Tabulation of Signs

The following items are included in the tab sheet:

- Pay Items are shown across the top and are sorted by ascending Pay Item number
- The Structure Number, Alignment Name For Station Offset Callout, and Station Offset columns are fixed; all others can be deleted using the Data Entry button
- Project totals are calculated for each Pay Item and shown at the bottom of the tab sheet

Important! The ***Sign Data*** tab is used to manage the contents of the Traffic_ITS Sheet. **Do not modify** the data on this tab.

There are four major steps involved in using tab sheets:

1. Locating the Pay Item list
2. Entering pay item data into an excel spreadsheet
3. Preparing the spreadsheet for use in a plan set
4. Linking the tab sheet to a MicroStation drawing

Detailed instructions are covered in Chapter 15 - Tabs Sheets of ***A Practical Guide for Using InRoads***.

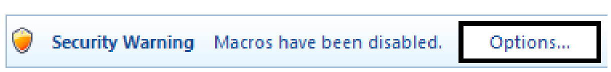
1.0 Locating the Pay Item List

The default Pay Item list an Excel file named ***Trnsport_Itemlist.csv.*** This file is located in the ***C:\Workspace\Workspace-CDOT_XM\Standards-Global*** folder and is generally updated by ServerCop.

To get started:

1. Open the ***12345TRAF_Tabulation of Traffic Signs.xls*** file from the ***C:\Projects\12345\Traffic_ITS\Drawings\Tabs*** folder or copy the default file from the ***C:\Workspace\Workspace-CDOT_XM\Project Template\Traffic_ITS\Drawings\Tabs*** folder.

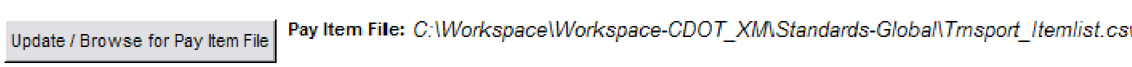
   Note: Some computers may generate a ***Security Warning*** that ***Macros have been disabled*** similar to the one below.

   If this happens, be sure to **Enable**s the Macros before continuing.

2. Verify the ***Pay Item file*** being used.

   The Pay Item file being used in the tab sheet is listed next to the ***Update/Browse for Pay Item File*** button as shown below.

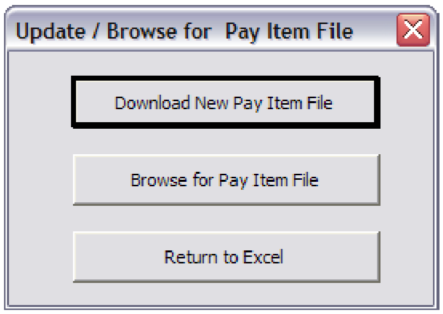
   Note: If the location of the file is listed in red text, this indicates that the Pay Item file is not found.

The steps below illustrate how to attach a different Pay Item list to the tab sheet using the ***Update/Browse for Pay Item File*** dialog box.

3. **<D>** the **Update/Browse for Pay Item File** button.

   This displays the ***Update/Browse for Pay Item File*** dialog box.

4. **<D>** the **Download New Pay Item File** button to access the most current Pay Item file from the internet.

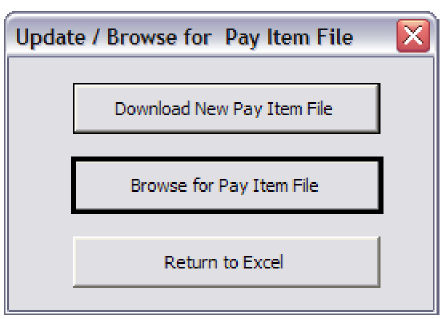


   This will bring up a spreadsheet in Excel.

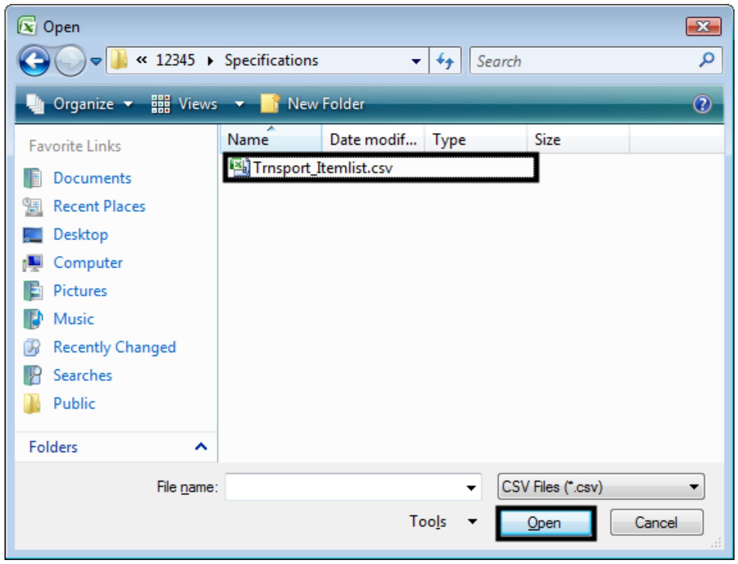
5. **Save** the file to a known location, preferably the ***\Specification*** folder of in the project directory.

   Note: Do not change the name of the file, only the location.

6. Load the new/updated Pay Item file by **<D>** the **Browse for Pay Item File** button.

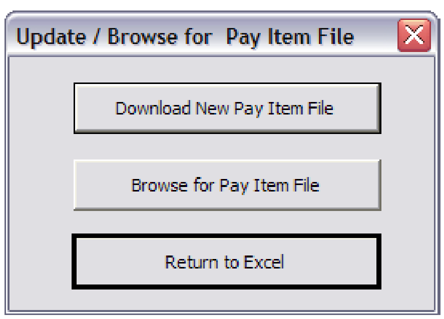


7. In the ***Open*** dialog box, navigate to the Pay Item list file just downloaded and open it.



After choosing Open, the ***Update/Browse for Pay Item File*** dialog box should display again.

8. In the ***Update/Browse for Pay Item File*** dialog box, **<D> Return to Excel** to dismiss the ***Update/Browse for Pay Item File*** dialog box and return to the spreadsheet.



9. Save the ***12345TRAF_Tabulation of Traffic Signs.xls*** file so that the Pay Item file remains attached to the spreadsheet.

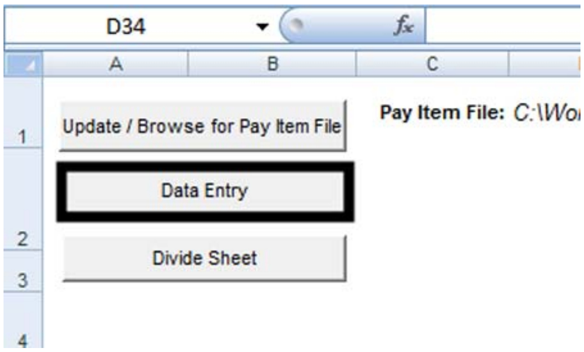
2.0 Entering Pay Item Data Into an Excel Spreadsheet

The overall steps for modifying the tab sheet are:

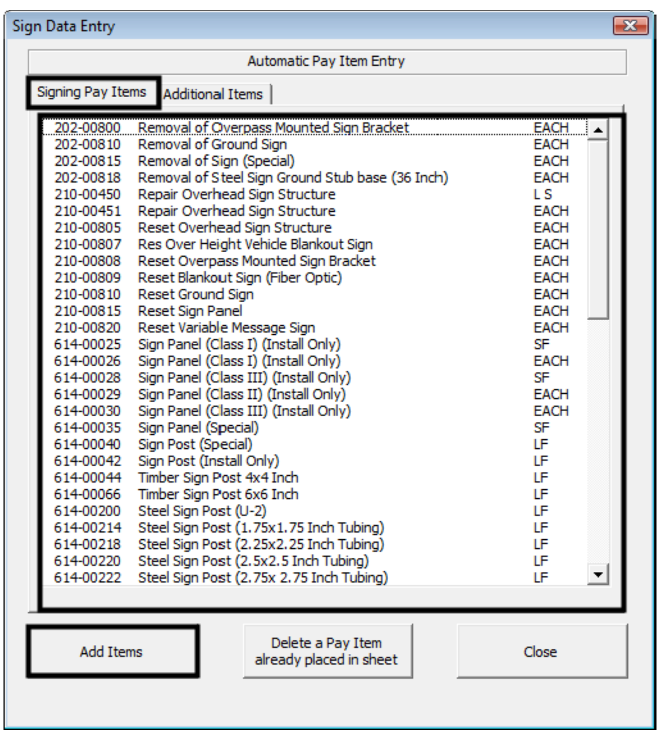
1. Adding a Pay Item
2. Removing a Pay Item
3. Entering Quantity Data
4. Adding or deleting rows

2.1 Adding a Pay Item

1. **<D>** the **Data Entry** button. This displays the ***Sign Data Entry*** dialog box.



2. **<D>** on the **Signing Pay Items** tab. This contains the Pay Item list.
3. Select the desired Pay Items from the list. Multiple Pay Items can be highlighted by holding the Ctrl key then selecting the Pay Items. (Note: holding the Ctrl key and dragging through several items will deselect previously selected items.)
4. **<D>** the **Add Items** button to update the spreadsheet with the selected Pay Items.



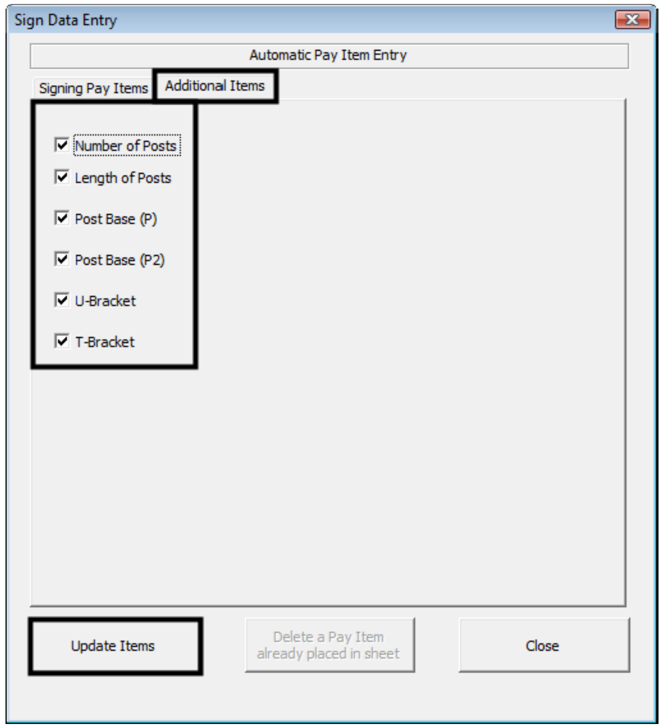
5. Additional Pay Items can be added as explained in steps 2 through 4. The columns are resorted, keeping the column contents with the proper Pay Item.

Columns for additional hardware associated with the sign can also be added or deleted.

6. **<D>** the **Additional Items** tab to display the list of items.

7. Toggle on or off the desired items.

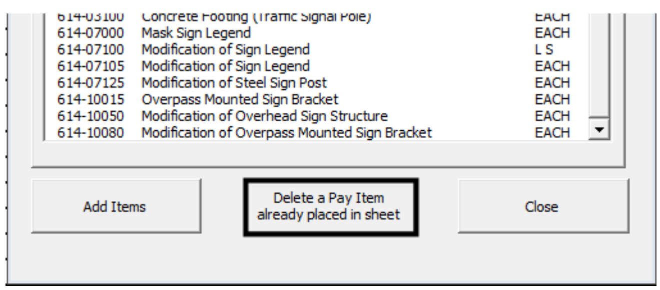
8. **<D>** the **Update Items** button to accept the changes and modify the table.



2.2 Removing Pay Items

1. To remove unused Pay Items, **<D>** on the **Signing Pay Items** tab.

2. **<D>** the ***Delete a Pay Item already placed in sheet*** button. The ***Delete Pay Item*** dialog box is displayed.

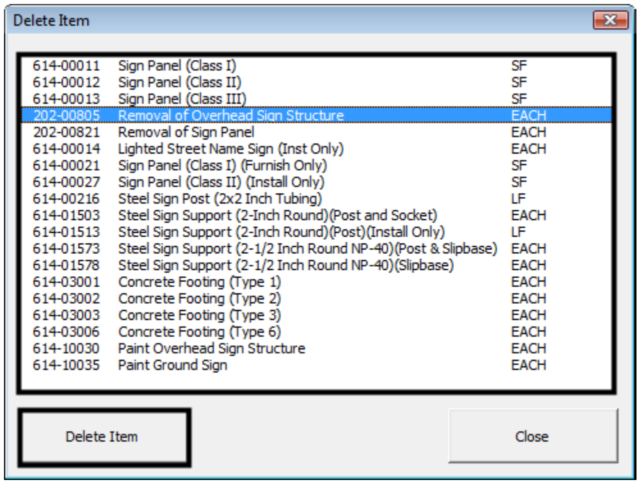


3. Highlight the Pay Item to be deleted.

4. **<D>** the **Delete Item** button. This removes the Pay Item from the spreadsheet and condenses the remaining data.

Note: Only one Pay Item at a time can be selected for removal.

Note: Data entered in the deleted Pay Item rows will also be deleted.



5. Repeat steps 3 and 4 to delete additional items.
6. **<D> Close** to dismiss the ***Delete Pay Item*** dialog box.
7. **<D> Close** to dismiss the ***Sign Data Entry*** dialog box.

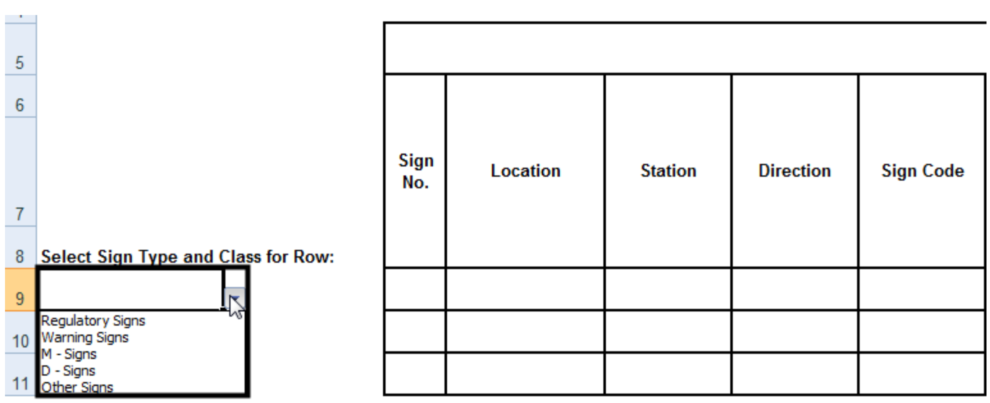
2.3 Adding Quantity Data

Next, quantity data is added to the sheet. The spreadsheet only does calculations to convert the width and height measurements into square feet for the Class I, Class II, and Class III sign panels. All other quantity calculations must be done prior to entering the data into the spreadsheet.

Columns ***A*** (***Select Sign Type***) and ***B*** (***Class for Row***)(outside of the table borders), are used to set the type and class of sign panel. The settings in these fields affect the data available for other fields in the table.

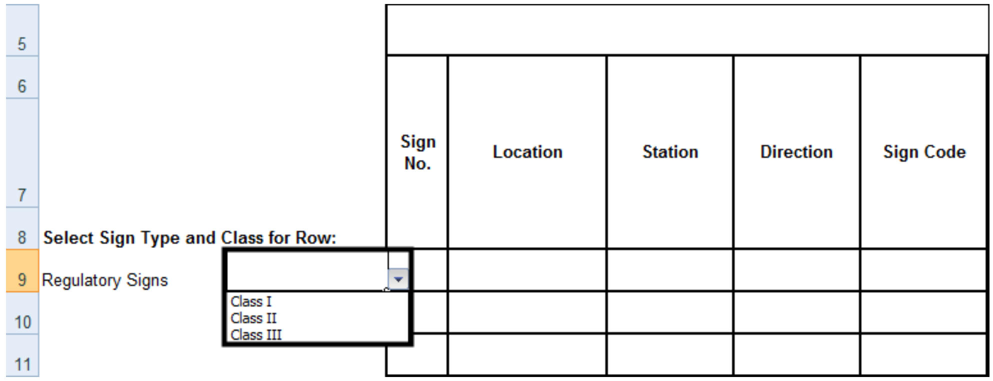
To set the Type and Class of sign panel:

1. **<D>** in the desired cell in column ***A*** (this will be on row 9 in a new file).
2. Use the drop down menu to select the desired **Sign Type**.



3. ***Tab*** or **<D>** to the ***B*** column of the row.

4. Use the drop down menu to select the desired **Sign Class**.



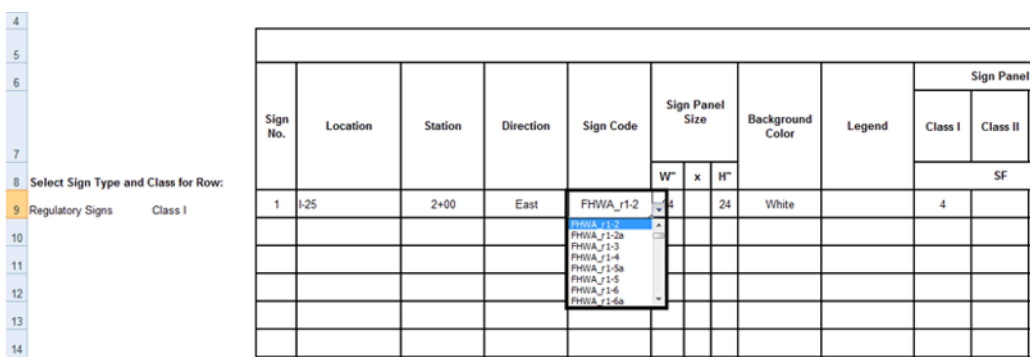
Columns ***C*** through ***F*** are used to define the sign number and location of the sign.To add quantity data to these columns:

5. ***Tab*** or **<D>** to the ***C*** column (***Sign No.***) of the row.
6. Key in the desired value.
7. Repeat steps 5 and 6 for columns ***D (Location)***, ***E (Station)***, and ***F (Direction)***.

   Note: The "+" sign is automatically inserted into the station number if it is not keyed in. Also, stations are rounded to the nearest whole station.

   Column ***G*** (***Sign Code***) used a drop down menu populated with items based on the sign type selected in column ***A***.

8. ***Tab*** or **<D>** to the ***C*** column (***Sign Code***) of the row.
9. Use the drop down menu to select the desired **Sign Code**.



For signs with a set width to height ratio, selecting the sign code automatically populates the columns ***H*** (***W"***), ***J*** (***H"***) and ***K*** (***Background Color***) cells as well as the corresponding Sign Panel Class cell in either column ***N*** (***Class I***), ***O*** (***Class II***), or ***P*** (***Class III***). The Sign Panel Size can be changed after the Sign Code has been selected.

10. ***Tab*** or **<D>** to the ***H*** column (***W"***) of the row.
11. Use the drop down menu to select the desired panel width.

Note: If the sign code has a fixed width to height ratio, the value in the ***J*** column (***H"***) will also be set.

12. If the sign code does not have a fixed width to height ratio, tab to the ***J*** column (***H"***) and key in the desired value.

13. If the sign code does not have a fixed width to height ratio, tab to the appropriate ***Sign Panel Class*** column (column ***N*** (***Class I***), ***O*** (***Class II***), or ***P*** (***Class III***)) and key in the desired value.

    The columns from ***Q*** to the right are for additional Pay Items associated with the sign. Quantities entered in these columns are calculated manually.

14. ***Tab*** or **<D>** to the desired column then key in the desired value.

15. Key in the quantity. Tab to additional columns that have quantities for that sign and key in their values.

2.4 Adding or Deleting Rows

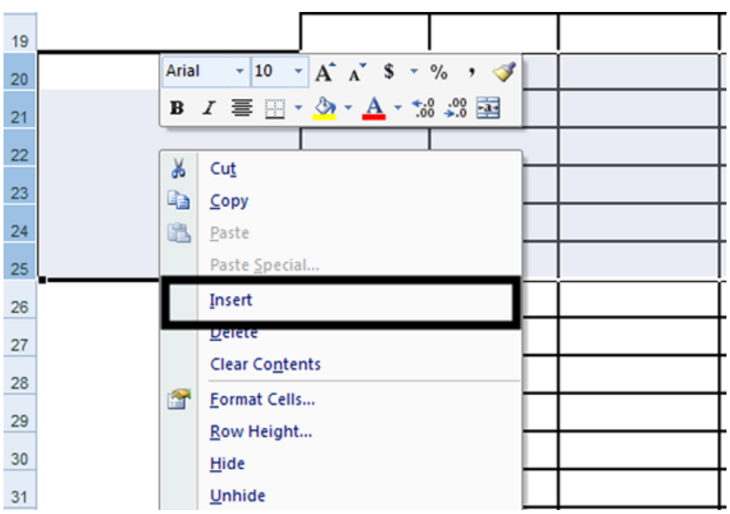
To add an additional row:

1. **<R>** on a row number that is within the table (below the headings and above the totals) and select **Insert** from the menu. A new row is added above the row that is selected.

To add multiple rows:

2. Highlight the number of rows within the table to be added.

3. **<R>** and select **Insert** from the menu. The additional rows are added above the highlighted rows.



To delete rows:

4. Use the same steps as for adding rows except choose **Delete** from the selection menu.

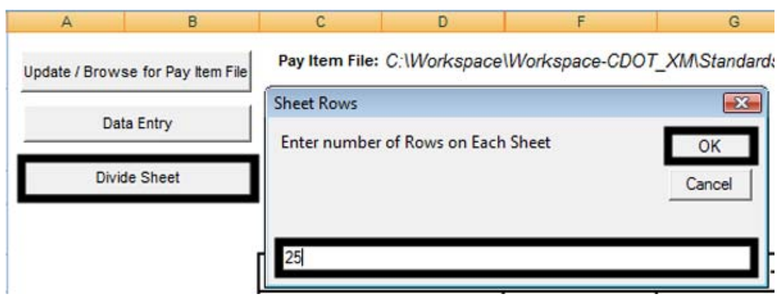
3.0 Prepare Tab Sheet for Use in Plan Sheet

1. Dividing long sheets
2. Dividing wide sheets

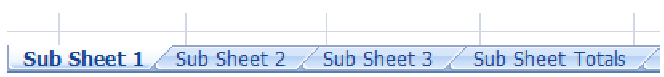
3.1 Dividing Long Sheets

All project quantities should be entered on the Sign Sheet. As a result this sheet may need to be divided into sub sheets. To divide this sheet into sub sheets:

1. **<D>** the **Divide Sheet** button. This displays the ***Sheet Rows*** dialog box.
2. Key in the number of rows of data you want to appear on each sheet.
3. **<D>** the **OK** button.



- This will create a number of new worksheets named ***Sub Sheet 1***, S***ub Sheet 2***, etc.
- Additionally, a ***Sub Sheet Totals*** worksheet is created which contains a table of total from each sub sheet and a grand total.



Important! If the table needs to be re-divided, delete the Sub Sheet and Sub Sheet Totals worksheets prior to executing the command.

4. Link the Sub Sheets tables to the MicroStation sheet border file following the instructions in Chapter 15 - Tabs Sheets of ***A Practical Guide for Using InRoads***.

3.2 Dividing Wide Sheets

If the table is deemed to be too wide after data is entered, use the following procedure:

1. Determine the number of columns that will fit on the sheet.
2. **Save** a copy of the original file with a different filename.
3. Reopen the original file.
4. On the ***Traffic_ITS Sheet*** worksheet, **<D>** the **Data Entry** button.
5. In the ***Data Entry*** dialog box, **<D>** the **Delete a Pay Item already placed in sheet** button. This displays the **Delete Item** dialog box.

6. From the **Delete Item** dialog box, highlight the first Pay Item to be removed from the first sheet.
7. **<D>** the **Delete Item** button. This removes the Pay Item column and any data in that column from the ***Traffic_ITS Sheet*** worksheet.
8. Repeat steps 7 and 8 until only the Pay Items for the first sheet are left.
9. Save and close the original file.
10. Open the copied file.
11. Repeat steps 5 through 9, deleting the Pay Items that appear on the original sheet.
12. Repeat steps 1 through 12 if a third or subsequent sheets are required.

If sheets need to be divided by both length and width, divide them by width first. This is because the Sub Sheets are not automatically updated by the addition or deletion of Pay Items.