APEGA Permit to Practice - P654

Prepared by:

Md Makamum Mahmood, MEng, PEng
Senior Project Engineer

Dan Healy, PhD, PEng
Principal

Reviewed by:

Gary Van Der Vinne, MSc, PEng
Principal

MILK RIVER FLOOD STUDY

OPEN WATER FLOOD INUNDATION MAP LIBRARY

Prepared for:

Alberta

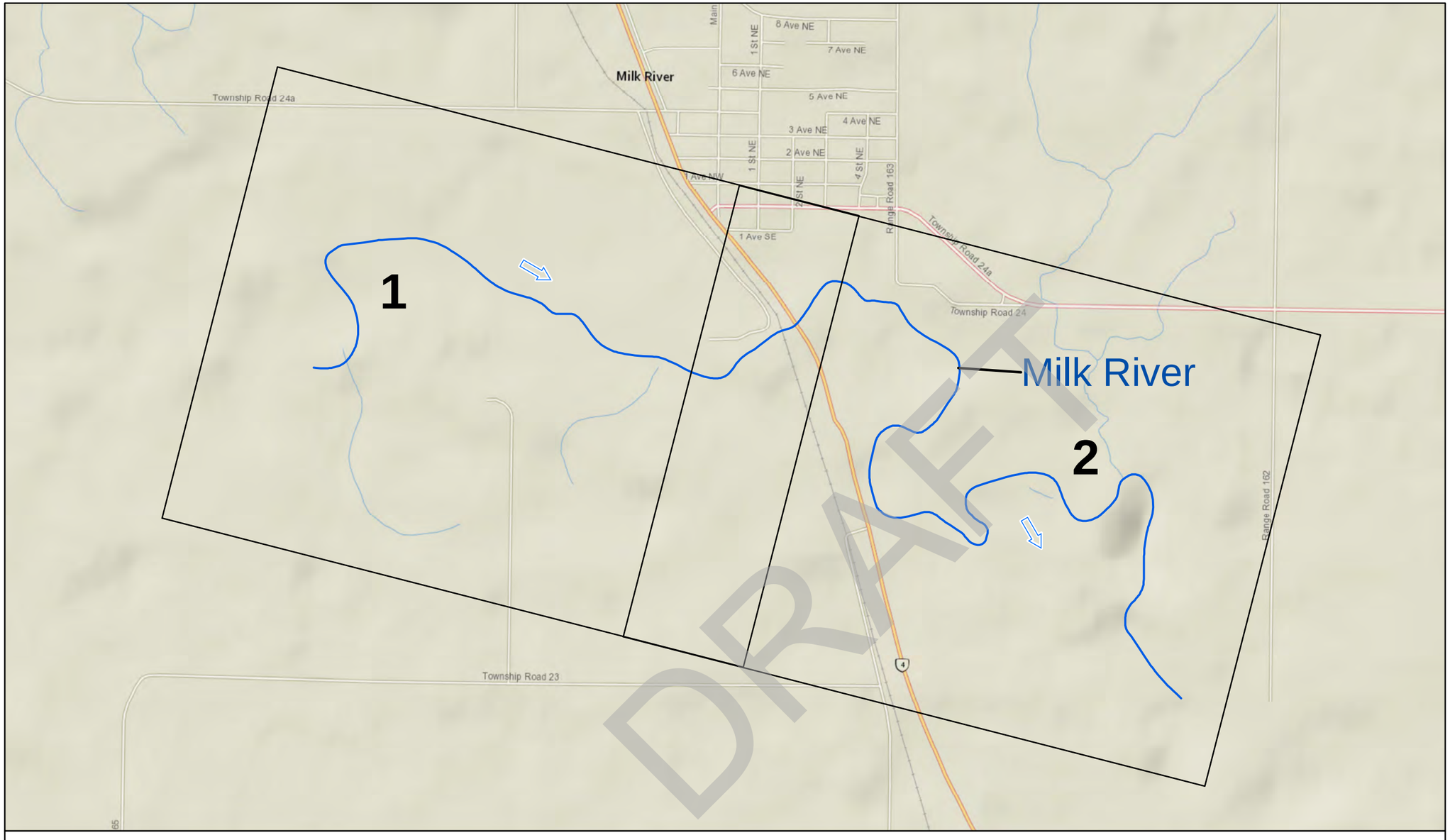
22 March 2022

NHC Ref. No. 1006666

nhc
northwest hydraulic consultants ltd

TABLE OF CONTENTS

OPEN WATER FLOOD INUNDATION INDEX MAP



Notes to Users:

1. Please refer to the accompanying **Milk River Study Report** for important information concerning these maps.
2. Within the flood inundation areas shown on this map, there may be isolated pockets of high ground. To determine whether or not a particular site is subject to flooding, reference should be made to the computed flood levels in conjunction with site-specific surveys where detailed definition is required.
3. Non-riverine and local sources of water have not been considered, and structures such roads, railways or barriers such as levees can restrict water flow and affect local flood levels. Channel obstruction, local stormwater inflow, groundwater seepage or other land drainage can cause flood levels to exceed those indicated on the map. Lands adjacent to a flooded area may be subject to flooding from tributary streams not indicated on the maps.
4. The flood inundation area is shown above the line work for bridges that are below flood levels.

Definitions:

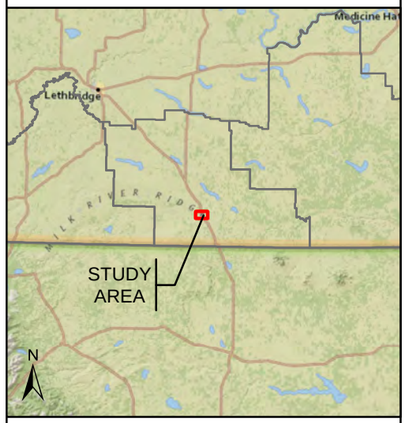
1. **Flood Inundation Mapping** - Delineates flood inundation areas, showing the extent of one or more flood scenarios under existing conditions. Depending on the particular flood scenario, the mapping may be divided into multiple zones. Flood inundation mapping is typically used for near real-time emergency response planning and operations.
2. **Flood Inundation Area** - The area inundated during a particular flood scenario under existing conditions. The flood inundation area may be divided into multiple zones, including isolated areas that may become inundated due to groundwater seepage or other subsurface connections. Flood inundation areas may change as a result of future development or flow obstructions.
3. **Flood Scenario**- Flow conditions that describe a particular flood event. Flood scenarios typically represent a range of flows, based either on flood frequency analysis or set flow intervals. The flood scenarios included with this map set include the 2-year, 5-year, 10-year, 20-year, 35-year, 50-year, 75-year, 100-year, 200-year, 350-year, 500-year, 750-year, and 1000-year flood events.

Data Sources and References:

1. Orthophoto imagery acquired by OGL Engineering for Alberta Environment and Parks: *OGL Engineering (2021). Milk River aerial imagery acquisition memorandum, project number 2021-500, submitted to Alberta Environment and Parks, 5 pp.*
2. Base data from Natural Resources Canada, Alberta Environment and Parks, and Altalis.
3. Additional base mapping from Esri.

Alberta

nhc
northwest hydraulic consultants



FLOW DIRECTION
STUDY REACH
MAP SHEET

SCALE - 1:18,000
0 300 600 M
N

Coordinate System: NAD 1983 CSRS 3TM 111; Vertical Datum: CGVD28 HTv2.0; Units: Metres

Engineer	*GIS*	*Reviewer*
MMM	JY	DJH

Job: 1006666 | Date: 11-MAR-2022

MILK RIVER FLOOD STUDY

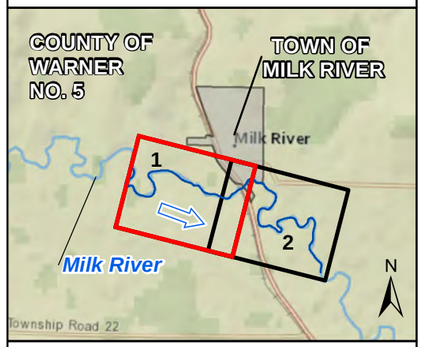
OPEN WATER FLOOD INUNDATION INDEX MAP

INDEX MAP

JY, P:_Projects (Active)\1006666 Milk River Flood Study\90 GIS\1006666_JY_Map_IndexMap_FloodInundation.mxd

2-YEAR OPEN WATER FLOOD INUNDATION MAP

(SHEETS 1 TO 2)



Alberta

nhc
northwest hydraulic consultants

- FLOW DIRECTION
- STUDY LIMIT
- BRIDGE
- MODEL CROSS SECTION
- RAILWAY
- LOCAL ROAD
- PROVINCIAL HIGHWAY
- TOWN OF MILK RIVER
- 2-YEAR FLOOD INUNDATION EXTENT

DISCHARGE
MILK RIVER = 59 m^3/s

SCALE - 1:7,500

0 100 200 M

N

Coordinate System: NAD 1983 CSRS 3TM 111;
Vertical Datum: CGVD28 HTv2.0; Units: Metres

Engineer	GIS	Reviewer
MMM	JY	DJH

Job: 1006666 | Date: 21-MAR-2022

MILK RIVER FLOOD STUDY

2-YEAR OPEN WATER FLOOD INUNDATION MAP

SHEET 1 OF 2

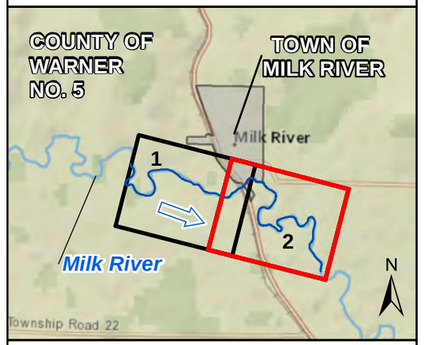
J:\Y_P_Projects (Active)\1006666 Milk River Flood Study\90 GIS\1006666_JY_Map_OWInundation_0002YR.mxd

SHEET 1 ↑

Classification: Public

Alberta

nhc
northwest hydraulic consultants



- FLOW DIRECTION
- STUDY LIMIT
- BRIDGE
- MODEL CROSS SECTION
- RAILWAY
- LOCAL ROAD
- PROVINCIAL HIGHWAY
- TOWN OF MILK RIVER
- 2-YEAR FLOOD INUNDATION EXTENT

DISCHARGE
MILK RIVER = 59 m^3/s

SCALE - 1:7,500

0 100 200 M

N

Coordinate System: NAD 1983 CSRS 3TM 111; Vertical Datum: CGVD28 HTv2.0; Units: Metres

Engineer	GIS	Reviewer
MMM	JY	DJH

Job: 1006666 | *Date: 21-MAR-2022*

MILK RIVER FLOOD STUDY

2-YEAR OPEN WATER FLOOD INUNDATION MAP

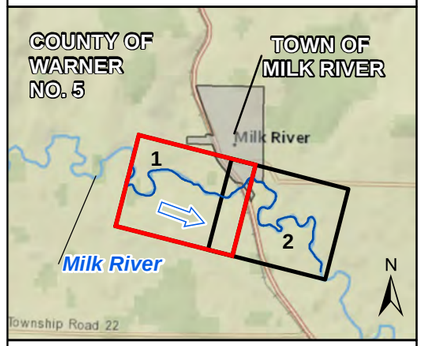
SHEET 2 OF 2

JY_P:_Projects (Active)\1006666 Milk River Flood Study\90 GIS\1006666_JY_Map_OWInundation_0002YR.mxd

5-YEAR OPEN WATER FLOOD INUNDATION MAP

(SHEETS 1 TO 2)

SHEET 2 ↓



- FLOW DIRECTION
- STUDY LIMIT
- BRIDGE
- MODEL CROSS SECTION
- RAILWAY
- LOCAL ROAD
- PROVINCIAL HIGHWAY
- TOWN OF MILK RIVER
- 5-YEAR FLOOD INUNDATION EXTENT

DISCHARGE
MILK RIVER = 113 m^3/s

SCALE - 1:7,500

0 100 200 M

N

Coordinate System: NAD 1983 CSRS 3TM 111;
Vertical Datum: CGVD28 HTv2.0; Units: Metres

Engineer	GIS	Reviewer
MMM	JY	DJH

Job: 1006666 | Date: 21-MAR-2022

MILK RIVER FLOOD STUDY

5-YEAR OPEN WATER FLOOD INUNDATION MAP

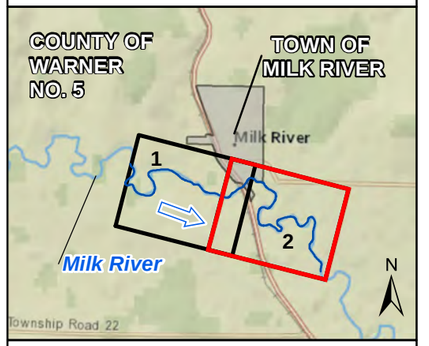
SHEET 1 OF 2

J:\Y_P_Projects (Active)\1006666 Milk River Flood Study\90 GIS\1006666_JY_Map_OWInundation_0005YR.mxd

SHEET 1 ↑

Alberta

nhc
northwest hydraulic consultants



- FLOW DIRECTION
- STUDY LIMIT
- BRIDGE
- MODEL CROSS SECTION
- RAILWAY
- LOCAL ROAD
- PROVINCIAL HIGHWAY
- TOWN OF MILK RIVER
- 5-YEAR FLOOD INUNDATION EXTENT

DISCHARGE
MILK RIVER = 113 m^3/s

SCALE - 1:7,500

0 100 200 M

N

Coordinate System: NAD 1983 CSRS 3TM 111; Vertical Datum: CGVD28 HTv2.0; Units: Metres

Engineer	GIS	Reviewer
MMM	JY	DJH

Job: 1006666 | *Date: 21-MAR-2022*

MILK RIVER FLOOD STUDY

5-YEAR OPEN WATER FLOOD INUNDATION MAP

SHEET 2 OF 2

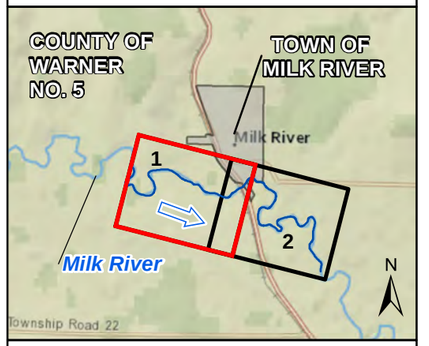
JY, P:_Projects (Active)\1006666 Milk River Flood Study\90 GIS\1006666_JY_Map_OWInundation_0005YR.mxd

10-YEAR OPEN WATER FLOOD INUNDATION MAP

(SHEETS 1 TO 2)

Alberta

nhc
northwest hydraulic consultants



- FLOW DIRECTION
- STUDY LIMIT
- BRIDGE
- MODEL CROSS SECTION
- RAILWAY
- LOCAL ROAD
- PROVINCIAL HIGHWAY
- TOWN OF MILK RIVER
- 10-YEAR FLOOD INUNDATION EXTENT

DISCHARGE
MILK RIVER = 152 m^3/s

SCALE - 1:7,500

0 100 200 M

N

Coordinate System: NAD 1983 CSRS 3TM 111; Vertical Datum: CGVD28 HTv2.0; Units: Metres

Engineer	*GIS*	*Reviewer*
MMM	JY	DJH

Job: 1006666 | *Date: 21-MAR-2022*

MILK RIVER FLOOD STUDY

10-YEAR OPEN WATER FLOOD INUNDATION MAP

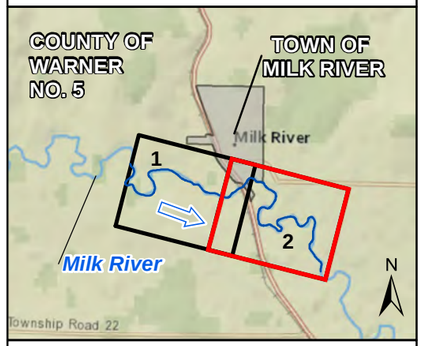
SHEET 1 OF 2

J:\Y_P_Projects (Active)\1006666 Milk River Flood Study\90 GIS\1006666_JY_Map_OWInundation_0010YR.mxd

SHEET 1 ↑

Alberta

nhc
northwest hydraulic consultants



- FLOW DIRECTION
- STUDY LIMIT
- BRIDGE
- MODEL CROSS SECTION
- RAILWAY
- LOCAL ROAD
- PROVINCIAL HIGHWAY
- TOWN OF MILK RIVER
- 10-YEAR FLOOD INUNDATION EXTENT

DISCHARGE
MILK RIVER = 152 m^3/s

SCALE - 1:7,500

0 100 200 M

N

Coordinate System: NAD 1983 CSRS 3TM 111; Vertical Datum: CGVD28 HTv2.0; Units: Metres

Engineer	GIS	Reviewer
MMM	JY	DJH

Job: 1006666 | *Date: 21-MAR-2022*

MILK RIVER FLOOD STUDY

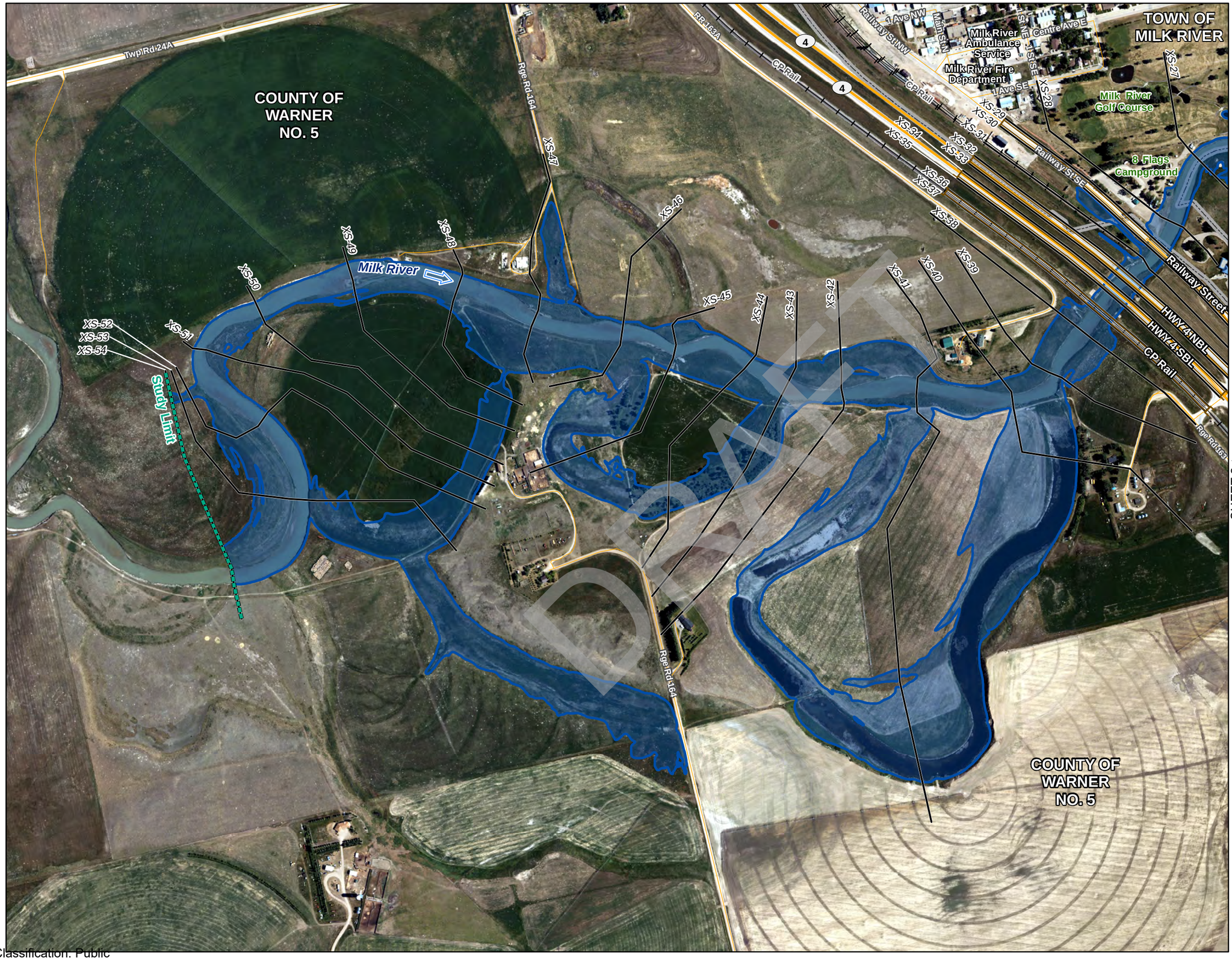
10-YEAR OPEN WATER FLOOD INUNDATION MAP

SHEET 2 OF 2

JY, P:_Projects (Active)\1006666 Milk River Flood Study\90 GIS\1006666_JY_Map_OW\inundation_0010YR.mxd

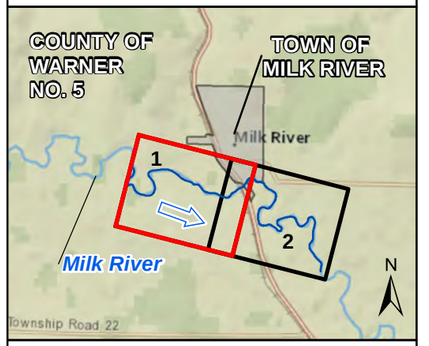
20-YEAR OPEN WATER FLOOD INUNDATION MAP

(SHEETS 1 TO 2)



Alberta

nhc
northwest hydraulic consultants



- FLOW DIRECTION
- STUDY LIMIT
- BRIDGE
- MODEL CROSS SECTION
- RAILWAY
- LOCAL ROAD
- PROVINCIAL HIGHWAY
- TOWN OF MILK RIVER
- 20-YEAR FLOOD INUNDATION EXTENT

DISCHARGE
MILK RIVER = 190 m^3/s

SCALE - 1:7,500

0 100 200 M

N

Coordinate System: NAD 1983 CSRS 3TM 111;
Vertical Datum: CGVD28 HTv2.0; Units: Metres

Engineer	GIS	Reviewer
MMM	JY	DJH

Job: 1006666 | Date: 21-MAR-2022

MILK RIVER FLOOD STUDY

20-YEAR OPEN WATER FLOOD INUNDATION MAP

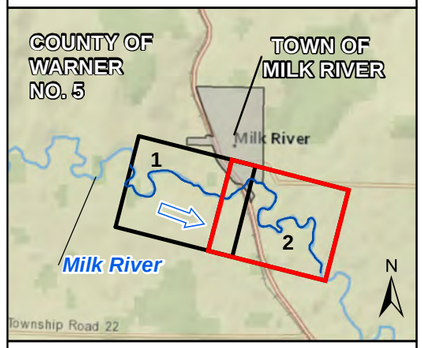
SHEET 1 OF 2

J:\Y_P_Projects (Active)\1006666 Milk River Flood Study\90 GIS\1006666_JY_Map_OWInundation_0020YR.mxd

SHEET 1 ↑

Alberta

nhc
northwest hydraulic consultants



- FLOW DIRECTION
- STUDY LIMIT
- BRIDGE
- MODEL CROSS SECTION
- RAILWAY
- LOCAL ROAD
- PROVINCIAL HIGHWAY
- TOWN OF MILK RIVER
- 20-YEAR FLOOD INUNDATION EXTENT

DISCHARGE
MILK RIVER = 190 m^3/s

SCALE - 1:7,500

0 100 200 M

N

Coordinate System: NAD 1983 CSRS 3TM 111; Vertical Datum: CGVD28 HTv2.0; Units: Metres

Engineer	GIS	Reviewer
MMM	JY	DJH

Job: 1006666 | *Date: 21-MAR-2022*

MILK RIVER FLOOD STUDY

20-YEAR OPEN WATER FLOOD INUNDATION MAP

SHEET 2 OF 2

J:\Y_P:_Projects (Active)\1006666 Milk River Flood Study\90 GIS\1006666_JY_Map_OWinundation_0020YR.mxd

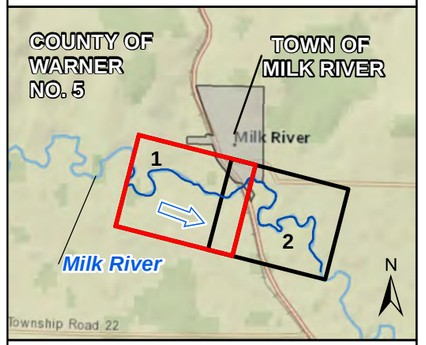
35-YEAR OPEN WATER FLOOD INUNDATION MAP

(SHEETS 1 TO 2)

SHEET 2 →

Alberta

nhc
northwest hydraulic consultants



- FLOW DIRECTION
- STUDY LIMIT
- BRIDGE
- MODEL CROSS SECTION
- RAILWAY
- LOCAL ROAD
- PROVINCIAL HIGHWAY
- TOWN OF MILK RIVER
- 35-YEAR FLOOD INUNDATION EXTENT

DISCHARGE
MILK RIVER = 221 m^3/s

SCALE - 1:7,500

0 100 200 M

N

Coordinate System: NAD 1983 CSRS 3TM 111; Vertical Datum: CGVD28 HTv2.0; Units: Metres

Engineer	GIS	Reviewer
MMM	JY	DJH

Job: 1006666 | *Date: 21-MAR-2022*

MILK RIVER FLOOD STUDY

35-YEAR OPEN WATER FLOOD INUNDATION MAP

SHEET 1 OF 2

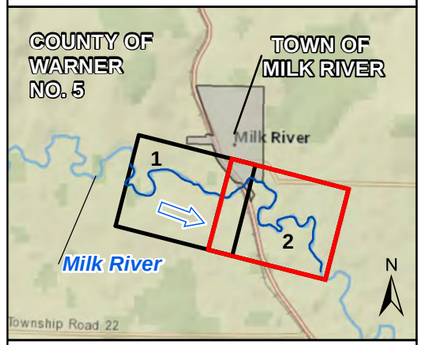
JY, P:_Projects (Active)\1006666 Milk River Flood Study\90 GIS\1006666_JY_Map_OWinundation_0035YR.mxd

SHEET 1 ↑

DRAFT

Alberta

nhc
northwest hydraulic consultants



- FLOW DIRECTION
- STUDY LIMIT
- BRIDGE
- MODEL CROSS SECTION
- RAILWAY
- LOCAL ROAD
- PROVINCIAL HIGHWAY
- TOWN OF MILK RIVER
- 35-YEAR FLOOD INUNDATION EXTENT

DISCHARGE
MILK RIVER = 221 m^3/s

SCALE - 1:7,500

0 100 200 M

N

Coordinate System: NAD 1983 CSRS 3TM 111; Vertical Datum: CGVD28 HTv2.0; Units: Metres

Engineer	GIS	Reviewer
MMM	JY	DJH

Job: 1006666 | *Date: 21-MAR-2022*

MILK RIVER FLOOD STUDY

35-YEAR OPEN WATER FLOOD INUNDATION MAP

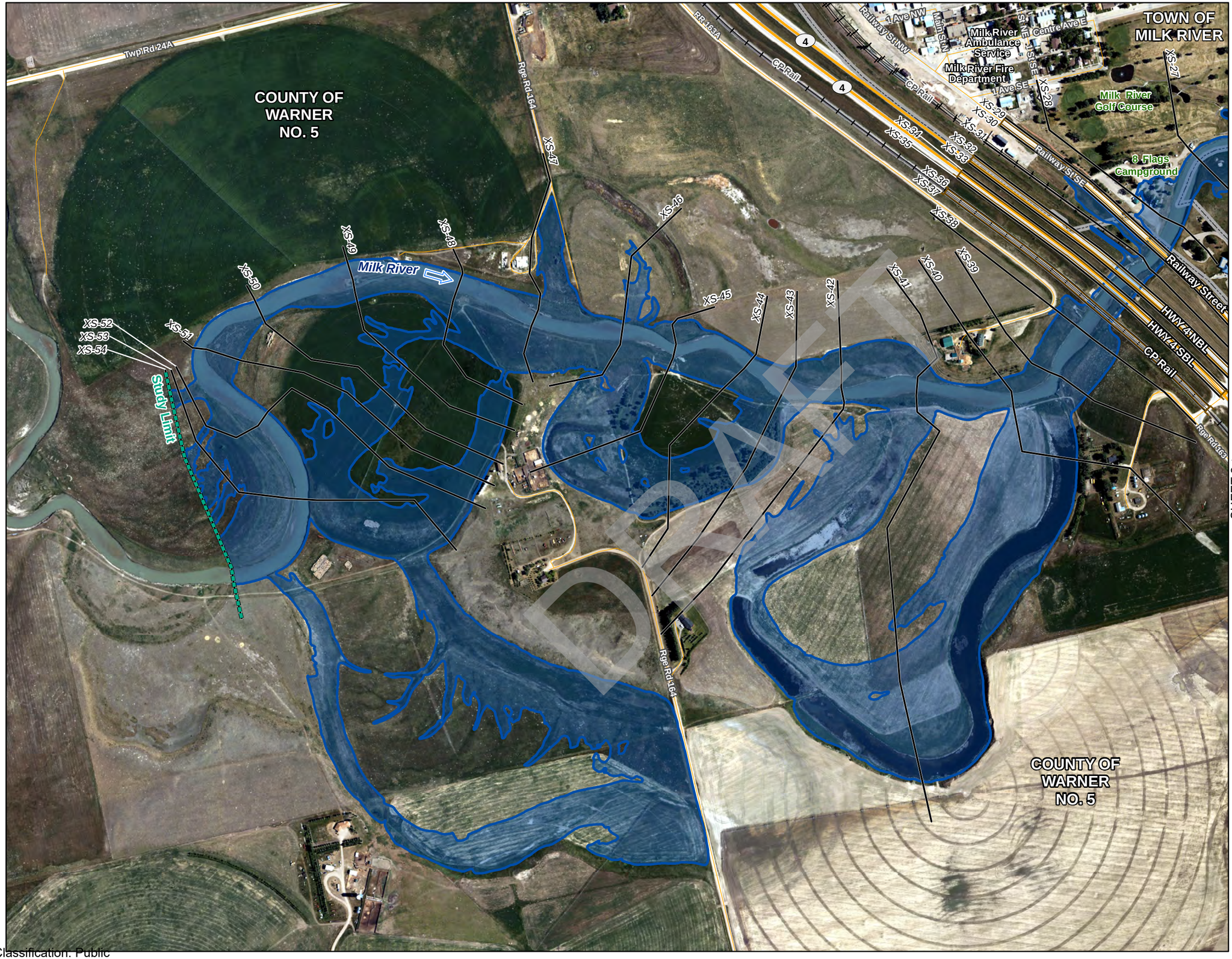
SHEET 2 OF 2

JY, P:_Projects (Active)\1006666 Milk River Flood Study\90 GIS\1006666_JY_Map_OWinundation_0035YR.mxd

Classification: Public

50-YEAR OPEN WATER FLOOD INUNDATION MAP

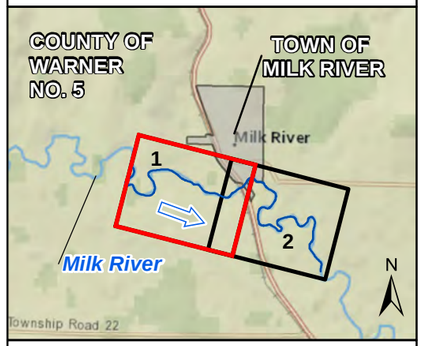
(SHEETS 1 TO 2)



SHEET 2 →

Alberta

nhc
northwest hydraulic consultants



- FLOW DIRECTION
- STUDY LIMIT
- BRIDGE
- MODEL CROSS SECTION
- RAILWAY
- LOCAL ROAD
- PROVINCIAL HIGHWAY
- TOWN OF MILK RIVER
- 50-YEAR FLOOD INUNDATION EXTENT

DISCHARGE
MILK RIVER = 240 m^3/s

SCALE - 1:7,500

0 100 200 M

N

Coordinate System: NAD 1983 CSRS 3TM 111; Vertical Datum: CGVD28 HTv2.0; Units: Metres

Engineer	GIS	Reviewer
MMM	JY	DJH

Job: 1006666 | *Date: 21-MAR-2022*

MILK RIVER FLOOD STUDY

50-YEAR OPEN WATER FLOOD INUNDATION MAP

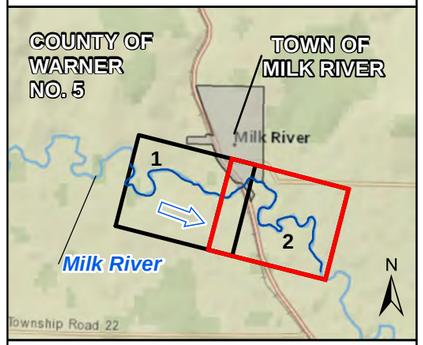
SHEET 1 OF 2

JY, P:_Projects (Active)\1006666 Milk River Flood Study\90 GIS\1006666_JY_Map_OWinundation_0050YR.mxd

SHEET 1 ↑

Alberta

nhc
northwest hydraulic consultants



- FLOW DIRECTION
- STUDY LIMIT
- BRIDGE
- MODEL CROSS SECTION
- RAILWAY
- LOCAL ROAD
- PROVINCIAL HIGHWAY
- TOWN OF MILK RIVER
- 50-YEAR FLOOD INUNDATION EXTENT

DISCHARGE
MILK RIVER = 240 m^3/s

SCALE - 1:7,500

0 100 200 M

N

Coordinate System: NAD 1983 CSRS 3TM 111; Vertical Datum: CGVD28 HTv2.0; Units: Metres

Engineer	GIS	Reviewer
MMM	JY	DJH

Job: 1006666 | *Date: 21-MAR-2022*

MILK RIVER FLOOD STUDY

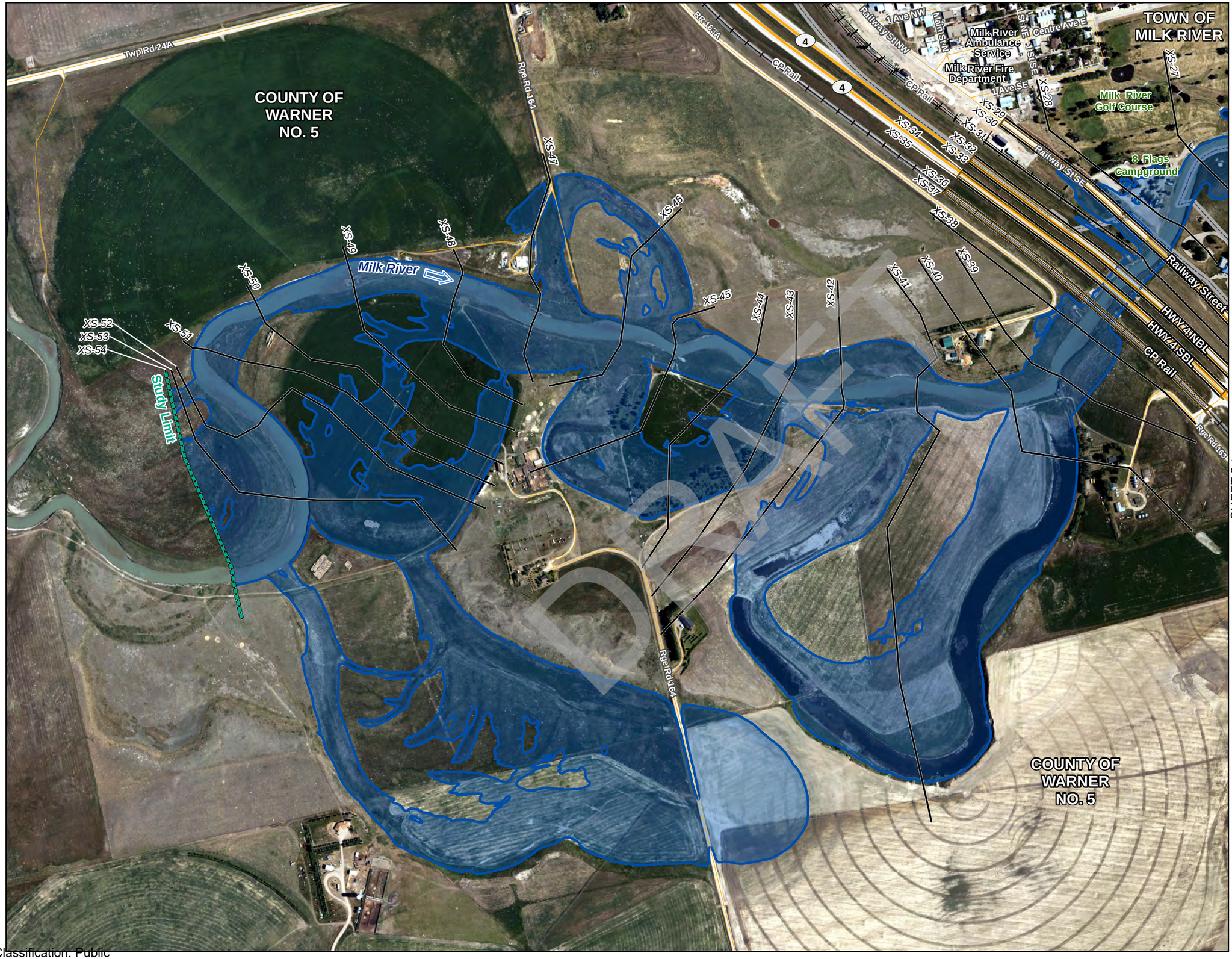
50-YEAR OPEN WATER FLOOD INUNDATION MAP

SHEET 2 OF 2

JY, P:_Projects (Active)\1006666 Milk River Flood Study\90 GIS\1006666_JY_Map_OWinundation_0050YR.mxd

75-YEAR OPEN WATER FLOOD INUNDATION MAP

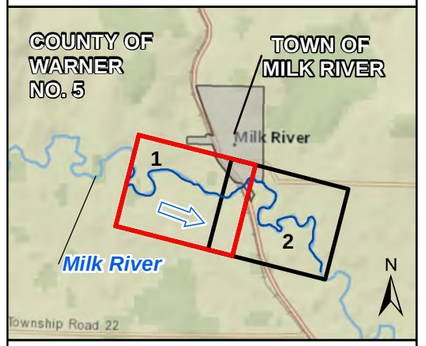
(SHEETS 1 TO 2)



SHEET 2 →

Alberta

nhc
northwest hydraulic consultants



- FLOW DIRECTION
- STUDY LIMIT
- BRIDGE
- MODEL CROSS SECTION
- RAILWAY
- LOCAL ROAD
- PROVINCIAL HIGHWAY
- TOWN OF MILK RIVER
- 75-YEAR FLOOD INUNDATION EXTENT

DISCHARGE
MILK RIVER = 262 m^3/s

SCALE - 1:7,500

0 100 200 M

N

Coordinate System: NAD 1983 CSRS 3TM 111; Vertical Datum: CGVD28 HTv2.0; Units: Metres

Engineer	GIS	Reviewer
MMM	JY	DJH

Job: 1006666 | *Date: 21-MAR-2022*

MILK RIVER FLOOD STUDY

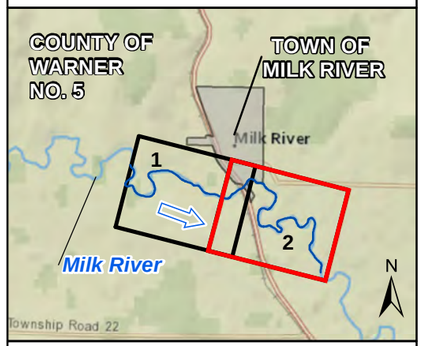
75-YEAR OPEN WATER FLOOD INUNDATION MAP

SHEET 1 OF 2

SHEET 1 ↑

Alberta

nhc
northwest hydraulic consultants



- FLOW DIRECTION
- STUDY LIMIT
- BRIDGE
- MODEL CROSS SECTION
- RAILWAY
- LOCAL ROAD
- PROVINCIAL HIGHWAY
- TOWN OF MILK RIVER
- 75-YEAR FLOOD INUNDATION EXTENT

DISCHARGE
MILK RIVER = 262 m^3/s

SCALE - 1:7,500

0 100 200 M

N

Coordinate System: NAD 1983 CSRS 3TM 111; Vertical Datum: CGVD28 HTv2.0; Units: Metres

Engineer	GIS	Reviewer
MMM	JY	DJH

Job: 1006666 | *Date: 21-MAR-2022*

MILK RIVER FLOOD STUDY

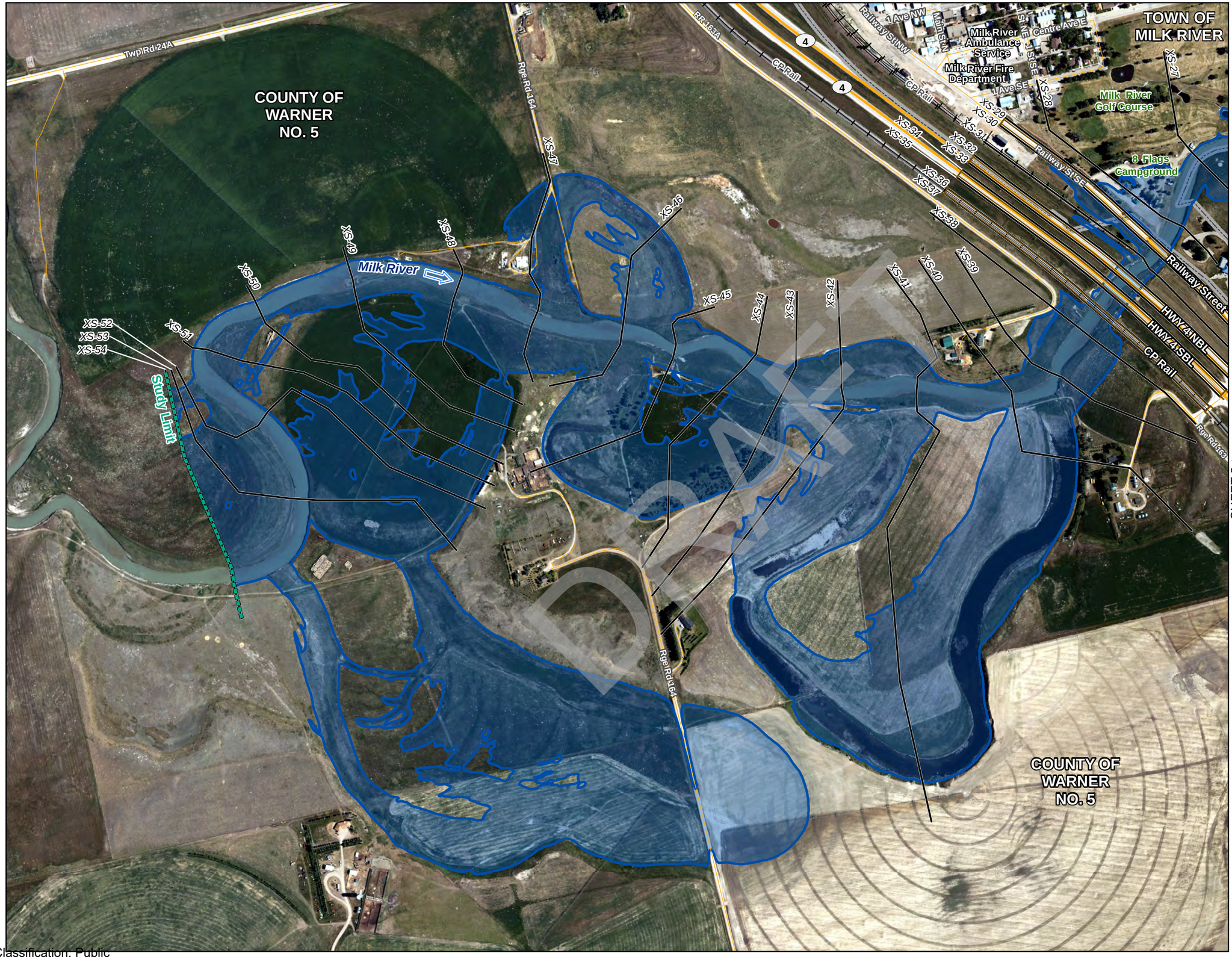
75-YEAR OPEN WATER FLOOD INUNDATION MAP

SHEET 2 OF 2

JY, P:_Projects (Active)\1006666 Milk River Flood Study\90 GIS\1006666_JY_Map_OWInundation_0075YR.mxd

100-YEAR OPEN WATER FLOOD INUNDATION MAP

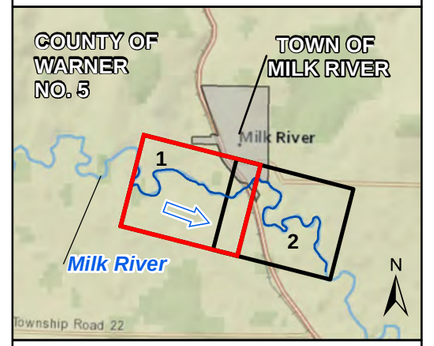
(SHEETS 1 TO 2)



SHEET 2 →

Alberta

nhc
northwest hydraulic consultants



- FLOW DIRECTION
- STUDY LIMIT
- BRIDGE
- MODEL CROSS SECTION
- RAILWAY
- LOCAL ROAD
- PROVINCIAL HIGHWAY
- TOWN OF MILK RIVER
- 100-YEAR FLOOD INUNDATION EXTENT

DISCHARGE
MILK RIVER = 277 m^3/s

SCALE - 1:7,500

0 100 200 M

N

Coordinate System: NAD 1983 CSRS 3TM 111; Vertical Datum: CGVD28 HTv2.0; Units: Metres

Engineer	GIS	Reviewer
MMM	JY	DJH

Job: 1006666 | *Date: 21-MAR-2022*

MILK RIVER FLOOD STUDY

100-YEAR OPEN WATER FLOOD INUNDATION MAP

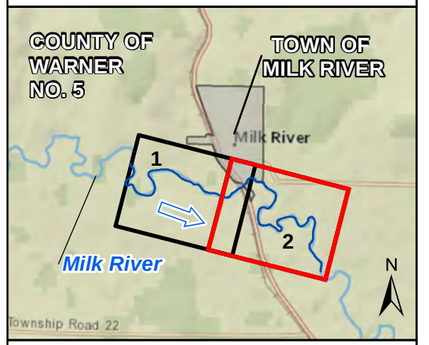
SHEET 1 OF 2

JY, P:_Projects (Active)\1006666 Milk River Flood Study\90 GIS\1006666_JY_Map_OWinundation_0100YR.mxd

SHEET 1 ↑

Alberta

nhc
northwest hydraulic consultants



- FLOW DIRECTION
- STUDY LIMIT
- BRIDGE
- MODEL CROSS SECTION
- RAILWAY
- LOCAL ROAD
- PROVINCIAL HIGHWAY
- TOWN OF MILK RIVER
- 100-YEAR FLOOD INUNDATION EXTENT

DISCHARGE
MILK RIVER = 277 m^3/s

SCALE - 1:7,500

0 100 200 M

N

Coordinate System: NAD 1983 CSRS 3TM 111; Vertical Datum: CGVD28 HTv2.0; Units: Metres

Engineer	GIS	Reviewer
MMM	JY	DJH

Job: 1006666 | *Date: 21-MAR-2022*

MILK RIVER FLOOD STUDY

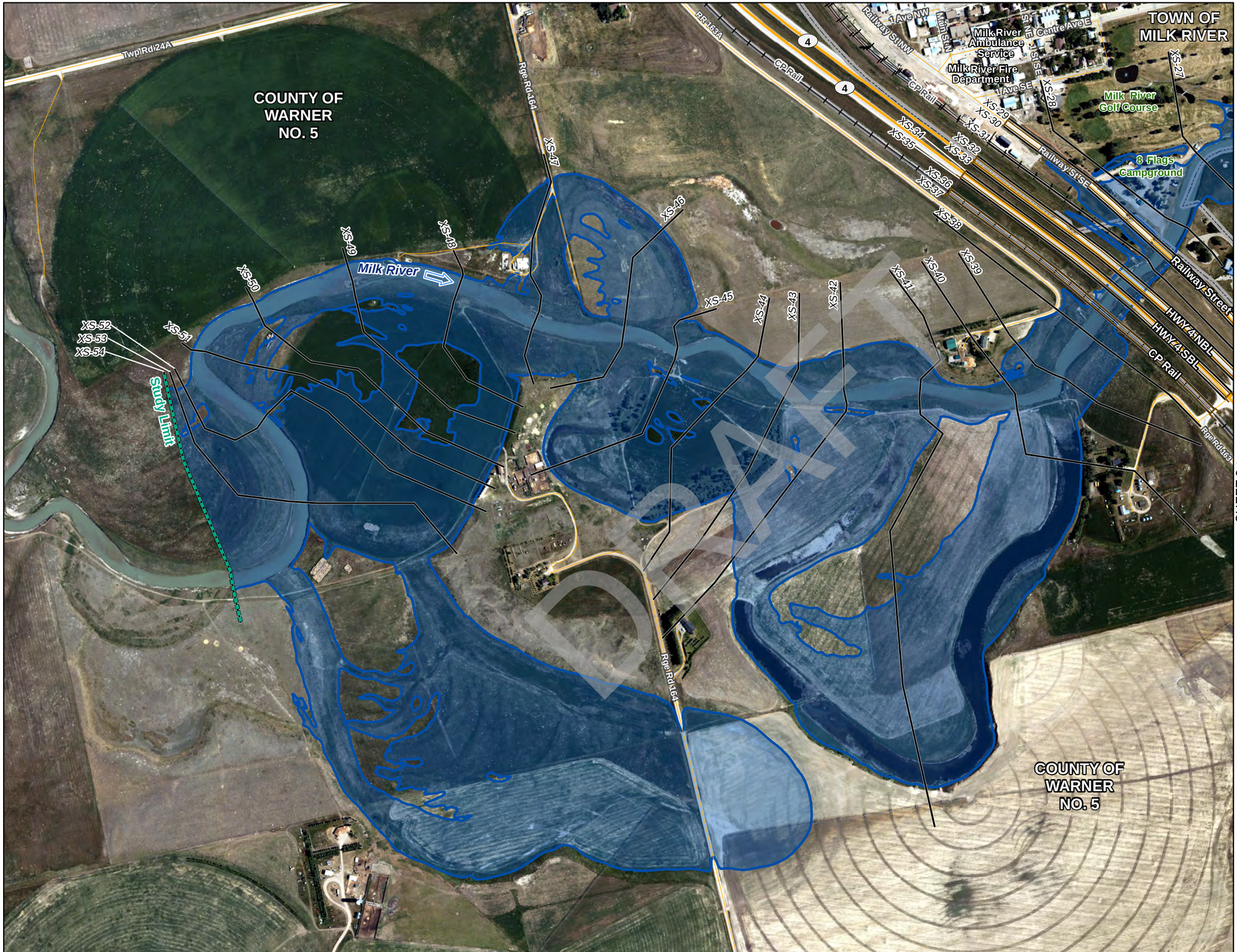
100-YEAR OPEN WATER FLOOD INUNDATION MAP

SHEET 2 OF 2

JY, P:_Projects (Active)\1006666 Milk River Flood Study\90 GIS\1006666_JY_Map_OWinundation_0100YR.mxd

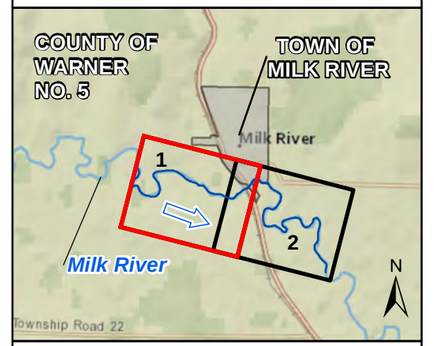
200-YEAR OPEN WATER FLOOD INUNDATION MAP

(SHEETS 1 TO 2)



Alberta

nhc
northwest hydraulic consultants



- FLOW DIRECTION
- STUDY LIMIT
- BRIDGE
- MODEL CROSS SECTION
- RAILWAY
- LOCAL ROAD
- PROVINCIAL HIGHWAY
- TOWN OF MILK RIVER
- 200-YEAR FLOOD INUNDATION EXTENT

DISCHARGE
MILK RIVER = 313 m^3/s

SCALE - 1:7,500

0 100 200 M

N

Coordinate System: NAD 1983 CSRS 3TM 111; Vertical Datum: CGVD28 HTv2.0; Units: Metres

Engineer	GIS	Reviewer
MMM	JY	DJH

Job: 1006666 | *Date: 21-MAR-2022*

MILK RIVER FLOOD STUDY

200-YEAR OPEN WATER FLOOD INUNDATION MAP

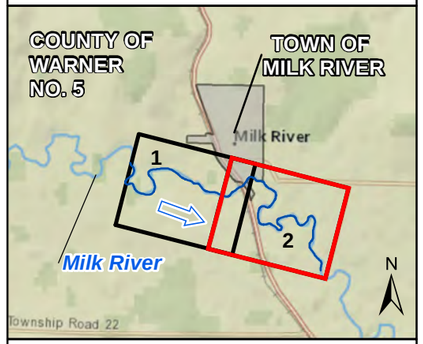
SHEET 1 OF 2

JY_P:_Projects (Active)\1006666 Milk River Flood Study\90 GIS\1006666_JY_Map_OWInundation_0200YR.mxd

SHEET 1 ↑

Alberta

nhc
northwest hydraulic consultants



- FLOW DIRECTION
- STUDY LIMIT
- BRIDGE
- MODEL CROSS SECTION
- RAILWAY
- LOCAL ROAD
- PROVINCIAL HIGHWAY
- TOWN OF MILK RIVER
- 200-YEAR FLOOD INUNDATION EXTENT

DISCHARGE
MILK RIVER = 313 m^3/s

SCALE - 1:7,500

0 100 200 M

N

Coordinate System: NAD 1983 CSRS 3TM 111; Vertical Datum: CGVD28 HTv2.0; Units: Metres

Engineer	GIS	Reviewer
MMM	JY	DJH

Job: 1006666 | *Date: 21-MAR-2022*

MILK RIVER FLOOD STUDY

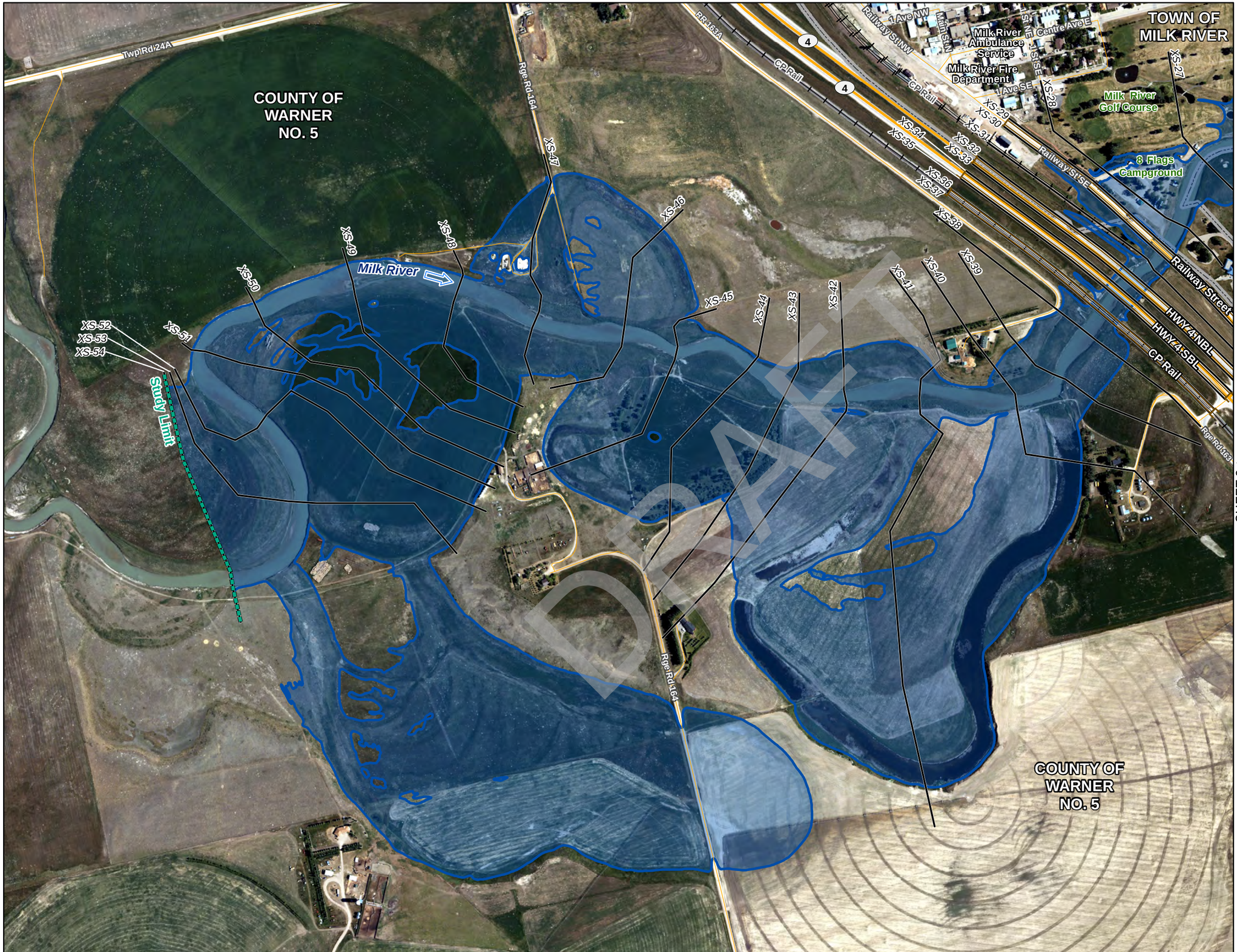
200-YEAR OPEN WATER FLOOD INUNDATION MAP

SHEET 2 OF 2

JY_P:_Projects (Active)\1006666 Milk River Flood Study\90 GIS\1006666_JY_Map_OWInundation_0200YR.mxd

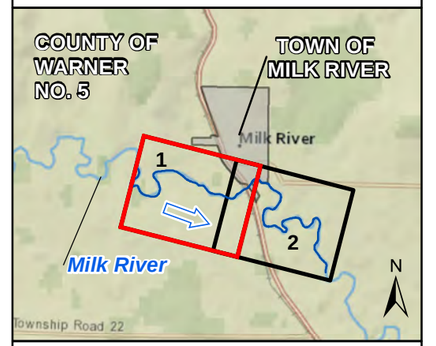
350-YEAR OPEN WATER FLOOD INUNDATION MAP

(SHEETS 1 TO 2)



Alberta

nhc
northwest hydraulic consultants



- FLOW DIRECTION
- STUDY LIMIT
- BRIDGE
- MODEL CROSS SECTION
- RAILWAY
- LOCAL ROAD
- PROVINCIAL HIGHWAY
- TOWN OF MILK RIVER
- 350-YEAR FLOOD INUNDATION EXTENT

DISCHARGE
MILK RIVER = 343 m^3/s

SCALE - 1:7,500

0 100 200 M

N

Coordinate System: NAD 1983 CSRS 3TM 111; Vertical Datum: CGVD28 HTv2.0; Units: Metres

Engineer	GIS	Reviewer
MMM	JY	DJH

Job: 1006666 | *Date: 21-MAR-2022*

MILK RIVER FLOOD STUDY

350-YEAR OPEN WATER FLOOD INUNDATION MAP

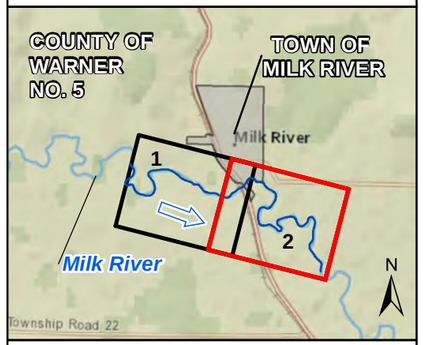
SHEET 1 OF 2

JY, P:_Projects (Active)\1006666 Milk River Flood Study\90 GIS\1006666_JY_Map_OWInundation_0350YR.mxd

SHEET 1 ↑

Alberta

nhc
northwest hydraulic consultants



- FLOW DIRECTION
- STUDY LIMIT
- BRIDGE
- MODEL CROSS SECTION
- RAILWAY
- LOCAL ROAD
- PROVINCIAL HIGHWAY
- TOWN OF MILK RIVER
- 350-YEAR FLOOD INUNDATION EXTENT

DISCHARGE
MILK RIVER = 343 m^3/s

SCALE - 1:7,500

0 100 200 M

N

Coordinate System: NAD 1983 CSRS 3TM 111; Vertical Datum: CGVD28 HTv2.0; Units: Metres

Engineer	GIS	Reviewer
MMM	JY	DJH

Job: 1006666 | *Date: 21-MAR-2022*

MILK RIVER FLOOD STUDY

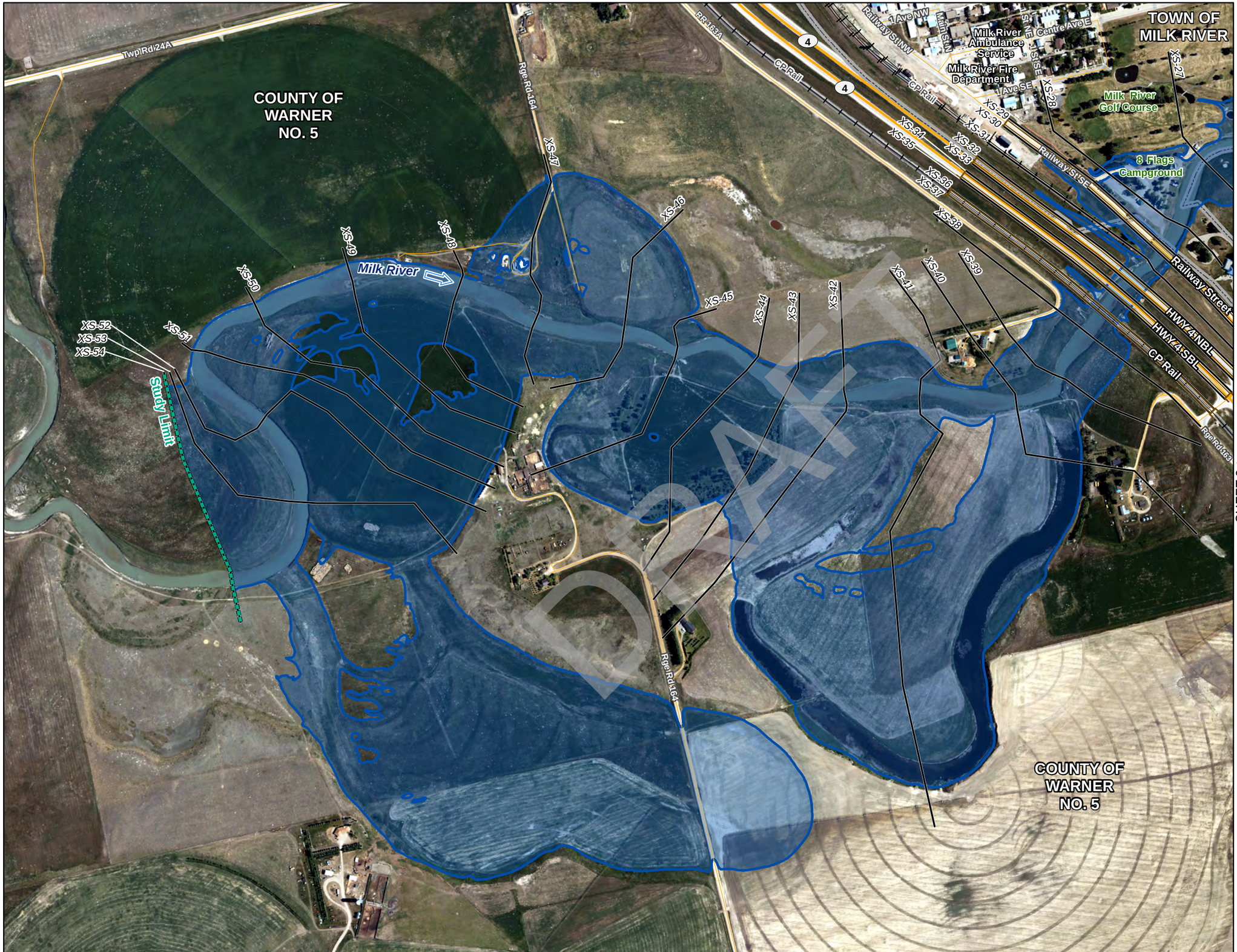
350-YEAR OPEN WATER FLOOD INUNDATION MAP

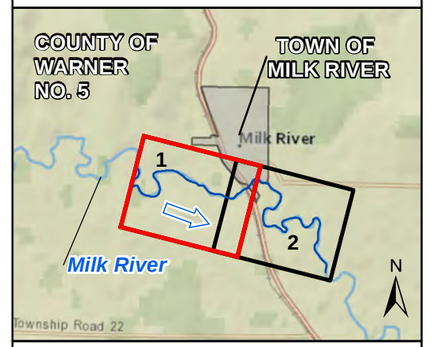
SHEET 2 OF 2

JY, P:_Projects (Active)\1006666 Milk River Flood Study\90 GIS\1006666_JY_Map_OWinundation_0350YR.mxd

500-YEAR OPEN WATER FLOOD INUNDATION MAP

(SHEETS 1 TO 2)





- FLOW DIRECTION
- STUDY LIMIT
- BRIDGE
- MODEL CROSS SECTION
- RAILWAY
- LOCAL ROAD
- PROVINCIAL HIGHWAY
- TOWN OF MILK RIVER
- 500-YEAR FLOOD INUNDATION EXTENT

DISCHARGE
MILK RIVER = 361 m^3/s

SCALE - 1:7,500

0 100 200 M

N

Coordinate System: NAD 1983 CSRS 3TM 111; Vertical Datum: CGVD28 HTv2.0; Units: Metres

Engineer	GIS	Reviewer
MMM	JY	DJH

Job: 1006666 | *Date: 21-MAR-2022*

MILK RIVER FLOOD STUDY

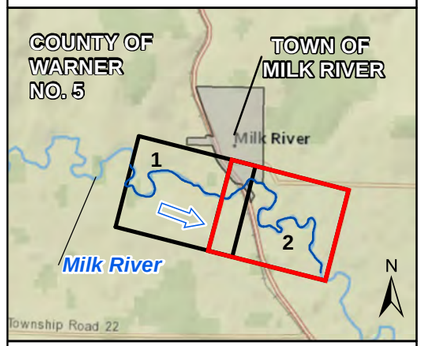
500-YEAR OPEN WATER FLOOD INUNDATION MAP

SHEET 1 OF 2

JY, P:_Projects (Active)\1006666 Milk River Flood Study\90 GIS\1006666_JY_Map_OWInundation_0500YR.mxd

SHEET 1 ↑

Classification: Public



- FLOW DIRECTION
- STUDY LIMIT
- BRIDGE
- MODEL CROSS SECTION
- RAILWAY
- LOCAL ROAD
- PROVINCIAL HIGHWAY
- TOWN OF MILK RIVER
- 500-YEAR FLOOD INUNDATION EXTENT

DISCHARGE
MILK RIVER = 361 m^3/s

SCALE - 1:7,500

0 100 200 M

N

Coordinate System: NAD 1983 CSRS 3TM 111; Vertical Datum: CGVD28 HTv2.0; Units: Metres

Engineer	GIS	Reviewer
MMM	JY	DJH

Job: 1006666 | *Date: 21-MAR-2022*

MILK RIVER FLOOD STUDY

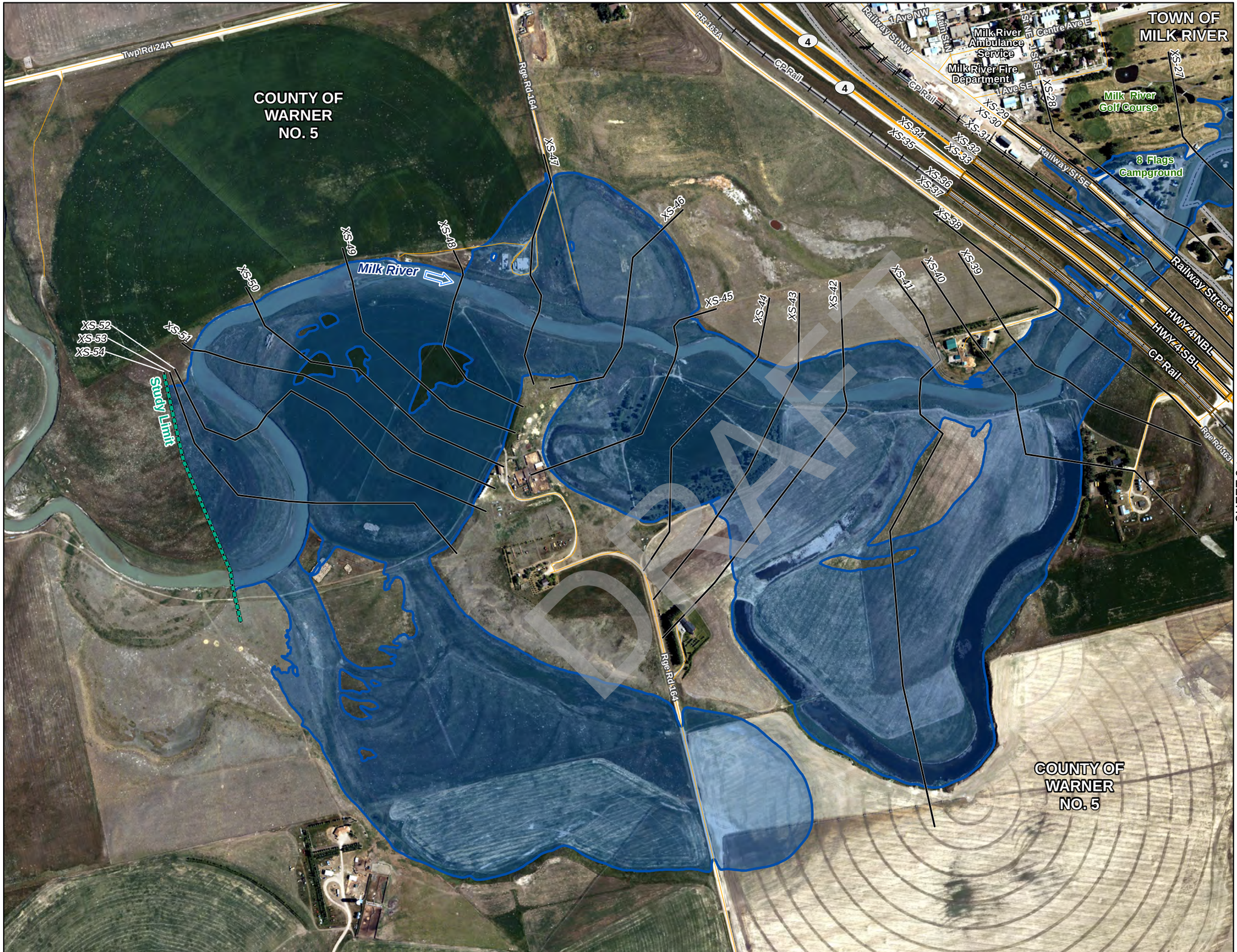
500-YEAR OPEN WATER FLOOD INUNDATION MAP

SHEET 2 OF 2

JY_P:_Projects (Active)\1006666 Milk River Flood Study\90 GIS\1006666_JY_Map_OWInundation_0500YR.mxd

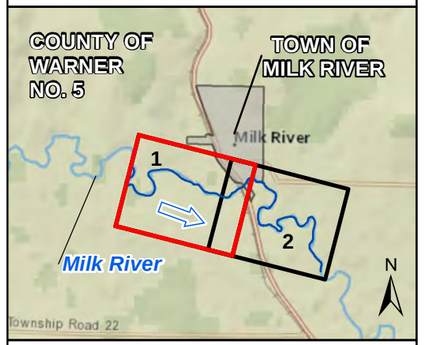
750-YEAR OPEN WATER FLOOD INUNDATION MAP

(SHEETS 1 TO 2)



Alberta

nhc
northwest hydraulic consultants



- FLOW DIRECTION
- STUDY LIMIT
- BRIDGE
- MODEL CROSS SECTION
- RAILWAY
- LOCAL ROAD
- PROVINCIAL HIGHWAY
- TOWN OF MILK RIVER
- 750-YEAR FLOOD INUNDATION EXTENT

DISCHARGE
MILK RIVER = 383 m^3/s

SCALE - 1:7,500

0 100 200 M

N

Coordinate System: NAD 1983 CSRS 3TM 111; Vertical Datum: CGVD28 HTv2.0; Units: Metres

Engineer	GIS	Reviewer
MMM	JY	DJH

Job: 1006666 | *Date: 21-MAR-2022*

MILK RIVER FLOOD STUDY

750-YEAR OPEN WATER FLOOD INUNDATION MAP

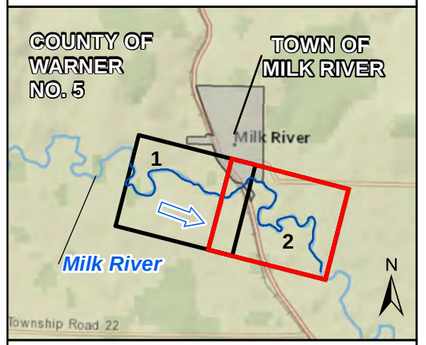
SHEET 1 OF 2

J:\Y_P_Projects (Active)\1006666 Milk River Flood Study\90 GIS\1006666_JY_Map_OWInundation_0750YR.mxd

SHEET 1 ↑

Alberta

nhc
northwest hydraulic consultants



- FLOW DIRECTION
- STUDY LIMIT
- BRIDGE
- MODEL CROSS SECTION
- RAILWAY
- LOCAL ROAD
- PROVINCIAL HIGHWAY
- TOWN OF MILK RIVER
- 750-YEAR FLOOD INUNDATION EXTENT

DISCHARGE
MILK RIVER = 383 m^3/s

SCALE - 1:7,500

0 100 200 M

N

Coordinate System: NAD 1983 CSRS 3TM 111; Vertical Datum: CGVD28 HTv2.0; Units: Metres

Engineer	GIS	Reviewer
MMM	JY	DJH

Job: 1006666 | *Date: 21-MAR-2022*

MILK RIVER FLOOD STUDY

750-YEAR OPEN WATER FLOOD INUNDATION MAP

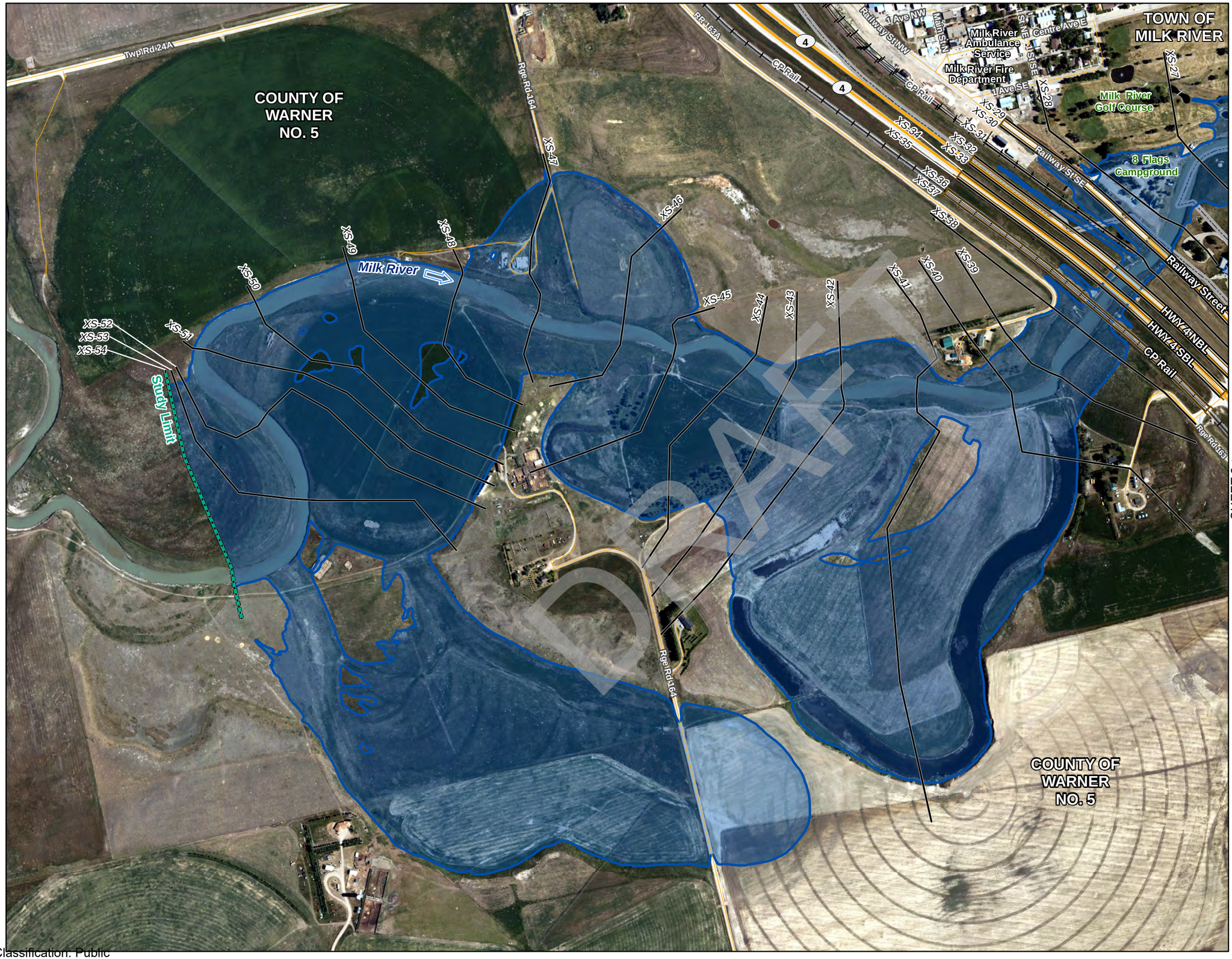
SHEET 2 OF 2

JY_P:_Projects (Active)\1006666 Milk River Flood Study\90 GIS\1006666_JY_Map_OWInundation_0750YR.mxd

Classification: Public

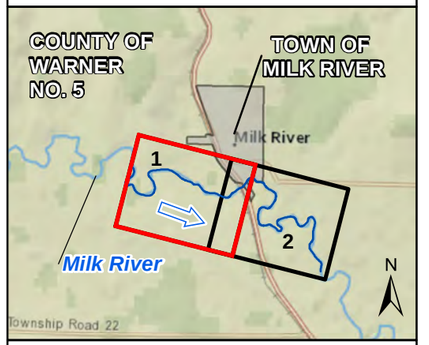
1000-YEAR OPEN WATER FLOOD INUNDATION MAP

(SHEETS 1 TO 2)



Alberta

nhc
northwest hydraulic consultants



- FLOW DIRECTION
- STUDY LIMIT
- BRIDGE
- LOCAL ROAD
- PROVINCIAL HIGHWAY
- RAILWAY
- MODEL CROSS SECTION
- TOWN OF MILK RIVER
- 1000-YEAR FLOOD INUNDATION EXTENT

DISCHARGE
MILK RIVER = 397 m^3/s

SCALE - 1:7,500

0 100 200 M

N

Coordinate System: NAD 1983 CSRS 3TM 111; Vertical Datum: CGVD28 HTv2.0; Units: Metres

Engineer	GIS	Reviewer
MMM	JY	DJH

Job: 1006666 | *Date: 21-MAR-2022*

MILK RIVER FLOOD STUDY

1000-YEAR OPEN WATER FLOOD INUNDATION MAP

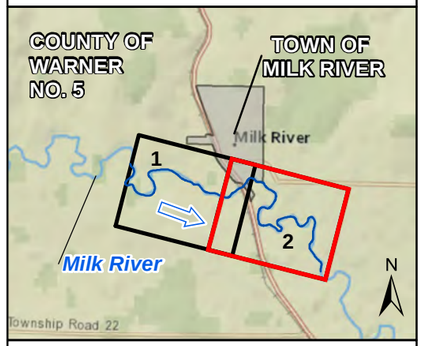
SHEET 1 OF 2

JY, P:_Projects (Active)\1006666 Milk River Flood Study\90 GIS\1006666_JY_Map_OWinundation_1000YR.mxd

SHEET 1 ↑

Alberta

nhc
northwest hydraulic consultants



- FLOW DIRECTION
- STUDY LIMIT
- BRIDGE
- LOCAL ROAD
- PROVINCIAL HIGHWAY
- RAILWAY
- MODEL CROSS SECTION
- TOWN OF MILK RIVER
- 1000-YEAR FLOOD INUNDATION EXTENT

DISCHARGE
MILK RIVER = 397 m^3/s

SCALE - 1:7,500

0 100 200 M

N

Coordinate System: NAD 1983 CSRS 3TM 111; Vertical Datum: CGVD28 HTv2.0; Units: Metres

Engineer	GIS	Reviewer
MMM	JY	DJH

Job: 1006666 | *Date: 21-MAR-2022*

MILK RIVER FLOOD STUDY

1000-YEAR OPEN WATER FLOOD INUNDATION MAP

SHEET 2 OF 2

JY_P:_Projects (Active)\1006666 Milk River Flood Study\90 GIS\1006666_JY_Map_OWinundation_1000YR.mxd

Classification: Public

nhc

northwest hydraulic consultants ltd