Import Digital Spatial Data into OneStop

» Intended User: Pipeline Licence or Amendments Applicants

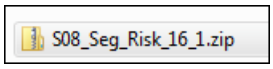
Overview

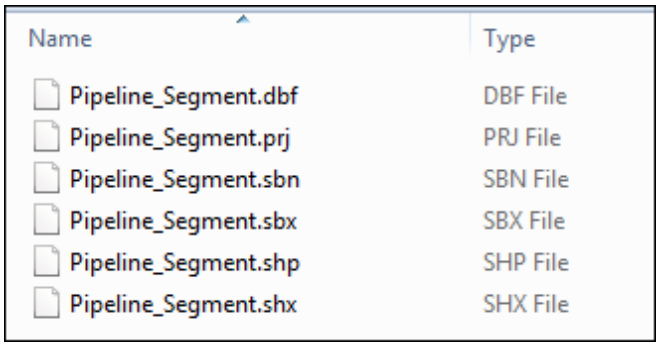
To apply for a pipeline or pipeline installation licence, applicants ***must*** upload the proposed pipeline location as a shapefile.

1. Digital pipeline spatial data represents the location of the line within the sketched or surveyed right-of-way.
2. The pipeline line data represents the start and end points, which are not just from lease to lease, but the exact start and end points of the pipeline applied for in the application.
3. The pipeline line data should be digitized in the direction of flow of material in the pipeline.
4. The pipeline line spatial data should tie in to the proper pipeline lines that have also been submitted as digital spatial data.
5. Digital pipeline point spatial data is to represent the location of the installation as a point.

Digital Spatial Data Files

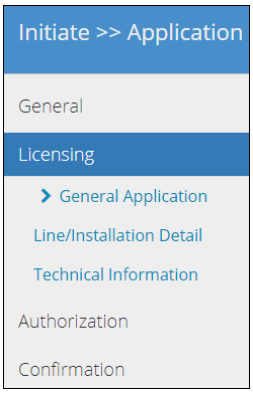
Digital spatial data is uploaded as a shapefile. This file contains pipeline location data and often consists of several files loaded as a zip file.



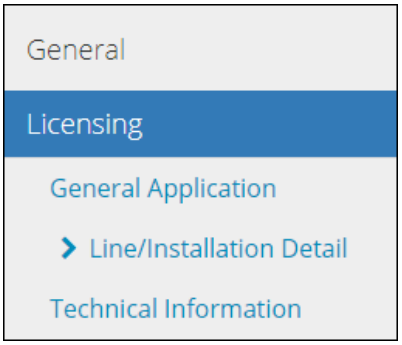


Upload Digital Spatial Data (shapefile)

1. Log into OneStop.
2. From the dashboard, use the search criteria to find the required application.
3. Click Search.
4. From the left menu bar, select Licensing.



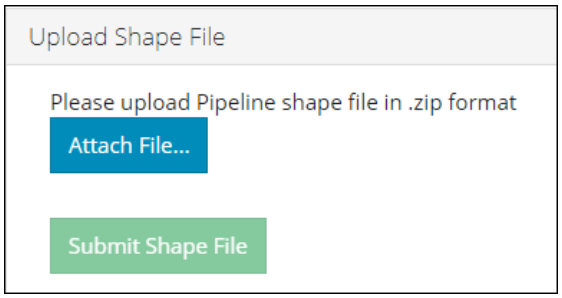
5. Select Line/Installation Detail.



6. Select Attach File...

   Shapefiles ***must*** be loaded ***before*** loading .csv files.

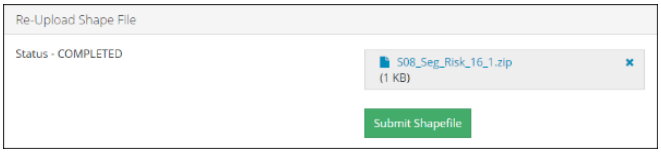
7. The upload Shape file segment displays.



8. Navigate to the location of the required file.

9. Double-click to select and insert the file.

10. The shapefile displays in OneStop.

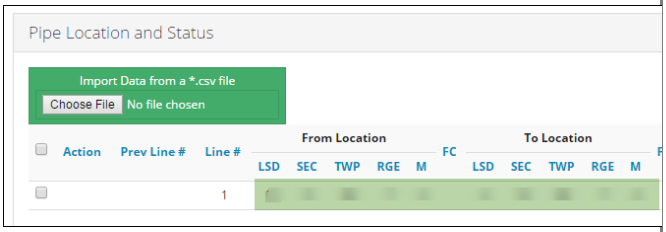


11. Click Submit Shapefile.

12. OneStop processes the file. This takes 10–30 seconds, depending the file size.

13. While the file is being processed, you can continue with the application.

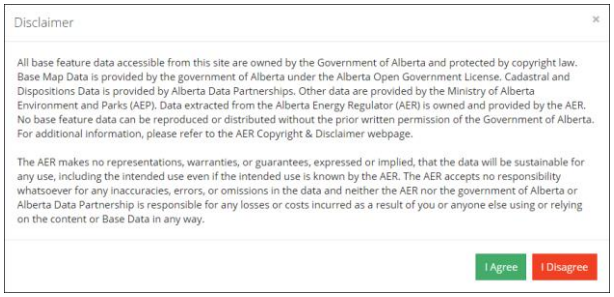
14. Once the file is loaded into **Map Viewer**, the information displays on the Pipe Location and Status row at the bottom of this window.



15. Move to the top of the window again.

16. Click View on Map.

17. The Base Map Data Disclaimer displays.

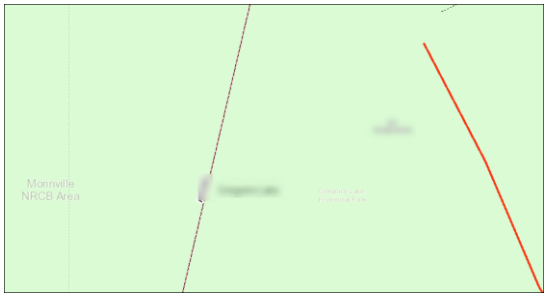


18. Click I Agree.

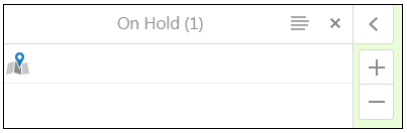
When you click I Disagree, the file is not loaded into **Map Viewer**, and the application is not complete.

19. The AER logo displays as **Map Viewer** opens.

20. Once loaded, the shapefile area displays.



21. Use the **Map Viewer** tools to zoom in or out as required.



Important: When you need to change a shapefile that is currently attached to a licence, upload the ***new*** file required.

OneStop overwrites the old file and enters the new file into **Map Viewer**.

Remove Rows

1. Click the checkbox at the beginning of the rows to be deleted. (You can delete more than one row at a time.)

	ID	OD (mm)	WT (mm)	Material	Type	Grade
☑	1	10.20	11.20	Aluminum	6063	000A

2. Click Remove Selected.

3. The row is removed from the window and the application.

4. Click Save.

Enter Pipeline Data Manually

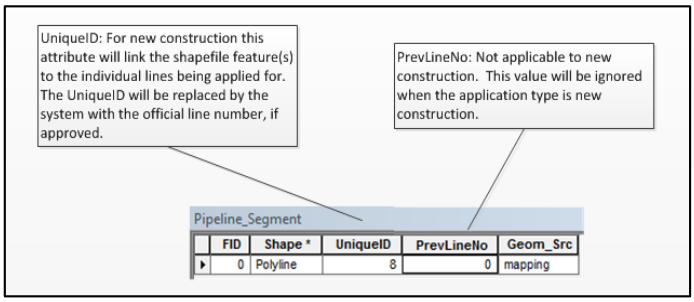
Data for the **Pipe Specifications** and **Pipe Locations** sections may also be entered manually. For further detail on manual data entry, please refer to the *Manual Entry of Pipeline Data* quick reference guide.

Pipeline – New Construction

Pipeline Segment Template Fields

On New Construction applications, the Pipeline Segment **PrevLineNo** field is required.

- Value must be input as zero.
- The filed may ***not*** be left blank.



Amendments to Pipeline – Split Lines on Shapefiles

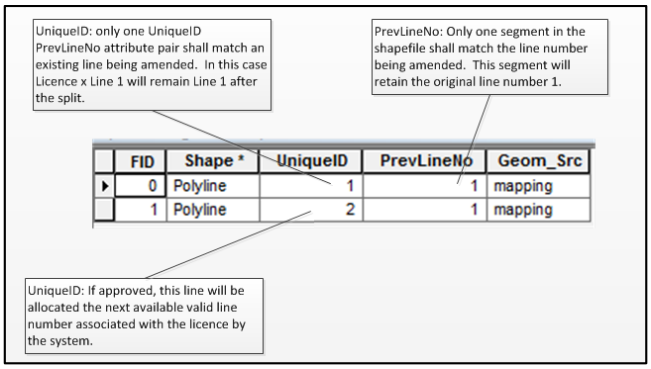
Pipeline Segment Template Fields

Important

When pipelines are amended and splits are added to the line, be careful when creating the new shapefile, to ensure one of the new segments is tied to the previous line number.

Also be careful to properly describe the line used to maintain the existing line number.

The **UniqueID** and **PrevLineNo** values that match the existing line number represent the tie to that existing line number. Only one UniqueID should match the PrevLineNo field.



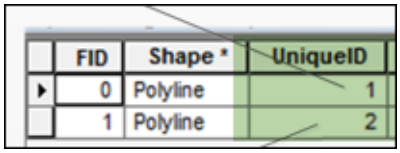
Operators or survey companies create the **UniqueID** field themselves. It could be any numerical sequence you like, while it is in Draft form.

The UniqueID of the line equates to the technical information provided in the application that describes that same line.

For instance:

Line 1, Segment 1 ties the split to the original pipeline segment 1, as these numbers are the same.

Line 1, the Segment 2 Unique ID could be named 2, 100, or 456.



Important

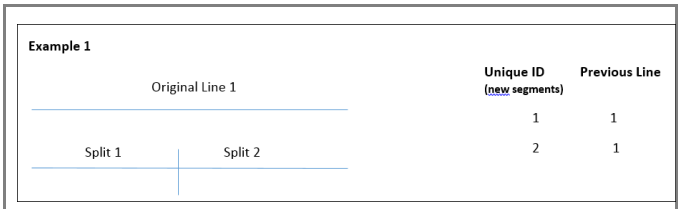
The only requirement is that the **new segment has a unique ID in the shapefile**. The **UniqueID** field relates to the technical information included in the application that describes this line segment.

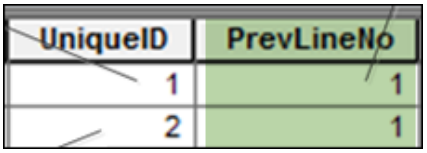
When the application is approved, OneStop may resequence the line numbers automatically.

Example 1

The first split on the line maintains the previous line number 1 in the shapefile submission, as these numbers are the same.

The second line in the shapefile submission takes on a unique identifier number (2) but is tied to the original line through the **Previous Line #** field box (still # 1).





Example 2

The first split on the line **reuses** the previous line number in the shapefile.

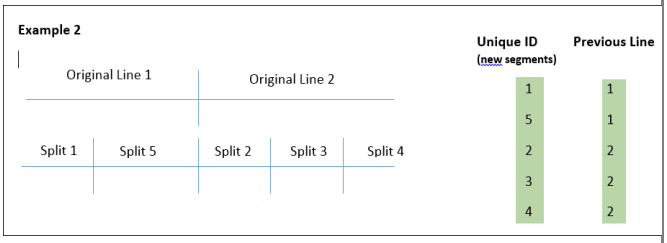
The added segments **each** take on a unique identifier number. These unique identifier numbers are created by the user.

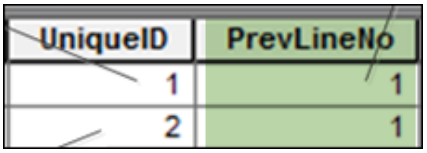
Each segment is tied to the original line through the **Previous Line No** field box.

When entering numeric values in the **UniqueID** field, users may use any numerical structure they wish, and sequence each line split as they choose. Segment order is ***not*** validated.

The tie to the original line ***is*** validated by the matching **UniqueID PrevLineNo** combinations.

In the example below, the lines described by **UniqueID 1** and **PrevLineNo 1** and by **UniqueID 2** and **PrevLineNo 2** maintain segment line numbers 1 and 2, respectively.





Important

Both **PrevLineNo**/**PrevInstID** and **UniqueID** **must** be positive integers.

Important

The splitting of spatial data pipelines should result in line segments that are digitized in the proper direction and in the proper sequence, so the results portray the correct "from" and "to" locations.

When the source of the spatial data line is from the AER Provincial shapefile, the digitized direction and sequence of multipart polylines may be incorrect.

We suggest operators ensure that all pipeline line splits result in the correct representation of the amendment being applied for.

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OneStop Automated Shapefile Validations

For all shapefiles submitted, OneStop automatically checks to confirm that:

a) the shapefile features fall within the geographic extents of the **Province of Alberta**

b) all **attributes** described in this quick reference guide (QRG), including the order of the attributes, are included in the shapefile submission

c) all **mandatory fields** as described in this QRG are included in the shapefile submission

d) the shapefile **Coordinate system** has the same parameters as described later in this QRG

e) **Amendment** applications have one **and only one UniqueID** field and only one **PrevLineNo** field that match the line number of the pipeline to be amended. The **UniqueID** and **PrevLineNo** fields that match describe the line that maintains the original line number.

Glossary of Terms

Key Term	Description
Shapefiles	A shapefile is an ESRI vector data storage format for storing the location, shape, and attributes of geographic features. It is stored as a set of related files and contains one feature class. Shapefiles contain large features, with associated data, that are used in GIS desktop applications, such as ArcMap. When you have a small amount of data in a shapefile (fewer than 1000 features), create it as a .zip file containing the .shp, .shx, .dbf, and .prj files that are updated and shown in a map viewer.
.csv	A .csv file extension means comma-separated values. These files are often created in Excel and uploaded for use in other applications. It is a text file that can be edited using any text editor. The fields of data in each row of the file are delimited (separated) by a comma. Individual rows are separated by a new line (character used to represent the end of a line of text). .csv files can be used to create numerous rows of data that can then be uploaded at one time.
ROW centre line	Right-of-Way Indicates that the line was created using the ROW centre. When the centre location is used in any of the other phases, those descriptors should be used.
as-planned	Indicates that the data was created during the planning stage and does not represent either the construction or as-built information.
construction	Indicates that the information was created to support the construction of the asset. It should be more accurate than the planning information.
as-built	Indicates that the spatial information reflects what was actually built. This should be more accurate than the previous two planning stages.
line locate	Indicates the line location of the existing buried infrastructure using geophysical methods (ground penetrating radar, electromagnetic, etc.). The line location technique should apply to the entire length of the pipeline applied for in the licence and to the line number being amended.
mapping	Represents the legacy AER lines created and maintained by the AER for mapping purposes. This value should be used when the other values do not apply ***and*** when the location data was sourced from the AER.

Pipeline Spatial Data

The AER requires that all spatial data submissions be referenced to the NAD83 datum and projected to the following:

NAD 1983 10TM AEP Forest	NAD 1983 CSRS 10TM AEP Forest
NAD_1983_10TM_AEP_Forest	NAD_1983_CSRS_10TM_AEP_Forest
WKID: 3400 Authority: EPSG	WKID: 3402 Authority: EPSG
Projection: Transverse Mercator	Projection: Transverse Mercator
False Easting: 500000.0	False Easting: 500000.0
False Northing: 0.0	False Northing: 0.0
Central Meridian: -115.0	Central Meridian: -115.0
Scale Factor: 0.9992	Scale Factor: 0.9992
Latitude Of Origin: 0.0	Latitude Of Origin: 0.0
Linear Unit: Meter (1.0)	Linear Unit: Meter (1.0)
Geographic Coordinate System: GCS_North_American_1983	Geographic Coordinate System: GCS_North_American_1983_CSRS
Angular Unit: Degree (0.0174532925199433)	Angular Unit: Degree (0.0174532925199433)
Prime Meridian: Greenwich (0.0)	Prime Meridian: Greenwich (0.0)
Datum: D_North_American_1983	Datum: D_North_American_1983_CSRS
Spheroid: GRS_1980	Spheroid: GRS_1980
Semi-major Axis: 6378137.0	Semi-major Axis: 6378137.0
Semi-minor Axis: 6356752.314140356	Semi-minor Axis: 6356752.314140356
Inverse Flattening: 298.257222101	Inverse Flattening: 298.257222101

Pipeline Line Data

Feature Name: Pipeline Segment

Description: Information describing the pipeline line (pipeline centreline, not right-of-way centre) location.

Geometry: polyline

Pipeline Segment Attributes:

Field name	Type	Allowable values	Value description	Mandatory or optional	Definition
FID	Object ID	System Defined		Mandatory	Unique identifier
Shape	Geometry	System Defined		Mandatory	The spatial feature
UniqueID	Long Integer			Mandatory	A unique number to represent the pipeline segment
PrevLineNo	Long Integer			Mandatory	Previous Pipeline segment line number; this is for application amendments. This column **must be set to zero** for new construction...
Geom_Src	Text	as-planned, construction, as-built, ROW centreline, mapping		Mandatory	Indicates the source drawing of the data, or how the data was generated. "Mapping" refers to the legacy AER mapping standards.

Pipeline line topology and business rules

1. Must not self-intersect
2. Must not self-overlap
3. Must not overlap another pipe centreline
4. All pipelines must be digitized in the direction of the substance flow through the pipeline

Packaging

Pipeline line data (i.e., pipeline segments) shapefiles must be provided and named as described below:

1. Pipeline_Segment.shp (required)
2. Pipeline_Segment.shx (required)
3. Pipeline_Segment.dbf (required)
4. Pipeline_Segment.prj (required and the spatial reference must be NAD 1983 10TM AEP Forest or NAD 1983 CSRS 10TM AEP Forest)
5. Pipeline_Segment.sbn (optional)
6. Pipeline_Segment.sbx (optional)
7. Pipeline_Segment.shp.xml (optional)

Important:

Please submit separate zip files for pipeline segments and pipeline installations.

A combined submission of Pipeline and Pipeline _Installation shapefiles as one zip file will ***not*** be handled by the system. Only one of them is processed. Users must submit them separately.

Pipeline Installation data

Feature Name: Pipeline Installation

Description: Information describing the pipeline installation location

Geometry: point

Pipeline Installation Attributes:

Field name	Type	Allowable values	Value description	Mandatory or optional	Definition
FID	Object ID	System Defined		Mandatory	Unique identifier
Shape	Geometry	System Defined		Mandatory	The spatial feature
UniqueID	Long Integer			Mandatory	A unique number to represent the pipeline installation
PrevInstID	Long Integer			Mandatory	Previous pipeline installation ID; This is for application amendments. This column **must be set to zero** for new - construction
Geom_Src	Text	as-planned, construction, as-built, ROW centreline, mapping		Mandatory	Indicates the source drawing of the data, or how the data was generated. "Mapping" refers to the legacy AER mapping standards.

Pipeline Installation topology and business rules

1. Must not be multi-part point geometry

Packaging

Pipeline installation point shapefiles must be provided and named as described below:

1. Pipeline_Installation.shp (required)
2. Pipeline_ Installation.shx (required)
3. Pipeline_ Installation.dbf (required)
4. Pipeline_ Installation.prj (required)
   The spatial reference must be NAD 1983 10TM AEP Forest or NAD 1983 CSRS 10TM AEP Forest
5. Pipeline_ Installation.sbn (optional)
6. Pipeline_ Installation.sbx (optional);Pipeline_ Installation.shp.xml (optional)

Important:

Please submit separate zip files for pipeline segments and pipeline installations.

A combined submission of Pipeline and Pipeline _Installation shapefiles as one zip file will ***not*** be handled by the system. Only one of them is processed.

Users must submit them separately.