# EAGLE MOUNTAIN - WOODFIBRE GAS PIPELINE PROJECT

## SCHEDULE A

# CERTIFIED PROJECT DESCRIPTION FOR AN ENVIRONMENTAL ASSESSMENT CERTIFICATE

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APPENDIX A	<b>CERTIFIED PROJECT DESCRIPTION MAPBOOK</b>

### 1 **PROJECT OVERVIEW**

The Eagle Mountain-Woodfibre Gas Pipeline Project (Project) is a natural gas transmission system with associated components, extending from near Hixon Creek, BC (E 513023, N 5485214) to Woodfibre, BC (E 481978, N 5502029) (Mapsheets 1 to 9).

The Project is comprised of the following components:

- Sweet natural gas<sup>1</sup> pipelines and associated components;
- Compressor stations and associated components;
- Electric substations and transmission lines; and
- Temporary construction facilities, including a construction camp site.

Except for temporary and permanent access roads, or unless otherwise noted, all components associated with the Project must be located within the Certified Pipeline Corridor, Certified Compressor Station Area and Certified Electrical Transmission Line Corridor shown on Mapsheets 1 to 9 in Appendix A to this document.

### 2 PIPELINES

The pipelines must transport sweet natural gas only.

The pipeline has a maximum Nominal Pipe Size (NPS) diameter of 24 inches (610 mm Outside Diameter [OD]).

The suction and discharge pipeline laterals to the Mount Mulligan compressor station have a maximum NPS diameter of 10 inches (273 mm OD).

The relocation of a portion of the existing NPS 10 pipeline to the NPS 24 Certified Pipeline Corridor and abandonment or decommissioning of a portion of the existing NPS 10.

The pipeline and associated components, including the construction right of way, must be located within the Certified Pipeline Corridor on Mapsheets 1 to 9 (Appendix A), with the exception of permanent access roads and barge landing sites.

<sup>&</sup>lt;sup>1</sup> Sweet natural gas refers to natural gas that meets natural gas transmission pipeline quality specifications, containing either zero or trace amounts of hydrogen sulphide, carbon dioxide, or natural gas liquids (as defined in CSA Z662).

Associated components related to construction and operation of the pipelines are:

- Supervisory control and data acquisition system, and associated communication equipment and towers, to allow for safe operation and maintenance of the pipeline through remote control and monitoring of operational and measurement data;
- In-line inspection facilities, including valves, pig launchers and receivers;
- Mainline block valves;
- Cathodic protection;
- One custody transfer station;
- Pipeline markers;
- Ground bed anodes;
- Crossover valves and piping;
- Permanent access roads;
- Portals, including fencing or structure; and
- Other ancillary components.

### 3 COMPRESSOR STATIONS

The Project includes:

- Up to two electric motor driven (EMD) compressor units at Eagle Mountain;
- Up to three gas fired turbine compressor units at Mount Mulligan compressor station; and
- A permanent access road to the Mount Mulligan compressor station.

The compressor stations are located within the Certified Compressor Station Areas shown in Mapsheets 5, 6 and 8 and are described in Table 1.

 Table 1: Compressor station compressor configuration.

Cleared Area for Compressor Station (maximum ha)	Compressor Configuration
Eagle Mountain expansion (5 ha)	Up to two 20,500 HP EMD tandem compressor units.
Mount Mulligan (4 ha)	Up to three 4,700 HP natural gas-fired turbine compressor units.

### 4 ELECTRICAL SUBSTATIONS AND TRANSMISSION LINES

The Project includes up to one electrical substation and high voltage electrical transmission lines to support the Eagle Mountain compressor station in Coquitlam.

The location of the electrical substation and transmission lines are within the Certified Electrical Transmission Line Corridor on Mapsheet 8 (Appendix A).

Facilities related to construction and operation of the electrical substation and transmission line at the Eagle Mountain compressor station are:

- Up to one high voltage transmission line (230 kV) to connect the new FortisBC electrical substation to the existing BC Hydro Meridian substation;
- One high voltage step-down electrical substation; and
- Up to two overhead electrical transmission lines (25 kV), from the FortisBC substation adjacent to the existing BC Hydro Meridian substation, to the proposed expansion of the existing Eagle Mountain compressor station.

### **5 TEMPORARY CONSTRUCTION FACILITIES**

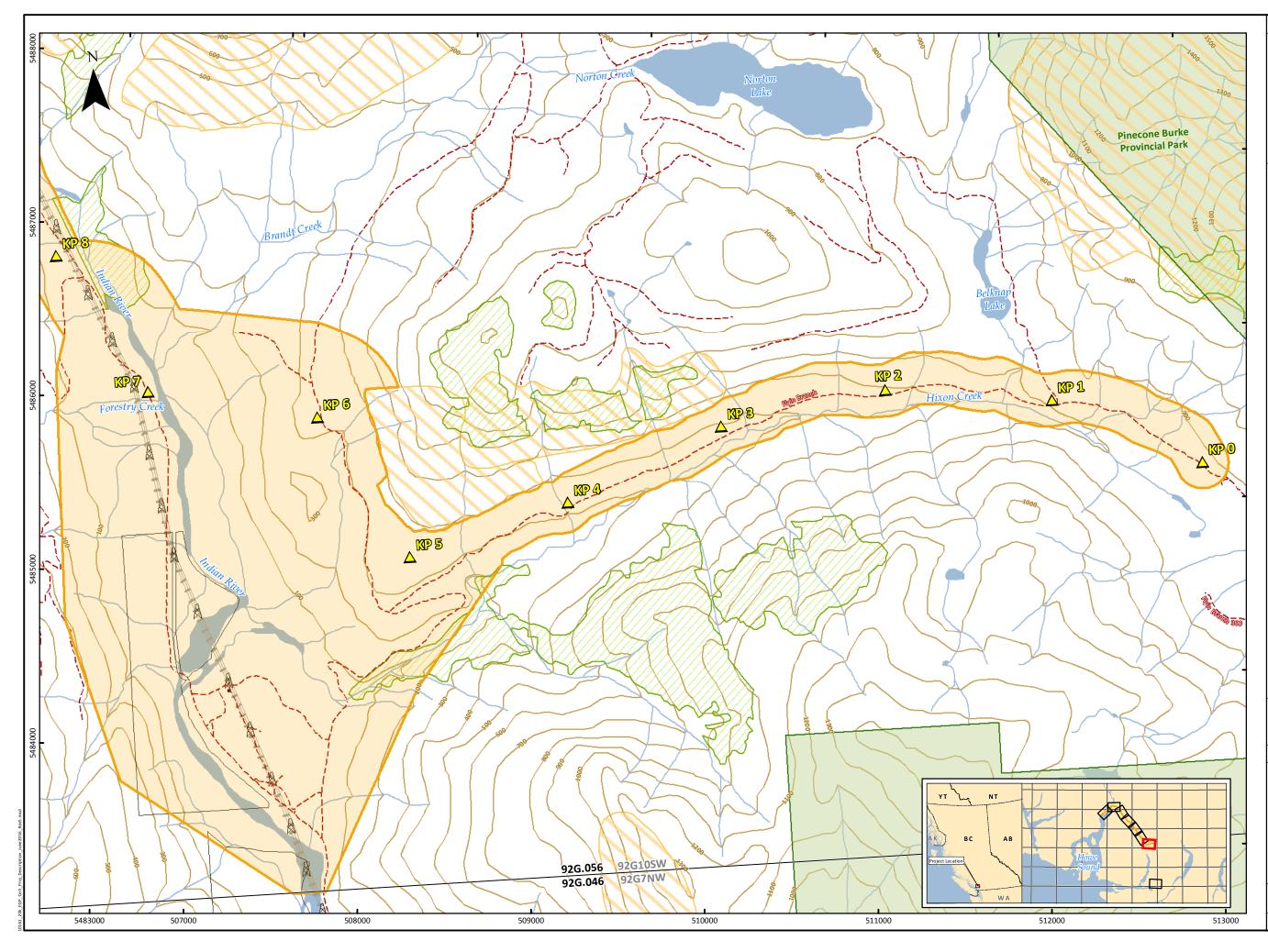
The Project includes temporary components and activities during Construction.

The location of temporary components and activities may be anywhere within or outside the Certified Pipeline Corridor.

Associated temporary components and activities are:

- Staging and stockpile sites;
- Contractor storage yards to store equipment and supplies;
- Laydown areas to setup and teardown equipment;
- Use of or upgrades to existing rail sidings;
- Work area for trenchless crossing construction;
- Borrow sites;
- Use of existing barge landing sites;
- Temporary access roads;
- Construction camp to a maximum area of 2 ha;
- Communication towers; and
- Other ancillary components and activities.

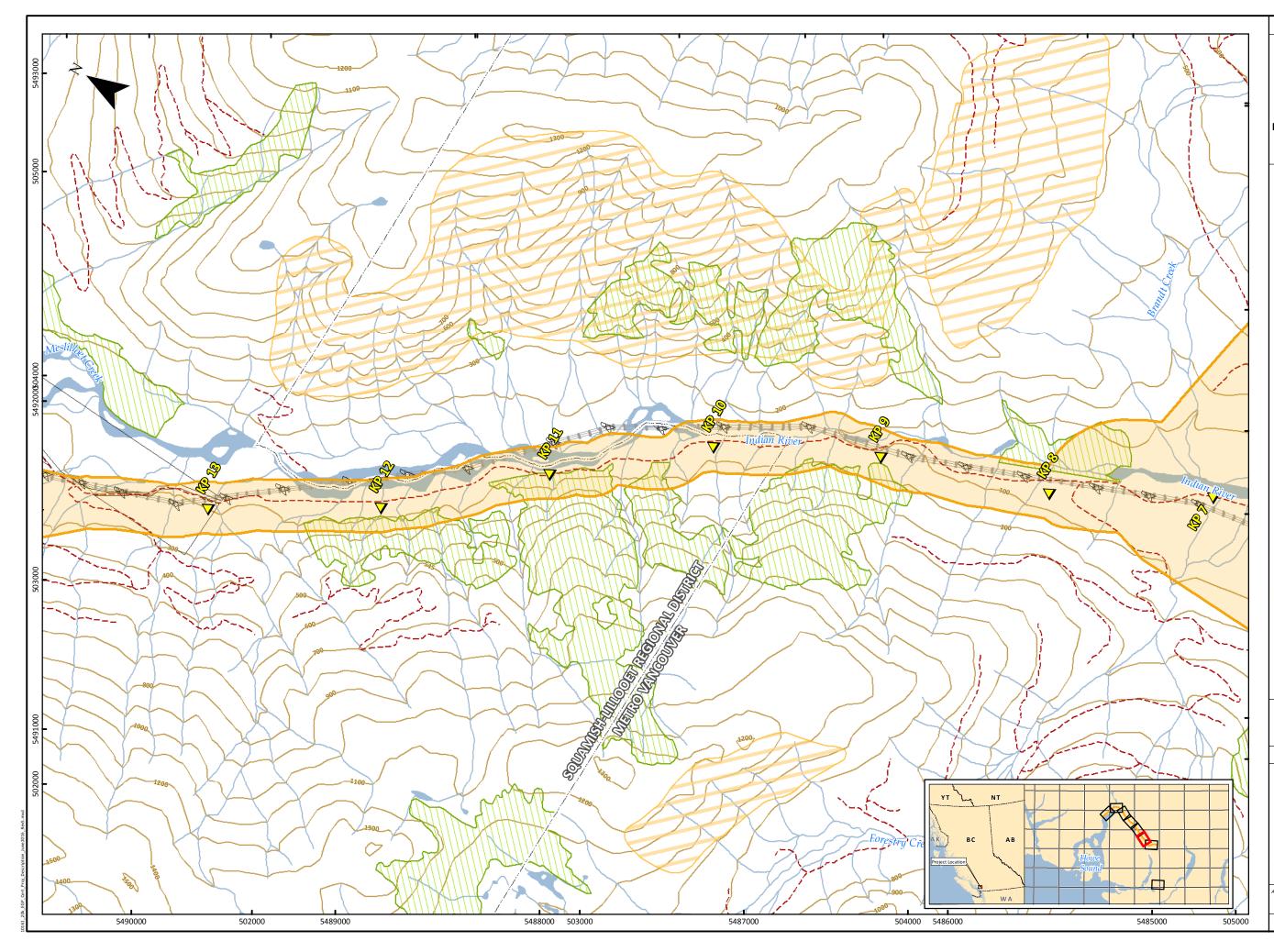
### APPENDIX "A": CERTIFIED PROJECT DESCRIPTION MAPBOOK



#### MAPSHEET 1 OF 9

#### CERTIFIED PIPELINE CORRIDOR

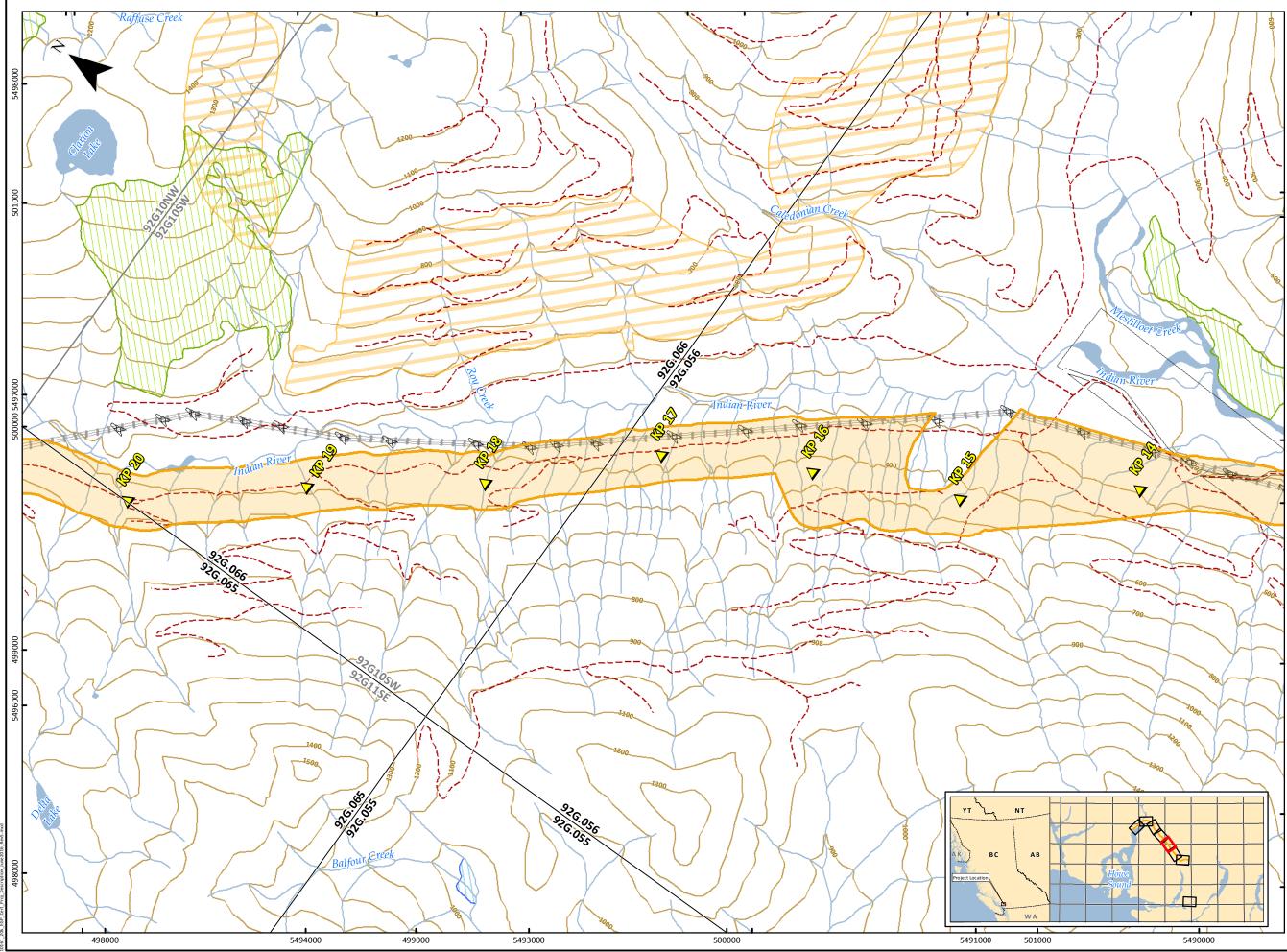
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	Watercourse	5		
	Waterbody			
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	Building			
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$\langle / \rangle$	Wildlife Hat	oitat Area		
	Old Growth (Legal)	Management	Area	
	Ungulate W	inter Range		
000	Municipality			
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Hydro 03-24-2014; Existing Pipeline: Fortis BC 2012; Roads: IHS Inc. 2016, BC MFLNRO 2012; Hydrography: BC MFLNRO 2008; Municipalities: BC MFLNRO 2007; Parks, Wildlife Management Areas: BC MFLNRO 2008;				
Management	Wildlife Habitat Areas, Ungulate Winter Range: BC MOE 2005; Old Growth Management Areas: BC FLNRO 2009; First Nations Reserves: Government of Canada 2016; Agricultural Land Reserves: Agricultural Land Commission 2015; National Topographic System (NTS) Grid 1:20k: TERA Environmental			
Consultants 2009; British Columbia Geographic System (BCGS) Grid 1:20k: BC MFLNRO 2003; Private Parcels: Integrated Cadastral Information Society				
(ICIS) 03-26-2014; Railways, Base Mapping: Government of British Columbia TRIM 2005-2007.				
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#### MAPSHEET 2 OF 9

#### CERTIFIED PIPELINE CORRIDOR

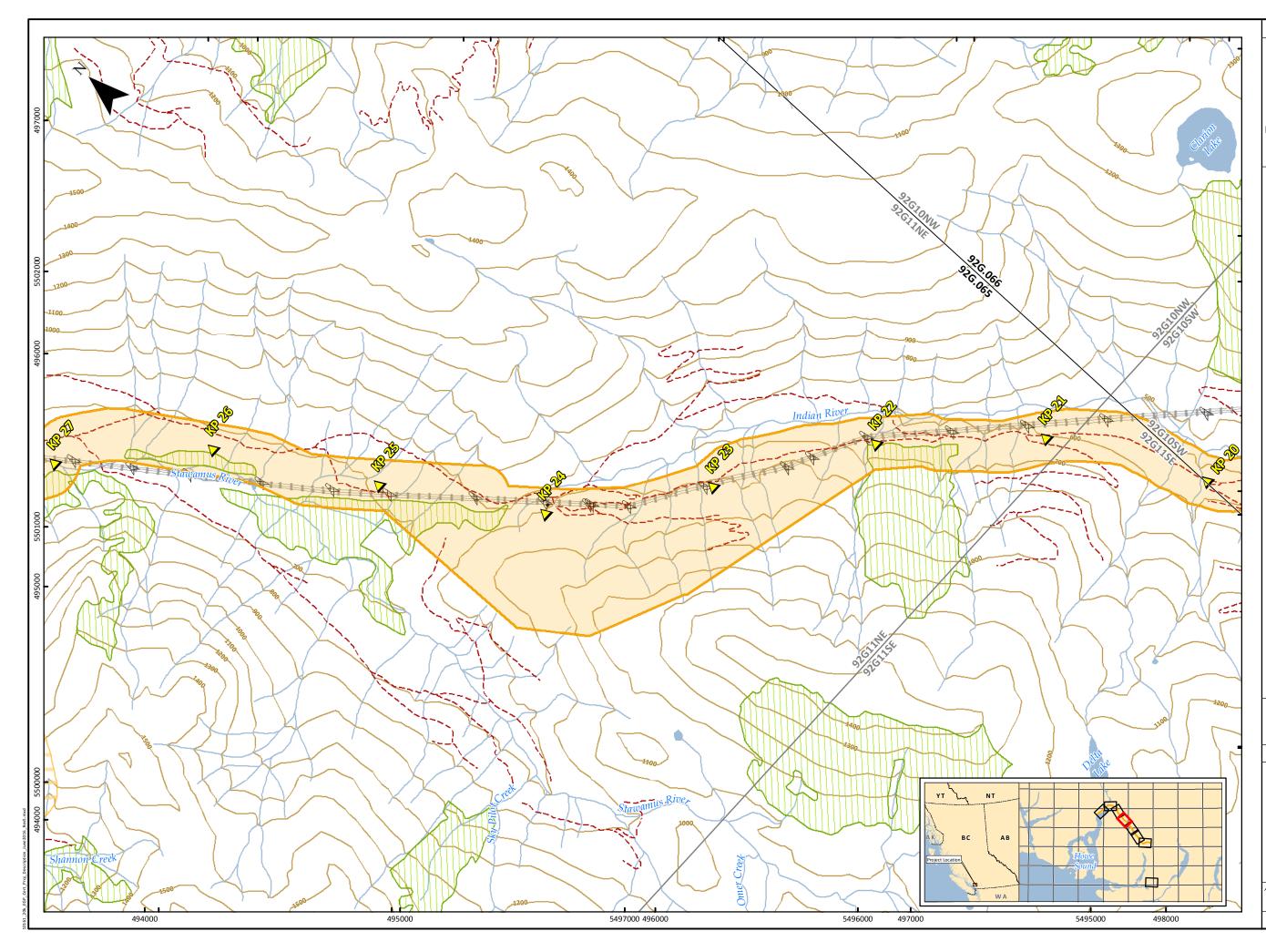
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	Certified Cor	npressor Station Area	
	Certified Elec Line Corridor	ctrical Transmission r	
	Existing NPS or Decomissi	10 to be Abandoned ioned	
99	Highway		
	Road		
	Resource Ro	ad	
<del></del>	Railway		
	Elevation Co	ntour (100 m)	
	Watercourse	2	
	Waterbody		
///	Wetland		
A	Transmission	Tower	
	Transmission	Line	
	Building		
	Builtup Area		
	Private Parce	el	
	Agricultural I	Land Reserve	
	Wildlife Hab	bitat Area	
	Old Growth I (Legal)	Management Area	
	Ungulate W	inter Range	
000	Municipality		
[]	Regional Dist	trict	
	Wildlife Man	agement Area (WMA)	
	Park/Protect	ed Area	
	First Nations	Reserve	
82G.010	BCGS Grid ID	)	
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#### MAPSHEET 3 OF 9

#### CERTIFIED PIPELINE CORRIDOR

Δ	Kilometre Po	ost	
	Certified Pip	eline Corridor	
	Certified Cor	npressor Station	Area
	Certified Elec Line Corridor	ctrical Transmiss r	ion
	Existing NPS: or Decomissi	10 to be Abando ioned	ned
99	Highway		
	Road		
	Resource Ro	ad	
<del></del>	Railway		
	Elevation Co	ntour (100 m)	
	Watercourse	2	
	Waterbody		
///	Wetland		
A	Transmission	Tower	
	Transmission	Line	
	Building		
	Builtup Area		
	Private Parce	el	
	Agricultural I	Land Reserve	
	Wildlife Hab	oitat Area	
	Old Growth I (Legal)	Management Ar	ea
	Ungulate W	inter Range	
	Municipality		
[]	Regional Dist	trict	
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	Park/Protect	ed Area	
	First Nations	Reserve	
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0A1SE	NTS Grid ID		
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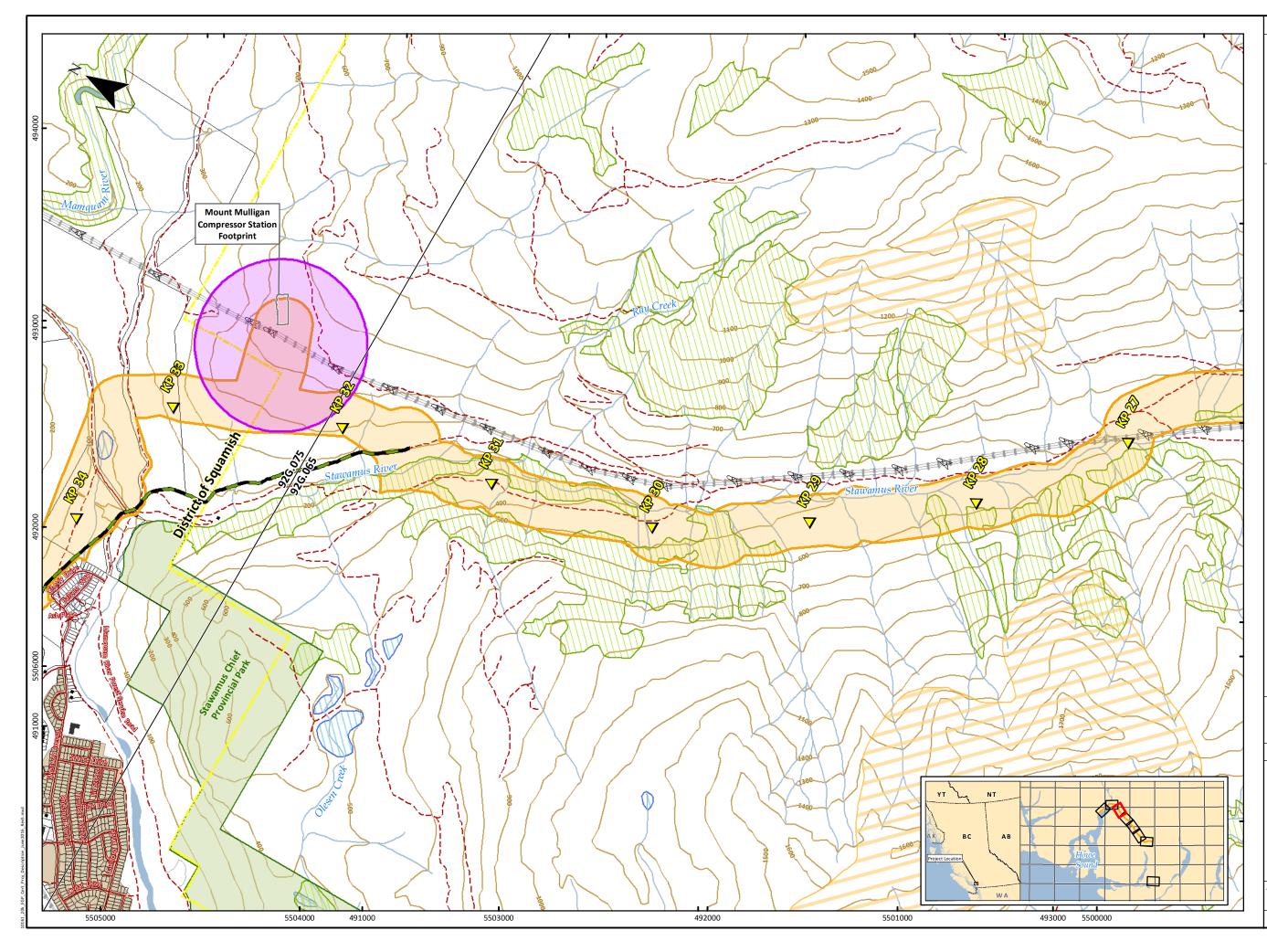
#### **MAPSHEET 4 OF 9**

#### CERTIFIED PIPELINE CORRIDOR

#### EAGLE MOUNTAIN-WOODFIBRE GAS PIPELINE PROJECT

Δ	Kilometre Post	
	Certified Pipeline Corridor	
	Certified Compressor Station Area	
	Certified Electrical Transmission Line Corridor	
_	Existing NPS10 to be Abandoned or Decomissioned	
99	Highway	
	Road	
	Resource Road	
<del></del>	Railway	
	Elevation Contour (100 m)	
	Watercourse	
	Waterbody	
<u>///</u>	Wetland	
A	Transmission Tower	
	Transmission Line	
_	Building	
	Builtup Area	
	Private Parcel	
	Agricultural Land Reserve	
	Wildlife Habitat Area	
	Old Growth Management Area	
	(Legal)	
	Ungulate Winter Range	
	Municipality	
	Regional District	
	Wildlife Management Area (WMA)	
	Park/Protected Area	
	First Nations Reserve	
82G.010	BCGS Grid ID	
0A1SE	NTS Grid ID	
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CHZ	M HILL Project Number 665837	
KPs: Universal Pegasus International (UPI) 08-21-2014 (1017); Certified Corridor for Proposed Pipeline: CH2M 11-09-2015 (Revision 14); Mount Mulligan Compressor Footprint: FortiSeC 08-04-2015; Eagle Mauntain J. 2015; Certified Exercised Testing Control (1997) (2016) (2017) (		
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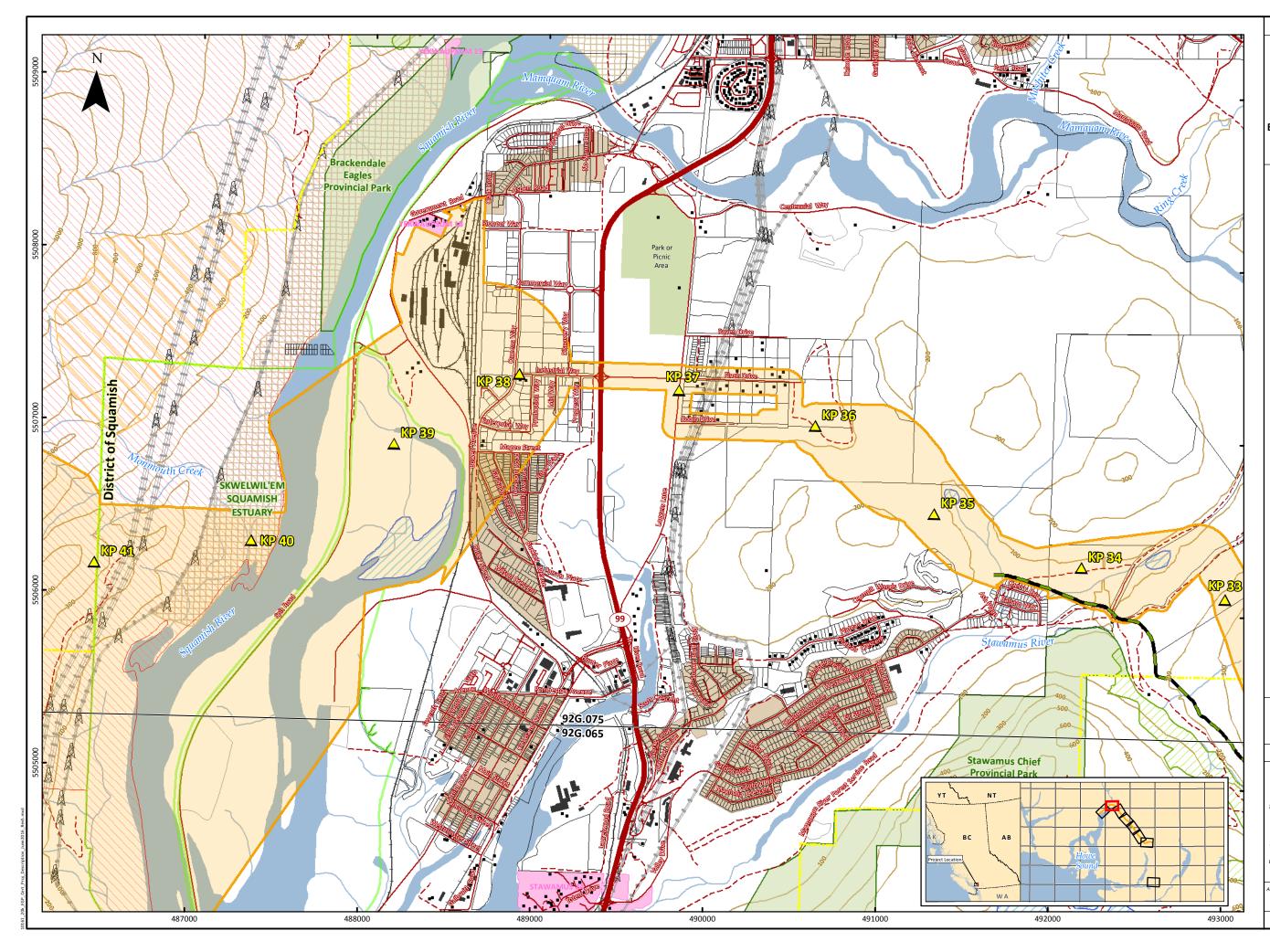


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#### MAPSHEET 5 OF 9

#### CERTIFIED PIPELINE CORRIDOR

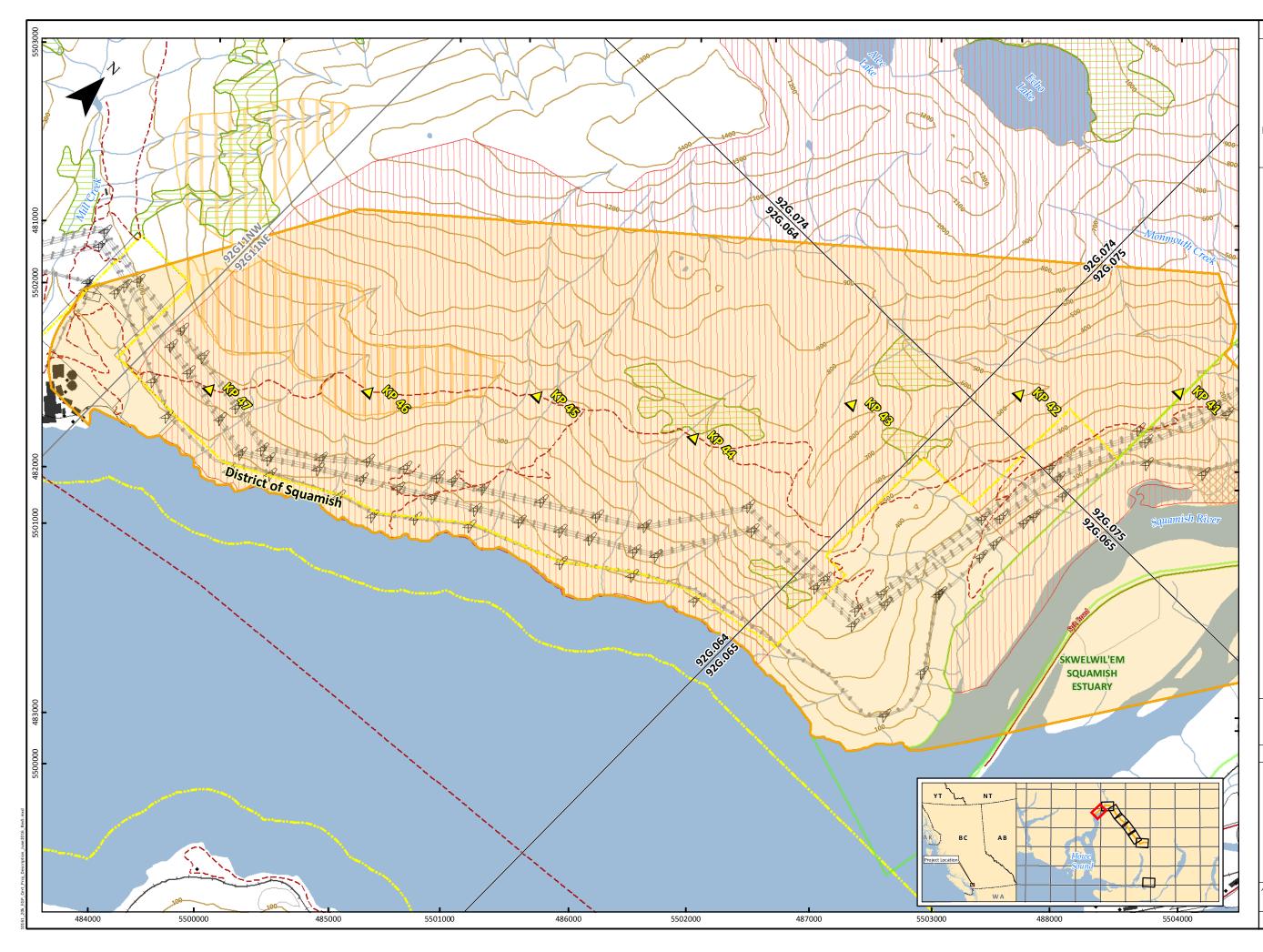
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	Certified Cor	npressor Station Area	
	Certified Elec Line Corridor	ctrical Transmission r	
	Existing NPS or Decomiss	10 to be Abandoned ioned	
99	Highway		
	Road		
	Resource Ro	ad	
<del></del>	Railway		
	Elevation Co	ntour (100 m)	
	Watercourse	2	
	Waterbody		
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A	Transmission	Tower	
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	Agricultural I	Land Reserve	
$\langle \rangle \rangle$	Wildlife Hab	oitat Area	
	Old Growth I (Legal)	Management Area	
	Ungulate W	inter Range	
	Municipality		
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	Wildlife Man	agement Area (WMA)	
	Park/Protect	ed Area	
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	UTM Zone 10 N	North. NAD 1983.	
KPs: Universal Pegasus International (UPI) 08-21-2014 (1017); Certified Corridor for Proposed Pipeline: CH2M 11-92-0215 (Revision 14); Mount Mulligan Compressor Station Area: CH2M 08-04-2015; Kagle Mourtain Certified Compressor Station: Solaris Management Consultants Inc. OS: 11 Transmission: DBS Energy in Co-04-2014; Ealte Mourtain Control and Construction Construction Construction Inces 3C Hydro 03-24-2014; Existing Pipeline: Fortis BC 2012; Roads: HS Inc. 2016, EC MFLNRO 2007; Parks, Wildlife Management Areas: BC MFLNRO 2008; Municipalities: BC MFLNRO 2007; Parks, Wildlife Management Areas: BC MFLNRO 2006; Municipalities: BC MFLNRO 2007; Parks, Wildlife Management Areas: BC MFLNRO 2006; Municipalities: BC MFLNRO 2007; Parks, Wildlife Management Areas: BC MFLNRO 2006; Municipalities: BC MFLNRO 2007; Parks, Wildlife Management Areas: BC MFLNRO 2006; Municipalities: BC MFLNRO 2007; Parks, Wildlife Management Areas: BC MFLNRO 2006; Municipalities: BC MFLNRO 2007; Parks, Wildlife Management Areas: BC MFLNRO 2006; Municipalities: BC MFLNRO 2007; Parks, Wildlife Management Areas: BC MFLNRO 2007; Marks Automal Topographic System (NTS) Grid 1.20k: TEAR Environmentai 2015; Mational Topographic System (NTS) Grid 1.20k: TEAR Environmentai Consultants 2009; Firtish Calumbia Geographic System (BCGS) Growth 1.20k; EC MILLON; Barks Alexandria, Base Mapping: Government of British Columbia TRIM 2005-2007.			
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#### **MAPSHEET 6 OF 9**

#### CERTIFIED PIPELINE CORRIDOR

Δ	Kilometre Po	ost	
	Certified Pip	eline Corridor	
	Certified Cor	npressor Station Area	
	Certified Elec Line Corridor	ctrical Transmission r	
	Existing NPS: or Decomissi	10 to be Abandoned ioned	
99	Highway		
	Road		
	Resource Ro	ad	
<u> </u>	Railway		
	Elevation Co	ntour (100 m)	
	Watercourse	2	
	Waterbody		
///	Wetland		
A	Transmission	Tower	
	Transmission	Line	
	Building		
	Builtup Area		
	Private Parce	21	
	Agricultural I	Land Reserve	
	Wildlife Hab	oitat Area	
	Old Growth I (Legal)	Management Area	
	Ungulate W	inter Range	
	Municipality		
[]	Regional Dist	trict	
	Wildlife Man	agement Area (WMA)	
	Park/Protect	ed Area	
	First Nations	Reserve	
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Transmission: DBS Energy inc 06-04-2014; Existing Transmission Lines: BC Hydro 03-24-2014; Existing Pipeline: Fortis BC 2012; Roads: HB: Nc. 2016, BC MFLNRO 2012; Hydrography: BC MFLNRO 2008; Municipalities: BC MFLNRO 2007; Parks, Wildlife Management Areas: BC MFLNRO 2008; Wildlife Habitat Areas, Unpulate Winter Range: BC MOE 2005; Old Growth Arease 2016; Actional Messersh, Habitat Areas, Commission Arease 2016; Streith Commission Commission 2015; National Topographic System (NTS) Grid 12:0k: TBA Environmental Consultants 2005; British Columbia Geographic System (BCS) Grid 12:0k: 8C MFLNRO 2003; Private Parcels: Integrated Cadastral Information Society (ICIS) 03-26-2014; Railways, Base Mapping: Covernment of British Columbia TRIM 2005-2007.			
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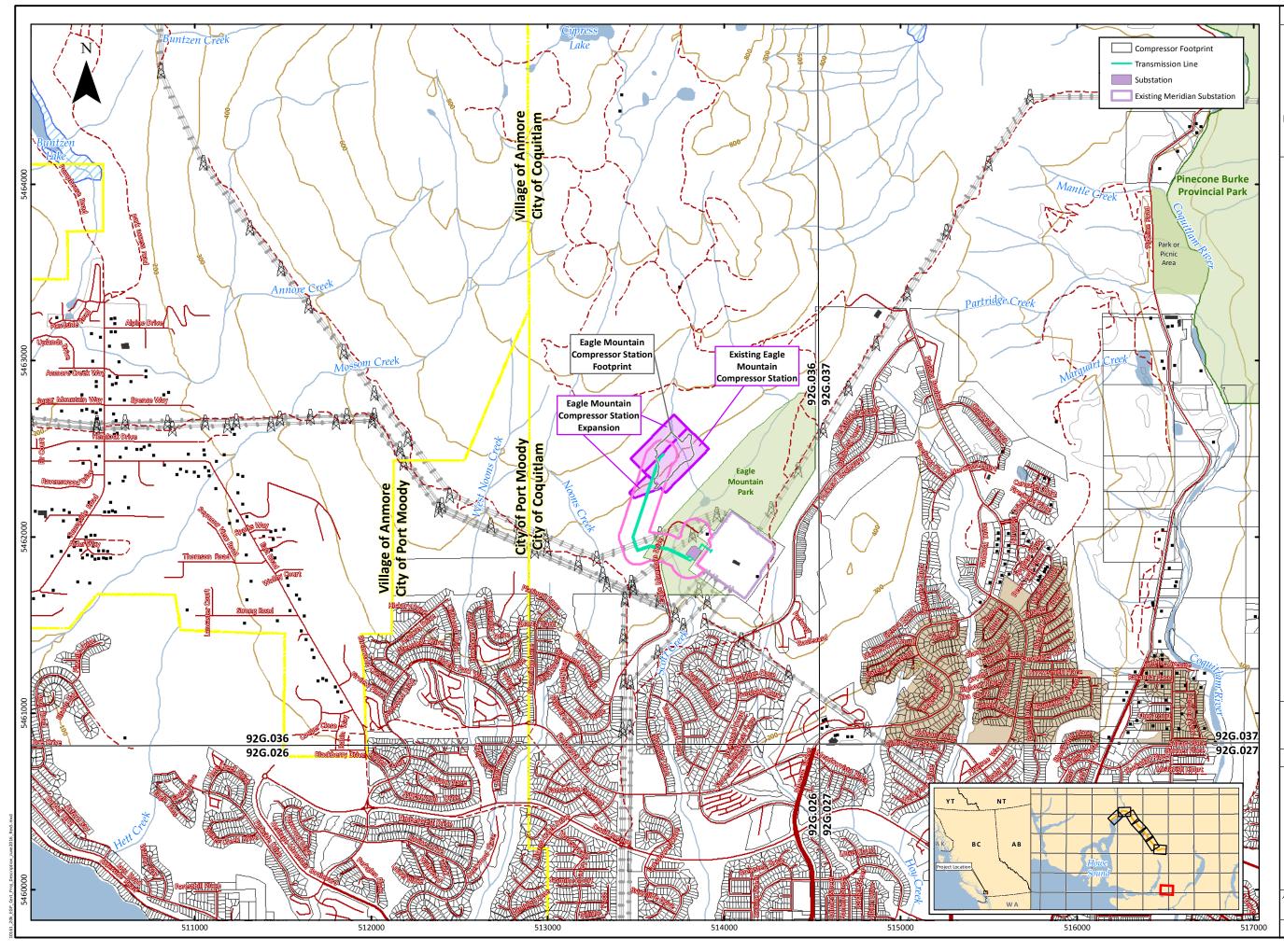
#### MAPSHEET 7 OF 9

#### CERTIFIED PIPELINE CORRIDOR

#### EAGLE MOUNTAIN-WOODFIBRE GAS PIPELINE PROJECT

Δ	Kilometre Post		
	Certified Pipeline Corridor		
	Certified Compressor Station Area		
	Certified Electrical Transmission Line Corridor		
	Existing NPS10 to be Abandoned or Decomissioned		
99	Highway		
	Road		
	Resource Road		
$\rightarrow \rightarrow \rightarrow$	Railway		
	Elevation Contour (100 m)		
	Watercourse		
	Waterbody		
///	Wetland		
A	Transmission Tower		
	Transmission Line		
-1	Building		
	Builtup Area		
	Private Parcel		
	Agricultural Land Reserve		
$\langle \rangle \rangle$	Wildlife Habitat Area		
777	Old Growth Management Area		
	(Legal)		
	Ungulate Winter Range		
	Municipality		
i	Regional District		
	Wildlife Management Area (WMA)		
	Park/Protected Area		
	First Nations Reserve		
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KPs: Universal Pegasus International (UPI) 08-21-2014 (1017); Certified Corridor for Proposed Pipeline: CH2M 11-09-2015 (Revision 14); Mount Mulligan Certified Compressor Station Area: CH1M 08-04-2015; Mount Certified Compressor Station Area: CH1M 08-04-2015; Mount Certified Compressor Station Science Management Consultants Inc. 05-11 2015; Certified Electrical Transmission Line Corridor CH2M 05-19-2015; VI Transmission: DB5 Energy Inc 06-04-2014; Existing Transmission Lines: BC Hydro 03-24-2014; Existing Pipeline: Fortis BC 2012; Roads: HBX 02008; Mildlife Habitat Areas. Ungulate Winter Kange: BC MOE 2005; Old Growth Granda 2015; Agricultural Land Resreex: Agricultural Land 2008; Wildlife Habitat Areas. Ungulate Winter Kange: BC MOE 2005; Old Growth Granda 2015; Astridie Masagement Areas: BC MELRO 2008; Wildlife Habitat Areas. Ungulate Winter Kange: BC MOE 2005; Old Growth Granda 2015; Britsh Columbia Geographic System (BCG5) Grid 12:0k: BC MFLNRO 2003; Private Parcels: Integrated Cadastral Information Society ((CIS) 03-26-2014; Railwark, Base Mapping; Government of British Columbia TRIM 2005-2007.			
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