

APPENDIX C



CONSULTING ENGINEERS
& SCIENTISTS

Tel: 519.823.1311
Fax: 519.823-1316

RWDI AIR Inc.
650 Woodlawn Road West
Guelph, Ontario, Canada
N1K 1B8
Email: solutions@rwdi.com



November 29, 2013

Mr. Richard Ott
Director of Capital Planning
Brandon Regional Health Authority
150 McTavish Avenue East
Brandon, MB R7A 2B3

CC: Brian Schoonbaert
Prairie Mountain Health
BSchoonbaert@pmh-mb.ca

Lara Bossert
Prairie Mountain Health
LBossert@pmh-mb.ca

Laura Shea
Manitoba Health
Laura.Shea@gov.mb.ca

PRIVILEGED AND CONFIDENTIAL

**Re: Report on Public Meetings
Brandon Bio-Med Waste EA
RWDI Reference No. 1301084**

Email: OttR@Brandonrha.mb.ca

Dear Mr. Ott,

Two public meetings were held on the upcoming biomedical waste treatment facility, to be located on the Brandon Hospital campus. The following are the details of the public meetings.

- Two meetings were held in Brandon, the first on Oct. 22 (held at Victoria Inn, 3550 Victoria Avenue West), between the hours of 2 and 8 pm. The second was held on Nov. 13 (at the West Lounge of the Nurses Residence, 150 McTavish Ave. East), also between the hours of 2 and 8 pm. The mail drop and newspaper notices for these events are shown within Appendix A. 2000 mail drop invitations were delivered by Canada Post to neighbourhood residences, within approximately 1 km of the hospital.
- Local radio media were also directly informed of the Nov. 13th meeting in the morning of the event.
- 11 posters were displayed, giving a perspective of the project and studies done to date. These are shown within Appendix B.
- Hospital staff and one representative from RWDI were present at the open houses at all the above-noted times.

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The results from the open houses were as follows:

- Two calls were received regarding the open houses:
 - 1) An older gentleman who didn't understand what the information meeting was about. He thought it had to do with him dropping his old medications off at the hospital; and,
 - 2) A lady phoned who had received the flyer. She was more upset that Canada Post had not delivered in a timely manner and didn't seem concerned about the project. She indicated she may come to the open house on Nov. 13.
- One person (employee from Manitoba Conservation) attended the first meeting. The person was notified of the project with the assistance of the posters. No issues were communicated to the staff or consultant.
- Nine people attended the second meeting. Three attendees were from Manitoba Conservation (main Winnipeg office) and as noted from the October meeting, they were given details of the project. All of the other attendees were residents living within 1 km of the hospital (having received the mail drop invitations). Four of the remaining six were from hospital employee families (one couple and two individuals). The remaining two were a couple who resided on Rideau Street.
- The following is a compendium of the discussion and comments from the attendees:
 - All attendees were notified of the project and its potential impacts.
 - The couple from Rideau were concerned about the number of cancer incidents in their neighbourhood.
 - All attendees wanted to understand the process of treatment, the amount of waste to be delivered and the amount of waste to be autoclaved and incinerated.
 - Two of the attendees wondered if the treatment could be done outside the city.
 - All Brandon attendees wanted to know where the waste would come from.
 - Some attendees asked about the traffic impact of the project.
 - All attendees were pleased that the hospital was communicating the project details and appeared satisfied that the answers given in the open house addressed their questions.
 - Some of the attendees (primarily hospital employees) were pleased to hear that the biomedical waste stream would be segregated into red and yellow streams and that state of the art treatment technology would be installed at the hospital.
- One radio station gave the hospital media spokesperson (Brian Schoonbaert) a short phone interview, although it is not known if this was aired. The primary questions surrounded the details of the project.

No further comments, either from the media or public, have been received to date.

Yours very truly,

RWDI AIR Inc.


Peter Klaassen, B.Eng., MBA, P.Eng.
Senior Consultant

PMK/NCK/hta

Attach.

APPENDIX A

Proposed Replacement of the Bio Medical Waste Treatment Facility

Prairie Mountain Health, with consultants from RWDI Consulting Engineers & Scientists, is currently undertaking an Environmental Assessment for the proposed replacement of a **Bio Medical Waste Treatment Facility** for the Province of Manitoba. This facility will be located on the current site within the Brandon Regional Health Centre campus.

Prairie Mountain Health will be holding Information Sessions on **Tuesday, October 22nd, 2013** and **Wednesday, November 13th, 2013** where the public is invited to drop in any time between 2 pm and 8pm. Display boards explaining the project, purpose, and location will be set up for public viewing. Staff from RWDI and Prairie Mountain Health will be in attendance to answer any questions about the project that the public may have.

Please join us:

Date: Tuesday, October 22, 2013
Time: 2 pm until 8 pm (drop in)
Place: Victoria Inn – 3550 Victoria Ave W
Brandon, MB

OR

Date: Wednesday, November 13, 2013
Time: 2 pm until 8 pm (drop in)
Place: Brandon Regional Health Centre
Nurses Residence – West Lounge
150 McTavish Ave E
Brandon, MB

For further information, please contact Lara Bossert, Executive Director – Corporate Operations & Communications at (204)483-5000.

APPENDIX B

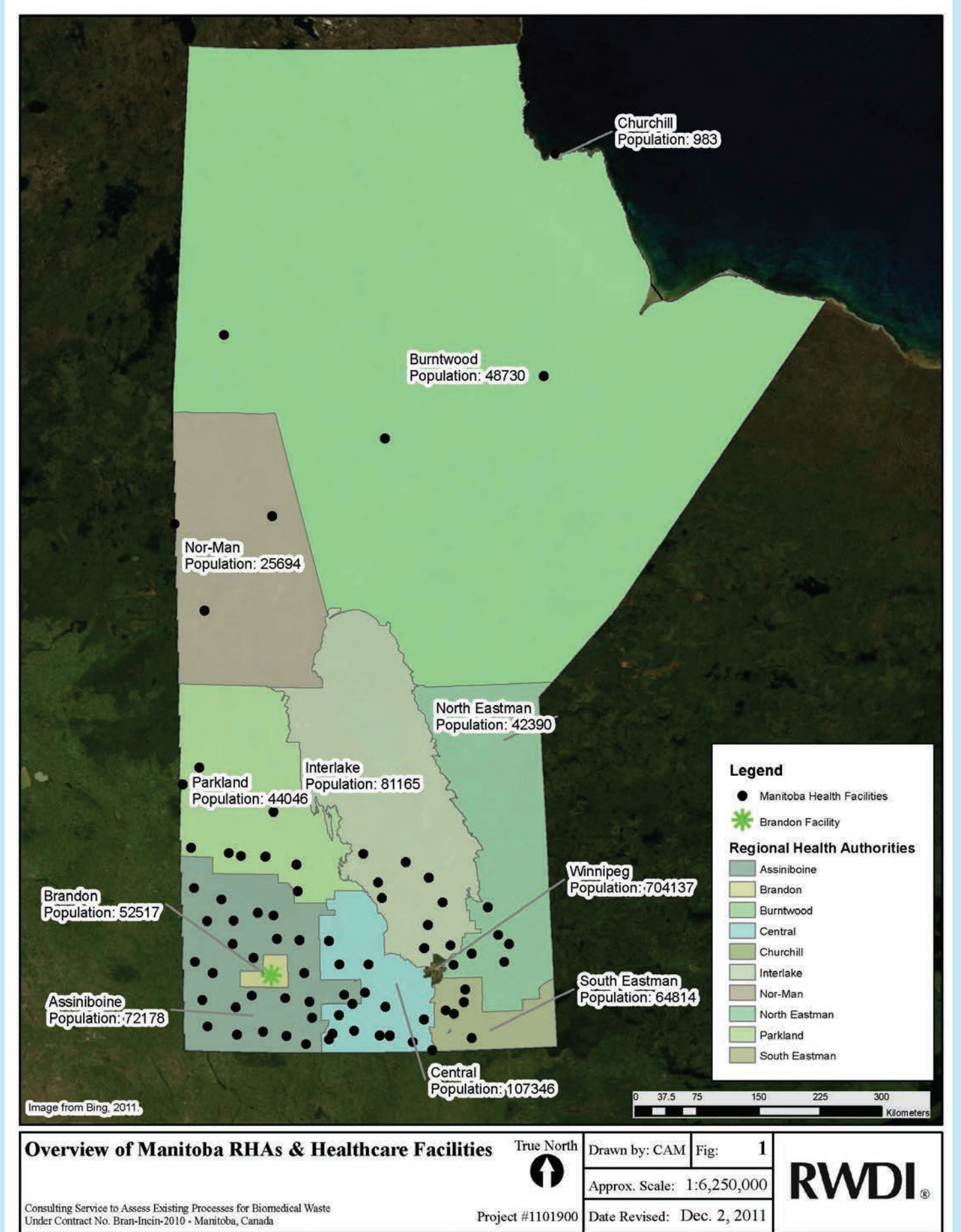


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Project Description

Q: What is the project background?

A: In 2010, the Province of Manitoba (through Manitoba Health) initiated a process to assess existing procedures for biomedical waste management and to develop recommendations for a facility located in Brandon that would provide a best practice solution for the management of biomedical waste generated within the province. The scope of the assessment included all biomedical waste management facilities located throughout the Regional Health Authorities (RHAs) of Manitoba, with the exception of the Winnipeg RHA.



Q: What is this specific project about?

A: Currently, there are a number of biomedical waste incinerators located at hospital sites around the province. The proposed project will allow these old incinerators to be shut down and a new state of the art treatment technology to be placed at the current Brandon incinerator site. The new facility will house the best available “clean” technology available for processing biomedical waste in a cost effective manner.



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What is Biomedical Waste?

Q: What does biomedical waste consist of?

- A:**
- 1. Human Anatomical Waste**
 - i. This consists of human tissues, organs and body parts, but does not include teeth, hair and nails.
 - 2. Animal Waste**
 - 3. Microbiology Laboratory Waste**
 - i. This consists of laboratory cultures, stocks or specimens of microorganisms, live or attenuated vaccines, human or animal cell cultures used in research, and laboratory material that has come in contact with any of these.
 - 4. Human Blood and Body Fluid Waste**
 - i. This consists of human fluid blood and blood products, items saturated or dripping with blood, body fluids contaminated with blood, and body fluids removed for diagnosis during surgery, treatment or autopsy. This does not include urine or feces.
 - 5. Waste Sharps**
 - i. Waste sharps are clinical and laboratory materials consisting of needles, syringes, blades, or laboratory glass capable of causing punctures or cuts.

(CCME - Guidelines for the Management of Biomedical Waste in Canada)

Biomedical Waste also includes:

- 6. Cytotoxic Waste**
 - i. Cytotoxic waste is the by-product of cytotoxic drug therapy administered to patients (such as chemotherapy). Cytotoxic waste typically includes all drug administrative equipment (ie. needles, syringes, dripset etc.) as well as all gown and body fluids/waste from patients undergoing such treatment.
(<http://sterihealth.com.au/services/medical-waste-collection/cytotoxic-waste>)
- 7. Pharmaceutical Waste**
 - i. Pharmaceutical waste is a form of medical waste that includes unused medications, over-the-counter personal care products and sometimes accessories such as sharps, used test strips and other supplies.
(<http://www.wisegeek.com/what-is-pharmaceutical-waste.htm>)

Categories 1, 6 and 7 are typically considered red bag/red labelled waste, category 2 is orange bag/labelled waste and all others are yellow bag/labelled waste.

Q: Where does biomedical waste come from?

- A:** Biomedical waste comes from a number of sources including: hospitals, personal health care centres, pharmacies, medical clinics, doctors offices, medical laboratories, dental clinics, university nursing departments, senior centres and veterinary clinics.

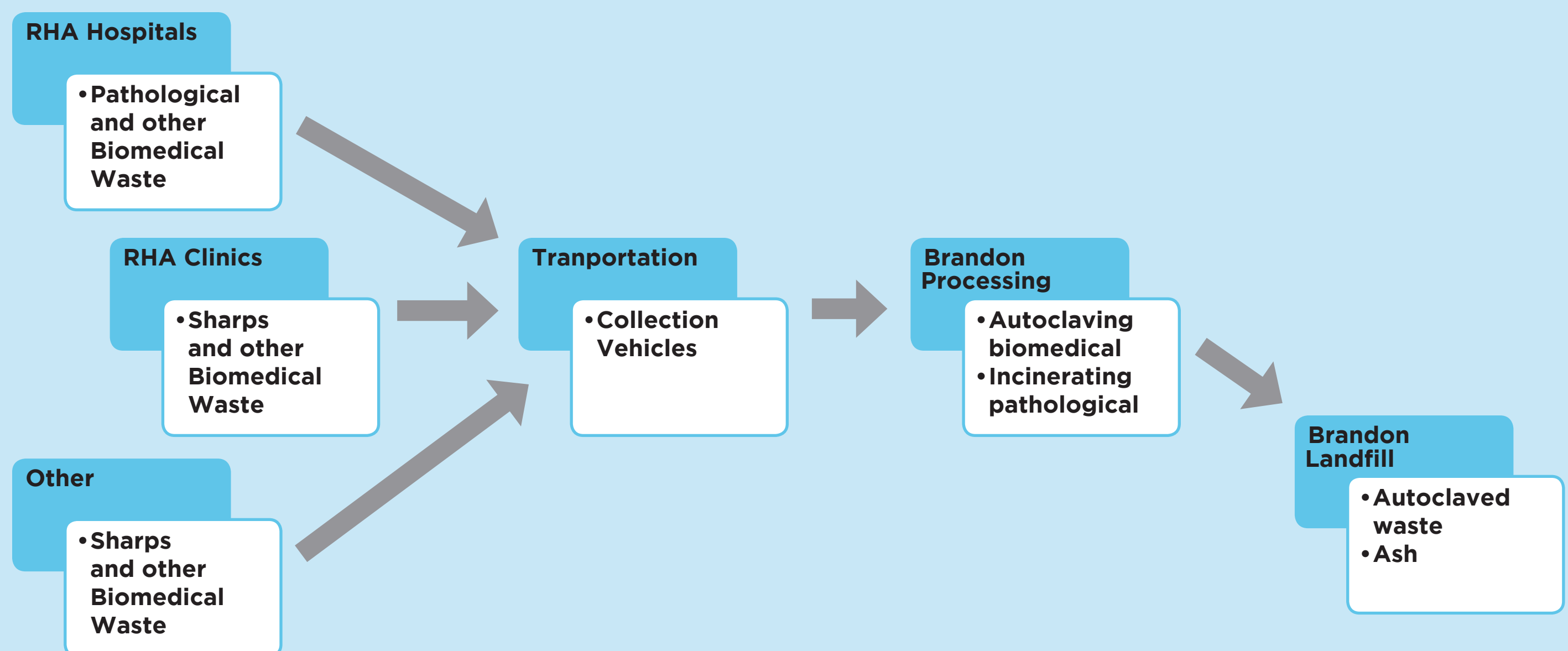


Material Flow

Q: What type of material is going to be processed?

A: There are 2 types of biomedical waste that will be processed at the treatment facility. Approximately 15% of the total waste is considered pathological, cytotoxic and pharmaceutical (red bag), and the rest (yellow bag) is all other biomedical waste.

Process Flow of Waste Material



Q: What is the quantity of waste to be processed?

A: Currently, it is estimated that health facilities in Manitoba (with the exception of WRHA) produce 440,000 tonnes of biomedical waste each year (2011). It is expected by 2020, that this will increase by up to 15% to 505,000 tonnes.

Estimated Waste Generation

	Total 2011	Total 2020	Hourly 2011	Hourly 2020	Maximum Hourly
Total All RHAs (kg)	440,000	505,000	211	242	358 (2020)





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Containment and Transport

Q: How will the waste materials be contained?

A: All containers used for the transportation or storage of waste will be durable double lined for leak protection and safety. Red waste containers will be used for pathological waste, and will have two plastic (red) liners inside the containers to hold all collected waste. Yellow bag waste will be shipped in double lined yellow containers.

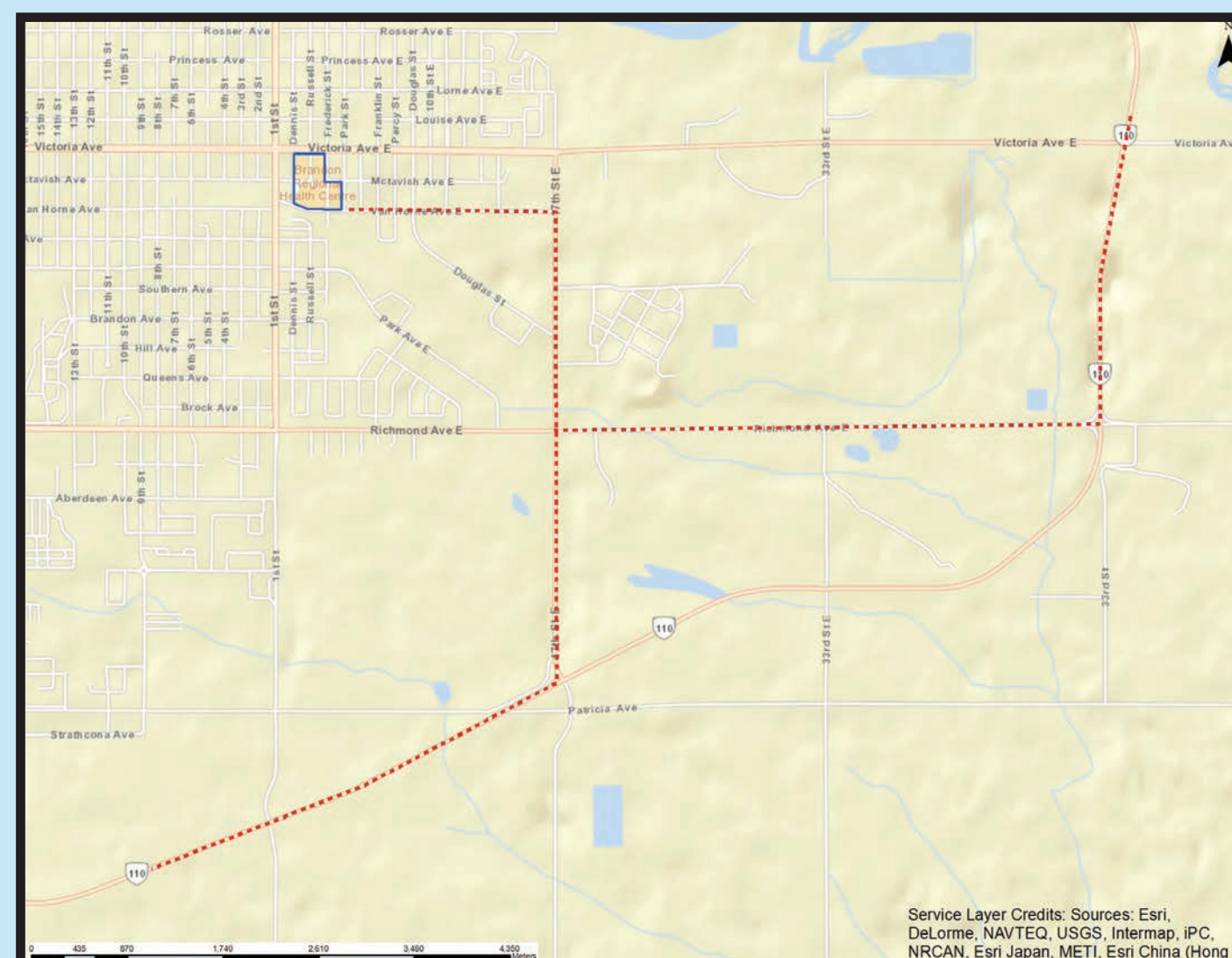


Q: How will the waste be transported into Brandon?

A: During the processing period (Monday to Friday), it is expected that waste delivery trucks will number between 2 to 4, depending on the routes and amount of waste collected from the other RHA facilities. These trucks will typically arrive at the beginning or end of the day. The truck will be large cube vans and will have minimal effect on regular traffic in the area.



Transportation Route Through Brandon



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Site Selection

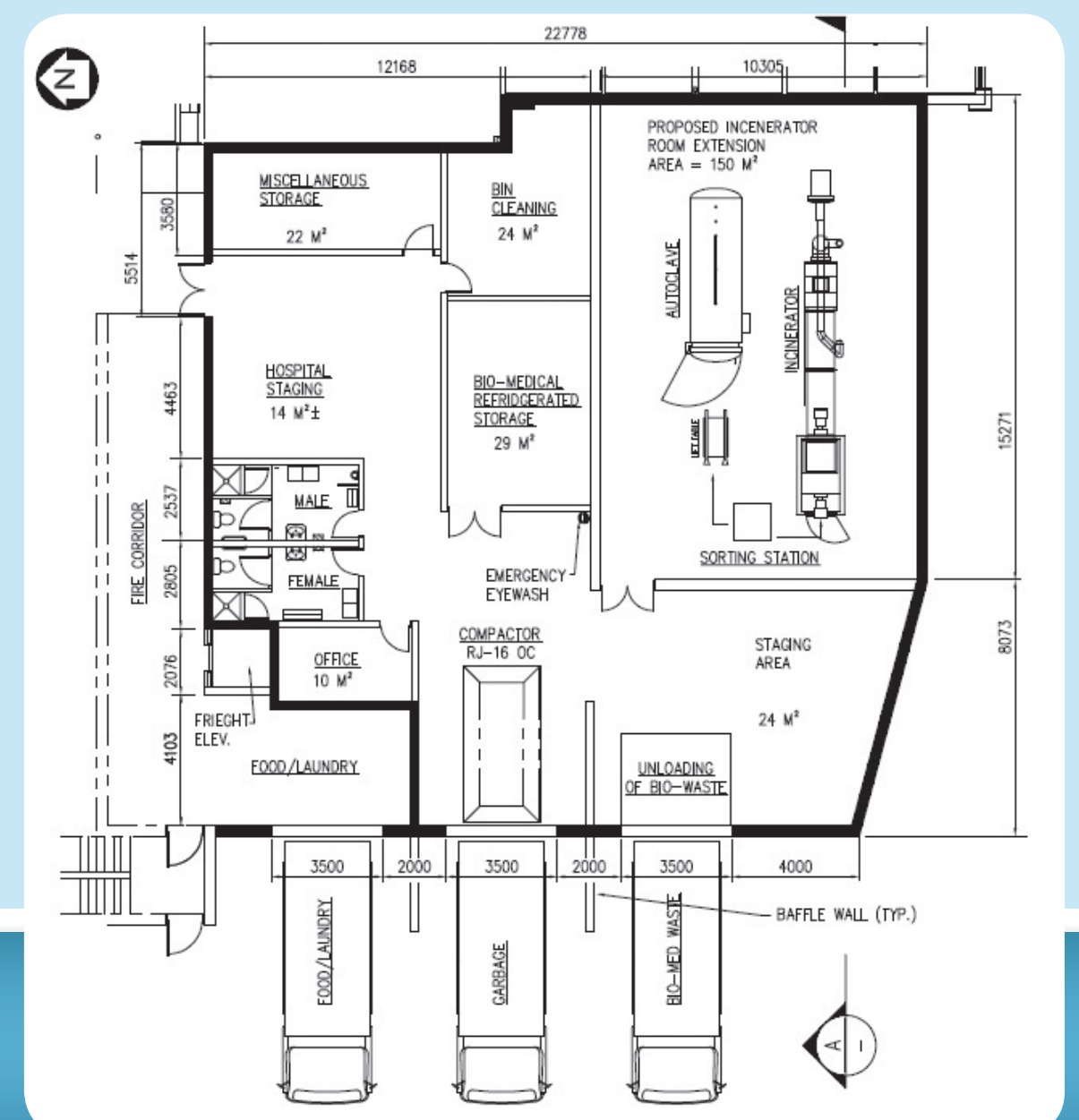
Q: Why Brandon?

A: Brandon was chosen as the candidate location for this facility as it is the largest biomedical waste generator, with the largest medical health centre (Brandon Regional Health Centre), outside of Winnipeg in Manitoba.



Q: How was the location for the Brandon facility selected?

A: Site visits were conducted to identify potential locations both on the Brandon Regional Health Centre site and at off-site locations in Brandon. Following an initial assessment, five potential on-site locations and one off-site location were identified. To select the ideal location, a decision matrix was developed based on a variety of attributes of the potential site locations.



Q: Which location was selected?

A: From the selection process, the site of the existing incinerator at the Brandon Regional Health Centre was chosen for the location of the new treatment facility. This location achieved the highest total score in the decision matrix and had advantages for construction and integration with the Brandon Regional Health Centre over the other potential locations. The figure above is the conceptual layout for the selected location.



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Technology Assessment

Q: How were the treatment technologies selected?

A: A thorough assessment, including a review of available literature and contacting industry sources, was completed to characterize each potential treatment technology for a treatment facility in Brandon. A decision matrix was then prepared to compare the treatment technologies based on a variety of attributes.

Based on the waste stream, one technology would be required for red bag waste and one technology would be required for the remaining yellow bag waste.

Q: How will the red bag waste be treated?

A: Based on the results of the decision matrix, the ideal solution for the red bag waste was determined to be a traditional incineration system with a gas treatment system.

The traditional incinerator is a well established technology and is very effective in its ability to eliminate microbiological organisms and reduce the volume of weight of the waste.



Q: How will the yellow bag waste be treated?

A: The ideal solution for the yellow bag waste was determined to be a single autoclave system, which sterilizes the waste with pressurized steam.

Autoclave systems are also well-established and effective technologies, and there are minimal health considerations due to gas emissions or wastewater effluent from an autoclave system.



Air Quality Assessment

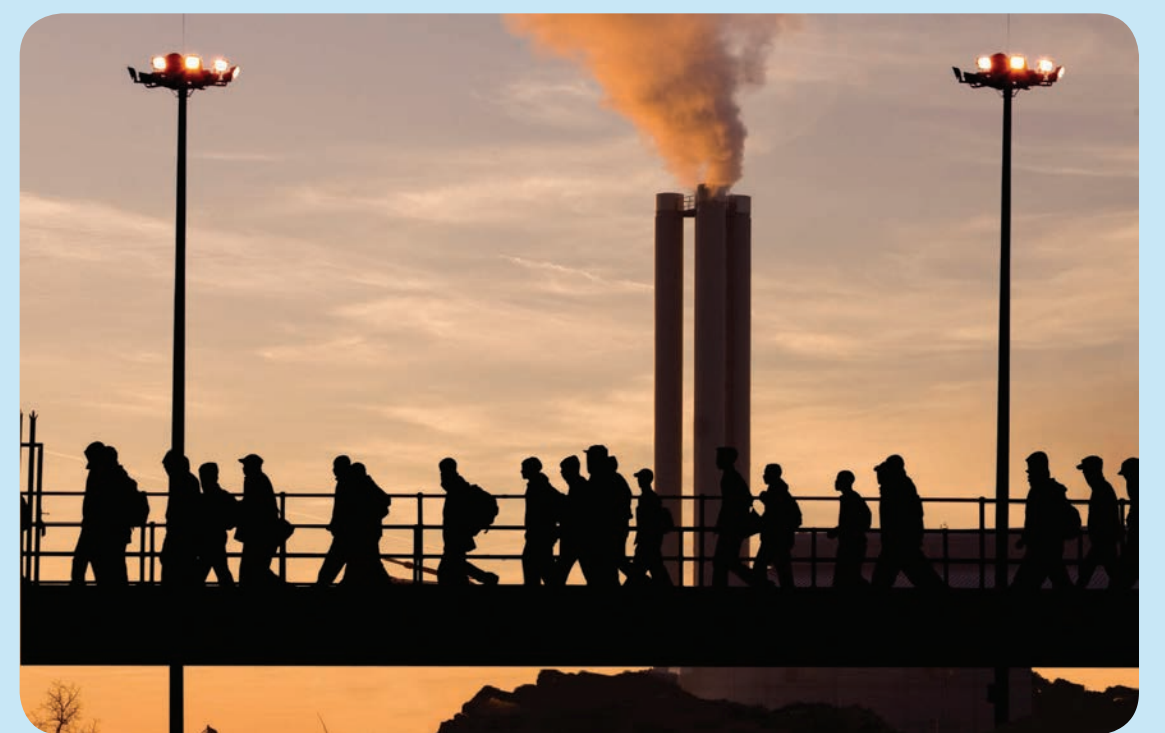
Q: What will the air quality impacts be associated with the biomedical waste incinerator?

A: All air emissions created from the biomedical waste incinerator are expected to be less than the recognized threshold. The combined offsite air quality impacts of the emissions from the incinerator and other current air emissions sources have been assessed using the regulatory approved AERMOD dispersion model. A total of 16 contaminants were identified with respect to the facility, emitted from a total of 10 point sources. Of the identified contaminants, 12 have limits under the Manitoba Ambient Air Quality Criteria (MAAQC). For those contaminants that do not have relevant limits under the MAAQC, relevant standards from Ontario Ambient Air Quality Criteria (OAAQC) were used. The cumulative concentration (i.e. the combined maximum project concentration + background concentration) for all pollutants and averaging times are less than their applicable threshold.



Q: What is the human health risk associated with the incinerator emissions?

A: There are no human health risks anticipated as a result of the incinerator emissions. A screening-level human health risk assessment to assess the potential human implications associated with air emissions from the biomedical waste treatment incinerator has been completed. Overall, the results of the inhalation assessment indicate that there are no acute/sub-chronic or chronic impacts to human health expected from the modelled emissions.



Construction Phase

Q: How will noise from construction activities be managed?

A: To minimize the temporary construction noise on nearby residents, the following measures have been recommended:

1. Conduct construction activity between the hours of 7 am and 10 pm to reduce the potential impact of construction noise;
2. Advise nearby residents of significant noise-causing activities and schedule these events to reduce disruption to them;
3. Ensure that all internal combustion engines are fitted with appropriate muffler systems; and
4. Take advantage of acoustical screening from existing on-site buildings to shield dwellings from construction equipment noise.

Q: How will construction dust be managed?

A: To minimize the impact of construction dust a number of measures will be put into place and will be required by the construction contractor. Measures may include appointing a “dust manager”, requirement of a formal Dust Management Plan, “watering” of construction debris and internal roadways.



Q: What about construction related traffic?

A: Additional traffic is not expected to exceed 2 to 5 loads per day for construction materials and personnel. All construction traffic will be directed to use 1st Street or Van Horne Ave E using City designated truck routes. Off-loading will be undertaken in the SW parking area (where the current offloading activities occur) or off the Van Horne curb. Traffic will either be controlled or alternative traffic routes (i.e. Frederick or Dennis Streets) will be available.



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Operations

Q: What are the proposed operations of the treatment facility?

A: The new operation will have features that will allow for a larger throughput with state of the art treatment technologies. The facility will have:

- Larger space to house storage and processing capability
- Operations that are physically separated and secure from other hospital operations
- New processing technologies with air pollution equipment
- Operations are anticipated 8 to 10 hours per day, Monday to Friday

Q: Who will be responsible for operations?

A: Prairie Mountain Health and Manitoba Health will be responsible for the operation of this biomedical incinerator. All personnel involved with this operation will be fully trained in Transport of Dangerous Goods, emergency response, the operation of the respective units and the method of record keeping. Operations personnel will also be responsible for signing off and handling manifests for receipt of waste and shipment of hazardous waste.



Q: How will the emissions from the incinerator be monitored?

A: A Continuous Emissions Monitoring (CEM) program will be implemented and installed in the incinerator stack to measure emissions of O₂, CO, CO₂ and NO_x. Additionally, stack testing will be completed once a year for the first 2 years of operations, followed by a biannual testing program.

Q: Is there a spills and emergency response plan in place?

A: Yes. A full spill action and emergency plan has been developed for the hospital campus. All personnel involved with the biomedical waste operation will be fully trained with the hospital plans. The Brandon Fire department will be invited to inspect the facility on an annual basis and offer further suggestions to improve safety, and allow the fire department to fully understand the operations.



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Who We Are

Q: What are Prairie Mountain Health's Vision, Mission and Values?

A: **VISION:** HEALTH AND WELLNESS FOR ALL

MISSION: Together, we deliver quality health services that meet the needs of the population

Prairie Mountain Health Values:

- Integrity
- Respect
- Responsiveness
- Engagement

Our values define what we believe in; what we stand for. They provide us with a common understanding of what's important and provide us with a framework for our actions. We are all expected to use our values to guide our work, our actions, and our decisions.

Prairie Mountain Health Facts

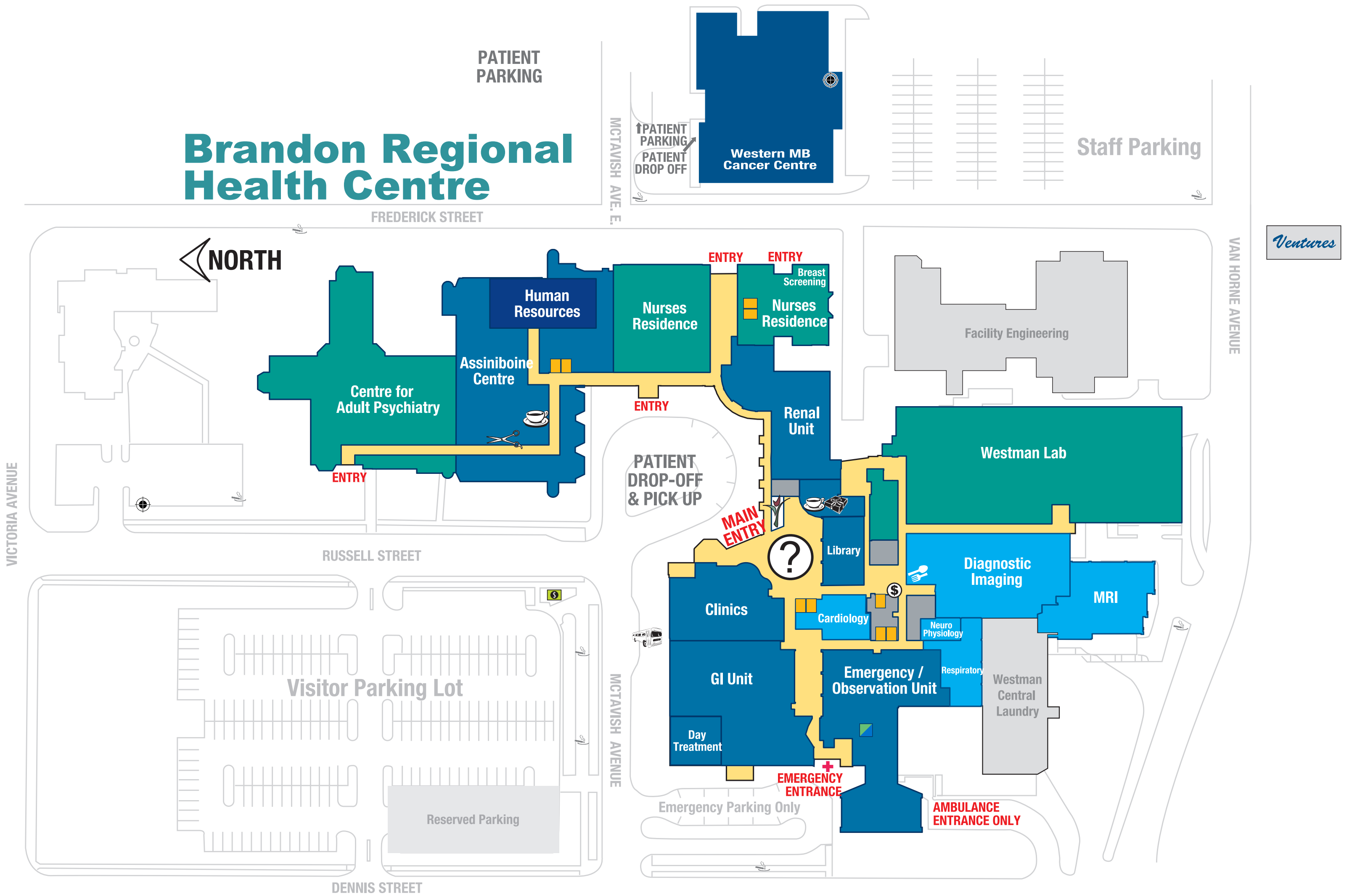
- Prairie Mountain Health (initially named Western RHA) was established in June 2012 joining the former Brandon, Assiniboine & Parkland Regional Health Authorities.
- Prairie Mountain Health spans an area from the 53rd parallel in the north to the United States border in the south and reaches from the Saskatchewan border across to the lakes and central Manitoba.
- 164,000 Residents in the PMH Region
- The region spans approximately 67,000 km² (size of Denmark)
- 14 First Nations Communities within the region
- 115 Towns/Municipalities within PMH
- PMH employs over 8,335 employees
- PMH has an annual operating budget of approximately \$557 million
- PMH operates:
 - 29 Health Centres
 - 795 acute care beds and 81 transitional care beds
 - 34 Community Health Services offices
 - 42 Personal Care Homes
 - 39 EMS stations





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Brandon Regional Health Centre



LEGEND:

- | | | |
|--------------------------|-------------------------|----------------------|
| Bank Machine - Basement | Elevator Location | Circulation |
| BRHC Foundation | Gift Shop / Coffee Shop | Diagnostic Services |
| Bus Stop | Hair Salon - Main Floor | Offices and Storage |
| Cafeteria - Basement | Information Desk | Ashtrays |
| Garden Café - Main Floor | Parking Pay Station | Patient Registration |



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