

# Roadway RM-205

## Reporting Functions

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# 1 Introduction






## 1.1 Objective

This document explains the reporting features of the Enterprise Information Management System (EIMS). It describes how reports are organized, how to create the different types of reports, and how to share reports with others.

## 1.2 Report Types

In EIMS there are several report formats in which data can be viewed. These formats are listed in alphabetical order in Table 1-1, and also shown in Figures 1-1 through 1-5. Each report type is printer compatible.

Table 1-1. Supported Report Types

Type	Description	Example
GIS Report 	This type of report combines a particular Geographic Information System (GIS) Map display with particular data inventory elements or ranges.	Figure 1-1
GIS Map 	This type of file contains a saved view of the map, for optional use in Map windows such as for the GIS Report. The map file may be accessed or created from a Map window, using the map icons using the <b>New Map / Open Map / Save Map</b> functions.	Figure 1-2
Graph Report 	Displays data in a graphical format. The system supports five general types of graphs: cumulative, distribution, conditional, general, and weighted average.	Figure 1-3
Jasper Report 	This type of advanced report is configured by advanced users using open source software and custom scripting. Input data may be required for a Jasper report, for which the user is prompted with a dialog box. A Jasper report may include features of other report types such as a Graph or table. Jasper report writing is not in the scope of this document.	Figure 1-4
Standard Report 	Displays information in a continuous tabular format. Each module has its own set of Standard reports available	Figure 1-5

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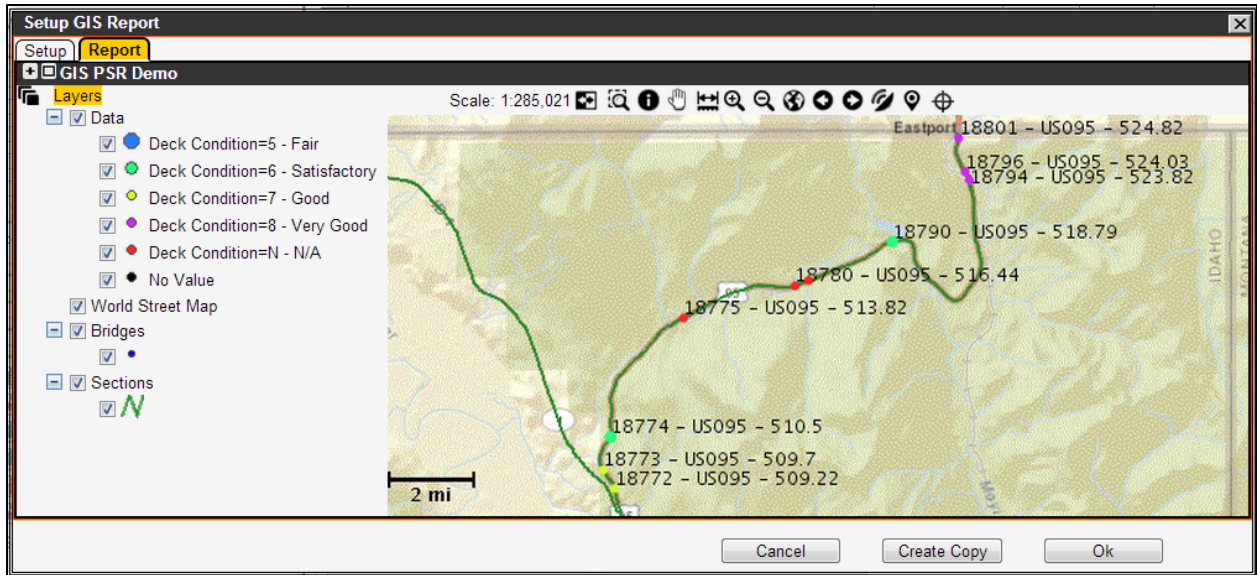


Figure 1-1. GIS Report Example

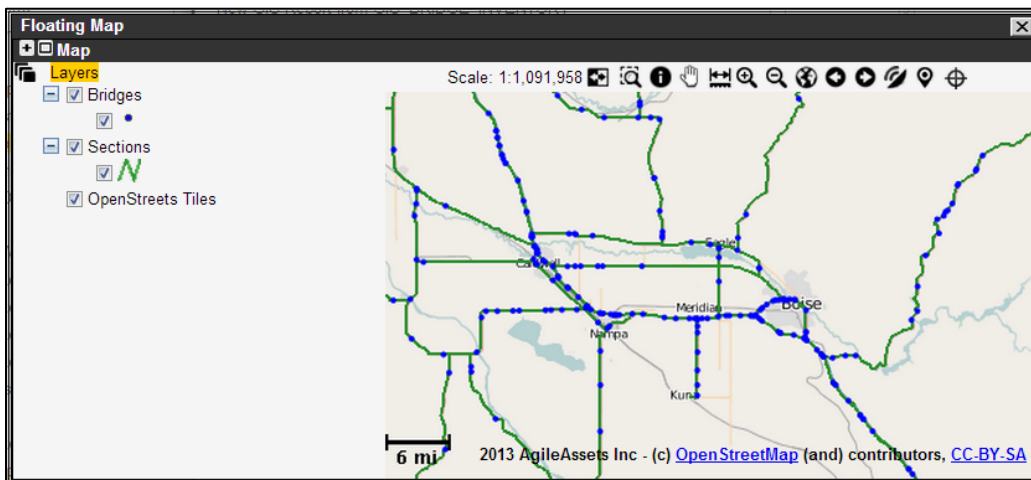


Figure 1-2. GIS Map Example

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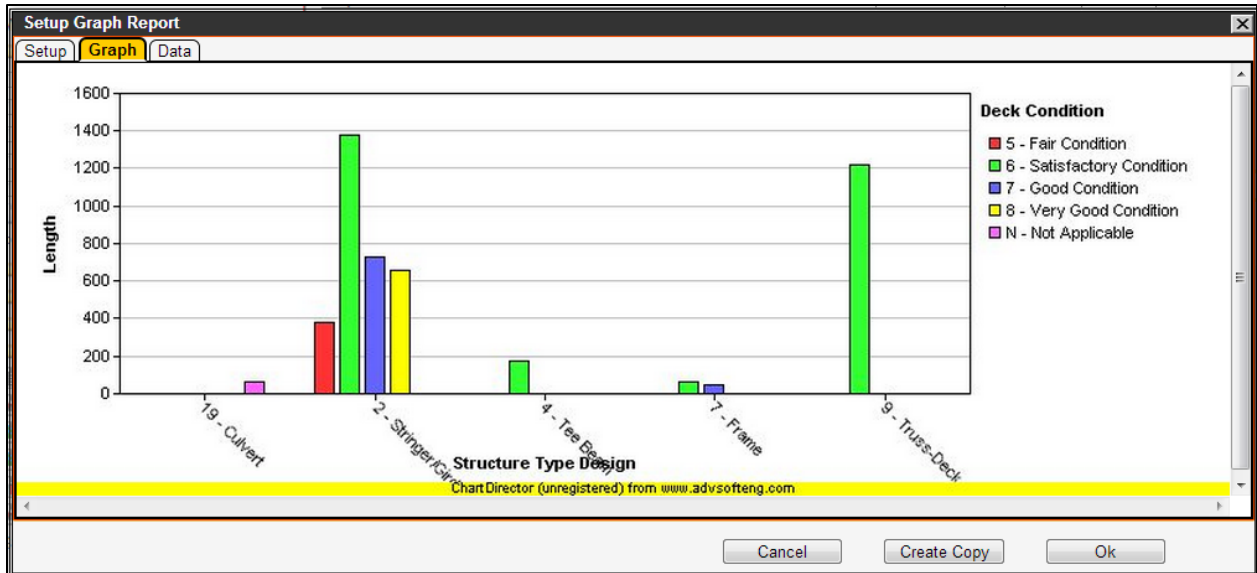



Figure 1-3. Graph Report Example

State Transportation Department FY 2013 Guardrail		<b>WORK ORDER SUMMARY</b>		Page: 1 of 1 Date: 08/22/2013 Time: 10:04 AM
Management	101A - DISTRICT 1	Start Date:	06/12/2013	
Work Order #:	706074	End Date:	06/12/2013	
Activity:	M324 - METAL GUARDRAIL MAINTENANACE			
Sub-Activity				
Accomplishment:	0	Units:		
Comments:				
Inv. Element	Route	Starting MP	Ending MP	Accomplishment
US002 28.4 - 28.48 (001590)		28.40	28.48	1.0
<b>LABOR TOTAL:</b>	\$ 0.00	<b>MATERIAL TOTAL:</b>	\$ 0.00	
<b>EQUIPMENT TOTAL:</b>	\$ 0.00	<b>OTHER COST:</b>	\$ 0.00	
<b>WORK ORDER TOTAL:</b>	\$ 0.00			

Figure 1-4. Jasper Report Example

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**Std Rpt on BRIDGE\_INVENTORY - 3172 Bonners Ferry Foreman**

8/22/2013 9:52:34 (1 Pages) Rows per page:

Structure Type Material	Structure Type Design	Bridge Name	Structure No.	Deck Surface Type	Deck Condition	Length
1 - Concrete	19 - Culvert	18760 - US095 - 485.63	S09520G 498.65	N - Not Applicable	N - Not Applicable	14
1 - Concrete	19 - Culvert	18775 - US095 - 513.82	S09520G 527.35	6 - Bituminous	N - Not Applicable	10
1 - Concrete	19 - Culvert	18780 - US095 - 516.44	S09520G 529.96	6 - Bituminous	N - Not Applicable	15
1 - Concrete	19 - Culvert	18785 - US095 - 516.75	S09520G 530.28	6 - Bituminous	N - Not Applicable	10
1 - Concrete	4 - Tee Beam	18790 - US095 - 518.79	09520G 532.32	6 - Bituminous	6 - Satisfactory Condition	33
1 - Concrete	7 - Frame	18745 - US095 - 480.07	S09520G 493.10	6 - Bituminous	6 - Satisfactory Condition	16
1 - Concrete	7 - Frame	18755 - US095 - 484.32	09520G 497.34	6 - Bituminous	6 - Satisfactory Condition	23
1 - Concrete	7 - Frame	18772 - US095 - 509.22	09520G 522.41	6 - Bituminous	7 - Good Condition	23
1 - Concrete	7 - Frame	18773 - US095 - 509.7	09520G 522.88	6 - Bituminous	7 - Good Condition	23
1 - Concrete	7 - Frame	18774 - US095 - 510.5	09520G 523.68	6 - Bituminous	6 - Satisfactory Condition	28
2 - Concrete Continuous	4 - Tee Beam	10030 - US002 - 69.91	00220B 69.98	6 - Bituminous	6 - Satisfactory Condition	145
3 - Steel	19 - Culvert	18768 - US095 - 494.44	S09520G 507.46	N - Not Applicable	N - Not Applicable	15
3 - Steel	2 - Stringer/Girder	18750 - US095 - 483.89	09520G 496.92	1 - Concrete	7 - Good Condition	730
3 - Steel	2 - Stringer/Girder	18765 - US095 - 494.23	09520G 507.25	6 - Bituminous	5 - Fair Condition	382
4 - Steel Continuous	2 - Stringer/Girder	18770 - US095 - 494.54	09520G 507.57	1 - Concrete	6 - Satisfactory Condition	1380
4 - Steel Continuous	9 - Truss-Deck	10035 - US002 - 69.99	00220B 70.05	6 - Bituminous	6 - Satisfactory Condition	1222
5 - Prestressed Concrete	2 - Stringer/Girder	18794 - US095 - 523.82	09520G 537.47	1 - Concrete	8 - Very Good Condition	129
5 - Prestressed Concrete	2 - Stringer/Girder	18796 - US095 - 524.03	09520G 537.63	1 - Concrete	8 - Very Good Condition	282
5 - Prestressed Concrete	2 - Stringer/Girder	18801 - US095 - 524.82	09520G 538.42	1 - Concrete	8 - Very Good Condition	250

Figure 1-5. Standard Report Example

## 1.3 Reports Management Window

### 1.3.1 Introduction

Reports are accessible from the Reports menu of any EIMS module, including the Resources module. This menu opens a Reports Management window similar to Figure 1-6.

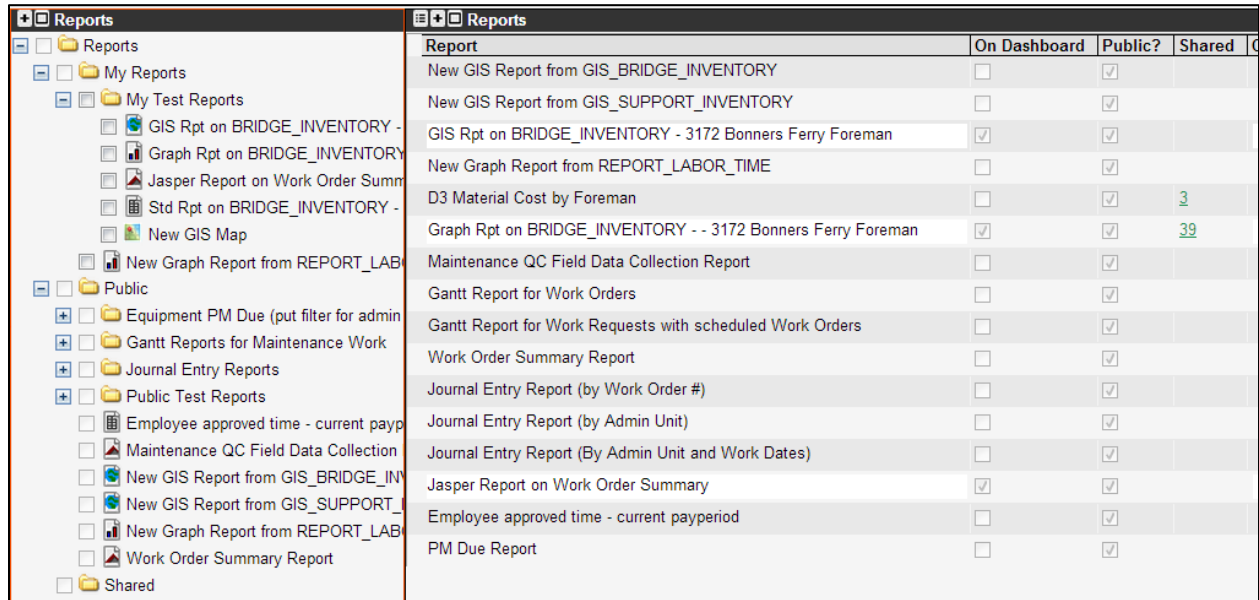


Figure 1-6. Reports Management Window Example

At left (Figure 1-6), the window displays a hierarchy of the various reports available. At right, it provides a tabular list of the same reports, with their configuration attributes. (Note: The actual report list the user sees in the Production EIMS may be different to that shown above.)

### 1.3.2 Window Layout

#### 1.3.2.1 Reports Directory Pane

The Report directory pane at left organizes the reports according to access setting, using the default hierarchy of **My Reports**, **Public**, and **Shared**, each is explained in Table 1-2.

Table 1-2. Reports Pane Folders

Folder	Description
My Reports	This folder is for the logged-in user. It contains all reports for which only the logged in user has access. The user may insert new reports into this folder, and insert new directories as needed to assist with organization, using simple commands explained in upcoming Table 1-4.
Public	This folder shows all reports where an originator has shared a report among all users of ODOT (agency-wide), and for which the logged-in user has sufficient privileges. Public reports are read-only. The folder structure for the Public directory is also read-only.



Folder	Description
Shared	This folder shows all reports that have been shared among particular members of a Division/Cost Center, for which the logged-in user has access. The Shared folder structure is read-only and is based on the names of the originator who shared the report. When a report is shared among a Division/Cost Center, the originating user may specify read-only or read-write access. If read-write is applied, any changes made to that file by a "shared" user also affect the original file in the My Reports folder of the originator. However, if the file was originally configured as read-only, it will remain read-only.

### 1.3.2.2 Report Properties

You can view properties of a report (Figure 1-7) as listed in Table 1-3.

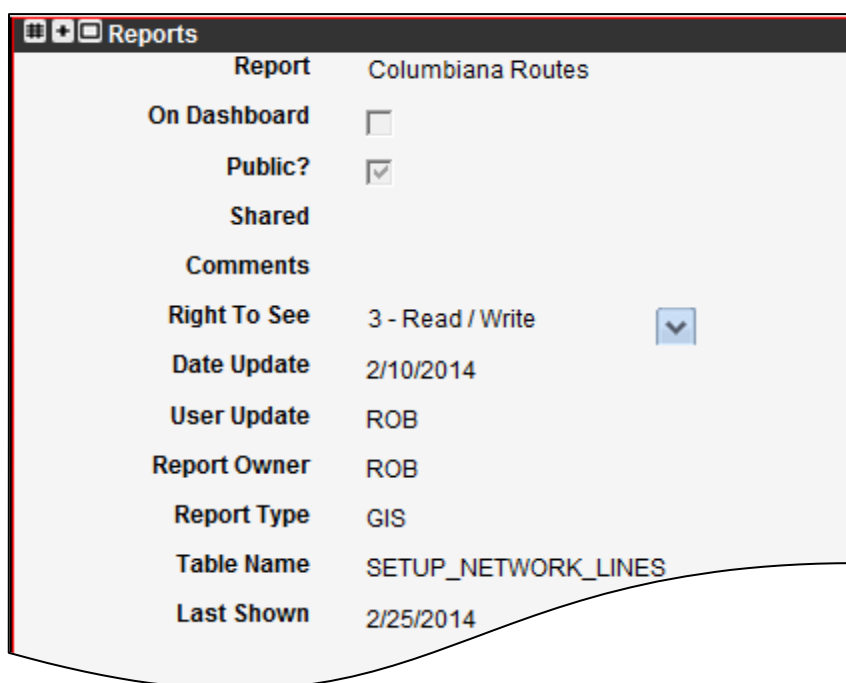


Figure 1-7. Report Properties Example

Table 1-3. Report Properties

Label	Description
Report	This field shows the name of the report, as configured by the originator. The originator may edit this field to rename a report.
On Dashboard	This field indicates whether the logged-in user has added this report to his/her home screen (Dashboard), using the <b>Add to Dashboard</b> command. This is further explained in section 3.
Public?	This field indicates whether the originator shared the report at the ODOT level, using the <b>Make Report Public</b> command. This is further explained in section 3.

Label	Description
Shared	This field indicates the number of users with whom the report is shared. Its value includes a hyperlink that opens a pop-up window when selected. The popup window lists the names of all users with whom the report is shared. This is further explained in section 3.
Comments	This field is used to provide information to help the user better understand the report.
Right To See	This field shows the security level assigned to the report. Only users with at least the specified access level may view or edit the report. The security level is selectable, to the originator or system administrator, from a drop-down list of security levels. The levels enabled in the list are those equal to the user's security level or lower.
Date Update	This field shows when the report was last modified.
User Update	This field shows the name of the user who last modified the report.
Report Owner	This field shows the name of report's originator. Only the originator may change the Right To See setting or Delete the report.
Report Type	This field shows the type of report, among the types listed previously in Table 1-1.
Table Name	This field shows the name of the table or reporting view from which data for the report is drawn.
Last Shown	This field shows when the report was last viewed.

### 1.3.3 Reports Command in Report Directory Pane

The menu commands that are available for reports are based on the type of report selected, as explained in Table 1-4.

Table 1-4. Folder Commands (Left Pane)

Label	Description
Basic commands – My Reports folder	
Delete	This command deletes a selected empty folder or report from within the My Reports folder.
Delete Selected	This command deletes any empty folders or reports selected by user by selecting a checkbox, from the My Reports folder.
Insert Directory	This command inserts a new folder into the selected My Reports folder, for which the folder name is editable.
Insert GIS Report	This prompts the user for which reporting view to use, and enters a new record, of which the report name is editable in the details pane at right. The <b>Setup/Show Report</b> function would then be used to configure the report and select <b>Ok</b> to update the report. Refer to section 2.2 for more details.

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Label	Description
Insert GIS Map	<p>This enters a new record, of which the report name is editable in the details pane at right. The <b>Setup/Show Report</b> function would then be used to configure the map and save over the new map file. Refer to section 2.3 for more details.</p> <p>A more likely scenario for creating a GIS Map is to use a <b>Save Map</b> function from a Map window, rather than using this Insert function.</p>
Insert Graph Report	<p>This prompts the user for which reporting view to use, and enters a new record, of which the report name is editable in the details pane at right. The <b>Setup/Show Report</b> function would then be used to configure the report and select <b>Ok</b> to update the report. Refer to section 2.4 for more details.</p>
Insert Jasper Report	<p>This function prompts the user for a Jasper Report file to upload. Jasper Reports is an advanced Reporting tool that requires additional training not covered in this manual. Ask your Manager if you believe you need access to Jasper Reports.</p>
Insert Standard Report	<p>This prompts the user for which reporting view to use, and enters a new record, of which the report name is editable in the details pane at right. The <b>Setup/Show Report</b> function would then be used to configure the report and select <b>Ok</b> to update the report. Refer to section 2.6 for more details.</p>
General Report Commands	
Add to Dashboard	<p>This command places the selected report on the user's Dashboard (home page).</p>
Copy Report	<p>This command copies a file from the Public or Shared folder, and places it in the My Reports hierarchy.</p>
Make Report Private	<p>This command is only available for a report that was made public by the logged-in user. It removes the copy of the report from the Public folder. It may be initiated from either the Public folder or the user's My Reports folder. Refer to section 3 for more details.</p>
Make Report Public	<p>This command is only available from the My Reports folder, for a report that has not been made public by the logged-in user. The system copies the selected report to the Public folder, for ODOT use. The record shows a checkmark applied to the Public field, in the details pane, to signify that it has been shared with ODOT. Refer to section 3 for more details.</p>
Schedule Report to be Emailed	<p>This command allows the report to be sent to other EIMS users as an email attachment. The system displays the Schedule Report to be Emailed window, for specifying the emailing activity. Refer to section 3 for more details.</p>
Setup/Show Report	<p>This command is used to open a selected report other than a Jasper type. The resulting dialog box allows Setup to be viewed and/or modified along with viewing the Report.</p>
Share Report	<p>This command is available from the My Reports folder, for a report that has not been shared by the logged-in user. Refer to section 3 for more details.</p>
Show Report	<p>This command is only available for Standard (tabular) report. It allows the user to accept default columns and column labels. It opens a new browser window and displays the report using current data.</p>

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Label	Description
Jasper Report commands	
Download Report	This is intended for advanced users and not covered in this manual.
Edit Jasper Subreports	This is intended for advanced users and not covered in this manual.
Insert/Update Report	This is intended for advanced users and not covered in this manual.
Show Report (Excel)	This command creates the report in a format readable by the Microsoft Excel application, and if this application is available, displays the report.
Show Report (HTML)	This command opens a new browser window and displays the report in a printer compatible format.
Show Report (PDF)	This command creates the report in a format readable by the Adobe Reader application, and if this application is available, displays the report.

## 2 How to Create or Display a Report

### 2.1 Getting Started Steps

1. Navigate to the Reports window: {module name} > Reports > Report.
2. To create a new report, proceed as follows. Otherwise, proceed to step 3. to copy a report for modification, or step 4. for only viewing an existing report.
  - a. In the Reports Management window, perform one of the following functions (Figure 2-1) on the My Reports folder:

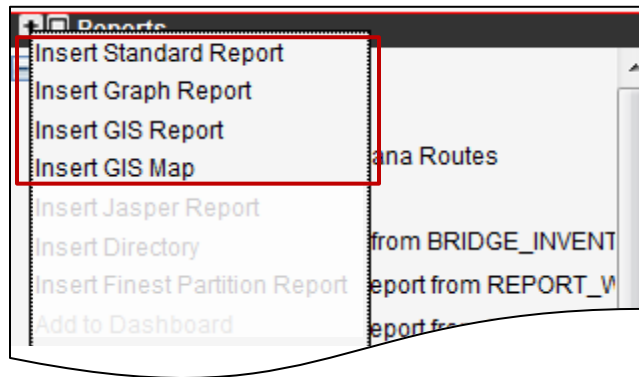


Figure 2-1. New Report Commands Example

- Insert GIS Report
  - Insert GIS Map (proceed to step c.)
  - Insert Graph Report
  - Insert Standard Report
- b. When prompted for the reporting view to report (Figure 2-2) (if applicable), use the drop list provided, and select the **OK** button.

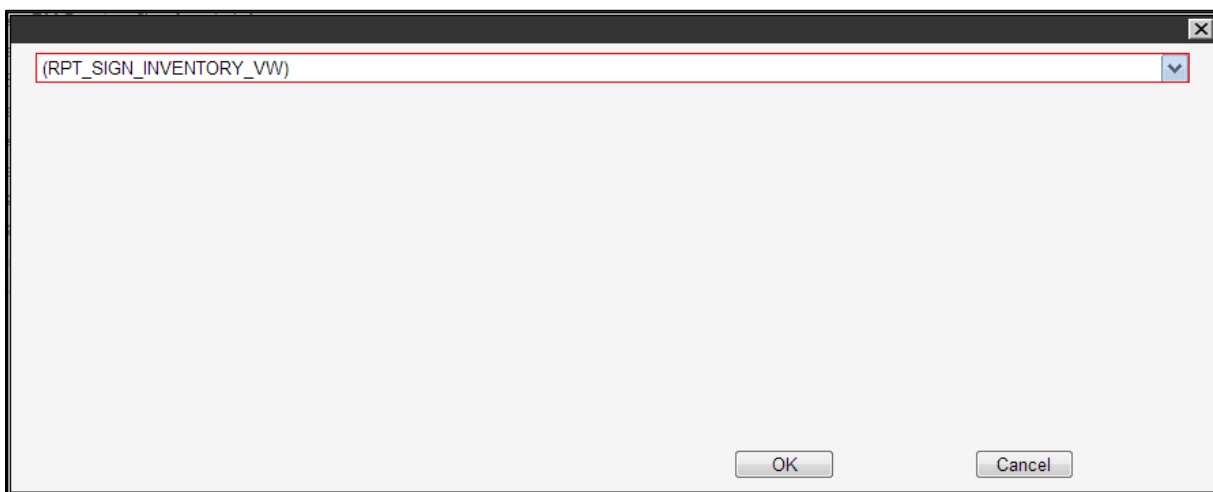


Figure 2-2. Reporting View Selection Dialog Box Example

**TIP!** The Reports Management window (Figure 2-3) shows a new report, and the selected reporting view (Figure 2-2) appears in the **Table Name** field.

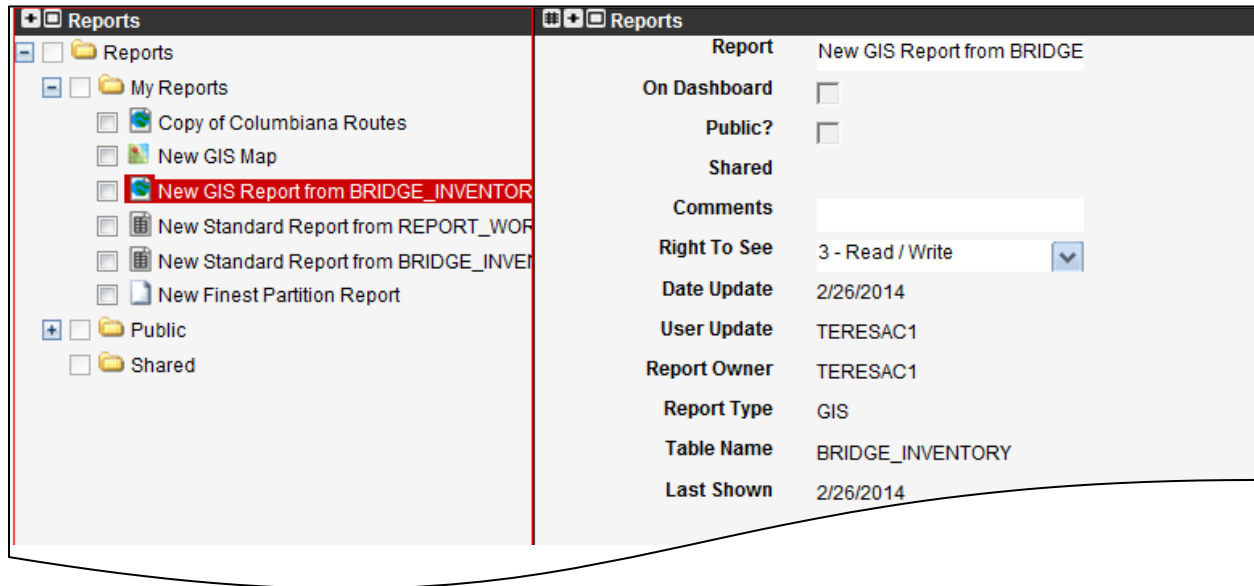


Figure 2-3. Reports Management Window – New Report Example

- c. At any time, the user may edit the **Report** name, **Comments**, and **Right To See** fields (Figure 2-3) as required.
3. To copy a report to use as a baseline, for making modifications, perform the **Copy Report** function (Figure 2-4) from the row of the desired report's name.
  - a. Refer to step 2.c. above for editable fields.
4. In the My Reports directory at left, perform a **Setup/Show Report** function (Figure 2-4) from the row of the report's name, unless:
  - a. If an established Standard report is selected, the **Show Report** function (Figure 2-4) is offered, to accept defaults and open a tabular view directly.

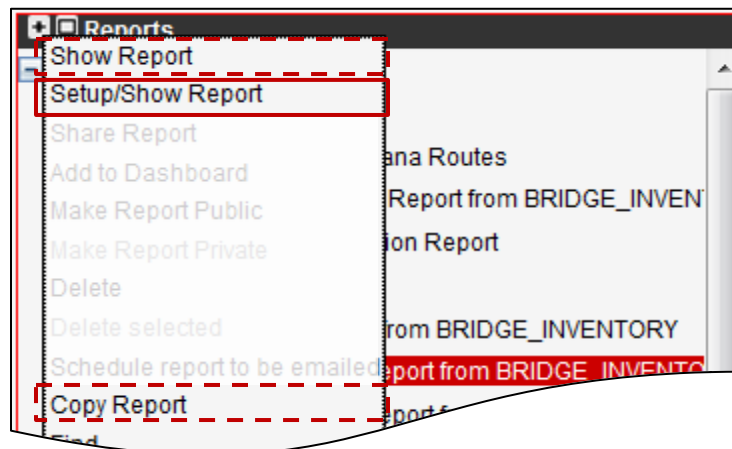
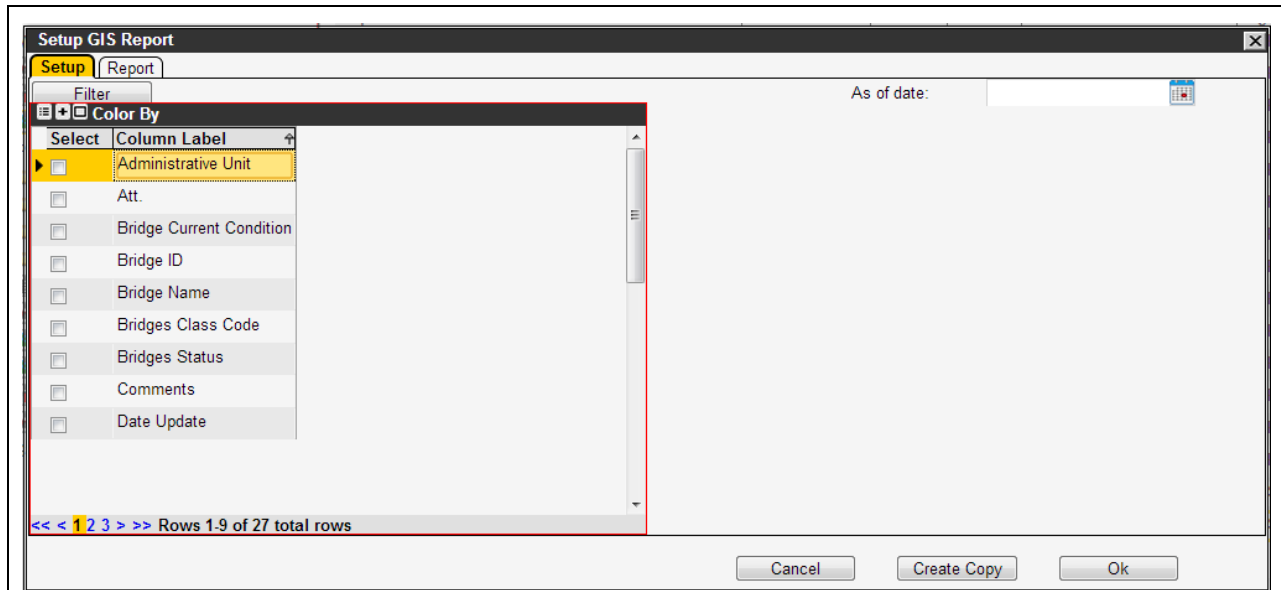


Figure 2-4. Setup/Show Request Example

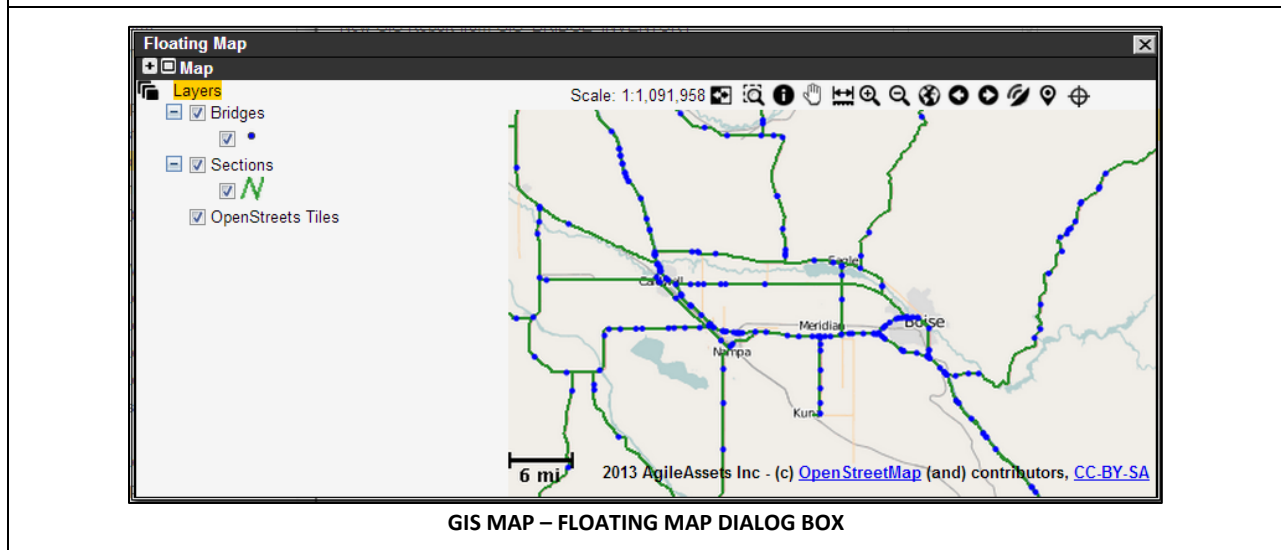
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5. From the **Setup/Show Report** function, when prompted for setup parameters based on selected report type (Figure 2-5), proceed to the paragraph listed in Table 2-1.



SETUP GIS REPORT DIALOG BOX

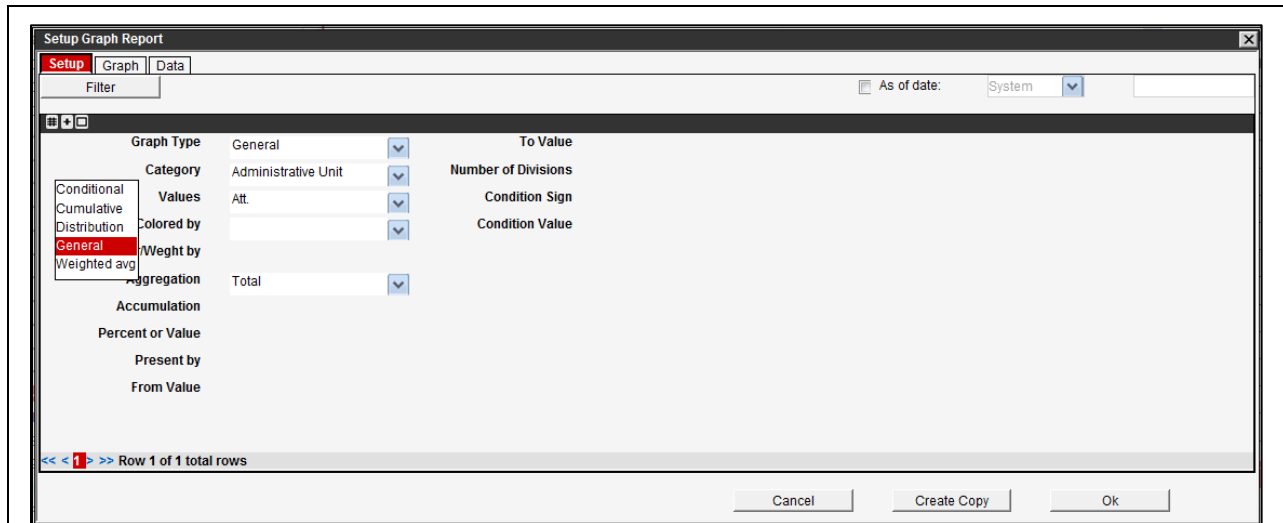
**TIP!** The Ok button at the bottom is only enabled when saving a new report.



GIS MAP – FLOATING MAP DIALOG BOX

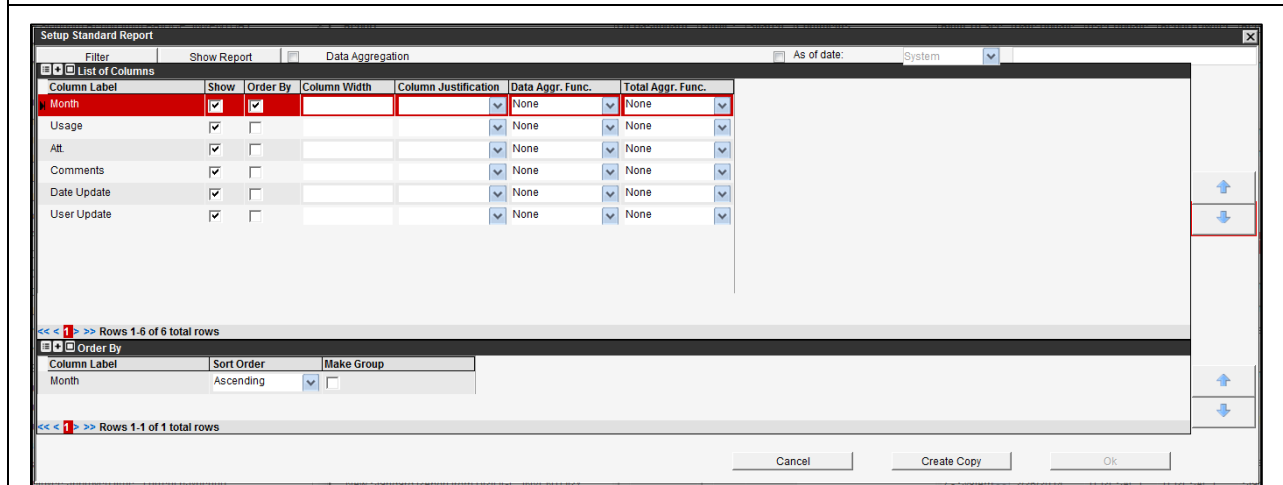
Figure 2-5. Report Setup Dialog Box Examples

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**SETUP GRAPH REPORT DIALOG BOX**

**TIP!** The Ok button at the bottom is only enabled when saving a new report.








**SETUP STANDARD REPORT DIALOG BOX**

**TIP!** The Ok button at the bottom is only enabled when saving a new report.

Figure 2-5. Report Setup Dialog Box Examples (Continued)

Table 2-1. Options by Report Type

Type	Options
GIS Report 	Setup and Display Paragraph 2.2
GIS Map 	Setup and Display Paragraph 2.3
Graph Report 	Setup and Display Paragraph 2.4
Jasper Report 	Display only Paragraph 2.5
Standard Report 	Setup and Display Paragraph 2.6



## 2.2 Setup and Displaying a GIS Report

1. Perform the Getting Started Steps in paragraph 2.1.

**TIP!** The Setup GIS Report dialog box (Figure 2-6) is opened to the **Setup** tab.

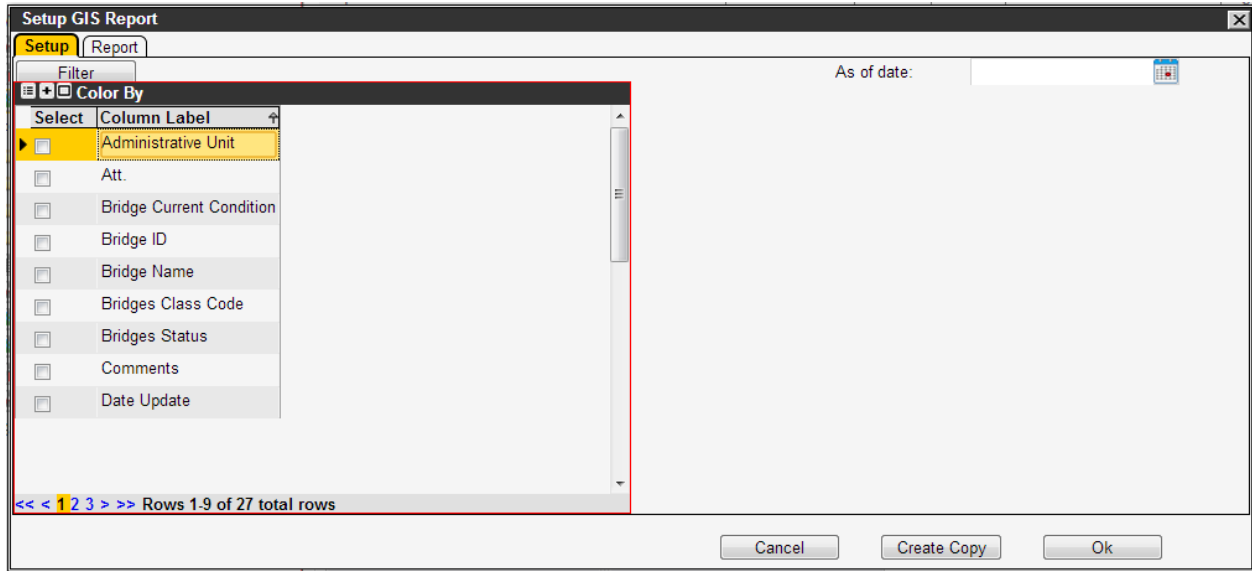


Figure 2-6. Setup GIS Report Dialog Box – Setup Tab Example (Repeated)

2. Adjust the Setup options (Table 2-2) as required, or proceed to step 3.

Table 2-2. GIS Reporting Options – Setup Tab

Label	Description
Color By	Placing a checkmark in the <b>Select</b> field of a column name (limited to one selection) causes all items of a certain type to be color coded.
Filter (button)	Opens a dialog box for entering filter criteria with which to restrict data used in the report.
As of date	This field, normally blank, allows the user to use reporting data matching a particular date rather than current data, by selecting the calendar button.

3. Select the **Report** tab (Figure 2-7) to display the data in a color-coded map.

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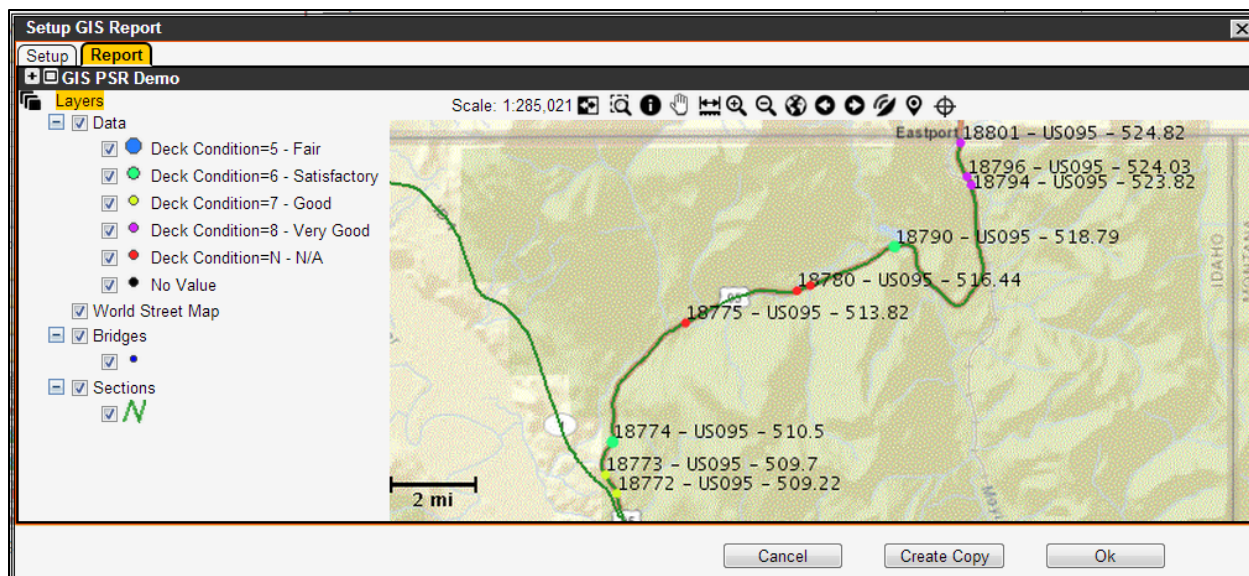


Figure 2-7. Setup GIS Report Dialog Box – Report Tab Example (Repeated)


- Using map pane menu options, listed in Table 2-3, configure the Report area of the dialog box as needed. Examples of usage are provided in the following steps.

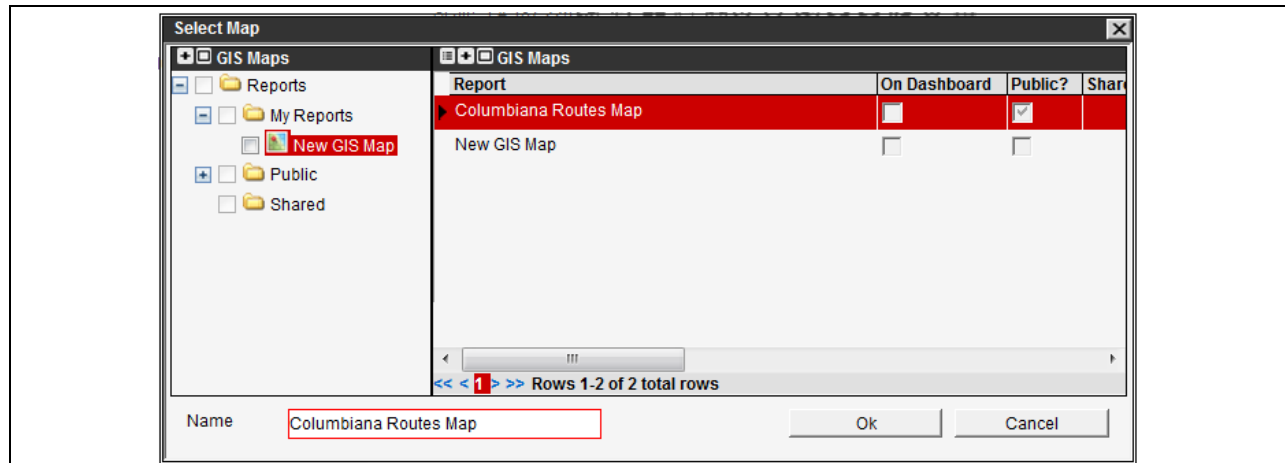
Table 2-3. Map Pane Options

Command	Description
Print...	This command places the map view into a new browser window, for printer compatibility.
Edit Layer Properties	This command opens the Layer Properties dialog box, which may be used to modify how the selected layer is shown on the map. (Note: Instead, the user may double-click on the layer name or the symbol used for the layer.)
Save As Layer	After modifying a layer, this command assists the user with saving the modifications. A saved layer can then be used with the <b>Add Layer</b> command.
Add Layer	Used to add additional GIS layers to the default layers in the Map window, from the user's library of GIS layers, in a Layer Selection dialog box. The system will recall this selection for subsequent viewings of the Map window. Opens dialog box (Figure 2-8).
Remove Layer	Used to delete the layer from the map and the list of layers. (Note: If the user only wishes to remove the layer from the map, but keep the layer available in the list of layers, clear the checkbox beside the name of the layer.)
Copy Layer	This command copies the existing layer to the clipboard.
Paste Layer	This command pastes the copied layer from the clipboard to the Map window.
Show Labels	This command is used to display the text labels of inventory elements on the map.
Hide Labels	This command removes labels from the map.

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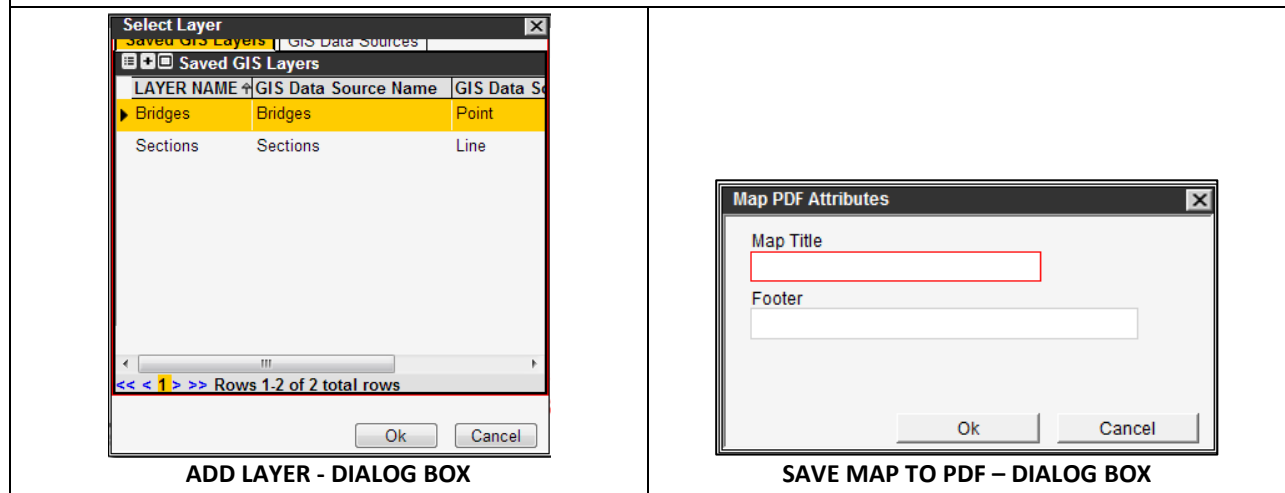
Command	Description
Show Attributes...	This command displays the inventory items of the active layer.
Set Layer Active	This command may be used to make a theme from which assets (features) can be selected. The system boldfaces the layer label to denote that it is the active layer.
Zoom To Layer	This command changes the magnification of the map so the entire extent of the layer is displayed.
Save Map	This command assists the user with saving the currently displayed map as a new Report, from a dialog box (Figure 2-8).
Save Map As PDF	This command opens the report in a format readable by the Adobe Reader application, from a dialog box (Figure 2-8).
Open Map	This command displays the Map Selection dialog box (Figure 2-8). Select the desired GIS Map, and then click the OK button. The system then closes the dialog box and displays the selected map.
New Map	This command removes all layers from the map other than those generated by the underlying window.

- a. To configure the map pane, either: perform an **Open Map** function (Figure 2-8) to select an established GIS Map, and/or use map pane controls (i.e., the Pan  icon) to center and zoom the viewing area.
- b. To add a layer to the map pane, perform an **Add Layer** function (Figure 2-8) to select an established layer.
- c. To save the GIS Report's map pane (such as for other use), use the **Save Map** and/or **Save Map as PDF** functions as prompted in Figure 2-8.



**OPEN MAP / SAVE MAP –DIALOG BOX**

**TIP!** The Name field at the bottom is only enabled when saving a map.



**ADD LAYER - DIALOG BOX**

**SAVE MAP TO PDF – DIALOG BOX**

Figure 2-8. Map Pane Option Examples

- In the Setup GIS Report dialog box, use buttons provided (Figure 2-9) to apply updates (**Ok**) or exit the screen as follows (Table 2-4).

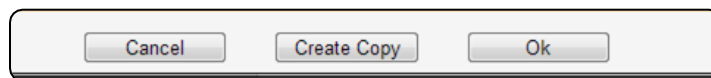


Figure 2-9. Setup GIS Report Dialog Box (Excerpt) – Buttons

Table 2-4. Setup GIS Report Dialog Box – Buttons

Label	Description
Cancel	This button operates the same as the close icon.
Create Copy	Method for copying a report and modifying as needed.
Ok	This button appears enabled when first configuring a new report, for applying the selections.

- Perform a **Save** function if the GIS Report has been created or modified.



## 2.4 Setup and Displaying a Graph Report

1. Perform the Getting Started Steps in paragraph 2.1.

**TIP!** The Setup Graph Report dialog box (Figure 2-11) is opened to the **Setup** tab.

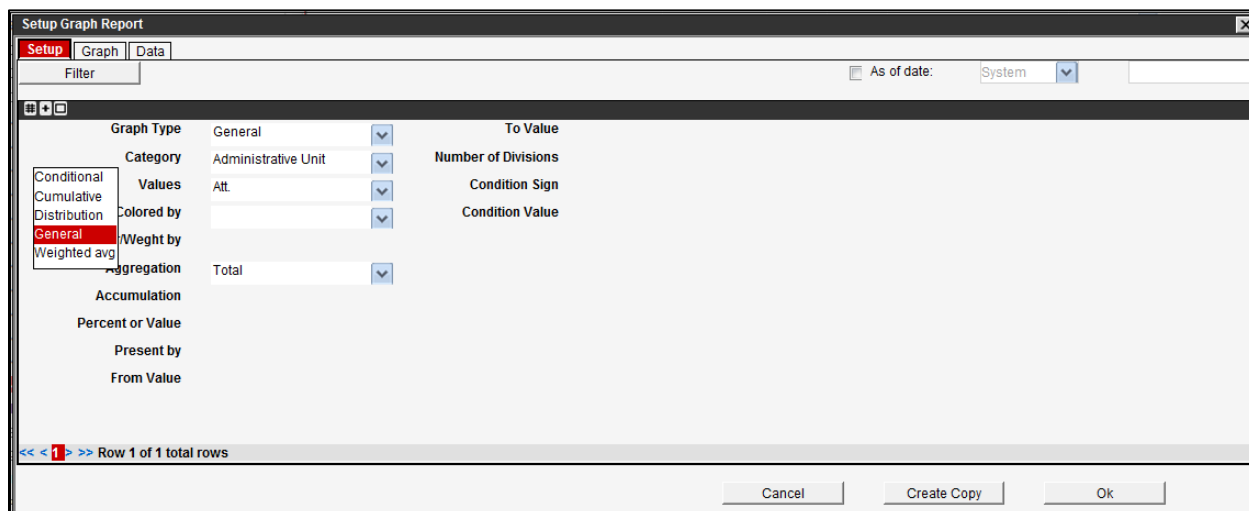


Figure 2-11. Setup Graph Report Dialog Box – Setup Tab Example (Record View)

2. Adjust the Setup options (Table 2-2) as required, or proceed to step 3.

Table 2-5. GIS Reporting Options – Setup Tab

Label	Description
Filter (button)	Opens a dialog box for entering filter criteria with which to restrict data used in the report.
As of date	This field, enabled with a checkbox, allows the user to use reporting data matching a particular date rather than current data, by using the calendar button. It also includes a selection of the System date or Effective Date.
Graph Type	A <b>General</b> graph is used to plot any X-axis variable against a user-defined summarization of a Y-axis value.
	A <b>Conditional</b> graph summarizes values only if the values pass a specified criterion (filter). This type of graph retrieves all of the rows in the reporting view that pass through the filter. It then calculates and reports the percentage of the measurement units that pass the conditional criteria, out of all measurements within that cell.
	A <b>Distribution</b> graph typically displays as a bar chart, and it shows summarized values of one variable plotted against another variable.
	A <b>Cumulative</b> graph is used for building frequency or probability density, or cumulative probability-density functions, for selected variables.
	A <b>Weighted avg</b> graph is used to plot any X-axis variable against a weighted average of a Y-axis value. This is similar to the General type of graph, except the aggregation function is always Average, and this is a Weighted Average, not a simple Average.

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Label	Description
Category	This field allows selection of the reporting view column that will be displayed along the X-axis of the graph. The system partitions the data by the Category value that the user selects in this field.
Values	This field selects a reporting view column that will be displayed along the Y-axis of the graph.
Colored By	This field selects a parameter with which to further partition the data as selected in the <b>Category</b> field. The field may be left blank, so the data is not further partitioned.
Cond/Ditr/Weight by	<p>This field serves multiple purposes:</p> <p><b>Condition By:</b> Used in a Conditional type graph for specifying the condition used.</p> <p><b>Distributed By:</b> Used in a Distribution type graph, for specifying how the X-axis data will be divided according to settings in the fields labeled From Value, To Value, and Number of Divisions.</p> <p><b>Weighted By:</b> Used in a Weighted Average type graph, for selecting the parameter for use in calculating a weighted average.</p>
Aggregation	<p>This field is enabled for a General graph type. It provides a list of functions (below) for applying to the <b>Value</b> field. The system will process the data for the Y-axis values within each <b>Category</b> and <b>Colored By</b> combination, according to the function selected in this field.</p> <div data-bbox="573 940 837 1140" style="border: 1px solid black; padding: 5px;"> <p>Average Maximum Min Number of Records St. Dev. Total Variance</p> </div>
Accumulation	This field is enabled for a Cumulative or Distribution graph type. It provides two choices for how the data is accumulated: Frequency and Cumulative. Frequency indicates how much exists, for each <b>Category</b> and <b>Colored By</b> combination. Cumulative takes the Frequency results and accumulates them for each Colored By level across all Categories.
Percent or Value	This field is enabled for a Cumulative graph type. It offers the selections of Percentage and Value.
Present by	This field determines how data is presented. Depending on the graph type, it provides Value and % options. Value means the real value will be shown. When the option includes %, the percentage of values compared to the total on the Y-axis of the graph will be shown.
From Value	This field is enabled for a Cumulative graph type. It shows the value at the beginning of the X-axis (nearest the Y-axis).
To Value	This field is enabled for a Cumulative graph type. It shows the value at the end of the X-axis.
Number of Divisions	This field is enabled for a Cumulative graph type. It shows how the range between the <b>From Value</b> and <b>To Value</b> is divided with tick marks.
Condition Sign	This field is enabled for a Conditional type graph for specifying the Conditional operator, such as greater than or less than.
Condition Value	This field is enabled for a Conditional type graph, for showing the value of the Condition specified in <b>Cond/Ditr/Weight</b> by field.

3. Select the **Graph** tab (Figure 2-12) to display the data in a Graph report.

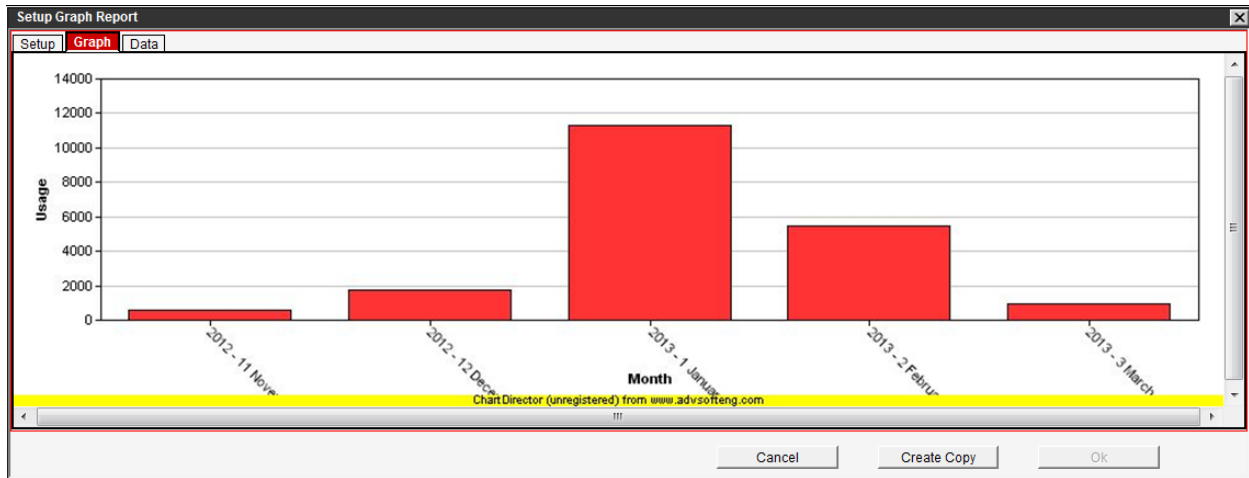


Figure 2-12. Setup Graph Report Dialog Box – Graph Tab Example

4. To view and/or export the data that was graphed, select the **Data** tab, as required.
5. In the Setup Graph Report dialog box, use buttons provided (Figure 2-13) to apply updates (**Ok**) or exit the screen as follows (Table 2-6).

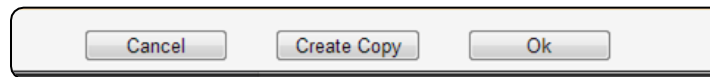


Figure 2-13. Setup Graph Report Dialog Box (Excerpt) – Buttons

Table 2-6. Setup Graph Report Dialog Box – Buttons

Label	Description
Cancel	This button operates the same as the close icon.
Create Copy	Method for copying a report and modifying as needed.
Ok	This button appears enabled when first configuring a new report, for applying the selections.

6. Perform a **Save** function if the Graph report has been created or modified.



## 2.5 Displaying a Jasper Report

Jasper Reports require advanced custom scripting. This section describes how to open an existing Jasper Report but this manual does not covered development of Jasper Reports themselves.

1. Select a Jasper report, with a display option as follows (Table 2-7).

Table 2-7. Jasper Display Commands

Label	Description
Show Report (Excel)	This command creates the report in a format readable by the Microsoft Excel application, and if this application is available, displays the report.
Show Report (HTML)	This command opens a new browser window and displays the report in a printer compatible format.
Show Report (PDF)	This command creates the report in a format readable by the Adobe Reader application, and if this application is available, displays the report.

2. When prompted to Define Argument(s) in a dialog box (Figure 2-14), select or enter the necessary value(s), per the report's setup.

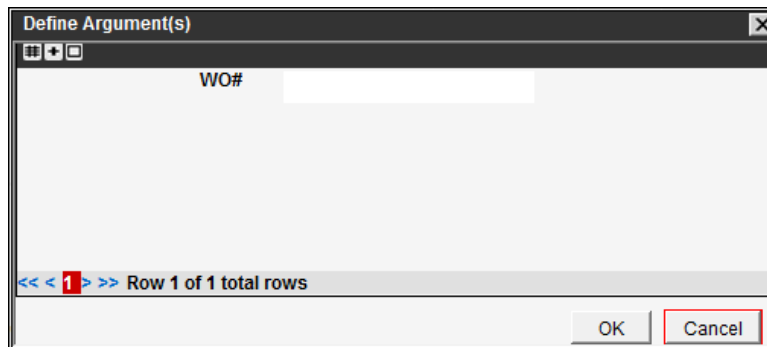


Figure 2-14. Jasper Report - Define Argument(s) Dialog Box Prompt Example

3. Select **OK** in the dialog box (Figure 2-14) to view the Jasper report (Figure 2-15) in the type of window selected.

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State Transportation Department FY 2013 Guardrail		<b>WORK ORDER SUMMARY</b>			Page: 1 of 1 Date: 08/22/2013 Time: 10.04 AM
Management	101A - DISTRICT 1	Start Date:	06/12/2013		
Work Order #:	706074	End Date:	06/12/2013		
Activity:	M324 - METAL GUARDRAIL MAINTENANACE				
Sub-Activity					
Accomplishment:	0	Units:			
Comments:					
Inv. Element	Route	Starting MP	Ending MP	Accomplishment	
US002 28.4 - 28.48 (001590)		28.40	28.48	1.0	
<b>LABOR TOTAL:</b>	\$ 0.00	<b>MATERIAL TOTAL:</b>	\$ 0.00		
<b>EQUIPMENT TOTAL:</b>	\$ 0.00	<b>OTHER COST:</b>	\$ 0.00		
<b>WORK ORDER TOTAL:</b>	\$ 0.00				

Figure 2-15. Jasper Report Example

## 2.6 Setup and Displaying a Standard Report

1. Perform the Getting Started Steps in paragraph 2.1.

**TIP!** When **Setup/Show Report** is selected, the Setup Standard Report dialog box (Figure 2-16) is opened. If **Show Report** is selected, skip to step 4.

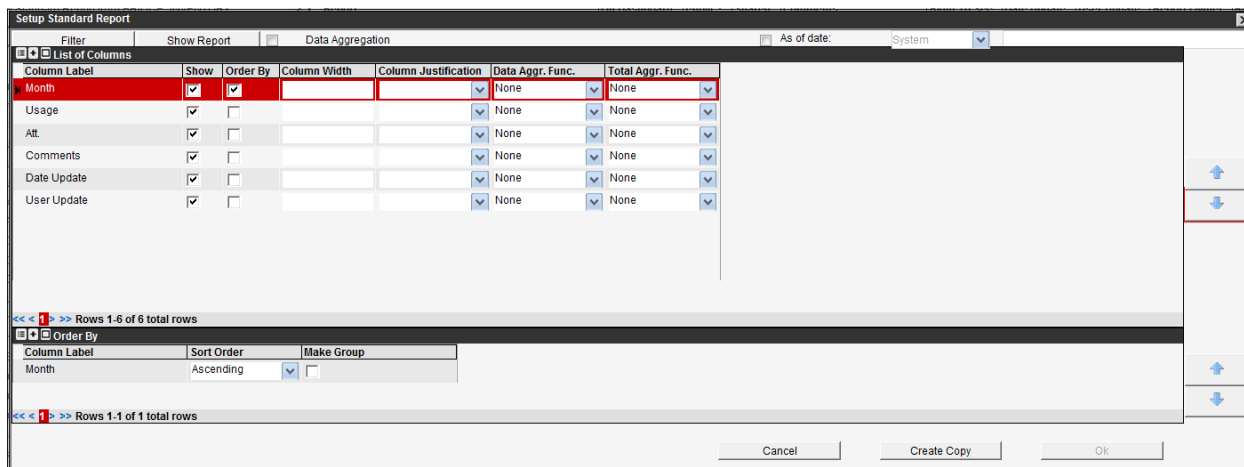


Figure 2-16. Setup Standard Report Dialog Box Example (Repeated)

2. Adjust the Setup options (Table 2-8) as required, or proceed to step 3.

Table 2-8. Setup Standard Report Dialog Box Options

Label	Description
Filter (button)	Opens a dialog box for entering filter criteria with which to restrict data used in the report. The user would first select one or more records from the List of Columns pane.
Show Report (button)	Displays the report in a new browser window.
Data Aggregation	Selecting this checkbox means all records in the reporting view are summarized into a single record for each non-numeric column being included in the report, and the numeric values are summarized as a total.
As of date	This field, enabled with a checkbox, allows the user to use reporting data matching a particular date rather than current data, by using the calendar button. It also includes a selection of the System date or Effective Date.
List of Columns pane	This pane lists the columns available in the report, and it allows the columns to be selected/deselected (Show), and re-ordered from top to bottom (left to right). Large arrow buttons assist with arranging the columns.
Column Label	This field shows the name of a column available in the report.
Show	This checkbox ensures the column will appear in the report.
Order By	This checkbox ensures the column will be used to sort information in the report.

Label	Description
Column Width	This field specifies the width of the column in pixels. When not specified, the system enters a default value, matching the width needed to display the column label on one line. If the user makes the value smaller than the default value, the column label will be truncated to fit.
Data Aggr. Func.	When the <b>Data Aggregation</b> checkbox is selected above, numeric values are aggregated by what is selected in this column. Numeric value aggregates default to Total. To use a “group by” rather than an aggregate, the user may select <b>None</b> .
Total Aggr. Func.	This function is independent of the Data Aggregation checkbox above. If setting a value in this field, the column inserts a summary value for all records at the end of the report beneath the column being summarized, according to the method of summary selected.
Order By pane	This pane lists the columns available in the report, according to those with the <b>Order By</b> checkbox selected in the pane above The top-most listed column is the primary sort; the next one down is the secondary sort; etc. If necessary, change the sort order by selecting the column to be moved and then using the appropriate Up/Down arrow button at right.
Column Label	This field shows the name of a column for which <b>Order By</b> checkbox is selected in the List of Columns pane.
Sort Order	This field indicates whether the column is to be sorted in Ascending or Descending order.
Make Group	This checkbox allows instances of the same type to be grouped together. It allows the user to summarize the data in the report for each unique instance, or for all instances. The Make Group checkboxes must be selected in order from top to bottom. In other words, the user may not select the checkbox for the second row of the table if the first row is not also selected.

3. Select the **Show Report button** (Figure 2-16) to display the tabular data.
4. Allow several seconds for the data to be processed, as indicated by a **Please wait...** dialog box (Figure 2-17).



Figure 2-17. Please Wait... Dialog Box Example

**TIP!** The data appears in a new browser window (Figure 2-18).

Structure Type	Material	Design	Bridge Name	Structure No.	Deck Surface Type	Deck Condition	Length
1 - Concrete		19 - Culvert	18760 - US095 - 485.63	S09520G 498.65	N - Not Applicable	N - Not Applicable	14
1 - Concrete		19 - Culvert	18775 - US095 - 513.82	S09520G 527.35	6 - Bituminous	N - Not Applicable	10
1 - Concrete		19 - Culvert	18780 - US095 - 516.44	S09520G 529.96	6 - Bituminous	N - Not Applicable	15
1 - Concrete		19 - Culvert	18785 - US095 - 516.75	S09520G 530.28	6 - Bituminous	N - Not Applicable	10
1 - Concrete		4 - Tee Beam	18790 - US095 - 518.79	09520G 532.32	6 - Bituminous	6 - Satisfactory Condition	33
1 - Concrete		7 - Frame	18745 - US095 - 480.07	S09520G 493.10	6 - Bituminous	6 - Satisfactory Condition	16
1 - Concrete		7 - Frame	18755 - US095 - 484.32	09520G 497.34	6 - Bituminous	6 - Satisfactory Condition	23
1 - Concrete		7 - Frame	18772 - US095 - 509.22	09520G 522.41	6 - Bituminous	7 - Good Condition	23
1 - Concrete		7 - Frame	18773 - US095 - 509.7	09520G 522.88	6 - Bituminous	7 - Good Condition	23
1 - Concrete		7 - Frame	18774 - US095 - 510.5	09520G 523.68	6 - Bituminous	6 - Satisfactory Condition	28
2 - Concrete Continuous		4 - Tee Beam	10030 - US002 - 69.91	00220B 69.98	6 - Bituminous	6 - Satisfactory Condition	145
3 - Steel		19 - Culvert	18768 - US095 - 494.44	S09520G 507.46	N - Not Applicable	N - Not Applicable	15
3 - Steel		2 - Stringer/Girder	18750 - US095 - 483.89	09520G 496.92	1 - Concrete	7 - Good Condition	730
3 - Steel		2 - Stringer/Girder	18765 - US095 - 494.23	09520G 507.25	6 - Bituminous	5 - Fair Condition	382
4 - Steel Continuous		2 - Stringer/Girder	18770 - US095 - 494.54	09520G 507.57	1 - Concrete	6 - Satisfactory Condition	1380
4 - Steel Continuous		9 - Truss-Deck	10035 - US002 - 69.99	00220B 70.05	6 - Bituminous	6 - Satisfactory Condition	1222
5 - Prestressed Concrete		2 - Stringer/Girder	18794 - US095 - 523.82	09520G 537.47	1 - Concrete	8 - Very Good Condition	129
5 - Prestressed Concrete		2 - Stringer/Girder	18796 - US095 - 524.03	09520G 537.63	1 - Concrete	8 - Very Good Condition	282
5 - Prestressed Concrete		2 - Stringer/Girder	18801 - US095 - 524.82	09520G 538.42	1 - Concrete	8 - Very Good Condition	250

Figure 2-18. Standard Report Example (Repeated)

**TIP!** The browser window divides the rows into groups of 100 (or user selected multiple) to fit the screen and allow scrolling among pages. If the number of rows is <100, it shows “All.”

5. To affect the display only, select a value from the **Rows per page** field (Figure 2-19, at left), if applicable. The display updates accordingly.

Download CSV

(481 Pages) Rows per page: 100

- 100
- 200
- 300
- 400
- 500
- 600
- 700
- 800
- 900

**ROWS SELECTION**

Download CSV

(481 Pages) Rows per page:

- CSV
- XLS
- XLSX
- HTML
- XML

**DOWNLOAD SELECTION**

Figure 2-19. Standard Report Example (Repeated)

6. To download the data, if applicable:
  - a. Select a format from the drop list (Figure 2-19, at right), such as the default file extension of Comma separated values (CSV).
  - b. Select the **Download** button to open a File Download dialog box (not shown).

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7. When finished viewing the report, exit the browser window showing the report, by way the close icon at upper-right.
8. In the Setup Standard Report dialog box, use buttons provided (Figure 2-20) to apply updates (**Ok**) or exit the screen as follows (Table 2-9).

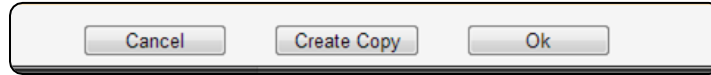


Figure 2-20. Setup Standard Report Dialog Box (Excerpt) – Buttons

Table 2-9. Setup Standard Report Dialog Box – Buttons

Label	Description
Cancel	This button operates the same as the close icon.
Create Copy	Method for copying a report and modifying as needed.
Ok	This button appears enabled when first configuring a new report, for applying the selections.

9. Perform a **Save** function if the Standard report has been created or modified.

## 3 Sharing, Making Public, Adding to Dashboard, and Emailing Reports

### 3.1 Share Reports

1. From the My Reports list in the Reports Management window, perform the **Share Report** function (Figure 3-1) on the appropriate report.

Share Report

Figure 3-1. Share Report Menu Option

2. When prompted to identify a Share Group, in the Report Group Sharing dialog box (Figure 3-2), identify the applicable Group name(s) at left or create a group.
  - a. To create a Share Group, perform an Insert in the **Groups** pane, and identify users in the **Individuals** pane at right, and/or by using a combination of the **Security Profiles** pane and **Admin. Units** pane at center.

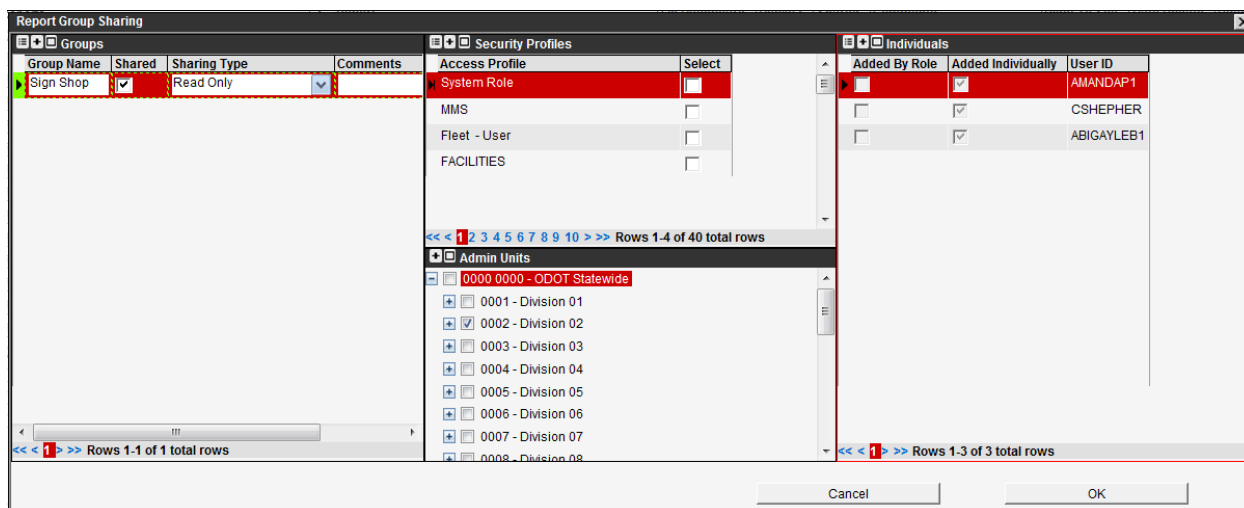


Figure 3-2. Report Sharing Dialog Box Example

3. Next to the **Group Name**, select the **Shared** checkbox in order to share the report with the specified group, or clear the checkbox in order to un-share the report, as applicable.

**TIP!** If **Shared** is checked, the specified group members will have access to a Shared subdirectory bearing the originator's name and his/her report. If cleared, the subdirectory and/or report will be removed from the specified group members' Shared directory.
4. If the **Shared** checkbox is selected, select the **Sharing Type** field as Read Only or Read/Write for the group, depending on user permissions, as needed.
5. Enter any information about the Share Group into the **Comments** field, as required.
6. Select the **OK** button to apply changes and exit the dialog box.

**TIP!** The report details now show the **Shared** status (Figure 3-3) as a blank field if not the report is not shared, or as a value and hyperlink for showing the shared users.

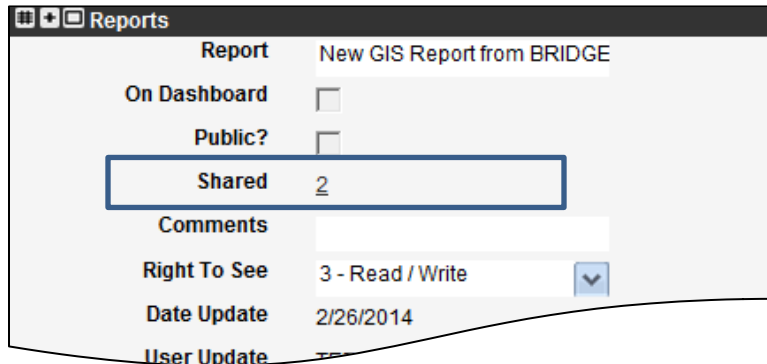


Figure 3-3. Report Sharing Status Example

7. Perform a **Save** function if the sharing status has been created or modified.

### 3.2 Make Reports Public

1. From the My Reports list in the Reports Management window, select a function on the appropriate report, depending on its status to enable the proper function (Figure 3-1): **Make Report Public** or **Make Report Private**.

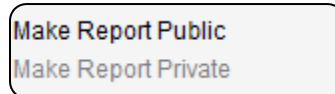


Figure 3-4. Share Public/Unshare Public Menu Options

**TIP!** The report details now show the **Public** status (Figure 3-5) as a checkmark, if made globally available to the agency, or appears as a blank checkbox if private.

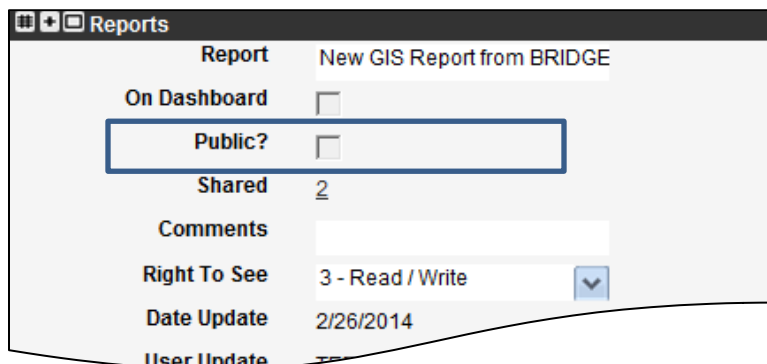


Figure 3-5. Report Sharing Status Example

2. Perform a **Save** function if the Public status has been created or modified.



### 3.3 Add Report to Dashboard

This function is used to place a report on the logged in users Dashboard (based on Module).

1. From the Reports Management window, select the **Add to Dashboard** function (Figure 3-9) on the appropriate report.

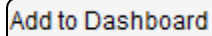
A rectangular button with rounded corners and a thin border, containing the text "Add to Dashboard" in a standard sans-serif font.

Figure 3-6. Add to Dashboard Option

2. Proceed to select **OK** in the dialog box (Figure 3-7), unless:
  - a. For a Jasper report, select the **Define parameters** button as enabled in the dialog box (Figure 3-7).

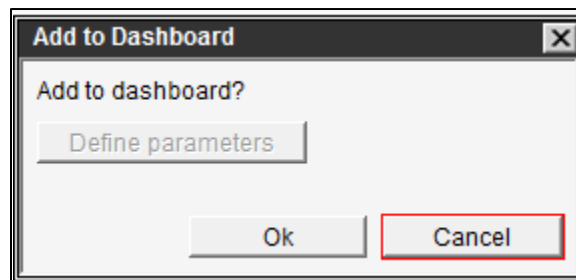


Figure 3-7. Add to Dashboard Dialog Box Example

- b. When prompted to Define Argument(s) for a Jasper report (as in Figure 2-14), select the value from the drop list(s) per report's setup, and select **OK**.
  - c. In the Add to Dashboard dialog box (Figure 3-7), select **OK**.
3. To view the Dashboard shortcut, select the **Home** icon in the left gutter area of the window to see the user's enabled Dashboard reports in the current module (Figure 3-8).

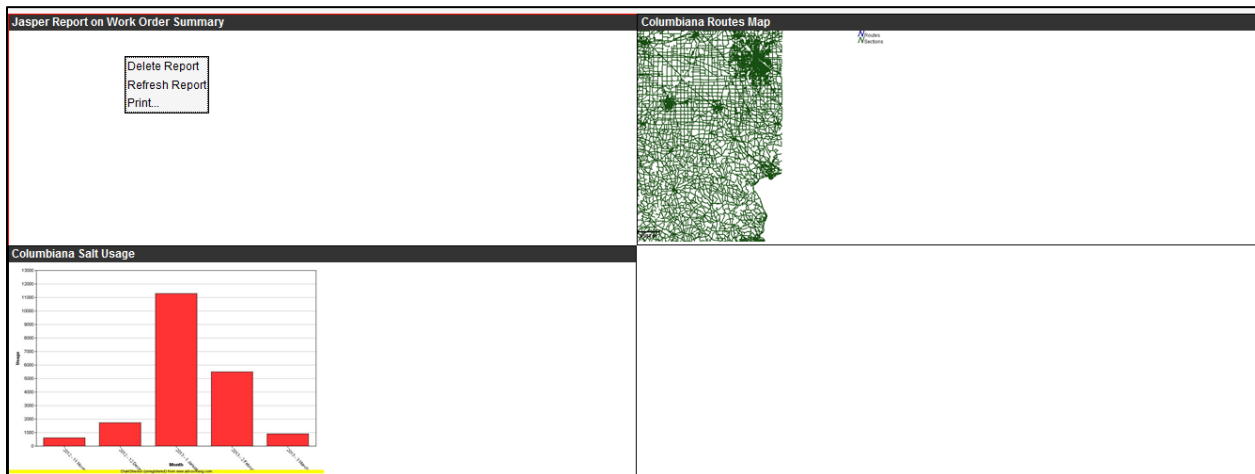


Figure 3-8. Dashboard Reports Example

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4. To resize or reposition a Dashboard report (Figure 3-8), the user may:
  - Double-click the title of a pane to fill the entire window, or double-click again to restore the pane size.
  - Resize the pane by dragging the edge or the pane, or drag the whole pane to a new position as desired.
5. To modify a Dashboard report shortcut, the user has the following options (Table 3-1).

Table 3-1. Dashboard Report Commands

Command	Description
Delete Report	This command removes the report from the Dashboard but not from the Reports Management window.
Refresh Report	This command causes the system to regenerate the report with the latest data.
Print...	This command carries the report into a new browser window, for printer compatibility.

6. Perform a **Save** function to apply Dashboard report changes.

### 3.4 Setting a Schedule for Reports to be Emailed

This function is used to create a schedule for emailing reports to select recipients, or to create a one-time email.

1. In the Reports Management window, select the **Schedule report to be Emailed** function (Figure 3-9) on the appropriate report.



Figure 3-9. Schedule Report to be Emailed Option

2. In the Email Schedule dialog box (Figure 3-9), proceed as follows:
  - a. Configure the upper pane by using the fields listed in Table 3-2, as required, and the menu options listed in Table 3-3, as required.

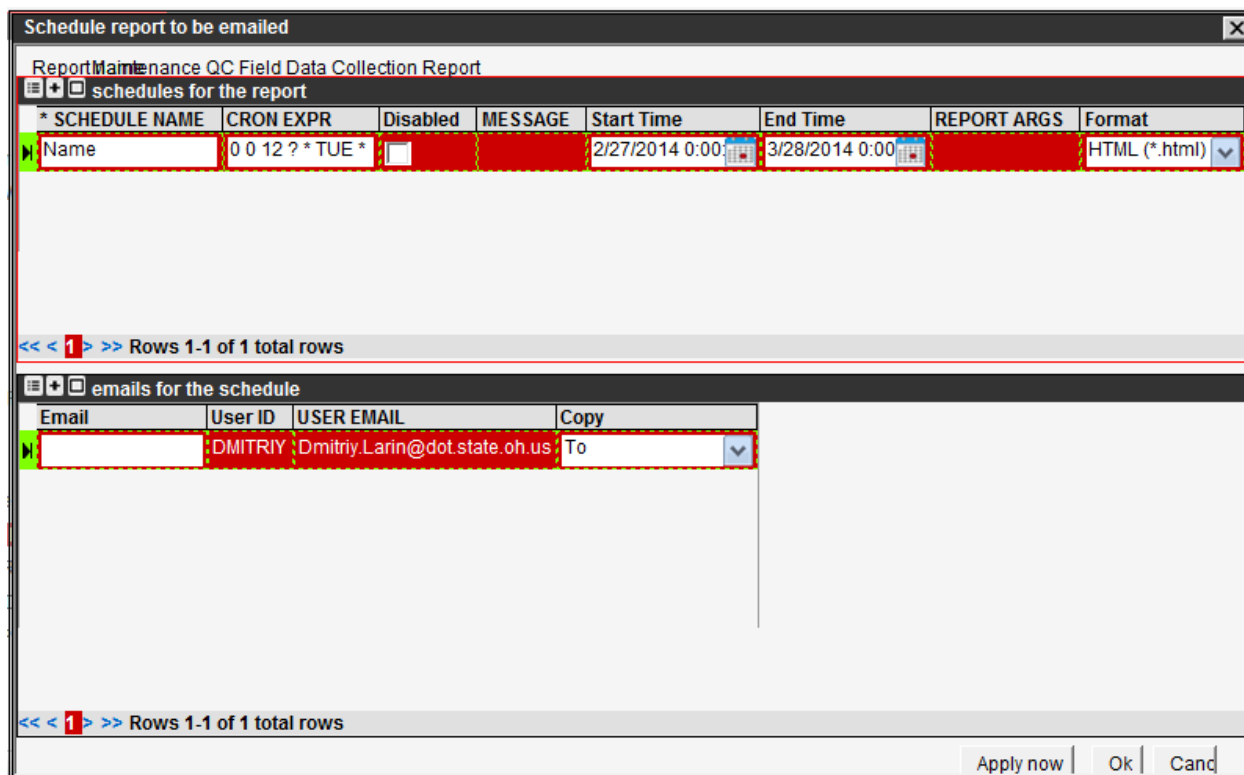


Figure 3-10. Email Schedule Dialog Box Example (Jasper Report Selected)

Table 3-2. Fields in the Schedules for the Report Pane

Label	Description
Schedule Name	This field shows the name of a schedule applied to the selected report.
Cron Expression	This field enables the Command Run On (CRON) expression; this simply refers to the setting of the time period of <b>Start Time</b> and <b>End Time</b> fields. It requires use of the <b>Set Schedule</b> command.

Label	Description
Disabled	When this checkbox is selected, the schedule is disabled and the system will not distribute the selected report.
MESSAGE	This field requires selection of the <b>Edit email message</b> command, to determine what message is shown in the email.
Start Time	This date field sets the beginning of the time period in which the CRON expression will be processed, to distribute the selected report.
End Time	This date field sets the ending of the time period in which the CRON expression will be processed, to distribute the selected report.
Jasper Report Fields – Advanced User	
Report Args	This Jasper related field requires selection of the <b>Define Arguments</b> command, to determine what data is shown in the distributed report.
Format	This Jasper related field requires selection of the format for viewing the distributed report, from the drop list.

Table 3-3. Commands in the Schedules of the Report Pane

Command	Description
Set Schedule	This command is used to establish when the report will be distributed. It opens the CRON Expression Editor dialog box (Figure 3-11), and places an abbreviated version of the expression in the <b>CRON Expression</b> field.
Edit email message	This command opens a Message dialog box (Figure 3-11), for editing the message to appear the <b>Message</b> field in a text editor.
Define Argument(s)	This command is only applicable for the <b>Report Args</b> field when selecting a Jasper report. It satisfies the inputs for the report.
Email Now	This command sends the report immediately, to the specified recipients, rather than at a scheduled time.



Table 3-4. Commands in the Emails for the Schedule Pane

Command	Description
Insert	This command establishes a blank row, in which the user may manually enter the recipient's email address in the <b>Email</b> field.
Insert Users Email Address	This command allows the user to select among user email addresses, in a dialog box (not shown), for which selection is applied to the <b>USER EMAIL</b> field.

- c. For each recipient specified, specify on what address line of the email the user will be notified, using the **Copy** field's drop list (Figure 3-12), as needed.
3. When the Email Schedule dialog box (Figure 3-9) has been configured, use buttons provided (Figure 3-13) to apply updates (**Ok**) or exit the screen as follows (Table 3-5).

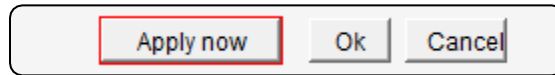


Figure 3-13. Email Schedule Dialog Box (Excerpt) – Buttons

Table 3-5. Email Schedule Dialog Box – Buttons

Label	Description
Apply Now	This button saves the data in the dialog box and also performs the <b>Email Now</b> command.
Cancel	This button discards any changes made to the dialog box and closes the dialog box.
Ok	This button saves the data in the dialog box and closes the dialog box.

4. Perform a **Save** function if the email schedule has been created or modified.

## 4 Preconfigured Reports

The following is a list of reports that are planned to be built for the Fleet module for go-live. They are not available for End User training.

- ❖ Graph reports
  - Snow & Ice Direct Costs
  - Stacked 11 fiscal year (FY) Monthly Direct Costs for Snow & Ice
  - Winter Operations Costs: 10 Year Average vs. Current FY
- ❖ Jasper reports
  - Snow & Ice Metrics for year to date (YTD)
- ❖ Standard (tabular) reports
  - Accident Damage Claim Actual Costs Report
  - Activity Cost per Unit of Accomplishment
  - Activity Production Rates
  - Asset Details
  - Budget Plan
  - County Work Summary
  - Direct / Indirect Costs
  - Equipment Inventory Status
  - Force Account Audit
  - Force Account Project Report
  - Labor Hours Per Pay Period
  - Labor, equipment, materials, and accomplishments (LEMA) Check
  - Linear Referencing System (LRS) Details
  - Plan vs. Actual
  - Shared Equipment
  - Snow and Ice Summary by Month
  - Work Order Details (various reports)
- ❖ Custom “Ad-Hoc” reports may also be created by the user.

## 5 Notes

### 5.1 Acronyms and Abbreviations

CRON	Command Run On (scheduling function)
CSV	Comma separated values
EIMS	Enterprise Information Management System
FY	Fiscal year
GIS	Geographic Information System
LEMA	Labor, equipment, materials, and accomplishments
LRS	Linear Referencing System
YTD	Year to date

### 5.2 Applicable Documents

<i>EIMS Security Roles</i>	Matrix of security roles and applicable functions, grouped by module
<i>EIMS Activity Codes</i>	Matrix of program activity codes, names, and attributes
<i>EIMS Business Rules</i>	Document of EIMS business rules