



PubWorks Work Order Module

Table of Contents

How to Setup Work Orders	2
Overview	2
Create the assets	3
Create the task	4
Create the Work Order Plan - Link assets with the task	4
Creating Alternative Results	6
Initialization of Schedule	<i>7</i>
Creating the Work Order	9
Creating a Work Order from the To-Do List	9
Creating a Work Order from the "To Do" list	11
Modifying Items on the Work Order	12
Creating a Work Order from Service Requests	12
Creating a Work Order from the Asset Search	16
Creating a New WO from an Existing Work Order – the "Copy" Button	19
Looking Up Scheduled Work Orders	19
Printing a To-Do List for Work Orders	20
Completing the Work Order	21
Entering Work that was Performed	22
Entering Resources for a Completed Work Order	22
Managing Partially Completed Work Orders	23
Work Orders with Different Outcomes	27



How to Setup Work Orders Inspection, Replacement and Maintenance

Overview

Work Orders in PubWorks is an optional module that fits a number of situations:

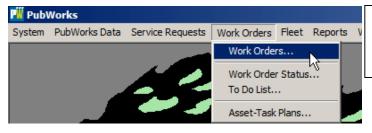
- Recurring tasks, such as an annual inspection or replacement of an item every three years.
- Performing a task on a large number of assets in a single job, such as selecting all the signs in a particular district, or of a certain type, that need to be replaced all together.
- 3. Adding a number of Service Requests to a job.
- 4. Setting-up one time jobs to be done in the future.

There are two important requirements to remember when using PubWorks Work Orders:

- 1. <u>Unlike Service Requests</u>, where actual work performed is entered with an activity record; Work Orders have **both** the work and resources recorded with the Work Order Record. You **do not** enter work performed on a Work Order in an Activity; **the Work Order takes the place of an Activity for capturing costs**.
- 2. A Work Order is not an ad hoc entry done on-the-fly. Work orders can only be setup when pre-defined assets and tasks have been linked to create work orders.

A common use of Work Orders is the tracking of sign installations or sign inspections for fulfilling sign retroreflectivity standards. The following example tracks signs, however you can setup Work Orders to track any scheduled event.

Note: Make sure that you have the PubWorks "Work Order" module and that it is turned on If you need to purchase the module, or need to have it turned on, please contact us.



Make sure that the Work Orders tab at the top of PubWorks is highlighted. You must have purchased the work order module **and** the module must be turned on in the user setup.

The following steps must be done prior to tracking your assets:

- 1. Create the assets (if not already done)
- 2. Create the task (if not already done)
- 3. Setup a Plan Link the assets with the task to create a Work Order



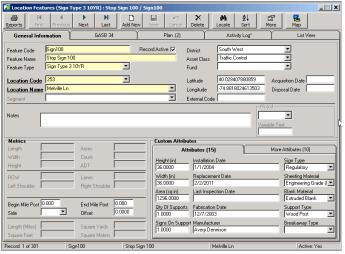
NOTE: A Plan must be setup before you can create a Work Order – you cannot just enter a Work Order on-the-fly if there is no plan established.

- 4. For recurring items, such as an annual inspection, make sure that you **initiate the process by performing the trigger task on each asset**. For example, you will need to enter the install date for a sign, if an installation triggers a 10-year replacement schedule. Otherwise, the software doesn't know when to start counting.
- 5. Generate your To Do List
- 6. **Setup Work Order criteria** such as frequency and batches
- 7. Generate the Work Order List

Create the assets

Define the asset that you want to maintain. In this example you are going to **replace all Type 3 signs every 10 years**. You need to make sure that you have the Type 3 signs in your list of location features.

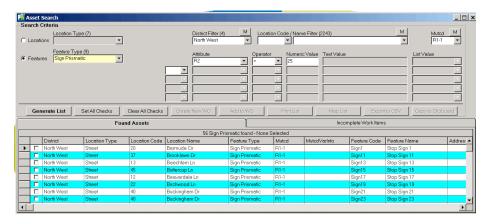
In the following example, all our Type 3 signs are the same material and with the same replacement schedule.



Note: You can search for groups of assets by attributes, districts and MUTCD. This is a very powerful and useful feature. With this lookup table (Work Orders>Asset Search) you can find all signs of a certain type with certain attributes.

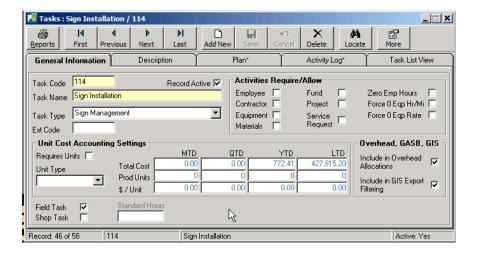
The MUTCD feature is automatically turned on if you select the "Is Sign" checkbox in the Location Feature Type category data list.





Create the task

<u>Define the task which will trigger the desired scheduled action</u>. In this case, the task of "sign installation" will trigger a replacement in 10 years, assuming that the material has a warranty of 10 years. **Anytime we perform a "sign installation" on a particular sign, it will create a new 10 year replacement period**. So if a sign is damaged and is re-installed, a new 10 year period will begin with the replacement date.



Create the Work Order Plan - Link assets with the task

Note: Every Work Order must have a pre-defined plan!

So what exactly is a plan? Some examples:

All prismatic signs must be replaced every 10 years

Every sign needs to be inspected once a year

Every culvert in the Middle River watershed needs to be cleaned once a year

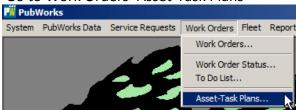
In 2016 the Muffin Master needs a complete overhaul by a certified technician





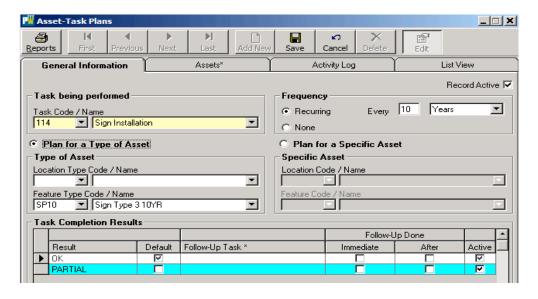
First, tie the asset and the action together.

a. Go to Work Orders>Asset-Task Plans



- b. Select the asset type that you want and the task that you need to perform.
- c. Select the frequency and time period
- d. Create a Default Result for a Task

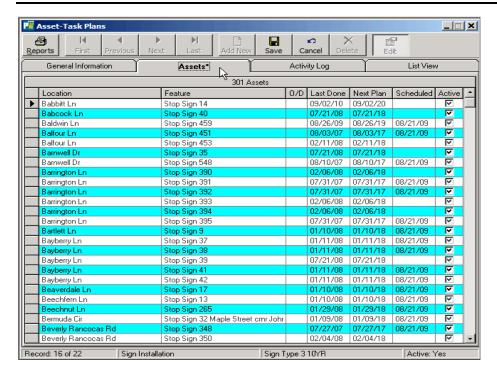
When you have a large number of items on your "To Do List" it is easier to create a default result and then make any changes to the norm. OK is the most frequent default value. This feature will come in handy when you complete a work order.



Now "Save" the task plan. Notice that before saving the plan (above) the tab for Assets has no asterisk.

After saving the plan, the tab for Assets has an asterisk. The asterisk in PubWorks means that there is something in that tab...in this case the assets in PubWorks that meet the criteria of the To Do Plan.

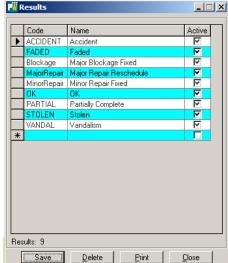




Creating Alternative Results

The results are where you setup possible outcomes. For example, it is OK, Broken, Partially Complete, etc.

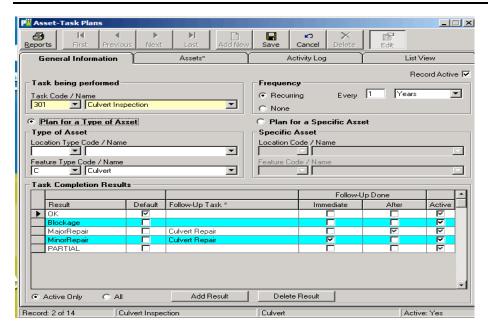




You also have the option to create a Follow-Up Task for a specific Result. For example, the following inspection of a culvert says

"if minor repair is needed, do the repairs immediately and the task is Culvert Repair" "if major repair is needed, schedule a task for Culvert Repair at a later date"





Selecting a follow-up of "Immediate" or "After" does the following:

Immediate follow-up will say that the work for that asset has been completed and is now off of the to-do list.

After means that some work is not done. So the asset will remain on the Work Order's to-do list along with the "Follow-Up Task" selected.

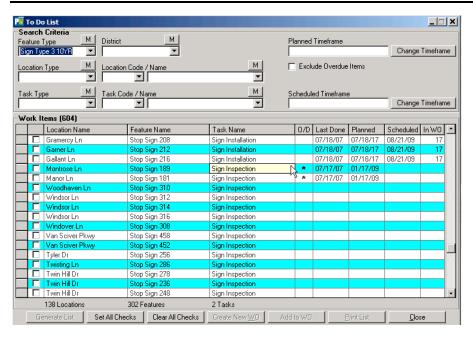
Initialization of Schedule

Note: Before you can run a report that lists when signs need to be replaced, you must input the original date of the triggering task. In this case "sign installation," was performed.

An easy way to find out which assets need to be initialized is to run the "To Do List" for a particular asset with all dates included for the timeframe.

Print a report and any asset that doesn't have a "Last Done" date needs to be performed.





Town of Hanover The assets highlighted in yellow do not have an original installation date, Work Order To Do List so one will need to be added. Last Done Location Planned Scheduled Sign Inspection 07/17/2008 01/17/2010 Sign1 Bermuda Cir Sign2 Bradford Ln Sign Inspection 01/30/2011 Bradford Ln 07/30/2009 Sign Inspection Sign3 Shelbourne Ln Sign4 Sign Inspection Summit Ln Sign5 Sign Inspection 07/17/2008 01/17/2010 Sunset Rd Sign6 Sign Inspection Bradford Ln 07/30/2009 01/30/2011 Sign7 Sign Inspection Sheffield Dr Sign8 Sign Inspection Bartlett Ln Sign9 Sign Inspection 08/06/2008 02/06/2010 Brooklawn Dr Sign11 Sign Inspection 07/30/2009 01/30/2011 Brierdale Ln Sign12 Sign Inspection Beechfern Ln Sign13 Sign Inspection 07/18/2008 01/18/2010 Babbitt Ln Sign14 Sign Inspection 01/30/2011 07/30/2009 Buttercup Ln Sign15 Sign Inspection Pembrook Ln Sign16 Sign Inspection Beaverdale Ln Sign17 Sign Inspection 07/18/2008 01/18/2010 Birchwood Ln Sign18 Sign Inspection Birchwood Ln Sign19 Sign Inspection 07/30/2009 01/30/2011 Birchwood Ln Sign20 Sign Inspection Buckingham Dr Sign21 Sign Inspection 07/18/2008 01/18/2010 Buckingham Dr Sign22 Sign Inspection Buckingham Dr Sign23 Sign Inspection 07/30/2009 01/30/2011 Birchwood Ln Sign24 Sign Inspection 07/18/2008 01/18/2010 Buckingham Dr Sign25 Sign Inspection Buckingham Dr Sign26 Sign Inspection Buckingham Dr Sign Inspection 07/30/2009 01/30/2011 Sign27 Buckingham Dr Sign28 Sign Inspection Buckingham Dr Sign29 Sign Inspection 07/21/2008 01/21/2010

After entering a date to initialize the process, you are ready to start creating your "To Do" list.





Creating the Work Order

Below are Work Orders created in different ways:

- 1. From a "To Do" List
- 2. From a Service Request
- 3. From an "Asset Search"
- 4. From an Existing Work Order

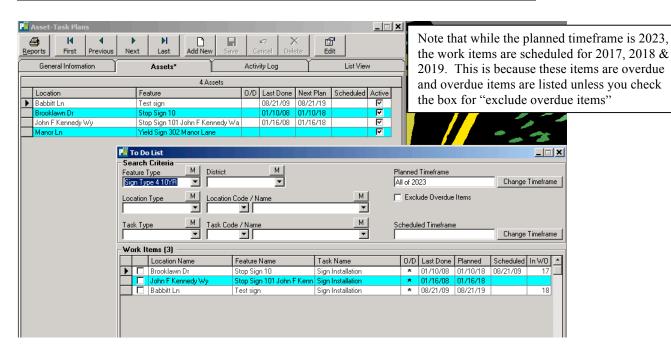
Creating a Work Order from the To-Do List

The "To Do List" will aggregate all assets that meet certain criteria – feature type, location, location type, district, task, etc.

After you have selected the criteria, click the "generate list" box in the lower left. This will tell you what needs to be done based on your selections.

In the screenshots below there are 4 signs in the upper screenshot, but only 3 planned replacements in the screenshot directly below. Manor Lane is missing. Why is this?

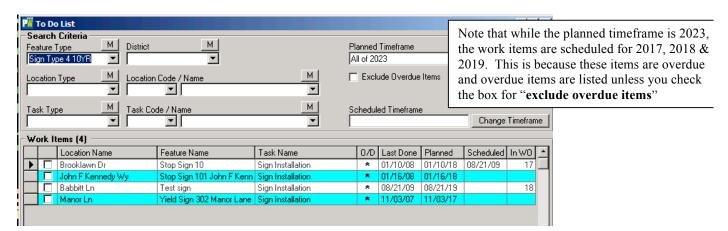
The reason for the ommission is that the yield sign on Manor Lane has not had a task performed for "sign installation," the computer program counts from the last "sign installation" date. If there isn't a sign installation date, there will not be a replacement date.



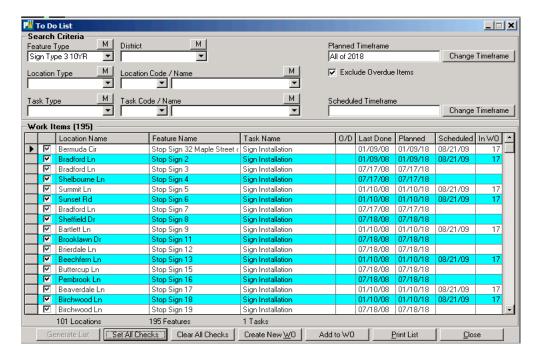


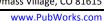
To fix this problem go to a daily activity and perform the task for "Sign Installation" and say that it was done on mm/dd/yy, so this is entered along with an employee. Now the yield sign on Manor Lane has an original installation date.

Re-running the planned list, it now shows.



The "To Do List" can also be used as a help with your budgets. Below there are 195 signs that have to be replaced in 2018. If the average cost is \$100 per sign, then \$19,500 should be budgeted for sign replacement.

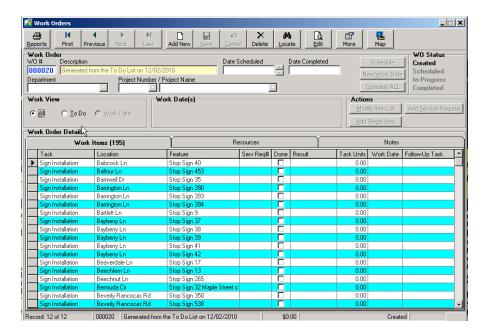




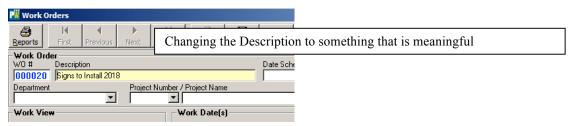


Creating a Work Order from the "To Do" list

- 1. From the "To Do List" apply your filters. When you have the items to be worked on, either manually check all items you want to include for this particular work order, or click "Set All Checks" at the bottom of the "To Do List" screen.
- 2. Click on "Create New WO" to generate a new work order which looks like the work order below.

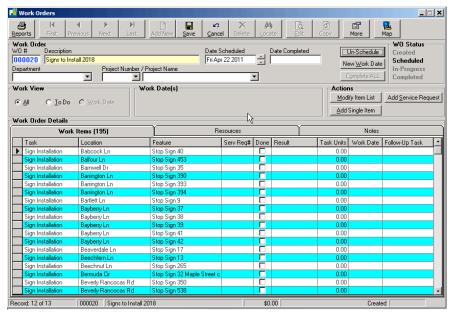


Hint: Rename the Work Order so that it means something to you. You may have hundreds of Work Orders, so what does "Generated from the To Do List on 12/02/10" mean? Probably nothing, however, changing the Description name to "Signs to Install 2018" tells you why the Work Order was generated.



- 3. Click the "Edit" button at the top of the Work Order
- 4. Establish a scheduled date
- 5. Save





Hint: Include the Department to facilitate looking-up Work Orders by Department.

Modifying Items on the Work Order

This allows you to delete items from your list.

Creating a Work Order from Service Requests

It can be helpful to create a single work order from multiple Service Requests.

- 1. Add Service Requests to an existing Work Order. You have maintenance scheduled on culverts in the Northeast Section. While there you already have the proper equipment with you to handle Service Requests for drainage problems. Solution: You filter the Service Requests for drainage problems in the Northeast Section and then add these Service Requests to the existing Work Order.
- Create a new Work Order from one or many Service Requests. You have a number
 of drainage service requests which may start with an inspection and lead to
 extended work. You want to keep track of all these Service Requests together over
 the life of the work.

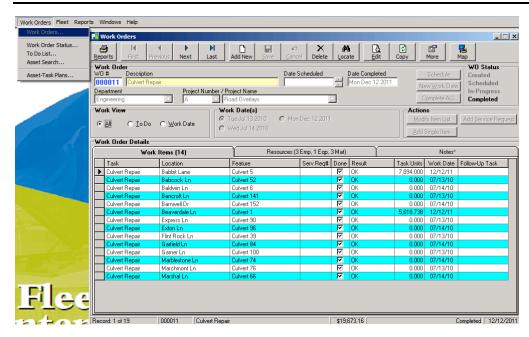
NOTE: Remember that a plan needs to be created in advance for the work that you want to do. So in the following example, you must already have a pothole plan for all roads created.

Both of the examples above are created in the same way.

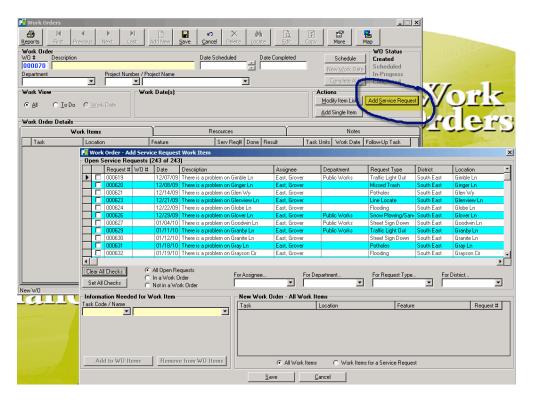
Go to your Work Orders and

- 1. Find an existing Work Order that you want to add Service Requests to
- 2. Or "Add New" Work Order from Service Requests.





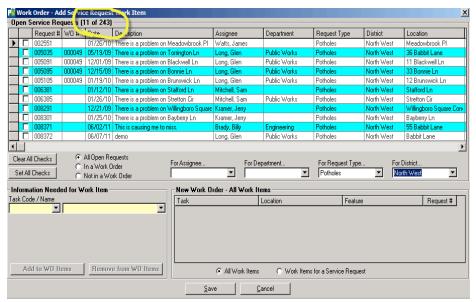
When you click "Add Service Request" to either an existing Work Order or a new Work Order, the dialog box for selecting Service Requests will display.



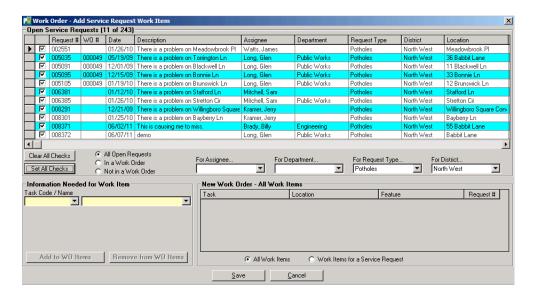
Select the filters you wish to apply. In the following screenshot the results are filtered by Request Type and by District. The results show each time your select a filter. In this case we have ended up with 11 of the 243 open Service Requests.







Next you either click the "Set All Checks" button to select all the results, or you check each service request that you wish to add to the Work Order.



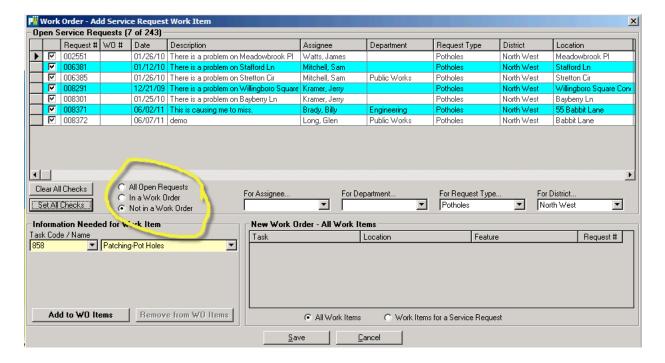
A task is then selected that you wish to be performed on these items. Remember: This task must already be linked to the assets.

You must also select if you want to add only those Service Requests that are not already in another Work Order.

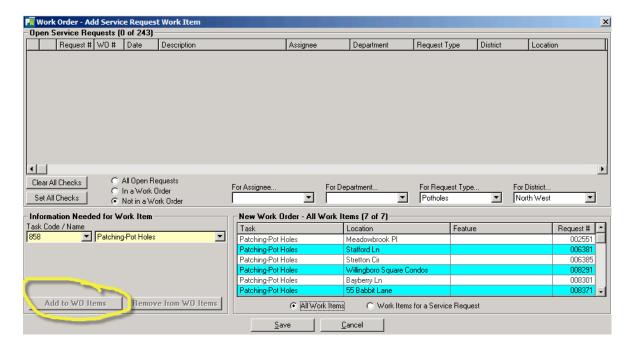
Notice that in the dialog box above there are 11 items that match the filtered results. However, in the dialog box below we have only 7 items. This is because the other 4 items are already included in another Work Order. This keeps you from duplicating work requests.





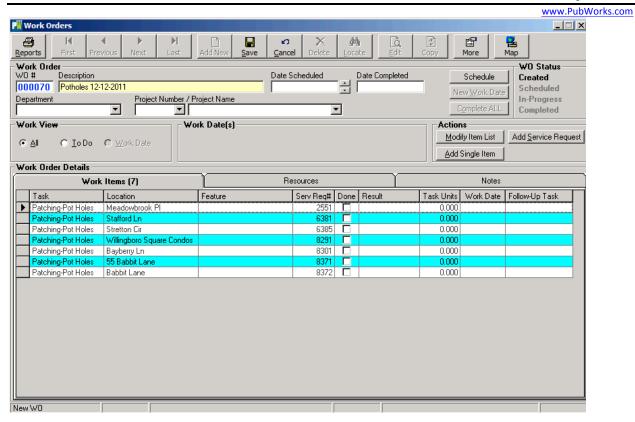


Finally, click "Add to WO Items" and "Save."



The Work Order is now complete and can be handled like any other Work Order.

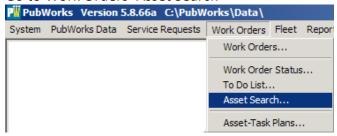




Creating a Work Order from the Asset Search

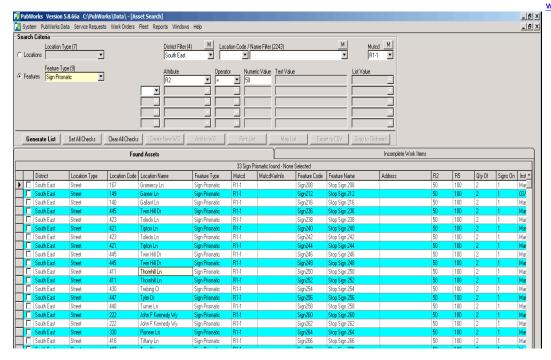
Using the Asset Search to create Work Orders is a very powerful and useful function.





Select the asset and the criteria for filtering such as districts, MUTCD and any attributes for the asset.

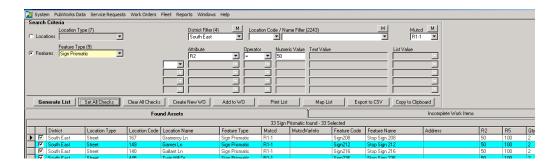




To filter by your selection criteria, Click "Generate List"

You then need to select the assets that you want in the new Work Order. It may be quicker to click the "Set All Checks" button to select everything.

In order to create the Work Order with the filtered items, Click "Create New WO"

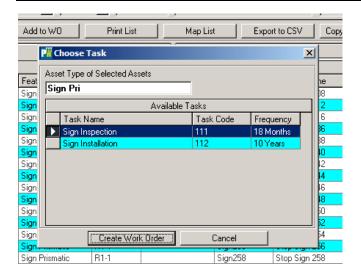


This will pop-up a dialog box that asks which task you want to perform.

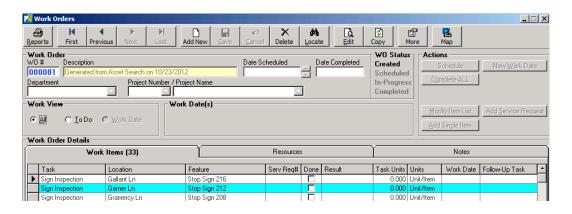
NOTE: As always, the asset and the task must already be planned. You can not select an asset and a task that is not already linked.







This generates a new Work Order. You will want to change the default WO name to something usefull.



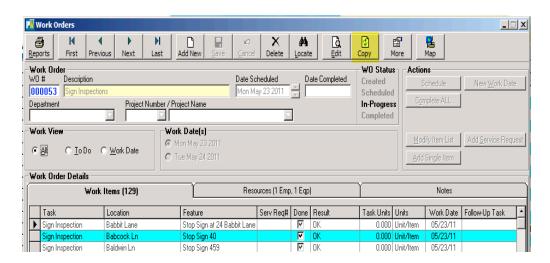




Creating a New WO from an Existing Work Order – the "Copy" Button

It can be very convenient and time saving to create a new Work Order from an Existing Work Order. For example, you inspect a group of signs every year, and the same signs are always in the same group.

When you finish with a Work Order with these items, Click "Copy"



Give the new Work Order a new Description and select a date one year from the completed date.



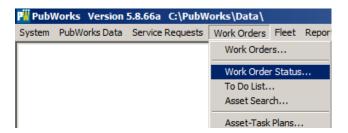
Looking Up Scheduled Work Orders

Looking up scheduled Work Orders, for either now or in the future, is a convenient way to monitor your work.

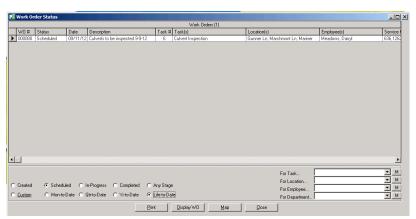
Go to Work Orders>Work Order Status







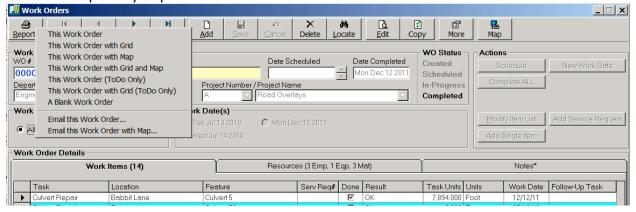
Select the filters you want to apply, and then generate your list.



TIP: Assign Work Orders to a Department. This allows you to quickly view only your department's Work Orders.

Printing a To-Do List for Work Orders

Here is a simple way to print the Work Order.





Stop Sign 393 Sign Installation Barrington Ln Stop Sign 394 Sign Installation Bartlett Ln Stop Sign 9 Sign Installation Bayberry Ln Stop Sign 37 Sign Installation Bayberry Ln Stop Sign 38 Sign Installation	
em# SR# Location Feature Task Done Remarks Babcock Ln Stop Sign 40 Sign Installation Balfour Ln Stop Sign 453 Sign Installation Barnwell Dr Stop Sign 35 Sign Installation Barrington Ln Stop Sign 390 Sign Installation Barrington Ln Stop Sign 393 Sign Installation Barrington Ln Stop Sign 394 Sign Installation Barrington Ln Stop Sign 394 Sign Installation Barrlett Ln Stop Sign 39 Sign Installation Barrlett Ln Stop Sign 37 Sign Installation Bayberry Ln Stop Sign 37 Sign Installation Bayberry Ln Stop Sign 38 Sign Installation	
Babcock Ln Stop Sign 40 Sign Installation Balfour Ln Stop Sign 453 Sign Installation Barmwell Dr Stop Sign 35 Sign Installation Barrington Ln Stop Sign 390 Sign Installation Barrington Ln Stop Sign 393 Sign Installation Barrington Ln Stop Sign 394 Sign Installation Barrington Ln Stop Sign 394 Sign Installation Barrlett Ln Stop Sign 39 Sign Installation Bayberry Ln Stop Sign 37 Sign Installation Bayberry Ln Stop Sign 38 Sign Installation	
Baffour Ln Stop Sign 453 Sign Installation Barrington Ln Stop Sign 35 Sign Installation Barrington Ln Stop Sign 390 Sign Installation Barrington Ln Stop Sign 393 Sign Installation Barrington Ln Stop Sign 394 Sign Installation Barrington Ln Stop Sign 394 Sign Installation Barrington Ln Stop Sign 37 Sign Installation Bayberry Ln Stop Sign 37 Sign Installation Bayberry Ln Stop Sign 38 Sign Installation	
Barrwell Dr Stop Sign 35 Sign Installation Barrington Ln Stop Sign 390 Sign Installation Barrington Ln Stop Sign 393 Sign Installation Barrington Ln Stop Sign 394 Sign Installation Barrlett Ln Stop Sign 394 Sign Installation Bartlett Ln Stop Sign 37 Sign Installation Bayberry Ln Stop Sign 37 Sign Installation Bayberry Ln Stop Sign 38 Sign Installation	
Barrington Ln Stop Sign 390 Sign Installation Barrington Ln Stop Sign 393 Sign Installation Barrington Ln Stop Sign 394 Sign Installation Bartlett Ln Stop Sign 9 Sign Installation Bayberry Ln Stop Sign 37 Sign Installation Bayberry Ln Stop Sign 38 Sign Installation	
Stop Sign 393 Sign Installation Barrington Ln Stop Sign 394 Sign Installation Bartleft Ln Stop Sign 9 Sign Installation Baybenry Ln Stop Sign 37 Sign Installation Baybenry Ln Stop Sign 38 Sign Installation	
6 Barrington Ln Stop Sign 394 Sign Installation 7 Bartlett Ln Stop Sign 9 Sign Installation 8 Bayberry Ln Stop Sign 37 Sign Installation 9 Bayberry Ln Stop Sign 38 Sign Installation	
7 Bartlett Ln Stop Sign 9 Sign Installation 8 Bayberry Ln Stop Sign 37 Sign Installation 9 Bayberry Ln Stop Sign 38 Sign Installation	
Baybeny Ln Stop Sign 37 Sign Insullation R Baybeny Ln Stop Sign 38 Sign Insullation	
Bayberry Ln Stop Sign 38 Sign Installation	
Bayberry Ln Stop Sign 38 Sign Installation	
10 Bayberry Ln Stop Sign 39 Sign Installation	
ll Bayberry Ln Stop Sign 41 Sign Installation	
12 Bayberry Ln Stop Sign 42 Sign Installation	
3 Beaverdale Ln Stop Sign 17 Sign Installation	
14 Beechfern Ln Stop Sign 13 Sign Installation	
5 Beechnut Ln Stop Sign 265 Sign Installation	
6 Bermuda Cir Stop Sign 32 Maple Street cm Sign Installation	
7 Beverly Rancocas Rd Stop Sign 350 Sign Installation	
18 Beverly Rancocas Rd Stop Sign 538 Sign Installation	
9 Beverly Rancocas Rd Stop Sign 541 Sign Installation	
0 Birchwood Ln Step Sign 18 Sign Installation	
nployees: Equipment: Name Reghrs OT hrs Callout hrs Unit Name	Hours Miles
Text Object	

Completing the Work Order

Upon completion of the work you must enter at a minimum the following: which assets had work performed and who did the work and how much time did it take. The WO already has the task that was done.

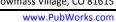
Were all items done – if not, which ones were completed?

Who was assigned the work?

Does vehicle and material usage need to be recorded?

Do incomplete items need to be scheduled?

Note: Work performed on a Work Order is the same as entering a daily activity for the asset. You do not re-enter work performed on a Work Order under Daily Activities. This will cause you to double count the work done by an employee.





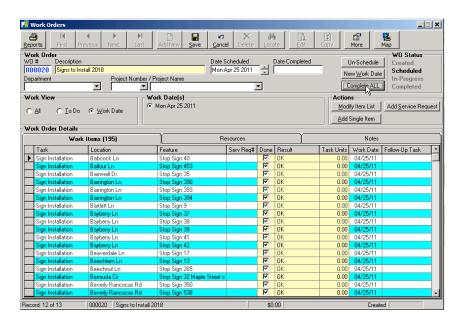
Entering Work that was Performed

After completing the work, do the following:

Edit

New Work Date – Enter the date that the work is being performed Complete ALL – if all the work was done, then click this box All items will be given the default result, which in this case is OK

Note: Each asset will now reflect that the task was performed on a date, by which employee, etc. If there are 100 items on the "To Do List", then 100 items will reflect the work performed! This is a real benefit of the Work Order Module.



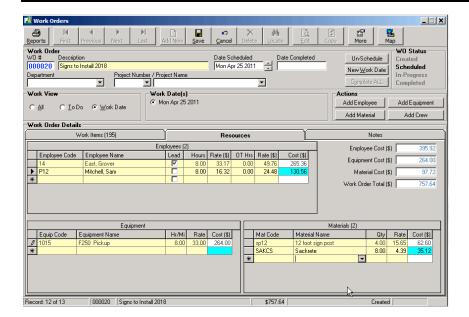
Entering Resources for a Completed Work Order

Entering labor, equipment and materials in Work Orders is very easy and takes the place of entering the work as a daily activity.

Under the "Resources" tab, enter labor, equipment and materials. You have now entered the equivalent of a daily activity for each of the employees.







The total costs are allocated evenly to each of the assets. The work is recorded under the asset's record. So for this WO, each asset is assigned 1/195th of the total labor, material and equipment costs.

Managing Partially Completed Work Orders

Done - Not Done Items

There are various reasons why a Work Order isn't completed in a single day:

There are just too many items on the list

A single item is repaired immediately and this takes a long time

Major repairs are needed and this will be done later

PubWorks gives you the flexibility to enter partially completed work orders.

The simplest form of an incomplete work order is to just say OK to those items completed and leave the other items open.

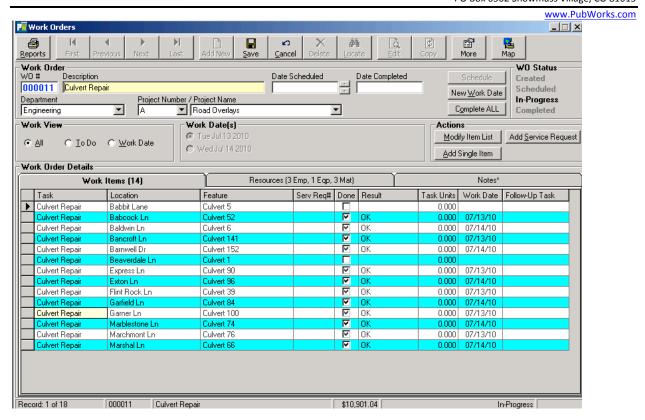
Notice in the record below there are:

14 total work items

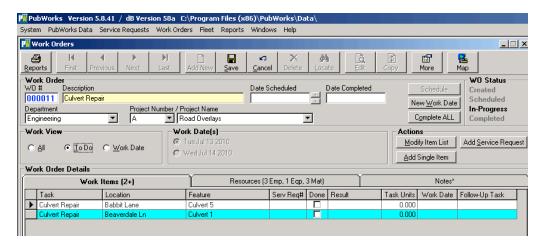
2 work items are not done

12 work items were done on either July 13th or July 14th, 2010.





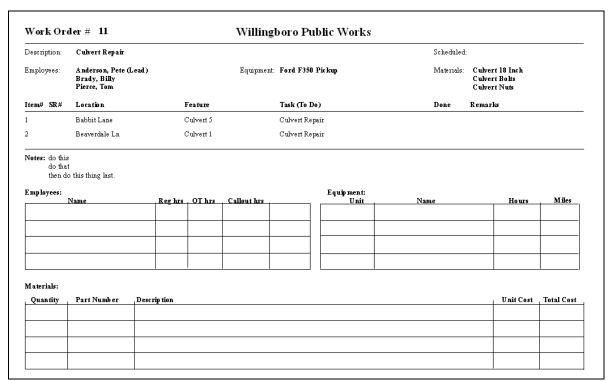
Clicking the "To Do" radio button gives me what is still open and you can perform this work.





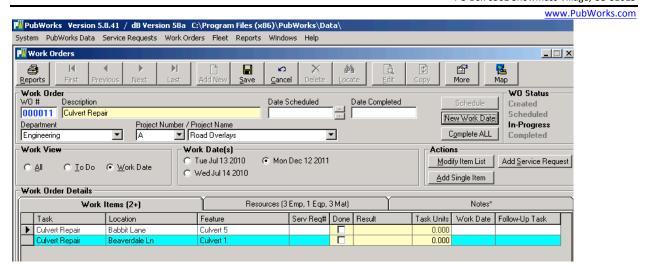




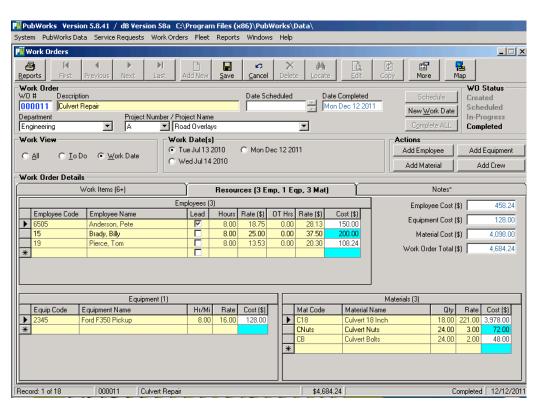


NOTE: This Work Order is already in process, so you do not add a new "Date Scheduled" rather you add a "New Work Date" to the on-going list of work dates. This will add a new work date and you can then enter completed work and resources used for the new work date. Notice below that the work date of Monday, December 12, 2011 has been added.





You enter the resources used and any notes for the current work date. <u>If this completes all the assigned items</u>, the "Date Completed" will automatically be entered, closing this Work Order.







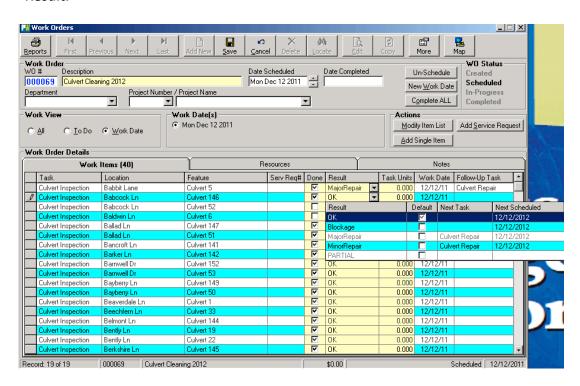
Work Orders with Different Outcomes

When performing an inspection, cleaning or other task, you may find that additional work is needed such as:

Additional Repairs Replacement

You want to record what needs to be done. So instead of checking that an item is OK, you will check the appropriate outcome. In the following example you need additional Major Repairs which will be performed at a later date.

The culverts were cleaned and "OK" with the exception of the first 4 culverts. These culverts need Major Repair work done. So when you check "Done" you then choose Major Repair as the "Result."



In the original setup, a result of Major Repair, creates a follow-up task of Culvert Repair.

Selecting a follow-up of "Immediate" or "After" does the following:

Immediate follow-up will say that the work for that asset has been completed and is now off of the to-do list.

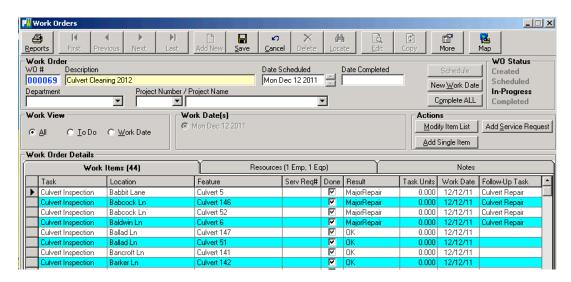
After means that some work is not done. So the asset will remain on the Work Order's to-do list along with the "Follow-Up Task" selected.



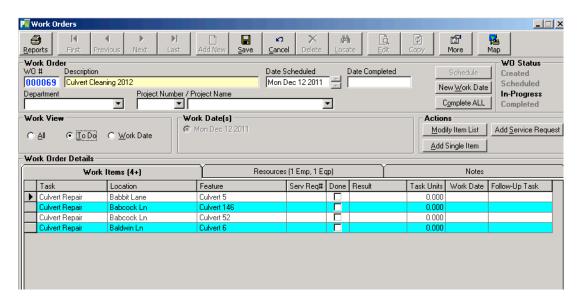


			Follow-	Follow-Up Done	
Result	Default	Follow-Up Task *	Immediate	After	Active
OK	V				V
Blockage					V
MajorRepair		Culvert Repair		V	V
MinorRepair		Culvert Repair	V		V
PARTIAL					V

After entering the results of Major Repair for these 4 culverts, you now have the following:



If you go to the "To Do" view, you will now see that you have a new tasks added to the existing work order for these 4 items. Notice that the original task was "Culvert Inspection" but now the task is "Culvert Repair."



You can now create a printed work order for these 4 items and then enter the work with a new "Work Date" and task completion.