WebCAT

User Guide

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Overview

Welcome to WebCAT. WebCAT is a web-based service providing on-line access to maps of transportation conditions in the I-95 Corridor Coalition region. This service is available to Coalition members and the general public on an unrestricted basis. The only requirements necessary to access WebCAT are a web browser and Internet access. WebCAT provides interactive highway and rail maps that can be combined with thematic overlay data such as traffic volumes, road type, bridge type, bridge condition, congestion estimates, etc. Users can find additional information on the thematic layers provided here by accessing the hotlinks listed in the Help menu on the main WebCAT page.

This User Guide will provide basic explanations of how to use WebCAT.

WebCAT is located at http://ags.camsys.com/webcat/
Opening Screen

The initial WebCAT page introduces you to the I-95 Corridor Coalition. Although WebCAT is free and available for use by anyone, we require users to read and agree to certain terms of service before using the WebCAT site.

Once you have read this page, click the Enter button to agree to the terms of service and enter the website.
Introduction to WebCAT Maps

The first screen of the WebCAT map that you see will look something like this:

There are some important things to understand about navigating in WebCAT from this initial page. These features are highlighted in the next image and are discussed in detail in the pages that follow.
Background Maps

The underlying map upon which the WebCAT data layers are displayed is called the background map. The default background map for WebCAT is the Street Map background map. You can choose one of four background maps to display at any point while using WebCAT by selecting from the drop-down background map menu.

You can choose between street, satellite, topographic, and shaded relief background maps. You may find that the WebCAT layers you wish to display are more easily viewed on one type of background map compared to another. An example of each type of background map is provided, below. Note that depending on the zoom level, the background map may change in appearance.

Street Map

The street map shows interstates, highways, streets, water bodies, certain land uses (e.g., national forests, parks, schools, hospitals), and political boundaries.

Street map background at scalebar of 200 miles, 30 miles, and 0.5 miles.
**Satellite Map**

Satellite maps provide a background that look like photographic images. The images are stitched together so sometimes slight differences can be seen across regions. The detail available at close range varies by geographic location. In some cases, images are unavailable at the closest zoom. These images can provide detail on natural terrain, urban areas, and other features of the built environment.

![Satellite map background at scalebar of 50 miles, 5 miles, and 500 feet.](image)

**Topographic Map**

The topographic map background looks very different depending on your zoom level. At a small scale (a map that is zoomed out), it looks like a combination of a satellite image and shaded relief. At a medium scale, it looks like a road atlas. At a large scale (zoomed in), the topographic background map displays an image of a U.S. Geological Survey (USGS) topographic map.

![Topographic map background at scalebar of 100 miles, 10 miles, and 0.5 miles.](image)
Shaded Relief Map

The shaded relief background map may be the easiest background on which to view various WebCAT layers because of its light color. Be aware, however, that the map features disappear and the background changes to a dark gray when zoomed in, as can be seen below.

Shaded relief map background at scalebar of 100 miles, 5 miles, and 1 mile.
Navigation Tools

WebCAT’s main navigation tools are located below the menus. One main difference between the navigation tools and WebCAT's menus is that menus generally cause control boxes to activate, while tools do not. However, you can always tell what is the currently activated tool—no matter whether the tool was turned on via a menu control box or by clicking on one of these main WebCAT tools—by looking at the Current Tool display at the bottom of the screen.

WebCAT’s main navigation tools are: Zoom In, Zoom Out, Pan, Zoom to Full Extent, Zoom Previous, and Zoom Next.

Zoom In Tool

The Zoom In tool allows you to “zoom in” to a particular area. Here is an example of the tool in action.

Use your mouse to click and drag a box around the area you wish to zoom in to.

Current tool display indicates that Zoom In tool is active
You may see a pixilated screen for a moment as WebCAT re-draws the layers. If your status bar on your web browser is activated, you can see this information.
This is the result of the Zoom In.

Note that the bright green I-95 layer no longer displays. Some layers have pre-set displays so they are only visible at certain levels.
Zoom Out Tool

The Zoom Out tool works similar to the Zoom In tool except it zooms out instead of zooming in. Here is an example of the Zoom Out tool in action.

Use your mouse to click and drag a box around the area you wish to zoom out to.
The box you draw when you zoom out tells WebCAT how big you want the current view to be in the zoomed out window. The smaller you make the box the smaller the current view will be in the zoomed out window. Also, wherever you draw the box on the current view will become the center of your zoomed out view.

Pan Tool

The Pan tool moves the view of the map from side to side (or up and down) without changing the scale. In other words, you can move your view of the map around without zooming in or out. When the Pan tool is activated, use your mouse to click on the map. Then drag and drop the map to pan from side to side (or up and down). This will change your view of the map.
Zoom to FullExtent Tool

Sometimes it is very useful to zoom to a pre-set overview of the map. In this case, the full extent of the map will take you to the initial view of WebCAT—the full I-95 Corridor. You may zoom out further than this extent if you wish. If you move the Zoom Control Slider Bar to the largest extent or if you zoom all the way out, you will see a map of the whole world. However, the Zoom to Full Extent tool will always return you to the I-95 Corridor view of WebCAT. This full extent will show whatever background map you have currently selected.

Here, the background map is the Satellite map. Even though all map layers are visible, only I-95 and the ICAT Interstate Routes show. The reason for this is because they are the only layers allowed to be visible by WebCAT at this scale.
**Zoom Previous Tool**

If you wish to return to a previous zoom level, use the Zoom Previous tool.

**Zoom Next Tool**

If you have already used the Zoom Previous tool and wish to move forward in the zoom sequence, use the Zoom Next tool.

**Zoom Control Slider Bar**

Although not listed as a specific tool, the Zoom Control Slider Bar is always on the main WebCAT screen. The Zoom Control Slider Bar is located along the left side of the screen. There are two ways to access the control bar directly. First, you can click on the + or – signs at the top and bottom of the slider bar. This will zoom you in or out one pre-set level on the map. Second, you can click on the slider handle (the small triangle) and move it along the slider bar to a specific zoom level. If you do not let go of the slider handle as you move it with the mouse, you will notice that it displays the various map scales in temporary pop-up boxes. These pre-set scales may seem a little unusual, but they correspond with map scales displayed on the scalebar. The distances displayed on the scalebar vary, depending on the resolution of your computer screen and the size of your browser window. For example, with a browser window that fills a 19-inch monitor screen at a screen resolution of 1280 x 1024, and the slider bar set at 1:9,234,300, the distances displayed on the scalebar at the bottom left of the screen are 300 miles (400 km). You
can also zoom in and out of the map using your mouse wheel (if your mouse has a wheel), or with the Zoom In and Zoom Out tools.

For a browser that fills a 17 inch monitor at a screen resolution of 1280 x 1024, the preset zooms for the Zoom Control Slider Bar and their corresponding scalebars are:

<table>
<thead>
<tr>
<th>Preset Zoom</th>
<th>Scalebar</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 : 4,509</td>
<td>200 ft (50 m)</td>
</tr>
<tr>
<td>1 : 9,018</td>
<td>500 ft (100 m)</td>
</tr>
<tr>
<td>1 : 18,036</td>
<td>1000 ft (300 m)</td>
</tr>
<tr>
<td>1 : 36,071</td>
<td>2000 ft (500 m)</td>
</tr>
<tr>
<td>1 : 72,143</td>
<td>0.5 mi (1 km)</td>
</tr>
<tr>
<td>1 : 144,286</td>
<td>1 mi (2 km)</td>
</tr>
<tr>
<td>1 : 288,572</td>
<td>3 mi (5 km)</td>
</tr>
<tr>
<td>1 : 577,144</td>
<td>5 mi (10 km)</td>
</tr>
<tr>
<td>1 : 1,154,287</td>
<td>10 mi (20 km)</td>
</tr>
<tr>
<td>1 : 2,308,575</td>
<td>20 mi (40 km)</td>
</tr>
<tr>
<td>1 : 4,617,153</td>
<td>50 mi (50 km)</td>
</tr>
<tr>
<td>1 : 9,234,300</td>
<td>100 mi (100 km)</td>
</tr>
<tr>
<td>1 : 18,468,600</td>
<td>200 mi (300 km)</td>
</tr>
<tr>
<td>1 : 36,937,200</td>
<td>400 mi (500 km)</td>
</tr>
<tr>
<td>1 : 78,874,400</td>
<td>500 mi (1000 km)</td>
</tr>
<tr>
<td>1 : 148,748,799</td>
<td>1000 mi (2000 km)</td>
</tr>
</tbody>
</table>

If your computer monitor is a different size and resolution, the preset zoom will correspond to different scale bar values. However, WebCAT will always adjust the preset zoom on the Zoom Control Slider Bar to the scalebar on your screen displays the above numbers.
Menus

Four menus are available from the main WebCAT screen: Map, ID, Tools, and Help.

Clicking on a menu tab will reveal a list of items associated with that menu theme. Clicking on a menu item will generally open a control box in the right of the screen that enables the user to specify what they want to do.

Every control box has at least two icons in the upper right corner – Minimize and Close.

To temporarily move the control box out of the way, click on the Minimize icon. This changes the control box to its minimized form, which looks like this:

![Minimized control box]

To maximize the control box, click on the icon that appears with the minimized form.

The close icon causes the control box to close completely (i.e., you will exit from the control box).
Map Menu

Items in the Map menu control things having to do with general map items.

The first two items listed, Legend and WebCAT Data, are especially important in displaying map data on the WebCAT site.

Legend

Clicking on Legend from the Map menu activates the Legend control box to the right side of the screen. The Legend control box will always open above any other open control box. If the Legend control box is already displayed, clicking on Legend from the Map Menu will result in no action. The Legend control box is displayed by default when WebCAT is opened.
The WebCAT legend is static. Symbology for all layers display in the same order, no matter which layers are currently displayed in WebCAT.

To view the layers, use either the slider bar or the up or down arrows at the right of the Legend control box.

**WebCAT Data**

Clicking on WebCAT Data from the Map menu activates the WebCAT Data control box to the right side of the screen. The WebCAT Data control box allows you to control which WebCAT data layers are visible.
The default WebCAT Data control box display is shown.

Three buttons display along the top right of the WebCAT Data control box. Their definitions will display if you hover your mouse over them. They are: Layer Visibility, Minimize, and Close.

Layer Visibility function allows you to choose which WebCAT layers to display in the map.
The available layers are:

<table>
<thead>
<tr>
<th>Layer Name</th>
<th>Layer Description</th>
<th>Symbology</th>
</tr>
</thead>
<tbody>
<tr>
<td>NBI Bridges</td>
<td>National Bridge Inventory Bridges</td>
<td>Point: Green square</td>
</tr>
<tr>
<td>Bottlenecks</td>
<td>Bottlenecks (traffic)</td>
<td>Point: Blue circle</td>
</tr>
<tr>
<td>AADT</td>
<td>Average Annual Daily Traffic</td>
<td>Line: Varying shades</td>
</tr>
<tr>
<td>ICAT Road Network</td>
<td>I-95</td>
<td>Line: Green</td>
</tr>
<tr>
<td></td>
<td>Interstate Routes</td>
<td>Line: Blue</td>
</tr>
<tr>
<td></td>
<td>ICAT Routes</td>
<td>Line: Red</td>
</tr>
<tr>
<td>Rail</td>
<td>ICAT Rail Network</td>
<td>Line: Black hashed</td>
</tr>
</tbody>
</table>

Some layers have preset visibility scales. This means that they are only visible when the map is zoomed in or out to a certain scale. If all layers were visible at all scales, the map would be too cluttered and WebCAT functionality would be compromised. For example, here is what the FARS Crashes layer looks like at full extent if it were always visible:

![FARS Crashes full extent](image)

No meaningful information can be learned from this, so the FARS layer is visible only at an appropriate scale. The scales for each layer are:

<table>
<thead>
<tr>
<th>Layer Name</th>
<th>Visible Minimum Scale</th>
<th>Visible Maximum Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>NBI Bridges</td>
<td>1:100,000</td>
<td></td>
</tr>
<tr>
<td>FARS Crashes</td>
<td>1:1,000,000</td>
<td></td>
</tr>
<tr>
<td>Bottlenecks</td>
<td>1:1,000,000</td>
<td></td>
</tr>
<tr>
<td>AADT</td>
<td>1:5,000,000</td>
<td></td>
</tr>
<tr>
<td>ICAT Road Network I-95</td>
<td></td>
<td>1:500,000</td>
</tr>
<tr>
<td>ICAT Road Network Interstate Routes</td>
<td></td>
<td>All</td>
</tr>
<tr>
<td>ICAT Road Network ICAT Routes</td>
<td></td>
<td>1:2,500,000</td>
</tr>
<tr>
<td>ICAT Rail Network</td>
<td></td>
<td>1:2,500,000</td>
</tr>
</tbody>
</table>
Layer Visibility can be a little confusing. It is designed to allow map services a great deal of flexibility and functionality in displaying data. (We have tried to make the WebCAT data layers as simple as possible because both WebCAT and DataCAT are still being periodically updated.)

Here’s how it works: most layers in WebCAT are separate maps. If the maps have more than one layer (like the ICAT Road Network map) then the user can control how many layers display in WebCAT. For example, in order to see ANY of the ICAT Road Network in the map, the box in the red circle must be checked, but if you only want the Interstate Route layer to display, the you could uncheck the I-95 and ICAT Routes layers.

![WebCAT Data layer visibility](image)

This allows all ICAT Road Network layers to be displayed. You can turn off individual layers like I-95 and still display Interstate Routes and ICAT Routes.

The Rail layer is not displayed.

Most of the map layers in WebCAT have only one layer associated with them. It is probably best if you keep these layers collapsed with the ‘hidden’ box checked, which is the default. Here, just the ICAT Road Network layers are displayed so they can be individually turned on and off.

![WebCAT Data layer visibility](image)
Overview Map

Clicking on the Overview Map from the Map Menu activates the Overview Map control box to the right side of the screen. If any other control box is open, the Map Overview control box will open below it.

The Overview Map provides a regional map with a red inset box. The regional information provided as an overview corresponds to one additional zoom level, as found on the Zoom Control Slider Bar.
Bookmarks

Bookmarks allows you to temporarily store a map extent. Clicking on Bookmarks from the Map menu activates the Bookmarks control box to the right side of the screen.

Four buttons display along the top right of the Bookmark control box. Their definitions will display if you hover your mouse over them. They are: Bookmarks, Add Bookmark, Minimize, and Close.
To add a bookmark, click the Add Bookmarks function. The Add Bookmarks dialog appears. Enter a name for the extent, and click ‘Add Bookmark’.

In the example below, the map is showing an area surrounding Baltimore, Maryland. The name of the bookmark is entered as ‘BaltimoreMD’.

To view saved bookmarks, click the Bookmarks function. A list of all saved bookmarks will appear. In this case, you can see the three bookmarks that were entered: BaltimoreMD, LongIsland, and BostonMA.

Clicking on any one of these bookmarks will zoom the map to this extent nearly instantly. From there, the user can change the map layers via the WebCAT Data control box or the background maps, etc.

In addition to the name of the bookmark, the extents of the bookmark are displayed. For example, the extent for the LongIsland bookmark is:

Left: -74.06383398437501
Bottom: 39.57248828125
Right: -70.69103125000001
Top: 42.1048369140625
Users with sharp eyes will notice the negative number indicator on the top of the first line, due to the text wrap feature of the Bookmarks control box.

You can delete any bookmark by clicking on the red X to the right of the bookmark. This permanently deletes the bookmark.

The Close function causes the Bookmarks control box to close completely. However, any saved bookmarks are maintained until you exit your session (i.e., close your browser) or you delete the bookmark.

Print
Print allows you to name and print a custom screen shot of WebCAT to one of your printers. Clicking on Print from the Map menu activates the Print control box to the right side of the screen.

The default map title and subtitle for the Print control box is shown. You can type a title and subtitle of your choice into the boxes provided and they will be displayed on the printed map. If you wish, you may also delete the text in the title and subtitle boxes and only your map will print.

The title is printed in Ariel (26 point) font and the subtitle is printed in Ariel (16 point) font. The map’s default orientation is portrait. It prints with the scalebar along the bottom of the map and includes a timestamp. Currently, there is no way to print a legend with the map.

When you click on the ‘Print’ button from the Print control box, it activates your computer’s printer interface. It may be possible to print a map in landscape orientation by adjusting your printer’s settings for the print job. However, printing the map in landscape orientation without further adjustments may cause the map to be cut off and print on multiple pages. If you wish to print a landscape map, experiment to find out which setting work best for your printer.

**ID Menu**

The ID menu provides ways with which to interact and identify items within specific map layers of WebCAT.
Identify

The Identify function in the ID menu allows you to point to an item on the map and view the attributes in the underlying data fields. When you click on Identify, the Identify control box is activated.

There are four icons in the upper right of the Identify control box: Identify, Results, Minimize, and Close.

Using Identify is a step-by-step process.

1. Activate the Identify control box.
2. The Identify function is open by default. Select the layer you wish to identify from the drop-down menu. If you do not select a layer, Identify will not work.

3. Activate Identify by clicking on either icon in the Identify control box. (Look at the Current Tool Display at the bottom of the screen to see that Identify is active.)
4. Click on the item of interest on the map. In this example, more information about a particular crash was needed. The particular crash is circled in red. Clicking on the crash causes WebCAT to display more information in the Identify control box.

We want more information on this specific crash

Clicking on it produces this linked information in the Identify control box results.
The Identify icon is pasted to the map as WebCAT displays the information in the Identify results box.

You can toggle back and forth between identifying and viewing the results by clicking on the Identify and Results buttons. To clear your identify query, click the Clear button (it is a fancy trashcan).

\[ Image \]

**Locate**
Locate in the ID Menu allows you find locations on the map via address search or by entering coordinates. When you click on Locate, the Locate control box activates.

There are five icons in the upper right of the Locate control box: Address, Coordinates, Results, Minimize, Close.

When you wish to find a location on the map by entering the address into the Locate control box, select the Address function. This will activate the address chooser screen. Enter as much of the address as you know and press Locate.
In this case, the address for the White House (1600 Pennsylvania Boulevard, Washington, D.C.) was entered. Notice that WebCAT can handle common abbreviations for street names.

As it turns out, the address we entered for the White House was slightly incorrect. The true address is 1600 Pennsylvania Ave NW. WebCAT offers three possible matches to the address we entered, along with a score for each one. The score indicates how well WebCAT thinks the presented address matches with the address that was typed in. The third location has a match of 100% because it is matching to Washington D.C. and not to a specific address. You can click on each one and view the location on the map. Here, the first address presented in the results is shown on the map.
When you are finished, click on the ‘Clear’ button to remove the search from the map. Note that searches with very little information entered may cause WebCAT to take a very long time to try to generate results. Try to be as specific and complete as possible. The less information you provide, the longer it will take.

You may, if you wish, locate points on the map by entering coordinates in Latitude / Longitude. Click on the Coordinates function to activate the Enter Coordinates screen.

Press ‘Locate’ and WebCAT will locate and zoom to the specified location you entered.
Once you have located your point on the map, you can use other tools to zoom in or out, etc.

**Spatial Select**

Spatial Select from the ID Menu allows you to geographically select items from WebCAT data layers. Once selected, you can examine the individual items within the area you selected. When you click on Spatial Select, the control box activates.
There are four icons in the upper right corner of the Spatial Select control box: Graphical Search, Results, Minimize, and Close.

To perform a spatial select, click on graphical search. (This is the default view in the Spatial Search control box.) Select a map layer for from the drop-down list.

Some things to note about the Spatial Select function:

- You can use Spatial Select at any zoom level.
- The map layer does not need to be visible in the map for you to select data.
- WebCAT will locate the item with the Spatial Select icon on the map.

Once you have selected your layer, choose a method for spatially selecting the data. The available options are: Select by Point, Select by Line, Select by Rectangle, and Select by Polygon. The item to the far right Clears your selection. Perhaps the easiest method for performing a spatial select is Select by Rectangle.

Click on this and, using your mouse, draw a rectangle on the screen. As soon as you release the mouse, the Results box activates. You can toggle between Graphical Search and Results.
Here, the Bottlenecks layer was selected and an area around Boston, Massachusetts was drawn. Spatial Select identifies 17 bottlenecks in the area we selected. If we wish to examine any in greater detail, we can click on the icon to the left of the attribute data. Each data point provides a full set of attributes as well as an clickable icon. Clicking on this icon will zoom in to the data point (as far as possible).

Here are the results of clicking on the icon, above. If you find you are zoomed in too far, use the WebCAT tools to zoom out a little (like Zoom Out, or Zoom Previous).
You may wish to pay careful attention to the currently activated tool. For example, let's say you zoom in to a spatially selected feature by clicking on the icon in the Spatial Select control box. Spatial Select is probably the current tool. If you then try to click on the map itself, WebCAT thinks you are trying to perform another Spatial Select query and will immediately clear the features you had selected. You may, if you wish, use other functions (such as the Identify function from the ID Menu) in conjunction with Spatial Select.

Finally, Select by Line will select line features only. This item in Spatial Select works by clicking once on the map with your mouse, then moving the mouse over the line feature. Spatial Select will draw a black line that intersects the line feature on the map. You may click once to anchor the Spatial Select line, and continue on. When you are finished, double-click to end. The Results box will display the line features intersected by the line you drew.

**Select by Attributes**

Select by Attributes in the ID Menu allows you to search WebCAT data by querying the data. When you click on Select by Attributes, the control box is activated.
There are six icons in the upper right of the Select by Attributes control box: Pan to Selection, Zoom to Selection, Select by Attributes, Results, Minimize, Close

To use the Select by Attributes function, you need to understand a little bit of the behind-the-scenes working of WebCAT. Each map layer is connected to a database. The databases contain large amounts of attributes, some of which are automatically displayed in the WebCAT map layers. The reason that only selected attributes are displayed in the WebCAT map layers is so they will load faster and allow you to manipulate them more easily. The attribute names are also presented in a more readable display in WebCAT layers compared with the underlying databases. For example, in the Interstate Routes layer, there is an attribute called "Primary Route", which might contain information like "I-95" or "I-275". However, in the underlying database, this same attribute is named "Sign1". When using the Select by Attributes control box to query data in WebCAT, you will need the attribute crosswalk between the formal attribute name ("Primary Route") and the database name ("Sign1"). These can be found in the Help menu. Each layer has an attribute crosswalk / data dictionary, which will open in a new browser window.

To query WebCAT data with the Select by Attributes function, you must first select the map layer that you wish to examine from the drop-down menu.
For example, if you select the Interstate Routes layer the available attributes will display. Double-click on the attribute(s) you wish to query and they will display in the query box.

Using the operators available, build your query. Be sure to press "Verify" to check your syntax before you press "Select" to make sure your query will work. If everything is correct, you will see this:

![Image of a successfully verified query]

If not, you will see this:

![Image of an error message]

Sometimes, you will see this.

![Image of a successful verification with no results]
This message means that although your query was entered correctly (there was nothing wrong with your query syntax), the search found nothing that matched. In this case, you may wish to look at information as it is displayed in the WebCAT map layers using the Identify control box first.

Some hints:

Enclose text attributes in 'Single Quotes'. Example: for the Interstate Routes layer, the following queries yielded the following results:

- `SIGN1 = 95` There was an error with the expression.
- `SIGN1 = I-95` There was an error with the expression.
- `SIGN1 = 'I-95'` The expression was successfully verified, but no records were returned.
- `SIGN1 = 'I95'` The expression was successfully verified, but no records were returned.
- `SIGN1 = '95'` The expression was successfully verified.

In WebCAT, the wildcard expression is %. So, a valid query would read:

- `SIGN1 = '5'`
  This would return all records where the Interstate route ended in a "5".

Other valid queries:

- `SIGN1 IS NOT NULL`
- `ISTOLL > 0`
- `ISTOLL <> 0`
- `(ISTOLL <> 0 AND ISICAT >= 1) OR STATEFIPS = '10'`
- `ROADNAME LIKE '%ain%'`
  This would return all roads named Main, as well as Braintree, Ainly, and Pain.
When your query has been verified, press "Select". The results of your query will display in the Results box.

Clicking on one of the returned records will locate the feature on the map and display the associated information.

You can toggle between the Select by Attributes box and the Results box by clicking on either of these icons.

You can also use the Pan to Selection and Zoom to Selection functions to examine the results of your query.

**Tools Menu**
Draw/Measure

Draw/Measure in the Tools menu allows you draw and measure points, lines, and polygons on the map. Specifically, you can:

- Draw points, lines, and polygons in various colors and thicknesses
- Add text to the map in various colors and font sizes
- Measure the distance of any line you draw on the map
- Measure the area and circumference of any polygon you draw on the map

Using these tools, you can create custom maps for printing and perform custom calculations.

When you click on Draw/Measure in the Tools menu, the control box is activated.

There are four icons in the upper right of the Select by Draw/Measure control box: Draw, Measurements, Minimize, and Close.

Draw
The Draw function in the Draw/Measure control box allows you to place points, lines, polygons, and text on the map layers. If desired, you can use these tools in conjunction with the Measure tool (see next section). The tools available in the Draw function are Draw Point, Draw Line, Draw Freehand Line, Draw Polygon, Draw Freehand Polygon, Draw Text, and Clear Drawing.

In general to use any of these tools you must select the tool, then the color, and the size. The mouse pointer will not change. The Current Tool display at the bottom of the screen will tell you which is activated.

You can pick a color from the color palate two different ways. First, you can select a color by clicking on it with your mouse. As you click on the color palate, it expands to show you the available colors. The available color palate happens to overlay the Size Box as you are selecting a color, but it will disappear once you have chosen your color.

Second, you can type in a color number into the color selector box. This option is especially useful when you want to create a series of maps to print that all have the same color, because you can write down your selected colors for future reference. Here, a bright blue color was selected, and its color number automatically appeared.

You can select a size for your draw function by using the drop-down sizes available or by clicking on the box with your mouse and then entering a size into the box. Although you can try to enter half-sizes into the box, WebCAT will automatically round the number to the nearest whole number.

Once you have selected the function and attributes, click on the map and draw. You may need to experiment to find the best way to draw with each function.
Draw Text works slightly differently than the others. Instead of clicking on the map and then typing, you should type your text into the “Text” box, choose your size, and select your color from the color palate. Verify at the bottom of the screen that the Currently Activated Tool is the Draw Text tool, and click on the map where you wish to have WebCAT place [“drop”] your text. Below are some examples of the various Draw functions.

One final and important thing: if you click Clear Drawing, it clears ALL currently drawn items on the map.

**Measurements**

The Measure icon on the Draw/Measure control box allows you to produce custom measurements on your map in conjunction with the Draw function of the Draw/Measure tool. To use the Measure tool, click on the Measure icon and the Measure screen will activate.
If you wish your drawings to show measurements, click the box and select the units of measure for both lines (distance) and polygons (area). The default is meters and square meters.

Now, when you use the associated drawing tools (Draw Line, Draw Freehand Line, Draw Polygon, or Draw Freehand Polygon) the units of measure will appear. It takes a moment for WebCAT to calculate the measurement for you, but each will appear shortly after your drawing completes. In the image below, “Feet” and “Square Feet” were chosen as units. The following appeared when using the various Draw tools:

You can see that the length of the green line is about 500 feet and the red freehand line is about 900 feet. The measure function calculates both the area and the perimeter of any polygons.
Help Menu

The Help Menu provides additional information to assist you in your use of WebCAT.

The User Guide opens into a new browser window.

If you wish to print this guide, and you have trouble, try the following:

- Open the User Guide from the Help Menu. It will open in a new browser tab or window.
- Somewhere along the top of your browser window, you should see some icons for print and save.
- Click on the save icon and your browser should save the pdf to where you direct it.
• Alternatively, you can click File, then Save or Save As.
• Close the User Guide in your web browser. Open the pdf that you have just saved and print from that document (instead of trying to print from the one you have open in your web browser). Often, this procedure leads to greater success printing pdf files from the Internet.

The next item is a link to the I-95 Corridor Coalition Home Page. The I-95 Corridor Coalition has sponsored development of the Integrated Corridor Analysis Tool (ICAT) to assist Coalition members in conducting multistate transportation planning and operations studies.

The next several items in the Help menu are links to metadata or codebooks for the various map layers in WebCAT. Each will open in a new window.
For further information on these layers, please visit the following:

National Highway Planning Network (NHPN):
   http://www.fhwa.dot.gov/planning/nhpn/
Highway Performance Monitoring System (HPMS):
Freight Analysis Framework (FAF):
   http://ops.fhwa.dot.gov/freight/freight_analysis/faf/
National Bridge Inventory (NBI):
   http://www.fhwa.dot.gov/bridge/nbi.htm
Fatality Analysis Reporting System (FARS):
   http://www.nhtsa.dot.gov/people/ncsa/fars.html#FARSq
Federal Railroad Administration (FRA):

The DataCAT link will take you to the partner site that provides data available for downloading. On this site, you may find the section “Links to Other Data” useful.
If you require additional assistance, please feel free to email WebCAT. The contact information is located in the Technical Assistance link or webcat (at) camsys (dot) com. We are available to answer questions about WebCAT. We welcome user feedback about WebCAT and are interested in ways that we might improve its functionality.

If you are experiencing problems with WebCAT, please describe the problem as best as you can (the specific tool you were using, etc.), and let us know how (or if) you would like us to contact you when it is resolved. Also, most of the testing of WebCAT has been done on Windows platforms using Internet Explorer or Firefox. If you are running a different operating system or web browser, this information would be valuable to us as we try to resolve any issues you raise. Thank you very much.

The About item provides basic information on WebCAT, such as version number and software.
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