



Navigation Protection Program
Programs Group
Transport Canada

Our file:
2019-500284

APPROVAL

APPLICANT: BC Hydro
Ste 600, Four Bentall Centre, 1055 Dunsmuir St. PO Box 49260
Vanouver, British Columbia V7X 1V5

WORK: Bridge

SITE LOCATION: Located at approximately 56.24356, -121.15957, located on unsurveyed foreshore or land covered by water being part of the bed of Peace River Side Channel (Water Crossing #C3) - Section 31 Township 83 Range 20 West of the 6th Meridian Peace River District Except the North East 1/4 Peace River, in the province of British Columbia

As per the application (detailed above) to the Minister of Transport, submitted pursuant to the *Canadian Navigable Waters Act*, for an approval of the work per the six (6) attached plan(s), the Minister hereby approves the work pursuant to subsection 7(6) for the construction, of the above mentioned work, in accordance with the following terms and conditions:

1. The CNWA Approval and its Terms and Conditions shall be posted at an easily accessible place at the worksite, and be provided to the contractor conducting the work.
2. The owner shall provide information about the causeway location and clearance using the Boater Communications Protocol, and post the information on the owner website, on a page related to the project.
3. The temporary bridge deck is to be removed prior to open water season.
4. Upon termination or decommissioning of the above works, all structures and associated equipment shall be completely removed without delay.

SIGNED on December 2, 2019 in Pacific

Jonn Leeden
Navigation Protection Program
Programs Group
Transport Canada
Pacific Region
For the Minister of Transport



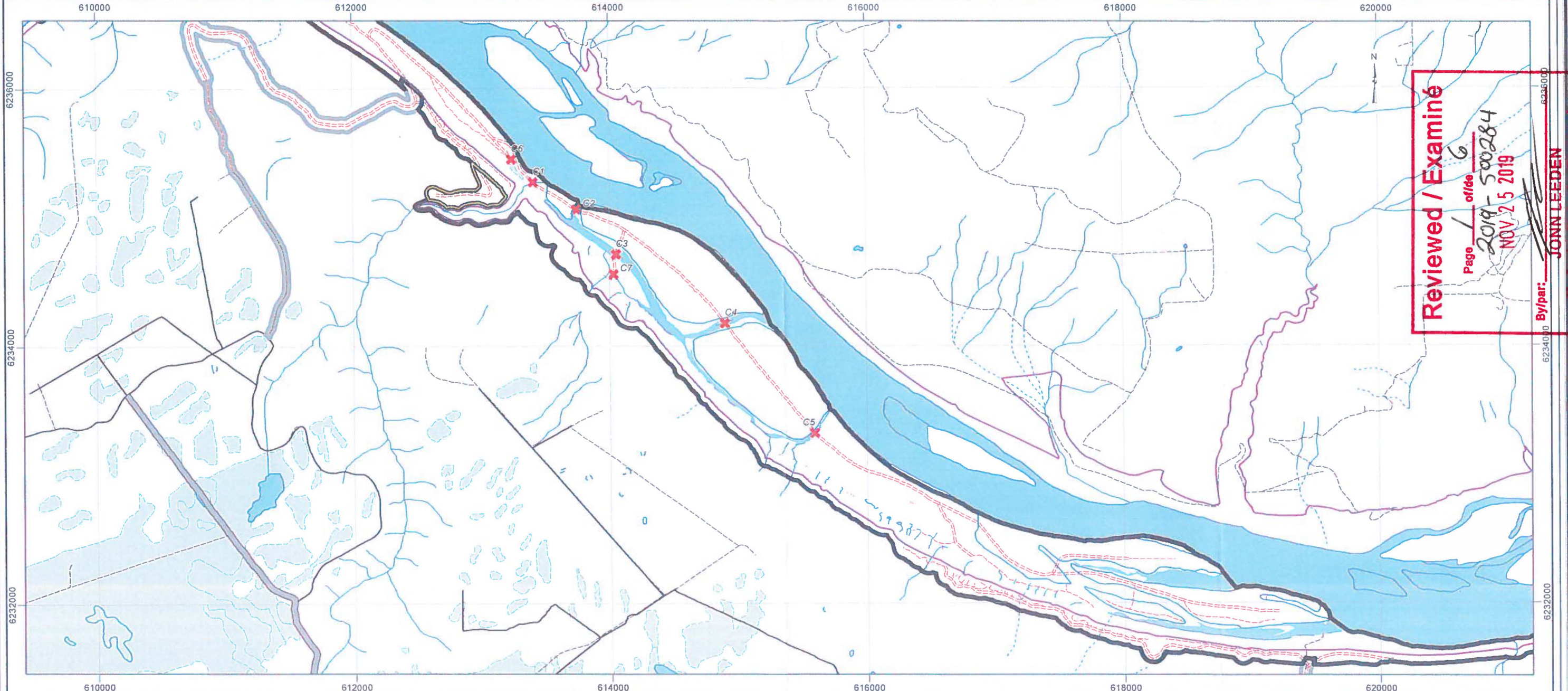
Projection: UTM Zone 10, NAD83
 Geographic Center of Map:
 E: 615,315 Longitude: 121°8'22.32"W
 N: 6,233,985 Latitude: 56°14'12.24"N

No.	Revisions	Made	Chkd	Appd	Date

Mapsheet Reference: 94A.015/016/026
 Location: Peace River South Bank (west of Tea I.)
 Resource District: Peace

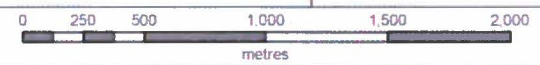
Drawing No.: OLT6-N11-00042B-0
 Revision: C
 Date: 05Apr19

Site C Clean Energy Project
 OLT6 Crossing Locations
 Overview Map

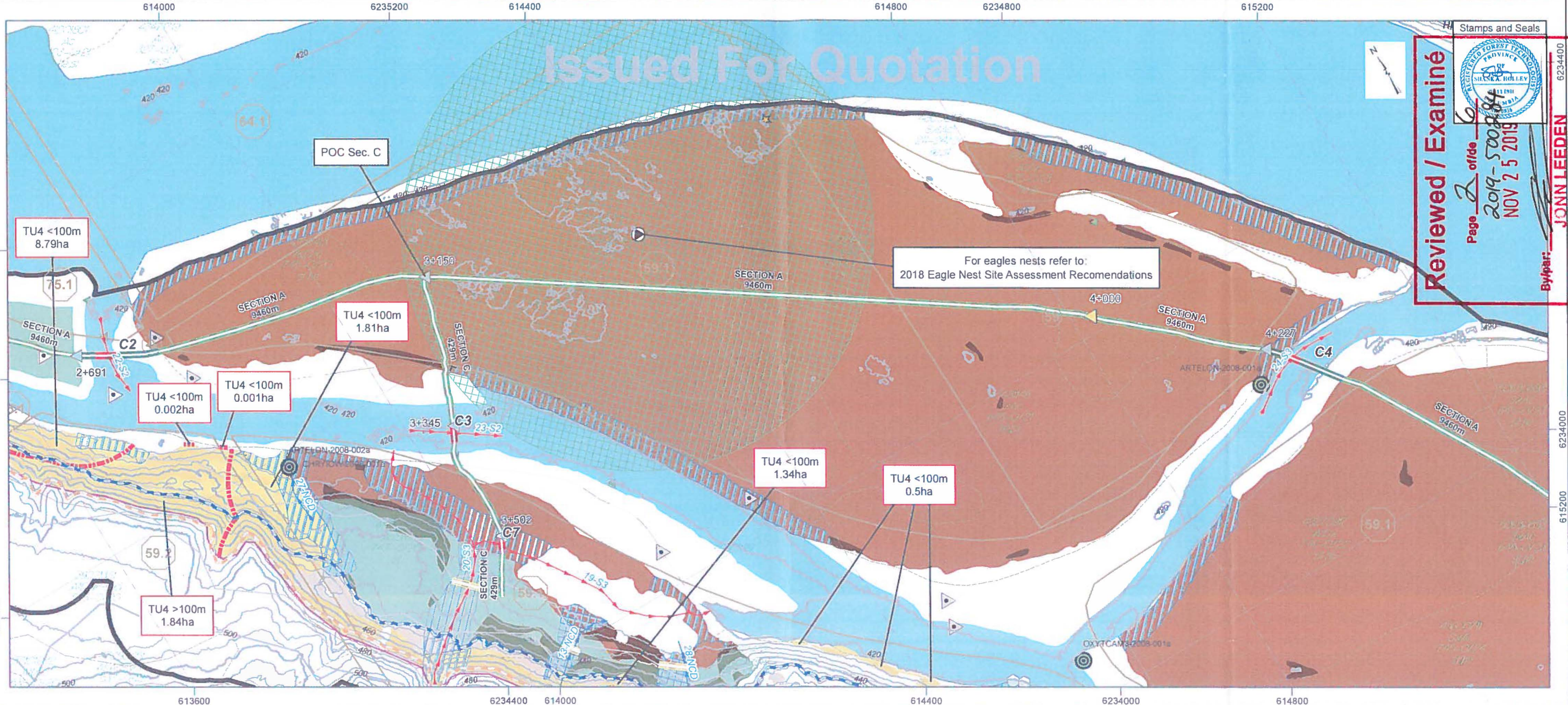


Reviewed / Examine
 Page / of 6
 2019-500284
 NOV 25 2019
 By/par: JOHN LEEDEN
 Navigation Protection Program /
 Programme de protection de la navigation

Crossings	Access	Water/Contours	Clearing Standards
<p>✘ Proposed Road Crossing</p>	<p>Primary Access Road</p> <p>Secondary Access Road</p> <p>Existing Trail</p> <p>Proposed Temporary Access</p> <p>Proposed Trail (skid, forwarding, backsp)</p>	<p>River</p> <p>Creek</p>	<p>OLTC6 boundary</p> <p>OLTC6a boundary</p> <p>OLTC 8 boundary</p> <p>5 Year Beach Erosion Line</p>
<p>Disclaimers</p> <p>TRIM water represents the average high water mark and water locations at time of TRIM data capture. This data may not represent current field conditions.</p>			



1:30 000

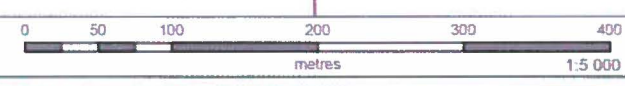


Reviewed / Examiné

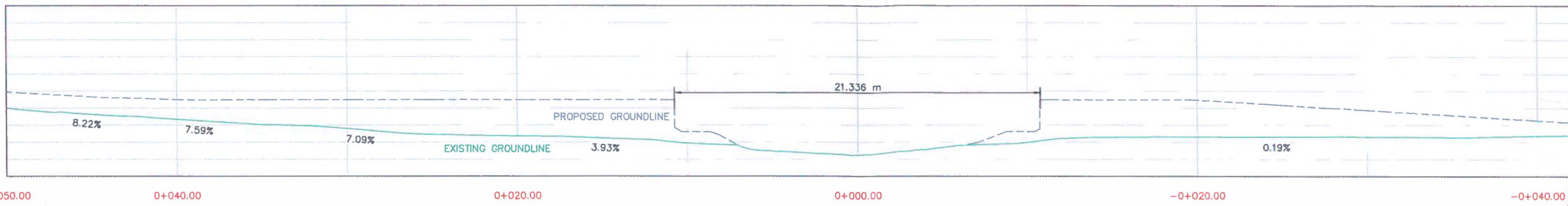
Page 2 of 10
 2019-500884
 NOV 25 2019

By: **JOHN LEEDEN**
 Navigation Protection Program /
 Programme de protection de la navigation

Property	Clearing Standards	Water/Contours	General	Access	Wildlife/Vegetation	Treatment Areas	Clearing Ribbon Scheme																																																																																						
<ul style="list-style-type: none"> Cadastre Line Fence Fence Line Install Parcel Number (Private Land) Parcel Number (Crown Land) Private Land Archaeological Site (Current to 26FEB19) 	<ul style="list-style-type: none"> OLTC6 boundary OLTC6a boundary OLTC 8 boundary No Go Area or TSFA Issue Area Clearing Limit 2016/2017 5 Year Beach Erosion Line Restricted Work Zone 	<ul style="list-style-type: none"> River Stream (Fish) Stream (Non-Fish) NCD (Non-Classified Drainage) Index Contour (20m Interval) Intermediate Contour 448m elevation mark 466.3m elevation mark 	<ul style="list-style-type: none"> Transmission Line Pipeline Pipeline Right-of-way Pipeline Crossing Oil & Gas Well (Active or Abandoned) Railway Recreation site Heli 100m Flight Distance Boundary Distance Marker - Interval Distance Marker - Junction / Crossing Culvert - Install BCH Instrumentation Site DO NOT DISTURB 	<ul style="list-style-type: none"> Primary Access Road Secondary Access Road Existing Trail OLTC8 Proposed Temporary Access Proposed Temporary Access Proposed Snow Road Proposed Temporary Bridge Proposed Skid Crossing Proposed Skid Trail Proposed Heli Drop Access Proposed Backspar Trail OLTC8 Upgrade Road Proposed Gravel Fill Proposed Tower Setting / Proposed Yarding Landing Proposed Yarding Direction 	<ul style="list-style-type: none"> Amphibian Observations Bald Eagle Nest 2017 Active Bald Eagle Nest Buffer (300m radius) Bat Hibernaculae Beaver Lodge/Bank Den Noxious Weeds Stick Nest (Raptor / Unknown) Den (Bear / Unknown) Tufa Seep Rare Plants (points) Rare Plants (patch) Wildlife data current to 31JAN19 	<p>OLTC 6, 6a Gross Clearing Area</p> <table border="1"> <tr> <th>Treatment Unit</th> <th>RVMA</th> <th>MFZ</th> <th>SMZ</th> <th>Incomplete Clearing</th> <th>Totals</th> </tr> <tr> <td>TU 1a</td> <td>219.8ha</td> <td>4.7ha</td> <td>1.2ha</td> <td>0.0ha</td> <td>225.7ha</td> </tr> <tr> <td>TU 1b</td> <td>29.7ha</td> <td>9.4ha</td> <td>3.3ha</td> <td>0.0ha</td> <td>42.4ha</td> </tr> <tr> <td>TU 2a</td> <td>5.5ha</td> <td>3.4ha</td> <td>0.3ha</td> <td>0.0ha</td> <td>9.2ha</td> </tr> <tr> <td>TU 3</td> <td>2.5ha</td> <td>0.2ha</td> <td>0.0ha</td> <td>0.0ha</td> <td>2.7ha</td> </tr> <tr> <td>TU 4</td> <td>13.1ha</td> <td>27.9ha</td> <td>7.6ha</td> <td>0.0ha</td> <td>48.6ha</td> </tr> <tr> <td>Clearing Complete (2016 / 2017 Clearing)</td> <td>5.8ha</td> <td>0.0ha</td> <td>0.0ha</td> <td>0.0ha</td> <td>5.8ha</td> </tr> </table>	Treatment Unit	RVMA	MFZ	SMZ	Incomplete Clearing	Totals	TU 1a	219.8ha	4.7ha	1.2ha	0.0ha	225.7ha	TU 1b	29.7ha	9.4ha	3.3ha	0.0ha	42.4ha	TU 2a	5.5ha	3.4ha	0.3ha	0.0ha	9.2ha	TU 3	2.5ha	0.2ha	0.0ha	0.0ha	2.7ha	TU 4	13.1ha	27.9ha	7.6ha	0.0ha	48.6ha	Clearing Complete (2016 / 2017 Clearing)	5.8ha	0.0ha	0.0ha	0.0ha	5.8ha	<table border="1"> <thead> <tr> <th>FEATURE</th> <th>RIBBON COLOUR</th> <th>RIBBON TEXT</th> <th>PAINT</th> </tr> </thead> <tbody> <tr> <td>Clearing/Harvest Boundary</td> <td>Orange</td> <td></td> <td>Double orange paint as needed</td> </tr> <tr> <td>Riparian Vegetation Management Area (RVMA)</td> <td>Blue</td> <td></td> <td>Riparian Vegetation Management Zone</td> </tr> <tr> <td>Special Management Zone (SMZ)</td> <td>Orange</td> <td></td> <td>Special Management Zone</td> </tr> <tr> <td>Machine Free Zone (MFZ)</td> <td>Yellow</td> <td></td> <td>Machine Free Zone</td> </tr> <tr> <td>Archaeological Site</td> <td>Wide yellow</td> <td></td> <td>Archaeological Site</td> </tr> <tr> <td>Hand Felling Split Line</td> <td>Orange</td> <td></td> <td>Split Line</td> </tr> <tr> <td>Road Centreline</td> <td>Pink</td> <td></td> <td></td> </tr> <tr> <td>Existing access road upgrade treatments</td> <td>Yellow</td> <td></td> <td></td> </tr> <tr> <td>Skid Trail Crossing</td> <td>Pink</td> <td></td> <td>Skid Trail</td> </tr> <tr> <td>Stream Centreline</td> <td>Blue</td> <td></td> <td></td> </tr> </tbody> </table>	FEATURE	RIBBON COLOUR	RIBBON TEXT	PAINT	Clearing/Harvest Boundary	Orange		Double orange paint as needed	Riparian Vegetation Management Area (RVMA)	Blue		Riparian Vegetation Management Zone	Special Management Zone (SMZ)	Orange		Special Management Zone	Machine Free Zone (MFZ)	Yellow		Machine Free Zone	Archaeological Site	Wide yellow		Archaeological Site	Hand Felling Split Line	Orange		Split Line	Road Centreline	Pink			Existing access road upgrade treatments	Yellow			Skid Trail Crossing	Pink		Skid Trail	Stream Centreline	Blue		
Treatment Unit	RVMA	MFZ	SMZ	Incomplete Clearing	Totals																																																																																								
TU 1a	219.8ha	4.7ha	1.2ha	0.0ha	225.7ha																																																																																								
TU 1b	29.7ha	9.4ha	3.3ha	0.0ha	42.4ha																																																																																								
TU 2a	5.5ha	3.4ha	0.3ha	0.0ha	9.2ha																																																																																								
TU 3	2.5ha	0.2ha	0.0ha	0.0ha	2.7ha																																																																																								
TU 4	13.1ha	27.9ha	7.6ha	0.0ha	48.6ha																																																																																								
Clearing Complete (2016 / 2017 Clearing)	5.8ha	0.0ha	0.0ha	0.0ha	5.8ha																																																																																								
FEATURE	RIBBON COLOUR	RIBBON TEXT	PAINT																																																																																										
Clearing/Harvest Boundary	Orange		Double orange paint as needed																																																																																										
Riparian Vegetation Management Area (RVMA)	Blue		Riparian Vegetation Management Zone																																																																																										
Special Management Zone (SMZ)	Orange		Special Management Zone																																																																																										
Machine Free Zone (MFZ)	Yellow		Machine Free Zone																																																																																										
Archaeological Site	Wide yellow		Archaeological Site																																																																																										
Hand Felling Split Line	Orange		Split Line																																																																																										
Road Centreline	Pink																																																																																												
Existing access road upgrade treatments	Yellow																																																																																												
Skid Trail Crossing	Pink		Skid Trail																																																																																										
Stream Centreline	Blue																																																																																												



TRIM water represents the average high water mark and water locations at time of TRIM data capture. This data may not represent current field conditions.



PROFILE
SCALE: 1:250

Reviewed / Examiné

Page 3 of 6

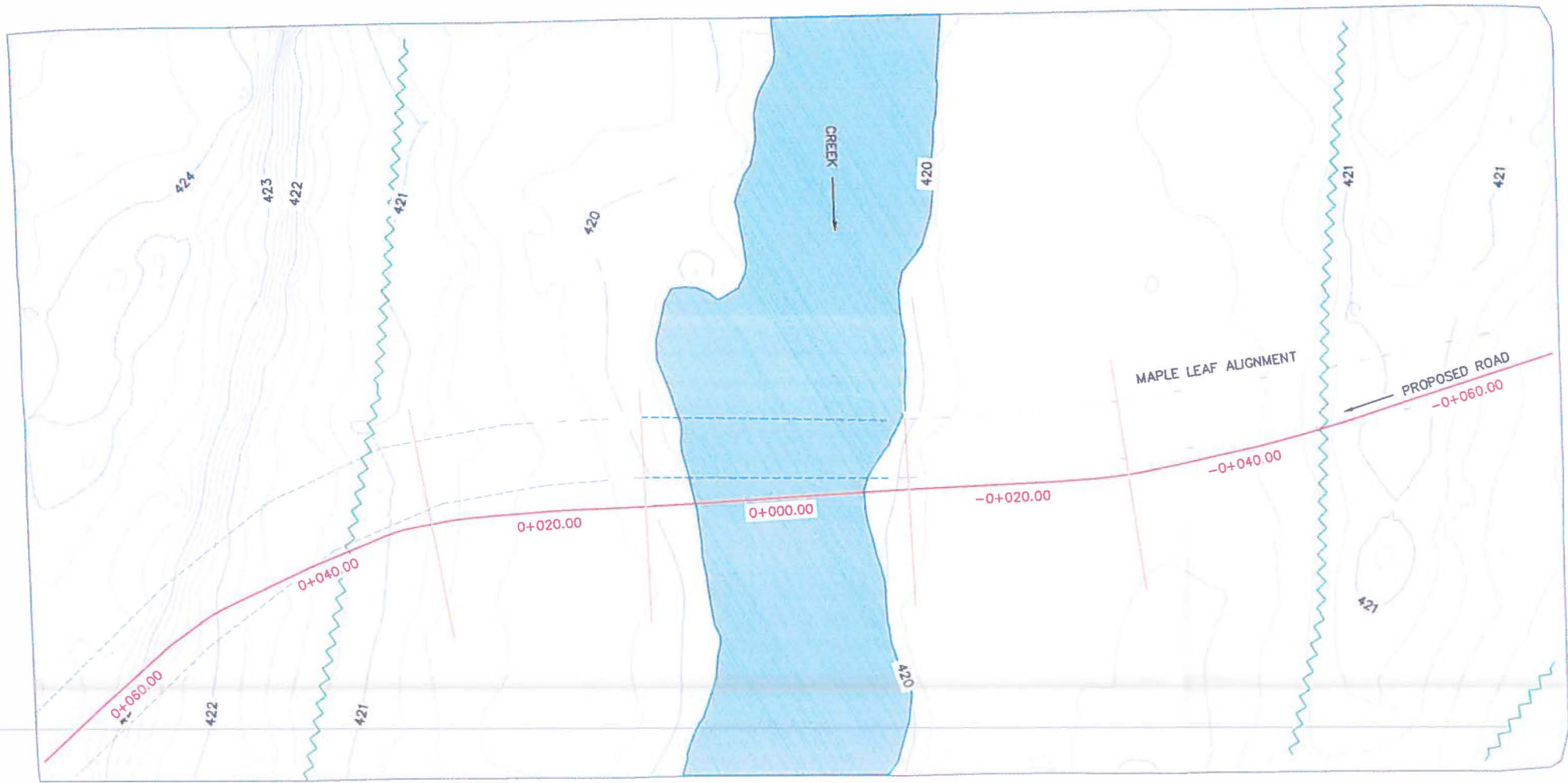
2019-500284

NOV 25 2019

By: **JONN LEEDEN**

Navigation Protection Program / Programme de protection de la navigation

LEGEND	
	CREEK
	ROAD
	ROAD ALIGNMENT
	RIPARIAN ROCK
	TREE LINE
	SECTION LINE



PLAN
SCALE: 1:500

- GENERAL NOTES:
1. TOPOGRAPHIC SURVEY DEVELOPED USING LIDAR DATA PROVIDED ON MAY 3, 2019 FROM MAPLE LEAF FORESTRY.
 2. COORDINATE SYSTEM NAD83.
 3. CREEK ESTIMATED AT 0.500m AT CROSSING LOCATION.
 4. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE IN MILLIMETERS AND ALL ELEVATIONS AND STATIONS ARE IN METERS.

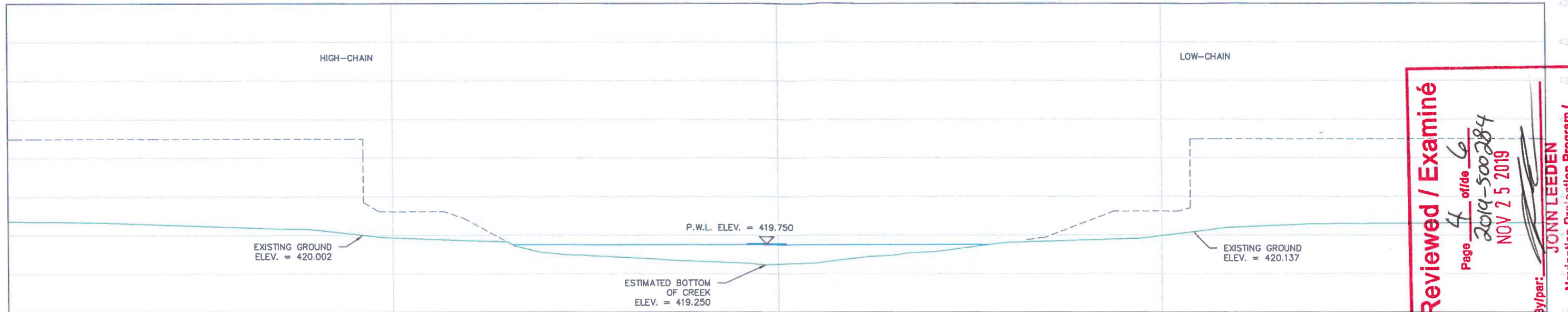
PRELIMINARY

NOT FOR CONSTRUCTION

FOR PERMITTING PURPOSES ONLY

ENGINEERING, ENVIRONMENTAL, INSPECTION			
SITE C CROSSING C3			
EXISTING PLAN VIEW			
DESIGNED BY	DRAWN BY	CHECKED BY	FILE
M. DARASZ	M. DARASZ	D. PALIN	TC-EV045
DATE	DATE	DATE	DATE
13-MAY-2019	13-MAY-2019	13-MAY-2019	TC-EV045
Sheet 02 of 05			

LAST DATE REVISED: 15-May-2019 8:21 AM



Reviewed / Examiné
 Page 4 of 6
 2019-500284
 NOV 25 2019
 By/par: **JOHN LEEDEN**
 Navigation: Protection Program /
 Programme de protection de la navigation

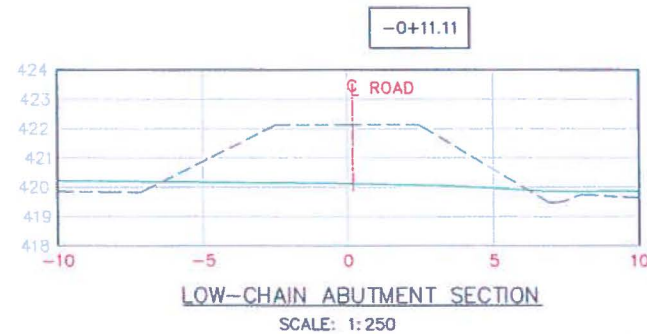
0+020.00

0+000.00

0+020.00

PROFILE
SCALE: 1:100

LEGEND	
	CREEK
	ROAD
	ROAD ALIGNMENT
	RIPARIAN ROCK
	TREE LINE
	SECTION LINE



- GENERAL NOTES:**
1. TOPOGRAPHIC SURVEY DEVELOPED USING LIDAR DATA PROVIDED ON MAY 3, 2019 FROM MAPLE LEAF FORESTRY.
 2. COORDINATE SYSTEM NAD83.
 3. CREEK ESTIMATED AT 0.500m AT CROSSING LOCATION.
 4. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE IN MILLIMETERS AND ALL ELEVATIONS AND STATIONS ARE IN METERS.

PRELIMINARY

NOT FOR CONSTRUCTION
FOR PERMITTING PURPOSES ONLY

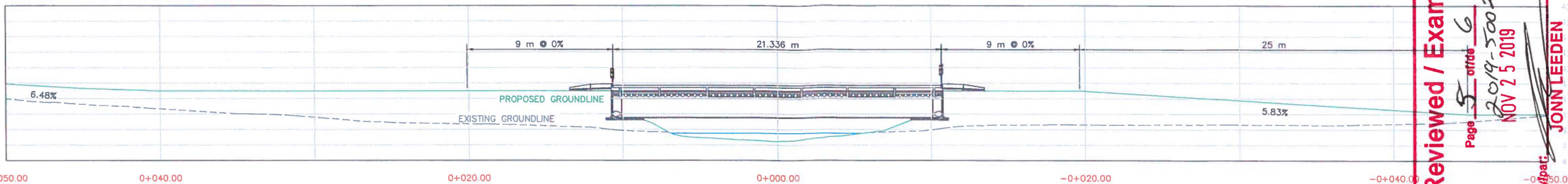
NO.	DATE	ISSUED FOR REVIEW	REVISIONS
0	13-MAY-2019	ISSUED FOR REVIEW	

ENGINEERING, ENVIRONMENTAL, INSPECTION
 SITE C CROSSING C3
 EXISTING PROFILES AND SECTIONS

DESIGNER	DRAWN	CHECKED	FILE
M. DARASZ	M. DARASZ	D. PALIN	
DATE	DATE	DATE	PLN#
13-MAY-2019	13-MAY-2019	13-MAY-2019	TC-EV045

Sheet 03 of 05

LAST DATE REVISED: 15-May-2019 8:21 AM

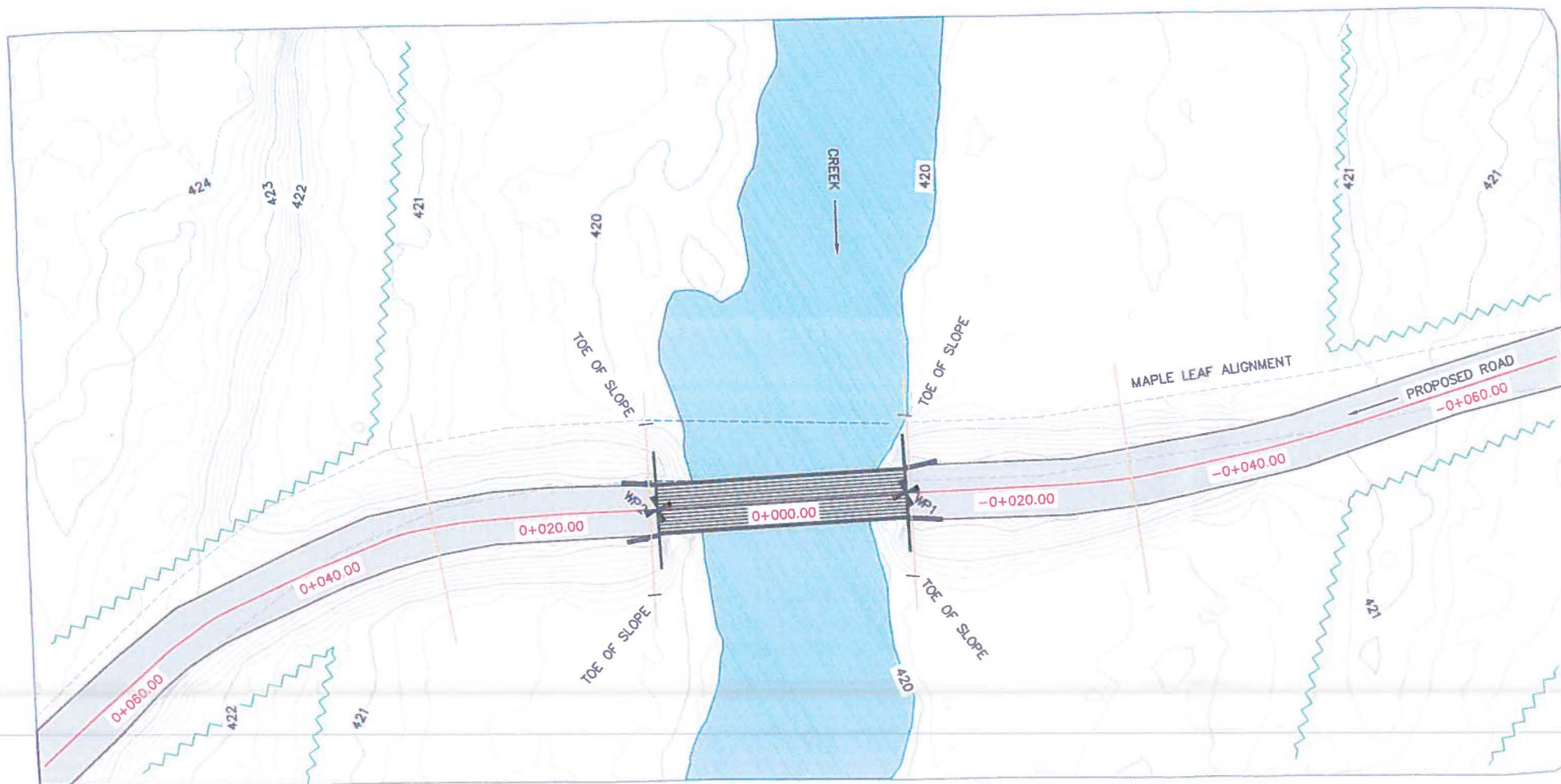


PROFILE
SCALE: 1:250

BENCHMARK SURVEY TABLE

MARK	ELEV. (m)	NORTHING	EASTING
✕ WP1	422.490	6234714.3264	614057.1604
✕ WP2	422.490	6234695.3641	614047.3799

LEGEND	
	CREEK
	ROAD
	ROAD ALIGNMENT
	RIPARIAN ROCK
	TREE LINE
	SECTION LINE



PLAN
SCALE: 1:500

GENERAL NOTES:

- BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE TO BE CERTIFIED AT A MINIMUM CL-625 LOADING.
- INITIAL BRIDGE LENGTHS DETERMINED BY MAPLE LEAF FORESTRY; BRIDGE LENGTH AND FINAL LOCATION TO BE VERIFIED BY MEASUREMENT PRIOR TO INSTALLATION.
- BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE TO BE CERTIFIED BY A PROFESSIONAL ENGINEER DURING CONSTRUCTION AND AN AS-BUILT PLAN PRODUCED AFTER CONSTRUCTION.
- PERMITS: OBTAINING, SUBMITTING, AND RECEIVING APPROVAL SHALL BE THE RESPONSIBILITY OF OWNER PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
- UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE IN MILLIMETERS AND ALL ELEVATIONS AND STATIONS ARE IN METERS.

- ESTIMATED VOLUMES:

COMPACTED ENDFILL:	1161 m ³
EXCAVATION:	21 m ³
NET FILL:	1140 m ³

- BACKFILL SHALL BE PLACED IN LAYERS NOT EXCEEDING 300mm IN LOOSE THICKNESS AND EACH LAYER SHALL BE COMPACTED TO A MINIMUM 95% STANDARD PROCTOR DENSITY OVER THE ENTIRE SURFACE.

ENDFILL:

- ENDFILL SHALL BE COMPLETED WITH WELL GRADED, SELECT, GRANULAR MATERIAL (<75 mm), FREE OF UNSUITABLE MATERIALS, IN LIFTS OF 300 AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.

PRELIMINARY
NOT FOR CONSTRUCTION
FOR PERMITTING PURPOSES ONLY

NO.	DATE	DESCRIPTION
0	13-MAY-2019	ISSUED FOR REVIEW REVISIONS

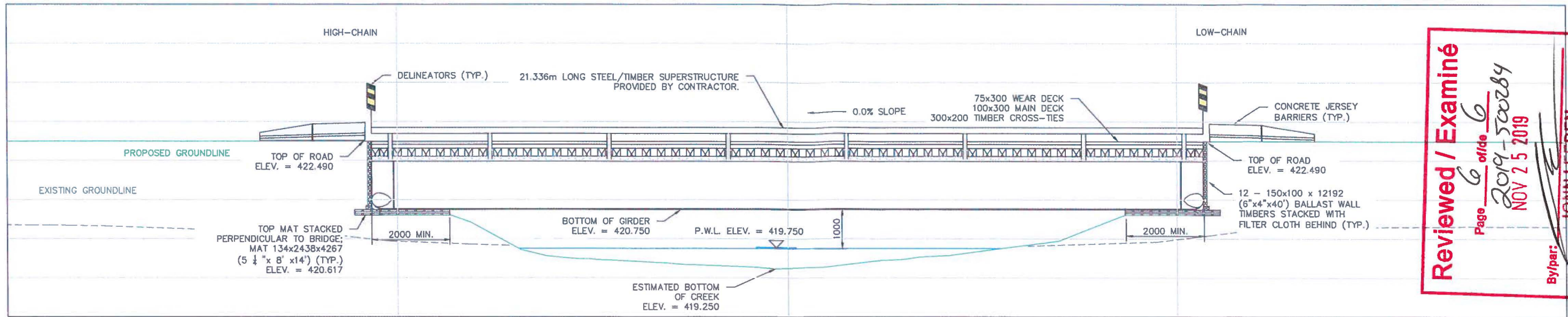
Trilogy Crossing Corp.
ENGINEERING, ENVIRONMENTAL, INSPECTION

SITE C CROSSING C3
GENERAL ARRANGEMENT

BC Hydro

DESIGNED BY	CHECKED BY	DATE	SCALE
M. DARASZ	M. DARASZ	13-MAY-2019	
	D. PALIN	13-MAY-2019	
		13-MAY-2019	TC-EV045

Reviewed / Examiné
 Page 5 of 6
 2019-500284
 NOV 25 2019
 By: JONN LEEDEN
 Navigation Protection Program /
 Programme de protection de la navigation



Reviewed / Examiné

Page 6 office 6
2019-500284
NOV 25 2019

By/par: **JOHN LEEDEN**
Navigation Protection Program /
Programme de protection de la navigation

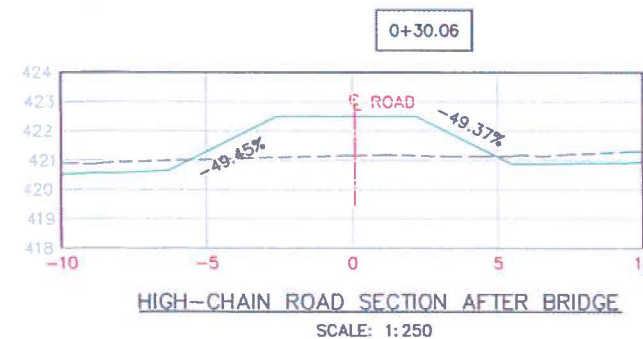
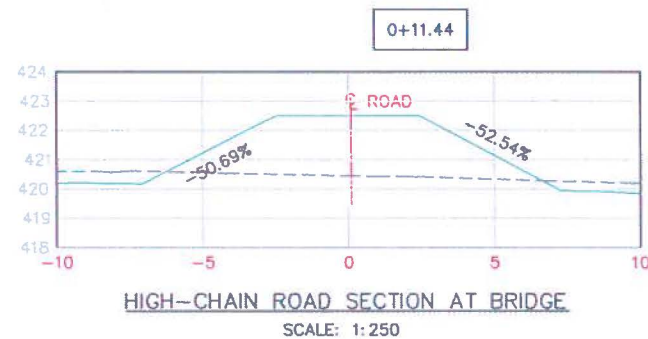
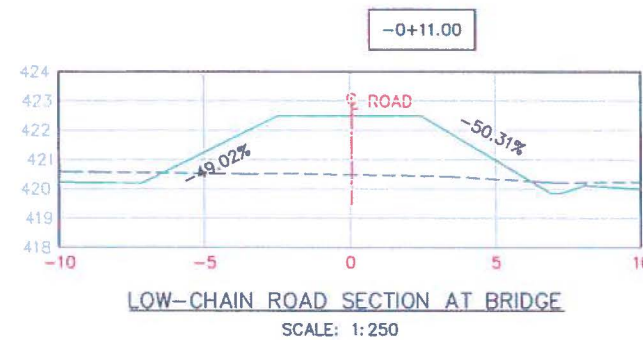
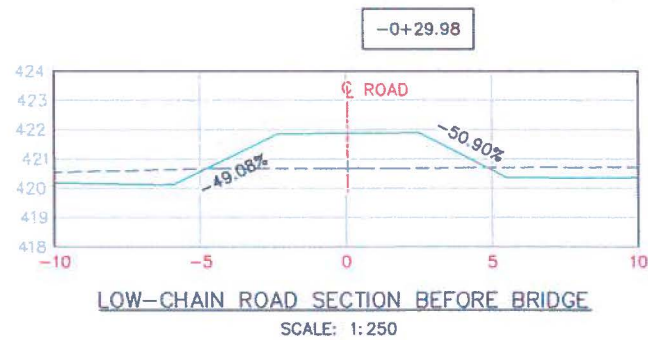
0+020.00

0+000.00

-0+020.00

PROFILE
SCALE: 1:100

LEGEND	
	CREEK
	ROAD
	ROAD ALIGNMENT
	RIPARIAN ROCK
	TREE LINE
	SECTION LINE



GENERAL NOTES:

- BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE TO BE CERTIFIED AT A MINIMUM CL-625 LOADING.
- INITIAL BRIDGE LENGTHS DETERMINED BY MAPLE LEAF FORESTRY; BRIDGE LENGTH AND FINAL LOCATION TO BE VERIFIED BY MEASUREMENT PRIOR TO INSTALLATION.
- BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE TO BE CERTIFIED BY A PROFESSIONAL ENGINEER DURING CONSTRUCTION AND AN AS-BUILT PLAN PRODUCED AFTER CONSTRUCTION.
- PERMITS: OBTAINING, SUBMITTING, AND RECEIVING APPROVAL SHALL BE THE RESPONSIBILITY OF OWNER PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
- UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE IN MILLIMETERS AND ALL ELEVATIONS AND STATIONS ARE IN METERS.

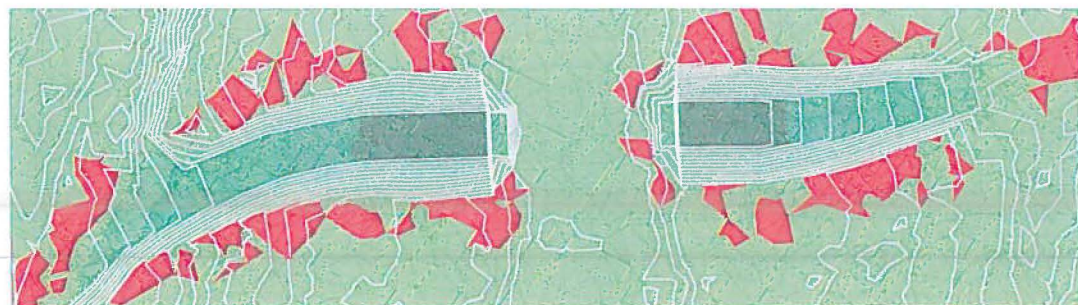
ESTIMATED VOLUMES:

COMPACTED ENDFILL:	1161 m ³
EXCAVATION:	21 m ³
NET FILL:	1140 m ³

- BACKFILL SHALL BE PLACED IN LAYERS NOT EXCEEDING 300mm IN LOOSE THICKNESS AND EACH LAYER SHALL BE COMPACTED TO A MINIMUM 95% STANDARD PROCTOR DENSITY OVER THE ENTIRE SURFACE.

ENDFILL:

- ENDFILL SHALL BE COMPLETED WITH WELL GRADED, SELECT, GRANULAR MATERIAL (<75 mm), FREE OF UNSUITABLE MATERIALS, IN LIFTS OF 300 AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.



AREA CUT AND FILL PLAN
SCALE: N.T.S.

Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	-0.500	0.000	Red
2	0.000	0.500	Green
3	0.500	1.000	Green
4	1.000	1.500	Green
5	1.500	2.000	Green
6	2.000	2.500	Green
7	2.500	3.000	Green

PRELIMINARY

NOT FOR CONSTRUCTION

FOR PERMITTING PURPOSES ONLY

NO.	DATE	ISSUED FOR REVIEW	REVISIONS
0	13-MAY-2019	ISSUED FOR REVIEW	

Trilogy Crossing Corp.
ENGINEERING, ENVIRONMENTAL, INSPECTION

SITE C CROSSING C3

PROPOSED PROFILES AND SECTIONS

DESIGNED BY	DRAWN BY	CHECKED BY	DATE
M. DARASZ	M. DARASZ	D. PALIN	13-MAY-2019

NO.	DATE	ISSUED FOR REVIEW	REVISIONS
0	13-MAY-2019	ISSUED FOR REVIEW	

TC-EV045
Sheet 05 of 05

LAST DATE REVISED: 15-May-2019 8:21 AM