



Name:	Item_Master_addin.xlam
Tested Excel Version:	Microsoft Excel 2013, 32bit version
Compatible Excel Version:	Microsoft Excel 2007 and up (32bit and 64 bit versions)

## Description

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The Item\_Master\_addin.xlam is an Excel add-in file used to provide additional features to assist during plan development.

The file can be found in the following places:

[http://www.dot.state.oh.us/Divisions/Engineering/CaddMapping/CADD\\_Services/Standards/GENSUM%20VBA%20AASHTOWare/GENSUM\\_VBA\\_AASHTOWare.xlsm](http://www.dot.state.oh.us/Divisions/Engineering/CaddMapping/CADD_Services/Standards/GENSUM%20VBA%20AASHTOWare/GENSUM_VBA_AASHTOWare.xlsm)

ODOTcadd Standards: ODOTcadd/Standards/ODOT/GenSum/Add-ins

The main purpose of this documentation is to explain how to set up and use this add-in.

## Set-Up

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There are three files located inside the Add-ins folder.

- Install\_Item\_Master\_Add-In\_EXCEL2013ONLY.vbs
- Item\_Master\_addin.xlam
- UnInstall\_Item\_Master\_Add-In\_EXCEL2013ONLY.vbs

The Install\_Item\_Master\_Add-in\_EXCEL2013ONLY.vbs can be used to install the add-in. USERS SHOULD TAKE CAUTION WHEN RUNNING THIS SCRIPT. This script is set up for ODOT employees. If you are not an ODOT employee this script file should be checked over to ensure it will run property and correctly in your office's work environment. See [Manual Installation:](#) for instructions on how to install the Item\_Master\_addin.xlam manually.

### Script Installation:

The script will first look for and un-install the Item\_Master\_addin if it is already installed. See [Un-Install](#) script for details of how the add-in is un-installed. When the install script runs it will install the Item\_Master\_addin.xlam file. The script uses the location that the script is saved at to install the Item\_Master\_addin.xlam file. SO IT IS IMPORTANT THAT FILES ARE NOT MOVED FROM THE ODOTCADD STANDARDS. Doing so can result in possible errors during installation.

The script will than add the ODOTcadd standards location to excels trusted locations. To do this a registry key is added at the following location inside the HKEY\_CURRENT\_USER.

*Software\Microsoft\Office\15.0\Excel\Security\Trusted Locations\*

The key will be named LocationX, where X is the next available number. The key will include the location to the ODOTcadd Standards. This location is obtained from where the script file is located. So again it is IMPORTANT to not move the location of the files inside the ODOTcadd standards. The key will also include a description of "ODOTcadd Standards Location".



It is important to note that the location of this registry key is dependent on the version of excel you are running. This script file is set up for Excel 2013. Users external to ODOT should verify the location of the registry key before running the script file. ODOT claims no liability whatsoever if the script file does not run as intended.

The reason a trusted location is set is because if it is not every time the user opens excel they will get a security warning. This can become very annoying and cause problems for other applications that work with excel. For example the ProjectWise add-in that loads in excel does not load properly when this Item\_Master\_addin.xlam is installed without the trusted location set.

### Manual Installation:

To install the add-in manually follow the steps below.

1. Open any excel workbook, if not already open.
2. Hit the file tab at the top left of excel
3. Select options (towards the bottom)
4. In the dialog that pops up, select the tab labeled Add-Ins on the left side
5. Now at the bottom of the dialog there is a dropdown box it should say Excel Add-ins, if not select Excel Add-ins in the drop down and hit Go...
6. Another dialog will show up, hit the Browse... button
7. Navigate to the location of the add-in file, \ODOTcadd\Standards\ODOT\GenSum\Add-Ins
8. Select the file named Item\_Master\_addin.xlam and hit Open
9. A pop up message will show up asking you, Copy 'Item\_Master\_addin.xlam' to the Addins Folder for "Your Name"?, **HIT NO!!!!!!!**, This add-in file will be updated with CADD standard updates. If the add-in file is copied to a user's local add-ins folder then the user will not see future updates to the add-in. This will allow for future updates to the add-in file to be automatically applied to the users.
10. Hit OK, and click Enable Macros when the box pops up

The steps below will go through manually setting a trusted location in excel.

1. Open any excel workbook, if not already open.
2. Hit the file tab at the top left of excel
3. Selection options (towards the bottom)
4. In the dialog that pops up, select the tab labeled Trust Center on the left side (last one)
5. Hit the Trust Center Headings... button at the bottom right.
6. In the dialog that pops up, select the Trusted Locations tab on the left (second one from top).
7. Check the box that says Allow Trusted Locations on my network (not recommended), it is located at the bottom left of the dialog
8. Now hit the Add new location... bottom
9. Hit the Browse... button and navigate to the location of the ODOTcadd standards where the add-in is located, \ODOTcadd
10. Check the box that says Subfolders of this location are also trusted and hit OK
11. Hit okay on any remaining open boxes.

The manual installation of the Item\_Master\_addin.xlam add-in is now complete.

### Update Options:

This add-in file is set to read-only. Updates to this file will be released with the quarterly CADD updates. But since this file contains a copy of the item master there is a need to update this item master copy more often than quarterly updates. See [Refresh Add-In](#) for details on a temporary item master update. The following can be set up to make permanent updates to the item master.



### Script:

A script file can be set up to update the item master copy in the Add-In file and save the add-in file. The following text can be copied into a text file and changed to a .vbs file extension to create a visual basic script file. The text in red needs to be changed to the correct location of the Add-In file.

*Option Explicit*

```
Dim xlApp, xlBook, fso
Const SourceFile = "I:\ODOTcadd\Standards\ODOT\GenSum\Add-Ins\Item_Master_addin.xlam"
Set xlApp = CreateObject("Excel.Application")

Set fso = CreateObject("Scripting.FileSystemObject")
'Check to see if the file exists in the source folder
If fso.FileExists(SourceFile) Then
    'Check to see if the file is read-only
    If Not fso.GetFile(SourceFile).Attributes And 1 Then
        'The file exists and is not read-only. Safe to open the file.
        'open source file and run macro to update item master, macro saves file
        Set xlBook = xlApp.Workbooks.Open(SourceFile, 0, True)
        xlApp.Run "Item_Master_addin.xlam!AutoFreshItemAddin"
        xlBook.Close ' close source file
        xlApp.Quit
        'delete old add-in file
        On Error Resume Next
        fso.DeleteFile(SourceFile)
        On Error GoTo 0
        'change the name of the new add-in file
        fso.MoveFile Left(SourceFile, Len(SourceFile) - 5) & "Temp.xlam", SourceFile
    Else
        'The file exists and is read-only.
        'Remove the read-only attribute
        fso.GetFile(SourceFile).Attributes = fso.GetFile(SourceFile).Attributes - 1
        'open source file and run macro to update item master, macro saves as temp file
        Set xlBook = xlApp.Workbooks.Open(SourceFile, 0, True)
        xlApp.Run "Item_Master_addin.xlam!AutoFreshItemAddin"
        xlBook.Close ' close source file
        xlApp.Quit
        'delete old add-in file
        On Error Resume Next
        fso.DeleteFile(SourceFile)
        On Error GoTo 0
        'change the name of the new add-in file
        fso.MoveFile Left(SourceFile, Len(SourceFile) - 5) & "Temp.xlam", SourceFile
        'Reapply the read-only attribute
        fso.GetFile(SourceFile).Attributes = fso.GetFile(SourceFile).Attributes + 1
    End If
Else
    'The file does not exist in the source folder.
End If

Set fso = Nothing
Set xlBook = Nothing
Set xlApp = Nothing

'WScript.Echo "Finished."
WScript.Quit
```

It is important to review the script file and only run it after the script has been verified. Only users who understand the script file should be using it.



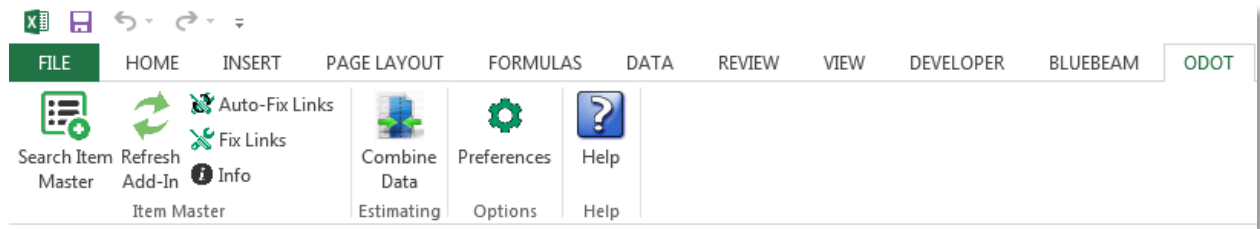
### Windows Task:

A windows task can be set up to run nightly updates on the add-in. This can be done by using the script file created in the [previous section](#). To set up a windows task open the Task Scheduler. In the Actions section located on the right of the dialog, select Create Basic Task... fill in the desired name and description for the task. Example Name: Nightly Update to Item\_Master\_addin.xlam. Example Description: Updates to the Item master inside the add-in with the current item master that's published online. Hit next, select the desired trigger. Example trigger is Daily. Hit next. Set the time for the task to run, example time set to 4:00:00 AM. Recur every 1 days. Hit next. Set action to start a program and hit next. Browse to the script file created in the [previous section](#) and hit next. Now hit Finish.

A windows task has now been set up. Click on Task Scheduler Library on the right side of the dialog, the newly created task should be listed in the top middle section of the dialog. Click on the task and hit the run button located on the right of the dialog to test the task. Note that your office's security setting could restrict this task from running.

### Features:

After the add-in has been installed an ODOT tab will have been added to the excel ribbon at the top of excel. This ODOT tab will load every time the excel application is launched. See [Un-Install](#) for instructions on uninstalling the Item\_Master\_addin.xlam add-in. The image below shows the contents of the ODOT tab.

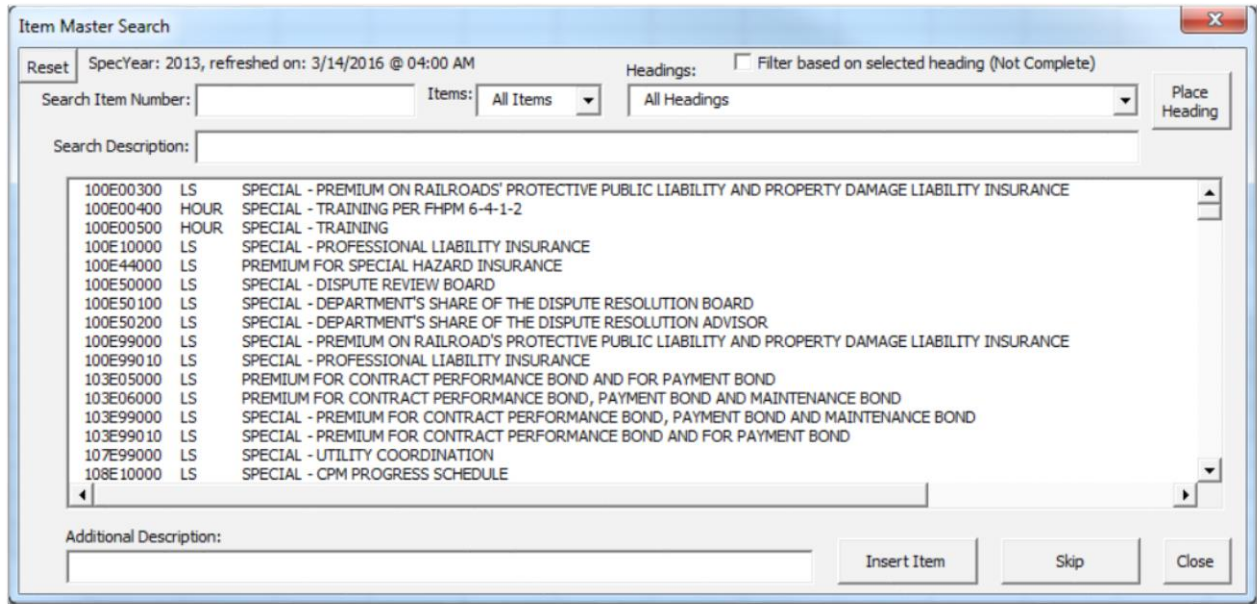


The ODOT tab is set up with four groups, Item Master, Estimating, Options, and Help. The Item Master group has five buttons while the other groups only have one. Each button is explained below.

### Search Item Master



This button will launch a dialog pictured below. Its main function is to assist the user in finding and placing item numbers into excel files. When the dialog first opens it is populated with all items from the copy of the item master that is stored in the add-in file. See [Refresh Add-In](#) for information on how to update the item master stored in the add-in file with the current item master that's published online.



There are several buttons and text boxes in this dialog. The following explains each of them and what they do. The Item Master Search will use the Items from the active spec year, which is set in the [Preferences](#) dialog. The Spec Year and the last refreshed time is shown in the top left of the dialog.

#### Reset Button:



The reset button will return the dialog to its original state. This includes clearing the [Search Item Number:](#) text box, [Search Description:](#) text box, [Additional Description](#) text box. As well as sets the [Items:](#) drop down box to All Items, sets the [Headings:](#) drop down box to all headings, and unchecks the [Filter based on selected heading](#) check box if checked. This will result in the list of items to be unfiltered.

#### Search Item Number:



This text box can be used to type in an item number. As the user types in this text box, the item list is filtered to show only items where the text in the Search Item Number text box is found anywhere in an item number. For example if the user types in 100 the item list will be filtered to show only items with item numbers that contain 100. Note that not only will this include item numbers that begin with 100 but also any item numbers that contain 100, for example item 201E11000 contains 100 and as a result is shown in the item list. The Search Item Number text box can also handle wildcards. A wildcard is represented with a \* character. A wildcard is best described with an example. For example the user enters in 1\*2. The item list will show all item numbers that contain a 1 and after that can be any character or any number of characters until a 2 is found. Some item numbers that would match that criteria are; 100E50200, 201E23000, 202E11002, and 305E12000.

#### Search Description:

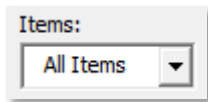


This text box can be used to type in an item description. This text box works exactly the same way as the [Search Item Number](#) text box, with the exception that this text box uses the Item description column in the [items list](#) to filter data as



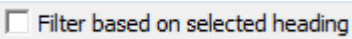
the [Search Item Number](#) uses the Item number column in the [items list](#). As the user types in this text box, the item list is filtered to show only items where the text in the Search Description text box is found anywhere in an item description. For example if the user types in Pavement the item list will be filtered to show only items with item descriptions that contain Pavement. Note that not only will this include item descriptions that begin with Pavement but also any item descriptions that contain Pavement, for example the description “FULL DEPTH PAVEMENT SAWING” contains pavement and as a result is shown in the [item list](#). The Search Description text box can also handle wildcards. A wildcard is represented with a \* character. A wildcard is best described with an example. For an example see [Search Item Number](#).

### Items Dropdown Box:



The Items dropdown box is populated with all three digit item codes found in the Item Master. A three digit item code refers to the first three numbers of an item number. When an item code is selected the item list will be filtered to only show items that start with the selected item code.

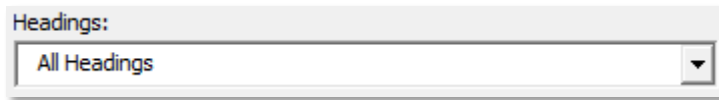
### Filter based on selected heading Checkbox:



When this checkbox is checked, the [item list](#) will be filtered to show only items known to typically go under that selected heading. The add-in contains a list for each heading, each list contains the known

three digit item codes that go with the given heading. These lists are what is used to filter the [item list](#) based on the selected heading. If this checkbox is unchecked and/or the headings dropdown has All Headings selected, then no filtering based on selected heading will accrue. This feature is still being worked on and is not complete. It is suggested that at this time the user does not use this feature.

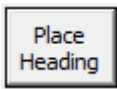
### Headings Dropdown Box:



This dropdown box is populated with a list of valid headings that can be used on a general summary sheet. The add-in contains a list of headings which is used

to populate this dropdown box. It’s main purpose is to be used with the [Place Heading](#) button.

### Place Heading Button:



The place heading button will place the selected heading from the [Heading Dropdown](#) box on a General Summary sheet or SimpleForm Sheet. If the active sheet is not one of these two sheets and the place heading button is selected then a message box will appear saying, “Please select the General Summary or the SimpleForm tab, and then select starting row”. If the place heading button is selected and the [headings dropdown](#) box has “All Headings” selected then a message box will appear saying, “Please select a heading”. Once the user is on a correct sheet (General Summary or SimpleForm) when the place heading button is selected, it will place the selected heading (except All Headings) in column C of the active cells row. If the active cell is not greater than row 13 on a General Summary sheet or 12 on a SimpleForm sheet then a message box will appear saying, “Please select a starting row greater than row X” where X is 13 if on a General Summary sheet and 12 if on a SimpleForm sheet.



Item List:

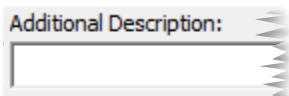
100E00300	LS	SPECIAL - PREMIUM ON RAILROADS' PROTECTIVE PUBLIC LIABILITY AND PROPERTY DAMAGE LIABILITY INSURANCE	
100E00400	HOUR	SPECIAL - TRAINING PER FHPM 6-4-1-2	
100E00500	HOUR	SPECIAL - TRAINING	
100E10000	LS	SPECIAL - PROFESSIONAL LIABILITY INSURANCE	
100E44000	LS	PREMIUM FOR SPECIAL HAZARD INSURANCE	
100E50000	LS	SPECIAL - DISPUTE REVIEW BOARD	
100E50100	LS	SPECIAL - DEPARTMENT'S SHARE OF THE DISPUTE RESOLUTION BOARD	
100E50200	L S	SPECIAL - DEPARTMENT'S SHARE OF THE DISPUTE RESOLUTION ADVISOR	
100E99000	LS	SPECIAL - PREMIUM ON RAILROAD'S PROTECTIVE PUBLIC LIABILITY AND PROPERTY DAMAGE LIABILITY INSURANCE	
100E99010	LS	SPECIAL - PROFESSIONAL LIABILITY INSURANCE	
103E05000	LS	PREMIUM FOR CONTRACT PERFORMANCE BOND AND FOR PAYMENT BOND	
103E06000	LS	PREMIUM FOR CONTRACT PERFORMANCE BOND, PAYMENT BOND AND MAINTENANCE BOND	
103E99000	LS	SPECIAL - PREMIUM FOR CONTRACT PERFORMANCE BOND, PAYMENT BOND AND MAINTENANCE BOND	
103E99010	LS	SPECIAL - PREMIUM FOR CONTRACT PERFORMANCE BOND AND FOR PAYMENT BOND	
107E99000	LS	SPECIAL - UTILITY COORDINATION	
108E10000	LS	SPECIAL - CPM PROGRESS SCHEDULE	

The Item List is populated with all items in the Item master. It is then filtered as the dialog is filled out. The Item List consists for 4 columns. The first column is the item number, the second the unit for that item, the third is the items description, and the 4<sup>th</sup> column is the items supplemental description. To see the 4<sup>th</sup> column the user needs to use the horizontal scroll bar and move it to the right. An item can be selected by simply clicking on that items line. Use the Vertical scroll bar to view more items. When an item is selected that line will be highlighted in blue. The up and down arrow keys may to be used to select other items. As well as the scroll wheel on the mouse can be used to select other lines. When the user's mouse is hovered inside the list box a tool tip will appear. This tool tips says, "Dble Left Click = Copy Item Number, Shift+Dble Left Click = Copy Item Desc., Ctrl+Dble Left Click = Copy Item Note Title (All Caps), Alt+Dble Left Click = Copy Item Note Title (Proper Case)". The tool tip tells the different ways you can copy item information to the clipboard. Below is an explanation of each way.

1. Double left clicking on an item in the Item List will copy the item number to the clipboard.
2. Shift + Double left click on an item in the Item List will copy the Item Description to the clipboard. If the item is a special item then "SPECIAL - " will be removed from the beginning of the item description.
3. Control + Double left click on an item in the Item List will copy the note title for that item in all caps. A note title takes the item description and adds "ITEM XXX - " in front of the description, where XXX is the items 3 digit item code. If the item is a special item then the note title will add "ITEM SPECIAL - " in front of the item description and removed the "SPECIAL - " from the beginning of the item description.
4. Alt + Double left click on an item in the Item List will copy the note title for that item in all proper case (first letter of every word is capitalized). See above for explanation of what the note title consists of.

The selected item number can also be placed directly onto an excel sheet with the use to the [Insert Item button](#).

Additional Description:



The additional Description button is used with the [Insert Item button](#). If a selected item from the Item list is selected that requires an additional description then the additional description text box will be highlighted with the color yellow. The criteria the code used to tell if an item should have an

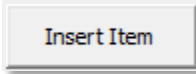
additional description are as follows.

Any item that contains the words; ADD, SPECIFY, INCLUDE, INDICATE, or REQUIRED in the item's supplemental description. Or where the item's description contains MISC.:. The text box will remain



yellow even if there is text in the textbox. If an item is selected from the Item list that does not meet the above specific criteria then the yellow highlighting of the text box will be removed.

### Insert Item Button:



The Insert item button is used to place item data directly onto the active excel worksheet. If this button is hit and no item is selected from the [Item list](#) then a message box will pop-up saying, Please select an item to insert. After an item is selected from the [Item list](#) and this button is hit the following will happen.

If the active worksheet is the ProjectInfo sheet then the item number of the selected item from the [item list](#) will be placed in the active cell and any text in the [Additional Description](#) textbox will be placed 2 columns to the right of the active cell in the same row as the active cell. If the [additional description](#) textbox is blank then it will clear out any text in the cell that is 2 columns to the right of the active cell. Note if the active cell is not greater than row 3 then a message box will pop-up saying, Please select a row greater than 3 to place item.

If the active worksheet is the General Summary, SimpleForm, Multi-Bridge summary Type 3M, or Type 5 sub-summary (see Sub-Summaries documentation) worksheet then the item number of the selected item from the [Item list](#) will be placed in column B in the same row of the active cell. Unlike on the ProjectInfo sheet the text in the [additional description](#) textbox only gets placed if that textbox is not empty. The [additional description](#) will be placed in column C in the same row of the active cell. If the active worksheet is the General Summary worksheet then the active row must be greater than 13. If not a message box will pop-up saying, Please select a starting row greater than 13. If the active worksheet is the ProjectInfo worksheet then the active row must be greater than 12. If not a message box will pop-up saying, Please select a starting row greater than 12.

If the active worksheet is a Type 1 sub-summary (see sub-summary documentation) then the item number of the selected item from the [item list](#) will be placed in the active cell. If the additional description text box is not blank then the text in that text box will be placed in the same column as the active cell but one row below the active cell.

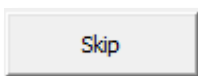
If the active worksheet is a single-bridge summary type 3S (see sub-summary documentation) then the item number of the selected item from the [item list](#) will be placed in column N in the same row as the active row. If the [additional description](#) text box is not blank then the text in that text box will be placed in column P in the same row as the active row.

If the active worksheet is a type 4 sub-summary (see sub-summary documentation) then the item number of the selected item from the [item list](#) will be placed in column C in the same row as the active row. If the [additional description](#) text box is not blank then the text in that text box will be placed in column D in the same row as the active row.

If the active worksheet does not meet the above situations then the item number of the selected item from the [item list](#) will be placed in the active cell. The [additional description](#) will not be placed. This is because the code does not know where to place the additional description.

After the item information is placed the active cell will be offset down one row unless the active worksheet is a Type 1 sub-summary (see sub-summary documentation). In that case the active cell is offset to the right one column.

### Skip Button:

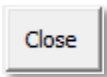


The Skip button simply offsets the active cell down one row unless the active worksheet is a Type 1 sub-summary (see sub-summary documentation). In that case the active cell is offset to the right one column.





### Close Button:



The close button will close the dialog. The user can also hit the x button at the top right of the dialog.

### Refresh Add-In

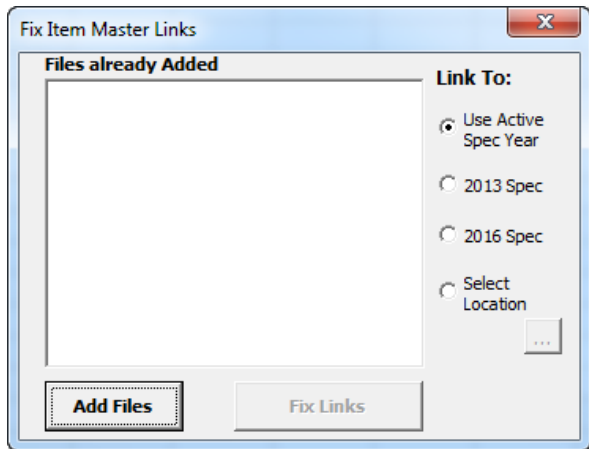


The Refresh Add-in button will update the item master stored in the add-in with the item master located [here](#). Only the item master for the [active spec year](#) will be updated. See [Preferences](#) for details on [active spec year](#). An internet connection is required. The online item master file is updated daily. This is only a temporary update. Since the Add-in file is read only the end user cannot make changes to it. The file is set to read only to prevent the user from accidentally changing something as well as to allow the file to be easily updated. There are a couple options offices have to make permanent updates to the add-in, See [Update Options](#):

### Fix Links



This button will open the following dialog. All the summary files have formulas to display an items unit and description. These formulas use named ranges that reference the item master located in the add-in file. See [Linking](#) for




more details on the named ranges. Since each office location has the standards located at different directories these links need to be fixed to point to the location of the given office's standards. This tool makes it very easy to select the files and fix the links.

#### Add Files button:


This will open a file browse where the user can multi-select files. The filter in this file browser to set to only show excel files. Select all the desired summary files and hit open. This will add the selected file names to the list area shown under the

Files already Added text. The user can select the Add Files button again to add more files. If the user selects a file that is already in the Files already Added list then a message box will pop-up telling the user the file has already been selected and will not be added to the list. The [Fix Links](#) button will be enabled once there is at least one file in the Files already Added list.

#### Link To:

This section of the dialog will set which item master to link to. There are four options. The Use Active Spec Year option will use the active spec year set in the [Preferences](#). The 2013 Spec option will fix the links to use the copy of the 2013 item master that's inside the add-in file. The 2016 spec option will fix the links to use the copy of the 2016 item master that's inside the add-in file. The Select Location option allows the user to specify a location to an excel file that contains a copy of the item master and fix the links to link to that file rather than the add-in. A default location can be set in the [Preferences](#). When this option is selected the  button will be enabled. Clicking that button will bring up a file browser at the last navigated directory used in excel. Only excel files will be listed. After selecting a file, the file will be opened in the background and if a valid item master worksheet is found in the file then another dialog will open with a pull down list listing all the valid worksheets found in the selected file. Once a

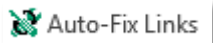


valid worksheet has been selected when hovering the mouse over the  button a tooltip will be displayed listing the selected file path and worksheet name. The [Fix Links](#) button will not be enabled if this option is selected without a valid excel file and worksheet set.

### Fix Links:

When the Fix Links button is selected the code will cycle through all the files listed in the Files already added list, open the file and change the two named ranges to link to the selected [Link to](#) option. If the file is found to contain the General Summary, SimpleForm, or DGNClip worksheets the named ranges will not be updated. This is because the GenSum\_VBA\_AASHTOWare file has its own copy of the item master inside the file which the named ranges point to. The GenSum\_VBA\_AASHTOWare file should NOT be added the files already added list. Note that if the named ranges do not exist in a selected file they will be added.

### Auto-Fix Links

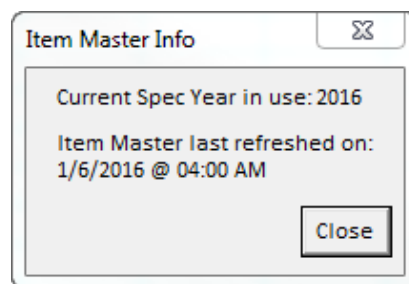


This Toggle button works the same way the [Fix Links](#) button does. The only difference is when this toggle is toggled on and the user opens an excel file, if that file contains the named ranges for the item master then the links for those named ranges will automatically be updated. Like the [Fix Links](#) button there are four options to select which item master to use. See [Fix Links](#) for an explanation of the four [Link To](#) options. Unlike the [Fix Links](#) button the user does not get the option to select which [Link to](#) Option to use. This is set in the [Preferences](#). See [Linking](#) for more details on the named ranges. Unlike the [fix links](#) button if the named ranges do not exist in the file then they will NOT be added.

### Info

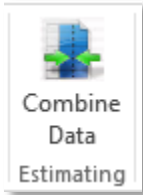


When selected will open the Item Master Info dialog shown below. This dialog will tell the user what the current spec year being used is. As well as the last time the item master for that given spec year was refreshed in the Add-In file.

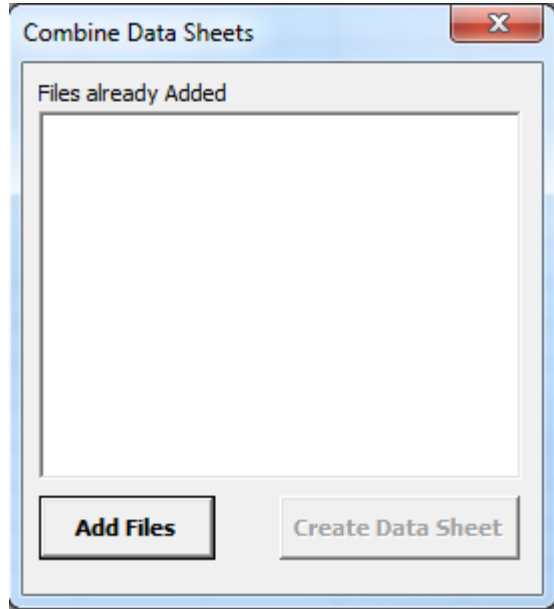




## Combine Data



The Combine Data button is located inside the Estimating group in the ODOT tab on the excel ribbon. This button should only be used by the Office of Estimating. It is used to combine data sheets from two or more GenSum\_VBA\_AASHTOWare excel files. When this button is selected the dialog shown below is opened. In the dialog below select the Add Files button. This will open a file browser. You can multi-select files. The filter in this file browser to set to only show excel files. Select all the desired



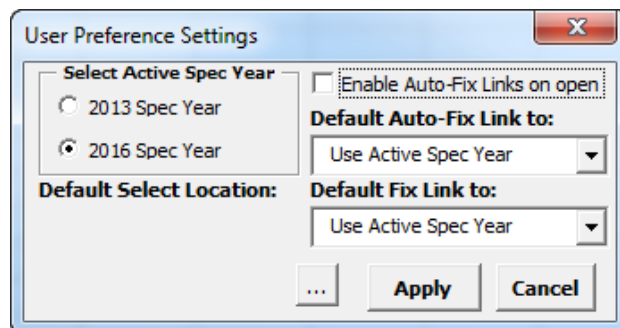
GenSum\_VBA\_AASHTOWare excel files and hit open. This will add the selected file names to the list area shown under the Files already Added text. The user can select the Add Files button again to add more files. If the user selects a file that is already in the Files already Added list then a message box will pop-up telling the user the file has already been selected and will not be added to the list. The Create Data Sheet button will be enabled once there is at least two files in the Files already Added list. When this button is selected the code will cycle through all the files listed, open the file and check for a General Summary sheet or SimpleForm sheet. If neither worksheet is found a message will pop up telling the user that the given file is not a valid GenSum file and data from this file will not be used. Data from any remaining files will still be combined. The code will check both the General Summary sheet and the SimpleForm sheet for data. If

only one sheet is filled out then the data tab is refreshed with the data from worksheet that data was found on. If the code finds data on both the General Summary sheet and SimpleForm sheet then a message box will pop-up asking which sheet should be used to refresh the data tab. If the data tab fails to be refreshed then a message box will pop-up saying the data tab for the given GenSum file could not be updated and it will not be included. A workbook is created with a worksheet labeled Data. This data sheet will have all the data from each of the data sheets from the files that were added to the Files already Added list in the dialog pictured to the left. Like headings will be combined. This includes combining any items with the same item number and additional description in the same heading. The data sheet is sorted to match the standard order of headings.

## Preferences



This button is located in the Options group of the ODOT tab. When pressed the dialog shown below will pop-up. This dialog is the User Preference Settings dialog.






### Select Active Spec Year:

There are two option buttons, one labeled 2013 Spec Year and the other labeled 2016 Spec Year. When the Apply button the selected spec year is set as the active spec year and the [Search Item Master](#) will use the Item Master for the active spec year.

### Default Select Location:

The  button is used to set the default select location. With this the user can select an excel file that contains a copy of an item master. Clicking that button will bring up a file browser at the last navigated directory used in excel. Only excel files will be listed. After selecting a file, the file will be opened in the background and if a valid item master worksheet is found in the file then another dialog will open with a pull down list, listing all the valid worksheets found in the selected file. Once a valid worksheet has been selected the file location will be shown in the Default select location. When hovering the mouse over this section a tooltip will be displayed listing the selected file path and worksheet name. The Default Select Location can be used with the [Fix Links](#) and [Auto-Fix links](#) features.

### Enable Auto-Fix Links on open:

This checkbox is used with the [Auto-Fix Links](#) feature. When checked on the Auto-Fix Links toggle button will be toggled to on when excel is loaded. More specifically when the ODOT tab is selected in the ribbon. This preference is only applied when the first excel file is opened. If a second excel file is opened then the current setting of the Auto-Fix Links toggled button is used.

### Default Auto-Fix Link to:

This section contains a dropdown list with 4 options. Use [Active Spec Year](#), 2013 Spec Year, 2016 Spec Year, and [Select Location](#). When Active Spec year is selected then when the [Auto-Fix Links](#) feature is used it will fix the links to use the [Active Spec Year](#) If the Active Spec Year has not been set the 2013 Spec Year is used. When the 2013 Spec Year is selected then when the [Auto-Fix Links](#) feature is used it will fix the links to use the 2013 Item Master inside the add-in file. When the 2016 Spec Year is selected then when the [Auto-Fix Links](#) feature is used it will fix the links to use the 2016 Item Master inside the add-in file. When the Select Location is selected then when the [Auto-Fix Links](#) feature is used it will fix the links to the [Default Select Location](#). If a Default Select Location has not been set then the [Active Spec Year](#) is used.

### Default Fix Link to:

This section contains a dropdown list with 4 options. Use [Active Spec Year](#), 2013 Spec Year, 2016 Spec Year, and [Select Location](#). When Active Spec year is selected then when the [Fix Links](#) feature is used it will default the [Link To:](#) section to use the [Active Spec Year](#) If the Active Spec Year has not been set the 2013 Spec Year is used. When the 2013 Spec Year is selected then when the [Fix Links](#) feature is used it will default the [Link To:](#) section to use the 2013 Item Master inside the add-in file. When the 2016 Spec Year is selected then when the [Fix Links](#) feature is used it will default the [Link To:](#) section to use the 2016 Item Master inside the add-in file. When the Select Location is selected then when the [Fix Links](#) feature is used it will default the [Link To:](#) section to use the [Default Select Location](#).

### Apply:

When the Apply button is selected all preferences will be stored in the user's registry. When excel is opened the saved user preferences will be applied.

### Cancel:

When the Cancel button is selected any changes made to the User Preference Settings will not be stored.



## Help

The Help button is located in the Help group of the ODOT tab in Excel's ribbon. Clicking this button will open this pdf help documentation. Once Again it is important that the add-in file itself is not moved to another location. The location of this add-in is used to find and open this pdf help document located here: ...*ODOTcadd\Standards\ODOT\GenSum\Documentation\Item\_Master\_addin.pdf*.

## Functions

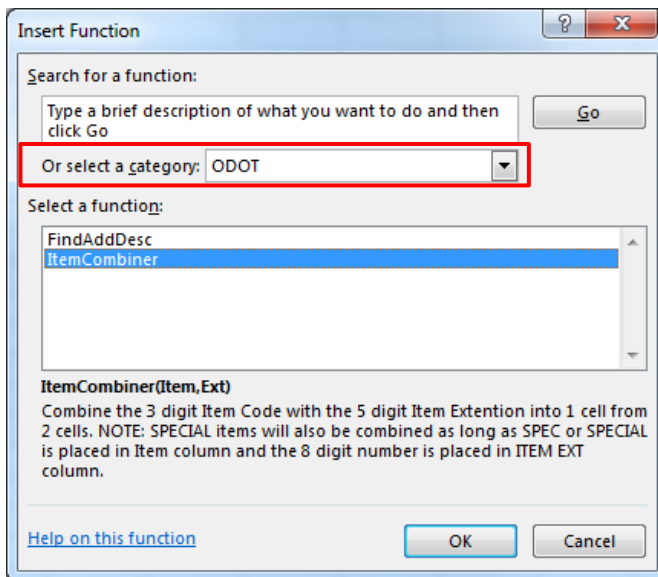
This Add-In also includes some custom functions.

### Item combiner:

The item combiner function can be used to combine item numbers that have the 3 digit item code in one cell and the 5 digit item extension in another cell. The function syntax is shown below.

*=ItemCombiner(Item,Ext)*

Where Item should be the cell location that contains the 3 digit item code and Ext is the cell location that contains the 5 digit item extension.



This function has been added to an ODOT category in the insert function dialog pictured to the left. The description of the function and its Function Arguments are explained in here as well. Excel does not have a way to add the tooltip that a user normally sees when entering a function into a cell. An alternative to see the syntax of the function is after typing '=ItemCombiner(' into a cell hit Ctrl+Shift+A and the syntax for that function will be filled out. The Function Arguments will list the argument name, which will need to be changed to the desired cell location. For special items the cell that contains the 3-digit item code should say SPEC or SPECIAL instead and the cell that contains the 5-digit item extension should contain an 8 digit number which consists for the 3 digit item code and the 5 digit item extension.

### FindAddDesc:

This function can be used to separate out the additional description from an item's full description. The syntax is shown below.

*=FindAddDesc(Item, Desc, SpecYear)*

Where Item is the cell location that contains the item's full item number, Desc is the cell location of the item's full description with additional description, and SpecYear is 2 for the newest spec year and 1 of the previous spec year.

As with the ItemCombiner function the FindAddDesc function has also been added to an ODOT category in the insert function dialog. See [ItemCombiner](#) for additional information on the Insert function dialog and keyboard shortcuts.

### HLink:

This function can be used to extract hyperlinks from cells. The syntax is shown below.

*=HLink(rng)*

Where rng is the cell location that contains a hyperlink.

The help for this function has been added to the User Defined category in the insert function dialog.



## Linking

This add-in file is used to help fill out the sub-summary sheets. The sub-summary sheets contain formulas to fill out item descriptions and units. These formulas contain named ranges. These named ranges are in each sub-summary file. And they link to the item master contained in the add-in. The named ranges are listed below.

*ITEM, which refers to =[Item\_Master\_addin.xlam]QryItemAddIn!\$A:\$A*

*QryItemNamed, which refers to =[Item\_Master\_addin.xlam]QryItemAddin!\$A:\$G*

These two named ranges are what create the link to this add-in. Linking to this Add-in was the chosen workflow so that every sub-summary file did not need a copy of the item master in the file. This would have made it easy for a user to have multiple files all with different versions of the item master, which could cause inaccurate data and more confusion. See Sub-Summary documentation for more details on setting up sub-summary sheets and linking to this add-in.

The Named Ranges listed above will link to the 2013 Item Master. The Named Ranges listed below will link to the 2016 Item Master.

*ITEM, which refers to =[Item\_Master\_addin.xlam]QryItemAddIn2!\$A:\$A*

*QryItemNamed, which refers to =[Item\_Master\_addin.xlam]QryItemAddin2!\$A:\$G*

If [Select Location](#) is used to fix links it is important that the copy of the item master in the file is set up correctly. The image below shows the order of and what columns are needed for the Named ranges to work properly. The columns include ITEM, ILFLG1, CODEDESC, IDESCRL, IDESC2, ILSST1, and SUPPDESCRREQUIRED in that order.

	A	B	C	D	E	F	G
1	ITEM	ILFLG1	CODEDESC	DESCR1	DESCR2	ILSST1	SUPPDESCRREQUIRED
2	100E00300	Y	LS	SPECIAL - PREMIUM ON RAILROADS' PROTECTIVE PUBLIC LIABILITY AND PROPERTY DAMAGE LIABILITY INS		ODOT INTERNAL USE	0
3	100E00400	Y	HOUR	SPECIAL - TRAINING PER FHPM 6-4-1-2		ODOT INTERNAL USE	0
4	100E00500	Y	HOUR	SPECIAL - TRAINING			0
5	100E10000	Y	LS	SPECIAL - PROFESSIONAL LIABILITY INSURANCE			0

## Un-Install

A script file has been created to assist in un-installing the add-in. A manual process is described below as well.

### Script Un-Install

Caution should be taken when using this script file. The UnInstall\_Item\_Master\_Addin\_EXCEL2013ONLY.vbs can be used to Un-Install the add-in. USERS SHOULD TAKE CAUTION WHEN RUNNING THIS SCRIPT. This script is set up for ODOT employees. If you are not an ODOT employee this script file should be checked over to ensure it will run property and correctly in your office's work environment. See [Manually Un-Install](#) for instructions on how to Un-install the Item\_Master\_addin.xlam manually.

The Script file will first open excel in the background and loop through all excel add-ins (activated and un-activated). If an add-in with a title field of Item\_Master\_Addin is found that add-in will be deactivated. In order to fully remove the add-in from excel its values need to be removed from two registry keys. The keys are located in the HKEY\_CURRENT\_USER,

*Software\Microsoft\Office\15.0\Excel\Add-in Manager*  
*Software\Microsoft\Office\15.0\Excel\AddInLoadTimes*



The script will remove the user preference keys for this add-in located here in the HKEY\_CURRENT\_USER  
*Software\VB and VBA Program Settings\Item\_Master\_addin*

The script will then remove the trusted location that was added to excel. In order to do this a registry key will be deleted. The key is found in the HKEY\_CURRENT\_USER here,

*Software\Microsoft\Office\15.0\Excel\Security\Trusted Locations\*

The script will loop through all the keys listed inside the locations given above. If the key has a Description value of ODOTcadd Standards Location then that key will be deleted. When the script is finished a message box will pop up saying Un-Install Complete.

It is important to note that the location of these registry keys is dependent on the version of excel the user is running. This script file is set up for Excel 2013. Users external to ODOT should verify the location of the registry keys before running the script file. ODOT claims no liability whatsoever if the script file does not run as intended.

## Manually Un-Install

To manually Un-Install the add-in follow the steps given below.

1. Open any excel workbook, if not already open.
  2. Hit the file tab at the top left of excel
  3. Select options (towards the bottom)
  4. In the dialog that pops up, select the tab labeled Add-Ins on the left side
  5. Now at the bottom of the dialog there is a dropdown box it should say Excel Add-ins, if not select Excel Add-ins in the drop down and hit Go...
  6. Another dialog will show up, uncheck to line that says Item\_Master\_AddIn and hit OK.
- Note that this only deactivates the add-in, it will still be listed in the Inactive Application Add-ins section. To remove the file from the list an edit to the registry need to be done, see [Script Un-Install](#) for details on the location of that registry key.

The User preferences registry keys need to be deleted here in the HKEY\_CURRENT\_USER,  
*Software\VB and VBA Program Settings\Item\_Master\_addin*

The Item\_Master\_addin key should be deleted. Only manually edit the Registry if you know what you are doing. Otherwise the un-install script should be used.

The steps below will go through manually removing a trusted location in excel.

1. Open any excel workbook, if not already open.
2. Hit the file tab at the top left of excel
3. Selection options (towards the bottom)
4. In the dialog that pops up, select the tab labeled Trust Center on the left side (last one)
5. Hit the Trust Center Headings... button at the bottom right.
6. In the dialog that pops up, select the Trusted Locations tab on the left (second one from top).
9. Select the line in the list of the desired trusted location you want to remove and hit the remove button.

The Item\_Master\_addin.xlam add-in has now been Un-Installed.



## Contacts

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If you have any questions, suggestions, or problem with this application please contact the ODOT Office of CADD and Mapping Services by use of the following form on the ODOT website:

[https://odot.formstack.com/forms/cadd\\_servicerequest](https://odot.formstack.com/forms/cadd_servicerequest)

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