

APPENDIX 'J'

MB HYDRO GAS RESPONSE LETTER

January 2, 2024

MH Gas File # 2023-1041

Thomas Findlay
AECOM Canada Ltd.
99 Commerce Drive
Winnipeg, Manitoba R3P 0Y7

Dear Thomas Findlay:

Re: 2024 Downtown Pavement Renewals - Westbound Broadway

Manitoba Hydro (Gas) has reviewed the design submitted by AECOM for the pavement renewals and associated work. 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

- Proposed street renewal occurs over both large (219.1 mm) and small (60.3 mm and 114.3 mm) steel natural gas mains. A Manitoba Hydro Safety Watch is required for all construction activities within 1.0 m of any large diameter mains. 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 1.0 m or underneath the proposed road/sidewalk reconstruction 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.
- Proposed soil cell installation occurs under the north sidewalk on Broadway. Manitoba Hydro Gas Design requires that the installation be discontinued where all main and service line crossings to customers on Broadway occur, unless otherwise specified by the MH site representative. Soil cell installations under the sidewalk may resume once all potential impacts with existing services and mains are avoided. Gas lines will not be relocated to accommodate soil cell installation.
- If it is determined that a final minimum depth of cover of 750 mm for the 114.3 mm and 60.3 mm steel distribution mains cannot be maintained, or if 1000 mm depth of cover cannot be maintained for the 219.1 mm steel distribution mains then please contact David Finnbogason at dfinnbogason@hydro.mb.ca for options related to lowerings or relocations.
- If it is determined that the directional drilled, punched, or bored crossing cannot maintain a minimum of 1.0 m separation between external surfaces of the pipelines and bores, then please contact David Finnbogason at dfinnbogason@hydro.mb.ca to discuss options pertaining to relocations as soon as possible.

- Under normal circumstances, the amount of time required to mobilize for small diameter distribution relocations (60.3 mm and 114.3 mm) is approximately 3-5 months. Large diameter (219.1 mm) main relocations would require approximately 6-12 months to complete due to engineering, approvals, and construction.

2. 219.1 mm Distribution Pressure Natural Gas Main

- Proposed road renewals and CB lead crossings occurs over existing 219.1 mm distribution pressure natural gas mains. A Manitoba Hydro Safety Watch may be required if any excavations are within 1.0 m of the 219.1 mm natural gas main.
- Contact “Click before you dig” a minimum of 2 weeks prior to any work commencing within 1.0 m of the 219.1 mm distribution 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 in order to coordinate a Manitoba Hydro Safety Watch, if required.
- 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 1.0 m of a 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 David Finnbogason at dfinnbogason@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.
- 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 1.0 m of the main.

3. 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.

4. Soil Cell Installation

- Manitoba Hydro Gas Design requests that the proposed soil cell installation on the north side of Broadway be discontinued where the 114.3 mm steel main on Memorial Blvd and all service line crossings to customers on Broadway occur, unless otherwise specified by the MH site representative. Soil cell installations under the sidewalk may resume once all potential impacts with existing services are avoided.
- If an impervious liner is installed around the soil cells, the system must maintain a minimum clearance of 300 mm from perpendicular gas mains and service lines. If not,

the soil cell system must maintain a minimum clearance of 1000 mm from gas mains and service lines. Requirements listed below on tree removal and installation must also be upheld.

5. Tree Installation and Removal

- A minimum 1.0 m of separation shall be maintained in all areas between the center line of new trees and existing gas mains, provided there is a root barrier geomembrane installed between the mains and the trees. If no root barrier will be installed, a 1.9 m separation between new trees and existing gas lines must be maintained.
- Proposed excavations of trees and roots within 3.0 m of a natural gas main require the roots to be exposed by hand to ensure it does not affect the integrity of the mains or the coating on the pipe.

6. Catch Basin and Lead Installation and Crossing Requirements

- Crossings of the 219.1 mm steel distribution pressure pipeline, the 114.3 mm line and the 60.3 mm pipeline shall be punched, bored, or horizontally directionally drilled (HDD). Open cut or trenched crossings may be authorized under special circumstance but require further review and engineering approval from Manitoba Hydro Gas Design.
- Directional drills, punches, and bored crossings shall maintain a minimum of 1.0 m between external surface of the pipeline and bores and must be drilled beneath the existing Manitoba Hydro pipeline. Crossings above Manitoba Hydro's pipeline are not acceptable.
- For directional drills, punches, and bored crossings, the clearance space around the catch basin lead must be kept to a minimum and post installation soil settling of the clearance space must not reduce the support or soil compaction of Manitoba Hydro's pipeline above.
- The new installations shall maintain the same elevation and alignment for the width of the crossing, with no bends or changes in elevation.
- The crossings shall be made such that the installation crosses Manitoba Hydro's pipeline as close to perpendicular as possible.
- The third party shall soft-dig by hand or hydro-vac a "viewing hole" as per the Manitoba Hydro Safe Excavation and Safety Watch Guidelines to confirm alignment and elevation of drill head during crossings.
- Deep utilities shall maintain a minimum horizontal clearance from natural gas mains of 1.25 m when running in parallel.
- A minimum horizontal separation of 300 mm from gas mains and 100 mm from service lines must be maintained for any new catch basin, hydrant, valve or fitting installations. Take caution when removing infrastructure near gas facilities as to not disrupt the pipe.
- Valve, hydrant, fitting and catch basin installations above natural gas infrastructure should be avoided. Contact David Finnbogason at dfinnbogason@hydro.mb.ca if installations above facilities are required.

7. 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.

8. 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.

9. Service Relocations

- This project will 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”).
- Manitoba Hydro is currently performing lowerings and rock wrapping free of charge to City Of Winnipeg works during normal working hours.
- Service lines will not be relocated to accommodate soil cell installation. The soil cells must be built around the existing services.
- Under normal circumstances, the amount of time required to mobilize for this work is approximately 2-3 weeks.
- Please contact Larry Tole at 204-360-5220 or ltole@hydro.mb.ca for any work required on site.

10. 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 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 David Finnbogason at dfinnbogason@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 gas mains 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.
- 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,



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