

# NARRATIVE REPORT

## 1.0 BUILDING INFORMATION

The Library building was originally constructed in 1949; a 1978 addition extended the building to the south. During this addition, the 1949 building was also renovated; after the 2000 flood the basement of the 1949 and 1978 buildings were partially renovated.

The Library building is a three-story, 102,933 ft<sup>2</sup> building which primarily serves as classroom and office areas for library personnel.

The interior floor finishes included carpet, ceramic tile, floor tile, and concrete; the interior wall finishes included gypsum wallboard, marble, plaster, wood, brick, concrete block, and concrete; and the interior ceiling finishes included ceiling tile, plaster, and concrete. The roofing system is a flat rubber-membrane roof and the exterior of the structure is brick.

The piping systems were insulated; fiberglass insulation (with and without hard fittings), aircell insulation (with hard fittings), and millboard insulation (with hard fittings) are located throughout the building. Steam enters the building in room 22 and domestic water enters the building in room 20A. HVAC systems located in the building consisted of steam radiators, steam unit heaters, and forced air furnaces equipped with heating/cooling coils.

## 2.0 ASBESTOS SURVEY INFORMATION

The Library building was surveyed as part of a larger project on NDSU's Fargo, ND Campus. This report is part of "Volume 2" of a nine volume series. This report includes building specific information only; please refer to the opening section of "Volume 2" for methodologies, definitions, and other pertinent supporting information.

A total of 168 samples were collected from suspect asbestos-containing materials (ACM) from the Library building on August 31, 2007 and an additional 5 samples were collected on May 14, 2008. Laboratory analysis results indicate **37 of these samples tested positive for asbestos.**

### 2.1 Suspect Materials Identified and Sampled

Plaster- Monocoat	Gypsum Wallboard (3 types)
Joint Compound (3 types)	Wall Texture
Ceiling Texture (3 types)	Ceiling Tile (11 types)
Linoleum	Underlayment Paper for Linoleum
Floor Tile (9 types)	Floor Tile Mastic (9 types)
Stair Tread Material (2 types)	Stair Tread Adhesive (2 types)
Sink Undercoating (2 types)	Floor Filler Material
Pyrobar	Tank Insulation (2 types)
Baseboard Adhesive (4 types)	Carpet Mastic (5 types)
Rainleader Bowl Insulation	Hard Fitting on Fiberglass Insulation
Encapsulant on Fiberglass Insulation (3 types)	Aircell Pipe Insulation
Hard Fitting on Aircell Insulation	Millboard Pipe Insulation
Hard Pack on Millboard Insulation	Hard Pack on Aircell Insulation
Hard Fitting on Millboard Insulation	HVAC Canvas Wrap
Hard Pack on Fiberglass Insulation	Black AHU Putty (3 types)
Window Caulk (2 types)	Gray HVAC Duct Caulk (3 types)

Penetration Putty (2 types)  
 Exterior Window Glazing  
 Exterior Window Glazing on Door (2 types)  
 Exterior Door Caulk  
 Exterior Building Seam Caulk (3 types)

HVAC Canvas Connector (2 types)  
 Exterior Air Vent Caulk  
 Exterior Penetration Putty (2 types)  
 Exterior Window Caulk (2 types)  
 Foundation Tar Coating

The Asbestos Bulk Sample Results Table includes asbestos sampling data.

2.2 **Asbestos Containing Materials**

Soft Ceiling Plaster (above texture)  
 2'x4' Off-White Ceiling Tile with Widthwise Fissures and Pinholes  
 Mastic for 12" White Floor Tile with Red and Green Marks  
 Mastic for 12" Tan/ Brown Floor Tile  
 12" Red Floor Tile  
 12"x18" Black Perimeter Floor Tile  
 Mastic for 12" Gray/Brown Mottled Floor Tile  
 Pink Sink Undercoating  
 Aircell Pipe Insulation  
 Hard Fitting on Aircell Insulation  
 Hard Pack on Aircell Insulation  
 Millboard Pipe Insulation  
 Hard Fitting on Millboard Insulation  
 Hard Pack on Millboard Insulation  
 Encapsulant on Fiberglass Insulation  
 Black AHU Putty  
 Gray HVAC Duct Caulk  
 Penetration Putty (around wire into VAV box)  
 Window Glazing  
 Exterior Air Vent Caulk  
 Exterior Penetration Putty (on sensors)  
 Exterior Door Caulk  
 Exterior Window Glazing on Door (1 type)  
 Exterior Foundation Tar Coating  
 Exterior Window Caulk (1 type)  
 9" Floor Tile and Mastic (assumed)

The ACM Locations/ Friable Materials Assessments Table includes ACM locations data.

2.3 **Cost Estimates**

Legend Technical Services Inc. estimates abatement costs (removal & disposal) of ACM for Library as follows:

ACM	QUANTITY	UNIT COST	TOTAL COST
Asbestos Floor Tile and/or Mastic	2,429 ft <sup>2</sup>	\$4.00/ft <sup>2</sup>	\$9,716.00
Asbestos Sink Undercoating	3 ea	\$150.00/ea	\$450.00
Asbestos Foundation Tar Coating	164 ft	\$10.00/ft	\$1,640.00
Asbestos Window Glazing (all types)	7 ea	\$225.00/ea	\$1,575.00

Asbestos Window Caulk	74 ea	\$125.00/ea.	\$9,250.00
Asbestos Window Glazing on Door	1 ea	\$225.00/ea	\$225.00
Asbestos Encapsulant on Fiberglass Insulation	50 ft	\$60.00/ft	\$3,000.00
Asbestos Aircell Pipe Insulation	218 ft	\$25.00/ft	\$5,450.00
Asbestos Hard Fittings on Aircell Insulation	22 ea	\$25.00/ea	\$550.00
Asbestos Millboard Pipe Insulation	405 ft	\$25.00/ft	\$10,125.00
Asbestos Hard Fittings on Millboard Insulation	15 ea	\$25.00/ea	\$375.00
Asbestos Penetration Putty (all types)	22 ea	\$60.00/ea	\$1,320.00
Asbestos Ceiling Tile	327 ft <sup>2</sup>	\$5.00/ft <sup>2</sup>	\$1,635.00
Asbestos Ceiling Plaster	719 ft <sup>2</sup>	\$7.50/ft <sup>2</sup>	\$5,392.50
Asbestos Air Vent Caulk	2 ea	\$125.00/ea	\$250.00
Asbestos Door Caulk	2 ea	\$125.00/ea	\$250.00
Asbestos AHU Putty	1 ea	\$1,000.00/ea	\$1,000.00
Asbestos HVAC Duct Caulk	3 ea	\$60.00/ea	\$180.00
<b>Total Estimated Abatement Costs:</b>			<b>\$52,383.50</b>

#### 2.4 Survey Notes

LEGEND identified and sampled 2 separate types (homogeneous areas) of Exterior Window Caulk; from the 1949 building and from the 1978 building. The exterior window caulk on the 1949 building tested positive for asbestos; the exterior window caulk on the 1978 building tested negative for asbestos.

LEGEND identified and sampled Black AHU Putty from 3 separate types (homogeneous areas) of AHUs: a medium-sized AHU in room 20A; a small-sized AHU in room 100; and a large- sized AHU in room 302. The black AHU putty on the large-size AHU in the southeast corner of room 302 tested positive for asbestos, only.

LEGEND identified and sampled 3 separate types (homogeneous areas) of Encapsulant on Fiberglass Insulation; from the 1978 renovation/addition (in the 1949 and 1978 buildings), from the renovations after the 2000 flood (in the basement of the 1949 building), and from an unknown renovation (in the north end of 2<sup>nd</sup> floor). The encapsulant on fiberglass insulation from the 1978 renovation/addition (in the 1949 and 1978 buildings) tested positive for asbestos, only.

LEGEND identified and collected a sample of hard pack on aircell insulation (on valves and hangars); the samples tested positive for asbestos (samples #130/131). LEGEND did not quantify the hard pack on aircell insulation; the material can only be abated by abating the aircell pipe insulation and should therefore have no individual costs.

LEGEND identified and collected a sample of hard pack on millboard insulation (on hangars); the sample tested positive for asbestos (sample #135). LEGEND did not quantify the hard pack on millboard insulation; the material can only be abated by abating the millboard pipe insulation and should therefore have no individual costs.

LEGEND identified and collected samples of Mastic for 12" White Floor Tile with Green Marks (installed during the renovations after the 2000 flood) from room 20E and room 14D. LEGEND

noted residual black mastic mixed with the new tan mastic in room 20E and only the new tan mastic in room 14D; the residual black mastic mix in room 20E tested positive for asbestos. NDSU records indicate the residual black mastic from previous flooring should have been abated from room 20E. LEGEND recommends assuming the residual black mastic mix is throughout room 20E until a destructive survey can be performed to verify the extent of the material.

LEGEND identified and sampled a Penetration Putty from above the ceiling in room 130 (using an access panel by room 130B). The penetration putty is on a variable air volume (VAV) box supplying air to room 130B. An electric wire passes through the side of the box and a small amount of putty was used to seal around this penetration; this material is the ACM Penetration Putty.

LEGEND identified and sampled 3 separate types (homogeneous areas) of Gray HVAC Duct Caulk from; room 6, hallway 88, and room 100. The gray HVAC duct caulk in room 6 tested positive for asbestos, only; this gray HVAC duct caulk is only in room 6.

LEGEND identified 3 separate types (homogeneous areas) of floor tile in room 120; a 12" Red Floor Tile and 12"x18" Black Perimeter Floor Tile from the north end of the room and an Unknown White/Gray Floor Tile from the south end of the room. The 2 floor tiles in the north end of the room tested positive for asbestos and the unknown floor tile in the south end of the room tested negative for asbestos. LEGEND was unable to determine the extent of the 2 ACM floor tiles below the carpet; a destructive survey should be performed in the future prior to renovation/demolition to verify the extent and quantities of the 2 ACM floor tiles.

LEGEND identified and sampled a Soft Ceiling Plaster above the popcorn ceiling texture in the central stairway and above ceiling tile and popcorn ceiling texture in hallway 188, room 201, room 201A, room 201B, and hallway 288. This layer of Soft Ceiling Plaster tested positive for asbestos.

**LEGEND TECHNICAL SERVICES, INC.**  
ACM LOCATIONS/FRIABLE MATERIALS ASSESSMENTS TABLE

LEGEND No. 0700048 (NDSU)  
LIBRARY (A012)

ROOM/ ACM	ASBESTOS TYPE	EST. QUANTITY	ACM TYPE	MATERIAL CONDITION	DAMAGE POTENTIAL	LOW MOD HIGH	ASSES. CAT. <sup>1</sup>	NOTES
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**Room 6** Now 6A

Gray HVAC Duct Caulk	10% Chrysotile	3 ea	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos caulk is above the ceiling tile on a duct leading to a vent through the ceiling tile; it is on the east end of the room.
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**Room 14A**

Encapsulant on Fiberglass Insulation	3-5% Chrysotile	1 ft	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos encapsulant on fiberglass insulation is above the ceiling tile along the west end of the room.
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**Room 16**

Penetration Putty (around wire into VAV box)	10% Chrysotile	1 ea	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos penetration putty is on the VAV box above the ceiling tile on the east end of the room.
Encapsulant on Fiberglass Insulation	3-5% Chrysotile	1 ft	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos encapsulant on fiberglass insulation is above the ceiling tile along the west end, adjacent to room 16J.

**Room 18**

Penetration Putty (around wire into VAV box)	10% Chrysotile	2 ea	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos penetration putty is on the 2 VAV boxes above the ceiling tile on the west end of the room.
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**Room 18A**

Mastic for 12" Tan/Brown Floor Tile	3% Chrysotile	48 ft <sup>2</sup>	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The mastic for 12" floor tile contains asbestos; the floor tile is negative.
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**Room 18F**

Mastic for 12" Tan/Brown Floor Tile	3% Chrysotile	202 ft <sup>2</sup>	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The mastic for 12" floor tile contains asbestos; the floor tile is negative.
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\* = Non-Friable materials were not assessed

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**Room 20C** Now 20D2

Aircell Pipe Insulation	50% Chrysotile	2 ft	Friable TSI	Damaged	Physical Air Erosion Vibration	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	1	The asbestos aircell insulation is on the east end of the room where the pipes pass through the wall from room 22.
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**Room 20E** Now 20F

Mastic for 12" White Floor Tile with Red and Green Marks	3% Chrysotile	67 ft <sup>2</sup>	Non-friable Miscellaneous	N/A*	N/A*	N/A*	N/A*	The mastic for 12" floor tile contains asbestos; the floor tile is negative; see note in section 2.4.
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**Room 22**

Aircell Pipe Insulation	50% Chrysotile	213 ft	Friable TSI	Damaged	Physical Air Erosion Vibration	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	1	The asbestos aircell insulation is on the west end of the room.
Hard Fittings on Aircell Insulation	40% Chrysotile	22 fittings	Friable TSI	Damaged	Physical Air Erosion Vibration	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	1	None
Millboard Pipe Insulation	40% Chrysotile	405 ft	Friable TSI	Significantly Damaged	Physical Air Erosion Vibration	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	1	The asbestos millboard insulation is on the west and south ends of the room.
Hard Fittings on Millboard Insulation	40% Chrysotile	15 fittings	Friable TSI	Significantly Damaged	Physical Air Erosion Vibration	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	1	None
Encapsulant on Fiberglass Insulation	3-5% Chrysotile	11 ft	Non-friable Miscellaneous	N/A*	N/A*	N/A*	N/A*	The asbestos encapsulant on fiberglass insulation is along the south end of the room; primarily at the ceiling level.

**Stairway 77S2**

9" Floor Tile and Mastic	Assumed	20 ft <sup>2</sup>	Non-friable Miscellaneous	N/A*	N/A*	N/A*	N/A*	The 9" floor tile and mastic are assumed ACMs.
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\* = Non-Friable materials were not assessed

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**Stairway 77S3**

9" Floor Tile and Mastic	Assumed	20 ft <sup>2</sup>	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The 9" floor tile and mastic are assumed ACMs.
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**Hallway 88**

Aircell Pipe Insulation	50% Chrysotile	1 ft	Friable TSI	Good	Physical Air Erosion Vibration	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	7	The asbestos aircell insulation is above the ceiling tile adjacent to room 10 on a pipe passing through the concrete ceiling.
Encapsulant on Fiberglass Insulation	3-5% Chrysotile	1 ft	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos encapsulant on fiberglass insulation is above the ceiling tile adjacent to room 12A.

**Room 100**

Aircell Pipe Insulation	50% Chrysotile	1 ft	Friable TSI	Damaged	Physical Air Erosion Vibration	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	1	The asbestos aircell insulation is on the west end of the room at the ceiling level on a pipe passing through the room.
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**Room 101**

9" Floor Tile and Mastic	Assumed	70 ft <sup>2</sup>	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The 9" floor tile and mastic are assumed ACMs.
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**Room 105** Abated Feb 2013

9" Floor Tile and Mastic	Assumed	25 ft <sup>2</sup>	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The 9" floor tile and mastic are assumed ACMs.
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**Room 108A**

Mastic for 12" Tan/Brown Floor Tile	3% Chrysotile	86 ft <sup>2</sup>	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The mastic for 12" floor tile contains asbestos; the floor tile is negative.
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\* = Non-Friable materials were not assessed

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**Room 108B**

Mastic for 12" Tan/Brown Floor Tile	3% Chrysotile	57 ft <sup>2</sup>	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The mastic for 12" floor tile contains asbestos; the floor tile is negative.
Pink Sink Undercoating	10% Chrysotile	1 sink	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos undercoating is on a sink along the west wall.

**Room 114**

Penetration Putty (around wire into VAV box)	10% Chrysotile	1 ea	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos penetration putty is on the VAV box above the ceiling tile on the south end of the room.
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**Room 114B**

Window Glazing	15% Chrysotile	1 window	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos glazing is on the window along the west wall.
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**Room 114C**

Window Glazing	15% Chrysotile	1 window	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos glazing is on the window along the west wall.
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**Room 114D**

Penetration Putty (around wire into VAV box)	10% Chrysotile	1 ea	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos penetration putty is on the VAV box above the ceiling tile on the east end of the room.
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**Room 118**

Penetration Putty (around wire into VAV box)	10% Chrysotile	1 ea	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos penetration putty is on the VAV box above the ceiling tile south of room 118C.
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\* = Non-Friable materials were not assessed



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**Room 118A**

Penetration Putty (around wire into VAV box)	10% Chrysotile	1 ea	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos penetration putty is on the VAV box above the ceiling tile on the east end of the room.
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**Room 118B**

Penetration Putty (around wire into VAV box)	10% Chrysotile	1 ea	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos penetration putty is on the VAV box above the ceiling tile on the south end of the room.
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**Room 118C**

Penetration Putty (around wire into VAV box)	10% Chrysotile	1 ea	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos penetration putty is on the VAV box above the ceiling tile on the north end of the room.
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**Room 118E**

Penetration Putty (around wire into VAV box)	10% Chrysotile	4 ea	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos penetration putty is on the 4 VAV boxes above the ceiling tile in the room.
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**Room 118F**

Penetration Putty (around wire into VAV box)	10% Chrysotile	1 ea	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos penetration putty is on the VAV box above the ceiling tile on the east end of the room.
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**Room 118G**

Penetration Putty (around wire into VAV box)	10% Chrysotile	1 ea	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos penetration putty is on the VAV box above the ceiling tile in the middle of the room.
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<b>Room 120 and 120C</b> <span style="border: 1px solid red; padding: 2px;">120 C Portion Abated May 2015</span> <span style="border: 1px solid red; padding: 2px;">Abated November 2023</span>								
<del>12" Red Floor Tile</del>	5% Chrysotile	287 ft <sup>2</sup>	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The 12" floor tile contains asbestos; the floor tile mastic is negative (under carpet).
<del>12"x18" Black Perimeter Floor Tile</del>	5% Chrysotile	334 ft <sup>2</sup>	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The 12"x18" floor tile contains asbestos; the floor tile mastic is negative (under carpet).
<b>Room 120A</b>								
9" Floor Tile and Mastic	Assumed	382 ft <sup>2</sup>	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The 9" floor tile and mastic are assumed ACMs.
Encapsulant on Fiberglass Insulation	3-5% Chrysotile	2 ft	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos encapsulant on fiberglass insulation is above the ceiling tile along the east end of the room.
<b>Room 120B</b> <span style="border: 1px solid red; padding: 2px;">Now 120A1</span>								
9" Floor Tile and Mastic	Assumed	48 ft <sup>2</sup>	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The 9" floor tile and mastic are assumed ACMs.
<b>Room 120C</b> <span style="border: 1px solid red; padding: 2px;">Now 120B</span>								
Pink Sink Undercoating	10% Chrysotile	1 sink	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos undercoating is on a sink along the south wall.
<b>Room 130</b>								
Penetration Putty (around wire into VAV box)	10% Chrysotile	2 ea	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos penetration putty is on the 2 VAV boxes above the ceiling tile; there is one VAV boxes adjacent to each access panel.

\* = Non-Friable materials were not assessed

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**Room 130A**

<del>12" Red Floor Tile</del> <b>Abated May 2015</b>	5% Chrysotile	287 ft <sup>2</sup>	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The 12" floor tile contains asbestos; the floor tile mastic is negative (only the southeast corner is not under carpet).
<del>12"x18" Black Perimeter Floor Tile</del> <b>Abated May 2015</b>	5% Chrysotile	40 ft <sup>2</sup>	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The 12"x18" floor tile contains asbestos; the floor tile mastic is negative (only the southeast corner is not under carpet).
<del>Pink Sink Undercoating</del> <b>Abated May 2015</b>	10% Chrysotile	1 sink	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos undercoating is on a sink in the northwest corner.
<del>2'x4' Ceiling Tile with Widthwise Fissures and Pinholes</del> <b>Abated May 2015</b>	3% Amosite	327 ft <sup>2</sup>	Friable Surfacing	Good	Physical Air Erosion Vibration	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	6	None

**Stairway 177S2**

9" Floor Tile and Mastic	Assumed	55 ft <sup>2</sup>	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The 9" floor tile and mastic are assumed ACMs.
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**Stairway 177S3** **Abated May 2015**

<del>9" Floor Tile and Mastic</del>	Assumed	55 ft <sup>2</sup>	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The 9" floor tile and mastic are assumed ACMs.
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**Hallway 188**

Soft Ceiling Plaster (above texture)	3% Chrysotile	96 ft <sup>2</sup>	Friable Surfacing	Good	Physical Air Erosion Vibration	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	7	The asbestos plaster is above the popcorn ceiling texture and the ceiling tile adjacent to room 101.
Aircell Pipe Insulation	50% Chrysotile	1 ft	Friable TSI	Damaged	Physical Air Erosion Vibration	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	1	The asbestos aircell insulation is above the ceiling tile adjacent to room 100; it is on the same pipe as in room 100.

\* = Non-Friable materials were not assessed

**LEGEND TECHNICAL SERVICES, INC.**  
ACM LOCATIONS/FRIABLE MATERIALS ASSESSMENTS TABLE

LEGEND No. 0700048 (NDSU)  
LIBRARY (A012)

ROOM/ ACM	ASBESTOS TYPE	EST. QUANTITY	ACM TYPE	MATERIAL CONDITION	DAMAGE POTENTIAL	LOW MOD HIGH	ASSES. CAT. <sup>1</sup>	NOTES
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**Hallway 188D**

Mastic for 12" Gray/Brown Mottled Floor Tile	10% Chrysotile	31 ft <sup>2</sup>	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The mastic for 12" floor tile contains asbestos; the floor tile is negative.
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**Hallway 188E**

Mastic for 12" Gray/Brown Mottled Floor Tile	10% Chrysotile	31 ft <sup>2</sup>	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The mastic for 12" floor tile contains asbestos; the floor tile is negative.
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**Room 199W1**

9" Floor Tile and Mastic	Assumed	66 ft <sup>2</sup>	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The 9" floor tile and mastic are assumed ACMs.
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**Room 200A**

9" Floor Tile and Mastic	Assumed	12 ft <sup>2</sup>	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The 9" floor tile and mastic are assumed ACMs.
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**Room 201**

Soft Ceiling Plaster (above texture)	3% Chrysotile	40 ft <sup>2</sup>	Friable Surfacing	Significantly Damaged	Physical Air Erosion Vibration	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	3	The asbestos plaster is above the popcorn ceiling texture and the ceiling tile on the south end of the room, only.
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**Room 201B**

Soft Ceiling Plaster (above texture)	3% Chrysotile	20 ft <sup>2</sup>	Friable Surfacing	Significantly Damaged	Physical Air Erosion Vibration	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	3	The asbestos acoustic plaster is above the popcorn ceiling texture and the ceiling tile on the south end of the room, only.
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\* = Non-Friable materials were not assessed

**LEGEND TECHNICAL SERVICES, INC.**  
ACM LOCATIONS/FRIABLE MATERIALS ASSESSMENTS TABLE

LEGEND No. 0700048 (NDSU)  
LIBRARY (A012)

ROOM/ ACM	ASBESTOS TYPE	EST. QUANTITY	ACM TYPE	MATERIAL CONDITION	DAMAGE POTENTIAL	LOW MOD HIGH	ASSES. CAT. <sup>1</sup>	NOTES
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**Room 205** Abated March 2013

<del>9" Floor Tile and Mastic</del>	Assumed	25 ft <sup>2</sup>	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The 9" floor tile and mastic are assumed ACMs.
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**Room 211**

12" Red Floor Tile	5% Chrysotile	63 ft <sup>2</sup>	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The 12" floor tile contains asbestos; the floor tile mastic is negative.
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**Room 214**

Penetration Putty (around wire into VAV box)	10% Chrysotile	1 ea	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos penetration putty is on the VAV box above the ceiling tile in the east end of the room.
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**Room 214A**

Window Glazing	15% Chrysotile	4 windows	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos glazing is on the windows along the west wall.
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**Room 218**

Penetration Putty (around wire into VAV box)	10% Chrysotile	2 ea	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos penetration putty is on the 2 VAV boxes above the ceiling tile in the west end of the room.
Encapsulant on Fiberglass Insulation	3-5% Chrysotile	4 ft	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos encapsulant on fiberglass insulation is above the ceiling tile south of rooms 214B and 214C.

**Room 220A**

9" Floor Tile and Mastic	Assumed	16 ft <sup>2</sup>	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The 9" floor tile and mastic are assumed ACMs.
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\* = Non-Friable materials were not assessed

**LEGEND TECHNICAL SERVICES, INC.**  
ACM LOCATIONS/FRIABLE MATERIALS ASSESSMENTS TABLE

LEGEND No. 0700048 (NDSU)  
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ROOM/ ACM	ASBESTOS TYPE	EST. QUANTITY	ACM TYPE	MATERIAL CONDITION	DAMAGE POTENTIAL	LOW MOD HIGH	ASSES. CAT. <sup>1</sup>	NOTES
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**Stairway 277S2**

9" Floor Tile and Mastic	Assumed	51 ft <sup>2</sup>	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The 9" floor tile and mastic are assumed ACMs.
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**Stairway 277S3**

9" Floor Tile and Mastic	Assumed	51 ft <sup>2</sup>	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The 9" floor tile and mastic are assumed ACMs.
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**Hallway 288**

Soft Ceiling Plaster (above texture)	3% Chrysotile	165 ft <sup>2</sup>	Friable Surfacing	Significantly Damaged	Physical Air Erosion Vibration	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	3	The asbestos plaster is above the popcorn ceiling texture and the ceiling tile adjacent to rooms 201 and 201B.
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**Room 301**

Encapsulant on Fiberglass Insulation	3-5% Chrysotile	30 ft	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos encapsulant on fiberglass insulation is throughout the room.
Black AHU Putty	5% Chrysotile	1 ea	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos black AHU putty is on the air handler unit on the east end of the room.

**Center Stairway (1<sup>st</sup>-2<sup>nd</sup> floor)**

Soft Ceiling Plaster (above texture)	3% Chrysotile	398 ft <sup>2</sup>	Friable Surfacing	Good	Physical Air Erosion Vibration	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	6	The asbestos acoustic plaster is above the popcorn ceiling texture in the stairway.
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**Exterior**

Air Vent Caulk	5% Chrysotile	2 ea	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos caulk is around an air vents on the east and south sides of room 302 (on roof).
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\* = Non-Friable materials were not assessed

**LEGEND TECHNICAL SERVICES, INC.**  
ACM LOCATIONS/FRIABLE MATERIALS ASSESSMENTS TABLE

LEGEND No. 0700048 (NDSU)  
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ROOM/ ACM	ASBESTOS TYPE	EST. QUANTITY	ACM TYPE	MATERIAL CONDITION	DAMAGE POTENTIAL	LOW MOD HIGH	ASSESS. CAT. <sup>1</sup>	NOTES
Penetration Putty (on sensors)	5% Chrysotile	3 ea	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos penetration putty is on the north side of room 302 (on roof).
Door Caulk	5% Chrysotile	2 ea	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos caulk is on the doors on the east side of stairway 377S3 and the south side of room 302 (on roof).
Window Glazing	5% Chrysotile	1 window	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos glazing is on the window on the south side of room 302 (on roof).
Window Glazing on Door	5% Chrysotile	1 door	Non-friable Miscellaneous	N/A*	N/A*		N/A*	The asbestos glazing is on a door window on the east side of stairway 377S3 (on roof); it is the older bottom layer of glazing).
Window Caulk	10% Chrysotile	74 windows	Non-friable Miscellaneous	N/A*	N/A*		N/A*	Refer to ACM Locations Map for further information.
Foundation Tar Coating	10% Chrysotile	164 ft	Non-friable Miscellaneous	N/A*	N/A*		N/A*	Refer to ACM Locations Map for further information.

- 1) Damaged or Significantly Damaged TSI ACM
- 2) Damaged Friable Surfacing ACM
- 3) Significantly Damaged Friable Surfacing ACM
- 4) Damaged or Significantly Damaged Friable Miscellaneous ACM

- 5) ACM with Potential for Damage
- 6) ACM with Potential for Significant Damage
- 7) Any Remaining Friable ACM or Friable Suspected ACM

**End**

\* = Non-Friable materials were not assessed