

# Print Manager User Guide

## College Station Utilities

### Cody Cook - Summer 2017

Print Manager

File

File Name

Search

Reset

Substation	File	Drawing Name	Type	Date	Comments
Greens Prairie	MEI-11860-612R-2F S.pdf	PANEL 2F REMOVAL ERCOT METERING LAYOUT AND MATERIALS		03/09/17	Greens Prairie Ring Bus Modifications
Greens Prairie	MEI-11860-101 S.pdf	OPERATING ONE-LINE DIAGRAM		03/09/17	Greens Prairie Ring Bus Modifications
Greens Prairie	MEI-11860-308 INSTALL CONDUIT SCHEDULE S.pdf	CONDUIT SCHEDULE		03/09/17	Greens Prairie Ring Bus Modifications
Greens Prairie	MEI-11860-301 S.pdf	CONDUIT PLAN ADDITION		03/09/17	Greens Prairie Ring Bus Modifications
Greens Prairie	MEI-11860-722 S.pdf	PANEL 2R CAP BANK WIRING DIAGRAM		03/09/17	Greens Prairie Ring Bus Modifications
Greens Prairie	MEI-11860-626-6R S.pdf	PANEL 6R (SPARE) LAYOUT AND MATERIALS		03/09/17	Greens Prairie Ring Bus Modifications
Greens Prairie	903.pdf	CONTROL BUILDING LIGHTING AND RACEWAY PLAN		03/28/16	Greens Prairie Ring Bus Modifications
Greens Prairie	MEI-11860-715.pdf	PANEL 5F WIRING DIAGRAM		03/23/16	Greens Prairie Ring Bus Modifications
Greens Prairie	MEI-11860-754.pdf	GCB41002 CT FIELD WIRING DIAGRAM		06/06/16	Greens Prairie Ring Bus Modifications
Greens Prairie	MEI-11860-011 LAYOUT-2 S.pdf	SUBSTATION LAYOUT PROJECT OVERVIEW		03/09/17	Greens Prairie Ring Bus Modifications
Greens Prairie	MEI-11860-030.pdf	STRUCTURE UNITS 5 TO 7		05/16/16	Greens Prairie Ring Bus Modifications
Greens Prairie	MEI-11860-713 S.pdf	PANEL 3F SCADA WIRING DIAGRAM		03/09/17	Greens Prairie Ring Bus Modifications
Greens Prairie	MEI-11860-616R.pdf	PANEL 6F REMOVAL (SPARE) LAYOUT AND MATERIALS		04/22/16	Greens Prairie Ring Bus Modifications
Greens Prairie	MEI-11860-723R.pdf	PANEL 3R REMOVAL WIRING DIAGRAM		03/23/16	Greens Prairie Ring Bus Modifications
Greens Prairie	MEI-11860-623.pdf	PANEL 3R DISTRIBUTION TRANS. #1 LAYOUT AND MATERIALS		04/22/16	Greens Prairie Ring Bus Modifications

Open

Delete

Edit



**College Station Utilities**  
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# Quick Start Guide

- 1. Launching Print Manager:** To launch the print manager application, navigate to: [O:\SUBSTATIONS-METERING\Prints\Print Manager](#) and open the “Print Manager” shortcut (This shortcut can be copied to your desktop by right-clicking the icon, going to [Send to](#) and then [Desktop \(create shortcut\)](#)).
- 2. Select Property to Search:** To search for a print, first select the property to search by. In the drop-down menu that should start on “Drawing Name”, you can select to search by [Substation](#), [File Name](#), [Drawing Name](#) (actual name on the print), [Type](#), [Date](#), or [Comments](#).
- 3. Search Prints:** After the property is selected, enter your query in the text box next to the properties drop-down menu. Then either hit enter or click the [Search](#) button. Search criteria for each property will remain until you enter in a new query for that property or hit the [Reset](#) button, clearing queries of all properties.
- 4. Opening Prints:** To open a print you can either [double click](#) the row of a single print, or you can select multiple prints by [clicking and dragging](#) or [holding Ctrl and clicking](#) multiple prints and then clicking the [Open](#) button. Be warned opening too many files, especially CAD files, may cause your computer to slow or the program to crash.
- 5. Editing Prints:** To edit a print select the [Edit](#) button and then [double click](#) any cell to edit it just like a spreadsheet. Click the [Edit](#) button again to exit edit mode and save changes.
- 6. Import Prints:** To import a print into the program the actual file must first be manually copied into the folder [O:\SUBSTATIONS-METERING\Prints\Print Manager\Prints](#). Then under the [File](#) menu at the top, select first [Update Names](#). After the command window disappears, go back into the [File](#) menu and select [Import Names](#). New prints will likely appear near the top of the list of prints.

## About

Print Manager is a Windows application that catalogs the substation prints for College Station Utilities. It was developed by Cody Cook, a summer intern for College Station Utilities for the sake of simplifying the task of locating print files of many substations.

Previously many of the files existed across a multitude of different folders and drives and rarely had a naming standard, much less a descriptive one. With this program prints can easily be searched and opened from a single location. All print files are contained within a single folder for simplicity and to make it easy to backup. The program simply keeps a list of the links to each print and other information that is entered in manually such as: substation, drawing name (name on the actual print), type, date, and comments. This allows for users to quickly narrow down the set of prints even if they don't know the exact name of a print.

The backend of the program was coded from the ground up in C++ ensuring speed and security, and the interface was designed in Qt Creator (<https://www.qt.io/>). Because the app is a non-distributed, internal, open-source, libraries are dynamically linked, and no specific compensation was gained from the development of the app, it complies with the free, open source LGPL licensing (<https://www.qt.io/qt-licensing-terms/>)

For more information or to view the source code, check out the github repository:

<https://github.com/codycook96/Print-Manager>

# File Directory

1. **Location:** At the time of writing this guide, the main directory of the application is [O:\SUBSTATIONS-METERING\Prints\Print Manager](#).
2. **Launching the App:** Within the main directory is a shortcut called [Print Manager](#). Use this to launch the app. This shortcut can be copied to your desktop by right-clicking the icon, going to [Send to](#) and then [Desktop \(create shortcut\)](#).
3. **Folders:**
  - a. **Source Folder:** The folder named [Source](#) contains all of the C++ .cpp files .h files that were used to create the app, as well as all the relevant Qt Creator files, samples of the database and metadata files, the script used to extract names from the [Prints](#) folder, and this user guide.
  - b. **Release Folder:** This folder contains the compiled contents of the source code, including the executable.
  - c. **Output Folder:** This folder contains the [.cvs](#) (excel) files containing all the information about the prints.
  - d. **Prints Folder:** This folder contains all of the actual print files. Whenever a new print file is to be added, it should be copied into this folder.
4. **Backup Prints Folder:** To make a backup of this folder, simply make a copy of the folder, rename it something descriptive like “Prints-Backup-[today’s date]”, [right-click](#) the folder, select [Send to](#) and then [Compressed \(zipped\) folder](#), and then move it somewhere safe.
5. **Restore Prints Folder:** Assuming you already have a zip file, copy it into the [Print Manager](#) folder, unzip the file, rename or delete the old Prints folder, then rename the unzipped folder [Prints](#). Prints may need to be updated from within the program
6. **Change Directory:** Whenever the location of the [Print Manager](#) main directory is changed, the new location will need to be update within the program. Within the program, under the [File](#) menu select [Change Directory](#), then select the [Print Manager](#) folder in its new location.

## Searching Prints

- 1. Initial Ordering:** Prints are always ordered by popularity even after being filtered by search queries. Prints that have been opened recently and opened often will appear closer to the top of the list.
- 2. Search Property:** Prints can be searched by the following properties:
  - a. Substation: the substation to which the print is for
  - b. File: the name of the file as it currently exists in the Prints folder
  - c. Drawing Name: the name that actually appears on the print
  - d. Type: any category the print belongs to (E.g. “House Panel” or “Elevations”)
  - e. Date: the date that appears on the print, either date created or last updated
  - f. Comments: any comments or further tags to help with searching (E.g. Pike Revisions)
- 3. Search:** Select a desired search property from the [drop-down](#) menu on the left, then enter the query in the [text box](#), then press [Enter](#) or select the [Search](#).
- 4. Stacking Queries:** Each time you select a new search property the previous queries are not overwritten. This allows for continual refining, perhaps first by substation, then type, then name.
- 5. Resetting Queries:** You can overwrite previous queries by simply selecting the same search property and entering a new query. You can also select the [Reset](#) button to reset all queries.

## Opening Prints

- 1. Opening Single Prints:** To open a single print, [double click](#) the row of the prints. The file may not open if that file type does not have a default program.
- 2. Opening Multiple Prints:** To open multiple prints, first select multiple prints by [clicking and dragging](#) or [holding Ctrl and clicking](#) multiple rows. Then select the [Open](#) button at the bottom left. You will receive a warning if you attempt to open more than six files. This is because opening too many files may cause slow downs or crashes.

## Editing Prints

1. **Edit Mode:** To toggle edit mode, select the [Edit](#) button at the bottom right. All edits are saved upon exiting edit mode.
2. **Editing Fields:** Once in edit mode, individual cells can be edited by [double clicking](#) them.
3. **Deleting Prints:** To delete one or more prints from the program simply select them and click the [Delete](#) button at the bottom right. Note this does not delete the file from the prints folder.
4. **Editing File Name:** It should be noted that if the file name is changed to something that does not exist in the Prints folder, the field will turn red upon exiting edit mode and it will throw an error when trying to open it.

## Importing Prints

1. **Prints Folder:** Only files in the [Prints](#) folder can be added into the program, first manually copy all files into this folder.
2. **Update Names:** Before importing names, first update the names list by selecting [Update Names](#) under the [File](#) menu. This launches a separate batch script so your computer may ask permission to run the file. Then wait til the command window is gone.
3. **Import Names:** Then under the [File](#) menu select [Import Names](#). This should add all files that do not already have a corresponding print in the program.

## Backup Prints

1. **Backup Prints Folder:** See File Directory section of this guide.
2. **Backup Database:** Under the [File](#) menu select [Create Backup](#). This should create a file named [backup.dat](#) in the [Source](#) folder.
3. **Restore Backup:** To restore a backup simply delete or rename the old database.dat file in the [Release/release](#) folder, move the backup into that folder and rename it [database.dat](#).

## Comments and Tips

**Adjusting Search Window:** You can drag and stretch the columns in the search window just as you can with Excel.

**Using Excel to Edit and Add Prints:** If you already have a list of the names and other information about prints, it may be faster to edit the database in excel rather than through the Print Manager. To do this, open Excel, and drag [database.dat](#) from the [Release/release](#) folder onto the Excel window. Then you can sort the file names, copy and paste data, and do any other data manipulation excel allows. Then when you save ensure it is to the same location and filename.

**Program Slow or Not Responding:** In my limited testing there were a few times when the program when slow down and for a second stop responding. This is not due to a crash or a bug, but most likely because the program is operating on and reading files from the network drive. Sometime in the future, especially if the number of files reaches the tens of thousands, it may be wise to make a copy the program to your individual computer.

**Moving Program Location:** To change the location of the program simple copy the entire [Print Manager](#) folder to the new location and the update the directory within the program (see the File Directory section).

**Export To Excel:** You can also export all the data, in the same format as you see in the search window, into excel. Under the [File](#) menu select [Export to Excel](#), enter a name for the file, then the file should open in Excel. If it does not launch in Excel, the file should be located in the [Output](#) folder.

**Updating, Revising or Developing:** If you have an interest in changing or continuing to develop this program, you can get the source code from Github at

<https://github.com/codycook96/Print-Manager> or from the Source folder in the network drive assuming you are working for CSU. I would advise having a decent grasp on C++ and watching some tutorials on Qt Creator. This app is useful seems to hold up to much of my testing, but it's obviously not perfect and I am still learning programming myself. I will not be able to continue to develop it so the code on Github will be as it was when I concluded my internship at the end of Summer 2017.