



Transportation and Infrastructure

Environmental Services Branch
1520-215 Garry St.,
Winnipeg, Manitoba, Canada R3C 3P3

September 13, 2024

Agnes Wittman
Director, Environmental Approvals Branch
Manitoba Environment and Climate Change
14 Fultz Blvd
Winnipeg, MB R3Y 0L6

Dear Ms. Wittman,

The community of St. Adolphe is located approximately 15 km south of the City of Winnipeg on the east side of the Red River at the junction of PR 200 and PR 210 in the RM of Richot. In the event of flooding on the Red River, the community is protected by an existing ring dike that was initially constructed in 1966. Following construction of the dike, it has been raised on two separate occasions, once after each of the flood events of 1979 and 1997. Additionally in 2015, the dike was expanded to the east and north to the 1:100 Flood Protection Level (FPL) to provide future flood protected residential and commercial development opportunities for the community. The east dike expansion development is licensed with the Environmental Approvals Branch under Environment Act License No. 3131R.

The existing St. Adolphe community flood protection dike consists of approximately 6.9 km of dike, divided into six lengths, with Lengths 4 and 5 defined under Environment Act License No. 3131R. Portions of the ring dike protecting St. Adolphe, including Lengths 4 and 5, do not meet current standards and are vulnerable to a 1:200-year flood event on the Red River. Therefore, MTI is completing design and construction works to raise the dike to the 1:200-year FPL (the Project).

In accordance with the Environment Act, Section 14(1)(b), Manitoba Transportation and Infrastructure (MTI) is hereby providing a Notice of Alteration to the St. Adolphe Flood Protection Dike licensed under Environment Act License No. 3131R. The Notice of Alteration Report provided with this letter contains details on the proposed alteration to Lengths 4 and 5 of the St. Adolphe Dike. The \$500 application fee will be transferred accordingly.

Sincerely,



Michael Foth
Manager, Capital Program
Environmental Services Branch
Manitoba Transportation and Infrastructure

cc: Simone Faucher
Diana Caballero



NOTICE OF ALTERATION REPORT:

St. Adolphe Flood Protection Dike
Environment Act License No. 3131R

MANITOBA TRANSPORTATION & INFRASTRUCTURE

Environmental Services Branch

September 13, 2024

1.0 INTRODUCTION

In accordance with the *Environment Act*, Section 14(1)(b), Manitoba Transportation and Infrastructure (MTI) is hereby providing a Notice of Alteration to the St. Adolphe Flood Protection Dike licensed under Environment Act License No. 3131R (Appendix B).

2.0 BACKGROUND

The community of St. Adolphe is located approximately 15 km south of the City of Winnipeg on the east side of the Red River at the junction of PR 200 and PR 210 in the RM of Richot. In the event of flooding on the Red River, the community is protected by an existing ring dike that was initially constructed in 1966. Following construction of the dike, it has been raised on two separate occasions, once after each of the flood events of 1979 and 1997. Additionally in 2015, the dike was expanded to the east and north to the 1:100 Flood Protection Level (FPL) to provide future flood protected residential and commercial development opportunities for the community. The east dike expansion development is licensed with the Environmental Approvals Branch under Environment Act License No. 3131R.

The existing St. Adolphe community flood protection dike consists of approximately 6.9 km of dike, divided into six lengths (Appendix A, Figure 1), with Lengths 4 and 5 defined under Environment Act License No. 3131R. Portions of the ring dike protecting St. Adolphe, including Lengths 4 and 5, do not meet current standards and are vulnerable to a 1:200-year flood event on the Red River. Therefore, MTI is completing design and construction works to raise the dike to the 1:200-year FPL (the Project).

3.0 ALTERATION TO DIKE AND ESTABLISHMENT OF BORROW AREA

Dike Alteration

Length 4 spans a linear distance of 440 m from Sta. 1+920 to Sta. 2+360 and Length 5 spans a linear distance of 3870 m from Sta. 2+360 to Sta. 6+230 (Appendix A, Figure 2). Proposed work on Lengths 4 and 5 consists of a top-up dike raise to the 1:200 FPL (237.2 masl).

Establishment of Borrow Area

A borrow area for the construction of the dike raise works (South Borrow Area) will be established using the old community south ring dike (Appendix A, Figures 3 to 5), also known as St. Adolphe Rd. The South Borrow Area is entirely located within the protected area of the existing ring dike. Existing granular material will be hauled from the stripped road surface and stockpiled at a designated, environmentally acceptable location. Borrow material will be hauled and placed directly in dike raise locations. When construction has finished, borrow area closeout will be completed according to standard practice and specifications and St. Adolphe Rd. will be resurfaced.

Work on the Project is expected to begin in the summer of 2025 and be completed by fall of the same year.

4.0 ALTERATION TO ENVIRONMENTAL EFFECTS

Environmental effects due to dike construction were addressed and identified by Environment Act License 3131R. Additional effects may include:

Borrow Area

Adverse effects to terrain and soils from Project-related activities, such as removal of vegetation and disruption to the surface layer, could potentially occur as a result of increased loss of soil due to erosion, change in landscape features, and soil compaction due to equipment movement. There is also a potential for sediment release from construction areas to the Red River that could have a detrimental effect on fish or fish habitat.

MTI has adopted a number of standard practices to reduce soil losses and sedimentation due to erosion along its projects. These standard practices will be used in this Project as dictated by local conditions. Standard practices include:

- minimizing the footprint of the Project area as much as possible, including borrow area;
- avoiding steep slopes wherever possible;
- protecting exposed soils and slopes as soon as possible;
- applying erosion and sediment control measures where appropriate (e.g. erosion control blanket, sediment fencing, straw wattle); and
- utilization of appropriate revegetation techniques to minimize erosion not only during construction but also during the operation phase of the Project.

In addition, construction equipment and vegetation clearing will be confined to the dike, borrow, and ancillary development areas. Regular follow-up inspections of the construction sites will be carried out to evaluate the success of the erosion control mitigation measures and recommend further action, where considered necessary.

With the proper application of the mitigation measures mentioned above, it is expected that soils within the Project area will experience a negligible increase in erosion. The effects of removing or altering landscape features will be local. Therefore, the adverse residual effects are not significant.

Potential construction related effects on permanent resident and migratory birds include habitat loss and disruption of breeding activities. As previously noted, construction activities will be confined to urban areas and areas currently under agricultural production. Therefore, there should be minimal disturbance to wildlife in the area.

Greenhouse Gas Emissions

The Project is not expected to have a lasting impact on air quality or climate change. Air quality can be affected by emissions released from vehicles and equipment during the construction phase. These vehicles and equipment are powered directly by the combustion of fossil fuels and therefore may have climate change implications.

The main work type for the Project that will generate greenhouse gas emissions is excavation work of 26,000 m³ of material. Using the federal greenhouse gas quantification requirements (Government of Canada, 2024), it is estimated that the Project will generate 69.784 tonnes of CO₂ as per the following calculation:

$$CO_{2i} = \sum_{p=1}^n Fuel_{ip} \times EF_{2i} \times 10^{-3}$$

$$CO_{2 Diesel} = Fuel_{Diesel} \cdot \underset{\text{Length 4 and 5}}{\text{St. Adolphe Project}} \times EF_{2 Diesel} \times 10^{-3}$$

$$CO_{2 Diesel} = 26 \text{ kL} \times 2684 \text{ kg/kL} \times 10^{-3}$$

$$CO_{2 Diesel} = 69.784 \text{ tonnes}$$

To account for uncertainties, including the use of additional vehicles for transport of MTI, consultant, and contractor personnel, an additional 50% qualifier has been added to the estimation of emissions. Thus, an estimated 104.676 tonnes of CO₂ will be emitted over the length of the Project.

5.0 SUMMARY

It is our opinion that this alteration will not result in any additional environmental effects than those addressed and identified by Environment Act License 3131R.

6.0 REFERENCES

Government of Canada. (2024). *Canada's greenhouse gas quantification requirements (2024)*. Retrieved from: <https://www.canada.ca/en/environment-climate-change/services/climate-change/greenhouse-gas-emissions/facility-reporting/reporting/quantification-requirements/canada-greenhouse-gas-reporting-program-2024.html>

APPENDIX A

Figures 1 – 5

Existing Lengths & Closures

Town of St. Adolphe

LEGEND



Existing Dike Alignment

- A** Closure #1, PR 200 North
- B** Closure #2, PR 200 South
- C** Closure #3, Tache Ave
- D** Closure #6, PR 210 West
- E** Closure #7, PR 210 East

9

St. Adolphe Dike Raise
Public Information Session 1

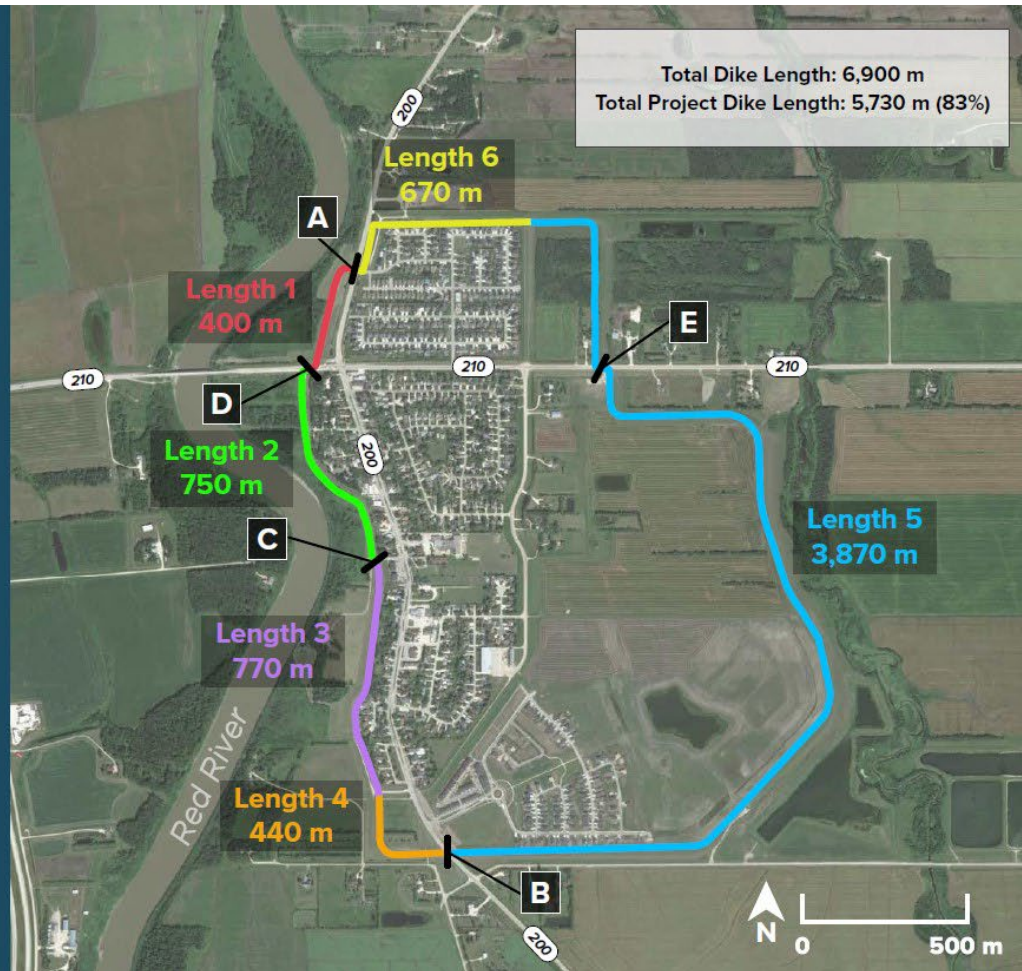


Figure 1. St. Adolphe Community Flood Protection Dike, Lengths 1 – 6.

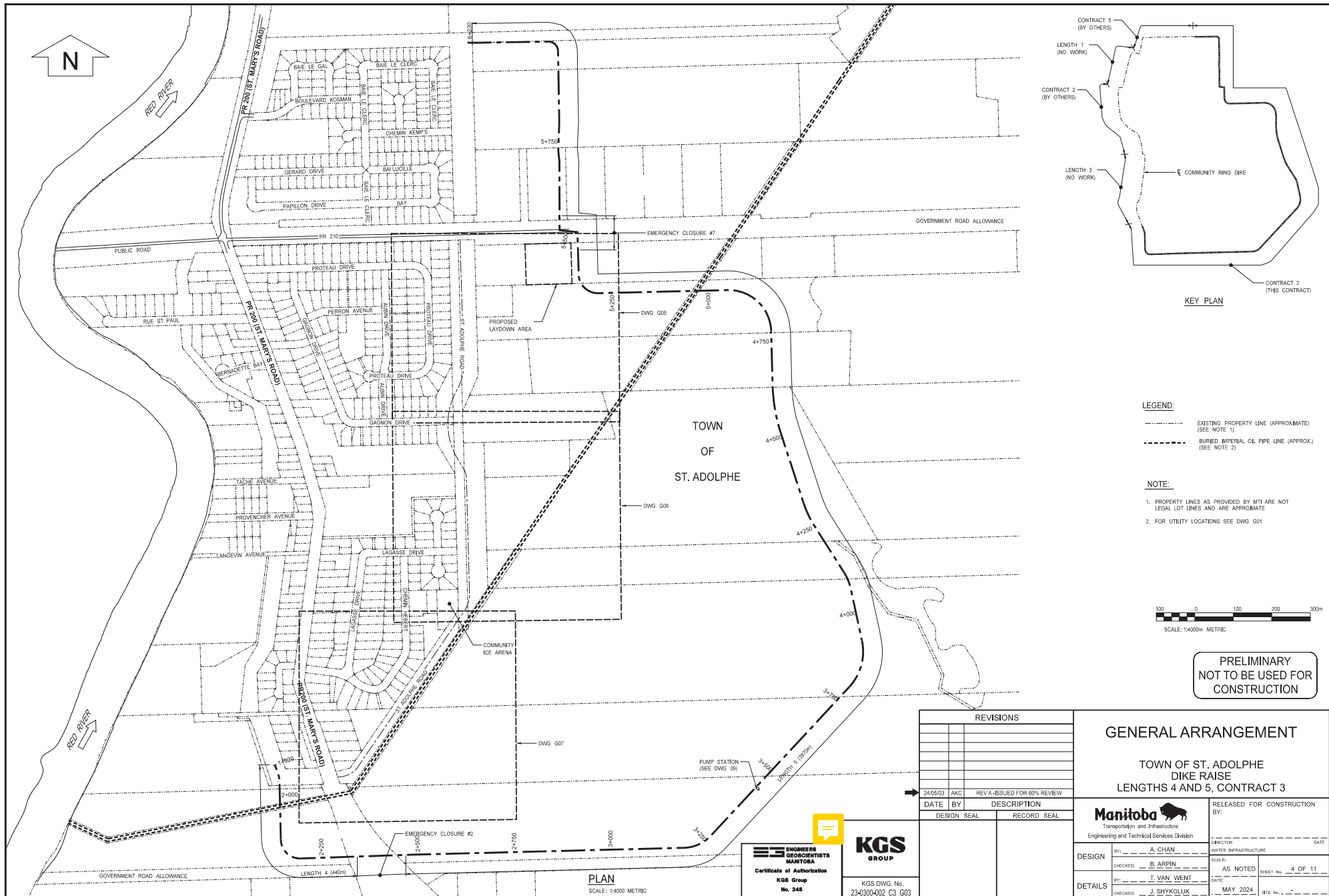


Figure 2. St. Adolphe Ring Dike Lengths 4 and 5.

REVISIONS		
NO.	DATE	DESCRIPTION
1	24/05/2024	AKC REV A - ISSUED FOR 60% REVIEW

DESIGN SEAL	RECORD SEAL
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GENERAL ARRANGEMENT TOWN OF ST. ADOLPHE DIKE RAISE LENGTHS 4 AND 5, CONTRACT 3		RELEASED FOR CONSTRUCTION BY: _____ DATE: _____
MANITоба Transportation and Infrastructure Engineering and Technical Services Division	WATER INFRASTRUCTURE SCALE: AS NOTED SHEET NO. 4 OF 11	
DESIGN BY: A. CHAN CHECKER: B. ARPIN	DATE: _____ DATE: _____ SITE NO.: _____	
DETAILS BY: T. VAN WENT CHECKER: J. SHYKOLUK	DATE: MAY, 2024 SITE NO.: _____	



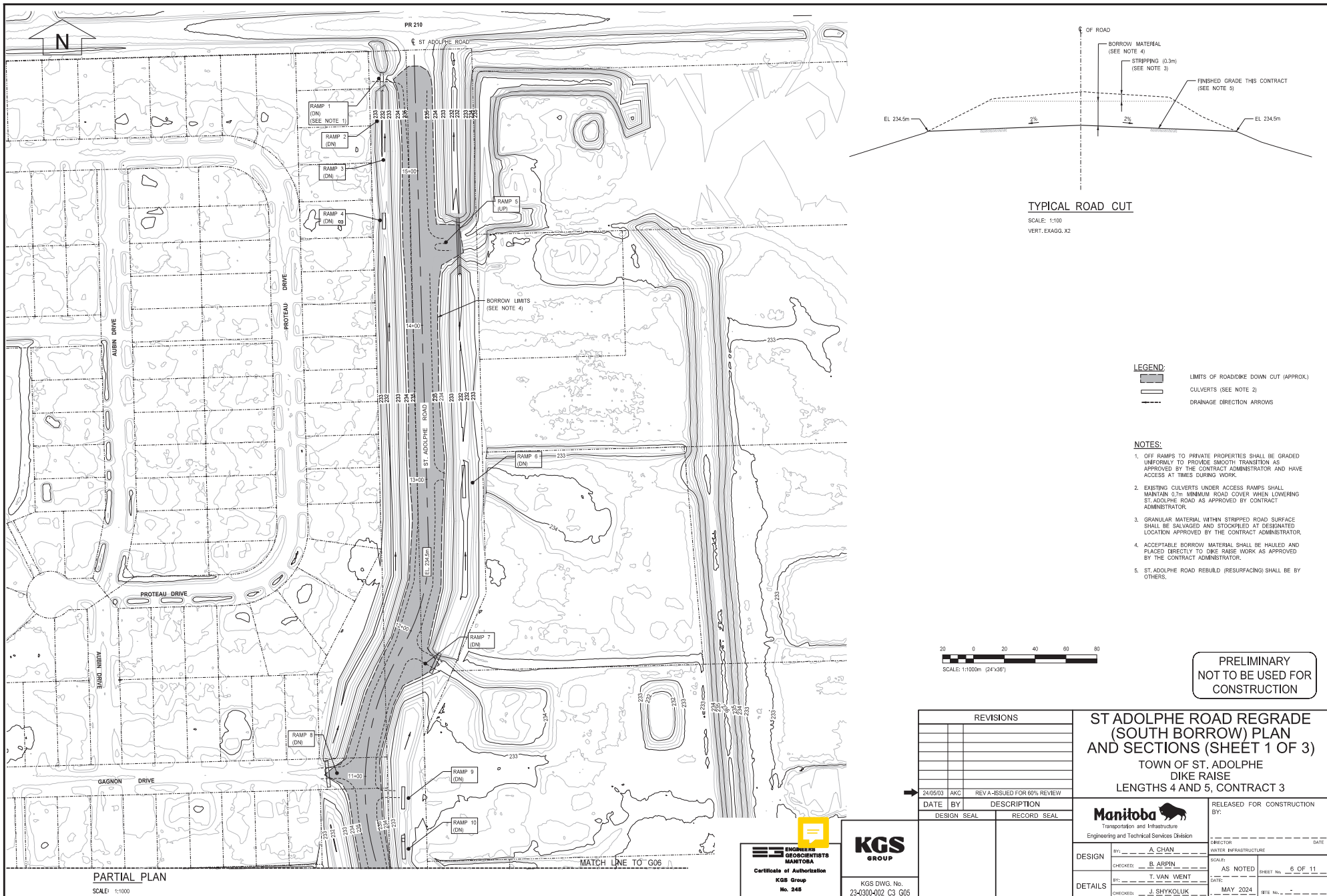


Figure 3. South Borrow Area, north section.

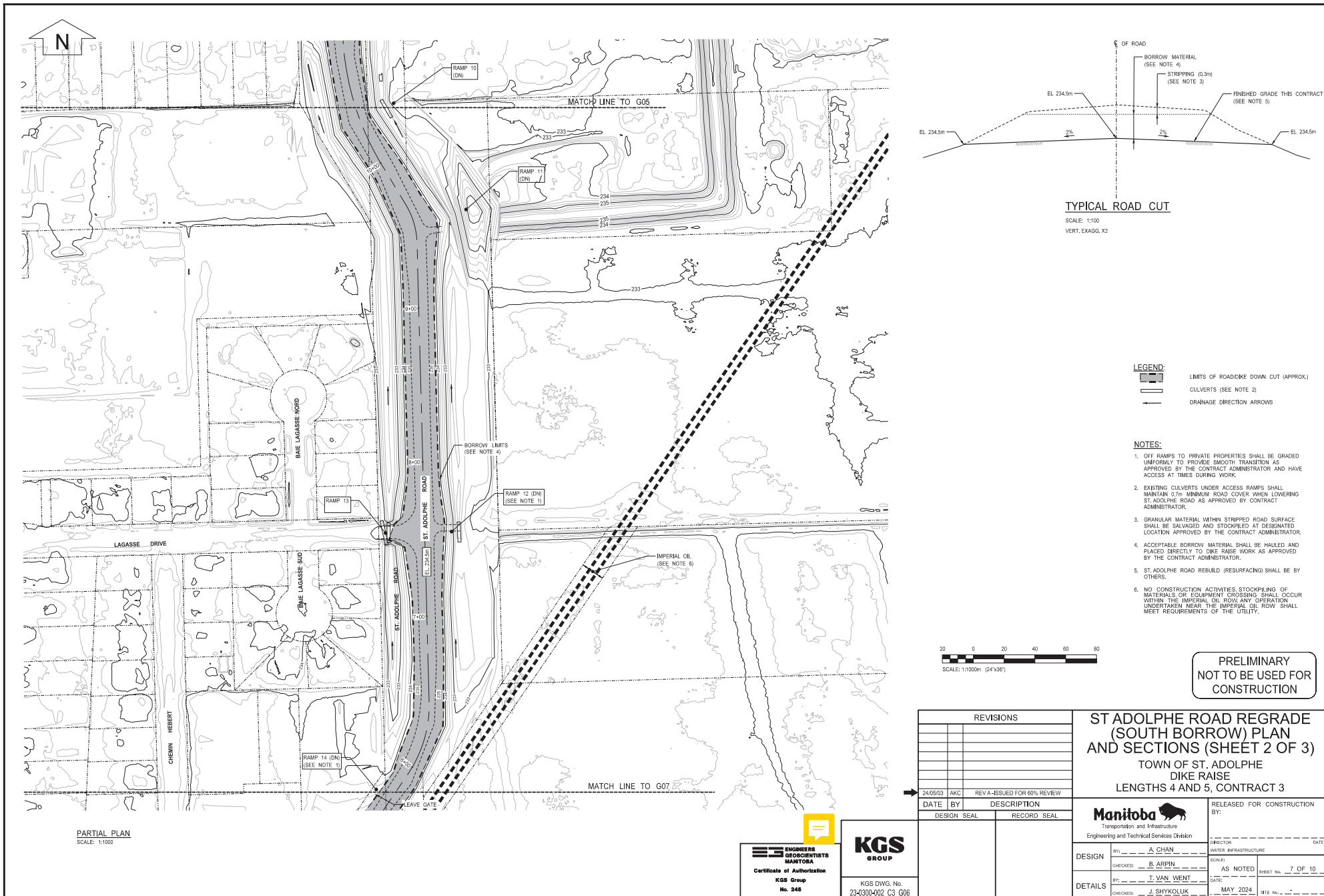


Figure 4. South Borrow Area, central section.

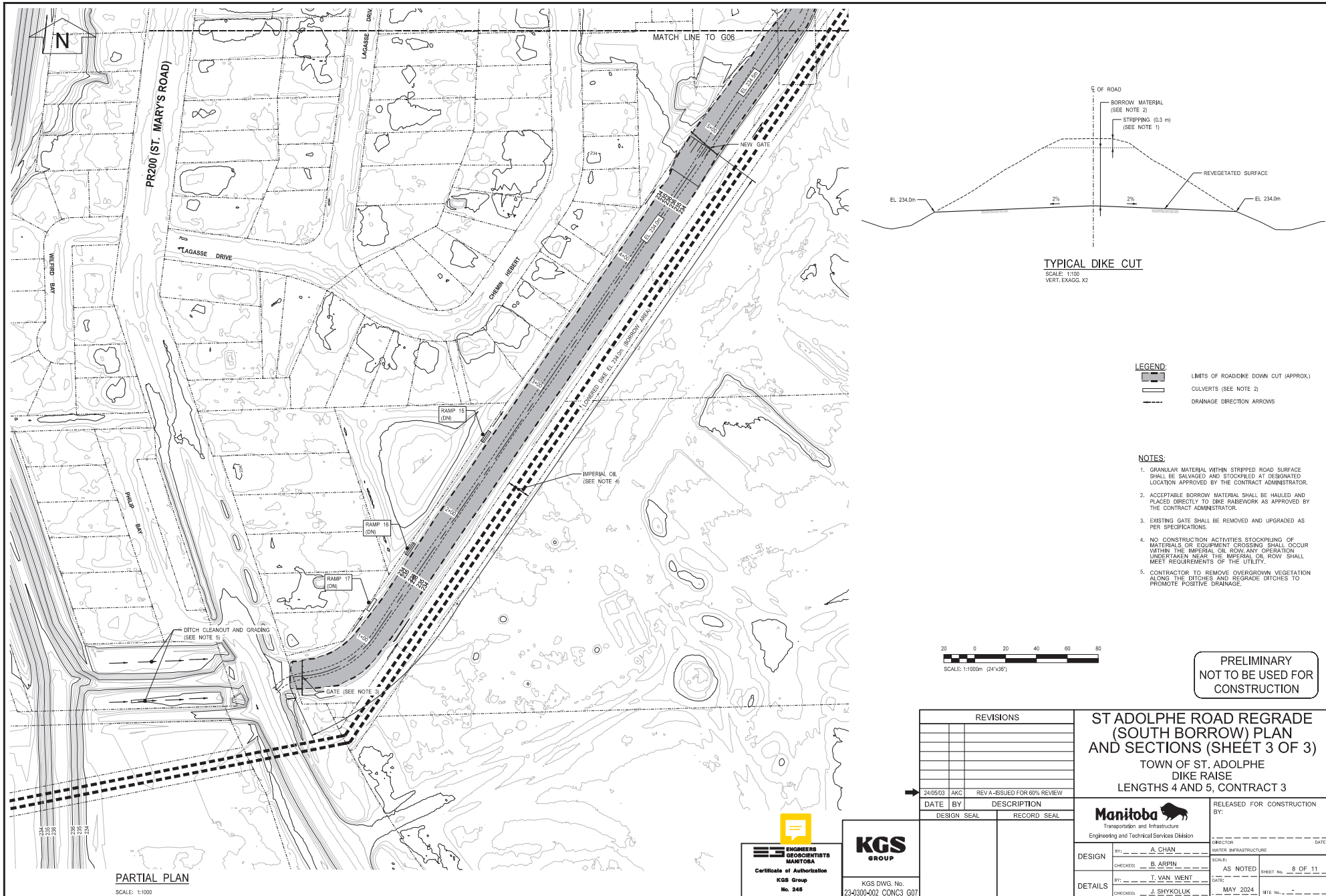


Figure 5. South Borrow Area, south section.

REVISIONS		
NO.	DATE	DESCRIPTION
1	24/05/2024	ANC REV A - ISSUED FOR 60% REVIEW

ST ADOLPHE ROAD REGRADE (SOUTH BORROW) PLAN AND SECTIONS (SHEET 3 OF 3)
 TOWN OF ST. ADOLPHE
 DIKE RAISE
 LENGTHS 4 AND 5, CONTRACT 3

 Transportation and Infrastructure Engineering and Technical Services Division	RELEASED FOR CONSTRUCTION BY: DIRECTOR _____ DATE _____ WATER INFRASTRUCTURE
DESIGN BY: <u>A. CHAN</u> CHECKER: <u>B. ARPIN</u>	SCALE: AS NOTED SHEET NO. <u>3</u> OF <u>11</u>
DETAILS BY: <u>T. VAN WENT</u> CHECKER: <u>J. SHYKOLUK</u>	DATE: <u>MAY, 2024</u> SITE NO. <u>_____</u>

KGS Dwg. No. 234-030-002 CONC3 007

APPENDIX B

Environment Act License 3131R



Conservation and Water Stewardship
Environmental Stewardship Division
Environmental Approvals Branch
123 Main Street, Suite 160, Winnipeg, Manitoba R3C 1A5
T 204 945-8321 F 204 945-5229
www.gov.mb.ca/conservation/eal

CLIENT FILE NO.: 5742.00

April 29, 2015

Ryan Coulter, P.Eng., Manager, Environmental Services
Highway Planning and Design Branch, Manitoba Infrastructure and Transportation
1420-215 Garry Street
Winnipeg MB R3C 3P3

Dear Mr. Coulter:

Enclosed is **revised Environment Act Licence No. 3131 R** dated April 29, 2015 issued to **Manitoba Infrastructure and Transportation** for the construction and operation of the Development being a flood protection dike expansion on the east side of the community of St. Adolphe in the Rural Municipality of Ritchot, in accordance with the Proposal filed under *The Environment Act* dated September 25, 2014 and additional information dated April 10, 2015.

The revised licence is in response to your notice of alteration of April 10, 2015. As the proposed alteration has insignificant environmental effects, the alteration is approved pursuant to Section 14(2) of *The Environment Act* as detailed in the enclosed revised Environment Act licence. In addition to the enclosed Licence requirements, please be informed that all other applicable federal, provincial and municipal regulations and by-laws must be complied with. A Notice of Alteration must be filed with the Director for approval prior to any alteration to the Development as licensed.

For further information on the administration and application of the Licence, please feel free to contact Yvonne Hawryliuk, Environment Officer, at 204-945-5305.

Pursuant to Section 27 of *The Environment Act*, this licensing decision may be appealed by any person who is affected by the issuance of this Licence to the Minister of Conservation and Water Stewardship within 30 days of the date of the Licence.

Yours truly,

“original signed by”

Tracey Braun, M.Sc.

Director

Environment Act

c: Don Labossiere, Director, Environmental Compliance and Enforcement Branch
Donna Smiley, Yvonne Hawryliuk, Environmental Compliance and Enforcement Branch (email)
Public Registries

NOTE: Confirmation of Receipt of this Licence No. 3131 R (by the Licencee only) is required by the Director of Environmental Approvals. Please acknowledge receipt by signing in the space provided below and faxing a copy (letter only) to the Department by May 13, 2015.

On behalf of Manitoba Infrastructure and Transportation

Date

****A COPY OF THE LICENCE MUST BE KEPT ON SITE AT THE DEVELOPMENT AT ALL TIMES****

LICENCE

Licence No. / Licence 3131 R

Issue Date / Date de délivrance January 29, 2015

Revised April 29, 2015

In accordance with *The Environment Act* (C.C.S.M. c. E125) /
Conformément à *la Loi sur l'environnement* (C.P.L.M. c. E125)

Pursuant to Section 11(1) and 14(2) / Conformément au Paragraphe 11(1) et 14(2)

MANITOBA INFRASTRUCTURE AND TRANSPORTATION:
"the Licence"

for the construction and operation of the Development being a flood protection dike expansion on the east side of the community of St. Adolphe in the Rural Municipality of Ritchot, in accordance with the Proposal filed under *The Environment Act* dated September 25, 2014, and additional information dated April 10, 2015, and subject to the following specifications, limits, terms and conditions:

DEFINITIONS

In this Licence,

"**approved**" means approved by the Director or assigned Environment Officer in writing;

"**Director**" means an employee so designated pursuant to *The Environment Act*;

"**Environment Officer**" means an employee so designated pursuant to *The Environment Act*;

GENERAL TERMS AND CONDITIONS

This Section of the Licence contains requirements intended to provide guidance to the Licencee in implementing practices to ensure that the environment is maintained in such a manner as to sustain a high quality of life, including social and economic development, recreation and leisure for present and future Manitobans.

1. In addition to any of the limits, terms and conditions specified in this Licence, the Licencee shall, upon the request of the Director:

- a) sample, monitor, analyze or investigate specific areas of concern regarding any segment, component or aspect of pollutant storage, containment, treatment, handling, disposal or emission systems, for such pollutants, ambient quality, aquatic toxicity, leachate characteristics and discharge or emission rates, and for such duration and at such frequencies as may be specified;
 - b) determine the environmental impact associated with the release of any pollutant from the Development;
 - c) conduct specific investigations in response to the data gathered during environmental monitoring programs; or
 - d) provide the Director, within such time as may be specified, with such reports, drawings, specifications, analytical data, descriptions of sampling and analytical procedures being used, bioassay data, flow rate measurements and such other information as may from time to time be requested.
2. The Licencee shall submit all information required to be provided to the Director or Environment Officer under this Licence, in writing, in such form (including number of copies) and of such content as may be required by the Director or Environment Officer, and each submission shall be clearly labelled with the Licence Number and Client File Number associated with this Licence.

SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS

3. The Licencee shall notify the assigned Environment Officer not less than two weeks prior to beginning construction of the Development. The notification shall include the intended starting date of construction and the name of the contractor responsible for the construction.
4. The Licencee shall, prior to construction of the Development, locate any unsealed wells within the footprint of the Development that will be abandoned due to the construction of the Development, and seal the wells in accordance with Manitoba regulatory requirements and Manitoba water well industry practices.
5. The Licencee shall not disturb riparian vegetation on the west side of the St. Adolphe Coulee, and shall maintain the configuration between the outside edge of the Development and the west bank of the St. Adolphe Coulee as indicated in Figure 1 attached to this Licence.
6. The Licencee shall:
 - a) not construct the flood protection dike and related earthwork components of the Development during periods of heavy rain;
 - b) place and/or isolate all excavated and construction material where it will not erode into any watercourse;
 - c) implement effective long-term sediment and erosion control measures to prevent soil-laden runoff, and/or silt from entering any watercourse during construction and until vegetation is established;
 - d) routinely inspect all erosion and sediment control structures and immediately complete any necessary maintenance or repair;

- e) revegetate soil exposed during the construction of the Development with native or introduced grasses or legumes. Native species shall be used to revegetate areas where native species existed prior to construction; and
 - f) use rock that is free of silt and clay for riprap.
7. The Licencee shall dispose of non-reusable construction debris from the Development at a waste disposal ground operating under the authority of a permit issued pursuant to *Manitoba Regulation 150/91* respecting *Waste Disposal Grounds*, or any future amendment thereof, or a Licence issued pursuant to *The Environment Act*.
 8. The Licencee shall collect and dispose of all used oil products and other regulated hazardous wastes generated by the machinery used in the construction and maintenance of the Development in accordance with applicable Manitoba Conservation and Water Stewardship and legislation requirements.
 9. The Licencee shall locate fuel storage and equipment servicing areas established for the construction and operation of the Development a minimum distance of 100 metres from any waterbody, and shall comply with the requirements of *Manitoba Regulation 188/2001* respecting *Storage and Handling of Petroleum Products and Allied Products* or any future amendment thereof.
 10. The Licencee shall, during construction of the Development, operate, maintain and store all materials and equipment in a manner that prevents any deleterious substances (fuel, oil, grease, hydraulic fluids, coolant, paint, uncured concrete and concrete wash water, etc.) from entering watercourses, and have an emergency spill kit for in-water use available on site during construction.
 11. The Licencee shall, in the case of physical or mechanical equipment breakdown where such breakdown results or may result in the release of a pollutant in an amount or concentration, or at a level or rate of release, that causes or may cause a significant adverse effect, immediately report the event by calling 204-944-4888 (toll-free 1-855-944-4888). The report shall indicate the nature of the event, the time and estimated duration of the event and the reason for the event.
 12. The Licencee shall, following the reporting of an event pursuant to Clause 11,
 - a) identify the repairs required to the mechanical equipment;
 - b) undertake all repairs to minimize unauthorized discharges of a pollutant;
 - c) complete the repairs in accordance with any written instructions of the Director and/or the Environment Officer; and
 - d) submit a report to the Director about the causes of breakdown and measures taken, within one week of the repairs being done.
 13. The Licencee shall, during construction and maintenance of the Development, prevent the introduction and spread of foreign aquatic and terrestrial biota by cleaning equipment prior to its delivery to the site of the Development.

14. The Licencee shall, in each summer and each fall (twice annually) until new vegetation is well established, monitor revegetated areas of the Development for the presence of purple loosestrife. If this invasive species is found, the Licencee shall develop a control plan in consultation with the Wildlife Branch, and implement the plan.
15. The Licencee shall limit the off-road movement of construction machinery associated with the Development to land within the footprint of the Development.

REVIEW AND REVOCATION

- A. Environment Act Licence No. 3131 is hereby rescinded.
- B. If, in the opinion of the Director, the Licencee has exceeded or is exceeding or has or is failing to meet the specifications, limits, terms, or conditions set out in this Licence, the Director may, temporarily or permanently, revoke this Licence.
- C. If the Licencee has not commenced construction of the Development within three years of the date of this Licence, the Licence is revoked.
- D. If, in the opinion of the Director, new evidence warrants a change in the specifications, limits, terms or conditions of this Licence, the Director may require the filing of a new proposal pursuant to Section 11 of *The Environment Act*.

“original signed by”

Tracey Braun, M.Sc.
Director
Environment Act

Client File No.: 5742.00

Figure 1 to Environment Act Licence No. 3131 R

Manitoba Infrastructure and Transportation – St. Adolphe Ring Dike Extension



****A COPY OF THIS LICENCE MUST BE KEPT ON SITE AT THE DEVELOPMENT AT ALL TIMES****