PEACE RIVER REGIONAL DISTRICT

DAWSON CREEK 1981 Alaska Avenue (Box 810), Dawson Creek, BC (T) 250-784-3200..(F) 250-784-3201
FORT ST. JOHN 9505 100TH Street, Fort St. John, BC V1J 4N4 (T) 250-785-8084 (F) 250-785-1125
[Toll Free: 1-800-670-7773]

Receipt # _____

Application for Development

1. **TYPE OF APPLICATION** **FEE**

[ ]	Official Community Plan Bylaw Amendment	$ 1,000.00
[ ]	Zoning Bylaw Amendment	650.00
[ ]	Official Community Plan / Zoning Bylaw Amendment combined	1,050.00
[x]	Temporary Use Permit	350.00
[ ]	Development Permit	165.00
[ ]	Development Variance Permit	165.00
[x]	Sign requirement	150.00

In regard to applications for:

i) an official community plan and/or zoning bylaw amendment;

ii) temporary use permit;

Sign provided by the PRRD and sign posted pursuant to Section 8 of Bylaw No. 2165, 2016, attached.

2. PLEASE PRINT

Property Owner's Name	Authorized Agent of Owner (if applicable) Coastal GasLink Pipeline Ltd.
Address of Owner	Address of Agent Box 1000 Station "M" 450 - 1st Street
City/Town/Village	City/Town/Village Calgary, Alberta
Postal Code	Postal Code T2P 5H1
Telephone Number: Fax Number:	Telephone Number: [redacted] Fax Number:
E-mail:	E-mail: [redacted]

3. PROPERTY DESCRIPTION

Full legal description of each property under application	Area of each lot
UNITS 19 & 29, BLOCK E, GROUP 93-P-11 Peace River District	12.16 ha./acres
	ha./acres
	ha./acres
	TOTAL AREA 12.16 ha./acres

Notice of collection of personal information:

Personal information on this form is collected for the purpose of processing this application. The personal information is collected under the authority of the *Local Government Act* and the bylaws of the PRRD. Documentation/Information submitted in support of this application can be made available for public inspection pursuant to the *Freedom of Information and Protection of Privacy Act.*

4. Civic Address or location of property: UNITS 19 & 29, BLOCK E, GROUP 93-P-11 Peace River District

5. PARTICULARS OF PROPOSED AMENDMENT

Please check the box(es) that apply to your proposal:

[ ] Official Community Plan (OCP) Bylaw amendment:
Existing OCP designation: _____
Proposed OCP designation: _____
Text amendment: _____

[ ] Zoning Bylaw amendment:
Existing zone: _____
Proposed zone: _____
Text amendment: _____

[ ] Development Variance Permit – describe proposed variance request:
_____
_____

[x] Temporary Use Permit – describe proposed use:
Temporary 12.16 ha Stockpile Site to support pipeline construction activities.
_____

[ ] Development Permit: Bylaw No. _____ Section No. _____

6. Describe the existing use and buildings on the subject property:
Unsurveyed Crown Land
_____
_____

7. Describe the existing land use and buildings on all lots adjacent to and surrounding the subject property:

(a) North Existing BC Hydro Power Line R/W Plan PGP36943
(b) East None
(c) South Existing Road Lone Prairie Road (Section 42 Road)
(d) West Existing BC Hydro Power Line R/W Plan PGP36943 & Existing Road Lone Prairie Road (Section 42 Road)

8. Describe the proposed development of the subject property. Attach a separate sheet if necessary:
The proposed stockpile site will be used to support pipeline construction activities. The pipe is typically hauled from the rail siding to the stockpile site, then hauled to the right-of-way during the pipeline construction, to coincide with the contractor's schedule, providing an efficient delivery system. This site will need to be accessed and prepared prior to the start of pipe delivery, and utilized until all construction activities have been completed

9. Reasons and comments in support of the application. Attach a separate sheet if necessary:
The stockpile site location has been proposed in an appropriate zoning area
_____
_____

10. Describe the means of sewage disposal for the development:

N/A - Sewage disposal will not be required for the proposed development.

11. Describe the means of water supply for the development:

N/A - Water supply will not be required for the proposed development.

THE FOLLOWING INFORMATION IS REQUIRED. FAILURE TO PROVIDE MAY DELAY YOUR APPLICATION.

12. Proof of ownership of the subject property or properties. (For example: Certificate of State of Title, BC Land Title Office Property Title Search or recent Property Tax Notice.)

13. A Sketch Plan of the subject property or properties, showing:
    (a) the legal boundaries and dimensions of the subject property;
    (b) boundaries, dimensions and area of any proposed lots (if subdivision is being proposed);
    (c) the location of existing buildings and structures on the subject property, with distances to property lines;
    (d) the location of any proposed buildings, structures, or additions thereto, with distances to property lines;
    (e) the location of any existing sewage disposal systems;
    (f) the location of any existing or proposed water source.

ADDITIONAL OR MORE DETAILED INFORMATION MAY BE REQUESTED BY THE PEACE RIVER REGIONAL DISTRICT FOLLOWING REVIEW OF YOUR APPLICATION.

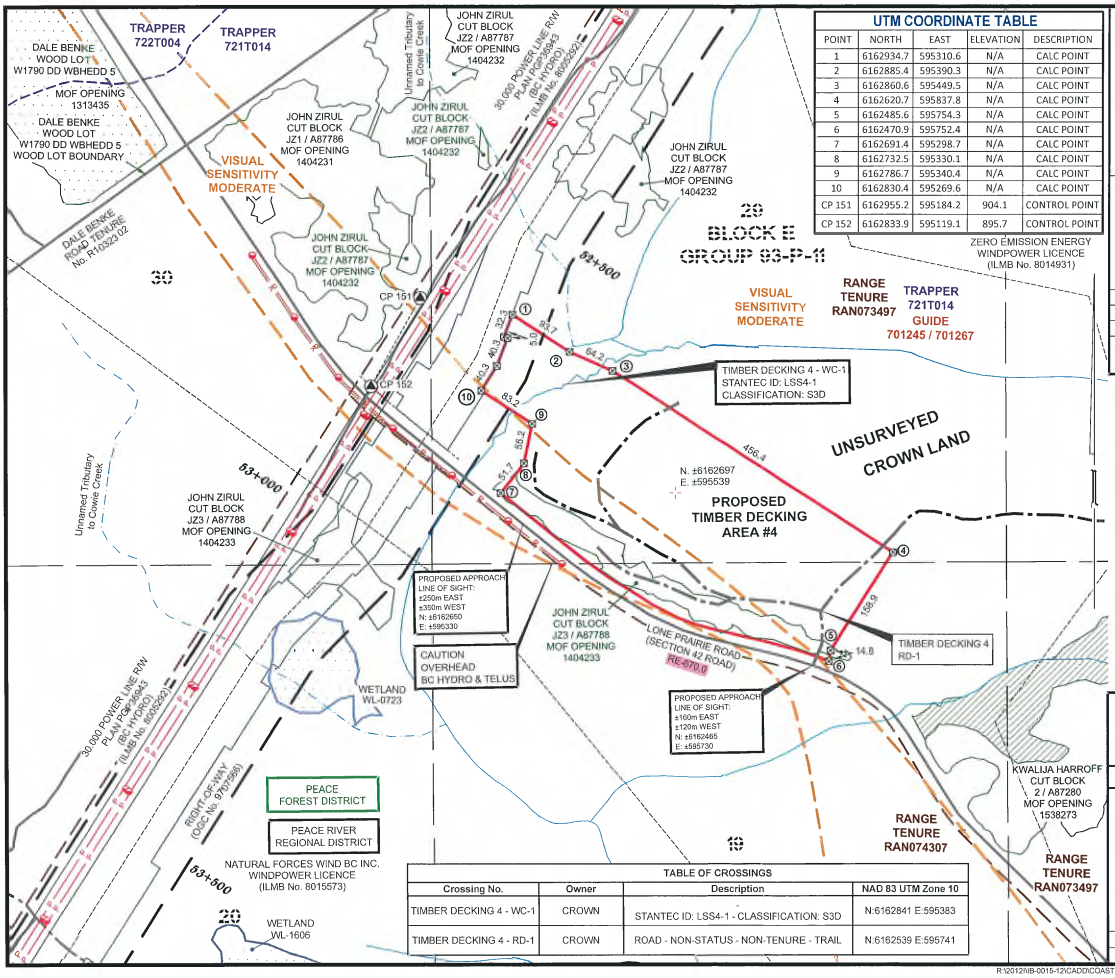
If it is necessary for the property boundaries and the location of buildings and structures to be more accurately defined, a plan prepared by a British Columbia Land Surveyor may be required.

15. I / We the undersigned hereby declare that the information provided in this application is complete and is, to the best of my / our knowledge, a true statement of the facts related to this application.

Signature of Owner	Date signed
Signature of Owner	Date signed

16. **AGENT'S AUTHORIZATION**
If you have an agent act on your behalf in submission of this application, the following authorization **MUST** be signed by **ALL** property owners.

I / We authorize	and	hereby
(name)	to act on my/our behalf regarding this application.	
Agent address:		
Telephone:	Fax:	Email:
Signature of Owner:		Date:
Signature of Owner:		Date:



UTM COORDINATE TABLE

POINT	NORTH	EAST	ELEVATION	DESCRIPTION
1	6162934.7	595310.6	N/A	CALC POINT
2	6162885.4	595390.3	N/A	CALC POINT
3	6162860.6	595449.5	N/A	CALC POINT
4	6162620.7	595837.8	N/A	CALC POINT
5	6162485.6	595754.3	N/A	CALC POINT
6	6162470.9	595752.4	N/A	CALC POINT
7	6162691.4	595298.7	N/A	CALC POINT
8	6162732.5	595330.1	N/A	CALC POINT
9	6162786.7	595340.4	N/A	CALC POINT
10	6162830.4	595269.6	N/A	CALC POINT
CP 151	6162955.2	595184.2	904.1	CONTROL POINT
CP 152	6162833.9	595119.1	895.7	CONTROL POINT

TABLE OF CROSSINGS

Crossing No.	Owner	Description	NAD 83 UTM Zone 10
TIMBER DECKING 4 - WC-1	CROWN	STANTEC ID: LSS4-1 - CLASSIFICATION: S3D	N:6162841 E:595383
TIMBER DECKING 4 - RD-1	CROWN	ROAD - NON-STATUS - NON-TENURE - TRAIL	N:6162539 E:595741

LEGEND:

- Proposed Ancillary Site Location Boundary
- Coastal GasLink Route
- Coastal GasLink Preliminary Construction Footprint
- Coastal GasLink Construction Corridor
- Calculated Point
- Control Monument
- Tenured Road
- Non-Status Road
- PNG Grid Boundary
- Watercourse
- Wetland
- Wood Lot
- Wildlife Tree Retention Area
- Crown Tenure
- Forest Cut Block/MOF Opening
- Trapper Boundary
- Range Tenure
- Visual Sensitivity Area
- Powerline / Powerpole

NOTES:

- The proposed project does impact OGC Area Based Analysis (ABA) areas.
- The proposed project is not within the Agricultural Land Reserve (ALR).
- Project to be flagged at time of construction.
- UTM Coordinates shown are NAD83 Zone 10 N.
- The proposed project is within the South East OGC Zone.
- Distances shown are in meters and decimals thereof.

MIDWEST SURVEYS
LAND SURVEYING LTD.
11003 Alaska Road
Fort St. John, BC
V1J 6P3
Tel: 250-785-3902
IB-0015-12

EPASS: 10054531 | BCGS: 93P.053 & 93P.063

REVISION	DESCRIPTION
0	Issued for Use, November 17, 2015

SCALE 1:5,000 (100 80 60 40 20 0 100 200 METERS)

TABLE OF AREAS REQUIRED

PROPOSED FEATURE	EXISTING CLEARING	NEW CUT	TOTAL
TOTAL AREA WITHIN CROWN LANDS			
Timber Decking Area #4	1.99 ha	10.17 ha	12.16 ha
TOTAL	**1.99 ha**	**10.17 ha**	**12.16 ha**

Caribou Range: None
Coal Licence: None
Community Forest: None
Guide / Outfitter: 701245 / 701267
Mineral Reserve: None
Mineral Interest: None
Range Tenure: RAN073497
Trapper: 721T014
Tree Farm Licence: None
Ungulate Winter Ranges: None
Wildlife Habitat Area: None
Wildlife Tree Retention Area: No
Wood Lot: None

NOTE: Water Course Crossing Information and New Cut / Existing Cut Information provided to Survey by Coastal GasLink Pipeline Ltd. for the Coastal GasLink Pipeline Project.

Coastal GasLink Pipeline Project

TransCanada *In business to deliver*

COASTAL GASLINK PIPELINE LTD.

PLAN SHOWING

PROPOSED TIMBER DECKING AREA #4

WITHIN

UNITS 19 & 29, BLOCK E, GROUP 93-P-11

WITHIN UNSURVEYED CROWN LAND
PEACE RIVER DISTRICT

Route Reference: CGP_Route_RevF	November 17, 2015
Document No. CGE4703-MSI-G-MP-434	Rev 0

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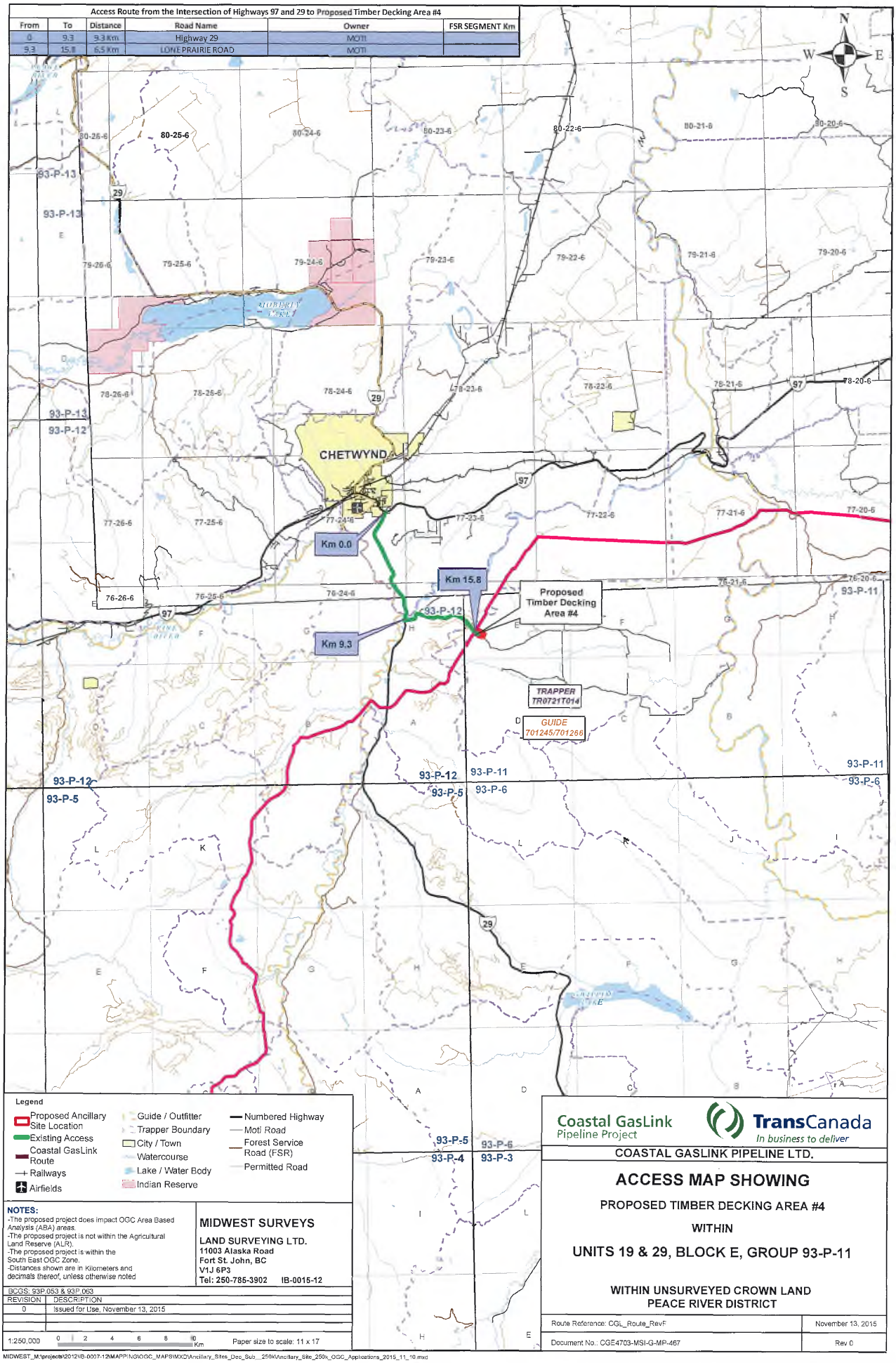
Access Route from the Intersection of Highways 97 and 29 to Proposed Timber Decking Area #4
From | To | Distance | Road Name | Owner | FSR SEGMENT Km
0 | 9.3 | 9.3 Km | Highway 29 | MOTI |
9.3 | 15.8 | 6.5 Km | LONE PRAIRIE ROAD | MOTI |
N
S
E
W
CHETWYND
Km 0.0
Km 9.3
Km 15.8
Proposed Timber Decking Area #4
TRAPPER TR0721T014
GUIDE 701245/701266
93-P-13
93-P-12
93-P-11
93-P-5
93-P-6
93-P-4
93-P-3
80-25-6
80-24-6
80-23-6
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77-24-6
77-23-6
77-22-6
77-21-6
77-20-6
76-26-6
76-25-6
76-24-6
76-21-6
76-20-6
29
97
Legend
Proposed Ancillary Site Location
Existing Access
Coastal GasLink Route
Railways
Airfields
Guide / Outfitter
Trapper Boundary
City / Town
Watercourse
Lake / Water Body
Indian Reserve
Numbered Highway
Moti Road
Forest Service Road (FSR)
Permitted Road
NOTES:
-The proposed project does impact OGC Area Based Analysis (ABA) areas.
-The proposed project is not within the Agricultural Land Reserve (ALR).
-The proposed project is within the South East OGC Zone.
-Distances shown are in Kilometers and decimals thereof, unless otherwise noted
MIDWEST SURVEYS
LAND SURVEYING LTD.
11003 Alaska Road
Fort St. John, BC
V1J 6P3
Tel: 250-785-3902 IB-0015-12
BCGS: 93P.053 & 93P.063
REVISION | DESCRIPTION
0 | Issued for Use, November 13, 2015
1:250,000
0 2 4 6 8 10 Km
Paper size to scale: 11 x 17
Coastal GasLink Pipeline Project
TransCanada
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COASTAL GASLINK PIPELINE LTD.
ACCESS MAP SHOWING
PROPOSED TIMBER DECKING AREA #4
WITHIN
UNITS 19 & 29, BLOCK E, GROUP 93-P-11
WITHIN UNSURVEYED CROWN LAND
PEACE RIVER DISTRICT
Route Reference: CGL_Route_RevF
November 13, 2015
Document No.: CGE4703-MSI-G-MP-467
Rev 0
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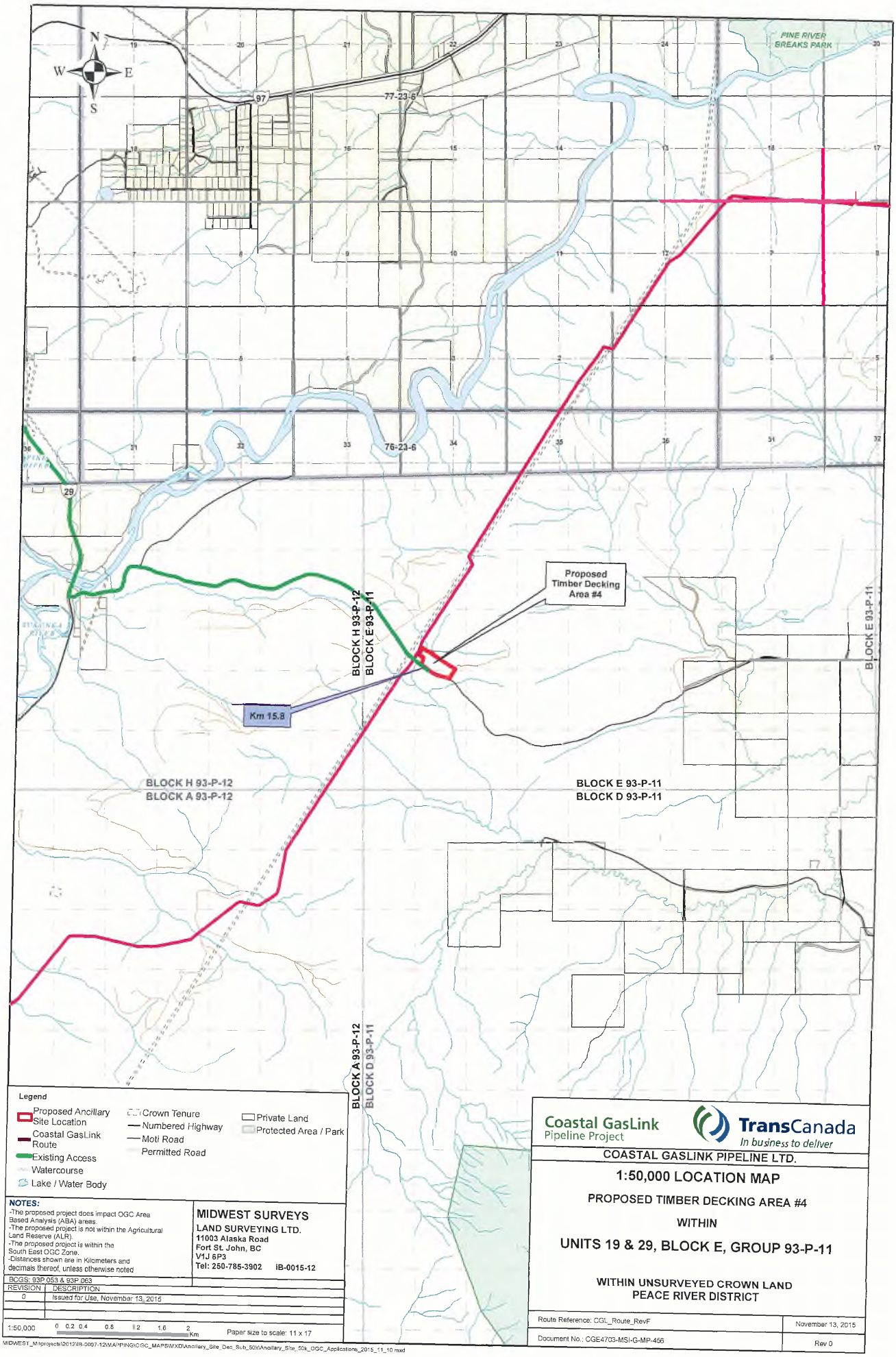

Legend

- Proposed Ancillary Site Location
- Coastal GasLink Route
- Existing Access
- Watercourse
- Lake / Water Body
- Crown Tenure
- Numbered Highway
- Moti Road
- Permitted Road
- Private Land
- Protected Area / Park

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Tel: 250-785-3902 IB-0015-12

BCGS: 93P.053 & 93P.063

REVISION	DESCRIPTION
0	Issued for Use, November 13, 2015

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Coastal GasLink Pipeline Project

TransCanada In business to deliver

COASTAL GASLINK PIPELINE LTD.

1:50,000 LOCATION MAP

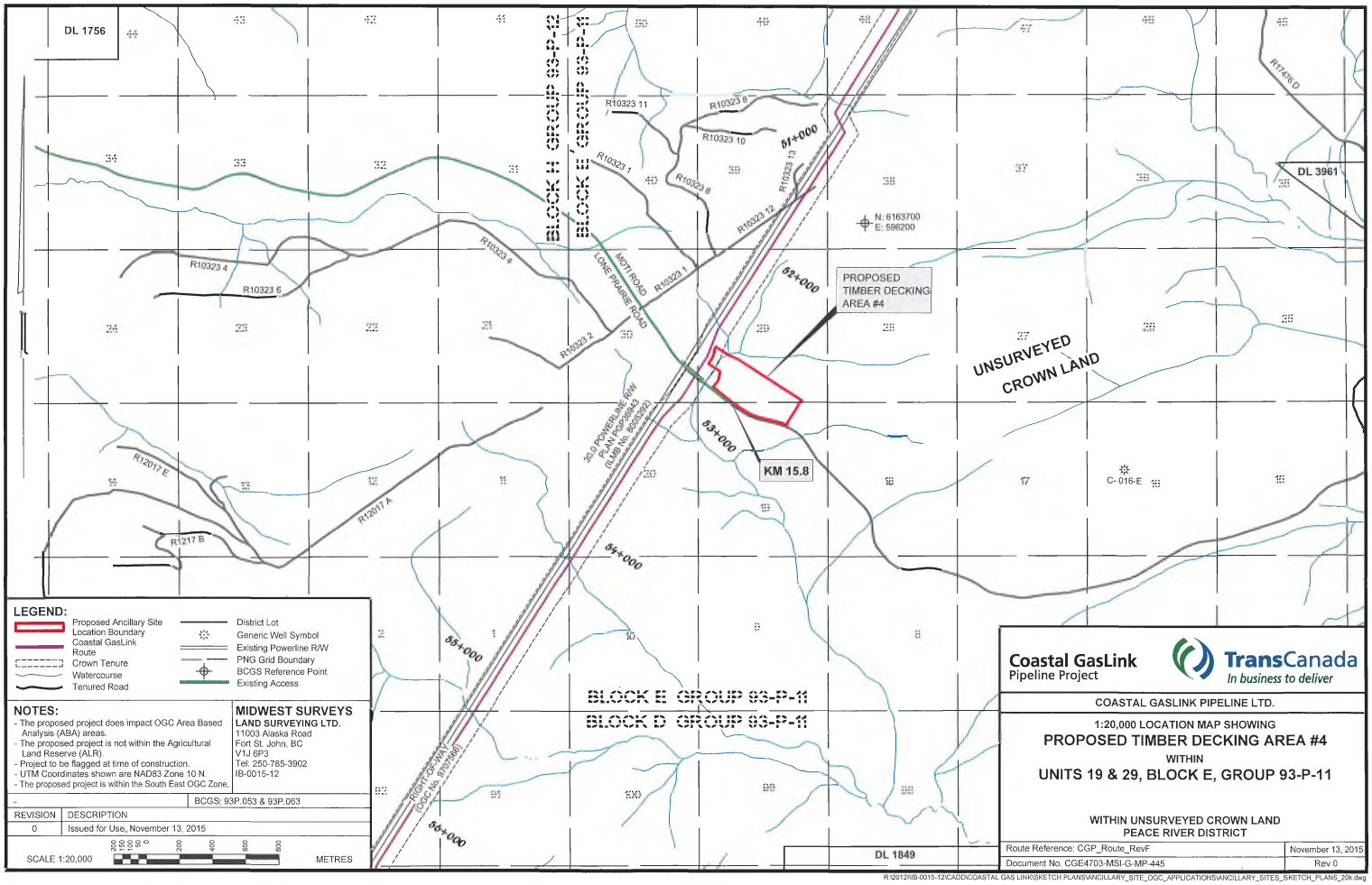
PROPOSED TIMBER DECKING AREA #4

WITHIN

UNITS 19 & 29, BLOCK E, GROUP 93-P-11

WITHIN UNSURVEYED CROWN LAND
PEACE RIVER DISTRICT

Route Reference: CGL_Route_RevF	November 13, 2015
Document No.: CGE4703-MSI-G-MP-456	Rev 0



LEGEND:

- Proposed Ancillary Site Location Boundary
- Coastal GasLink Route
- Crown Tenure
- Watercourse
- Tenured Road
- District Lot
- Generic Well Symbol
- Existing Powerline R/W
- PNG Grid Boundary
- BCGS Reference Point
- Existing Access

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BCGS: 93P.053 & 93P.063

REVISION	DESCRIPTION
0	Issued for Use, November 13, 2015

SCALE 1:20,000 — 200 100 0 200 400 600 800 METRES

Coastal GasLink Pipeline Project

TransCanada — In business to deliver

COASTAL GASLINK PIPELINE LTD.

1:20,000 LOCATION MAP SHOWING

PROPOSED TIMBER DECKING AREA #4

WITHIN

UNITS 19 & 29, BLOCK E, GROUP 93-P-11

WITHIN UNSURVEYED CROWN LAND
PEACE RIVER DISTRICT

Route Reference: CGP_Route_RevF	November 13, 2015
Document No. CGE4703-MSI-G-MP-445	Rev 0

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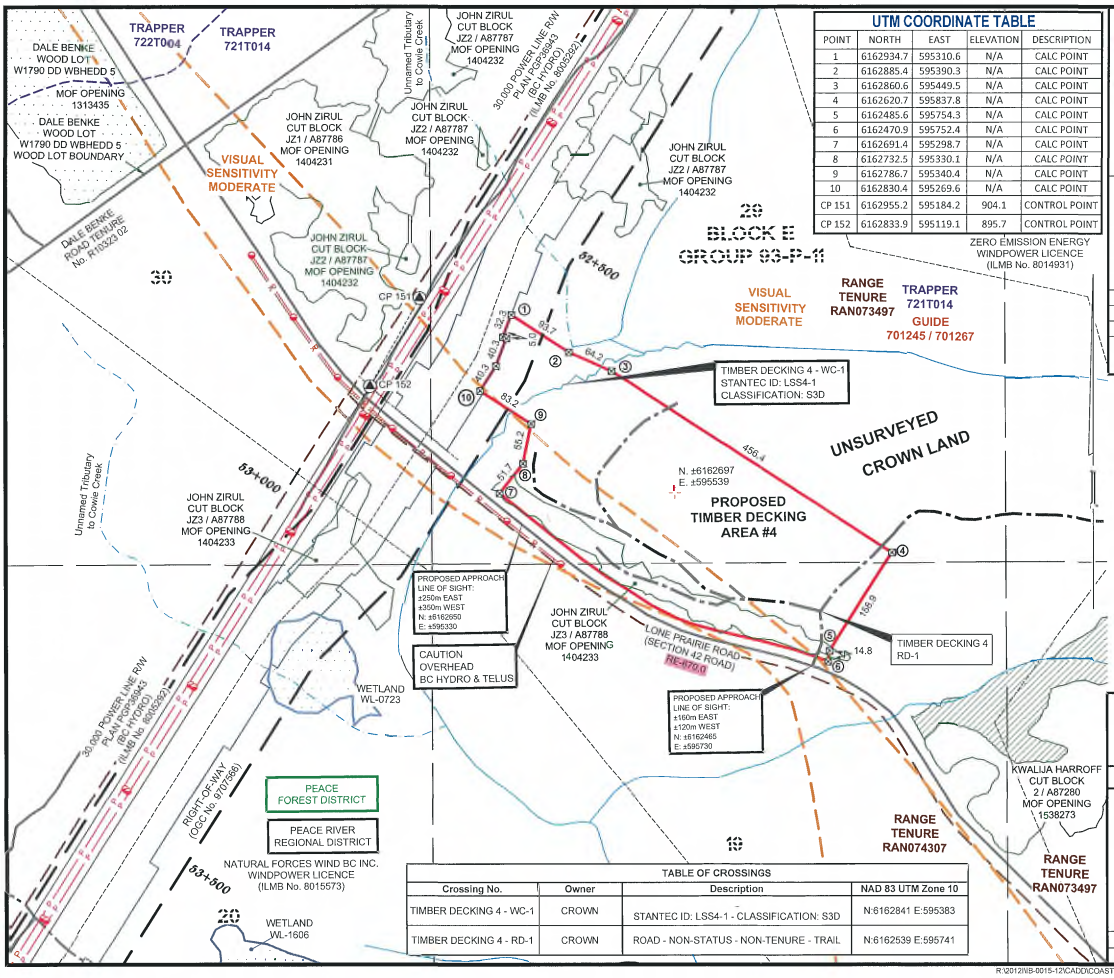

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LEGEND:

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- Calculated Point
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- Tenured Road
- Non-Status Road
- PNG Grid Boundary
- Watercourse
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- Trapper Boundary
- Range Tenure
- Visual Sensitivity Area
- Powerline / Powerpole

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EPASS: 10054531 | BCGS: 93P.053 & 93P.063

REVISION	DESCRIPTION
0	Issued for Use, November 17, 2015

SCALE 1:5,000 (100 80 60 40 20 0 100 200) METERS

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PROPOSED FEATURE	EXISTING CLEARING	NEW CUT	TOTAL
TOTAL AREA WITHIN CROWN LANDS			
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TOTAL	**1.99 ha**	**10.17 ha**	**12.16 ha**

Caribou Range:	None
Coal Licence:	None
Community Forest:	None
Guide / Outfitter:	701245 / 701267
Mineral Reserve:	None
Mineral Interest:	None
Range Tenure:	RAN073497
Trapper:	721T014
Tree Farm Licence:	None
Ungulate Winter Ranges:	None
Wildlife Habitat Area:	None
Wildlife Tree Retention Area:	No
Wood Lot:	None

NOTE: Water Course Crossing Information and New Cut / Existing Cut Information provided to Survey by Coastal GasLink Pipeline Ltd. for the Coastal GasLink Pipeline Project.

Coastal GasLink Pipeline Project

TransCanada *In business to deliver*

COASTAL GASLINK PIPELINE LTD.

PLAN SHOWING

PROPOSED TIMBER DECKING AREA #4

WITHIN

UNITS 19 & 29, BLOCK E, GROUP 93-P-11

WITHIN UNSURVEYED CROWN LAND
PEACE RIVER DISTRICT

Route Reference: CGP_Route_RevF	November 17, 2015
Document No. CGE4703-MSI-G-MP-434	Rev 0

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BC Oil & Gas COMMISSION

Non OGAA v2.2

June 19, 2017

Coastal GasLink Pipeline Ltd.
450 – 1st Street SW
Calgary, Alberta
T2P 5H1

Attention: Joey Reimann

RE: Determination of Application for CGL Timber Decking Area Site #4 (OGC Legacy File #9643754)

Permit Holder: Coastal GasLink Pipeline Ltd.
Date of Issuance: June 19, 2017
Effective Date: June 19, 2017
Application Submitted Date: December 21, 2015
OGC Legacy File #: 9643754
Approved Disturbance Footprint: 12.16ha

ACTIVITIES APPROVED

Associated Oil & Gas Activity No.: 9643754	**Type:** Timber Decking Area
Changes In and About a Stream: WC-1	

GENERAL PERMISSIONS, AUTHORIZATIONS and CONDITIONS

PERMISSIONS

Petroleum and Natural Gas Act

1. The BC Oil and Gas Commission (the "Commission") pursuant to section 138 of the *Petroleum and Natural Gas Act* hereby permits the Permit Holder referenced above to construct and operate a related activity(s) as detailed in Activities Approved table above and the Activity Details table(s) below, when applicable, for the purposes of carrying out oil and gas activities as defined in the *Oil and Gas Activities Act* (OGAA); subject to the conditions set out herein.
2. The permissions and authorizations granted under this permit are limited to the area identified in the areas described in construction plan, document number CGE4703-MSI-G-MP-434, Revision 0, dated November 17, 2015 (the "construction plan"), by Midwest Surveys Land Surveying Ltd. as submitted to the Commission in the permit application dated December 21, 2015; herein after referred to as the 'activity area'.
3. The Commission, pursuant to section 138(1) of the *Petroleum and Natural Gas Act,* hereby permits the occupation and use of any Crown land located within the activity area.
   a) The permission to occupy and use Crown land expires two years from the date of issuance, unless the Commission has received notice of construction start, or this permit is otherwise extended, suspended, cancelled, surrendered or declared spent.
   b) The permission to occupy and use Crown land does not entitle the Permit Holder to exclusive possession of the activity area.
   c) The total disturbance within the activity area must not exceed the total approved disturbance footprint as referenced above.

AUTHORIZATIONS

Forest Act

4. The Commission, pursuant to section 47.4 of the *Forest Act*, hereby authorizes the removal of Crown timber from the activity area under the cutting permits associated with the Master Licence(s) as follows:

   Master Licence to Cut No.: M02340

   Cutting Permit No.: 19

   Timber Mark No.: MTB 716

   Total New Cut: 10.17

   Forest District: (DPC) Peace Natural Resource District

   Region: Interior

5. The cutting permits are deemed spent upon the submission of the post-construction plan or upon either the cancellation or expiry of the activities approved under the permit.

Water Sustainability Act

6. The Commission, pursuant to section 11 of the *Water Sustainability Act*, authorizes the changes in and about a stream, as detailed in the Activities Approved table above, within the activity area for construction and maintenance activities, unless otherwise restricted by this authorization

   a) Instream works must be carried out in accordance with the methods and any mitigations, as specified in the application.

7. The authorizations granted under this permit are limited to the area identified in the areas described in in construction plan, document number CGE4703-MSI-G-MP-434, Revision 0, dated November 17, 2015 (the "construction plan"), by Midwest Surveys Land Surveying Ltd. as submitted to the Commission in the permit application dated December 21, 2015; herein after referred to as the 'activity area'.

CONDITIONS

Notification

8. A notice of construction start must be submitted, as per the relevant Commission process at the time of submission, at least 48 hours prior to the commencement of activities under this permit.

9. Within 60 days of the completion of construction activities under this permit, the Permit Holder must submit to the Commission a post-construction plan as a shapefile and PDF plan accurately identifying the location of the total area actually disturbed under this permit. The shapefile and plan must be submitted via eSubmission.

General

10. The rights granted by this permit in relation to unoccupied Crown land are subject to all subsisting grants to or rights of any person made or acquired under the *Coal Act, Forest Act, Land Act, Mineral Tenure Act, Petroleum and Natural Gas Act, Range Act, Water Sustainability Act* or *Wildlife Act*, or any extension or renewal of the same.

11. The Permit Holder must not assign, sublicense or permit any person other than its employees, contractors or representatives to use or occupy any Crown land within the activity area, other than its employees, contractors or representatives, without the Commission's written consent. The Permit Holder must ensure that the activity area is maintained in a condition so as to minimize hazards, including but not limited to hazards associated with storage of materials and equipment.

12. The Permit Holder must ensure that the activity area is free of garbage, debris and unused equipment.

13. The permit holder must notify the Saulteau First Nations Lands Department office five (5) working days prior to commencement. Notification will be sent to Fernie Garbitt at fgarbitt@saulteau.com.

Environmental

14. *Construction activities must not result in rutting, compaction or erosion of soils that cannot be reasonably* rehabilitated to similar levels of soil productivity that existed on the activity area prior to the construction activities taking place.

15. Any temporary access must be constructed and maintained in a manner that provides for proper surface drainage, prevents pooling on the surface, and maintains slope integrity.

16. The Permit Holder must make reasonable efforts to prevent establishment of invasive plant s on the activity area associated with the related activities set out in the Authorized Activities table above resulting from the carrying out of activities authorized under this permit.

17. Following completion of construction associated with the associated activities set out in the Authorized Activities table above, the Permit Holder must, as soon as practicable

    a) decompact any soils compacted by the activity;

    b) if natural surface drainage pattern was altered by the carrying out of the activity, the Permit Holder must restore, to the extent practicable, to the drainage pattern and its condition before the alteration; and

    c) re-vegetate any exposed soil on the activity area including, where necessary, using seed or vegetative propagules of an ecologically suitable species that

        (i) promote the restoration of the wildlife habitat that existed on the area before the oil and gas activity was begun, and

        (ii) stabilize the soil if it is highly susceptible to erosion.

    d) Following completion of construction activities authorized herein, any retrievable surface soils removed from the activity area must be redistributed so that the soil structure is restored, to the extent practicable, to its condition before the activity was begun.

Clearing

18. The Permit Holder is permitted to fell any trees located on Crown land within 1.5 tree lengths of the activity area that are considered to be a safety hazard according to *Workers Compensation Act* regulations and must be felled in order to eliminate the hazard. Trees or portions of these trees that can be accessed from the activity area without causing damage to standing timber may be harvested.

19. The holder of the cutting permit must pay to the government, stumpage and any waste billing determined in accordance with the terms of this authorization.

20. The authorized cutting permit does not grant the Permit Holder the exclusive right to harvest Crown timber from the activity area. Authority to harvest some or all of the timber may be granted to other persons. The Permit Holder's right to harvest timber applies to any timber found on the site at the time they undertake harvesting activities.

21. All harvested Crown timber must be marked with the cutting permit's associated timber mark.

22. Any waste assessments applied under the Master Licence to Cut are subject to the merchantability specifications and monetary waste billing requirements in the Provincial Logging Residue and Waste Manual specific to the region associated with the cutting permit authorization.

23. Stumpage for Cutting Permit No. 19 will be calculated in accordance with the Interior Appraisal Manual as amended from time to time.

24. Apart from the that which is required for the installation of the clear-span bridge at crossing #WC-1 no new cut or construction is permitted within the 20m RRZ of the S3 stream shown to cross through the proposed Timber Decking Area

Water Course Crossings and Works

25. Stream, lake and wetland crossings must be constructed in accordance with the methods and any mitigations, as specified in the application.

26. In-stream activities within a fish bearing stream, lake or wetland must occur:

    a) during the applicable reduced risk work windows as specified in the Region 7 Omineca – Reduced Risk Timing Windows for Fish and Wildlife; or

    b) in accordance with alternative timing and associated mitigation recommended by a quali fied professional and accepted by Commission; or

    c) in accordance with an authorization or letter of advice from Fisheries and Oceans Canada that is provided to the Commission.

27. At any time, the Commission may suspend instream works authorized under this permit. Suspensions on instream works will remain in place until such time as the Commission notifies Permit Holders that works may resume. Reasons for suspension of works may include, but are not limited to, drought conditions and increased environmental or public safety risks.

28. Mechanical stream crossings must be constructed, maintained and deactivated according to the following requirements, as applicable:

    a) Only bridges, culverts, ice bridges or snow fills may be constructed at stream crossings;

    b) The Permit Holder must ensure that permanent bridges are designed and fabricated in compliance with

        i. the Canadian Standards Association Canadian Bridge Design Code, CAN/CSA-S6; and

        ii. soil property standards, as they apply to bridge piers and abutments; set out in the Canadian Foundation of Engineering Manual.

    c) Except with leave of the Commission, the Permit Holder must ensure that:

        i. any culverts used are designed and fabricated in compliance with the applicable:

            (a) Canadian Standards Association CSA G401,Corrugated Steel Pipe Products; or

            (b) Canadian Standards Association Standard CSA B1800, Section B182.2, Plastic Non-pressure Pipe Compendium, or

        ii. Any pipe installed in lieu of a culvert is of at least equivalent standard and strength as any culvert as specified above.

    d) Except with leave of the Commission, the Permit Holder must ensure that bridges and culverts meet the criteria set out in (i), (ii), or (iii) below:

        i. The bridge or culvert is designed to pass the highest peak flow of the stream that can reasonably be expected within the return periods set out in column 2 the table below for the period the Permit Holder anticipates the structure will remain on site, as set out in column 1In the table below:

Column 1 Anticipated period crossing structure will remain on site	Column 2 Peak flow period
Bridge or culvert, 3 years or less	10 years
Bridge other than a bridge within a community watershed, more than 3 years but less than 15	50 years
Bridge within a community watershed, more than 3 years	100 years
Bridge, 15 years or more	100 years
Culvert, more than 3 years	100 years

        ii. The bridge, or any component of the bridge:

(a) is designed to pass expected flows during the period the bridge is anticipated to remain on the site;

(b) is constructed, installed and used only in a period of low flow; and

(c) is removed before any period of high flow begins.

iii. The culvert:

(a) is a temporary installation, and the Permit Holder does not expect to subsequently install a replacement culvert at that location;

(b) is not installed in a stream, when the stream contains fish;

(c) is sufficient to pass flows that occur during the period the culvert remains on the site;

(d) is installed during a period of low flow; and

(e) is removed before any period of high flow begins.

e) Ice bridges on fish bearing streams may only be constructed where sufficient water depth and stream flows prevent the bridge structure from coming in contact with the stream bottom;

f) Water applied to construct an ice bridge on a water body must be sourced in accordance with the *Water Sustainability Act* unless

i. the water body is a stream with a stream channel width of at least 5 metres and is not designated as a sensitive stream under the *Fish Protection Act*, or has a riparian class of W1, W3, or L1,

ii. the water is sourced from the same water body proximal to the location on which the ice bridge is constructed,

iii. the water body is not within the boundaries of a public park,

iv. pump intakes do not disturb beds of streams or wetlands and are screened with a maximum mesh size and approach velocity in accordance with the Fisheries and Oceans Canada Freshwater Intake End-of-Pipe Fish Screen Guideline, and

(a) where the water body is a stream, the flow of water in the stream at the time and location of pumping exceeds 60 litres per second and the instantaneous pumping rate does not exceed 1% of the water flowing in the water body at the time and location the pumping occurs, or

(b) where the water body is a lake or pond, the cumulative volume of water withdrawn does not exceed 10 cm of lake or pond depth, calculated as the product of lake or pond surface area x 10 cm;

g) Records of water withdrawal and corresponding streamflow measurements are maintained by the Permit Holder and provided to the Commission upon request;

h) Snow fills must consist of clean snow and may only be located on streams that are dry or frozen to the bottom during the period of construction, maintenance and use. Where periodic thaws are anticipated, culverts must be installed to allow meltwater to pass through. Snow fill and any installed culverts must be removed prior to spring snow melt;

i) Bridge or culvert abutments, footings and scour protection must be located outside the natural stream channel and must not constrict the channel width;

j) Equipment used for activities under this approval must not be situated in a stream channel unless it is dry or frozen to the bottom at the time of the activity.

29. The only crossing structure permitted to be installed at crossing #WC-1 is a clear span bridge constructed with abutments above the high water mark.

Archaeology

30. An AIA report must be submitted to the Commission as soon as practicable.

    If artifacts, features, materials or things protected under section 13(2) of the Heritage Conservation Act are identified the permit holder must, unless the permit holder holds a permit under section 12 of the Heritage Conservation Act issued by the Commission in respect of that artifact, feature, material or thing:

    a. immediately cease all work in the vicinity of the artifacts, features, materials or things;

    b. immediately notify the Commission and the Archaeology Branch of the Ministry of Forests, Lan ds and Natural Resource Operations

    c. refrain from resuming work in the vicinity of the artifacts, features, materials or things except in accordance with an appropriate mitigation plan that has been prepared in accordance with the Heritage Conservation Act and approved by the Archaeology Branch of the Ministry of Forests, Lands and Natural Resource Operations.

ADVISORY GUIDANCE

1. Appropriate tenure will be issued upon acceptance of the post-construction plan. Submission of the original application and submission of the post-construction plan is considered an application for all subsequent applicable *Land Act* tenures. Upon the Commission's acceptance of the post-construction plan no further applications for replacement tenure are required.
2. A major culvert has the same meaning as in the Oil and Gas Road Regulation.

All pages included in this permit and any attached documents form an integral part of this permit.

[redacted]

Corey Scofield
Authorized Signatory
Commission Delegated Decision Maker

Copied to:

Land Agent – Roy Northern Land Service Ltd.
First Nations – Blueberry River First Nations, Kelly Lake Cree Nation, Kelly Lake First Nation, Kelly Lake Metis Settlement Society, McLeod Lake Indian Band, Saulteau First Nations, West Moberly First Nations
Ministry of Forests District Office – (DPC) Peace Natural Resource District

TC Energy
450 - 1 Street S.W. Calgary, AB
Canada, T2P 5H1
tel 1-855-633-2011
email coastalgaslink@transcanada.com
web www.transcanada.com

TC Energy

April 22, 2020

Peace River Regional District
PO Box 810
Dawson Creek, BC V1G 4H8

Attention: Land Use Planning Division

RE: Temporary Use Permit Application
Coastal GasLink Pipeline Ltd.
RNLS File 120496 (SP 4)
Proposed Stockpile Site within Units 19 & 29, Block E, 93-P-11

Dear Sir/Madam:

Pursuant to Coastal GasLink Pipeline Ltd. (CGLP) attached application for a Temporary Use Permit, we would like to advise that the location of the above noted Stockpile Site is on Crown land. CGLP has received a Crown Land Application from the BC Oil and Gas Commission (BC OGC) for authorization to carry out the proposed activities on Crown land. Within the temporary use application package the landowner signoff section has been intentionally left blank as the Crown will has issued consent by way of a BC OGC permit rather than a signature. Th euse of this site was initially intended as a timber decking area but has since changed to a stockpile site. A re-issue of the OGC permit is not required.

Please find enclosed the following documents pertaining to this application:

- Application Fee Cheque;
- PRRD Application for Development;
- Sketch Plans; and
- OGC Approval

Coastal GasLink
Pipeline Project

TC Energy
450 - 1 Street S.W. Calgary, AB
Canada, T2P 5H1
tel 1-855-633-2011
email coastalgaslink@transcanada.com
web www.transcanada.com

TC Energy

Thank you for your consideration to this matter. If you have any questions or require further information, please contact Jerry Hagen at (403) 920-7994 or jerry_hagen@tcenergy.com.

Yours truly,

Coastal GasLink Pipeline Ltd.

Jerry Hagen
Sr. Land Representative
Coastal GasLink Project

Encl.

Coastal GasLink
Pipeline Project

Traffic Management Plan, Section 1

CGL4703-SMJV-SA-PLN-0011

September 19, 2019

Rev 0

Issued for Use

Confidential

SURERUS MURPHY
A JOINT VENTURE COMPANY

Authorization Page

Surerus Murphy Joint Venture

Prepared by: _____ Date: Sept 19, 2019

Name: Jason McElligott

Title: Engineering Manager

Endorsed by: _____ Date: Sept 19, 2019

Name: Kyle Scott

Title: Assistant Project Manager

Approved by: _____ Date: Sept 19, 2019

Name: John Fitzgerald

Title: Senior Project Manager

Authorization Page

Coastal GasLink Pipeline Project

Accepted by: _____ Date: _____

Name: Brian Jewer

Title: Project Manager

Revision Log

Rev	Section	Revision Description
A	Entire Document	Initial release
B	Entire Document	Edited to address Client Comments
0	N/A	Issued for Use

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1.0 INTRODUCTION

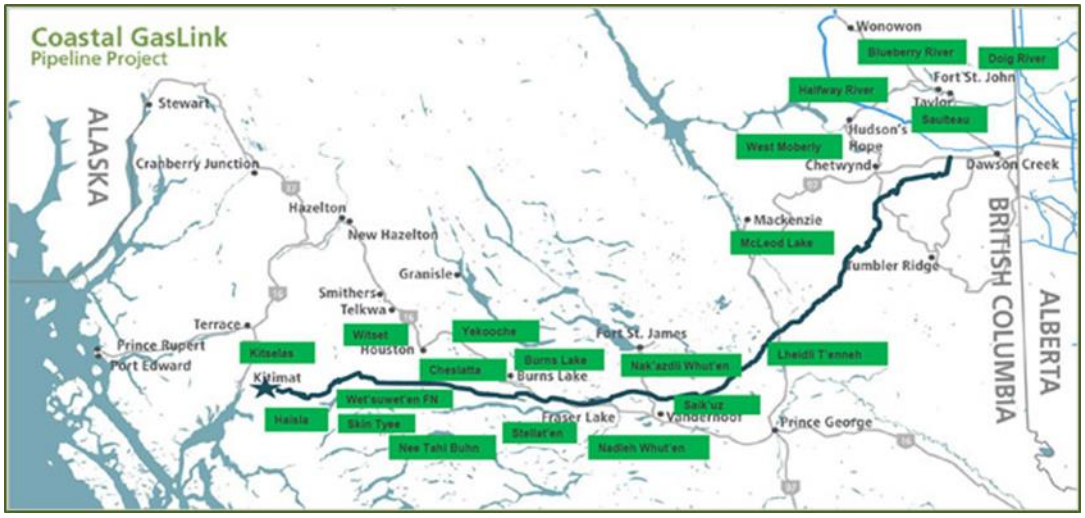
1.1 PURPOSE

The purpose of the Traffic Management Plan (TMP) is to provide an initial basis for the control of traffic management activities for the Coastal GasLink Pipeline (CGL) Project (Project). The TMP is a working document that will be revised as required to reflect changes in project planning to provide opportunities for improvement as they evolve through ongoing communication with Indigenous groups, regulatory bodies, landowners and other stakeholders.

1.2 PROJECT BACKGROUND

The Project is a new pipeline construction proposed to support the liquefied natural gas (LNG) industry, safely delivering natural gas across Northern BC for exports to global markets by LNG Canada.

Figure 1: CGL Project Map (from CGL Website)



Beginning near Dawson Creek, BC, the Project extends approximately 670km, encountering various terrain ranging from agricultural land to mountainous landscapes and rivers prior to terminating at Kitimat, BC along the west coast. The 670km is divided into eight constructions sections (or spreads) that will be constructed by various contractors. This includes (from the CGL Executive Summary):

- The construction of approximately 665 km of 48-inch (NPS 48) (1,219 mm) diameter pipeline
- The construction and operation of:

- Metering facilities at the receipt point (three (3) receipt meter stations and provisions for additional receipt meter stations at kilometer post (KP) 0) and delivery point (one (1) sales meter station)
- One (1) compressor station with provisions for up to seven (7) additional compressor station sites to allow for future expansion up to 5 bcf/d (142 mmcm/d)

1.2.1 SMJV Construction Sections

Section 1 begins near Groundbirch, BC at KP 0.0 extending southwesterly to a Sukunka laydown area near Brule Mines at KP 91.4. Details include:

- Install 91.4 km of NPS 48 with a Maximum Operating Pressure (MOP) of 13,375 kPa
- Install major crossings at the Murray River and the Sukunka River

Section 2 carries on west from Section 1 for about 50km, finishing at KP 139.5. Details include:

- Install 48.1 km of NPS 48 with a Maximum Operating Pressure (MOP) of 13,375 kPa
- Several steep slopes and mountainous terrain
- Install crossing at the Burnt River
- Figure 2 2: Spread 1 (left) and Spread 2 (right) overview

Figure 2: Spread 1 (left) and Spread 2 (right) Overview

1.3 SCOPE

This Traffic Management Plan has been developed specifically for Section 1. The scope of work:

- Identifies access roads to be used for both light and heavy vehicles to gain access to 91 kms of proposed pipeline Right of Way ("ROW")
- Includes development of an Access Map for Project personnel to follow
- Includes formulation of traffic management protocols and identification of Traffic Control Devices to ensure the safety of both workers and the public along the work zone
- Meet the requires of the Ministry of Transportation and Infrastructure
- Align with Work-Safe BC OHS Regulations on both traffic Control and Roads

The TMP defines the key roles, responsibilities and activities of the Surerus Murphy Joint Venture (SMJV) Project Management Team to implement a collaborative commitment to project safety. It also provides an overall framework and describes specific requirements to ensure a safe worksite environment throughout the lifespan of the project.

As the project is accessed using roads and access routes of difference standards, ownerships and governance, SMJV have looked at traffic management in a systematic manner. This document outlines the Project wide requirements for the management of Project traffic, as well as detailing additional requirements on access routes which fall under control of different parties. The access routes to the Project are a combination of MoTI Highways, MoTI high grade gravel roads, Forest Service Roads (FSR`S) of varying grades and newly constructed right of way (ROW) access. See table 1 below for a full list of access roads, road owners and grades for section 1.

For MoTI highways SMJV have identified that the Project is defined as a Category 2 project under BC MoTI Traffic management regulations and so SMJV have enlisted the service of a 3rd party traffic engineering provider DWB to develop a traffic management plan which sets out the BC MoTI requirements at the areas where the Project interfaces with MoTI Highways. DWB have produce a Traffic Management Plan covering the interfaces of the Project with the MoTI Highways, Highway 29 and 97. A copy of the plan is attached in appendix B.

Once off the MoTI highway, access routes tend to be either MoTI high grade gravel roads of FSR`s for which SMJV have outlined the traffic management requires in the main body of this document with supporting information contained in the appendices.

During the project, work crews will cross controlled roads between kick off and completion. Table 1 below is a list of Project access routes covered by this TMP.

Table 1: List of Project Access Roads

SMJV Road Name	Road Owner	Road Type
Highway 97	MOTI	Highway
Highway 29	MOTI	Highway
Access road 1	MOTI	Low grade gravel
Access road 1A	Land owner- new construction	Shoofly temporary access
Access road 2A/B	MOTI	High grade gravel
Access road 2	Land owner- new construction	Shoofly temporary access
Access road 3	Conoco-Phillips, Encana, Groundbirch FSR	Low grade gravel
Access road 3C	Land owner- new construction	Shoofly temporary access
Access road 4 through 7	MOTI	High grade gravel
Access road 4	Tembec	Low grade gravel
Access road 5	FSR	Trail
Access road 5A	New construction	Medium Grade Gravel
Access road 6	Tembec	Deactivated FSR
Access road 6A	Tembec/BC hydro	Trail
Access road 8	MOTI	Medium grade gravel
Access road 9	Land owner	Shoofly
Access road 11 through 15	Sukunka FSR Talisman	High grade gravel
Access road 11 through 11G	Canfor/Tembec/Talisman/MFLRNO/CNRL	High grade/Medium grade gravel
Access road 11	BC Hydro	Deactivated trail
Access road 11D	Land owner	Trail
Access road 11F	Land owner	Trail and new shoofly construction
Access road 12	Canfor	High grade gravel

1.4 DEFINITIONS

Table 2: Definitions of Terms

Term	Definition
Active Work Area	The portion of the roadway or right-of-way on which workers and/or equipment are engaged in construction or maintenance activities.
Advance Warning Area	Drivers must be given advanced warning of what to expect.
Crossing Equipment Operations	Workers often carry out crossing operations on roadways, which may require periodic stoppages. Some examples of crossing work activities are crossing equipment across the roads where permitted. "Crossing Operations" will require traffic control signage on TWP/RR gravel roads and highways. The person in charge of the job will ensure that applicable signage will be posted 2015 Ministry of Transportation and Infrastructure Traffic Control Manual for Work on Roadways to create a work zone if he/she determines that traffic control will remove the danger while work involves continuous moving operations.

Term	Definition
Detour	A temporary road closure may require a detour or an alternate route around the affected area. (i.e.: trenching on a low volume grid road).
Duration of Work - Short	Short duration work includes any activity that will last for less than one day.
Duration of Work - Long	Long duration work includes any activity that will last for more than one day.
Emergency Conditions	Temporary closure of a highway or roadway may become necessary when a hazardous condition that cannot be easily removed creates an obstruction on the roadway. SMJV workers must react in a manner to warn motorists of the hazardous situation, without creating further hazards to workers or motorists. SMJV will notify applicable governing bodies and/or road owners if emergency conditions arise.
Highway	General term denoting a roadway where the speed limit exceeds 80 km/h.
Inactive Work Area	The portion of a public right-of-way in which construction or maintenance activities have temporarily ceased.
One Lane Closed	A traffic lane that has been reduced to a usable width of less than 3 m. For two lanes, if it has less than 6m total, some type of traffic control is required. (Either a pilot vehicle or a Traffic Control).
Partial Lane Blockage	A traffic lane that has been reduced but still has a usable width of 3 m or greater. For two lanes, if it has less than 6m total, some type of traffic control is required. (Either a pilot vehicle or a Traffic Control).
Termination Area	The termination area provides a short distance for traffic to clear the work area and return to normal. A downstream taper is usually placed in the termination area.
Transition Area	In the transition area, traffic is channeled from the normal highway lanes to the path required to move traffic around the work area. The transition area contains the channelization devices used to taper or divert traffic. (cones, barricades).
Work Zone	When implementing traffic control plans, the work zone is defined as the area between the first advance warning sign and the point beyond the work area where traffic is no longer affected.

To gain access to the ROW, SMJV personnel completed a desktop study to identify all required access roads. The investigation was completed by analyzing the route centerline coupled with the Client provided Overview and Access Map. Additionally, the route selection was optimized to minimize disturbance to the locals. Refer to Appendix A for the SMJV Project Access Map.

All public access roads that the pipeline route intersects will be crossed with trenchless methods, creating minimal disturbance to traffic. As traffic will be able to flow as normal while construction activities progress, there are only two main situations when traffic controlling may be required:

- During heavy equipment or load transportation
- During emergency situations (e.g. surface mud release, oil spills, accidents, etc.)

As part of the Project orientation all personnel will be provided with an outline of the project access routes, speed limits, and populated areas.

On a live basis new issues which arise, and new information will be passed on to all foremen during the Daily Foreman Meetings, which will in turn be discussed to all crew members at the Daily Safety Tailgate Meetings.

SMJV understands the criticality of maintaining and managing the access routes to the ROW for the safety of the public and Project personnel together with the successful delivery of the Project. SMJV will have dedicated utility crews who will maintain all traffic management features on the access project access roads. This crew will receive their work assignments from the superintendent or assistant superintendent for the daily activities. The assignments will be given to the crews in a timely manner prior to needing the signs, etc., thus allowing some time to get them in place before the work begins.

The utility crew will at a minimum be required to wear the Project PPE requires as set out in the Site-Specific Safety Plan. However, if task requires traffic control and the personnel have the necessary qualification additional specific PPE as per section 8.2 of this document will be required.

2.0 PRIVATE VEHICLES USE AND PARKING

SMJV intend to prohibit the use of Private vehicles and restrict access to all areas except Camp 1 Chetwynd multi user site (MUS) where private car parking will be provided. A regular bus service will run between Chetwynd, Chetwynd Camp 1 and Sukunka falls camp 2.

Sukunka falls camp 2 will have parking for construction vehicles only, there will be no private parking. Access road 10 Sukunka forest service road will be for construction vehicles only with access prohibited for private vehicles of personnel working on the project.

3.0 PROJECT VEHICLES

SMJV will utilize a combination of crew trucks, personal trucks, 12-passenger vans and busses to access the ROW. Vans and busses will be preferred for larger crews to reduce traffic. Additionally, Off Highway Vehicles (OHV) such as side-by-sides may be used to quickly access areas along the ROW.

3.1 VEHICLE REQUIREMENTS

SMJV Light Vehicle Health & Safety Standard (SSMJV-HS-STN-008 found in Appendix B) applies to employees who drive light-duty vehicles (i.e., vans, pickup trucks, cars, ATV's, etc.) that are owned, leased, or contracted by the SMJV. The Standard outlines the requirements for use of vehicles on SMJV project locations.

SMJV realizes that vehicle operation is always considered to be a site safety risk; therefore, SMJV requires the following driver situational awareness practices:

- "Walk around" or "circle check" prior to backing-up vehicles or equipment as outlined in the SMJV Spotter Program
- SMJV driver training including a vehicle practical evaluation
- Pull through (drive through) parking as the preferred means for stopping/parking a vehicle or equipment
- Back in parking as the secondary means for parking a vehicle or equipment so that the next movement of that vehicle or equipment will be in the forward direction
- SMJV will actively participate in TCPL's Driver Situation Awareness Practice
- At least TWO of the following, or for vehicles and equipment operated with reduced visibility, THREE of the following:
    - operational back-up alarm
    - spotter
    - back-up camera
    - back-up sensors with audible alarm
    - single blast of the vehicle horn prior to any reverse motion

The following items are required for all vehicles traveling the right of way:

- 1 set of reflective pylons
- Hi-vis vest
- Fire extinguisher
- Spill kit

- British Columbia #1 emergency first aid kit
- Positive air shut off for diesel motors if required in a live facility
- 2-way radio
- Pylon

3.2 OFF HIGHWAY VEHICLE REQUIREMENTS

Off highway vehicle (OHV) operators must complete and hold a valid license or certificate of competency from an approved Canada Safety Council ATV/UTV/Snowmobile training course and demonstrate their competence in ATV/UTV/Snowmobile operation to the Work Site Supervisor.

SMJV expects all personnel using OHVs to ride in a safe and responsible manner in compliance with the manufacturer's instructions and applicable regulations. OHVs include, ATVs, UTVs, 4-wheel quads, side by sides, 8-wheel muskeg buggies, and snowmobiles.

Store the operator's manual for the all-terrain vehicle or snow vehicle in a secure place with the vehicle or at another location readily accessible to the operator.

OHV safety precautions include:

- Wear head and eye protection as laid out in the PPE Standard SSMJV-HS-STN-010 Rev 2
- Wear manufacturer provided seat belts when available
- Check your communications, safety/survival equipment (two-way radio, first aid kit, air horn, and fire extinguisher) prior to departure
- Only allow passengers on OHVs where manufacturer seating is supplied
- When ramps are used to load or unload an OHV, place them at a suitable angle, secured to the vehicle to stop slipping, be sufficiently wide, and have a surface finish which provides an adequate grip for the OHV's tires
- Always start your trip with a full tank of fuel and check your oil and inspect the OHV for oil or fuel leaks
- Travel off-road only and at safe speeds
- Exercise caution when crossing lake or river ice and when climbing steep slopes
- Look ahead for possible obstacles such as fence lines, branches, or rough terrain
- Follow SMJV Working Alone Health & Safety Standard (SSMJV-HS-STN-015) when traveling long distances to remote areas

- All OHVs to be supplied by SMJV and will be registered to certified individuals who will then be responsible for the maintenance and working condition of the OHV

The following items must be attached to the OHV:

- Air horn
- First aid kit
- 5 lb fire extinguisher
- Bear spray (when working in bear inhabited areas)
- Foot rest guards
- Project specific ERP (Emergency Response Plan)

The following are highly encouraged to be attached to the OHV:

- Buggy whip
- Spill kit

OHVs must be licensed and insured as per British Columbia Off-Highway Vehicle regulations and the license plate properly attached and displayed on the OHV.

4.0 AREAS OF CONCERN

4.1 INTERFACE WITH LOCAL PUBLIC TRAFFIC

A main area of concern is the interface between work crews/equipment and the local public traffic using the roads. SMJV will put up proper signs and warnings to mitigate this. This will include signs stating that there is pipeline construction and to reduce speed. All signs put up on roads will meet or exceed all the requirements and be approved where required by governing body responsible for the road.

4.2 HIGHWAY DRIVING

Safety precautions will be taken to avoid highway accidents at all costs, include:

- Installing barricades, blinkers, flares or warning signs, etc., as required, on each side of the road before excavation begins
- Restricting vehicles parking on the approach to the pipeline side of the road where the warning devices are erected. (i.e. block access and visibility)
- Stationing of trained Traffic Controls on each side of the traffic control location at an adequate distance to allow motorists time to come to a complete stop when equipment is being moved across approved roads (Refer to Section 8 Traffic Control Requirements)
- Maintaining warning signs until road and highway crossings are properly levelled, shoulders repaired, and ditches cleared
- In areas where private residences exist speeds will be reduced

4.3 DRIVING SPEEDS

SMJV will educate all work crews on the speed restrictions and erect proper signage. In addition, SMJV will implement a Vehicle Monitoring Program which uses GPS technology to monitor fleet vehicles. The following speed limits will be communicated to the crews:

- 25 km/hr in the ROW and 15 km/hr when passing other workers
- 10 km/hr in the yard
- 40 km/hr in gravel roads (unless otherwise posted)

All speed requirements must be met, and discipline rules will apply should posted speed limits or traffic regulations not be met by any employee or contractor. When possible, SMJV will use crew truck and/or busses to transport workers to right of way (ROW) work locations to reduce traffic.

Additional considerations will be identified by construction and safety management personnel during the pre-job hazard assessment, prior to commencement of field work. The TMP will be managed by the Engineering team and the Superintendent.

4.4 RESOURCE ROADS

The Project will utilize resource roads to access the ROW, which are controlled using radio communication. Signage at the entrance of each road will indicate the radio channel that is to be used for each road. SMJV will provide access maps (Appendix A) through the ERP which indicates the radio channels used for each road.

Generally, radio protocol dictates that traffic will call every other km as indicated by roadside signs (evens up and odds down). Some roads will have a unique protocol which will be posted at the entrance to the road. Personnel will be made aware of which roads have unique protocols during the site orientation.

Radio calls will be concise and will indicate:

- Road
- Location (km)
- Direction of travel (up or down)
- Type of vehicle

5.0 PROJECT ACCESS

5.1 HIGHWAYS

Section 1 of the Project is accessed using 2 main Highways, Highway 29 & Highway 97. Access Roads 1 & 2 intersect HW29 at an existing junction as shown below. The traffic management requirements at this junction are dealt with in the Highway 97 and Highway 29 Access Point Traffic Management Plan attached in Appendix B.

The Highway 97 and Highway 29 Access Point Traffic Management Plan also looks in detail at and prescribes the traffic management requirements and controls for the 5 junctions onto Highways 29 which are used for section 1 construction. These junctions are as follows:

- Chetwynd MUS
- Lone Prairie Road
- Access Road 8
- Access Road 9
- Access Road 10
- Sukunka Road

5.2 HIGH GRADE GRAVEL

On leaving the Highway Project traffic will travel along high-grade gravel roads, some of which are MOTI roads with others being FSR`s.

These roads will require the following three signs:

- Construction Ahead at 400m away
- Reduce Speed at 300m away
- Traffic Control Ahead at 200m away (required when Traffic Control is present)
- Additional signage will be installed for emergency situations. All signage specifications will be based from the “Sign Schedule” provided in the Work-Safe BC 18.5 Placement of traffic control signs and devices at https://www.worksafebc.com/en/law-policy/occupational-health-safety/searchable-ohs-regulation/ohs-regulation/part-18-traffic-control

The SMJV utility crew will be assigned to install and remove signs as needed to meet the requirements outlined in Part 18 of WorkSafeBC Traffic Control [Enacted by B.C. Reg. 242/2006, effective January 1, 2007]. The utility supervisor will have the responsibility of managing the traffic accommodation strategy during the project, working in conjunction with SMJV supervision.

5.3 ROAD RESTRICTIONS

An integral part of the access analysis was the incorporation of restrictions imposed by the Highway and other Road bodies. These restrictions may include:

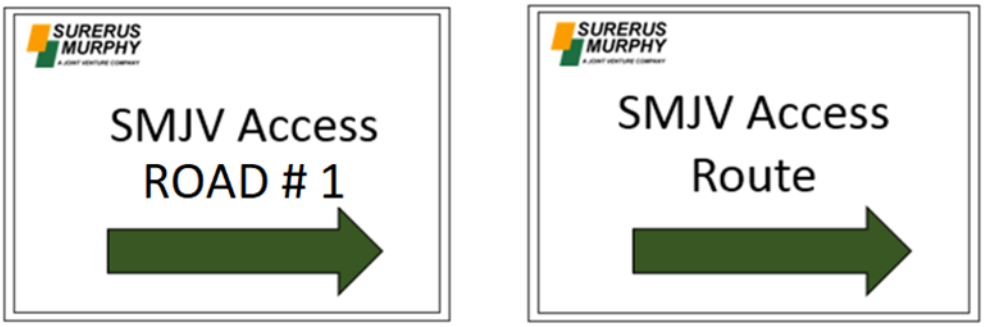
- Road and Road Bans (seasonal, temporary and year-round)
- Road Closures
- Dedicated Truck Routes/Non-Truck Routes
- Bridge SWL
- Utility & Service Crossings

In order to ensuring minimal disturbance to public traffic SMJV will continuously review information CGL provide for changes to these restrictions. Where necessary SMJV will make amendments to the TMP in line with any change in these restrictions throughout the project.

6.0 GENERAL PROJECT SIGNAGE

To provide clear and concise direction to drivers, SMJV will install access signage to and at all access points. These signs will be placed on the side of the road at least 150m before any turns and at the turn. The signage will be free from obstruction when installed. Signage will be maintained throughout the duration of the project and replaced when necessary. Sample signage is shown below. Where a trail, path or access point is used that has specific boundary limits that are not physically distinguishable, fencing will be installed to ensure the route stays within the allocated workspace.

Figure 3: Access Signage Sample



In addition to the access signage, general construction signage will be installed where workers and traffic may interface.

SMJV will coordinate with road owners to identify worn signs or areas where additional signage could be utilized.

7.0 TRAFFIC CONTROL

7.1 TRAFFIC CONTROL FOR HEAVY EQUIPMENT OR LOAD TRANSPORT

A form of traffic control will be required when transporting equipment to, from and along the project. The transportation of equipment will be managed effectively on the project to ensure that unnecessary moves are not undertaken. The access routes were selected to accommodate the movement of large loads such as excavators, drilling rigs, coating units, side booms, pipe trucks, and dozers.

Traffic will be controlled in locations where equipment will be offloaded near roadways or when a large carrier or a piece of equipment must block a portion of a road to enter or exit a ROW access point. Traffic will be controlled with Traffic Controls (Designated Signalers). This is the most suitable method as it is flexible to suit the irregular schedule of equipment transport/movement. Refer to Section 9 for Traffic Control Requirements. When a Traffic Control is required, a "Traffic Control" sign will be placed 150m ahead of the Traffic Control.

7.2 TRAFFIC CONTROL FOR EMERGENCY SITUATIONS

In the event of an emergency occurring such as a surface mud release, oil spill or any type of major incident, the response will vary depending upon a few factors:

- The location of the incident
- The extent of the affected area of the incident
- The classification and size of the road on which the incident occurred

When a small spill or surface mud release occurs on a roadway, the first action will be to notify the Traffic Control Supervisor (TCS) who will coordinate the response. The TCS will follow the procedure set out in section 3.3 of Appendix B of this document. If the event is large enough and places the public in danger, then the first traffic response will be to contact 911 to request additional support.

SMJV's utility crew will be available 24 hours to respond to any emergency situations. When a spill or release is spotted, the road traffic will either be stopped completely using Traffic Controls, or the traffic controlled to flow around the release by blocking off one lane of the Highway.

This traffic control set-up will be maintained until the clean-up response is completed.

8.0 TRAFFIC CONTROL REQUIREMENTS

SMJV will appoint a Traffic Control Manager (TCM) for the Project together with TCS who will be responsible for implementing and overseeing all traffic control requirements. The responsibilities of the TCM and TCS are listed in section 3.3 of appendix B of this document.

A British Columbia Traffic Control trainer will supply appropriate training for crews designated to support activity where traffic control is required. Should time not permit for onsite Traffic Control training, a qualified third-party contractor will be used for TC operations.

8.1 WORK SAFE BC TRAFFIC CONTROL REQUIREMENTS

A designated signaler shall only be used to control traffic where other methods are not suitable. The Traffic Control must abide by the rules set out in Part 18 of WorkSafeBC [Enacted by B.C. Reg. 242/2006, effective January 1, 2007].

8.2 TRAFFIC CONTROL PPE REQUIRED

Each traffic control person must be provided with, and must use, all the following:

- CSA approved steel toed boots
- Hi-vis hard hat with strip of retro reflective tape across the top from front to back and on the sides
- Hi-vis vest or jacket. Garments must cover the entire shoulder and have both fluorescent and retro-reflective material consistent with the rest of garment
- Hi-vis wrist band, fitted with a minimum 5 cm (2 in) wide fluorescent retro-reflective strip about their entire circumference
- Hi-vis lower leg bands, fitted with a minimum 5 cm (2 in) wide fluorescent retro-reflective strip about their entire circumference
- Traffic control paddle
- Safety glasses
- Gloves appropriate for the task
- Respiratory protection
- Flashlight with red signaling wand
- Effective communication (i.e. 2-way radios) when TCPs are not visible to each other.
- Hearing protection for noise exposures at or greater than 85dB as identified by hazard assessment

8.3 TRAFFIC CONTROL RESPONSIBILITIES

The responsibility of the Traffic Control(s) is to control traffic movements through a work area to provide the maximum level of safety to workers, the motoring public and pedestrians. They must keep traffic moving at reduced speeds unless conditions require that they stop traffic temporarily.

A minimum of two certified Traffic Controls will be required as a part of the Traffic Control crew. The Traffic Controls will be provided with electronic radio communications. The following requirements must also be met:

- Traffic Control Persons MUST have enough time to uncover ALL signs prior to the start of this activity
- Traffic Control Persons MUST cover Traffic Control Person Signs before leaving area

All necessary signs MUST be covered at end of each shift.

8.4 TRAFFIC CONTROL POSITIONING

In general, the Traffic Control will consider the following when positioned for traffic control:

- Stand outside of the travel lane
- Be positioned 100-150m from the beginning of the active work area
- Ensure they can be seen by approaching traffic for at least 150m
- Ensure there is an adequate escape route

Additionally, the Traffic Control should never turn their back on approaching traffic, must stand alone, must not sit, and shall never leave their post unattended.

8.5 TRAFFIC CONTROL SIGNALING

A skilled and experienced Traffic Control is an integral team member for effective and safe traffic control. The Traffic Control must be efficient at signaling and be able to evaluate the risks for the workers, the public and themselves. The Traffic Control must have the knowledge and experience to control traffic as detailed below:

- When stopping traffic, the Traffic Control must display the STOP sign to the motorist, giving the motorist plenty of warning for a safe and comfortable stop. Hand signals may be used if necessary
- Before moving traffic from a stopped position, the Traffic Control must ensure that the opposing traffic has stopped, and that the last opposing vehicle has passed his or her post

- When slowing traffic, the Traffic Control shall display the SLOW sign and, if necessary, use hand signals to command a further reduction in speed. Care should be taken to avoid bringing traffic to a complete stop
- If an emergency vehicle approaches when the STOP sign is displayed, the Traffic Control should attempt to contact the other Traffic Control (if applicable) so that traffic in the opposing direction can be stopped
- Traffic control persons MUST have enough distance and time to STOP approaching traffic
- DO NOT allow traffic to flow until highway clean-up is completed and the traffic lane is clear

8.6 TRAFFIC CONTROL COMMUNICATIONS

Communications between Traffic Controls will be done using 2-way electronic radios. The Traffic Control Crew will ensure that the radios are fully charged, and a spare set is available if required. All Traffic Controls must be confident with radio communication prior to beginning traffic control.

Efficient use of radios for communications largely depend on the operator's method of speaking. Special care is necessary to ensure words do not become blurred in the transmission of speech, especially during critical operations. The following is an excerpt from the RIC-22: General Radio Operating Procedures issued by the Government of Canada on January 2008 regarding speech transmission techniques:

When using radio, the operator should speak all words plainly and clearly to prevent words from running together. Avoid any tendency to shout, to accent syllables, or to speak too rapidly. The following points should be kept in mind when using radio:

- Speed: Keep the rate of speech constant, neither too fast nor too slow. Remember that the operator receiving your message may have to write it down
- Rhythm: Preserve the rhythm of ordinary conversation and word pronunciation. Also avoid the introduction of unnecessary sounds such as "er" and "um" between words."

To ensure messages are transmitted clearly, all radio operators will:

- Plan the content of the message prior to transmission
- Carefully listen to the radio before talking to ensure any other transmissions are not interrupted
- Send the radio message clearly and concisely
- Await confirmation of message receipt from the intended recipient

8.7 TRAFFIC CONTROL NIGHT OPERATIONS

There is currently no plan to have night operations in the project, but if the need arises, when flagging at night, additional visibility of the Traffic Control is required. The following additional measures will be followed as detailed in Section 18.10 of the WorkSafeBC Traffic Control guidelines.

Operations during night time or poor visibility:

- During the hours of darkness, or in other conditions of poor visibility, each traffic control person must be provided with and must use, in addition to the equipment required by section 18.9, a flashlight fitted with a red signaling wand
- For subsection (1), the traffic control person must have immediate access to spare batteries for the flashlight

[Enacted by B.C. Reg. 242/2006, effective January 1, 2007]

8.8 FLAGGERS

Flaggers will be used to control and direct traffic on the ROW or on Forestry Service Roads. Flaggers will be competent in spotting and giving clear and consistent direction to road users and equipment operators.

9.0 ROAD SURFACE DAMAGE PREVENTION MEASURES

If required by road owners, an additional layer of rubber tires will be used to protect the road surface when tracked heavy equipment crosses the highway. It should be noted that when crossing MOTI roads rubber mats will be required. The tire layer will not be placed into position until clean-up equipment (brooms, shovels, and scrappers) are on site. The protective layer will be removed from the road surface and onto the ROW immediately after the tracked equipment crossing and the road surface swept clean as described in Section 10.

10.0 DUST CONTROL, CLEANING AND REPAIRING ROADS

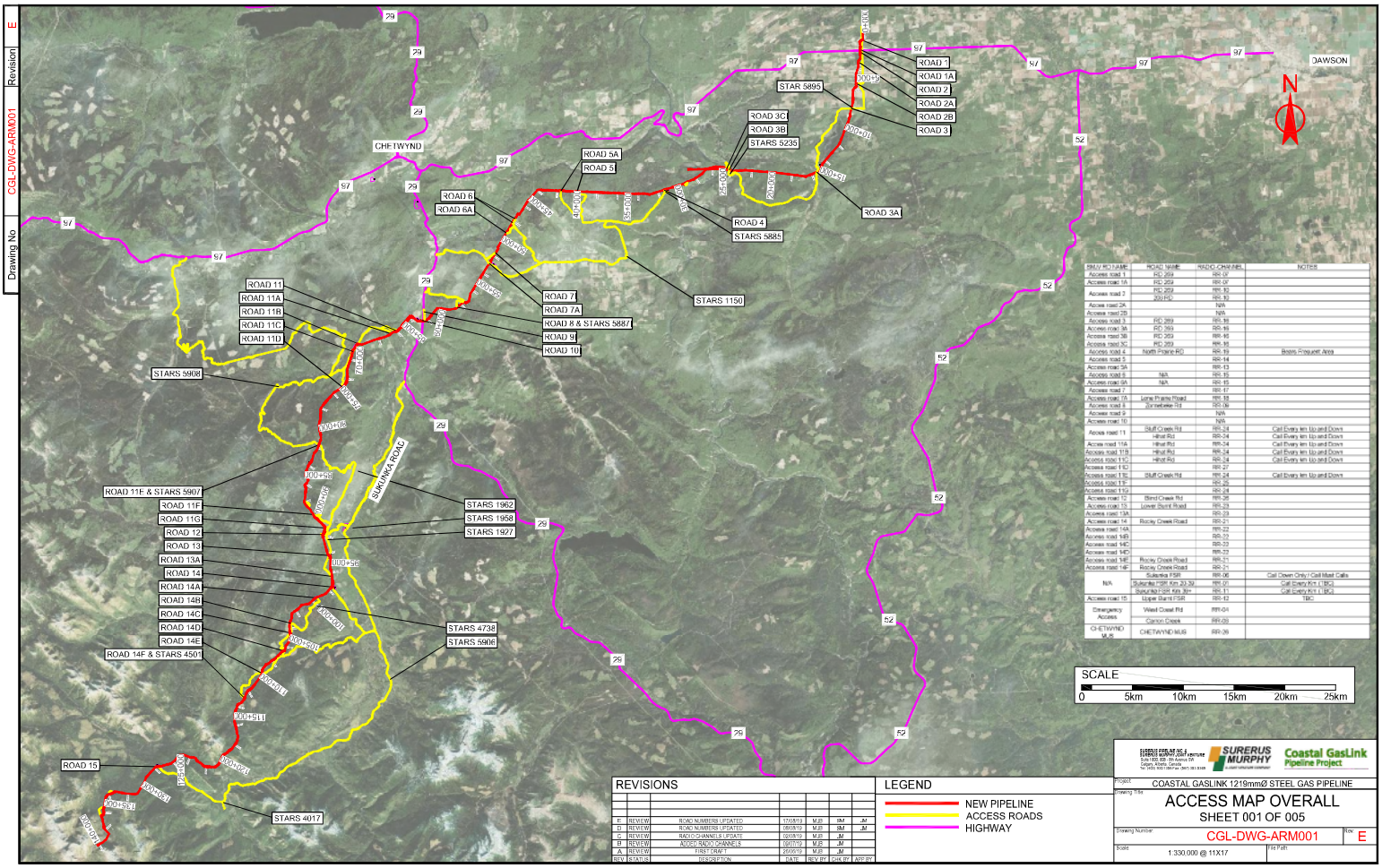
When conditions require that dust control be performed, a water truck is available on the project. In the event the road is damaged or requires attention, the Traffic Control Supervisor will be notified immediately. If the condition of the road surface is compromised, making the passage of traffic unsafe, the section will be secured to stop and prevent any public or workers for entering the becoming harmed as a result of the comprise. Where applicable the TCS will notify the road owner of the issue and advise of the rectification required and provide some guidance on the rectification time. For a more details on the protocols associated with incidents and issue on MOTI Highways please refer to appendix B Highway 97 and Highway 29 Access Points.

If any debris or dirt falls to the road surface, it will be picked up as soon as possible. Machine cleaners, such as sweeper trucks or skid-steers will be used to sweep and/or scrape the debris off the road surface to the satisfaction of the authorities or road owner.

If any repairs are required, the TCS will through CGL liaise with the road authorities or road owner to coordinate the repairs. Upon agreement of the repair scope, the repair will be completed as soon as possible, and traffic reroutes will be installed as required to maintain the flow of traffic.

Figure 4: CAT Skid Steer with Brush Attachment

Appendix A: SMJV Access Maps



RMJV RD NAME	ROAD NAME	RADIO CHANNEL	NOTES
Access road 1	RD 259	RR-07	
Access road 1A	RD 259	RR-07	
Access road 2	RD 259 259 RD	RR-10 RR-10	
Access road 2A		N/A	
Access road 2B		N/A	
Access road 3	RD 269	RR-16	
Access road 3A	RD 269	RR-16	
Access road 3B	RD 269	RR-16	
Access road 3C	RD 269	RR-16	
Access road 4	North Prairie RD	RR-19	Bears Frequent Area
Access road 5		RR-14	
Access road 5A		RR-13	
Access road 6	N/A	RR-15	
Access road 6A	N/A	RR-15	
Access road 7		RR-17	
Access road 7A	Long Prairie Road	RR-18	
Access road 8	Jumbelake Rd	RR-09	
Access road 9		N/A	
Access road 10		N/A	
Access road 11	Bluff Creek Rd Hihat Rd	RR-24 RR-24	Call Every km Up and Down Call Every km Up and Down
Access road 11A	Hihat Rd	RR-24	Call Every km Up and Down
Access road 11B	Hihat Rd	RR-24	Call Every km Up and Down
Access road 11C	Hihat Rd	RR-24	Call Every km Up and Down
Access road 11D		RR-27	
Access road 11E	Bluff Creek Rd	RR-24	Call Every km Up and Down
Access road 11F		RR-25	
Access road 11G		RR-24	
Access road 12	Blind Creek Rd	RR-28	
Access road 13	Lower Burnt Road	RR-23	
Access road 13A		RR-23	
Access road 14	Rocky Creek Road	RR-21	
Access road 14A		RR-22	
Access road 14B		RR-22	
Access road 14C		RR-22	
Access road 14D		RR-22	
Access road 14E	Rocky Creek Road	RR-21	
Access road 14F	Rocky Creek Road	RR-21	
N/A	Sukunka FSR Sukunka FSR Km 20-30 Sukunka FSR Km 30+	RR-06 RR-06 RR-11	Call Down Only / Call Mast Calls Call Every Km (TBC) Call Every Km (TBC)
Access road 15	Upper Burnt FSR	RR-12	TBC
Emergency Access	West Coast Rd	RR-04	
	Canon Creek	RR-09	
CHETWYND M.K.	CHETWYND MUS	RR-26	

REVISIONS						
E	REVIEW	ROAD NUMBERS UPDATED	17/05/13	MJB	BM	JM
D	REVIEW	ROAD NUMBERS UPDATED	08/08/12	MJB	BM	JM
C	REVIEW	RADIO CHANNELS UPDATE	02/07/12	MJB	JM	
B	REVIEW	ADDED RADIO CHANNELS	19/07/12	MJB	JM	
A	REVIEW	FIRST DRAFT	26/05/12	MJB	JM	
REV	STATUS	DESCRIPTION	DATE	REV BY	CHK BY	APP BY

LEGEND

NEW PIPELINE
ACCESS ROADS
HIGHWAY

SURERUS MURPHY
Coastal GasLink Pipeline Project

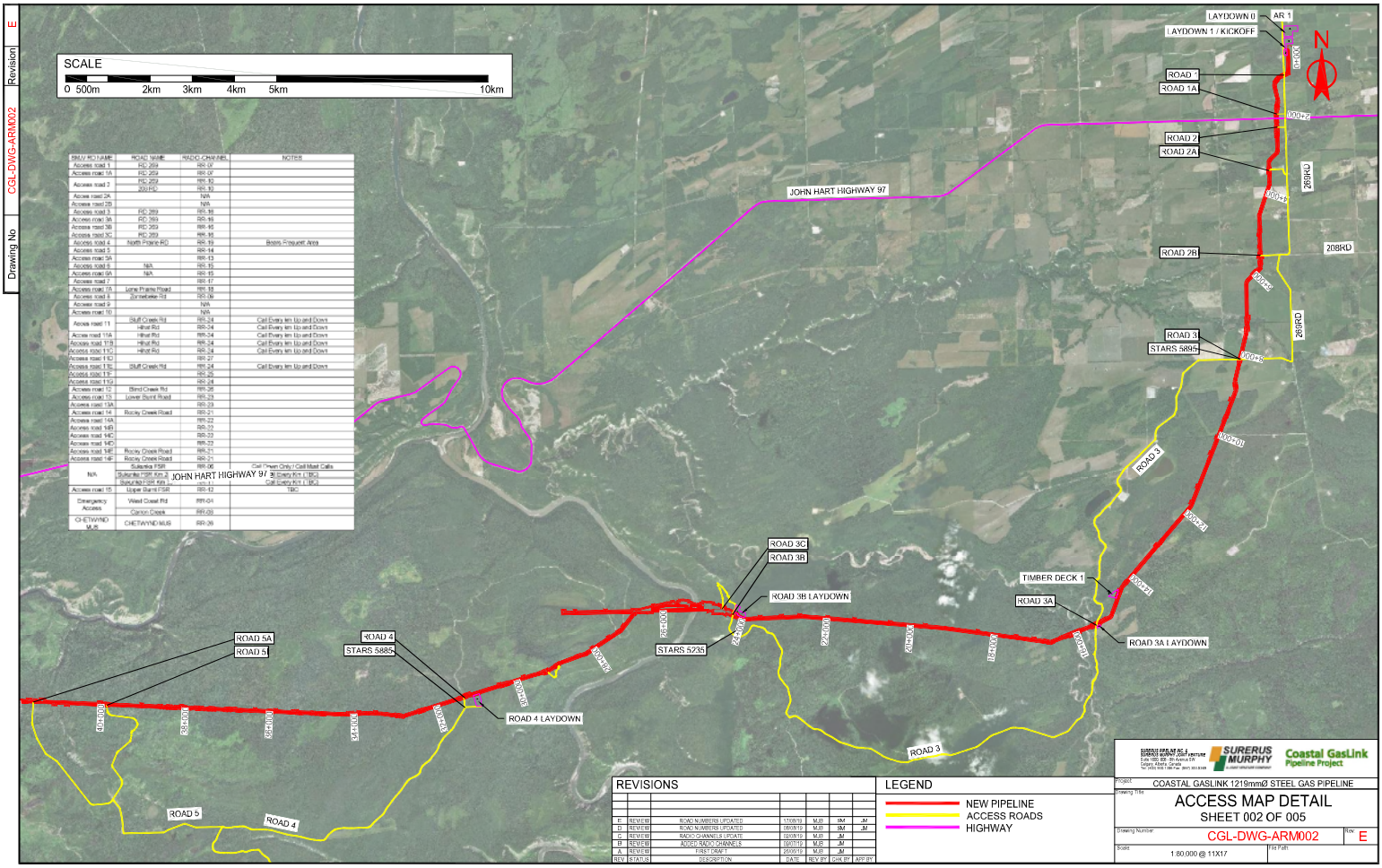
Project: COASTAL GASLINK 1219mmØ STEEL GAS PIPELINE

Drawing Title: ACCESS MAP OVERALL
SHEET 001 OF 005

Drawing Number: CGL-DWG-ARM001 Rev: E

Scale: 1:330,000 @ 11X17 Plot Path:

Revision: E
CGL-DWG-ARM001
Drawing No



RMV RD NUMB	ROAD NAME	RADIO CHANNEL	NOTES
Access road 1	RD 269	RR 07	
Access road 1A	RD 269	RR 07	
Access road 2	RD 269 269 RD	RR 10	
Access road 2A		RR 10 N/A	
Access road 2B		N/A	
Access road 3	RD 269	RR 16	
Access road 3A	RD 269	RR 16	
Access road 3B	RD 269	RR 16	
Access road 3C	RD 269	RR 16	
Access road 4	North Prairie RD	RR 19	Bears Frequent Area
Access road 5		RR 14	
Access road 5A		RR 13	
Access road 6	N/A	RR 15	
Access road 6A	N/A	RR 15	
Access road 7		RR 17	
Access road 7A	Long Prairie Road	RR 18	
Access road 8	Zonetelee Rd	RR 09	
Access road 9		N/A	
Access road 10		N/A	
Acces road 11	Bluff Creek Rd	RR 24	Call Every km Up and Down
Access road 11A	Hihat Rd	RR 24	Call Every km Up and Down
Access road 11B	Hihat Rd	RR 24	Call Every km Up and Down
Access road 11C	Hihat Rd	RR 24	Call Every km Up and Down
Access road 11D		RR 27	
Access road 11E	Bluff Creek Rd	RR 24	Call Every km Up and Down
Access road 11F		RR 25	
Access road 11G		RR 28	
Access road 12	Blind Creek Rd	RR 26	
Access road 13	Lower Burnt Road	RR 23	
Access road 13A		RR 23	
Access road 14	Rocky Creek Road	RR 21	
Access road 14A		RR 22	
Access road 14B		RR 22	
Access road 14C		RR 22	
Access road 14D		RR 23	
Access road 14E	Rocky Creek Road	RR 21	
Access road 14F	Rocky Creek Road	RR 21	
N/A	Sukunka FSR	RR 06	Call When Only / Call Mast Calls
	Sukunka FSR Km 2		3 Every Km (BC)
	Burnt No1 FSR Km		Call Every Km (BC)
Access road 15	Upper Burnt FSR	RR 12	TBC
Emergency Access	West Coast Rd	RR 04	
	Canon Creek	RR 09	
CHETWYND MUR	CHETWYND MUR	RR 26	

REVISIONS						
E	REVIEW	ROAD NUMBERS UPDATED	17/09/19	MJB	BM	JM
D	REVIEW	ROAD NUMBERS UPDATED	09/08/19	MJB	BM	JM
C	REVIEW	RADIO CHANNELS UPDATE	02/08/19	MJB	JM	
B	REVIEW	ADDED RADIO CHANNELS	09/07/19	MJB	JM	
A	REVIEW	FIRST DRAFT	26/05/19	MJB	JM	
REV	STATUS	DESCRIPTION	DATE	REV BY	CHK BY	APP BY

LEGEND

NEW PIPELINE
ACCESS ROADS
HIGHWAY

Project: COASTAL GASLINK 1219mmØ STEEL GAS PIPELINE

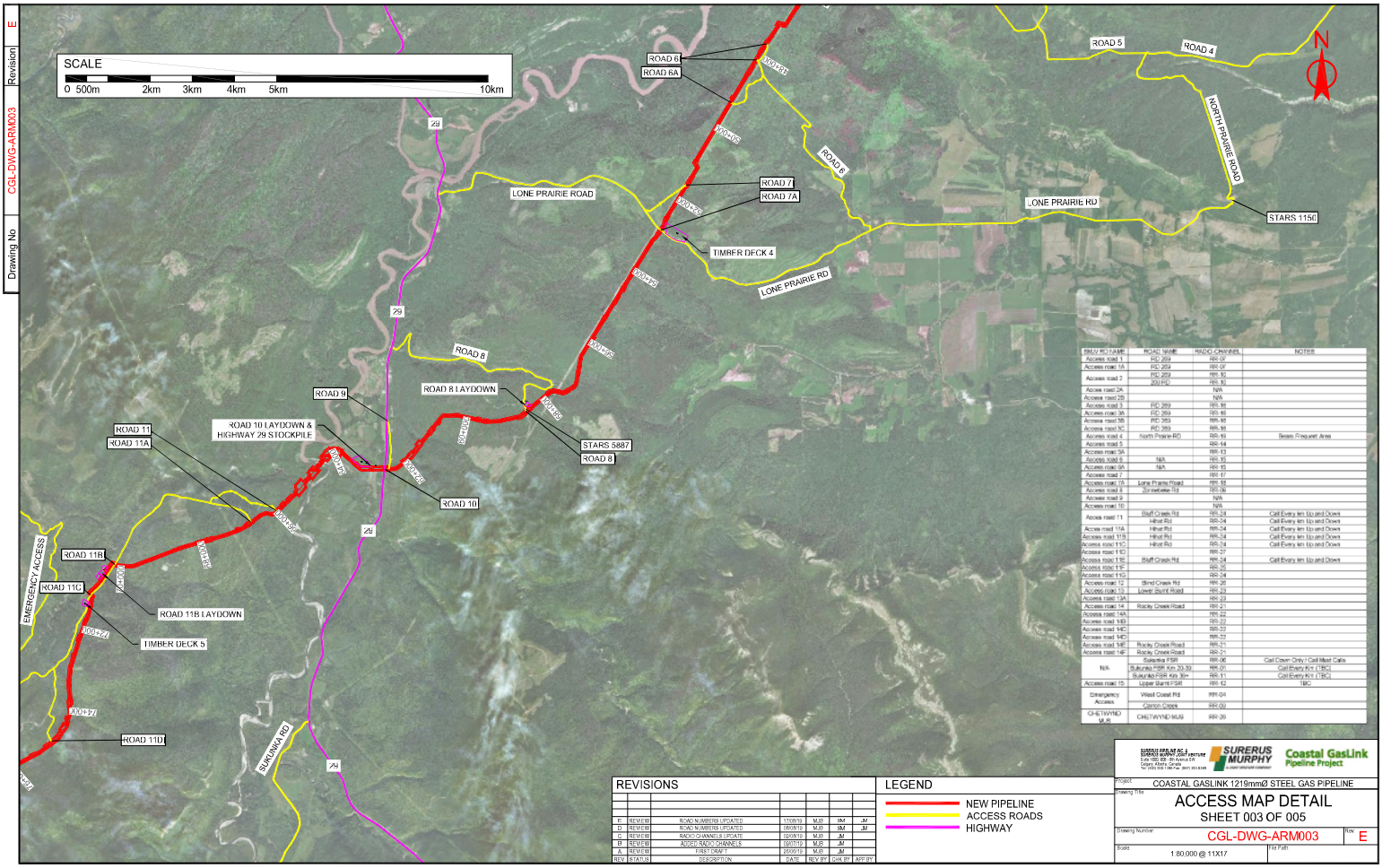
Drawing Title: ACCESS MAP DETAIL
SHEET 002 OF 005

Drawing Number: CGL-DWG-ARM002 Rev: E

Scale: 1:80,000 @ 11X17 Plot Date:

Revision: E

Drawing No: CGL-DWG-ARM002



SMJV RD NAME	ROAD NAME	RADIO CHANNEL	NOTES
Access road 1	RD 269	RR-01	
Access road 1A	RD 269	RR-07	
Access road 2	RD 269	RR-10	
Access road 2A	200 RD	RR-10	
Access road 2B		N/A	
Access road 3	RD 269	RR-16	
Access road 3A	RD 269	RR-16	
Access road 3B	RD 269	RR-16	
Access road 3C	RD 269	RR-16	
Access road 4	North Prairie RD	RR-19	Bears Frequent Area
Access road 5		RR-14	
Access road 5A		RR-13	
Access road 6	N/A	RR-15	
Access road 6A	N/A	RR-15	
Access road 7		RR-17	
Access road 7A	Lone Prairie Road	RR-18	
Access road 8	Zonebelke Rd	RR-09	
Access road 9		N/A	
Access road 10		N/A	
Access road 11	Bluff Creek Rd	RR-24	Call Every 4m Up and Down
	Hihut Rd	RR-24	Call Every 4m Up and Down
Access road 11A	Hihut Rd	RR-24	Call Every 4m Up and Down
Access road 11B	Hihut Rd	RR-24	Call Every 4m Up and Down
Access road 11C	Hihut Rd	RR-24	Call Every 4m Up and Down
Access road 11D		RR-27	
Access road 11E	Bluff Creek Rd	RR-24	Call Every 4m Up and Down
Access road 11F		RR-25	
Access road 11G		RR-24	
Access road 12	Blind Creek Rd	RR-26	
Access road 13	Lower Burnt Road	RR-23	
Access road 13A		RR-23	
Access road 14	Rocky Creek Road	RR-21	
Access road 14A		RR-22	
Access road 14B		RR-22	
Access road 14C		RR-22	
Access road 14D		RR-22	
Access road 14E	Rocky Creek Road	RR-21	
Access road 14F	Rocky Creek Road	RR-21	
N/A	Sukunka FSR	RR-06	Call Down Only / Call Most Calls
	Sukunka FSR Km 33-39	RR-01	Call Every Km (TBC)
	Sukunka FSR Km 39+	RR-11	Call Every Km (TBC)
Access road 15	Upper Burnt FSR	RR-12	TBC
Emergency Access	West Coast Rd	RR-04	
	Canon Creek	RR-00	
CHETWYND MUS	CHETWYND MUS	RR-26	

REVISIONS						
E	REVIEW	ROAD NUMBERS UPDATED	17/09/19	MJB	BM	JM
D	REVIEW	ROAD NUMBERS UPDATED	09/08/19	MJB	BM	JM
C	REVIEW	RADIO CHANNELS UPDATE	02/07/19	MJB	JM	
B	REVIEW	ADDED RADIO CHANNELS	19/07/19	MJB	JM	
A	REVIEW	FIRST DRAFT	26/05/19	MJB	JM	
REV	STATUS	DESCRIPTION	DATE	REV BY	CHK BY	APP BY

LEGEND

- NEW PIPELINE
- ACCESS ROADS
- HIGHWAY

SURERUS MURPHY

Coastal GasLink Pipeline Project

Project: COASTAL GASLINK 1219mmØ STEEL GAS PIPELINE

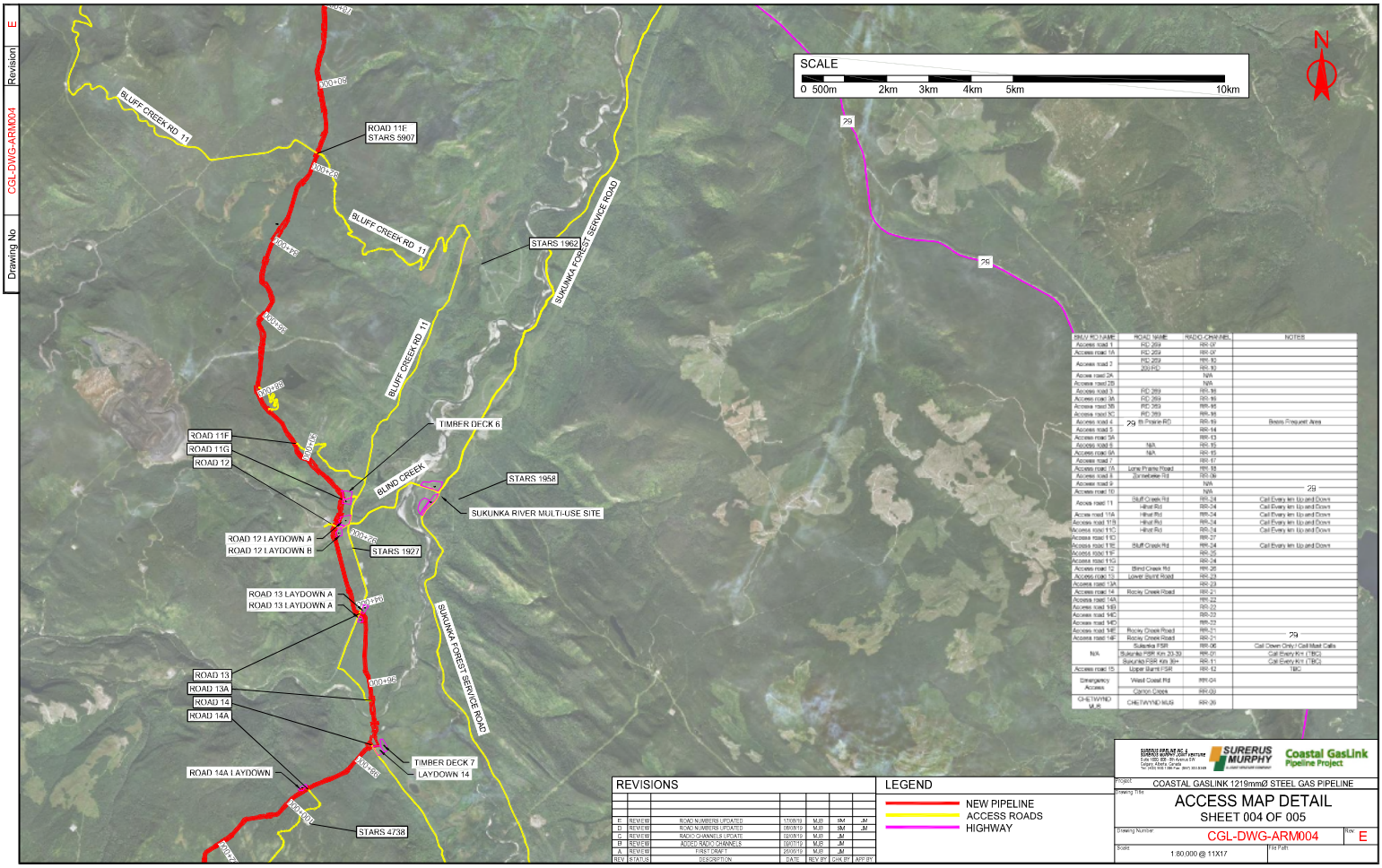
Drawing Title: ACCESS MAP DETAIL
SHEET 003 OF 005

Drawing Number: CGL-DWG-ARM003 | Rev: E

Scale: 1:80,000 @ 11X17 | Plot Path:

Revision: E

Drawing No: CGL-DWG-ARM003



RMU RD NAME	ROAD NAME	RADIO CHANNEL	NOTES
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Access road 2	FD 269	RR-10	
	300 FD	RR-10	
Access road 2A		N/A	
Access road 2B		N/A	
Access road 3	FD 269	RR-16	
Access road 3A	FD 269	RR-16	
Access road 3B	FD 269	RR-16	
Access road 3C	FD 269	RR-16	
Access road 4	29 th Prairie RD	RR-19	Bears Frequent Area
Access road 5		RR-14	
Access road 5A		RR-13	
Access road 6	N/A	RR-15	
Access road 6A	N/A	RR-15	
Access road 7		RR-17	
Access road 7A	Lone Prairie Road	RR-18	
Access road 8	Zonnebeke Rd	RR-09	
Access road 9	N/A		29
Access road 10	N/A		
Access road 11	Bluff Creek Rd	RR-24	Call Every km Up and Down
Access road 11A	Hihat Rd	RR-24	Call Every km Up and Down
Access road 11B	Hihat Rd	RR-24	Call Every km Up and Down
Access road 11C	Hihat Rd	RR-24	Call Every km Up and Down
Access road 11D		RR-27	
Access road 11E	Bluff Creek Rd	RR-24	Call Every km Up and Down
Access road 11F		RR-35	
Access road 11G		RR-24	
Access road 12	Blind Creek Rd	RR-25	
Access road 13	Lower Burnt Road	RR-23	
Access road 13A		RR-23	
Access road 14	Rocky Creek Road	RR-21	
Access road 14A		RR-22	
Access road 14B		RR-20	
Access road 14C		RR-20	
Access road 14D		RR-20	
Access road 14E	Rocky Creek Road	RR-21	
Access road 14F	Rocky Creek Road	RR-21	29
	Sukunka FSR	RR-06	Call Down Only / Call Mast Calls
N/A	Sukunka FSR Km 33-39	RR-01	Call Every Km (TBC)
	Sukunka FSR Km 39+	RR-11	Call Every Km (TBC)
Access road 15	Upper Burnt FSR	RR-12	TBC
Emergency Access	West Coast Rd	RR-04	
	Cannon Creek	RR-00	
CHETWYND M.R.	CHETWYND MUS	RR-26	

REVISIONS						
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D	REVIEW	ROAD NUMBERS UPDATED	09/08/19	MJB	BM	JM
C	REVIEW	RADIO CHANNELS UPDATE	02/07/19	MJB	JM	
B	REVIEW	ADDED RADIO CHANNELS	09/07/19	MJB	JM	
A	REVIEW	FIRST DRAFT	26/05/19	MJB	JM	
REV	STATUS	DESCRIPTION	DATE	REV BY	CHK BY	APP BY

LEGEND

NEW PIPELINE
ACCESS ROADS
HIGHWAY

SURERUS MURPHY
Coastal GasLink Pipeline Project

Project: COASTAL GASLINK 1219mmØ STEEL GAS PIPELINE

Drawing Title: ACCESS MAP DETAIL
SHEET 004 OF 005

Drawing Number: CGL-DWG-ARM004 Rev: E

Scale: 1:80,000 @ 11X17 Ref Fgh:

Appendix B: TMP for Highway 97 and Highway 29 Access Points

DWB Consulting Services Ltd.

TRAFFIC MANAGEMENT PLAN (TMP)

COASTAL GASLINK PIPELINE PROJECT - SECTION 1 AND 2 – HIGHWAY 97 AND HIGHWAY 29 ACCESS POINTS

Engineering | Environmental | Forestry

Prepared for: Surerus Murphy Joint Venture Company
Attn: Jason McElligott, Engineering Manager

SURERUS MURPHY
A JOINT VENTURE COMPANY

Prepared by: DWB Consulting Services Ltd.
Prince George Division
1579 – 9th Avenue Prince George BC V2L 3R8
250.562.5541 | www.dwbconsulting.ca

Date: May 22, 2019 | DWB file: 19391-101 | Revision: 1

OQM | Organizational Quality Management Program

Signature Page

DWB Consulting Services Ltd. is pleased to submit this report for your review. This report has been prepared using sound technical and professional judgement, based on our knowledge and experience, applicable regulatory framework, industry best management practices, and current understanding of project conditions, design, and project setting.

REPORT TITLE: Traffic Management Plan – Coastal GasLink Pipeline Project - Section 1 and 2 – Highway 97 and Highway 29 Access, Chetwynd, BC

PREPARED FOR: Surerus Murphy Joint Venture Company

REVISION: 1

WRITTEN BY:

Sean Hawryluk, EIT

REVIEWED BY:

Todd Wambolt, P.Eng

REVISION HISTORY			
Date	**Version**	**Review Type**[1]	**Reviewed by**
22/04/2019	Draft	Editorial/ Professional	Todd Wambolt, PEng
22/05/2019	REV 1	Client/Regulatory	SMJV/MOTI

[1] Editorial Review: Reviewed for formatting, grammar, spelling, etc.
Professional Review: Reviewed for content and professional signoff
Client Review: Reviewed by client
Regulatory Review: Reviewed by regulatory agency (i.e. DFO) if necessary
Peer Review: Reviewed for content and errors by peer

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Brian Jewer	Office: Cell: Email: brian_jewer@transcanada.com	Owner's Representative
Kassidi Jones	Office: (250)-788-9365 Cell: (250) 788-3802 Email: Kassidi.Jones@gov.bc.ca	MOTI Representative & Area Manager Roads Chetwynd/Pine Pass

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LIST OF APPENDICES

1.0 INTRODUCTION

The purpose of this Traffic Management Plan (TMP) is to describe in detail the methodology to be taken in controlling traffic at specific access points on Highway 97 and Highway 29 during the Coastal GasLink Pipeline (CGL) Project (Project) Sections 1 and 2, in the Chetwynd, BC area. These access points include:

- Access Roads #1 and #2 at the 269 Road - Highway 97 junction in Groundbirch.
- Access Roads #4, #8, #9 and #10 on Highway 29S.
- Two access points at the Chetwynd Camp and Multi-Use area on Highway 29S.

Additional requirements shall be adhered to as prescribed in documents such as (But not limited to):

- SMJV Project Traffic Management Plan (CGL4703-SMJV-SA-PLN-0002)
- Safety Review of Access Routes: Coastal GasLink Project – Section 1 (McElhanney. 2018)
- Safety Review of Access Routes: Coastal GasLink Project – Section 2 (McElhanney. 2018)

This plan has been developed on behalf of Surerus Murphy Joint Venture Company (SMJV/ The Contractor) in accordance with British Columbia Ministry of Transportation and Infrastructure (BC MoTI / The Ministry) 2015 *Traffic Management Manual for Work on Roadways* (TMM). This TMP includes the information required for Category 2 projects as defined in the TMM.

Copies of this TMP shall be retained by the Contractor's Superintendent, the Traffic Control Supervisor (TCS), and by at least one Traffic Control Person (TCP) if any TCP is involved in the project. The TCS and each TCP (if applicable) shall have a copy of the specific Traffic Control Plan applicable to the work area(s) under their control. Upon request, any of the previously mentioned parties will immediately provide those documents to the Ministry of Transportation and Infrastructure Representative (MR), a Work Safe BC officer, or any other party interested in the traffic control on the project.

2.0 TRAFFIC CONTROL PLAN

2.1 PROJECT DESCRIPTION

This TMP pertains to specific locations where construction traffic will enter and exit Highway 97 and Highway 29 for works associated with the Coastal Gaslink Pipeline Project Sections 1 and 2. This TMP does not pertain to aspects of construction that would directly affect public traffic. Sections 1 and 2 of the CGL project involve the construction of 140km of NPS 48 pipeline and related facilities in an area that is mainly to the south of highway 97 in the general vicinity of Chetwynd, BC.

2.2 PROJECT LOCATION

The limits of the portion of the Project as they pertain to this TMP are the intersection of 269 Road (Access Road #1 and #2) and Highway 97; and the intersection of Sukunka Forest Service Road (Access Road #10) and Highway 29S. The CGL ROW crosses Highway 97 just west of 269 Road; the CGL ROW crosses Highway 29S approx. 6.4 km north of Sukunka Forest Service Road.

This TMP addresses five (5) access points to the Project and two (2) access points to the Chetwynd camp and multi-use area. The access points addressed in this TMP are the following:

Junction	Latitude (N)	Longitude (W)	Description
Chetwynd Camp & Multi-use area	55°39'17.09" 55°39'31.92"	121°35'40.03" 121°35'51.87"	This includes a main and emergency access approximately 3.2km south of Hwy 97 on Hwy 29. The location includes an 800 person camp, a yard for storing pipeline construction equipment, and 1000 parking spaces for staff to leave their personal vehicles.
Access Roads 1 & 2 From Hwy 97	55°46'52.51"	120°53'50.39"	Access roads 1 and 2 are located on the 269 road just off of Hwy 97. These access roads access the first 25km of pipeline construction for this project.
Access Road 4 from Hwy 29	55°36'36.43"	121°34'22.22"	Access road 4 starts on the Lone Prairie road from Hwy 29 just south of a bridge over the Pine river. Access road 4 accesses pipeline km 25.5-56.
Access Road 8 from Hwy 29	55°34'39.63"	121°35'28.29"	Access road 8 is located approximately 13km south of Hwy 97 on Hwy 29 and accesses pipeline km 56-62.

Access Road 9 from Hwy 29	55°33'44.30"	121°35'36.85"	Access road 9 is located approximately 15km south of Hwy 97 on Hwy 29. Access road 9 currently joins a Hwy 29 road construction detour.
Access Road 10 from Hwy 29	55°29'54.45"	121°37'30.02"	Access road 10 starts on the Sukunka FSR from Hwy 29 and accesses the final 65km of pipeline construction.

2.3 ESTIMATED TRAFFIC VOLUME

Traffic volumes on Highway 97 and Highway 29S were estimated in Safety Review of Access Routes Coastal GasLink Project – Section 1 using MoTI traffic data (AADT) reports and estimates of construction traffic generated by SMJV.

2.3.1 Existing Traffic

Estimated AADT along Highway 29S based on three (3) locations ranged between 4,341 vehicles per day (2014 data, 100 m north of 47 Street in Chetwynd) and 700 vehicles per day (2014 data, 17.1 km south of Chetwynd). Traffic volumes were significantly lower on highway 29 south of Chetwynd.

Estimated AADT along Highway 97 based on four (4) locations ranged between 7,430 vehicles per day (2014 data, 1.5 km east of Highway 29, west intersection in Chetwynd) and 1,904 vehicles per day (2014 data, 42 km east of Chetwynd). Traffic volumes were significantly lower at the AADT location 42 km east of Chetwynd (approx. 16 km west of Access Road #1 and #2).

The most relevant existing traffic volumes seem to be 700 vehicles per day for Highway 29S access points and 1,904 vehicles per day for Highway 97 access points.

2.3.2 Construction Traffic

Construction traffic will add to existing highway traffic volumes.

Thirty or more logging truck trips per day are expected to access Highway 29 on peak days. Camp mobilization, demobilization and goods movement to and from Chetwynd Camp are expected to increase traffic by more than 100 trips at the start and end of shifts. Traffic for transporting pipe to the work areas is not expected to be significant in comparison to existing industrial traffic.

Thirty or less timber logging truck trips per day are expected to access Highway 97 during peak periods. Trips into and out of the Wilde Compressor and Stockpile Yard will add 50 trips per hour to Highway 97 traffic during peak periods.

2.4 TRAFFIC CONTROL SUPERVISOR (TCS)

The TCS for this project is Xiaojian Wei. The TCS will be responsible for implementing the TMP and communicating with the project management team over any issues relating to the TMP. SMJV will be responsible for ensuring that the conditions of the site meet the requirements of the TMP prior to construction and will be fully responsible for providing safe passage during the project.

2.5 CONSTRUCTION SCHEDULE

Early works are scheduled to begin in January 2019. The main construction clearing works are scheduled to start August 2019, and construction is scheduled for completion by October 2021. Construction of the Chetwynd Camp and Multi-Use area has begun and is expected to be operational in early 2020. Construction hours and dates when construction will not occur have not been specified. Note, however, that this TMP is intended for access points to off-road construction sites that will not directly affect public traffic.

2.6 PLAN GENERAL INFORMATION

Detailed drawings showing the traffic pattern and signage requirements are provided in Appendix I. Additional information is included below:

- There are no construction activities planned within Hwy 97 or Hwy 29, and as such no impacts or delays to traffic are anticipated.
- MOTI authorization shall be obtained if work activities that will cause an impact to traffic are required.
- The Contractor shall comply with all applicable bylaws of the Peace River Regional District.
- Emergency access for ambulance, police, and health authority will be maintained at all times throughout the site.
- No off-road equipment will enter the paved highway unless on highway legal trailers.

2.7 CLOSURES, DELAYS, AND DETOURS

Road closures and delays, including Single Lane Alternating Traffic (SLAT), will not be required for the aspects of the project addressed by this TMP. Project work is entirely off of Highway 97 and Highway 29S and no detours will be required. Alternate routes to Dawson Creek Hospital and Tumbler Ridge Health Clinic are provided (Appendix C).

2.8 TRAFFIC CONTROL DEVICES

Required traffic control devices and locations are shown on the traffic control drawings provided in Appendix I. Installation of traffic control devices is to be conducted in accordance with the procedures in Appendix E. All traffic control devices shall be in accordance with the TMM and any updates.

2.9 TRAFFIC MANAGEMENT FOR OVERSIZE VEHICLES

There will be no reduction of the Highway 97 or Highway 29 clearance envelopes for the aspects of the project addressed by this TMP.

3.0 INCIDENT MANAGEMENT PLAN

Implementation of the Incident Management Plan is optional for the works associated with this TMP.

This Incident Management Plan addresses incidents that may occur at access points to the Project - Access Road #1 and #2 (269 Road and Highway 97), Access Road #4, #8, #9, and #10 (Sukunka FSR) and Chetwynd Camp Main and Emergency access points. This Incident Management Plan does not address incidents that may occur in other locations within or outside of the work area (Project area off of Highway 97 and Highway 29S), which may be addressed by other project documents (e.g. Safety Reviews).

A requirement for incident management is that the TCS reports directly to the Superintendent. Incident reports will be written in the form of the Incident Response Form provided in Appendix F and will also be recorded in the Daily Traffic Activity Report as included in Appendix G. The Daily Traffic Activity Report is to be completed daily by the TCS during construction operations. A copy of all documentation will be maintained at the SMJV Chetwynd Office.

The TCS for this job will be supplied by the Contractor and may be reached on site or by the contact information provided in Appendix D: Emergency Contact Procedure and List. All supervisors will be informed of emergency services contact procedures (see Section 3.3, Appendix A, and Appendix D).

3.1 INCIDENT RESPONSE

There are three main components of incident response:

- Detection of the incident.
- Fast response time to secure the incident area, notification to the required agencies and re-establishment of traffic flow.
- Effective communication between the Contractor, MoTI, and the travelling public.

The primary function of traffic control is to move traffic safely and efficiently through any incident area while maintaining access for any emergency vehicles. The TCS or the Superintendent will regularly monitor the access points addressed by this TMP for incidents. In the event of an incident, the TCS or the Superintendent will contact emergency services, assess the incident site, and determine the best procedures for rectifying the incident. The TCS or the Superintendent will determine the location, number of people involved, along with the extent of the injuries and identify any hazardous situations, such as fuel spillages. The Contractor will provide access for any emergency vehicles and assistance to the emergency response personnel, if so requested.

Types of incidences may include unforeseen delays due to volume of traffic, encounters with TCPs and minor accidents; however, the majority of these incidents may be avoided by users obeying construction traffic signage and the Contractor reviewing the traffic signage daily. If an incident occurs, the Superintendent is required to call the appropriate emergency personnel immediately as listed in Appendix A and provide the location and name of the project where the incident occurred.

Emergency route maps to **Chetwynd Hospital, Dawson Creek Hospital, and Tumbler Ridge Health Clinic** are provided in Appendix C. Alternate emergency routes are provided for both Highway 97 and Highway

29S access roads and Chetwynd Camp access locations. An emergency contact procedure including the key contacts will be posted to inform the travelling public of whom to contact in the event of an emergency as provided in Appendix D.

3.2 INCIDENT REPORTING

All employees are responsible for traffic incident reporting. All incidents are to be reported directly to the Superintendent and/or Safety Manager including near misses verbally, regardless of its severity, as soon as possible but within 24 hours. A review of the incident reports will be conducted by the Superintendent to minimize the chance of any future incidents and make any changes to the TMP as required. Information regarding the incident and subsequent preventative action will be shared between the Superintendent and the TCS. The incident report will include the following, as outlined in the Incident Response Form, in Appendix F:

- Incident occurrence
- Response measures taken
- Clearance measures required
- Estimated clearance time
- Incident clearance

3.3 INCIDENT RESPONSE PROCEDURES

The procedure for incidents would include the following:

1. TCS – call the appropriate emergency response personnel in Appendix A.
2. The Contractor – stop and prevent any public or workers from entering the incident zone.
3. The Contractor – clear any hazards from public or workers without endangering workers.
4. TCS – determine clearance measures required and estimate the clearance time.
5. TCS – notify MR of the incident, clearance measures taken and still required, and estimated clearance time.
6. The MR is responsible for notifying MoTI department and RTMC.
7. The Contractor – proceed with incidence clearance and restore traffic flow through site.
8. The Contractor – complete the Incident Response Form in Appendix F.
9. Proceed with follow up procedures as per the Implementation Plan.

If an incident results in delay of traffic, the Superintendent must update Drive BC to inform the public of estimated delay times. Once emergency personnel are on site, the incident will be contained and/or cleared, and normal traffic flow will be re-established as soon as possible.

3.4 INCIDENT DELAY TIMES

Traffic flow should be normalized as soon as possible and in accordance with direction from the TCS. Major incidents that require delay times greater than one hour may include vehicle accidents, large fuel spills, or incidents resulting in bodily harm to the public or workers. Minor incidents that require a delay of less than 30 minutes may include small spills, incidents involving traffic control persons, unexpected queuing of traffic that clears within 30 minutes, or any event that causes unexpected delays of less than 30 minutes.

Where traffic queues cannot be cleared within thirty (30) minutes due to an incident, easily identifiable personnel should walk the traffic queue in each direction ensuring that:

- Travellers are aware of the events;
- Travellers are aware of their options;
- Travellers are aware of the estimated time of opening and level of confidence for that estimate;
- Any health issues or safety issues that may arise are tended to.

3.5 INCIDENT INVESTIGATION

The access points to the work zone should be monitored and inspected regularly (minimum daily) to identify and analyze evidence of traffic incidents and conflicts by the Traffic Control Supervisor. These findings shall be recorded on the Daily Traffic Activity Report and Daily Sign Check Report, Appendix G. Should an incident occur, the TCS will investigate the cause of the incident. The findings from the investigation will be recorded on the Incident Response Form, Appendix F and reported according to the requirements in Sections 3.2 and 3.3.

4.0 PUBLIC INFORMATION PLAN

Implementation of the Public Information Plan is optional for the works associated with this TMP.

Any changes to the TMP will be reported directly to the MR by the TCS and/or the Superintendent. The Contractor is responsible for informing the MR of construction activities and requesting publications on Drive BC.

The travelling public will be made aware of construction conditions and unscheduled traffic delays through Drive BC. It is the role of the TCS to update Drive BC of changes in construction conditions and unscheduled traffic delays.

Prior to implementing a pre-approved lane closure or delay, the Contractor shall provide advance notification to the public by means of advertisement or public messaging. Written notification will be sent to the parties included in but not be limited to the list below. The contact numbers are detailed in Appendix B. Contact information for the MR is included in Key Contacts before the Table of Contents of the TMP.

- All emergency services
- Project MR
- Drive BC through the MR
- RTMC through the MR
- Local MoTI road, bridge and/or electrical maintenance contractors
- BC Trucking Association
- Commercial Vehicle Safety and Enforcement (CVSE)
- Peace River Regional District
- First Nations

The stakeholders above, the Public, and the MR will be given a minimum of one (1) week notice prior to all road closures, lane closures and other traffic delays, and the advertising will be done in such a way that the closures are predictable and consistent for the travelling public.

5.0 IMPLEMENTATION PLAN

5.1 PROJECT IMPLEMENTATION AND DUTIES

The TMP will be reviewed by the Contractor and all workers prior to construction to ensure that the plan is fully understood. The TCS will be in direct contact with the Superintendent. The TCS will be responsible for implementing the TMP and communicating with the Superintendent and the MR over any issues relating to the TMP.

5.1.1 Traffic Control Supervisor

The Traffic Control Supervisor (TCS) cannot be the Site Supervisor, Superintendent, or Foreman unless permitted in writing by the Road Authority. The roles of TCS and Traffic Control Manager (TCM) may be executed by the same person; however, the roles should be split between two persons if traffic management responsibilities require frequent or full-time attention. The TCS is to have TCP Certification in order to assume the duties of a TCP and direct traffic, if needed.

The Traffic Control Supervisor is responsible for:

- Overseeing traffic control operations.
- Ensuring traffic control operations are executed in accordance with the Traffic Control Plan and are updated as necessary.
- Ensuring all Traffic Control Plan operations comply with the requirements of *Parts 8 and 18 of the WorksafeBC Occupational Health and Safety Regulation* regarding supervision of TCPs at the work zone.
- Ensuring the required traffic control signs and devices are in place and checked, maintained, and moved as required.
- Documenting daily traffic control setups and changes are documented in the traffic control logs.
- Ensuring concerns with traffic are reported to the Traffic Control Manager or Superintendent.

If Traffic Control Persons are required, the Traffic Control Supervisor shall also be responsible for:

- Providing direction to TCPs and ensuring TCPs are familiar with requirements.
- Ensuring TCPs wear the appropriate personal protective clothing and equipment as per Section 5.4 of the TMM.
- Ensuring TCPs carry evidence of current TCP certification.
- Ensuring TCPs are equipped with all necessary equipment, and perform their traffic control duties safely and competently.

- Ensuring TCPs are positioned at locations that are safe and clear of potential environmental hazards, and that TCPs are provided with rest breaks.

5.1.2 Traffic Control Manager

The Traffic Control Manager (TCM) cannot be the Site Supervisor, Superintendent, or Foreman unless permitted in writing by the Road Authority. The roles of TCS and Traffic Control Manager (TCM) may be executed by the same person; however, the roles should be split between two persons if traffic management responsibilities require frequent or full-time attention.

The Traffic Control Manager is responsible for:

- Preparing the Traffic Control Plan and sub-plans, including reviewing, evaluating, and approving the details in the Traffic Control Plan and traffic control layouts.
- Fully implementing the Traffic Control Plan.
- Monitoring traffic operations to determine the effectiveness of the Traffic Control Plan.
- Ensuring all signage and Traffic Control Plan operations are in place and functioning as intended.
- Ensuring that the Traffic Control Plan is current.
- Overseeing modifications to the Traffic Control Plan as necessitated by schedule changes, special events, or changes to sub-plans.
- Ensuring that the daily traffic logs are maintained.
- Exercising full line authority over all traffic control persons on the work site.
- Finalizing traffic control measures with the Traffic Engineer and communicating modifications in the Traffic Control Plan to the Traffic Engineer.
- Liaising with the Project Manager, workers, Traffic Engineer, and MR as required.
- Ensuring any problems arising during construction relating to traffic are discussed with the Superintendent, TCS, and the TCPs to resolve and modify any aspects of the plan to ensure public safety through the construction site.
- Ensuring the MR is notified of all changes.
- Implementing a monitoring schedule for active and inactive work periods through the course of the project.
- Directing the Incident Management Plan, the Public Information Plan, and the Implementation Plan.

5.1.3 Superintendent

These responsibilities may be ordinarily designated to the Site Supervisor, Foreman, or Superintendent on projects where traffic control is associated with a single work area. However, because this project involves multiple areas of traffic control associated with multiple work areas, these responsibilities are designated to the Project Superintendent.

The Superintendent is responsible for ensuring:

- Each crew member is familiar with the Traffic Control Plan.
- Ensuring all personnel understand the Incident Management Plan and are aware of emergency procedures and contacts.
- Each crew member wears the required safety apparel and uses the required equipment when working on or crossing the highway.
- The roadway is protected by implementing the Traffic Control Plan.

5.1.4 Traffic Engineer

The Traffic Engineer will be responsible for:

- Developing the Traffic Management Plan.
- Liaising with Project Manager and TCS as required.
- Modifying the plan as required.

5.2 TRAFFIC CONTROL MONITORING

It is the responsibility of the Contractor to ensure the TMP is adhered to. The Contractor will drive through the site prior to any construction to ensure that the TMP has been followed and all signage is properly located as required. Daily inspections will be completed to ensure the safety of the traveling public. The TCS will be required to collect Daily Traffic Activity Reports. The Daily Traffic Activity Report and Daily Traffic Sign Check Report, Appendix G are to be completed daily by the TCS during construction operations. A copy of all documentation will be maintained at the SMJV Chetwynd office.

Significant actions by traffic control personnel should be recorded. Traffic control records should include, but not be limited to the following:

- Photo logging.
- Photos accompanied by a description, time, location, direction, and name of photographer.
- Maintaining an up-to-date Traffic Control Plan.

- Daily records of times, locations, and names of individuals involved in the installation, change, and removal of traffic control devices.

When the traffic control inspection process identifies a condition that requires changes, documentation records should include:

- Description and location of the change required, when the requirement was noted, and by whom.
- Instructions given to make changes.
- What changes or replacements were made, and when.
- If changes were deferred, why.

5.3 TRAFFIC CONTROL DEVICE INSTALLATION AND REMOVAL

The Ministry's preferred approach for installing and removing traffic control devices can be found in *Section 6.7 – Device Installation and Removal* of the TMM. Overall guidelines and illustrations are included in *Section 6.7.4 [Device Installation and Removal for] Two-Lane, Two-Way Roadways* (attached in Appendix H).

Appendix A
Emergency Contact Numbers

Emergency Contact Numbers

Site Description: Coastal GasLink Pipeline Project: Section 1 and 2

Highway 97 and Highway 29 Access Locations			
Access	**Location**	**Latitude**	**Longitude**
Access Road 1 &2	Hwy 97 & Rd 269	55°46’52.6” N	120°53’50.4” W
Chetwynd Camp	Hwy 29 (3.7km S of HWY 97)	55°39’17.1” N	121°35’39.7” W
Access Road 4	Hwy 29 & Lone Prairie Rd.	55°36'36.4" N	121°34'22.2" W
Access Road 8	Hwy 29 (13km S of HWY 97)	55°34'39.6" N	121°35'28.2" W
Access Road 9	Hwy 29 (15km S of HWY 97)	55°33'44.3" N	121°35'36.8" W
Access Road 10	Hwy 29 & Sukunka FSR	55°29'54.5" N	121°37'30.0" W

In the event of an emergency, please call the following numbers:

RCMP	**911**
Ambulance Service	
Fire Department	
Poison Control Centre	1 800 567 8911
Wildfire	1 800 663 5555
Earthquake, Flood & Dangerous Goods Spills	1 800 663 3456
Highway Maintenance Contractor: Caribou Road Services (South) Ltd.	1 250 788 2407
Reporting Environmental Violations	1 877 952 7277
Air or Marine Emergency	1 800 567 5111
Area Manager Roads - Chetwynd/Pine Pass	1 250 788 3802

Appendix B

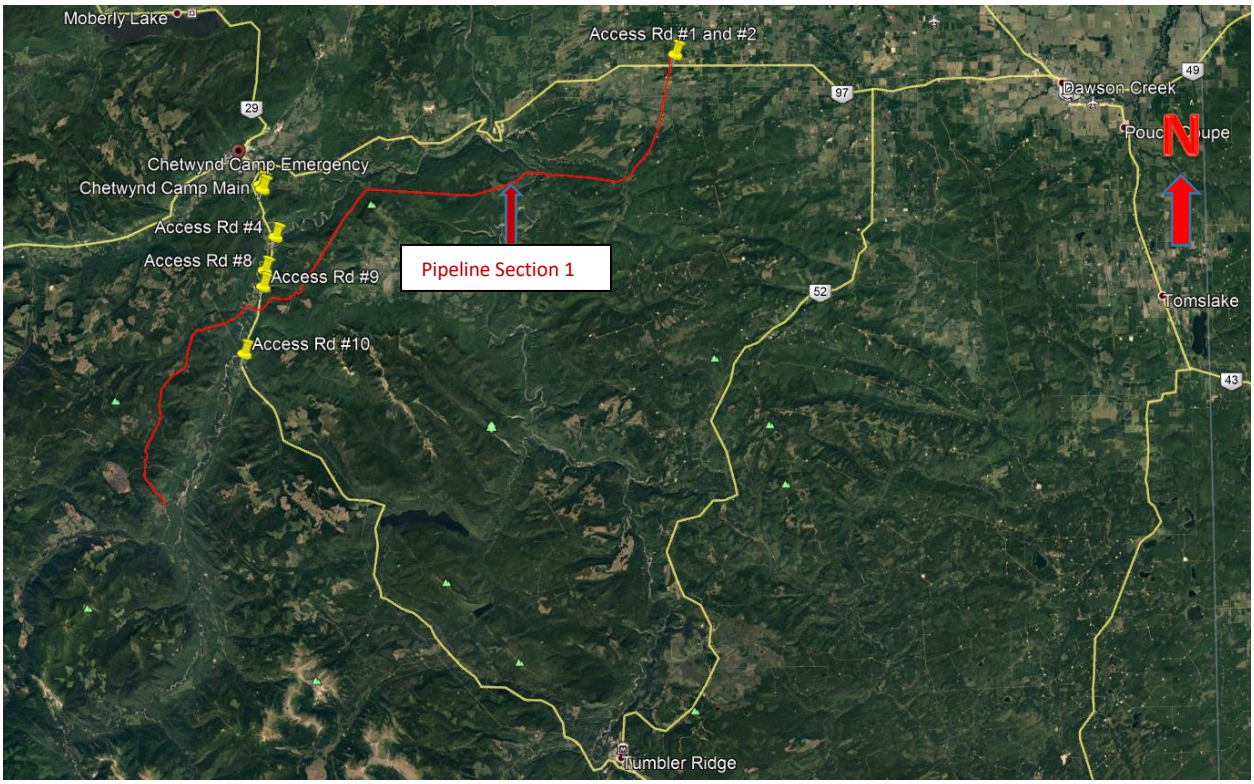
Non-Emergency Contact Numbers

Non-Emergency Contact Numbers

RCMP – Chetwynd Detachment	250 788 9221
Chetwynd Hospital and Health Centre	250 788 2236
Peace River Regional District	250 784 3200
District of Chetwynd	250 401 4100
Commercial Vehicle Safety and Enforcement (CVSE)	250 952 0577
BC Trucking Association	604 888 5319
Drive BC	1 800 550 4997
Local Radio (Peace FM Chetwynd)	250 788 9452
Area Manager Roads - Chetwynd/Pine Pass	1 250 788 3802

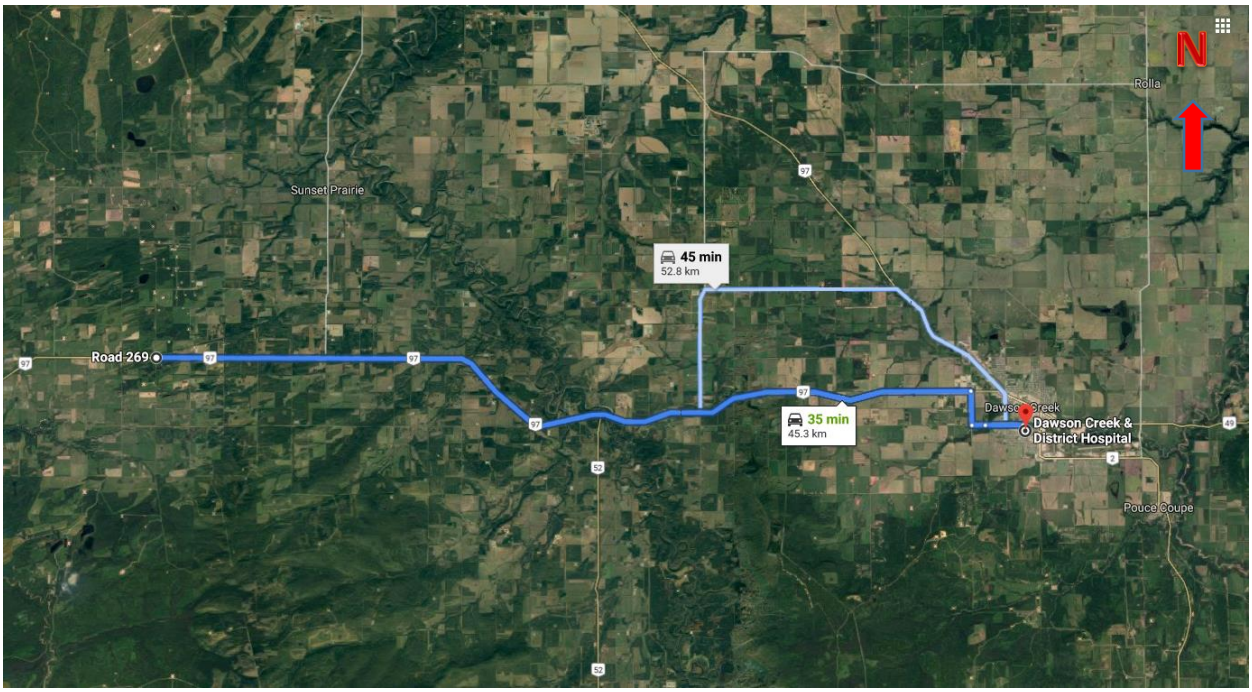
Appendix C

Site Location and Emergency Route Location Maps



Site Location

The Pipeline Project crosses the area between Groundbirch on Highway 97, 57 km east of Chetwynd, British Columbia (Access Road #1 and #2) and Highway 29S, 16 km south of Chetwynd, British Columbia (approx. 1 km south of Access Road #9). The east extremity of the project (pipeline crossing of highway 97) is 45 km west of Dawson Creek. The south-west extremity of the project (pipeline crossing of Highway 29) is 77 km north of Tumbler Ridge.

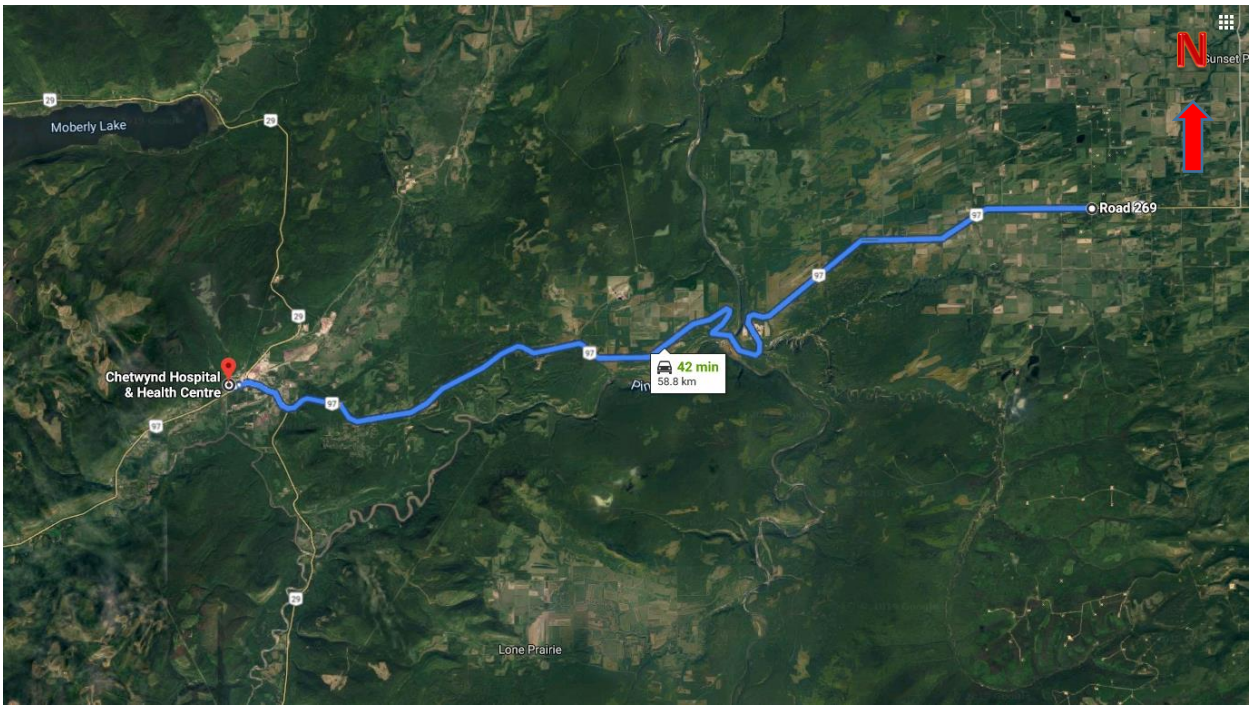


Emergency Route to Dawson Creek Hospital

Emergency Route Map when working in Groundbirch Area – Highway 97 and Access Road #1 and #2 (eastbound towards Dawson Creek Hospital, 45.3 km from Access Road #1 and #2)

- Starting from Access Road #1 and #2 in Groundbirch, head east on Highway 97 (40.6 km)
- Turn right on Dangerous Goods Route (1.6 km)
- Turn left on 208 Road (650 m)/ continue on 108 Avenue (1.8 km)
- Turn right on 13 Street (160 m)
- Turn left on 110 Avenue (220 m)
- Turn right on 10 Street (110 m)
- Turn right on 111 Avenue/ Emergency Entrance Road (74 m)

Dawson Creek and District Hospital
11100 13 Street
Dawson Creek, BC

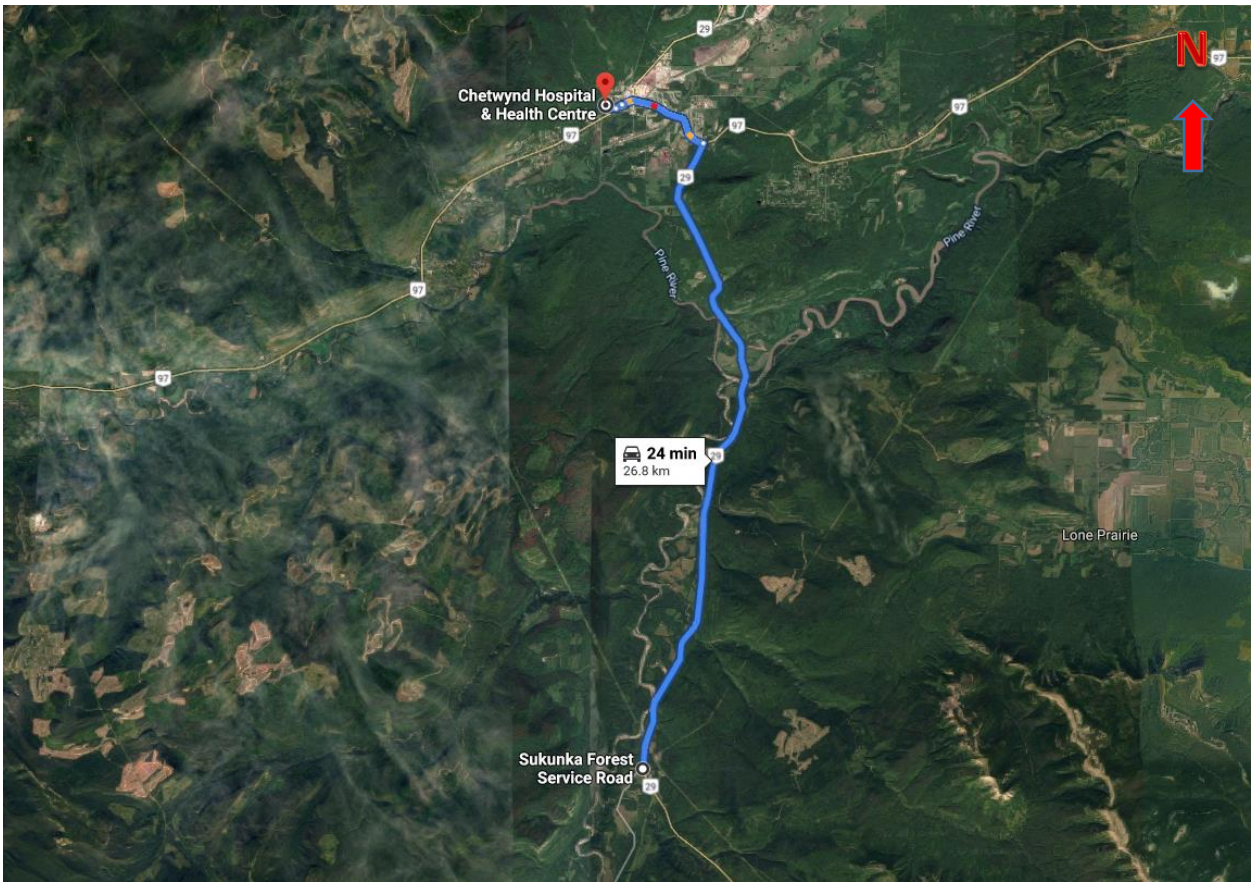


Emergency Route to Chetwynd Hospital

Alternate Emergency Route Map when working in Groundbirch Area – Highway 97 and Access Road #1 and #2 (westbound towards Chetwynd Hospital, 58.8 km from Access Road #1 and #2)

- Starting from Access Road #1 and #2 in Groundbirch, head west on Highway 97 (57.9 km)
- Turn right 53 Street NW (38 m)
- Turn left at the 1st cross street onto North Access Road (240m)
- Turn right onto Hospital Road (500 m)
- Turn right to stay on Hospital Road (130 m)

Chetwynd Hospital and Health Centre
5400 Hospital Road
Chetwynd, BC

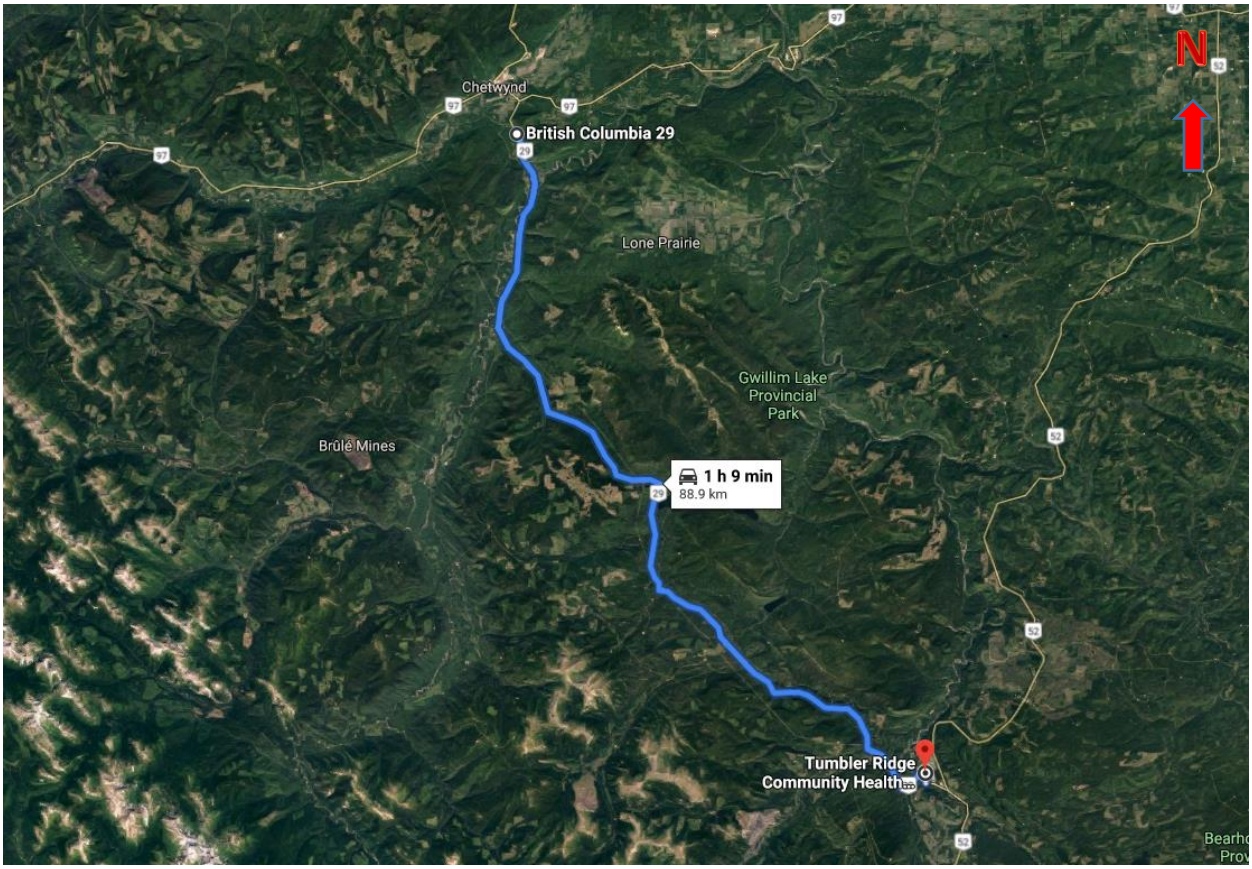


Emergency Route to Chetwynd Hospital

Emergency Route Map when working in area of Highway 29S – Chetwynd Camp, Access #4, #8, #9 and #10 (distance given from Access #10, northbound towards Chetwynd Hospital, 26.8 km from Access #10)

- Starting from Access Road #10 - Sukunka Forest Service Road, for Head north on Highway 29S (22.5 km)
- Turn left onto Highway 29N/ Highway 97 – continue to follow Highway 97 (3.3 km)
- Turn right onto 53 Street NW (38 m)
- Turn left at the 1st cross street onto North Access Road (240 m)
- Turn right onto Hospital Road (500 m)
- Turn right to stay on Hospital Road (130 m)

Chetwynd Hospital and Health Centre
5400 Hospital Road
Chetwynd, BC



Emergency Route to Tumbler Ridge Health Clinic

Alternate Emergency Route Map when working in area of Highway 29S – Chetwynd Camp, Access #4, #8, #9 and #10 (distance given from Chetwynd Camp Emergency Entrance, southbound towards Tumbler Ridge Health Centre, 88.9 km from Chetwynd Camp)

- Starting from Chetwynd Camp, head south on Highway 29S (88.0 km)
- Turn left onto Monkman Way (350 m)
- Turn right onto Southgate Street (500 m)
- Turn left onto Front Street (63 m)

Tumbler Ridge Health Clinic
220 Front Street
Tumbler Ridge, BC

Appendix D

Emergency Contact Procedure and List

Emergency Contact Procedure and List

In the event of an emergency outside work hours or during weekends, please follow the following procedure for contacting the necessary site personnel.

Site Description: Coastal GasLink Pipeline Project: Section 1 and 2

Highway 97 and Highway 29 Access Locations			
Access	**Location**	**Latitude**	**Longitude**
Access Road 1 &2	Hwy 97 & Rd 269	55°46’52.6” N	120°53’50.4” W
Chetwynd Camp	Hwy 29 (3.7km S of HWY 97)	55°39’17.1” N	121°35’39.7” W
Access Road 4	Hwy 29 & Lone Prairie Rd.	55°36'36.4" N	121°34'22.2" W
Access Road 8	Hwy 29 (13km S of HWY 97)	55°34'39.6" N	121°35'28.2" W
Access Road 9	Hwy 29 (15km S of HWY 97)	55°33'44.3" N	121°35'36.8" W
Access Road 10	Hwy 29 & Sukunka FSR	55°29'54.5" N	121°37'30.0" W

For Emergency Response Call 911

Emergency Contacts

(780) 742-4834	(Superintendent)	Rob Beckner
(403) 400-6496	(Traffic Control Supervisor)	Xiaojian Wei
(250) 556-4356	(Corporate Safety Manager)	Hugh Odwyer
(403) 585-5604	(Project Manager)	Alan Atkinson

Procedure

1. In the event of an emergency, contact the listed emergency contacts in the order specified.
2. Describe the incident and the location.
3. Ensure emergency contacts understand the situation and are travelling to site, as required.
4. If necessary, safely wait for emergency contacts to arrive on site.

Appendix E

Installation of Traffic Control Signs

Installation of Traffic Control Signs

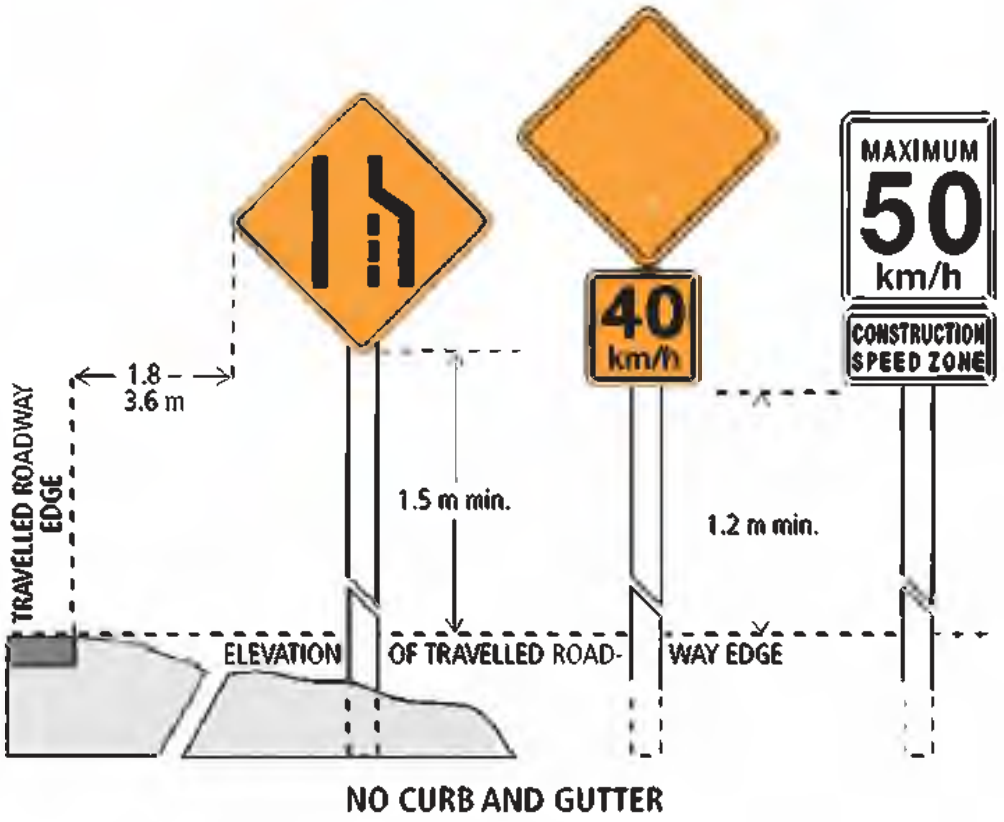
All traffic control (TC) signs will be placed in the locations stated in the TMP drawing. All TC signs will meet the requirements set out in the *Interim Traffic Management Manual for Work on Roadways, 2015,* BC MoTI and will be:

- Standard in size, shape, colour and message
- Clean and in good condition
- Reflectorized for night use

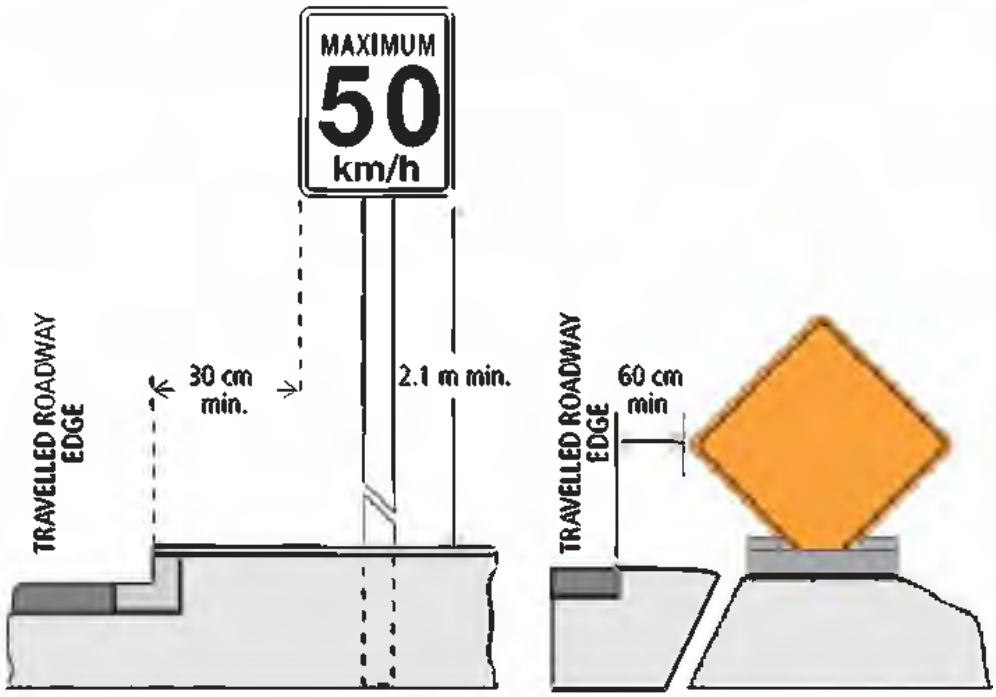
Signs may be attached to posts or portable supports. Most signs should be post-mounted on long-term projects. Temporary STOP and YIELD signs should be mounted at approximately the same height and in approximately the same position as for permanent installations. Portable sign supports are more practical for short duration work and for signs that need to be repositioned regularly. Work zone signs supports should be lightweight, yielding or have the same breakaway features as for permanent installations. To avoid illegibility due to glare from direct reflection of headlights, signs may be tilted back or rotated a few degrees away from the roadway.

Figure 4.1 A from the BC MoTI *Interim Traffic Management Manual for Work on Roadways* shows minimum mounting heights and lateral offsets for signs on mounted posts. Signs on portable supports should be as high as possible up to the mounting height for fixed post installations. Mounting heights above the minimum requirements may be used if necessary to increase the visibility of signs.

Signs up to 75 cm x 75 cm may be mounted on one post. Larger signs normally require two posts to prevent twisting and turning.



NO CURB AND GUTTER



CURB and GUTTER

TEMPORARY SUPPORT

Figure 4.1 A: Typical Sign Installation Heights and Offsets

Appendix F

Incident Response Form

Coastal GasLink Pipeline Project – Section 1 and 2 – Highway 97 and Highway 29 Access, Chetwynd, BC

This form will be completed at the post incident meeting. A meeting will be held after any traffic incident to discuss the cause and prevention. Ensure incident is recorded on the Daily Traffic Management Form. Document all correspondence and safety related issues.

Incident Information: _____

_____

_____

_____

_____

Time / Date: _____

Reported by (name / position): _____

Contact Telephone for above: _____

Location of incident: _____

_____

Cause and effect of incident: _____

_____

_____

Measures taken to prevent future incidents: _____

_____

_____

Further action taken: _____

_____

_____

Injuries caused by incident: _____

_____

Contractor Representative
Signature: _____ Date: _____

Departmental Representative
Signature: _____ Date: _____

Appendix G

Daily Traffic Activity Report and Daily Traffic Sign Check Report

DAILY TRAFFIC ACTIVITY REPORT

Date: _____ **Inspector:** _____

Summary of Traffic Activity:

Incident/Information Report	Time	Location	Comments

Comments:

Traffic Control Supervisor Comments:

Traffic Inspector: _____
Signature

Traffic Control Supervisor: _____
Signature

Date Signed: _____

DAILY TRAFFIC SIGN CHECK

Date: _____ **Inspector:** _____

Traffic Control Sign	Time	Location	Checked	Comments

Traffic Inspector: _____
Signature

Traffic Control Supervisor: _____
Signature

Date Signed: _____

Appendix H

TMM Section 6.7.4 – Device Installation and Removal for Two-Lane, Two-Way Roadways

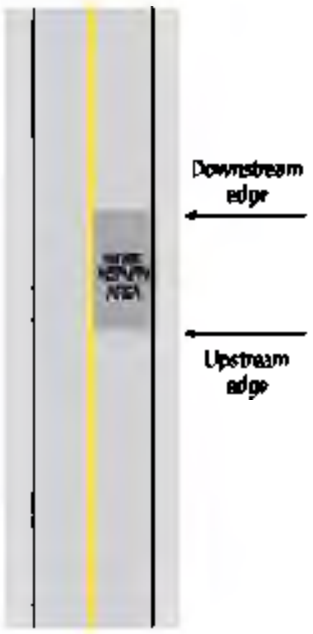
6.7.3 Removal Considerations

1. If the speed is ≥ 70 km/h, a shadow vehicle with a 360-degree flashing light and 4-way flashers is recommended when removing traffic control devices. Position the shadow vehicle between the worker and the approaching traffic.
2. Uncover any previously covered signs that are required for the two-way traffic.
3. In detour situations where vehicles have been directed to use alternative routes, remove upstream signage first to ensure that traffic has not been directed to an alternative route from which the signs have been partially removed.

6.7.4 Two-Lane, Two-Way Roadways

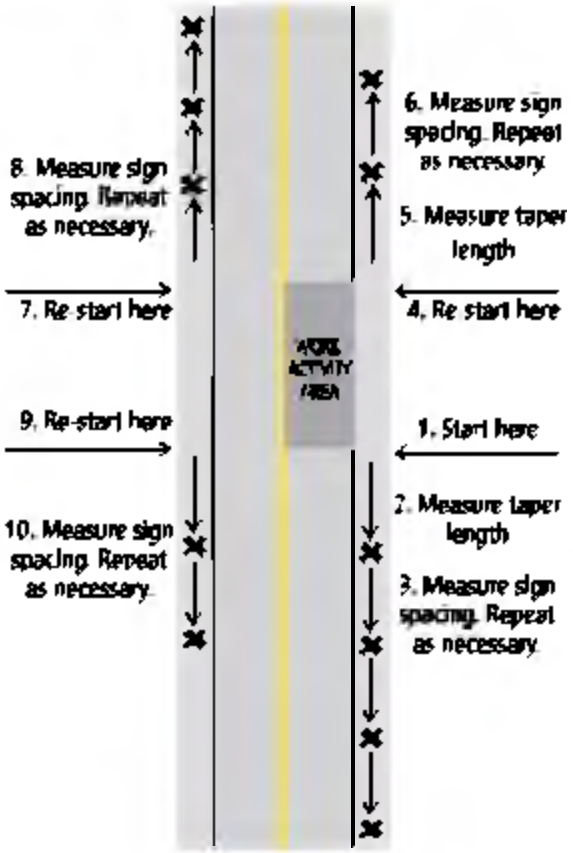
Step 1: Planning the Setup

1. Using the Traffic Control Plan, define the edges of the work activity area.
2. Mark the upstream and downstream edge of the work activity area.



Step 2: Determining the Layout

1. Mark sign and channelizing device placement in accordance with the Traffic Control Plan or Tables A and B (see Section 6.6 or Appendix F).
   - Measurements may be made using a variety of methods (e.g., Distance Measuring Instrument, GPS, or manual measuring)
   - Marking may be done at the edge of pavement with survey stakes, paint, or other temporary markers.
   - Measure outward starting from the edge of the work activity area.
2. Follow sub-steps 1 through 10 as shown in the diagram on the right.

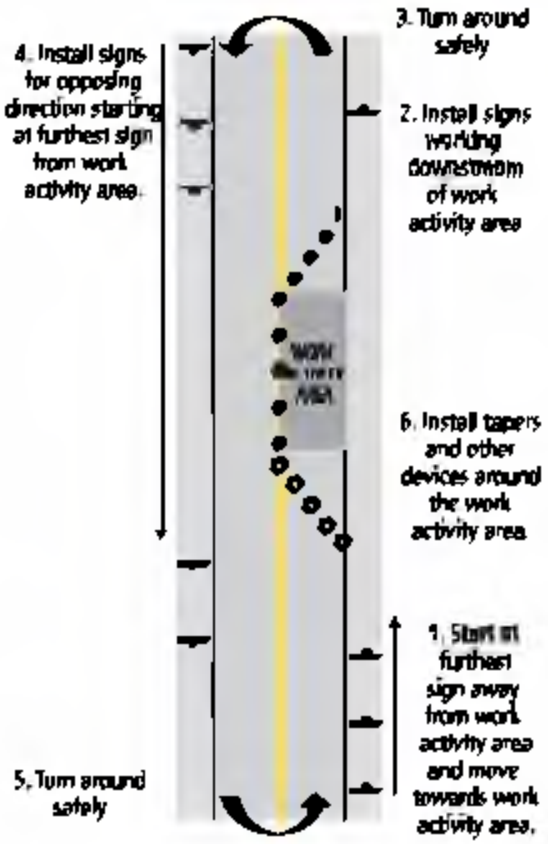


Step 3: Order of Installation

Traffic control devices should be placed in the order that drivers will encounter them, beginning with the sign or device furthest upstream from the work activity area and continuing forward. Typically, channelizing devices forming lane shifts, merges, detours, and other traffic pattern changes are established after the signs identifying the work zone are in place.

Using the diagram on the right:

1. Start at the furthest sign upstream and move towards the work activity area, placing signs in the locations previously marked and keeping as far to the right as possible.
    - Cover any existing conflicting signs.
2. Place signs for the termination area.
3. Pull off the road in an appropriate area to turn around and travel in the opposite direction.
4. Complete sign placement in the opposite direction, keeping as far to the right as possible.
    - Cover any existing conflicting signs.
5. Pull off the road in an appropriate area to turn around and travel in the opposite direction.
6. Place tapers and delineation around the work activity area.



Step 4: Planning the Removal

As soon as the traffic control devices are no longer needed, they should be removed. During the removal process, Traffic Control Persons, flashing arrow boards, shadow vehicles, and/or flashing vehicle lights should be used.

Signs and devices are removed in the opposite order of which they were installed. Traffic Control Person Ahead C-001 signs should remain in place until Traffic Control Persons are no longer needed.

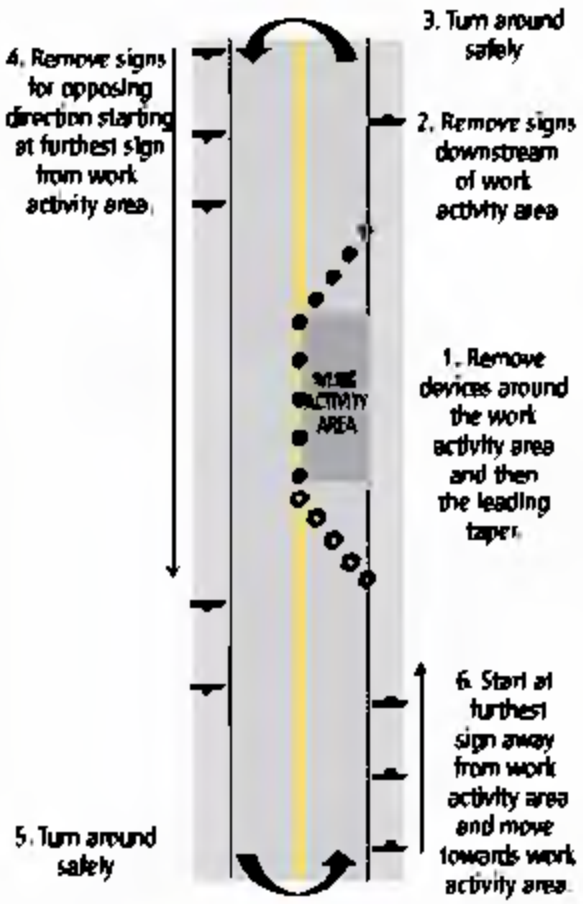
No worker should ride outside on the rear of a reversing vehicle. If special circumstances allow for this practice, it is mandatory to follow Section 16.31 in WorkSafeBC's Occupational Health and Safety Regulation (Rider Restriction).

Step 5: Order of Removal

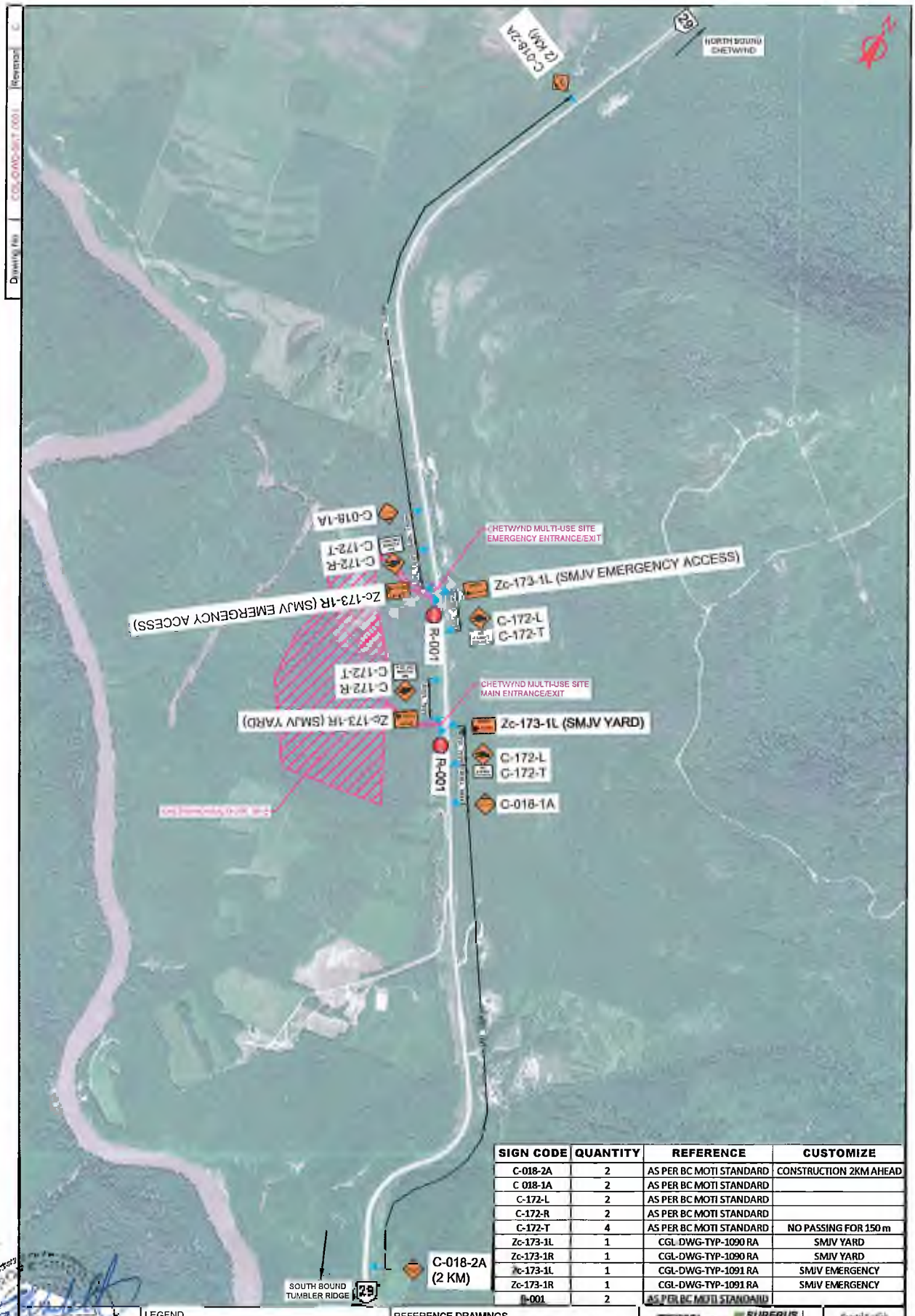
Ensure that work operations have ceased, and that all equipment and workers are off the roadway.

Using the diagram on the right:

1. First remove channelizing devices on the travelled roadway. Do not remove advance warning signs until all other devices are removed.
    - Use a TCP to stop traffic, if required, and pull channelizing devices off the roadway, starting with those closest to the work on the downstream side and then moving to the upstream side. If necessary, place channelizing devices on the shoulder for storage and later pick-up.
2. Starting at the nearest sign downstream of the work activity area, remove or turn signs not in use, keeping as far to the right as possible.
    - Uncover any previously covered signs that are required for re-establishing normal traffic operations.
3. Pull off the road in an appropriate area to turn around and travel in the opposite direction.
4. Remove devices and remove or turn signs not in use in the opposite direction, keeping as far to the right as possible.
    - Uncover any previously covered signs that are required for re-establishing normal traffic operations.
5. Pull off the road in an appropriate area to turn around and travel in the opposite direction.
6. Remove the advance warning signs upstream of the work activity area.



Appendix I
TRAFFIC CONTROL DRAWINGS



SIGN CODE	QUANTITY	REFERENCE	CUSTOMIZE
C-018-2A	2	AS PER BC MOTI STANDARD	CONSTRUCTION 2KM AHEAD
C 018-1A	2	AS PER BC MOTI STANDARD	
C-172-L	2	AS PER BC MOTI STANDARD	
C-172-R	2	AS PER BC MOTI STANDARD	
C-172-T	4	AS PER BC MOTI STANDARD	NO PASSING FOR 150 m
Zc-173-1L	1	CGL-DWG-TYP-1090 RA	SMJV YARD
Zc-173-1R	1	CGL-DWG-TYP-1090 RA	SMJV YARD
Zc-173-1L	1	CGL-DWG-TYP-1091 RA	SMJV EMERGENCY
Zc-173-1R	1	CGL-DWG-TYP-1091 RA	SMJV EMERGENCY
R-001	2	AS PER BC MOTI STANDARD	

T WAMBOLT
ISSUED
May 2, 2024
FOR CONSTRUCTION

LEGEND
PROPOSED YARD BOUNDARY
SIGNAGES

GENERAL NOTES
1) The retroreflective standards of all construction signs shall meet minimum levels of ASTM Type 9 of better sheeting.
2) Conflicting signs shall be covered.
3) During periods of inactive work, construction signs shall be covered as appropriate.
4) Sign spacing shown is minimum required and may be adjusted to suit field conditions.

REFERENCE DRAWINGS

REVISIONS

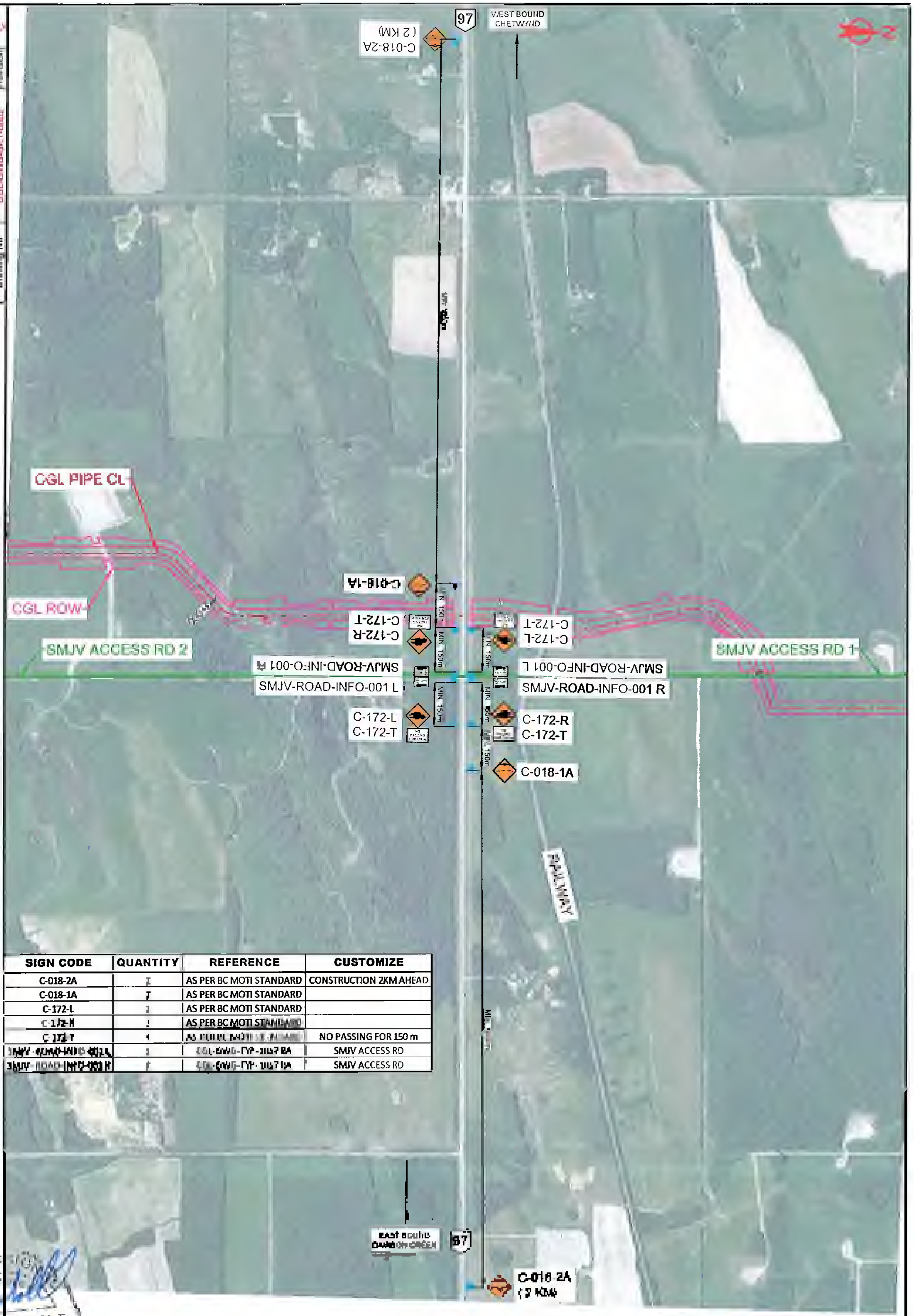
SURERUS MURPHY

CGL NPS Ø48 STEEL GAS PIPELINE

SITE-SPECIFIC TRAFFIC CONTROL
CHETWYND MULTI-USE YARD

CGL-DWG-SKT-0001 C

NTS



SIGN CODE	QUANTITY	REFERENCE	CUSTOMIZE
C-018-2A	[illegible]	AS PER BC MOTI STANDARD	CONSTRUCTION 2KM AHEAD
C-018-1A	[illegible]	AS PER BC MOTI STANDARD	
C-172-L	[illegible]	AS PER BC MOTI STANDARD	
C-172-R	[illegible]	AS PER BC MOTI STANDARD	
C-172-T	[illegible]	AS PER BC MOTI STANDARD	NO PASSING FOR 150 m
SMJV-ROAD-INFO-001 L	[illegible]	CGL-DWG-TYP-[illegible]	SMJV ACCESS RD
SMJV-ROAD-INFO-001 R	[illegible]	CGL-DWG-TYP-[illegible]	SMJV ACCESS RD

ISSUE FOR CONSTRUCTION

LEGEND

PROPOSED CGL ROW
PROPOSED CGL CL
SMJV ACCESS RD
SIGNAGES

GENERAL NOTES

1) The retroreflective standards of all construction signs shall meet minimum levels of ASTM Type 9 of better sheeting.
2) Conflicting signs shall be covered.
3) During periods of inactive work, construction signs shall be covered as appropriate.
4) Sign spacing shown is minimum required and may be adjusted to suit field conditions.

REFERENCE DRAWINGS

REVISIONS

B	ISSUE	
A	ISSUE FOR INTERNAL R	

SURERUS MURPHY

STEEL GAS PIPELINE

SITE-SPECIFIC TRAFFIC CONTROL
ACCESS RD 1 & 2

CGL-DWG-SKT-0002

NTS

SIGN CODE	QUANTITY	REFERENCE	CUSTOMIZE
C-018-2A	2	AS PER BC MOTI STANDARD	CONSTRUCTION 2KM AHEAD
C-018-1A	2	AS PER BC MOTI STANDARD	
C-172-L	1	AS PER BC MOTI STANDARD	
C-172-R	1	AS PER BC MOTI STANDARD	
C-172-T	2	AS PER BC MOTI STANDARD	NO PASSING FOR 150 m
SMJV -ROAD-INFO-001 L	1	CGL-DWG-TYP-1017 RA	SMJV ACCESS RD
SMJV -ROAD-INFO-001 R	1	CGL-DWG-TYP-1017 RA	SMJV ACCESS RD

PROFESSIONAL ENGINEER
G. T. WAMBOLT
May 27, 21
COLUMBIA
ISSUE FOR CONSTRUCTION

LEGEND

GENERAL NOTES
1) The retroreflective standards of all construction signs shall meet minimum levels of ASTM Type 9 of better sheeting.
2) Conflicting signs shall be covered.
3) During periods of inactive work, construction signs shall be covered as appropriate.
4) Sign spacing shown is minimum required and may be adjusted to suit field conditions.

REFERENCE DRAWINGS

REV	STATUS	DESCRIPTION	DATE	REV BY	CHK BY	APP BY

REVISIONS

1		ISSUE FOR USE	14/05/21	XW	JM	TJ
0	REVIEW	ISSUE FOR REVIEW	21/04/21	XW	JM	TJ
A		ISSUE FOR INTERNAL REVIEW	17/04/21	XW	JM	TJ
REV	STA	DESCRIPTION	DATE	REV BY	CHK BY	APP BY

SURERUS MURPHY
Coastal GasLink Pipeline Project

Project: CGL NPS Ø48 STEEL GAS PIPELINE

Drawing Title: SITE-SPECIFIC TRAFFIC CONTROL ACCESS RD 4

Drawing Number: CGL-DWG-SKT-0003 C

NTS

File Path:

SIGN CODE	QUANTITY	REFERENCE	CUSTOMIZE
C-172-L	1	AS PER BC MOTI STANDARD	
C-172-R	1	AS PER BC MOTI STANDARD	
C-172-T	2	AS PER BC MOTI STANDARD	NO PASSING FOR 150 m
SMJV -ROAD-INFO-001 L	1	CGL-DWG-TYP-1017 RA	SMJV ACCESS RD
SMJV -ROAD-INFO-001 R	1	CGL-DWG-TYP-1017 RA	SMJV ACCESS RD

ISSUE FOR CONSTRUCTION

LEGEND
PROPOSED SMJV ACCESS RD
HWY 29 TEMPORARY DETOUR

GENERAL NOTES
1) The retroreflective standards of all construction signs shall meet minimum levels of ASTM Type 9 of better sheeting.
2) Conflicting signs shall be covered.
3) During periods of inactive work, construction signs shall be covered as appropriate.
4) Sign spacing shown is minimum required and may be adjusted to suit field conditions.
5) The additional of SMJV construction signage shall be reviewed with the contractor and MOTI Representative of the current Zonnebec Creek construction project and adjusted as necessary.

REFERENCE DRAWINGS

REVISIONS

SURERUS MURPHY
Coastal GasLink
CGL NPS Ø48 STEEL GAS PIPELINE
Drawing Title: SITE-SPECIFIC TRAFFIC CONTROL ACCESS RD 8 (TEMPORARY LAYOUT)
Drawing Number: CGL-DWG-SKT-0004 Rev C
NTS

Revision | CGL-DWG-SKT-0004 | Drawing No

SIGN CODE	QUANTITY	REFERENCE	CUSTOMIZE
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C-018-1A	2	AS PER BC MOTI STANDARD	
C-172-L	1	AS PER BC MOTI STANDARD	
C-172-R	1	AS PER BC MOTI STANDARD	
C-172-T	2	AS PER BC MOTI STANDARD	NO PASSING FOR 150 m
SMJV -ROAD-INFO-001 L	1	CGL-DWG-TYP-1017 RA	SMJV ACCESS RD
SMJV -ROAD-INFO-001 R	1	CGL-DWG-TYP-1017 RA	SMJV ACCESS RD
R-001	1	AS PER BC MOTI STANDARD	

C | Revision | CGL-DWG-SKT-0005 | Drawing No

G. T. VANWOLL
PROFESSIONAL ENGINEER

ISSUE FOR CONSTRUCTION

LEGEND

SMJV ACCESS ROAD
SIGNAGES
PROPOSED CGL ROW
PROPOSED CGL CL

GENERAL NOTES

1) The retroreflective standards of all construction signs shall meet [illegible] levels of ASTM Type 9 of better sheeting.
2) Conflicting signs shall be covered.
3) During periods of inactive work, construction signs shall be covered as appropriate.
4) Sign spacing shown is minimum required and may be adjusted to suit field conditions.

REFERENCE DRAWINGS

No.	Drawing	Title	Date	Issued	Appr By

REVISIONS

D		ISSUE FOR USE	14/05/19	JM		
C		ISSUE FOR REVIEW	22/04/19			
B		ISSUE FOR INTERNAL REVIEW	17/04/19			
A				DRAWN	CHK BY	APP BY

SURERUS MURPHY
A JOINT VENTURE COMPANY

Coastal GasLink
Engineering Project

Project: CGL NPS Ø48 STEEL GAS PIPELINE

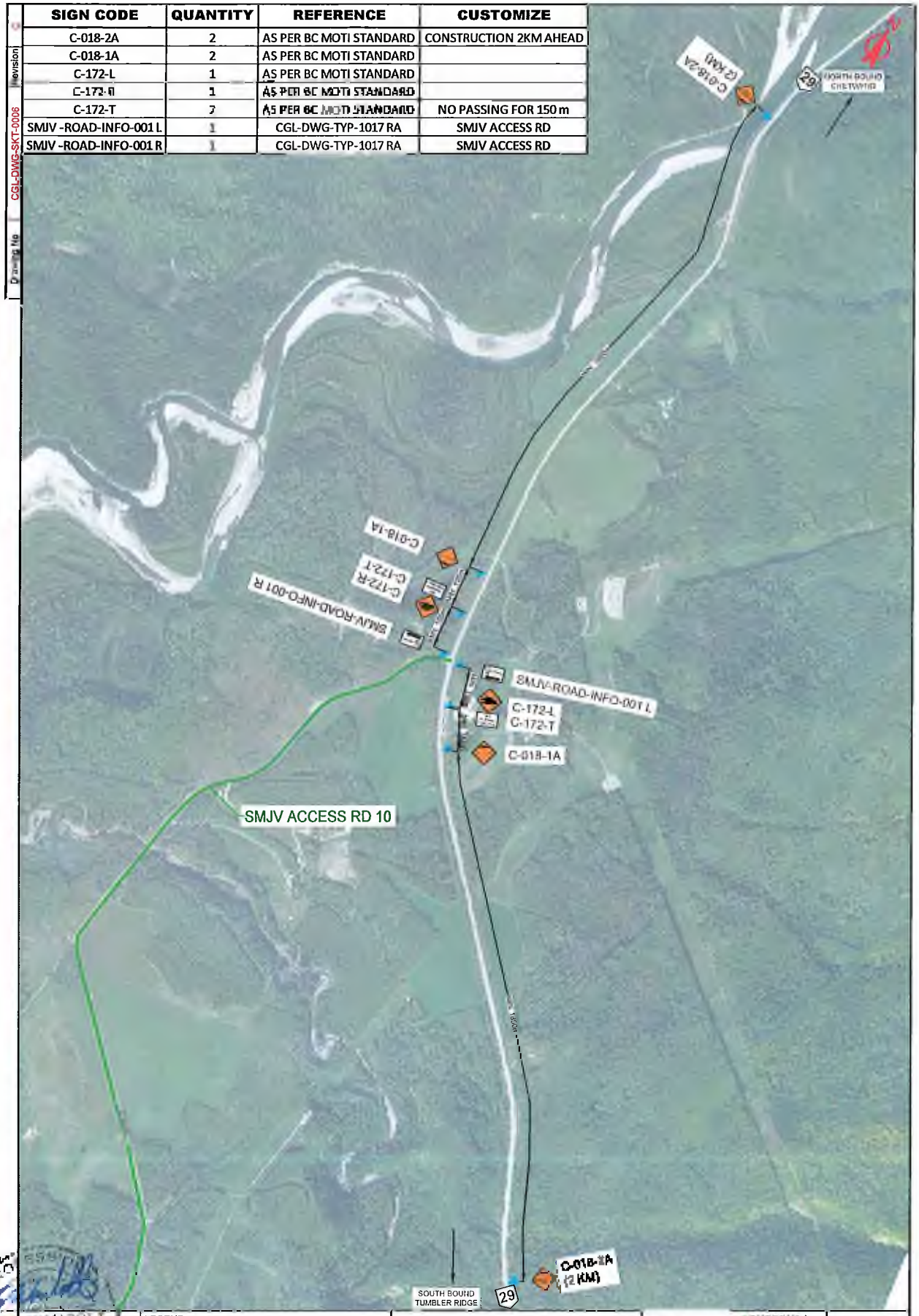
Drawing Title: SITE-SPECIFIC TRAFFIC CONTROL ACCESS RD 9

Drawing Number: CGL-DWG-SKT-0005 | Rev: C

NTS | File Path:

SIGN CODE	QUANTITY	REFERENCE	CUSTOMIZE
C-018-2A	2	AS PER BC MOTI STANDARD	CONSTRUCTION 2KM AHEAD
C-018-1A	2	AS PER BC MOTI STANDARD	
C-172-L	1	AS PER BC MOTI STANDARD	
C-172-R	1	AS PER BC MOTI STANDARD	
C-172-T	2	AS PER BC MOTI STANDARD	NO PASSING FOR 150 m
SMJV -ROAD-INFO-001 L	1	CGL-DWG-TYP-1017 RA	SMJV ACCESS RD
SMJV -ROAD-INFO-001 R	1	CGL-DWG-TYP-1017 RA	SMJV ACCESS RD

Revision | Drawing No. CGL-DWG-SKT-0006



SYMBOL

LEGEND

PROPOSED SMJV ACCESS RD SIGNAGES

GENERAL NOTES

1) The retroreflective standards of all construction signs shall meet minimum levels of ASTM Type 9 of better sheeting.
2) Conflicting signs shall be covered.
3) During periods of inactive work, construction signs shall be covered as appropriate.
4) Sign spacing shown is minimum required and may be adjusted to suit field conditions.

REFERENCE DRAWINGS

REVISIONS

NO.	DESCRIPTION	BY	APP'D
0	ISSUED FOR CONSTRUCTION		

ISSUED FOR CONSTRUCTION

SURERUS MURPHY

Coastal GasLink Pipeline Project

CGL NPS Ø48 STEEL GAS PIPELINE

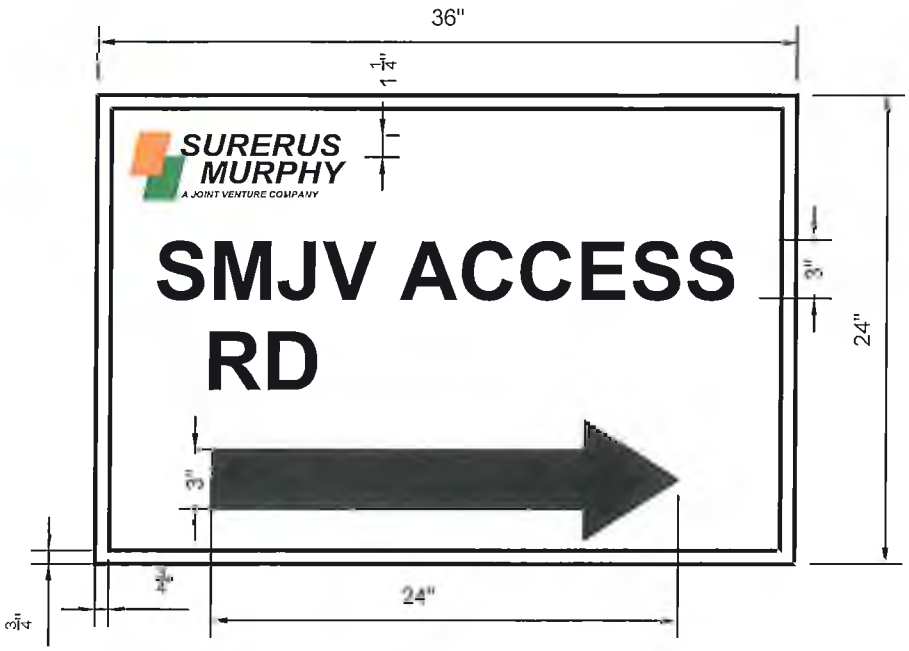
SITE-SPECIFIC TRAFFIC CONTROL
SMJV ACCESS ROAD 10

CGL-DWG-SKT-0006 C

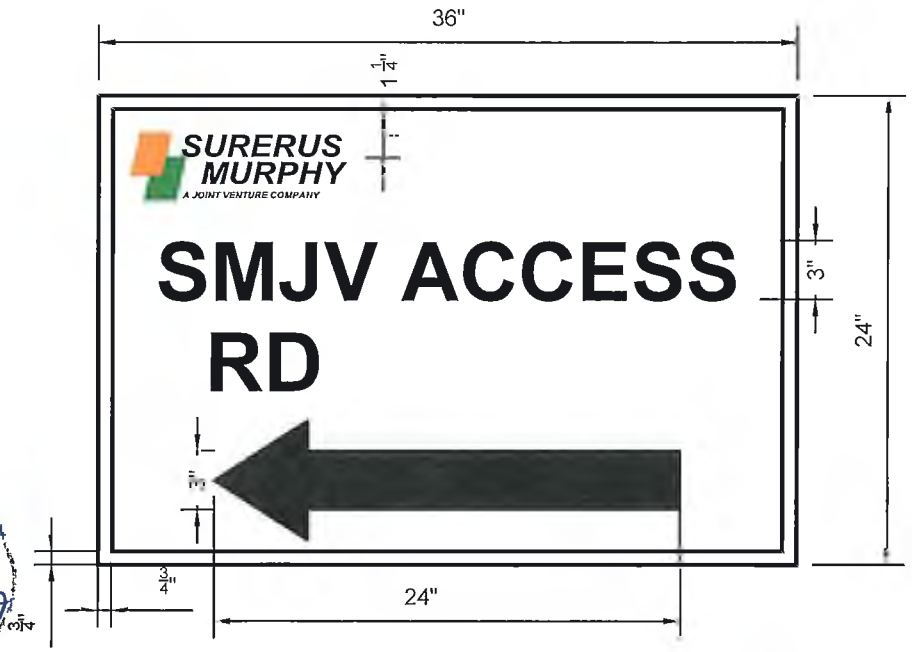
NTS

Appendix J
CUSTOMIZED SIGN DETAILS

Drawing No | CGL-DWG-TYP-1017
Revision | B



SMJV-ROAD-INFO-001 R



G. T. WAMBOLT
PROFESSIONAL ENGINEER
May 22, 2019

SMJV-ROAD-INFO-001 L

ISSUE FOR CONSTRUCTION

GENERAL NOTES

- THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DRAWINGS RELATING TO THE PROJECT.
- THIS DRAWING IS SOLELY FOR THE USE OF THE CONTRACTUAL CUSTOMER OF SURERUS MURPHY JV (SMJV).
- SMJV ASSUMES NO LIABILITY TO ANY OTHER PARTY FOR REPRESENTATION CONTAINED IN THIS DRAWING.
- ALL SURVEY INFORMATION IS TO BE VERIFIED CORRECT PRIOR TO CONSTRUCTION COMMENCEMENT.

REVISIONS

REV	STATUS	DESCRIPTION	DATE	REV BY	CHK BY	APP BY
B	IUSE	ISSUE FOR CONSTRUCTION	22/05/19	XW	JM	TW
A	REVIEW	ISSUE FOR INTERNAL REVIEW	25/03/19	MJB	JM	

SURERUS MURPHY JOINT VENTURE
Suite 1600, 605 - 5th Avenue SW
Calgary, Alberta, Canada
Tel (403) 930.1333 Fax (587) 333.5363

SURERUS MURPHY
A JOINT VENTURE COMPANY

Coastal GasLink
Pipeline Project

Project:

Drawing Title: MAJOR ROAD INFORMATION

Drawing Number: CGL-DWG-TYP-1017 | Rev: B

Scale: NTS | File Path:

Drawing No | CGL-DWG-TYP-1090 | Revision | B

Zc-173-1L (SMJV YARD)

Zc-173-1R (SMJV YARD)

PROFESSIONAL ENGINEER
G. T. WAMBOLT

NOTE:
DIMENSION AND DETAILED SPECIFICATION, AS PER MOTI D16 9645

ISSUE FOR CONSTRUCTION

GENERAL NOTES

- THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DRAWINGS RELATING TO THE PROJECT.
- THIS DRAWING IS SOLELY FOR THE USE OF THE CONTRACTUAL CUSTOMER OF SURERUS MURPHY JV (SMJV)
- SMJV ASSUMES NO LIABILITY TO ANY OTHER PARTY FOR REPRESENTATION CONTAINED IN THIS DRAWING.
- ALL SURVEY INFORMATION IS TO BE VERIFIED CORRECT PRIOR TO CONSTRUCTION COMMENCEMENT.

REVISIONS

REV	STATUS	DESCRIPTION	DATE	REV BY	CHK BY	APP BY
B	IUSE	ISSUE FOR CONSTRUCTION	22/05/19	XW	JM	TW
A	REVIEW	ISSUE FOR INTERNAL REVIEW	25/03/19	MJB	JM	

SURERUS MURPHY JOINT VENTURE
Suite 1600, 605 - 5th Avenue SW
Calgary, Alberta, Canada
Tel (403) 930.1338 Fax (587) 333.5359

SURERUS MURPHY
A JOINT VENTURE COMPANY

Coastal GasLink
Pipeline Project

Project:

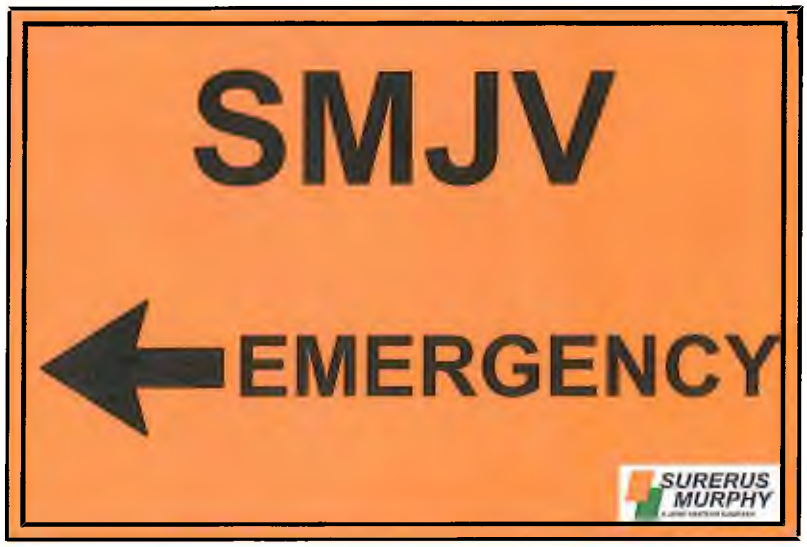
Drawing Title:
MOTI Z-SERIES SIGNAGE
ENTRANCE AT HWY

Drawing Number: CGL-DWG-TYP-1090 Rev: B

Scale: NTS

File Path:

Drawing No | CGL-DWG-TYP-1091 | Revision | B



Zc-173-1L (SMJV EMERGENCY)

PROFESSIONAL ENGINEER
G. T. WAMBOLT
May 22, 2019

Zc-173-1R (SMJV EMERGENCY)

NOTE:
DIMENSION AND DETAILED SPECIFICATION, AS PER MOTI D16 9645

ISSUE FOR CONSTRUCTION

GENERAL NOTES

- THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DRAWINGS RELATING TO THE PROJECT.
- THIS DRAWING IS SOLELY FOR THE USE OF THE CONTRACTUAL CUSTOMER OF SURERUS MURPHY JV (SMJV).
- SMJV ASSUMES NO LIABILITY TO ANY OTHER PARTY FOR REPRESENTATION CONTAINED IN THIS DRAWING.
- ALL SURVEY INFORMATION IS TO BE VERIFIED CORRECT PRIOR TO CONSTRUCTION COMMENCEMENT.

REVISIONS

REV	STATUS	DESCRIPTION	DATE	REV BY	CHK BY	APP BY
B	USE	ISSUE FOR CONSTRUCTION	22/05/19	XW	JM	TW
A	REVIEW	ISSUE FOR INTERNAL REVIEW	25/03/19	MJB	JM	

SURERUS MURPHY JOINT VENTURE
Suite 1600, 605 - 5th Avenue SW
Calgary, Alberta, Canada
Tel: (403) 930.1358 Fax: (587) 353.5359

SURERUS MURPHY
A JOINT VENTURE COMPANY

Coastal GasLink
Pipeline Project

Project:

Drawing Title:
MOTI Z-SERIES SIGNAGE
EMERGENCY ENTRANCE AT HWY

Drawing Number: CGL-DWG-TYP-1091 Rev: B

Scale: NTS

File Path:

BRITISH COLUMBIA | Ministry of Transportation and Infrastructure

Z-RECORD

Highway Engineering Special Purpose Signs

Regional Traffic Engineer Approval Required for all NEW Placements (unless otherwise stated)

Sign Series

Zc-173-1L

NOTE:

Outlined text indicates variable messaging. Actual messaging is solid black as shown above. Provide messaging to the manufacturer when ordering.

NOTE:

This part of the message must fit within space indicated, 1220 x 406 mm in order to accommodate future overlays of the same dimension.

Ref: D16 9645

Approved: January, 2017
Jerry Froese
Senior Traffic Engineer

Sign Item Number	Dimensions (W x H) mm	Substrate	Reflectivity (ASTM Type)	Colour	Approval Required	Typical Application
-	-	-	-	-	-	-
Zc-173-1L	1830 x 915	0.081 AL	9	B / FLO	STOE	All Roads or Highways
-	-	-	-	-	-	-
-	-	-	-	-	-	-

Sign Description: For temporary industrial access, off Ministry ROW.

BRITISH COLUMBIA | Ministry of Transportation and Infrastructure

Z-RECORD

Highway Engineering Special Purpose Signs

Regional Traffic Engineer Approval Required for all NEW Placements (unless otherwise stated)

Sign Series

Zc-173-1R

NOTE:

Outlined text indicates variable messaging. Actual messaging is solid black as shown above. Provide messaging to the manufacturer when ordering.

NOTE:

This part of the message must fit within space indicated, 1220 x 406 mm in order to accommodate future overlays of the same dimension.

Ref: D16 9645

Approved: January, 2017
Jerry Froese
Senior Traffic Engineer

Sign Item Number	Dimensions (W x H) mm	Substrate	Reflectivity (ASTM Type)	Colour	Approval Required	Typical Application
-	-	-	-	-	-	-
Zc-173-1R	1830 x 915	0.081 AL	9	B / FLO	STOE	All Roads or Highways
-	-	-	-	-	-	-
-	-	-	-	-	-	-

Sign Description: For temporary industrial access, off Ministry ROW.

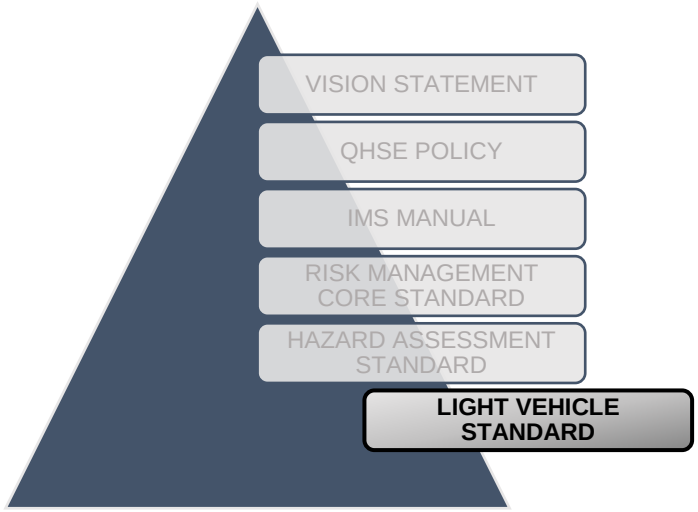
Appendix C: SMJV Light Vehicle Management HS Standard

SSMJV-HS-STN-008

This document is revised independently from the Traffic Management Plan.

Light Vehicle Management
HS Standard

To be the company of choice for our people and our clients by delivering safe and quality work.



Revision	Date (yyyy-mm-dd)	Status / Change Description
5	2019-02-12	Resolved ISN deficiencies. Enhanced Journey Management section. Issued for Use.
4	2019-01-19	Added 360 walk around requirement; driver abstract expectation, updated minimum vehicle requirements, updated tire requirements, added towing requirements, added industry best standard hand signals, revised journey management requirements, added journey management assessment forms, added multi-jurisdictional requirements. Issued for Use
0	2018-06-01	Issued for Use

Document Number and Revision	SSMJV-HS-STN-008 Rev 5

Never Harm Trust Integrity Assured Delivery

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TABLES

FIGURES

No table of figures entries found.

APPENDICES

No appendices exist for this Document

Based on SSMJV-TMP-0004 Rev 06 Template for Management System Standards

If you have ideas to improve the Management System, please email them to QHSE@Surerus-Murphy.com

1. Introduction

1.1. Purpose

The following Light Vehicle Safety Standard applies to employees who drive light-duty vehicles (i.e., vans, pickup trucks, cars, ATV's, etc.) that are owned, leased, or contracted by the Company. It also includes those vehicles rented by employees for use on Company business as well as those personal vehicles operating on Company business.

1.2. Scope

The Light Vehicle Safety Standard applies to all employees and contractors engaged in transporting workers, secured loads, and travelling to or from a Company work site.

All employees and contractors must review the Company's Light Vehicle Standard as part of the initial company on-boarding

1.3. References

1.3.1. External

Table 1. Relevant External Resources

Document Name
ISO 9001:2015 Quality Management Systems
ISO 14001:2015 Environmental Management Systems
ISO 45001:2015 Occupational Health and Safety Management Systems
Alberta OHS Code - Parts 2 Hazard Assessment and Part 6 Section 114 Winching Operations
Alberta OHS Code - Part 9 Fall Protection Section 155 Fall Protection on Vehicles and Loads
Alberta OHS Code - Part 10 Fire and Explosion Hazards Section 166 Internal Combustion Engines
Alberta OHS Code - Section 172 Welding Services from Vehicles and Section 173 Horizontal Cylinder Storage, and 236
Alberta Traffic Safety Act (2017) and Vehicle Equipment Regulation (2009)
Alberta Municipal Affairs - Code for Electrical Installations at Oil and Gas Facilities
BC WCB - OHS Regulation: Parts 16 Mobile Equipment
BC Motor Vehicle Act (2017) and Regulations (2017) and Off-Road Vehicle Regulation (2017)
Canada Safety Council: ATV/UTV/Snowmobile Training Syllabus
Saskatchewan Traffic Safety Act
Saskatchewan OHS Reg – Part XI Powered Mobile Equipment
Saskatchewan OHS Reg – Part III Working Alone or at Isolated Place of Employment
Saskatchewan OHS Reg – Part IX Safeguards, storage, warning signs and signals

1.3.2. Internal

Table 2. Relevant Internal Resources

Document Name	Document Number
Integrated Management System Manual	SSMJV-GV-MAN-001
Hazard Assessment Standard	SSMJV-HS-STN-002
Incident Management Standard	SSMJV-GV-STN-006
Personnel Protective Equipment Standard	SSMJV-HS-STN-010
Variance Management Standard	SSMJV-GV-STN-016
Progressive Discipline Standard	SSMJV-HR-STN-001
Drug & Alcohol Standard	SSMJV-HR-STN-002
Vehicle Assignment Form	SSMJV-HS-FOR-035
Vehicle Incident Information Form	SSMJV-HS-FOR-034
Vehicle Safety Checklist	SSMJV-HS-FOR-040
Journey Management Form	SSMJV-HS-FOR-051
Hand Signal – Wallet Card	SSMJV-HS-PHO-004
Hand Signal - Poster	SSMJV-HS-PHO-005

2. Definitions and Acronyms

Company definitions and acronyms are found in the *Integrated Management System (IMS) Manual*. Those specific to this H&S Standard include the following:

Table 3. Definitions & Acronyms

Term	Description
Off-Highway Vehicle	Means a motorized off-highway vehicle
All-Terrain Vehicle	ATV is designed to travel on four or more low pressure tires with or without tracks added, with a seat designed to be straddled by the operator and handlebars for steering. Note: Three wheeled not permitted.
Utility Task Vehicle	UTV is a motorized off-highway vehicle, designed to travel on four or more low pressure tires with or without tracks added, with side by side seat designation utilizing a steering wheel.
Snowmobile	Snowmobile is a tracked motorized off-highway vehicle, designed to travel on snow with a seat designed to be straddled by the operator and handlebars for steering.
Competent Person	Is qualified because of knowledge, training and experience to organize the work and its performance Is familiar with the applicable federal and provincial Occupational Health and Safety Acts and regulations that apply to the work, and

Term	Description
	Has knowledge of any potential or actual danger to health and safety in the workplace and their mitigating factors
Mobile Equipment	Means a wheeled or tracked vehicle which is engine or motor powered, together with attached or towed equipment, but not a vehicle operated on fixed rails or tracks.
Variance	Means a temporary procedure developed for a specific purpose, when the health and safety manual procedures and guidelines cannot be followed. Each Variance must be approved and is for a one-time use. It does not permit non-compliance with regulatory requirements.
ANSI	American National Standards Institute
OHV	Off-Highway Vehicle
CSA	Canadian Standards Association.
CT	Critical Task
SSOP	Site Specific Operating Procedure
SWP	Safe Work Permit
FLHA	Field Level Hazard Assessment
UTV	Utility Terrain Vehicle
ATV	All-Terrain Vehicle

3. General Rules

- The company requires all drivers to drive in accordance with the law.
- All drivers shall be trained on this Standard
- Driving directions should be obtained if driving to an unfamiliar location
- Drivers will follow Company Journey Management procedures
- Drivers shall carry a reliable method of communication in case of emergency (e.g. cell phones, radios, etc)
- Drivers shall not operate equipment which is defective, or which is not in compliance with the law.
- No supervisor or manager will allow a driver to drive, and no driver shall drive after he or she has accumulated 13 hours of driving time in a day or after the driver has accumulated 14 hours of on-duty time in a day.
- When driving long distances, drivers should take rest breaks to mitigate fatigue
- The Company prohibits the possession and use of illegal drugs and alcoholic beverages at their yards, facilities, and work sites and in all Company-owned or leased vehicles and vehicles used by employees and contractor's vehicles on Company business. Employees and contractors will comply with the *Alcohol and Drug Standard*.
- Any damage to a company vehicle must be reported within 24hrs to the relevant supervisor. Failure to report will result in disciplinary action.

- One of the most important rules of the road is courtesy. Consider the rights and privileges of others.
- The vehicle's motor shall not be running while refuelling or installing tire chains.
- When parked, standard transmission vehicles should be placed in low gear or reverse; automatic transmission vehicles should be in park. In both circumstances, engage the emergency brake and, if necessary, block the wheels.
- Drivers shall not leave the vehicle engine running when not in the vehicle. In those instances where such is deemed necessary, the emergency brake shall be firmly engaged.
- Prior to moving a vehicle, conduct a 360 walk around to check of obstructions and hazards
- A worker must not ride in a vehicle with any part of the body outside the vehicle.
- A vehicle shall be driven according to weather and road conditions and must be under control at all times. Driving under adverse weather conditions should be avoided if possible.
- Driving should be done during daylight hours, if possible.

4. Driver Selection and Criteria

The **Project Manager** is accountable for ensuring that the following requirements are met prior to issuing a company vehicle.

Driver selection will be determined by the following:

1. Company vehicle drivers must have a current and valid driver's license for the jurisdiction in which they are operating a company vehicle.

2. All drivers must upload their driver's abstract to Safety Sync before operating a company vehicle. The abstract must;
    a. cover the previous five years
    b. be current within one month of hire date.
    c. Must be provide yearly, or at the beginning of a new project, whichever comes sooner.

3. Company vehicles will not be provided if the abstract shows 10 or more points unless approved by VP of Operations and a monitoring and coaching program is implemented.

4. The abstracts will be reviewed by the ***Project Safety Dept*** or the ***hiring individual (facilities)*** and the names of those meeting the criteria will be passed to the relevant supervisor / line manager.

5. A *Vehicle Assignment Form* must be completed by the assigned driver prior to taking possession of a company vehicle. The Warehouse Supervisor shall not issue keys unless this form is completed. ***Note****: A valid driving licence and mandate must also be provided for review at this time*

6. A new abstract must be obtained at the beginning of a new project or yearly whichever is sooner.

7. Any changes to abstract, suspension or revocation of an employee's or contractor's licence must be notified to the company immediately.

If there are questions concerning the above information, please contact your supervisor for clarification

5. Records

A locked site on SafetySync will be used to store all vehicle licenses and abstracts. These records are confidential. Electronic records will be retained for 10 years at minimum.

6. Driving Violations

Drivers that receive a traffic violation must personally pay all costs associated with the traffic violation Drivers whose duties require the operation of a vehicle must notify their Supervisor if:

- Their driver's licence has been suspended.
- Upon notification of loss of driver's license, driving privileges will be revoked.
- Restrictions to their driver's licence could affect the performance of their work (i.e., night driving conditions).

All drivers and other personnel who violate traffic laws, or site driving rules while operating a company vehicle will be subject to the *Progressive Disciplinary Standard*.

7. Vehicle Inspection

Drivers of company owned, leased or rented vehicles shall inspect the condition and operation of their vehicles daily prior to operation and complete the pre-use inspection log (*Vehicle Safety Checklist.*)

The **driver** is responsible for detailing any defects, noting it on the Vehicle Inspection Form and reporting the defect to their Supervisor as soon as reasonably possible. The **Supervisor** is accountable for ensuring the defect is corrected in a timely manner.

Completed Vehicle Inspection forms shall be handed weekly to the individual supervisors who are responsible for reviewing and passing them on to the **project equipment coordinator**

The Project Equipment Coordinator shall review the inspection records for deficiencies, which are relayed to the **project master mechanic** to schedule repair.

The Vehicle Inspection Forms will then be transferred to the **project health and safety administrator** to collect vehicle kilometres driven.

8. Vehicle Appearance

The Company reserves the right, at its discretion, to refuse the use of a vehicle supplied by a worker or contractor due to its appearance e.g. broken glass and mirrors, excessive rust, dents, age etc.

All vehicles, including cab interior, must be kept clean. Good housekeeping practices must be followed for the cargo/storage areas.

9. Vehicle Incidents

All incidents, including any damage, involving company vehicles must be reported immediately to the supervisor verbally followed by a full report on the forms provided by the company, giving details including number and length of skid marks, width of roads, presence of traffic signs, visibility, names and addresses of persons involved and witness statements.

In case of an incident, the driver shall proceed as follows:

1. Stay Safe
    a. Pull off the road, if possible.
    b. Evaluate the need to evacuate (e.g. if there is fire or potential for explosion)
2. Get Help
    a. Phone 911 or use radio if required
3. Assess hazards
    a. A damaged vehicle may have many hazards. Keep a wide berth when walking near a damaged vehicle.
    b. Note that vehicles that have been rolled over are likely unstable and are a hazard
    c. Place flares or warning reflectors on the road as necessary
4. Respond
    a. Render first aid to any injured person if safe to do so
    b. Assist First Responders on scene as required
5. Post Incident
    a. Refrain from entering into any argument or dispute with the driver of the other vehicle, pedestrians or bystanders.
    b. Make no admission of liability or offer any settlement of claims.
    c. Use the *Vehicle Incident Information Form* in the glove compartment to help gather the essential information at the accident scene.
    d. Advise appropriate police detachment in the event of injury/extensive damage.
    e. All damages must be reported to the supervisor immediately.

10. Transportation of Workers - General Rules

Workers are prohibited from boarding or leaving any moving vehicle, except in case of an emergency.

Workers shall not ride on running boards, fenders or the outside of trucks or trailers, on reaches or on skid sloops.

No stops shall be made on a trestle or bridge for unloading or picking up workers.

Crew vehicles shall be pulled off to the side of the road when workers are boarding or disembarking.

Flammable substances shall not be transported within the crew compartment of a vehicle used to transport workers. The number of passengers carried in the cab shall **not** exceed the number of seats and safety belts or that allowed by applicable government regulations.

Any enclosed portion or compartment of a vehicle in which workers are transported must have:

- Effective ventilation independent of doors providing clean air,
- Adequate lighting,
- A means for heating and cooling,
- An effective means of communication between the operator and passengers, and
- More than one means of exit.

11. Transportation of Materials, Equipment, and Tools

Vehicles shall not be operated on or off highway in excess of maximum capacity allowed by the applicable governmental regulations or permits.

Controlled products, flammable products or hazardous materials shall not be carried in the driver or passenger compartments of vehicles.

All regulated materials such as; WHIMIS controlled products, Transportation of Dangerous Goods or Hazardous Waste, must be hauled in accordance with the appropriate legislated requirements.

11.1. Cargo Securement

The Company requires that all vehicles (i.e., pick-up, van, SUV and cars) have all loads or cargo properly secured, contained, and covered with a tarp or cargo net, and any part of any load that projects outside the body of the vehicle must be red flagged so that the load cannot:

- Leak, spill, blow off, fall from, fall through or otherwise be dislodged from the vehicle, or
- Shift upon or within the vehicle to such an extent that the vehicle's stability or manoeuvrability is adversely affected.

When transporting materials and tools:

- Ensure the load does not exceed the vehicle's rated capacity.
- Use securement or tie-down equipment appropriate to the size and shape of the cargo.
- Ensure cargo is not loose in the cabs or passenger compartment of cars or trucks.
- No flammable or explosive materials shall be transported in the vehicle cab.
- Compressed gas cylinders must be upright and secured against falling.

12. Minimum Vehicle Equipment

All company leased, owned or rented vehicles are required to have the following equipment as a minimum;

- 1 set of triangle flares
- Fire extinguisher
- Emergency first aid kit appropriate to the Provincial requirements in which work is being conducted
- Alberta and BC #1 emergency first aid kit
- Winter rated tires (M&S, Snowflake or Three Peak Mountain symbol) with a minimum of 3.5 mm (4/32) of tread depth, will be installed on vehicles from October 31 until March 31 All-Weather/Season rated tires with a minimum of 3.5 mm (4/32) of tread depth will be installed on vehicles from April 1 to October 30
- Blankets
- Booster Cables
- Water
- Flashlights
- Sandbags and a shovel (in the winter)

Site specific requirements may include the following but are not part of the minimum requirement.

- Buggy whips
- Two-way radio complete with current channel designations
- Back up alarms
- Positive air shut off (diesel motors)
- Pulaski's/Shovel/Water Cans

13. Off Highway Vehicles (ATVs, UTVs, Snowmobiles, Argos)

Operators must have completed an approved Canada Safety Council ATV/UTV/ Snowmobile training course and demonstrated their competence in ATV/UTV/Snowmobile operation to the Work Site Supervisor.

The Company expects all personnel using OHVs to ride in a safe and responsible manner in compliance with the manufacturer's instructions and applicable regulations. ATVs include 4-wheel quads, 8-wheel muskeg buggies, and snowmobiles.

The operator's manual for the all-terrain vehicle or snow vehicle is kept in a secure place with the vehicle or at another location readily accessible to the operator. All personnel operating an OHV must have a valid licence or certificate of competency in OHV operations.

OHV safety precautions include:

- Wear a Snell or DOT-approved helmet, face shield, glasses, or goggles.
- Check your communications, safety/survival equipment (two-way radio, first aid kit, air horn, and fire extinguisher) prior to departure.
- Passengers are allowed on OHVs where manufacturer seating is required
- If ramps are used when loading or unloading an OHV, they must be placed at a suitable angle, secured to the vehicle to stop slipping, be sufficiently wide and have a surface finish which provides an adequate grip for the OHV's tires.
- Always start your trip with a full tank of fuel. Check your oil and inspect the OHV for oil or fuel leaks.
- Travel off-road only and at safe speeds.
- Exercise caution when crossing lake or river ice and climbing steep slopes.
- Look ahead for possible obstacles such as fence lines, branches, or rough terrain.
- Follow working alone procedures when traveling long distances to remote areas.

13.1. Required OHV Safety Equipment

In remote areas or during winter operations, the following items must be attached to the ATV:

- Air horn
- First aid kit
- 5 lb fire extinguisher
- Bear spray when working in bear-habited areas
- Survival kit (required when operating in remote areas)
- Footrest guards
- Two-way radio complete with current channel designations as required

13.2. Licences and Insurance

- OHVs must be licensed and insured as per the Provincial off-highway vehicle regulations.
- The license plate must be properly attached and displayed on the OHV.
- Operators manual must be kept in a secure place where it is readily available to the operator

14. Battery Boosting Procedure

To boost or jump-start a vehicle, follow the steps listed below:

1. Batteries must be the same voltage.

2. Both negative posts must be grounded.
3. If possible, check battery fluid; check for freezing.
4. Vehicles must not be touching; turn off all accessories.
5. Ignitions must be off; gears in park or neutral; parking brakes on.
6. Attach clamps (positive clamps first).
7. Attach negative clamp to the engine block of the vehicle being started.
8. Start the engine.

Remove in exact opposite order.

15. Parking

Employees will park vehicles (company or private) in the areas designated by the Company's on-site supervisor. The Company requires that all vehicles be parked in a manner that reduces the risk of accidents.

Unless otherwise indicated by signage a "Back-In" policy will apply for all vehicles on site i.e. a vehicle or equipment will be reversed into a parking spot, such that the next movement of that vehicle will be in the forward direction

Park on the same side of the road as other vehicles, park defensively on all company leases, and park the vehicle in such a manner that it does not hinder operations of other vehicles.

In general, all vehicles and equipment will have at least two (2) of the following safety measures:

- operational backup alarm;
- a spotter;
- backup camera;
- backup sensors with audible alarm;
- double blast of the vehicle horn prior to any reverse motion;
- single blast of the vehicle horn prior to any forward motion.

Vehicles or equipment with reduced visibility (i.e. use of mirrors for backup purposes) will have a minimum of three (3) of the above safety measures.

16. Towing a Trailer

Company vehicles used for towing small trailers must be properly equipped. Hitches, receivers and wiring must meet the vehicle manufacturer's specifications and government regulations.

When using trailers and hitches, Workers shall:

- test signal lights and brakes prior to departure

- test and calibrate auxiliary brakes prior to departure; if equipped with breakaway cable, check the cable length and ensure the coupling is fully plugged in
- use adequately sized tow chains that are securely fastened
- cross the tow chains to prevent the hitch from contacting the ground if it becomes disconnected
- secure the coupling latch (e.g., pin, lock, bolt and nut) after coupling the trailer to the towing vehicle
- secure all loads
- visually inspect trailers and hitches prior to each trip
- have the trailer ball-mount assembly removed from the receiver when not in use
- ensure hitch and receiver are compatible and correctly sized Trailers are required to have functional lighting when in use.

17. Vehicle recovery

When attempting to tow a vehicle out of a stuck position, understand the limitations of your vehicle and ensure that both ends of the towing device are secure.

17.1. Step by Step Guide for Pulling out a Vehicle with a Recovery Strap

- Stop, consider the task at hand and assess the hazards and document on your FLHA
- If you have any questions or doubts at this point, call a tow truck, it remains your best option. Use the checklist provided at the end of this document to make a safe decision.
- If the vehicle recovery takes place on or near a roadway, you must implement a traffic warning or traffic control system (e.g., traffic cones or reflector flares).
- Ensure that you have the correct equipment—a recovery strap is essential.
- The recovery strap should be at least 6 m or 20 ft in length, with loops (not hooks) and in good working condition (no cuts or broken stitches).
- If you do not have a recovery strap like this at hand, call a tow truck.
- Check both vehicle weights and add the weights of any loads either vehicle is carrying.
- The vehicle doing the pulling must be of equal or, ideally, greater weight than the vehicle that is being pulled.
- Ensure the recovery strap has a Minimum Breaking Strength (MBS) that is 2-3 times the total weight of the stuck vehicle.
- If the MBS is greater, it will not function optimally (they are most effective when their elasticity enhances the pull).
- If it is less, the danger is the strap may snap under high tension.

- Recovery straps are usually constructed so that each inch of width adds approximately 10,000 lbs (4,500 kg) of MBS (e.g., a 3 inch wide strap would usually have a rating of approximately 30,000 lbs [13,500 kg]).
- Ensure tow hooks, hitch receivers and any shackles used are rated to loads that exceed the recovery strap MBS. In the event of excessive loads, the recovery strap should always be the weakest link and snap first.
- A shackle should have a Working Load Limit (WLL) stamped on it (remember 1 ton = 2000 lbs or 900 kg).
- As much as possible, clear out mud, sand, or snow from under the stuck vehicle and in front of the tires in the direction of the pull.
- Position the pulling vehicle in line with the stuck vehicle—the pulling vehicle facing forward; the stuck vehicle being pulled from the front (ideally) or the back.
- You need to be within 10° of a straight line—side loading can lead to serious vehicle damage.
- You need to be sure you have a clear path straight forward free of any obstacles that is at least the length of the strap and stuck vehicle.
- Lay out the recovery strap between the two vehicles and loop the strap onto a tow hook bolted to the vehicle frame or put the loop on a shackle which is properly pinned to a frame mounted hitch rated for recovery.
- If using a threaded shackle, hand tighten the pin and then turn it back one quarter turn for ease of release later.
- Never tie the strap onto the vehicle, slip the strap over a ball hitch, or attach it to anything other than a tow hook or frame mounted hitch.
- Only use one recovery strap (never two in parallel)—however, there are two options for creating additional length with two recovery straps if needed

Double length by threading straps through each other's eye. A rolled newspaper stuck between the loops provides a safe means of undoing the knot later

Gain 50% more length by looping one strap through the eye of another.

Never use a shackle to join two straps—if a strap fails, it becomes a deadly projectile

- reduce the expected strength of the recovery straps by 25% if you are using two correctly joined straps.

- Drape a heavy coat or blanket over the middle of the strap to dampen any backlash if it snaps or releases.
- Agree on a plan and communication signals between the two drivers. Industry Recommended Practice Hand Signals for Directing Vehicles (IRP 12) provides a good system of signals to use.
- Ensure all other bystanders are at least 2 times the length of the recovery strap to the side of the vehicles—both the strap and the vehicles lurching forward unexpectedly present a hazard.
- The pulling vehicle accelerates slowly (to about 10-12 KPH) to build tension in the strap and provide a sustained pull. Once the slack is taken up, the stuck vehicle likewise applies acceleration in low gear to assist the pulling car. Neither vehicle should spin their tires.
- Steady momentum is most effective—never resort to jerking or take a long run and jerk. Maintain tension throughout the pull, do not allow slack to develop in the strap at any point. After three attempts to pull the vehicle loose, it is time to stop and call a tow truck.
- Do not remove straps until both vehicles are fully stopped and secured.
- It is a good idea to clean and dry out a recovery strap after use as dirt and moisture weaken the strap.
- **Remember, if at any point in the process you have any safety concerns whatsoever or concerns about potential damage to either vehicle, stop and call a certified tow truck.**

17.2. Using a Vehicle Mounted Winch for Vehicle Recovery

- Only use a vehicle mounted winch for vehicle recovery if you have had proper training on the safe and correct use of the winch.
- Always wear heavy duty gloves when working with a winch.
- When one vehicle is winching out another, ensure both vehicles are in neutral (not park) and that the non-stuck vehicle has its parking brake engaged (ideally with transfer case in 4 wheel drive mode).
- Only perform a self-recovery if you have a solid anchor point and a “tree saver strap” and shackle configuration rated to exceed your winch capacity

- The right way to do it: A tree saver strap with winch cable hooked to the shackle pin. Never simply wrap the winch cable around an anchor point and hook it back on itself. Never use a recovery strap for this purpose. Always position the tree saver as low to the ground as possible

- Drape a heavy coat or blanket over the cable —this will dampen the recoil in the event of a cable or hook failure.
- If winch controls permit, work as much to one side as possible, out of the recoil line of fire.
- With a front mounted winch, always raise your hood—especially if your setup requires you to be in the vehicle during winching.

Remember, if at any point in the process you have any safety concerns whatsoever or concerns about potential damage to either vehicle, stop and call a certified tow truck.

Conduct a hazard assessment of the situation and record on the *FLHA Form*

18. Traveling in Adverse Weather Conditions

Adverse weather conditions are normally thought of when winter begins, however workers who travel to remote locations must prepare themselves for all weather conditions which could present or create hazards.

Weather conditions such as heavy rains, thunderstorms, and high winds could affect roadway conditions (i.e., muddy roads, fallen trees, etc.) and visibility which could entrap a worker in a remote area or cause an accident.

A SMJV journey management plan will be completed prior to commencing a journey in adverse weather conditions.

19. Journey Management

The objective of journey management is to eliminate driving related incidents that bring harm to people and property. SMJV can minimize injury and damage by identifying and managing hazards and minimizing exposure to unnecessary travel. Addressing these issues provides the added benefit of reducing trip delays due to weather and mechanical breakdowns.

19.1. Planning the Trip

Prior to a trip the following items are to be assessed:

- Driver condition, fit for duty
- Weather conditions, snoe, fog, rain
- Road conditions, dry, ice, wet, snow covered
- Vehicle conditions, tires, lights, engine
- Vehicle equipment, first aid kit, booster cables, fire extinguisher, blankets.etc
- Planed route, Highway, secondary hi way, gravel

- Animals activity
- Traffic
- Day/Night driving
- Re-fueling points
- Rest points
- Departure times
- Arrival times
- Check in person

These items reviewed make the difference between a successful trip verse an unsuccessful trip, SMJV wants their employees to arrive safety, with each and every journey in which they partake.

19.2. Journey Management Risk Assessment

The Risk Assessment aids in identifying the need to conduct a Journey Management Form, a completed score will determine the requirements:

- Green, less than 40 points is a routine trip, conduct a self-assessment and a self-approval of the trip, this score does not require a JM Form to be completed
- Yellow, a score between 40 – 74, requires a JM form to be completed and signed off by your immediate supervisor.
- Red, a score greater than 75 points, requires a JM form to be completed and must be approved by the site Superintendent or PM

19.3. Journey Management Form

The *Journey Management Form* confirms that the Journey is evaluated to determine that external hazards are identified i.e weather, fatigue.

The form identifies vehicle being driven, route that is to be traveled as well as specific communication points or times with an individual not partaking in the journey.

The contact individual will be aware of all aspects of the journey including the contact frequency, contact numbers and what the emergency plan is.

19.4. Emergency Procedures for Non-Contactable Driver

Should a communication check point not be achieved, the following shall occur:

- Attempt to contact the driver, and passenger, using the identified communication source identified in the form.
- Attempt to contact the driver, and passenger, using the identified secondary communication source with in the form.

- Contact the location in which the nect contact should have occurred, to confirm the driver had reached that destination,
- Afet an hour, If still no contact is made, notify your immediate supervisor, and SMJV safety,
- Continue attempting steps 1 – 3, at the two-hour mark after the initial check in point, identify next stepts to be taken with SMJV Safety as well as Site Supervission. These stepts may include;
    - Contacting a vehicle that is traveling towards the site.
    - Sending a vehicle out from site if safe to do so,
    - Sending a vehicle from a different site that is close to the last check in point,
    - In remote areas, dispatching an Arial search of the vehicle,
    - Contacting Law Enforcement with the Make, Model, and color with licence plate province and number along with identified route to be taken

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A journey management plan should be developed before commencing a journey in adverse weather conditions.