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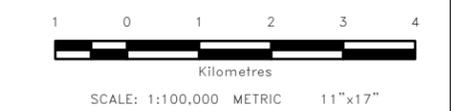
**LEGEND:**

- Water Survey of Canada Gauge Location
- River Centreline

Velocity (m/s)

- 0.0 – 1.0 m/s
- 1.0 – 2.0 m/s
- 2.0 – 3.0 m/s
- 3.0 – 4.0 m/s
- > 4.00 m/s
- Map Extents

**NOTES:**  
 1. Imagery is supplied by ATGIS Geomatics and dated as September 11 – 13, 2019, and by ESRI and DigitalGlobe, WV02 dated June 3, 2015.



All units are metric and in metres unless otherwise specified.  
 Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

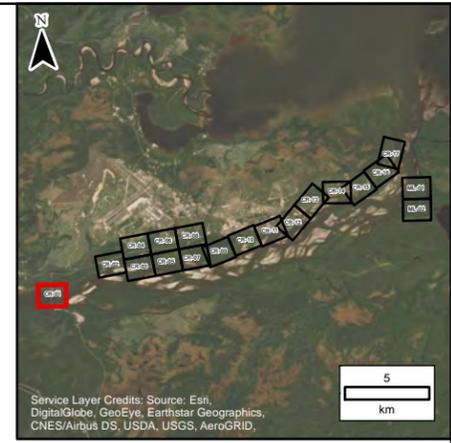
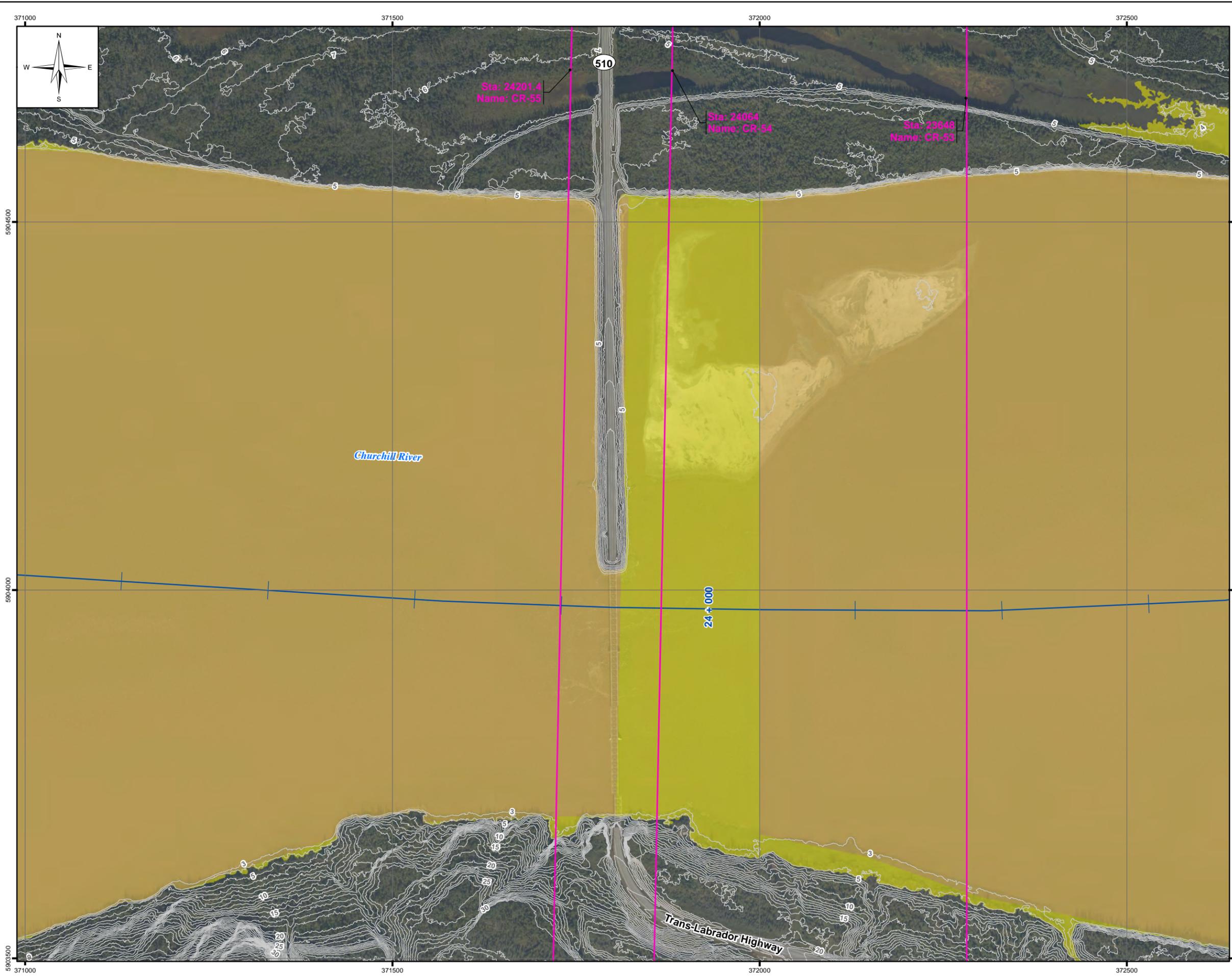
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – OVERVIEW MAP

JUNE 2020	FIGURE 7.1	REV: 0
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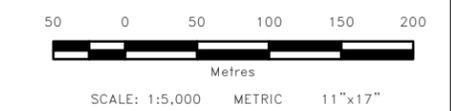


**LEGEND:**

- Sta: 23648 Name: CR-53
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LiDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATGIS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LiDAR captured by ATGIS Geomatics on September 11 – 13, 2019.



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Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

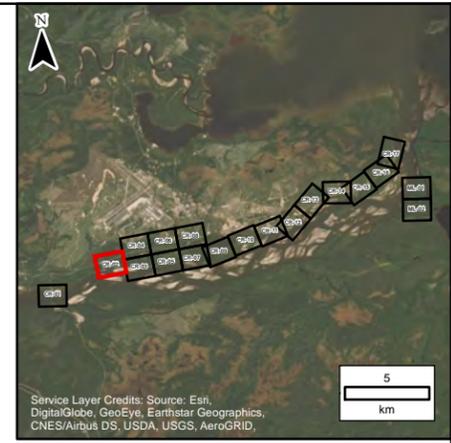
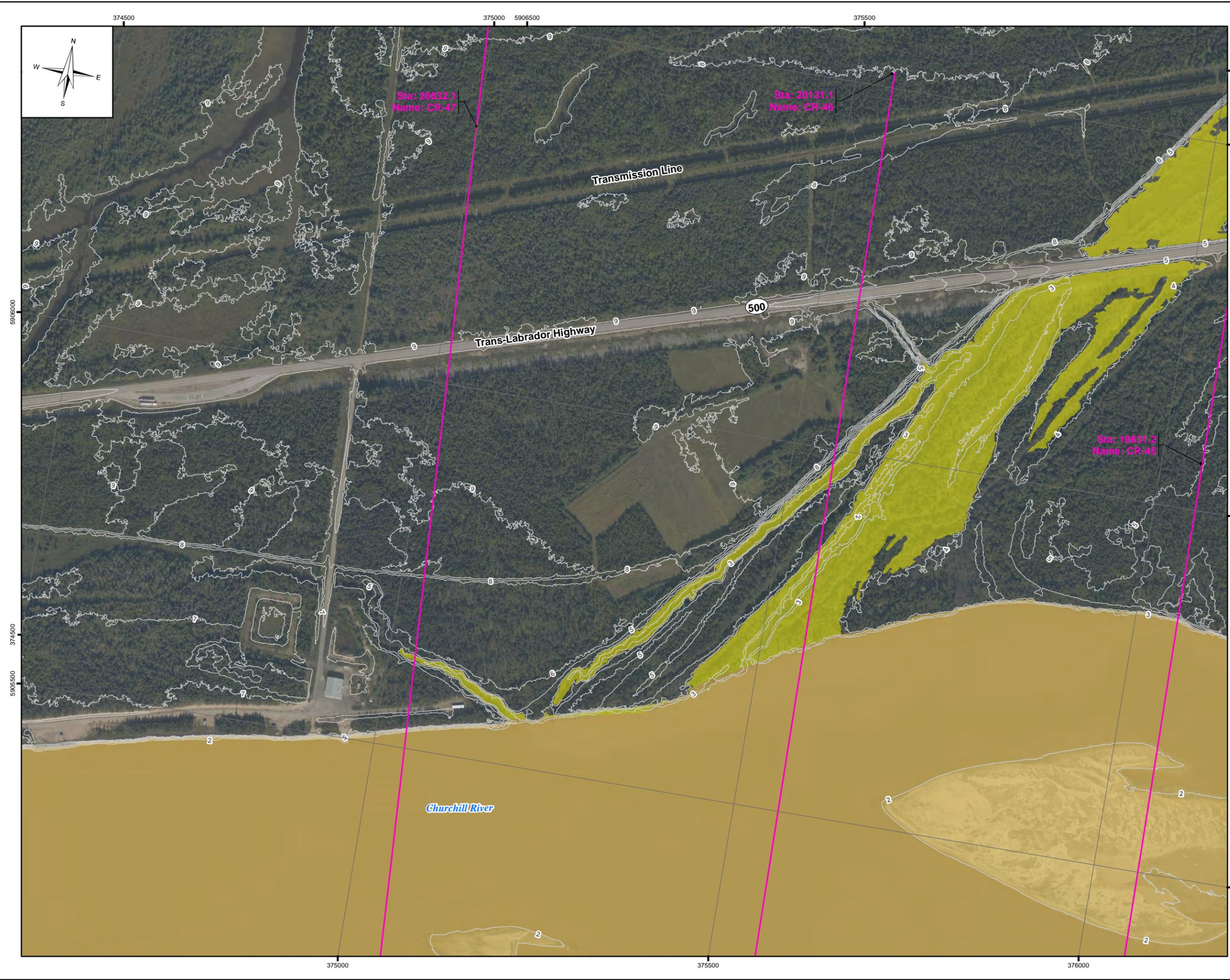
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**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-01

JUNE 2020	FIGURE 7.1	REV: 0
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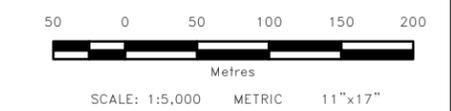


**LEGEND:**

- Sta: 20632.1 Name: CR-47  
Cross Section
- Water Survey of Canada Gauge Location
- River Centreline
- 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
- 1.0 – 2.0 m/s
- 2.0 – 3.0 m/s
- 3.0 – 4.0 m/s
- > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.

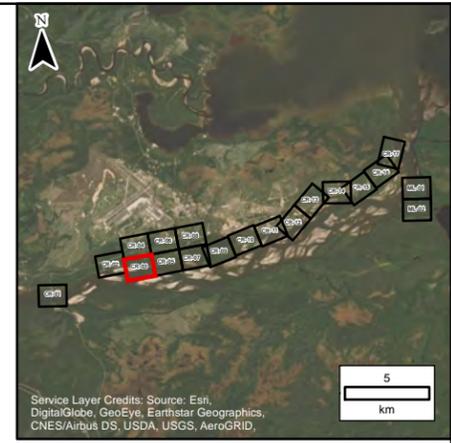
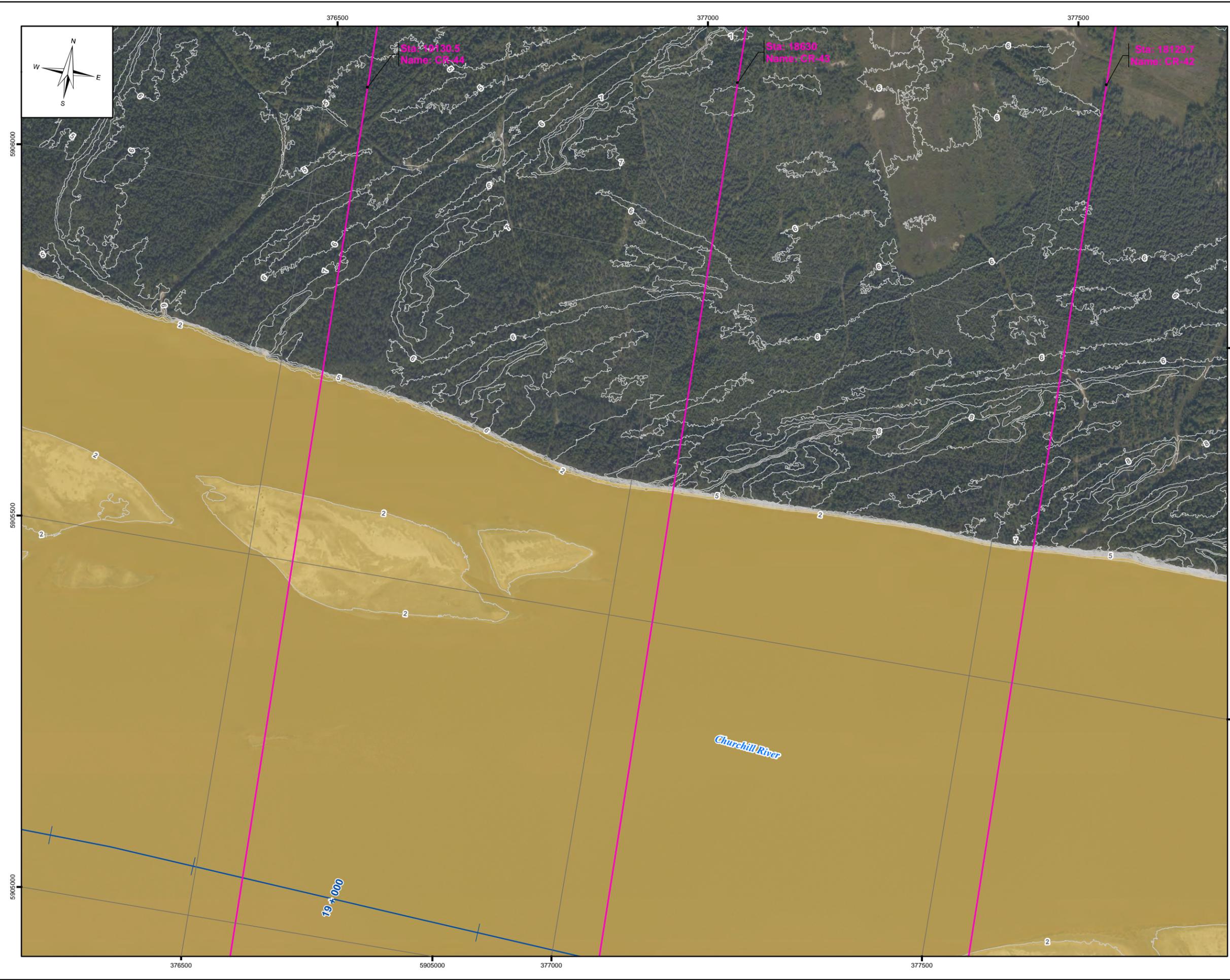


All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

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<b>CHURCHILL RIVER FLOOD RISK AND FORECASTING</b>		
OPEN WATER 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-02		
JUNE 2020	FIGURE 7.1	REV: 0

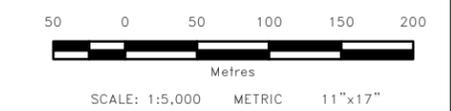


**LEGEND:**

- Sta: 23648 Name: CR-43
- Cross Section
- Water Survey of Canada Gauge Location
- River Centreline
- 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
- 1.0 – 2.0 m/s
- 2.0 – 3.0 m/s
- 3.0 – 4.0 m/s
- > 4.00 m/s

**NOTES:**

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2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



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Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

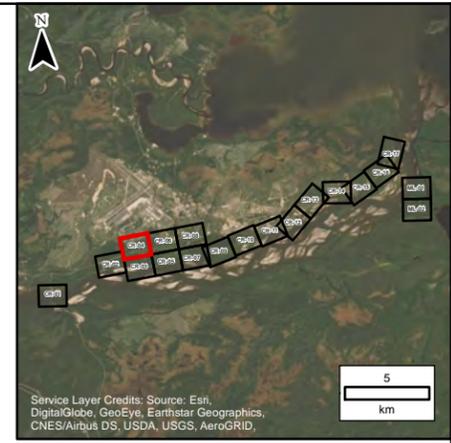
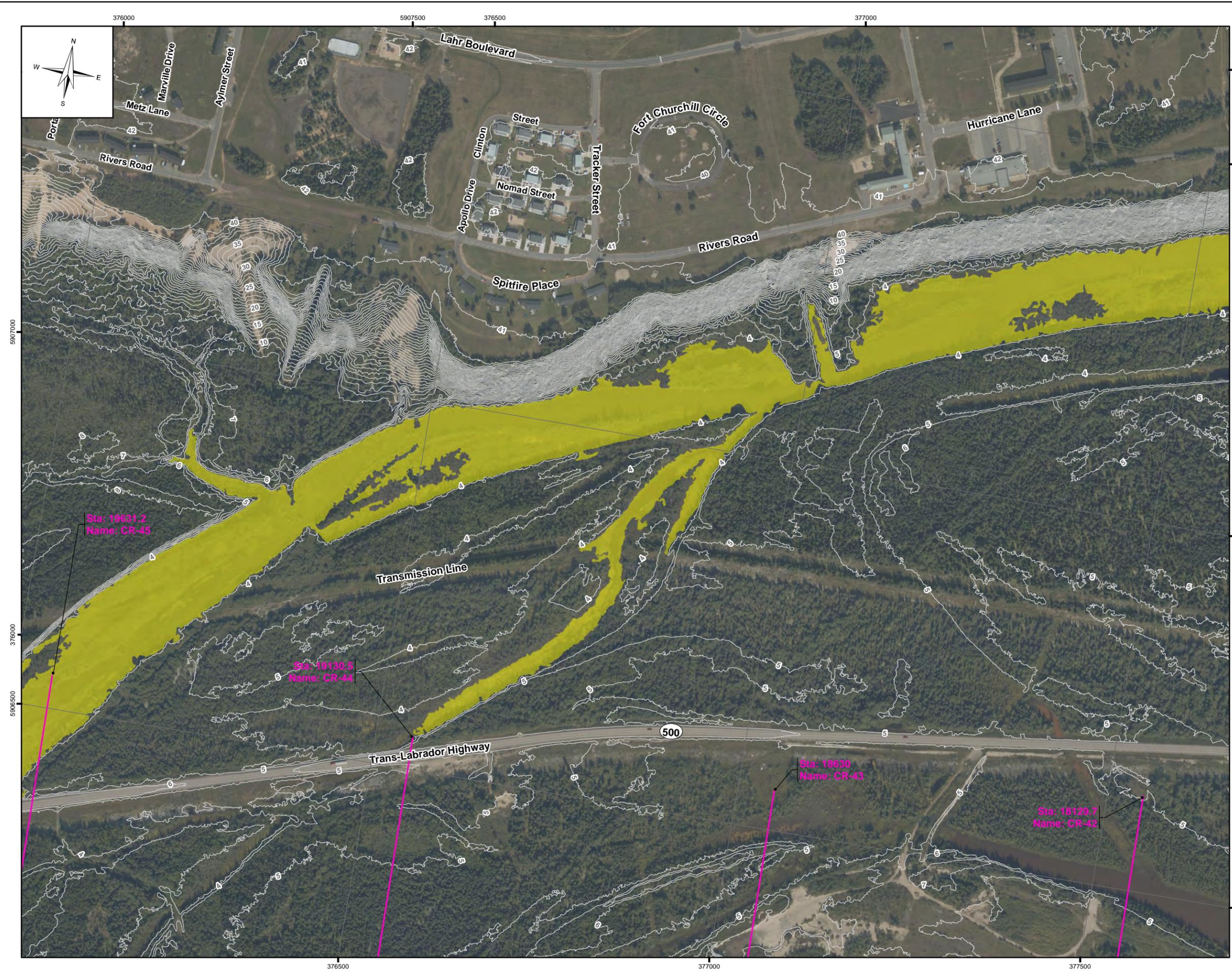
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

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**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-03

JUNE 2020	FIGURE 7.1	REV: 0
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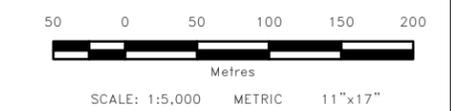


**LEGEND:**

- Sta: 23648 Name: CR-43  
Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



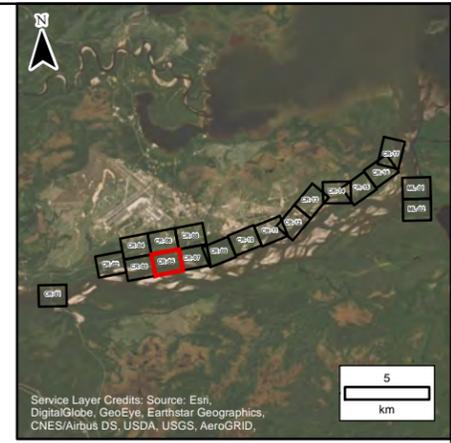
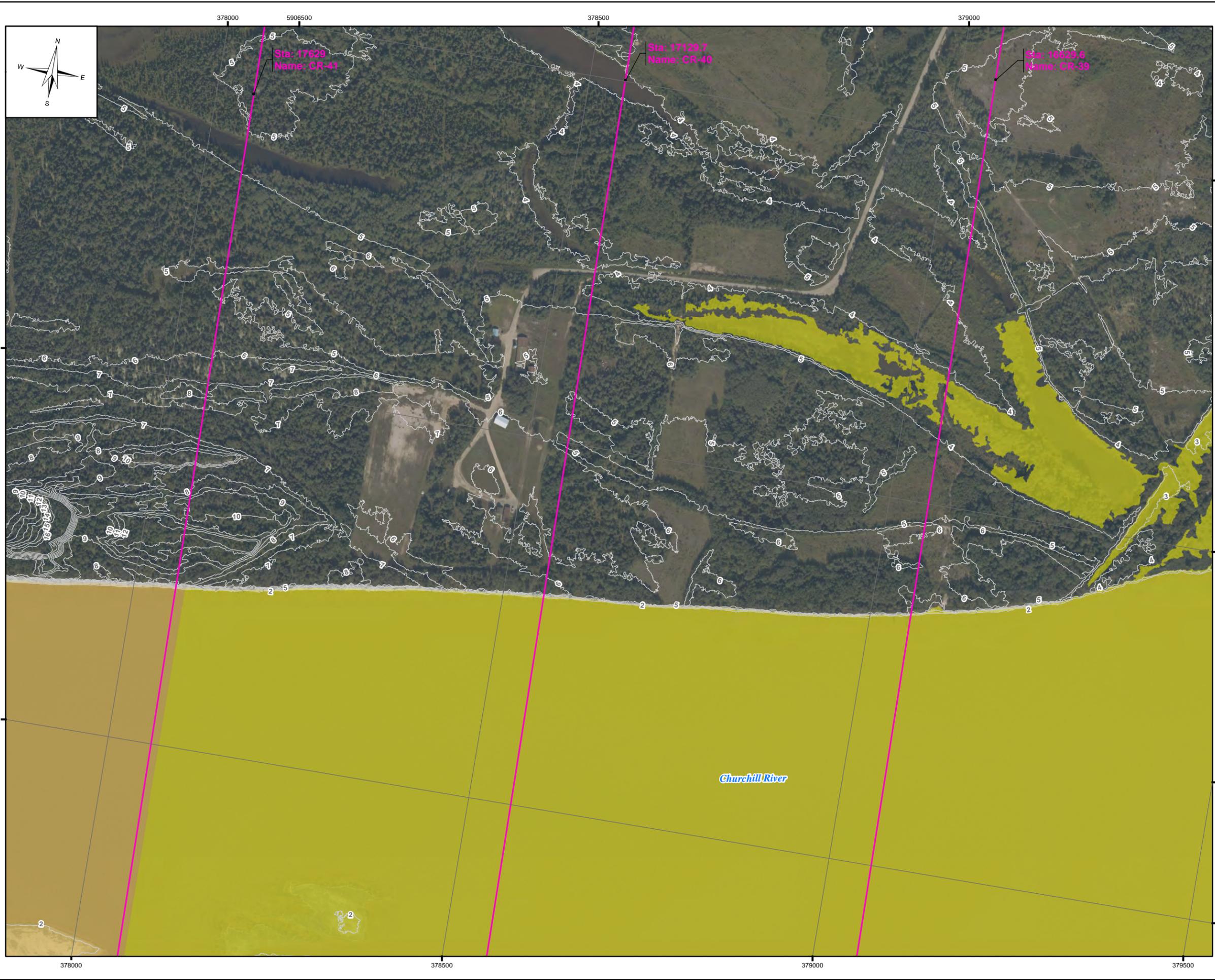
All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

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NO	YY/MM/DD	DESCRIPTION	ISSUED BY / CHECK BY

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**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-04

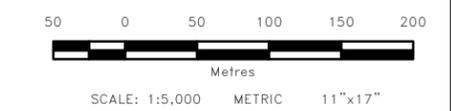


**LEGEND:**

- Sta: 2364.8 Name: CR-33
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by AT LIS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by AT LIS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

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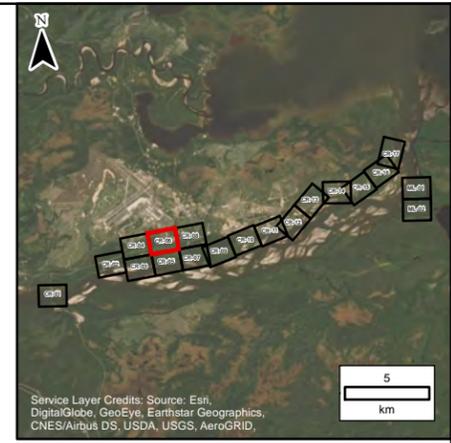
**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD)  
CONDITIONS – CR-05

JUNE 2020	FIGURE 7.1	REV: 0
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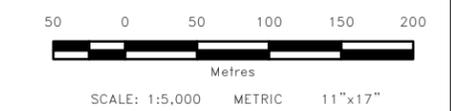


**LEGEND:**

- Sta: 23648 Name: CR-43
- Cross Section
- Water Survey of Canada Gauge Location
- River Centreline
- 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
- 1.0 – 2.0 m/s
- 2.0 – 3.0 m/s
- 3.0 – 4.0 m/s
- > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLIS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLIS Geomatics on September 11 – 13, 2019.



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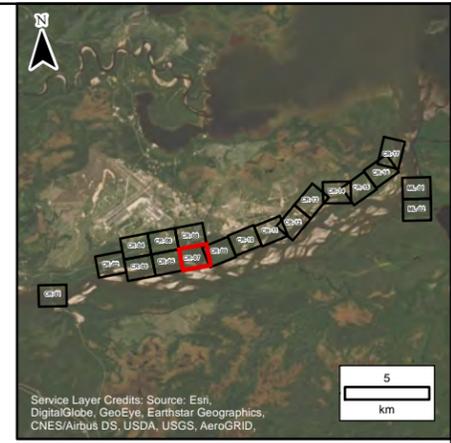
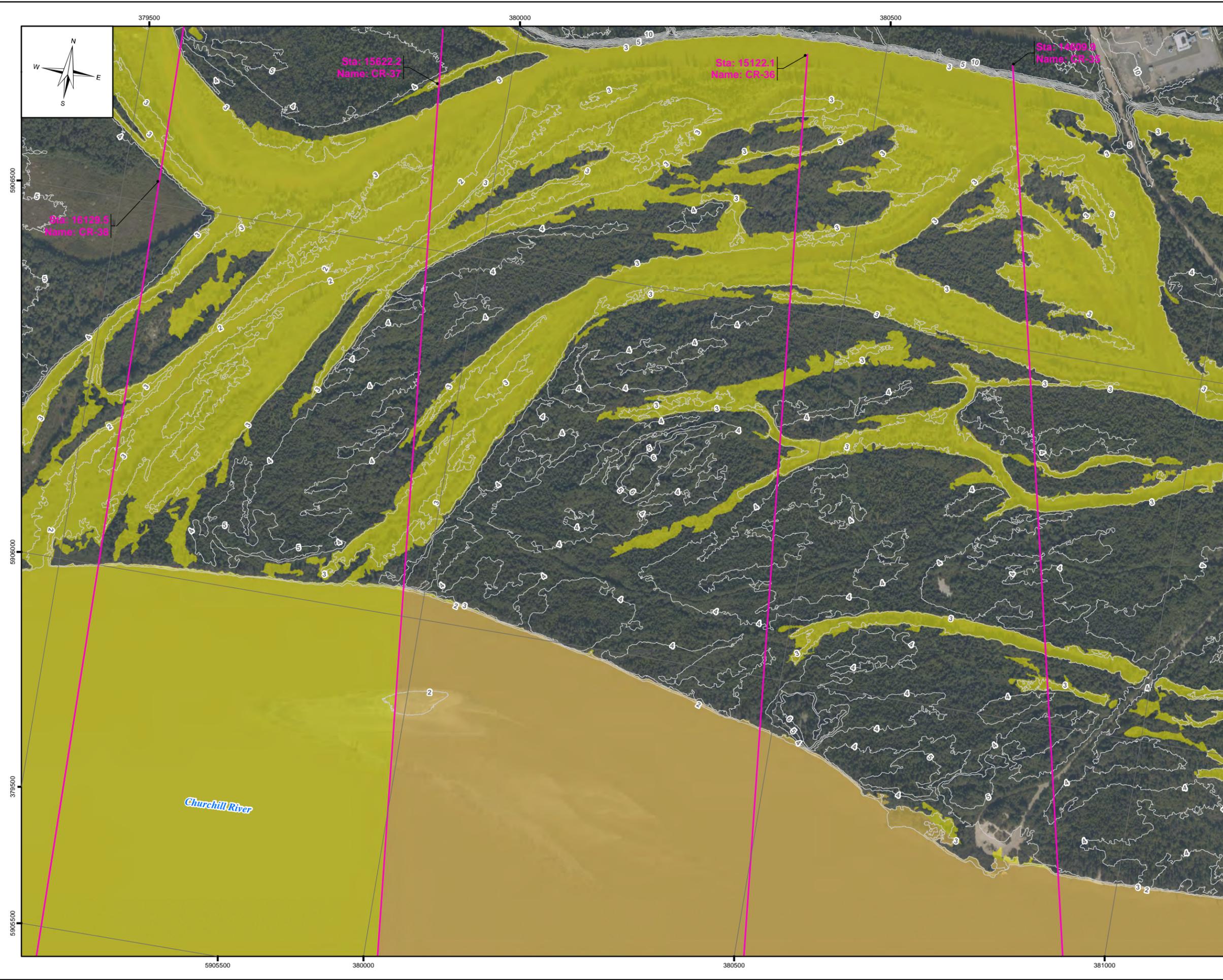
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

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**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-06

JUNE 2020	FIGURE 7.1	REV: 0
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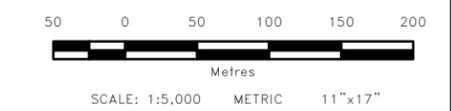


**LEGEND:**

- Sta: 2364.8 Name: CR-33  
Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

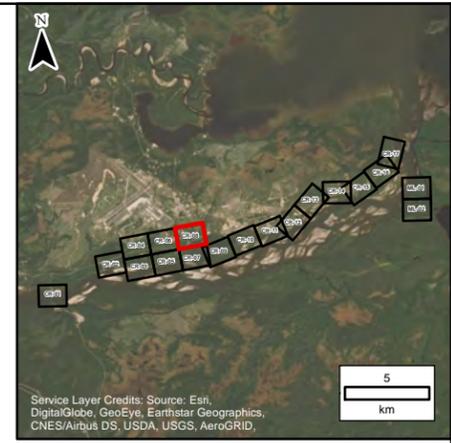
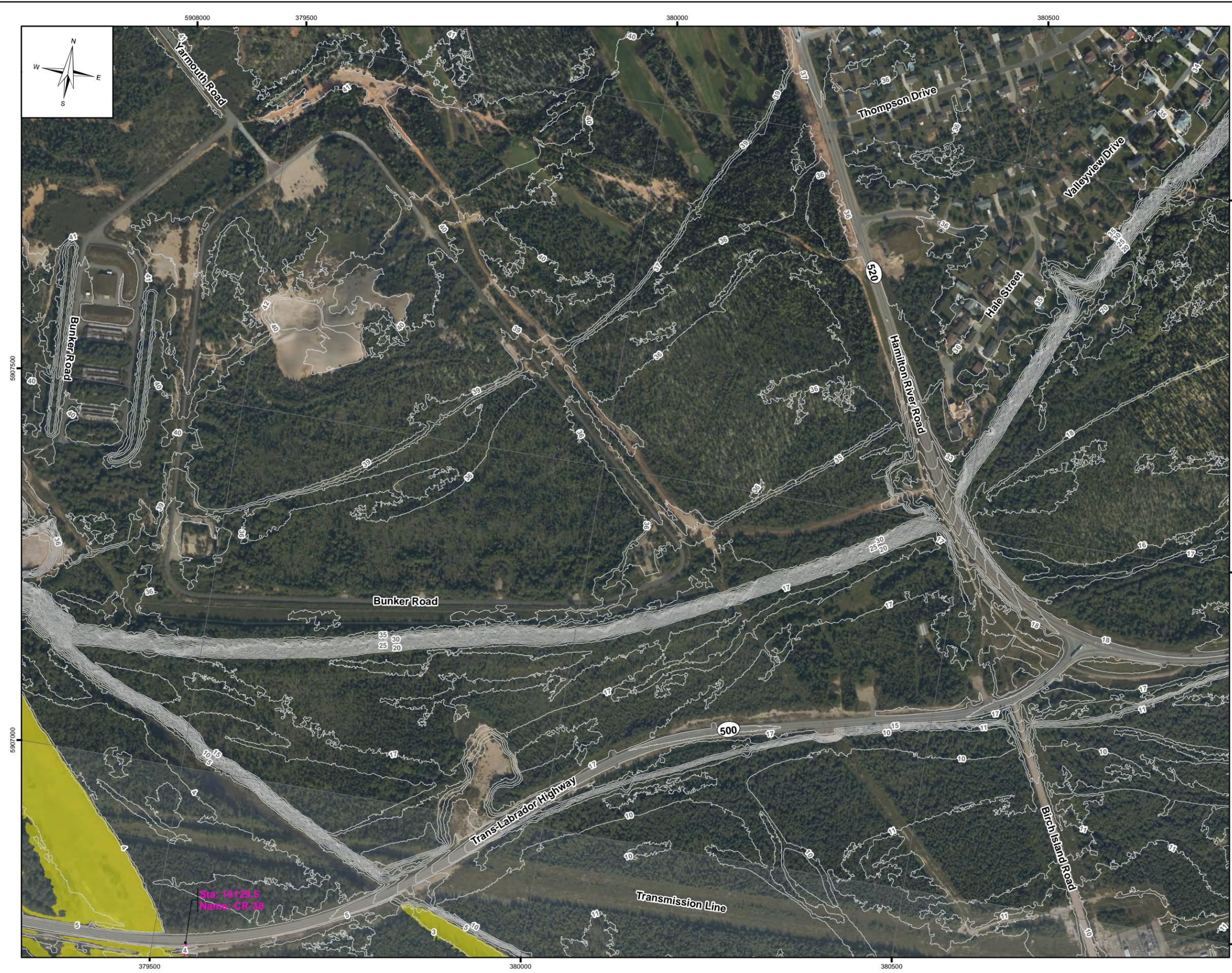
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**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD)  
CONDITIONS – CR-07

JUNE 2020	FIGURE 7.1	REV: 0
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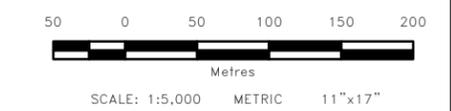


**LEGEND:**

- Sta: 23648 Name: CR-53
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

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2. Topography shown was developed by KGS Group from the LIDAR captured by ATGIS Geomatics on September 11 – 13, 2019.



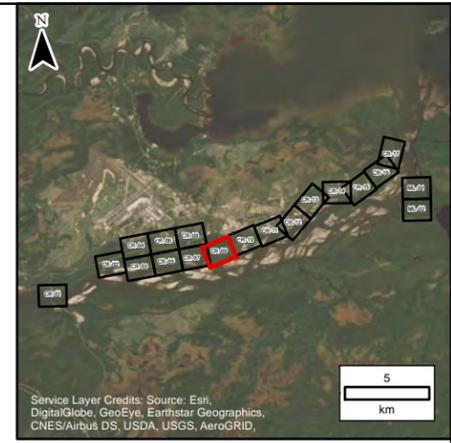
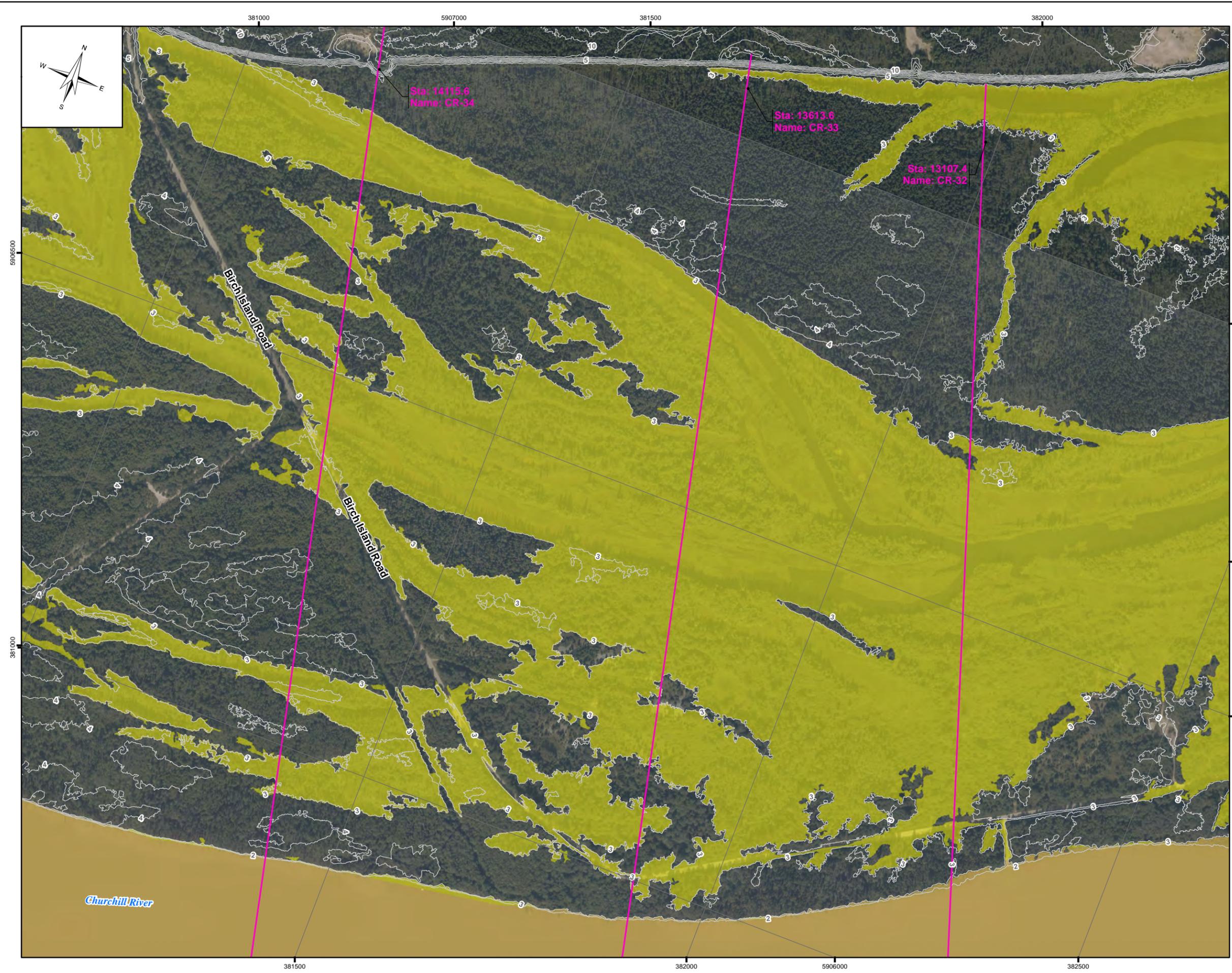
All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

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**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-08

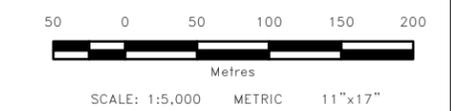


**LEGEND:**

- Sta: 2364.8 Name: CR-53
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

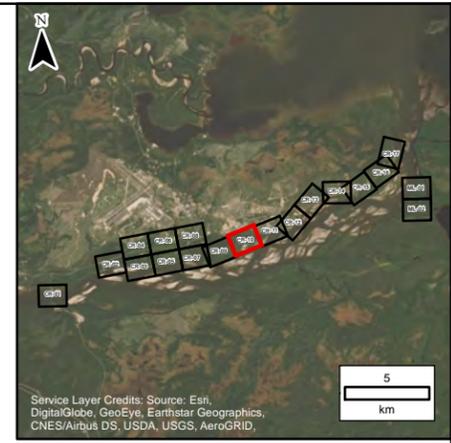
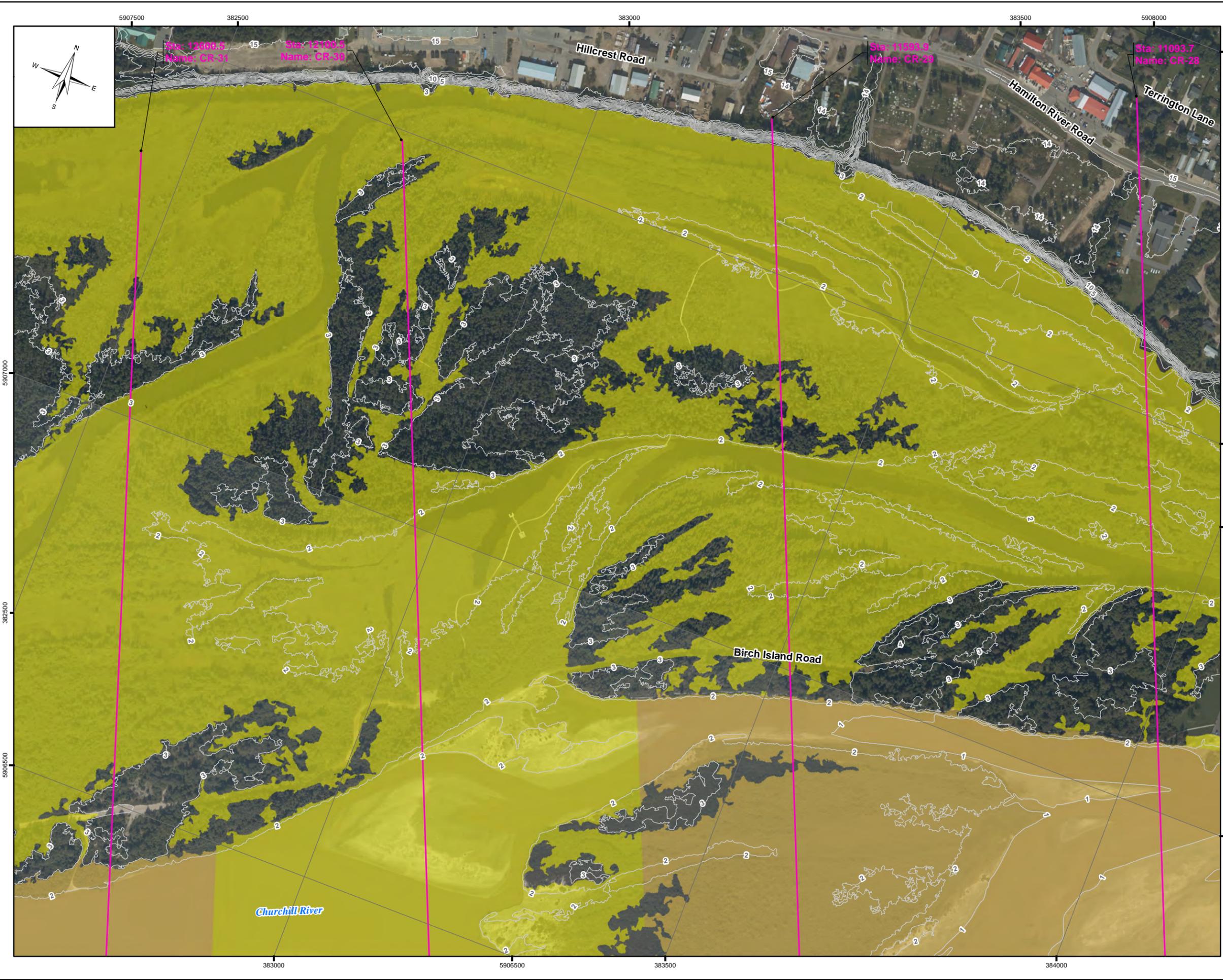
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**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-09

JUNE 2020	FIGURE 7.1	REV: 0
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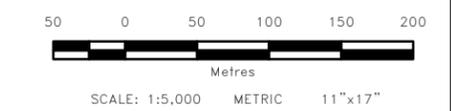


**LEGEND:**

- Sta: 2364.8 Name: CR-23  
Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

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0	20/06/30 ISSUED WITH FINAL REPORT	DSB	MSW
NO	YY/MM/DD DESCRIPTION	ISSUED BY	CHECK BY

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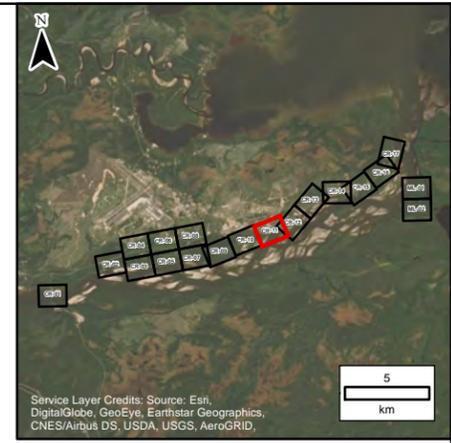
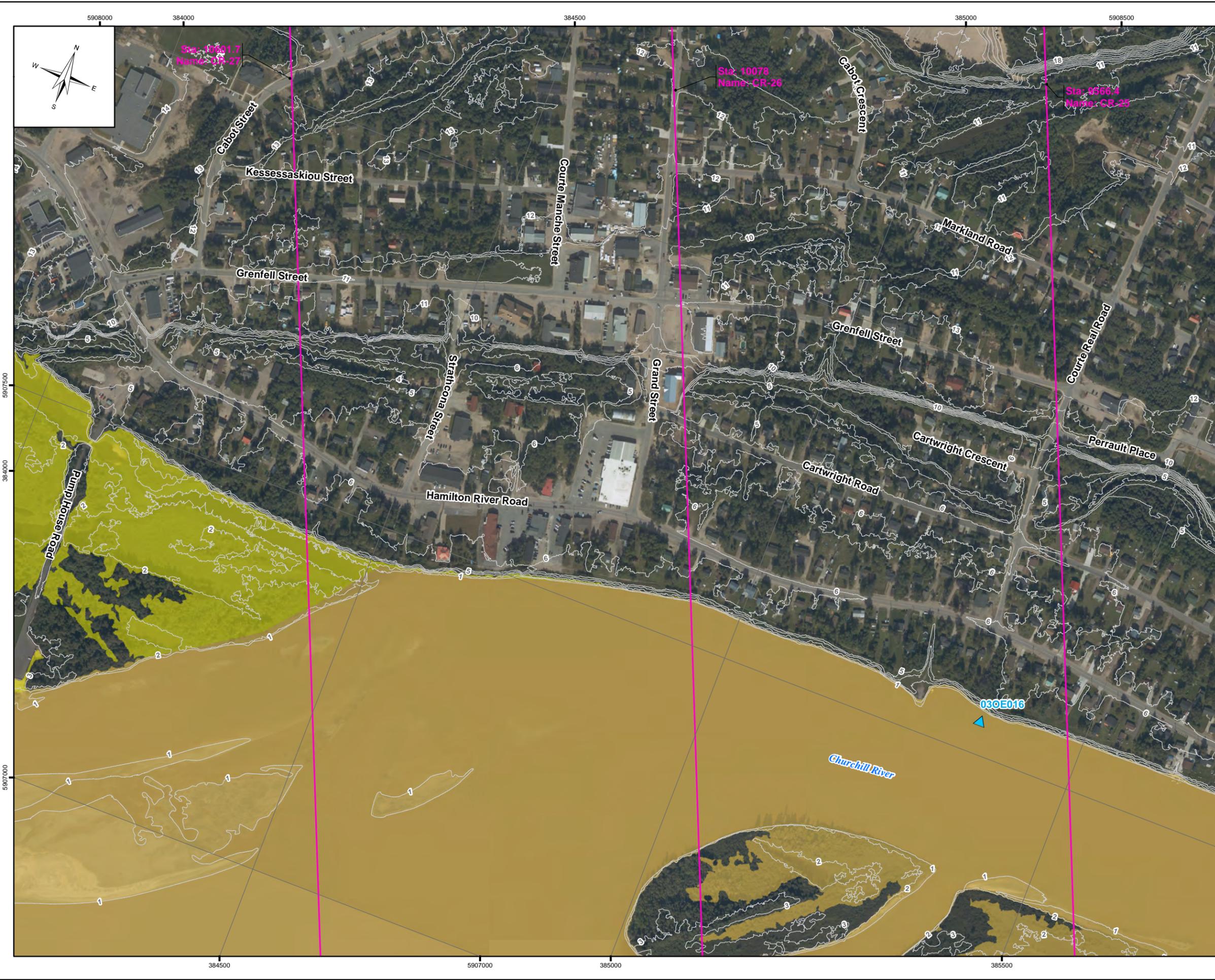
**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-10

JUNE 2020	FIGURE 7.1	REV: 0
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 11"x17" PLOT\_SCALE 1:1



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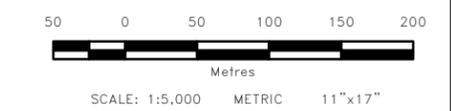
- Sta: 2364.8 Name: CR-53
- Cross Section
- Water Survey of Canada Gauge Location
- River Centreline
- 1m LIDAR Contour

**Velocity (m/s)**

- 0.0 – 1.0 m/s
- 1.0 – 2.0 m/s
- 2.0 – 3.0 m/s
- 3.0 – 4.0 m/s
- > 4.00 m/s

**NOTES:**

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 Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

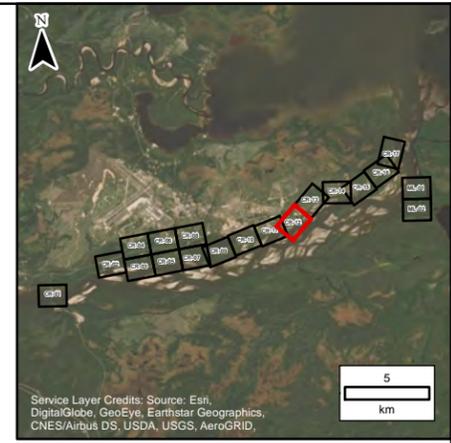
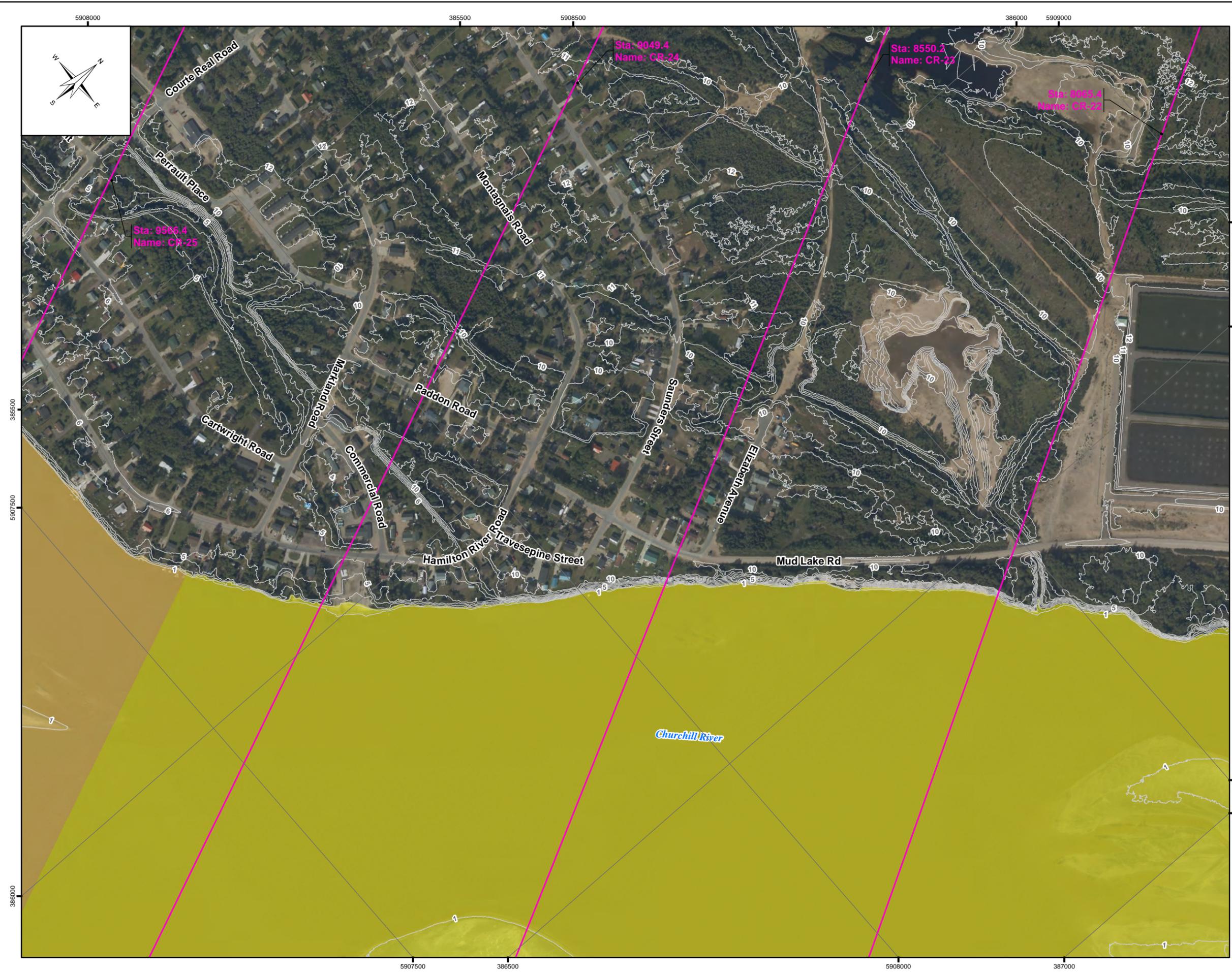
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-11

File Name: P:\Projects\2018\18-3217-001\GIS\Map\18-3217-001\_Fig7.1\_11x17.mxd  
 11"x17" PLOT SCALE 1:1  
 Portions of data Produced by KGS Group, under Licence with the Government of Canada © 2020 Her Majesty the Queen in Right of Canada, Department of Natural Resources. All rights reserved.

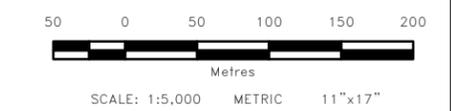


**LEGEND:**

- Sta: 2364.8 Name: CR-53
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
 Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

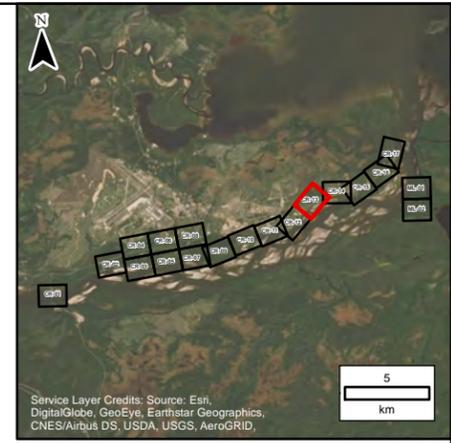
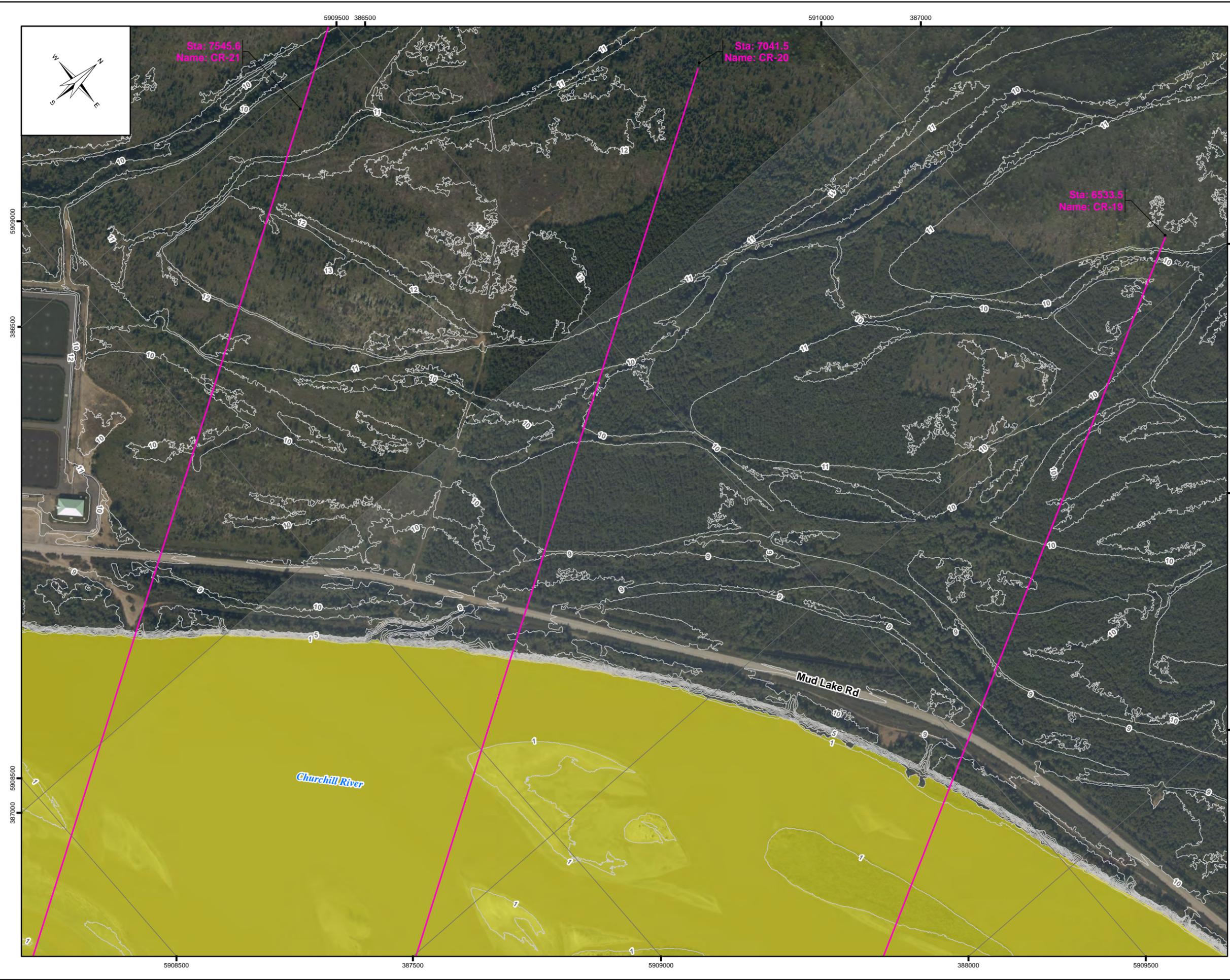
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-12

JUNE 2020	FIGURE 7.1	REV: 0
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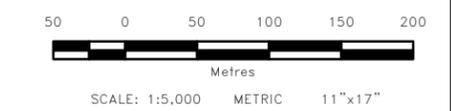


**LEGEND:**

- Sta: 2364.8 Name: CR-53
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.

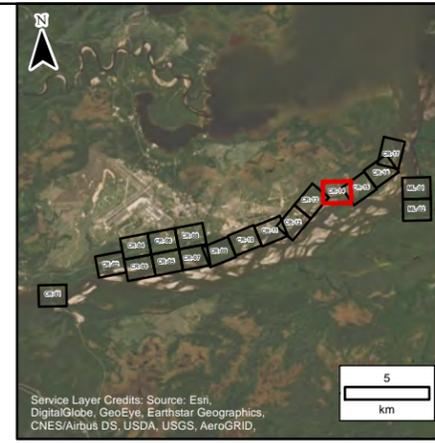
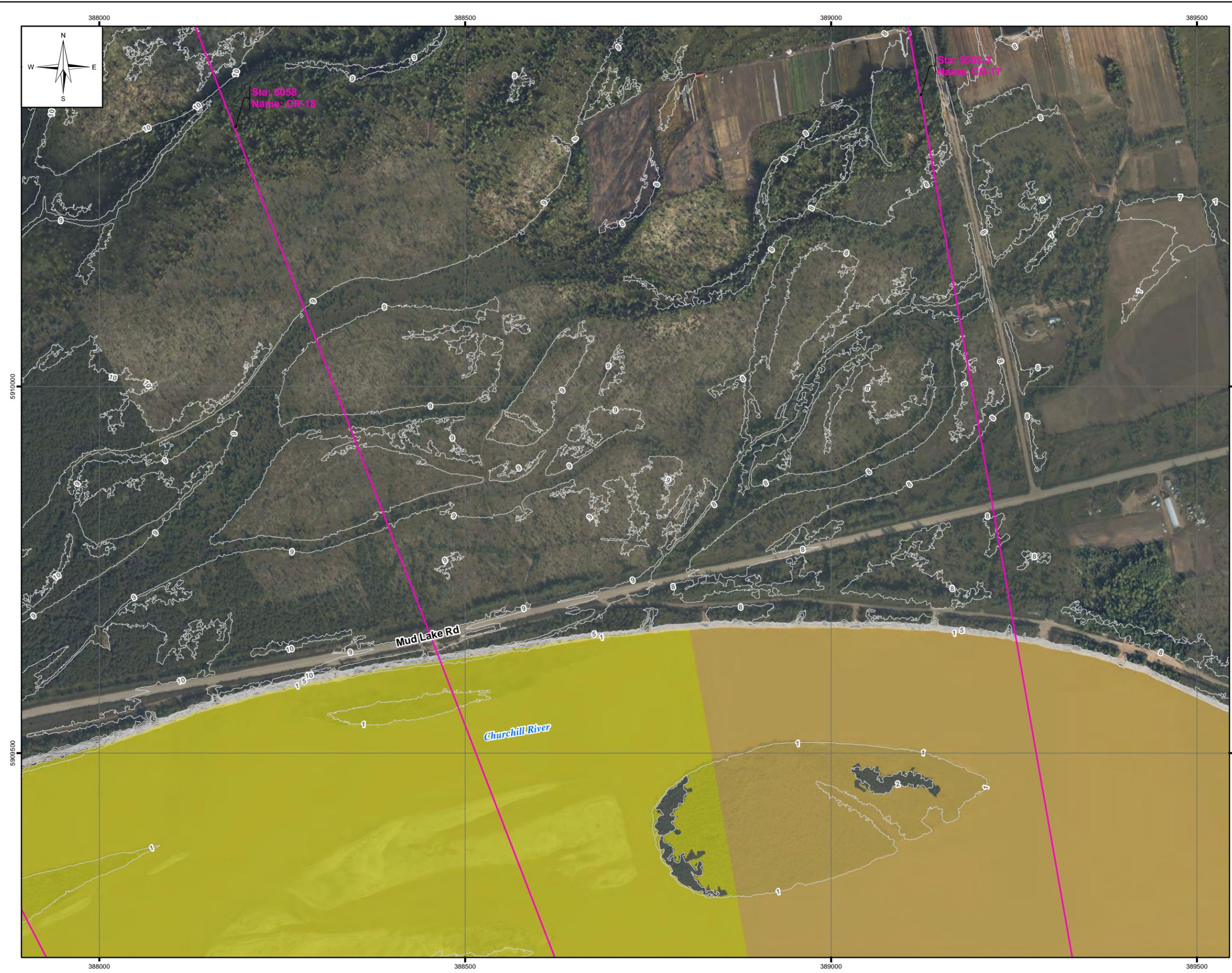


All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

0	20/06/30 ISSUED WITH FINAL REPORT	DSB	MSW
NO	YY/MM/DD	DESCRIPTION	ISSUED BY / CHECK BY

REVISIONS / ISSUE

<b>CHURCHILL RIVER FLOOD RISK AND FORECASTING</b>		
OPEN WATER 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-13		
JUNE 2020	FIGURE 7.1	REV: 0

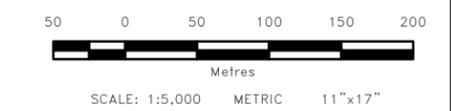


**LEGEND:**

- Sta: 2364 Name: CR-53
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

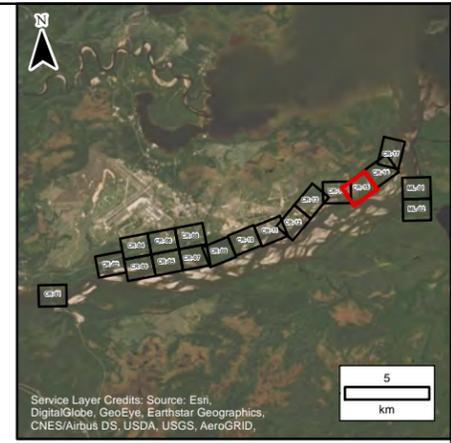
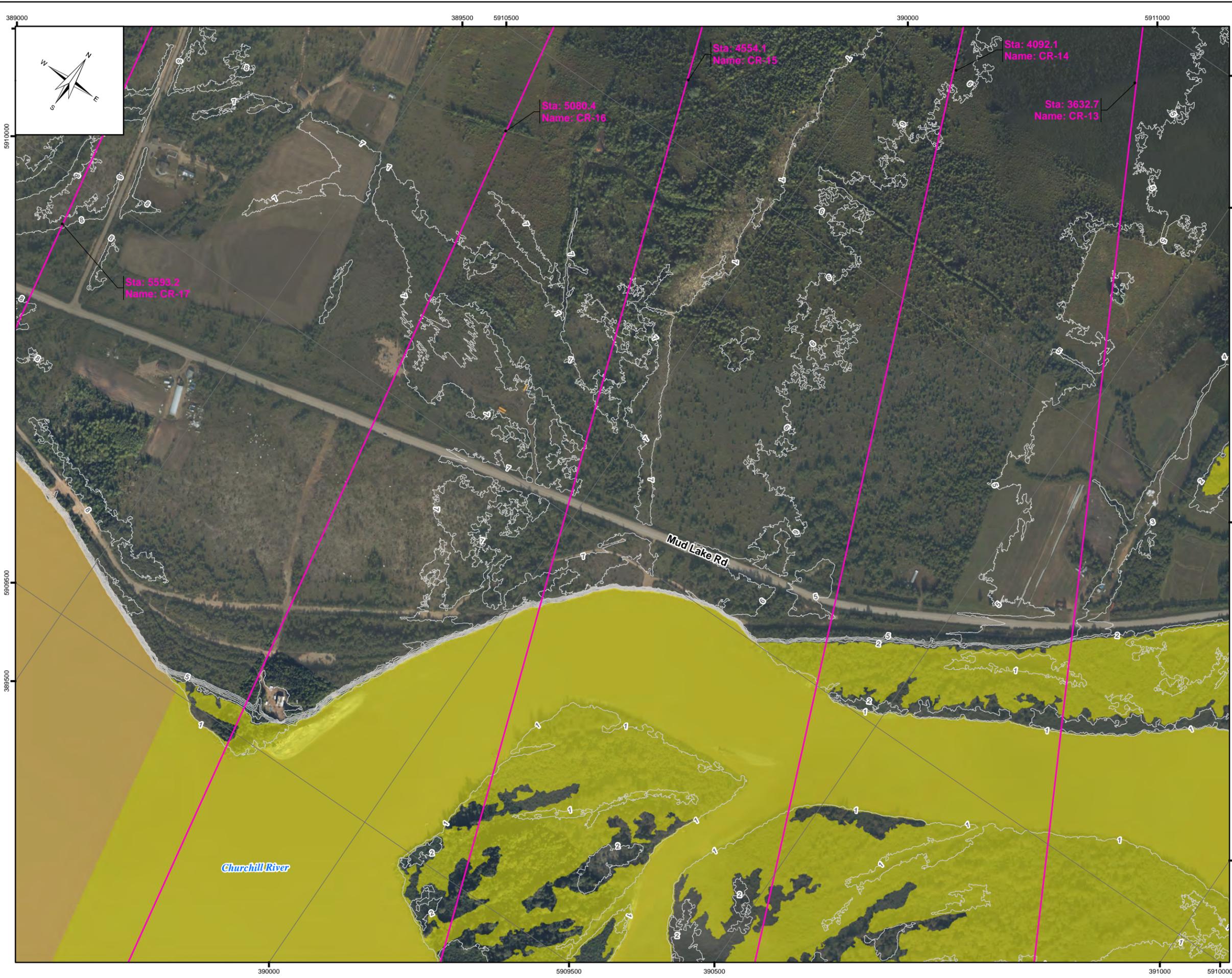
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD)  
CONDITIONS – CR-14

JUNE 2020	FIGURE 7.1	REV: 0
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**LEGEND:**

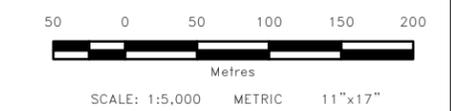
- Sta: 2364.8 Name: CR-53
- Cross Section
- Water Survey of Canada Gauge Location
- River Centreline
- 1m LIDAR Contour

**Velocity (m/s)**

- 0.0 – 1.0 m/s
- 1.0 – 2.0 m/s
- 2.0 – 3.0 m/s
- 3.0 – 4.0 m/s
- > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATGIS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATGIS Geomatics on September 11 – 13, 2019.



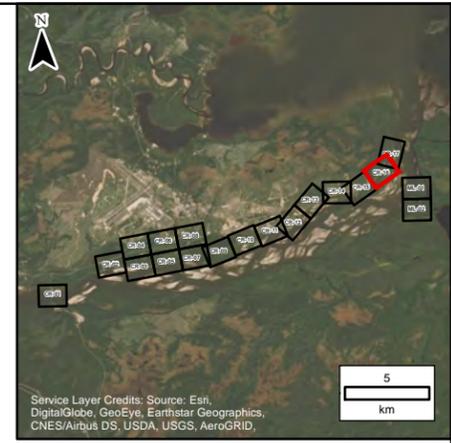
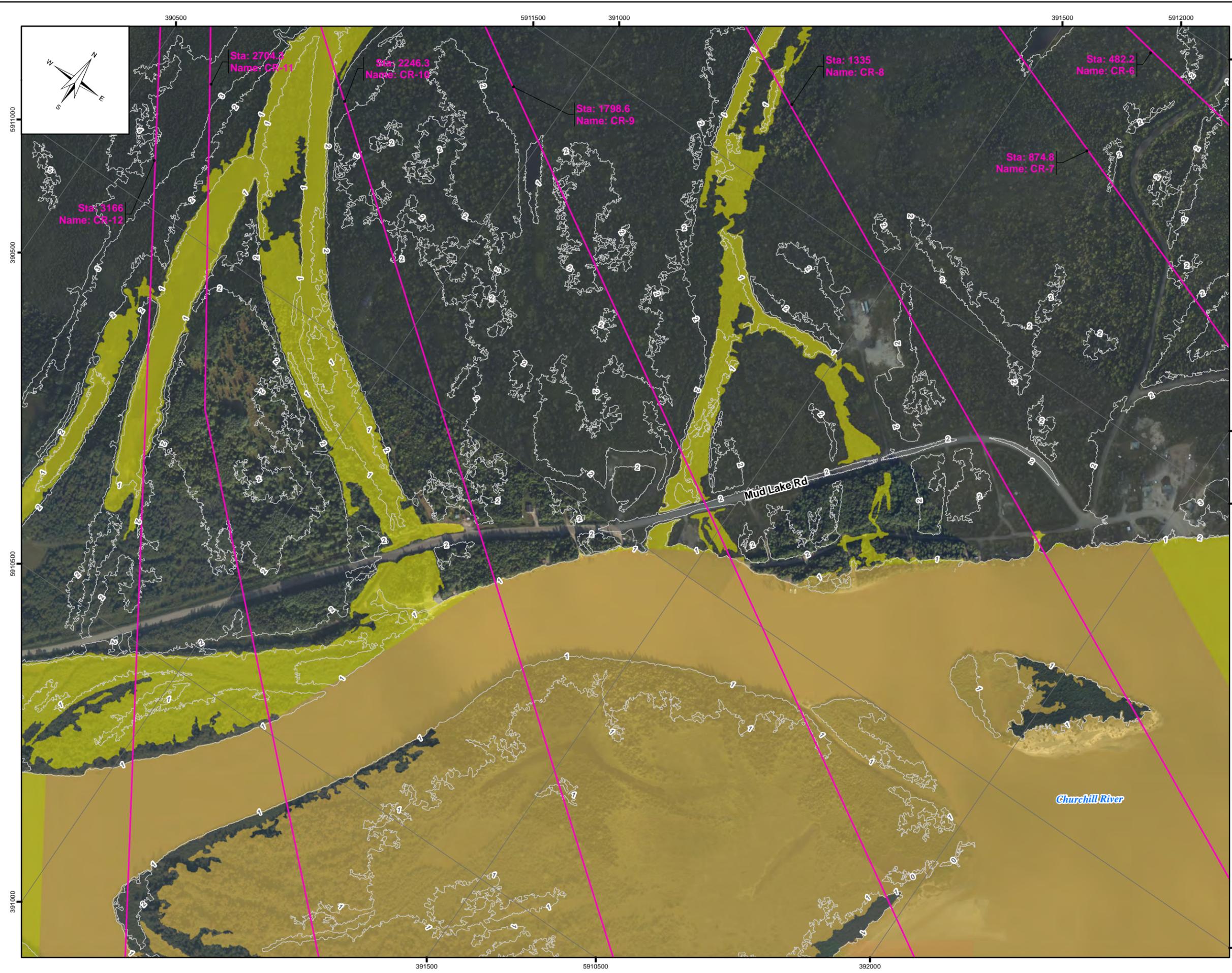
All units are metric and in metres unless otherwise specified. Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-15

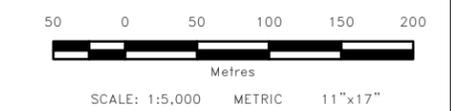


**LEGEND:**

- Sta: 2364.8 Name: CR-53
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

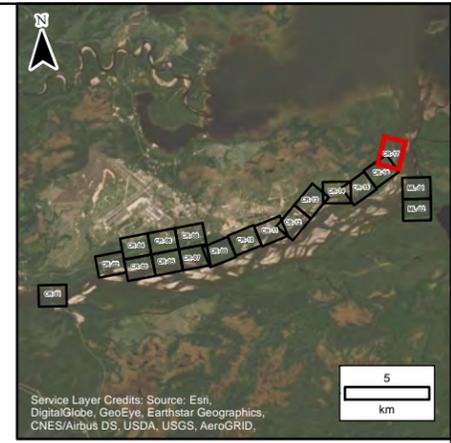
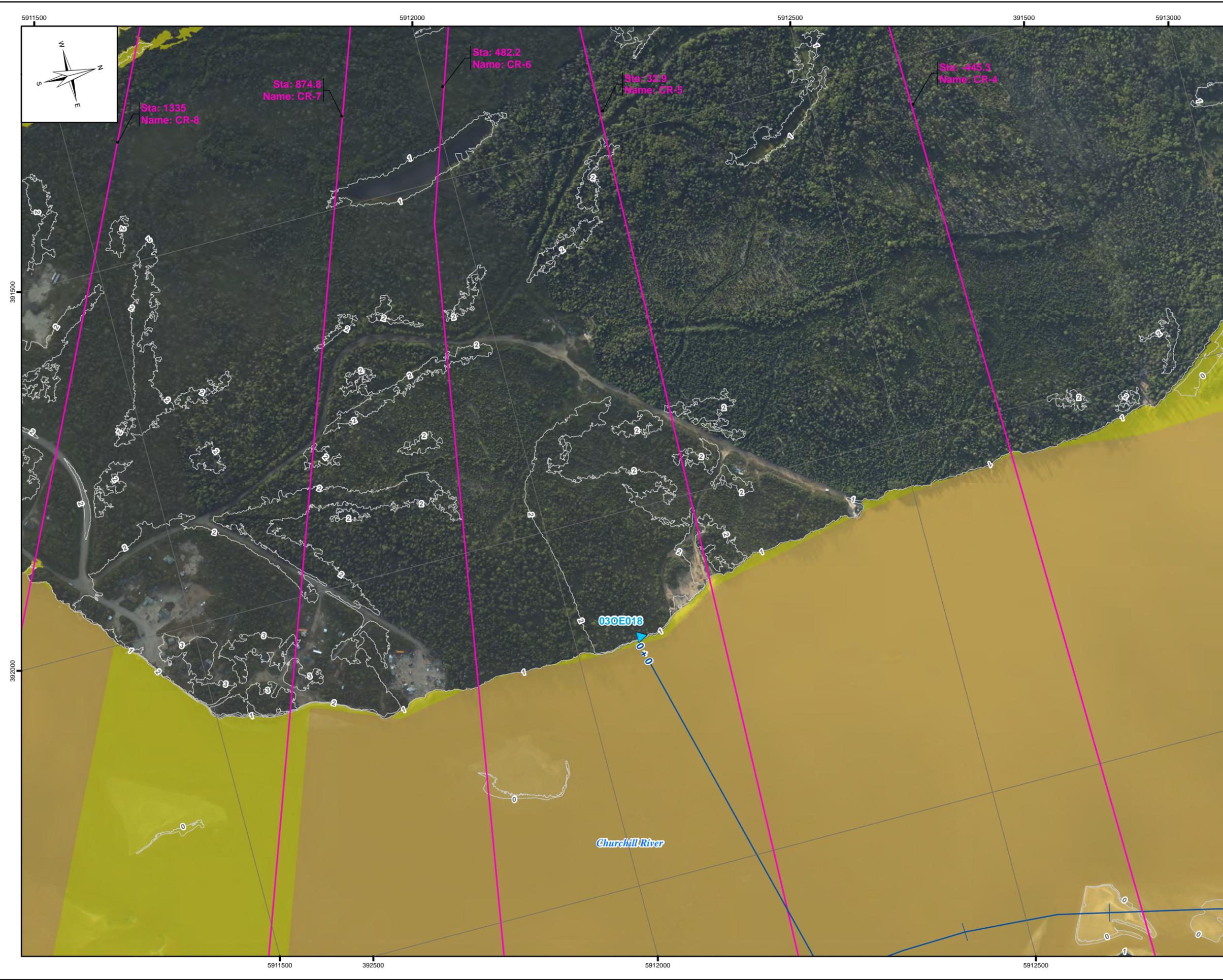
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-16

JUNE 2020	FIGURE 7.1	REV: 0
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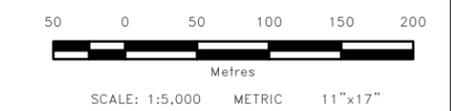


**LEGEND:**

- Sta: 2364.8  
Name: CR-53
- Cross Section
- Water Survey of Canada  
Gauge Location
- River Centreline
- 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
- 1.0 – 2.0 m/s
- 2.0 – 3.0 m/s
- 3.0 – 4.0 m/s
- > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.

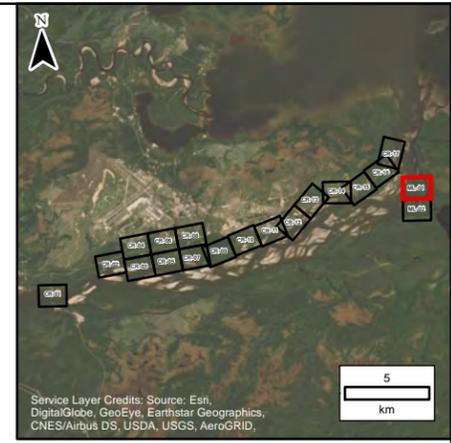
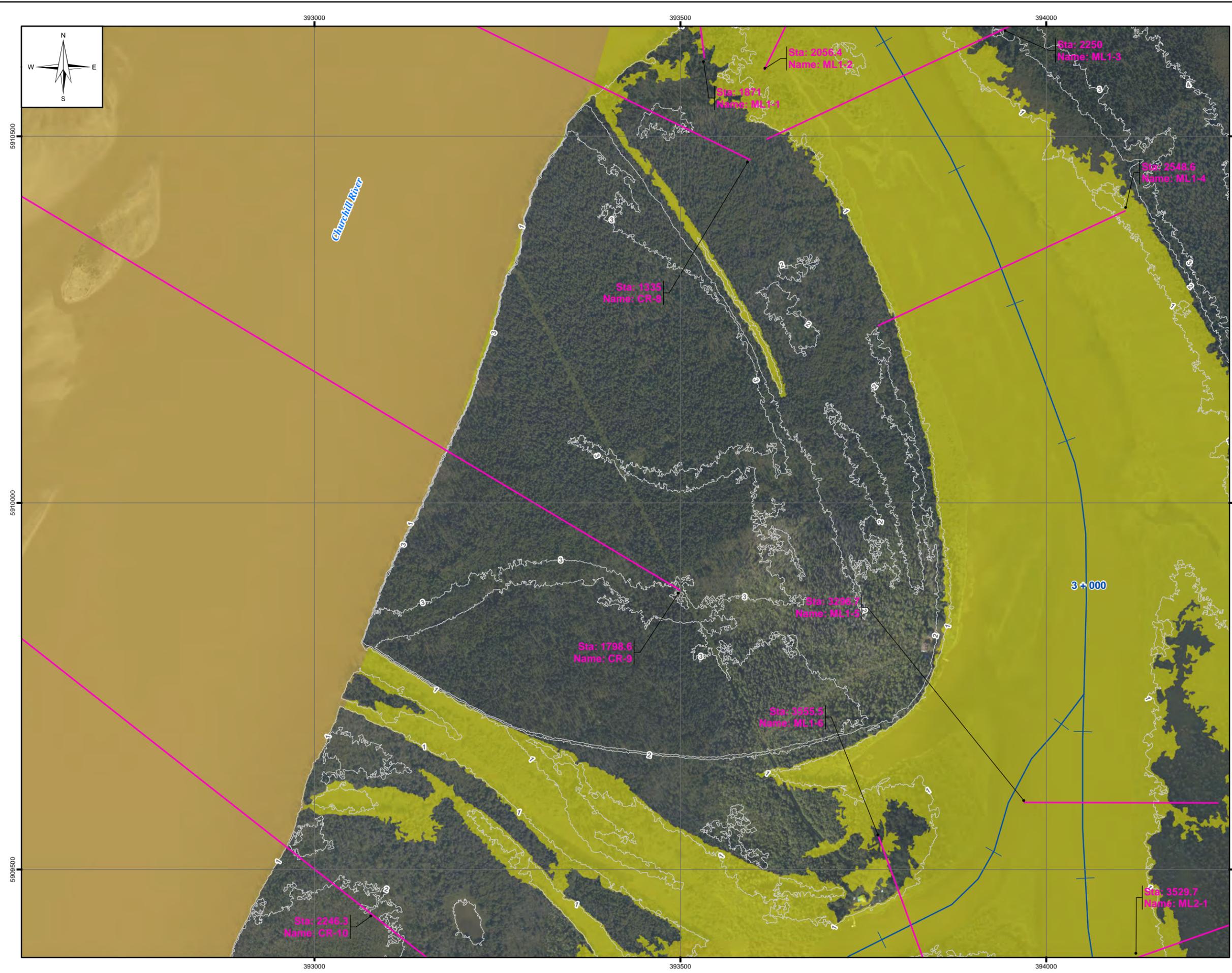


All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

0	20/06/30 ISSUED WITH FINAL REPORT	DSB	MSW
NO.	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

<b>CHURCHILL RIVER FLOOD RISK AND FORECASTING</b>		
OPEN WATER 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-17		
JUNE 2020	FIGURE 7.1	REV: 0

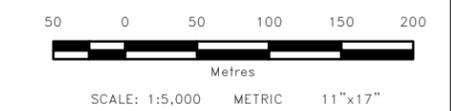


**LEGEND:**

- Sta: 2364.8 Name: CR-53  
Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLIS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLIS Geomatics on September 11 – 13, 2019.

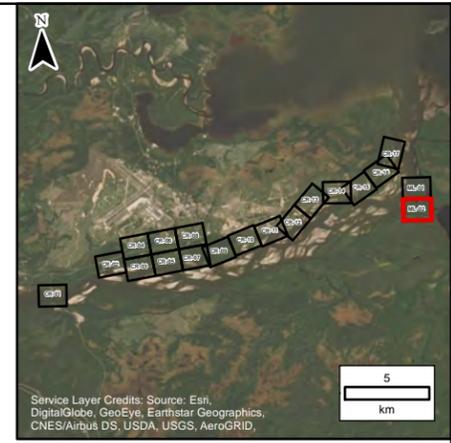
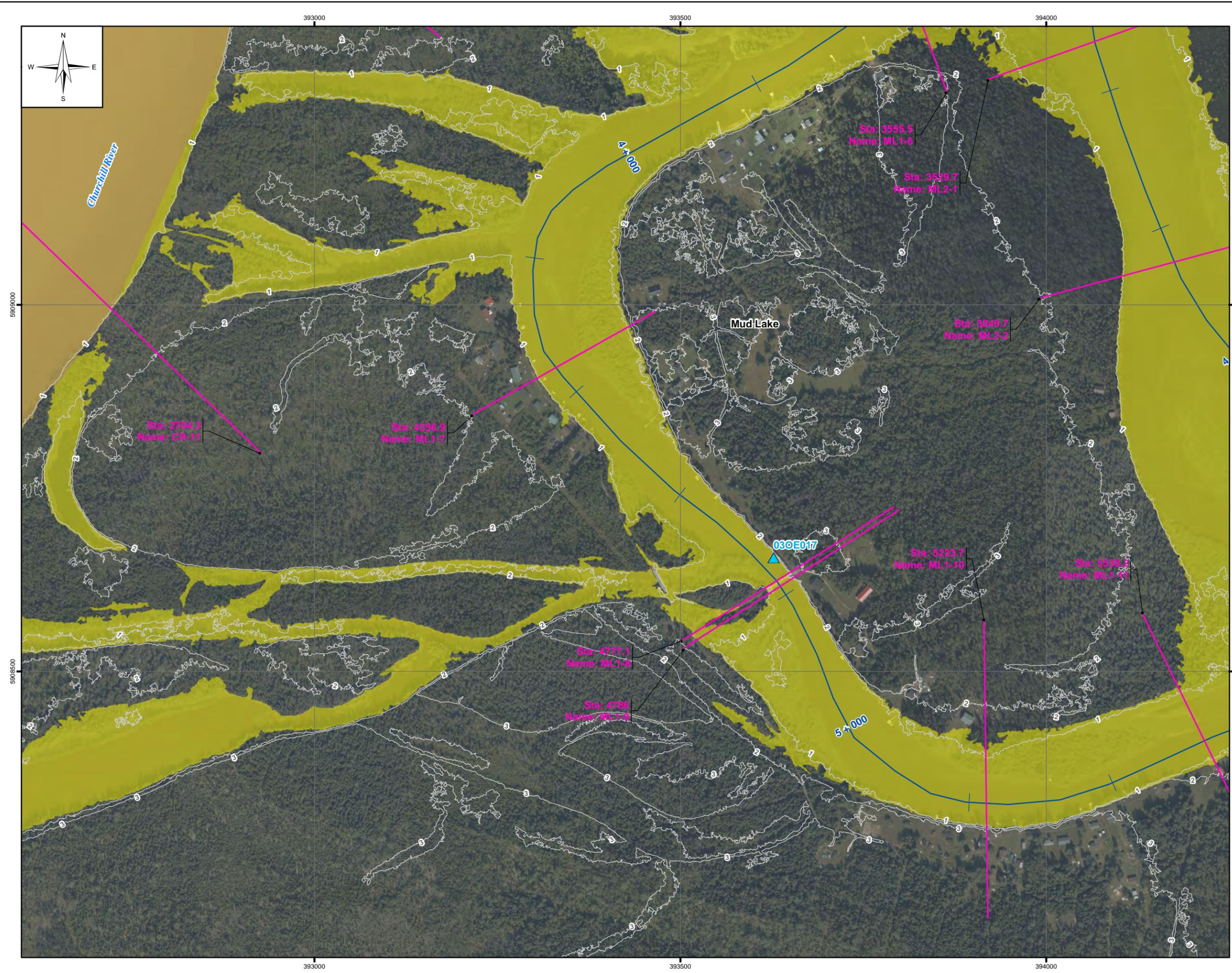


All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

<b>CHURCHILL RIVER FLOOD RISK AND FORECASTING</b>		
OPEN WATER 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – ML-01		
JUNE 2020	FIGURE 7.1	REV: 0

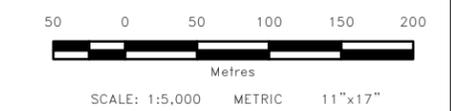


**LEGEND:**

- Sta: 2364.8 Name: CR-53
- Cross Section
- Water Survey of Canada Gauge Location
- River Centreline
- 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
- 1.0 – 2.0 m/s
- 2.0 – 3.0 m/s
- 3.0 – 4.0 m/s
- > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATGIS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATGIS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – ML-02

JUNE 2020	FIGURE 7.1	REV: 0
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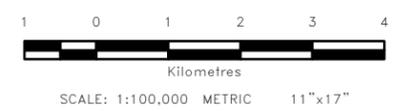
**LEGEND:**

- Water Survey of Canada Gauge Location
- River Centreline

Velocity (m/s)

- 0.0 – 1.0 m/s
- 1.0 – 2.0 m/s
- 2.0 – 3.0 m/s
- 3.0 – 4.0 m/s
- > 4.00 m/s
- Map Extents

**NOTES:**  
 1. Imagery is supplied by ATGIS Geomatics and dated as September 11 – 13, 2019, and by ESRI and DigitalGlobe, WV02 dated June 3, 2015.



All units are metric and in metres unless otherwise specified.  
 Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

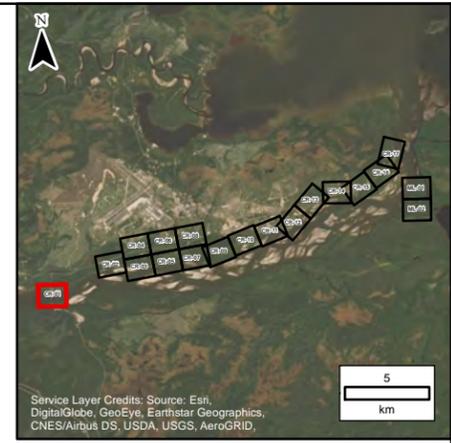
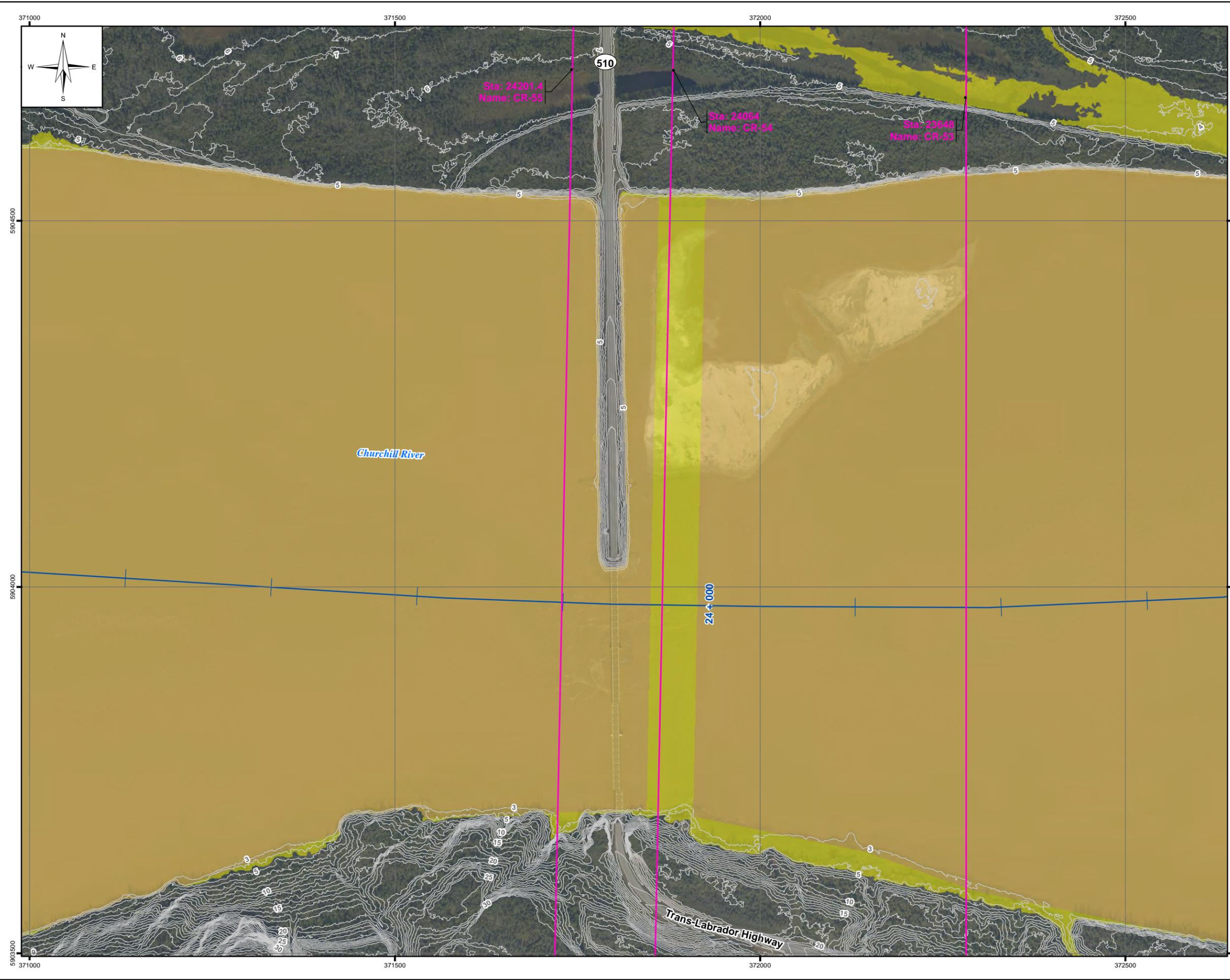
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – OVERVIEW MAP

JUNE 2020	FIGURE 7.2	REV: 0
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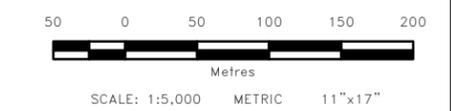


**LEGEND:**

- Sta: 23648 Name: CR-53
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LiDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATGIS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LiDAR captured by ATGIS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

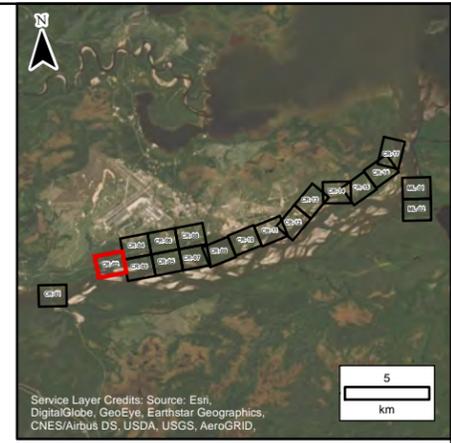
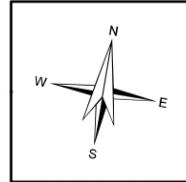
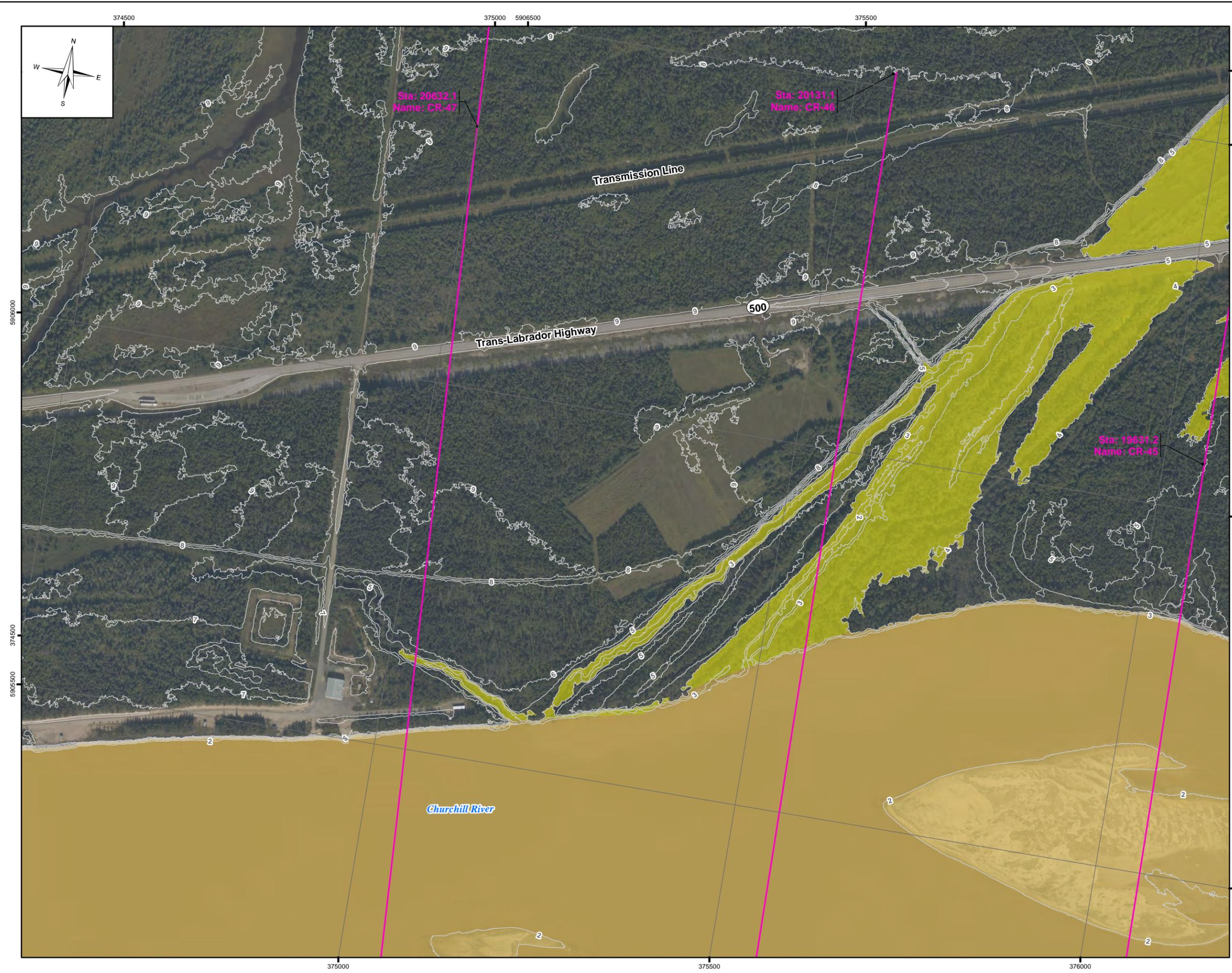
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-01

JUNE 2020	FIGURE 7.2	REV: 0
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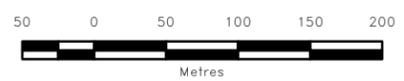


**LEGEND:**

- Sta: 20632.1 Name: CR-47
- Sta: 20131.1 Name: CR-46
- Sta: 19631.2 Name: CR-45
- Cross Section
- Water Survey of Canada Gauge Location
- River Centreline
- 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
- 1.0 – 2.0 m/s
- 2.0 – 3.0 m/s
- 3.0 – 4.0 m/s
- > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



SCALE: 1:5,000 METRIC 11"x17"

All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

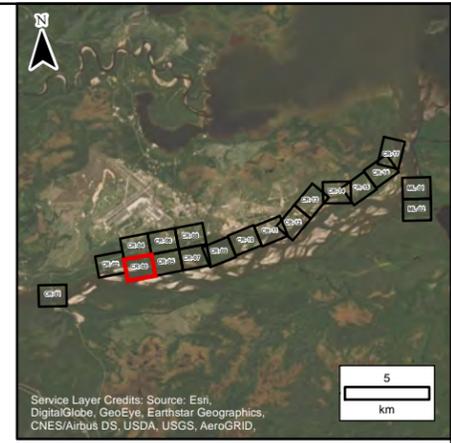
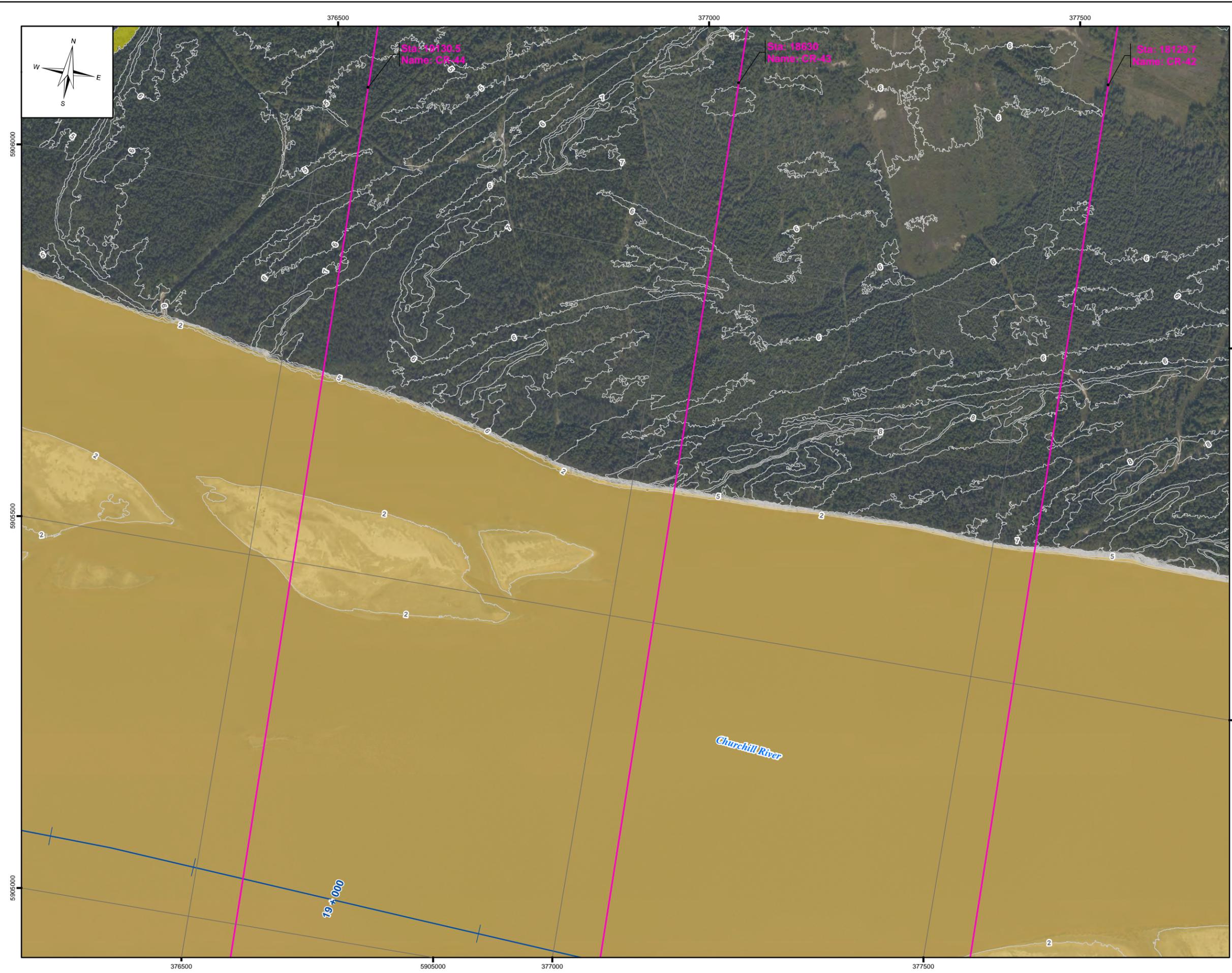
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-02

JUNE 2020	FIGURE 7.2	REV: 0
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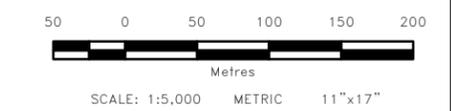


**LEGEND:**

- Sta: 23648 Name: CR-43
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLIS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLIS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

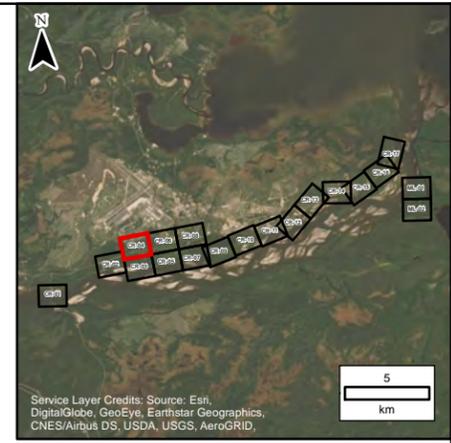
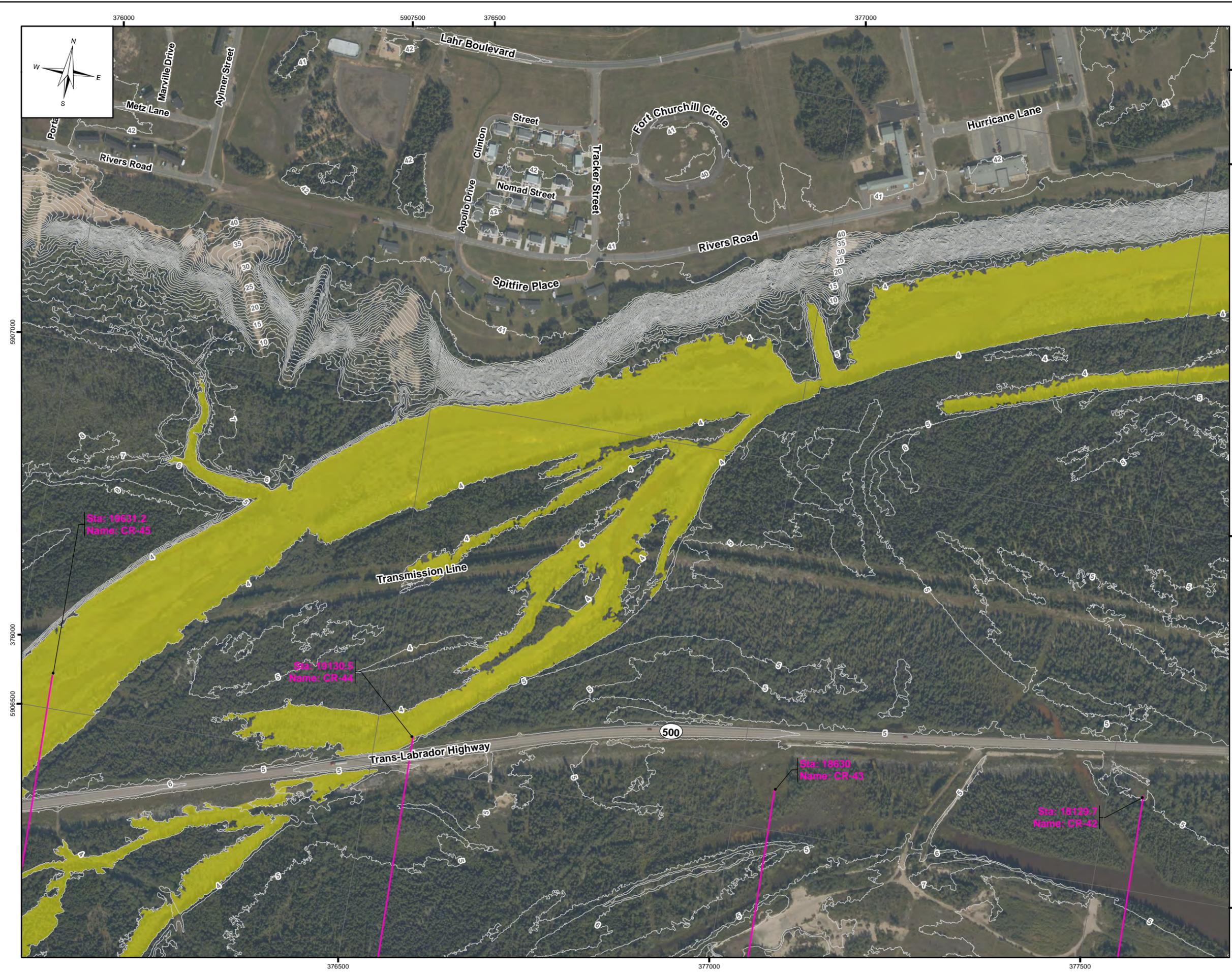
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NO.	Y1/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-03

JUNE 2020	FIGURE 7.2	REV: 0
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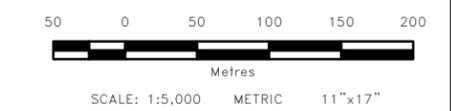


**LEGEND:**

- Sta: 23648 Name: CR-43
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



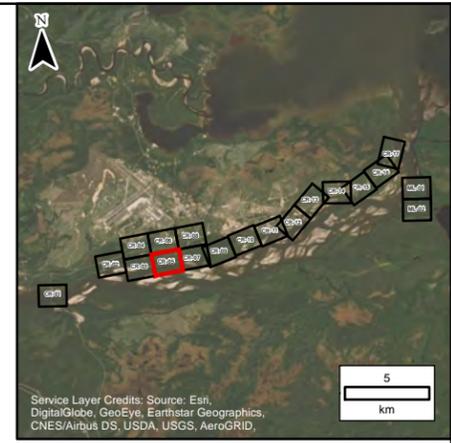
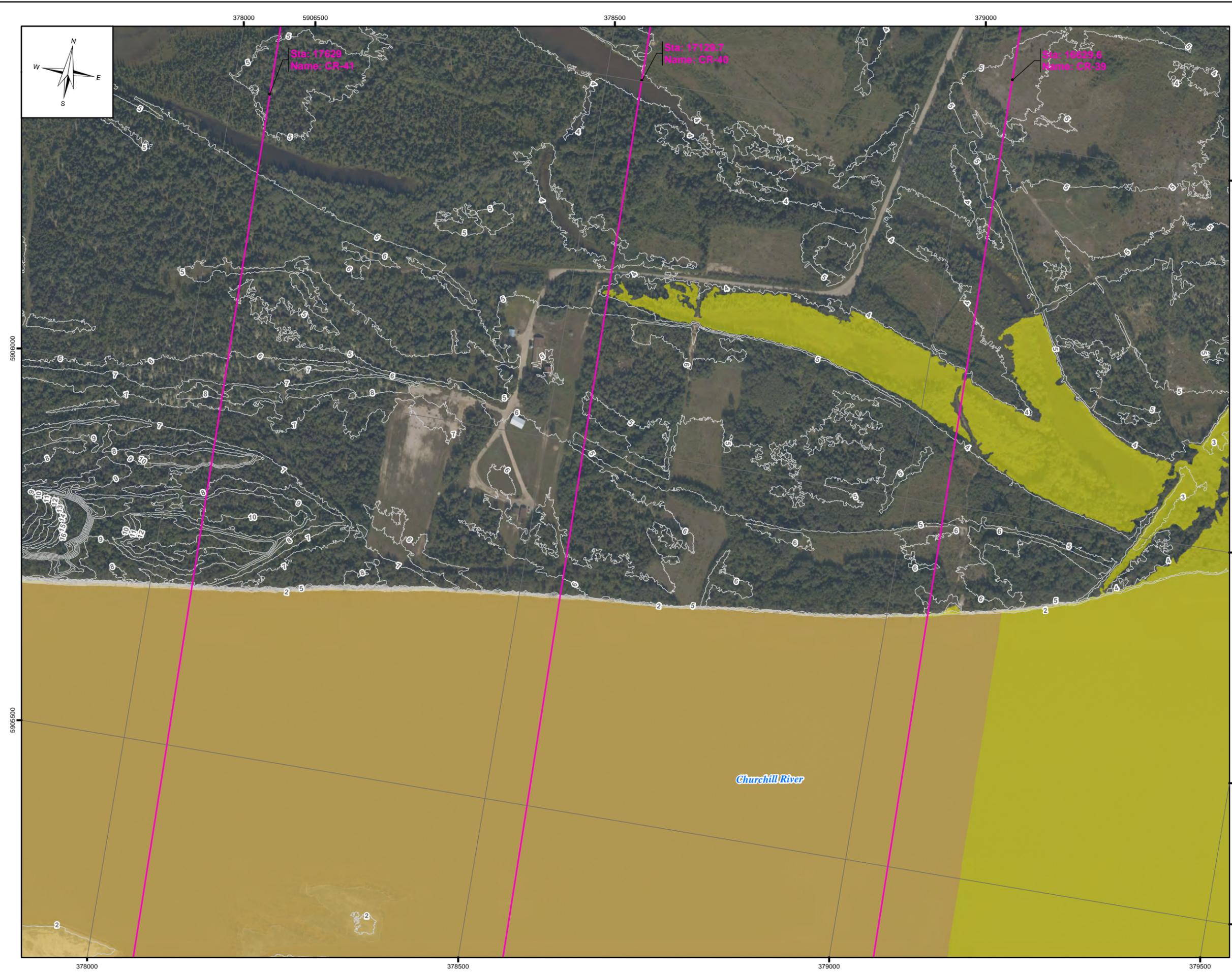
All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-04

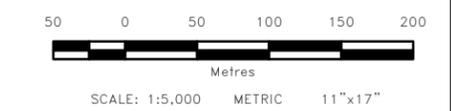


**LEGEND:**

- Sta: 2364.8 Name: CR-43
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLIS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLIS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	Y1/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

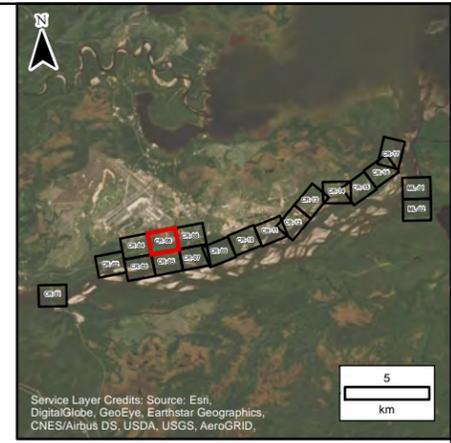
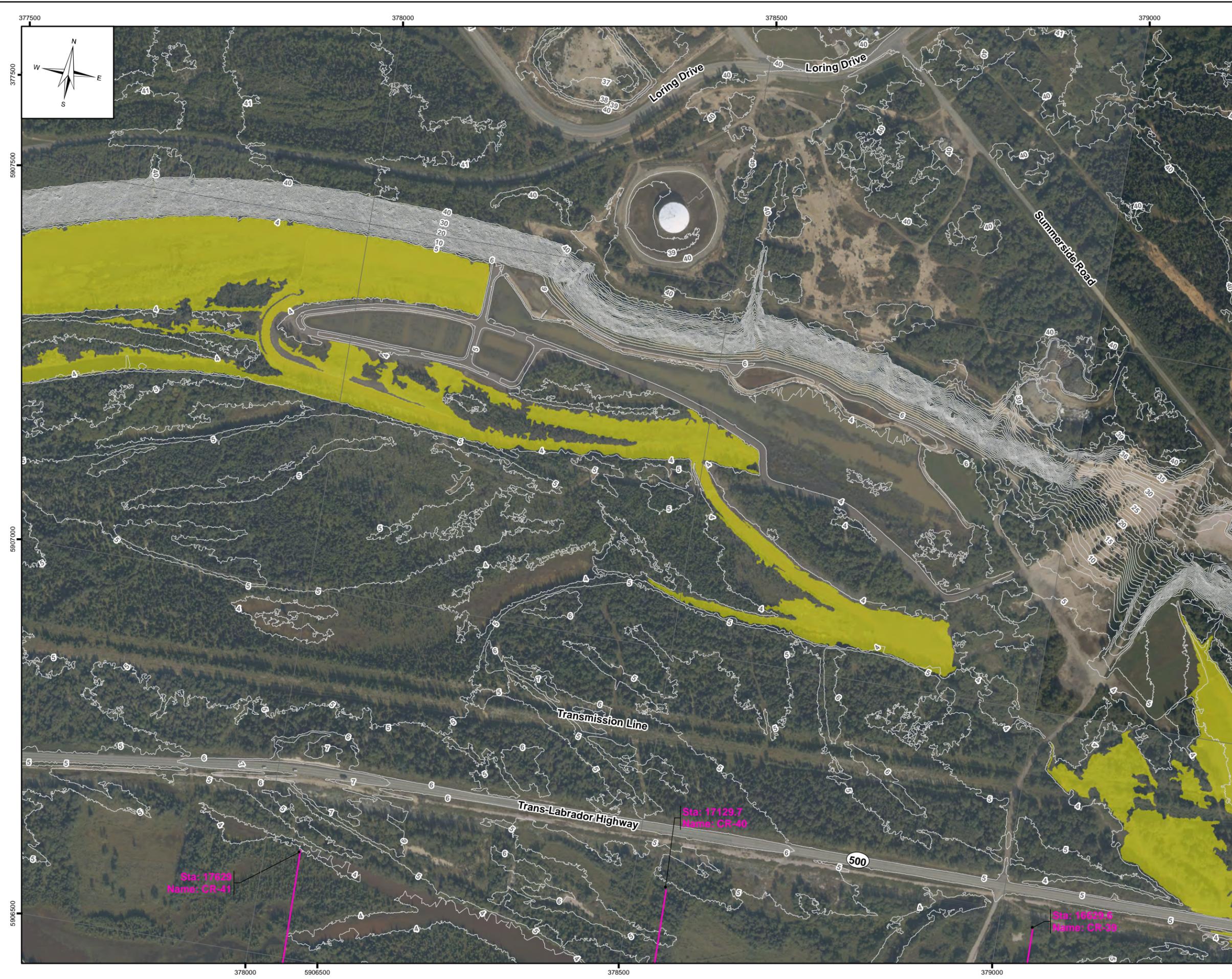
**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD)  
CONDITIONS – CR-05

JUNE 2020	FIGURE 7.2	REV: 0
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File Name: P:\Projects\2018\18-3217-001\Dwg\GIS\MXD\Flood\_Mapping\18-3217-001\_Fig7.2\_11x17.mxd  
 11"x17" PLOT SCALE 1:1

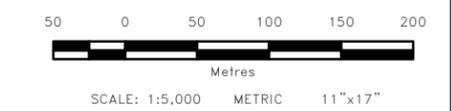


**LEGEND:**

- Sta: 23648 Name: CR-43
- Cross Section
- Water Survey of Canada Gauge Location
- River Centreline
- 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
- 1.0 – 2.0 m/s
- 2.0 – 3.0 m/s
- 3.0 – 4.0 m/s
- > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLIS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLIS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
 Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

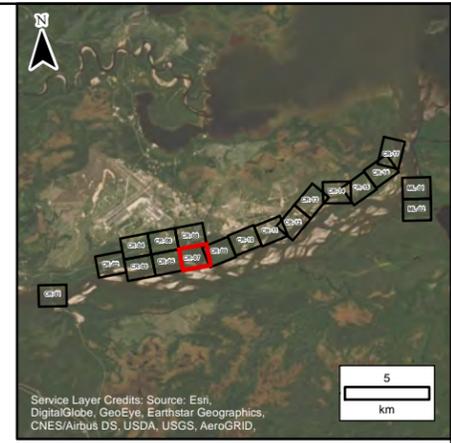
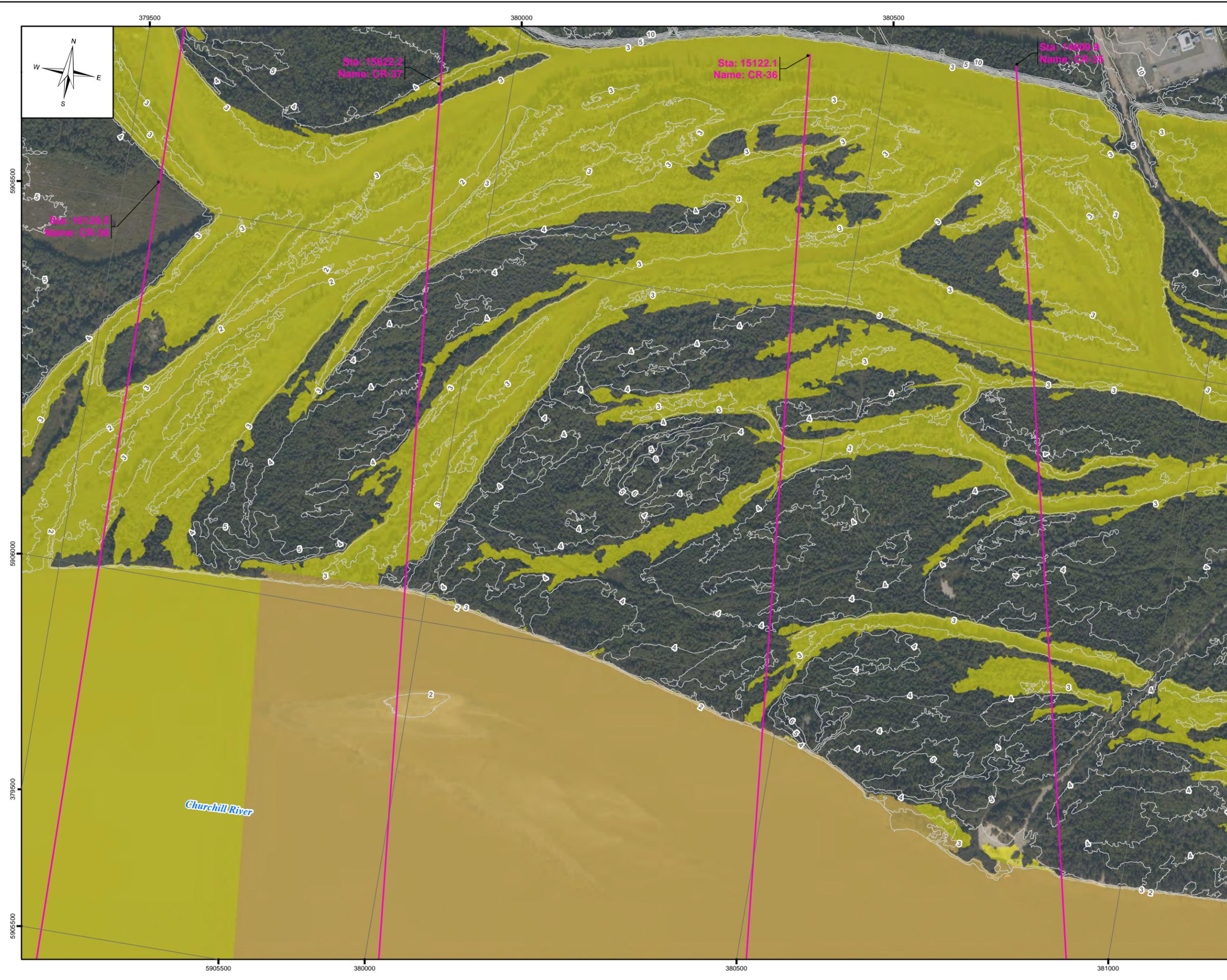
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-06

JUNE 2020	FIGURE 7.2	REV: 0
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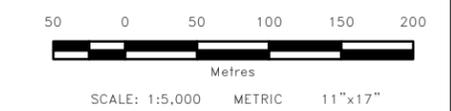


**LEGEND:**

- Sta: 2364.8 Name: CR-33  
Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

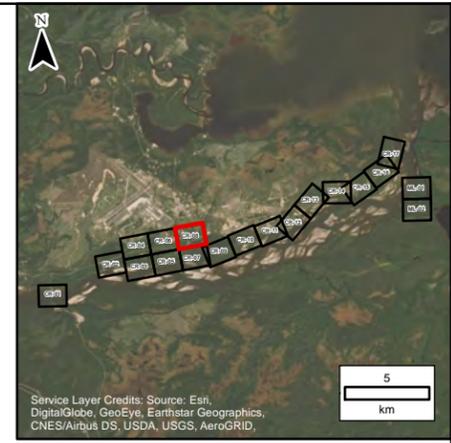
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-07

JUNE 2020	FIGURE 7.2	REV: 0
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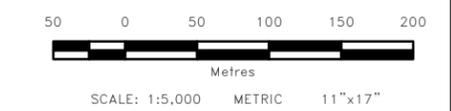


**LEGEND:**

- Sta: 23648 Name: CR-53
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATGIS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATGIS Geomatics on September 11 – 13, 2019.



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Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

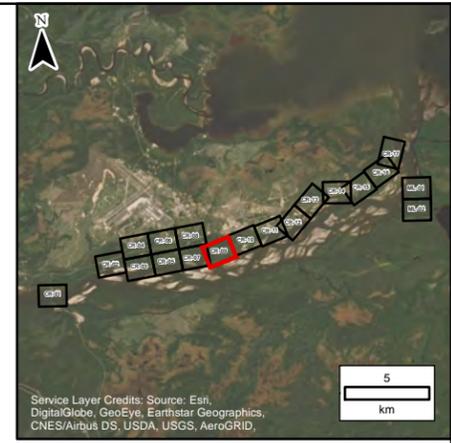
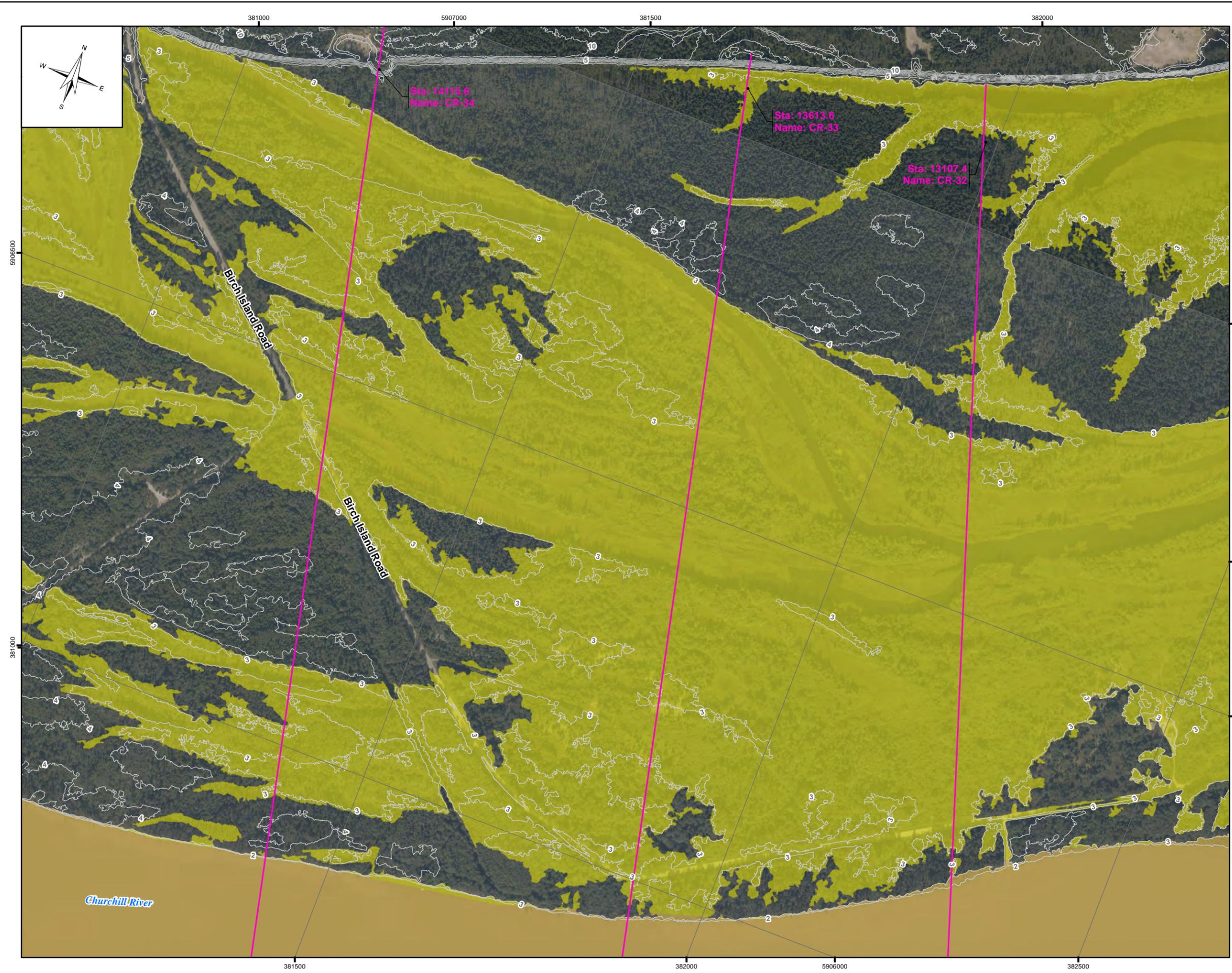
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-08

JUNE 2020	FIGURE 7.2	REV: 0
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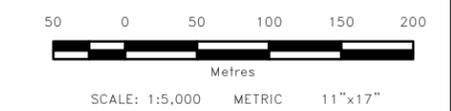


**LEGEND:**

- Sta: 23648 Name: CR-53
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



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Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

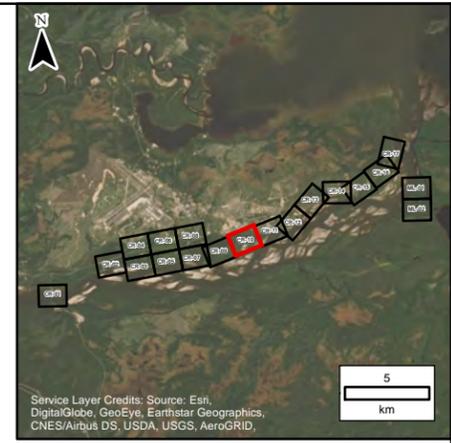
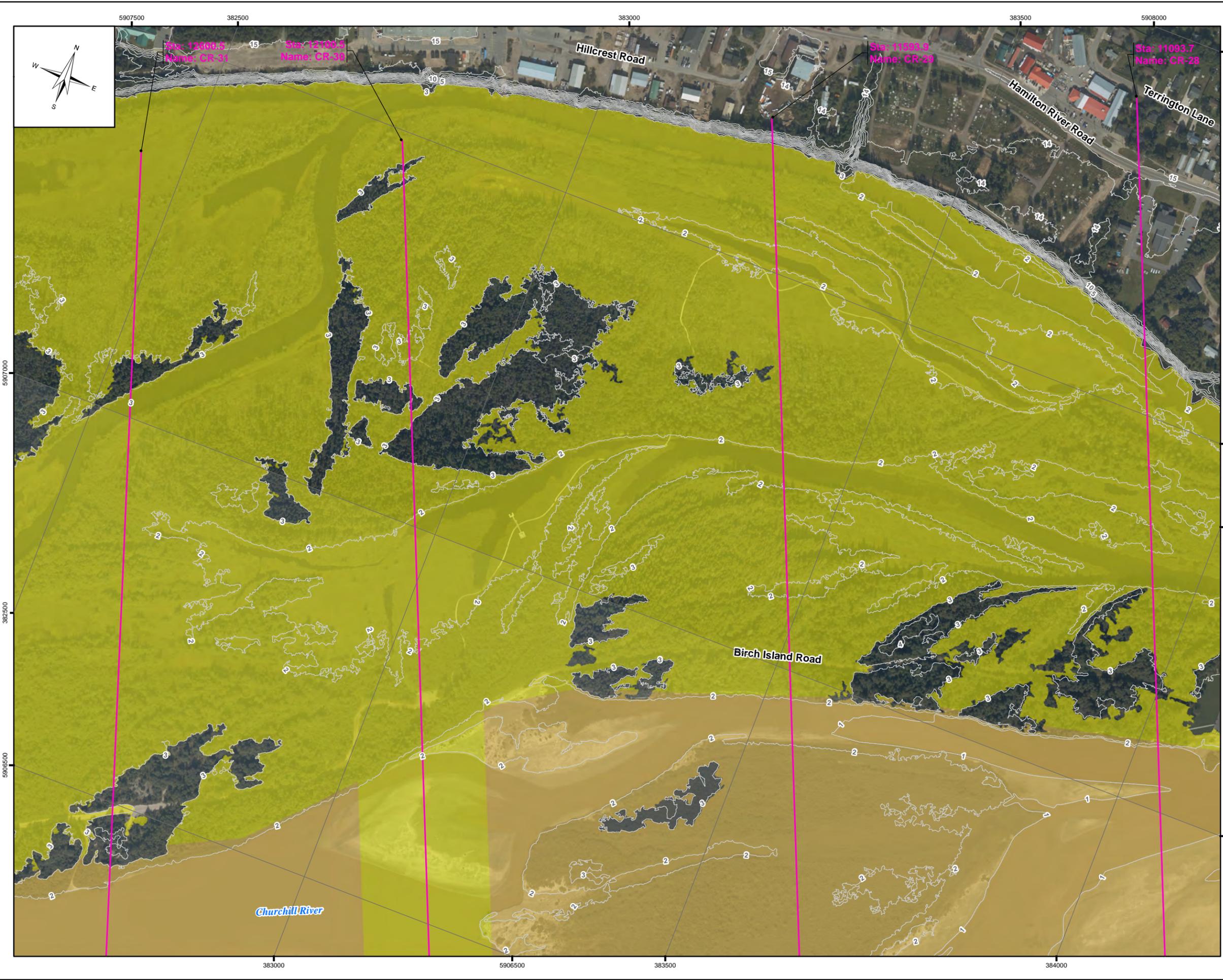
REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-09

JUNE 2020	FIGURE 7.2	REV: 0
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 11"x17" PLOT SCALE 1:1  
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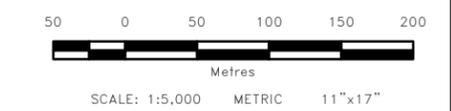


**LEGEND:**

- Sta: 2364.8 Name: CR-28
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

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2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
 Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

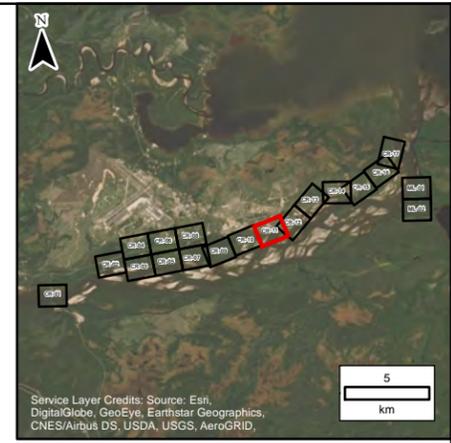
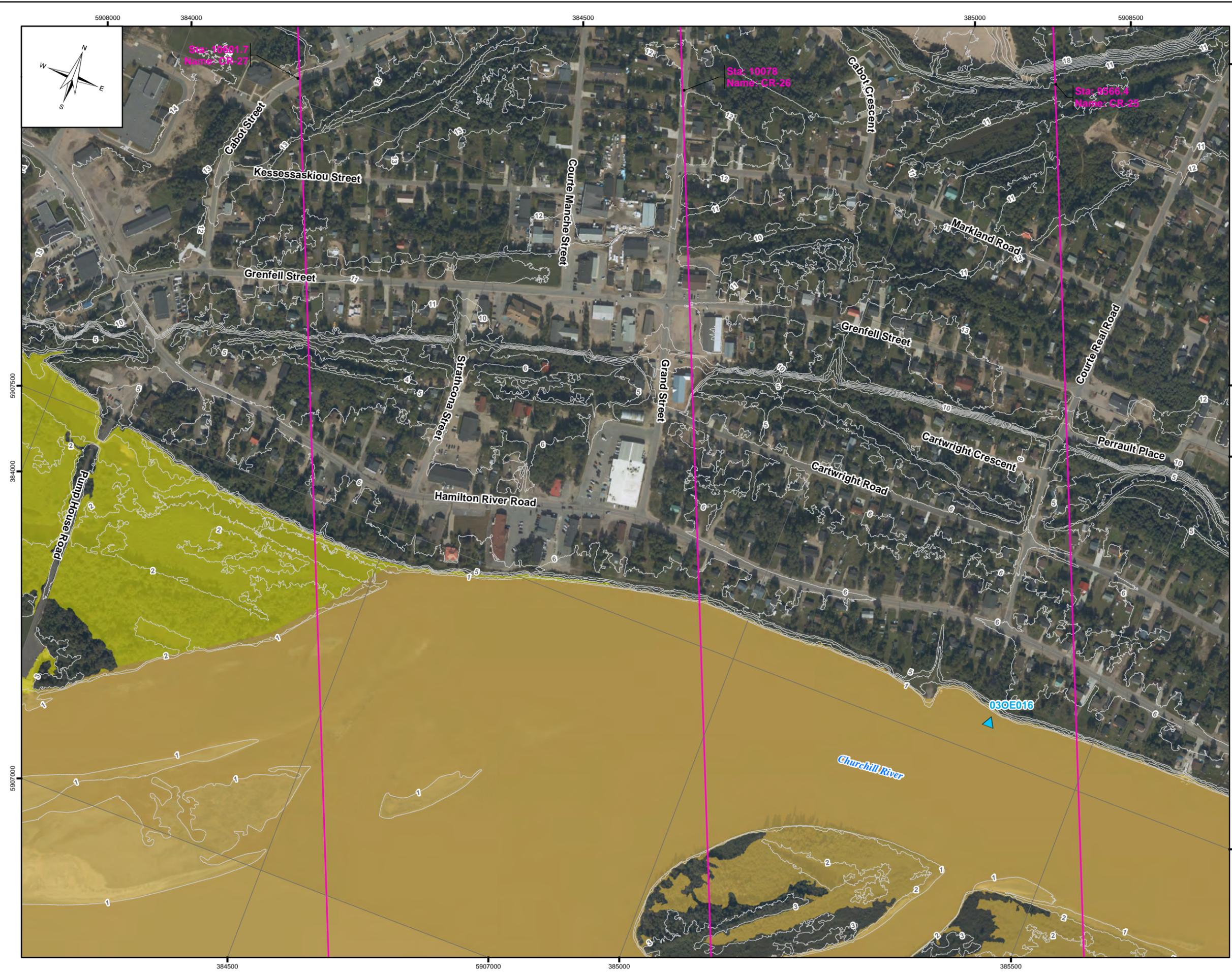
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-10

JUNE 2020	FIGURE 7.2	REV: 0
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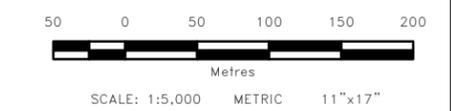


**LEGEND:**

- Sta. 23648 Name: CR-53
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLIS Geomatics and dated as September 11 – 13, 2019.
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 Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

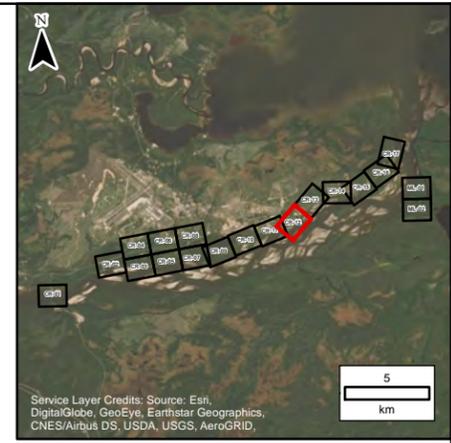
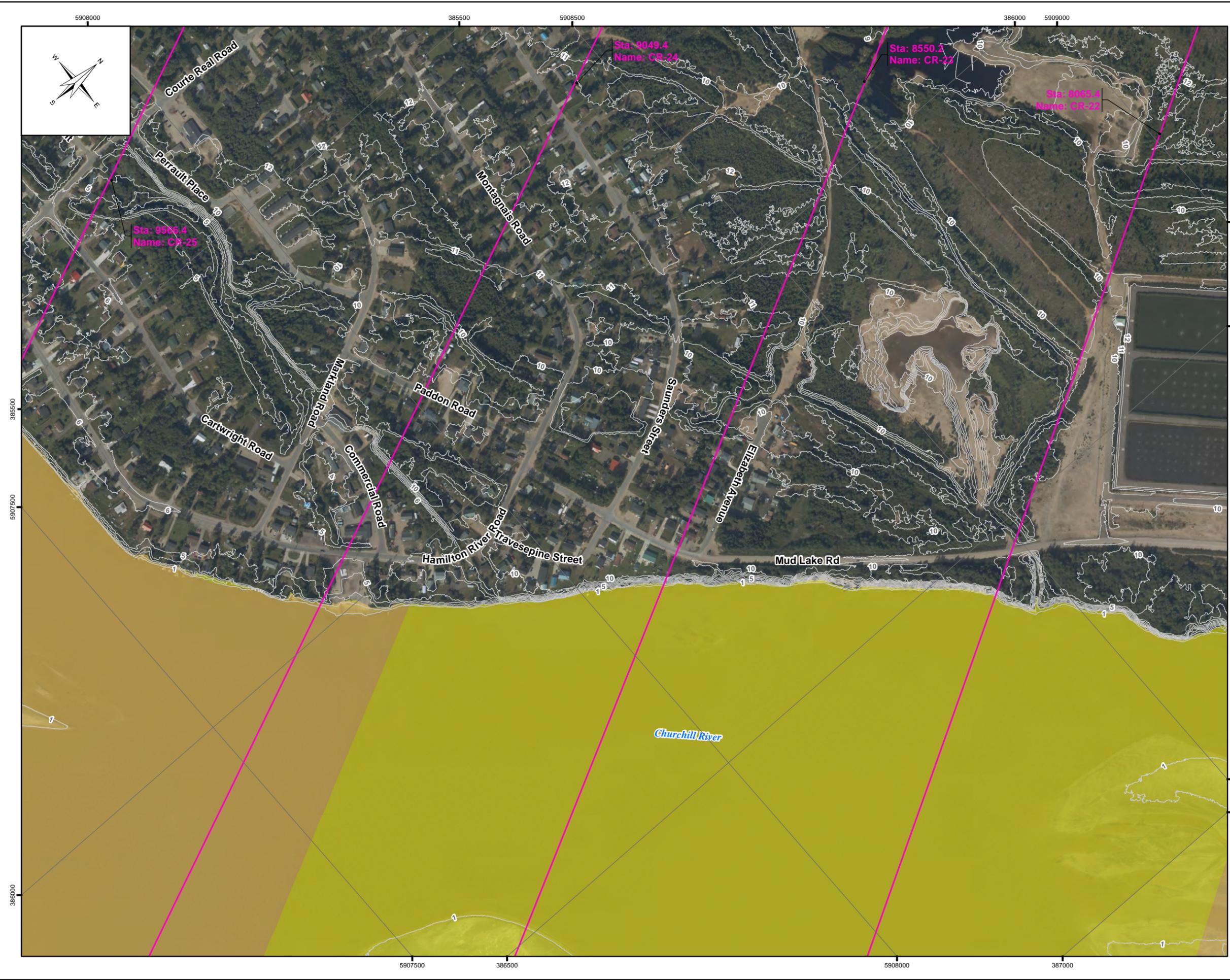
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-11

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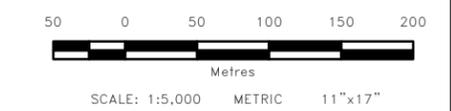


**LEGEND:**

- Sta: 2364.8 Name: CR-53
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



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 Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

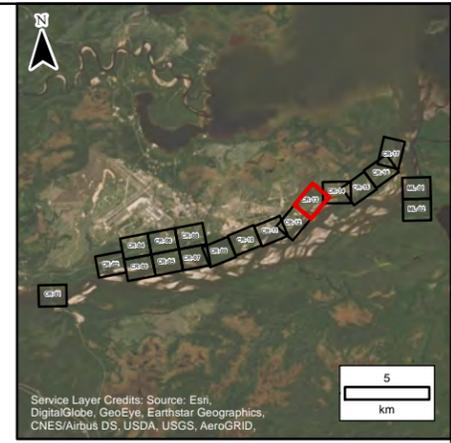
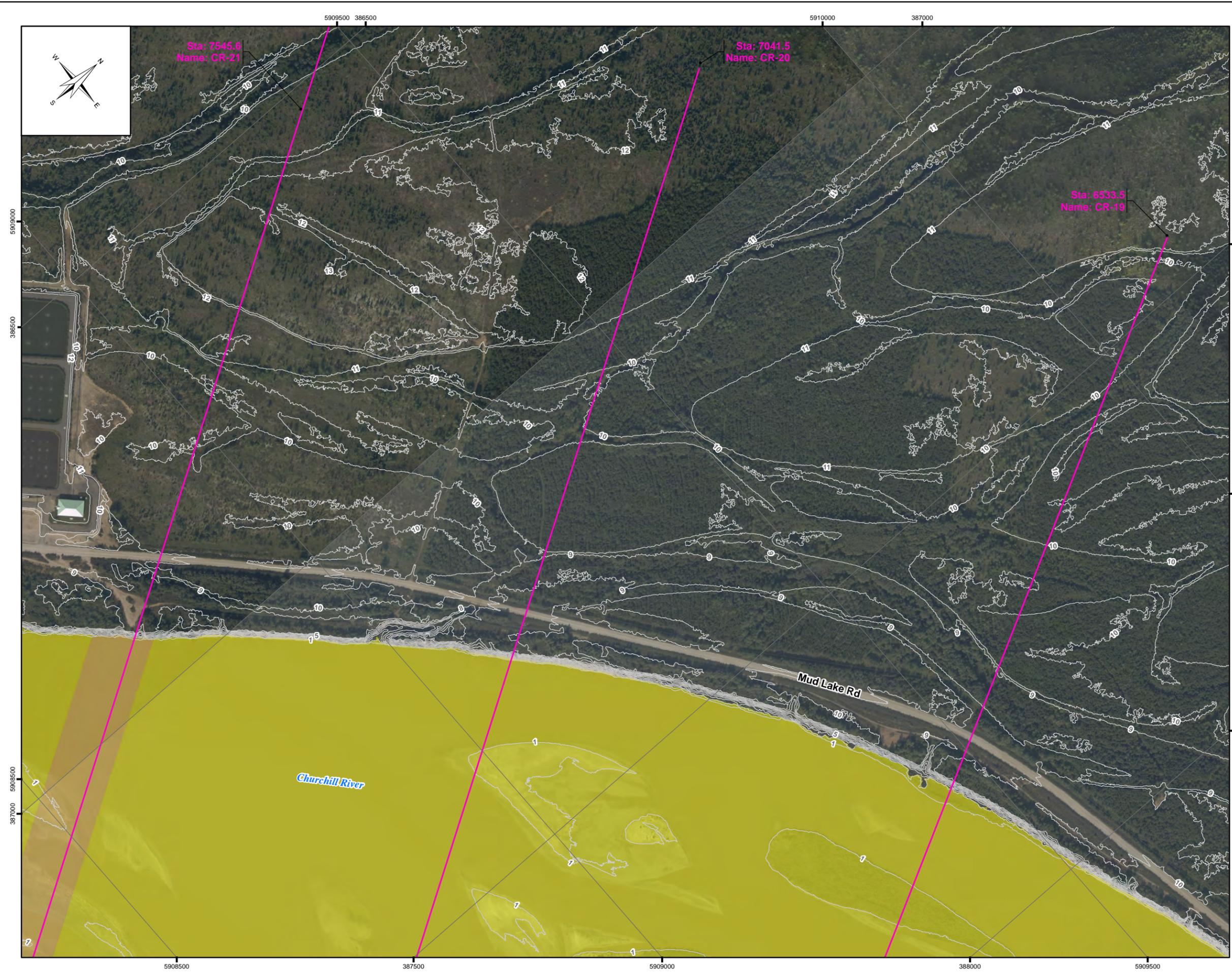
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-12

JUNE 2020	FIGURE 7.2	REV: 0
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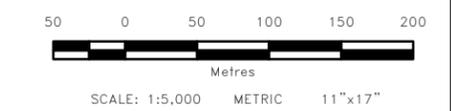


**LEGEND:**

- Sta: 2364.8 Name: CR-53
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



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Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

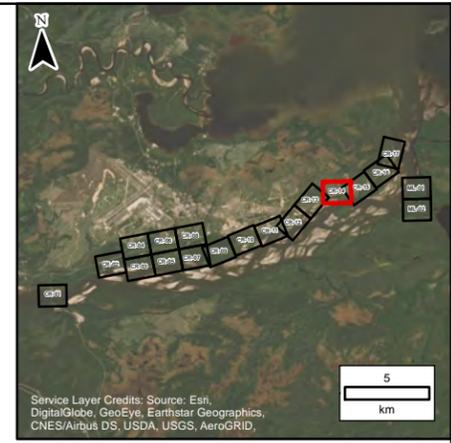
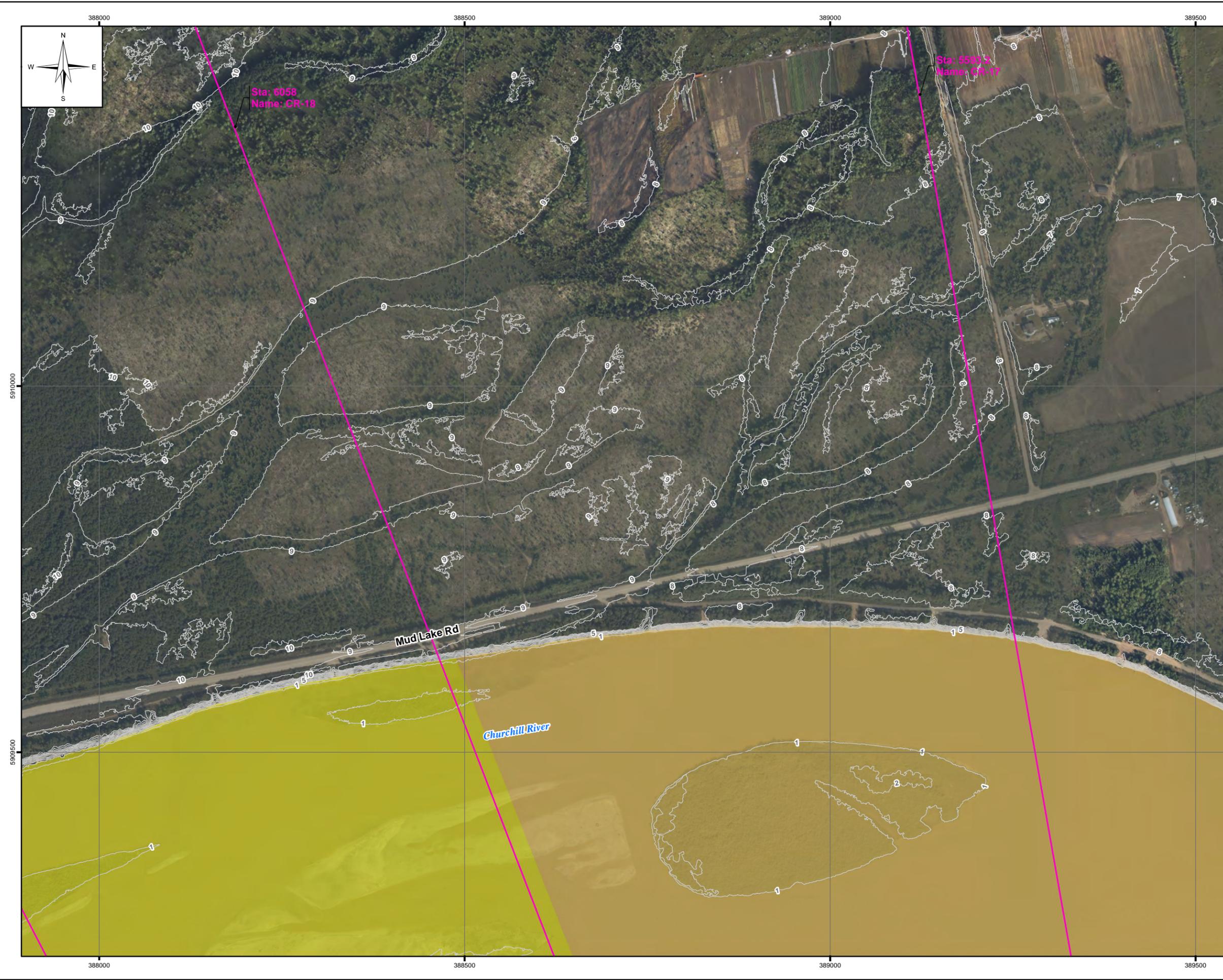
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-13

JUNE 2020	FIGURE 7.2	REV: 0
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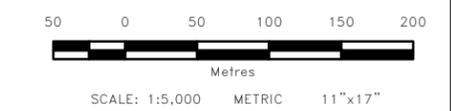


**LEGEND:**

- Sta: 2364 Name: CR-53
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



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Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

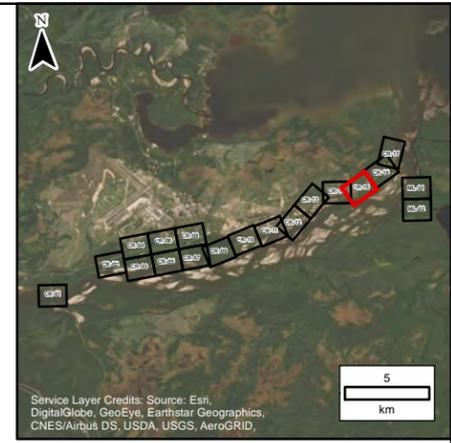
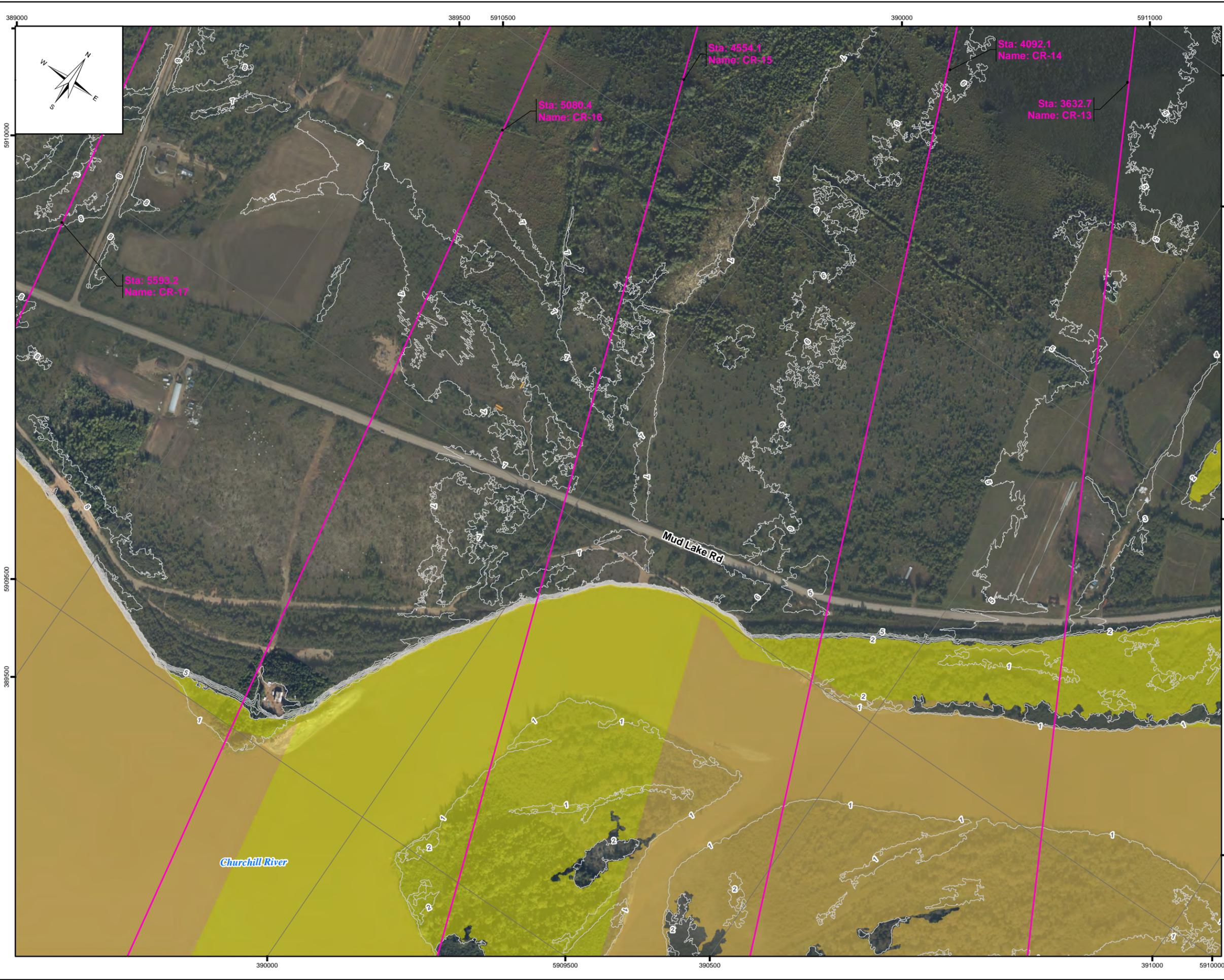
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD)  
CONDITIONS – CR-14

JUNE 2020	FIGURE 7.2	REV: 0
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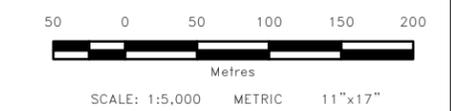


**LEGEND:**

- Sta: 2364.8 Name: CR-13
- Cross Section
- Water Survey of Canada Gauge Location
- River Centreline
- 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
- 1.0 – 2.0 m/s
- 2.0 – 3.0 m/s
- 3.0 – 4.0 m/s
- > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified. Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

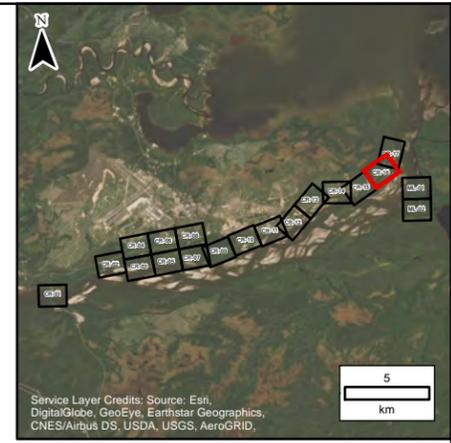
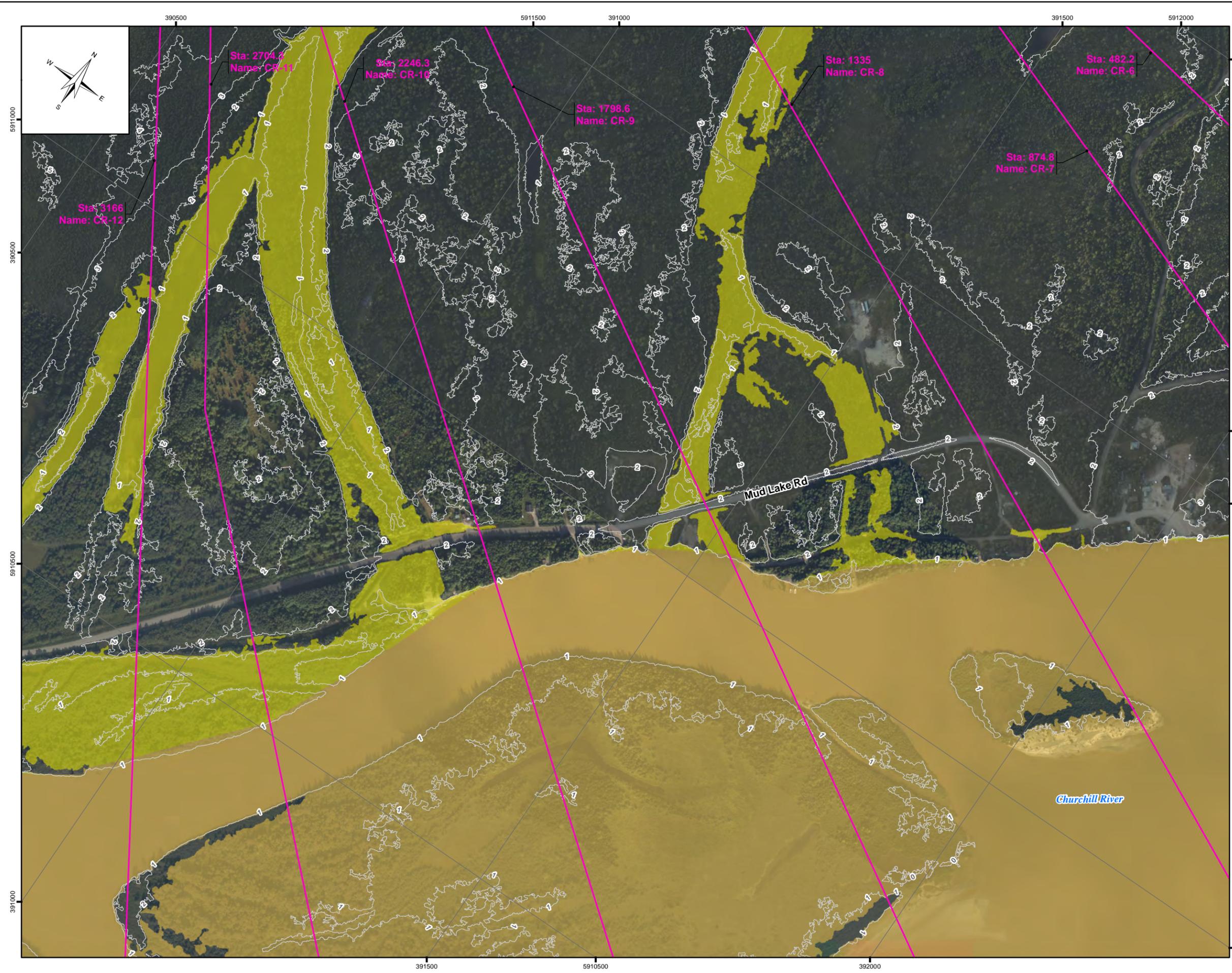
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-15

JUNE 2020	FIGURE 7.2	REV: 0
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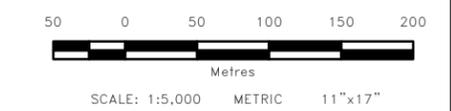


**LEGEND:**

- Sta: 2364.8 Name: CR-53
- Cross Section
- Water Survey of Canada Gauge Location
- River Centreline
- 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
- 1.0 – 2.0 m/s
- 2.0 – 3.0 m/s
- 3.0 – 4.0 m/s
- > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



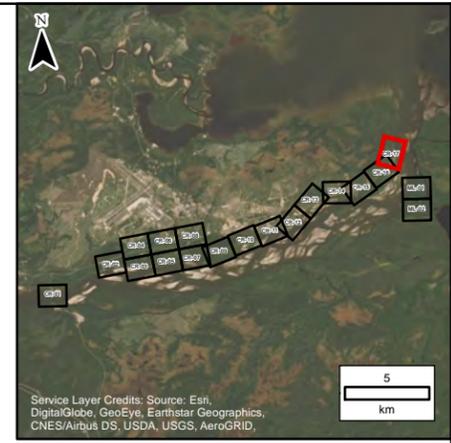
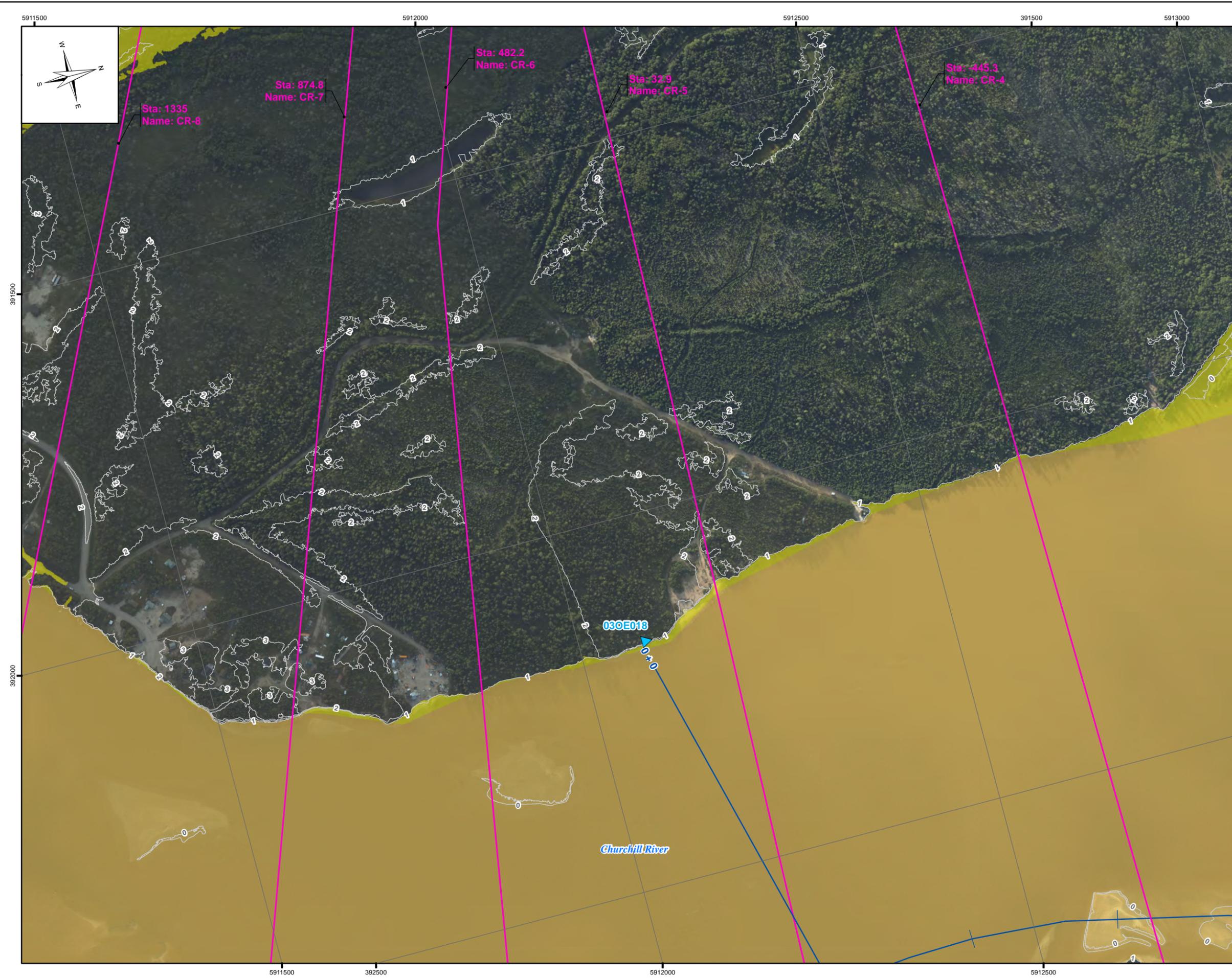
All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-16

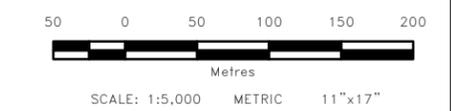


**LEGEND:**

- Sta: 2364.8 Name: CR-53
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

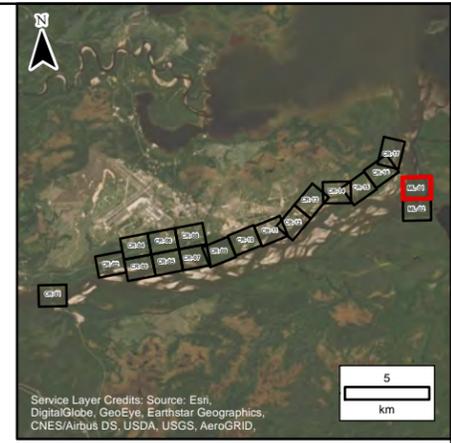
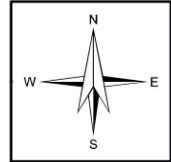
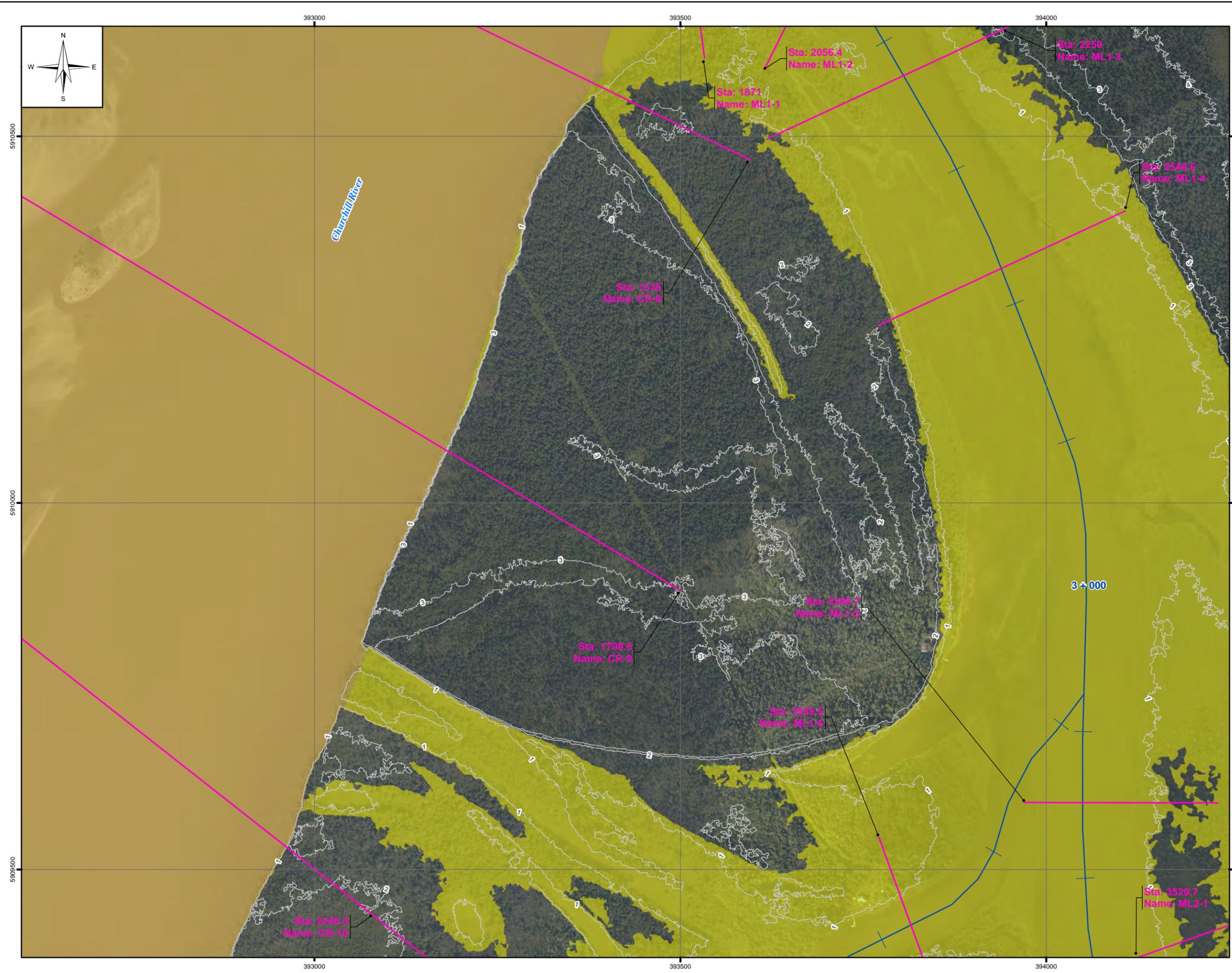
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-17

JUNE 2020	FIGURE 7.2	REV: 0
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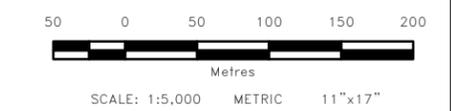


**LEGEND:**

- Sta: 2364.8 Name: CR-53  
Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLIS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLIS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

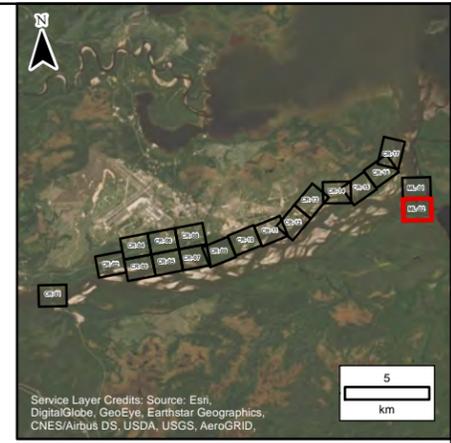
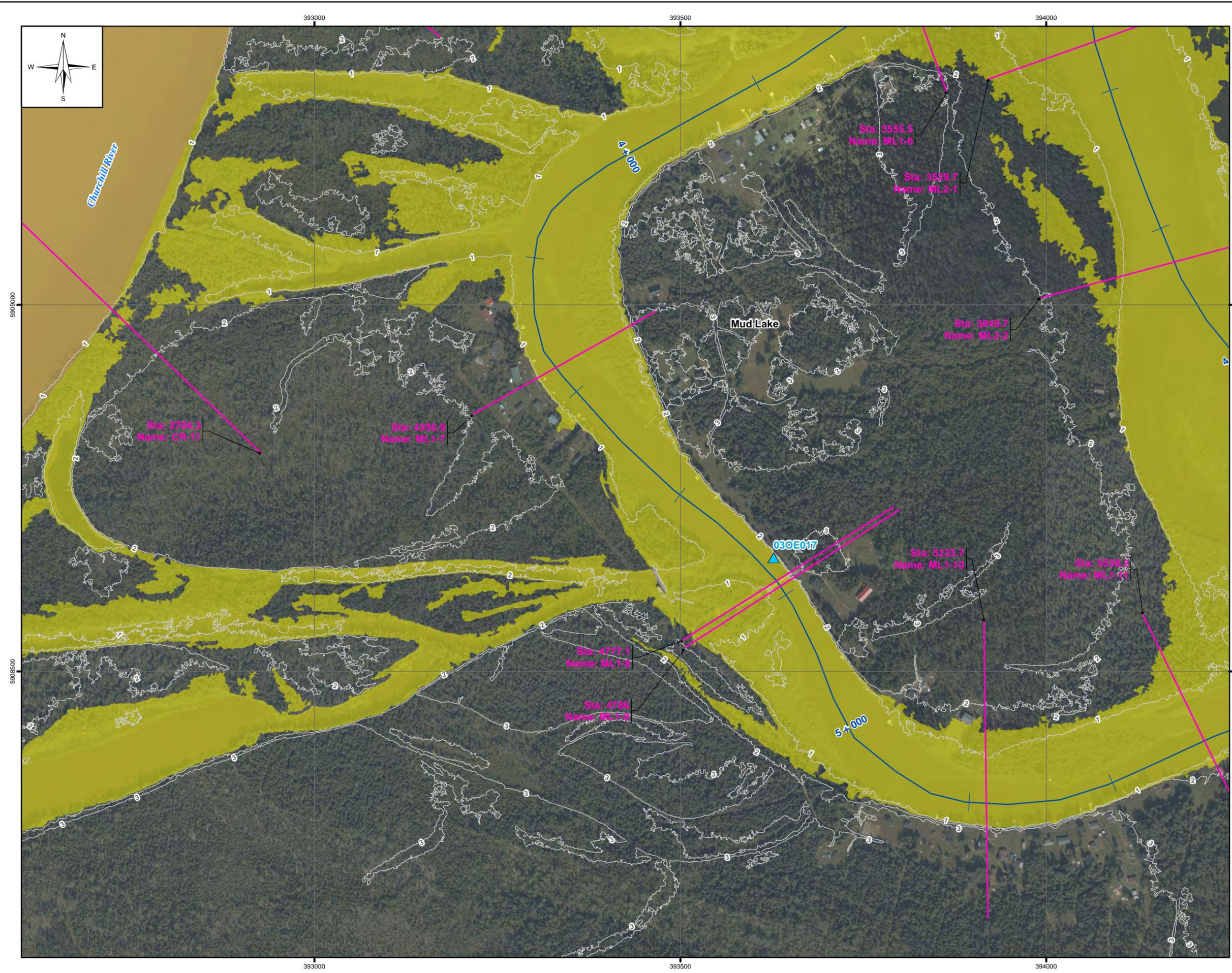
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – ML-01

JUNE 2020	FIGURE 7.2	REV: 0
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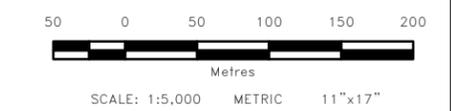


**LEGEND:**

- Sta: 2364.8 Name: CR-53
- Cross Section
- Water Survey of Canada Gauge Location
- River Centreline
- 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
- 1.0 – 2.0 m/s
- 2.0 – 3.0 m/s
- 3.0 – 4.0 m/s
- > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATGIS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATGIS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

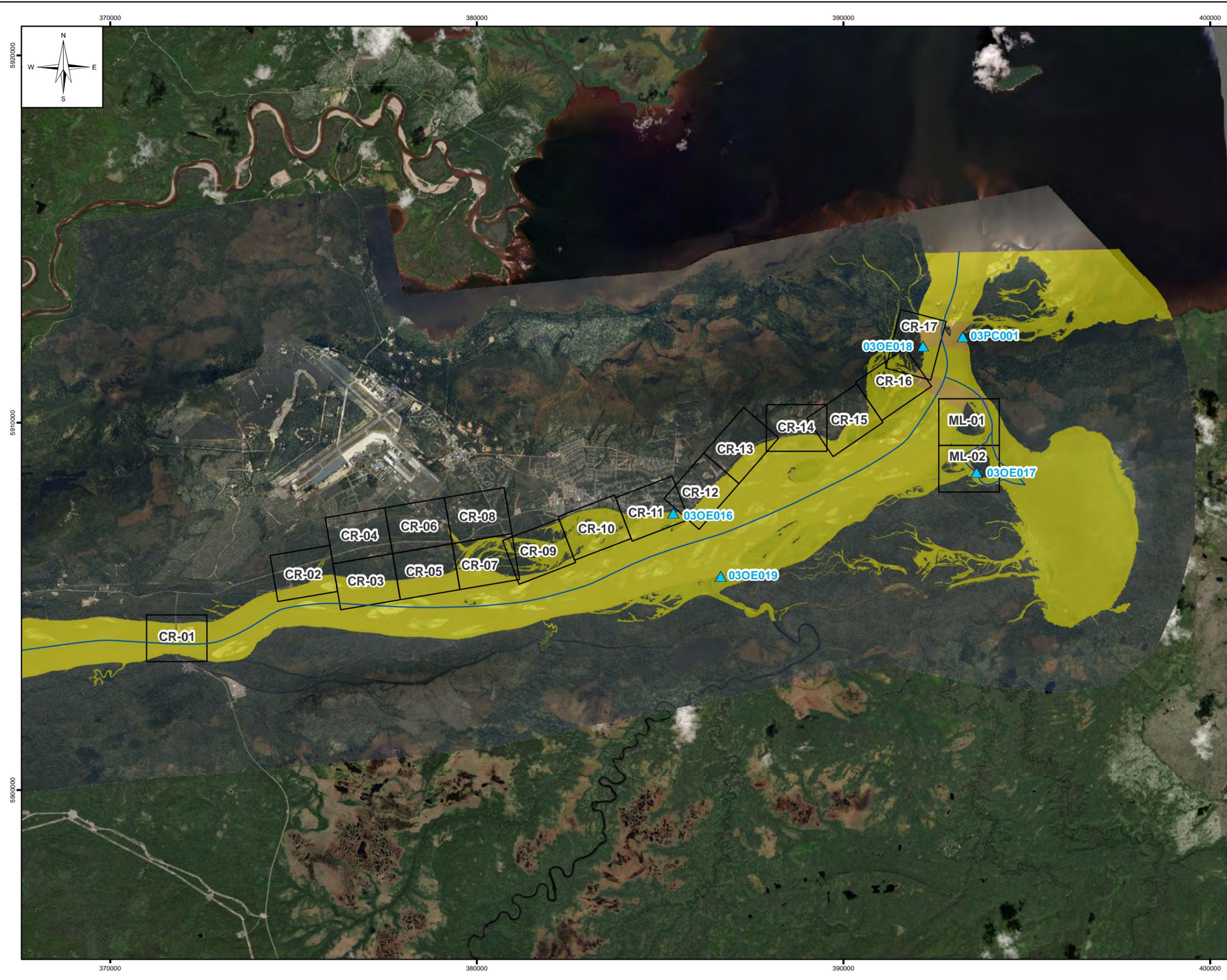
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

OPEN WATER 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – ML-02

JUNE 2020	FIGURE 7.2	REV: 0
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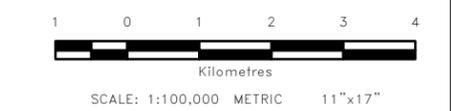
**LEGEND:**

- Water Survey of Canada Gauge Location
- River Centreline

Velocity (m/s)

- 0.0 – 1.0 m/s
- 1.0 – 2.0 m/s
- 2.0 – 3.0 m/s
- 3.0 – 4.0 m/s
- > 4.00 m/s
- Map Extents

**NOTES:**  
 1. Imagery is supplied by ATGIS Geomatics and dated as September 11 – 13, 2019, and by ESRI and DigitalGlobe, WV02 dated June 3, 2015.



All units are metric and in metres unless otherwise specified.  
 Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

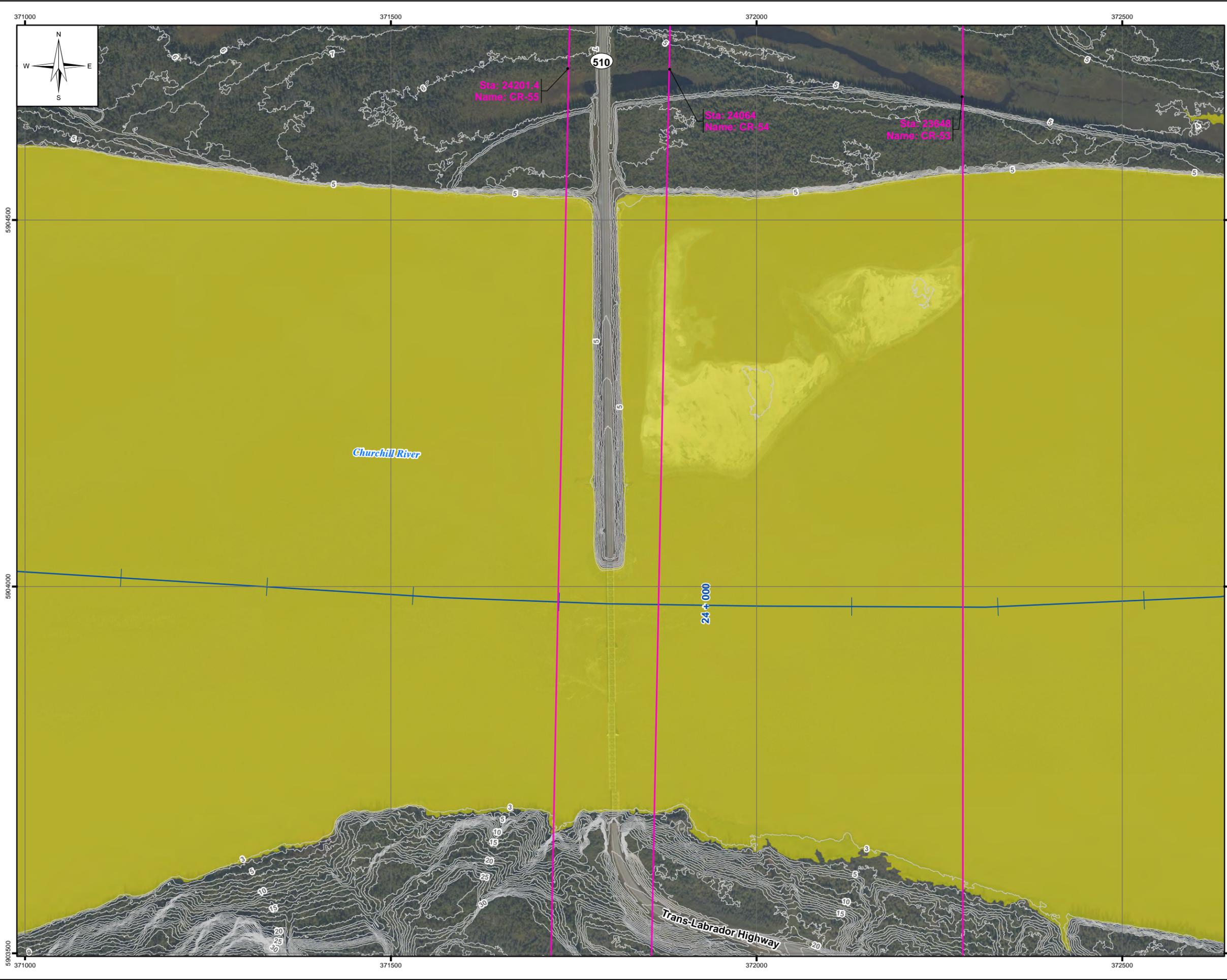
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – OVERVIEW MAP

JUNE 2020	FIGURE 7.3	REV: 0
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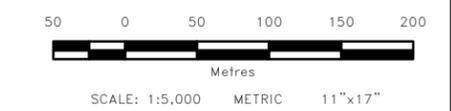


**LEGEND:**

- Sta: 23648  
Name: CR-53
  - Cross Section
  - Water Survey of Canada  
Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.

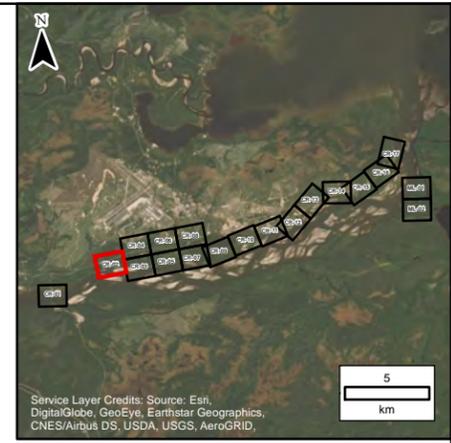
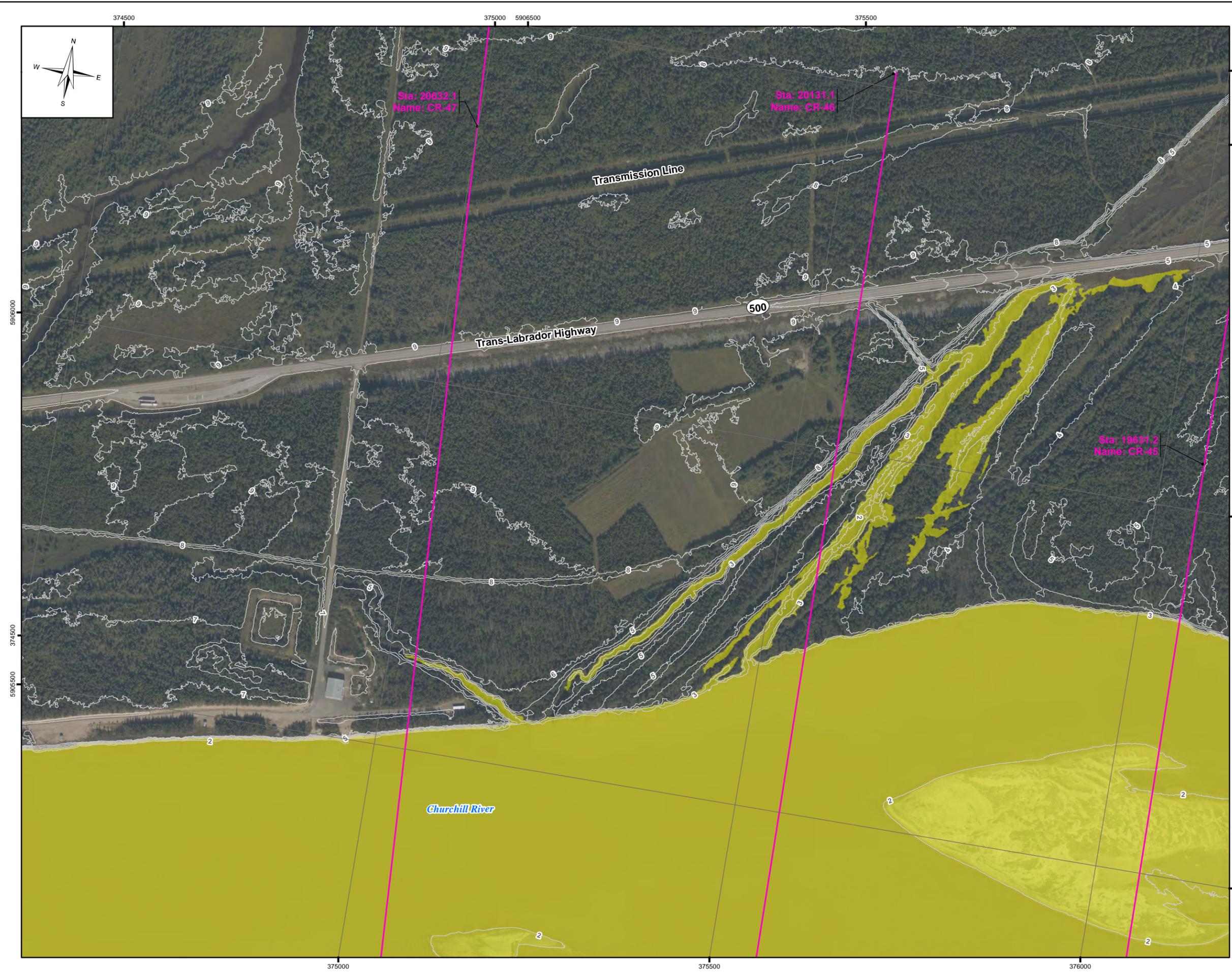


All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

0	20/06/30 ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY / CHECK BY

REVISIONS / ISSUE

CHURCHILL RIVER FLOOD RISK AND FORECASTING		
ICE-AFFECTED 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-01		
JUNE 2020	FIGURE 7.3	REV: 0

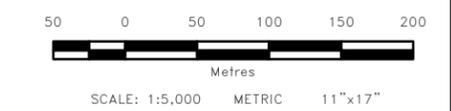


**LEGEND:**

- Sta: 20632.1 Name: CR-47  
Cross Section
- Water Survey of Canada Gauge Location
- River Centreline
- 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
- 1.0 – 2.0 m/s
- 2.0 – 3.0 m/s
- 3.0 – 4.0 m/s
- > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

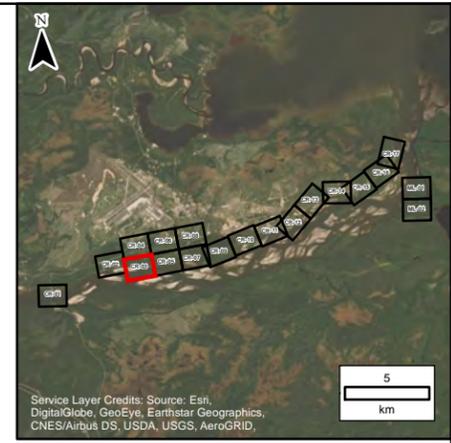
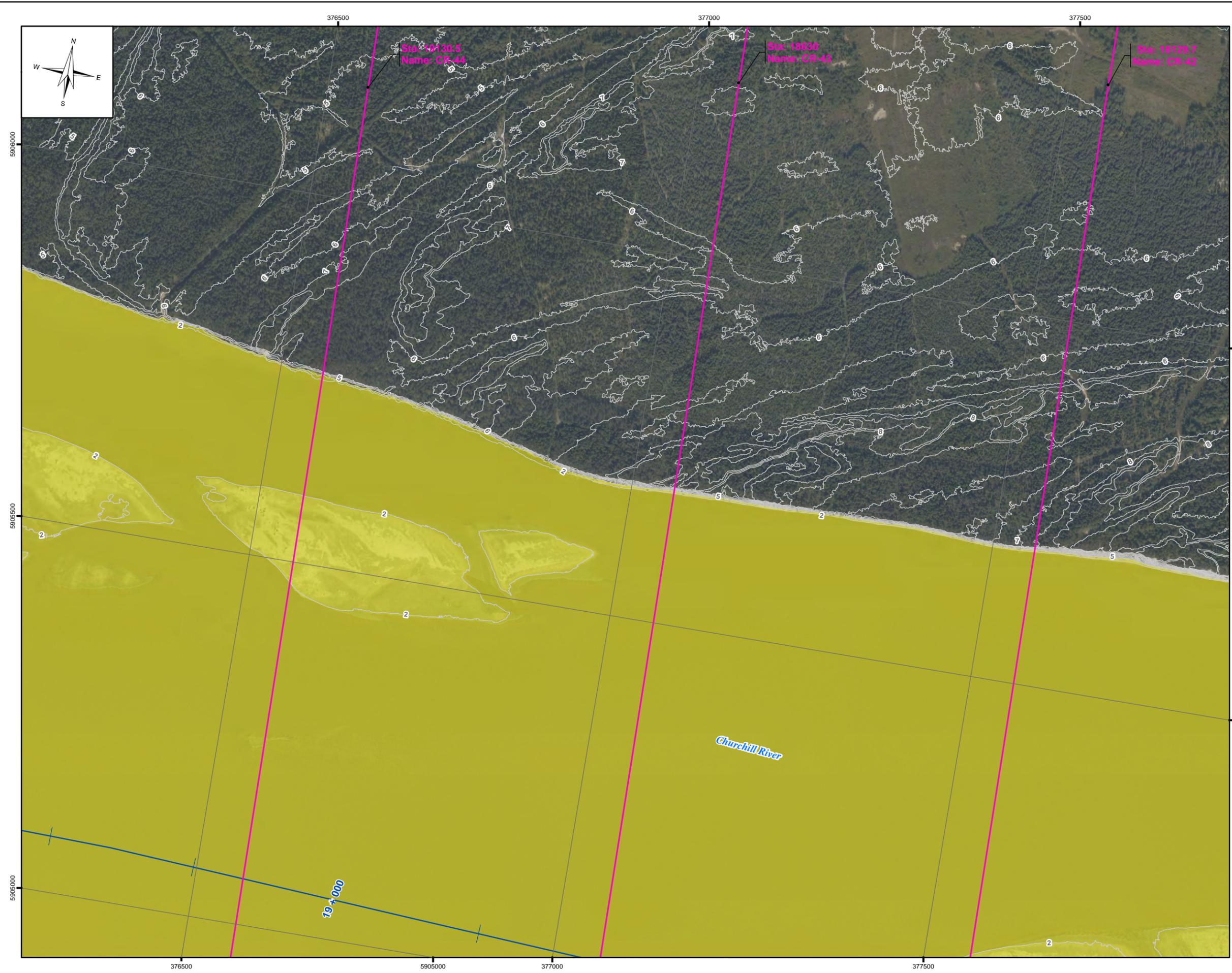
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-02

JUNE 2020	FIGURE 7.3	REV: 0
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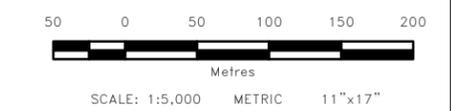


**LEGEND:**

- Sta: 23648 Name: CR-43
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLIS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLIS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

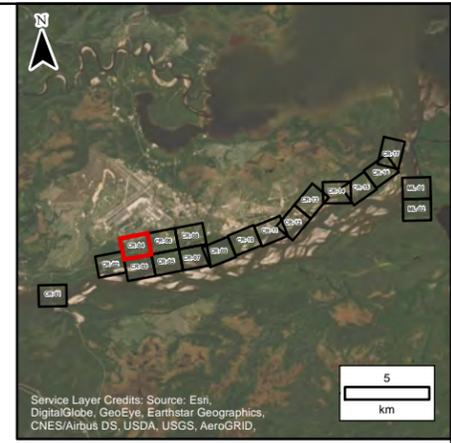
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	Y1/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-03

JUNE 2020	FIGURE 7.3	REV: 0
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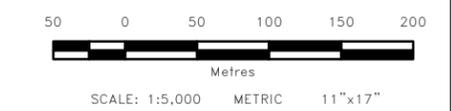


**LEGEND:**

- Sta: 23648  
Name: CR-43  
Cross Section
  - Water Survey of Canada  
Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



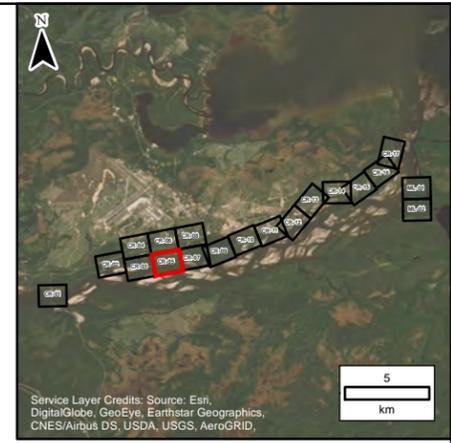
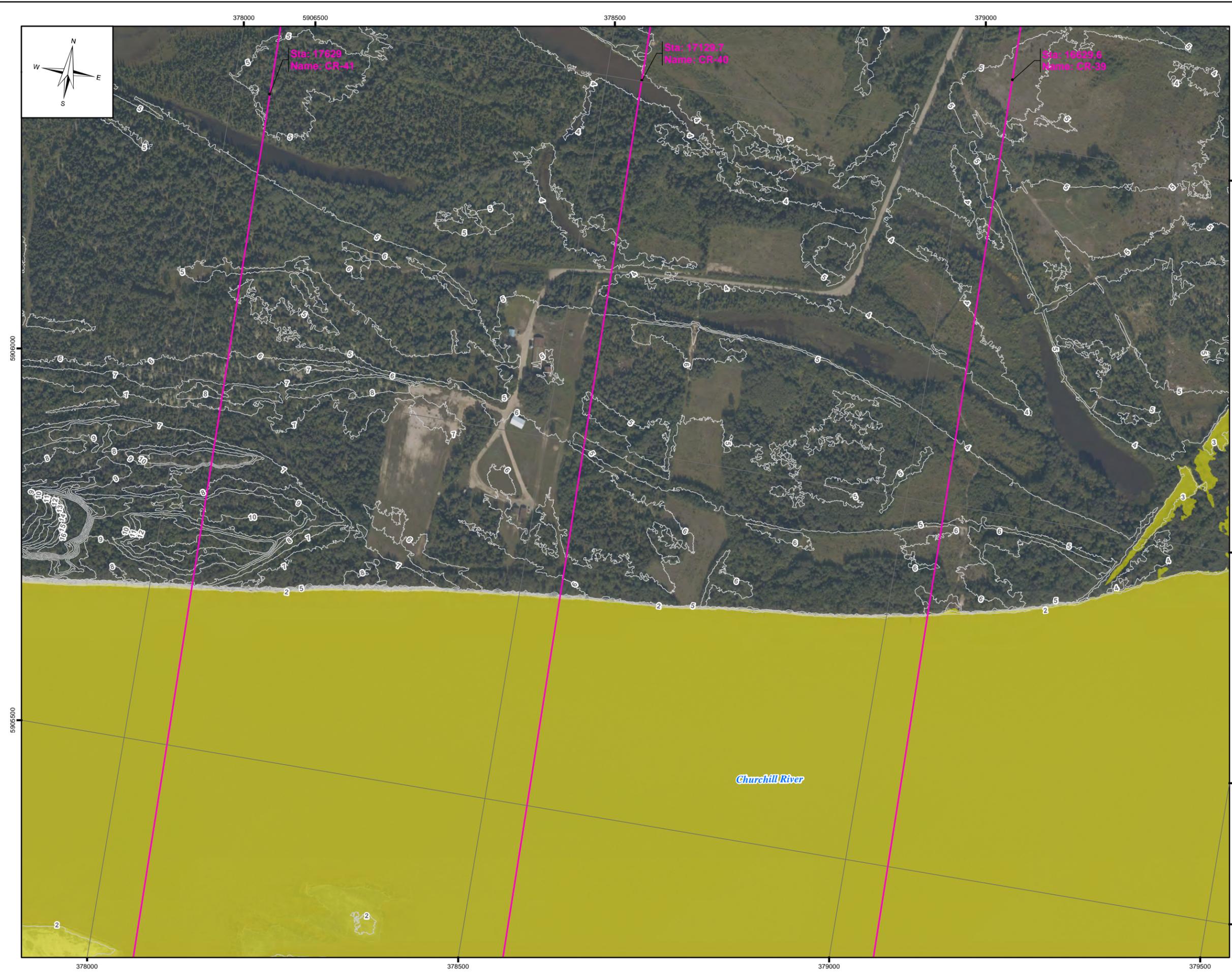
All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

0	20/06/30 ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY / CHECK BY

REVISIONS / ISSUE

CHURCHILL RIVER FLOOD RISK AND FORECASTING

ICE-AFFECTED 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-04

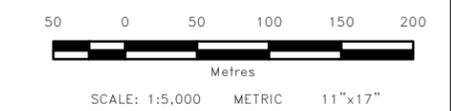


**LEGEND:**

- Sta: 2364.8 Name: CR-53
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

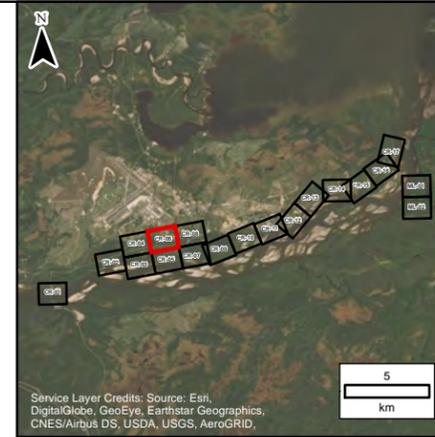
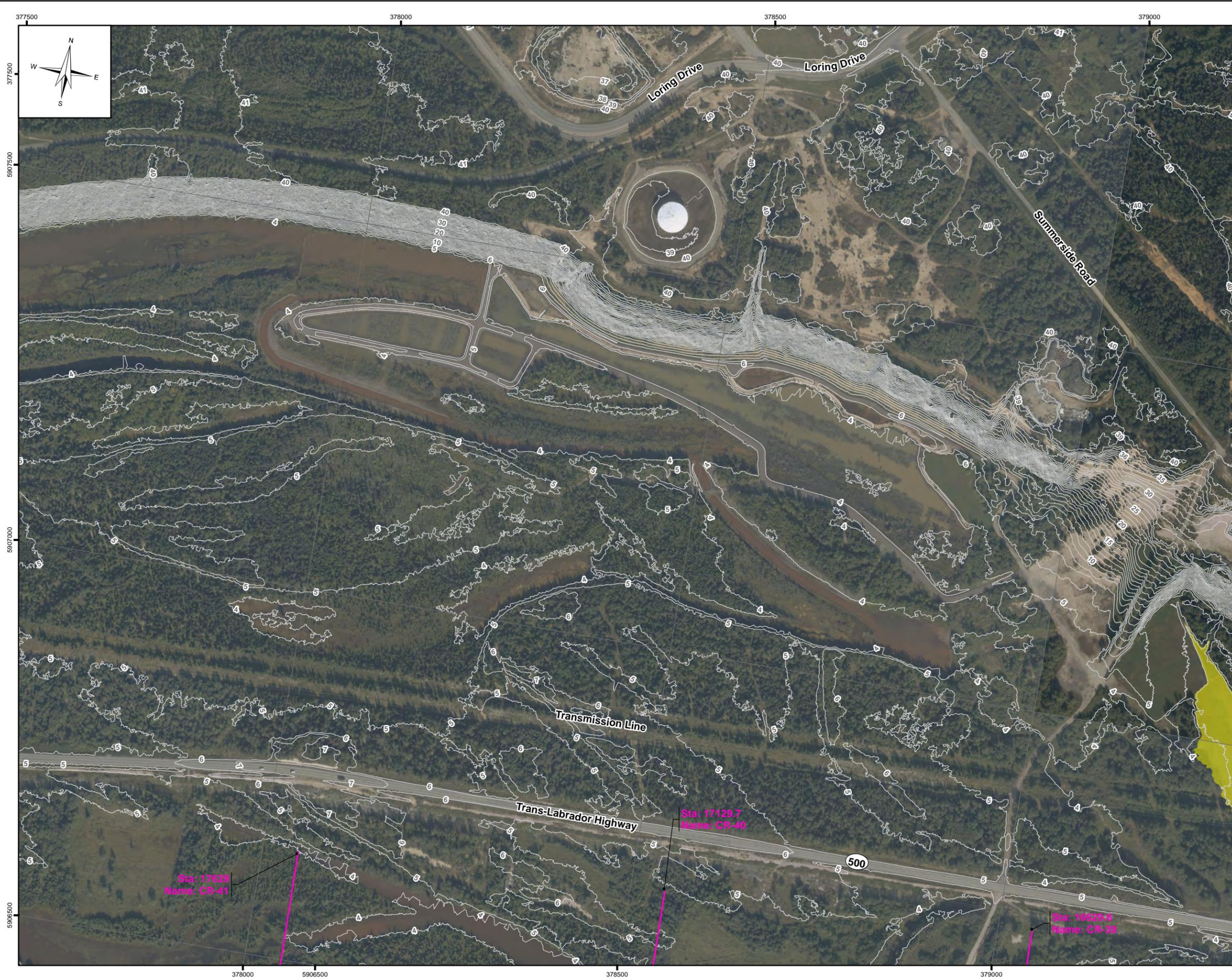
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	Y1/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD)  
CONDITIONS – CR-05

JUNE 2020	FIGURE 7.3	REV: 0
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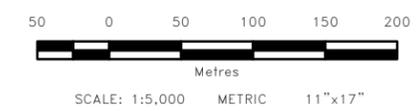


**LEGEND:**

- Sta: 2364.8  
Name: CR-43
- Cross Section
- Water Survey of Canada Gauge Location
- River Centreline
- 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
- 1.0 – 2.0 m/s
- 2.0 – 3.0 m/s
- 3.0 – 4.0 m/s
- > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

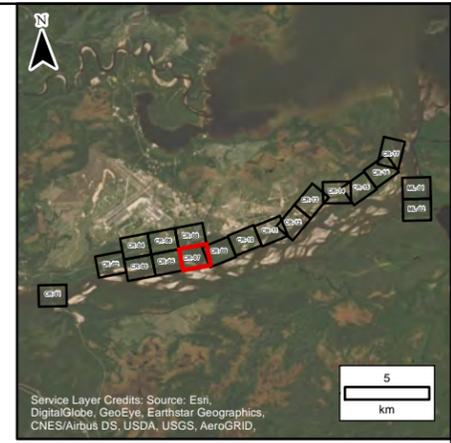
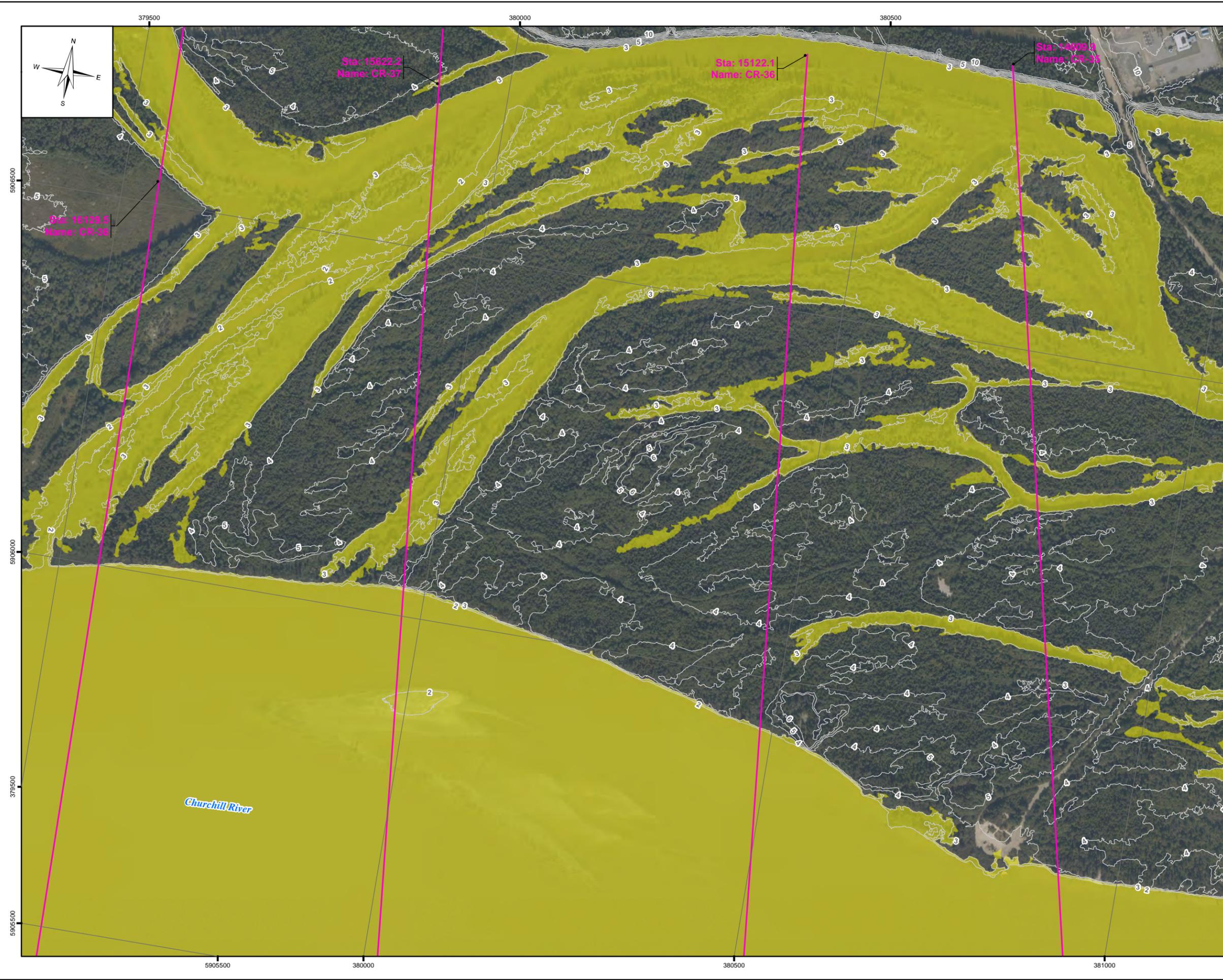
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-06

JUNE 2020	FIGURE 7.3	REV: 0
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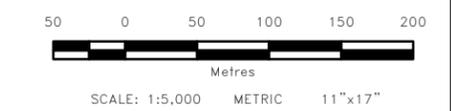


**LEGEND:**

- Sta: 2364.8 Name: CR-38 Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

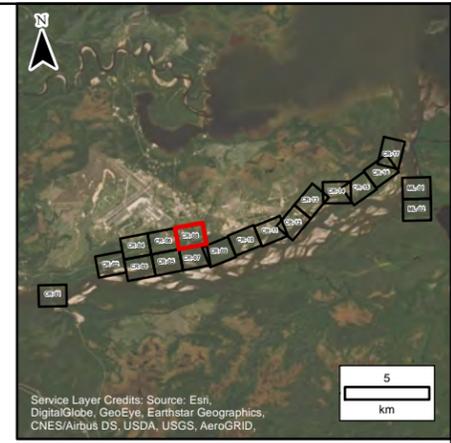
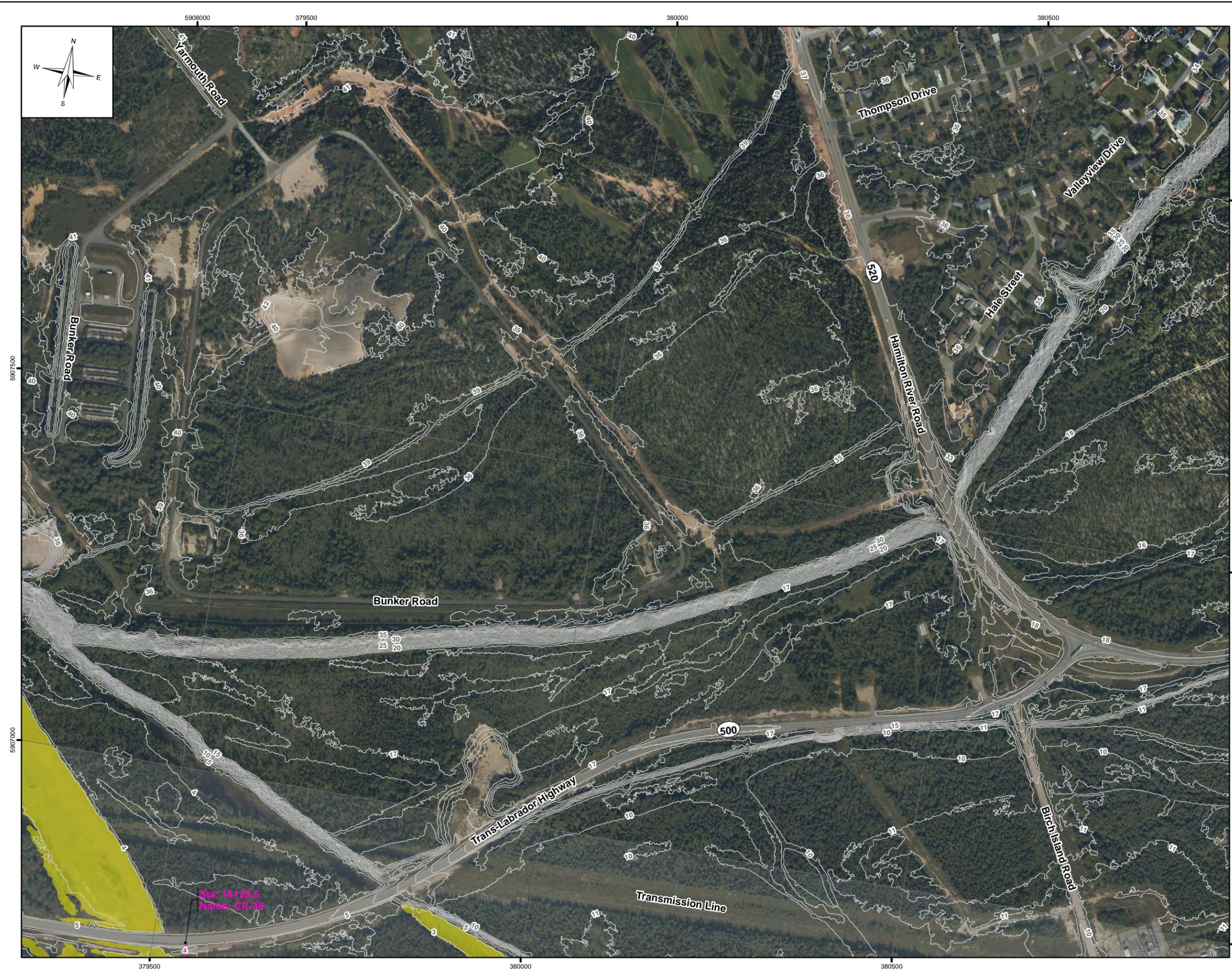
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD)  
CONDITIONS – CR-07

JUNE 2020	FIGURE 7.3	REV: 0
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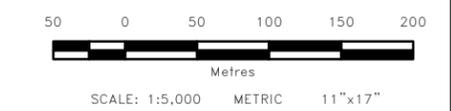


**LEGEND:**

- Sta: 23648  
Name: CR-53
  - Cross Section
  - Water Survey of Canada  
Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLIS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLIS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

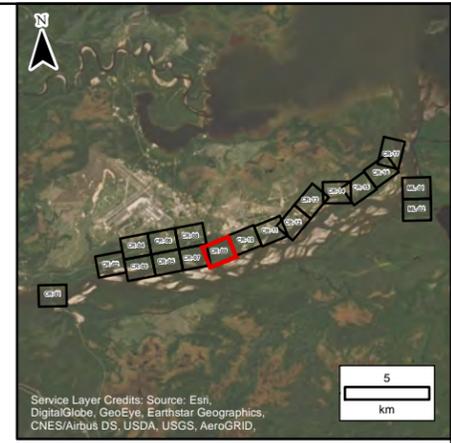
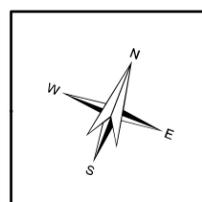
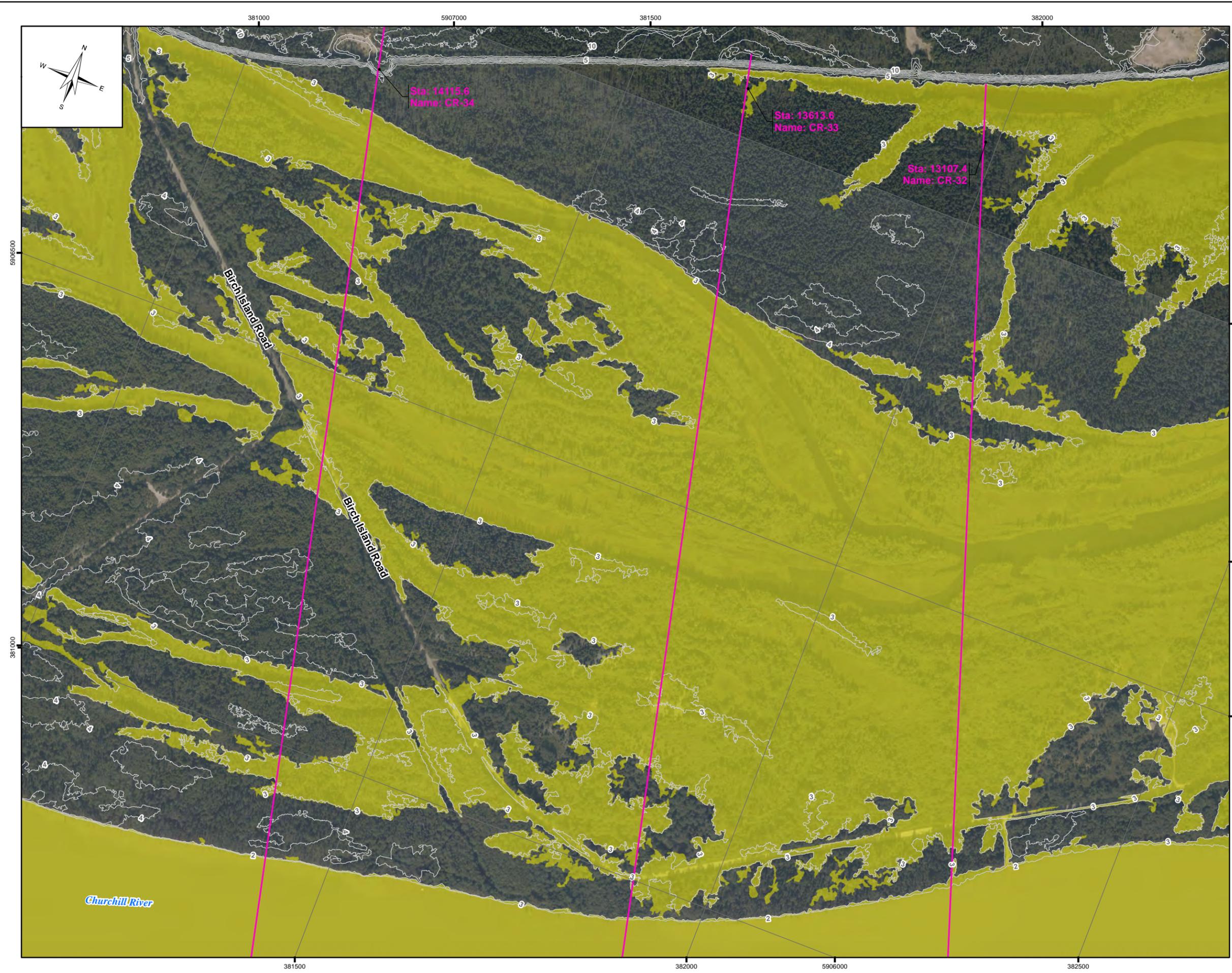
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-08

JUNE 2020	FIGURE 7.3	REV: 0
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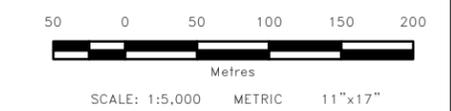


**LEGEND:**

- Sta: 2364.8 Name: CR-33  
Cross Section
- Water Survey of Canada Gauge Location
- River Centreline
- 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
- 1.0 – 2.0 m/s
- 2.0 – 3.0 m/s
- 3.0 – 4.0 m/s
- > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLIS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLIS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

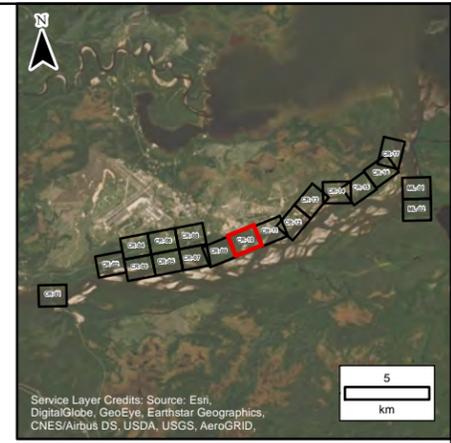
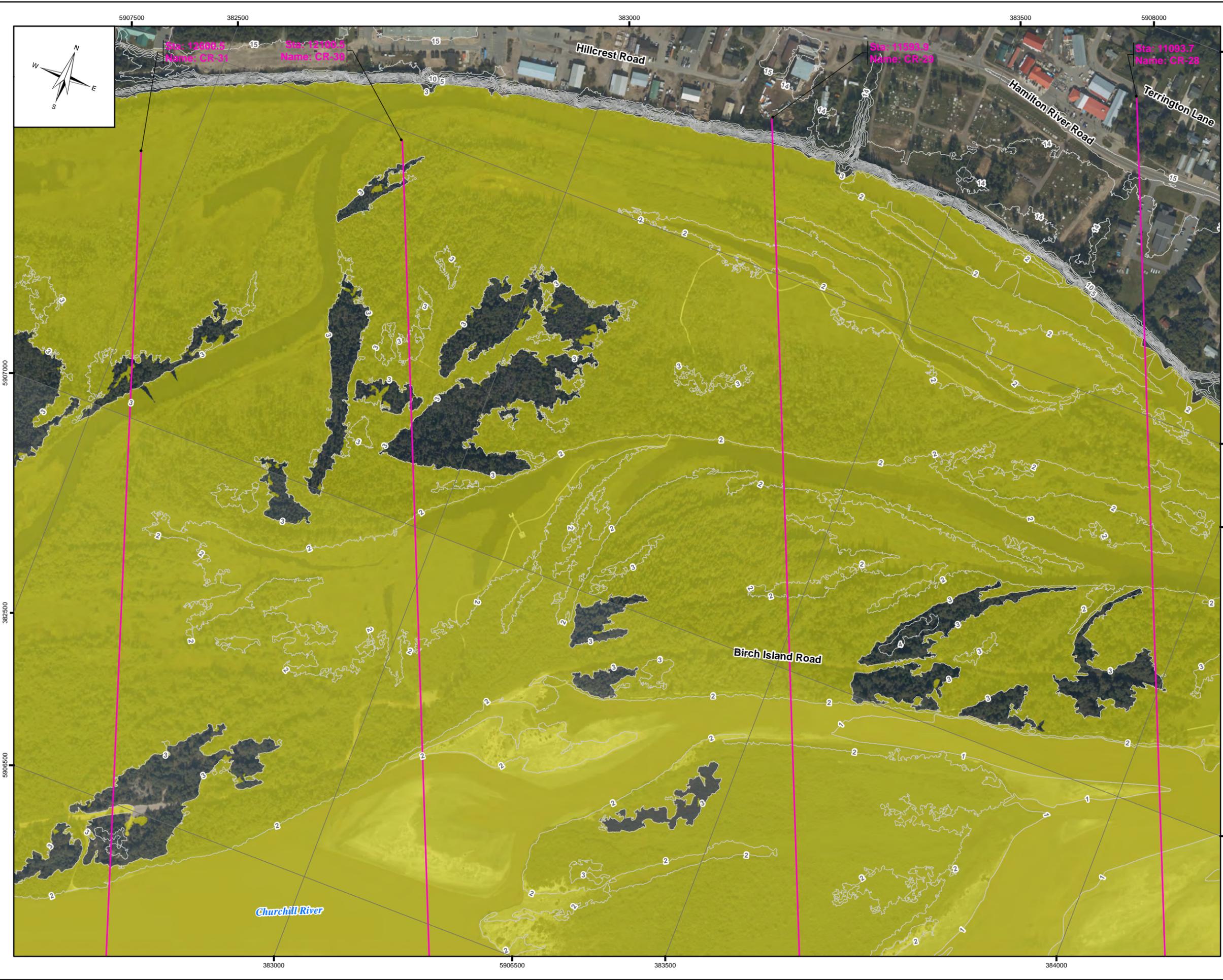
REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-09

JUNE 2020	FIGURE 7.3	REV: 0
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File Name: P:\Projects\2018\18-3217-001\Dwg\GIS\MXD\Flood\_Mapping\18-3217-001\_Fig7.3\_11x17.mxd  
 11"x17" PLOT SCALE 1:1  
 Portions of data Produced by KGS Group, under Licence with the Government of Canada © 2020 Her Majesty the Queen in Right of Canada, Department of Natural Resources. All rights reserved.

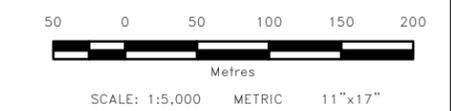


**LEGEND:**

- Sta: 2364.8 Name: CR-23 Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATGIS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATGIS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
 Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

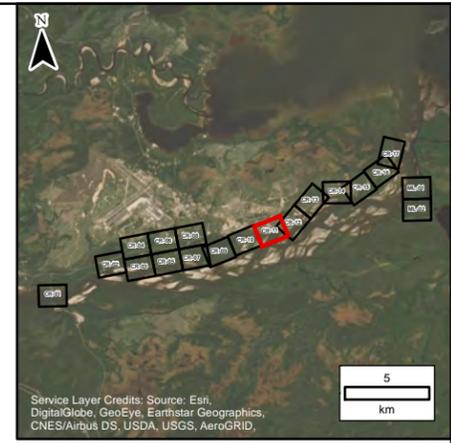
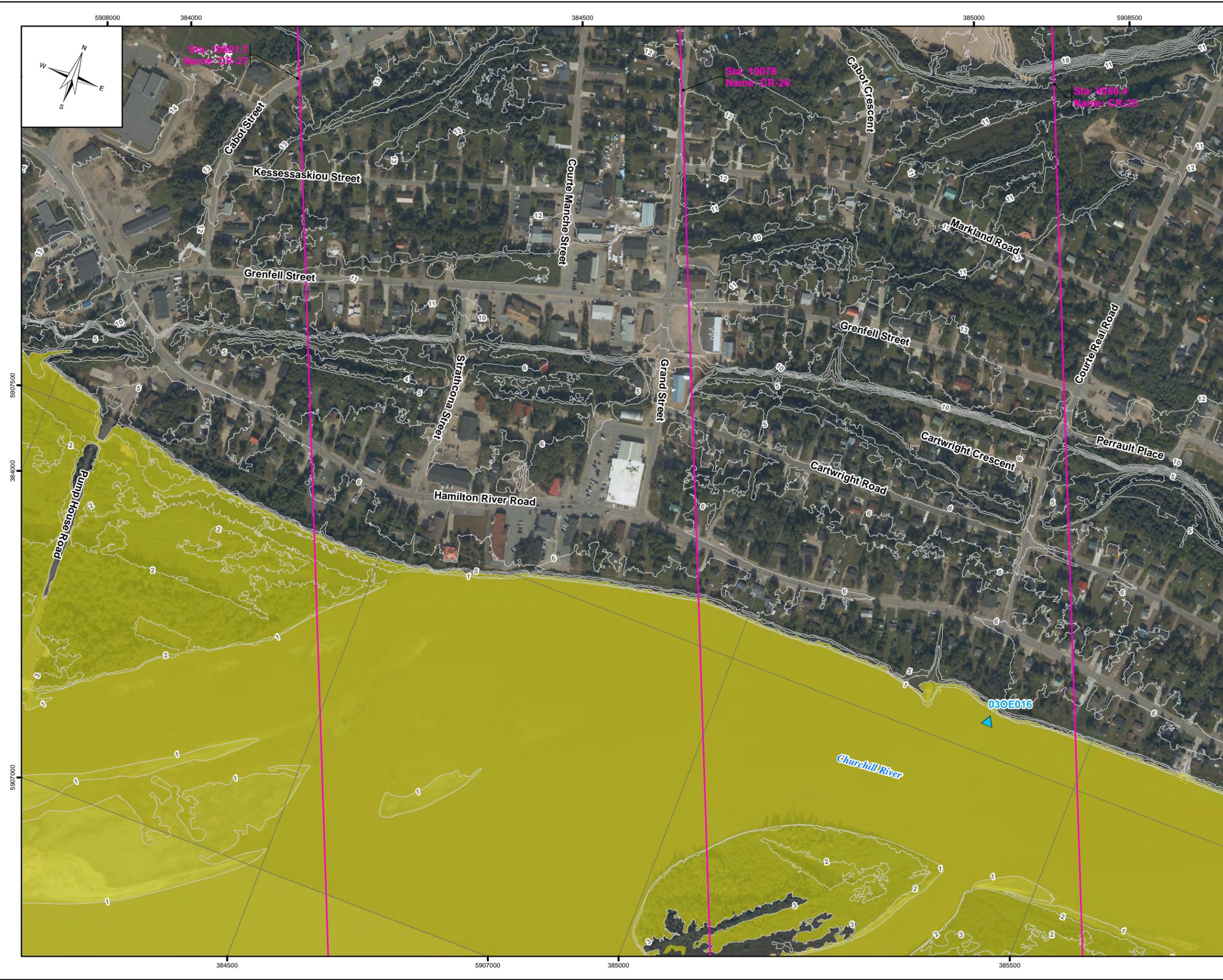
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-10

JUNE 2020	FIGURE 7.3	REV: 0
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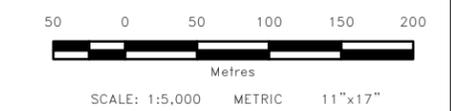


**LEGEND:**

- Sta: 2364.8 Name: CR-53
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
 Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

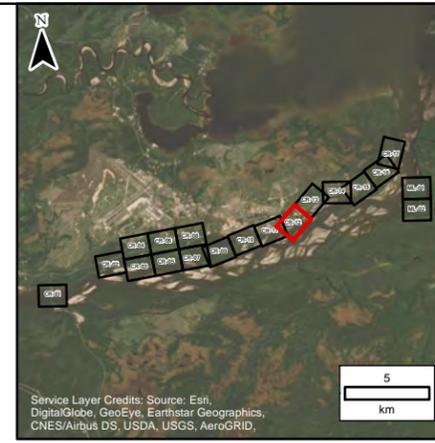
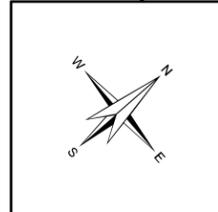
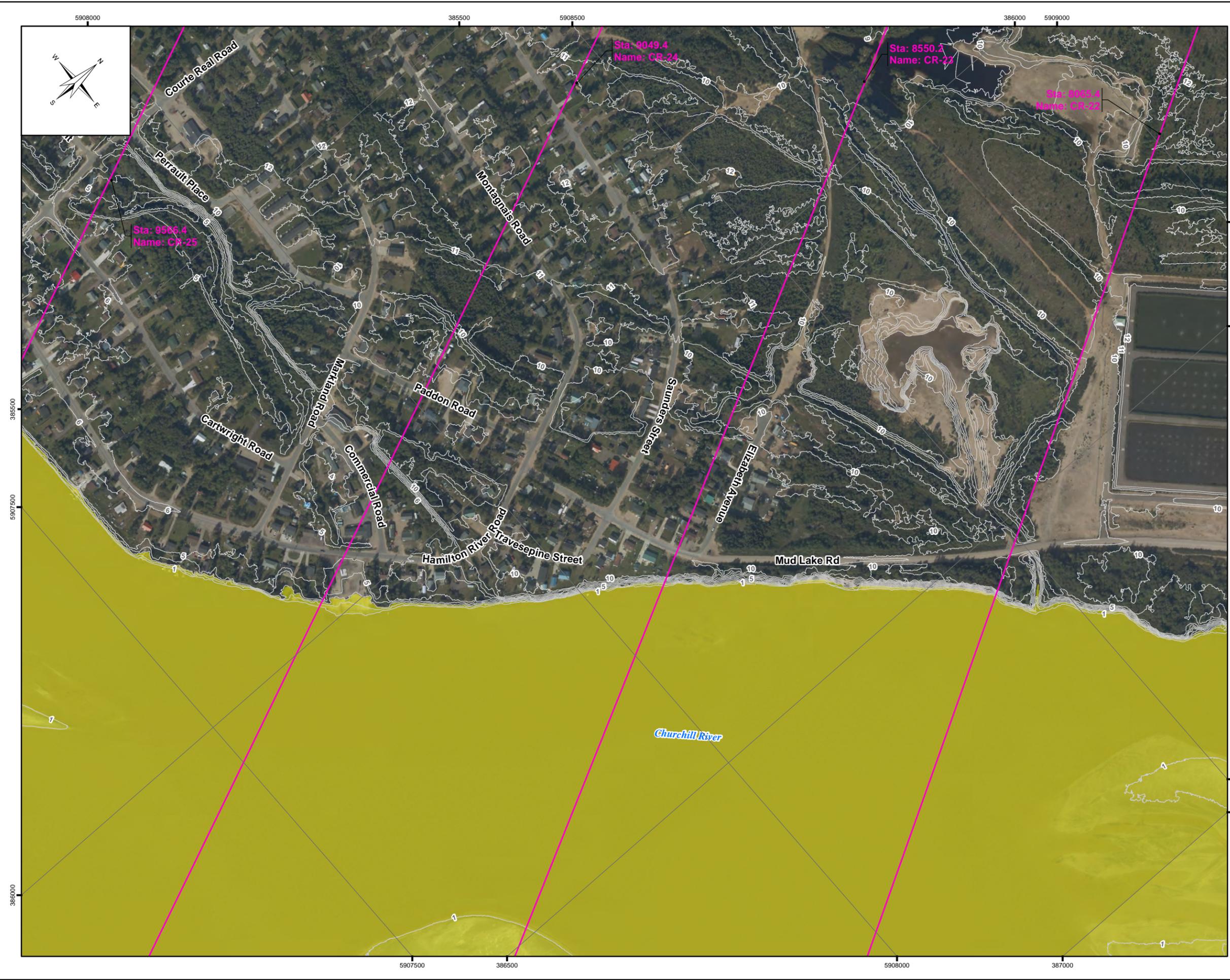
REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-11

File Name: P:\Projects\2018\18-3217-001\18-3217-001\_Dwg\GIS\MXD\Flood\_Mapping\18-3217-001\_Fig7.3\_11x17.mxd  
 11"x17" PLOT SCALE 1:1

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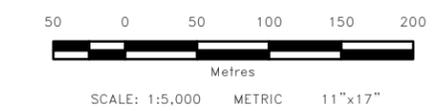


**LEGEND:**

- Sta: 2364.8 Name: CR-53
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



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 Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

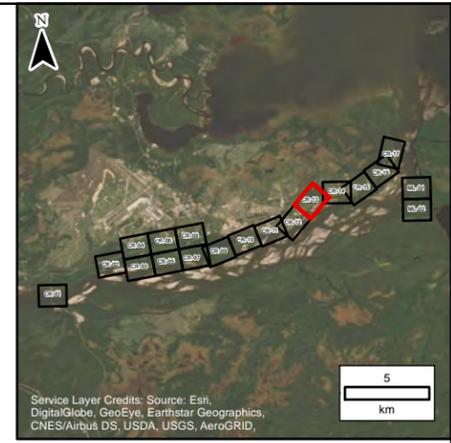
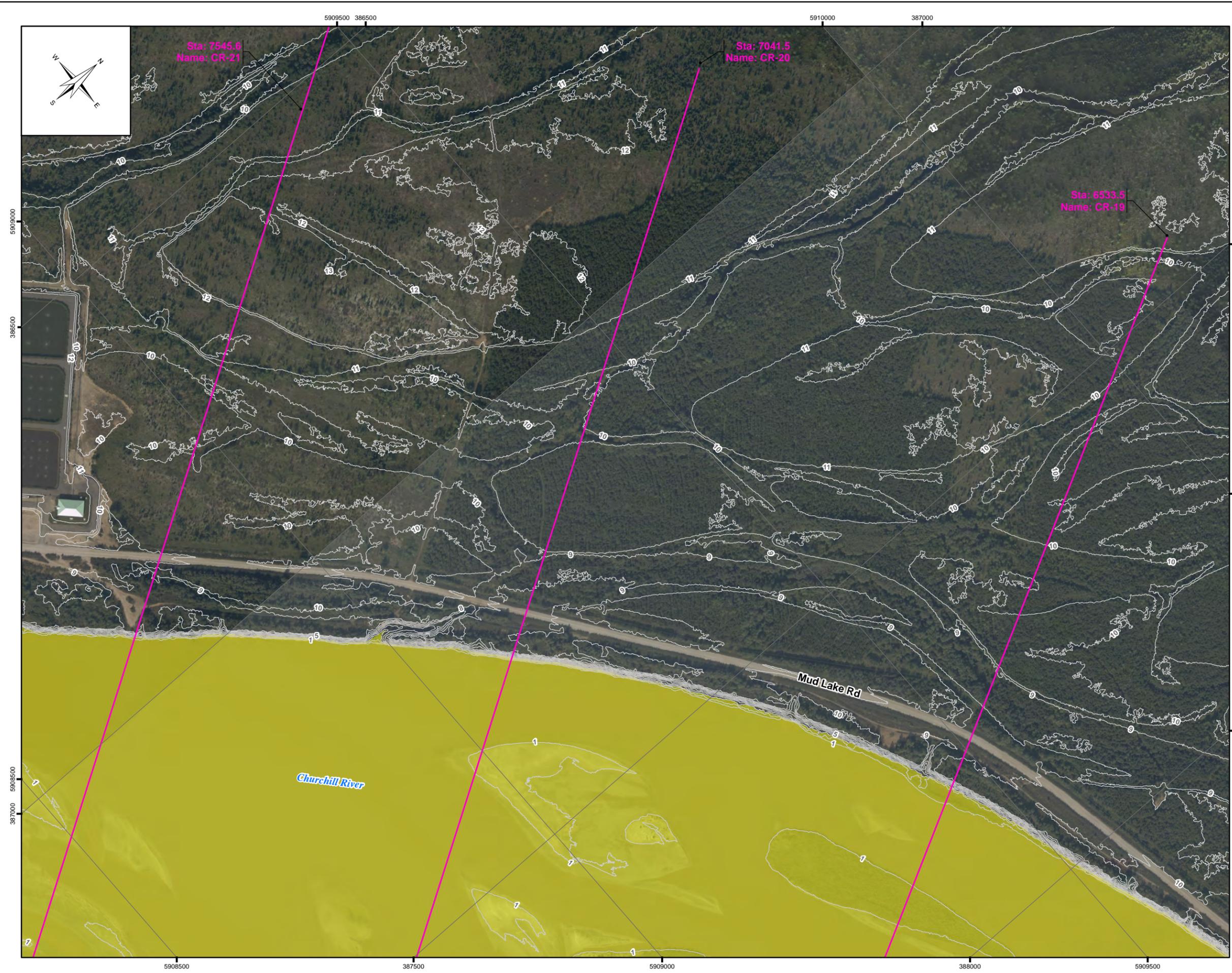
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-12

JUNE 2020	FIGURE 7.3	REV: 0
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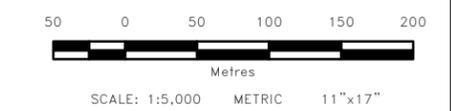


**LEGEND:**

- Sta: 2364.8 Name: CR-13
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



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Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

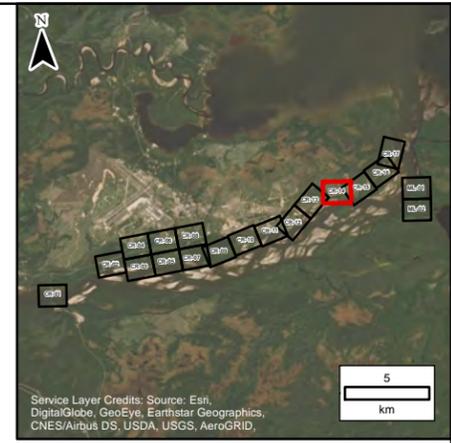
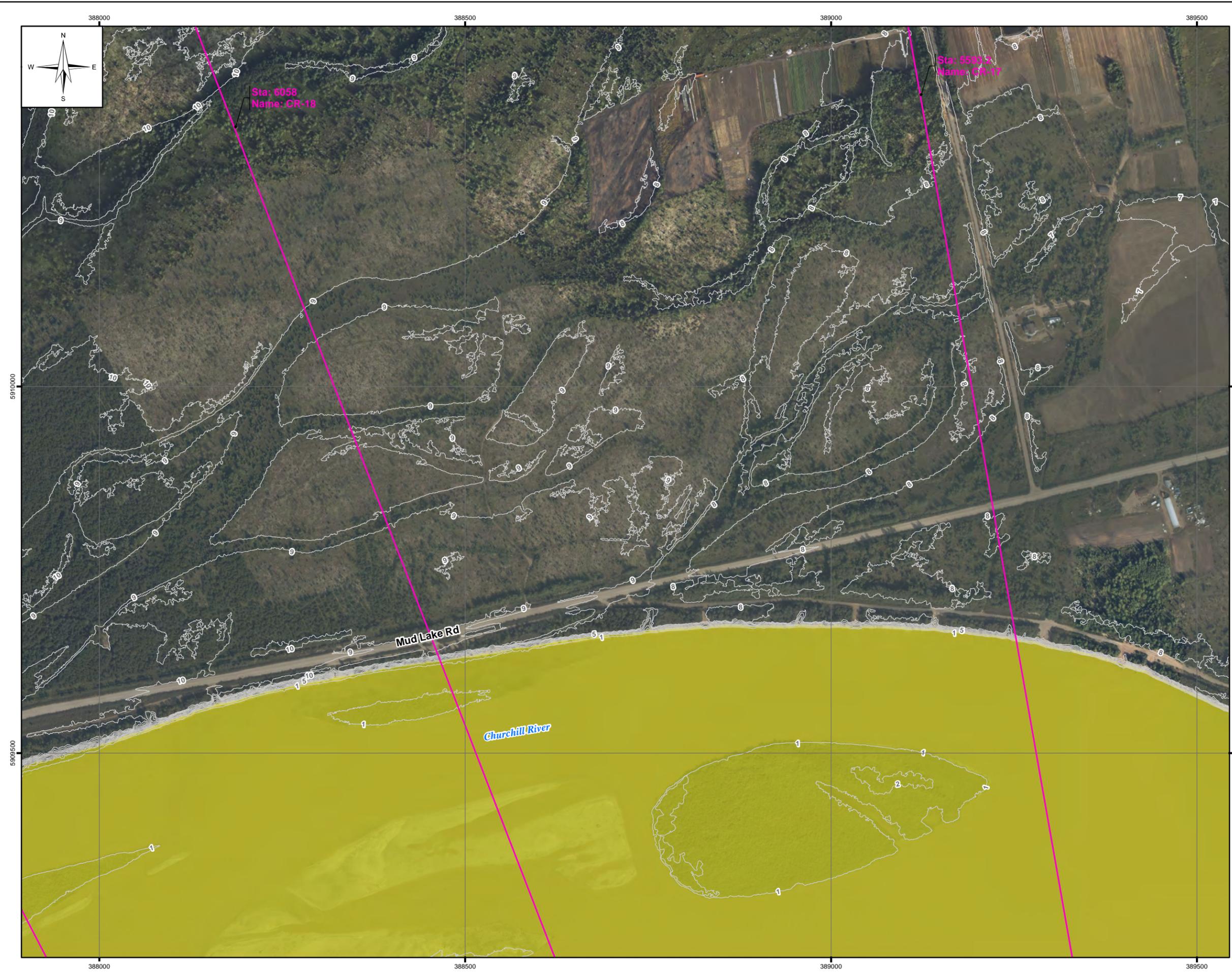
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD)  
CONDITIONS – CR-13

JUNE 2020	FIGURE 7.3	REV: 0
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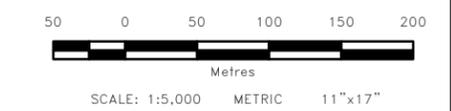


**LEGEND:**

- Sta: 2364 Name: CR-53
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

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2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

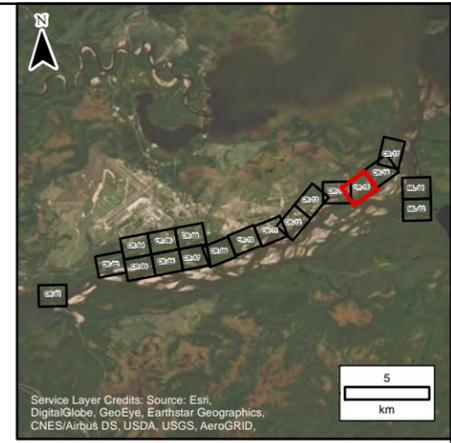
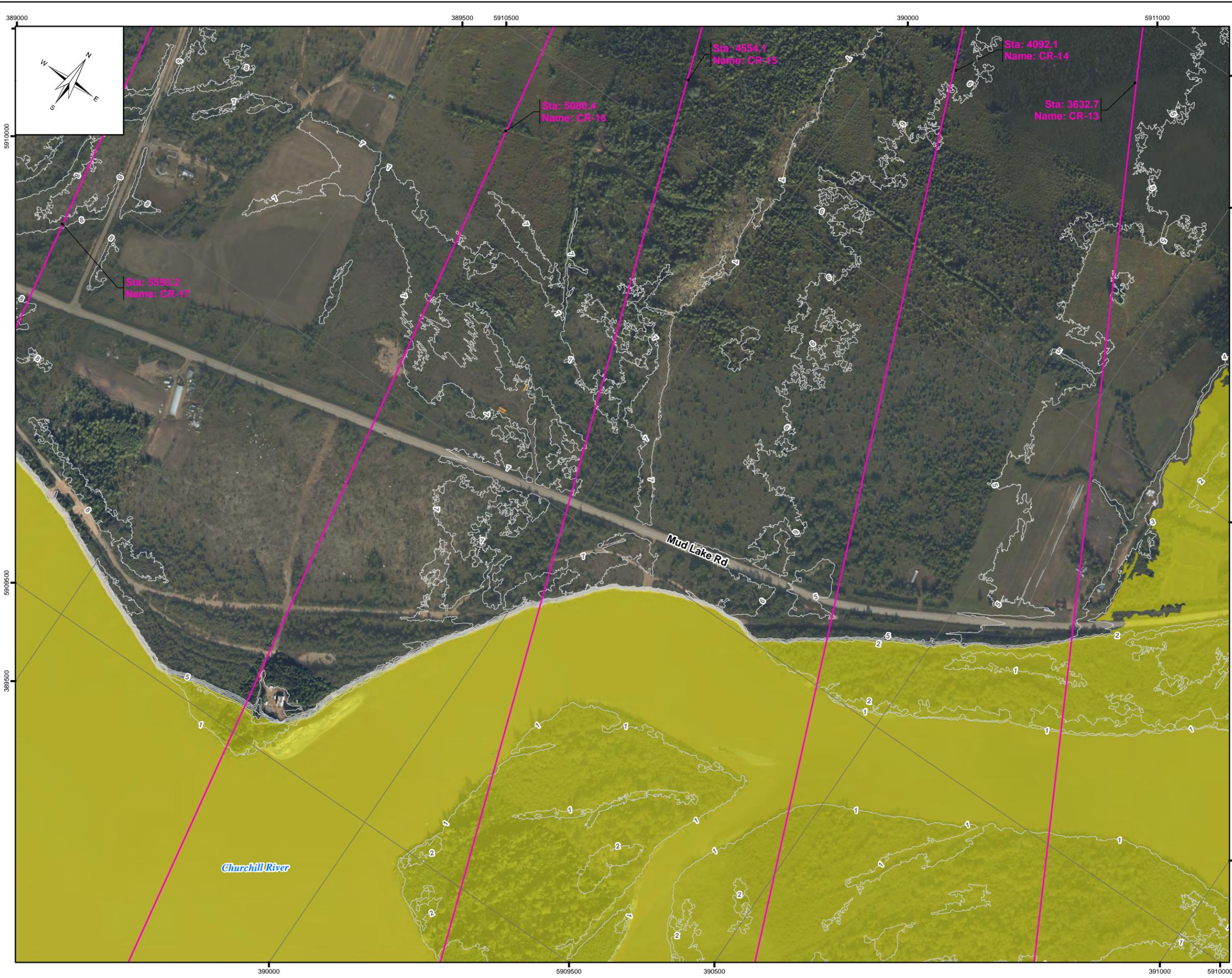
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NO.	Y1/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD)  
CONDITIONS – CR-14

JUNE 2020	FIGURE 7.3	REV: 0
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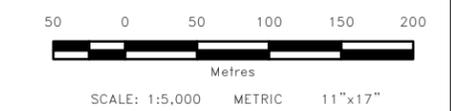


**LEGEND:**

- Sta: 2364.8 Name: CR-13
- Cross Section
- Water Survey of Canada Gauge Location
- River Centreline
- 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
- 1.0 – 2.0 m/s
- 2.0 – 3.0 m/s
- 3.0 – 4.0 m/s
- > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATGIS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATGIS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified. Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

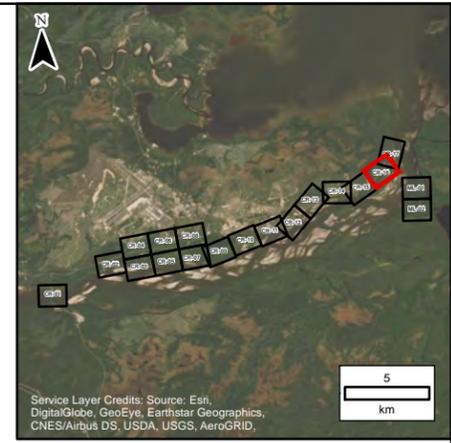
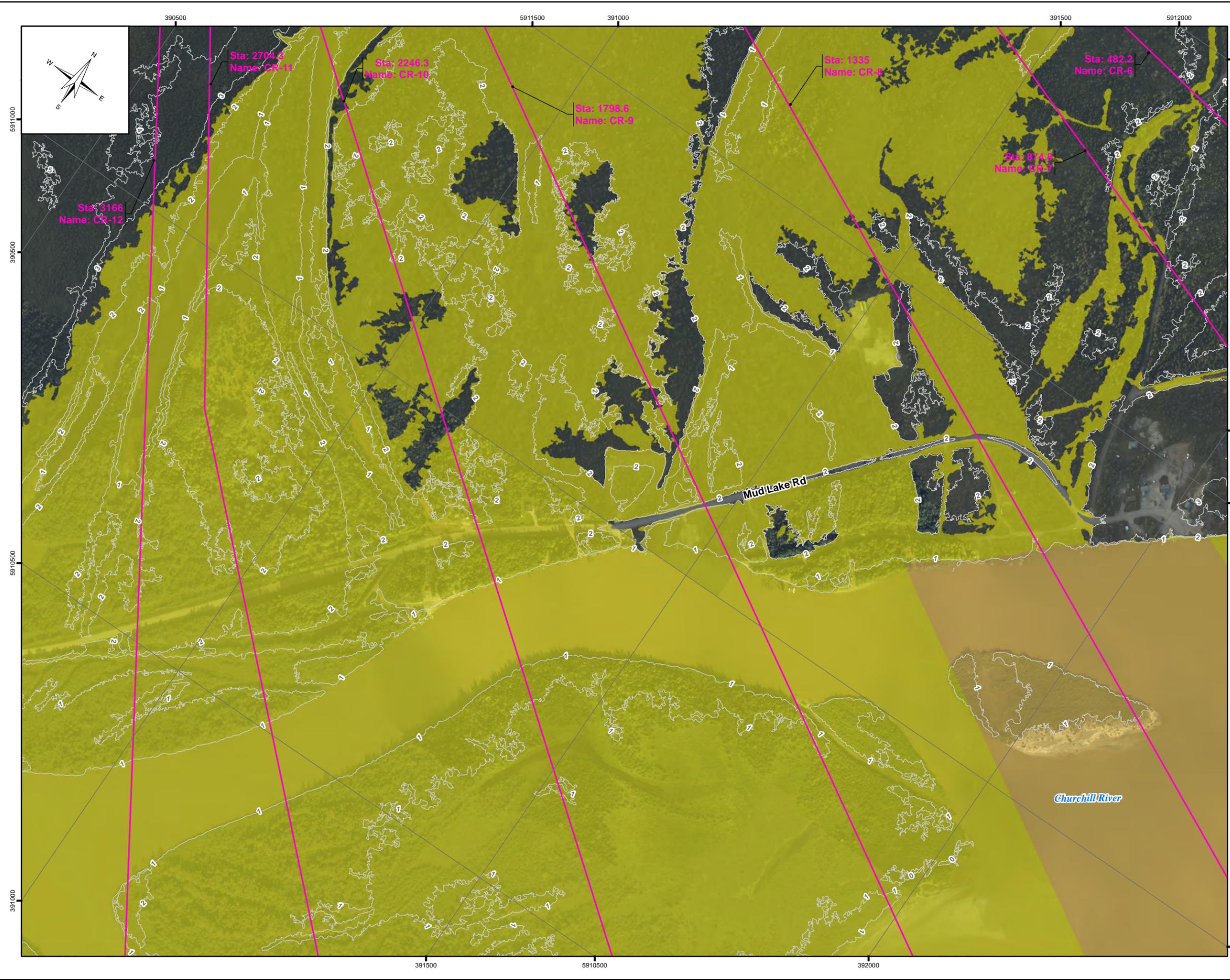
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-15

JUNE 2020	FIGURE 7.3	REV: 0
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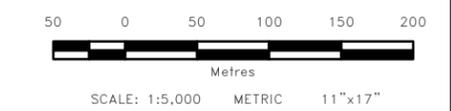


**LEGEND:**

- Sta: 2364.8 Name: CR-5  
Cross Section
- Water Survey of Canada Gauge Location
- River Centreline
- 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
- 1.0 – 2.0 m/s
- 2.0 – 3.0 m/s
- 3.0 – 4.0 m/s
- > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLI Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLI Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
 Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

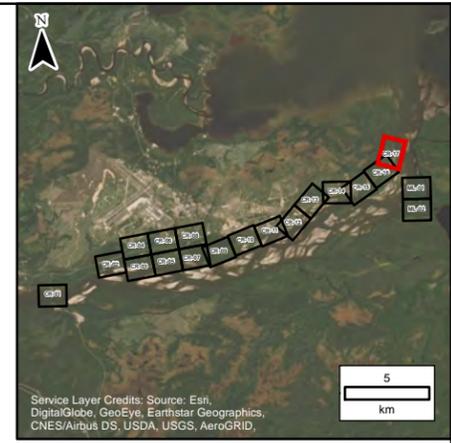
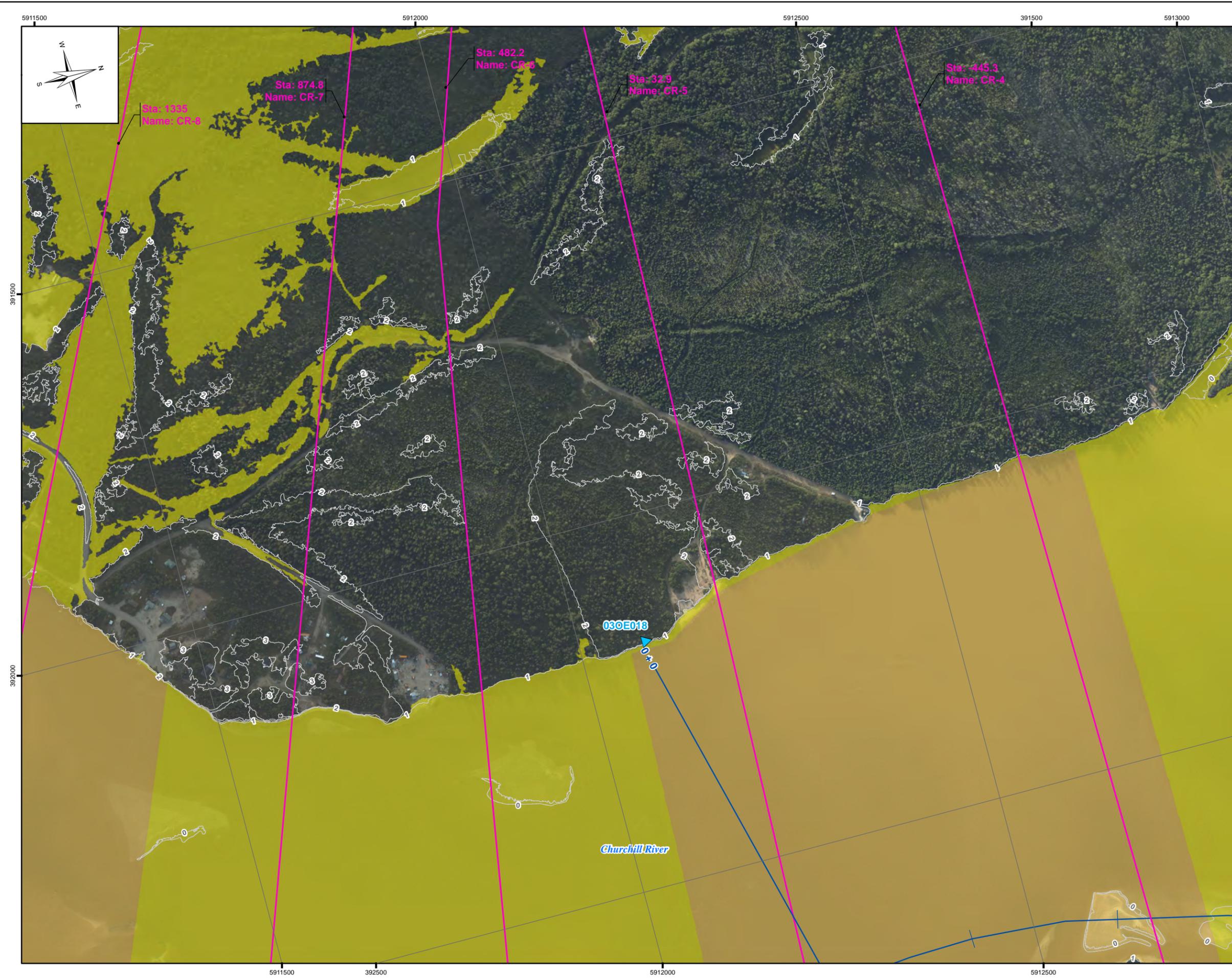
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-16

JUNE 2020	FIGURE 7.3	REV: 0
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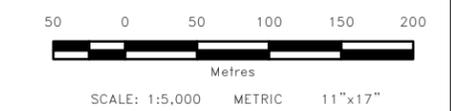


**LEGEND:**

- Sta: 2364.8 Name: CR-53
- Cross Section
- Water Survey of Canada Gauge Location
- River Centreline
- 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
- 1.0 – 2.0 m/s
- 2.0 – 3.0 m/s
- 3.0 – 4.0 m/s
- > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

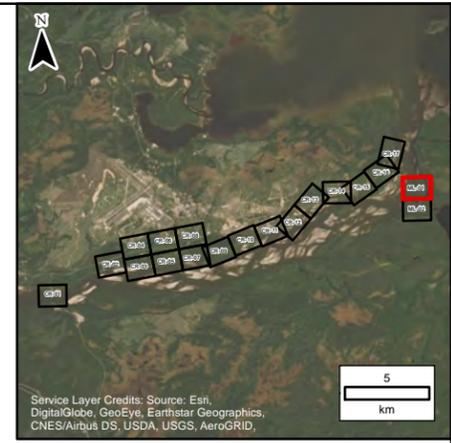
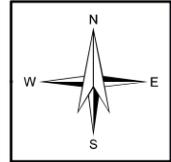
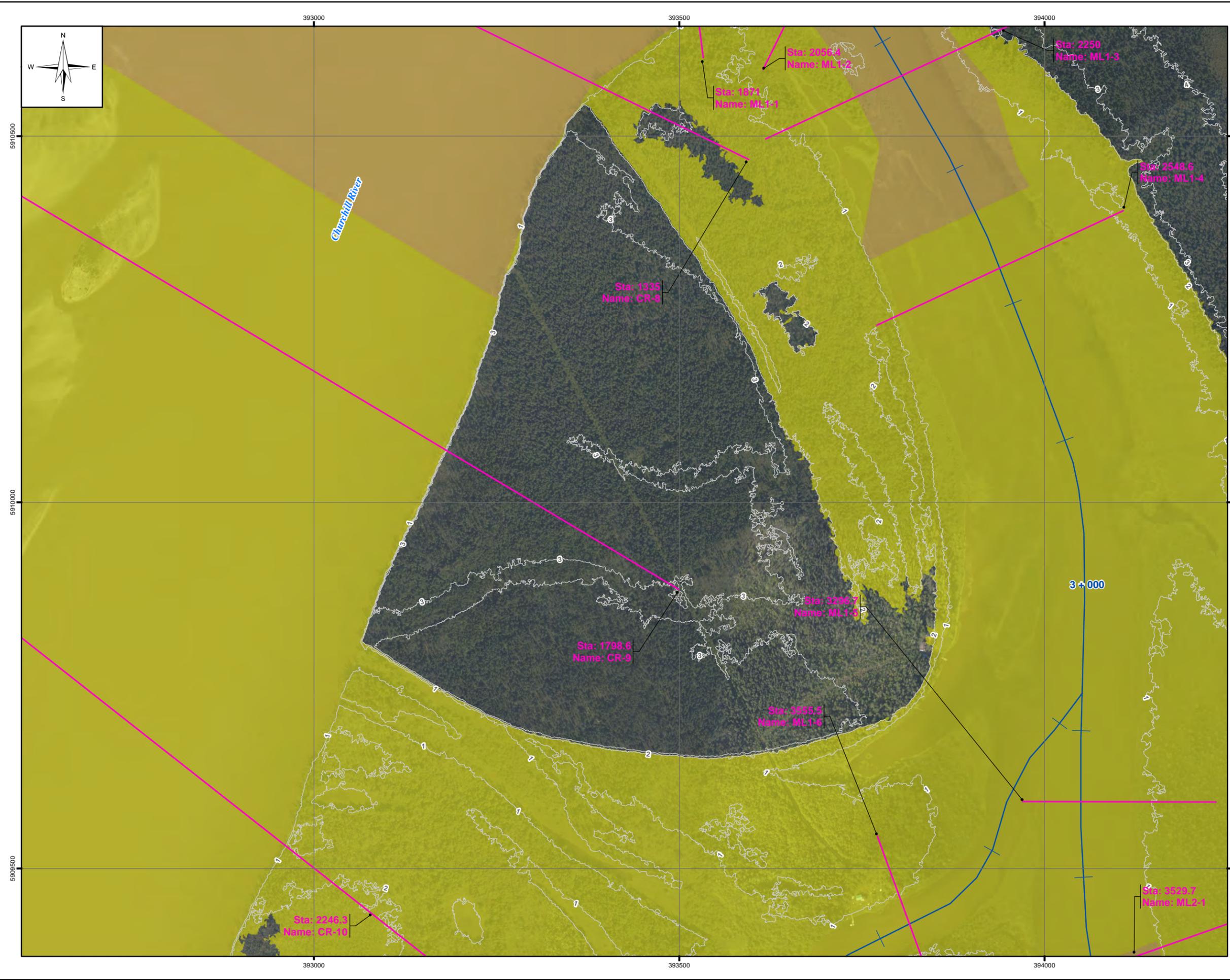
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-17

JUNE 2020	FIGURE 7.3	REV: 0
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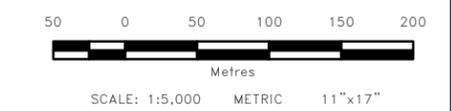


**LEGEND:**

- Sta: 2364.8 Name: CR-53  
Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLIS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLIS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

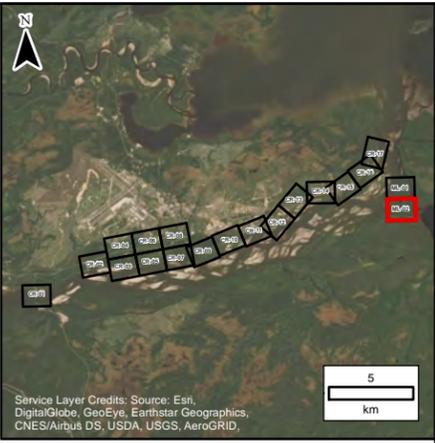
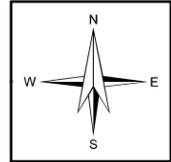
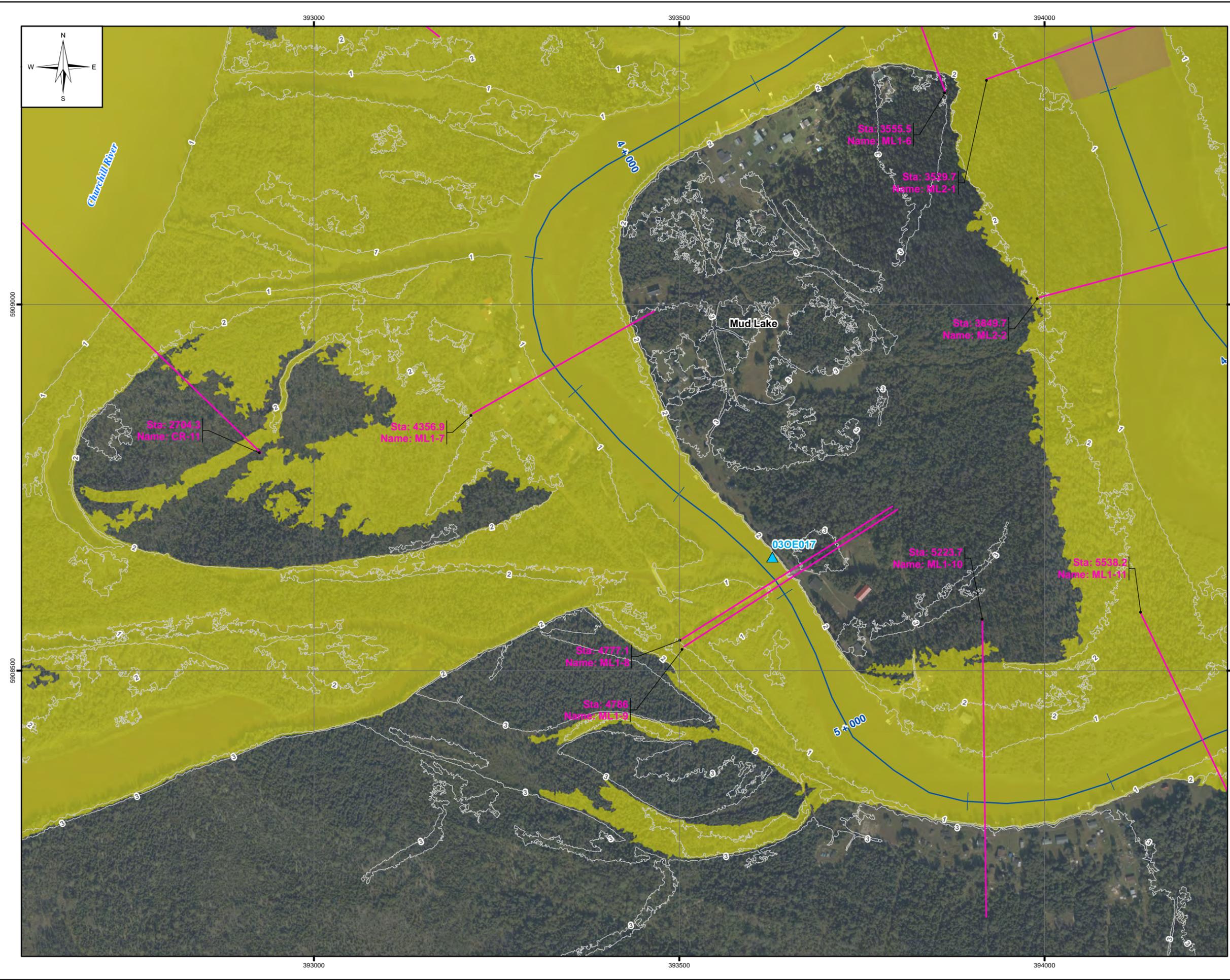
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – ML-01

JUNE 2020	FIGURE 7.3	REV: 0
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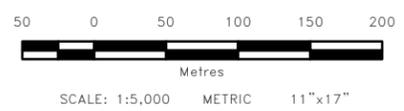


**LEGEND:**

- Sta: 2364.8 Name: CR-53
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLIS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLIS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

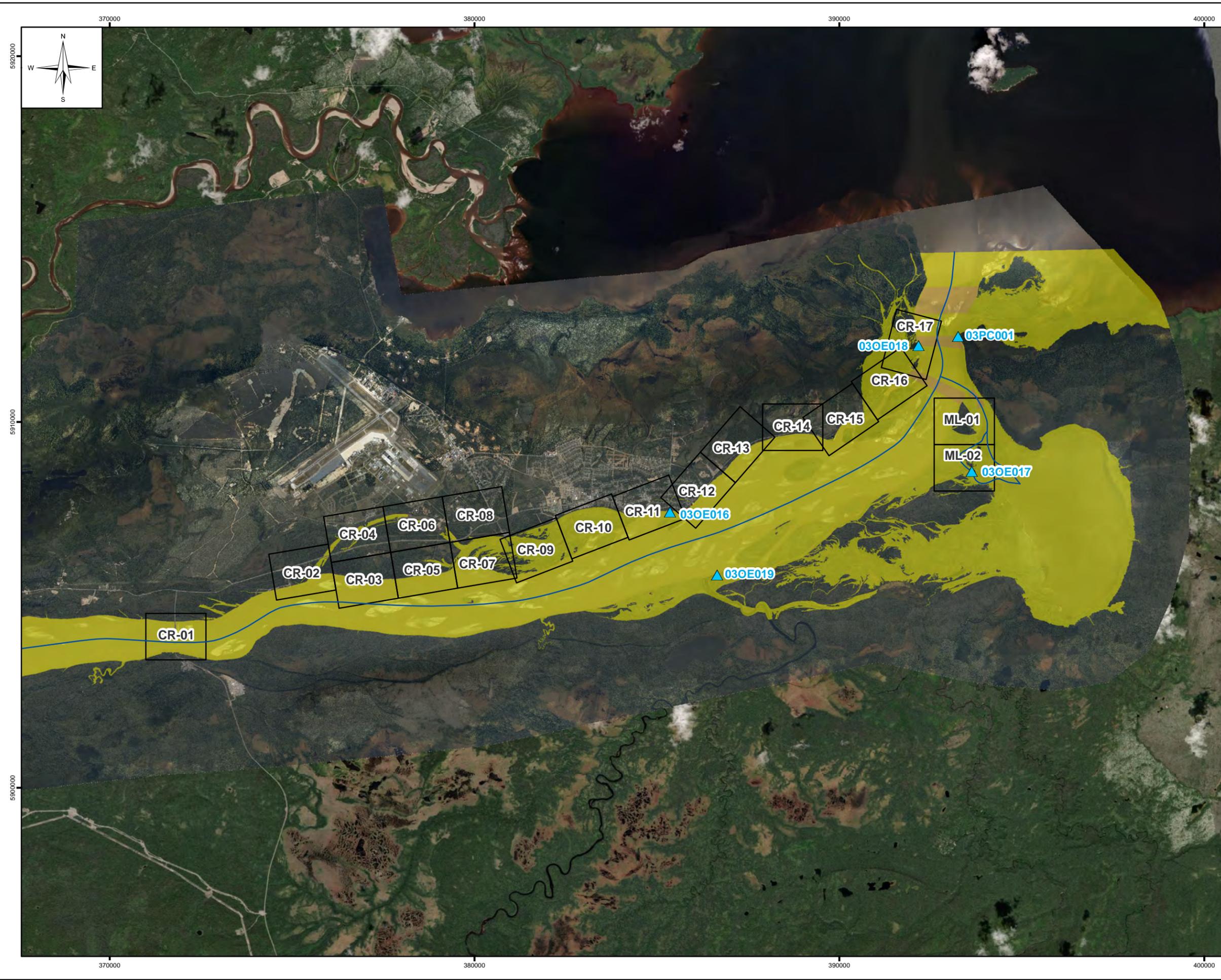
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:20 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – ML-02

JUNE 2020	FIGURE 7.3	REV: 0
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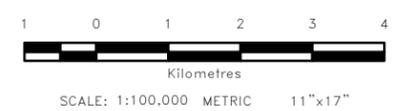
**LEGEND:**

- Water Survey of Canada Gauge Location
- River Centreline

Velocity (m/s)

- 0.0 – 1.0 m/s
- 1.0 – 2.0 m/s
- 2.0 – 3.0 m/s
- 3.0 – 4.0 m/s
- > 4.00 m/s
- Map Extents

**NOTES:**  
 1. Imagery is supplied by ATGIS Geomatics and dated as September 11 – 13, 2019, and by ESRI and DigitalGlobe, WV02 dated June 3, 2015.



All units are metric and in metres unless otherwise specified.  
 Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

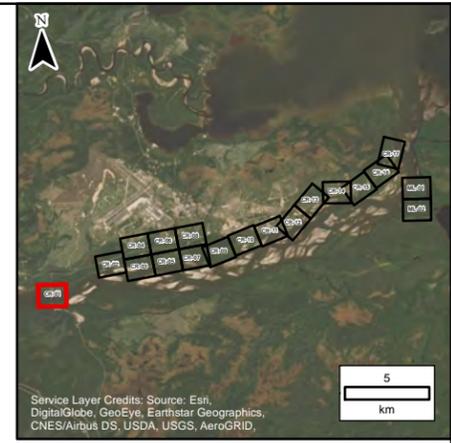
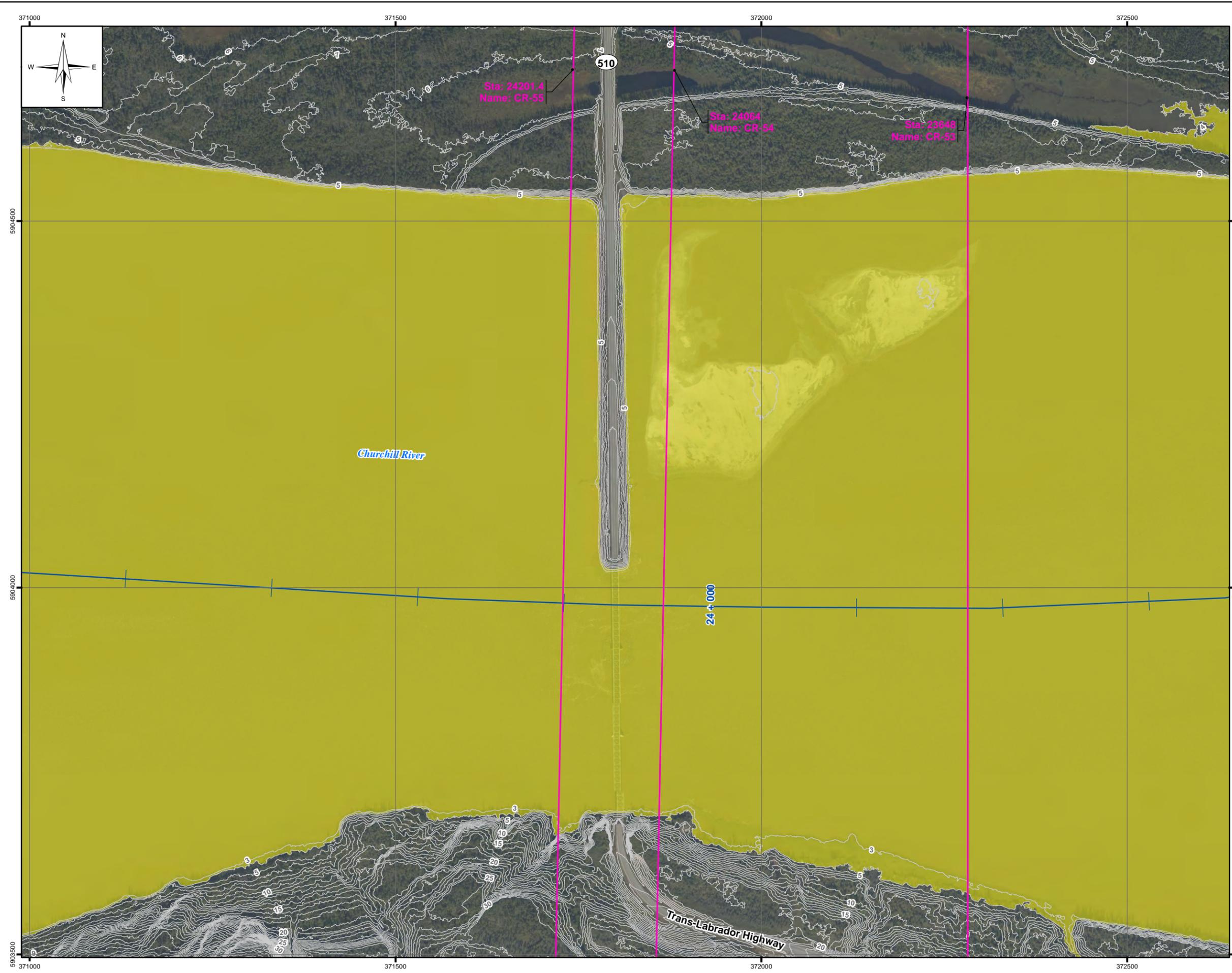
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – OVERVIEW MAP

JUNE 2020	FIGURE 7.4	REV: 0
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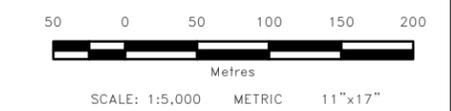


**LEGEND:**

- Sta: 23648 Name: CR-53
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LiDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LiDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



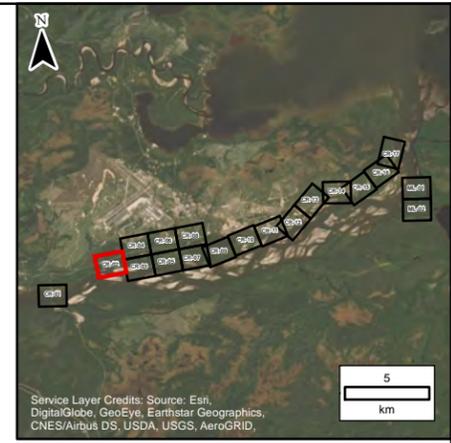
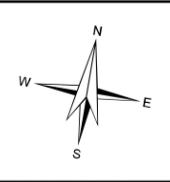
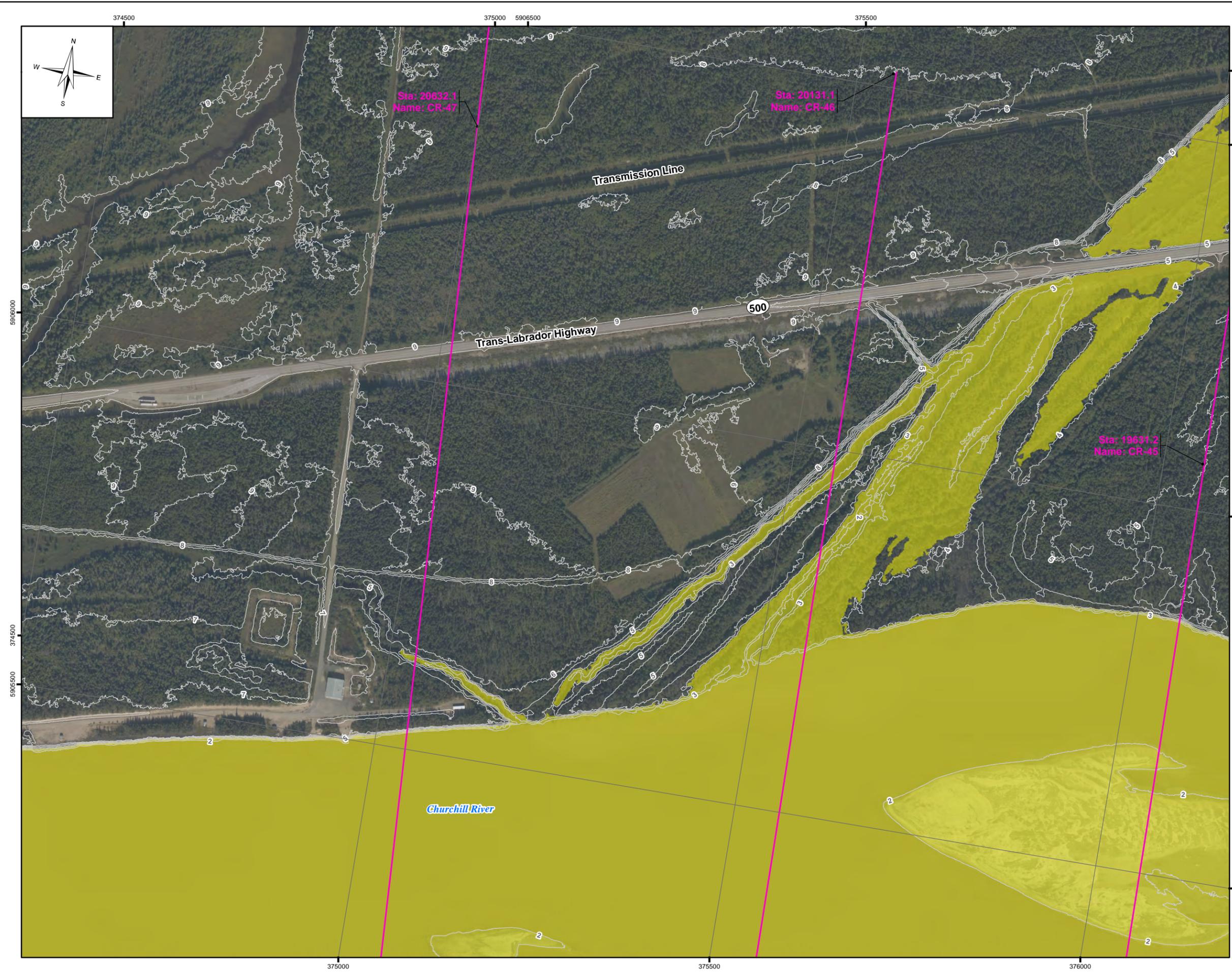
All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

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NO.	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-01

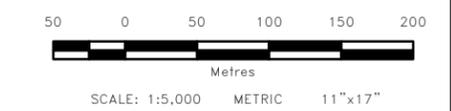


**LEGEND:**

- Sta: 20632.1 Name: CR-47
  - Sta: 20131.1 Name: CR-46
  - Sta: 19631.2 Name: CR-45
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

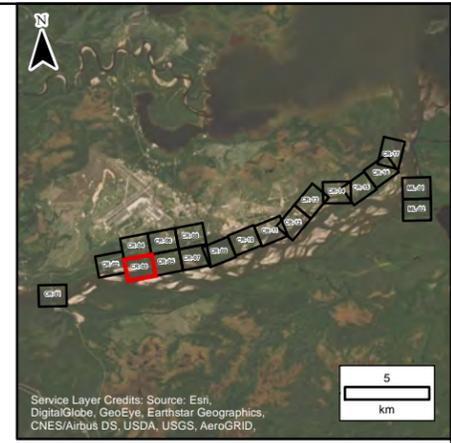
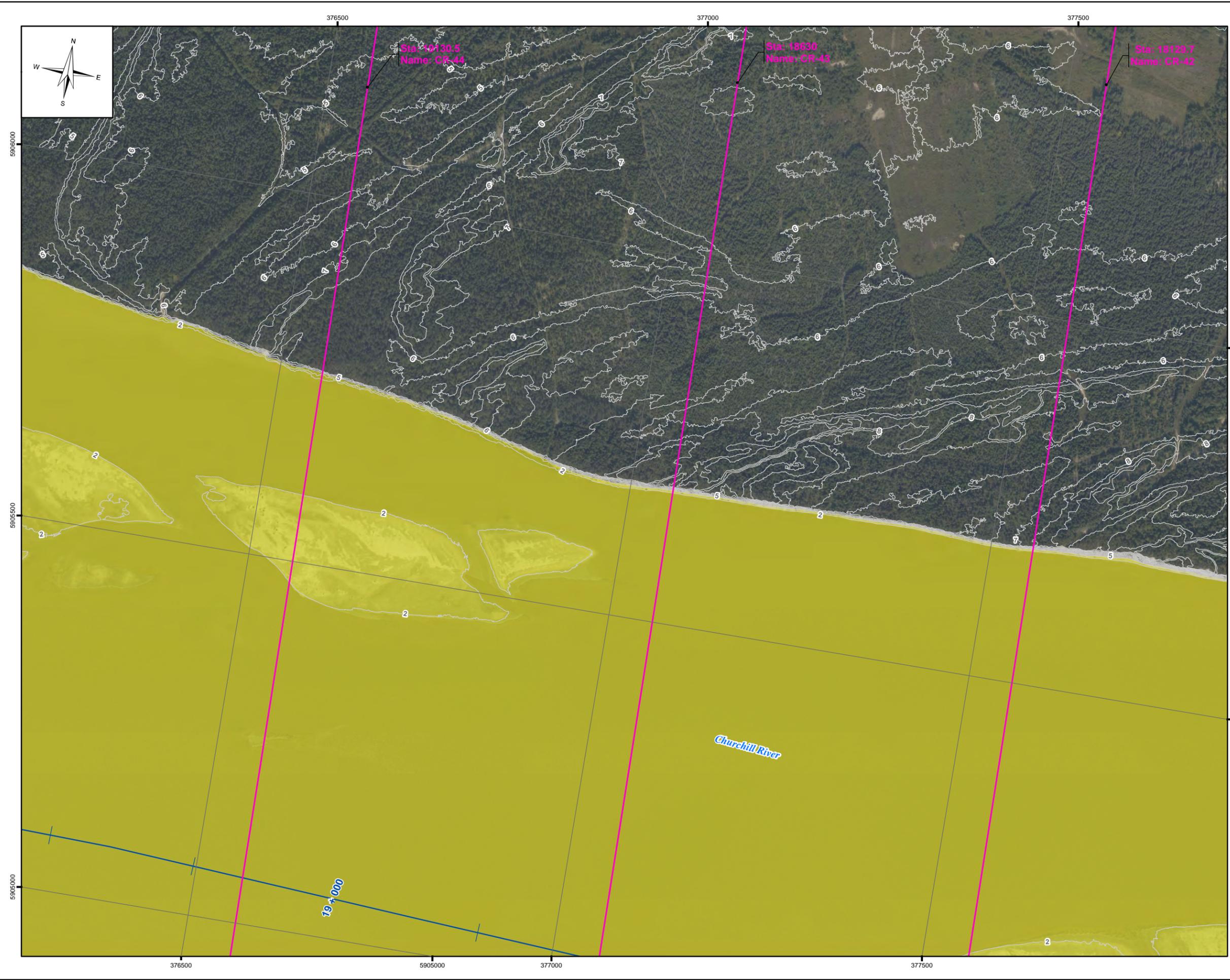
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-02

JUNE 2020	FIGURE 7.4	REV: 0
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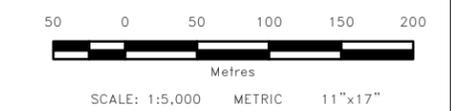


**LEGEND:**

- Sta: 23648 Name: CR-43
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

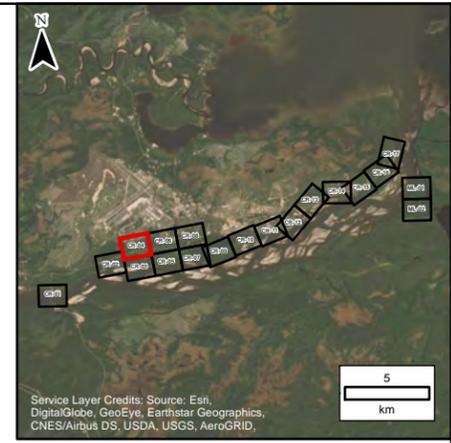
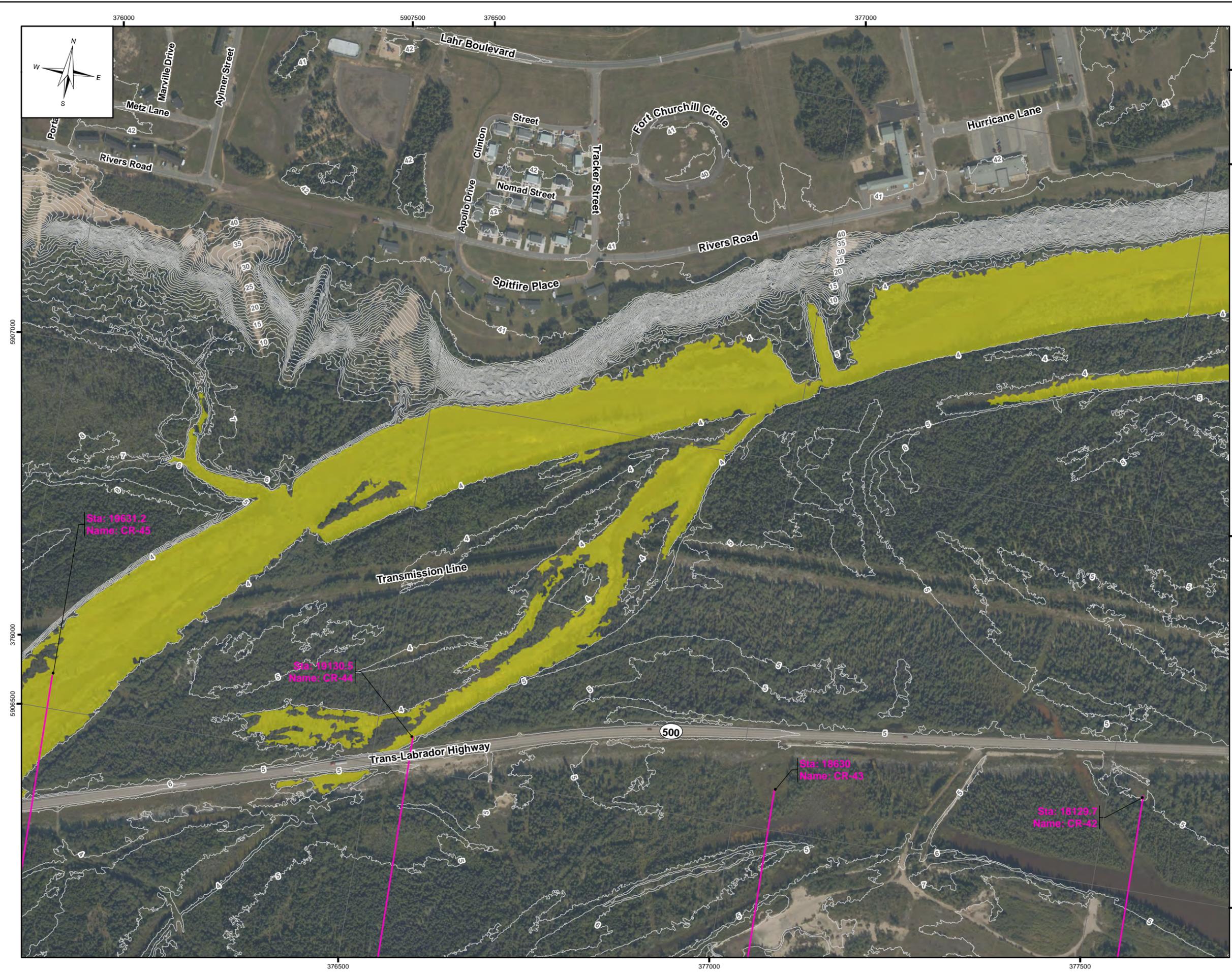
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NO.	Y1/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-03

JUNE 2020	FIGURE 7.4	REV: 0
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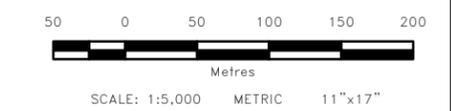


**LEGEND:**

- Sta: 23648 Name: CR-43
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



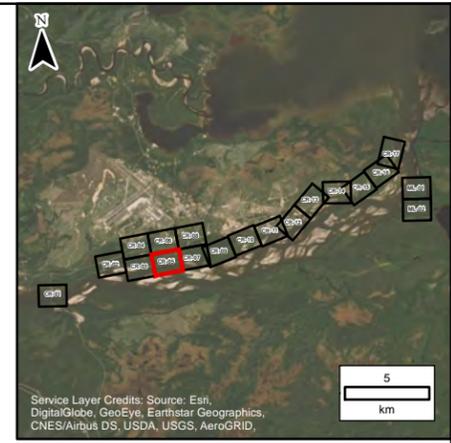
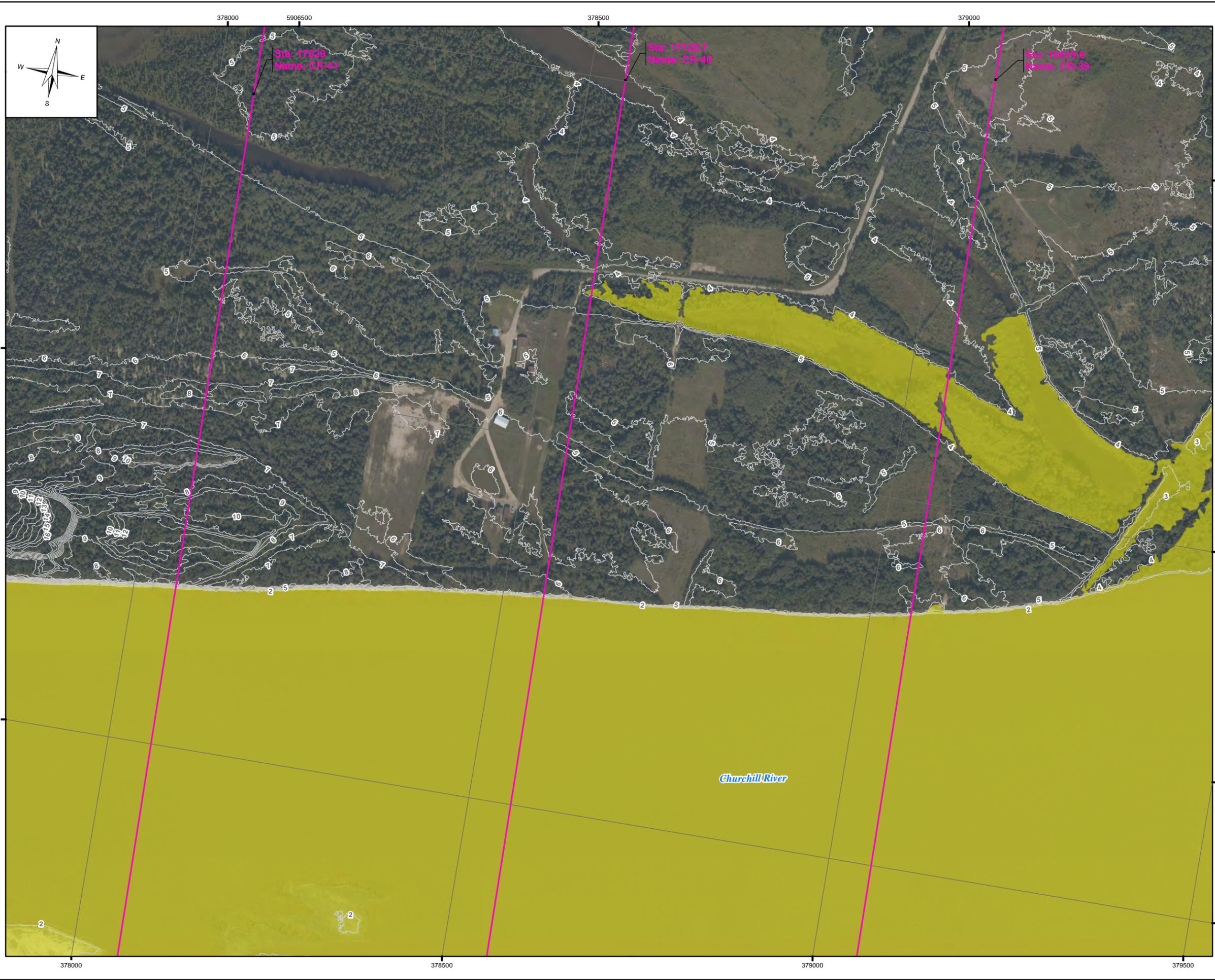
All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-04

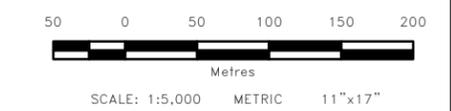


**LEGEND:**

- Sta: 2364.8 Name: CR-43
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLIS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLIS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

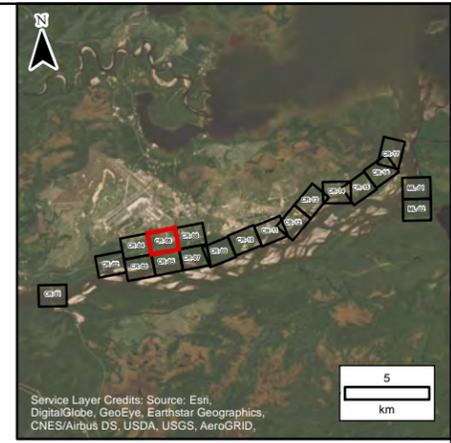
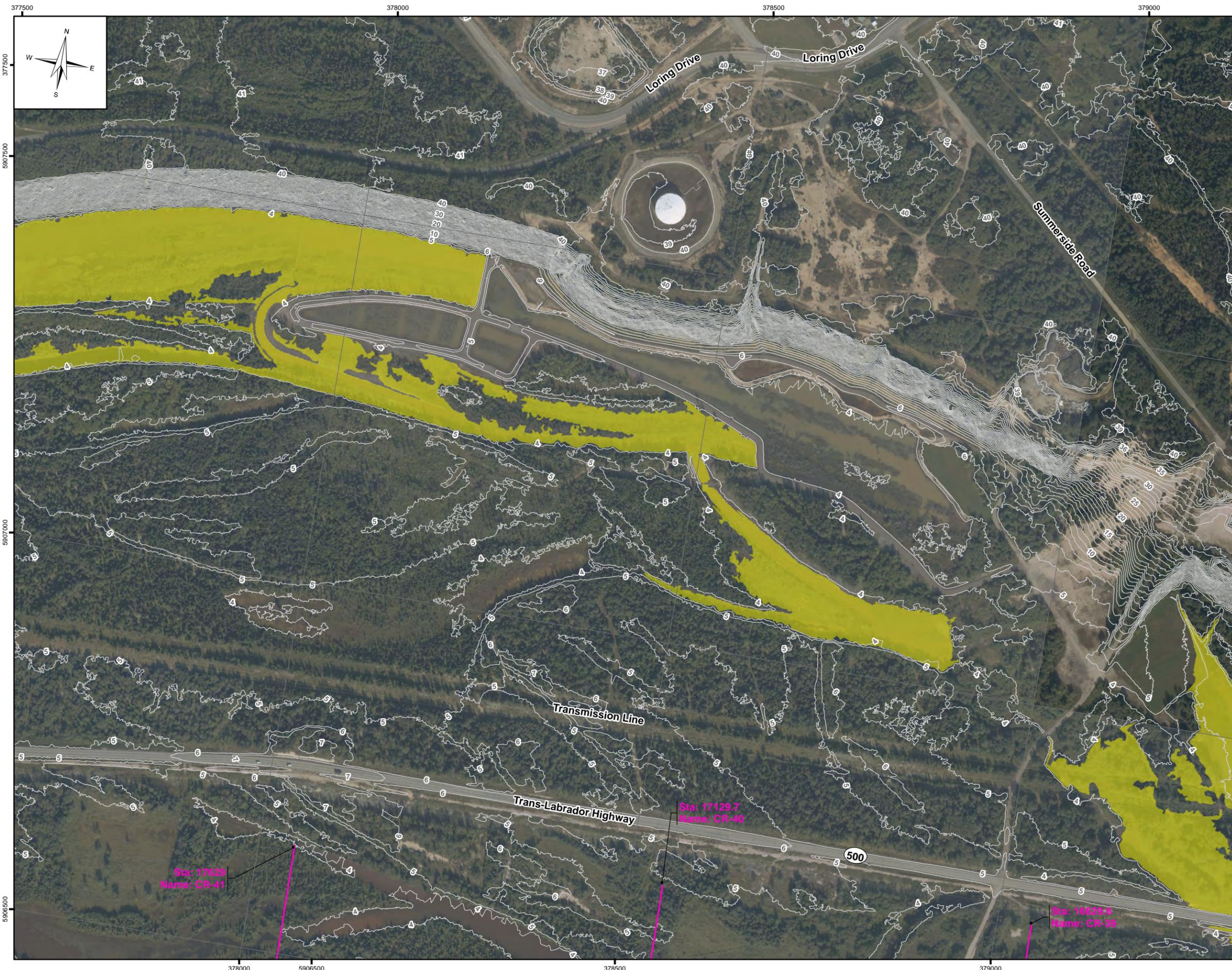
**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD)  
CONDITIONS – CR-05

JUNE 2020	FIGURE 7.4	REV: 0
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File Name: P:\Projects\2018\18-3217-001\Dwg\GIS\MXD\Flood\_Mapping\18-3217-001\_Fig7\_4\_11x17.mxd  
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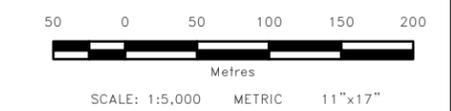


**LEGEND:**

- Sta: 23648 Name: CR-43
- Cross Section
- Water Survey of Canada Gauge Location
- River Centreline
- 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
- 1.0 – 2.0 m/s
- 2.0 – 3.0 m/s
- 3.0 – 4.0 m/s
- > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
 Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

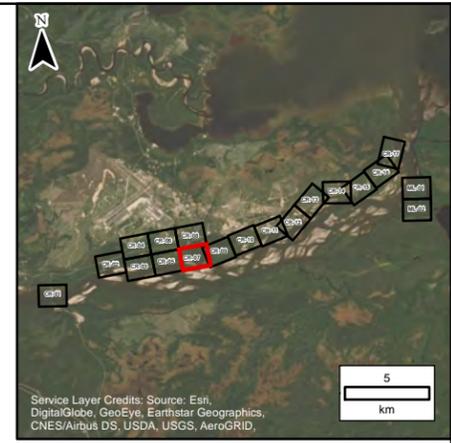
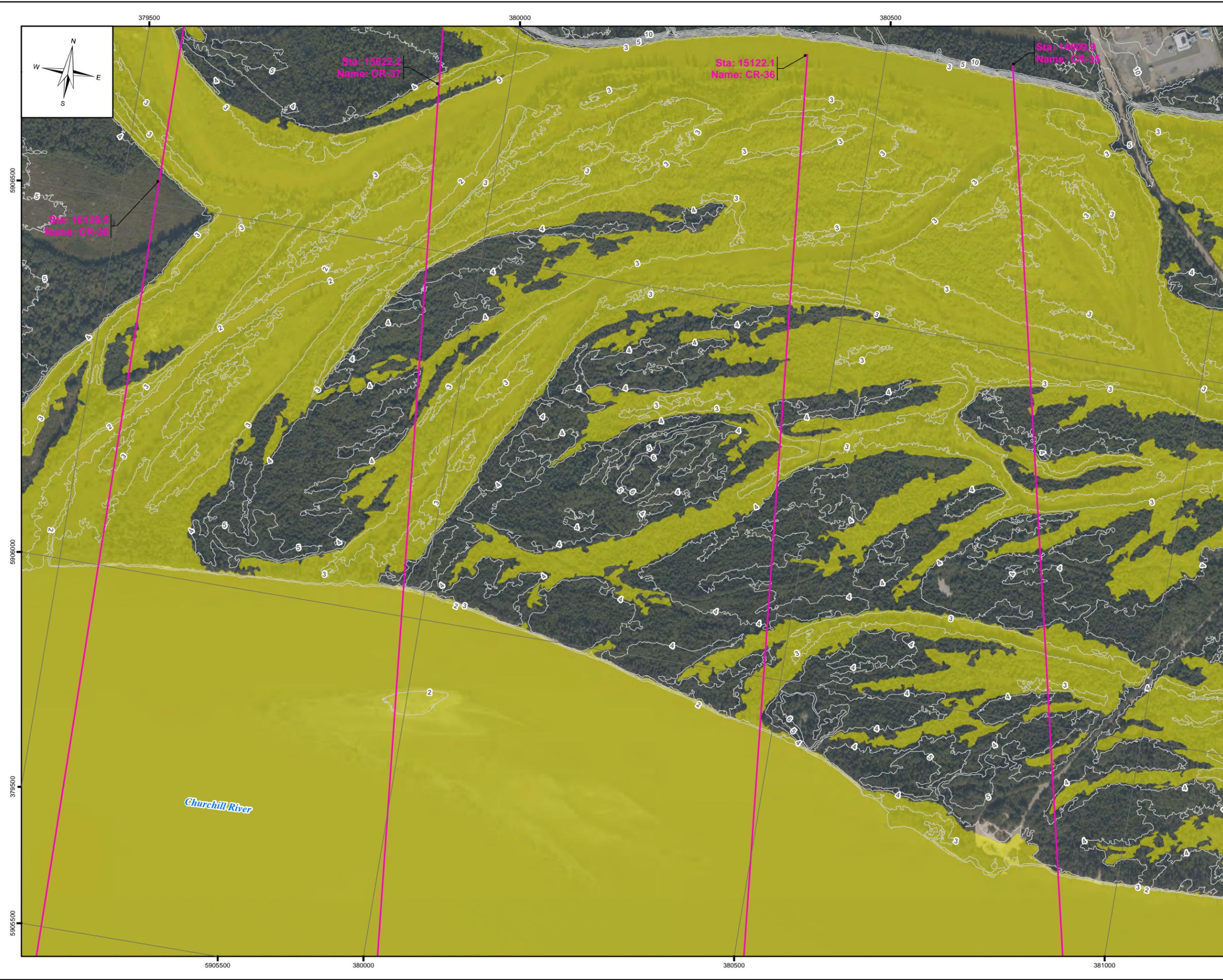
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-06

JUNE 2020	FIGURE 7.4	REV: 0
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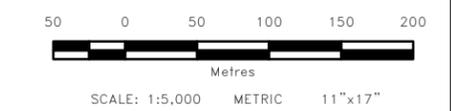


**LEGEND:**

- Sta: 23648 Name: CR-53  
Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

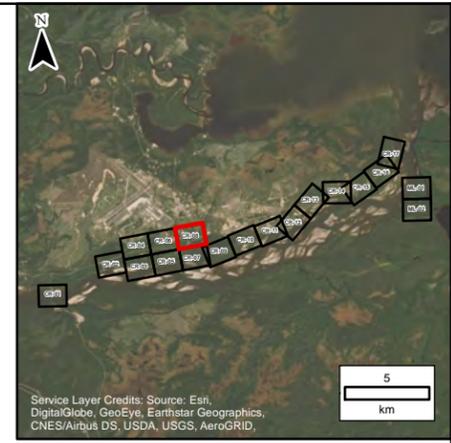
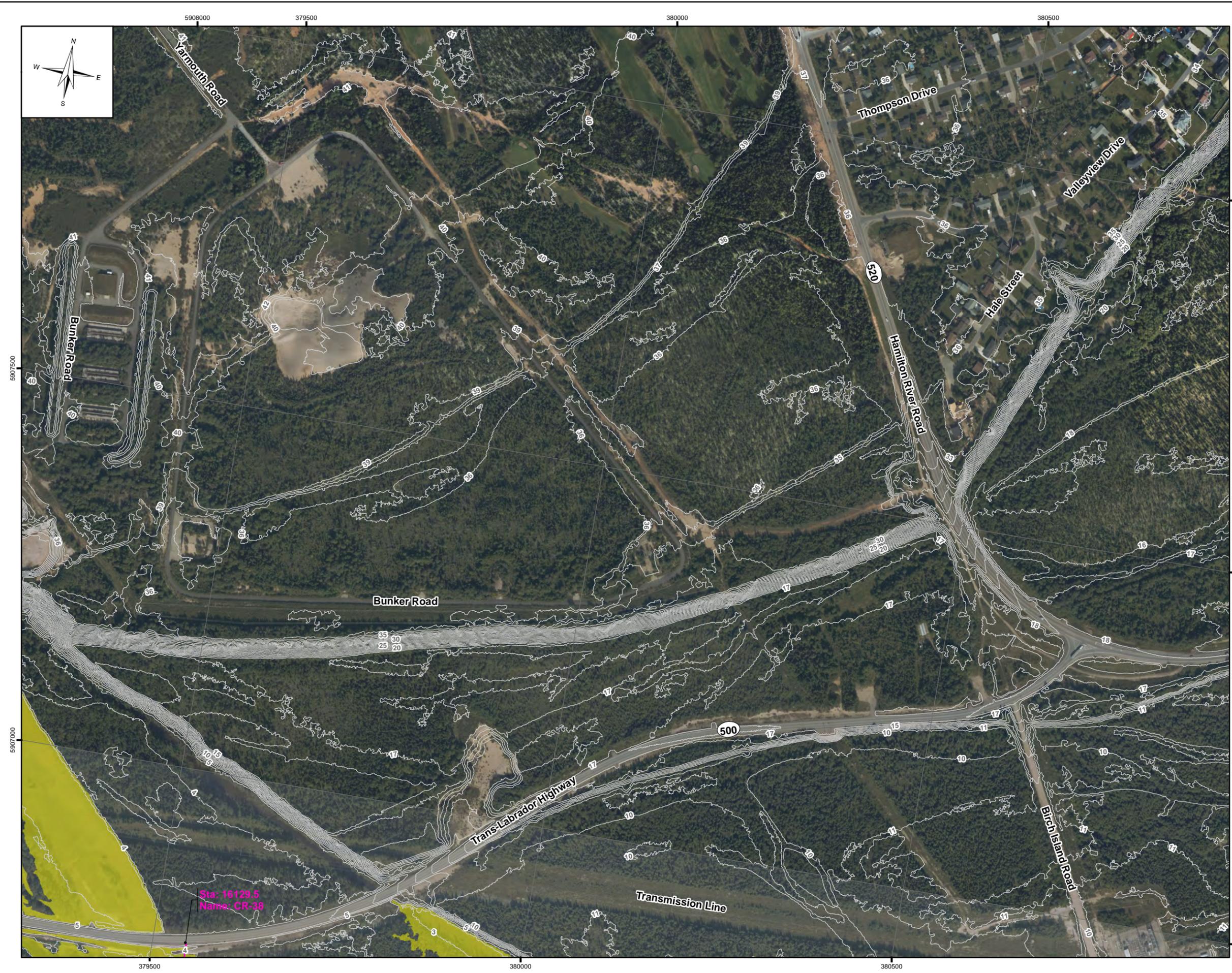
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD)  
CONDITIONS – CR-07

JUNE 2020	FIGURE 7.4	REV: 0
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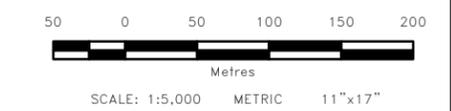


**LEGEND:**

- Sta: 2364.8  
Name: CR-53
  - Cross Section
  - Water Survey of Canada  
Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLIS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLIS Geomatics on September 11 – 13, 2019.



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Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

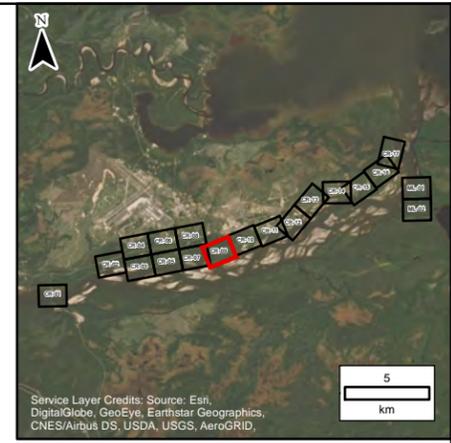
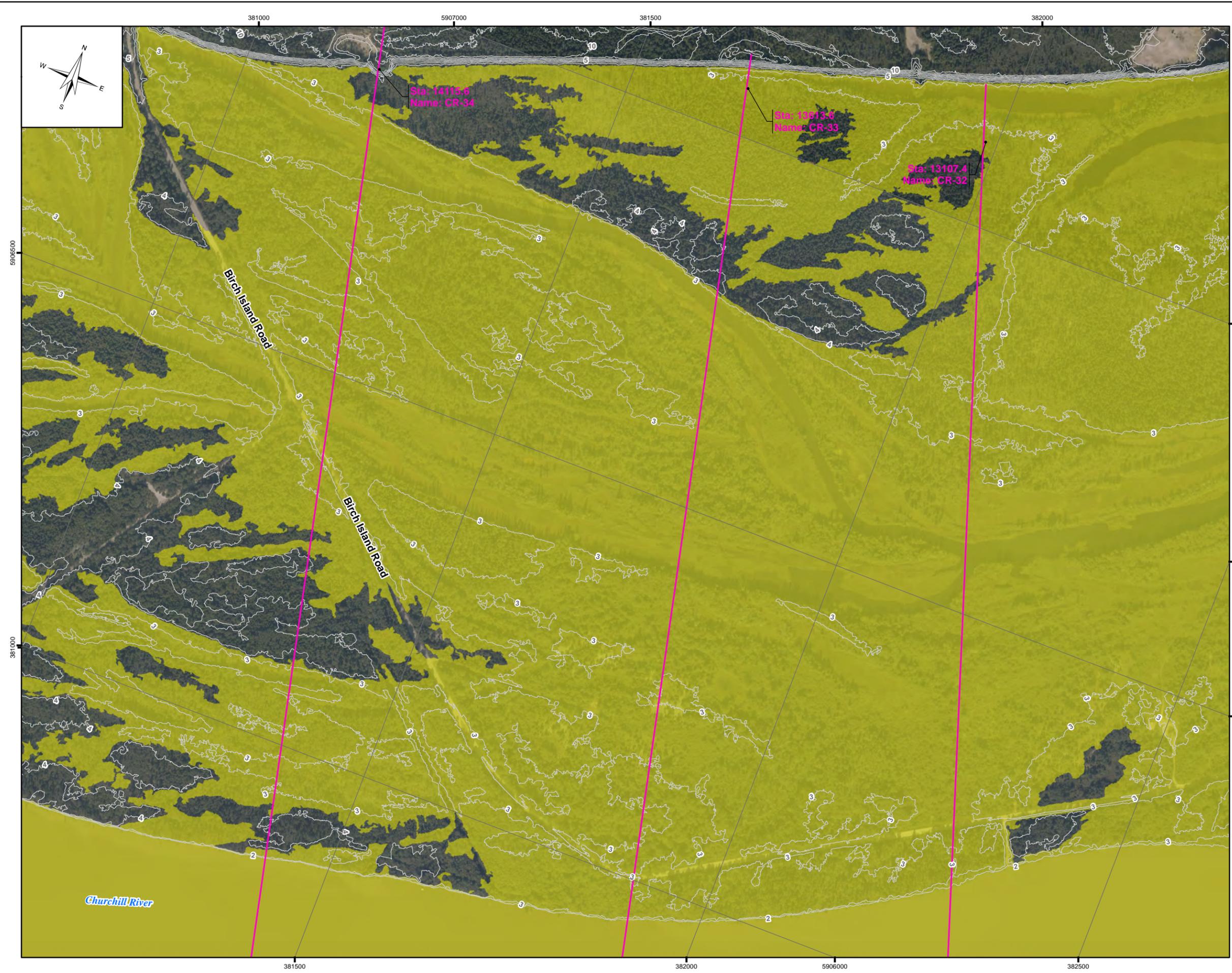
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-08

JUNE 2020	FIGURE 7.4	REV: 0
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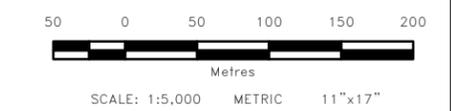


**LEGEND:**

- Sta: 23648 Name: CR-33
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



All units are metric and in metres unless otherwise specified.  
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

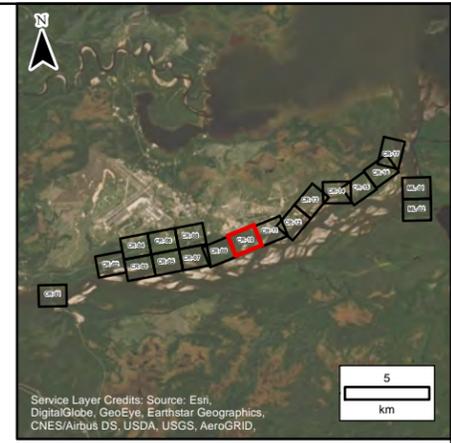
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD)  
CONDITIONS – CR-09

JUNE 2020	FIGURE 7.4	REV: 0
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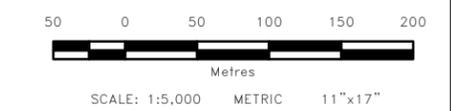


**LEGEND:**

- Sta: 2364.8 Name: CR-23
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

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0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

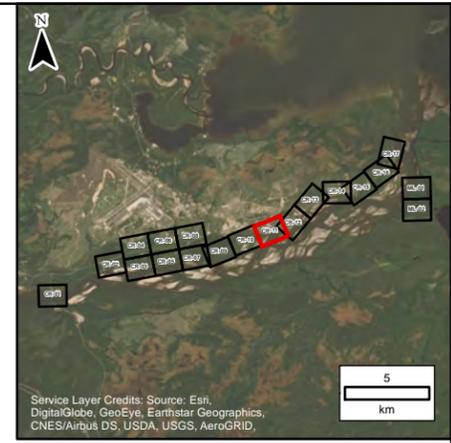
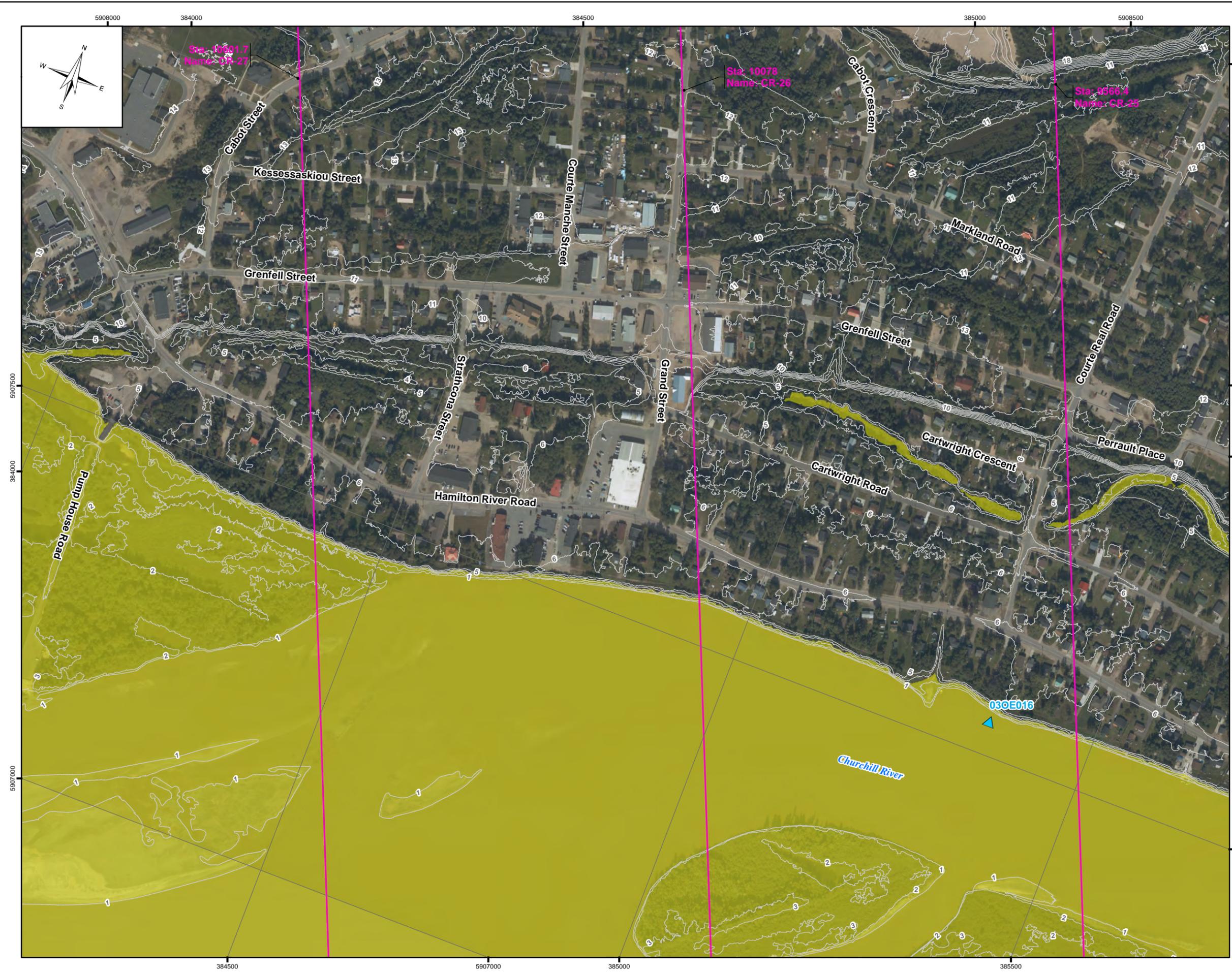
REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-10

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File Name: E:\Projects\2018\18-3217-001\Dwg\GIS\MXD\Flood\_Mapping\18-3217-001\_Fig7\_4\_11x17.mxd  
 11"x17" PLOT\_SCALE 1:1

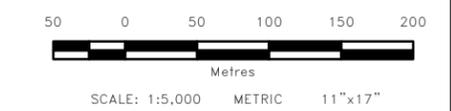


**LEGEND:**

- Sta. 23648 Name: CR-53
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



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 Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

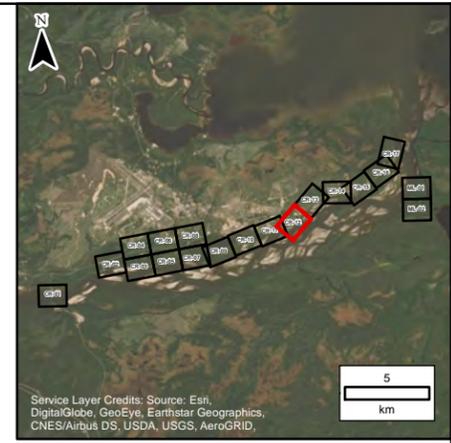
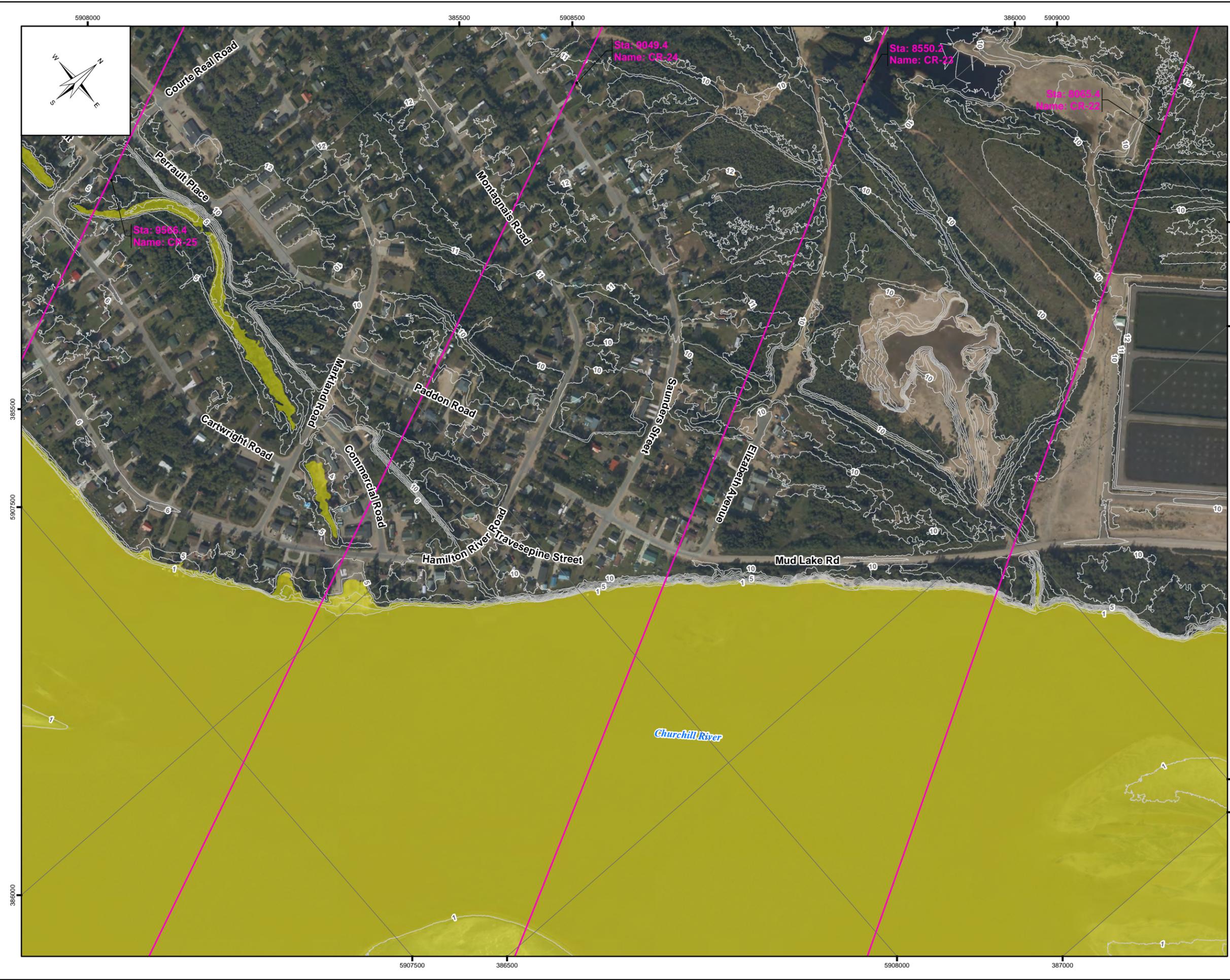
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-11

File Name: P:\Projects\2018\18-3217-001\18-3217-001\_Dwg\GIS\MXD\Flood\_Mapping\18-3217-001\_Fig7\_4\_11x17.mxd  
 11"x17" PLOT SCALE 1:1



**LEGEND:**

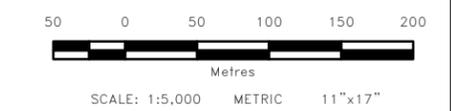
- Sta: 2364.8 Name: CR-53
- Cross Section
- Water Survey of Canada Gauge Location
- River Centreline
- 1m LIDAR Contour

**Velocity (m/s)**

- 0.0 – 1.0 m/s
- 1.0 – 2.0 m/s
- 2.0 – 3.0 m/s
- 3.0 – 4.0 m/s
- > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



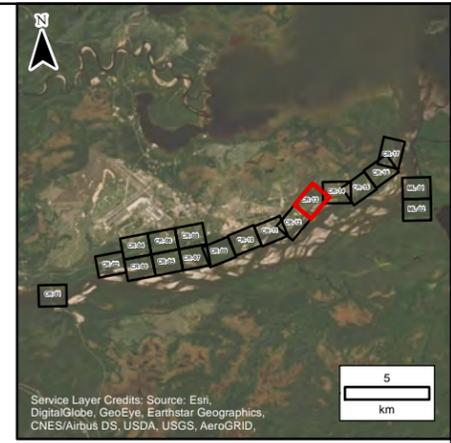
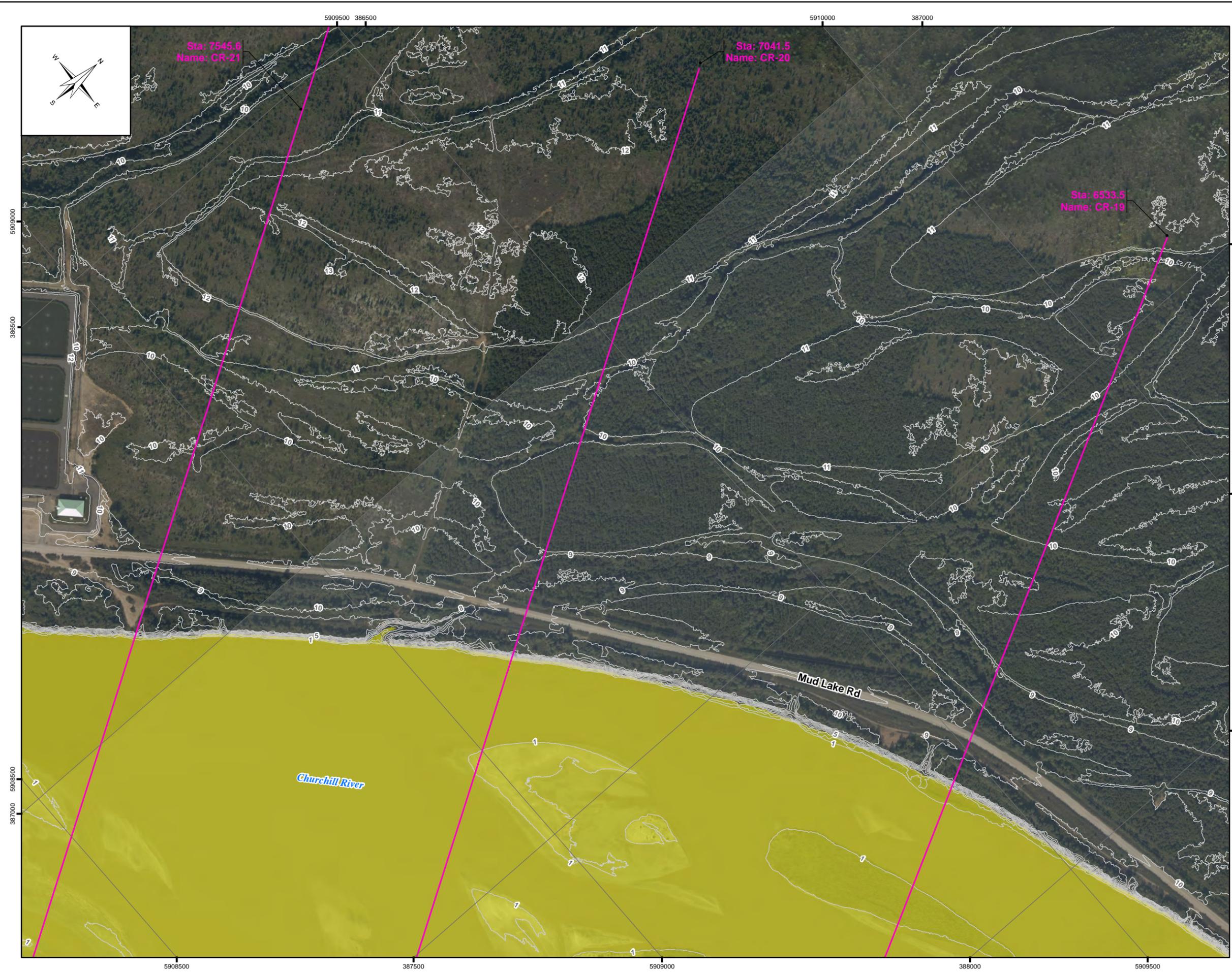
All units are metric and in metres unless otherwise specified.  
 Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

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**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-12

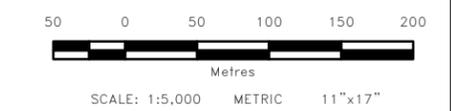


**LEGEND:**

- Sta: 2364.8 Name: CR-13
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

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2. Topography shown was developed by KGS Group from the LIDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



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Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

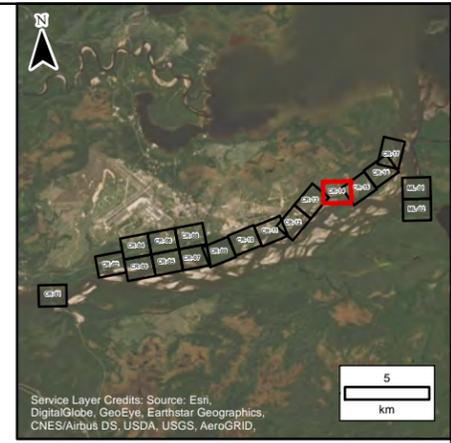
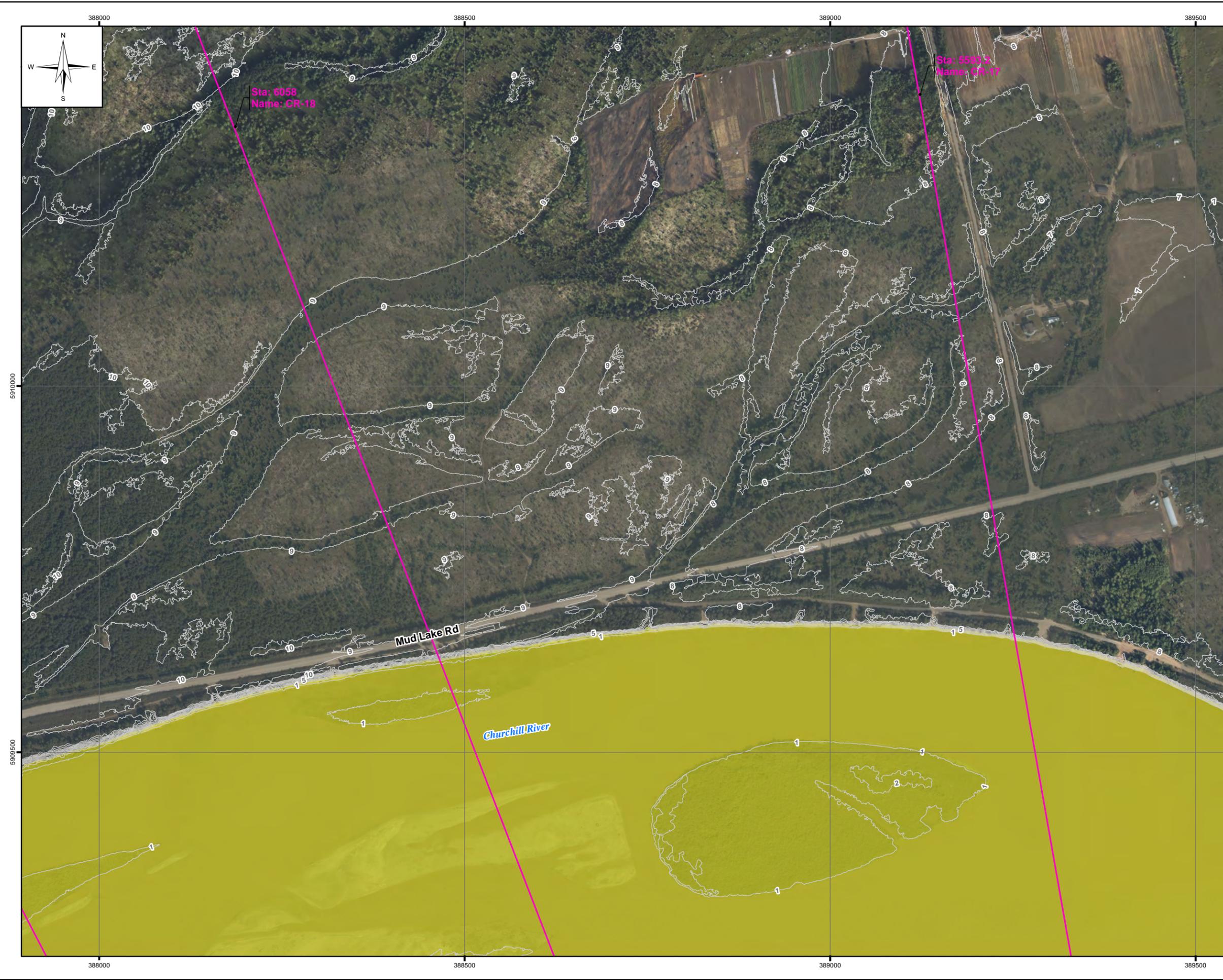
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD)  
CONDITIONS – CR-13

JUNE 2020	FIGURE 7.4	REV: 0
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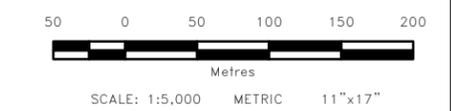


**LEGEND:**

- Sta: 2364 Name: CR-53
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

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Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

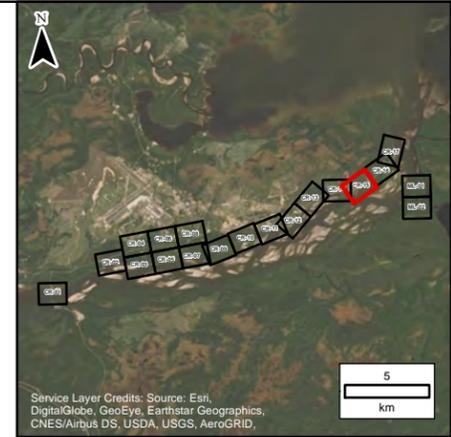
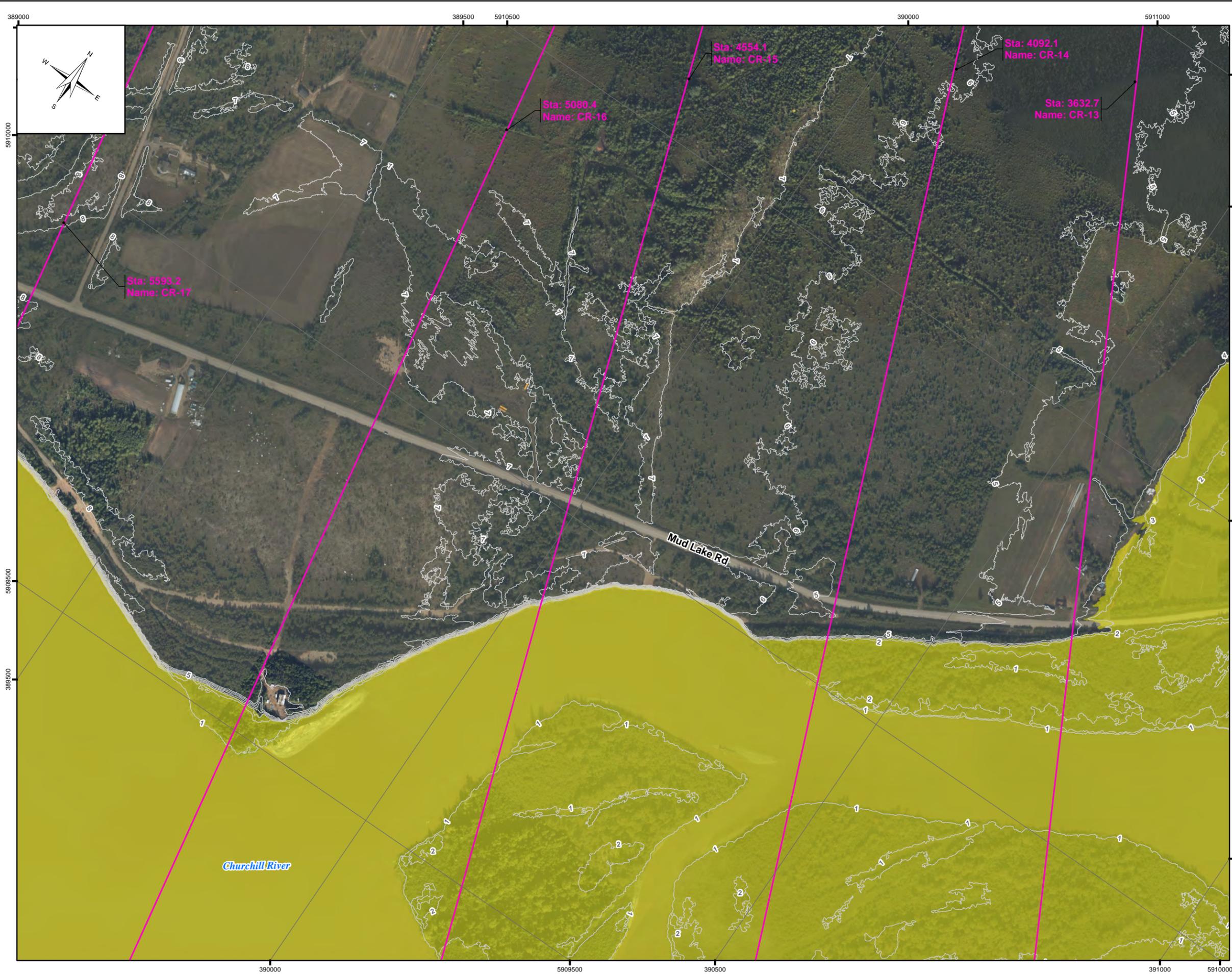
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NO.	Y1/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD)  
CONDITIONS – CR-14

JUNE 2020	FIGURE 7.4	REV: 0
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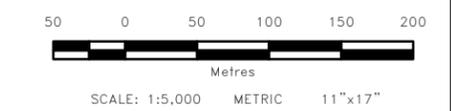


**LEGEND:**

- Sta: 2364.8 Name: CR-53
  - Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

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Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

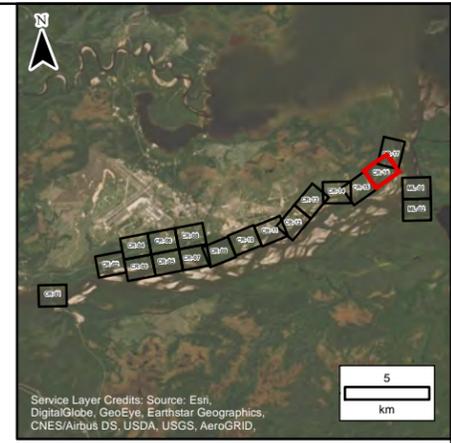
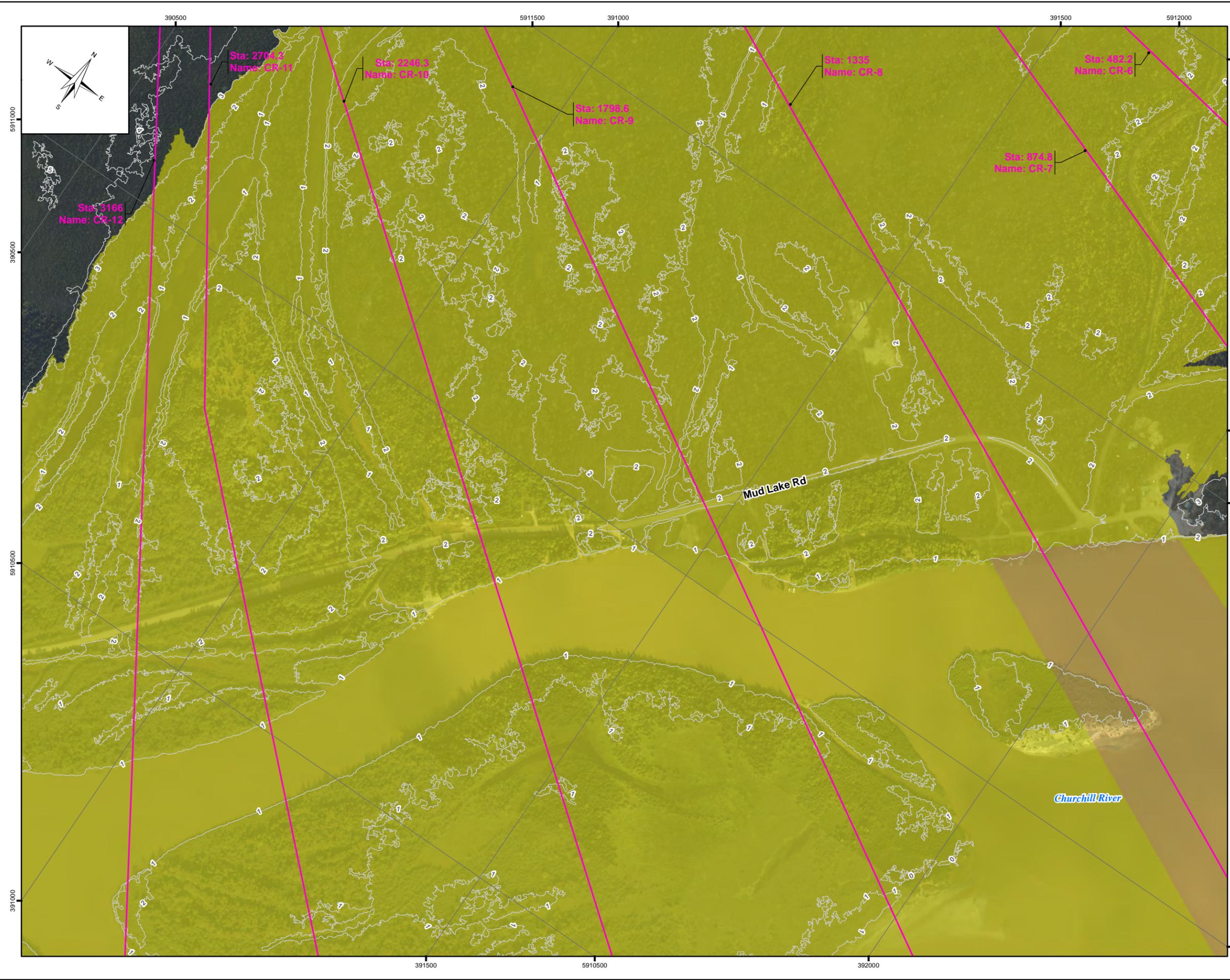
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-15

JUNE 2020	FIGURE 7.4	REV: 0
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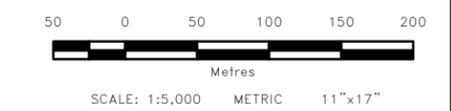


**LEGEND:**

- Sta: 2364.8 Name: CR-53  
Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

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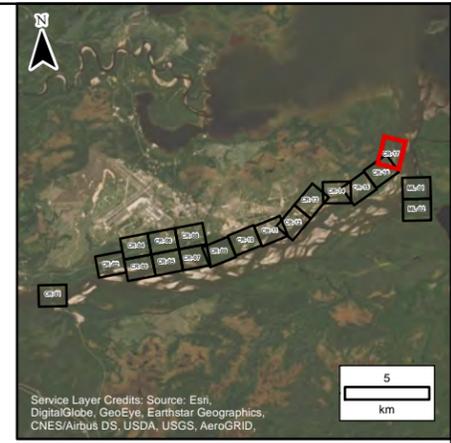
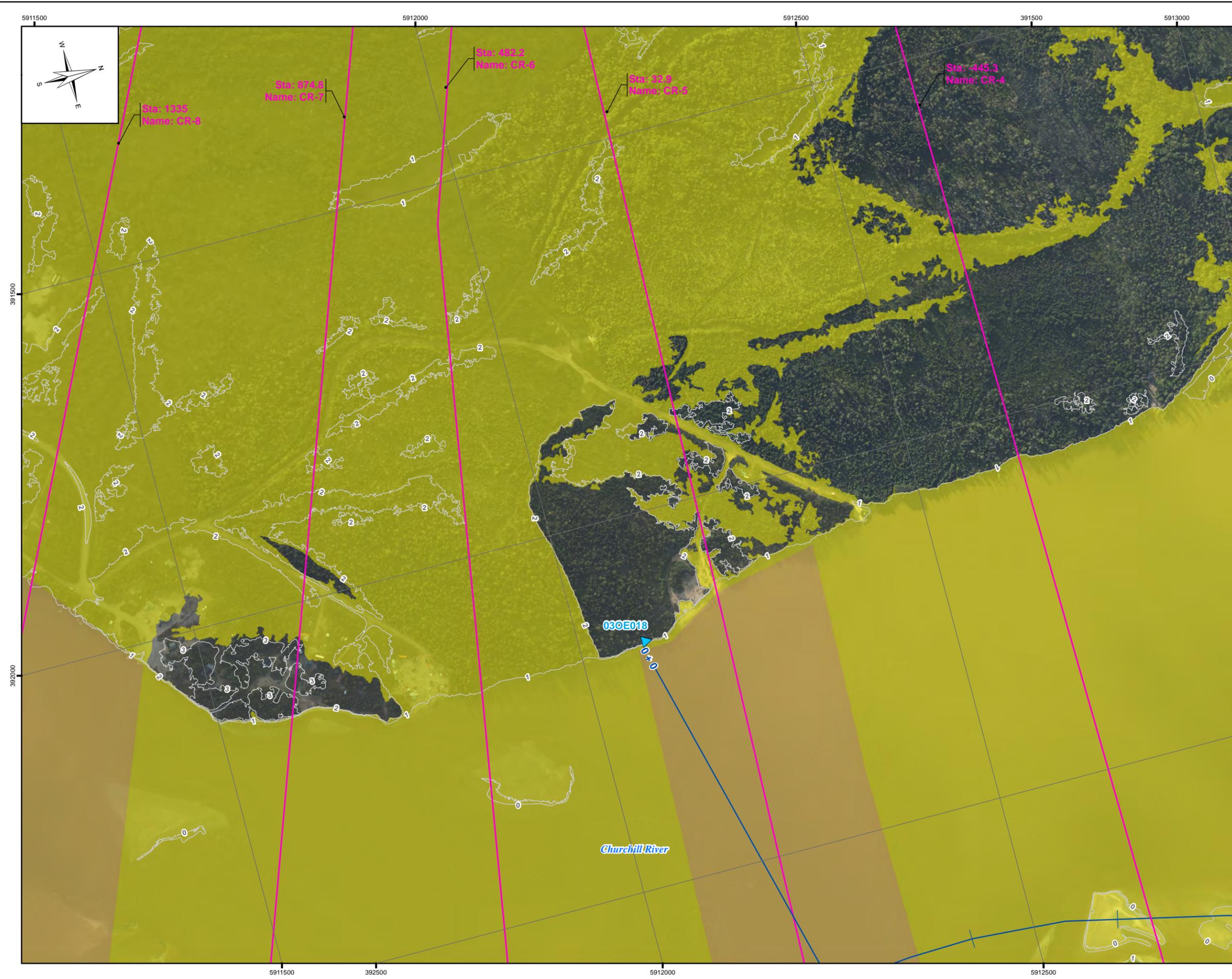
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-16

JUNE 2020	FIGURE 7.4	REV: 0
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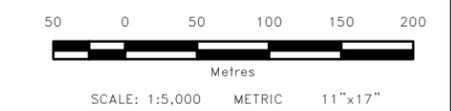


**LEGEND:**

- Sta: 2364.8 Name: CR-53  
Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

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Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

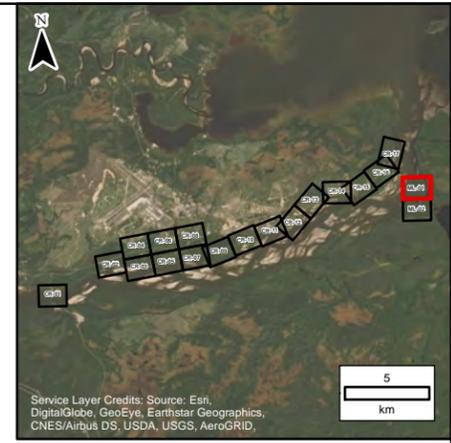
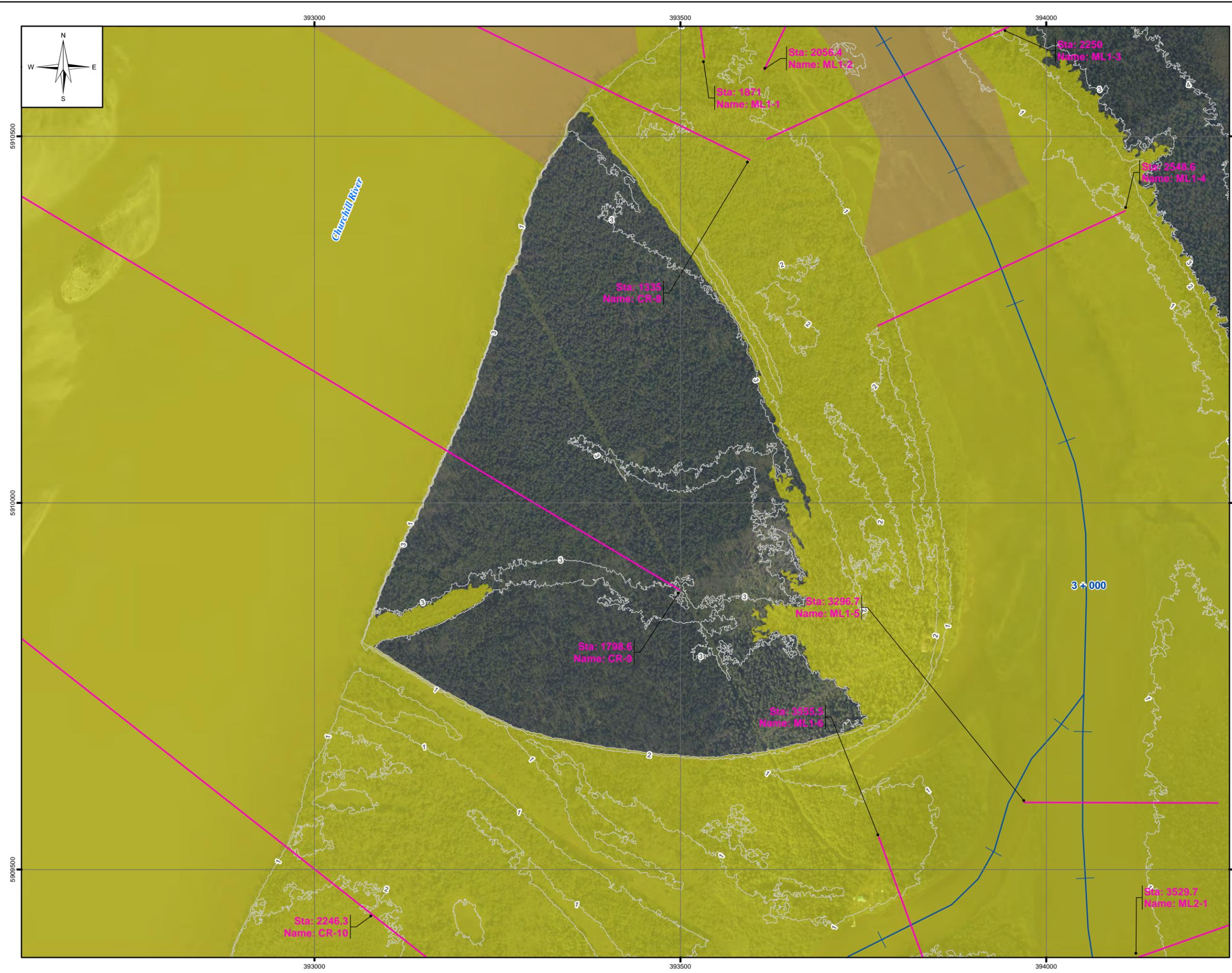
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – CR-17

JUNE 2020	FIGURE 7.4	REV: 0
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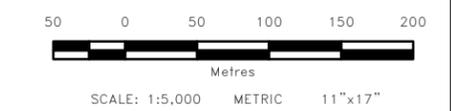


**LEGEND:**

- Sta: 2364.8 Name: CR-53  
Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)**
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

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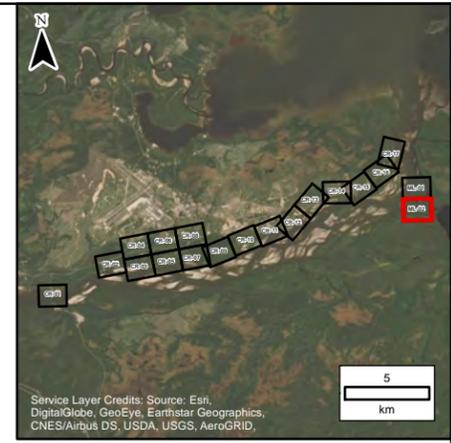
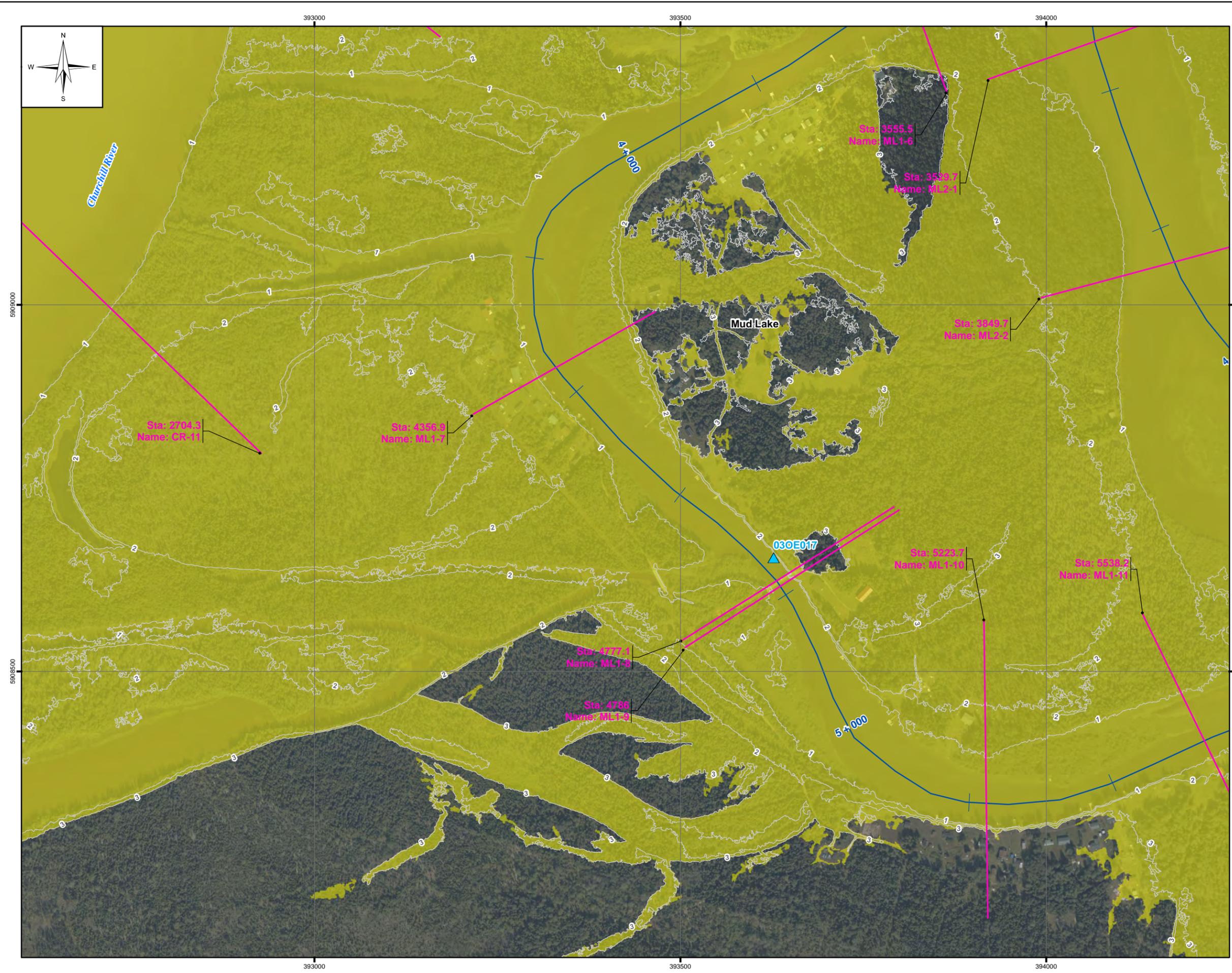
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NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – ML-01

JUNE 2020	FIGURE 7.4	REV: 0
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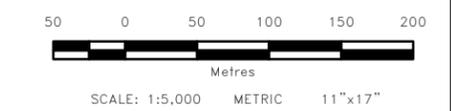


**LEGEND:**

- Sta: 2364.8 Name: CR-53  
Cross Section
  - Water Survey of Canada Gauge Location
  - River Centreline
  - 1m LIDAR Contour
- Velocity (m/s)
- 0.0 – 1.0 m/s
  - 1.0 – 2.0 m/s
  - 2.0 – 3.0 m/s
  - 3.0 – 4.0 m/s
  - > 4.00 m/s

**NOTES:**

1. Imagery is supplied by ATLIS Geomatics and dated as September 11 – 13, 2019.
2. Topography shown was developed by KGS Group from the LIDAR captured by ATLIS Geomatics on September 11 – 13, 2019.



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0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

**CHURCHILL RIVER FLOOD RISK AND FORECASTING**

ICE-AFFECTED 1:100 YEAR VELOCITY DISTRIBUTION FOR CURRENT CLIMATE, CURRENT DEVELOPMENT (CC-CD) CONDITIONS – ML-02

JUNE 2020	FIGURE 7.4	REV: 0
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