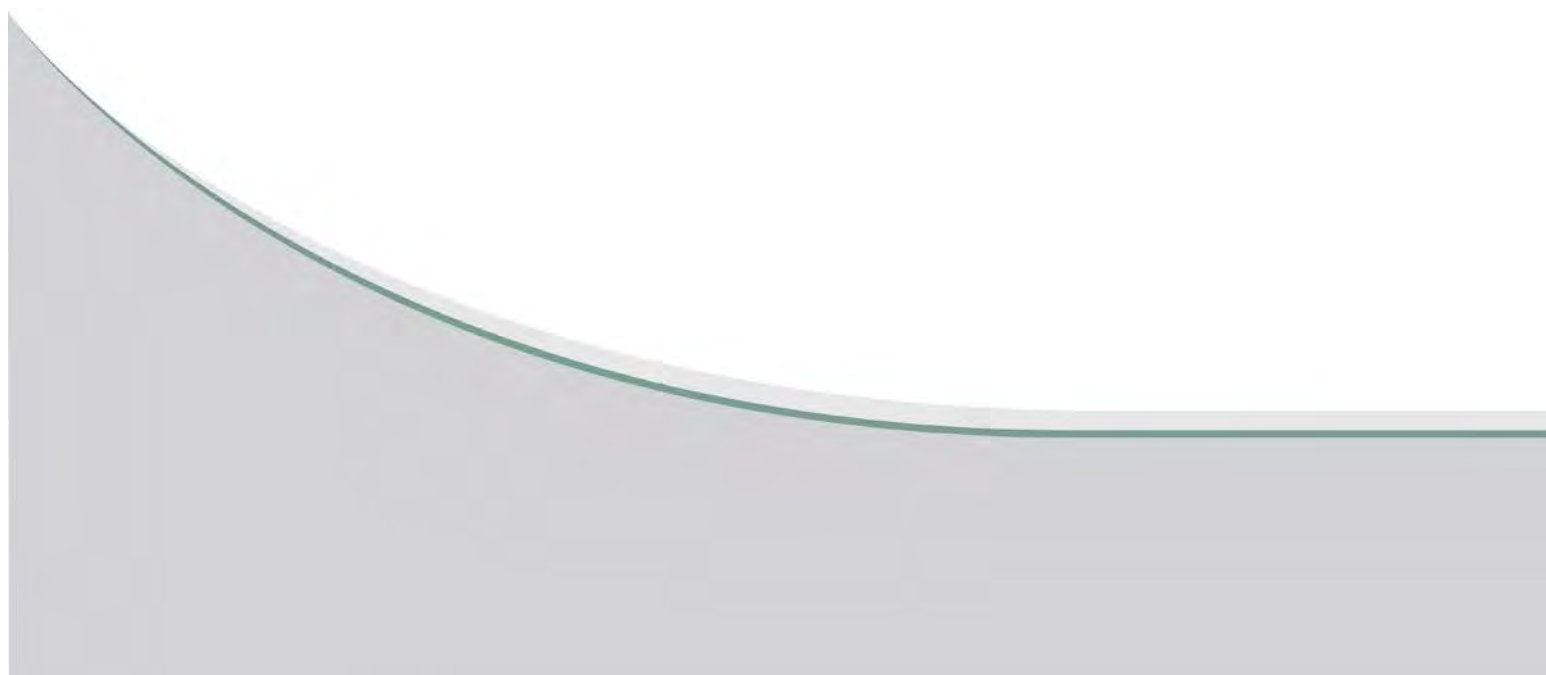


APPENDIX Q

CHURCHILL RIVER CLIMATE CHANGE FLOOD RISK MAPS





- LEGEND:
- Water Survey of Canada Gauge Location
 - River Centerline
 - 1:20 Year Open Water Flood Zone
 - 1:100 Year Open Water Flood Zone
 - Map Extents

NOTES:

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



SCALE: 1:100,000 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).

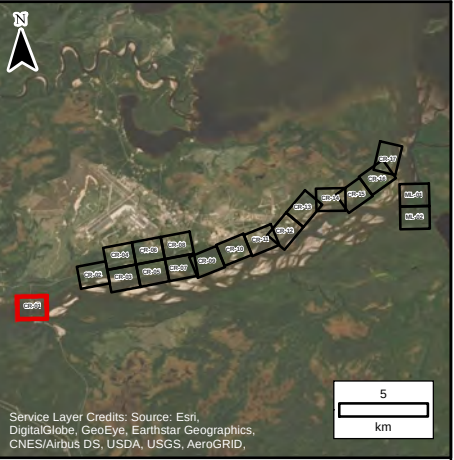
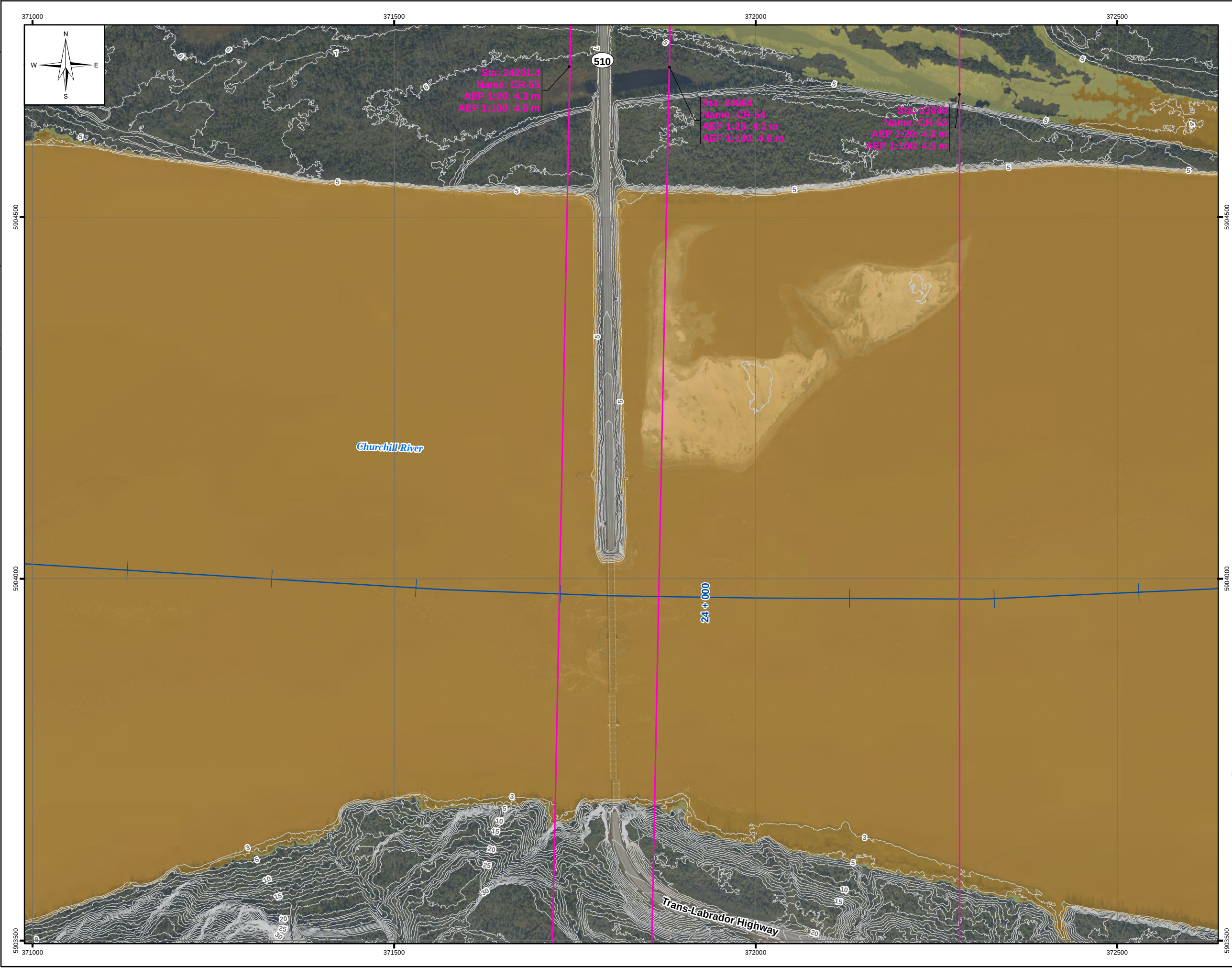
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

CHURCHILL RIVER FLOOD RISK AND FORECASTING

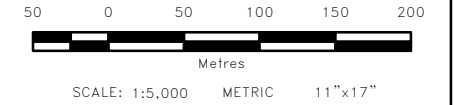
OPEN WATER FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – OVERVIEW MAP

JUNE 2020	FIGURE 3.1	REV: 0
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- LEGEND:**
- Sta: 23648
Name: CR-53
AEP 1:20: 4.3 m
AEP 1:100: 4.5 m
 - Water Survey of Canada Gauge Location
 - River Centreline
 - 1m LIDAR Contour
 - 1:20 Year Open Water Flood Zone
 - 1:100 Year Open Water Flood Zone

- NOTES:**
- Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
 - 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

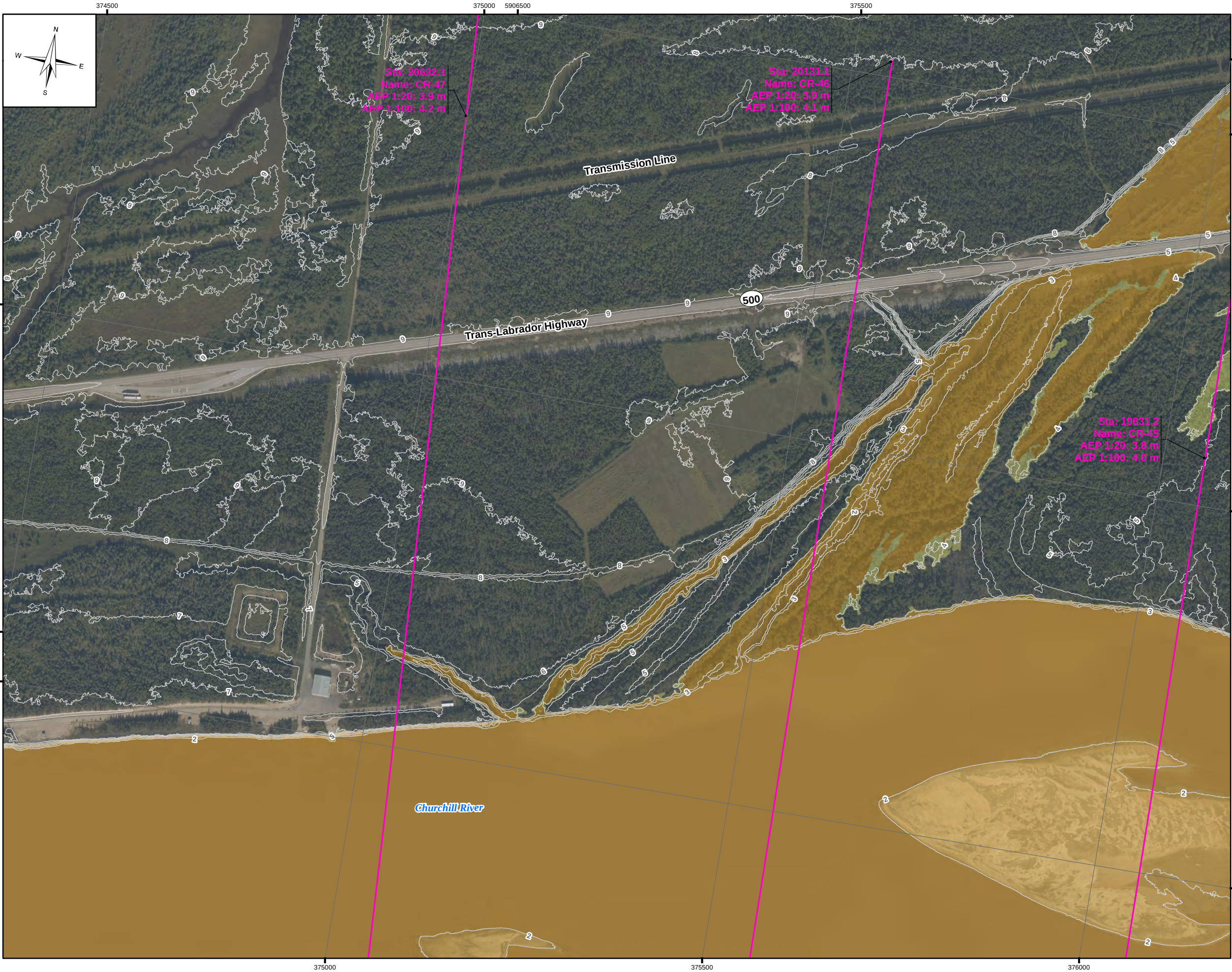
CHURCHILL RIVER FLOOD RISK AND FORECASTING

OPEN WATER FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-01

JUNE 2020	FIGURE 3.2	REV: 0
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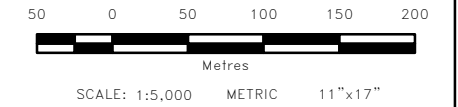
Portions of data Produced by KGS Group, under Licence with the Government of Canada © 2019
Her Majesty the Queen in Right of Canada, Department of Natural Resources. All rights reserved.

FileName: P:\Projects\2018\18-3217-001\Draw\GIS\MXD\Flood_Mapping\18-3217-001_Fig3.2_11x17.mxd
11"x17" PLOT SCALE 1:1



- LEGEND:**
- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
 - Water Survey of Canada Gauge Location
 - River Centreline
 - 1m LIDAR Contour
 - 1:20 Year Open Water Flood Zone
 - 1:100 Year Open Water Flood Zone

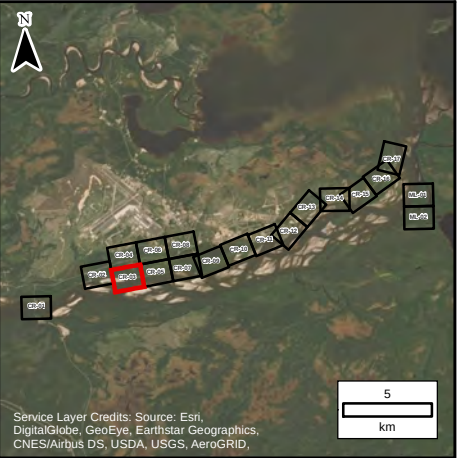
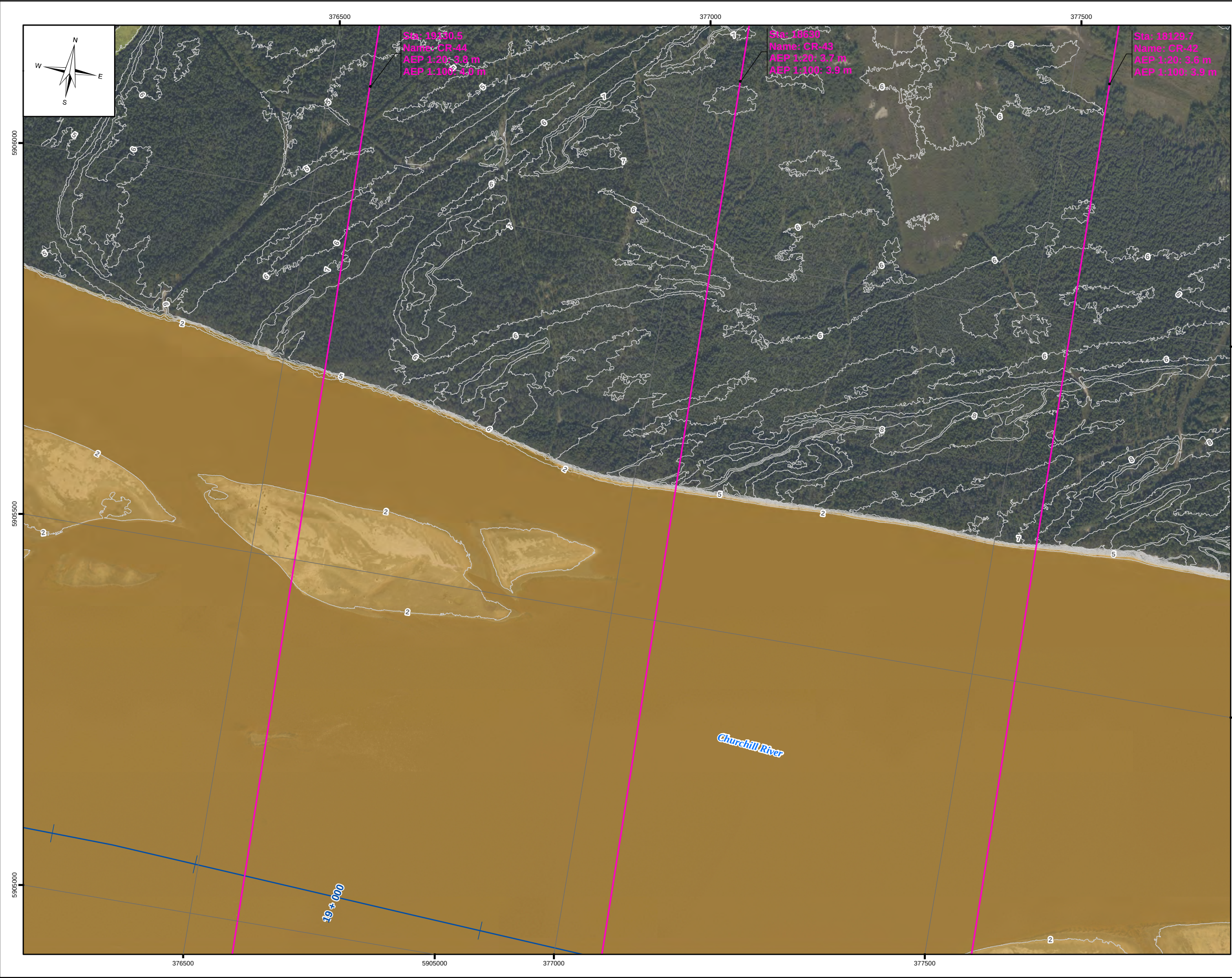
- NOTES:**
- Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
 - Topography shown was developed by KGS Group from the LiDAR captured by ATLAS Geomatics on September 11 – 13, 2019.



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

CHURCHILL RIVER FLOOD RISK AND FORECASTING		
OPEN WATER FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-02		
JUNE 2020	FIGURE 3.2	REV: 0



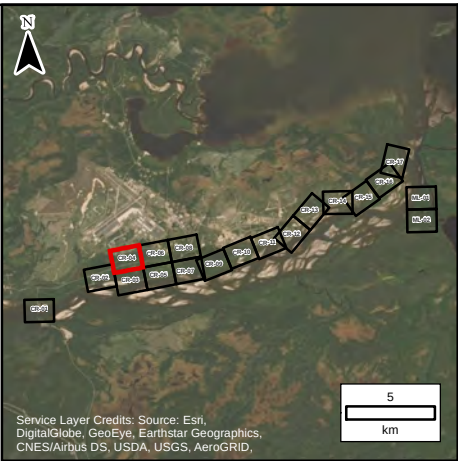
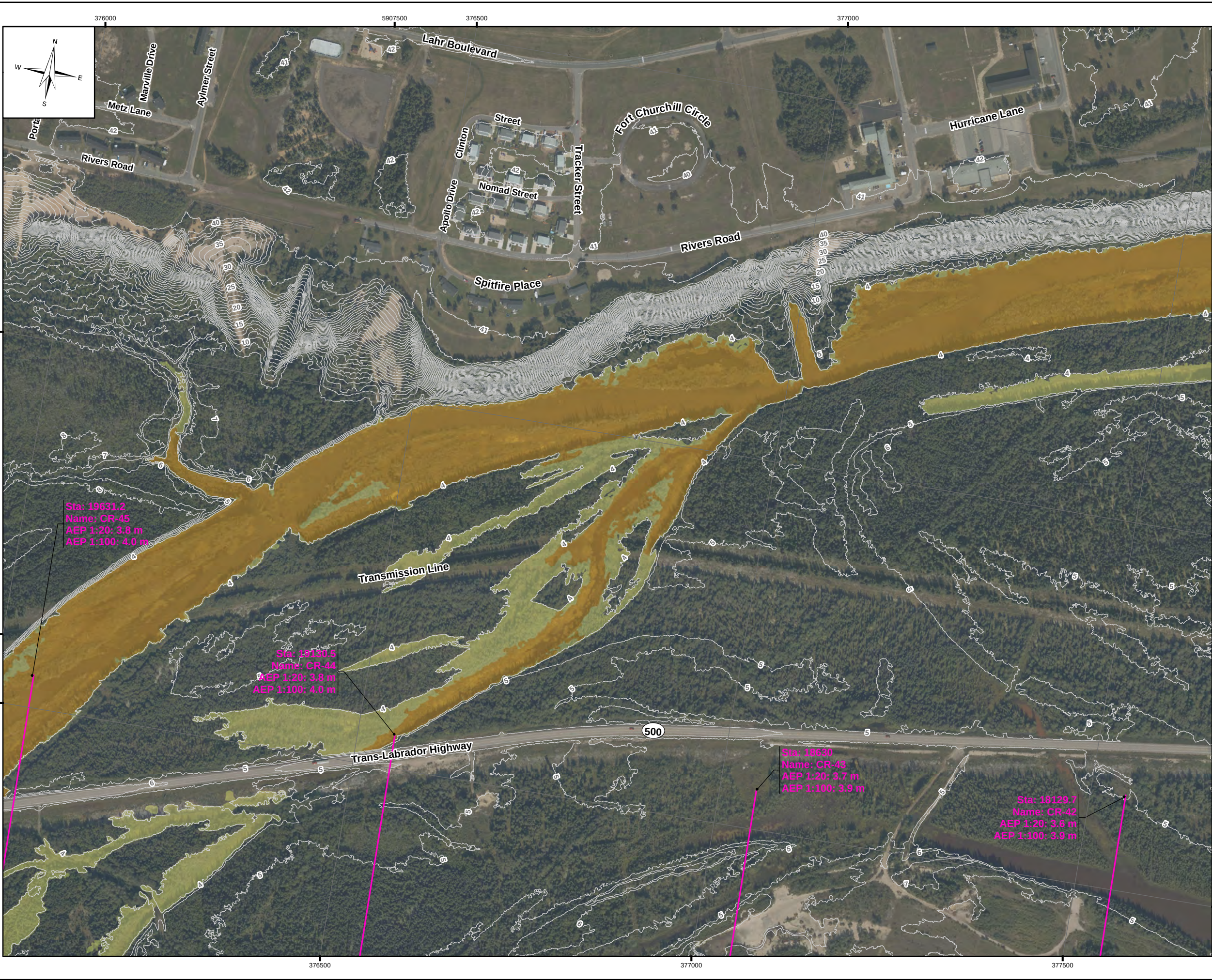
- LEGEND:
- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
 - Cross Section
 - Water Survey of Canada Gauge Location
 - River Centreline
 - 1m LIDAR Contour
 - 1:20 Year Open Water Flood Zone
 - 1:100 Year Open Water Flood Zone

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

50 0 50 100 150 200
Metres
SCALE: 1:5,000 METRIC 11"x17"

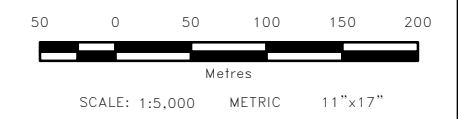
All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

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 FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-03					
JUNE 2020		FIGURE 3.2		REV:	0



- LEGEND:**
- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
 - Cross Section
 - Water Survey of Canada Gauge Location
 - River Centreline
 - 1m LIDAR Contour
 - 1:20 Year Open Water Flood Zone
 - 1:100 Year Open Water Flood Zone

- 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.

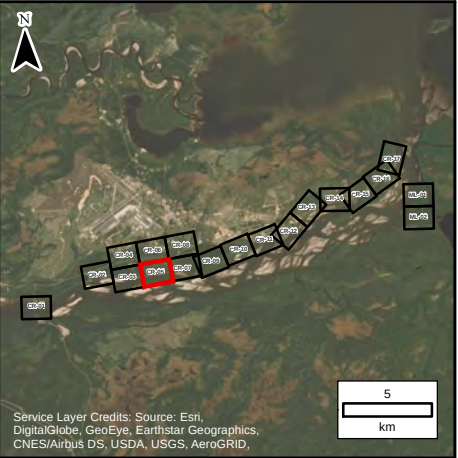
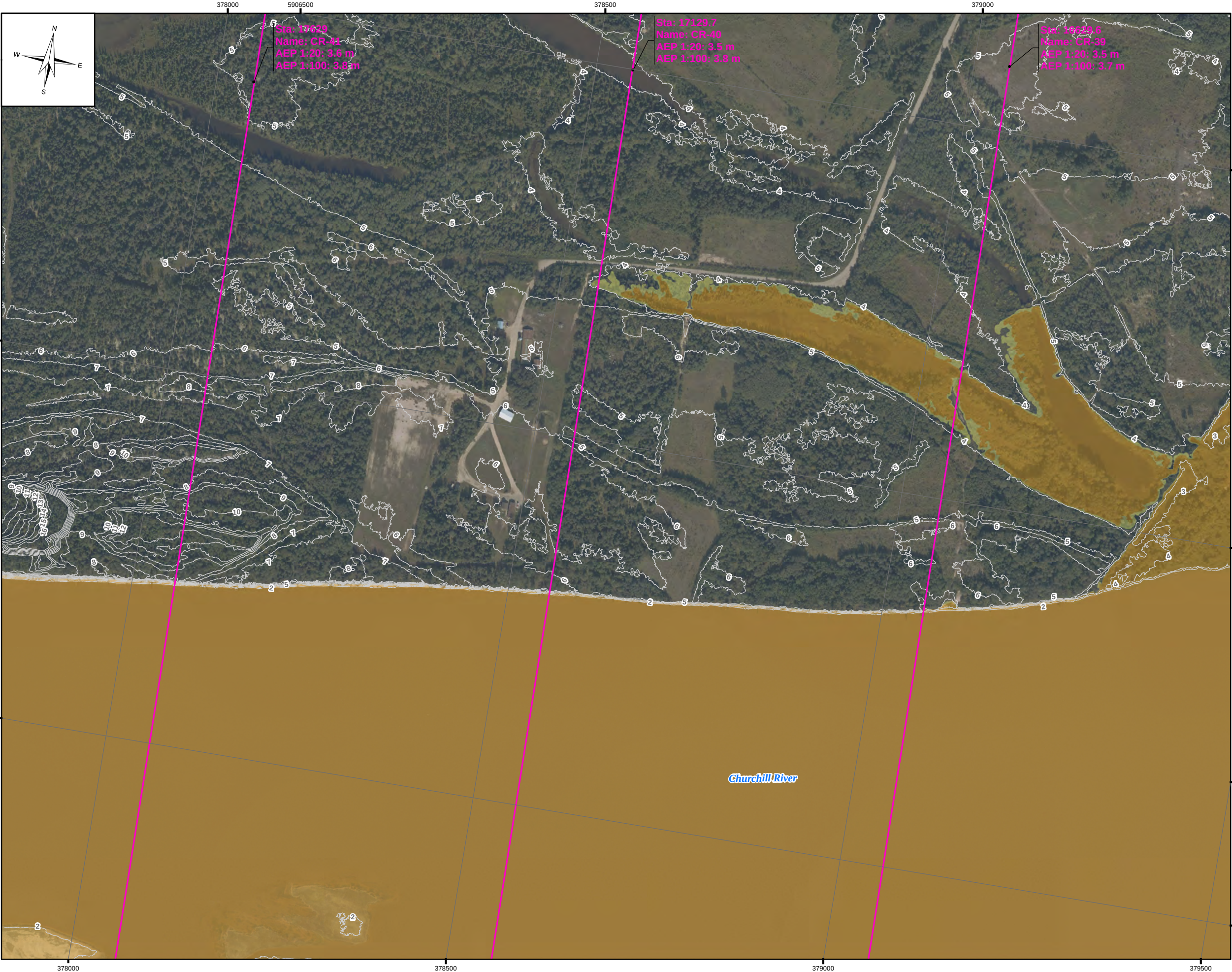


All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM), Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

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

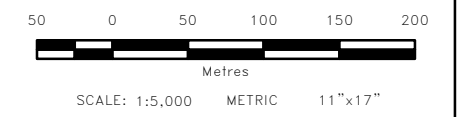
CHURCHILL RIVER FLOOD RISK AND FORECASTING

OPEN WATER FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-04



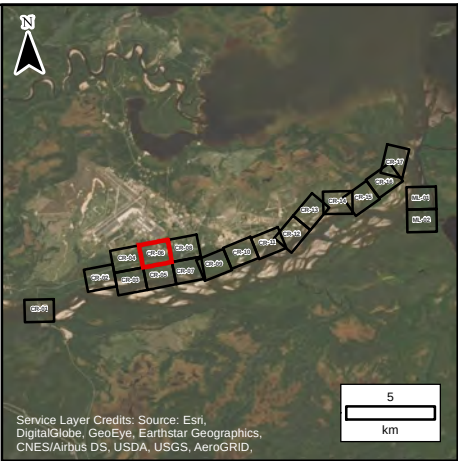
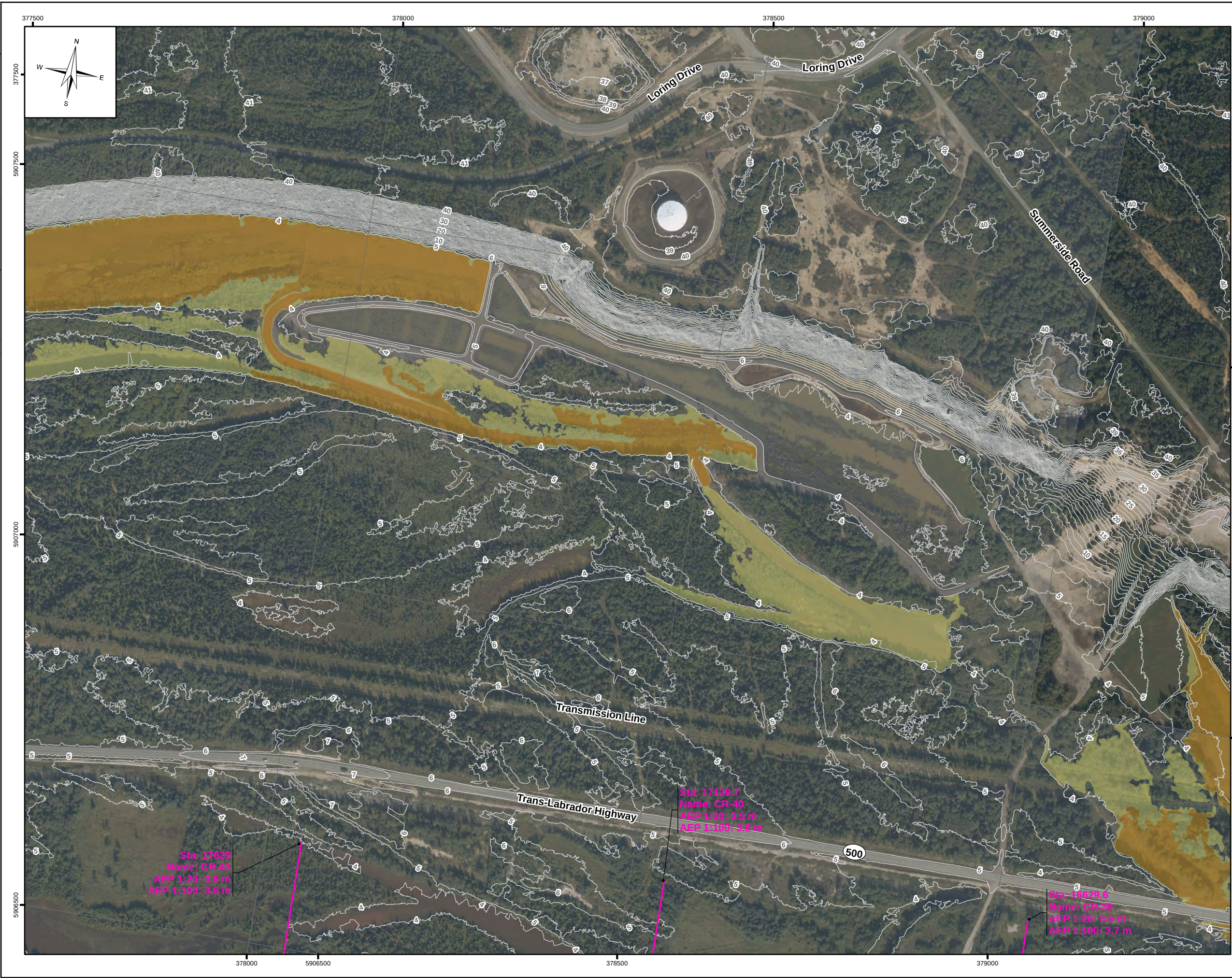
- LEGEND:
- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
 - Cross Section
 - Water Survey of Canada Gauge Location
 - River Centreline
 - 1m LIDAR Contour
 - 1:20 Year Open Water Flood Zone
 - 1:100 Year Open Water Flood Zone

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



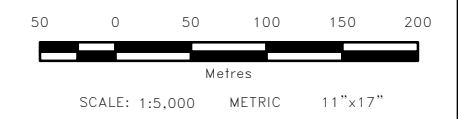
All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM)
Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

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 FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-05					
JUNE 2020		FIGURE 3.2			REV: 0



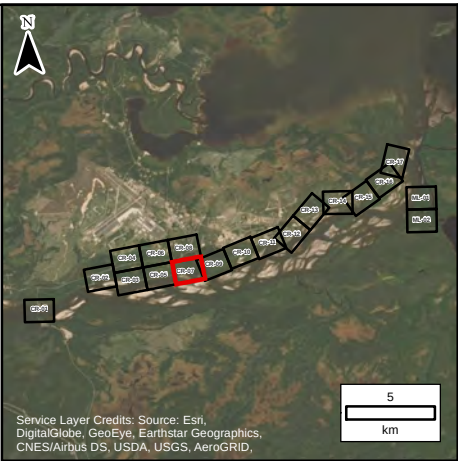
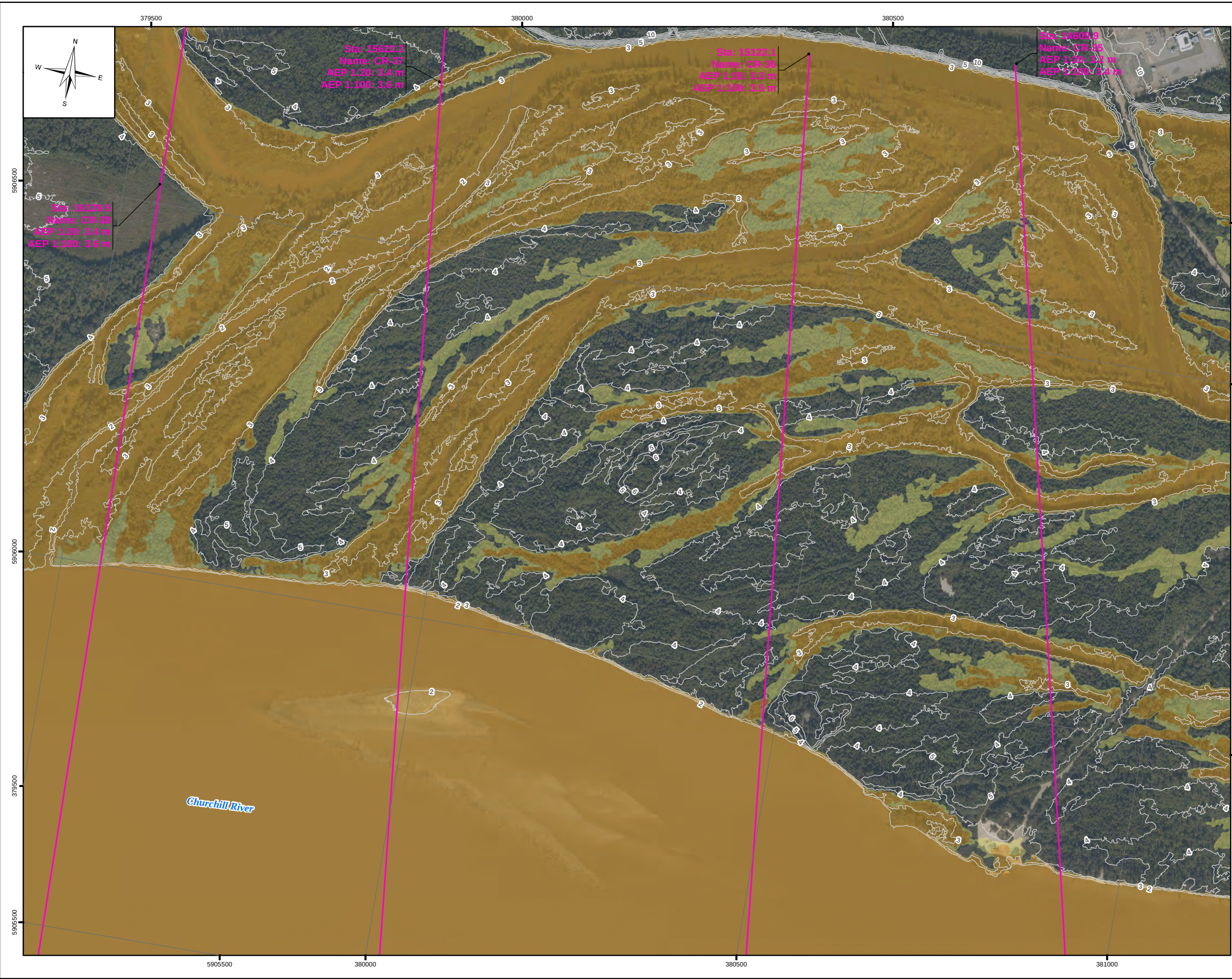
- LEGEND:**
- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
 - Cross Section
 - Water Survey of Canada Gauge Location
 - River Centreline
 - 1m LIDAR Contour
 - 1:20 Year Open Water Flood Zone
 - 1:100 Year Open Water Flood Zone

- NOTES:**
- Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
 - 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 FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-06						
JUNE 2020		FIGURE 3.2			REV:	0



LEGEND:

- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
- Cross Section
- Water Survey of Canada Gauge Location
- River Centreline
- 1m LIDAR Contour
- 1:20 Year Open Water Flood Zone
- 1:100 Year Open Water Flood Zone

NOTES:

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

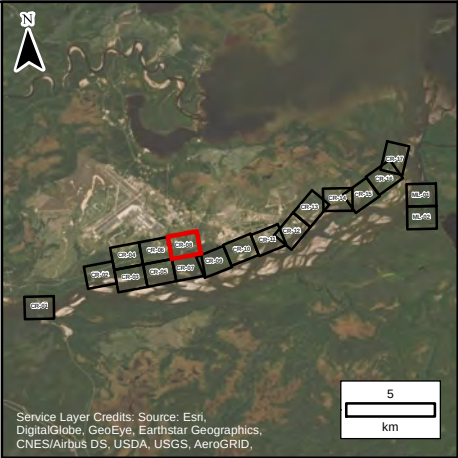


SCALE: 1:5,000 METRIC 11"x17"

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).

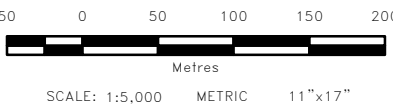
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

CHURCHILL RIVER FLOOD RISK AND FORECASTING		
OPEN WATER FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-07		
JUNE 2020	FIGURE 3.2	REV: 0



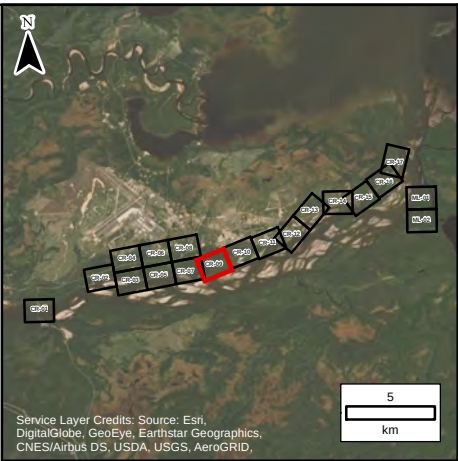
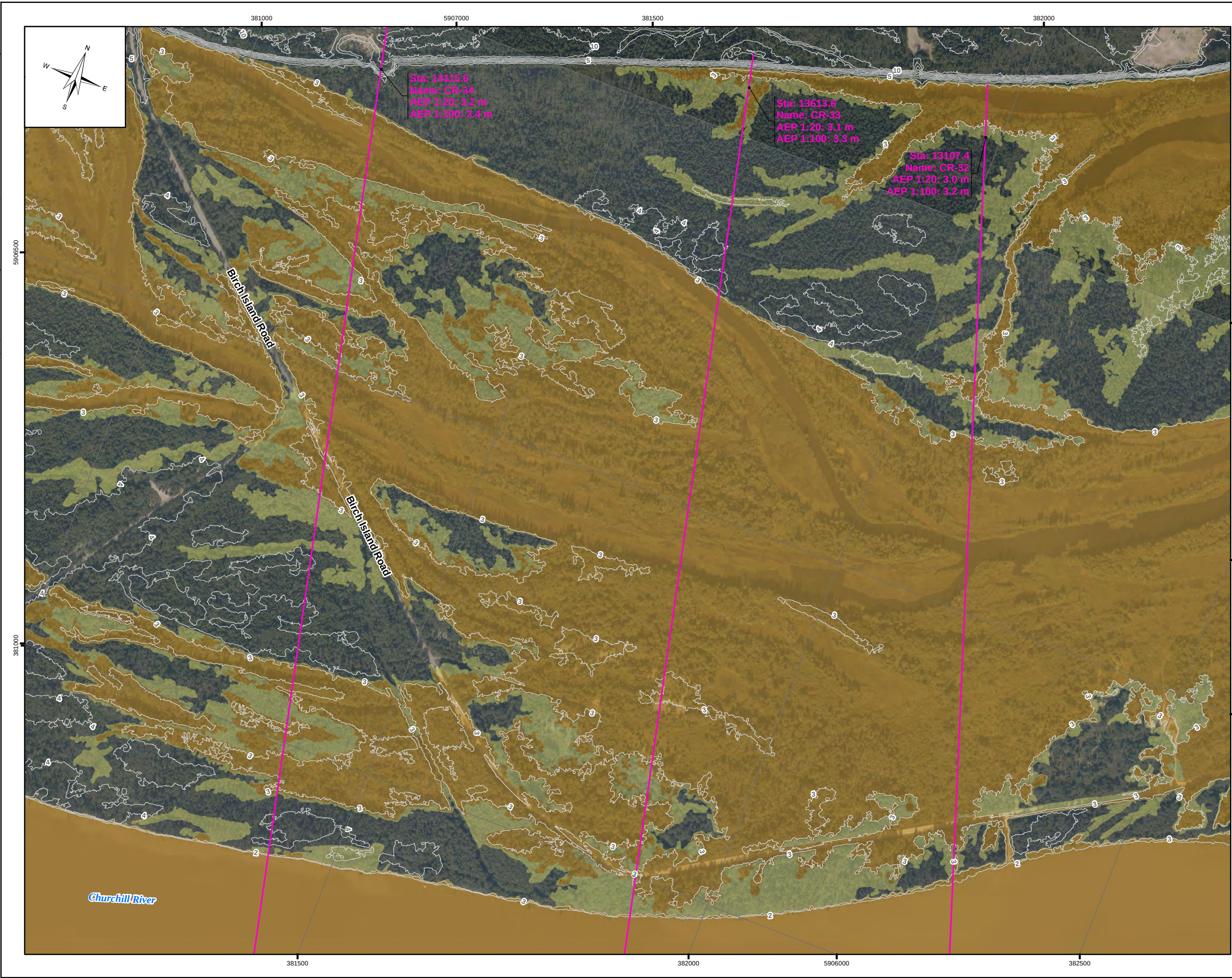
- LEGEND:**
- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
 - Water Survey of Canada Gauge Location
 - River Centreline
 - 1m LIDAR Contour
 - 1:20 Year Open Water Flood Zone
 - 1:100 Year Open Water Flood Zone

- 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 FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-08					
JUNE 2020		FIGURE 3.2		REV: 0	

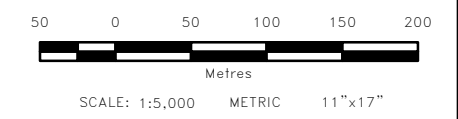


LEGEND:

- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
- Cross Section
- Water Survey of Canada
Gauge Location
- River Centreline
- 1m LIDAR Contour
- 1:20 Year Open Water Flood Zone
- 1:100 Year Open Water Flood Zone

NOTES:

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



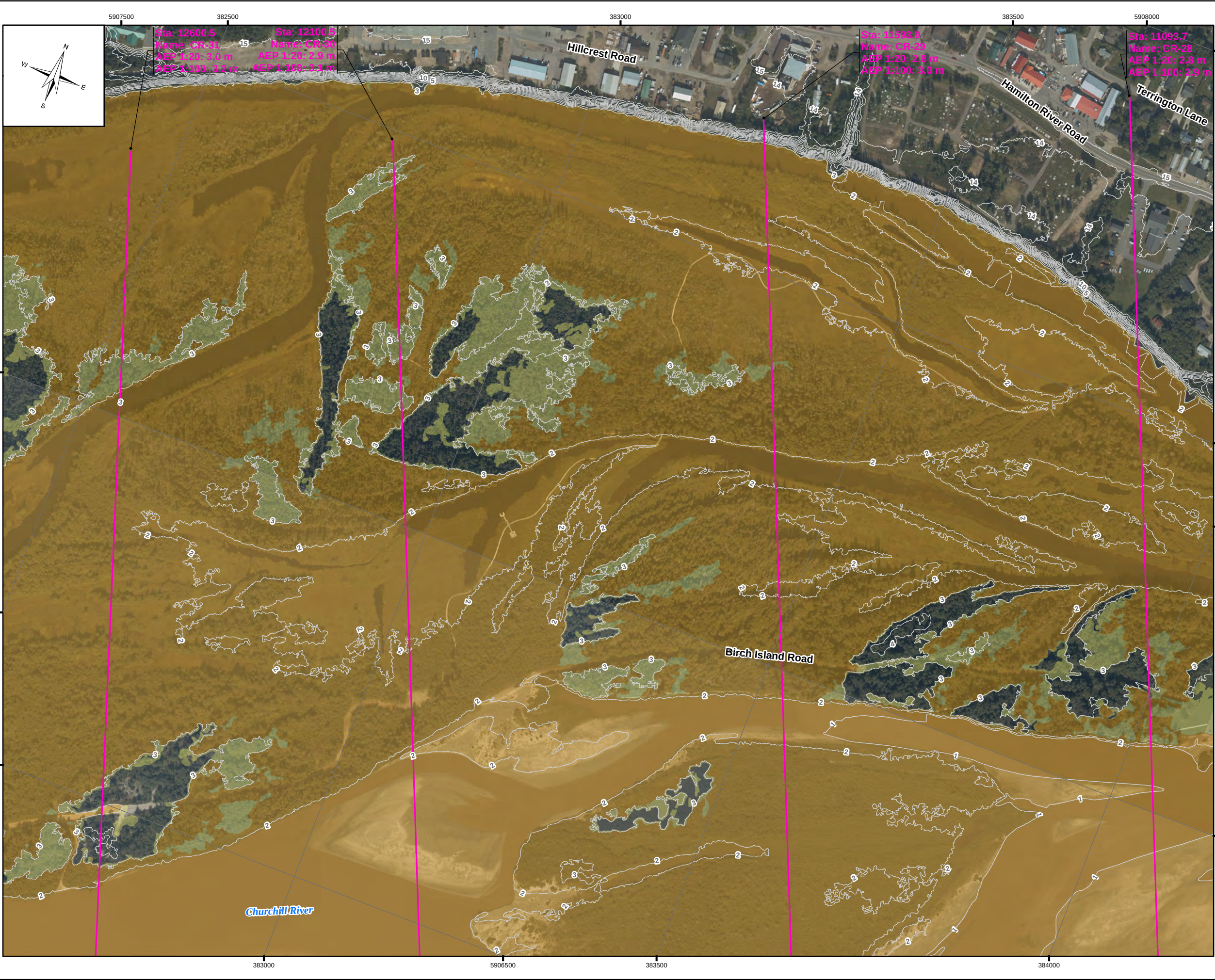
All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM), Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

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

CHURCHILL RIVER FLOOD RISK AND FORECASTING

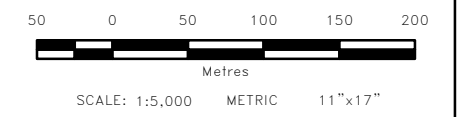
OPEN WATER FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-09

JUNE 2020	FIGURE 3.2	REV: 0
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- LEGEND:**
- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
 - Cross Section
 - Water Survey of Canada Gauge Location
 - River Centreline
 - 1m LIDAR Contour
 - 1:20 Year Open Water Flood Zone
 - 1:100 Year Open Water Flood Zone

- 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.



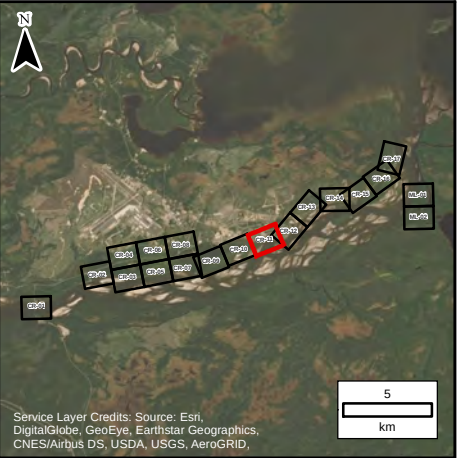
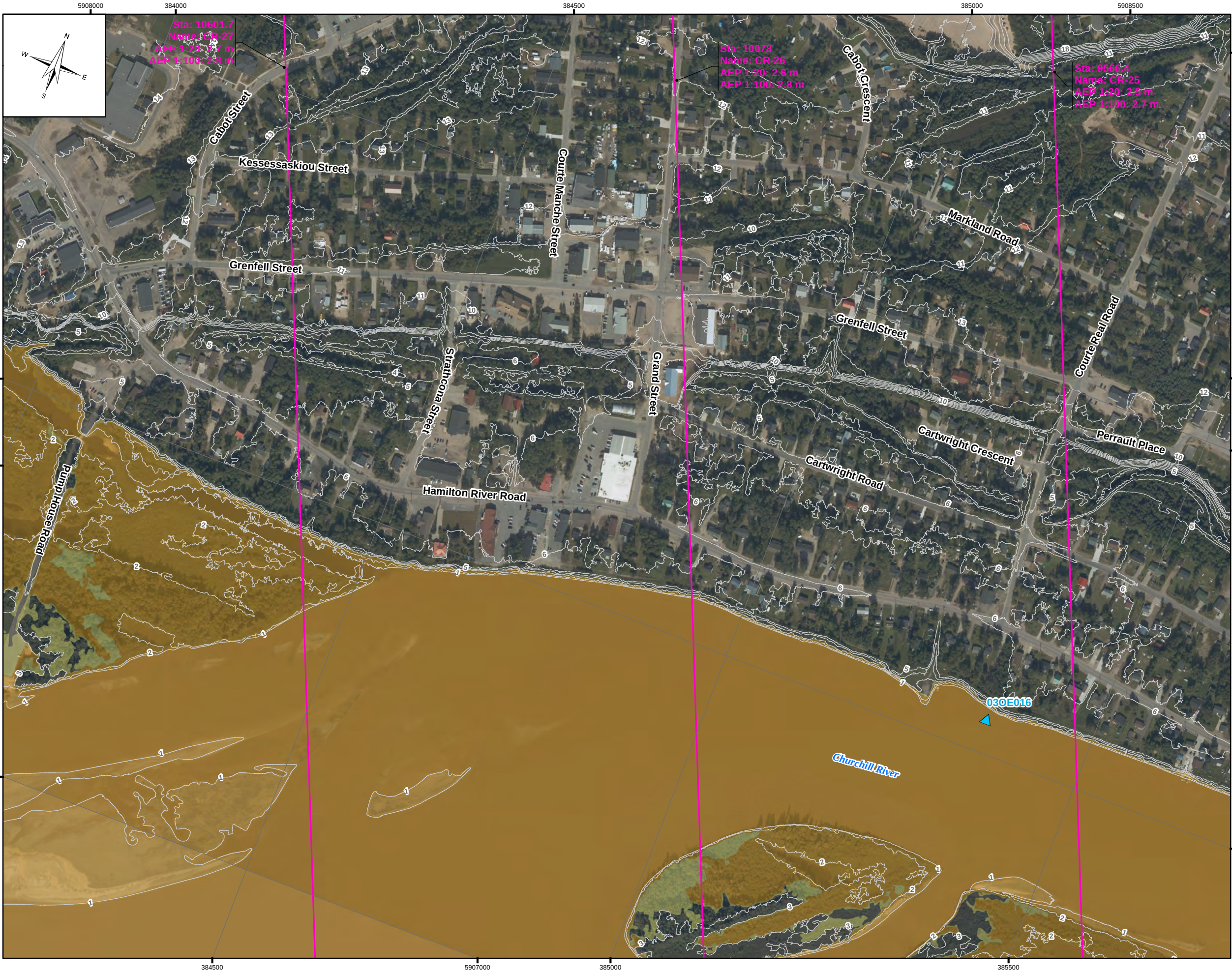
All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM), Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

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

CHURCHILL RIVER FLOOD RISK AND FORECASTING

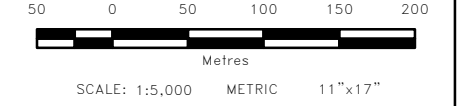
OPEN WATER FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-10

JUNE 2020	FIGURE 3.2	REV: 0
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- LEGEND:
- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
 - Cross Section
 - Water Survey of Canada
Gauge Location
 - River Centreline
 - 1m LIDAR Contour
 - 1:20 Year Open Water Flood Zone
 - 1:100 Year Open Water Flood Zone

- 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.



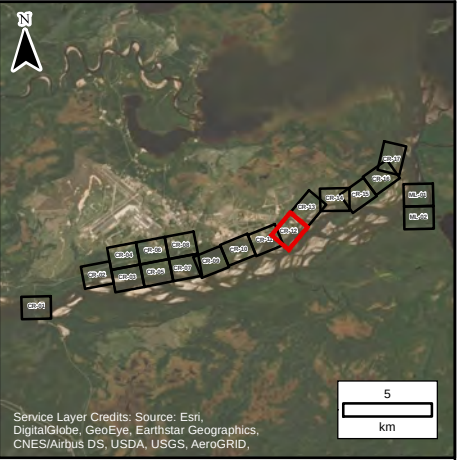
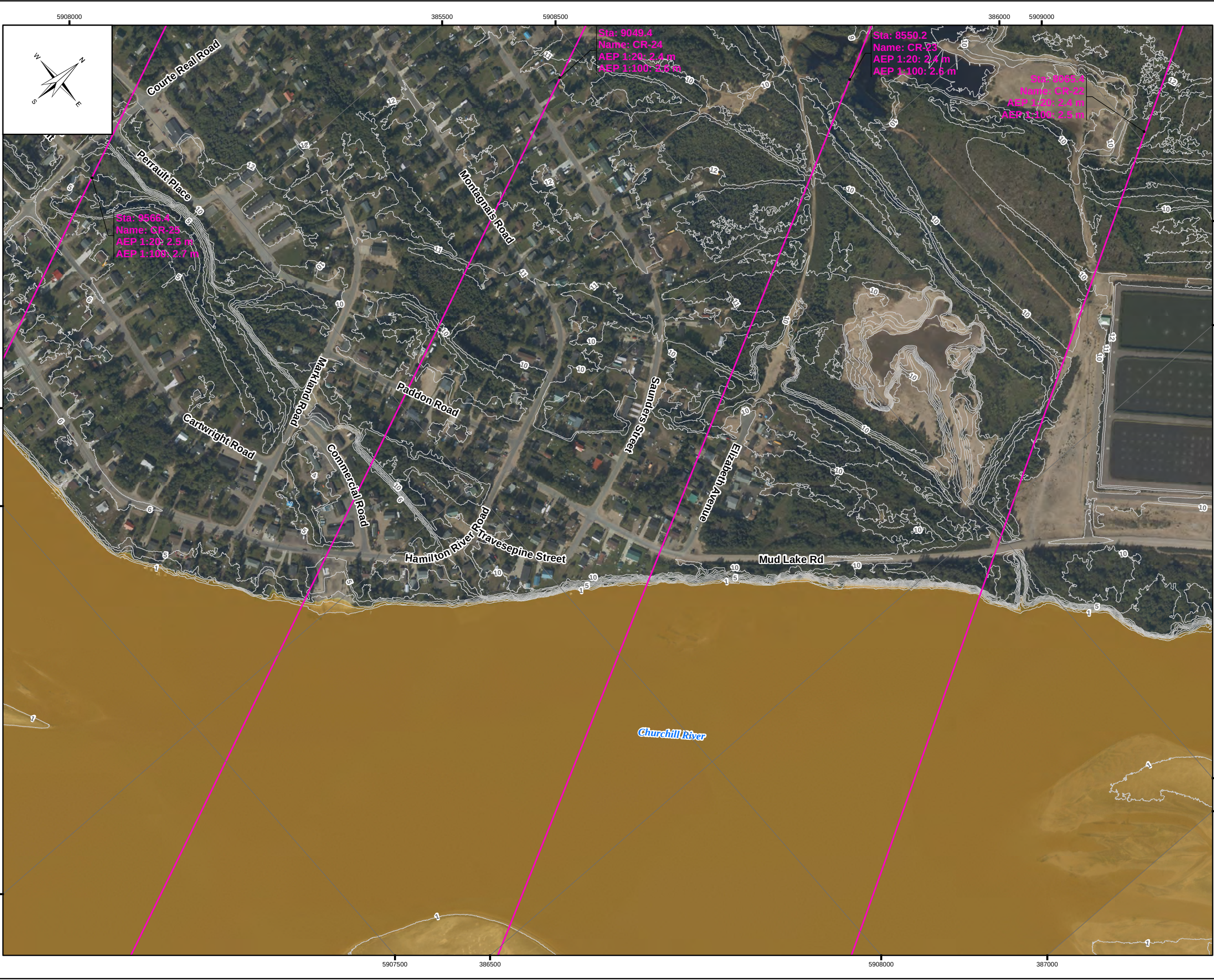
All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM), Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

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

REVISIONS / ISSUE

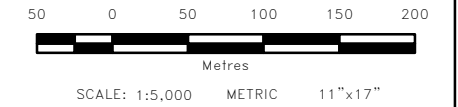
CHURCHILL RIVER FLOOD RISK AND FORECASTING

OPEN WATER FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-11



- LEGEND:
- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
 - Cross Section
 - Water Survey of Canada Gauge Location
 - River Centreline
 - 1m LIDAR Contour
 - 1:20 Year Open Water Flood Zone
 - 1:100 Year Open Water Flood Zone

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

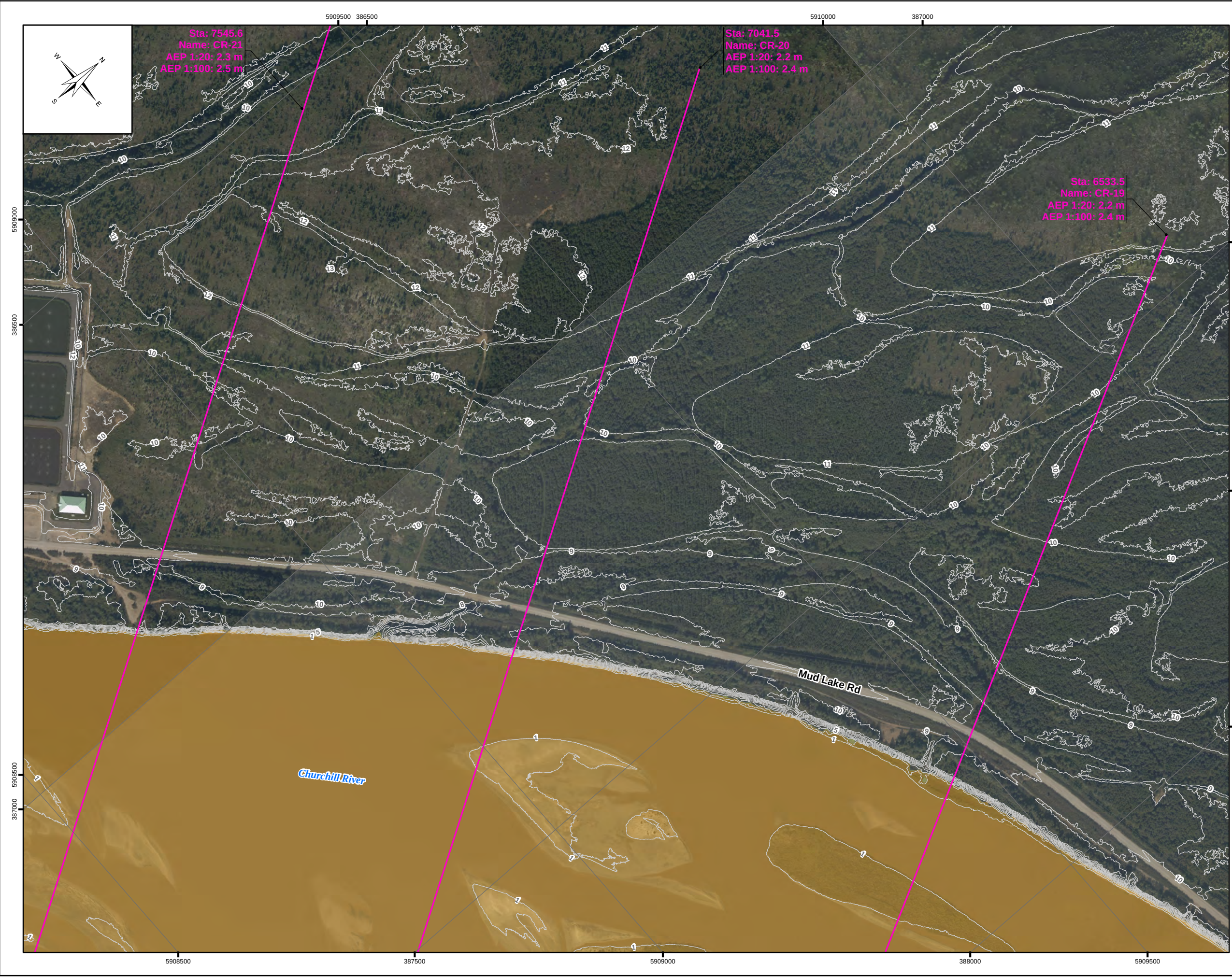


All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM), Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

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

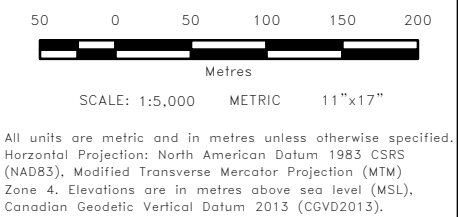
REVISIONS / ISSUE

CHURCHILL RIVER FLOOD RISK AND FORECASTING	
OPEN WATER FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-12	
JUNE 2020	FIGURE 3.2
	REV: 0

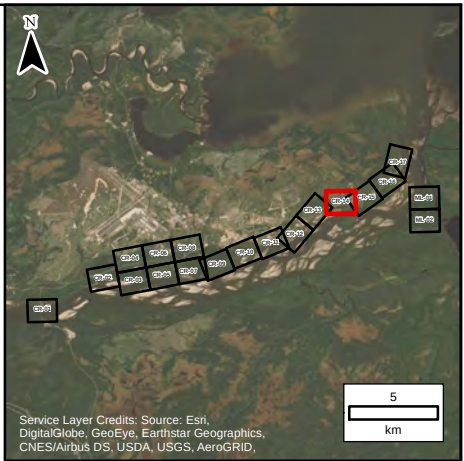
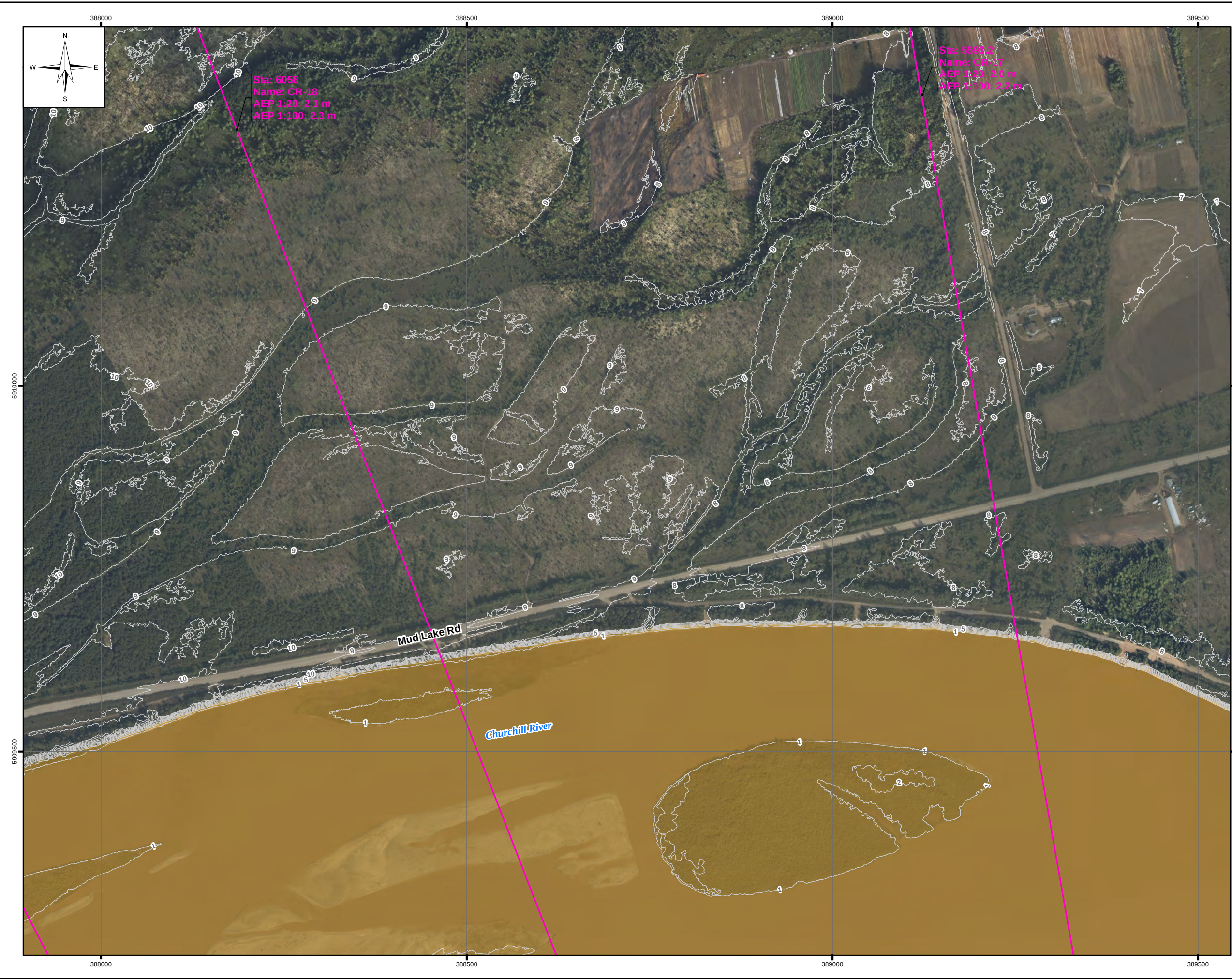


- LEGEND:**
- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
 - Water Survey of Canada Gauge Location
 - River Centreline
 - 1m LIDAR Contour
 - 1:20 Year Open Water Flood Zone
 - 1:100 Year Open Water Flood Zone

- 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.



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 FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-13					
JUNE 2020		FIGURE 3.2		REV: 0	



LEGEND:

- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
- Cross Section
- Water Survey of Canada Gauge Location
- River Centreline
- 1m LIDAR Contour
- 1:20 Year Open Water Flood Zone
- 1:100 Year Open Water Flood Zone

NOTES:

- Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
- 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

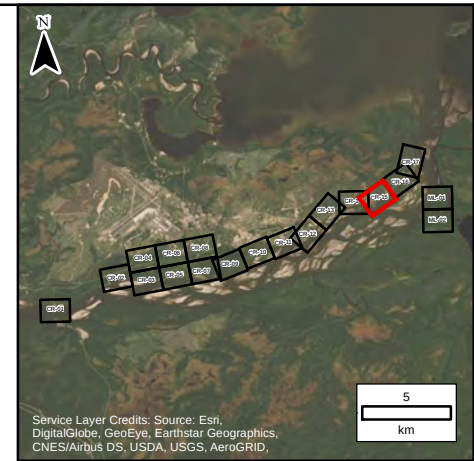
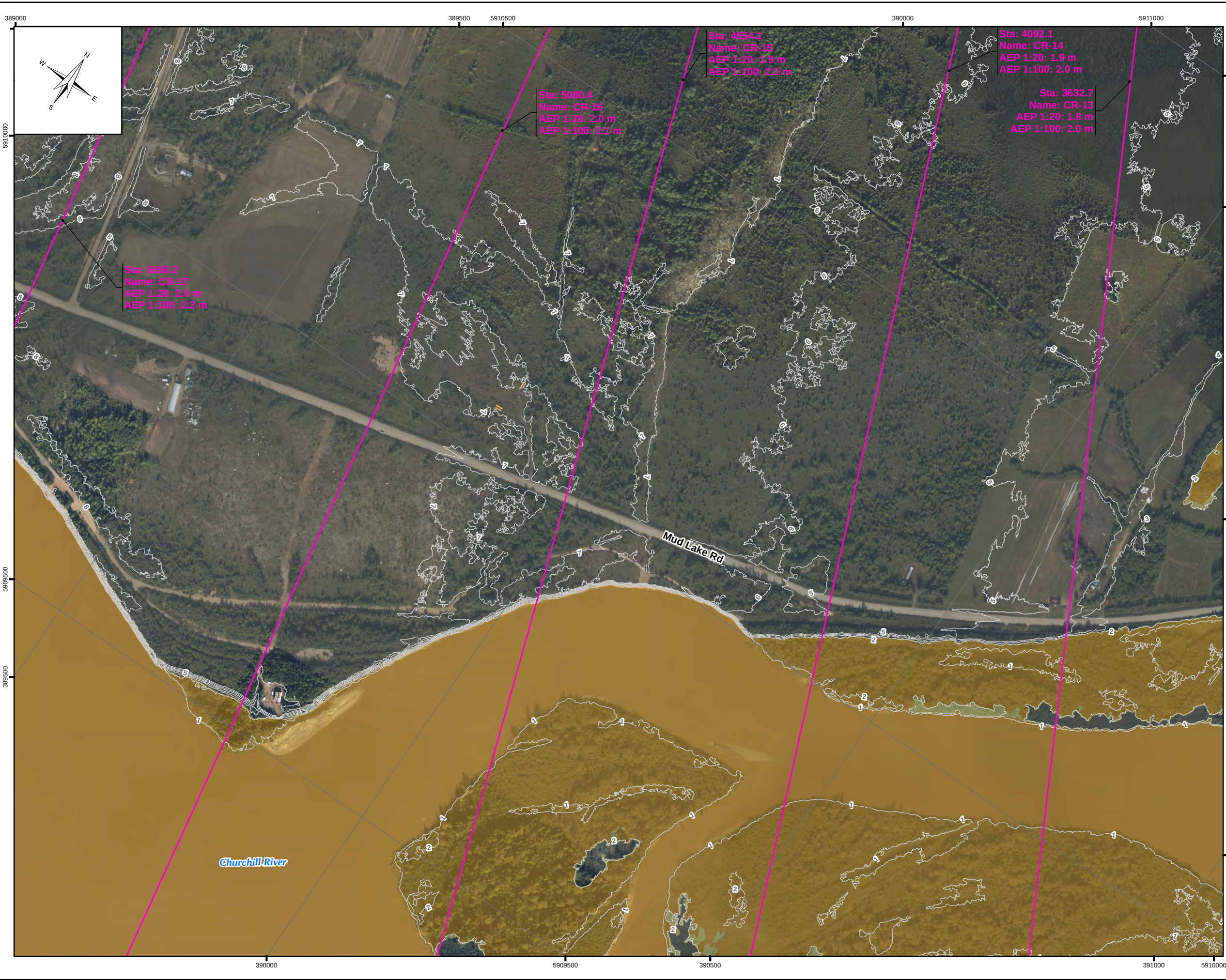
CHURCHILL RIVER FLOOD RISK AND FORECASTING

OPEN WATER FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-14

JUNE 2020	FIGURE 3.2	REV: 0
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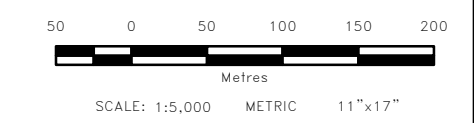
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FileName: P:\Projects\2018\18-3217-001\Dwg\GIS\MXD\Flood_Mapping\18-3217-001_Fig3.2_11x17.mxd
11"x17" PLOT SCALE 1:1



- LEGEND:**
- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
 - Cross Section
 - Water Survey of Canada Gauge Location
 - River Centreline
 - 1m LIDAR Contour
 - 1:20 Year Open Water Flood Zone
 - 1:100 Year Open Water Flood Zone

- NOTES:**
- Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
 - 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).

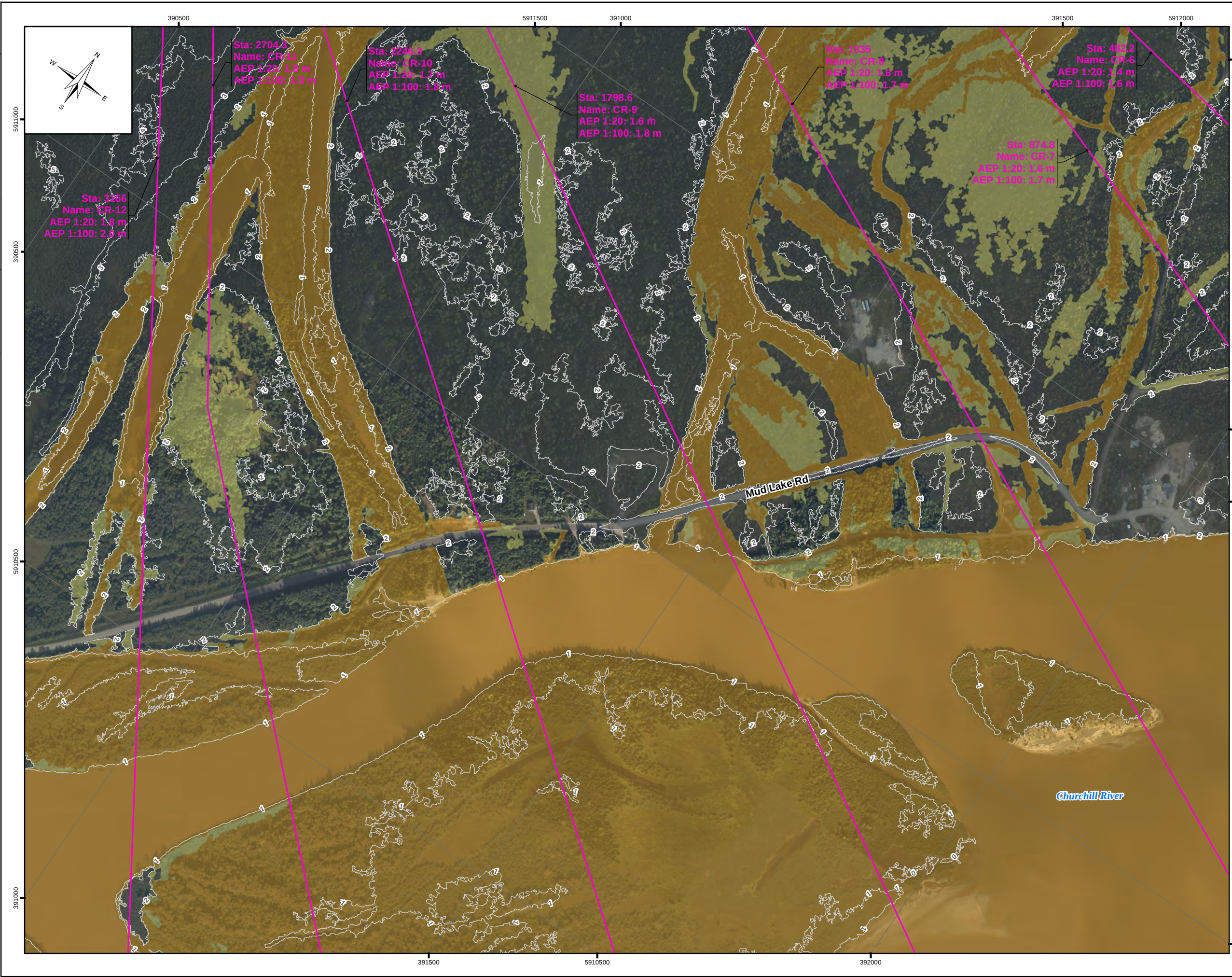
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

CHURCHILL RIVER FLOOD RISK AND FORECASTING

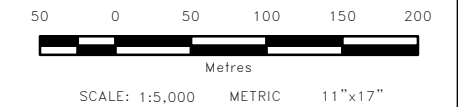
OPEN WATER FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-15

JUNE 2020	FIGURE 3.2	REV: 0
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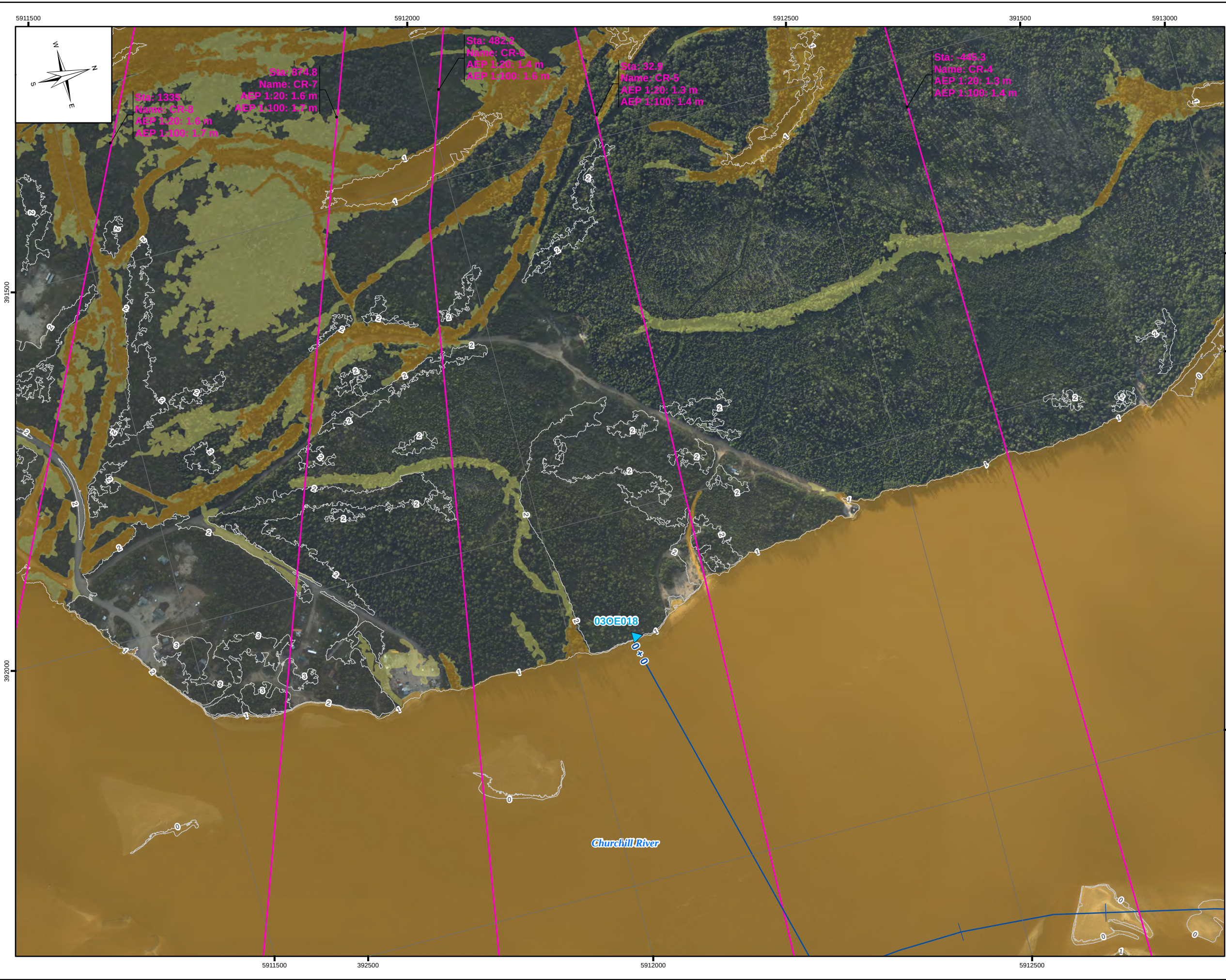
- LEGEND:**
- Sta: 2364.8
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
 - Water Survey of Canada Gauge Location
 - River Centreline
 - 1m LIDAR Contour
 - 1:20 Year Open Water Flood Zone
 - 1:100 Year Open Water Flood Zone

- NOTES:**
- Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
 - 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 FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-16				
JUNE 2020		FIGURE 3.2	REV:	0

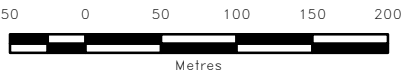


LEGEND:

- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
- Cross Section
- Water Survey of Canada
Gauge Location
- River Centreline
- 1m LIDAR Contour
- 1:20 Year Open Water Flood Zone
- 1:100 Year Open Water Flood Zone

NOTES:

- Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
- 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).

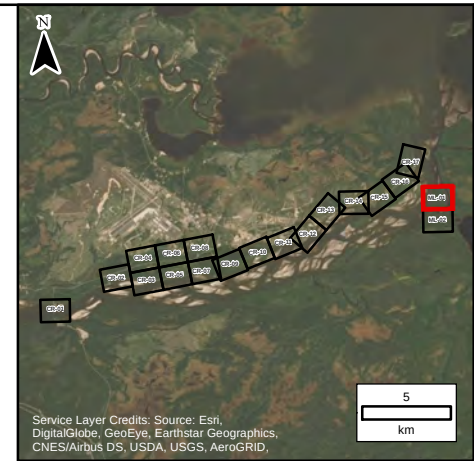
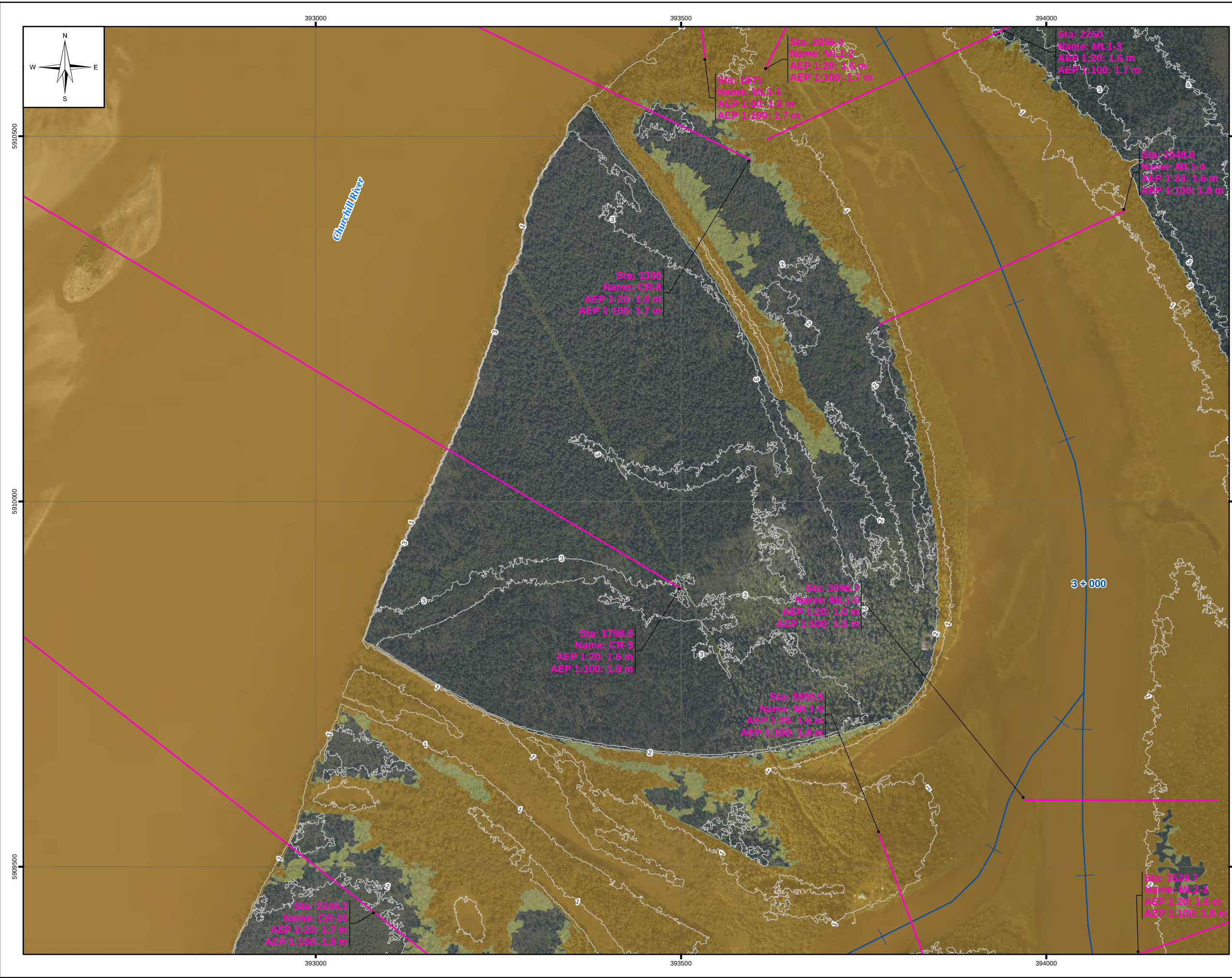
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY
REVISIONS / ISSUE				



CHURCHILL RIVER FLOOD RISK AND FORECASTING

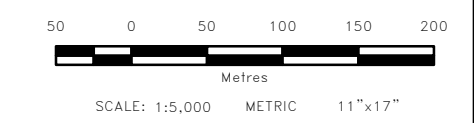
OPEN WATER FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-17

JUNE 2020	FIGURE 3.2	REV: 0
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- LEGEND:**
- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
 - Cross Section
 - Water Survey of Canada Gauge Location
 - River Centreline
 - 1m LIDAR Contour
 - 1:20 Year Open Water Flood Zone
 - 1:100 Year Open Water Flood Zone

- NOTES:**
- Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
 - 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 FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – ML-01

JUNE 2020	FIGURE 3.2	REV: 0
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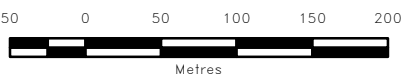


LEGEND:

-
- Sta: 23648
Name: CR-53
AEP: 120: 4.2 m
AEP: 100: 4.5 m
- Cross Section
- Water Survey of Canada
Gauge Location
- River Centreline
- 1m LiDAR Contour
- 1:20 Year Open Water Flood Zone
- 1:100 Year Open Water Flood Zone

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				



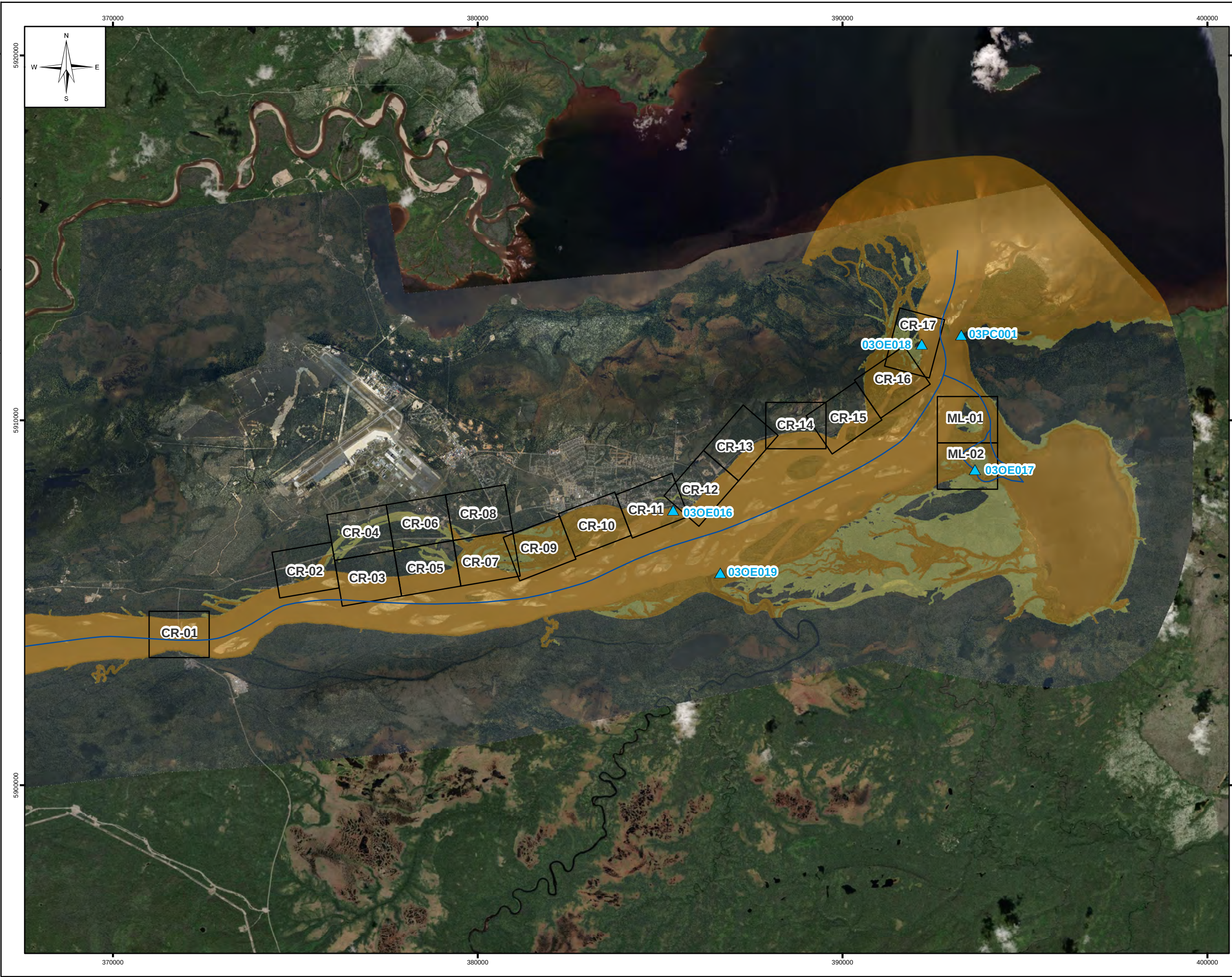
CHURCHILL RIVER FLOOD RISK AND FORECASTING

OPEN WATER FLOOD ZONE FOR CLIMATE
CHANGE, CURRENT DEVELOPMENT
(CLC-CD) - ML-02

JUNE 2020	FIGURE 3.2	REV: 0
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File Name: P:\Projects\2018\18-3217-001\Drawings\GIS\MXD\Flood_Mapping\18-3217-001_Fig4.1_11x17.mxd
11"x17" PLOT SCALE 1:1

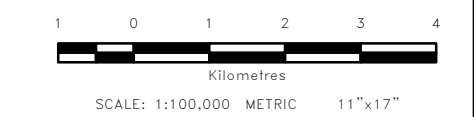
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- LEGEND:
- ▲ Water Survey of Canada Gauge Location
 - River Centreline
 - Orange shaded area: 1:20 Year Ice Affected Flood Zone
 - Yellow shaded area: 1:100 Year Ice Affected Flood Zone
 - Black outline: Map Extents

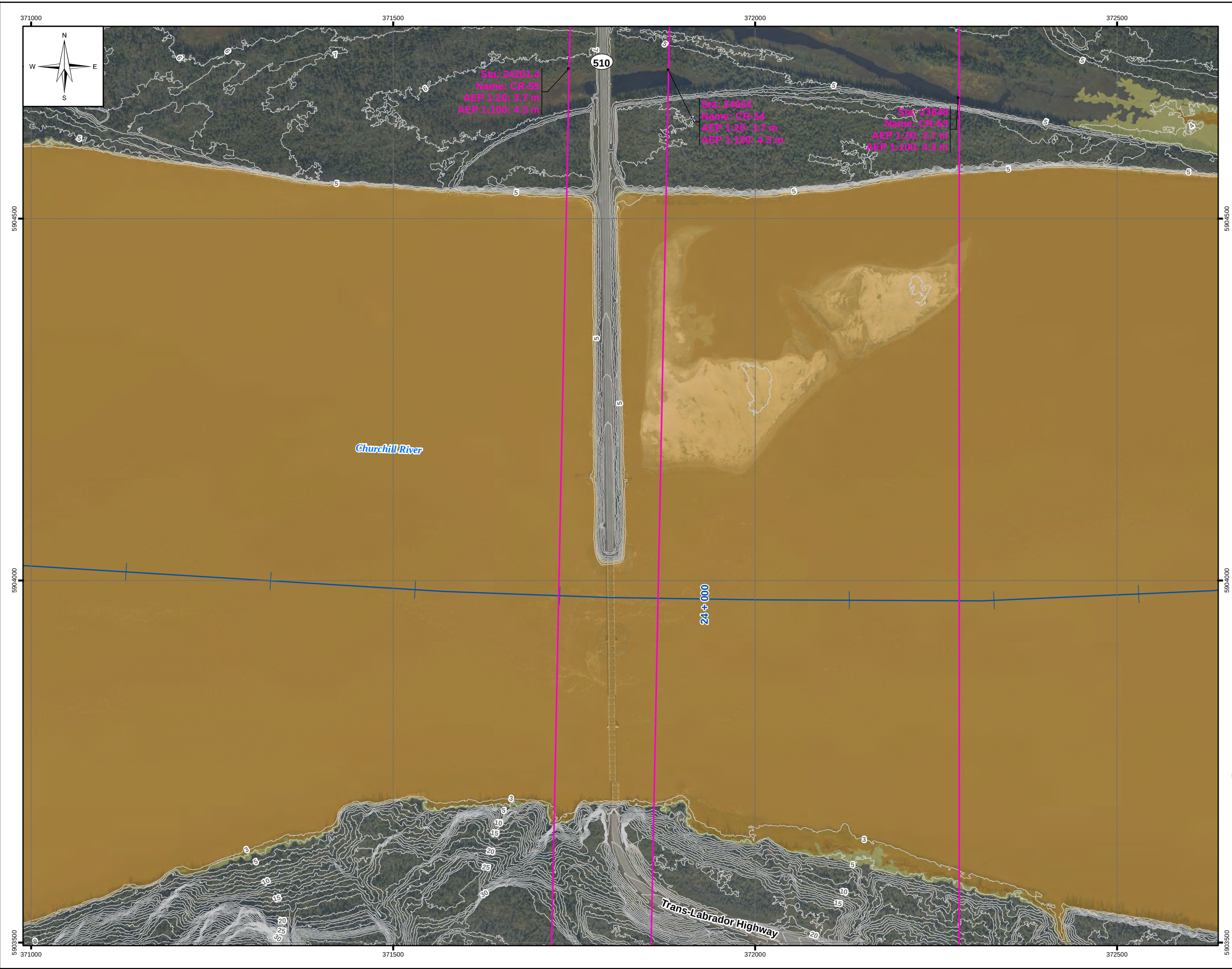
NOTES:

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



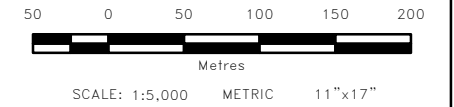
All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM)
Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

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 FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – OVERVIEW MAP					
JUNE 2020		FIGURE 4.1		REV:	0



- LEGEND:**
- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
 - Cross Section
 - Water Survey of Canada
Gauge Location
 - River Centreline
 - 1m LIDAR Contour
 - 1:20 Year Ice Affected Flood Zone
 - 1:100 Year Ice Affected Flood Zone

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

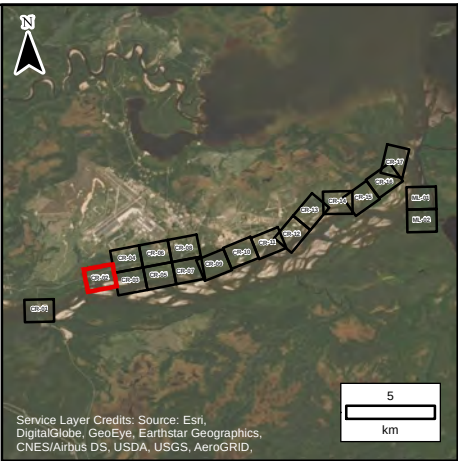
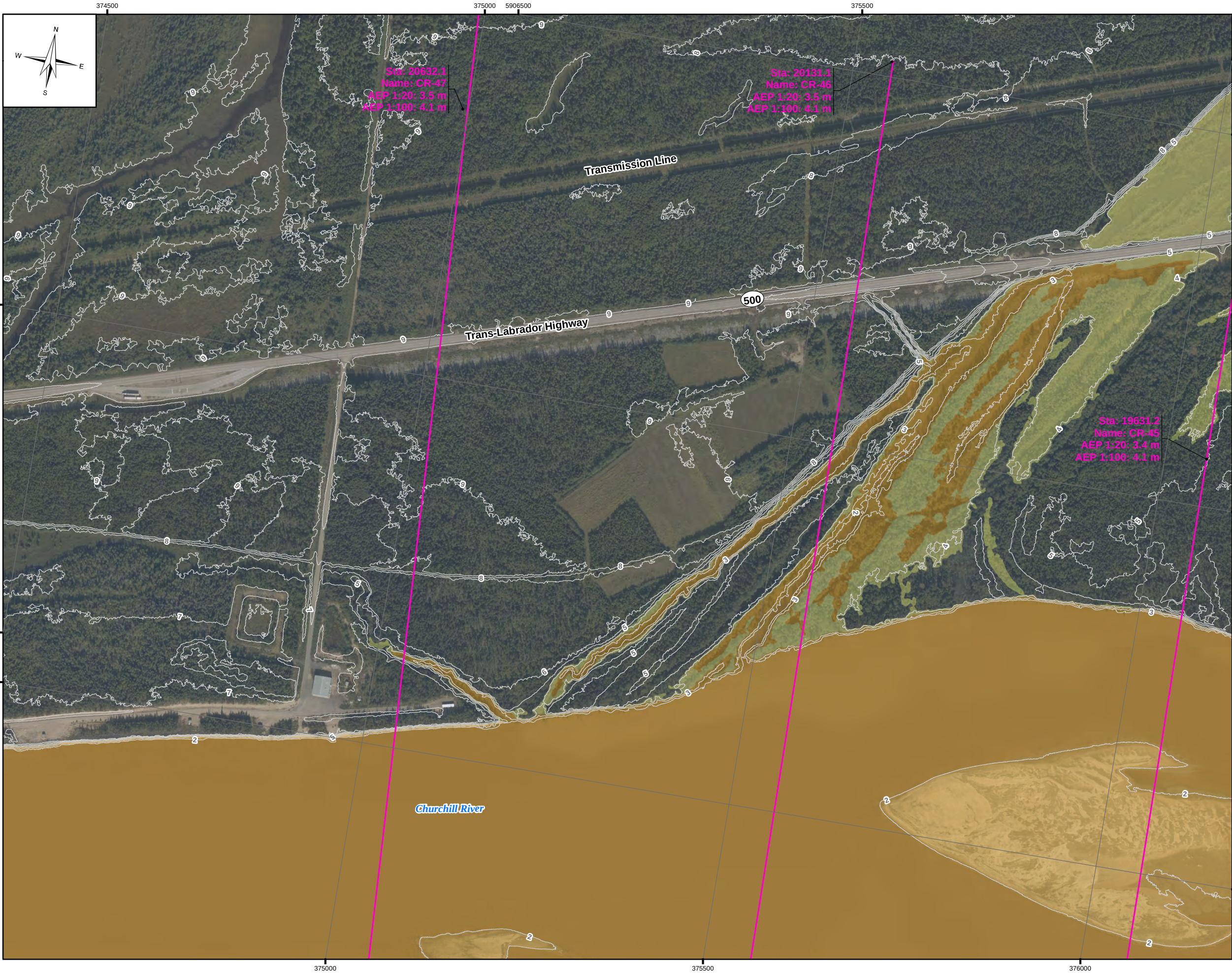


All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM)
Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

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 FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-01					
JUNE 2020		FIGURE 4.2		REV: 0	

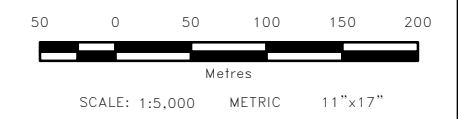
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File Name: P:\Projects\2018\18-3217-001\Drawings\GIS\MXD\Flood_Mapping\18-3217-001_Fig4.2_11x17.mxd
11"x17" PLOT SCALE 1:1



- LEGEND:**
- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
 - Cross Section
 - Water Survey of Canada Gauge Location
 - River Centreline
 - 1m LIDAR Contour
 - 1:20 Year Ice Affected Flood Zone
 - 1:100 Year Ice Affected Flood Zone

- 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.

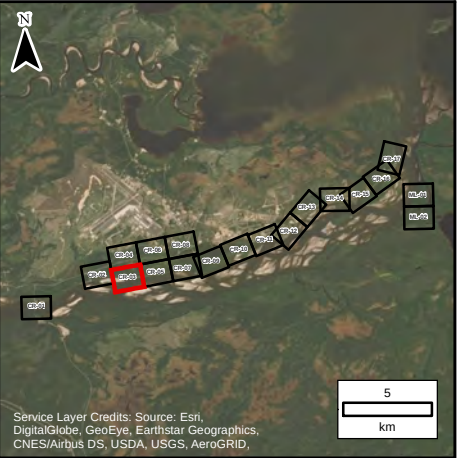
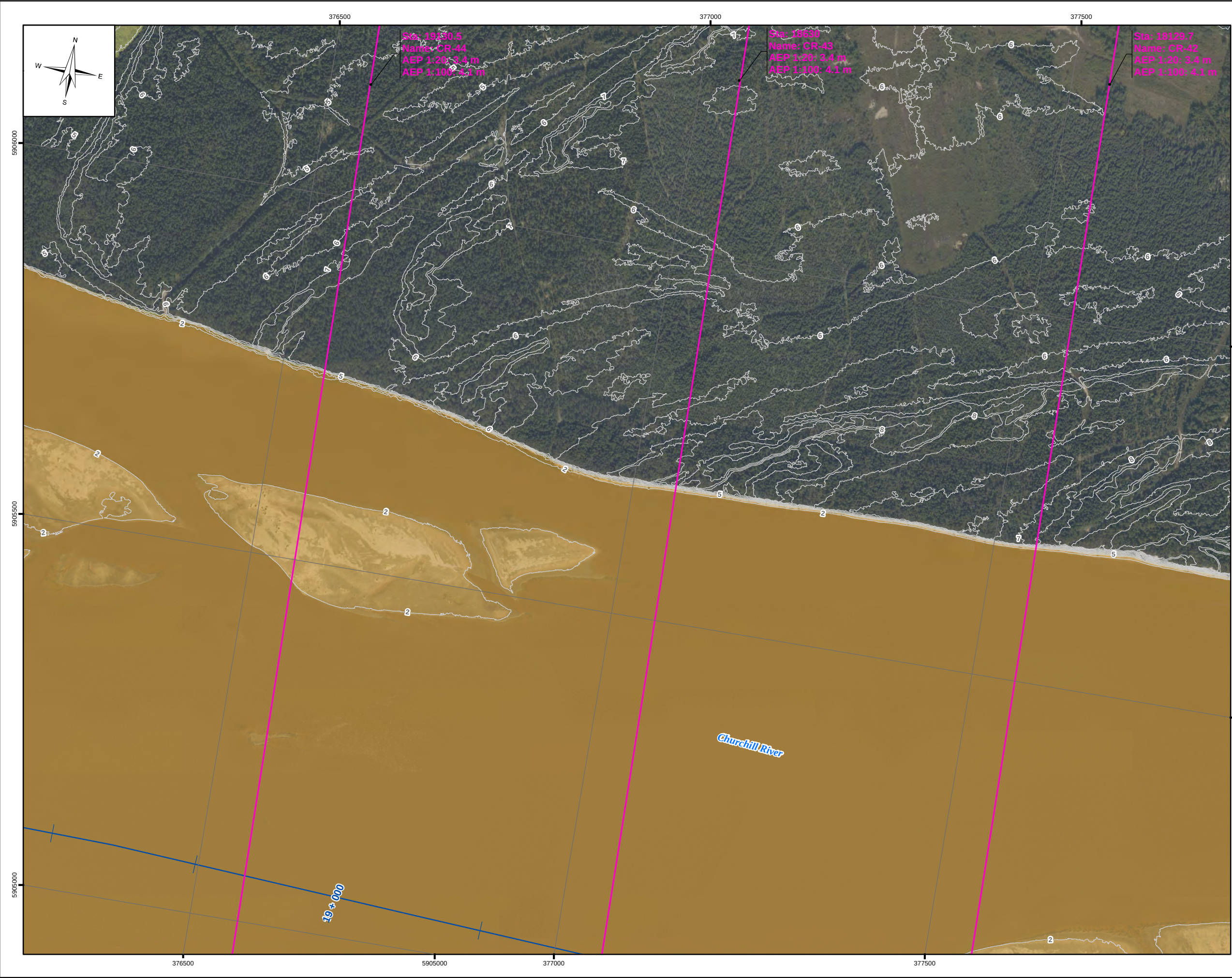


All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM)
Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY
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CHURCHILL RIVER FLOOD RISK AND FORECASTING		
ICE AFFECTED FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-02		
JUNE 2020	FIGURE 4.2	REV: 0

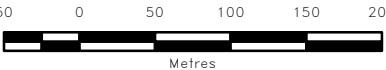


LEGEND:

- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
- Cross Section
- Water Survey of Canada Gauge Location
- River Centreline
- 1m LIDAR Contour
- 1:20 Year Ice Affected Flood Zone
- 1:100 Year Ice Affected Flood Zone

NOTES:

- Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
- 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"

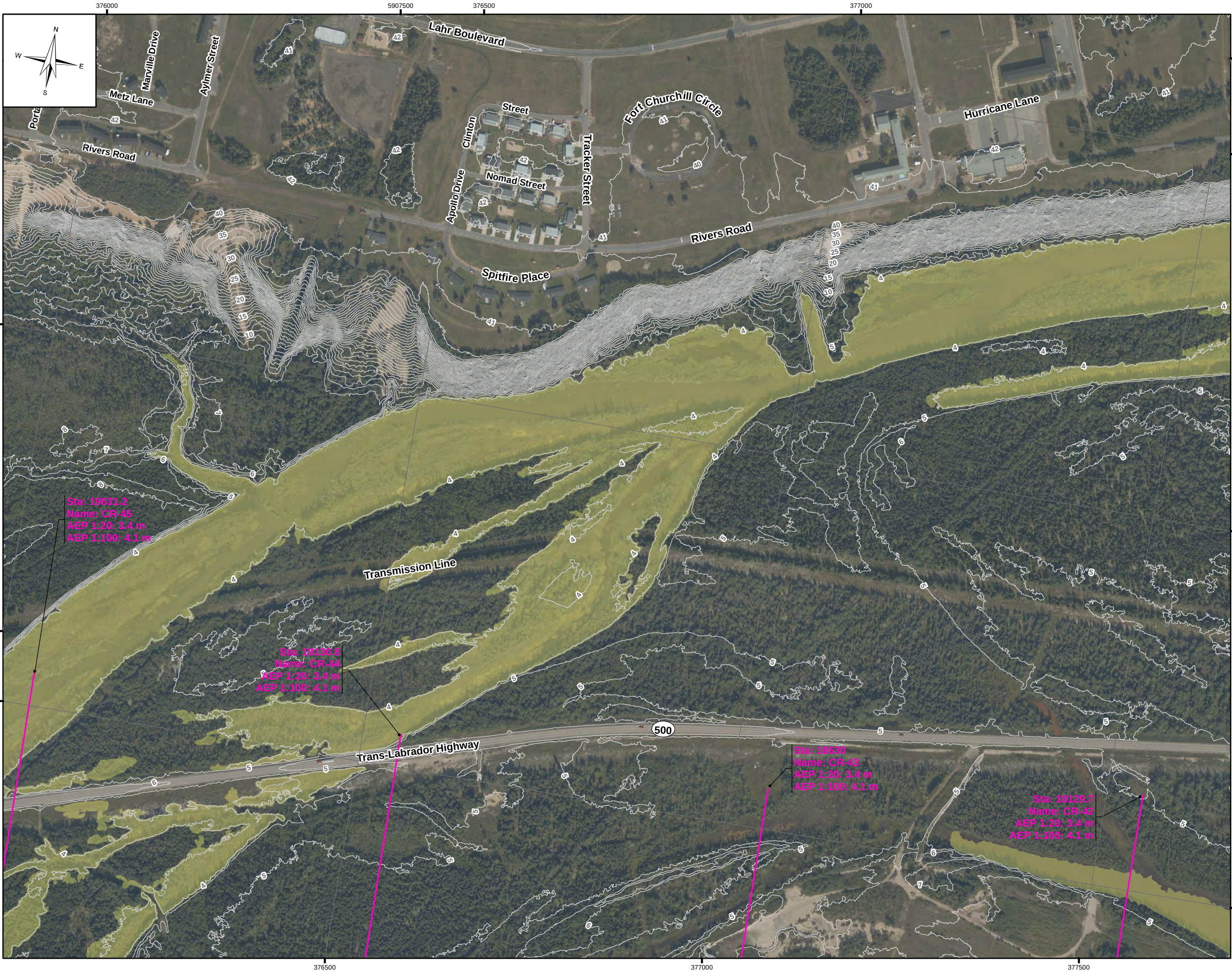
All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM)
Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

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

CHURCHILL RIVER FLOOD RISK AND FORECASTING

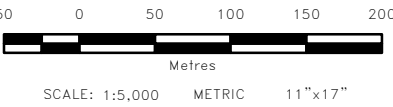
ICE AFFECTED FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-03

JUNE 2020	FIGURE 4.2	REV: 0
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- LEGEND:**
- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
 - Cross Section
 - Water Survey of Canada Gauge Location
 - River Centreline
 - 1m LIDAR Contour
 - 1:20 Year Ice Affected Flood Zone
 - 1:100 Year Ice Affected Flood Zone

- 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.



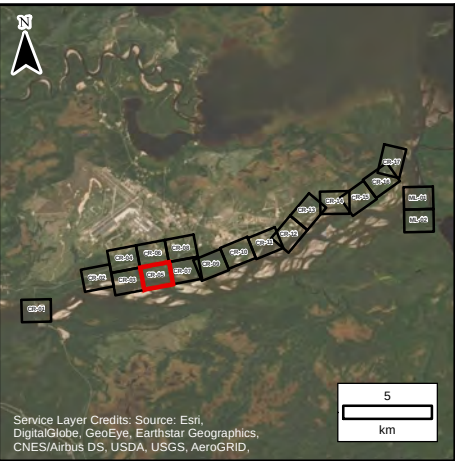
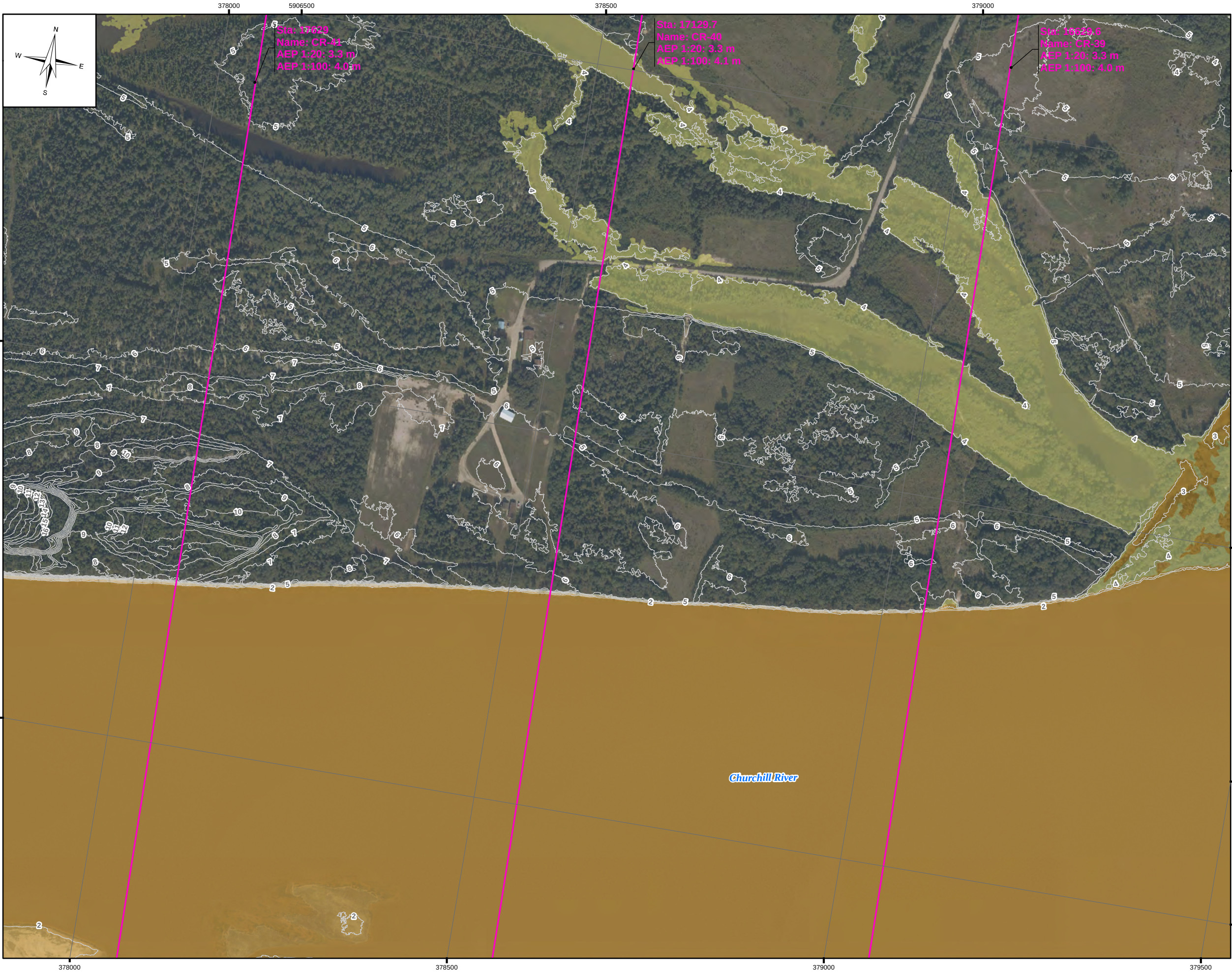
All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM)
Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

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CHURCHILL RIVER FLOOD RISK AND FORECASTING

ICE AFFECTED FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-04

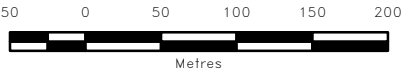


LEGEND:

- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
- Cross Section
- Water Survey of Canada
Gauge Location
- River Centreline
- 1m LIDAR Contour
- 1:20 Year Ice Affected Flood Zone
- 1:100 Year Ice Affected Flood Zone

NOTES:

- Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
- 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).

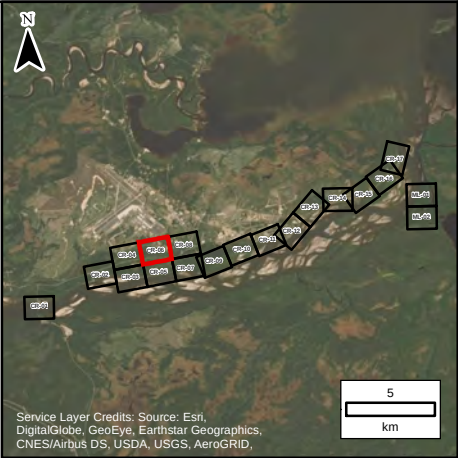
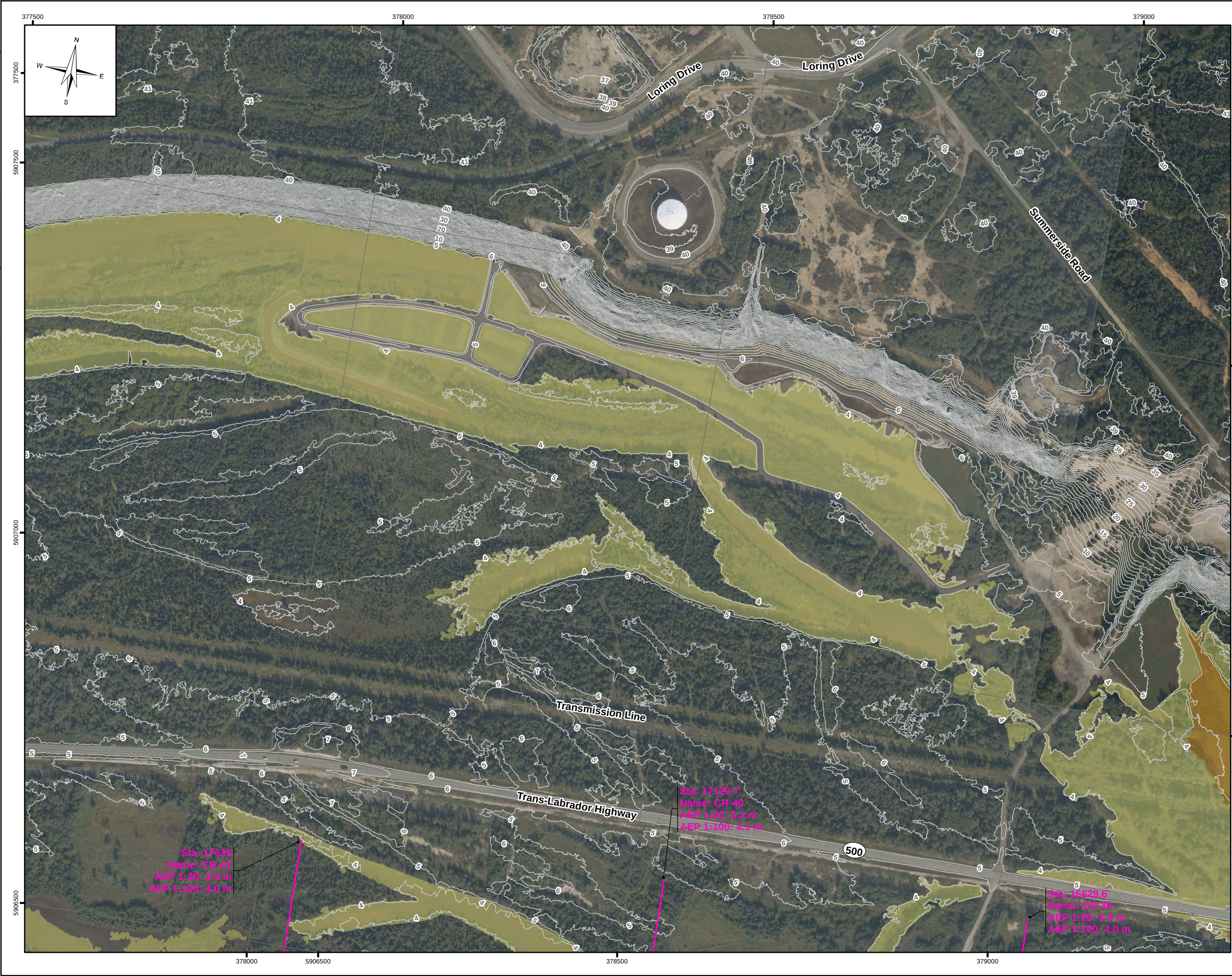
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

KGS
GROUP
CONSULTING
ENGINEERS

CHURCHILL RIVER FLOOD RISK AND FORECASTING

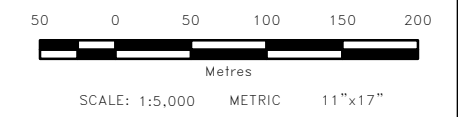
ICE AFFECTED FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-05

JUNE 2020	FIGURE 4.2	REV: 0
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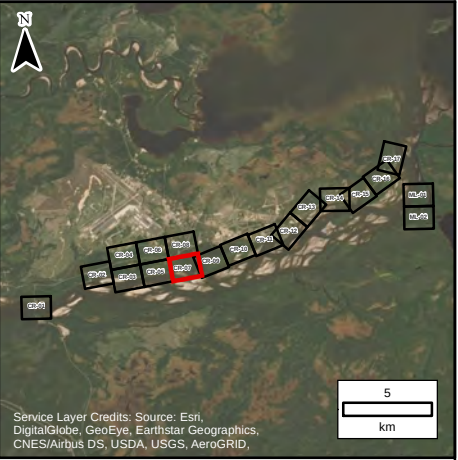
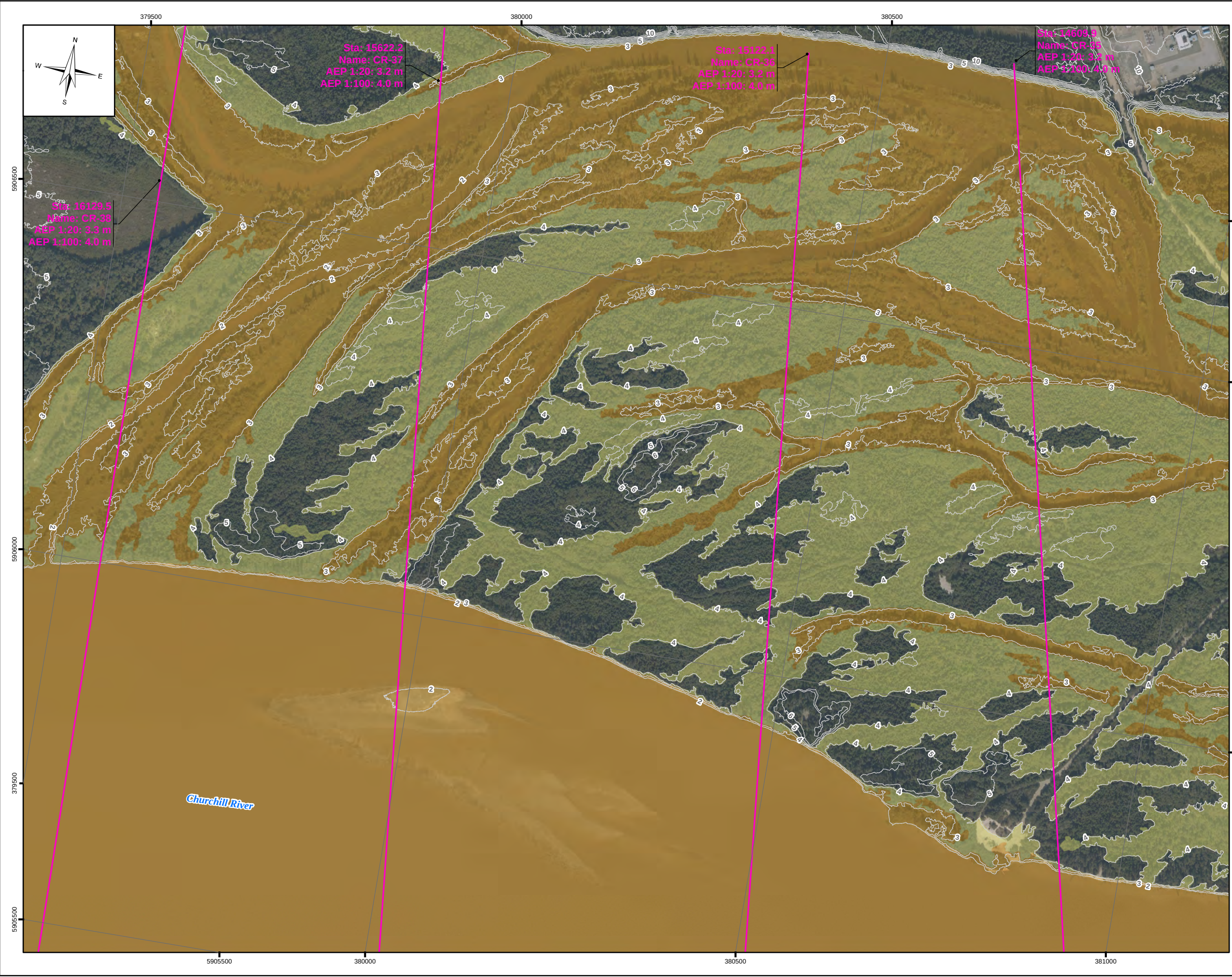
- LEGEND:**
- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
 - Cross Section
 - Water Survey of Canada Gauge Location
 - River Centreline
 - 1m LIDAR Contour
 - 1:20 Year Ice Affected Flood Zone
 - 1:100 Year Ice Affected Flood Zone

- 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.



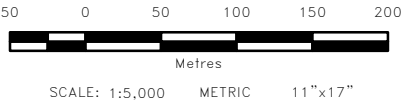
All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM)
Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

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 FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-06					
JUNE 2020		FIGURE 4.2		REV:	0



- LEGEND:**
- Sta: 23648, Name: CR-53, AEP 1:20: 4.2 m, AEP 1:100: 4.5 m
 - Water Survey of Canada Gauge Location
 - River Centreline
 - 1m LIDAR Contour
 - 1:20 Year Ice Affected Flood Zone
 - 1:100 Year Ice Affected Flood Zone

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



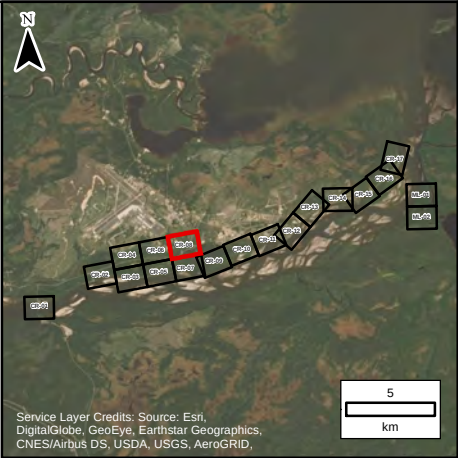
All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM), Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

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

CHURCHILL RIVER FLOOD RISK AND FORECASTING

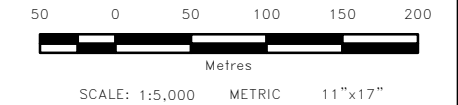
ICE AFFECTED FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-07

JUNE 2020	FIGURE 4.2	REV: 0
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- LEGEND:**
- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
 - Water Survey of Canada Gauge Location
 - River Centreline
 - 1m LIDAR Contour
 - 1:20 Year Ice Affected Flood Zone
 - 1:100 Year Ice Affected Flood Zone

- 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.



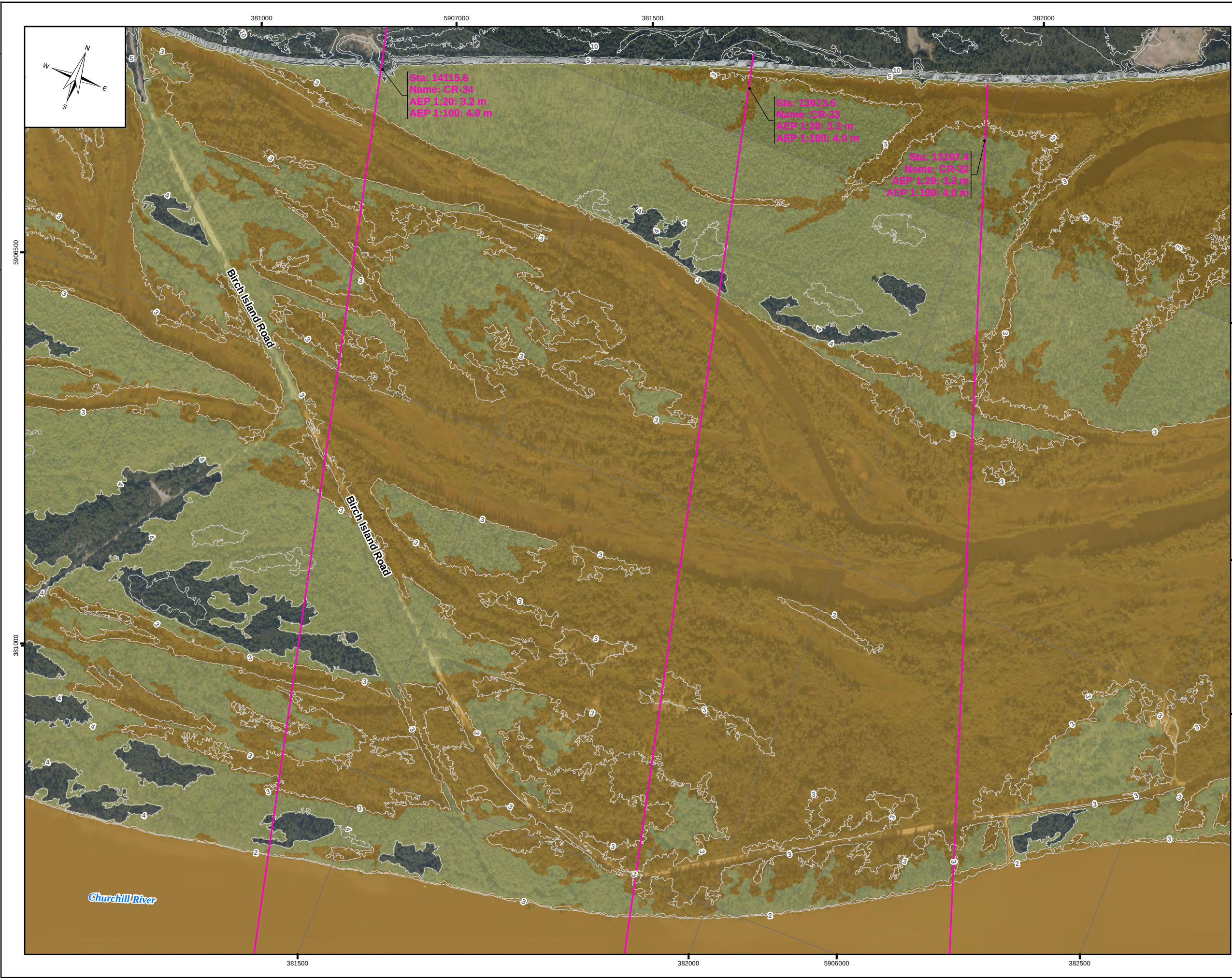
All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM), Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

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CHURCHILL RIVER FLOOD RISK AND FORECASTING

ICE AFFECTED FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-08

JUNE 2020	FIGURE 4.2	REV: 0
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LEGEND:

- Sta: 23648, Name: CR-53, AEP 1:20: 4.2 m, AEP 1:100: 4.5 m
- Cross Section
- Water Survey of Canada Gauge Location
- River Centreline
- 1m LIDAR Contour
- 1:20 Year Ice Affected Flood Zone
- 1:100 Year Ice Affected Flood Zone

NOTES:

- Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
- 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).

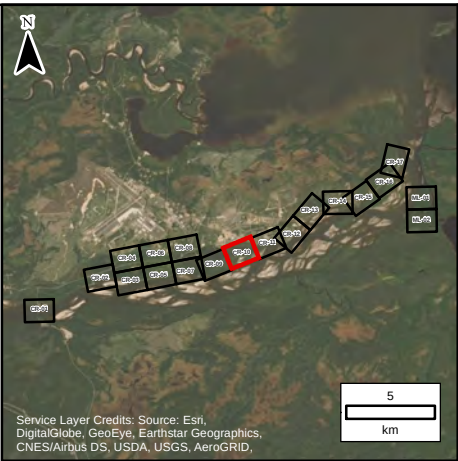
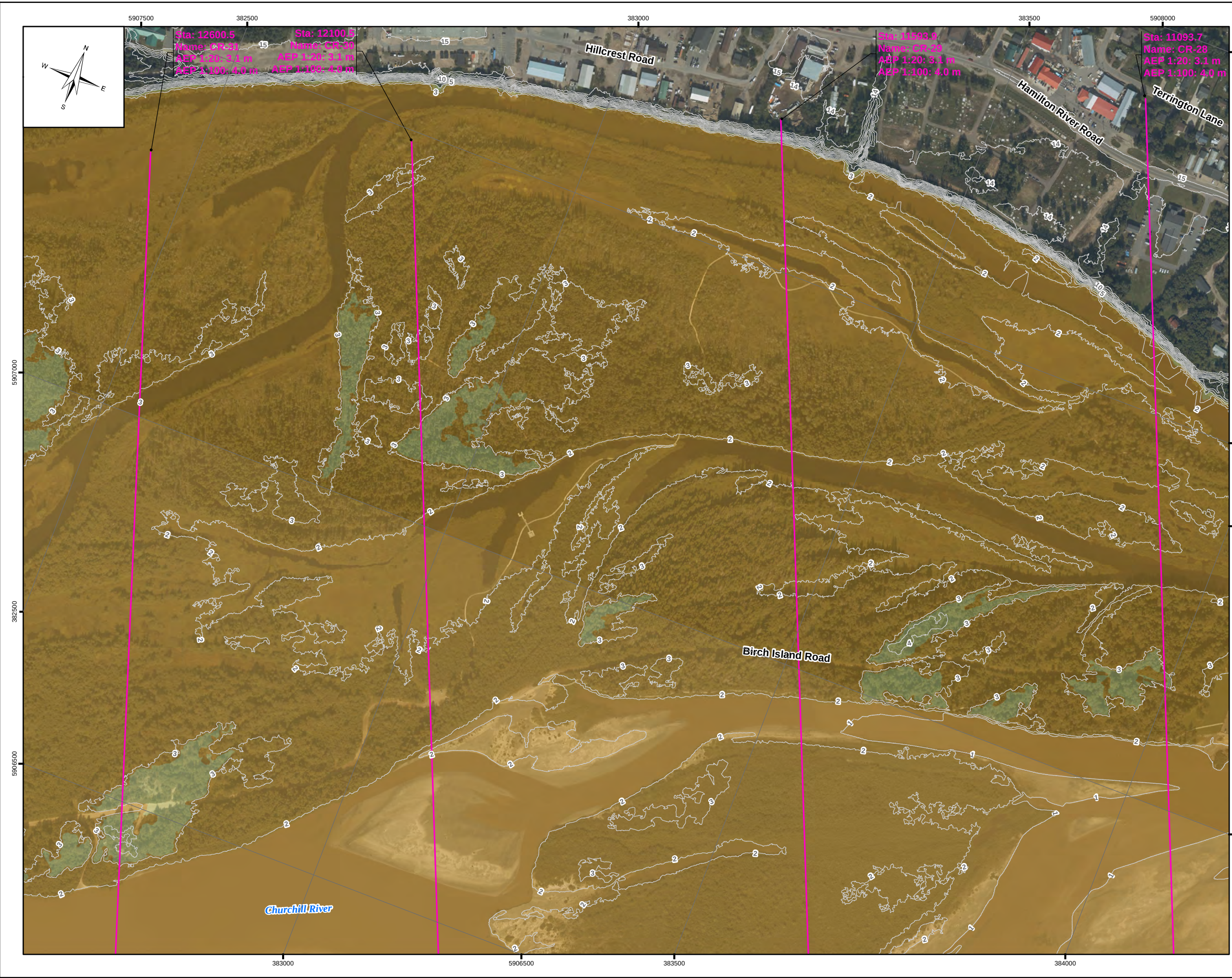
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY
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CHURCHILL RIVER FLOOD RISK AND FORECASTING

ICE AFFECTED FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-09

JUNE 2020	FIGURE 4.2	REV: 0
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LEGEND:

- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
- Cross Section
- Water Survey of Canada Gauge Location
- River Centreline
- 1m LIDAR Contour
- 1:20 Year Ice Affected Flood Zone
- 1:100 Year Ice Affected Flood Zone

NOTES:

- Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
- 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"

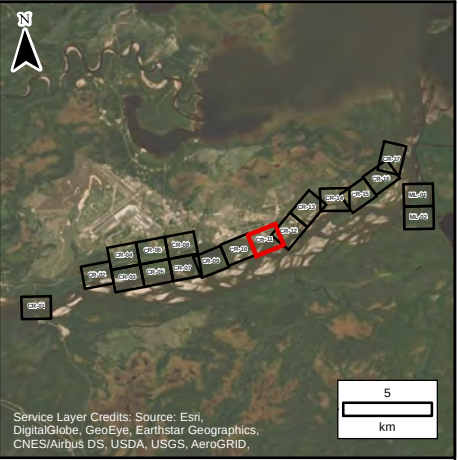
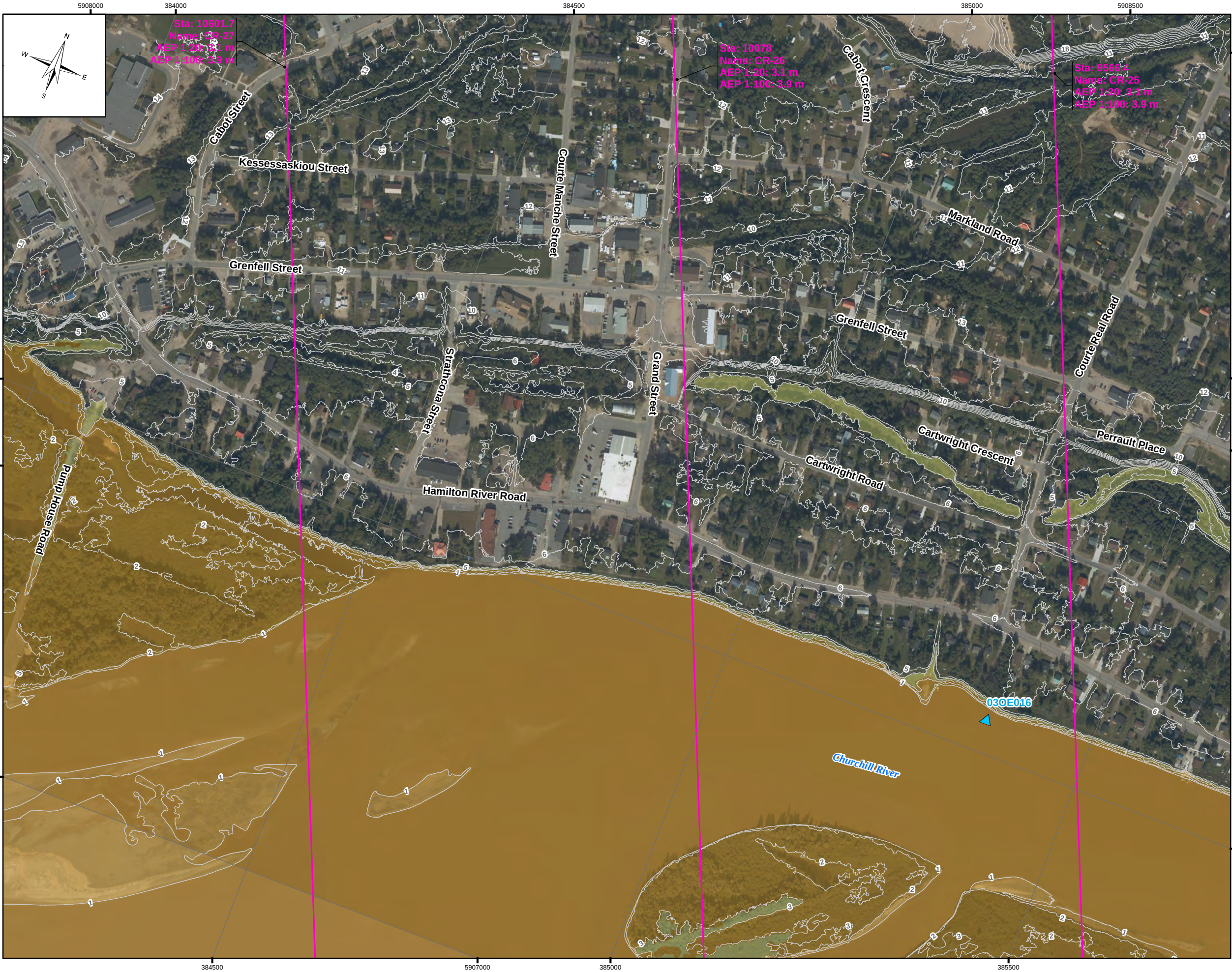
All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM)
Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

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

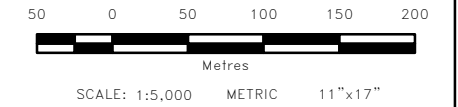
ICE AFFECTED FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-10

JUNE 2020	FIGURE 4.2	REV: 0
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- LEGEND:**
- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
 - Cross Section
 - Water Survey of Canada Gauge Location
 - River Centreline
 - 1m LIDAR Contour
 - 1:20 Year Ice Affected Flood Zone
 - 1:100 Year Ice Affected Flood Zone

- NOTES:**
- Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
 - 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).

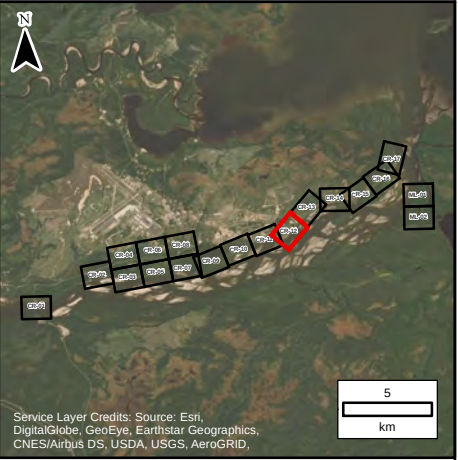
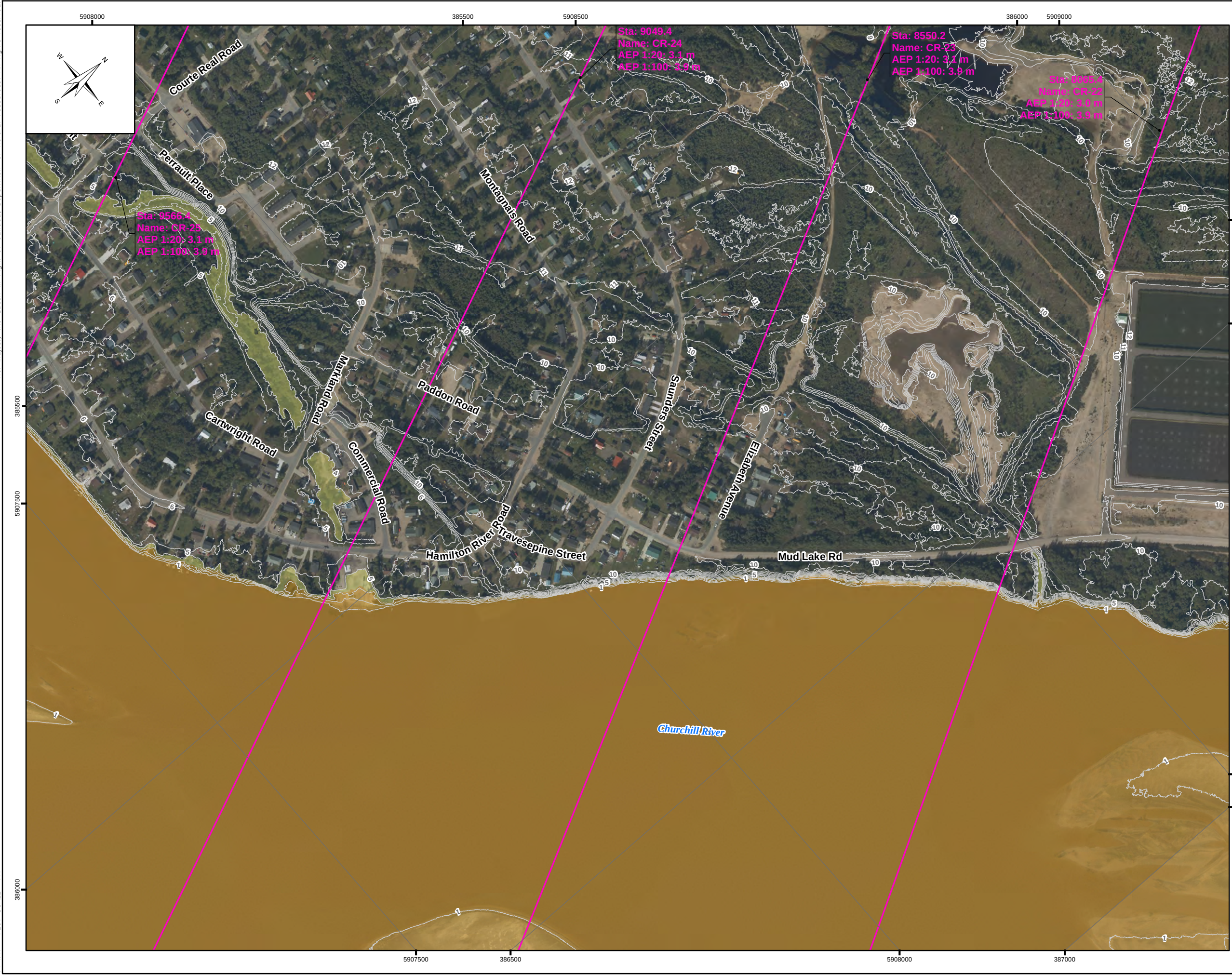
0 20/06/30 ISSUED WITH FINAL REPORT		DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY
REVISIONS / ISSUE			



CHURCHILL RIVER FLOOD RISK AND FORECASTING

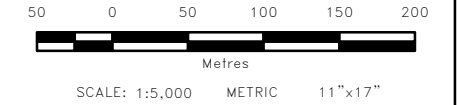
ICE AFFECTED FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-11

JUNE 2020	FIGURE 4.2	REV: 0
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- LEGEND:
- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
 - Cross Section
 - Water Survey of Canada Gauge Location
 - River Centreline
 - 1m LIDAR Contour
 - 1:20 Year Ice Affected Flood Zone
 - 1:100 Year Ice Affected Flood Zone

- NOTES:
- Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
 - 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

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KGS

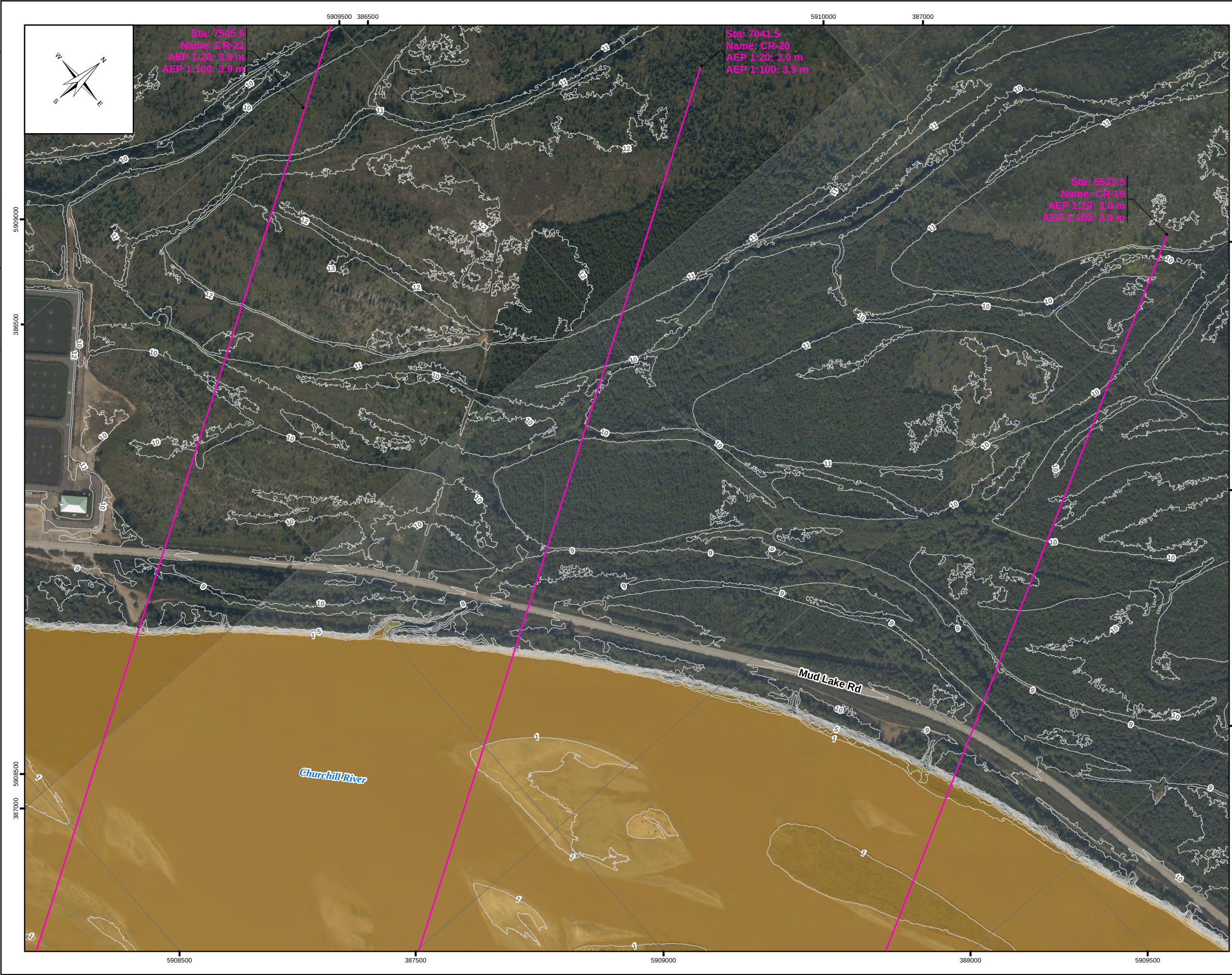
GROUP

CONSULTING ENGINEERS

CHURCHILL RIVER FLOOD RISK AND FORECASTING

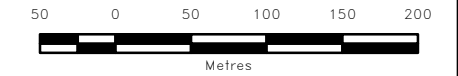
ICE AFFECTED FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-12

JUNE 2020	FIGURE 4.2	REV: 0
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- LEGEND:**
- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
 - Water Survey of Canada Gauge Location
 - River Centreline
 - 1m LIDAR Contour
 - 1:20 Year Ice Affected Flood Zone
 - 1:100 Year Ice Affected Flood Zone

- NOTES:**
- Imagery is supplied by ATLAS Geomatics and dated as September 11 – 13, 2019.
 - 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).

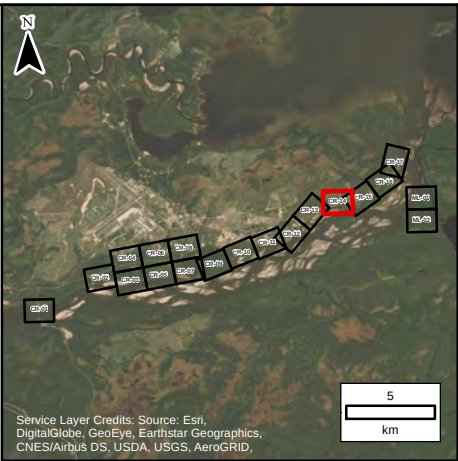
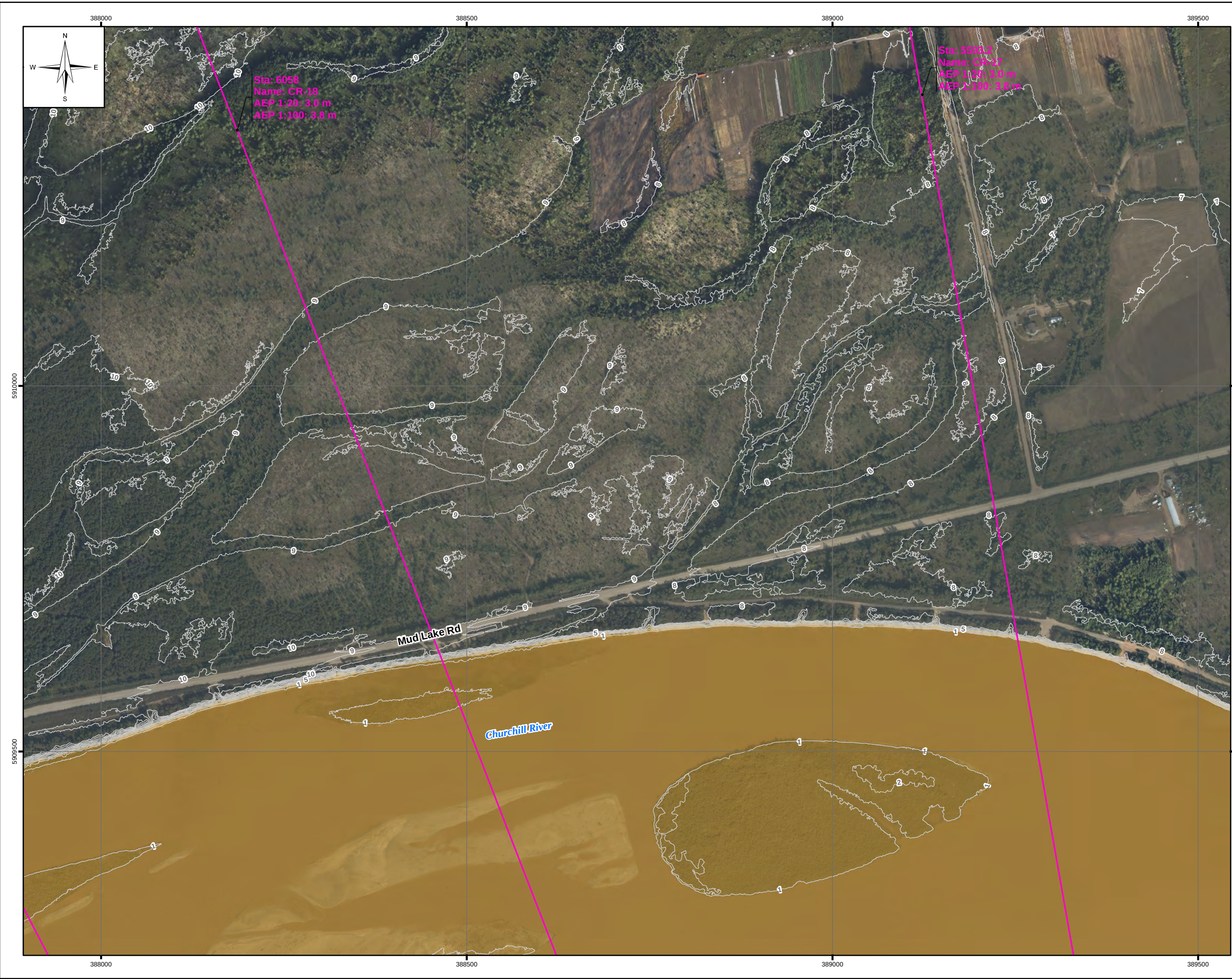
0	20/06/30	ISSUED WITH FINAL REPORT	DSB	MSW
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

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CHURCHILL RIVER FLOOD RISK AND FORECASTING

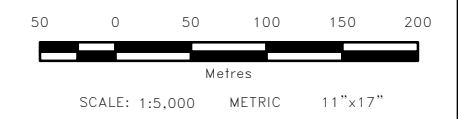
ICE AFFECTED FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-13

JUNE 2020	FIGURE 4.2	REV: 0
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- LEGEND:**
- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
 - Cross Section
 - Water Survey of Canada Gauge Location
 - River Centreline
 - 1m LIDAR Contour
 - 1:20 Year Ice Affected Flood Zone
 - 1:100 Year Ice Affected Flood Zone

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



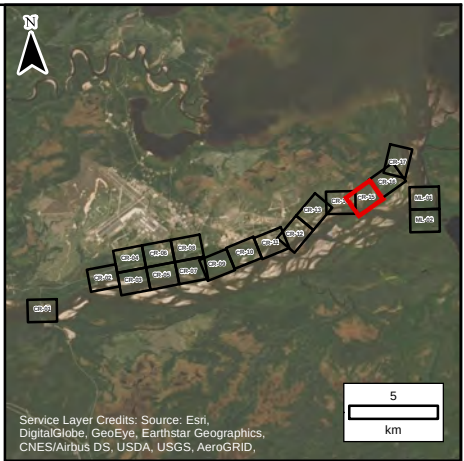
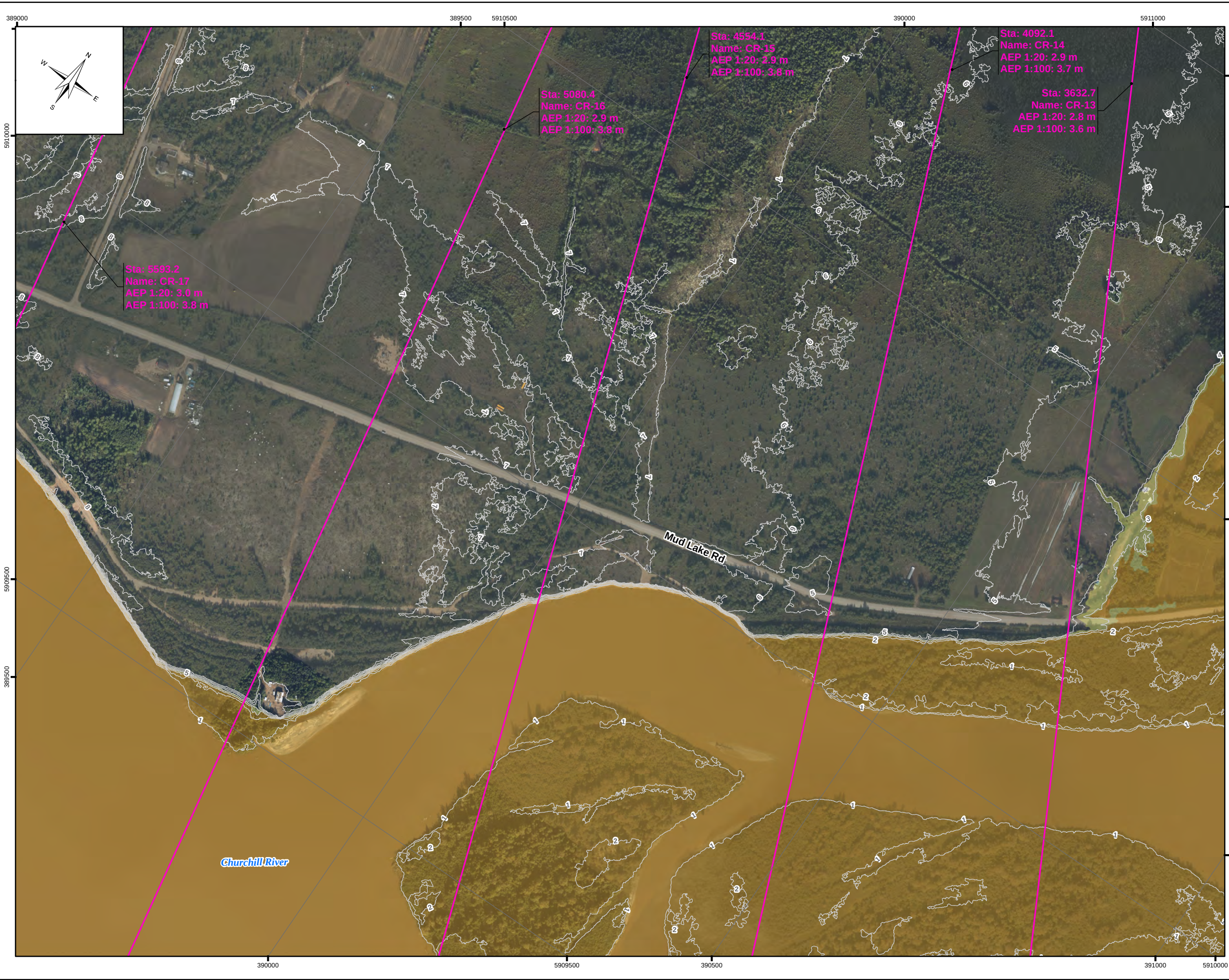
All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM)
Zone 4. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

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CHURCHILL RIVER FLOOD RISK AND FORECASTING

ICE AFFECTED FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-14

JUNE 2020	FIGURE 4.2	REV: 0
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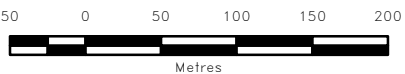


LEGEND:

- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
- Cross Section
- Water Survey of Canada
Gauge Location
- River Centreline
- 1m LIDAR Contour
- 1:20 Year Ice Affected Flood Zone
- 1:100 Year Ice Affected Flood Zone

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).

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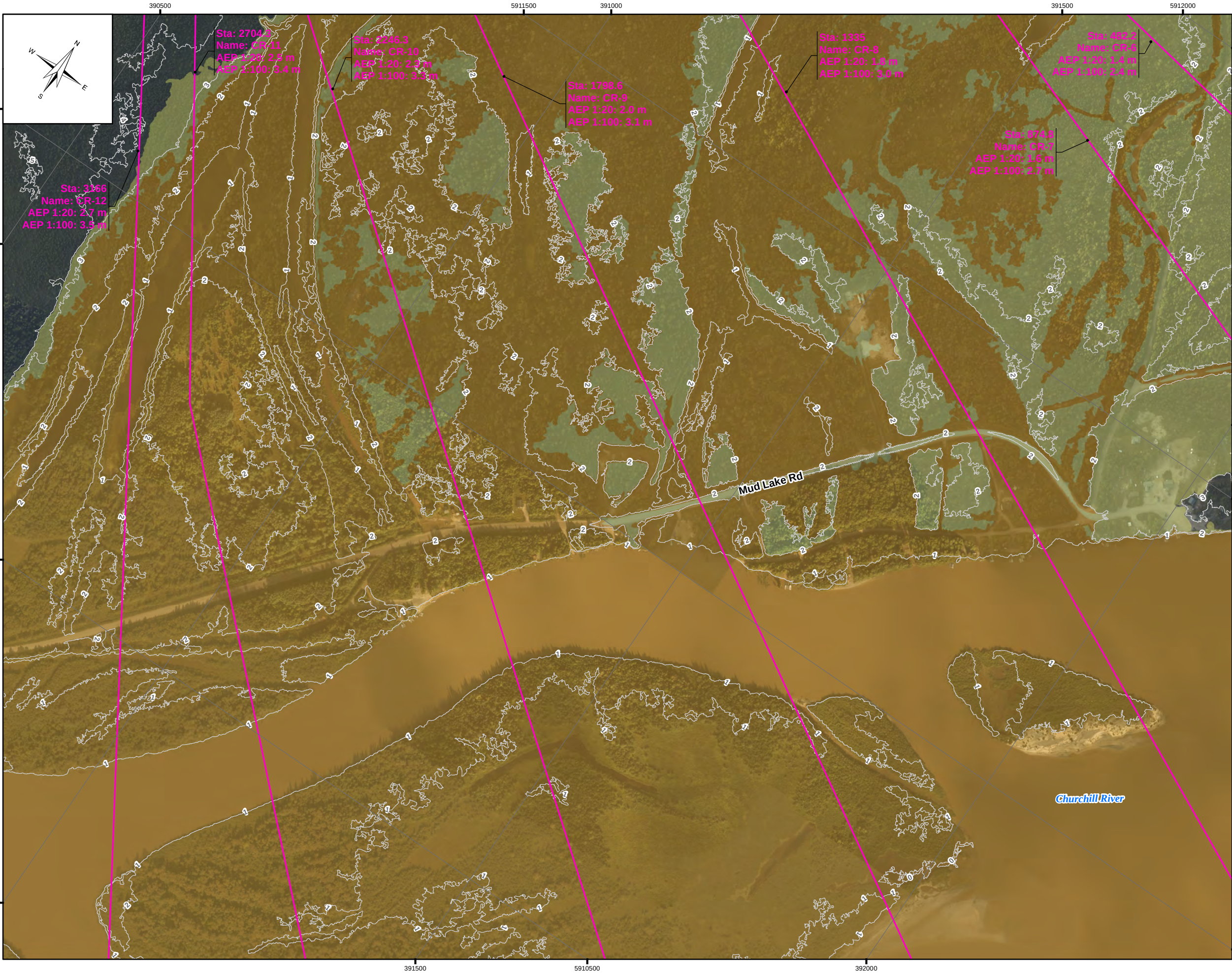
KGS GROUP
CONSULTING ENGINEERS

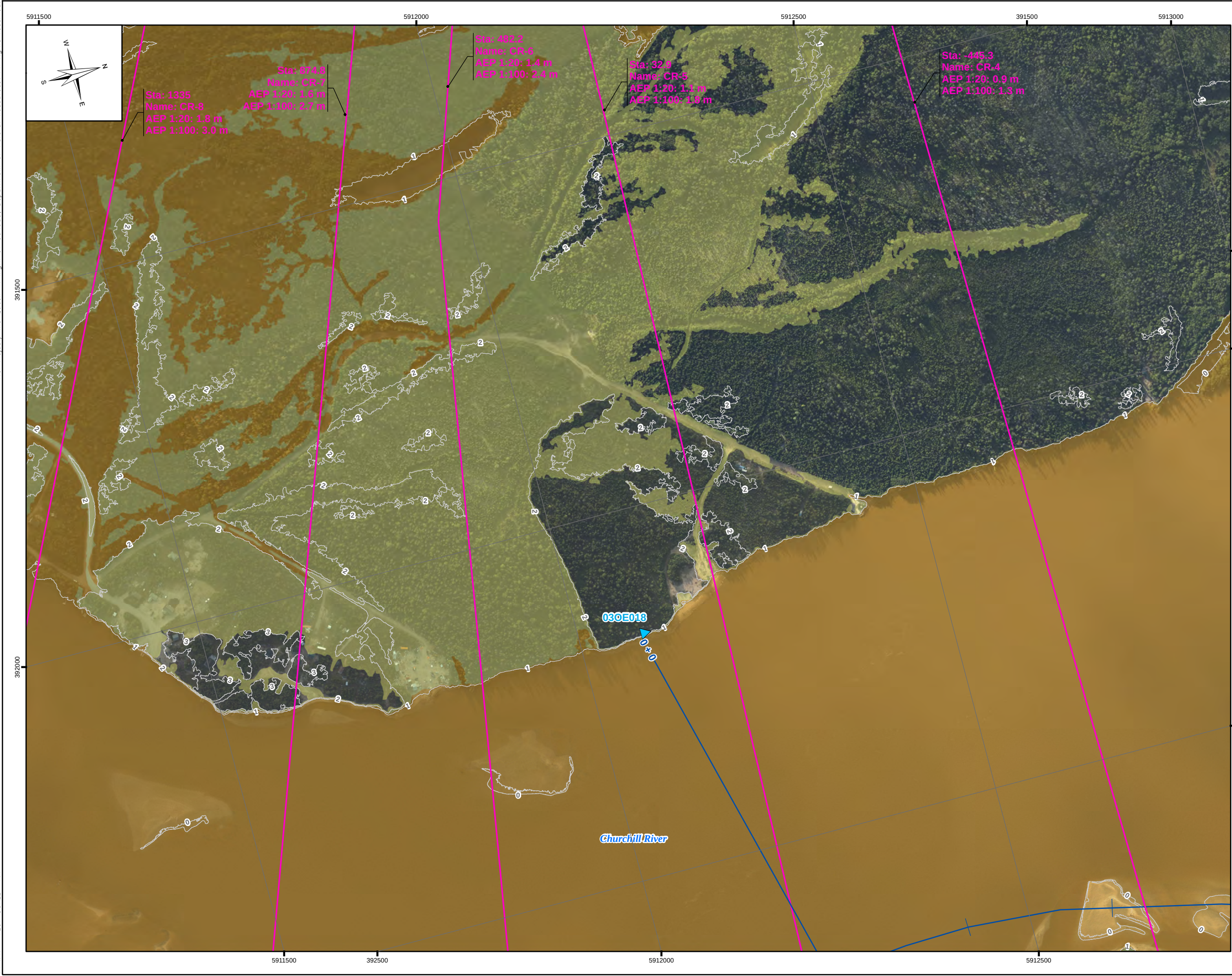
Newfoundland Labrador

CHURCHILL RIVER FLOOD RISK AND FORECASTING

ICE AFFECTED FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-15

JUNE 2020	FIGURE 4.2	REV: 0
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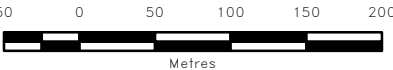


LEGEND:

- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
- Cross Section
- Water Survey of Canada
Gauge Location
- River Centreline
- 1m LIDAR Contour
- 1:20 Year Ice Affected Flood Zone
- 1:100 Year Ice Affected Flood Zone

NOTES:

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

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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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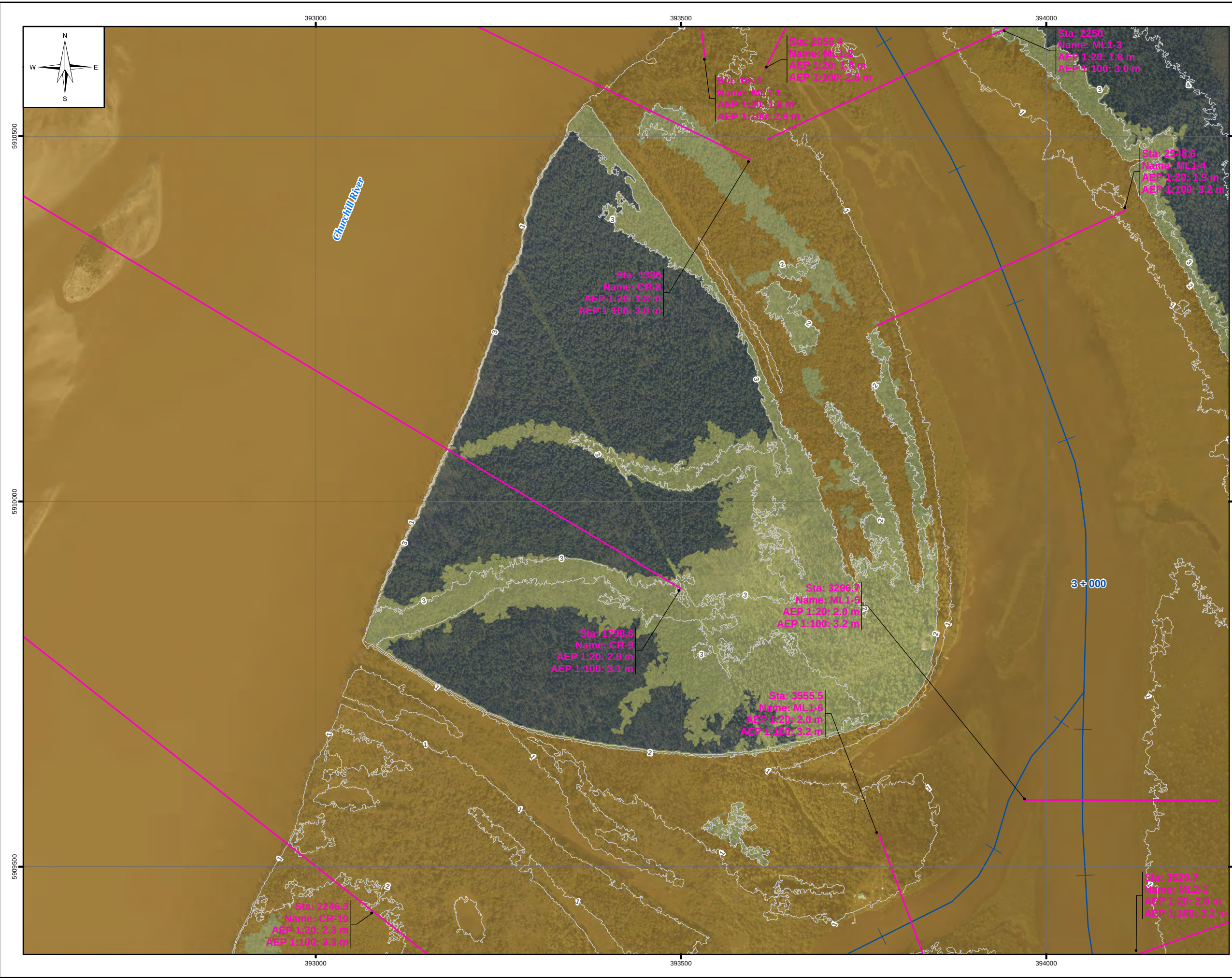
KGS GROUP CONSULTING ENGINEERS

Newfoundland Labrador

CHURCHILL RIVER FLOOD RISK AND FORECASTING

ICE AFFECTED FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – CR-17

JUNE 2020	FIGURE 4.2	REV: 0
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W N E S

5 km

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID,

LEGEND:

- Sta: 2364.8
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
- Cross Section
- Water Survey of Canada Gauge Location
- River Centreline
- 1m LIDAR Contour
- 1:20 Year Ice Affected Flood Zone
- 1:100 Year Ice Affected Flood Zone

NOTES:

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50 0 50 100 150 200

Metres

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

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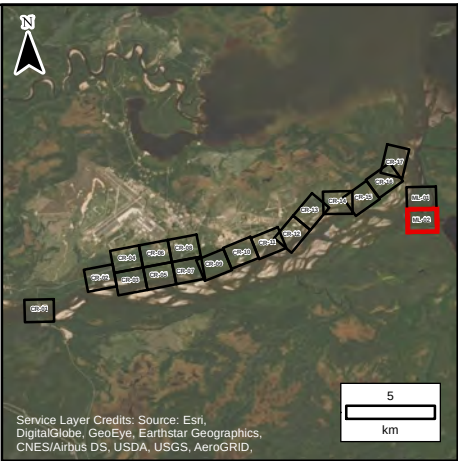
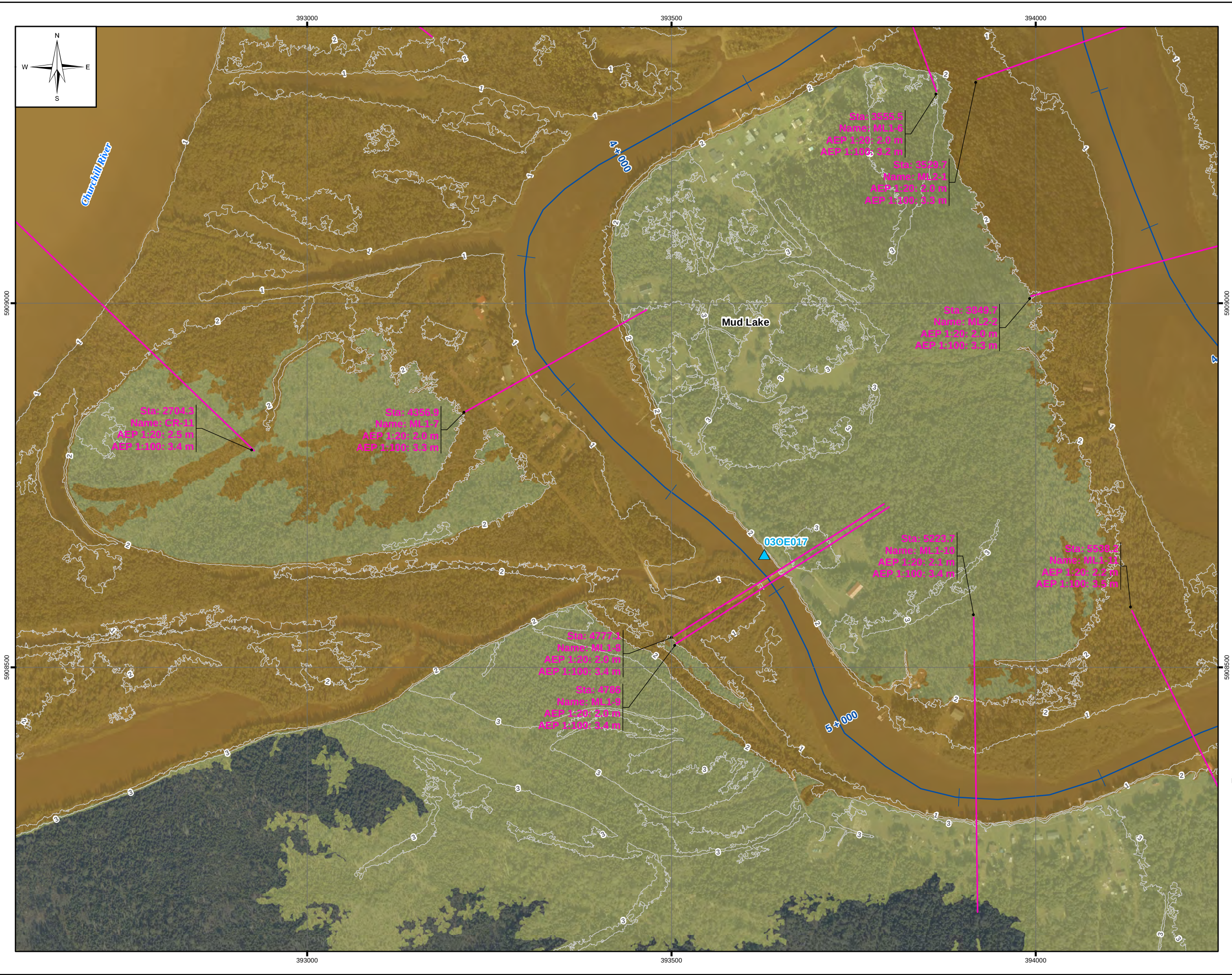
KGS GROUP
CONSULTING ENGINEERS

Newfoundland Labrador

CHURCHILL RIVER FLOOD RISK AND FORECASTING

ICE AFFECTED FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – ML-01

JUNE 2020	FIGURE 4.2	REV: 0
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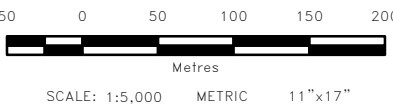


LEGEND:

- Sta: 23648
Name: CR-53
AEP 1:20: 4.2 m
AEP 1:100: 4.5 m
- Cross Section
- Water Survey of Canada Gauge Location
- River Centreline
- 1m LIDAR Contour
- 1:20 Year Ice Affected Flood Zone
- 1:100 Year Ice Affected Flood Zone

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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CHURCHILL RIVER FLOOD RISK AND FORECASTING

ICE AFFECTED FLOOD ZONE FOR CLIMATE CHANGE, CURRENT DEVELOPMENT (CLC-CD) – ML-02

JUNE 2020	FIGURE 4.2	REV: 0
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