

# **Enhanced Pipeline Graphics File Layout Document**

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**Alberta Energy Regulator**  
Enhanced Pipeline Graphics File

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# 1 Introduction

## 1.1 Overview

The Enhanced Pipeline Graphics File contains all oil and gas pipelines approved by the Alberta Energy Regulator. This data represents the best information available to the AER at the date of publication. Information on specific pipeline location should be obtained from the survey plans, owners, and field observations. This dataset excludes low pressure distribution lines. From October 1, 2016, pipelines with a “removal” status will be removed from the dataset if the AER receives a letter verifying the removal of the pipeline, otherwise the pipelines will be included in the dataset with the status of “removal.”

Pipeline installations associated with a pipeline licence are also included in this product as a point shapefile. A pipeline installation will be linked to a pipeline licence. There may be line segments associated with the pipeline installation licence or it may be a standalone installation on a licence.

## 1.2 Available Formats and Publications

- CSV
- Shapefile

Both publications are available daily through the [www.aer.ca](http://www.aer.ca) website at no charge.

## 1.3 Problems

If you have any questions about the enhanced pipeline shapefiles and CSV files, please contact [inquiries@er.ca](mailto:inquiries@er.ca).

#### 1.4 Confidentiality

All files and programs are processed to exclude confidential data. Data is made available once it has been released from confidential status.

#### 1.5 Disclaimer

The AER makes no representation, warranties or guarantees, expressed or implied, for the fitness of the data files with respect to intended use. The AER accepts no responsibility whatsoever for any inaccuracy, errors, or omissions in the data files. The AER shall not be responsible for any costs incurred by a company for the conversion, installation, or improvement of the data files. The AER does not guarantee the continuing availability of any data or the consistency of the transfer record format.

## 2 Pipelines

The table below lists the attributes and the attributes descriptions found in the pipelines shapefile.

Attribute	Description	
<b>Licence_Number</b>	The pipeline licence number	
<b>NEB_Pipeline_Indicator</b>	Indicates if pipeline is property of the National Energy Board (NEB-80000 series).	
<b>Segment_Line_Number</b>	A number identifying a pipeline segment with the same engineering specifications for a given licence.	
<b>Licence_Line_Number</b>	A concatenation of Licence_Number and Segment_Line_Number to make a specific line segment unique.	
<b>Pipeline_Licence_Segment_Id</b>	A unique identifier for a particular pipeline segment. This unique surrogate identifier is required to properly support licence transfers since the segment licence number and line number can change between licences.	
<b>Company_Name</b>	Name of the business associate, usually the legal name. A business associate's name can change over time.	
<b>BA_CODE</b>	A business associate code obtained from Petrinex (Canada's Petroleum Information Network) that identifies licensees, agents or any company that does business with the AER (e.g. drilling companies).	
<b>Pipeline_Specification_Id</b>	Identifies a set of pipeline specifications that apply to one or more licensed pipeline segments.	
<b>Segment_Length</b>	Length of the segment in kilometers (km).	
<b>Segment_Status</b>	The operating status of the line.	
	Abandoned	The permanent deactivation of a pipeline done in a manner that ensures the pipeline is left in a permanently safe and secure condition.
	Discontinued	The temporary deactivation of a pipeline or part of a pipeline.

	Not Constructed	The pipeline was not constructed prior to expiry of the permit. If the licensee wants to construct after permit expiry they must reapply for approval.
	Operating	The pipeline segment is approved, constructed, licensed and carrying substance.
	Permitted	The pipeline has been approved for construction, and may or may not be constructed and/or operating. Permitted status stays as such for one year after approval for construction has been given. Construction must begin within that time frame.
	Removed	Pipelines to be removed or partially removed, including crossings of roads, railways, and watercourses.
<b>Segment_From_Facility</b>	The type of facility attached to the start of the pipeline segment.	
<b>From_Location</b>	A sequential number that uniquely identifies the legal subdivision where a pipeline segment's starting point is located.	
<b>Segment_to_Facility</b>	The type of facility attached to the end of a pipeline segment.	
<b>To_Location</b>	A sequential number that uniquely identifies the legal subdivision where a pipeline segment's end point is located.	
<b>H2S_Content</b>	Hydrogen sulphide (H <sub>2</sub> S) content of a substance.	
<b>Pipe_Technical_Standard</b>	The technical standard to which a pipeline is or will be constructed.	
<b>Pipe_Outside_Diameter</b>	Outside diameter of a pipeline in millimetres.	
<b>Pipe_Wall_Thickness</b>	Wall thickness of a pipe in millimetres.	
<b>Pipe_Type</b>	The CSA, API or ASTM standards for pipe manufacture. A defined set of values do not exist for this value. A reference table R_Pipe_Type is close, but not complete. An FK relationship did	



	not work for the business and was removed.
<b>Pipe_Grade</b>	The pipe grade, alloy or compound specification. A defined set of values do not exist for this value. A reference table R_Pipe_Grade is close, but not complete. An FK relationship did not work for the business and was removed.
<b>Pipe_Material</b>	Material from which the pipeline is manufactured.
<b>Pipe_Max_Operating_Pressure</b>	Maximum operating pressure of the pipe.
<b>Pipe_Stress_Level</b>	Stress level of a pipe expressed as percent % of yield strength.
<b>Pipe_Joint_Method</b>	Method for joining lengths of pipe.
<b>Pipe_Internal_Protection</b>	Method of internal protection.
<b>Segment_Crossing_Type</b>	Indicates the type of surface or water crossing that a segment required, if any. Crossings are often very sensitive environmentally.
<b>Field_Centre</b>	<p>Name of field center. An AER field centre is an AER centre that is located in an area of the province and is staffed to do the following for that area of the province:</p> <ul style="list-style-type: none"> <li>- provide 24 hour response to emergency, release, and complaint incidents;</li> <li>- inspect operations at wells, pipelines, and facilities in that area to ensure compliance with acts and regulations;</li> <li>- participate in public-industry liaison committees and facilitate the resolution of landowner-industry conflicts; and</li> <li>- answer information requests from the public.</li> </ul>
<b>Substance</b>	A substance that is used by or results from petroleum and natural gas operations.
<b>Original_Licence_Number</b>	The original licence number for the segment. This is used to track the original licence where a segment has been transferred to another licence.

<b>Original_Pipe_Specification_Id</b>	The original segment specification ID. This is used to track the original licence data where a segment has been transferred to another licence.	
<b>Original_Segment_Line_Number</b>	The original segment line number for the segment. This is used to track the original licence where a segment has been transferred to another licence.	
<b>Licence_Approval_date</b>	The original date the segment was licensed. This is used to track the original licence where a segment has been transferred to another licence.	
<b>Original_Licence_Issue_Date</b>	The original date the installation was licensed. This is used to track the original licence where an installation is transferred to another licence.	
<b>Permit_Approval_Date</b>	Date on which construction approval was granted.	
<b>Permit_Expiry_Date</b>	The date that the segment or installation will convert from "Permitted" status to "Operating" status, normally one year from the permit date. Currently only used for new construction, may be used for amendment applications at some future date.	
<b>Last_Occurance_Year</b>	Year of last construction, test or status change.	
<b>Above_Ground_Pipeline</b>	Indicates whether pipeline is above ground. Surface line crossing indicates an above ground pipeline.	
<b>Geometry_Source</b>	As-Planned	Pipeline drawings created during the planning stage.
	Constructed	Construction drawings generated in support of pipeline construction.
	As-Built	Pipeline drawings depicting the actual location of the pipeline infrastructure post construction.
	ROW Centreline	The location of the pipeline as defined by the

		centre of the right-of-way (ROW).
	Mapping	AER manipulated spatial data in support of base plan products.
<b>Shape_Length</b>	Length of feature in internal units.	

### 3 Pipeline Installations

The table below lists the attributes and the attributes descriptions found in the pipeline installations shapefile.

Attribute	Description	
<b>Licence_Installation_Number</b>	Licence installation number	
<b>Pipeline_Licence_Number</b>	The pipeline licence number	
<b>Pipeline_Installation_ID</b>	A number identifying an installation that is part of a pipeline and is covered by the pipeline licence.	
<b>Installation_Type</b>	<p>The type of pipeline installation. Possible types:</p> <ul style="list-style-type: none"> <li>• CS - Compressor station</li> <li>• PS - Pump station</li> <li>• RS - Regulator station,</li> <li>• MS - Meter station</li> <li>• MR - Meter/Regulation station</li> <li>• LH - Line heater</li> <li>• LR - Oil terminal</li> </ul>	
<b>BA_ID</b>	Business Associate identification code.	
<b>Licence_Approval_Date</b>	Date on which operating approval was granted.	
<b>Installation_Power</b>	Power rating of the pipeline installation. Only valid for pumping stations.	
<b>Prime_Mover</b>	The power source at a pipeline installation.	
<b>Geometry_Source</b>	The source of the geometry for the feature.	
	As-Planned	Pipeline drawings created during the planning stage
	Constructed	Construction drawing generated in support of pipeline construction
	As-Built	Pipeline drawings depicting the actual location of the pipeline infrastructure post construction
	ROW	Location of the pipeline as defined by the centre of the

	Centreline	right-of-way
	Mapping	AER manipulated spatial data in support of base plan products.
<b>Installation_Location</b>	A sequential number that uniquely identifies the legal subdivision where a pipeline installation is located.	
<b>Pipeline_Installation_Status</b>	The operating status of the installations.	
	Abandoned	The permanent deactivation of a pipeline installations done in a manner that ensures the Installation is left in a permanently safe and secure condition
	Discontinued	The temporary deactivation of a pipeline installation.
	Not Constructed	The pipeline installation was not constructed prior to expiry of the permit. If the licensee wants to construct after permit expiry they must reapply for approval.
	Operating	The pipeline installation is approved, constructed, licensed and carrying substance.
	Permitted	The pipeline installation has been approved for construction, and may or may not be constructed and/or operating. Permitted status stays as such for one year after approval for construction has been given. Construction must begin within that time frame.
	Removed	Pipelines installations to be removed or partially removed, including crossings of roads, railways, and watercourses.
<b>Substance</b>	A substance that is used by or results from petroleum and natural gas operations.	
<b>Original_Installation_Number</b>	The original installation number for the installation. This is used to track the original licence where an installation has been transferred to another licence.	
<b>Field_Centre</b>	Name of field center. An AER field centre is an AER centre that is located in an area of the province and is staffed to do the following for	

that area of the province:

- provide 24 hour response to emergency, release, and complaint incidents;
- inspect operations at wells, pipelines, and facilities in that area to ensure compliance with acts and regulations;
- participate in public-industry liaison committees and facilitate the resolution of landowner-industry conflicts; and
- answer information requests from the public.