APPENDIX B

MANITOBA HYDRO GAS DESIGN REVIEW LETTER

Manitoba Hydro

360 Portage Ave (16) ♦ Winnipeg, Manitoba Canada • R3C 0G8
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4th March 2025

MH Gas File # 2025-0095

Mark Edgar
Transportation Engineer
Stantec
500-311 Portage Avenue
Winnipeg MB R3B 2B9

Dear Mark:

Re: 25-C-03 - SB Pembina

Manitoba Hydro (Gas) has reviewed the design submitted by Stantec for the proposed reconstruction and resurfacing along Pembina highway. The following parameters shall be followed when working in proximity to all natural gas mains. Please ensure that all requirements are communicated to your contractor.

1. **Special Concerns - Mains**

- Upon review, it was noted that the proposed reconstruction and resurfacing work impacts existing 219.1 mm steel high pressure natural gas main. A Manitoba Hydro High Pressure Safety Watch is required for all construction activities within 3.0 m of any high pressure mains. It was also noted that a 114.3 mm steel and 60.3 mm PE distribution pressure natural gas mains are impacted. During construction, gas mains should not be undermined or exposed past the 3 o'clock and 9 o'clock positions on the cross section of the pipe.
- Please locate any mains within 3.0 m or underneath of the proposed work and investigate to determine depth of cover in relation to both existing and proposed grades. Note that all locating and soft-digging requirements listed below are to be upheld.
- If it is determined that a final minimum depth of cover of 750 mm for the 114.3 mm and 60.3 mm distribution mains cannot be maintained, or if 1000 mm depth of cover cannot be maintained for the 219.1 mm high pressure main, then please contact Irtaza Khan at irkhan@hydro.mb.ca to discuss options pertaining to relocations or lowerings as soon as possible. Under normal circumstances, the amount of time required to mobilize for small diameter distribution relocations/lowerings is approximately 3-5 months. High pressure main relocations/lowerings (219.1 mm) would require approximately 6-12 months to complete due to engineering, approvals, and construction.

2. **Special Concerns – Insulated Flange**

- Additionally, it was noted that Manitoba Hydro has a below grade flanged fitting requiring replacement on Pembina highway at Father Labonte avenue. See the attached as-built drawings depicting the location of the Insulated Flange.
- Manitoba Hydro will replace the below grade flange at no cost to your project, however it should be coordinated during construction to avoid additional impacts on the area.
- Please update us with an accurate schedule of the work in this area. For updates from Manitoba Hydro please contact:
    - Construction Updates and Coordination:
        - Curtis Menzul
        - P: 204-360-5286
        - E:cmenzul@hydro.mb.ca
- Under normal circumstances, the amount of time to mobilize for this work is approximately 2-3 weeks.

3. **High Pressure Natural Gas Main**

- Proposed road reconstruction impacts existing 219.1 mm high pressure natural gas main. A Manitoba Hydro High Pressure Safety Watch is required for all construction activities within 3.0 m of the high pressure natural gas main.
- Contact "Click before you dig" a minimum of 2 weeks prior to any work commencing within 3.0 m of the high pressure natural gas main to arrange for the pipeline to be properly located and marked by Manitoba Hydro personnel at **ClickBeforeYouDigMB.com or Call 1-800-940-3447.** Upon receiving clearances, the excavator will be provided with the phone number of the appropriate District to coordinate a Manitoba Hydro High Pressure Safety Watch.
- Prior to construction at this location, please expose the main by hand or hydro-excavation to confirm elevation of the pipe. The elevations & corresponding locations shall be forwarded back to Irtaza Khan at irkhan@hydro.mb.ca.
- Once the pipeline depth and location has been confirmed by hand or hydro-excavation, the safety watcher may authorize the limited use of mechanical excavation. A smooth edged bucket must be used for excavations within 3.0 m of the main.
- A minimum 900 mm of cover shall be maintained in all areas where highway rated equipment will be crossing, traveling, or compacting over the 219.1 mm gas mains. **Vibratory compaction** cannot be used over or within 3.0 m of a high pressure main.
- If highway rated equipment must cross, travel, or compact over the gas main with less than the minimum depth of cover, or if equipment heavier than highway rated load cross the main then submit construction/crossing plans to Irtaza Khan at irkhan@hydro.mb.ca. Earth bridging or steel plates must be placed over the main and extend a minimum of 1.0 m on either side at each crossing location when crossing with less than minimum cover.
- When working with less than minimum cover, a minimum 300 mm of granular material shall be bladed into place with tracked equipment offset from the pipeline. Then static compaction equipment would be allowed and built up in layers until minimum cover is achieved.

- Subbase material shall be bladed into place as opposed to being end dumped over the 219.1 mm gas main in areas with less than the minimum cover.
- Caution must be used to ensure the integrity of the pipeline coating. Any damages to the coating must be reported to and repaired at no cost by Manitoba Hydro prior to backfilling.
- The contractor and all site supervisory personnel and equipment operators shall be informed of the risks associated with working adjacent to, and over this pipeline by the Resident Inspector. New site personnel during construction shall be orientated as to the significance and constraints associated with working over and around a high pressure natural gas main.

4. Insufficient Cover

- Absolutely no work including concrete cutting or pavement breaking may occur over the pipeline (regardless of size) until depth of cover is determined and a safety watch is on site.

5. Catch Basin Removal and Installation

- Proposed excavations for the removal and installation of catch basins appear to impact a gas main in which case will require exposure to be completed by hand or Hydro-excavation. Caution must be used when working in the vicinity of the natural gas mains at these locations.
- A minimum horizontal separation of 300 mm from gas mains and 100 mm from service lines must be maintained for any new underground structure installations excluding directionally drilled, punched, and bored crossings. If an underground structure must be installed with less than the minimum horizontal separation, an underground rigid foam barrier shall be placed over the main for protection. Submit plans for barrier installation to Irtaza Khan at irkhan@hydro.mb.ca.
- Underground structure installations above natural gas infrastructure should be avoided. Contact Irtaza Khan at irkhan@hydro.mb.ca if installations above facilities are required.

6. Sidewalk Renewals

- Excavations shall be limited to removal of the existing concrete sidewalk. All further excavations within 1.0 m of any natural gas main or service must be completed by hand or soft dig methods.

7. Asphalt Overlays and Road Reconstruction

- When excavations for concrete works are required within 1.0 m of any natural gas main, the main must be exposed by hand or soft dig methods to verify the main elevation at intervals to be determined by the site inspector.
- Should a main be exposed to sub-base, the main requires rock wrap and may also require lowering.

8. Service Relocations

- This project may impact services. Services that are to be exposed in the subgrade must be rock wrapped and lowered during construction or replaced prior to construction.

Manitoba Hydro will not be able to complete rock wrapping or lowering of any services unless the lowering is minimal (i.e. < 100-150 mm or < 4-6").

- Under normal circumstances, the amount of time required to mobilize for this work is approximately 2-3 weeks.
- Please contact Curtis Menzul at 204-360-5286 or cmenzul@hydro.mb.ca for any work required on site.

9. **General:**
   - Please note that the requirements of Manitoba Hydro's Safe Excavation and Safety Watch guidelines shall apply. All natural gas pipelines and service lines must be properly located and marked by Manitoba Hydro personnel. This can be arranged by visiting **ClickBeforeYouDigMB.com or call 1-800-940-3447.** Construction operations are not to commence unless these conditions are adhered to.
   - All excavations within 1.0 m of any natural gas main must be completed by hand or Hydro-excavation.
   - A minimum separation of 300 mm from gas mains and 100 mm from service lines must be maintained for any new underground structure installations excluding directionally drilled, punched, and bored crossings. If an underground structure must be installed with less than the minimum separation, an underground rigid foam barrier shall be placed over the main for protection. Submit plans for barrier installation to Irtaza Khan at irkhan@hydro.mb.ca.
   - A minimum 600 mm of cover shall be maintained in all areas where highway rated equipment will be crossing, traveling, or compacting over the 114.3 mm, and 60.3 mm gas mains. Vibratory compaction cannot be used over or within 1.0 m of a main.
   - A minimum 450 mm of cover shall be maintained in all areas where highway rated equipment will be crossing, traveling, or compacting over the gas service lines. Vibratory compaction cannot be used over or within 1.0 m of a service.
   - If highway rated equipment must cross, travel, or compact over the gas main with less than the minimum depth of cover, or if equipment heavier than highway rated load cross the main then submit construction/crossing plans to Irtaza Khan at irkhan@hydro.mb.ca. Earth bridging or steel plates must be placed over the main and extend a minimum of 1.0 m on either side at each crossing location when crossing with less than minimum cover.
   - All construction operations within the vicinity of natural gas pipelines are to take place in a manner so as not to damage or cause detriment to the integrity of the natural gas pipeline. Any damages to the coating must be reported to and repaired at no cost by Manitoba Hydro prior to backfilling.

Manitoba Hydro believes that there should be no problem with this work; however, Manitoba Hydro makes no representations or warranties in that regard.

If you have any questions or comments, please contact the undersigned.

Regards,

Irtaza Khan

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IK/AM
Cc: Curtis Menzul, Gas Operations MTCE – Sutherland Ave, Manitoba Hydro
Robert Morrison, Damage Prevention – Sutherland Ave, Manitoba Hydro
Aaron Dueck, District Service Worker – Henlow Bay, Manitoba Hydro
Aldo Garofalo, Gas Operations MTCE – Sutherland Ave, Manitoba Hydro