O-Calc® Pro 8.0 – SpidaCalc Integration Plugin

User Guide

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Osmose O-Calc® Pro 8.0 – SpidaCalc Integration Plugin User Guide

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O-Calc Pro's "SpidaCalc Integration Plugin"

Overview

The **SpidaCalc Integration Plugin** is an add-on for O-Calc Pro that allows the user to import *SpidaCalc* project files into an O-Calc Pro Line Design. There are convenient tools within the O-Calc Pro interface which enable the mapping of *SpidaCalc* Client files to O-Calc Pro Master Catalog elements. The plugin will read *SpidaCalc* Project files and attempt to create a fully connected O-Calc Pro Line Design incorporating any mapping of elements between the two systems. This tool is especially useful for users who may have existing *SpidaCalc* Project files and want to translate this data into O-Calc Pro Line Design files. Please note, this is a one-way process from *SpidaCalc* Project files to O-Calc Pro Line Design files.

Understanding Terminology

O-Calc Pro	Spida Calc	Description
Master Catalog (.pplc) file	Client (.client) file	File used to model pole equipment
Pole Model (.pplx or .pplld) files	Project (.spida) files	Pole Loading Analysis files
LE Collection Configuration plugin	SpidaCalc Integration plugin	Both plugins are needed to produce the SpidaCalc Configuration Mapping (.spdcfg) file.
Catalog file 'element'	Client file 'key'	Various equipment and poles being replaced during the mapping process.
Drag and Drop Mapping symbol --->	Key converted to an O-Calc Pro element	The result of replacing a SpidaCalc key with an O-Calc Pro element
Scenes	n/a	Relevant data associated with the pole file; latitude, longitude, elevation, etc.

Supported SpidaCalc Files and Versions

SpidaCalc®, developed by Bentley Systems, Incorporated has evolved through several major versions. The O-Calc Pro plugin attempts to work with the v8.0 and various sub-versions of the *SpidaCalc* software, in either metric units or imperial units.

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> ***Note**: Depending on the actual version the SpidaCalc project files were generated from, it may not be able to be mapped completely into O-Calc Pro Line Design, and some elements may need to be re-entered into your O-Calc Pro model by hand.*

The O-Calc Pro process for integrating *SpidaCalc* information is based on two separate files generated by the *SpidaCalc* system. The '**Client'** file (with extension *.client) typically defines the engineering and construction standards of an electric utility. The elements within the **Client** file attempt to be all encompassing in terms of poles, equipment, spans, and other elements. While the *SpidaCalc* '**Project'** file (with extension *.spida) includes explicit project information such as pole locations, pole designs with various equipment and spans attached.

Overview of the O-Calc Pro Integration Process

Based on these two files, the O-Calc Pro integration process is a two-step process. The first step is to read in the **Client** file using the standard O-Calc Pro plugin called "O-Calc LE Collection Configuration". This O-Calc Pro plugin is included with your O-Calc Pro subscription. The O-Calc LE Collection Configuration enables you to import the **Client** file and map individual **Client** file elements to explicit O-Calc Pro Master Catalog elements. The mapping configuration file is then saved as an O-Calc Pro configuration file (with the extension *.spdcfg).

The second step of the integration process makes use of the O-Calc Pro plugin called "*SpidaCalc Integration*" plugin. This plugin is necessary to complete the integration from *SpidaCalc* to O-Calc Pro and must be purchased and activated. (See the section below on Getting the Plugin.) The *SpidaCalc Integration* plugin enables the user to import a **Project** file (with extension *.spida) and then you must either individually map the elements of the **Project** file and/or apply the mapping within the O-Calc Pro configuration file (*.spdcfg). When the **Project** elements to O-Calc Pro elements mapping is to the user's satisfaction, the *SpidaCalc Integration* plugin has an option to convert the project file pole models into a fully connected O-Calc Pro Line Design.

The remainer of this User Guide gives more details on these processes and the O-Calc Pro plugins.

Getting the *SpidaCalc Integration* Plugin

The *SpidaCalc Integration* plugin is a **paid add-on** to your O-Calc Pro subscription.

To purchase and activate:

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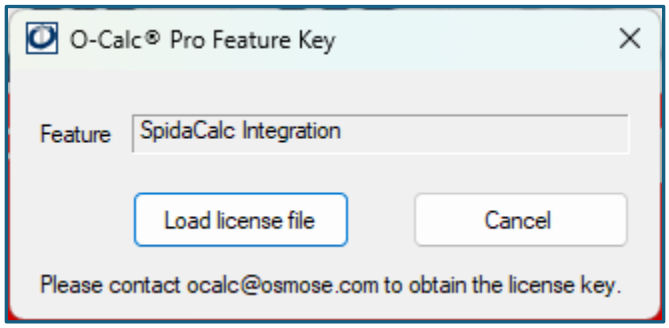
- Contact: **oclac@osmose.com**
- You'll receive a license file (*.dat) linked to your O-Calc Pro subscription.

Activation Steps

1. Open **Manage Plugins** in O-Calc Pro.
2. Enable the *SpidaCalc Integration* and the **O-Calc LE Collection Configuration** plugins.
3. Restart O-Calc Pro.
4. When prompted, click **Load license file** and select the .dat file you received.



Note: The O-Calc LE Collection Configuration does not need a separate license file.

Mapping the Client file with O-Calc LE Collection Configuration Plugin

The O-Calc LE Collection Configuration plugin when activated will include the following docked O-Calc Pro Collection Configuration window:

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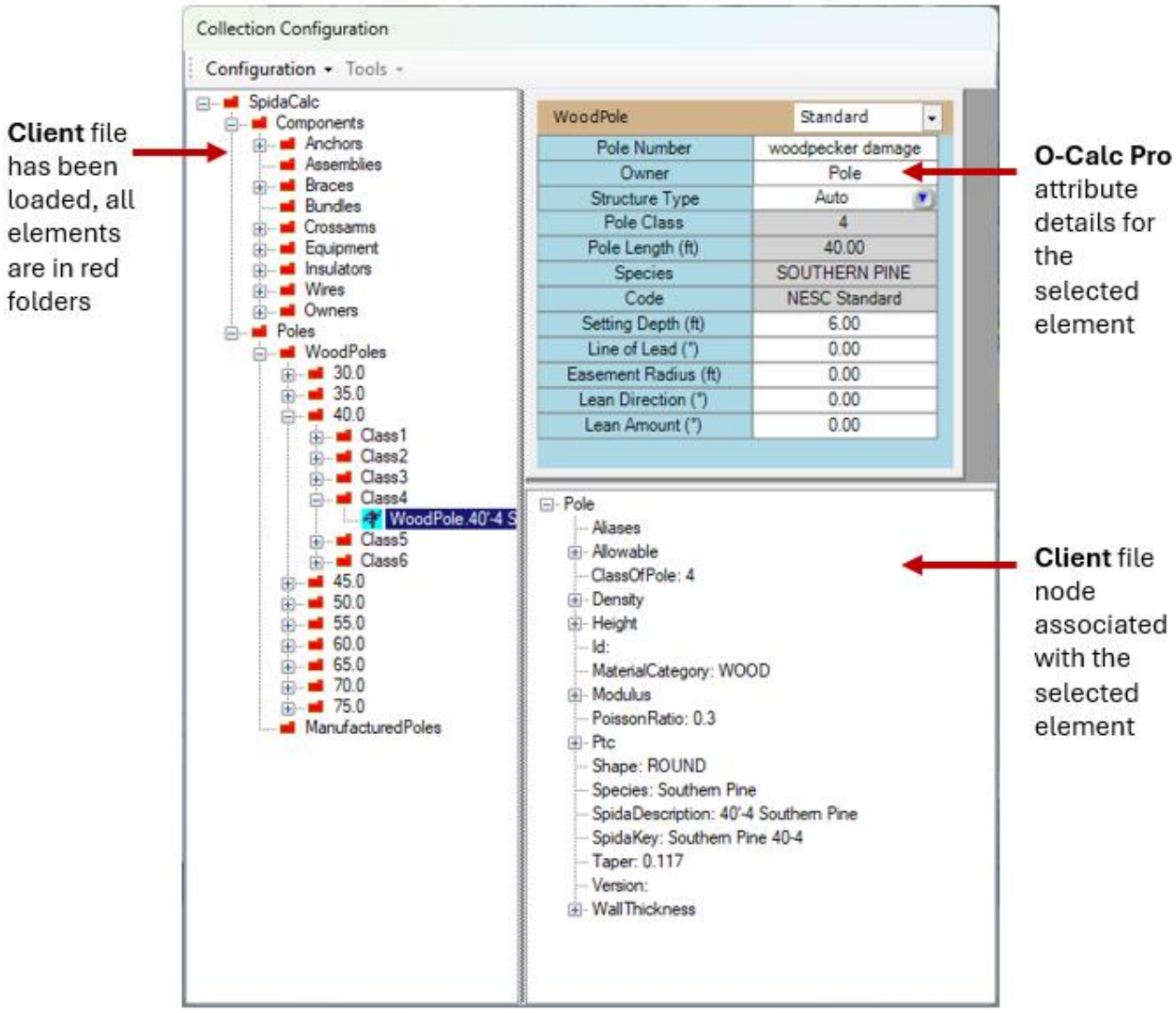

In this screen shot a **Client** file has been loaded, and all the elements have been read and placed into appropriate red folders. The individual elements at the top of the tree control and the poles (either standard wood poles or manufactured poles) at the bottom of the tree control. The wood poles, based on the length, species, and class are automatically mapped to the standard wood poles as defined by the ANSI 05.1 standards.

When a mapped element is selected, the O-Calc Pro attribute details will be displayed in the upper right panel of this screen. If necessary, some of these attributes can be updated. In the lower right panel is the **Client** file node associated with the selected element. This read-only information can be helpful to make any necessary changes within the O-Calc Pro attribute details.

Note: some information regarding the O-Calc LE Collection Configuration can be found on this video: O-Calc LE Configuration

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Load Client File

The O-Calc LE Collection Configuration plugin has an option to load the **Client** file. It is found under the menu:

Configuration -> New Configuration -> SpidaCalc Configuration -> Load Client File

An Open **Client** file dialog will be displayed to permit you to navigate to a Client file (files with extensions *.client). Once the Client file is selected, tree control (red folders) will be fully populated with information directly from the Client file.

Mapping Client file keys to O-Calc Pro elements

The next step in the process is to open various sections of the red-folder tree control and then drag-and-drop O-Calc Pro Master Catalog elements onto the Client file 'keys'. This replacement will map the Client file 'key' directly to an O-Calc Pro element. When this mapping occurs, you will see Client key pointing with an arrow (--->) to an O-Calc Pro element. Below is an example of this drag-and-drop mapping for the 'TRANSFORMER' folder:

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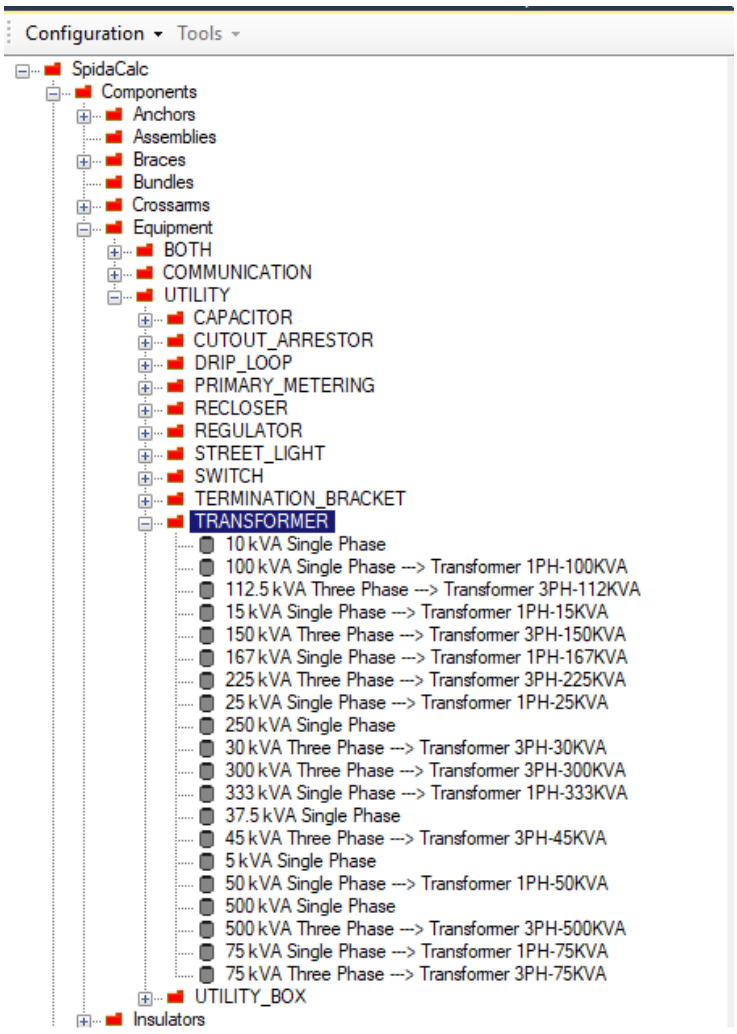

Notice that not all the Client keys have been mapped in this example (10 k VA Single Phase, 250 k VA Single Phase, etc.). It is not necessary to have each, and every Client file key mapped at this stage of the process. Selecting any individual key will populate the right-hand panels with the O-Calc Pro item in the top right corner and the Client item in the lower right corner. This can be helpful for making minor attribute updates to the mapped O-Calc Pro item.

Once the Client file keys have been mapped, the user can save the mapping configuration using the menu item:

Configuration -> Save Configuration As

Which will save the mapping configuration with the supplied name as a SpidaCalc Configuration Mapping file (with extension *.spdcfg).

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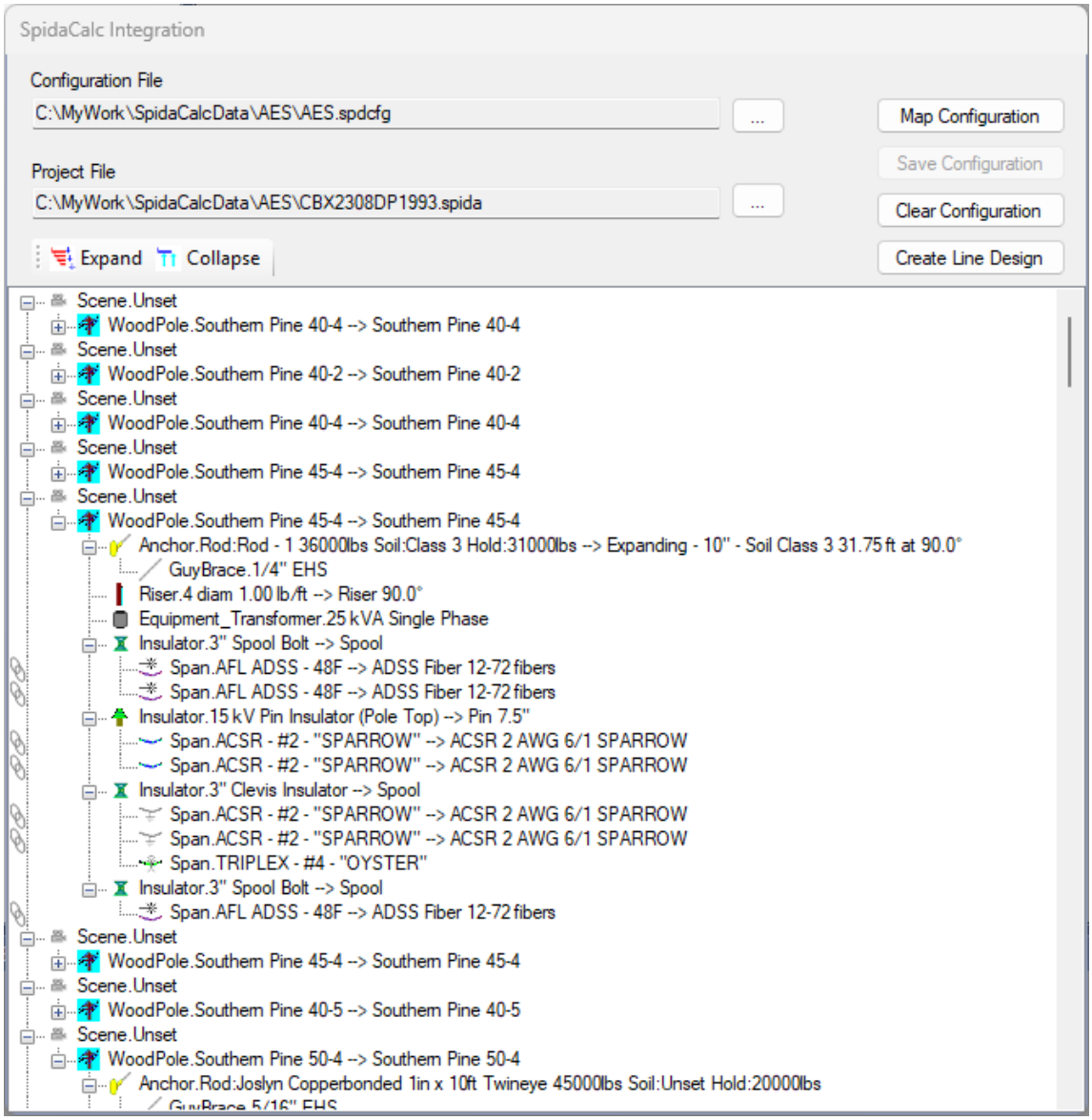
The O-Calc LE Collection Configuration plugin also enables you to reload the saved SpidaCalc Configuration Mapping file, make additional mapping changes, and save it again as necessary.

SpidaCalc Integration Plugin

Once the SpidaCalc Integration plugin has been loaded and activated, it will be displayed within the O-Calc Pro interface as the following docked window:



This interface has two separate files that can be loaded using the ellipse buttons. The Configuration file in which a previously save SpidaCalc Configuration Mapping file

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(extension *.spdcfg) can be loaded. And a **Project** file with the extension *.spida. When a Project file is loaded, the list of poles within the Project file will be listed in the main window below, called the Project file window. This tree control of Scenes and Poles can be expanded or collapsed either wholesale using the Expand or Collapse buttons or by individual expanding or collapsing branches using the (+) plus and (–) minus signs within the tree control.

Each expanded pole lists the various **Client** (or **Project***) “keys” in a standard O-Calc Pro model hierarchy. Within this interface it is possible to drag-and-drop O-Calc Pro elements, from a Master Catalog for example, onto the various Client keys to ‘replace’ them. For each unique Client key, a single drag-and-drop will populate all within the loaded Project file.

* Note: The “keys” are either within the **Client** file or the **Project** file. For clarity, this document always refers to the “keys” as Client keys.

For example, in the screenshot below, the ‘ACSR 2 AWG 6/1 SPARROW’ span was dragged-and-dropped on to just one ‘Span.ACSR - #2 “SPARROW”’ primary key, therefore all four where automatically mapped. (Key ---> Span pairs outlined with red rectangle). But also take notice that the neutral keys ‘Span.ACSR - #2 “SPARROW”’ (outlined with an orange rectangle) did not automatically get mapped. This is because the primary keys (with blue span icon) have a **Client** file usage type of primary, while the neutral keys (with gray span icon) have a usage type of neutral. Therefore, one should drag-and-drop a different O-Calc Pro catalog item, namely a neutral identified Sparrow conductor in this case.

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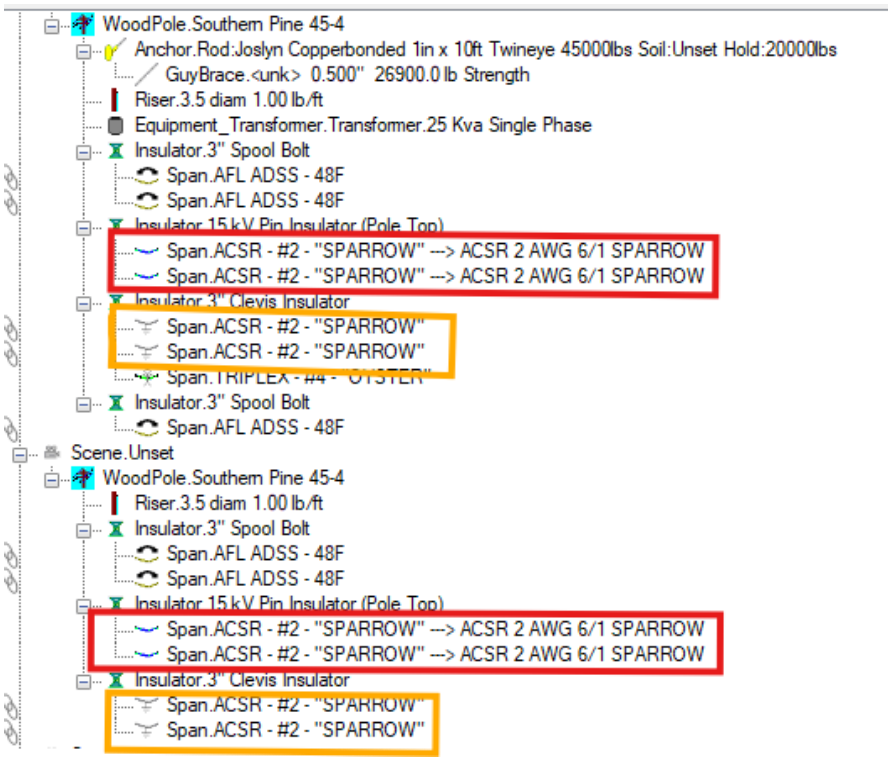

Using the Client File Configuration Mapping File

As was outlined in the section **Load Client File**, the *SpidaCalc Configuration Mapping* file (*.spdcfg) is a mapping configuration file based on the full **Client** file. It maps **Client** keys to O-Calc Pro elements. If one of these configuration files has been loaded within the *SpidaCalc Integration Plugin*, then these **Client** 'keys' to O-Calc Pro 'element' mapping can be applied directly to the **Project** file by clicking on the button "Map Configuration".

> ***Important Note:*** *While it is possible to save mapping changes to the same* SpidaCalc Configuration Mapping file (**.spdcfg) from either the '**O-Calc LE Collection Configuration**' plugin or from the '**SpidaCalc Integration**' plugin, it is not possible to have the same *.spdcfg file open in both plugins at the same time. If the* SpidaCalc Configuration Mapping file *(*.spdcfg) is already open in one plugin the other plugin will present a message to you that it cannot be open in both plugins.*

Map Configuration Button

The Map Configuration button will read through the various mappings within the loaded SpidaCalc Configuration Mapping file and attempt to find the same SpidaCalc key within

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the Project file. For every match found, the Project file display will be updated with the appropriate **Client** key ---> O-Calc Pro element mapping.

Save Configuration Button

If there are still unmapped **Client** keys within the Project file display, you have the option to map these by dragging-and-dropping from within the O-Calc Pro application, for example from a Master Catalog. These new/additional mapping tasks can be saved back to the *SpidaCalc Configuration Mapping* file by selecting the "Save Configuration" button. In this way the *SpidaCalc Configuration Mapping* file can be further enhanced with mapped elements as more **Project** files are converted to O-Calc Pro Line Designs.

Clear Configuration Button

The "Clear Configuration" button will clear the full the *SpidaCalc Integration plugin* interface. It will clear the selected SpidaCalc Configuration Mapping file, the selected **Project** file, and the **Project** file display. If there happens to be unsaved *SpidaCalc Configuration Mapping* file updates, the "Clear Configuration" option will prompt the user if they wish to save these updates or not.

Create Line Design Button

The "Create Line Design" button will take the currently displayed information/mapping as listed within the Project File display window and generate an O-Calc Pro Line Design. The default Line Design name will be the name of the Project File with the standard Line Design file extension, namely *.pplld. Once the Line Design has been created within the O-Calc Pro interface, an O-Calc Pro user can further manipulate this Line Design using all the available tools within O-Calc Pro.

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Appendix

SpidaCalc Integration Plugin – Default value mapping

When the Client files and Project files are read into the O-Calc Pro environment using either the Collection Configuration Plugin or *SpidaCalc Integration Plugin*, the O-Calc Pro environment attempts to automatically map the elements at the element level (span, equipment, pole, etc.). Not all the defined SpidaCalc elements have uniquely, well defined O-Calc Pro element equivalents.

The following table lists the various SpidaCalc element types and subtypes with the corresponding O-Calc Pro element types they are automatically mapped to. If a SpidaCalc element type/subtype is not found within the list, then O-Calc Pro will default the value as listed in the table below.

Default Mapping Table

SpidaCalc Type	SpidaCalc Subtype	Default Value
Equipment • Equipment Type	WIRELESS_ANTENNA JOINT_USE_BOX CUTOUT_ARRESTOR PRIMARY_METERING TERMINATION_BRACKET UTILITY_BOX DRIP_LOOP MOLDED_VACUUM_FAULT_INTERRUPTER CAPACITOR REGULATOR RECLOSER SWITCH TRANSFORMER RISER STREET_LIGHT	If Equipment Type is not within the list, then default is: **Generic Equipment**
Span • Usage Group	PRIMARY SECONDARY NEUTRAL SPANHEAD SIDEWALK DOWN COMMUNICATION_SERVICE COMMUNICATION OPEN_WIRE UTILITY_SERVICE	If Usage Group is not within the list, then default is: **Unknown**
Measurement • Units of Measure	FEET FOOT METRE INCH	If Units of Measure is not within the list, then default is: **INCH**

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Power Equipment • Transformer Type	CAPACITOR REGULATOR RECLOSER SWITCH TRANSFORMER	If Transformer Type is not within the list, then default is: **Transformer**

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