O-Calc® Pro 8.0 – Clearance Analysis Report

User Guide

Osmose O-Calc® Pro 8.0 – Clearance Analysis Report User Guide

October 2025

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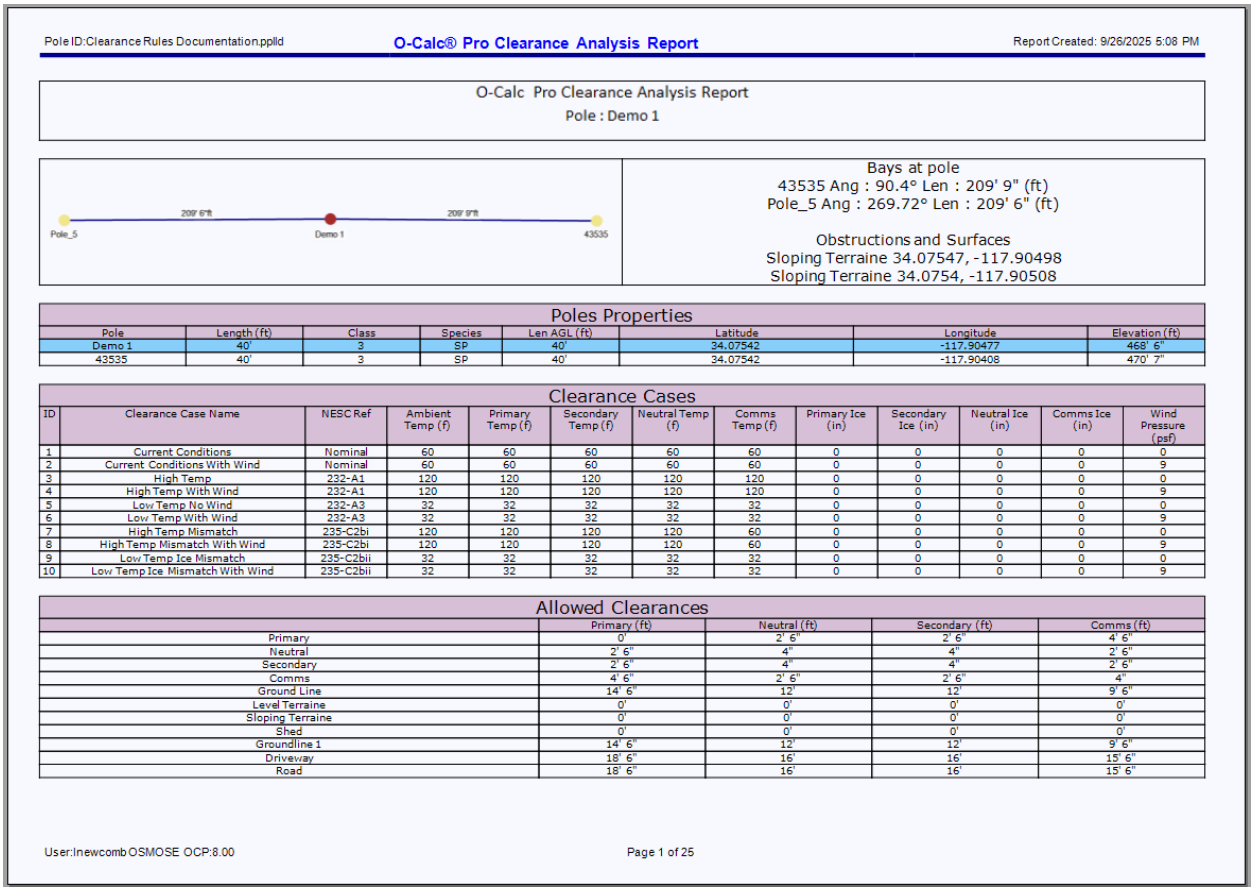
O-Calc Pro Clearance Analysis Report User Guide

Overview

The O-Calc Pro Clearance Analysis Report is intended to provide users with a detailed or worst-case clearance analysis report to evaluate the clearances and obstruction needed for any spans or equipment attached to the pole. Analysis is based upon pole loading regulations and clearance rules such as the NESC, GO95, or CSA. However, they can be configured to your explicit needs. Two report options are available; **Osmose Clearance Analysis (Detailed)** and **Osmose Clerance Analysis (Worst Case).**



Pole ID:Clearance Rules Documentation.pplld — O-Calc® Pro Clearance Analysis Report — Report Created: 9/26/2025 5:08 PM

O-Calc Pro Clearance Analysis Report
Pole : Demo 1

209' 6"ft 209' 9"ft
Pole_5 Demo 1 43535

Bays at pole
43535 Ang : 90.4° Len : 209' 9" (ft)
Pole_5 Ang : 269.72° Len : 209' 6" (ft)

Obstructions and Surfaces
Sloping Terraine 34.07547, -117.90498
Sloping Terraine 34.0754, -117.90508

Poles Properties

Pole	Length (ft)	Class	Species	Len AGL (ft)	Latitude	Longitude	Elevation (ft)
Demo 1	40'	3	SP	40'	34.07542	-117.90477	468' 6"
43535	40'	3	SP	40'	34.07542	-117.90408	470' 7"

Clearance Cases

ID	Clearance Case Name	NESC Ref	Ambient Temp (f)	Primary Temp (f)	Secondary Temp (f)	Neutral Temp (f)	Comms Temp (f)	Primary Ice (in)	Secondary Ice (in)	Neutral Ice (in)	Comms Ice (in)	Wind Pressure (psf)
1	Current Conditions	Nominal	60	60	60	60	60	0	0	0	0	0
2	Current Conditions With Wind	Nominal	60	60	60	60	60	0	0	0	0	9
3	High Temp	232-A1	120	120	120	120	120	0	0	0	0	0
4	High Temp With Wind	232-A1	120	120	120	120	120	0	0	0	0	9
5	Low Temp No Wind	232-A3	32	32	32	32	32	0	0	0	0	0
6	Low Temp With Wind	232-A3	32	32	32	32	32	0	0	0	0	9
7	High Temp Mismatch	235-C2bi	120	120	120	120	60	0	0	0	0	0
8	High Temp Mismatch With Wind	235-C2bi	120	120	120	120	60	0	0	0	0	9
9	Low Temp Ice Mismatch	235-C2bii	32	32	32	32	32	0	0	0	0	0
10	Low Temp Ice Mismatch With Wind	235-C2bii	32	32	32	32	32	0	0	0	0	9

Allowed Clearances

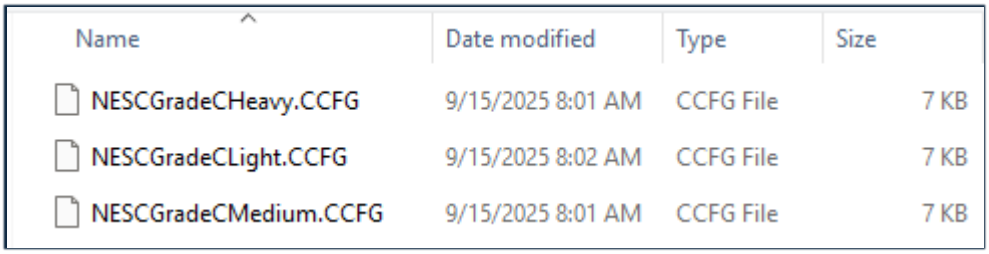
	Primary (ft)	Neutral (ft)	Secondary (ft)	Comms (ft)
Primary	0'	2' 6"	2' 6"	4' 6"
Neutral	2' 6"	4"	4"	2' 6"
Secondary	2' 6"	4"	4"	2' 6"
Comms	4' 6"	2' 6"	2' 6"	4"
Ground Line	14' 6"	12'	12'	9' 6"
Level Terraine	0'	0'	0'	0'
Sloping Terraine	0'	0'	0'	0'
Shed	0'	0'	0'	0'
Groundline 1	14' 6"	12'	12'	9' 6"
Driveway	18' 6"	16'	16'	15' 6"
Road	18' 6"	16'	16'	15' 6"

User:Inewcomb OSMOSE OCP:8.00 Page 1 of 25

Note: *A Line Design (.pplld) file or Pole Model (.pplx) file must be open in O-Calc Pro to access the Clearance Analysis Reports.*

Loading the Configuration

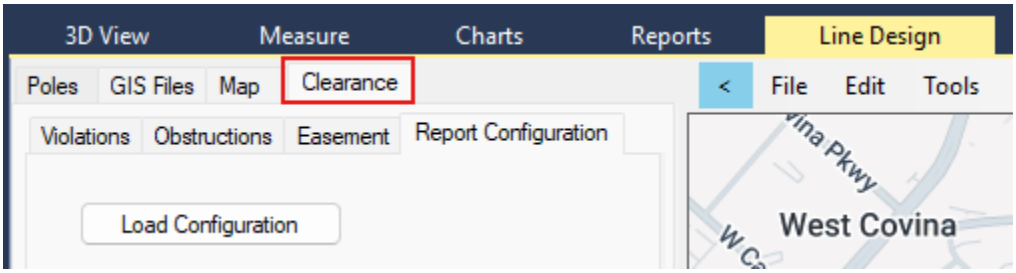
The configuration criteria from which the report evaluates the pole clearance violations, obstructions, and easements must be defined for the Clearance Analysis Report to produce results. Within the Clearance Report Config File menu, you can import a predefined configuration .CCFG file(s). The .CCFG file must contain clearance cases and minimum clearance details. You can use an existing configuration file and make customized updates to the configuration based on any pole loading scenario. Shown below are the readymade 2023 NESC configuration files currently available within O-Calc Pro:



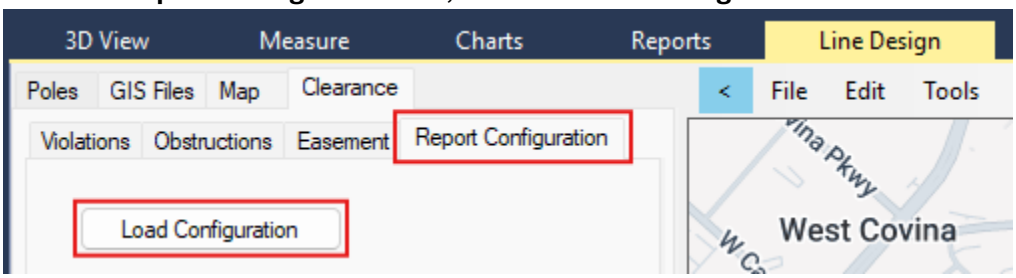
Note: *Future updates to include the readymade GO95 and CSA configuration files.*

Complete these steps to load the configuration data:

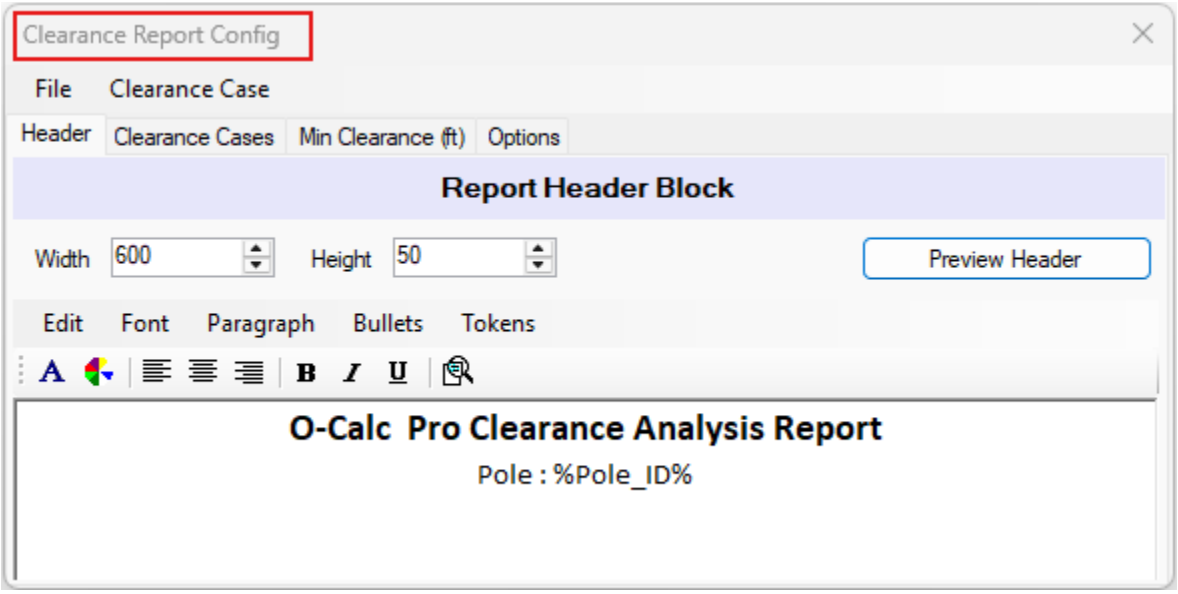
1. From the **Line Design** menu, select the **Clearance** tab in the auxiliary area to the left of the map.



2. Click the **Report Configuration** tab, click the **Load Configuration** button.



3. The **Clearance Report Config** window opens.

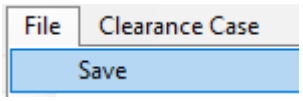


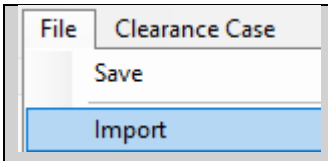
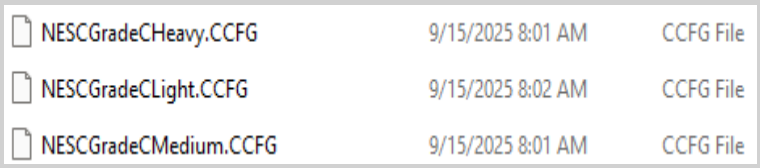
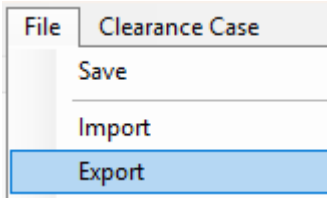
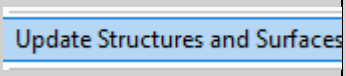
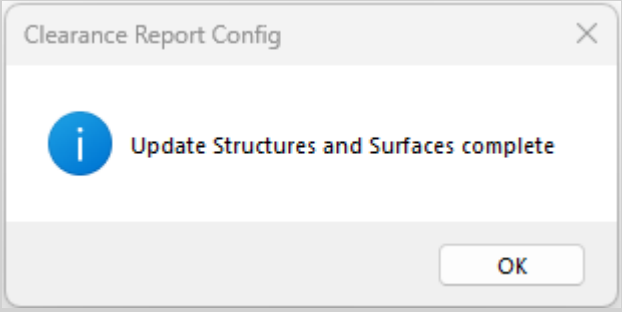
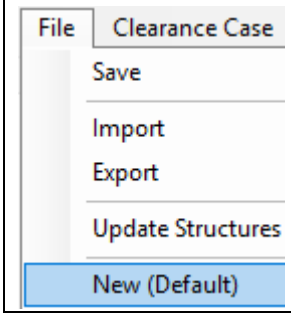
Clearance Report Config

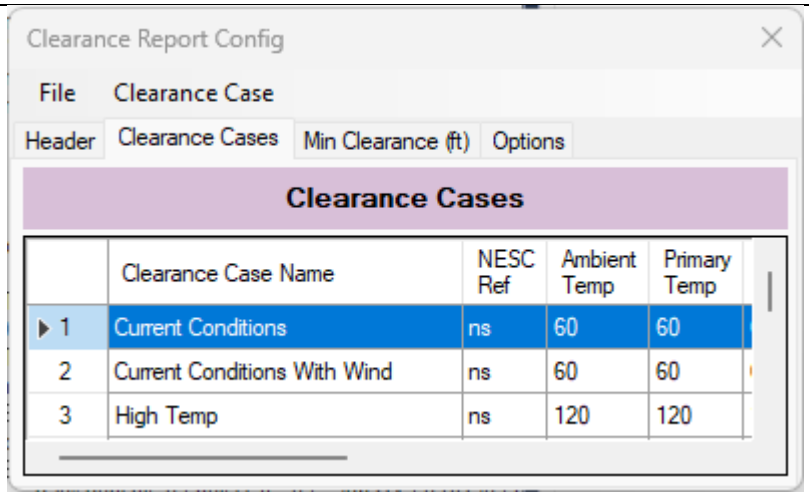
The Clearance Report Config window provides access to all the tools needed to create and display the Clearance Analysis Report such as the Header, Clearance Cases, Minimum Clearance spacing information, and an additional Options menu. Within the File menu, you can import or export configuration data, begin a new report, make updates to an existing one and most importantly, Save the configuration information so that the Clearance Analysis Reports will use this information.

File and Clearance Case Menus

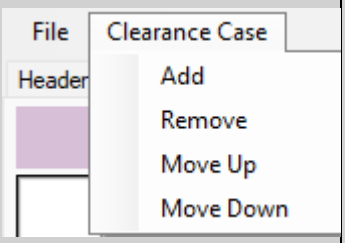
See the File and Clearance Case menu description below.

Clearance Report Config Menu	Description
File > Save 	Use the File menu **Save** option to save the Clearance Report Configuration file. There is only one saved configuration that the Clearance Reports use at this location: [***C:\Users\<username>\AppData\Roaming\ClearanceReport\Default.xml***] If closed and reopened, the Clearance Report Configuration will appear as the last saved report. Once the file is saved, click **OK** in the confirmation window.
File > Import	Use the File menu **Import** option to select various other pre-configured clearance configuration (.CCFG) files and click **Open**. This will load the .CCFG file into the Clearance Report Config window for making updates or changes.

<table>
<tr>
<td> 
</td>
<td>Note: unless Saved to the Defualt.xml file, these configurations will not be applied to the Clearance Reports.
 
</td>
</tr>
<tr>
<td>File > Export
 
</td>
<td>Use the File menu Export option to export (save to a CCFG file) the Clearance Config file using the file name and location of your choice.</td>
</tr>
<tr>
<td>File > Update Structures and Surfaces
 
</td>
<td>Use to update structures and surfaces that you have added, in the Min Clearance tab. See the confirmation message, click OK.
 
</td>
</tr>
<tr>
<td>File > New (Default)
 
</td>
<td>Use the File menu New (Default) option to return to the default values. Returns the Clearance Cases and Min Clearance (ft) tab to their default setting. Any edits done to the settings in the Header and Options tab will remain the same.</td>
</tr>
</table>



Clearance Case



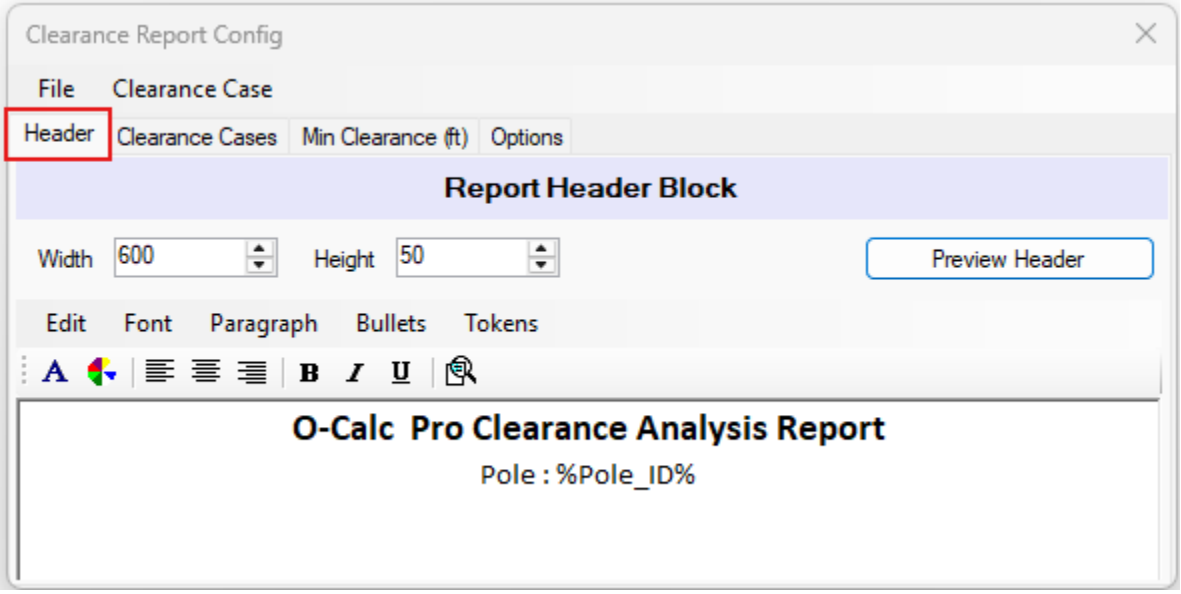
Use the **Clearance Case** menu to manipulate the existing entries displayed in the Clearance Cases window and add new ones.

To perform these operations: Remove, Move Up, Move Down, first select the number in the first column (as highlighted above) for the row of data you want to affect. Use as follows:

a. **Add** – Adds a row to the bottom of the list of clearance cases.
b. **Remove** – Removes the currently selected clearance case. Multiple cases can be removed at once using the shift key to select clearance case rows.
c. **Move Up** – Moves highlighted clearance cases up the numbered list
d. **Move Down** – Moves highlighted clearance cases down the numbered list

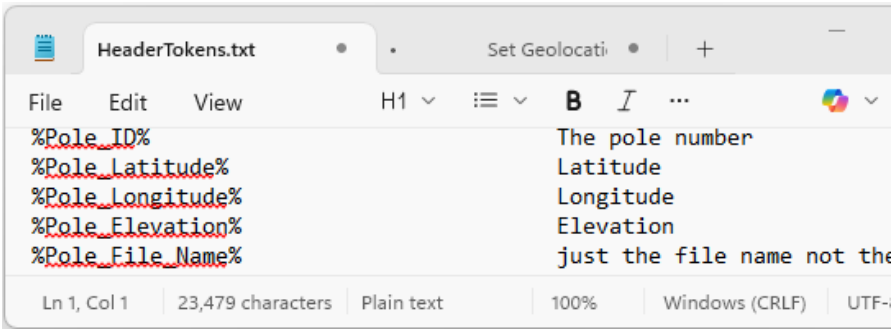
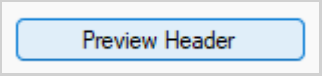
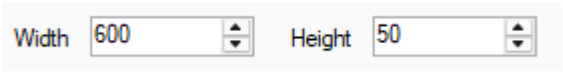
Report Header Block

Selecting the Header tab displays the Report Header Block, which enables customizing of the clearance reports title. Customization options include the header size (Width and Height), and content within the header. The text content within the header can be adjusted with the options such as Edit, Font, Paragraph, Bullets, and Tokens. Use the Preview Header option to inspect the layout of the Header you design. All O-Calc Pro Tokens are available which should be encapsulated with percent signs (%).



See the menu descriptions below for the Header options.

Report Header Block Menu	
Edit	To perform these operations use as follows: **Undo** – Revert the last action the user performed. **Redo** – Repeat the last action that was undone. **Find** – Search for a specific text. **Find and Replace** – Search for specific text and replace it with a new text. **Select All** – Use to select (highlight) everything in the text area. **Copy** – Duplicates selected text. **Cut** – Removes selected text. **Paste** – Inserts copied text. **Import…** – Use to import Text, XML, and Ike files. **Insert Image** – Insert images with a Bitmap, JPEG, or GIF format.
Font	**Select Font** – Use to select the font, font style, and size. **Font Color…** – Use to select a font color from a 'basic color' pallet or select 'define a custom color' pallet. **Bold** – Use to make the selected text darker and thicker to add emphasis. **Italic** – Use to slant the selected text. **Underline** – Use to add a line beneath the selected text. **Normal** – Remove special formatting and return text to the default style. ***Note:*** *Bold font may cause the header to appear bury.*

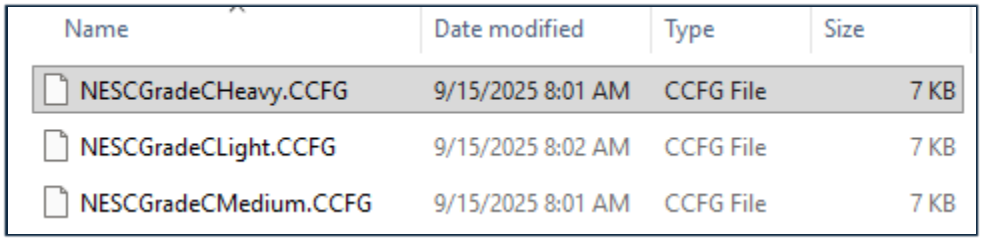
Paragraph	**Indent** – Indent the line the curser is on or multiple highlighted lines. Indent options are None, 5 pts, 10 pts, 15 pts, or 20 pts. **Align** – Use to shift text to Left, Center, or Right.
Bullets	**Add Bullets** – Use to adds bullet point to the line where the curse is or to multiple highlighted lines. **Remove Bullets** – Use to remove bullet point to the line where the curse is or to multiple highlighted lines.
Tokens	Use to open a file in NotePad named **HeaderTokens.txt** containing a list of Tokens/commands to copy and paste into the report header. 
Preview Header	Click to open a .png file displaying the current Header you have designed, after you have clicked the Save button in the File menu.   ***Note:*** *The height of the Header Block determines how many rows of text are displayed in the preview.*
Width/ Height	The Width is the horizontal size of the Header information block. The Height is the vertical size of the Header information block. 

Clearance Cases and Minimum Clearance Tabs

The Clearance Cases and the Minimum Clearance tabs contain the values used in defining the regulation data for the pole loading analysis results. Clearance cases and minimum clearances can

be defined as stipulated by a governing body such as the NESC, GO95, etc. Additionally, customized case values can be manually entered and saved for importing along with the minimum clearance values for use by the clearance report. Each value can be edited and saved to create a custom clearance case for use in any pole loading scenario.

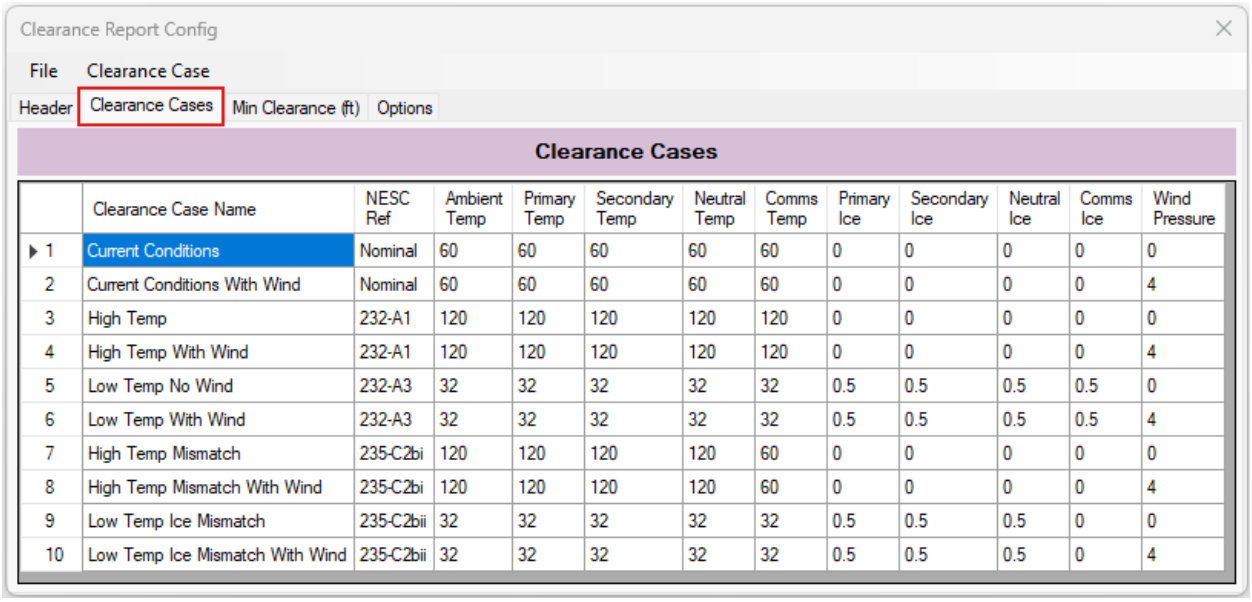
In the two examples of data displayed below are the NESC Grade C Heavy regulations imported from the pre-built configuration file, shown below:



Clearance Cases Tab

The Clearance Cases tab lists all the defined clearance cases as rows within a table. There are 12 standard columns that list the name of the clearance case, the standard reference being used, the various temperatures and ice thicknesses that should be used for various wire types (Primary, Secondary, Neutral, and Communications). And finally, a wind pressure column.

The Clearance Case menu, as described above in the section "File and Clearance Case Menus" enable the adding, removing, and reordering of these Clearance Cases. One can select an individual cell within this table to edit a name, temperature, ice thickness, or wind pressure. Be sure to either hit the enter key or move to another cell for the edit to take effect.



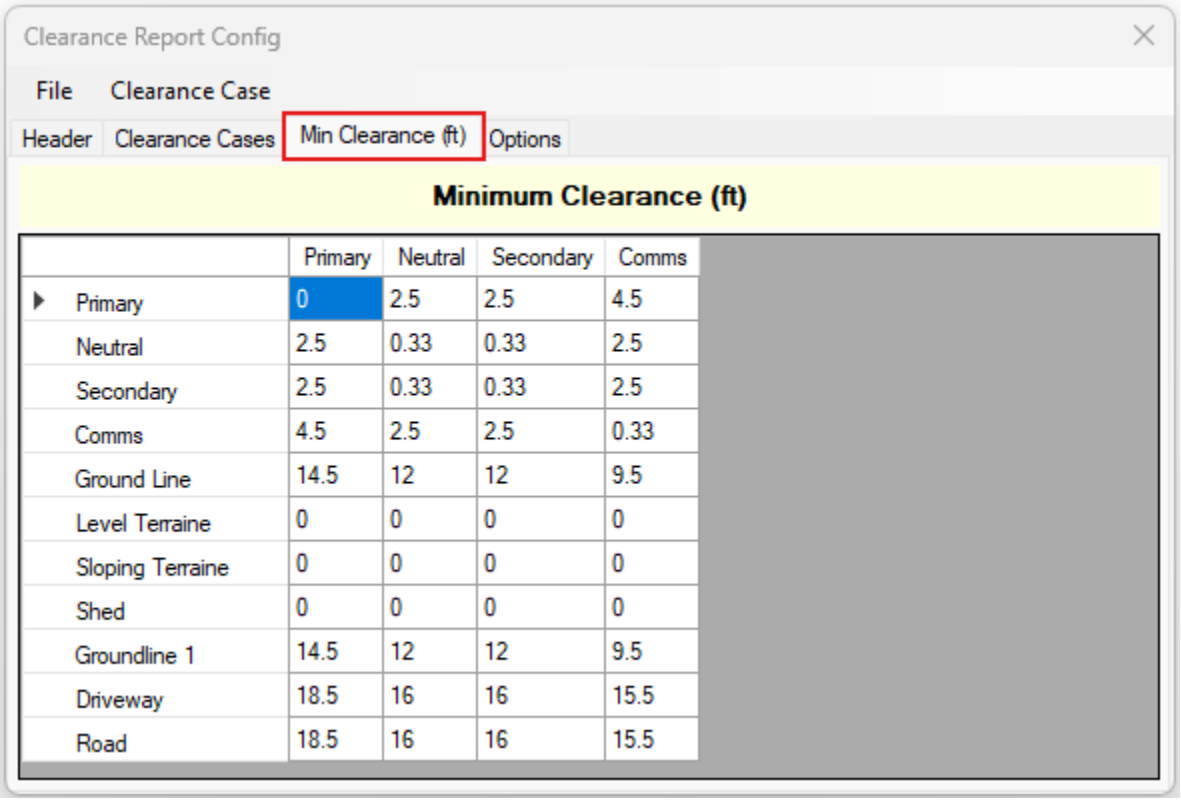
	Clearance Case Name	NESC Ref	Ambient Temp	Primary Temp	Secondary Temp	Neutral Temp	Comms Temp	Primary Ice	Secondary Ice	Neutral Ice	Comms Ice	Wind Pressure
▶ 1	Current Conditions	Nominal	60	60	60	60	60	0	0	0	0	0
2	Current Conditions With Wind	Nominal	60	60	60	60	60	0	0	0	0	4
3	High Temp	232-A1	120	120	120	120	120	0	0	0	0	0
4	High Temp With Wind	232-A1	120	120	120	120	120	0	0	0	0	4
5	Low Temp No Wind	232-A3	32	32	32	32	32	0.5	0.5	0.5	0.5	0
6	Low Temp With Wind	232-A3	32	32	32	32	32	0.5	0.5	0.5	0.5	4
7	High Temp Mismatch	235-C2bi	120	120	120	120	60	0	0	0	0	0
8	High Temp Mismatch With Wind	235-C2bi	120	120	120	120	60	0	0	0	0	4
9	Low Temp Ice Mismatch	235-C2bii	32	32	32	32	32	0.5	0.5	0.5	0	0
10	Low Temp Ice Mismatch With Wind	235-C2bii	32	32	32	32	32	0.5	0.5	0.5	0	4

Min Clearance (ft) Tab

The Min Clearance (ft) tab enables the user to adjust the minimum vertical spacing in feet between different span types (Primary, Neutral, Secondary, and Comms). It also always for adjusting minimum vertical spacing between these span types and any defined obstructions. The obstructions are defined within the Line Design Obstructions tab under the Rules menu.

> ***Note**: See the O-Calc Pro Line Design User Guide for explicit instructions regarding Obstructions.*

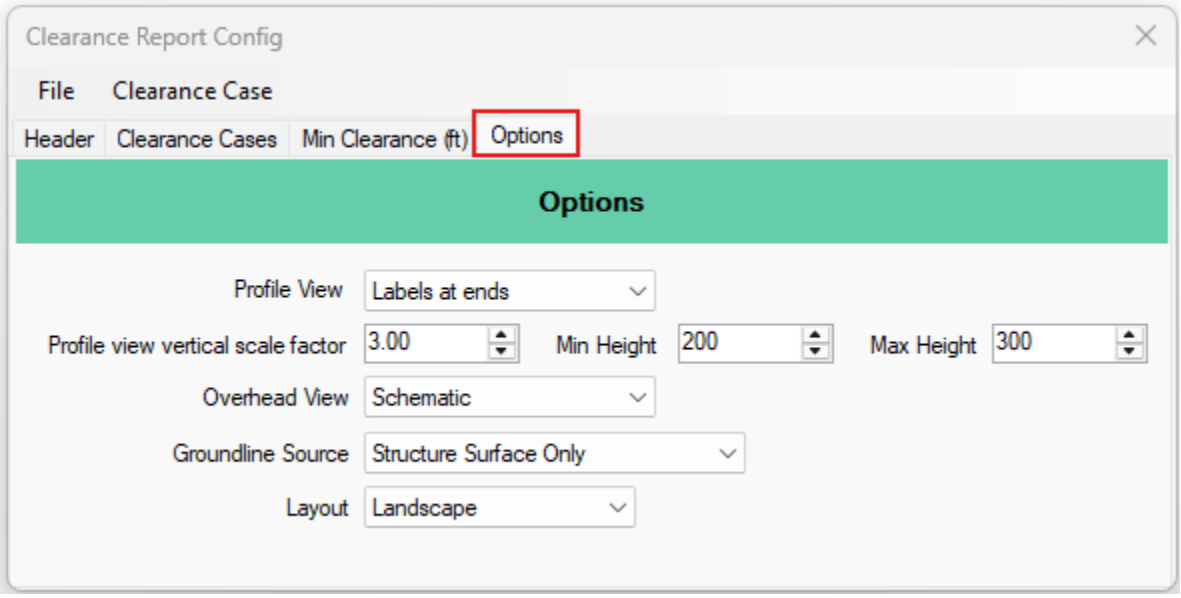
To refresh the list of Obstructions, use the File -> Update Structures and Surfaces within the Clearance Report Config dialog. To chance an actual minimum clearance value, select the cell and type in the required value. Be sure to either hit the enter key or move to another cell for the edit to take effect.



	Primary	Neutral	Secondary	Comms
Primary	0	2.5	2.5	4.5
Neutral	2.5	0.33	0.33	2.5
Secondary	2.5	0.33	0.33	2.5
Comms	4.5	2.5	2.5	0.33
Ground Line	14.5	12	12	9.5
Level Terraine	0	0	0	0
Sloping Terraine	0	0	0	0
Shed	0	0	0	0
Groundline 1	14.5	12	12	9.5
Driveway	18.5	16	16	15.5
Road	18.5	16	16	15.5

Options Tab

The Options tab allows for additional general Clearance Analysis Report configurations. How the *O-Calc Pro Clearance Report (Detailed)* and *O-Calc Pro Clearance Report (Worst Case)* are displayed to the user when reports are run. The various options listed below and their detailed descriptions are outlined in the table below.



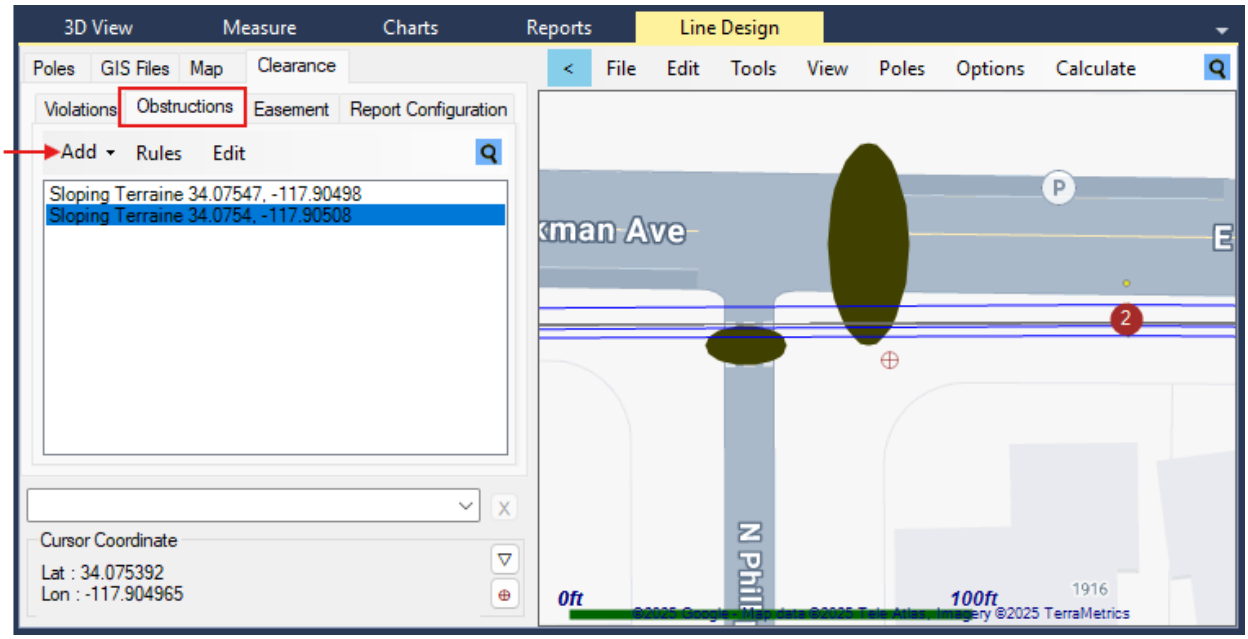
Profile View	**Labels at ends** – Labels for spans are on the ends of the poles to the side in reports pole diagrams. **Label in Body** – Places the labels for spans in between poles in reports pole diagrams.
Profile View vertical scale factor	Maximum value is 3.00, moves down in increments of 10.
Min Height	Moves up or down in increments of 10.
Max Height	Moves up or down in increments of 10.
Overhead View – The first page of the report, below the header block, is an overhead view of the pole in question within the Line Design. This option configures how that overhead view is displayed	**Schematic** – Displays line design like the view in the **Line Design** tab. **Render** – Display is like the top view in the **3D View** tab. **Not Displayed** – Does not display an overhead view in the report.
Groundline Source	**Registered Source Only** – Only the registered/default groundline data source is used, ignoring structure/surfaces data.

	Structure Surface Only - Only structure/surfaces data is used for groundline calculations, ignoring the default groundline **Both** – Default and Structure/Surfaces data is used.
Layout	**Portrait** – Displays report vertically. **Landscape** – Displays report horizontally.

Add Obstructions

The O-Calc Pro Clearance Analysis Report also utilizes the existing functionality of obstructions in O-Calc Pro. By defining obstructions in the report configuration and placing them in the line design, O-Calc Pro can determine if the obstructions violate any of the defined clearance rules in the configuration file.

> ***Note:*** *See the Clearance topic listed in Line Design User Guide for instructions on adding obstructions and surfaces.*



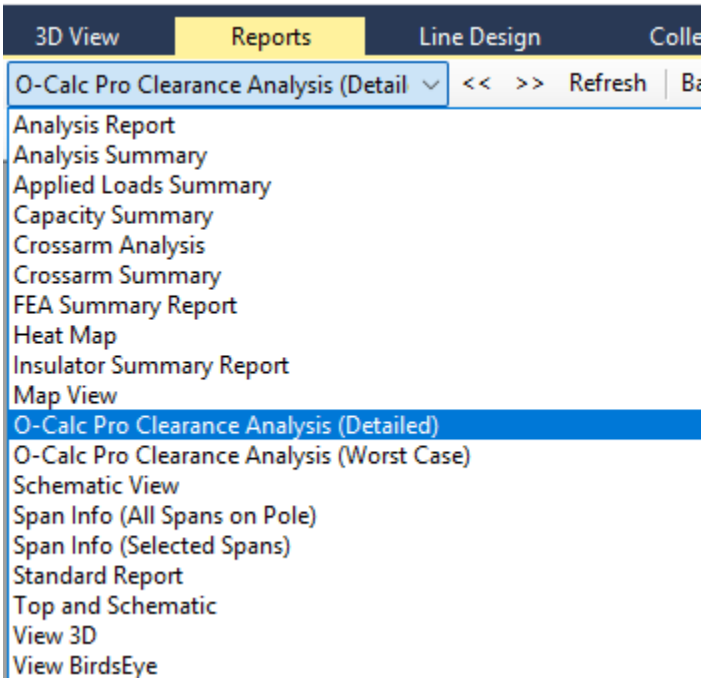
> ***Note:*** *Be sure to click the Update Structures and Surfaces in the File menu after any updates are added to the line design.*

Run the Report

Once the configuration and any potential obstructions are added to the line design and saved the next step is running the report. You can find the report in the Reports panel. In the Reports drop-down menu there are two options; select the one you need:

O-Calc Pro Clearance Analysis (Detailed) – Includes the full Clearance analysis report including all clearance cases for that pole.

O-Calc Pro Clearance Analysis (Worst Case) – Includes just the information for the worst-case scenario so it's a much shorter report.



Understanding the Report

Understanding the O-Calc Pro Clearance Analysis Report structure and the various information it contains is vital to effectively using the report. The Report is separated into several different types of data. Color-coded pages (purple, orange, blue) are useful in identifying immediately the type of data contained within them. The colors are as follows:

Purple – General pole information

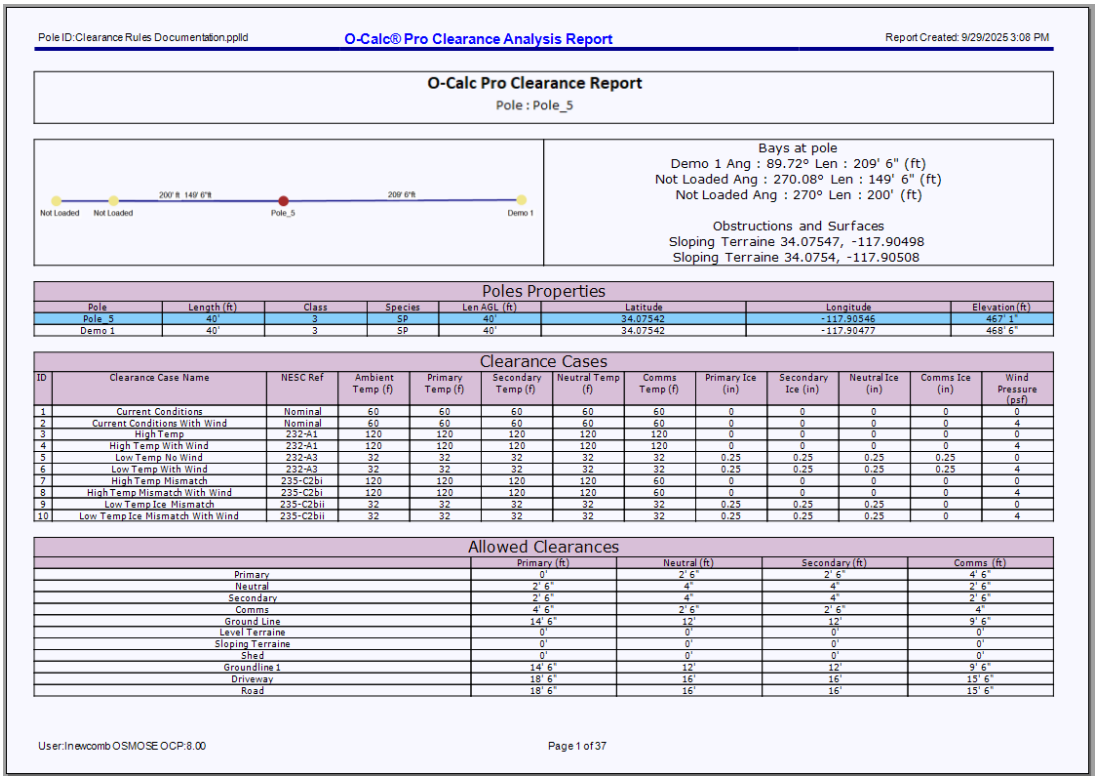
Orange – Worst clearance case scenario

Blue – Individual clearance cases

Purple - General information for the pole, plus the attached equipment being evaluated

The O-Calc Pro Clearance Analysis (Detailed) report reveals information pertaining to the selected pole. We will examine the report page by page to understand each of the results displayed.

Page 1 – Purple: General pole information



Pole ID:Clearance Rules Documentation.ppltd O-Calc® Pro Clearance Analysis Report Report Created: 9/29/2025 3:08 PM

O-Calc Pro Clearance Report
Pole : Pole_5

Bays at pole
Demo 1 Ang : 89.72° Len : 209' 6" (ft)
Not Loaded Ang : 270.08° Len : 149' 6" (ft)
Not Loaded Ang : 270° Len : 200' (ft)

Obstructions and Surfaces
Sloping Terraine 34.07547, -117.90498
Sloping Terraine 34.0754, -117.90508

Poles Properties

Pole	Length (ft)	Class	Species	Len AGL (ft)	Latitude	Longitude	Elevation (ft)
Pole_5	40'	3	SP	40'	34.07542	-117.90546	467' 1"
Demo 1	40'	3	SP	40'	34.07542	-117.90477	468' 6"

Clearance Cases

ID	Clearance Case Name	NESC Ref	Ambient Temp (f)	Primary Temp (f)	Secondary Temp (f)	Neutral Temp (f)	Comms Temp (f)	Primary Ice (in)	Secondary Ice (in)	Neutral Ice (in)	Comms Ice (in)	Wind Pressure (psf)
1	Current Conditions	Nominal	60	60	60	60	60	0	0	0	0	0
2	Current Conditions With Wind	Nominal	60	60	60	60	60	0	0	0	0	4
3	High Temp	232-A1	120	120	120	120	120	0	0	0	0	0
4	High Temp With Wind	232-A1	120	120	120	120	120	0	0	0	0	4
5	Low Temp No Wind	232-A3	32	32	32	32	32	0.25	0.25	0.25	0.25	0
6	Low Temp With Wind	232-A3	32	32	32	32	32	0.25	0.25	0.25	0.25	4
7	High Temp Mismatch	235-C2bi	120	120	120	120	60	0	0	0	0	0
8	High Temp Mismatch With Wind	235-C2bi	120	120	120	120	60	0	0	0	0	4
9	Low Temp Ice Mismatch	235-C2bii	32	32	32	32	32	0.25	0.25	0.25	0	0
10	Low Temp Ice Mismatch With Wind	235-C2bii	32	32	32	32	32	0.25	0.25	0.25	0	4

Allowed Clearances

	Primary (ft)	Neutral (ft)	Secondary (ft)	Comms (ft)
Primary	0'	2' 6"	2' 6"	4' 6"
Neutral	2' 6"	4"	4"	2' 6"
Secondary	2' 6"	4"	4"	2' 6"
Comms	4' 6"	2' 6"	2' 6"	4"
Ground Line	14' 6"	12'	12'	9' 6"
Level Terraine	0'	0'	0'	0'
Sloping Terraine	0'	0'	0'	0'
Shed	0'	0'	0'	0'
Groundline 1	14' 6"	12'	12'	9' 6"
Driveway	18' 6"	16'	16'	15' 6"
Road	18' 6"	16'	16'	15' 6"

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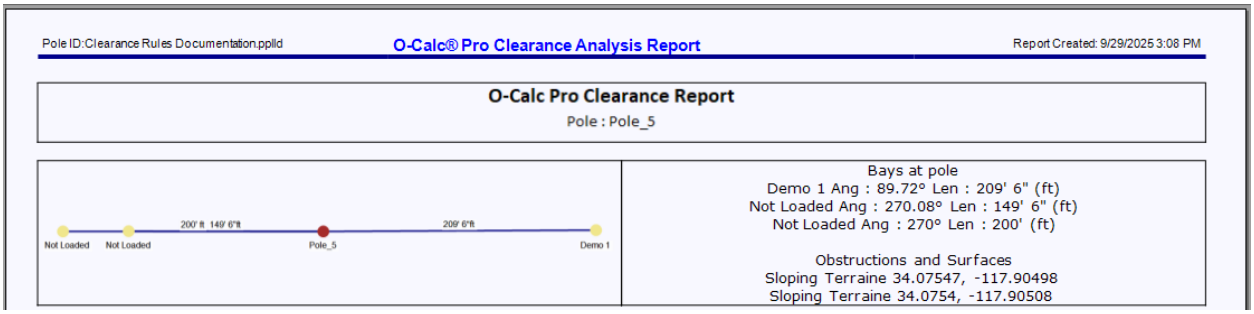
Page 1 top of the page see the following details:

1. **Pole ID:** in the upper left corner.
2. **Report Created:** in the upper right corner date and time stamp.
3. **Header Information:** Pole_5 is the selected pole.



Pole ID:Clearance Rules Documentation.ppltd O-Calc® Pro Clearance Analysis Report Report Created: 9/29/2025 3:08 PM

O-Calc Pro Clearance Report
Pole : Pole_5

Bays at pole
Demo 1 Ang : 89.72° Len : 209' 6" (ft)
Not Loaded Ang : 270.08° Len : 149' 6" (ft)
Not Loaded Ang : 270° Len : 200' (ft)

Obstructions and Surfaces
Sloping Terraine 34.07547, -117.90498
Sloping Terraine 34.0754, -117.90508

4. **Graphic** on the left displays a plan view of the pole (red dot icon) and any adjacent poles.
5. **Bays at pole** information displays the degree and length of the wires.
6. **Obstructions and Surfaces** displays the added items latitude and longitude data.
7. On page 1 next section shows the **Poles Properties:**
    a. Pole Number (ID)
    b. Length (ft), Class, Species, Length AGL (ft), Latitude, Longitude, Elevation (ft)

Poles Properties							
Pole	Length (ft)	Class	Species	Len AGL (ft)	Latitude	Longitude	Elevation (ft)
Pole_5	40'	3	SP	40'	34.07542	-117.90546	467' 1"
Demo 1	40'	3	SP	40'	34.07542	-117.90477	468' 6"

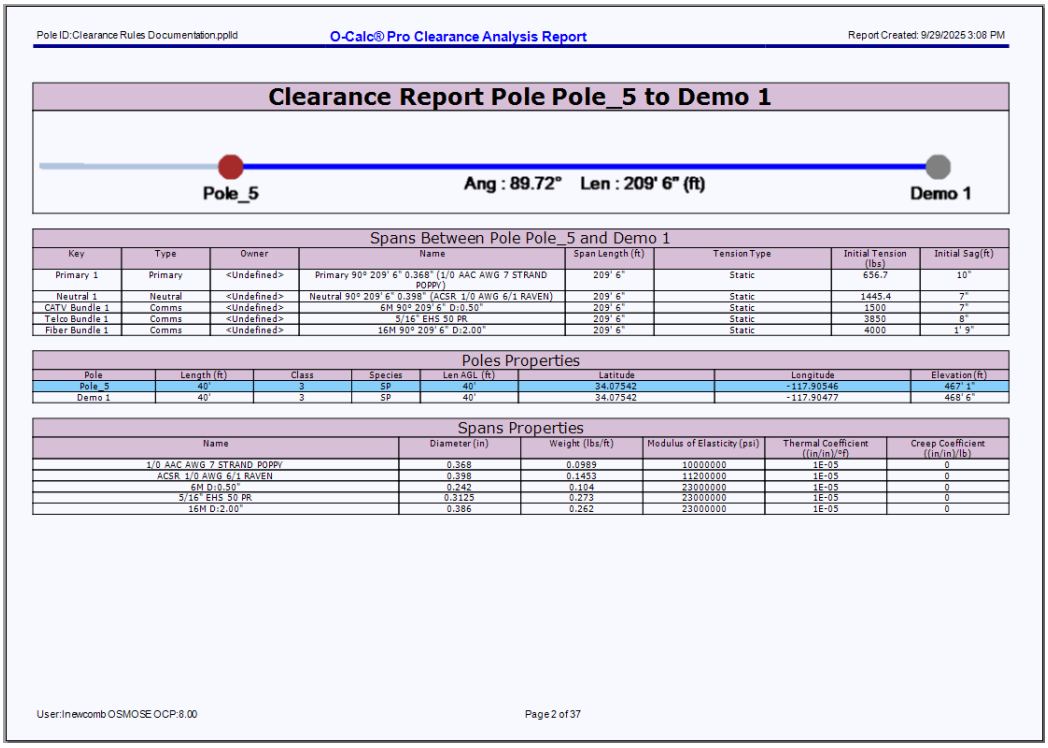
8. On page 1 next section shows the **Clearance Cases:**
    a. **ID** (column number)
    b. **Clearance Case Name**, **Code Ref** (NESC)
    c. **Ambient Temp** (f), Primary Temp, Secondary Temp, Neutral Temp, Comms Temp
    d. **Primary Ice** (in), Secondary Ice, Neutral Ice, Comms Ice, Wind Pressure (psf)

Clearance Cases												
ID	Clearance Case Name	NESC Ref	Ambient Temp (f)	Primary Temp (f)	Secondary Temp (f)	Neutral Temp (f)	Comms Temp (f)	Primary Ice (in)	Secondary Ice (in)	Neutral Ice (in)	Comms Ice (in)	Wind Pressure (psf)
1	Current Conditions	Nominal	60	60	60	60	60	0	0	0	0	0
2	Current Conditions With Wind	Nominal	60	60	60	60	60	0	0	0	0	4
3	High Temp	232-A1	120	120	120	120	120	0	0	0	0	0
4	High Temp With Wind	232-A1	120	120	120	120	120	0	0	0	0	4
5	Low Temp No Wind	232-A3	32	32	32	32	32	0.25	0.25	0.25	0.25	0
6	Low Temp With Wind	232-A3	32	32	32	32	32	0.25	0.25	0.25	0.25	4
7	High Temp Mismatch	235-C2bi	120	120	120	120	60	0	0	0	0	0
8	High Temp Mismatch With Wind	235-C2bi	120	120	120	120	60	0	0	0	0	4
9	Low Temp Ice Mismatch	235-C2bii	32	32	32	32	32	0.25	0.25	0.25	0	0
10	Low Temp Ice Mismatch With Wind	235-C2bii	32	32	32	32	32	0.25	0.25	0.25	0	4

9. On page 1 next section shows the **Allowed Clearances:**
    a. Category
    b. Primary (ft), Neutral (ft), Secondary (ft), Comms (ft),

Allowed Clearances				
	Primary (ft)	Neutral (ft)	Secondary (ft)	Comms (ft)
Primary	0'	2' 6"	2' 6"	4' 6"
Neutral	2' 6"	4"	4"	2' 6"
Secondary	2' 6"	4"	4"	2' 6"
Comms	4' 6"	2' 6"	2' 6"	4"
Ground Line	14' 6"	12'	12'	9' 6"
Level Terraine	0'	0'	0'	0'
Sloping Terraine	0'	0'	0'	0'
Shed	0'	0'	0'	0'
Groundline 1	14' 6"	12'	12'	9' 6"
Driveway	18' 6"	16'	16'	15' 6"
Road	18' 6"	16'	16'	15' 6"

Page 2 – Purple: General pole information continued



Pole ID:Clearance Rules Documentation.ppltd O-Calc® Pro Clearance Analysis Report Report Created: 9/29/2025 3:08 PM

Clearance Report Pole Pole_5 to Demo 1

Pole_5 Ang : 89.72° Len : 209' 6" (ft) Demo 1

Spans Between Pole Pole_5 and Demo 1

Key	Type	Owner	Name	Span Length (ft)	Tension Type	Initial Tension (lbs)	Initial Sag(ft)
Primary 1	Primary	<Undefined>	Primary 90° 209' 6" 0.368" (1/0 AAC AWG 7 STRAND POPPY)	209' 6"	Static	656.7	10"
Neutral 1	Neutral	<Undefined>	Neutral 90° 209' 6" 0.398" (ACSR 1/0 AWG 6/1 RAVEN)	209' 6"	Static	1445.4	7"
CATV Bundle 1	Comms	<Undefined>	6M 90° 209' 6" D:0.50"	209' 6"	Static	1500	7"
Telco Bundle 1	Comms	<Undefined>	5/16" EHS 50 PR	209' 6"	Static	3850	8"
Fiber Bundle 1	Comms	<Undefined>	16M 90° 209' 6" D:2.00"	209' 6"	Static	4000	1' 9"

Poles Properties

Pole	Length (ft)	Class	Species	Len AGL (ft)	Latitude	Longitude	Elevation (ft)
Pole_5	40'	3	SP	40'	34.07542	-117.30546	467' 1"
Demo 1	40'	3	SP	40'	34.07542	-117.30477	468' 6"

Spans Properties

Name	Diameter (in)	Weight (lbs/ft)	Modulus of Elasticity (psi)	Thermal Coefficient ((in/in)/°F)	Creep Coefficient ((in/in)/lb)
1/0 AAC AWG 7 STRAND POPPY	0.368	0.0989	10000000	1E-05	0
ACSR 1/0 AWG 6/1 RAVEN	0.398	0.1453	11200000	1E-05	0
6M D:0.50"	0.242	0.104	23000000	1E-05	0
5/16" EHS 50 PR	0.3125	0.273	23000000	1E-05	0
16M D:2.00"	0.386	0.262	23000000	1E-05	0

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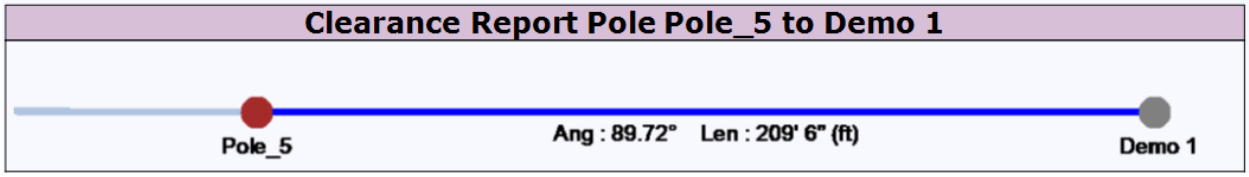
At the top of page 2 see the following details:

1. At the top of the page, the graphic shows the selected pole (red dot icon) has a length of 209'6" (ft) and an angle of 89.72 degrees.



2. On page 2 the next section shows details about the **Spans Between Pole_5 and Demo 1:**
   a. Key – Type with a number designation, Type – Electrical or communication
   b. Owner – Ownership of the individual wire(s), Name – Includes type, length, angle, size and name of the conductor or cable
   c. Span Length (ft) – length of the conductor or cable, Tension Type – As defined by O-Calc Pro tension mode types
   d. Initial Tension (lbs) – amount of wire tension in pounds, Initial Sag (ft) – amount of wire sag in feet

Spans Between Pole Pole_5 and Demo 1

Key	Type	Owner	Name	Span Length (ft)	Tension Type	Initial Tension (lbs)	Initial Sag(ft)
Primary 1	Primary	<Undefined>	Primary 90° 209' 6" 0.368" (1/0 AAC AWG 7 STRAND POPPY)	209' 6"	Static	656.7	10"
Neutral 1	Neutral	<Undefined>	Neutral 90° 209' 6" 0.398" (ACSR 1/0 AWG 6/1 RAVEN)	209' 6"	Static	1445.4	7"
CATV Bundle 1	Comms	<Undefined>	6M 90° 209' 6" D:0.50"	209' 6"	Static	1500	7"
Telco Bundle 1	Comms	<Undefined>	5/16" EHS 50 PR	209' 6"	Static	3850	8"
Fiber Bundle 1	Comms	<Undefined>	16M 90° 209' 6" D:2.00"	209' 6"	Static	4000	1' 9"

3. One page 2 the next section shows **Poles Properties:**
    a. Pole Number
    b. Length (ft), Class, Species, Length AGL (ft), Latitude, Longitude, Elevation (ft)

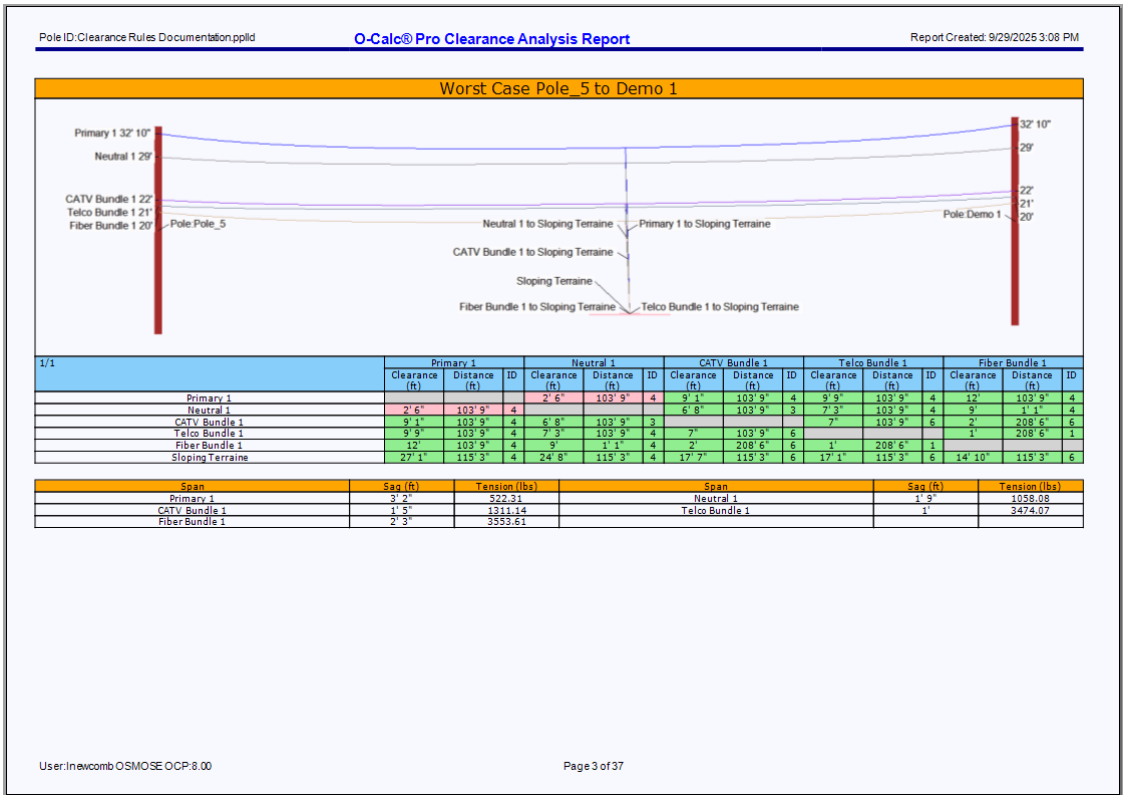
Poles Properties							
Pole	Length (ft)	Class	Species	Len AGL (ft)	Latitude	Longitude	Elevation (ft)
Pole_5	40'	3	SP	40'	34.07542	-117.90546	467' 1"
Demo 1	40'	3	SP	40'	34.07542	-117.90477	468' 6"

4. One page 2 the next section shows **Spans Properties:**
    a. Name of the conductor or cable
    b. Diameter (in), Weight (lbs/ft), MOE (psi), Thermal Coeff., Creep Coeff.

Spans Properties					
Name	Diameter (in)	Weight (lbs/ft)	Modulus of Elasticity (psi)	Thermal Coefficient ((in/in)/°F)	Creep Coefficient ((in/in)/lb)
1/0 AAC AWG 7 STRAND POPPY	0.368	0.0989	10000000	1E-05	0
ACSR 1/0 AWG 6/1 RAVEN	0.398	0.1453	11200000	1E-05	0
6M D:0.50"	0.242	0.104	23000000	1E-05	0
5/16" EHS 50 PR	0.3125	0.273	23000000	1E-05	0
16M D:2.00"	0.386	0.262	23000000	1E-05	0

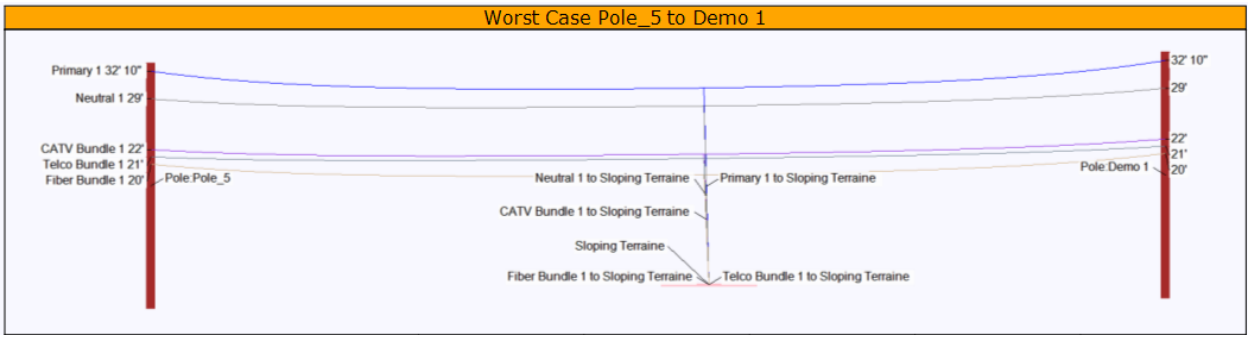
Page 3 – Orange: Worst clearance case scenario

You will see a table containing a list of the spans defined in the previous page and the amount of clearance they have. Green cells mean the equipment is compliant with the rule set up in the configuration and Red cells mean the equipment is in violation of the clearance rules.



Page 3 top of the page see the following details:

1. At the top of the page, the graphic shows the **Worst Case Pole_5 to Demo 1** which contains a profile view of the heights of attachment.



2. On page 3 the next section shows details about the conductors and their clearances and distances between poles.

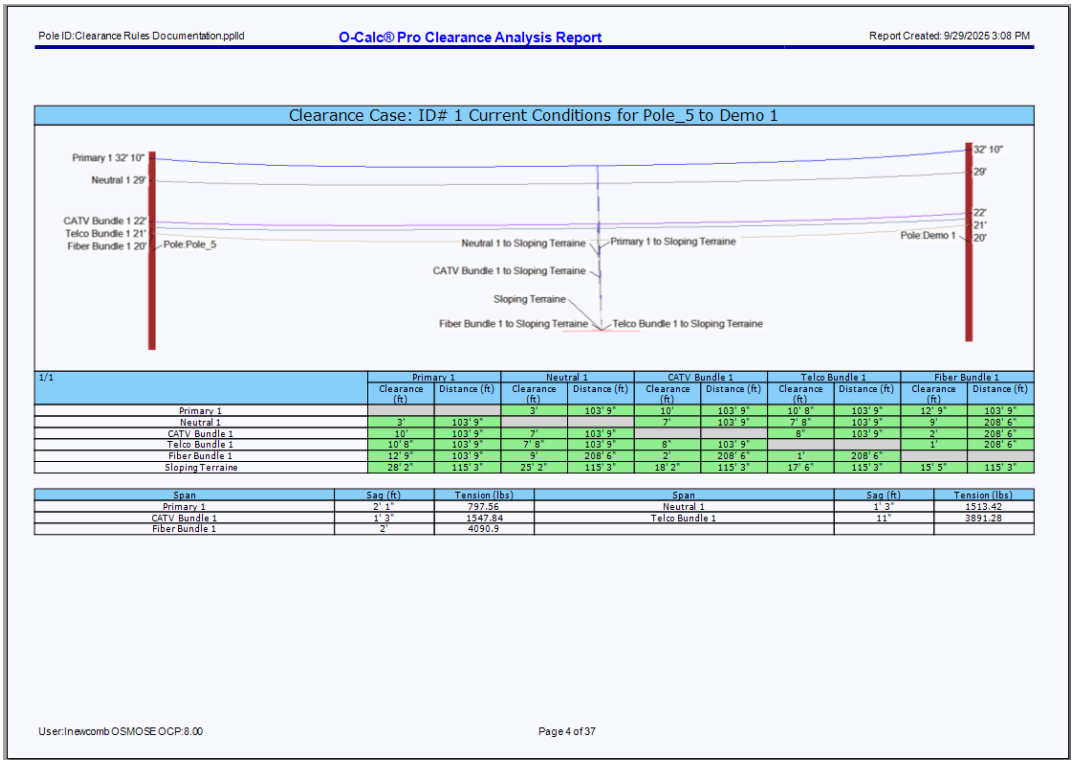
1/1	Primary 1			Neutral 1			CATV Bundle 1			Telco Bundle 1			Fiber Bundle 1		
	Clearance (ft)	Distance (ft)	ID	Clearance (ft)	Distance (ft)	ID	Clearance (ft)	Distance (ft)	ID	Clearance (ft)	Distance (ft)	ID	Clearance (ft)	Distance (ft)	ID
Primary 1				2' 6"	103' 9"	4	9' 1"	103' 9"	4	9' 9"	103' 9"	4	12'	103' 9"	4
Neutral 1	2' 6"	103' 9"	4				6' 8"	103' 9"	3	7' 3"	103' 9"	4	9'	1' 1"	4
CATV Bundle 1	9' 1"	103' 9"	4	6' 8"	103' 9"	3				7"	103' 9"	6	2'	208' 6"	6
Telco Bundle 1	9' 9"	103' 9"	4	7' 3"	103' 9"	4	7"	103' 9"	6				1'	208' 6"	1
Fiber Bundle 1	12'	103' 9"	4	9'	1' 1"	4	2'	208' 6"	6	1'	208' 6"	1			
Sloping Terraine	27' 1"	115' 3"	4	24' 8"	115' 3"	4	17' 7"	115' 3"	6	17' 1"	115' 3"	6	14' 10"	115' 3"	6

3. On page 3 the next section shows details about the span sag and tension amounts.

Span	Sag (ft)	Tension (lbs)	Span	Sag (ft)	Tension (lbs)
Primary 1	3' 2"	522.31	Neutral 1	1' 9"	1058.08
CATV Bundle 1	1' 5"	1311.14	Telco Bundle 1	1'	3474.07
Fiber Bundle 1	2' 3"	3553.61			

Page 4 – Blue – Individual clearance cases

These pages evaluate clearances on an individual case by case basis and show the clearances for the equipment under those loading conditions. Similar to the Orange pages these will also provide the user with the clearances of the euipment and show cells in green or red for compliance or violations of the rules, respectively.



Pole ID:Clearance Rules Documentation.ppltd O-Calc® Pro Clearance Analysis Report Report Created: 9/29/2025 3:08 PM

Clearance Case: ID# 1 Current Conditions for Pole_5 to Demo 1

1/1

	Primary 1		Neutral 1		CATV Bundle 1		Telco Bundle 1		Fiber Bundle 1	
	Clearance (ft)	Distance (ft)	Clearance (ft)	Distance (ft)	Clearance (ft)	Distance (ft)	Clearance (ft)	Distance (ft)	Clearance (ft)	Distance (ft)
Primary 1			3'	103' 9"	10'	103' 9"	10' 8"	103' 9"	12' 9"	103' 9"
Neutral 1	3'	103' 9"			7'	103' 9"	7' 8"	103' 9"	9'	208' 6"
CATV Bundle 1	10'	103' 9"	7'	103' 9"			8"	103' 9"	2'	208' 6"
Telco Bundle 1	10' 8"	103' 9"	7' 8"	103' 9"	8"	103' 9"			1'	208' 6"
Fiber Bundle 1	12' 9"	103' 9"	9'	208' 6"	2'	208' 6"	1'	208' 6"		
Sloping Terraine	28' 2"	115' 3"	25' 2"	115' 3"	18' 2"	115' 3"	17' 6"	115' 3"	15' 5"	115' 3"

Span	Sag (ft)	Tension (lbs)	Span	Sag (ft)	Tension (lbs)
Primary 1	2' 1"	797.56	Neutral 1	1' 3"	1513.42
CATV Bundle 1	1' 3"	1547.84	Telco Bundle 1	11"	3891.28
Fiber Bundle 1	2'	4090.9			

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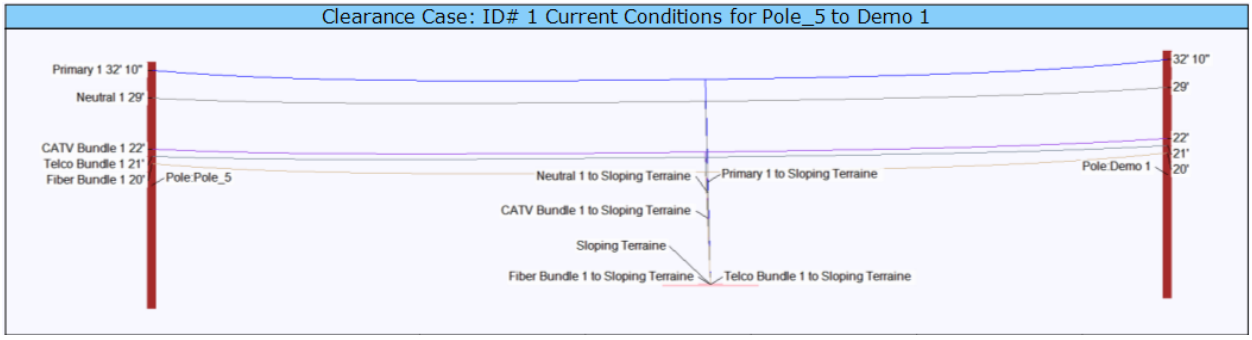
Page 4 top of the page see the following details:

1. The graphic shows the **Clearance Case: ID# 1 Current Conditions for Pole_5 to Demo 1** which contains a profile view of the heights of attachment.



2. On page 4 the next section shows details about the conductors and their clearances and distances between poles.

1/1	Primary 1		Neutral 1		CATV Bundle 1		Telco Bundle 1		Fiber Bundle 1	
	Clearance (ft)	Distance (ft)	Clearance (ft)	Distance (ft)	Clearance (ft)	Distance (ft)	Clearance (ft)	Distance (ft)	Clearance (ft)	Distance (ft)
Primary 1			3'	103' 9"	10'	103' 9"	10' 8"	103' 9"	12' 9"	103' 9"
Neutral 1	3'	103' 9"			7'	103' 9"	7' 8"	103' 9"	9'	208' 6"
CATV Bundle 1	10'	103' 9"	7'	103' 9"			8"	103' 9"	2'	208' 6"
Telco Bundle 1	10' 8"	103' 9"	7' 8"	103' 9"	8"	103' 9"			1'	208' 6"
Fiber Bundle 1	12' 9"	103' 9"	9'	208' 6"	2'	208' 6"	1'	208' 6"		
Sloping Terraine	28' 2"	115' 3"	25' 2"	115' 3"	18' 2"	115' 3"	17' 6"	115' 3"	15' 5"	115' 3"

3. On page 4 the next section shows details about the span sag and tension amounts.

Span	Sag (ft)	Tension (lbs)	Span	Sag (ft)	Tension (lbs)
Primary 1	2' 1"	797.56	Neutral 1	1' 3"	1513.42
CATV Bundle 1	1' 3"	1547.84	Telco Bundle 1	11"	3891.28
Fiber Bundle 1	2'	4090.9			