

NavView User Guide – 09 Pipelines

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Table of Contents

Pip	belir	nes	3
9.1	0	verview	3
9.2	Pi	ipelines Window	3
9.3	Ac	dd a Pipeline	. 11
9.3	3.1	Add a Pipeline from the Pipelines Window	. 11
9.3	3.2	Add a Pipeline from the Map View	. 11
9.4	Cr	reate a Route Alignment from a Pipeline	13
9.5	Re	emove a Pipeline	13
9.6	Ec	dit a Pipeline	14
9.6	6.1	Edit a Pipeline from the Pipelines Window	14
9.6	6.2	Edit a Pipeline from the Map View	15
9.7	E۶	xport Pipelines	16
9.8	Im	nport Pipelines	17
	 9.1 9.2 9.3 9.3 9.4 9.5 9.6 9.6 9.6 9.7 	 9.1 O 9.2 P 9.3 A 9.3.1 9.3.2 9.4 C 9.5 R 9.6 E 9.6.1 9.6.2 9.7 E 	9.1 Overview



9. Pipelines

NavView uses several supporting files including waypoints, survey line, pipelines. This section covers the creation and editing of pipelines.

9.1 Overview

A pipeline in NavView represents the design route of a real-world pipeline or cable. This can be displayed in Map and 3D Map views, selected for a Point to Route Guidance and tracked via the Layback Connection for pipe laying. NavView maintains a local Pipelines.xml file in the Local\[Station]\Working folder. Pipelines are also maintained in the NavView database used for distributed systems (see Network Services section).

Roles	Privileges
Not Logged In	Cannot add, load, import, edit or remove pipelines
User	Can add, load, import, edit pipelines but cannot remove pipelines
Online/Supervisor/ Administrator	Can add, load, import, edit and remove pipelines

If Rolls and Privileges are enabled, the following are what is allowed for each role:

9.2 Pipelines Window

The Pipelines window is opened by clicking on the Pipelines button in the Files section of the Home Ribbon Tab (see Figure 9-1) or project Explorer view (see Figure 9-2). This window provides access to all Pipelines for creating and editing (see Figure 9-3)

Pipelines	Reports	Project Fo
∕ <mark>⊅ Surv</mark> e Pipelin	es Configura	tión ^{ut}
💕 Waypoints		License
Files	Reports	Genera

FIGURE 9-1 PIPELINES - HOME RIBBON TAB

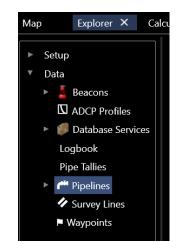


FIGURE 9-2 PIPELINES - PROJECT EXPLORER VIEW



Pipelines			-	
	Selected Pipeline			
€ ● ∰ ৳ ₽	Pipeline Graphic	s Graphics 3D		
Name PL 1	Name:	PL 1		
	Initial station	0.00 ftUS		
	Has overage			
	Generate profile	Interval: 10.00 m		
	Nodes Route Ir	nformation		
	• • • 1			
	Name	Position	Radius	
	0	E 2,069,628.27 ftUS, N 9,856,972.01 ftUS		
	1	E 2,086,336.65 ftUS, N 9,855,634.20 ftUS	20,000.00	ftUS
	2	E 2,109,022.47 ftUS, N 9,840,491.34 ftUS		
		ОК	Cancel	Apply

FIGURE 9-3 PIPELINES - MANAGEMENT WINDOW

The Pipelines management window (shown in Figure 9-3) consists of the following elements:

1. **Pipeline List**

This lists the pipelines that currently loaded in NavView.

2. Pipelines Toolbar 🕒 🗈 🗄

The pipelines toolbar provides the means to manipulate the pipelines list as a whole, but not the individual settings of each pipeline.



Click to add a pipeline

Click to remove the selected pipeline. A prompt will appear asking for confirmation before deletion of the pipeline

Click to create a copy of the selected pipeline. The new pipeline will have the same name with (Copy) appended

Note: Overage loops are not copied

Click to create alignment route from multiple segments in the selected pipeline

E Click to export the selected pipeline to a file

Click to import a pipeline from a text file

3. Selected Pipeline

This displays the details of the selected pipeline for review and editing.

Pipeline Tab

- **Name:** Name assigned to the pipeline
- Initial Station: Offset applied to the stationing. For instance, if the stationing starts at an arbitrary point after the start of the route which needs to be tracked, this feature allows correct stationing in NavView



- Has Overage: Allows overages to be configured and added to pipeline
- **Generate Profile:** Generates a 3D model of the pipeline in the 3D map
- Interval: Spacing along pipeline the DTM is queried to generate the profile

Nodes Tab

Allows for editing of the nodes in the pipeline. This view consists of the following elements:

- **Name:** Name of the node. The name is displayed on the map for easy interpretation. This is optional
- **Position:** Position of the node can be edited by clicking in this column
- **Radius:** Radius of the node. Entering a radius greater than 0 makes the node into an intersection point, for which a curve will be calculated along with a Point on Curve (PC) at the start of the curve and a Point on Tangent (PT) at the end of the curve

• Nodes Toolbar

Used for adding, removing, and sorting nodes

- Adds a new node to the bottom of the nodes list
- Inserts a new node above the currently selected node
- Removes the currently selected node

Moves the currently selected node up in the list

Moves the currently selected node down in the list

Reverses the Node order

Validate the route, checks for any errors in the route data

Route Information Tab

The Route Information tab is shown below in Figure 9-4. This provides details on the entire route. If a radius is entered for a node in the Nodes tab, NavView will consider that point an intersection point, and will generate a curve segment which consists of a beginning of curve and tangent point, based on the specified radius.



Pipelines							_	-	
Pipelines Pipelines PL 1	Name: Initial station Has overage Generate p	Fraphics Grap PL 1 0.00 ftUS	10.00 m						
	Name 0	Easting (ftUS) 2,069,628.27	Northing (ftUS) 9,856,972.01	Easting (ftUS)	Northing (ftUS)	Radius (ftUS	STA 0+00.0		
	PC-1 1 PT-1 2	2,081,153.80 2,090,661.18 2,109,022.47	9,856,049.18 9,852,747.56 9,840,491.34	2,086,336.65	9,855,634.20	20,000.00	STA 115+62.4 STA 217+36.1 STA 438+12.1		
						ОК	Cancel Ap	ply	

FIGURE 9-4 PIPELINES - ROUTE INFORMATION TAB

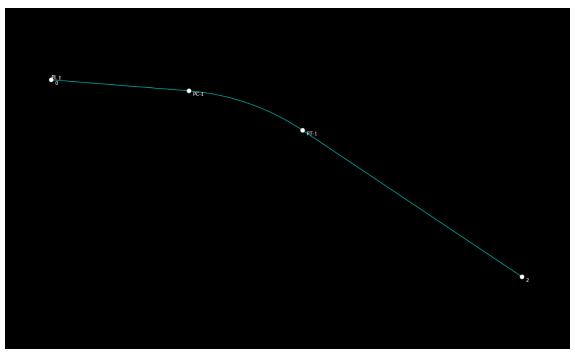


FIGURE 9-5 PIPELINES - CURVE ON MAP

Figure 9-5 shows a curve represented on a map display. Note that the curve point (PC) and the tangent point (PT) take the name of the intersection point node after a dash. In this example the intersection point is called "1", so "PC-1" and "PT-1" are generated.

The curve points are automatically generated using the intersection point and the radius and cannot be edited.



Node Details

Clicking on a node in the Route information tab opens a node details window. The node details window is based on the type and location of the node that is selected and provides information about the segments connected to that node. The two types of segment details views are shown below in Figure 9-6

0

		•	- 🗆 ×
		- Curve	
		Name	CP
		Easting	2,079,557.54 ftU
		Latitude	9,836,112.98 поз
		Longitude	W 91° 38' 59.321
			W 91 50 59.521
		[⊿] Curve	
2	- 🗆 X	L	10,173.68 ftUS
At start of ————		R	
✓ From		Т	5,199.44 ftUS
		Δ	29° 08' 43.5612
Name	0	[⊿] PC	
Easting	2,069,628.27 ftUS	Name	
Northing	9,856,972.01 ftUS	Easting	
Latitude	N 27° 09' 27.355"	Northing	9,856,049.18 ftU
		Latitude	N 27° 09' 16.998
Longitude	W 91° 40' 46.774"	Longitude	W 91° 38' 39.276
Station	STA 0+00.0	Station	STA 115+62.4
⊿ Grid		≓ PI	
		Name	
Bearing	94° 34' 40.0826	Easting	2,086,336.65 ftU
Distance	11,562.41 ftUS	Northing	9,855,634.20 ftU
⊿ To		Latitude	N 27° 09' 12.330
		Longitude	W 91° 37' 41.944
Name	PC-1	.⊿ PT	
Easting	2,081,153.80 ftUS	Name	
Northing	9,856,049.18 ftUS	Easting	
Latitude	N 27° 09' 16.998"	Northing	9,852,747.56 ftU
		Latitude	N 27° 08' 43.270
Longitude	W 91° 38' 39.276"	Longitude	W 91° 36' 54.419
Station	STA 115+62.4	Station	STA 217+36.1

FIGURE 9-6 PIPELINES - LINE AND CURVE SEGMENT DETAILS

Overages Tab

The Overages Tab (see Figure 9-7) is available when the "Has Overages" has been checked. This view allows overages to be configured and added to route. This view consists of the following:



Nodes	Route Information Ove	erages	Overage Route Information
⊕ ■ ■	Name:	Overag	e
Overage	Description:		
	Start Station:	31,400.	86 ftUS
	Loss (True):	300.00	ftUS
	Overage Side:	🔘 Rig	ht 🔿 Left
	Overage Style:	🔿 Ful	I 🔘 Half
	Radius (Grid):	150.00 f	tUS
	Minimum Radius(Grid):	3.28 ftU	S
	Valid:	Yes	
	Radius:	150.02 f	tUS(T) 150.00 ftUS(G)
	Curve Length:	898.47 f	tUS(T) 898.33 ftUS(G)
	Straight Line Length:	598.47 f	tUS(T) 598.38 ftUS(G)
	Max Straight Line Length:	12,413.2	4 ftUS(T) 12,411.28 ftUS(G)
	Line Scale Factor:	0.99984	2
	Deflection Angle:	85.78°	

FIGURE 9-7 PIPELINES - OVERAGES TAB

- **Name:** Name assigned to the overage
- **Description:** Description assigned to the overage
- **Start Station:** Start station of the overage (along line distance)

Note: Overage loops cannot be added on a curve.

- Loss (True): Distance to lose from pipeline/cable
- **Overage Side:** Side of the pipeline the overage is to go at the start
- **Overage Style:** Assign half for overage to be applied to one side., assign full for overage to be distributed evenly on both sides
- Radius: Assign radius for overage to be applied

Overage Route Information Tab

The Overage Route Information tab is shown below in Figure 9-8. This provides details on the entire route with added overage



Nodes Route I	nformation	Overages Over	age Route Inform	ation		
Name	Easting (ftUS)	Northing (ftUS)	Easting (ftUS)	Northing (ftUS)	Radius (ftUS)	Station (FP)
0	2,069,628.27	9,856,972.01				STA 0+00.0
PC-1	2,081,153.80	9,856,049.18				STA 115+62.4
			2,086,336.65	9,855,634.20	20,000.00	
PT-1	2,090,661.18	9,852,747.56				STA 217+36.1
PC-Overage 1	2,098,699.65	9,847,381.86				STA 314+00.9
Overage 1			2,098,815.55	9,847,304.49	150.00	
PT-Overage 1	2,098,746.91	9,847,183.22				STA 316+25.4
Overage 2			2,098,678.28	9,847,061.94	150.00	
PT-Overage 2	2,098,794.18	9,846,984.58				STA 318+50.0
Overage 3			2,098,910.08	9,846,907.21	150.00	
PT-Overage 3	2,098,995.76	9,847,017.11				STA 320+74.6
Overage 4			2,099,081.43	9,847,127.01	150.00	
PT-Overage 4	2,099,197.33	9,847,049.65				STA 322+99.2
	2,109,022.47	9,840,491.34				STA 441+12.1

FIGURE 9-8 PIPELINES - OVERAGE ROUTE INFORMATION TAB

Graphics Tab

In the Graphics tab, it is possible to control all aspects of the visibility of the line, nodes, and associated text items. The Graphics display is shown below in Figure 9-9

elected Pipe	line			
Pipeline	Graphics	Graphics 3D	Overage Graphi	cs
Line			Nodes	
Visible:	✓		Visible:	✓
Opacity:			Opacity:	
Minimun	n Scale: 0		Minimum Scale:	0
Stroke:		*	Symbol:	Circle *
Thicknes	s:		Color:	*
Style:		•	Fill:	-
Text	le:		Thickness:	1 *
Color:		~	Size:	8 *
Size:	10	• •	Text Visible:	
Minimu	ım Scale: 0		Color:	*
			Size:	10 *
			Minimum Scale	: 0

FIGURE 9-9 PIPELINES - GRAPHICS TAB

Note: The Minimum Scale setting is based on the Map view scale as displayed in the Map views when the Display scale bar option is enabled (see Windows section). As the Map view is zoomed in, the scale increases, as it is zoomed out the scale decreases. The pipeline will display when the scale is greater than the Minimum Scale setting.

Graphics 3D Tab

In the Graphics 3D tab, it is possible to control all aspects of the visibility of the line, line color and line diameter. The Graphics 3D display is shown below in Figure 9-10



Selected Pipe	line		
Pipeline	Graphics	Graphics 3D	Overage Graphics
Visible:	<		
Color:	~		
Diameter:	3.28 ftUS		

FIGURE 9-10 PIPELINES - GRAPHICS 3D TAB

Overage Graphics

In the Overage Graphics tab, it is possible to control all aspects of the visibility of the line, nodes, and associated text items. The Graphics display is shown below in Figure 9-11

Pipeline	Graphics	Graphics 3D	Overage Graphi	cs
Line			Nodes	
Visible:	✓		Visible:	✓
Opacity:			Opacity:	<u></u>
Minimun	n Scale: 0		Minimum Scale:	0
Stroke:		*	Symbol:	Circle 🛛 👻
Thicknes	s:	`	Color:	*
Style:	—	-	Fill:	*
Text	le:		Thickness:	1 *
Color:		~	Size:	8 *
Size:	10	· · ·	Text Visible:	
Minimu	ım Scale: 0		Color:	¥
			Size:	10 *
			Minimum Scale	: 0

FIGURE 9-11 PIPELINES - OVERAGE GRAPHICS TAB

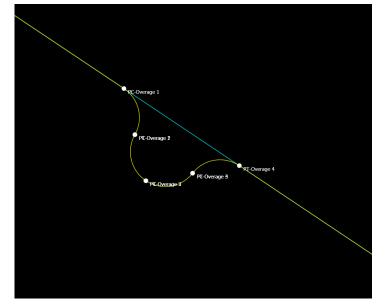


FIGURE 9-12 PIPELINES - OVERAGE LOOP - STYLE HALF EXAMPLE

4D Nav, LLC NavView User Guide – 09 Pipelines Document: 4DN_NVUG_S09_01A Release: 01 Revision: A



9.3 Add a Pipeline

A pipeline can be added in several ways, from the map and pipelines window.

9.3.1 Add a Pipeline from the Pipelines Window

- 1. Open the Pipelines window from the Home Tab or from the project Explorer view.
- 2. Click the 🕒 button.
- 3. A pipeline is created and displayed in the selected pipeline view.

Pipelines		-	\square \times
Pipelines	Selected Pipeline		
	Pipeline Graphics Graphics 3D		
Name	Name: PL 2		
PL 1			
PL 2	Initial station 0.00 ftUS		
	Has overage		
	Generate profile Interval: 32.81 ftUS		
	Nodes Route Information		
	Name Position	Radius	
	SOL E 268,588,244.09 ftUS, N 0.00 ftUS		
	EOL E 268,465,892.50 ftUS, N 0.00 ftUS		
	O	K Cancel	Apply

FIGURE 9-13 PIPELINES - PIPELINE ADDED

- 4. Edit the new pipeline as required.
- 5. Click **Apply** to save the changes but keep the window open. Click **Cancel** to discard changes and keep the window open or click **Ok** to save the pipeline and close the window.

9.3.2 Add a Pipeline from the Map View

- 1. In a Map window, activate the Multi-Point Coordinate Picker 🗹 or Ruler 🚾 (see Map Window in the Windows section for details)
 - a. Create at least two points in the Map
 - b. To create a pipeline, right mouse click with the mouse over the line or line annotation and select **Copy To > Pipeline > New Pipeline**

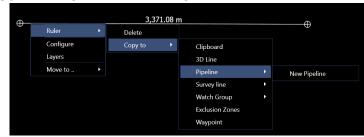


FIGURE 9-14 PIPELINES - COPY TO PIPELINE



c. The Configure Pipeline window will appear with the newly created pipeline selected for review and editing

🔮 Configure Pipelin			—		×		
Pipeline Graphi	cs Graphics 3D						
Name:	Name: Line						
Initial station	0.00 ftUS						
Has overage							
Generate profile	Interval: 10.00 m						
Nodes Route	Information						
€	♠ ♣ ♠ ∢						
Name	Position		Radiu	s			
E 2,044,741.62 ftUS, N 9,853,361.36 ftUS							
	E 2,055,801.49 ftUS, N 9,853	3,321.29 ftl	JS				

FIGURE 9-15 PIPELINES - COPY TO - CONFIGURE PIPELINE WINDOW

- 2. In the Map window, select an existing pipeline from the map background by mouse right click with the pointer on the pipeline.
 - a. From the pop-up menu select **Convert Polyline to > Pipeline**

Convert WI polyline to	•	3D line connection	
Configure		Pipeline	
Layers		Survey line	
Move to	•	Exclusion Zone	
		Watch Group	•

FIGURE 9-16 PIPELINES - CONVERT POLYLINE TO PIPELINE

b. Click **Okay** in Deviation Report popup. The Configure Pipeline window will appear with the newly created pipeline selected for review and editing

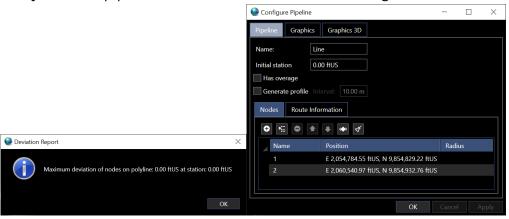


FIGURE 9-17 PIPELINES - CONVERT TO - CONFIGURE PIPELINE

- 3. Click **OK** to accept the pipeline and add it to Pipelines (if the pipelines window is open, you will see the line added to the bottom of the list)
- 4. Click **Cancel** to discard the pipeline.

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9.4 Create a Route Alignment from a Pipeline

The route alignment tool generates a pipeline with curves given a pipeline that does not contain curves.

- 1. Open the Pipelines window from the Home Tab or from the project Explorer view.
- 2. Select the pipeline that is to be the base for the route alignment.
- 3. Click the button button.
- 4. When prompted to enter an external distance, enter a value for the mid ordinate to use for calculating the curves to apply and click OK.



FIGURE 9-18 PIPELINES - CREATE ALIGNMENT - EXTERNAL DISTANCE

Note: External distance entered will be used to calculate curves at all tangent IP's.

- 5. A new pipeline will be generated with the name of the base pipeline with the "-Alignment-X u" where X is the mid ordinate distance used and u is the units with curves added to the nodes (see Figure 9-19)
- **Note:** If a curve with the entered mid ordinate value is not possible due to the length of the associated segments, curve(s) will be added such that sequential PT (Point on Tangent or end of curve) and PC (Point on Curve or start of curve) are coincidental.

Pipelines			-		×
	Selected Pipeline				
+ ● ∰ ₺ ₺	Pipeline Graphic	s Graphics 3D			
Name PL 1	Name:	PL 1-Alignment-100.000 m			
PL 1-Alignment-100.000 m	Initial station	0.00 ftUS			
	Has overage				
	Generate profile	Interval: 10.00 m			
	Nodes Route I	nformation			
	•	• • <			
	Name	Position	Radius	5	
	0	E 2,066,143.37 ftUS, N 9,860,108.26 ftL	s		
	1	E 2,080,930.07 ftUS, N 9,859,536.61 ftU	IS 38,811	1.40 ftUS	
	2	E 2,095,831.09 ftUS, N 9,854,963.40 ftU		81 ftUS	
	3	E 2,109,322.04 ftUS, N 9,836,594.37 ftL		86 ftUS	
	4	E 2,108,750.39 ftUS, N 9,821,312.24 ftU	S		
		OK	Cance	el A	

FIGURE 9-19 PIPELINES - CREATE ALIGNMENT – ALIGNMENT ADDED

9.5 Remove a Pipeline

- 1. Open the Pipelines window from the Home Tab or from the project Explorer view.
- 2. Select an existing pipeline.
- 3. Click the 🖸 remove button.



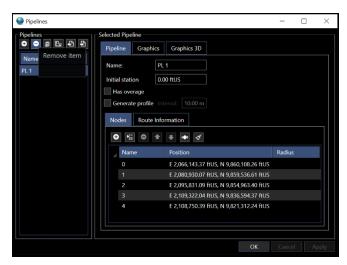


FIGURE 9-20 PIPELINES - REMOVE PIPELINE

9.6 Edit a Pipeline

Pipelines can be edited from the pipelines window or from the map view. These operations are described below.

9.6.1 Edit a Pipeline from the Pipelines Window

- 1. Open the Pipelines Window from the Home Tab or from the project Explorer view.
- 2. Select the pipeline to be edited.
- - Add Button to add a new node to the pipeline
 - Insert Button to the insert a node above the selected node
 - Remove Button to remove the selected node from the list
 - Move Up Button to move the selected node up one position
 - Move Down Button to move the selected node down one position
 - Reverse Node Order Button to reverse the Node order of the survey line
 - Validate the Route Button to check the route for errors
- 4. Click **Apply** to save the changes and keep the window open. Click **Ok** to save the changes and close the window or click **Cancel** to discard the changes but keep the window open.



9.6.2 Edit a Pipeline from the Map View

1. Right click on a pipeline in the Map View to bring up the Pop-Up menu (see Figure 9-21)

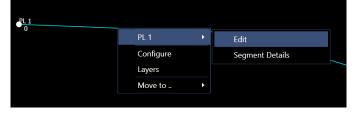


FIGURE 9-21 PIPELINES - MAP EDIT - POP-UP MENU

2. Click **Edit** to open the Configure Pipeline window (see Figure 9-22)

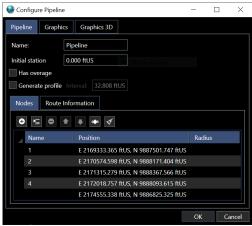


FIGURE 9-22 PIPELINES - CONFIGURE PIPELINE WINDOW

Note: In addition, the pipeline nodes are highlighted with grips which can be selected and dragged (see Figure 9-23)

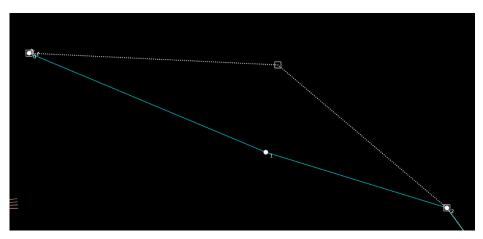


FIGURE 9-23 PIPELINES - MAP EDIT - PIPELINE NODE GRIPS

- 3. Drag a node to the desired location, and the node coordinates will be updated in the Configure Pipeline Dialog when closed.
- Right clicking on the line while in Editing Mode will display a context menu with an Insert Node option. Click this option to insert a new node at the mouse coordinates (see Figure 9-24)



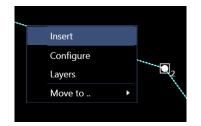


FIGURE 9-24 PIPELINES - MAP EDIT - INSERT NODE POP-UP

5. Right clicking on a node while in Editing Mode will display a context menu with a Remove Node option. Click this option to remove the node (See Figure 9-25)

Node	•	Remove	
Configure		Copy to	•
Layers			
Move to	•		

FIGURE 9-25 PIPELINES – MAP EDIT – REMOVE NODE POP-UP

9.7 Export Pipelines

Pipelines can be exported from the Pipelines Window to a text file.

- 1. Open the Pipelines Window from the Home Tab or from the project Explorer view.
- 2. Select one single pipeline.

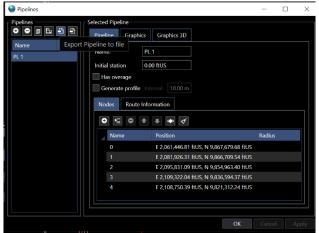


FIGURE 9-26 PIPELINES – EXPORT PIPELINE TO FILE

3. Click the 🖸 Export Button, this will open an export configuration dialog (see Figure 9-27)



SourDNav.N	lavViewCore.Routes.ViewModels.RouteExp	_	\times
Output format	CSV (grid)		
Output CRS	NAD27 / BLM 15N (ftUS) (32065) 👻		
Flatten curves			
		OK	Cancel

FIGURE 9-27 PIPELINES – EXPORT CONFIGURATION DIALOG

- 4. Select Output format
 - **CSV (grid):** The file contains one line for each node in the pipeline route in the following format: Node Name, Easting, Northing and Radius
 - CSV (geo): The file contains one line for each node in the pipeline route in the following format: Node Name, Latitude (dd.dd.....), Longitude (dd.dd.....) and Radius
 - **Navipac (.rln):** File contains one line for line name and one line for each node Easting, Northing
 - **Route Exchange Format (.rtz):** Format is latitude (dd.dd.....) and longitude (dd.dd.....) and radius in meters
- 5. Select Output CRS
- 6. **Flatten curves:** If selected, curves are approximated using straight line segments
- 7. Click **Okay** to open a save file dialog. Select a location and filename and click **Save** to export the pipeline. Click **Cancel** to abort the operation or to exit after saving exported file

9.8 Import Pipelines

The Import option allows the user to load a pipeline route from file and add this to existing **Pipelines**. On a networked system, this will result in the updating of the pipelines for all NavView systems on the network.

NavView supports custom import of any ASCII text data in a file. The input settings are configurable for delimited or for offset from start of line, as described below.

- 1. Open the pipelines Window from the Home Tab or from the project Explorer view.
- 2. Click the 🖻 Import Button to launch the Open file dialog.
- 3. Browse to the file to import, select and click Open.
- 4. The **Import Route Data** wizard is launched on the first page, File Settings (see Figure 9-28)



🧶 Import Route	Data			-	\Box \times
File Settings					
	Input CR	S: NAD27 /	BLM 15N (ft	JS) (32065)	· 8 8
Line Prefix:					
Header Rows:	0				
Delineation	Delimited	-			
Delimiter:	Comma				
Culture:	English (Cana	ida) 👻			
••	F				
Data Type	Units	Field Start	Field Size	Trim Start	Trim End
Easting *	Metre *			0	0
Northing 👻	Metre 👻			0	0
	Car	ncel <			Finish

FIGURE 9-28 PIPELINES - IMPORT ROUTE DATA - FILE SETTINGS

- Input CRS: From the drop-down list of Horizontal CRSs present in NavView, select the CRS the points to be imported are on
- Load Settings: Click 🖭 to load saved route import settings from a file
- Save settings: Click 🖾 to save the current route import settings to a file
- Line Prefix: Check the box if there is a line prefix and enter the prefix in the box
- Header Rows: If a header is present in the file, enter the number of header rows
- Delineation: Select the data format, Delimited or Fixed Length
- **Delimiter:** Select the field delimiter from the respective drop-down list options
 - Comma
 - Space
 - Tab
 - Custom: Selection of this option enables entry of the delimiter character
- **Culture:** From the drop-down list select the country numerical format
- 5. Click the 🖸 button to add an entry to the data grid for every field in the record, whether the field is to be used in the import or not.

Data Type	Units	Field Start	Field Size	Trim Start	Trim End
Easting 🛛 💌	US survey foot			0	0
Northing *	US survey foot			0	0

FIGURE 9-29 PIPELINES - IMPORT ROUTE DATA - ADD DATA FIELDS

- Data Type: Select the data type contained in the field, if the field is not to be used, select Ignore
- Units: Select the units or format that applies to the field and data type



- If **Delimiter** is Fixed Length
 - **Field Start:** Enter the zero-based index of the start of the field, e.g. the index of the first character in a record is 0, the index of the 10th character is 9
 - Field Size: Enter the length of the data in the field
- If **Delimiter** is comma, tab, space or custom
 - **Trim Start:** Enter the number of characters to trim from the start of the field value, e.g. if a field containing Depth contains "D 567.89", 2 would be entered to trim the "D" before reading the value
 - **Trim End:** Enter the number of characters to trim from the end of the field value, e.g. if a field containing Depth contains "567.89 D", 2 would be entered to trim the "D" before reading the value
- **Note:** When using fixed length and Field Size, use the setting of the field start and field size to Trim unwanted start and end characters.
- 6. To **Move** a selected field up or down to re-order its place in the record, select the field and click either the **I** or **I** button
- 7. Click **Finish** to import the pipeline route and append them to the existing pipelines in NavView.