the samples submitted were obtained by examination in accordance with the current USEPA 600/R-93/116 Method for the analysis of asbestos in building materials using polarized light microscopy and dispersion staining techniques. The detection limit of this method is listed as less than 1% by volume.

This test report relates only to the materials sent for examination and any use or extension of the information by the client of these results is the responsibility of the client.

If any questions arise on the results of the attached information, please contact our office. Thank you for this opportunity of service.

Sincerely,



Tyneal Knackstedt
Bersch Consulting Ltd.
B67BLH02I- Fire Hall #1

Bulk Sample Analysis Report

August 9, 2019

Project Number: B67.19

Client: City of Saskatoon

Contact: Nathan Hahn

Location: Fire Hall #1

File Number: B67BAH02I

Sample Number	Sample Date	Sample Material	Sample Location and Information	Asbestos	%	Analyst
1	2019/08/02	Ceiling Tile	2nd Floor Women's Dormitory	No Asbestos Detected		WB/EMSL
2	2019/08/02	Ceiling Tile	2nd Floor Women's Dormitory	No Asbestos Detected		WB/EMSL

Note: The results for the samples submitted were obtained by examination in accordance with the current USEPA 600/R-93/116 Method for the analysis of asbestos in building materials using polarized light microscopy and dispersion staining techniques. The detection limit of this method is listed as less than 1% by volume.

Bersch Consulting Ltd.

May 30, 2019

City of Saskatoon
1101 Avenue P North,
Saskatoon, SK
S7L 7K6

ATTENTION: Tanner Huynink

SUBJECT: Bulk Sample Analysis Report

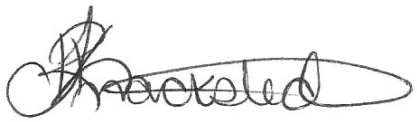
Please find attached the laboratory results for the bulk sample collected on May 27, 2019 from Fire Hall #1 in Saskatoon, SK. The sample was analyzed for the identification of asbestos. Asbestos **was not** detected within the sample.

The results for the sample submitted was obtained by examination in accordance with the current USEPA 600/R-93/116 Method for the analysis of asbestos in building materials using polarized light microscopy and dispersion staining techniques. The detection limit of this method is listed as less than 1% by volume.

This test report relates only to the materials sent for examination and any use or extension of the information by the client of these results is the responsibility of the client.

If any questions arise on the results of the attached information, please contact our office. Thank you for this opportunity of service.

Sincerely,



Tyneal Knackstedt
Bersch Consulting Ltd.
B67BLA27I- Fire Hall #1

Bulk Sample Analysis Report

May 30, 2019

Project Number: B67.19

Client: City of Saskatoon

Contact: Tanner Huynink

Location: Fire Hall #1

File Number: B67BAE27I

Sample Number	Sample Date	Sample Material	Sample Location and Information	Asbestos	%	Analyst
1a	2019/05/27	Floor Tile	Bathroom	No Asbestos Detected		EMSL
1b	2019/05/27	Mastic	Bathroom	No Asbestos Detected		EMSL

Note: The results for the samples submitted were obtained by examination in accordance with the current USEPA 600/R-93/116 Method for the analysis of asbestos in building materials using polarized light microscopy and dispersion staining techniques. The detection limit of this method is listed as less than 1% by volume.

BERSCH
CONSULTING LTD.

PRE-RENOVATION ASSESSMENT

February 16, 2018

CLIENT: City of Saskatoon
222 3rd Avenue N
Saskatoon, Sk
S7K 0J5

ATTENTION: Nathan Sommerfeld

PROJECT: Fire Hall #1 – 125 Idylwyld Drive South – Testing of Multiple Locations for Construction

FILE NUMBER: B67PRB01H

Evan Westad of Bersch Consulting Ltd. conducted a site visit on February 13, 2018, at Fire Hall #1 located at 125 Idylwyld Dr S, Saskatoon, Saskatchewan. The purpose of the visit was to investigate and collect bulk samples to determine the presence/absence of asbestos behind the brick façade on the north exterior wall. One bulk sample was collected. Asbestos **was not** detected within the sample.

The results for the sample submitted was obtained by examination in accordance with the current USEPA 600/R-93/116 Method for the analysis of asbestos in building materials using polarized light microscopy and dispersion staining techniques. The detection limit of this method is listed as less than 1% by volume. This test report relates only to the materials sent for examination and any use or extension of the information by the client of these results is the responsibility of the client. Please reference ***Appendix I*** for the bulk analysis results.

SITE OBSERVATION AND INFORMATION:

1) The north wall is composed of cinderblock, which was not included in the scope of this investigation. Approximately 15ft above ground level a brick façade finishes the exterior. Bersch Consulting Ltd removed a small portion of brick in five different areas in order to examine the cavity between the cinderblock wall and brick. Two areas in the lower portion of the brick wall (directly outside the garage area) were examined. The cavity between the brick façade and cinderblock wall, at this level, is empty of any insulation. Three (3) areas higher up on the wall (directly outside the second floor) were examined. The wall cavity in these areas is insulated with fiberglass batt insulation between the brick and cinderblock. One (1) sample of the fiberglass insulation was collected and tested to determine the presence/absence of asbestos. Asbestos was not detected within the sample. As a result of the site investigation and bulk sample analysis, no asbestos concerns regarding the removal of the brick façade on the north wall of Fire Hall #1, were noted.

If any questions arise on the results of the attached information, please contact us at our office at 306.978.6665. Thank you for this opportunity of service.

Sincerely,

Evan Westad
Bersch Consulting Ltd.
File No.: B67PRB13H- Fire Hall #1

SITE PHOTOS

Photo 1- Wall Cavity on Second Floor. (fiberglass insulation)

Photo 2- Wall Cavity in Lower Section

APPENDIX I

BULK SAMPLE ANALYSIS

Bersch Consulting Ltd.
244-2002 Quebec Avenue
Saskatoon, SK S7K 1W4

B67BAB13H

BULK SAMPLE ANALYSIS REPORT

PROJECT NO: **B67.18**
CLIENT: **CITY OF SASKATOON**
CONTACT: **NATHAN SOMMERFELD**
LOCATION: **FIRE HALL #1**

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
1	13-Feb-18	North Wall Cavity - Fiberglass Insulation	No Asbestos Detected		WB

BERSCH & ASSOCIATES LTD.

February 10, 2011

City of Saskatoon
1101 Avenue P North
Saskatoon, SK
S7L 7K6

ATTENTION: John Hiltz

SUBJECT: Bulk Material Identification Report

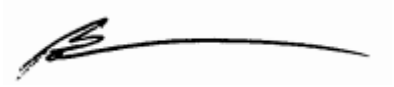
Please find attached our laboratory's results for the bulk samples collected throughout the Fire Hall #1. The samples were forwarded to our Laboratory for the identification of asbestos.

The results for the samples taken were obtained by examination in accordance with the current USEPA 600/R-93/116 Method for the analysis of asbestos in building materials using polarized light microscopy and dispersion staining techniques. The detection limit of this method is listed as greater than 1% by volume.

This test report relates only to the material sent for examination and any use or extension of the information by the client of these results is the responsibility of the client.

If any questions arise on the results of the attached information, please contact me at (306) 222-7477. Thank you for this opportunity of service.

Sincerely,



Brad Berschiminsky
Bersch & Associates Ltd.
File: B67BLB02

Bersch & Associates Ltd.
Box 3568
Humboldt, Sask. S0K 2A0

B67BAB02

BULK SAMPLE ANALYSIS REPORT

PROJECT NO. B67.11
CLIENT: City of Saskatoon
Fire Hall #1

ATTN: John Hiltz

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
1	2-Feb-11	B06 - Lineal pipeline insulation on small green line at pipe hanger	None detected		WB
2	2-Feb-11	B06 - 1' x 1' floor tile, gray with gray & white brush marks	None detected		WB
3	2-Feb-11	Boiler Room - Insulation on SF1 Supply Air Ducting, 10' in from entry door	None detected		WB
4	2-Feb-11	Boiler Room - Return fan AH-1A expansion gasket	Chrysotile		WB
5	2-Feb-11	Boiler Room - Fresh air duct insulation in the northwest corner	None detected		WB
6	2-Feb-11	Boiler Room - Small light green pipeline mud compound at wood brace adjacent sink on the north side of the boiler	None detected		WB
7	2-Feb-11	Boiler Room - Rope gasket on the front boiler door	None detected		WB

Bersch & Associates Ltd.
Box 3568
Humboldt, Sask. S0K 2A0

B67BAB02

BULK SAMPLE ANALYSIS REPORT

PROJECT NO. B67.11
CLIENT: City of Saskatoon
Fire Hall #1

ATTN: John Hiltz

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
8	2-Feb-11	Boiler Room - Boiler insulation behind metal cladding	None detected		WB
9	2-Feb-11	Boiler Room - Back-up generator exhaust breeching beneath cladding	None detected		WB
10	2-Feb-11	Boiler Room - Mud compound on overhead end cap on pipeline stemming from P2 on the east side of the Boiler	Chrysotile		WB
11	2-Feb-11	Boiler Room - Boiler exhaust breeching	None detected		WB
12	2-Feb-11	MCC Room - B07 - Panel above the doorway adjacent the back-up generator	Chrysotile	40	WB
13	2-Feb-11	MCC Room - B07 - Fresh air duct insulation along the north wall	None detected		WB
14	2-Feb-11	MCC Room - B07 - Compound enclosing conduit on upper south wall above main panel	None detected		WB

Bersch & Associates Ltd.
Box 3568
Humboldt, Sask. S0K 2A0

B67BAB02

BULK SAMPLE ANALYSIS REPORT

PROJECT NO. B67.11
CLIENT: City of Saskatoon
Fire Hall #1

ATTN: John Hiltz

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
15	2-Feb-11	B02 Corridor - Mud compound at hangers above doorway to MCC room B07	Chrysotile		WB
16	2-Feb-11	B02 Corridor - Lineal insulation on overhead pipelines	None detected		WB
17	2-Feb-11	B02 Corridor - Overhead fresh air duct insulation	None detected		WB
18	2-Feb-11	129 - Vehicle exhaust duct insulation overhead on east wall	None detected		WB
19	2-Feb-11	130 - Sheet flooring	Chrysotile		WB
20	2-Feb-11	130 - Roof drain material surrounding roof drain collar at ceiling	None detected		WB
21	2-Feb-11	133 - Sheet flooring, white multi-color speckle pattern	None detected		WB

Bersch & Associates Ltd.
Box 3568
Humboldt, Sask. S0K 2A0

B67BAB02

BULK SAMPLE ANALYSIS REPORT

PROJECT NO. B67.11
CLIENT: City of Saskatoon
Fire Hall #1

ATTN: John Hiltz

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
22	2-Feb-11	129 - Brick mortar beside wash hose reel	None detected		WB
23	2-Feb-11	118 - Lineal insulation on HWHR line adjacent to overhead unit heater adjacent the northeast corner of room 130	None detected		WB
24	2-Feb-11	118 - Lineal insulation on HWHS line adjacent to overhead unit heater adjacent the northeast corner of room 130	None detected		WB
25	2-Feb-11	215 - Return fan expansion gasket	Chrysotile		WB
26	2-Feb-11	215 - Return fan duct insulation and tar paper	None detected		WB
27	2-Feb-11	201 - Sheet flooring at counter area, peach with irregular multi colors	None detected		WB

Bersch & Associates Ltd.
Box 3568
Humboldt, Sask. S0K 2A0

B67BAB02

BULK SAMPLE ANALYSIS REPORT

PROJECT NO. B67.11
CLIENT: City of Saskatoon
Fire Hall #1

ATTN: John Hiltz

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
28	3-Feb-11	111A - Wall parging on east wall above the suspended ceiling	None detected		WB
29	3-Feb-11	108 - Duct insulation above suspended ceiling	None detected		WB
30	3-Feb-11	105 - 2" x 2" floor tile	None detected		WB
31	3-Feb-11	105 - Ceiling parging	None detected		WB
32	3-Feb-11	107 - Wall plaster above suspended ceiling	None detected		WB
33	3-Feb-11	102 Corridor - Mud compound at hanger on line above the suspended ceiling to the east of 105	Chrysotile		WB

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Box 3568
Humboldt, Sask. S0K 2A0

B67BAB02

BULK SAMPLE ANALYSIS REPORT

PROJECT NO. B67.11
CLIENT: City of Saskatoon
Fire Hall #1

ATTN: John Hiltz

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
34	3-Feb-11	116 - Lineal insulation on small line above the suspended ceiling	None detected		WB
35	3-Feb-11	119 - Medium sized pipeline fitting above the suspended ceiling	Chrysotile		WB
36	3-Feb-11	119 - Small pipeline fitting above the suspended ceiling	Chrysotile		WB
37	3-Feb-11	117 Corridor - Mud compound at 1 hanger on the medium size line above the suspended ceiling adjacent 134 entry	Chrysotile		WB
38	3-Feb-11	221 - 2' x 2' ceiling tile, course textured with foil backing	None detected		WB
39	3-Feb-11	220 Corridor - Block wall mortar above the suspended ceiling adjacent 221 entry	None detected		WB

Bersch & Associates Ltd.
Box 3568
Humboldt, Sask. S0K 2A0

B67BAB02

BULK SAMPLE ANALYSIS REPORT

PROJECT NO. B67.11
CLIENT: City of Saskatoon
Fire Hall #1

ATTN: John Hiltz

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
40	3-Feb-11	205 - Wall plaster above the suspended ceiling	None detected		WB
41	3-Feb-11	213 - 2' x 4' ceiling tile, fissured with raised 4" x 4" square pattern	None detected		WB
42	3-Feb-11	213 - Sheet flooring, blue/beige/peach faded stone pattern	None detected		WB
43	3-Feb-11	200 Corridor - Foil duct insulation above suspended ceiling adjacent 223 Stairs	None detected		WB
44	3-Feb-11	217 - Sheet flooring, blue/gray sand stone pattern	None detected		WB
45	3-Feb-11	217 - 2' x 4' ceiling tile with stripped pattern	None detected		WB

Bersch & Associates Ltd.
Box 3568
Humboldt, Sask. S0K 2A0

B67BAB02

BULK SAMPLE ANALYSIS REPORT

PROJECT NO. B67.11
CLIENT: City of Saskatoon
Fire Hall #1

ATTN: John Hiltz

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
46	3-Feb-11	210a - Sheet flooring beneath carpet, yellow with square pattern	None detected		WB
47	3-Feb-11	210a - Wall plaster on the east wall	None detected		WB
48	3-Feb-11	200 Corridor - Transite board above the entry doors into 210a & 216	Chrysotile	40	WB
49	3-Feb-11	128 - 2' x 4' fissured ceiling tile	None detected		WB
50	3-Feb-11	208 - Duct expansion gasket at the fan unit in the northeast corner	None detected		WB
51	3-Feb-11	208 - Fire-stop material compound in perimeter roof channels	None detected		WB

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Humboldt, Sask. S0K 2A0

B67BAB02

BULK SAMPLE ANALYSIS REPORT

PROJECT NO. B67.11
CLIENT: City of Saskatoon
Fire Hall #1

ATTN: John Hiltz

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
52	11-Feb-11	Exterior - Light blue transite board on the east exterior wall of the building, adjacent room 219	Chrysotile	40	WB
53	11-Feb-11	Exterior - Dark blue transite board on the east exterior soffit of the building, adjacent room 219	Chrysotile	40	WB
54	11-Feb-11	Exterior - Light blue transite board on the fascia of the east exterior adjacent room 219	Chrysotile	40	WB
55	11-Feb-11	207 - Blue bulletin board	None detected		WB
56	11-Feb-11	203 - Wall plaster on column build out	None detected		WB
57	11-Feb-11	207 - Wall plaster on west wall	None detected		WB

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B67BAB02

BULK SAMPLE ANALYSIS REPORT

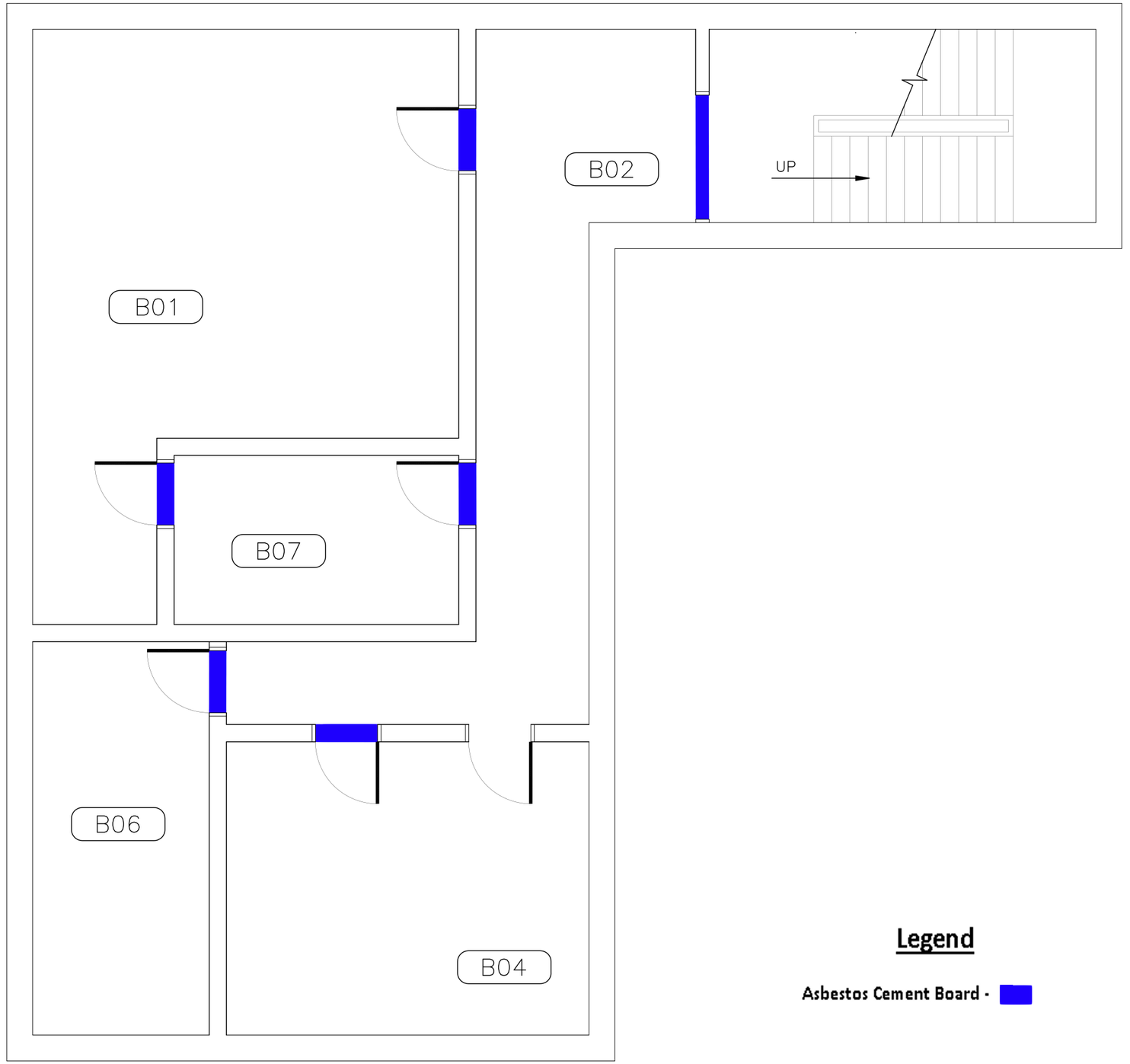
PROJECT NO. B67.11
CLIENT: City of Saskatoon
Fire Hall #1

ATTN: John Hiltz

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
58	11-Feb-11	210a - Wall parging on east wall adjacent radiant heater	None detected		WB
59	11-Feb-11	Roof - Styrofoam fitting on cladded pipeline adjacent A/C unit on the roof	None detected		WB
60	11-Feb-11	Roof - Styrofoam lineal insulation on cladded pipeline adjacent A/C unit on the roof	None detected		WB
61	11-Feb-11	Roof - Insulation in cladded line adjacent roof unit on the southwest corner of the building, adjacent ducting	None detected		WB

APPENDIX II

FLOOR PLANS



Legend

Asbestos Cement Board -

City of Saskatoon

Infrastructure Services Department

Facilities Branch
306-975-3300

GENERAL NOTES:

1. All dimensions are in millimetres
2. Drawings are not to be scaled.
3. All drawings to be read in con–junction with the specifications. unless otherwise noted.
4. Verify site conditions and location of all utilities prior to the start of construction.
5. Report all discrepancies to the Consultant.
6. If in doubt, ask.

REV	ISSUED FOR	DATE

DESIGNED BY:	DRAWN BY:	CHECKED BY:	REQUESTED BY:
	MSB		

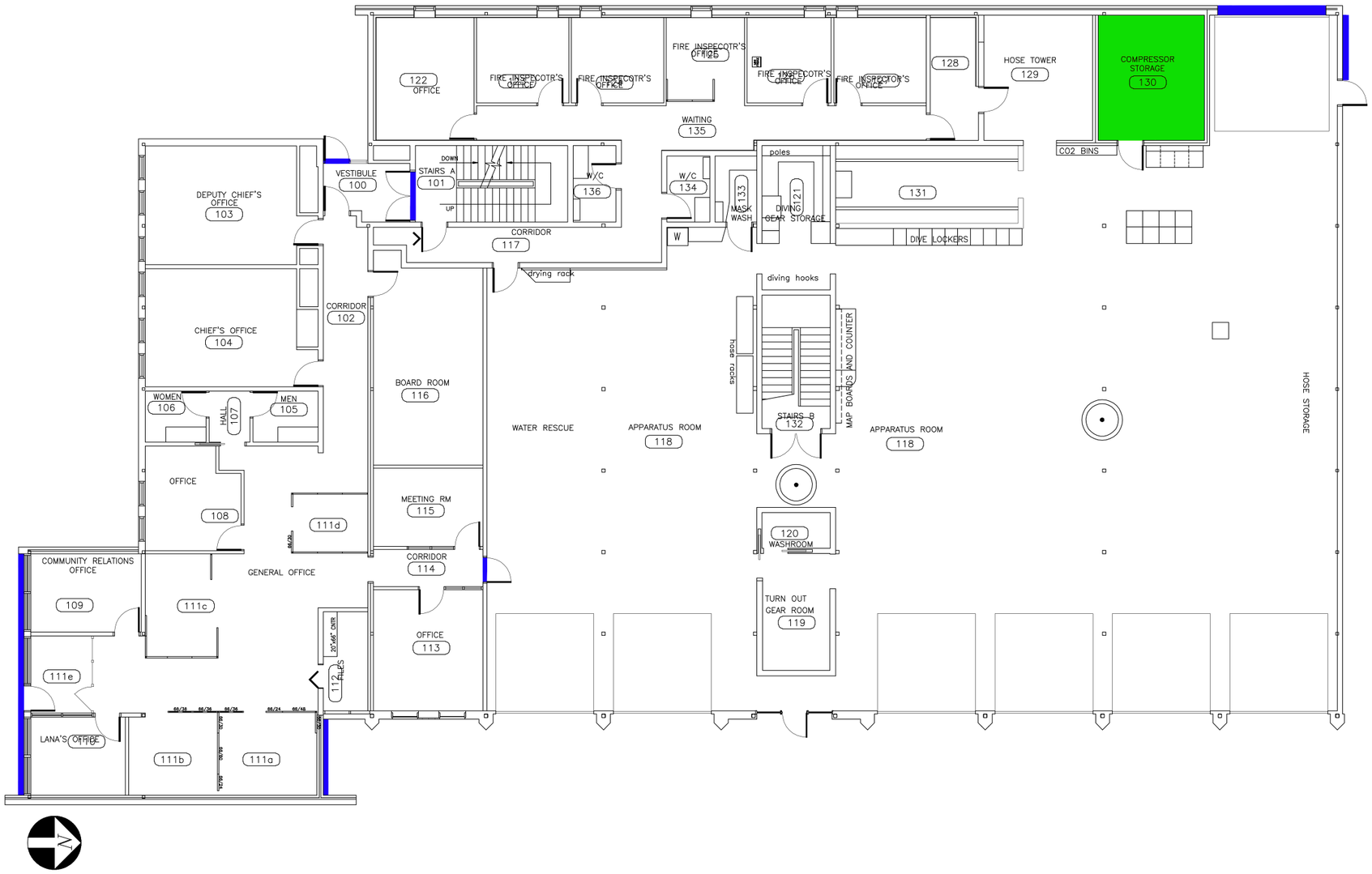
SCALE:	DATE:
1:1700	13/02/2012

SHEET NAME: Asbuilt
Lower Floor Base Plan

PROJECT TITLE
821 Firehall #1

PROJECT NO.

SHEET REV. NO.



Legend

Asbestos Cement Board -

Asbestos Sheet Flooring -

City of Saskatoon

Infrastructure Services Department

Facilities Branch
306-975-3300

GENERAL NOTES:

1. All dimensions are in millimetres
2. Drawings are not to be scaled.
3. All drawings to be read in conjunction with the specifications. unless otherwise noted.
4. Verify site conditions and location of all utilities prior to the start of construction.
5. Report all discrepancies to the Consultant.
6. If in doubt, ask.

REV	ISSUED FOR	DATE

DESIGNED BY:	DRAWN BY:	CHECKED BY:	REQUESTED BY:

SCALE:	DATE:
1:175	28/2/2005

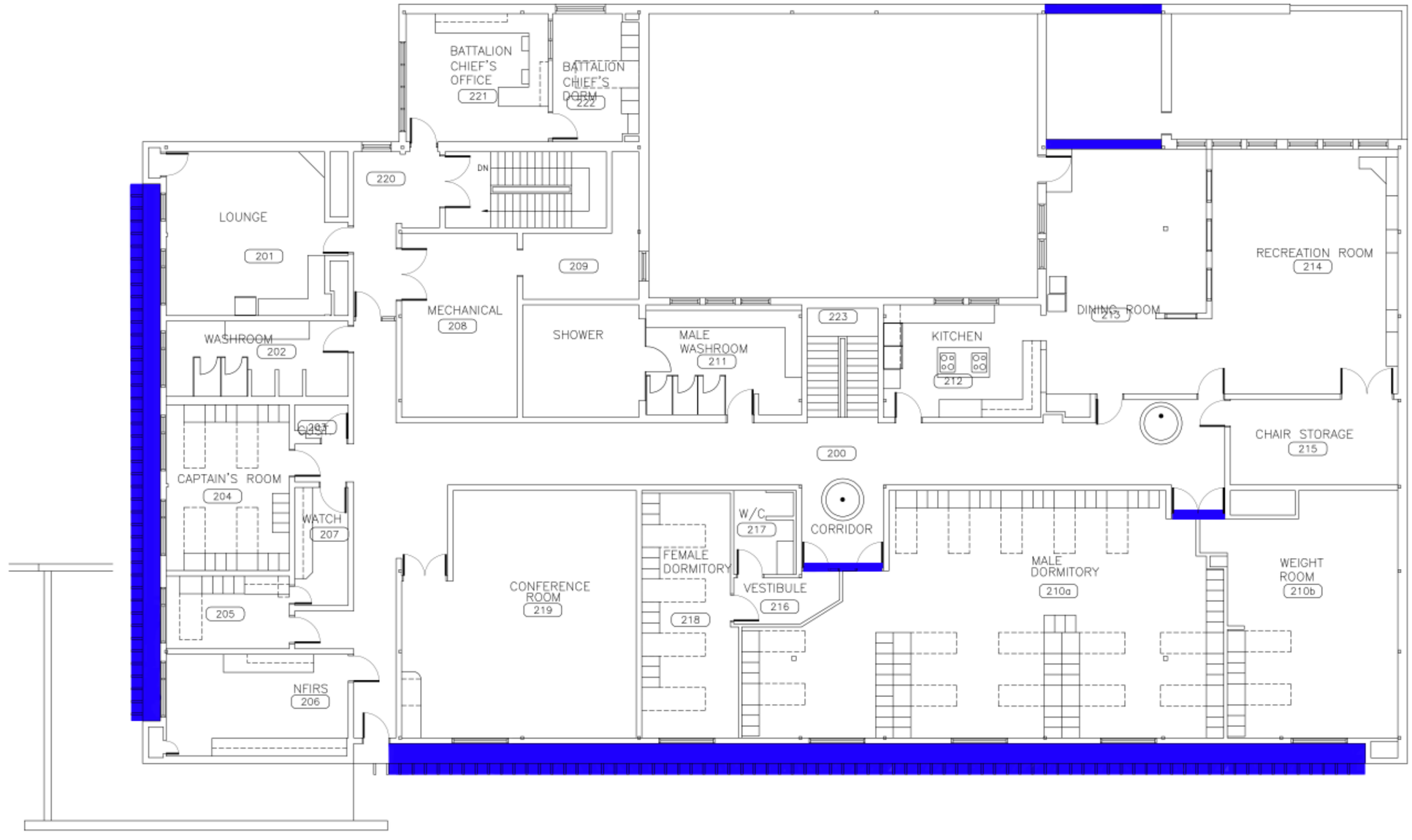
SHEET NAME: Asbuilt

Main Floor Base Plan

PROJECT TITLE

821 Firehall #1

PROJECT NO.	SHEET REV. NO.



Legend

Asbestos Cement Board -

City of Saskatoon

Infrastructure Services Department

Facilities Branch
306-975-3300

GENERAL NOTES:

1. All dimensions are in millimetres
2. Drawings are not to be scaled.
3. All drawings to be read in conjunction with the specifications, unless otherwise noted.
4. Verify site conditions and location of all utilities prior to the start of construction.
5. Report all discrepancies to the Consultant.
6. If in doubt, ask.

REV	ISSUED FOR	DATE

DESIGNED BY:	DRAWN BY:	CHECKED BY:	REQUESTED BY:

SCALE: 1:200

DATE: 28/2/2005

SHEET NAME: Asbuilt
Second Floor Base Plan

PROJECT TITLE
821
Firehall #1

PROJECT NO.

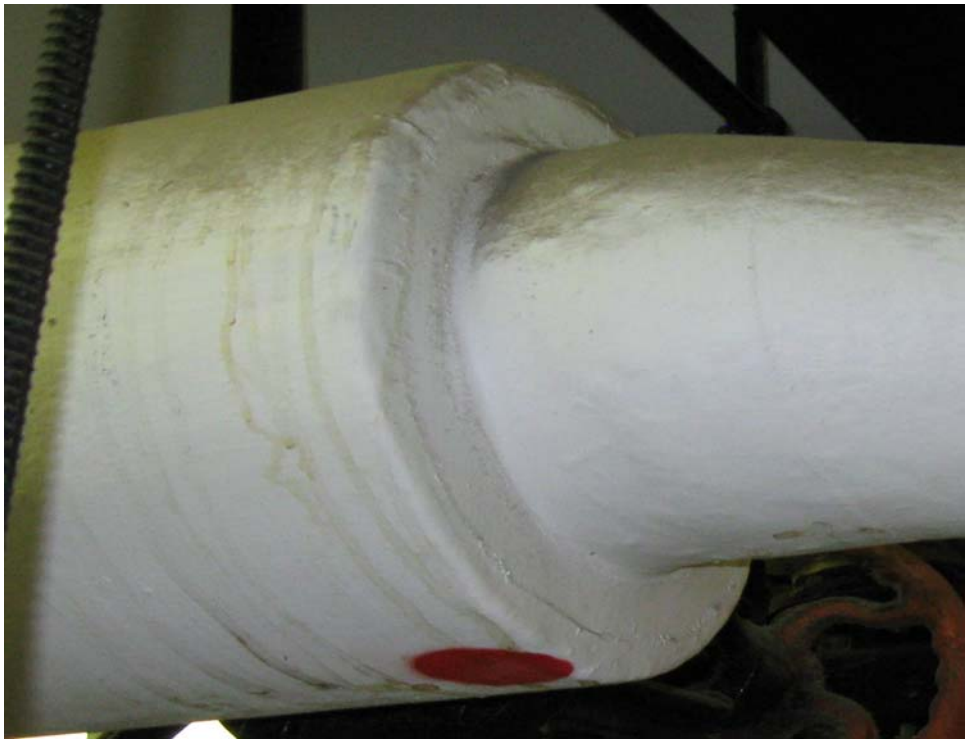
SHEET

REV. NO. 0

APPENDIX III

PHOTOS

Photo #1



Asbestos Mud Compound on mechanical pipeline end cap

Photo #2

Asbestos Duct Work Woven Expansion Gasket

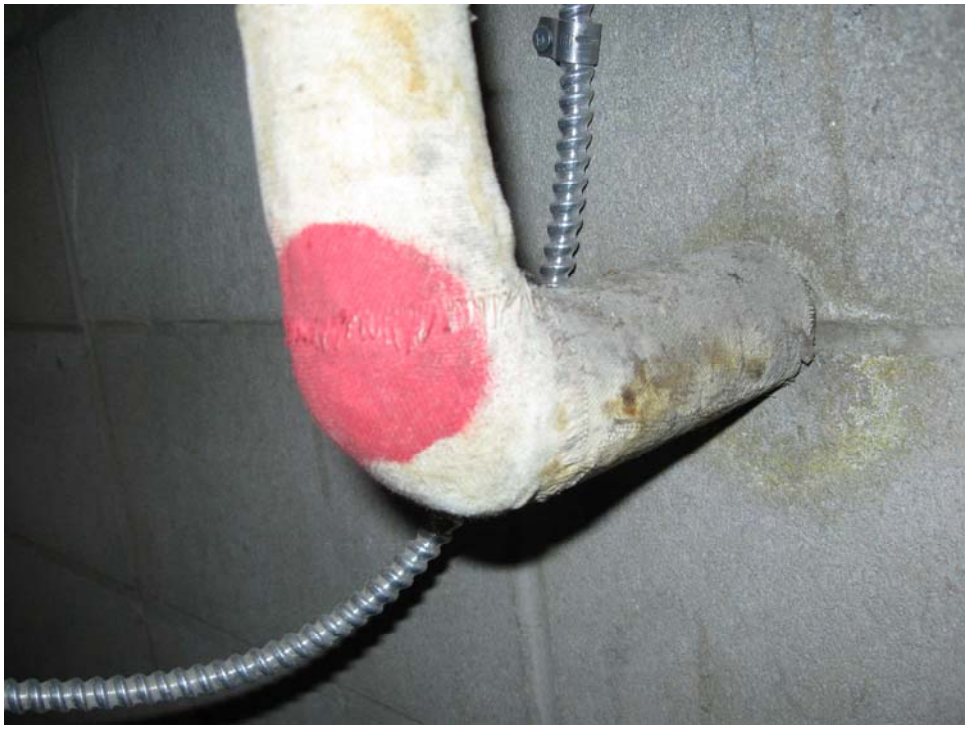
Photo #3

Asbestos Sheet Floor Covering

Photo #4

Asbestos Board above doorways

Photo #5



Asbestos Pipeline Fitting (elbow)

Photo #6

Asbestos Board on wall surface surrounding windows, on the soffit and on the fascia

Photo #7

Asbestos Board below main entry windows

Bersch & Associates Ltd.

FIRE HALL #1
125 IDYLWYLD DRIVE SOUTH
SASKATOON, SASKATCEHWAN

ASBESTOS SURVEY REPORT
FEBRUARY 2013

Prepared for: John Hiltz – City of Saskatoon
Prepared by: Bersch & Associates Ltd.
Project No. B67.11

1.0 INTRODUCTION

Bersch & Associates Ltd. was retained by John Hiltz – Project Coordinator – Infrastructure Services Department with the City of Saskatoon to conduct an asbestos survey of the Fire Hall #1 located at 125 Idylwyld Drive S, Saskatoon, SK. The purpose of the survey was to identify and label the asbestos containing materials located on the site. Dustin Fraess & Brad Berschiminsky of Bersch & Associates Ltd. conducted the survey of the Fire Hall in February 2011. Following the asbestos abatement performed in 2012 we have re-inspected the site allowing for us to update this report. This report gives an account of the results of the inspection and our firm's recommendations on control options to be implemented to bring the Fire Hall #1 into compliance with the Province of Saskatchewan Occupational Health and Safety Act and Regulations.

2.0 METHODOLOGY

On February 2, 2011, Dustin Fraess & Brad Berschiminsky of Bersch & Associates Ltd. began conducting a survey of Fire Hall #1. **The re-inspection of the Fire Hall #1 was performed in February 2013.** The primary documents for guidance and criteria in this survey were the Province of Saskatchewan "Occupational Health and Safety Act and Regulations, 1996", Province of Saskatchewan, "Management of Asbestos", and the U.S. Environmental Protection Agency "Guidance for Controlling Asbestos Containing Materials in Buildings. The USEPA document identifies factors associated with the "condition" and the "potential for disturbance or erosion" of asbestos containing materials (ACM). These factors help to define potential for exposure of ACM and were used to make a qualitative evaluation of the material. It should be noted that the recommendation of a "Management" Asbestos Abatement Action is based upon the premise that renovations are not scheduled in that area that will potentially result in the disruption or violation to the asbestos containing material. In the event that renovations are scheduled that impact upon the areas containing asbestos materials then pre-removal of the asbestos containing materials may be necessary.

In total, 61 bulk samples of the suspect asbestos containing materials were collected from the Fire Hall. Chrysotile asbestos was detected in 14 of the samples collected. Refer to Appendix I for a copy of the Bulk Analysis Report. All bulk samples collected were analyzed by Bersch & Associates Ltd. laboratory in accordance with the current USEPA 600/R-93/116 Method for the analysis of asbestos in building materials using polarized light microscopy and dispersion staining techniques. The detection limit of this method is listed as greater than 1% by volume.

3.0 EXECUTIVE SUMMARY

The survey of the Fire Hall #1 located at 125 Idylwyld Drive S, Saskatoon, Saskatchewan entailed the inspection of all suspect asbestos containing material (ACM) located within the facility. Materials inspected included mechanical equipment insulating materials, gaskets, wall boards, flooring, bulletin boards, ceiling tiles and wall plaster. The block walls were also

checked in various locations for the presence of vermiculite insulation. As a result vermiculite block wall infill material was not observed at any of the locations inspected. Laboratory results indicated that "Chrysotile" asbestos is present within the Fire Hall #1. Refer to Appendix I for Bulk Sample Analysis results. All accessible ACM within the facility was clearly identified to eliminate uncertainty of asbestos content. The identification of this material is as follows:

- Unmarked insulation (including pipe runs, vessels, fittings, and pipe hangers) shall be considered asbestos-free. ***Pipeline fittings, mud compound at pipeline hangers and expansion gaskets marked with a red dot of spray paint found in otherwise unlabelled areas are asbestos containing.***

- Asbestos-containing ***Sheet flooring and Transite Board above doorways and lining the exterior of the building have not been identified with paint but rather are shown on the floor plans in Appendix II.*** Each surfacing material has been assigned a color on the floor plans with all such material to be considered asbestos containing material.

- Any unmarked pipeline fitting material located within bulk heads, wall cavities, beneath the existing floor covering or other inaccessible areas should be considered asbestos-containing until testing of the material can determine the presence or absence of asbestos.

Throughout the survey of the Fire Hall, asbestos containing materials were assessed and given a priority rating of One, Two, Three or Four, with "One" being the items requiring the most immediate attention. Photographs have been attached in *Appendix III* of this report to assist in the identification of the asbestos materials present within the Fire Hall.

4.0 SURVEY RESULTS:

The following information is a list of observations of the asbestos containing materials located throughout the #1 Fire Hall facility.

.1 BASEMENT LEVEL – BOILER ROOM

1. One "end cap" on a line above the east side of the boiler stemming from the P2 line, has been identified as containing asbestos mud compound. The end cap on the mechanical pipeline requires removal. The fitting was identified with a red dot. See photograph #1 in *Appendix III.*

PRIORITY: **ONE**
CONDITION: **MODERATE**
POTENTIAL FOR DISTURBANCE: **MODERATE**
ACTION: **REMOVED in 2012**

2. There is one expansion gasket along the ductwork identified as containing asbestos. The gasket is located at the connection of Return Fan AH-1A to the right upon entry into the Boiler Room. The expansion gasket has been identified with a red dot of spray paint. See photograph #2 in *Appendix III*.

PRIORITY:	**THREE**
CONDITION:	**GOOD**
POTENTIAL FOR DISTURBANCE:	**LOW/ MODERATE**
ACTION:	**MANAGE**

.2 BASEMENT LEVEL – B02 CORRIDOR

1. ACM mud compound is present at hangers on the mechanical pipelines within the corridor. The hangers in which the mud compound is present have been identified with a red dot of spray paint. The management of this material is recommended but the owner may want to consider removing the asbestos containing mud compound in conjunction with the Boiler Room mud compound.

PRIORITY:	**TWO**
CONDITION:	**GOOD**
POTENTIAL FOR DISTURBANCE:	**LOW**
ACTION:	**REMOVED in 2012**

2. Transite board containing asbestos is present above the doorways entering into rooms B05, B06, B07, Boiler Room and the Stairwell double doors. The asbestos board is in good condition and the management of this material is recommended. The board has not been identified with a label but is identified on the floor plans in *Appendix II*. See photograph #4 in *Appendix III.*

PRIORITY:	**FOUR**
CONDITION:	**LOW**
POTENTIAL FOR DISTURBANCE:	**LOW**
ACTION:	**MANAGE**

.3 MAIN LEVEL – 100 VESTIBULE

1. Asbestos containing Transite Board is present above the doorways leading into 101 Stairwell and the exterior entry door. The Board has not been identified with a label but is identified on the floor plans in *Appendix II*. See photograph #4 in *Appendix III.*

PRIORITY:	**FOUR**
CONDITION:	**LOW**
POTENTIAL FOR DISTURBANCE:	**LOW**
ACTION:	**MANAGE**

.4 MAIN LEVEL – 130 – COMPRESSOR STORAGE

1. Asbestos containing sheet flooring covers the floor of the entire room. The flooring is in good to moderate condition with the recommendation of management of the floor covering material. See photograph #3 in *Appendix III.*

PRIORITY:	**THREE**
CONDITION:	**MODERATE/ GOOD**
POTENTIAL FOR DISTURBANCE:	**LOW**
ACTION:	**MANAGE**

.5 MAIN LEVEL – 102 CORRIDOR

1. Asbestos containing mud compound is present on one pipeline hanger above the suspended ceiling tile. The mud compound is located in the east corner of the corridor adjacent to the 105 Men's Washroom. The mud compound has been identified with red paint. The mud compound is in good condition with the recommendation to manage the material. The owner may want to consider removing the asbestos containing mud compound in conjunction with the other pipeline fittings identified.

PRIORITY:	**THREE**
CONDITION:	**GOOD**
POTENTIAL FOR DISTURBANCE:	**MODERATE/ LOW**
ACTION:	**REMOVED in 2012**

.6 MAIN LEVEL – 103 DEPUTY CHIEF'S OFFICE

1. Asbestos containing mud compound is present at pipeline hangers above the suspended ceiling tile. The mud compound has been identified with red paint and is in good condition with the recommendation to manage the material. Again, the owner may opt to remove the asbestos containing mud compound in conjunction with the other pipeline fittings identified.

PRIORITY:	**THREE**
CONDITION:	**GOOD**
POTENTIAL FOR DISTURBANCE:	**MODERATE/ LOW**
ACTION:	**REMOVED in 2012**

.7 MAIN LEVEL – 104 CHIEF'S OFFICE

1. Asbestos containing mud compound is present at pipeline hangers above the suspended ceiling tile. The mud compound has been identified with red paint and is in good condition with the recommendation to manage the material. The owner may opt to remove this material as well.

PRIORITY:	**THREE**
CONDITION:	**GOOD**
POTENTIAL FOR DISTURBANCE:	**MODERATE/ LOW**
ACTION:	**REMOVED in 2012**

.8 MAIN FLOOR – 114 CORRIDOR

1. Asbestos containing Transite Board is present above the doorway leading into 118 Apparatus Room. The Board has not been identified with a label but is identified on the floor plans in *Appendix II*. See photograph #4 in *Appendix III.*

PRIORITY:	**FOUR**
CONDITION:	**GOOD**
POTENTIAL FOR DISTURBANCE:	**LOW**
ACTION:	**MANAGE**

.9 MAIN FLOOR – 117 CORRIDOR

1. Asbestos containing mud compound is present on one pipeline hanger above the suspended ceiling tile. The mud compound is located above the suspended ceiling adjacent to 134 Washroom entry. The mud compound has been identified with red paint. The mud compound is in good condition with the recommendation to manage the material. The owner may opt to remove this material also.

PRIORITY:	**THREE**
CONDITION:	**GOOD**
POTENTIAL FOR DISTURBANCE:	**MODERATE**
ACTION:	**REMOVED in 2012**

.10 MAIN LEVEL – 119 GEAR ROOM

1. Asbestos containing pipeline fittings are present above the suspended ceiling. The fittings have been identified with red paint. See photograph #5 in *Appendix III*.

PRIORITY:	**THREE**
CONDITION:	**GOOD**
POTENTIAL FOR DISTURBANCE:	**MODERATE/ LOW**
ACTION:	**REMOVED in 2012**

.11 SECOND FLOOR – 200 CORRIDOR

1. Asbestos containing Transite Board is present above the doorways leading into rooms 210a and 216. The Board has not been identified with a label but is identified on the floor plans in *Appendix II*. See photograph #4 in *Appendix III.*

PRIORITY:	**FOUR**
CONDITION:	**GOOD**
POTENTIAL FOR DISTURBANCE:	**LOW**
ACTION:	**MANAGE**

.12 SECOND FLOOR – 208 STORAGE ROOM

1. Two asbestos containing expansion gaskets are present on the duct work connected to the fan unit in the northeast corner. The expansion gaskets are identified with a red dot of spray paint. See photograph #2 in *Appendix III.*

PRIORITY:	**THREE**
CONDITION:	**MODERATE/ GOOD**
POTENTIAL FOR DISTURBANCE:	**MODERATE/ LOW**
ACTION:	**REMOVED in 2012**

.13 SECOND FLOOR – 215 FAN ROOM

1. Three asbestos containing expansion gaskets are present connecting the duct work. The expansion gaskets are identified with a red dot of spray paint. See photograph #2 in *Appendix III.*

PRIORITY:	**THREE**
CONDITION:	**GOOD**
POTENTIAL FOR DISTURBANCE:	**LOW**
ACTION:	**REMOVED in 2012**

.14 EXTERIOR OF BUILDING

1. Asbestos containing Transite Board is present lining the exterior of the south and east sides of the building. On the south side of the building the board is present surrounding the main entry windows. It is also located at the upper and lower fascia, soffit and wall surface surrounding the second floor windows. On the east side of the building the board is present on the upper and lower fascia, soffit and wall surface surrounding the second floor windows. The board is also surrounding the top of the hose tower. The board is painted light and dark blue and has not been identified with an "asbestos" label but is identified on the floor plans in *Appendix II*. See photographs #4, #6 and #7 in *Appendix III.*

PRIORITY:	**FOUR**
CONDITION:	**GOOD**
POTENTIAL FOR DISTURBANCE:	**LOW**
ACTION:	**MANAGE**

The remaining rooms in the building which have not been identified in the section above have no identified ACM. Although it should be noted there may be pipeline fittings within the wall cavities, bulkheads or any other area considered to be inaccessible at the time of our inspection that should be treated as asbestos until testing proves otherwise. Asbestos sheet flooring may be present below the carpet in rooms where identification was not possible due to damaging the carpet. The concrete block walls were inspected in B07, 101, 129 and two areas in 118 for the presence of vermiculite insulation. No such material was observed during our inspection. If encountered during renovations or demolition the material should be tested for asbestos. The roof membrane of the building should be tested at the time of renovations. It was not tested at this time due to the destructive nature the sampling would require.

5.0 ASBESTOS ABATEMENT DISCUSSION

Asbestos is a known carcinogen and any release of asbestos fibres into the atmosphere creates a potential health hazard. Although the mechanism and epidemiology of asbestos carcinogenisis is not yet well defined, accumulating evidence suggests the significance of exposure at even very low fibre concentrations and hence human exposure should be kept to a minimum. It should be noted however that asbestos is a natural mineral and a measurable background concentration can be detected in any location sampled (inside buildings, outside buildings, urban, rural, etc.). The recommendations of the report are therefore intended to keep the potential exposure to an absolute minimum with the knowledge that a zero exposure is not possible.

Asbestos containing materials have been used in a wide variety of applications. Of particular concern, is the group of so called friable products. A friable product is one that can be crumbled or reduced to powder or smaller fragments by hand pressure. Publications from the U.S.E.P.A. as early as 1977 have indicated the potential hazard of asbestos exposure in buildings containing these friable products. The two main uses of friable asbestos products are as spray insulation (thermal, acoustic or fireproofing) on deck and/or beams or as thermal insulation on piping or mechanical equipment. A large amount of non-friable asbestos containing materials have also been used in building construction such as asbestos cement board and asbestos containing vinyl flooring.

The mere presence of a friable asbestos containing material does not imply that there is an actual presence of elevated airborne fibre. As numerous studies have indicated, elevated asbestos fibre levels are generally found when settled dust or the actual asbestos containing material itself is disturbed by maintenance, renovation, inadvertent contact or vibration. The factors considered in the Environmental Protection Agency (USEPA) exposure assessment (condition of material, water damage, activity, movement, exposed surface area, accessibility, friability and presence in an air stream) often give some indication of the likelihood of fibre release but are not in any way definitive in determining whether a hazard exists or not. That is, even if the most friable product exists in a building, elevated fibre levels will not likely occur unless there is some disturbance by physical contact, vibration or an air stream. Asbestos containing pipe or mechanical insulation is not considered friable unless the jacketing is deteriorated or is disturbed by maintenance or renovation. There are four possible approaches to control exposure to airborne asbestos once a friable material is identified in a building. These methods briefly are as follows:

A) Removal - Asbestos material is removed and disposed of by burial and replaced by non-asbestos materials.

B) Encapsulation - Asbestos material is coated with a bridging or penetrating sealant.

C) Enclosure - Asbestos containing materials are separated from the building environment by physical airtight and waterproof barriers.

D) Management and Custodial Control - The Province of Saskatchewan Human Resources, Labor and Employment Branch under the Occupational health and Safety Regulations publish a document outlining "The Management of Asbestos". In the guide for compliance, an action plan is outlined for management of the asbestos materials identified and in summary is:

1. Identification. The Occupational Health & Safety Regulations state that all asbestos containing building materials be clearly marked "ASBESTOS" (where practical) to warn others of the possible exposure to asbestos fibres if disturbed.

2. Inspection on regular basis is conducted to determine the ongoing condition of the material. As per the Occupational Health & Safety Regulations, 1996 an employer shall ensure that all friable asbestos containing material and all sprayed-on asbestos surfaces are regularly inspected by the employer, or owner and are inspected at least annually by a competent person to confirm that the material is not releasing, and is not likely to release, asbestos dust into the atmosphere. Maintenance staff should be instructed to bring to attention any problem areas they note during daily activities.

3. Development of Written Work Procedures for maintenance personnel to Control the Hazard of Asbestos, or often arrangements are made for a qualified contractor to conduct the necessary removal/repair prior to the regular staff conducting maintenance. An Asbestos Control Plan needs to be developed that protects the health and safety of all workers in the event of the dispersal of asbestos dust into the atmosphere at a place of employment or worksite. A brief summary of the Asbestos Control Plan is found under Section 337 (2) of the Occupational Health and Safety Regulations, 1996.

4. Asbestos Abatement Awareness and Low Risk Process Training if the regular maintenance personnel are required to conduct asbestos related activities.

6.0 CONCLUSION

The above recommendations are the most reasonable and cost effective means of controlling the asbestos containing materials located in the Fire Hall #1. **It should be noted that all pipe fitting compound and mechanical insulating material enclosed in wall cavities and bulkheads should be considered to contain asbestos material until bulk sampling proves otherwise.** Since no inspection work which involved damaging or destroying building components was undertaken during the inspection, ACM may be enclosed in drywall/plaster wall cavities, ceiling spaces or within block wall cavities. Asbestos flooring may be present beneath carpeted rooms where identification was not possible due to the damage required to inspect beneath the carpets. The roof membrane should be tested during the upcoming renovation to the cooling system. The asbestos board found lining the building may remain in place until renovation or demolition require disturbance of the material. The remediation of any asbestos materials should be performed by qualified personal.

Although Bersch & Associates Ltd. has recommended the management of the majority of the pipeline fittings identified throughout the facility as a control option, the owner may consider removing the asbestos mud compound throughout the facility for two reasons: 1) The number of asbestos containing fittings present is limited considering the overall building therefore by removing the identified fittings will not pose a significant expense. 2) The removal of the remaining pipeline fittings identified as containing asbestos shall eliminate the potential for future disturbance to the material.

7.0 REFERENCES

.1 Province of Saskatchewan "The Occupational Health and Safety Act and The Occupational Health and Safety Regulations", December, 1996.

.2 Province of Saskatchewan Human Resources, Labor, and Employment "The Management of Asbestos" January 1991.

.3 USEPA, 1985. U.S. Environmental Protection Agency, "Guidance for Controlling Asbestos-Containing Materials in Buildings". Washington, DC: Office of Toxic Substances, USEPA.

.4 Environment Management and Protection Act, Saskatchewan Environment, October 2002

.5 United States of America, NIOSH, Midwest Center for Occupational Health & Safety, "Asbestos Training for Building Inspectors and Management Planners"

.6 Hazardous Substances and waste Dangerous Goods Regulations, Saskatchewan Environment, April 1989

APPENDIX I

BULK SAMPLE ANALYSIS

BERSCH & ASSOCIATES LTD.

February 10, 2011

City of Saskatoon
1101 Avenue P North
Saskatoon, SK
S7L 7K6

ATTENTION: John Hiltz

SUBJECT: Bulk Material Identification Report

Please find attached our laboratory's results for the bulk samples collected throughout the Fire Hall #1. The samples were forwarded to our Laboratory for the identification of asbestos.

The results for the samples taken were obtained by examination in accordance with the current USEPA 600/R-93/116 Method for the analysis of asbestos in building materials using polarized light microscopy and dispersion staining techniques. The detection limit of this method is listed as greater than 1% by volume.

This test report relates only to the material sent for examination and any use or extension of the information by the client of these results is the responsibility of the client.

If any questions arise on the results of the attached information please contact me at 222-7477. Thank you for this opportunity of service.

Sincerely,

Brad Berschiminsky
Bersch & Associates Ltd.
File: B67BLB02

Bersch & Associates Ltd.
Box 3568
Humboldt, Sask. S0K 2A0

B67BAB02

BULK SAMPLE ANALYSIS REPORT

PROJECT NO. B67.11
CLIENT: City of Saskatoon
Fire Hall #1

ATTN: John Hiltz

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
1	2-Feb-11	B06 - Lineal pipeline insulation on small green line at pipe hanger	None detected		WB
2	2-Feb-11	B06 - 1' x 1' floor tile, gray with gray & white brush marks	None detected		WB
3	2-Feb-11	Boiler Room - Insulation on SF1 Supply Air Ducting, 10' in from entry door	None detected		WB
4	2-Feb-11	Boiler Room - Return fan AH-1A expansion gasket	Chrysotile	60	WB
5	2-Feb-11	Boiler Room - Fresh air duct insulation in the northwest corner	None detected		WB
6	2-Feb-11	Boiler Room - Small light green pipeline mud compound at wood brace adjacent sink on the north side of the boiler	None detected		WB
7	2-Feb-11	Boiler Room - Rope gasket on the front boiler door	None detected		WB
8	2-Feb-11	Boiler Room - Boiler insulation behind metal cladding	None detected		WB
9	2-Feb-11	Boiler Room - Back-up generator exhaust breeching beneath cladding	None detected		WB

Bersch & Associates Ltd.
Box 3568
Humboldt, Sask. S0K 2A0

B67BAB02

BULK SAMPLE ANALYSIS REPORT

PROJECT NO. B67.11
CLIENT: City of Saskatoon
Fire Hall #1

ATTN: John Hiltz

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
10	2-Feb-11	Boiler Room - Mud compound on overhead end cap on pipeline stemming from P2 on the east side of the Boiler	Chrysotile	65	WB
11	2-Feb-11	Boiler Room - Boiler exhaust breeching	None detected		WB
12	2-Feb-11	MCC Room - B07 - Panel above the doorway adjacent the back-up generator	Chrysotile	40	WB
13	2-Feb-11	MCC Room - B07 - Fresh air duct insulation along the north wall	None detected		WB
14	2-Feb-11	MCC Room - B07 - Compound enclosing conduit on upper south wall above main panel	None detected		WB
15	2-Feb-11	B02 Corridor - Mud compound at hangers above doorway to MCC room B07	Chrysotile	50	WB
16	2-Feb-11	B02 Corridor - Lineal insulation on overhead pipelines	None detected		WB
17	2-Feb-11	B02 Corridor - Overhead fresh air duct insulation	None detected		WB
18	2-Feb-11	129 - Vehicle exhaust duct insulation overhead on east wall	None detected		WB

Bersch & Associates Ltd.
Box 3568
Humboldt, Sask. S0K 2A0

B67BAB02

BULK SAMPLE ANALYSIS REPORT

PROJECT NO. B67.11
CLIENT: City of Saskatoon
Fire Hall #1

ATTN: John Hiltz

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
19	2-Feb-11	130 - Sheet flooring	Chrysotile	30	WB
20	2-Feb-11	130 - Roof drain material surrounding roof drain collar at ceiling	None detected		WB
21	2-Feb-11	133 - Sheet flooring, white multi-color speckle pattern	None detected		WB
22	2-Feb-11	129 - Brick mortar beside wash hose reel	None detected		WB
23	2-Feb-11	118 - Lineal insulation on HWHR line adjacent to overhead unit heater adjacent the northeast corner of room 130	None detected		WB
24	2-Feb-11	118 - Lineal insulation on HWHS line adjacent to overhead unit heater adjacent the northeast corner of room 130	None detected		WB
25	2-Feb-11	215 - Return fan expansion gasket	Chrysotile	60	WB
26	2-Feb-11	215 - Return fan duct insulation and tar paper	None detected		WB
27	2-Feb-11	201 - Sheet flooring at counter area, peach with irregular multi colors	None detected		WB

Bersch & Associates Ltd.
Box 3568
Humboldt, Sask. S0K 2A0

B67BAB02

BULK SAMPLE ANALYSIS REPORT

PROJECT NO. B67.11
CLIENT: City of Saskatoon
Fire Hall #1

ATTN: John Hiltz

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
28	3-Feb-11	111A - Wall parging on east wall above the suspended ceiling	None detected		WB
29	3-Feb-11	108 - Duct insulation above suspended ceiling	None detected		WB
30	3-Feb-11	105 - 2" x 2" floor tile	None detected		WB
31	3-Feb-11	105 - Ceiling parging	None detected		WB
32	3-Feb-11	107 - Wall plaster above suspended ceiling	None detected		WB
33	3-Feb-11	102 Corridor - Mud compound at hanger on line above the suspended ceiling to the east of 105	Chrysotile	30	WB
34	3-Feb-11	116 - Lineal insulation on small line above the suspended ceiling	None detected		WB
35	3-Feb-11	119 - Medium sized pipeline fitting above the suspended ceiling	Chrysotile	30	WB
36	3-Feb-11	119 - Small pipeline fitting above the suspended ceiling	Chrysotile	40	WB

Bersch & Associates Ltd.
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Humboldt, Sask. S0K 2A0

B67BAB02

BULK SAMPLE ANALYSIS REPORT

PROJECT NO. B67.11
CLIENT: City of Saskatoon
Fire Hall #1

ATTN: John Hiltz

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
37	3-Feb-11	117 Corridor - Mud compound at 1 hanger on the medium size line above the suspended ceiling adjacent 134 entry	Chrysotile	30	WB
38	3-Feb-11	221 - 2' x 2' ceiling tile, course textured with foil backing	None detected		WB
39	3-Feb-11	220 Corridor - Block wall mortar above the suspended ceiling adjacent 221 entry	None detected		WB
40	3-Feb-11	205 - Wall plaster above the suspended ceiling	None detected		WB
41	3-Feb-11	213 - 2' x 4' ceiling tile, fissured with raised 4" x 4" square pattern	None detected		WB
42	3-Feb-11	213 - Sheet flooring, blue/beige/peach faded stone pattern	None detected		WB
43	3-Feb-11	200 Corridor - Foil duct insulation above suspended ceiling adjacent 223 Stairs	None detected		WB
44	3-Feb-11	217 - Sheet flooring, blue/gray sand stone pattern	None detected		WB
45	3-Feb-11	217 - 2' x 4' ceiling tile with stripped pattern	None detected		WB

Bersch & Associates Ltd.
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Humboldt, Sask. S0K 2A0

B67BAB02

BULK SAMPLE ANALYSIS REPORT

PROJECT NO. B67.11
CLIENT: City of Saskatoon
Fire Hall #1

ATTN: John Hiltz

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
46	3-Feb-11	210a - Sheet flooring beneath carpet, yellow with square pattern	None detected		WB
47	3-Feb-11	210a - Wall plaster on the east wall	None detected		WB
48	3-Feb-11	200 Corridor - Transite board above the entry doors into 210a & 216	Chrysotile	40	WB
49	3-Feb-11	128 - 2' x 4' fissured ceiling tile	None detected		WB
50	3-Feb-11	208 - Duct expansion gasket at the fan unit in the northeast corner	Chrysotile	60	WB
51	3-Feb-11	208 - Fire-stop material compound in perimeter roof channels	None detected		WB
52	11-Feb-11	Exterior - Light blue transite board on the east exterior wall of the building, adjacent room 219	Chrysotile	40	WB
53	11-Feb-11	Exterior - Dark blue transite board on the east exterior soffit of the building, adjacent room 219	Chrysotile	40	WB
54	11-Feb-11	Exterior - Light blue transite board on the fascia of the east exterior adjacent room 219	Chrysotile	40	WB

Bersch & Associates Ltd.
Box 3568
Humboldt, Sask. S0K 2A0

B67BAB02

BULK SAMPLE ANALYSIS REPORT

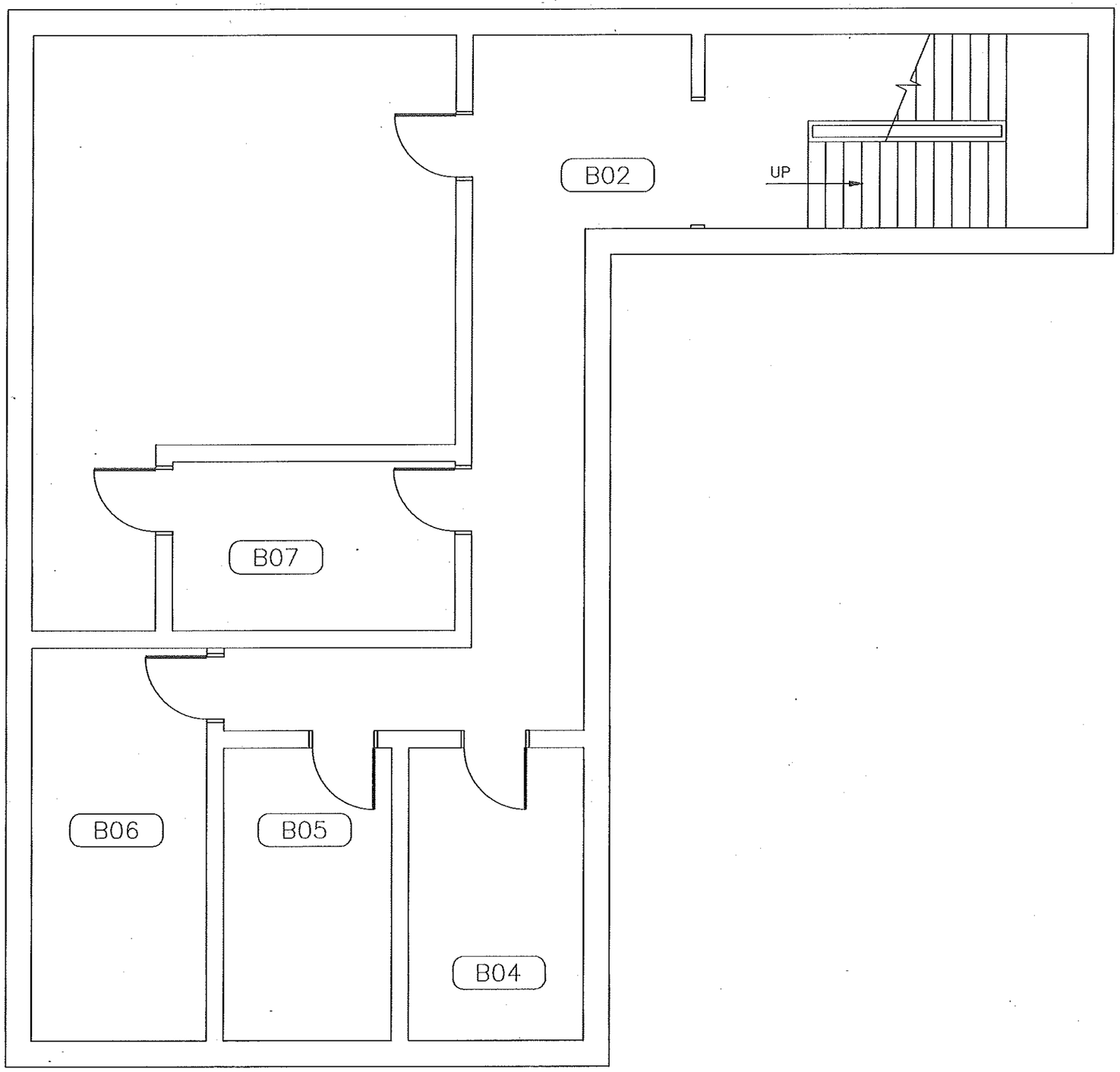
PROJECT NO. B67.11
CLIENT: City of Saskatoon
Fire Hall #1

ATTN: John Hiltz

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
55	11-Feb-11	207 - Blue bulletin board	None detected		WB
56	11-Feb-11	203 - Wall plaster on column build out	None detected		WB
57	11-Feb-11	207 - Wall plaster on west wall	None detected		WB
58	11-Feb-11	210a - Wall parging on east wall adjacent radiant heater	None detected		WB
59	11-Feb-11	Roof - Styrofoam fitting on cladded pipeline adjacent A/C unit on the roof	None detected		WB
60	11-Feb-11	Roof - Styrofoam lineal insulation on cladded pipeline adjacent A/C unit on the roof	None detected		WB
61	11-Feb-11	Roof - Insulation in cladded line adjacent roof unit on the southwest corner of the building, adjacent ducting	None detected		WB

APPENDIX II

FLOOR PLANS



City of Saskatoon

Infrastructure Services Department

Facilities Branch
306-975-3300

GENERAL NOTES:

1. All dimensions are in millimetres
2. Drawings are not to be scaled.
3. All drawings to be read in conjunction with the specifications. unless otherwise noted.
4. Verify site conditions and location of all utilities prior to the start of construction.
5. Report all discrepancies to the Consultant.
6. If in doubt, ask.

REV	ISSUED FOR	DATE

DESIGNED BY:	DRAWN BY:	CHECKED BY:	REQUESTED BY:
	LG		LG

SCALE:	DATE:
1:1700	08/06/2001

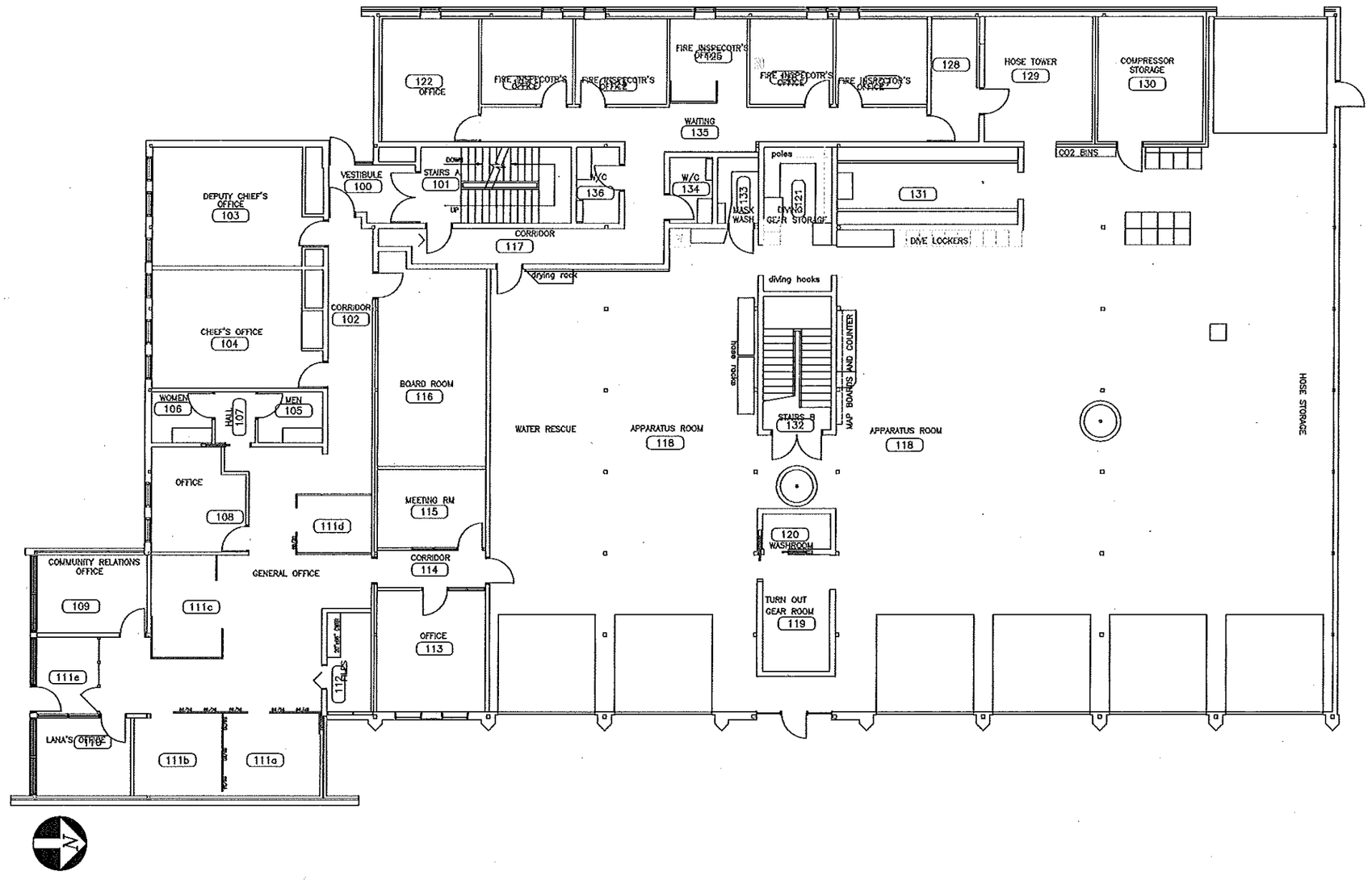
SHEET NAME: Asbuilt

Lower Floor
Base Plan

PROJECT TITLE

821
Firehall #1

PROJECT NO.	SHEET
	REV. NO. △



City of Saskatoon

Infrastructure Services Department

Facilities Branch
306-975-3300

GENERAL NOTES:

1. All dimensions are in millimetres
2. Drawings are not to be scaled.
3. All drawings to be read in conjunction with the specifications, unless otherwise noted.
4. Verify site conditions and location of all utilities prior to the start of construction.
5. Report all discrepancies to the Consultant.
6. If in doubt, ask.

REV	ISSUED FOR	DATE

DESIGNED BY:	DRAWN BY:	CHECKED BY:	REQUESTED BY:

SCALE: 1:175

DATE: 28/2/2005

SHEET NAME: Asbuilt

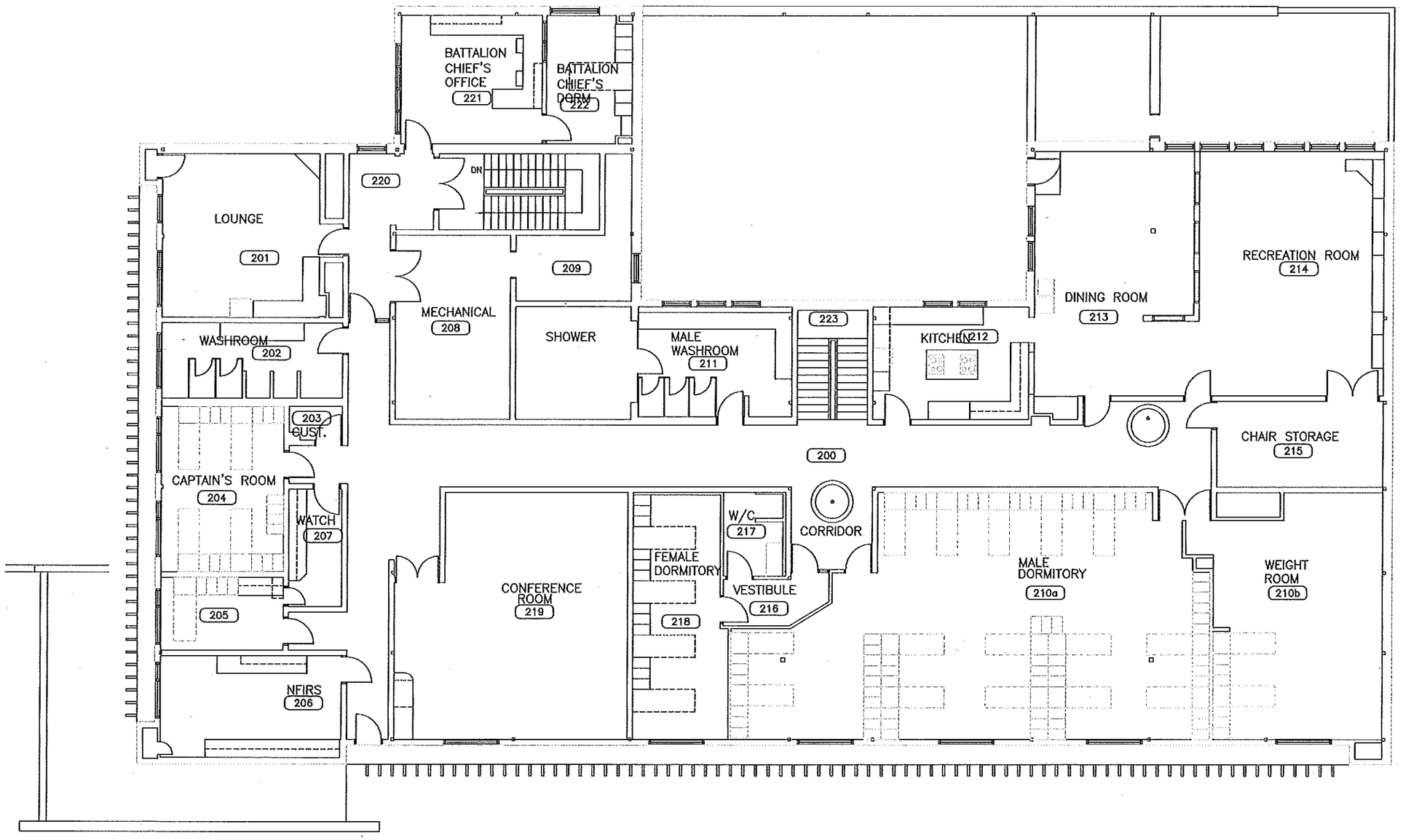
Main Floor Base Plan

PROJECT TITLE:

821 Firehall #1

PROJECT NO.

SHEET REV. NO.



City of Saskatoon

Infrastructure Services Department

Facilities Branch
306-975-3300

NOTE:
THESE DRAWINGS HAVE BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS. THE CITY HAS TAKEN STEPS TO VERIFY THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION BUT SHALL NOT BE RESPONSIBLE FOR AND ERRORS OR OMMISSIONS THAT MAY BE INCORPORATED AS A RESULT OF ERRONEOUS INFORMATION PROVIDED BY OTHERS THAT WAS NOT ABLE TO BE VISUALLY CONFIRMED.

GENERAL NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES
2. DRAWINGS ARE NOT TO BE SCALED.
3. ALL DRAWINGS TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS UNLESS OTHERWISE NOTED.
4. VERIFY SITE CONDITIONS, DIMENSIONS AND LOCATION OF ALL UTILITIES PRIOR TO THE START OF CONSTRUCTION.
5. REPORT ALL DISCREPANCIES TO THE CONSULTANT.

REV	ISSUED FOR	DATE

DESIGNED BY	DRAWN BY	CHECKED BY	REQUESTED BY

SCALE: 1:200
DATE: 28/2/2005

SHEET NAME: Asbuilt
Second Floor Base Plan

PROJECT TITLE
821 Firehall #1

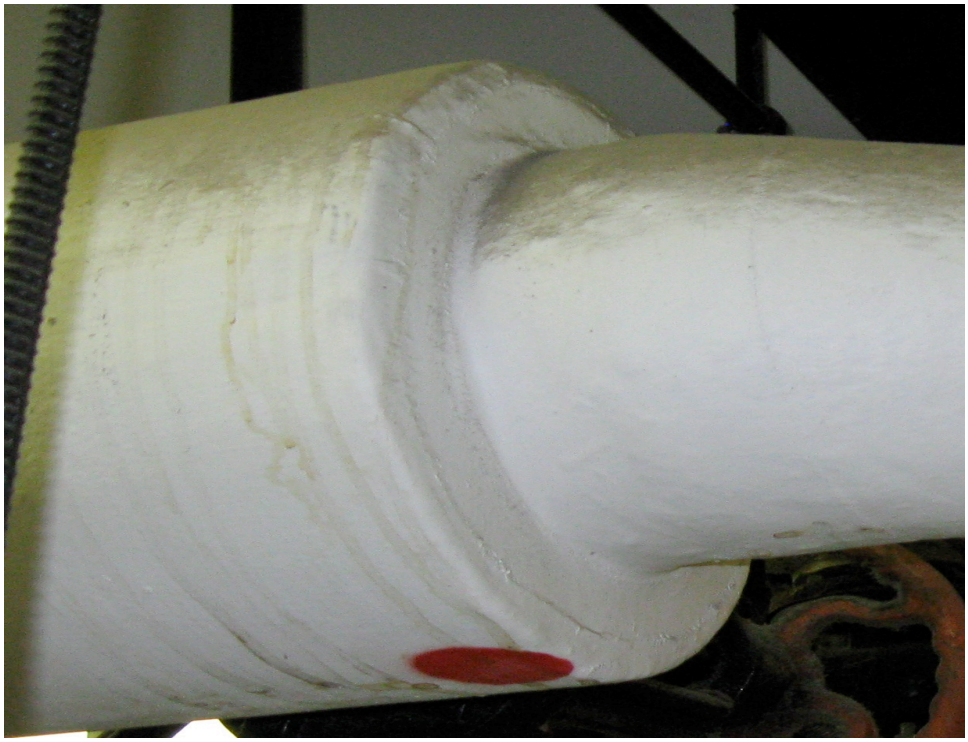
PROJECT NO.

SHEET REV. NO. 0

APPENDIX III

PHOTOS

Photo #1



Asbestos Mud Compound on mechanical pipeline end cap

Photo #2

Asbestos Duct Work Woven Expansion Gasket

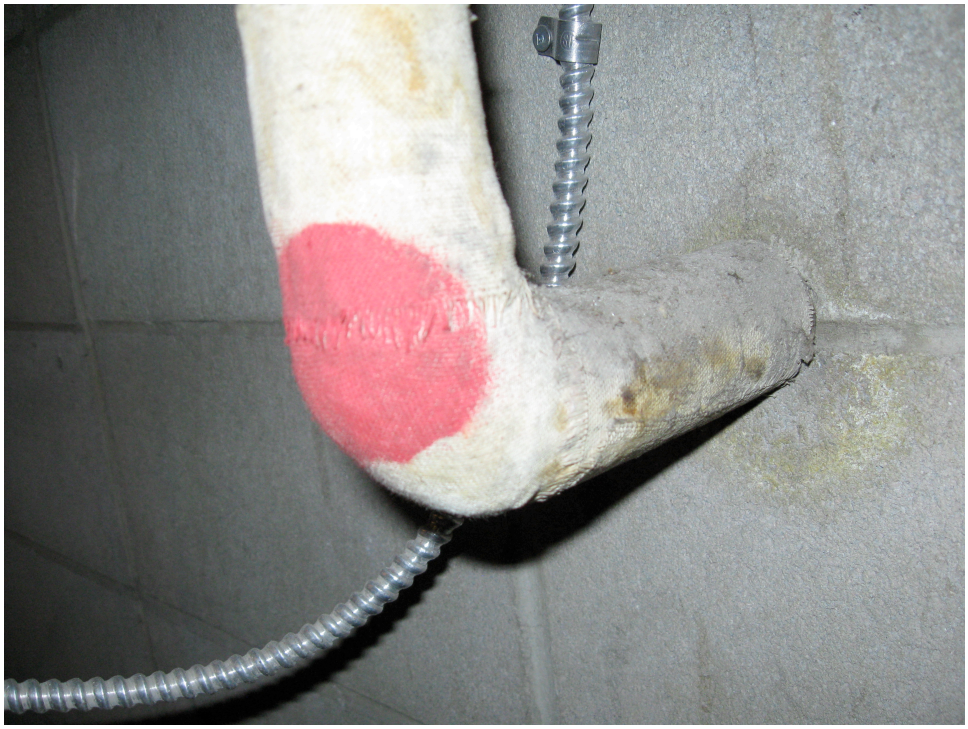
Photo #3

Asbestos Sheet Floor Covering

Photo #4

Asbestos Board above doorways

Photo #5



Asbestos Pipeline Fitting (elbow)

Photo #6

Asbestos Board on wall surface surrounding windows, on the soffit and on the fascia

Photo #7

Asbestos Board below main entry windows

BERSCH & ASSOCIATES LTD.

November 24, 2015

City of Saskatoon
Infrastructure Services Department
3130 Laurier Drive
Saskatoon, Sk
S7L 5J7

ATTENTION: Brent Anderson

SUBJECT: Bulk Sample Analysis Report

Please find attached the laboratory results for the bulk samples collected from the #1 FireHall Maintenance Building located at 125 Idylwyld Drive S, Saskatoon, SK. The additional sampling was requested prior to the concrete slab upgrade project planned for the area. The samples were analyzed for the identification of asbestos. Asbestos **was not** detected.

The results for the samples submitted were obtained by examination in accordance with the current USEPA 600/R-93/116 Method for the analysis of asbestos in building materials using polarized light microscopy and dispersion staining techniques. The detection limit of this method is listed as less than 1% by volume.

This test report relates only to the materials sent for examination and any use or extension of the information by the client of these results is the responsibility of the client.

If any questions arise on the results of the attached information please contact our office. Thank you for this opportunity of service!

Sincerely,

Brad Berschiminsky
Bersch & Associates Ltd.
File: B67BLK20

Bersch & Associates Ltd.
Box 3568
Humboldt, Sask. S0K 2A0

B67BAK20

BULK SAMPLE ANALYSIS REPORT

PROJECT NO: B67.15
CLIENT: CITY OF SASKATOON - INFRASTRUCTURE SERVICES – FACILITIES BRANCH
CONTACT: BRENT ANDERSON
LOCATION: #1 FIREHALL MAINTENANCE BUILDING - SASKATOON, SK.

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
1	20-Nov-15	Main Level - Concrete Patch / Concrete - Along The West Wall In Front Of The North Overhead Door.	No Asbestos Detected		WB
2	20-Nov-15	Basement Level Carpentry Area - Deteriorating Wall Material - Northwest Upper Corner Along The West Wall.	No Asbestos Detected		WB
3	20-Nov-15	Basement Level Storage Area To North Of Carpentry Area - Concrete Material - Underside Of Main Level Concrete Floor Slab To The South Of Modine Overhead Heating Unit.	No Asbestos Detected		WB
4	20-Nov-15	Basement Level Storage Area To North Of Carpentry Area - Concrete Material - Underside Of Main Level Concrete Floor Slab At Exposed Rebar Section.	No Asbestos Detected		WB
5	20-Nov-15	Basement Level Storage Area To North Of Carpentry Area - Concrete Material - Underside Of Main Level Concrete Floor Slab And Wall Material In The Northwest Upper Corner.	No Asbestos Detected		WB

BERSCH & ASSOCIATES LTD.

September 21st, 2016

City of Saskatoon
Infrastructure Services Department
Fire Hall #1
125 Idylwyld Drive South
Saskatoon, Sk
S7M 1P9

ATTENTION: Hazel Fernandez – Project Coordinator

SUBJECT: Bulk Sample Analysis Report

Please find attached our laboratory's results for the bulk samples collected from Fire Hall #1 on on September 15th, 2016. The samples were analyzed in our laboratory for the identification of asbestos. Asbestos **was not** detected within the samples.

The results for the sample submitted were obtained by examination in accordance with the current USEPA 600/R-93/116 Method for the analysis of asbestos in building materials using polarized light microscopy and dispersion staining techniques. The detection limit of this method is listed as less than 1% by volume.

This test report relates only to the materials sent for examination and any use or extension of the information by the client of these results is the responsibility of the client.

If any questions arise on the results of the attached information please contact our office. Thank you for this opportunity of service to your firm.

Sincerely,

Wes Berschiminsky
Bersch & Associates Ltd.

File: B67BLI15F

Bersch & Associates Ltd.
Box 3568
Humboldt, Sask. S0K 2A0

B67BAI15F

BULK SAMPLE ANALYSIS REPORT

PROJECT NO: **B67.16**
CLIENT: **CITY OF SASKATOON**
FACILITIES & FLEET MANAGEMENT
CONTACT: **HAZEL FERNANDEZ**
LOCATION: **FIRE HALL #1 - 125 IDYLWYLD DRIVE SOUTH**

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
1	15-Sep-16	West Vestibule - Ceiling Tile Debris Above Suspended Ceiling Small Textured Pin Hole	No Asbestos Detected		WB
2	15-Sep-16	West Vestibule - 1' x 1' Ceiling Tile Pin Hole Fine Fissured Pattern	No Asbestos Detected		WB
3	15-Sep-16	West Vestibule - 1' x 1' Ceiling Tile Pin Hole Deep Fissured Pattern	No Asbestos Detected		WB

BERSCH
CONSULTING LTD.

May 17, 2017

City of Saskatoon
Infrastructure Services Department
Fire Hall #1
125 Idylwyld Drive South
Saskatoon, Sk
S7M 1P9

ATTENTION: Nathan Sommerfeld

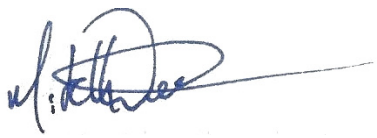
SUBJECT: Bulk Sample Analysis Report – Fire Hall # 1

Evan Westad of Bersch Consulting Ltd. conducted a site visit on May 16, 2017, to investigate and collect bulk samples of material to confirm the presence/absence of asbestos content. The facility is located at 125 Idylwyld Drive South, Saskatoon, SK. Three (3) samples of insulation were collected and analyzed for the identification of asbestos. Asbestos **was not** detected in the samples. Based on the bulk sampling and site investigation, there does not appear to be an asbestos concern that would reflect on the renovations proposed for the area.

The results for the bulk samples were obtained by examination in accordance with the current USEPA 600/R-93/116 Method for the analysis of asbestos in building materials using polarized light microscopy and dispersion staining techniques. The detection limit of this method is listed as less than 1% by volume.

This test report relates only to the materials sent for examination and any use or extension of the information by the client of these results is the responsibility of the client. If any questions arise on the results of the attached information, please contact our office at 306.978.6665. Thank you for this opportunity of service!

Sincerely,



Mitch Webber
Bersch Consulting Ltd.
B67BLE16G – Fire Hall #1

Bersch Consulting Ltd.
244-2002 Quebec Avenue
Saskatoon, SK S7K 1W4

B67BAE16G

BULK SAMPLE ANALYSIS REPORT

PROJECT NO: **B67.17**
CLIENT: **CITY OF SASKATOON**
CONTACT: **NATHAN SOMMERFELD**
LOCATION: **FIRE HALL #1 - 125 IDYLWYLD DRIVE SOUTH**

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
1	16-May-17	Hose Tower - North Exterior Wall - White Insulation	No Asbestos Detected		WB
2	16-May-17	Hose Tower - North Exterior Wall - Brown Insulation	No Asbestos Detected		WB
3	16-May-17	Hose Tower - North Exterior Wall - Pink Insulation	No Asbestos Detected		WB

BERSCH
CONSULTING LTD.

September 29, 2017

City of Saskatoon
Facilities & Fleet Management
1101 Avenue P North
Saskatoon, SK
S7L 7K6

ATTENTION: Tanner Huynink
Hazel Fernandez

SUBJECT: Bulk Sample Analysis Report Fire Hall #1

Please find attached the laboratory results for the bulk sample collected September 26, 2017 from the hallway adjacent the boardroom at Fire Hall #1 located at 125 Idylwyld Dr South, Saskatoon, Saskatchewan. The sample was analyzed for the identification of asbestos. Asbestos **was not** detected within the sample.

The results for the sample submitted was obtained by examination in accordance with the current USEPA 600/R-93/116 Method for the analysis of asbestos in building materials using polarized light microscopy and dispersion staining techniques. The detection limit of this method is listed as less than 1% by volume.

This test report relates only to the materials sent for examination and any use or extension of the information by the client of these results is the responsibility of the client.

If any questions arise on the results of the attached information, please contact our office. Thank you for this opportunity of service!

Sincerely,

Tyneal Knackstedt, B.S.A, M.SEM
Bersch Consulting Ltd.
File: B67BLI26G – Fire Hall #1

Bersch Consulting Ltd.
244-2002 Quebec Avenue
Saskatoon, SK S7K 1W4

B67BAI26G

BULK SAMPLE ANALYSIS REPORT

PROJECT NO: **B67.17**
CLIENT: **CITY OF SASKATOON**
CONTACT: **TANNER HUYNINK/ HAZEL FERNANDEZ**
LOCATION: **FIREHALL #1**

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
1	26-Sep-17	Hallway Adjacent Boardroom - Drywall Mud Compound	No Asbestos Detected		EMSL