Bersch & Associates Ltd.

FRANCES MORRISON LIBRARY

ASBESTOS SURVEY REPORT

APRIL 2013

Prepared by: Bersch & Associates Ltd.
Prepared for: City of Saskatoon
Project No. B67.13

1.0 INTRODUCTION

Bersch & Associates Ltd. were retained by the City of Saskatoon, I.S./Facilities Department to re-assess the asbestos containing materials originally identified in the June 2001 asbestos survey of the Frances Morrison Library located at 311 – 23rd Street East in Saskatoon, Saskatchewan. The purpose of the survey was to update the Priority 1 recommendations previously set forth in the June 2001 and February 2012 surveys. Clint Berschiminsky and Trent Blaus of Bersch & Associates Ltd. conducted the original survey of the Frances Morrison Library in June 2001. Brad Berschiminsky performed the reassessment audit in February 2012 and Dustin Fraess in 2013. This report gives a detailed account of the results of the inspection and our firm's recommendations on control options to be implemented to bring the Frances Morrison Library in compliance with the Province of Saskatchewan Occupational Health and Safety Act and Regulations.

2.0 METHODOLOGY

On June 18, 2001, Trent Blaus of Bersch & Associates Ltd. began conducting a survey of the Frances Morrison Library. 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 require disturbing or violating the asbestos containing material. In the event that renovations are scheduled that impact upon the areas of asbestos containing material then pre-removal of the asbestos containing materials may be necessary.

On January 31, 2012 Brad Berschiminsky and Brandon Molinger of Bersch & Associates Ltd. commenced with the reassessment of the asbestos containing materials remaining throughout the library. In addition 5 air samples were collected to determine the fibre levels within areas housing the spray-applied asbestos fireproofing. The results were recorded below the facility clearance limit of 0.01 fibres per cubic centimeter. (Fibre levels of .0002, .0013, .0015, .0002 and .0023 fibres/cc were recorded). On April 11, 2013 Dustin of Bersch & Associates Ltd. commenced with the reassessment of the Priority 1 areas located throughout the facility.

In total, thirty-five (35) bulk samples of the suspect asbestos containing materials were collected from the Frances Morrison Library at the time of the original survey. Asbestos was detected in twenty-five (25) 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 Frances Morrison Library located in Saskatoon, Saskatchewan entailed the inspection of all accessible suspect asbestos containing material (ACM) located within the facility. Materials inspected included mechanical equipment insulating materials, spray-applied insulation, suspended ceiling tile, stipple ceiling texture, gasket material and vinyl floor coverings. Where visual identification was not possible a sample was collected for bulk analysis to detect any asbestos content. Laboratory results indicated that "Chrysotile" asbestos was present within the Frances Morrison Library. 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:

- Spray-applied asbestos-containing insulation is located within the Penthouse Mechanical Room. The spray-applied insulation is located on the walls and on the ceiling and is enclosed with drywall. The walls have been marked *'ASBESTOS'* in red stencil. Warning stickers have also been placed on the walls informing of the asbestos containing material within the wall cavity. In addition, Placards will be placed at each entrance into the Penthouse Mechanical Room warning of the Asbestos hazard.

- Spray-applied asbestos-containing insulation is located within the Basement Boiler Room. The spray-applied insulation is located on the ceiling. The insulation has been previously encapsulated. Placards will be placed at each entrance into the Basement Boiler Room warning of the Asbestos hazard.

- Asbestos-containing duct parging compound located on ventilation ducting within the Basement Boiler Room. The asbestos compound is located mainly on the duct pins fasteners securing the underlying fiberglass insulation and duct insulation corners. Since the location of the asbestos parging compound is sporadic, all duct insulation labeled *'ASBESTOS'* in red stencil markings is considered asbestos or contaminated with asbestos.

- Lineal pipe runs with asbestos-containing insulation are marked *'ASBESTOS'* in red stencil.

- All mud compound samples collected were found to contain asbestos, with the exception of Samples #16 and #32 collected from within the Penthouse Mechanical Room. *All fittings marked with a red dot of spray paint contain asbestos mud compound*. Unmarked insulation (including pipe runs, fittings, and pipe hangers) in areas deemed inaccessible should be considered asbestos containing until further testing can be conducted.

- Vessels that are insulated with asbestos-containing material are clearly labeled *'ASBESTOS'* in red stencil. All insulation on such a vessel is to be considered asbestos or contaminated with asbestos.

- Asbestos-containing vinyl floor tile was identified within the South Stairwell. Refer to Appendix II – Floor Plans for the location of this material. This material is considered non-friable and will not produce an airborne fibre release unless mechanically disturbed.

- Asbestos-containing ceiling texture was identified within the South and North-West Stairwells. Refer to Appendix II – Floor Plans for the location of this material.

- Asbestos-containing stipple ceiling texture was identified within the Main Stairwell, Theatre, Basement Lobby, Inquiry Desk area of the Main Floor and the Second Floor Lobby. Refer to Appendix II – Floor Plans for the location of this material. Note: Minor patchwork to the stipple ceiling texture within the theatre was completed June 21, 2001.

- A number of repairs to the asbestos-containing material within the Basement Boiler Room were completed June 21, 2001 following the Boiler Room Clean-up Project.

- Any unmarked material enclosed within ceiling spaces, wall cavities or other inaccessible areas should be considered asbestos containing until testing of the material can determine the presence or absence of asbestos.

While conducting the survey of the Frances Morrison Library, asbestos containing materials were assessed and given a priority rating of One, Two or Three, with One being the items requiring the most immediate attention.

RECOMMENDATIONS:

The following information is a list of observations and recommendations with regards to the Asbestos Containing Materials located within the Frances Morrison Library. Some of the areas have been revised as a result of the reassessment and some of the areas listed below remain as per the original assessment.

A. PENTHOUSE MECHANICAL ROOM

1. Asbestos containing spray-applied insulation was identified within the Air Plenum located within the Penthouse Mechanical Room. The material had previously been enclosed with drywall. However, the drywall has deteriorated due to water damage and some of the drywall has broken off thus exposing the asbestos containing material above. Due to the location of this material and the high potential for disturbance, our recommendation is for the removal of this material in order to prevent an uncontrolled fibre release. The asbestos containing spray was removed from the air plenum. If the air handling unit is ever removed or dismantled caution should be used to investigate whether fireproofing is present within any areas that may have been inaccessible areas prior.

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

2. Seven (7) asbestos-containing pipe elbows were identified within the Air Plenum located within the Penthouse Mechanical Room. These fittings were observed in moderate/ good condition with a low/moderate potential for disturbance. Bersch & Associates Ltd. recommends that all seven (7) fittings be managed until such time as removal is scheduled. A priority 2 is allocated to these fittings as a result of their location.

PRIORITY:	**TWO**
CONDITION:	**MODERATE/GOOD**
POTENTIAL FOR DISTURBANCE:	**LOW/MODERATE**
ACTION:	**COMPLETED 2012**

3. Exposed spray-applied insulation was observed along the West wall of the Penthouse Mechanical Room. A number of pipes and valves within this area are located half way into the wall cavity and as such the drywall was cut away to accommodate the piping system. Bersch & Associates recommends caulking to isolate these open wall cavities to prevent disturbance of the ACM material behind. The exposed asbestos containing material was previously encapsulated but over time the encapsulant has deteriorated. Recommendation is for the removal of approximately 150 ft^2 (10ft x 15ft) due to the high potential for disturbance. The removal of the portion of wall originally viewed has been completed.

PRIORITY:	**ONE**
CONDITION:	**MODERATE**
POTENTIAL FOR DISTURBANCE:	**MODERATE**
ACTION:	**COMPLETED 2012**

4. Eight (8) asbestos-containing pipe elbows were identified at floor level directly East of the Elevator Pulley Room in the Penthouse Mechanical Room. These fittings were observed in moderate condition but due to their location have a high potential for disturbance. Bersch & Associates Ltd. recommends that these fittings be removed in order to avoid an accidental fibre release. The eight (8) asbestos containing pipe elbows have been removed, there are still asbestos pipe elbows in the room but they have been observed in good condition.

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

5. Three (3) asbestos-containing pipe elbows were identified at ceiling level directly West of the Air Plenum in the Penthouse Mechanical Room. These fittings were observed in poor condition and should be removed to prevent further deterioration and possible fibre release. The recommended action of removing three (3) asbestos containing pipe elbows was completed and the asbestos was removed.

   PRIORITY: **THREE**
   CONDITION: **GOOD**
   POTENTIAL FOR DISTURBANCE: **LOW**
   ACTION: **COMPLETED**

6. The drywall material enclosing the spray-applied wall insulation along the North and West walls is showing signs of water damage along the floor of the penthouse Mechanical Room. It can be assumed that the underlying asbestos containing material is deteriorating as well. Holes were observed in the drywall and exposed asbestos containing material was present. Bersch & Associates Ltd. recommends that the lower wall portion be repaired to obtain an airtight seal to isolate the wall cavity from the Penthouse Mechanical Room.

   PRIORITY: **ONE**
   CONDITION: **POOR**
   POTENTIAL FOR DISTURBANCE: **HIGH**
   ACTION: **COMPLETED 2012**

7. The wall cavity located along the South wall of the Penthouse Mechanical Room contains spray-applied insulation. Removal of the material is not possible due to the restricted access to this area. The access to this area is currently sealed with a poly barrier. Recommendation is for the erection of a permanent barrier employing drywall and steel studs in order to seal off the access and create an airtight cavity. We also recommend the floor around the area be HEPA vacuumed, the pipe penetrations to be sealed off and encapsulate the asbestos fire proofing material present at this location. When the door to the air-handling unit is opened while the fan unit is operating a significant draw can be observed from the wall cavity behind the drywall. This moves air across the fireproofing which in turn may release fibres into the penthouse mechanical room area. This is the primary reason for our recommendation to seal all areas in which airflow may occur from behind the drywall area.

   PRIORITY: **ONE**
   CONDITION: **MODERATE**
   POTENTIAL FOR DISTURBANCE: **HIGH**
   ACTION: **ENCLOSED 2012**

8. Numerous penetrations were observed in the drywall enclosing the spray-applied asbestos containing material on the walls and ceiling throughout the Penthouse Mechanical Room. The edges of the drywall where they meet the structural beams should also be sealed off. Gaps in the drywall were observed at pipe penetrations, electrical outlets and beam penetrations. Bersch & Associates Ltd. recommends all gaps / breeches be sealed off with a silicone-based sealant or polyurethane for larger holes. Assuming any material used to seal be fire-rated.

   PRIORITY: **ONE**
   CONDITION: **MODERATE**
   POTENTIAL FOR DISTURBANCE: **MODERATE/HIGH**
   ACTION: **COMPLETED 2012**

9. The duct joint canvass within the Penthouse Mechanical Room was identified as containing asbestos. This material was observed in good condition with a moderate potential for disturbance. Bersch & Associates Ltd. recommends that this material be replaced with non-asbestos expansion joint canvass as regular maintenance activity is performed on the mechanical system. The duct joint canvass has been removed and replaced.

   PRIORITY: **FOUR**
   CONDITION: **GOOD**
   POTENTIAL FOR DISTURBANCE: **LOW**
   ACTION: **COMPLETE / REPLACED**

B. SECOND FLOOR

1. Four (4) exposed asbestos-containing pipe elbows were identified within the ceiling space along the South Wall (above Southwest cubicle in Technical Services area) on the Second Floor. Recommendation is for the repair of these fittings to prevent an unintentional fibre release. The pipeline fittings have been repaired. The remaining fittings were observed in good condition.

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

2. Asbestos 12” x 12” vinyl floor tile is present in the office adjacent the freight elevator. No immediate action is required as the floor tile is in good condition**.**
   PRIORITY: **FOUR**
   CONDITION: **GOOD**
   POTENTIAL FOR DISTURBANCE: **LOW**
   ACTION: **MANAGE**

3. Asbestos ceiling texture is present within the lobby area. No immediate action is required at this time as the ceiling texture was in good condition.

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

C. MAIN FLOOR

1. A damaged asbestos-containing pipe elbow was observed within the ceiling space of the Main Floor in the Southwest corner of the Collections area above Shelf 001 – 155. Most of this fitting has already fallen off. Bersch & Associates Ltd. recommends that the remainder of the fitting be removed and the area directly below the damaged fitting HEPA vacuumed to remove all accumulations of asbestos and debris. The pipeline fitting has been removed and the debris vacuumed. Manage the remaining pipeline fittings present throughout the area.

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

2. Three (3) damaged asbestos-containing pipe elbows were identified within the ceiling space of the Main Floor along the South wall above the office directly East of the Public Washrooms. The fittings have deteriorated and pieces have broken off and fallen to the ceiling tile below. Recommendation is for the removal of these fittings to prevent further deterioration and avoid an accidental fibre release. A thorough HEPA vacuuming of the ceiling tiles directly below the deteriorated fittings will be conducted to ensure all accumulations of asbestos and debris are thoroughly cleaned from the ceiling tile surfaces. The fittings have been re-canvassed and remain in good condition.

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

3. Five (5) damaged asbestos-containing pipe elbows were observed in the ceiling space of the Main Floor above the Foreign Book section (East wall). Asbestos debris was also observed on the ceiling tile below the fittings. Bersch & Associates Ltd. recommends that the fittings be removed and the area directly below HEPA vacuumed in order to avoid an uncontrolled fibre release. The fittings have been removed and the area vacuumed. Management of the remaining pipeline fittings is the recommended activity.

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

4. Five (5) damaged asbestos-containing pipe elbows were observed in the ceiling space of the Main Floor above the Community Services Satellite Office (East wall). Bersch & Associates Ltd. recommends that the fittings be removed and the area directly below HEPA vacuumed to ensure that all debris is removed from this area. The fittings have been removed and the area vacuumed. Management of the remaining pipeline fittings is the recommended activity.

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

5. Two (2) damaged asbestos-containing pipefittings were identified within the ceiling space of the Main Floor in the Southeast corner along the South perimeter wall. The fittings have deteriorated and have started to break off the pipe leaving asbestos-containing debris on the ceiling tile below. Recommendation is for the removal of these fittings and HEPA vacuuming of the ceiling tile immediately below the fittings to ensure all debris is removed. The fittings have been removed and the area vacuumed. Management of the remaining pipeline fittings is the recommended activity.

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

6. Approximately twelve (12) damaged asbestos-containing fittings were observed within the Main Floor ceiling space above the Travel Book section. These fittings were observed in poor condition with debris present on the ceiling tile below. Bersch & Associates Ltd. recommends that the fittings be removed to avoid an accidental fibre release. In addition, a thorough HEPA vacuuming of the area directly below the fittings is recommended. The fittings have been removed and the area vacuumed. Management of the remaining pipeline fittings is the recommended activity.

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

7. Two (2) damaged asbestos-containing fittings were observed within the ceiling space of the Main Floor above the Staff Office located directly West of the South stairwell. Bersch & Associates Ltd. was unable to mark these fittings due to their location. However, the fittings were observed in poor condition and removal is recommended to prevent further deterioration. The fittings have been removed and the area vacuumed. Management of the remaining pipeline fittings is the recommended activity.

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

8. An exposed asbestos-containing pipe elbow was observed within the ceiling space of the Loading area on the Main Floor. Removal or re-canvassing of the fitting is recommended in order to avoid an unintended fibre release. The fittings have been removed and the area vacuumed. Management of the remaining pipeline fittings is the recommended activity.

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

9. Ten (10) exposed asbestos-containing fittings were identified within the Main Floor ceiling space above the Photocopy area (South of Circulation Service desk). The fittings were observed in moderate condition with a moderate potential for disturbance. Bersch & Associates Ltd. recommends that the fittings be repaired to prevent an accidental fibre release. The fittings have been re-canvassed and remain in good condition.

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

10. Approximately twenty-five (25) asbestos-containing fittings were identified on the lineal pipe run within the ceiling space of the Main Floor extending from the Discharge area to the Public Computer area. These fittings should be re-canvassed in order to avoid an inadvertent fibre release. The fittings have been re-canvassed and remain in good condition.

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

11. Two (2) exposed asbestos-containing pipe fitting elbows were identified within the Main Floor ceiling space above Shelf 001-155 in the South-West corner of the Collections area of the library. Recommendation for repair of the fittings in order to prevent an uncontrolled fibre release. The fittings have been re-canvassed and remain in good condition.

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

12. Asbestos-containing fittings were identified within the Main Floor ceiling space in the Northwest corner (South of North-West stairwell). Seven (7) exposed fittings were observed in this area. Repair of the fittings is recommended to prevent deterioration and possible fibre release. The fittings have been re-canvassed and remain in good condition.

    One (1) damaged asbestos-containing pipeline fitting in Northwest area on the ceiling tile between shelves 925-930 and 930-940. The fitting debris lying on the ceiling tile should be cleaned up and disposed of and the partial fitting remaining on the pipeline should be removed as per the glovebag removal method. The upper ceiling tile surface area should also be HEPA vacuumed.

    PRIORITY: **ONE**
    CONDITION: **POOR**
    POTENTIAL FOR DISTURBANCE: **MODERATE / HIGH**
    ACTION: **COMPLETED 2012**

13. Two (2) exposed asbestos-containing fittings within the Main Floor ceiling space above Shelf 823 – 839 were identified. Recommendation is for the repair of these fittings in order to avoid an unintentional fibre release. The fittings have been re-canvassed and remain in good condition.

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

14. Asbestos-containing fittings were identified within the Main Floor ceiling space along the North perimeter wall above Shelf 912 – 915. Six (6) exposed fittings were observed in this area. Bersch & Associates Ltd. recommends that these fittings be re-canvassed in order to avoid an uncontrolled fibre release. The fittings have been re-canvassed and remain in good condition.

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

15. Ten (10) exposed asbestos-containing fittings were identified within the ceiling space of the Main Floor along the South wall above the office directly East of the Public Washrooms. Recommendation is for the repair of these fittings to prevent an accidental fibre release. The fittings have been removed. Management of the remaining pipeline fittings is the recommended activity.

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

16. Seven (7) exposed asbestos-containing fittings were observed within the Main Floor ceiling space two columns South of the Circulation Services Desk. Repair of these fittings is recommended to prevent an unintentional fibre release. The fittings have been re-canvassed and remain in good condition.

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

17. Asbestos-containing fittings were identified above the General Fiction area in the Main Floor ceiling space. Four (4) exposed fittings were observed in this area. Bersch & Associates Ltd. recommends that these fittings be re-canvassed to prevent deterioration and possible fibre release. The fittings have been re-canvassed and remain in good condition.

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

18. Two (2) exposed asbestos-containing fittings were observed within the ceiling space directly East of the Main Entrance on the Main Floor. Recommendation is for the repair of these fittings to prevent an inadvertent fibre release. The fittings have been re-canvassed and remain in good condition.

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

19. Asbestos-containing pipe fitting compound was identified within the Main Entrance ceiling space above the Main Doors. Three (3) exposed asbestos-containing fittings were identified within this area. Bersch & Associates Ltd. recommends that these fittings be re-canvassed in order to avoid an accidental fibre release. The fittings have been re-canvassed and remain in good condition.

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

20. Four (4) exposed asbestos-containing fittings were identified within the ceiling space of the Main Floor above the Foreign Book section (East perimeter wall). Repair of the fittings is recommended to prevent further deterioration and avoid a possible fibre release. The fittings have been re-canvassed and remain in good condition.

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

21. Asbestos-containing fittings were identified within the Main Floor ceiling space above the Community Services Satellite Office (East perimeter wall). Ten (10) exposed fittings were observed in this area. Bersch & Associates Ltd. recommends that these fittings be repaired in order to prevent an uncontrolled fibre release. The fittings have been re-canvassed and remain in good condition.

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

22. Six (6) exposed asbestos-containing fittings were observed within the Main Floor ceiling space in the Southeast corner along the perimeter walls. Recommendation is for the re-canvassing of these fittings to prevent further deterioration and possible fibre release. The fittings have been re-canvassed and remain in good condition.

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

23. Asbestos was detected in the grey backing material of the vinyl countertop located along the West wall of the Discharge area on the Main Floor. This material is considered non-friable and will not produce an airborne fibre release unless mechanically disturbed. This material was observed in good condition and may be managed in place until renovation activity warrants prior removal.

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

24. Asbestos ceiling texture is present within the Inquiry desk area. No immediate action is required at this time as the ceiling texture was in good condition.

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

D. MEZZANINE

1. Three (3) exposed asbestos-containing fittings were identified in the Mezzanine directly South of the Book Cart Lift. Exposed mud compound was observed at each pipe hanger along the lineal pipe run. Enclosing the mud compound in canvas is recommended to prevent further deterioration and possible fibre release. The fittings have been re-canvassed and remain in good condition.

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

2. One (1) exposed asbestos containing "t" joint was been identified in the South-East corner of the Mezzanine adjacent "Canadian Patent Office Record" books, adjacent green "Jenkins" valve. Bersch and Associates Ltd. recommend that the exposed "t" joint be canvassed or removed to prevent further damage.

PRIORITY:	**TWO**
CONDITION:	**MODERATE**
POTENTIAL FOR DISTURBANCE:	**MODERATE**
ACTION:	**COMPLETED 2012**

E. BASEMENT

1. Asbestos-containing pipe elbows were identified within the ceiling space of the Theatre. Twelve (12) fittings were observed in poor condition (note: four of the elbows remain unmarked due to inaccessibility). Bersch & Associates Ltd. recommends that these fittings be removed to prevent further deterioration and possible fibre release. Six (6) asbestos elbows have been removed from the theater and six (6) fittings remain in the southeast corner above the stage, but have been observed in good condition.

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

2. Asbestos-containing fittings were identified within the ceiling space of the Community Relations Office located in the Basement. Eight (8) exposed fittings were observed in this area. Recommendation is for the repair of these fittings to avoid an inadvertent fibre release. The fittings have been re-canvassed and remain in good condition.

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

3. Twenty-three (23) exposed asbestos-containing fittings were identified within the ceiling space of the Computer Training Room located in the Basement. Bersch & Associates Ltd. recommends that these fittings be re-canvassed to prevent further deterioration and possible fibre release. The fittings have been re-canvassed and remain in good condition.

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

4. Two (2) exposed asbestos-containing fittings were identified within the ceiling space of the Writer in Residence Room located in the Basement. Repair of these fittings is recommended to prevent an uncontrolled fibre release. The fittings have been re-canvassed and remain in good condition.

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

5. Asbestos was detected in the grey backing material of the vinyl countertop on the service counter located in the Kitchen area of the Basement. This material is considered non-friable and will not produce an airborne fibre release unless mechanically disturbed. This material was observed in good condition and may be managed in place until renovation activity warrants prior removal. The asbestos countertop has been removed and replaced with a non-asbestos countertop. No further action required.

6. Asbestos-containing duct joint canvass was identified within the Basement Boiler Room. The asbestos-containing duct joint canvass has been marked with red paint. Bersch & Associates Ltd. recommends that this material be replaced with non-asbestos expansion joint canvass as regular maintenance activity is performed on the mechanical system.

   PRIORITY: **TWO**
   CONDITION: **GOOD**
   POTENTIAL FOR DISTURBANCE: **MODERATE**
   ACTION: **REMOVE – LOW RISK**

7. Asbestos rope gasket was identified within the Basement Boiler Room. The outer gasket located at both ends of Boilers #1 and #2 contains asbestos. These gaskets have been marked with red paint for identification. Bersch & Associates Ltd. recommends that these gaskets be replaced with non-asbestos gasket material as regular maintenance is conducted on the boilers.

   PRIORITY: **TWO**
   CONDITION: **GOOD**
   POTENTIAL FOR DISTURBANCE: **MODERATE**
   ACTION: **REMOVE**

8. Asbestos transite board was found along the east wall of the boiler room, behind the single faced transformer and is identified with an asbestos warning label. Bersch and Associates Ltd. recommends managing the transite board as it has been observed in good condition.

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

9. Asbestos lineal pipe insulation debris was found on top of the main breaker box of the boiler room. Bersch and Associates Ltd. recommends to remove the debris and HEPA vacuum the top of the breaker box.

PRIORITY:	**ONE**
CONDITION:	**POOR**
POTENTIAL FOR DISTURBANCE:	**MODERATE / HIGH**
ACTION:	**COMPLETED 2012**

10. Asbestos 12" x 12" vinyl floor tile was found in the staff room, maintenance office, and the theater. No immediate action is required at this time as the floor tiles were in good condition**.**

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

11. Asbestos ceiling texture is present within the ceiling space of the theater and lobby area. No immediate action is required at this time as the ceiling texture was in good condition.

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

12. Asbestos containing spray-applied fireproofing material was identified on the ceiling of the Boiler Room. The material has been encapsulated in the past and remains in good condition. The recommendation to eventually remove the material in order to prevent an accidental release of fibres due to the material dislodging from the concrete surface. The material is in an environment where vibration and air movement is present.

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

F. SOUTH STAIRWELL

1. Asbestos 12" x 12" floor tile on some stairs and landings. No immediate action is required at this time as the floor tile was in good condition.

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

2. Asbestos ceiling texture is present within the stairwell. No immediate action is required at this time as the ceiling texture was in good condition.

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

G. MAIN STAIRWELL

1. Asbestos 12" x 12" floor tile on some stairs and landings. No immediate action is required at this time as the floor tile was in good condition.

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

2. Asbestos ceiling texture is present within the stairwell. No immediate action is required at this time as the ceiling texture was in good condition.

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

4.0 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.

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

For the specifics of this report Removal, Repair, Enclose and Management of the asbestos containing materials are the recommended planned activities. The recommendation is set forth to manage the asbestos containing materials that are in good condition and present a low potential for disturbance, until such time as renovation work is scheduled for the area housing the asbestos material. At this time the asbestos shall require removal if the renovations shall pose a potential for disturbance thus releasing asbestos fibres into the adjacent area.

Bersch & Associates Ltd. is available to assist in the re-inspection of the friable asbestos containing materials as per the Occupational Health and Safety Regulations for the Province of Saskatchewan. The regulations stipulate, at minimum the inspection to be performed annually by a competent person to confirm that the material is not releasing and is not likely to release asbestos dust into the atmosphere.

5.0 REFERENCES

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

.2 Province of Saskatchewan Human Resources, Labour, 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 Hazardous Substances and waste Dangerous Goods Regulations, Saskatchewan Environment, April 1989

Bersch & Associates Ltd.
361 Broad Street
Regina, Sask. S4R 1X2

BULK SAMPLE ANALYSIS REPORT

PROJECT NO. B67.01
CLIENT: CITY OF SASKATOON
FRANCES MORRISON LIBRARY

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	OTHER	ANALYST
1	06/18/01	Basement Boiler Room Green Lineal F/G Pipe Run Pipe Fitting Compound	Chrysotile	60	N/F Material	WB
2	06/18/01	Basement Boiler Room Vessel in N.W Corner Parging Compound	Chrysotile	70	N/F Material	WB
3	06/18/01	Basement Boiler Room Grey Lineal F/G Pipe Run Compound at Valve	Chrysotile	70	N/F Material	WB
4	06/18/01	Basement Boiler Room Grey Lineal F/G Pipe Run Pipe Fitting Compound	Chrysotile	80	N/F Material	WB
5	06/18/01	Basement Boiler Room Boiler #2 Outer Rope Gasket Material	Chrysotile	80	N/F Material	WB
6	06/18/01	Basement Boiler Room Boiler #2 Inner Rope Gasket Material	None		Glass Fibre N/F Material	WB
7	06/18/01	Basement Boiler Room Ceiling Spray-Applied Insulation	Chrysotile	60	N/F Material	WB
8	06/18/01	Basement Boiler Room Adjacent Water Heater Pipe Fitting Compound	Chrysotile	80	N/F Material	WB

N/F - Non Fibrous

Bersch & Associates Ltd.
361 Broad Street
Regina, Sask. S4R 1X2

BULK SAMPLE ANALYSIS REPORT

PROJECT NO. B67.01
CLIENT: CITY OF SASKATOON
FRANCES MORRISON LIBRARY

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	OTHER	ANALYST
9	06/18/01	Basement Boiler Room Boiler #2 Boiler Insulation	None		Glass Fibre N/F Material	WB
10	06/18/01	Basement Boiler Room Fresh Air Duct - South Wall Parging Compound	Chrysotile	70	N/F Material	WB
11	06/18/01	Basement Boiler Room Boiler #2 Breaching Lineal Pipe Insulation	Chrysotile	70	N/F Material	WB
12	06/18/01	Basement Boiler Room Duct Expansion Material White	Chrysotile	30	Glass Fibre N/F Material	WB
13	06/18/01	Basement Boiler Room Duct Expansion Material Black	None		Glass Fibre N/F Material	WB
14	06/18/01	Penthouse Mechanical Room Inside Air Plenum Pipe Fitting Compound	Chrysotile	70	N/F Material	WB
15	06/18/01	Basement Boiler Room East Wall - Electrical Area Wall Board	Chrysotile	60	N/F Material	WB
16	06/18/01	Penthouse Mechanical Room West Wall Pipe Fitting Compound	None		Glass Fibre N/F Material	WB

N/F - Non Fibrous

Bersch & Associates Ltd.
361 Broad Street
Regina, Sask. S4R 1X2

BULK SAMPLE ANALYSIS REPORT

PROJECT NO. B67.01
CLIENT: CITY OF SASKATOON
FRANCES MORRISON LIBRARY

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	OTHER	ANALYST
17	06/18/01	Penthouse Mechanical Room Duct Expansion Material White	Chrysotile	30	N/F Material	WB
18	06/18/01	Penthouse Mechanical Room West Wall Spray-Applied Insulation	Chrysotile	70	N/F Material	WB
19	06/18/01	South Stairwell 12" x 12" Vinyl Floor Tile Beige with Brown Streaks	Chrysotile	1 to 5	Quartz Vinyl N/F Material	WB
20	06/18/01	Basement Theatre Stage Pipe Fitting Compound	Chrysotile	80	N/F Material	WB
21	06/18/01	Mezzanine North-West Corner Pipe Fitting Compound	Chrysotile	70	N/F Material	WB
22	06/18/01	Mezzanine North-West Corner 9" x 9" Vinyl Floor Tile	None		Quartz Vinyl N/F Material	WB
23	06/18/01	Mezzanine Adjacent Book Cart Lift Compound at Pipe Hanger	Chrysotile	70	N/F Material	WB
24	06/19/01	Main Floor Discharge Area Vinyl Counter Top	Chrysotile	40	Vinyl N/F Material	WB

N/F - Non Fibrous

Bersch & Associates Ltd.
361 Broad Street
Regina, Sask. S4R 1X2

BULK SAMPLE ANALYSIS REPORT

PROJECT NO. B67.01
CLIENT: CITY OF SASKATOON
FRANCES MORRISON LIBRARY

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	OTHER	ANALYST
25	06/19/01	Main Floor Discharge Area 12" x 12" Vinyl Floor Tile (Checker)	None		Quartz Vinyl N/F Material	WB
26	06/19/01	Main Floor Loading Area Pipe Fitting Compound	Chrysotile	30	Glass Fibre Mineral Wool N/F Material	WB
27	06/19/01	Main Floor Adjacent Public Washrooms 12" x 12" Vinyl Floor Tile	None		Quartz Vinyl N/F Material	WB
28	06/19/01	Main Floor Adjacent Circulation Service Desk Pipe Fitting Compound	Chrysotile	70	N/F Material	WB
29	06/19/01	Second Floor Gallery Pipe Fitting Compound	Chrysotile	60	N/F Material	WB
30	06/19/01	Second Floor Technical Services Area 2' x 4' Ceiling Tile	None		Cellulose N/F Material	WB
31	06/19/01	Main Stairwell - Ceiling Stipple Ceiling Texture	Chrysotile	1 to 5	N/F Material	WB
32	06/19/01	Penthouse Mechanical Room North Wall Pipe Fitting Compound	None		Cellulose Glass Fibre N/F Material	WB

N/F - Non Fibrous

Bersch & Associates Ltd.
361 Broad Street
Regina, Sask. S4R 1X2

BULK SAMPLE ANALYSIS REPORT

PROJECT NO. B67.01
CLIENT: CITY OF SASKATOON
FRANCES MORRISON LIBRARY

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	OTHER	ANALYST
33	06/19/01	South Stairwell Textured Ceiling	Chrysotile	15	Vermiculite N/F Material	WB
34	06/20/01	Basement Theatre - Above South Aisle Stipple Ceiling Texture	Chrysotile	1 to 5	N/F Material	WB
35	06/21/01	Basement Theatre - Above North Aisle Stipple Ceiling Texture	None		N/F Material	WB

N/F - Non Fibrous

Bersch Consulting Ltd.

October 22, 2019

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

ATTENTION: Tanner Huynink

SUBJECT: Bulk Sample Analysis Report – Frances Morrison Library

Please find attached the laboratory results for the bulk sample received on October 22, 2019 from the Frances Morrison Library located at 311 – 23rd Street East, 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
Bersch Consulting Ltd.
B67BLJ17I – Frances Morrison

Bulk Sample Analysis Report

October 22, 2019

Project Number: B67.19

Client: City of Saskatoon

Contact: Tanner Huynink

Location: Frances Morrison Library

File Number: B67BAJ17I

Sample Number	Sample Date	Sample Material	Sample Location and Information	Asbestos	%	Analyst
1	2019/10/17	Mastic	South stairwell. On back of black baseboards along stairs.	No Asbestos Detected		EMSL/WB

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 2, 2019

City of Saskatoon
311-23rd Street East,
Saskatoon, SK
S7K 0J6

ATTENTION: Paul Lummerding

SUBJECT: Bulk Sample Analysis Report

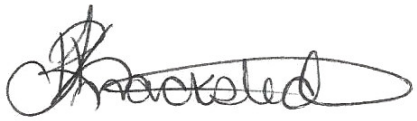
Please find attached the laboratory results for the bulk sample collected on April 29, 2019 from the Frances Morrison Library in Saskatoon, SK. The sample was analyzed for the identification of asbestos. Asbestos **was not** detected within the sample.

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.
B67BLD29I- Frances Morrison Library

Bulk Sample Analysis Report

May 2, 2019

Project Number: B67.19

Client: City of Saskatoon

Contact: Paul Lummerding

Location: Frances Morrison Library – Stair Risers

File Number: B67BAD29I

Sample Number	Sample Date	Sample Material	Sample Location and Information	Asbestos	%	Analyst
1	2019/04/29	Black Vinyl Matting	South Stairwell Along the Stair Risers	No Asbestos Detected		WB

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.

February 28, 2019

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

ATTENTION: Nathan Hahn

SUBJECT: Bulk Sample Analysis Report

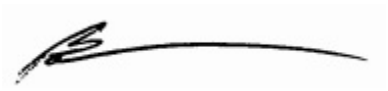
Please find attached the laboratory results for the bulk sample received on February 20, 2019 from Frances Morrison Library, Saskatoon, Saskatchewan. The sample was analyzed for the identification of asbestos. Asbestos **was not** detected within the sample.

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,



Brad Berschiminsky
Bersch Consulting Ltd.
B67BLB20I- Frances Morrison Library

Bulk Sample Analysis Report

February 28, 2019

Project Number: B67.19

Client: City of Saskatoon

Contact: Nathan Hahn

Location: Frances Morrison Library – Lunch Room, 2nd Floor, Men Washroom Sinks

File Number: B67BAJ23H

Sample Number	Sample Date	Sample Material	Sample Location and Information	Asbestos	%	Analyst
1	2018/02/20	Arborite Adhesive	Lunch Room, 2nd Floor, Men Washroom Sinks	No Asbestos Detected		WB

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.

October 25, 2018

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 October 23, 2018 from Frances Morrison Library, Saskatoon, Saskatchewan. The sample was analyzed for the identification of asbestos. Asbestos **was** 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,

Brad Berschiminsky
Bersch Consulting Ltd.
B67BLJ23H- Frances Morrison Library

Bulk Sample Analysis Report

October 25, 2018

Project Number: B67.18

Client: City of Saskatoon

Contact: Tanner Huynink

Location: Frances Morrison Library – North Stairwell

File Number: B67BAJ23H

Sample Number	Sample Date	Sample Material	Sample Location and Information	Asbestos	%	Analyst
1	2018/10/23	Glazing Caulking	Main Floor – North Stairwell on Landing Between Main and Second - Black Glazing Caulking from the Exterior and Interior of Broken Pane.	Chrysotile	2%	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.

July 16, 2018

The City of Saskatoon
Facilities & Fleet Division
1101 Avenue P North
Saskatoon, Saskatchewan
S7L 7K6

ATTENTION: Tanner Huynink

SUBJECT: Bulk Sample Analysis Report

Please find attached the laboratory results for the bulk sample collected July 12, 2018 from the Frances Morrison Library located at 311 23rd Street East, Saskatoon, Sk. The sample was analyzed for the identification of asbestos. Asbestos **was** detected within the sample.

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.

Sincerely,

Evan Westad
Bersch Consulting Ltd.
B67BLG12H

Bulk Sample Analysis Report

July 16, 2018

Project Number: B67.18

Client: City of Saskatoon

Contact: Tanner Huynink

Location: Frances Morrison Library

File Number: B67BAG12H

Sample Number	Sample Date	Sample Material	Sample Location and Information	Asbestos	%	Analyst
1a	2018/07/12	Vinyl Floor Tile	2nd Floor- South Side Outside Elevator- Beige w Dark Brown Streak Floor Tile	Chrysotile	3%	EMSL
1b	2018/07/12	Mastic	2nd Floor- South Side Outside Elevator- Beige w Dark Brown Streak Floor Tile Mastic	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.

June 4, 2018

City of Saskatoon
Facilities & Fleet Division
1101 Avenue P North
Saskatoon, Saskatchewan
S7L 7K6

ATTENTION: Hazel Fernandez

SUBJECT: Bulk Sample Analysis Report

Please find attached the laboratory results for the bulk sample collected May 24, 2018 from the Frances Morrison Library located at 311 23rd Street East, Saskatoon, Sk. The sample was analyzed for the identification of asbestos. Asbestos **was not** detected within the sample.

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.

Sincerely,

Tyneal Knackstedt, B.S.A., M.SEM.
Bersch Consulting Ltd.
B67BLE24H

Bulk Sample Analysis Report

June 4, 2018

Project Number: B67.18

Client: City of Saskatoon

Contact: Hazel Fernandez

Location: Frances Morrison Library

File Number: B67BAE24H

Sample Number	Sample Date	Sample Material	Sample Location and Information	Asbestos	%	Analyst
1	2018/05/24	Vinyl Floor Tile	Main Floor South Stairwell- 12”x12” Beige w Brown Brush Strokes Floor Tile	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.

Site Investigation

May 23, 2018

Client: City of Saskatoon
Facilities and Fleet Division
1101 Avenue P North
Saskatoon, Saskatchewan
S7L 7K6

Attention: Hazel Fernandez

File Number: B67SIE23H – Frances Morrison Library Custodian

Project: Frances Morrison Library Custodian– Investigation of Ceiling Space

Tyneal Knackstedt of Bersch Consulting Ltd. conducted a site investigation of the Frances Morrison Library located at 311 23 Street East, Saskatoon, Saskatchewan. The purpose of the site investigation was to inspect the custodian room ceiling space for the presence of asbestos. A City of Saskatoon worker removed a lighting fixture and discovered suspect asbestos-containing material laying on the ceiling surface within the ceiling space. One (1) bulk sample was collected and analyzed for the identification of asbestos. Asbestos **was** detected within the sample.

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. Please reference **Appendix I** for the bulk analysis results.

Within the ceiling space lineal fiberglass insulation was laying on the ceiling surface. Pieces of damaged pipefitting compound was also discovered laying on the ceiling surface adjacent where the light fixture was removed. Refer to **Appendix II** for Site Photos. A sample of the pipefitting compound was collected and analyzed for the presence of asbestos. Asbestos was detected within the sample.

Replacing of the light fixtures within the custodian room will require low risk cleanup of the ceiling space by an asbestos abatement contractor to ensure safety of the workers. It is recommended the ceiling surface within the ceiling space be cleaned by bagging the large pieces of debris and vacuuming of the surface with a vacuum equipped with a HEPA filter. Pipefitting compound is still visible on the elbow of the pipe and should be removed utilizing low risk glovebagging procedures.

The opening is currently closed off with plastic and caution tape. Warning signs are placed by the opening. There is no concern of exposure to the workers or to the worker that discovered the suspect material.

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,

Tyneal Knackstedt, B.S.A., M.SEM.
Bersch Consulting Ltd.
B67SIE23H- Frances Morrison Library Custodian

Appendix I

Bulk Sample Analysis

Bulk Sample Analysis Report

May 23, 2018

Project Number: B67.18

Client: City of Saskatoon

Contact: Hazel Fernandez

Location: Frances Morrison Library – Custodian Room

File Number: B67BAE23H

Sample Number	Sample Date	Sample Material	Sample Location and Information	Asbestos	%	Analyst
1	2018/05/23	Pipefitting Compound	Custodian Room – Basement – Ceiling Space	Chrysotile	20%	EMSL/WB

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.

Appendix II

Site Photos

Figure 1. Removed Light Fixture. Access to Ceiling Space.

Figure 2. Fibreglass Pipe Insulation Laying on Ceiling Surface.

Figure 3. Damaged Pipefitting Compound from Above Elbow Laying on Ceiling Surface.

Figure 4. Elbow with Damaged Pipefitting Compound Within Ceiling Space.

BERSCH
CONSULTING LTD.

October 12, 2017

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

ATTENTION: Ryan Mcdougall / Hazel Fernandez

SUBJECT: Bulk Sample Analysis Report – Frances Morrison Library

Please find attached the laboratory results for the bulk sample collected on October 6, 2017 from the Frances Morrison Library located at 311 23 Street East, 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, B.S.A., M.SEM.
Bersch Consulting Ltd.
B67BLJ06G – Frances Morrison Library

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

B67BAJ06G

BULK SAMPLE ANALYSIS REPORT

PROJECT NO: **B67.17**
CLIENT: **CITY OF SASKATOON**
CONTACT: **RYAN MCDOUGALL / HAZEL FERNANDEZ**
LOCATION: **FRANCES MORRISON LIBRARY**

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
1	6-Oct-17	Custodial / Security Break Room - Drywall Mud Compound Around Light Fixture	No Asbestos Detected		EMSL

BERSCH
CONSULTING LTD.

August 16, 2017

City of Saskatoon
3130 Laurier Drive
Saskatoon, SK
S7L 5J7

ATTENTION: Audrey Van Dijk

SUBJECT: Bulk Sample Analysis Report – Frances Morrison Library

Please find attached the laboratory results for the bulk samples collected August 15, 2017 from the Frances Morrison Library located at 311 23rd Street East in Saskatoon, SK. 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, B.S.A., M.SEM.
Bersch Consulting Ltd.
B67BLH15G

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

B67BAH15G

BULK SAMPLE ANALYSIS REPORT

PROJECT NO: B67.17
CLIENT: CITY OF SASKATOON
CONTACT: AUDREY VAN DIJK
LOCATION: FRANCES MORRISON LIBRARY

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
1	15-Aug-17	2nd Floor Admin -Grey Plaster	No Asbestos Detected		EMSL
2	15-Aug-17	2nd Floor Admin - White Drywall Plaster	No Asbestos Detected		EMSL
3	15-Aug-17	1st Floor Library - Ceiling Tile	No Asbestos Detected		EMSL

BERSCH
CONSULTING LTD.

August 15, 2017

City of Saskatoon
222 3rd Avenue North
Saskatoon, SK
S7K 0J5

ATTENTION: Ian Banks

SUBJECT: Bulk Sample Analysis Report – Frances Morrison Library

Please find attached the laboratory results for the bulk samples collected August 11, 2017 from the Frances Morrison Library located at 311 23rd Street East in Saskatoon, SK. The samples were analyzed for the identification of asbestos. Asbestos **was** 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, B.S.A., M.SEM.
Bersch Consulting Ltd.
B67BLH15G

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

B67BAH11G

BULK SAMPLE ANALYSIS REPORT

PROJECT NO: B67.17
CLIENT: CITY OF SASKATOON
CONTACT: IAN BANKS
LOCATION: FRANCES MORRISON LIBRARY

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
1a	11-Aug-17	2nd Floor Admin - Yellow/Beige Floor Tile	Chrysotile	4%	EMSL
1b	11-Aug-17	2nd Floor Admin - Brown Mastic	No Asbestos Detected		EMSL
2	11-Aug-17	2nd Floor Admin - Gray Leveler Compound	No Asbestos Detected		EMSL

BERSCH CONSULTING LTD.

April 26th, 2017

City of Saskatoon
222 3rd Avenue North
Saskatoon, SK
S7K 0J5

ATTENTION: Nathan Hahn

SUBJECT: Pre-Renovation Assessment – Frances Morrison Library – IT Room.

Mitch Webber and Evan Westad of Bersch Consulting Ltd. conducted a site visit on April 21st, 2017 to investigate the plaster wall in room 201 to determine the presence/absence of asbestos content. The facility is located at 311 23rd Street East, Saskatoon, SK. One bulk sample was collected from room 201and analyzed for the identification of asbestos. During the analysis of the sample, the laboratory had to break the sample down into two samples; one plaster and one skim coat. Asbestos **was not** detected in either sample. Based on the bulk sample results and site investigation, there does not appear to be an asbestos concern that would reflect on the whiteboard installation in room 201.

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.

The block wall adjacent entry to the room was also drilled into, resulting in a hollow block cavity. No insulation was observed in the block walls.

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,

Mitch Webber
Bersch Consulting Ltd.

File No.: B67BLD21G – F.M.L – IT Room

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

B67BAD21G

BULK SAMPLE ANALYSIS REPORT

PROJECT NO: B67.17
CLIENT: CITY OF SASKATOON
CONTACT: NATHAN HAHN
LOCATION: FRANCES MORRISON LIBRARY - 311 23RD STREET EAST, SASKATOON, SK

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
1a	21-Apr-17	201 - Plaster Base Coat - Gray	No Asbestos Detected		WB
1b	21-Apr-17	201 - Plaster Skim Coat - White	No Asbestos Detected		WB

BERSCH & ASSOCIATES LTD.

November 14th, 2016

The City of Saskatoon
222 3rd Avenue North
Saskatoon, SK
S7K 0J5

ATTENTION: Karen Sinclair

SUBJECT: Bulk Sample Analysis Report PRA for Frances Morrison Library

Karen Sinclair with the City of Saskatoon had requested Bersch & Associates to perform some bulk sample testing prior to some renovations that are planned for the 2nd floor Admin Area within Frances Morrison Library and the Basement. Samples were collected to determine the presence/absence of asbestos prior to renovations commencing. Below are the results for the samples taken.

Please find attached our laboratory's results for the bulk samples collected November 9th, 2016 from Frances Morrison Library located at 311 23rd Street East, Saskatoon, SK. The samples were analyzed in our laboratory for the identification of asbestos. Asbestos **was** 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,

Brad Berschiminsky
Bersch & Associates Ltd.

File No. – B67BLK09F – Frances Morrison Library

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

B67BAK09F

BULK SAMPLE ANALYSIS REPORT

PROJECT NO: B67.16
CLIENT: CITY OF SASKATOON
CONTACT: KAREN SINCLAIR
LOCATION: FRANCES MORRISON LIBRARY - 311 23RD STREET EAST, SASKATOON, SK

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
1	9-Nov-16	2nd Floor Admin Area Corridor - 2' x 4' Ceiling Tile Pin Hole & Fissure Pattern	No Asbestos Detected		WB
2	9-Nov-16	2nd Floor Admin Area Bathroom - Caulking From Sink	No Asbestos Detected		WB
3a	9-Nov-16	2nd Floor Admin Area Corridor - Plaster Skim Coat on Wall Adj. Bathroom	No Asbestos Detected		WB
3b	9-Nov-16	2nd Floor Admin Area Corridor - Plaster Base Coat on Wall Adj. Bathroom	No Asbestos Detected		WB
4	9-Nov-16	2nd Floor Admin Area Kitchen - 1' x 1' Floor Tile Gray w/ Black Streak/Spec	Chrysotile	1-10%	WB
5a	9-Nov-16	2nd Floor Admin Area Adj. Copier - Plaster Skim Coat	No Asbestos Detected		WB
5b	9-Nov-16	2nd Floor Admin Area Adj. Copier - Plaster Base Coat	No Asbestos Detected		WB

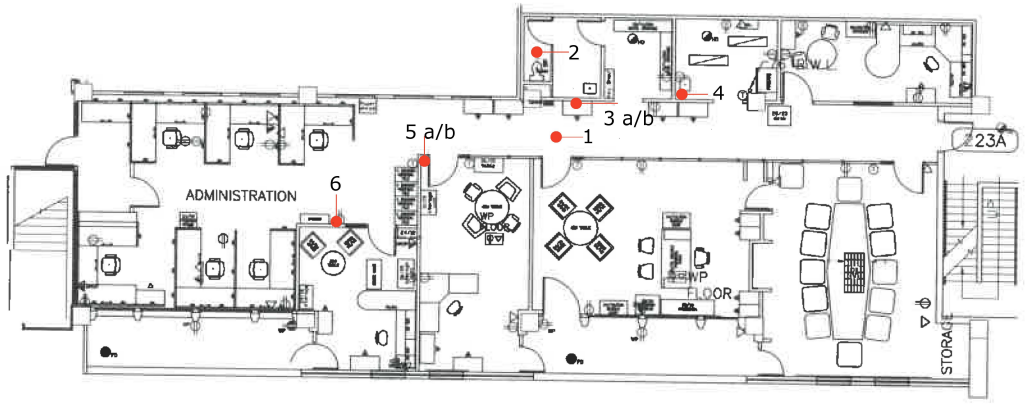
Bersch & Associates Ltd.
244-2002 Quebec Avenue
Saskatoon, SK S7K 1W4

B67BAK09F

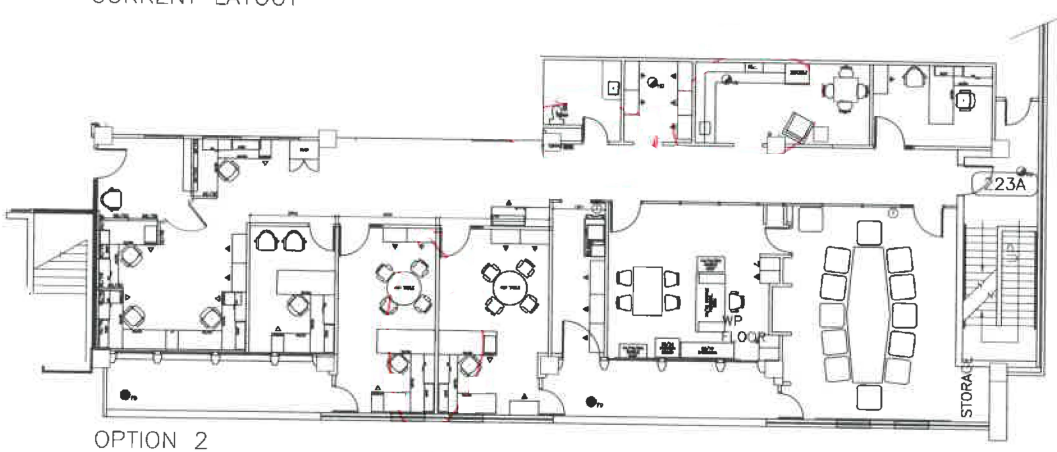
BULK SAMPLE ANALYSIS REPORT

PROJECT NO: B67.16
CLIENT: CITY OF SASKATOON
CONTACT: KAREN SINCLAIR
LOCATION: FRANCES MORRISON LIBRARY - 311 23RD STREET EAST, SASKATOON, SK

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
6	9-Nov-16	2nd Floor Admin Area Adj. Admin Area - Panel Board	No Asbestos Detected		WB
7	9-Nov-16	Basement Area - Drywall Mud Compound	No Asbestos Detected		WB



CURRENT LAYOUT



OPTION 2

City of Saskatoon

Asset & Financial Management 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:
KS	JEL	KS	

SCALE: 1:125

DATE: 21/07/2016

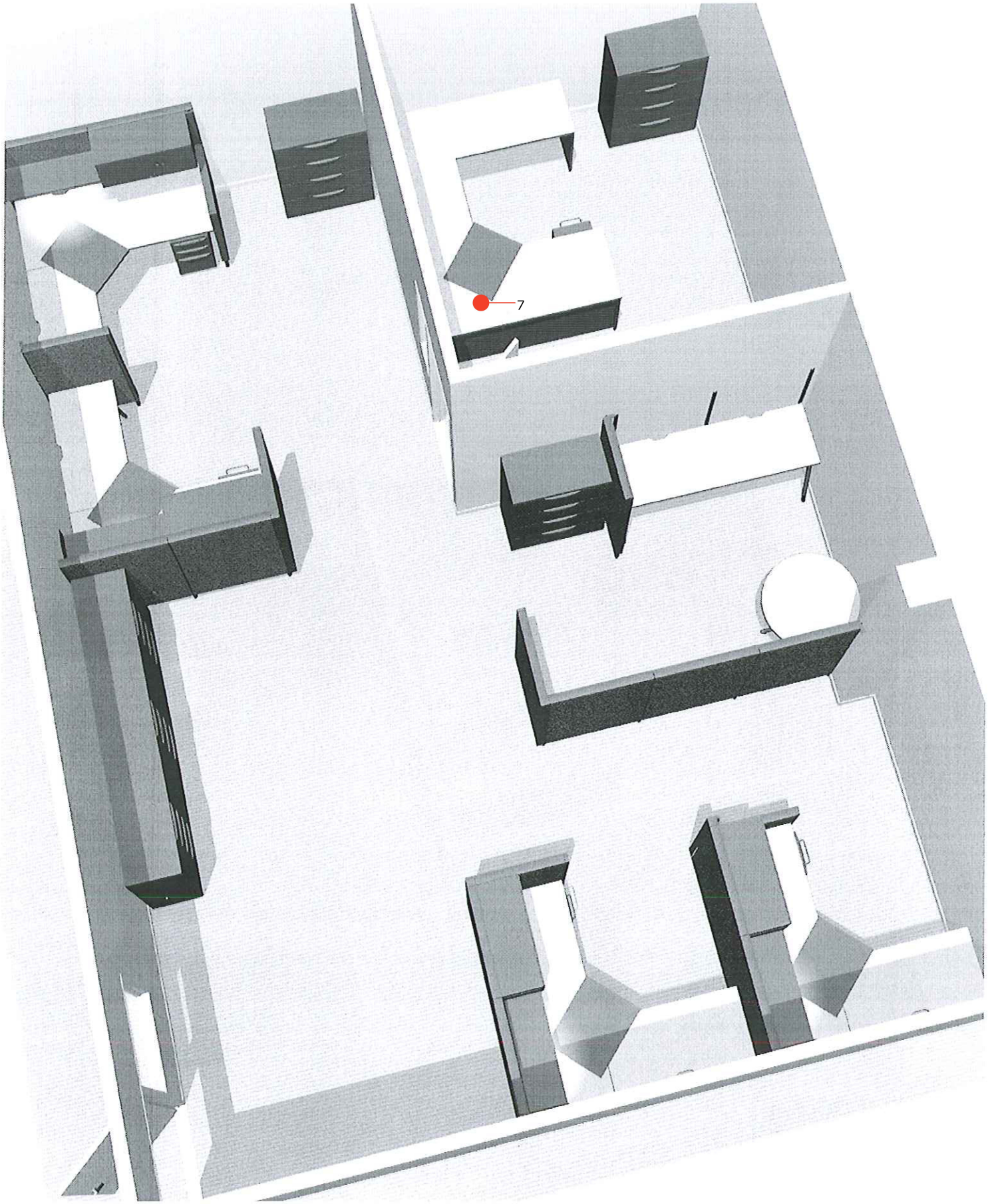
SHEET NAME:
SECOND FLOOR FURNITURE PLAN

PROJECT TITLE:
651 - FRANCES MORRISON LIBRARY

PROJECT NO.: 651-15-2

SHEET: 1

REV. NO.: 0



CITY OF SASKATOON
FINANCE MOVE - 651-0FLR-RM B33
MARCH 16, 2016

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hbi office plus inc.