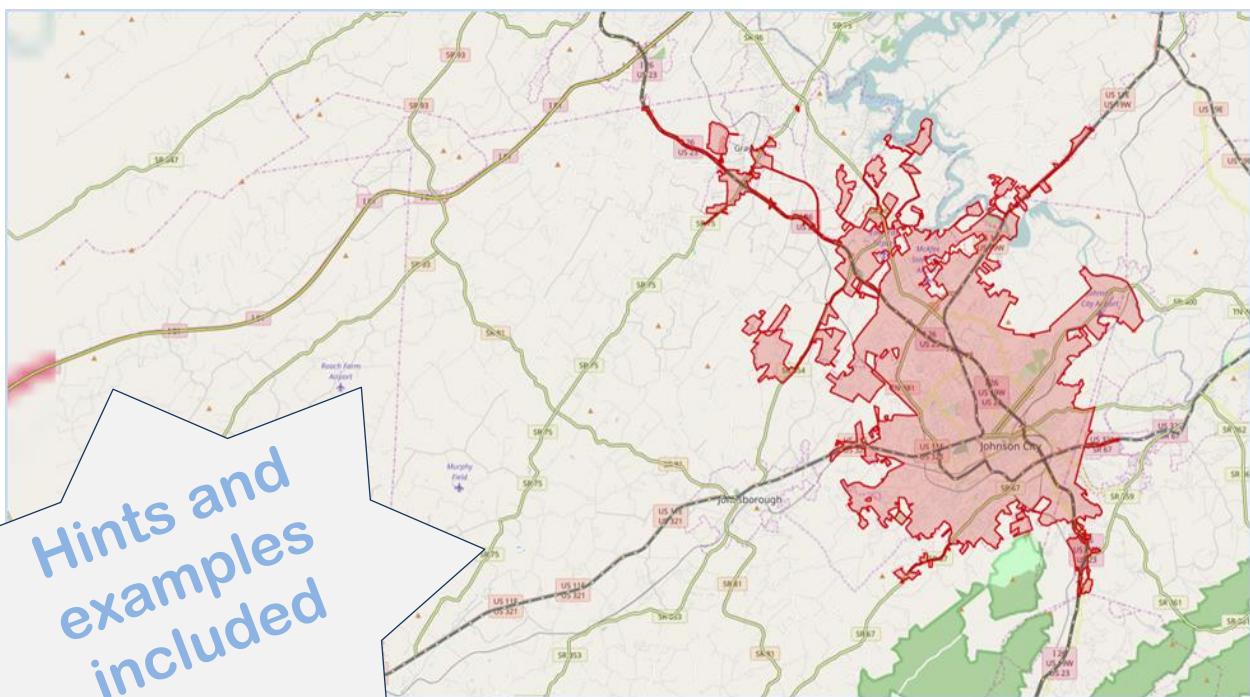


# INTRODUCING E-TRIMS (Version 7.0)



Tennessee Roadway Information Management System



Basic Training Manual

July 2017

#### Documentation Process

This training manual highlights aspects of the new E-TRIMS, launched in July 2017. The document describes the E-TRIMS layout and provides examples of simple and advanced queries with accompanying descriptions. Examples and hints are provided for easier use of the application. The contents of this manual are intended for basic to intermediate training.

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#### Contact Information

##### **Long Range Planning Division**

**James K. Polk Building  
505 Deaderick Street, Suite 1000  
Nashville, TN 37243**

**David Lee** - **615.253.4519**  
[David.Lee@tn.gov](mailto:David.Lee@tn.gov)

**Lia Prince** - **615.741.2934**  
[Lia.Prince@tn.gov](mailto:Lia.Prince@tn.gov)

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## Section One

### E-TRIMS Application Layout

One of the main differences in the new E-TRIMS is the layout, which features a maximized map view in the browser. The toolbars are now positioned along the periphery of the map with the majority of them being in the main task bar.

E-TRIMS has been updated to include the following key features:

- New base map selection
- New map layers panel and functions
- Feature info enhancement
- Printing upgrade
- Quick search bar
- Google street view feature
- And more....

On opening the application, there will be a '**Welcome Window**' highlighting the name of the application, instructions and other important information. When the **Current Workspace** (previously a '**Session**') is open, the main tool bar is visible along with other key icons, toggle buttons and floating panels.

#### Distinguishing features of the new E-TRIMS workspace:

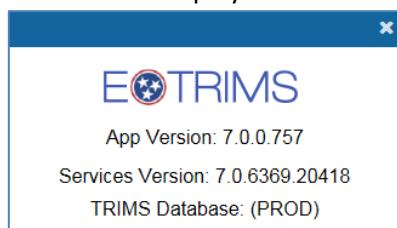
- Header with prominent application logo
- Floating map layers and Route Search panels
- E-TRIMS header with lock and info icon
- Numerous base maps for data visualization

#### E-TRIMS Header:

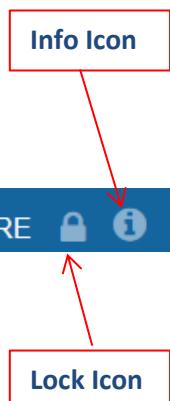


The lock icon is the **LOG OFF** button which allows the user to close E-TRIMS

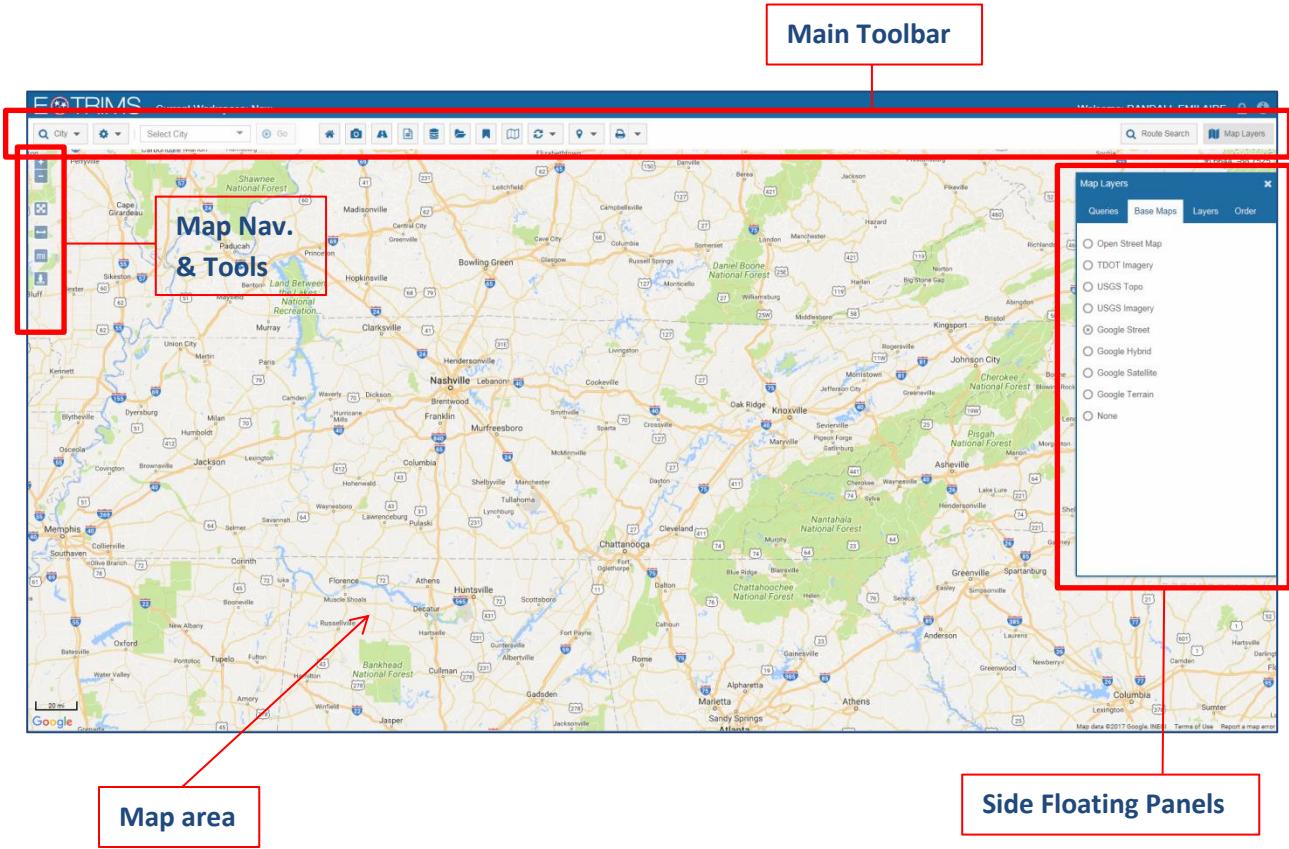
The **Info icon** displays the 'About Window':



The different categorical areas in the new E-TRIMS main layout window include the following:

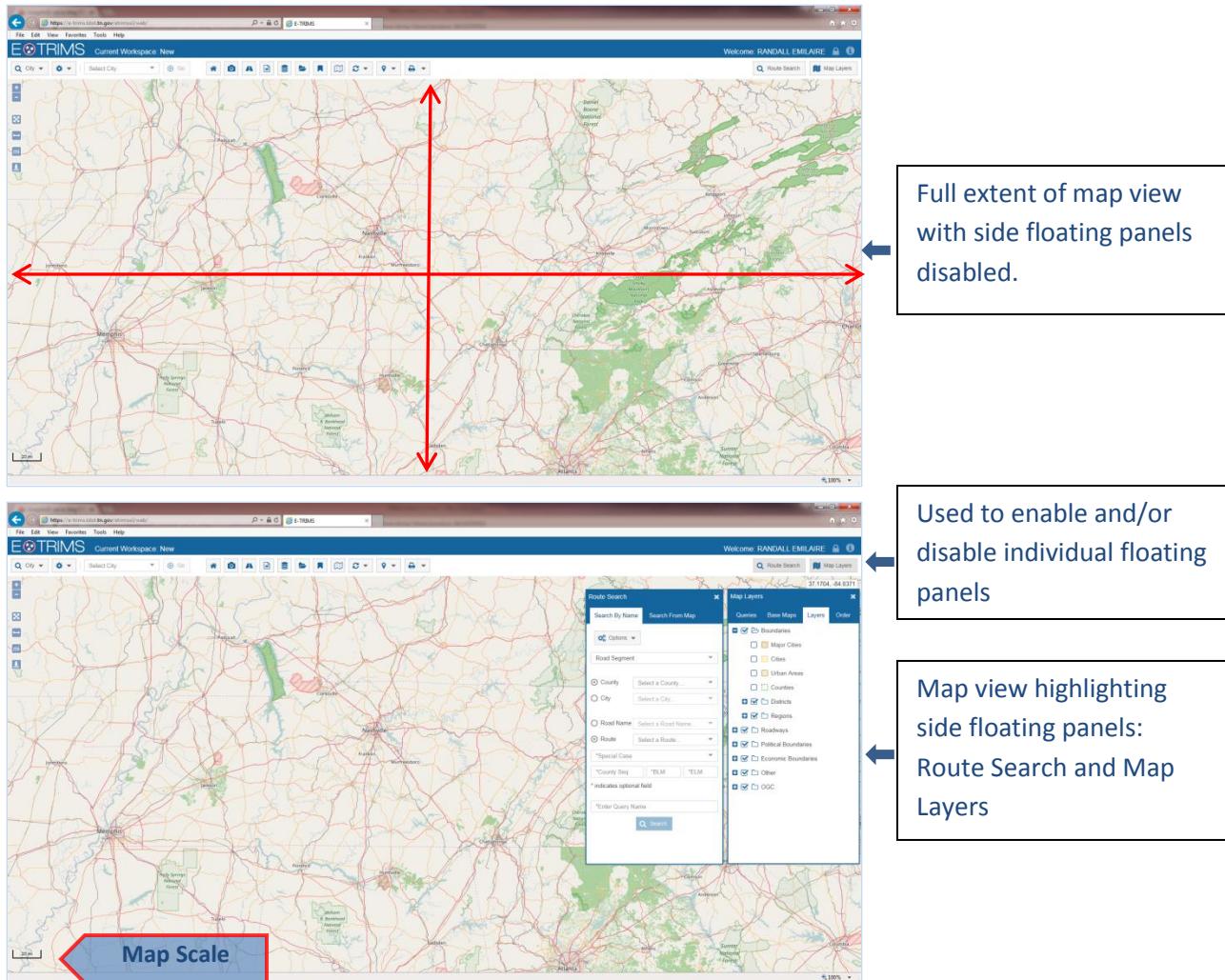


1. Main Toolbar area
2. Map Area
3. Side Panel (can be removed if necessary using toggle buttons)
4. Map Navigation and tools (Floating type panel)

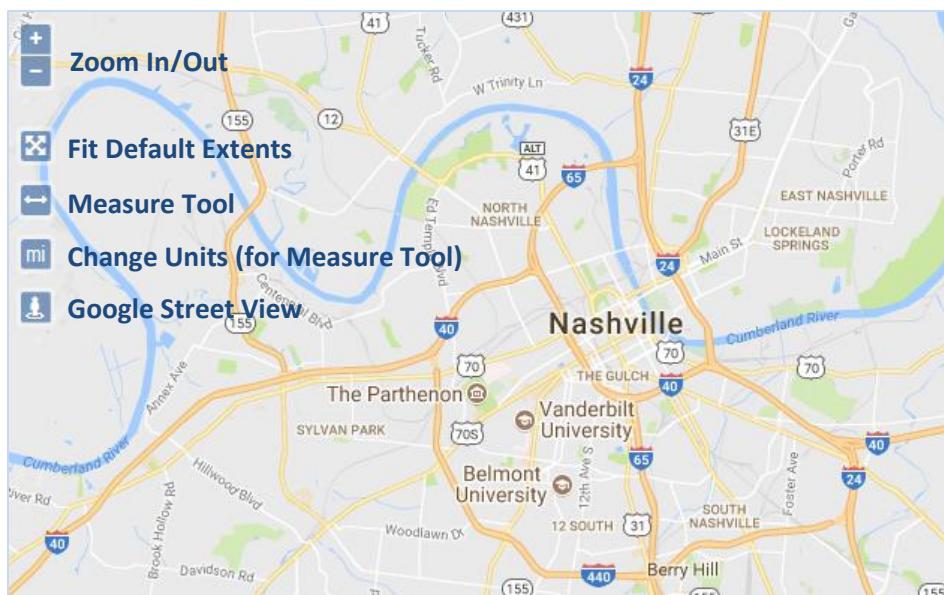


## Map Area

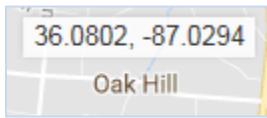
The Map Area in the new E-TRIMS maximizes the map view while intermittently using floating panels and translucent map navigation and tools that illuminate when needed.



## Map Navigation and tools



## Coordinate Display

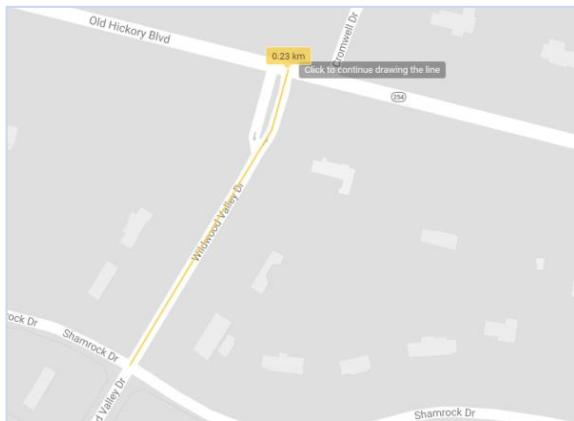


**NEW to E-TRIMS:** Coordinate Readout in Decimal Degrees—The latitude/longitude of the cursor are displayed in the upper right corner of the map view.

## Measure Tool



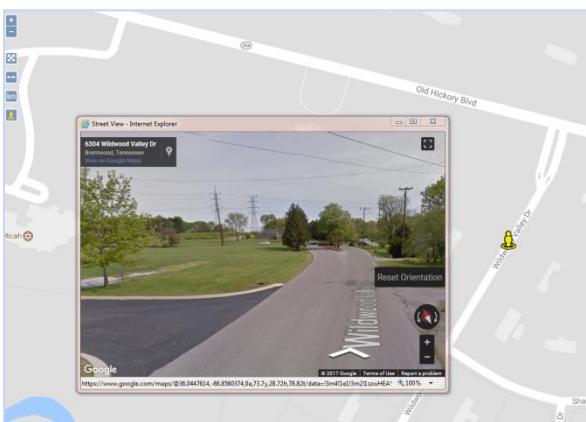
Used to draw line strings to measure distances. The measurements are displayed on the map.



## Google Street View



Opens Google Street View by clicking on icon then on street.

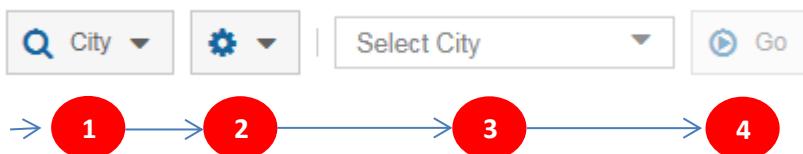


## Main Toolbar

The main toolbar has three sections: **Quick Search**, **menu icons** and the **toggle buttons for the floating panels**.

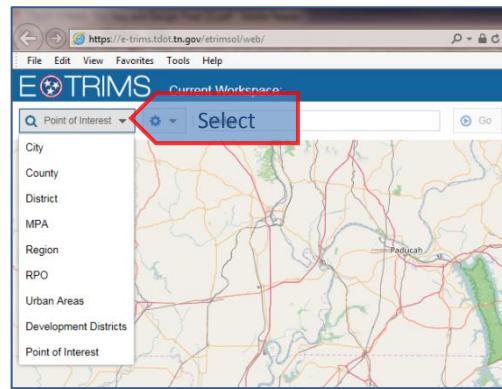
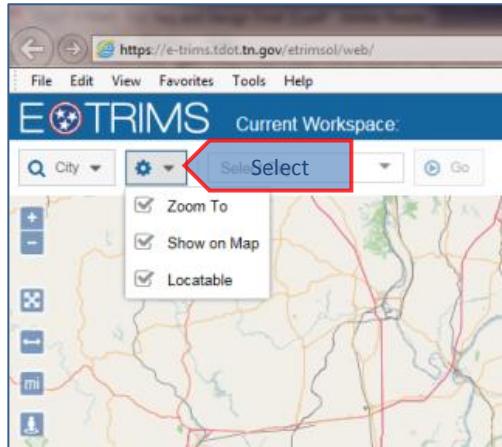
### Quick Search

The **Quick Search** bar is used for **Area** and **Point of Interest (POI)** searches.

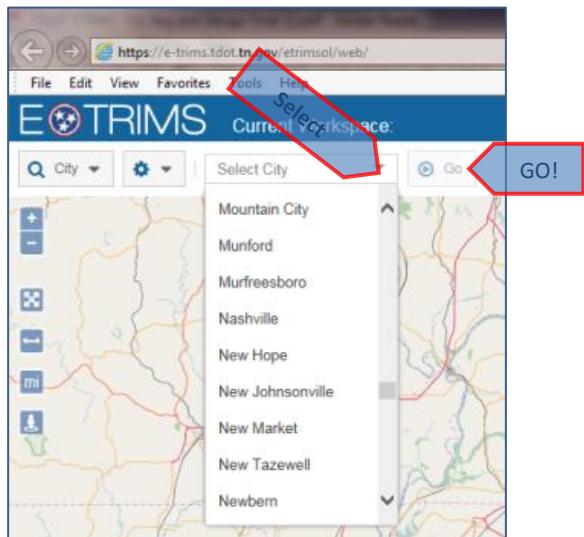


**1**

Select search type area:

**2**Select settings for search: **Zoom to; Show on Map; Locatable****3**

Select settings based on item 1 above; (Area Name)

**4**

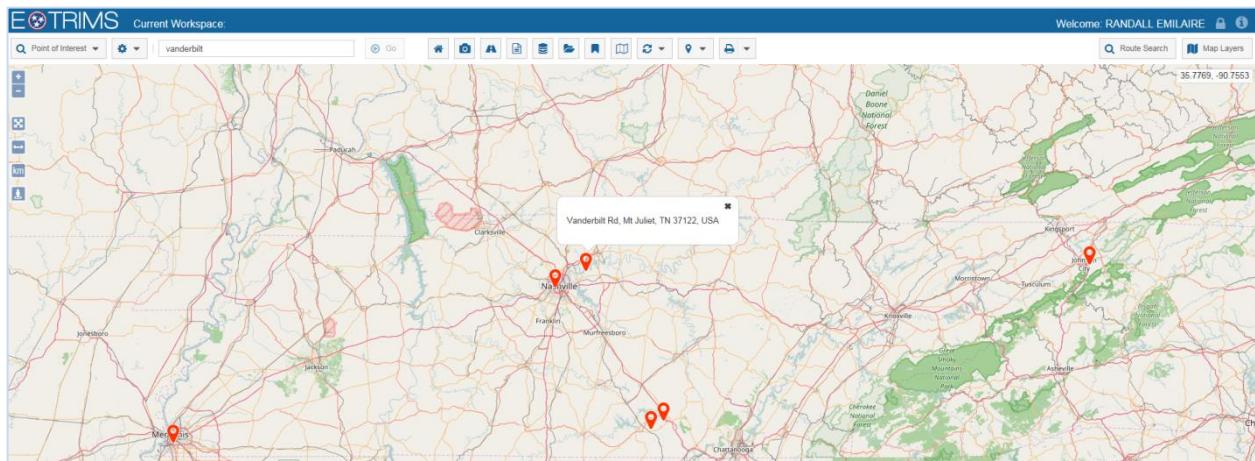
Click to execute the search



**Example 1:** Using Point of Interest, perform a quick search: Street Name = 'Vanderbilt'.



**Result:**



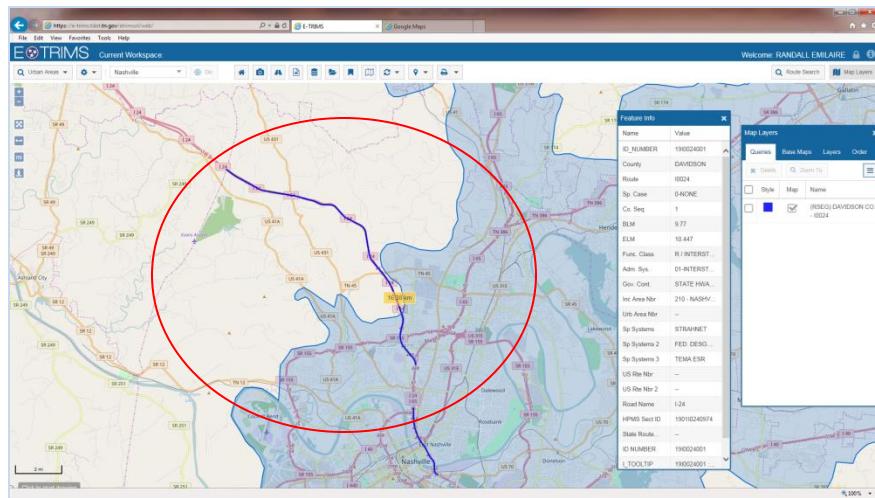
**Example 2:** For quick visualization, highlight the length of Interstate 24 which falls outside of the Nashville Urban Area in Davidson County and get the approximate length.

1. Select the Nashville Urban Area using Quick Search



2. Perform a query to highlight I0024 in Davidson County. (See Example 3, pg. 19 – Simple query)
3. Using the measure tool for a quick estimate, measure the part of I-24 which falls outside of the Nashville Urban Area boundary. (*Alternatively the log mile can be used to find the length.*)

**Result: 10.18 miles**



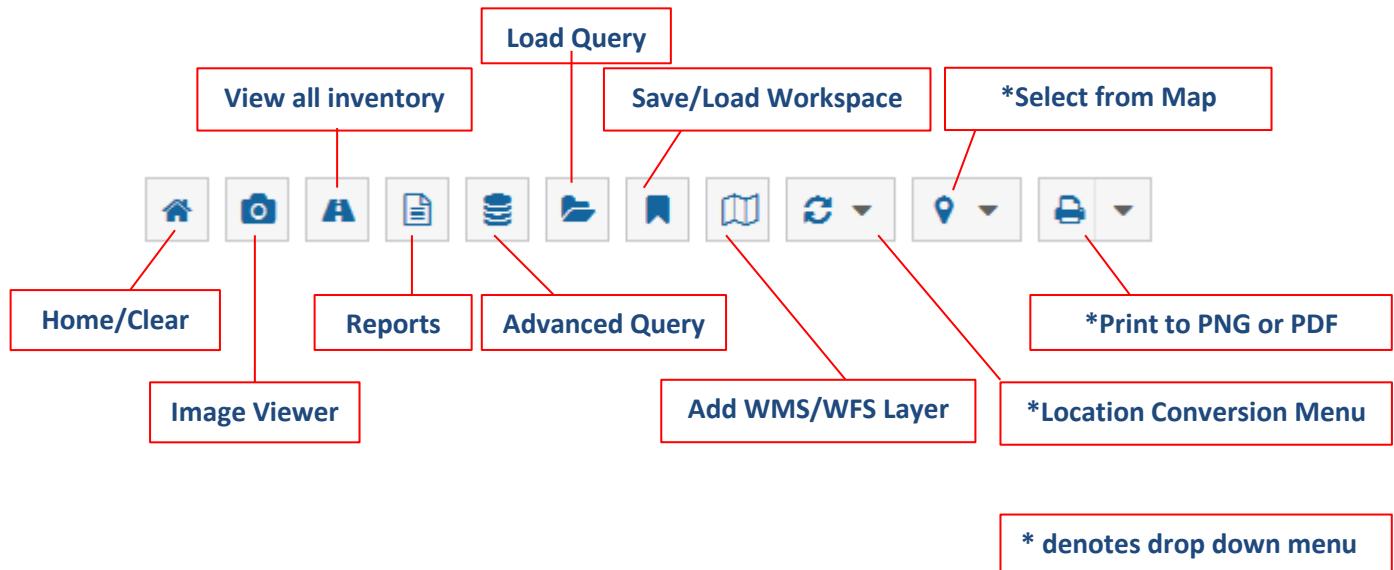
### Hint 1: Use Quick Search - Point of Interest

The Point of Interest live search allows the user to key in one or more words related to a location (such as a street name). Results are placed on the map



## Section Two

### Toolbar Icons and Menus



The center menu on the task bar contains icons and menus. Some of the icons are new and others were used to execute functions previously used in E-TRIMS v6.0.

- Home/Clear – In an active workspace, this button prompts whether to save or not, then clears the map.
- Image Viewer – This button opens **Image Viewer** without selecting a map location.
- View All Inventory Data – This button opens **View All Data Inventory Data** without selecting a map location.
- Reports – This button opens the **Reports** interface. The functionality is the same as E-TRIMS 6.0



Advanced Query – Opens the [Advance Query](#) interface. The functionality is the same as E-TRIMS 6.0.



Load Query – Opens the [Load Query](#) interface. The functionality is the same as E-TRIMS 6.0.



Save/Load Workspace – The ‘Session Concept’ is now referred to as workspace. This button opens the [Workspace Manager Interface](#).

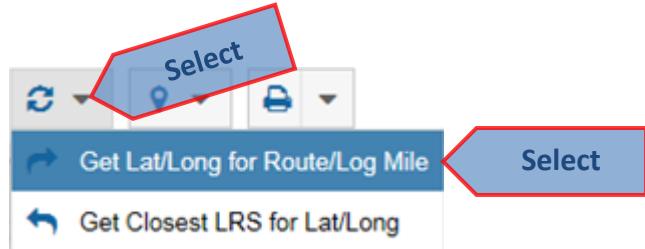


Add WMS/WFS Layer – This button opens a new module to allow users to add [WFS and WMS](#) map layers.

## Location Conversion – This menu provides two options



### Get Lat/Long for Route Log Mile

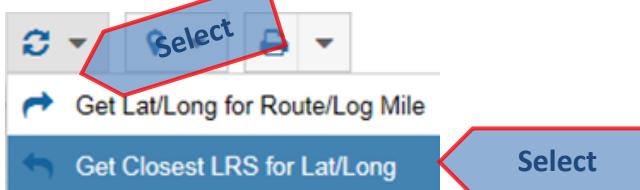


For this option the user enters the ID Number (example given), Log Mile and Sub Route, and the system displays the Latitude and Longitude.

Get Lat/Long for Route/Logmile

ID Number:	EX. 01SR009001
Log Mile:	Ex. 1.234
Sub-Route:	00
<input type="button" value="Convert"/>	
Latitude:	<input type="text"/>
Longitude:	<input type="text"/>
<input type="button" value="Zoom"/>	
<input type="button" value="Image Viewer"/>	

### Get Closest LRS for Lat/Long



For this option, the user enters the Latitude and Longitude values (example given), and the system displays the closest ID Number and Log Mile.

### Get Closest LRS for Lat/Long

Please enter latitude and longitude values in decimal degrees.

Latitude: Ex. 36.205868

Longitude: Ex. -86.822848

Convert

ID Number:

Log Mile:

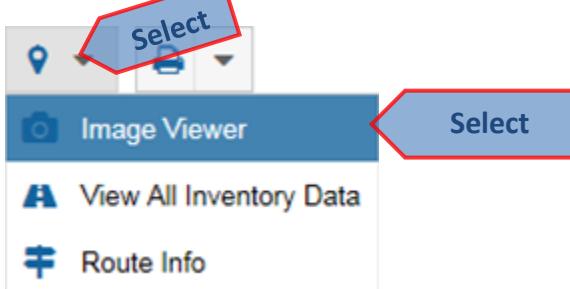
Zoom

Image Viewer

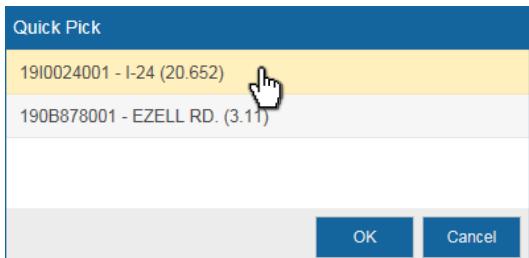
**Select from Map Menu –** This menu provides three (3) options



### Image Viewer

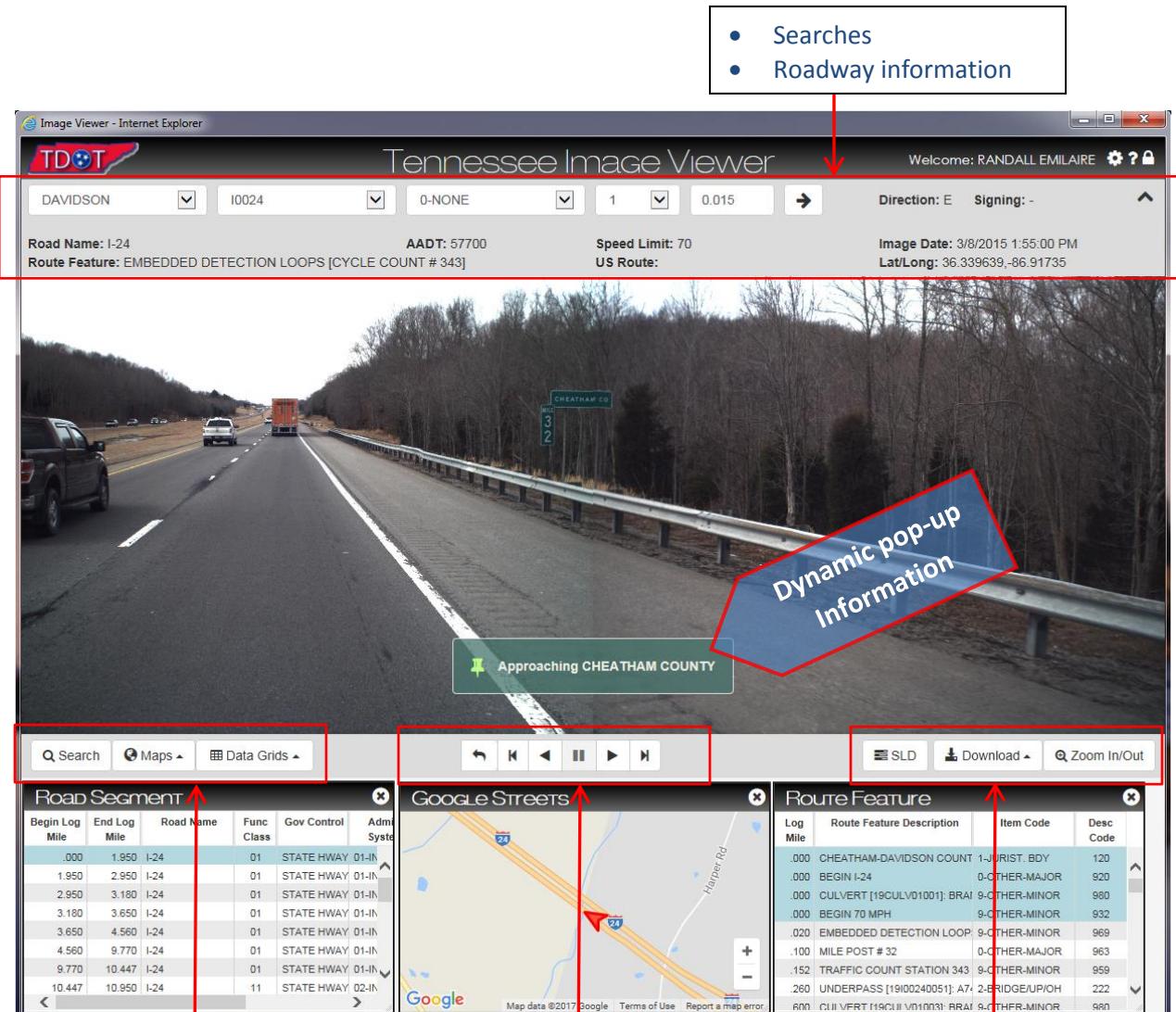


Click on the map to identify a location.



Selecting the **Image Viewer** will prompt the user to **'Click on the map to identify a location'**. A Quick Pick dialog window will prompt the user to confirm the desired selection. Select and click OK! The Tennessee Image Viewer (TIV) will open and display the location. The functionality of the TIV has not changed.

**Tennessee Image Viewer (TIV)** – Browser based front and sideview roadway image viewer which is synchronized with TDOT's LRS data. Only available for Interstates and State Routes.



- Search by Catalog table
  - Various base map follow through functions
  - Data grid features (ex. Traffic, Geometrics etc.)

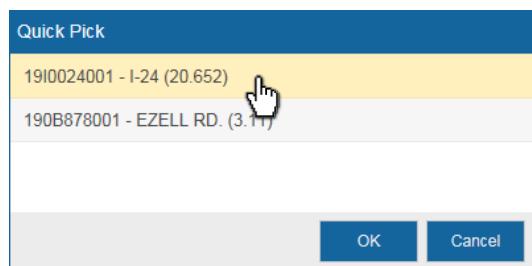
- Playback controls (ex.  
Play forward/ backward,  
pause, and restart)

- SLD chart
  - Download front or side view
  - Zoom in/out feature

## View All Inventory Data



**Click on the map to identify a location.**



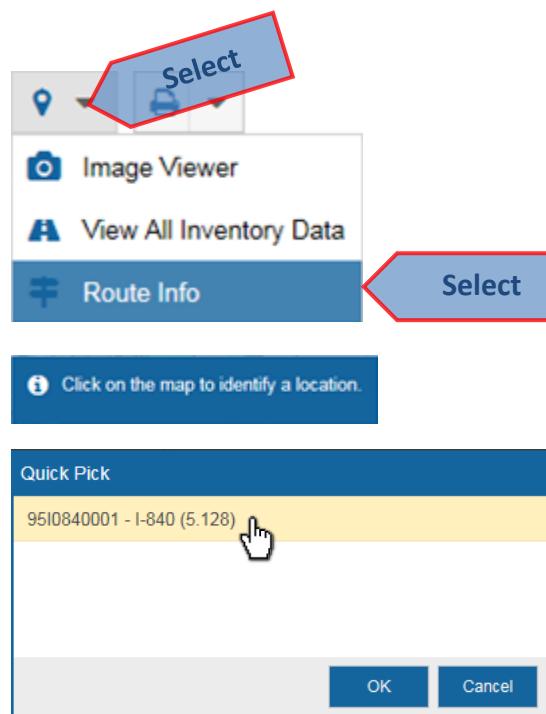
Selecting **View All Inventory Data** will prompt the user to '**Click on the map to identify a location**'. A Quick Pick dialog window will prompt the user to confirm the desired selection. Select and click OK! The result will highlight roadway description data by Log Mile. Other roadway attributes are also included.

## RESULT (Example)

The 'View All Inventory Data' results window. The top bar includes filters for County (DAVIDSON), Route (I0024), Spcl. Cse. (0-NONE), Cnty. Seq. (1), and search fields for 'From' and 'To'. Below is a table with columns: Log Mile, Item Code, Item Code Order, Route Feature Description, Desc Code, Milepost, MP Suffix, and Latitude. The table lists various roadway features like county lines, culverts, and bridge/underpass structures. At the bottom are 'Export', 'ImageViewer' (circled in red), and 'Close' buttons.

**Hint 2:** Image Viewer can be used from the Result Window and data can be exported in various formats as in previous E-TRIMS versions.

## Route Info



Selecting **Route Info** will prompt the user to **'Click on the map to identify a location'**. A Quick Pick dialog window will prompt the user to confirm the desired selection. Select and click OK! The result will highlight Route Info based on Log Mile. Other route attributes are also included: AADT and Truck % etc..

## RESULT (Example)

Route Info	
County	WILSON
Route	I0840
Special Case	0-NONE
County Seq.	1
Log Mile	5.128
Admin. Sys.	02-INTERSTATE URBAN
Functional Class	U / INTERSTATE
Government Control	STATE HWAY AGENCY
Road Name	I-840
US Route #s	
AADT	31170
Year of Traffic	2016
% Passenger Pick-...	82
% Single-unit Trucks	3
% Multi-unit Trucks	15

Close

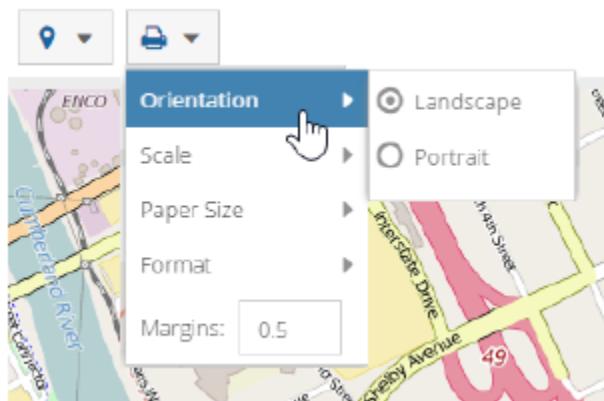
## Printing

**Print Menu** - This menu provides five (5) options, (Click on drop down arrow to see options).

The options on the print menu include:

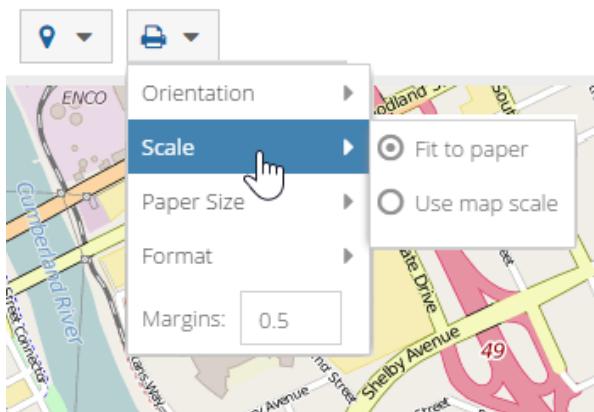
1. Selecting paper orientation
2. Scale
3. Paper Size
4. Format
5. Margins

**Selecting paper orientation** – allows users to select landscape or portrait orientation for the output. Defaults to landscape.

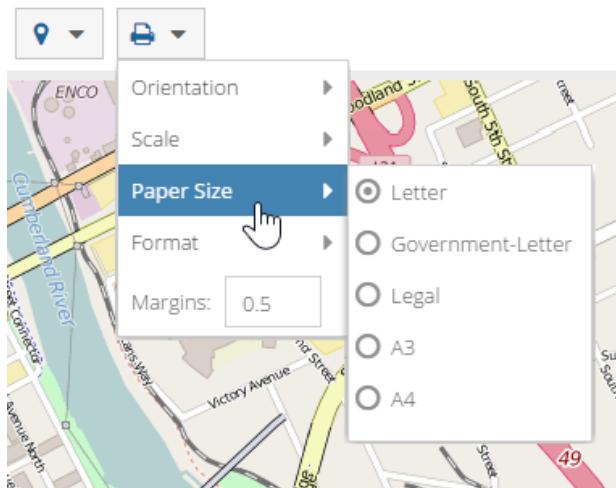


**Scale** – Allows user to specify how the map should fit on the page.

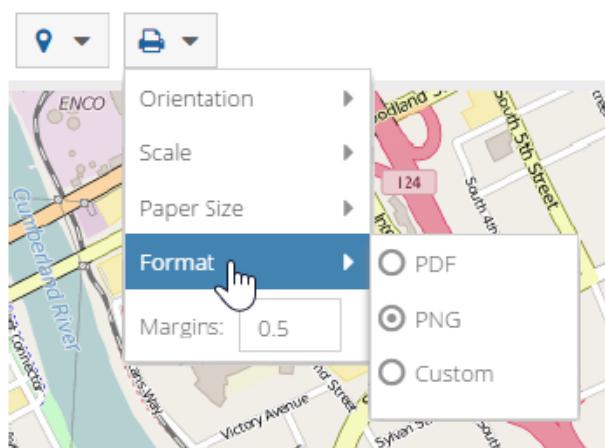
- a. **Fit to paper** – This option will size an image of the map to fit on the selected page size and orientation. This is the default option
- b. **Use Map Scale** – This option keeps the image of the map the same size as it appears in the browser, no matter which paper size and orientation is selected.



**Paper Size** – Allows user to identify the output paper size. The system supports **letter, government letter, legal, A3 and A4** paper sizes. Letter is the default paper size.



**Format** – Allows user to identify the output format. Options are **PDF and PNG** for a quick print. The Custom option will open the more advanced Custom Print Module. PNG is the default output option.



**Margins** – Allows user to specify the paper margin size.

After identifying all of the print settings, the user will click the Print menu button to output the map using the selected options.

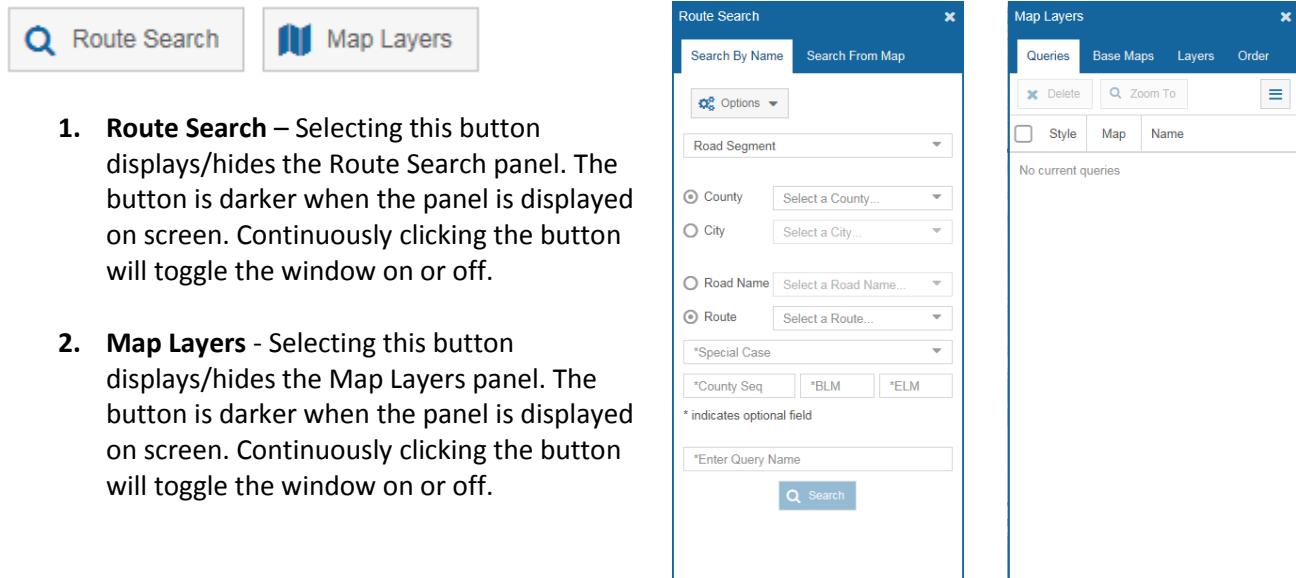


**HINT 3:** Clicking ‘open’ would allow an installed photo viewer to display the map to be printed

## Section Three

### Main Toolbar Toggle Buttons

On the right of the application window main toolbar, there are two (2) toggle buttons.



### Route Search (Simple Query)

This new method is an updated interface with separate tabs which allows the user to **Search by Name** or **Search from Map**. The window also includes and **Options Toolbar** which allows for customization.

**HINT 4:** The Search by Name Tab replaces the existing Select Route by Name Simple Query side panel. In Version 7.0 users will query by County or City and by Road Name or Route. If the Display on Map checkbox is selected, the results will display as a vector layer on the map, using the settings defined in the options toolbar.

## Search by Name

Users are allowed the same functionality as in E-TRIMS 6 and there are mandatory and optional fields. The main search criteria are located and selected from the drop down menu:

Click and Enter search requirements and don't forget to enter a query name!

Enter name

Select

**Example 3:** There will be road improvements on **State Route 10** in **Bedford County** from **Log Mile 6.850** to **Log Mile 8.191**. Your Supervisor requires a print out of this **Road Segment** from E-TRIMS.

Minimum info:
 

- Select Road Segment (default)
- Choose the County/City
- Choose Road Name/Route

**\*Search\***

- Optional info --
- 4. Special Case
- 5. County Sequence
- 6. Beginning Log Mile
- 7. Ending Log Mile

Select

Search

Click

Click

Enter

Result:

County	Route	Func. Class	Co. Seq.	BLM	ELM	Func. Class	Adm. Sys.	Gov. Cont.	Inc Area Nbr	Urb Area Nbr	Sp Systems	Sp Systems 2	Sp Systems 3	US Rte Nbr
BEDFORD	SR010	O-NONE	1	6.85	6.89	R / OTH PRIN A...	03-NHS RURAL...	STATE HWY...	-	-	FED. DESG. TR...	TN PARKWAY	-	231
BEDFORD	SR010	O-NONE	1	6.89	6.895	R / OTH PRIN A...	03-NHS RURAL...	STATE HWY...	-	-	FED. DESG. TR...	TN PARKWAY	-	231
BEDFORD	SR010	O-NONE	1	6.895	7.275	U OTH PRIN ART	13-NHS URBAN...	STATE HWY...	-	265 - SHELBYV...	FED. DESG. TR...	TN PARKWAY	-	231
BEDFORD	SR010	O-NONE	1	7.275	8	U OTH PRIN ART	13-NHS URBAN...	STATE HWY...	265 - SHELBYV...	265 - SHELBYV...	FED. DESG. TR...	TN PARKWAY	-	231

## Attributes

The new attributes pop up window can be activated by clicking on the name of the query in **Map Layers** → **Queries**. Each attribute row is based on a segment, hence in the example there were 4 Segments. The total segment length is 1.15 miles. Therefore 1.15 miles of roadworks will occur.

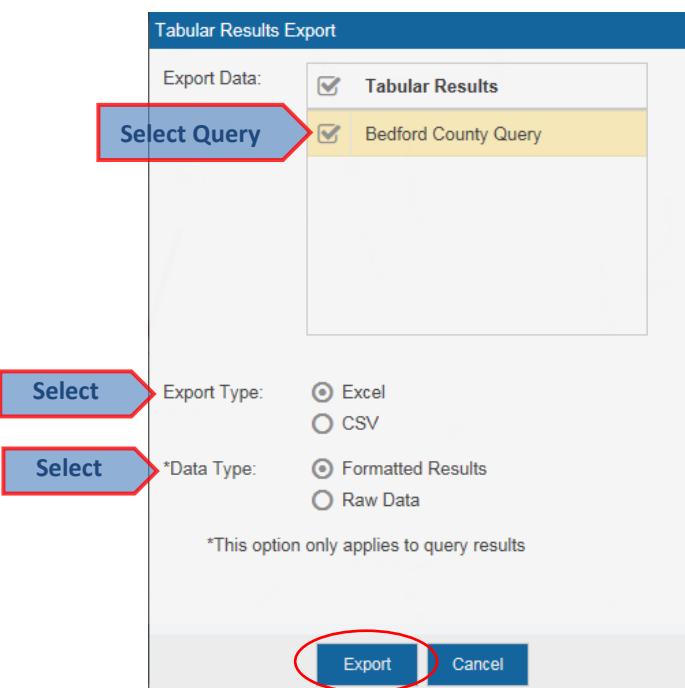
**HINT 5:** Using Tennessee Image Viewer in this setting will go to the road segment queried; alternatively E-TRIMS Google Streetview can now be used.

## Export

Attribute results can be exported:

- MS Excel files
- CSV files.

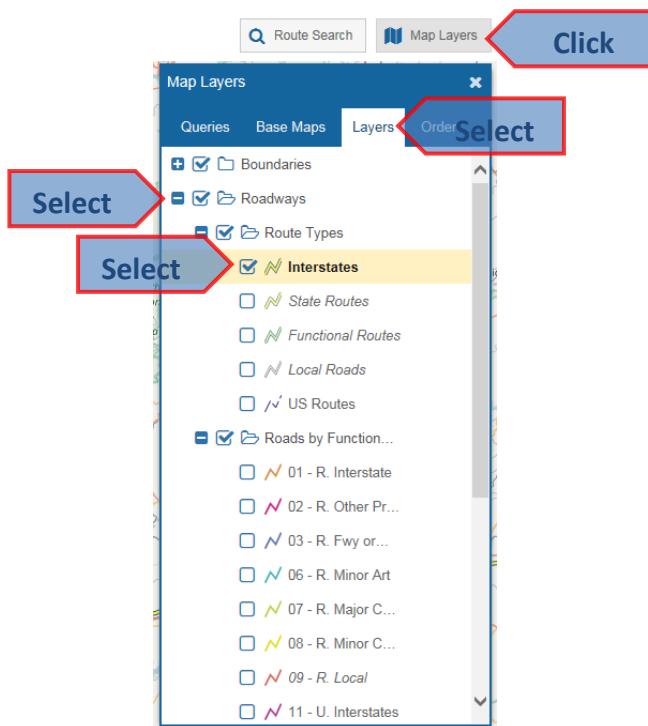
Data types can be formatted or Raw.

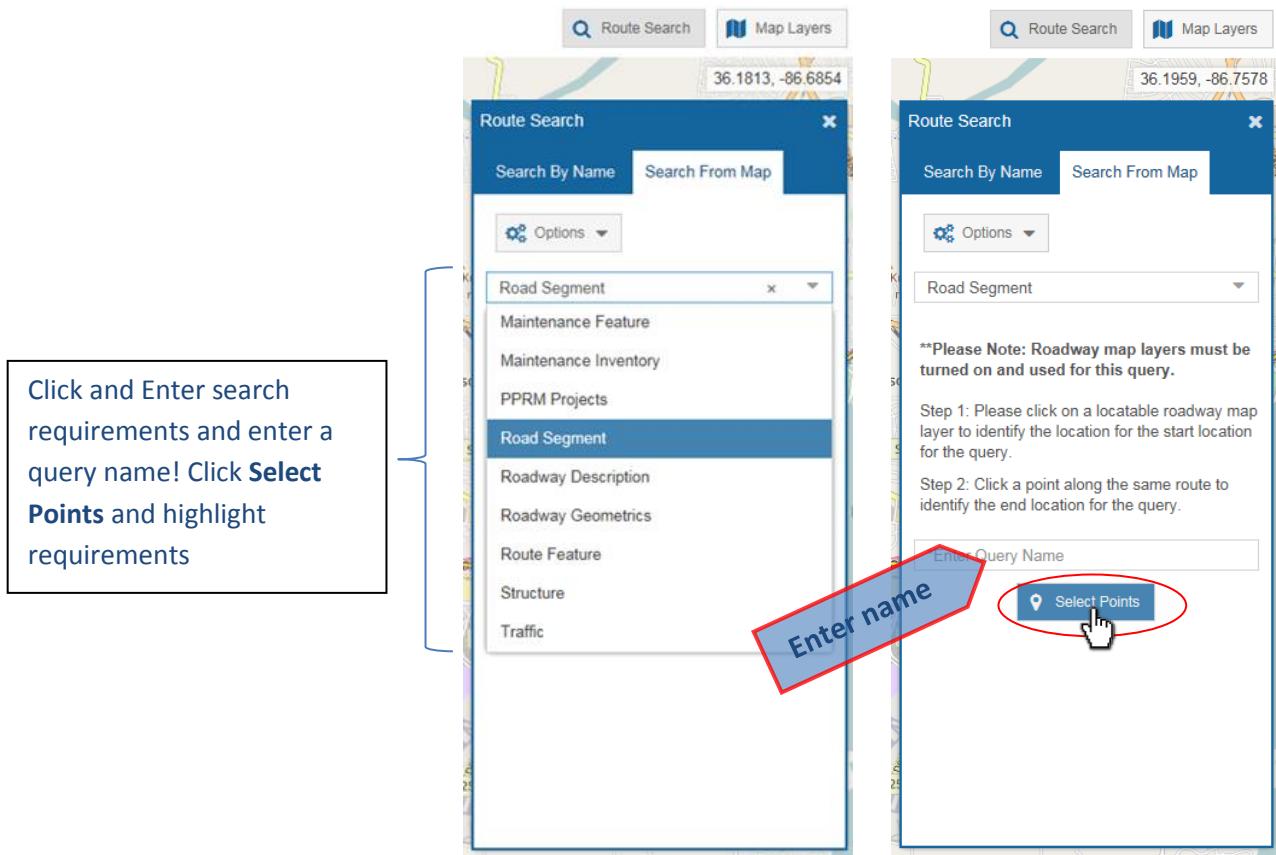


## Search from Map

For this search **ROADWAY MAP LAYERS MUST BE TURNED ON** (See instructions below):

- Click on Map Layers (Top right of screen) → Layers → Roadways → Enable applicable map layers
- Close Map Layers





**Example 4.** There is significant congestion on **Interstate 24** in **Davidson County** during peak hours. Basic attributes (such as Speed limit and terrain) for the section of Interstate 24 in Davidson County is needed for analytical purposes. The area required is north of SR171 near Exit 62 to Shelby Ave near Exit 49.

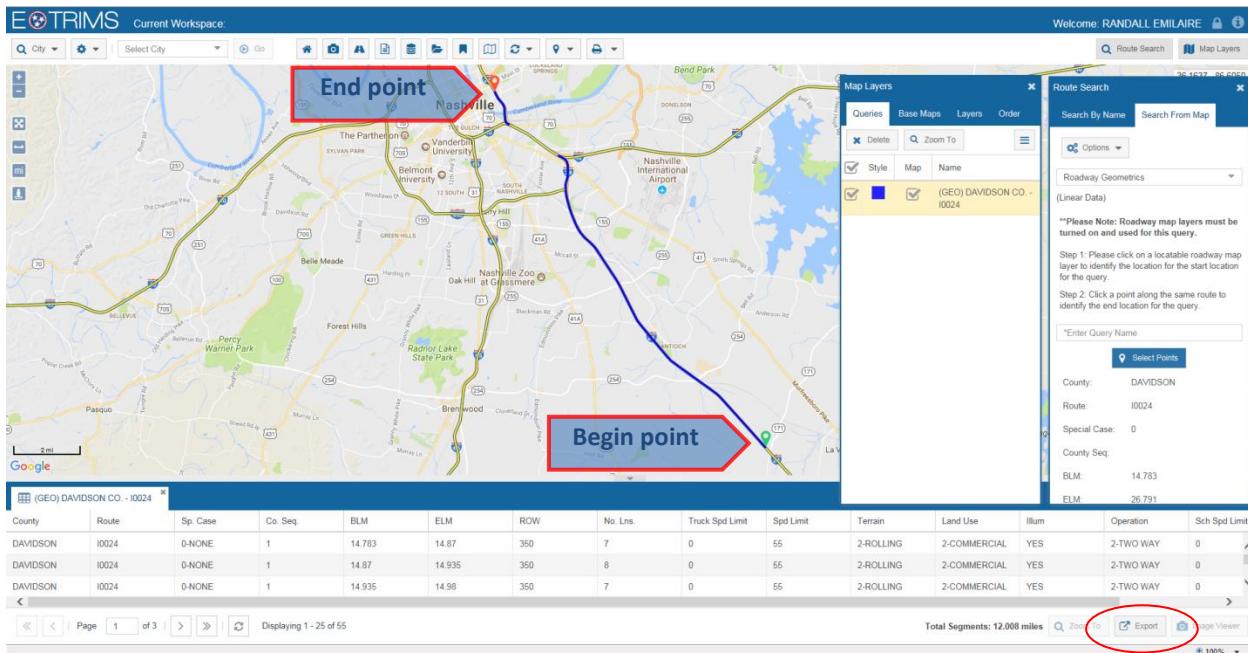
The quickest method in the new E-TRIMS is: **Search From Map**.

Using **Roadway Geometrics**:

Select

Query information, populates while points are being selected

County:	DAVIDSON
Route:	I0024
Special Case:	0
County Seq:	
BLM:	14.783
ELM:	26.791

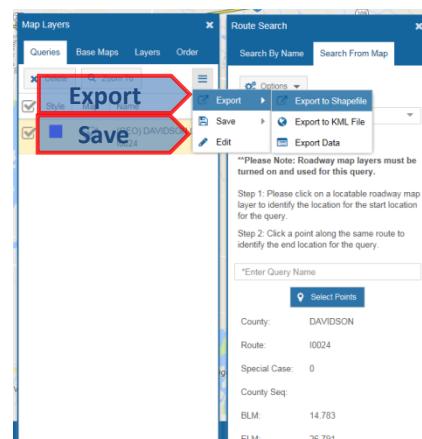
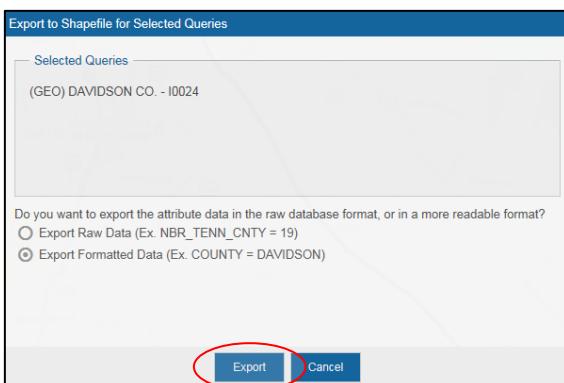


**HINT 6:** For this process – Select a point along the locatable vector roadway for the starting point of the search and the system will prompt to select an ending point. When both points are identified, the system will execute the query. Look out for further instructions at the bottom right of the screen when applicable.

## Export Attributes and Shapefile

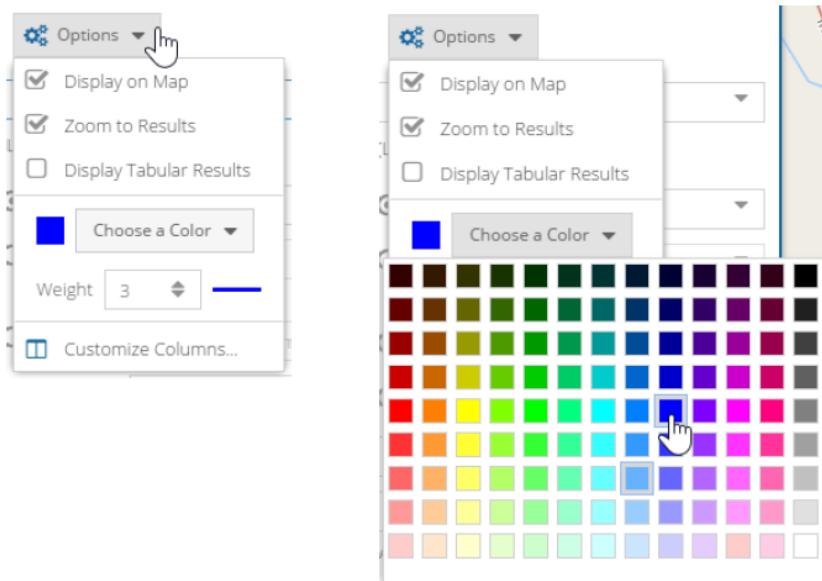
To export attributes: See Exercise 3; Export

### To export to Shapefile or KML



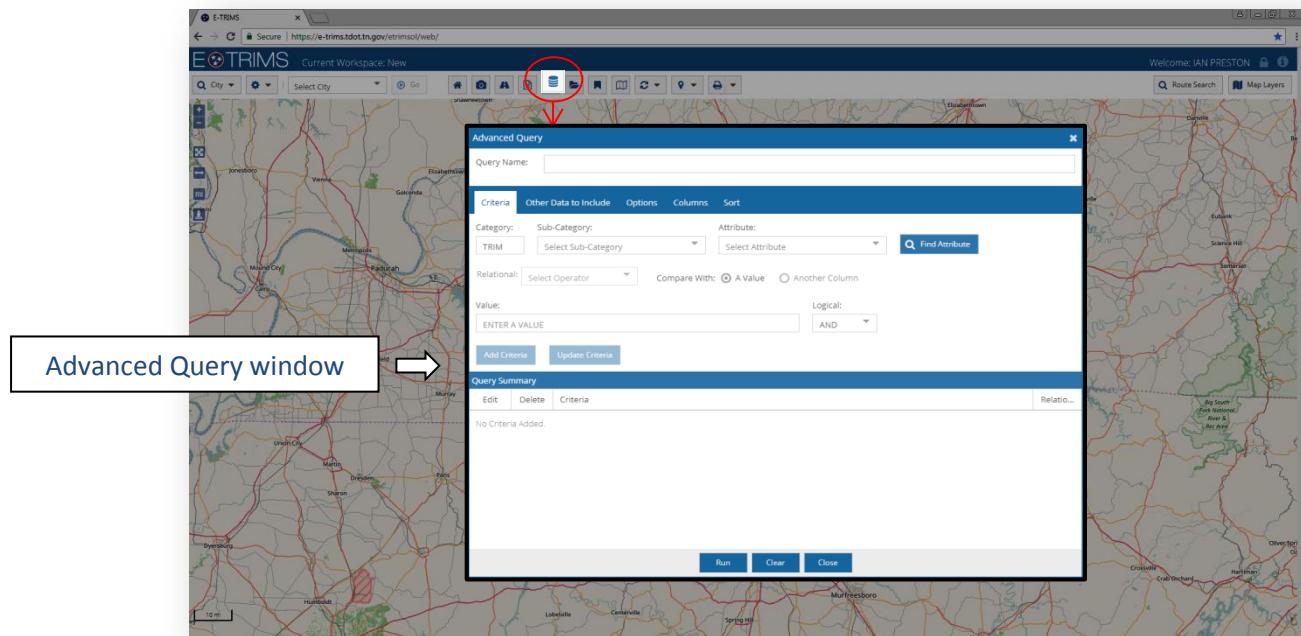
## Route Search Options Toolbar

The **Route Search Options Toolbar** provides the avenue to customize where and how the results from the search will be displayed. If results are displayed on a map, then the user may want an automatic **Zoom to Results** upon query completion. The user can also specify if **Tabular Results** are required. Line weights and colors can also be customized.



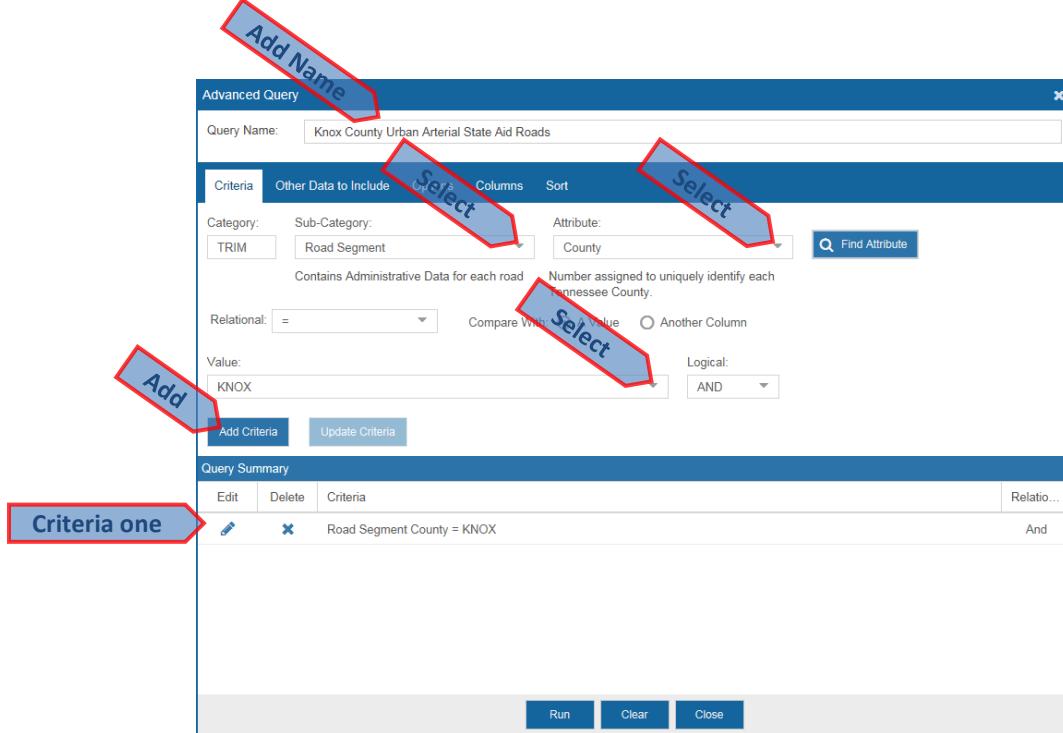
## Advanced Query

Advanced queries are typically complex queries with multiple search criteria. They frequently require numerous search parameters which would be stacked and then analyzed.



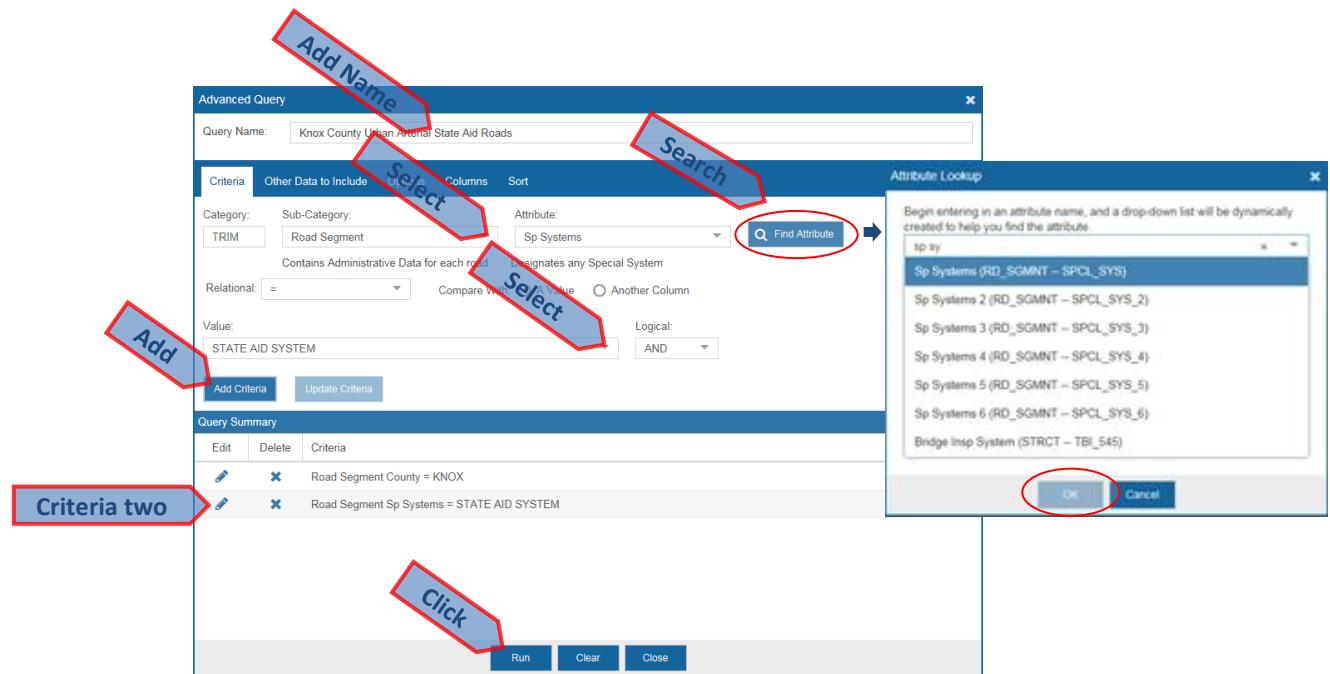
**Example 5.** A project in Knox County will be commissioned, but only on Urban Minor Arterial Roads on the State Aid Network. A supervisor is requesting attributes and a shapefile of all roads which meet those conditions.

### Criteria One: Using Road Segment - (Selecting Query)



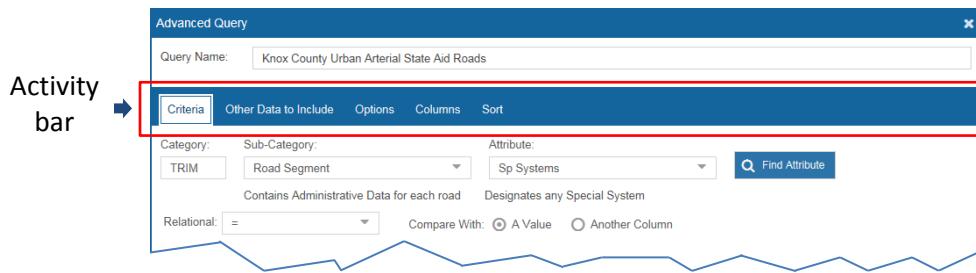
### Criteria two: Using Road Segment -

Use **Find Attribute** to get Sp Systems → State Aid System.



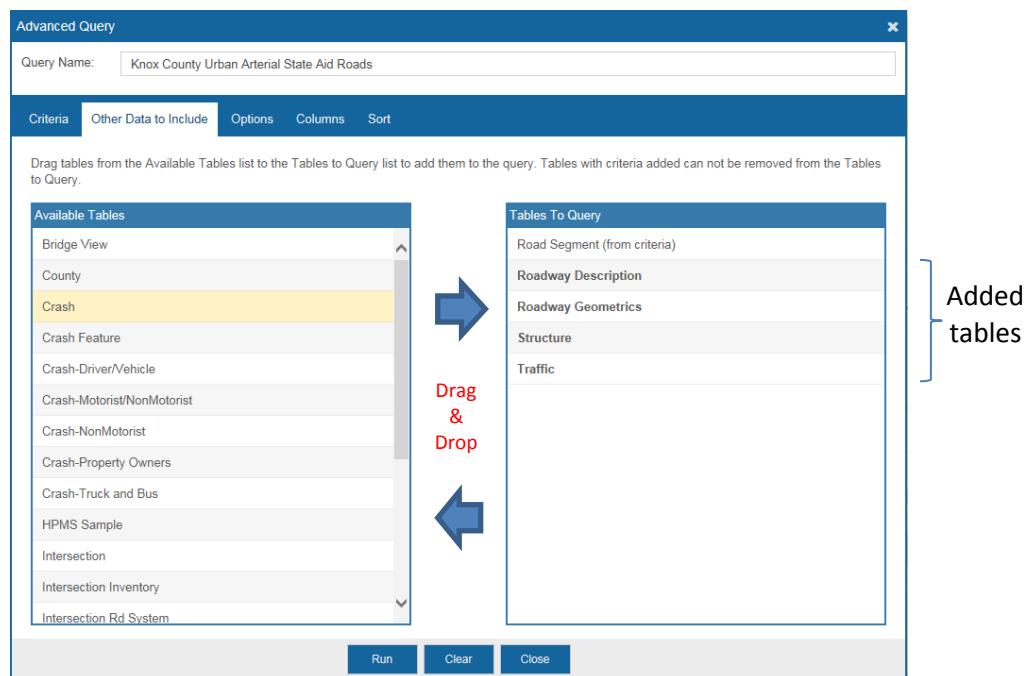
## Query Add-ons and Options

An advanced query can be customized based on user needs.



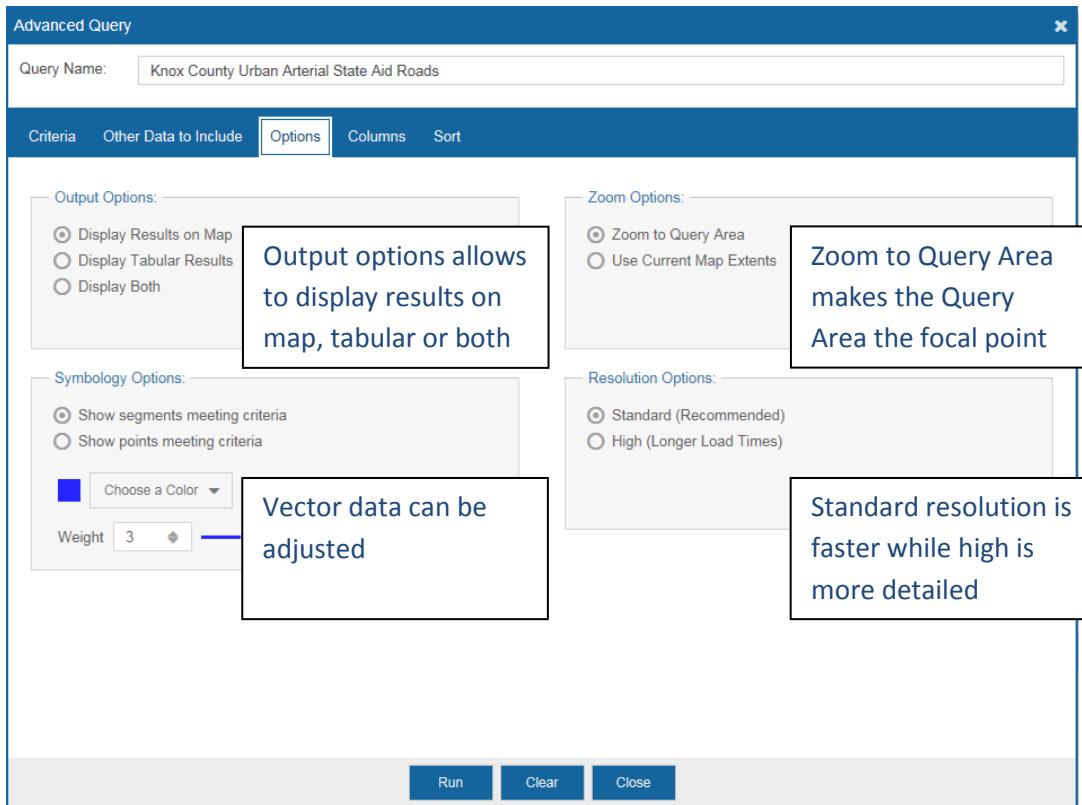
### ***Other Data to Include:***

Using the drag and drop feature, other tables (based on query road segment) can be added to the results

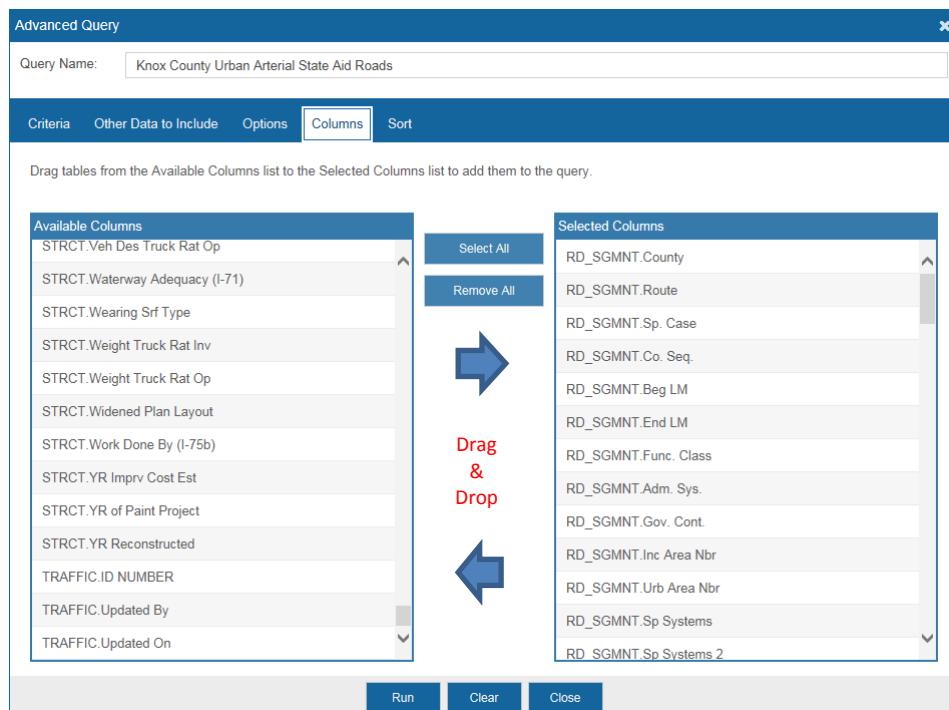


**HINT 7:** Required tables can be added or removed as necessary. Apart from drag and drop, double-clicking a table can also add or remove it from the query.

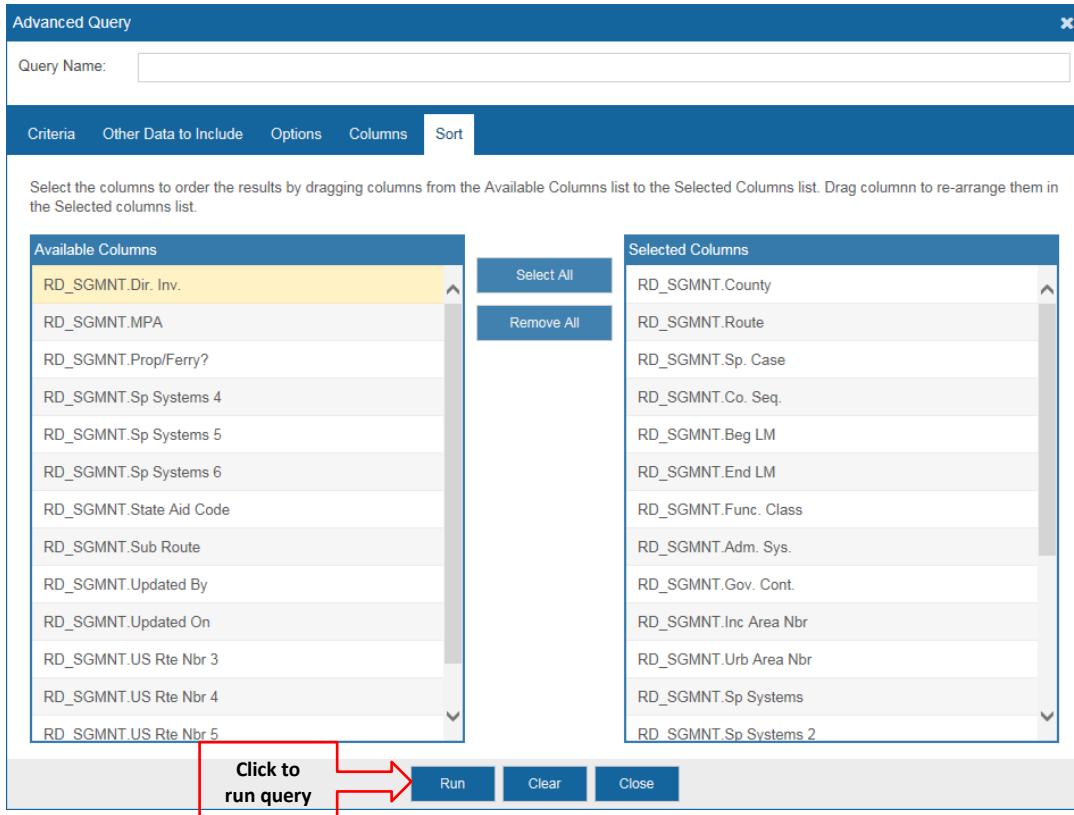
**Options:** The options section directly modifies visualization attributes.



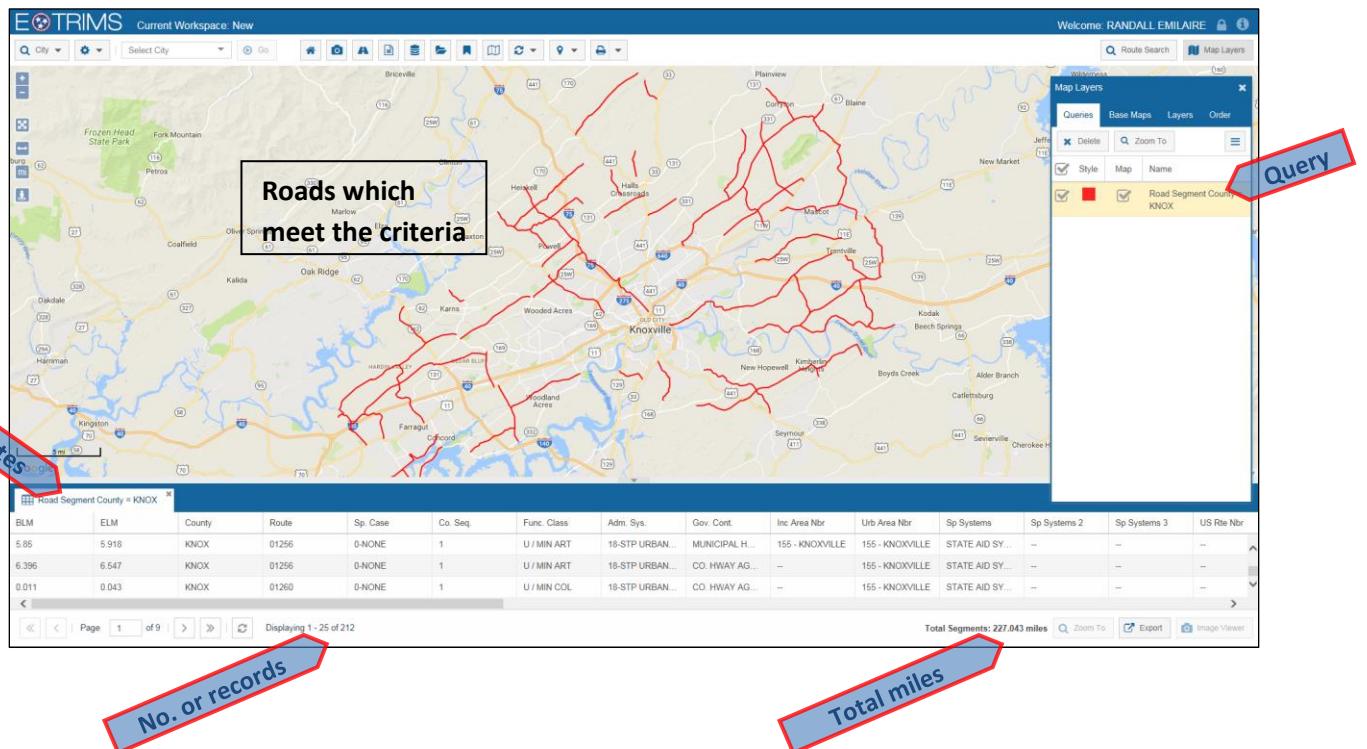
**Columns:** To de-clutter results, users can select only the required information and remove what is not needed using drag and drop or double clicking as in 'Other Data to Include'.



**Sort:** Used to sort results within **Selected Columns**. Columns can also be sorted by drag and drop.



**Results:** Road segment which meet the set criteria one and two are highlighted in red.



## Exporting attribute data and shapefiles:

The screenshot shows the E-TRIMS application interface. At the top, there's a toolbar with various icons. Below it is a map of East Tennessee, specifically the Knox County area, showing roads in red and yellow, and rivers in blue. To the right of the map is a 'Map Layers' sidebar with tabs for 'Queries', 'Base Maps', 'Layers', and 'Order'. Under the 'Queries' tab, there are checkboxes for 'Style' and 'Map Name', and one for 'Road Segment County = KNOX' which is checked. Below the sidebar is a table titled 'Road Segment County = KNOX' with columns for BLM, ELM, County, Route, Sp. Case, Co. Seq., Func. Class, Adm. Sys., Gov. Cont., Inc Area Nbr, Urb Area Nbr, Sp Systems, Sp Systems 2, Sp Systems 3, and US Rte Nbr. The table contains three rows of data. At the bottom of the interface, there are navigation buttons like 'Page 1 of 9' and 'Displaying 1 - 25 of 212', along with 'Total Segments: 227.043 miles', 'Zoom To', 'Export', and 'Image Viewer' buttons.

## Spatial Data:

This section shows the process of exporting spatial data. On the left, a screenshot of the 'Map Layers' sidebar shows the 'Export' button being clicked. On the right, a detailed view of the 'Export to Shapefile for Selected Queries' dialog box is shown. It lists 'Road Segment County = KNOX' under 'Selected Queries'. It asks if the user wants to export attribute data in raw database format or a more readable format, with 'Export Formatted Data (Ex. COUNTY = DAVIDSON)' selected. At the bottom, the 'Export' button is circled in red.

## Attribute Data:

This section shows the process of exporting attribute data. On the left, a screenshot of the 'Map Layers' sidebar shows the 'Export' button being clicked. On the right, a detailed view of the 'Tabular Results Export' dialog box is shown. It has a checkbox for 'Tabular Results' which is checked, and another for 'Road Segment County = KNOX' which is also checked. Below that, 'Export Type:' is set to 'Excel' and 'Data Type:' is set to 'Formatted Results'. At the bottom, the 'Export' button is circled in red.

### **Interpreting results:**

Results are displayed on the map and in tabular form. The Traffic Table was added to the query therefore information including truck percentages and AADT are appended.

Other E-TRIMS characteristics:

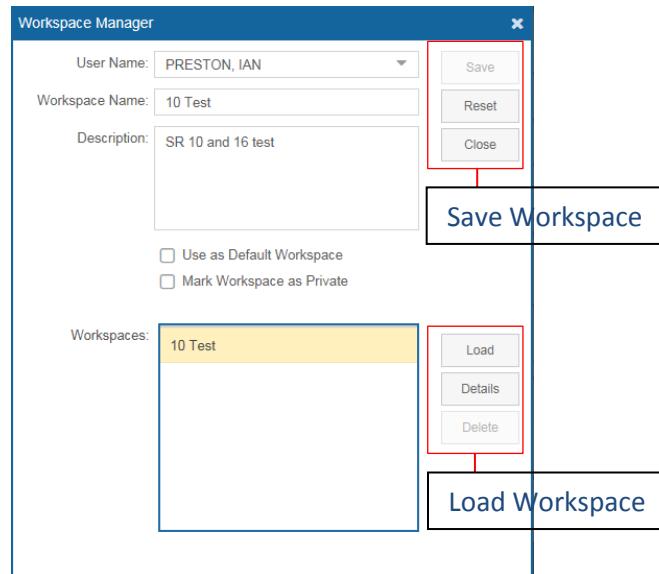
1. Double click on individual attribute rows to locate road segment on map.
2. Use Google Street view to visualize the roadway.
3. Hover over road segment to get latitude and longitude.
4. Print map using the new E-TRIMS print feature.

#### **Saving your work (Workspace Manager)**

1. Open Workspace Manager
2. Input workspace name
3. Description
4. Save

#### **Loading a workspace (Workspace Manager)**

1. Open Workspace Manager
2. Select workspace
3. Load/ OK



## **Advanced Query Functions**

E-TRIMS uses various Functions to construct complex queries. These Functions are either Vector Relational and/or logical and vary based on attribute type.

#### **Relational Functions (Drop down)**

Relational:  NOT IN

=	<b>Equal</b>
<>	<b>Not equal</b>
>	<b>Greater than</b>
>=	<b>Greater than equal to</b>
<	<b>Less than</b>
<=	<b>Less than equal to</b>
LIKE	<b>Used to search for a specified pattern in a column</b>
NOT LIKE	<b>Used to search for a specified pattern in a column</b>
IN	<b>Whether a value is IN a list of values</b>
NOT IN	<b>Whether a values is NOT IN a list of values</b>
IS	<b>Null value</b>

<b>IS NOT</b>	<b>Not a Null value</b>
<b>STARTS WITH</b>	<b>Whether a value starts with</b>
<b>ENDS WITH</b>	<b>Whether a value ends with</b>

Logical:

**Logical Functions (Drop Down)**

AND 

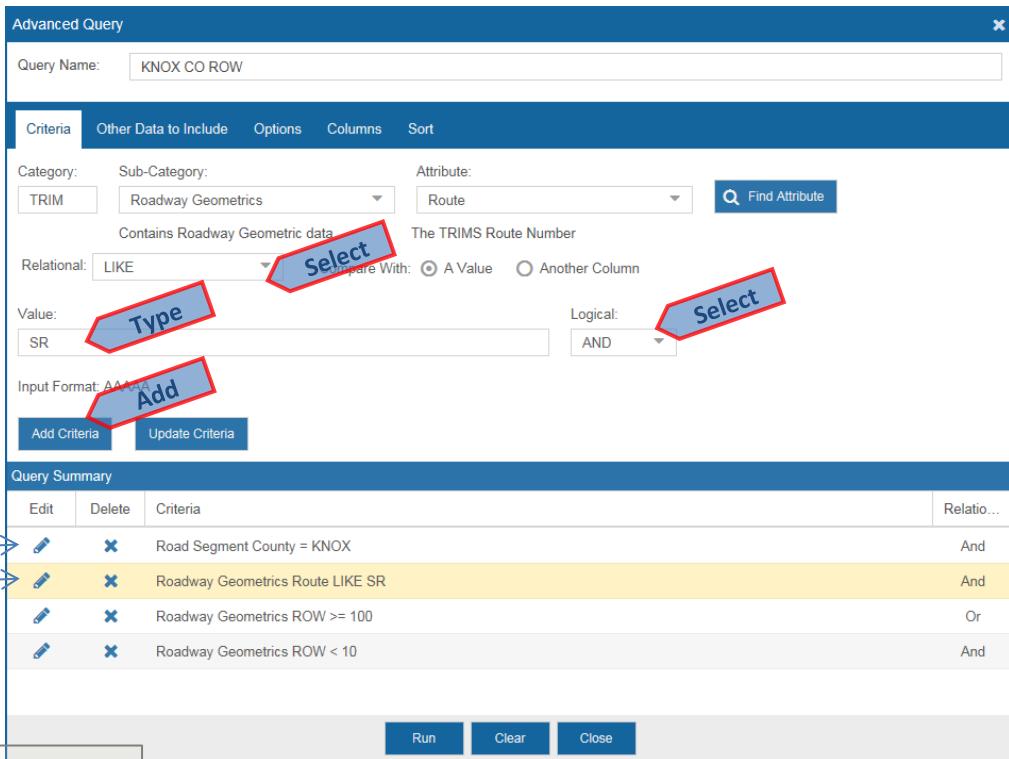
<b>AND</b>	<b>Both terms in each criteria returned</b>
<b>OR</b>	<b>Either term OR both in each criteria returned</b>

**Example 6.** Someone has asked you to find: All State Routes in Knox County with ROW thresholds that are greater than or equal to 100 feet or less than 10 feet. This is a prior requirement for further analytical processes.

### Using E-TRIMS Advanced Query - Relational and Logical Functions

Select County (Example 5)

Sub Category = Roadway Geometrics  
Attribute = Route



The screenshot shows the 'Advanced Query' dialog box with the following configuration:

- Query Name:** KNOX CO ROW
- Criteria Tab:**
  - Category:** TRIM
  - Sub-Category:** Roadway Geometrics
  - Attribute:** Route
  - Relational:** LIKE
  - Value:** SR
  - Logical:** AND
- Query Summary:**
  - Road Segment County = KNOX
  - Roadway Geometrics Route LIKE SR
  - Roadway Geometrics ROW >= 100
  - Roadway Geometrics ROW < 10

Annotations with red arrows and text boxes highlight specific steps:

- A box labeled "Select County (Example 5)" points to the "Category" dropdown.
- An annotation "Type" points to the "Value" input field.
- An annotation "Add" points to the "Add Criteria" button.
- Two annotations labeled "Select" point to the "Relational" and "Logical" dropdown menus.
- A box labeled "Sub Category = Roadway Geometrics" points to the "Sub-Category" dropdown.
- A box labeled "Attribute = Route" points to the "Attribute" dropdown.

**Advanced Query**

Query Name: KNOX CO ROW

Criteria Other Data to Include Options Columns Sort

Category: Sub-Category: Attribute:

Relational:  Contains Roadway Geometric data The right-of-way for this roadway segment  
Compare With:

Value:  Logical:

Input Format: 999

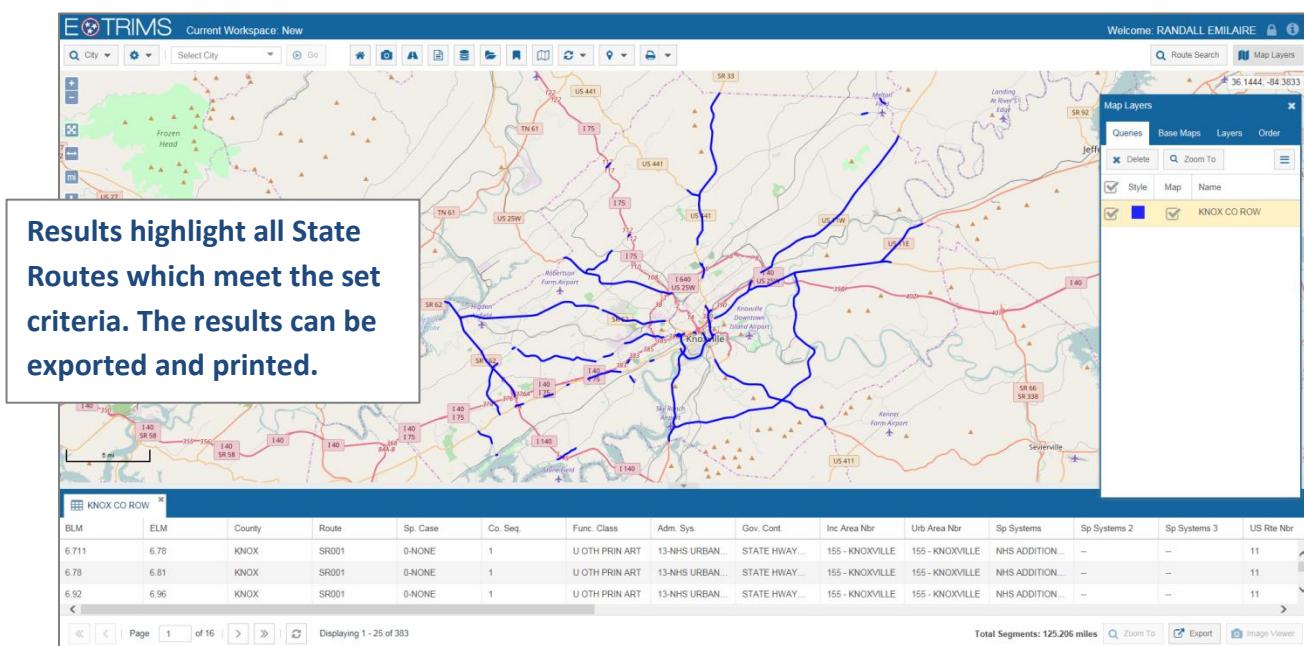
Add Criteria Update Criteria

**Query Summary**

		Relatio...
<input type="checkbox"/> <input checked="" type="checkbox" value="X"/>	Road Segment County = KNOX	And
<input type="checkbox"/> <input checked="" type="checkbox" value="X"/>	Roadway Geometrics Route LIKE SR	And
<input type="checkbox"/> <input checked="" type="checkbox" value="X"/>	Roadway Geometrics ROW >= 100	Or
<input type="checkbox"/> <input checked="" type="checkbox" value="X"/>	Roadway Geometrics ROW < 10	And

Run Clear Close

**Add the last criteria using the same method but using 'AND'**



## Map Layers

The Map Layers tab is a floating panel accessible from the map layers toggle button. The Map Layers Side Panel contains the following tabs:

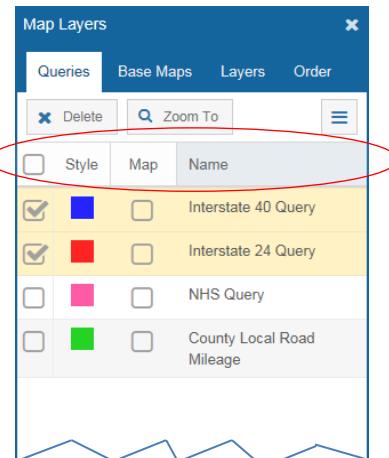
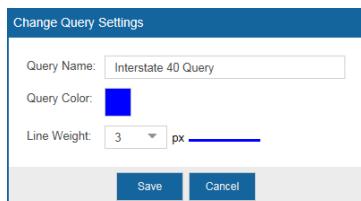
- **Queries**
- **Base Maps**
- **Layers**
- **Order**

**HINT 8:** E-TRIMS 6.0 provides access to the *Map Layers* tree view (hierarchical structure) and the display order listing. In the New E-TRIMS 7.0, this functionality is available on a floating panel accessible from the Map Layers toggle button on the main toolbar.

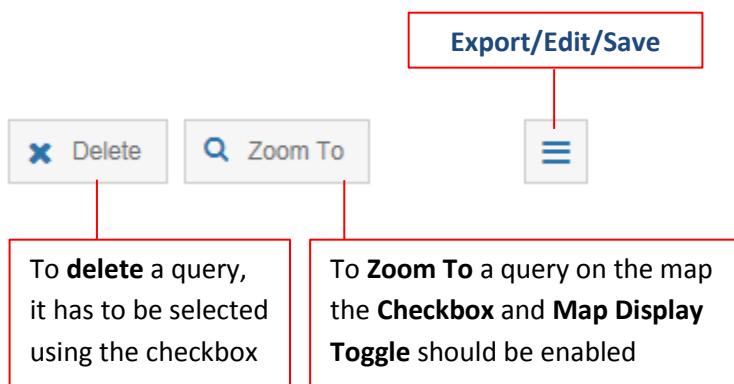
## Queries

This tab shows the query map layers. From there, queries can be edited, exported, saved and/or deleted. For each query, the following columns are displayed:

- **Checkbox** (to select a query)
- **Style indicator** (link to customize line color and weight)

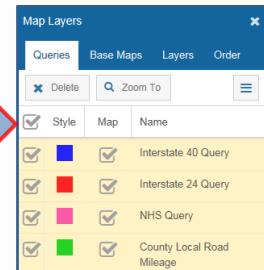


- **Map display toggle** (to toggle query display within map area)
- **Query name** (query name and link to attributes)



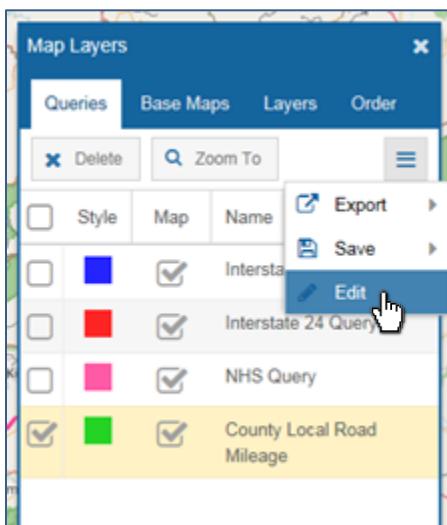
**Hint 9:** All queries can be selected by clicking the checkbox in the main bar.

Select all Queries



**Query Export/Edit/Save – Drop down menu with available options**

#### *Edit Option*

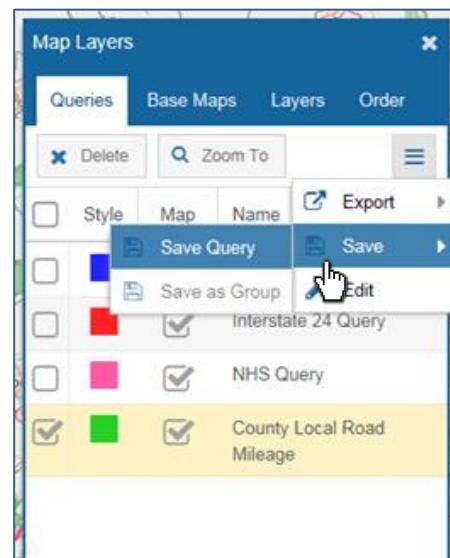


This option is enabled if a single query is selected and opens initiates editing. The option will open the selected query in the interface used to create it

#### *Save Query Option*

This menu has options to **Save Query** (Saves a single query) and **Save As Group** (Save a group of queries).

**Private Query** - are only accessible to the user. **Shared Query** - accessible by all users



**Required**

**Optional**

Save Query

Query Name: County Local Road Mileage

Description: Enter a Query Description...

Query Type:  Private Query  Shared Query  Published Query

This type of query will be accessible to all users.

Save Cancel

### Export Option

**Export to Shapefile or KML**

This menu has options for **Export to Shapefile**, **Export to KML File** and **Export Data**.

#### Single or multiple

Single or multiple queries can be exported at a time. The formats can be **Raw Data** or **Formatted Data**.

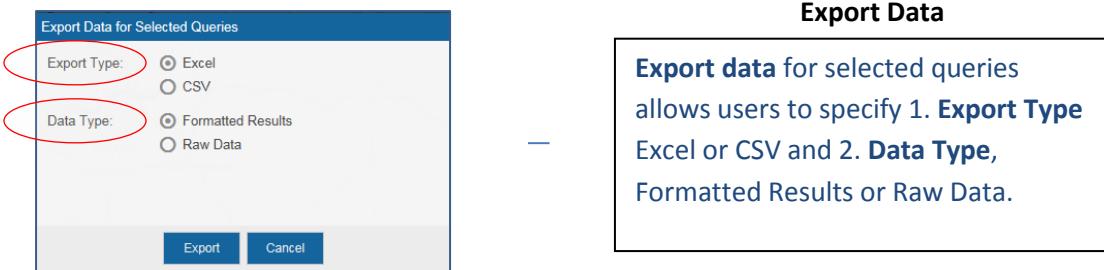
Selected Queries

County Local Road Mileage

Do you want to export the attribute data in the raw database format, or in a more readable format?

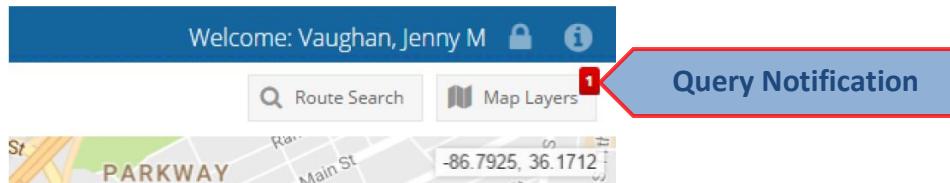
Export Raw Data (Ex. NBR\_TENN\_CNTY = 19)  
 Export Formatted Data (Ex. COUNTY = DAVIDSON)

Export Cancel



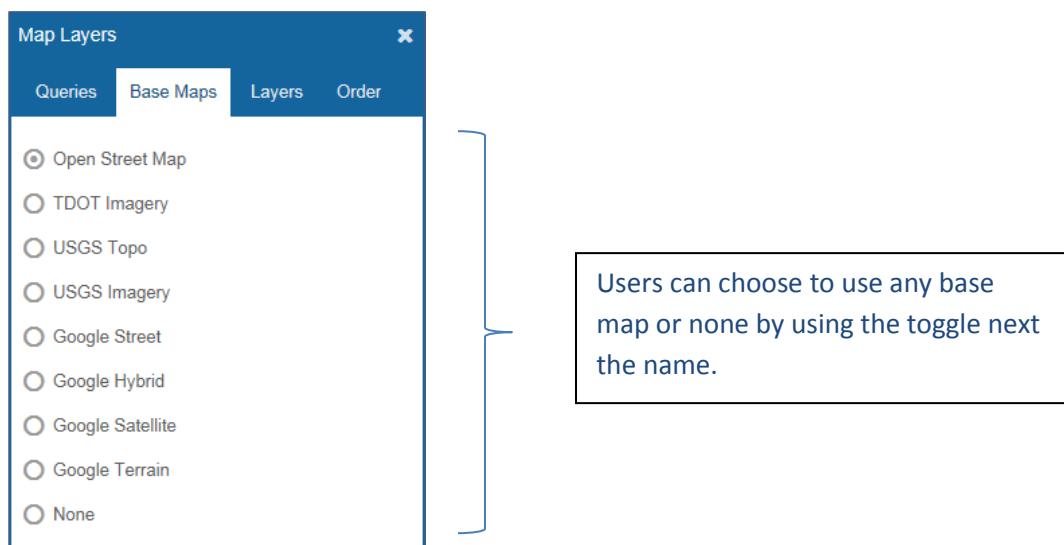
### Query Results Notification

After performing a query, the New E-TRIMS will automatically add it to the current queries side panel and add it to the list. A new feature in E-TRIMS is the floating badge on the Map Layers toggle button to notify the user when new queries have been added.



### Base Maps

To enhance data visualization, new base maps have been added to E-TRIMS. These can be explored using Map Layers → Base Maps:



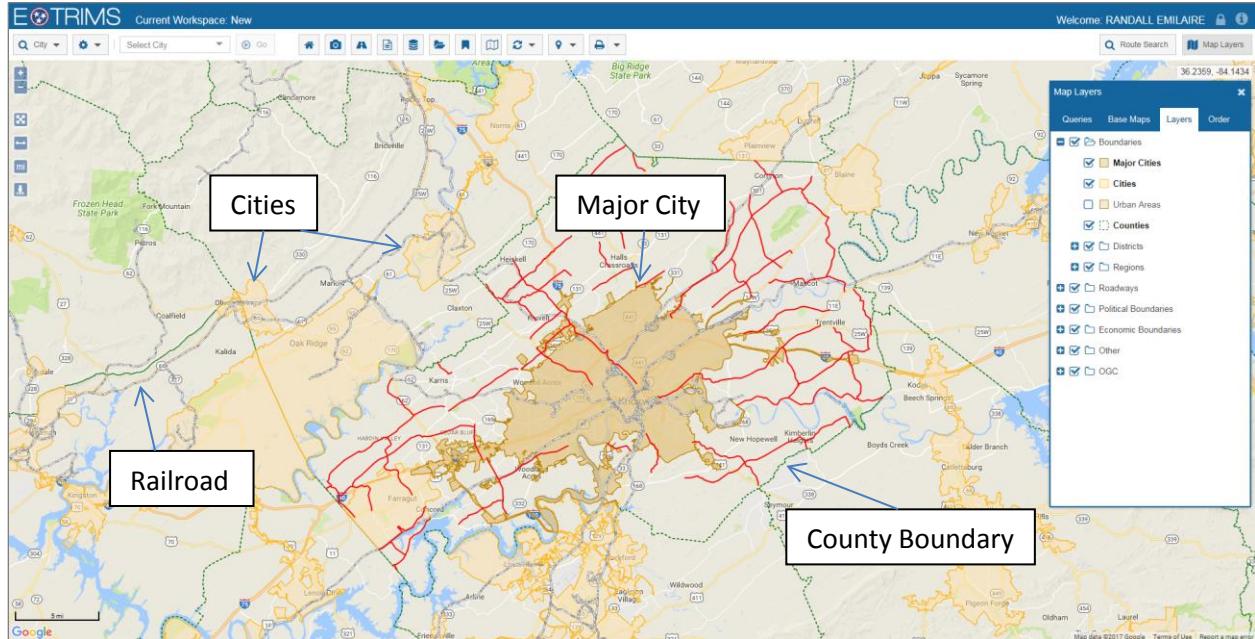
**Hint 10:** In order to see Interstate, State Route and other Highway shields for easier and faster road identification, use **Google Street** or **Google Satellite** imagery or **Google Terrain**.



## Layers

As with previous versions of E-TRIMS, to enhance visualization, many preset layers can be activated. The main layers are:

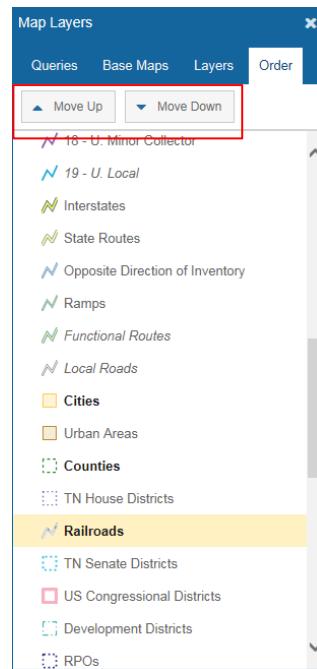
- **Boundaries**
- **Roadways**
- **Political Boundaries**
- **Economic Boundaries**
- **Other**
- **OGC**



## Order

Order is used to view required datasets regardless of hierarchical structure. Drag and drop can be used or the **Move up** or **Move down** buttons.

Moving layers to the top will not necessarily turn off the layer, rather the uppermost layer will be made more visible.



## Load a Query

Queries can be published and saved as private, shared or even grouped. Several people who use the system have saved queries which can potentially benefit a new user and save time.

HR	Query Name	Original Author	Created On	Last Run On	Source	# Runs
+ Advanced Query Test 5 - Five Tables	JJ03059	09-12-2011	06-21-2017	ETRIMS	27	
- Advanced Query Test 5 - Five Tables	TERRELL, BRIAN	09-30-2011	05-24-2017	ETRIMS	55	
Description: Added Tables:  + Road Segment Adm. Sys. greater than or equal to 25... ROACH, JOE 11-09-2011 04-07-2015 ETRIMS 8						

**Advanced Query**

Criteria Logical

Road Segment Inc Area Nbr = DICKSON  
Roadway Description Fe  
Traffic AADT >= 15000  
Roadway Geometrics Sp  
Roadway Description Feature Type = PAVEMENT

Run Now Load Delete Close

Immediately run the query as is.

Make changes or edits before running.

**Load a saved query in E-TRIMS v7.0.****Steps:**

1. Click on **Load Query** icon 
  2. Choose a query category – (**Published, Private, Shared, Grouped**).
  3. Select a query from the list
    - a. If you know the user, select that name from the **User Name** drop down menu.
  4. Click the  sign to see the query description.
  5. Confirm query details are in keeping with what you want.
- 6a. If edits or changes are required – **Load** Query to edit then run.  
A new window opens based on how the query was created.
- 6b. If the query requires no changes – **Run Now**

**HINT 11:** Advanced queries are complex and time consuming, so see if one has been created before building. If so, load it - tweak it - Run it!

**View All Inventory Data** 

In order to get all data on a particular route: select ‘View All Inventory’. Data headings are:

- Route Feature
- Road Segment
- Traffic
- Roadway Description
- Geometrics
- Road History
- Maintenance Feature
- Maintenance Inventory

**Example 7.** Make a quick search in E-TRIMS for all data on Interstate 440 in Davidson County

**Enter Log mile if known**

**Click**

**Find Now**

**Activity Bar**

**Results**

- Export Tabular data
- Open image viewer based on segment
- Close window

### Export Tabular data

This export allows various tables to be selected for export. The data type can be formatted data or Raw data, and the export type MS Excel or CSV file.

**Select all**

**Selectable tables for tabular export**

Table Name
<input type="checkbox"/> Route Feature
<input type="checkbox"/> Road Segment
<input type="checkbox"/> Traffic
<input type="checkbox"/> Roadway Description
<input type="checkbox"/> Geometrics

Data Type:  Formatted Results  Raw Data

Export Type:  Excel  CSV

OK Cancel

## Section four

### Reports

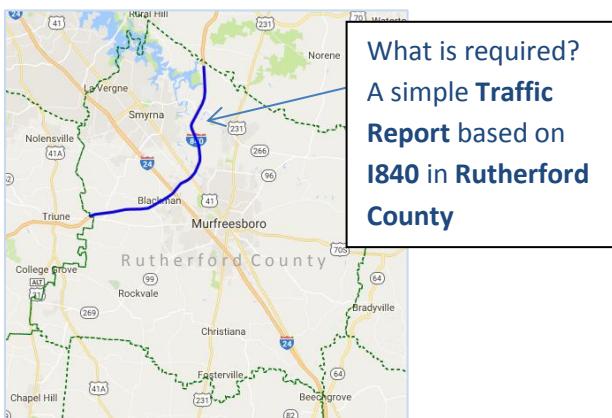


As in the previous E-TRIMS, reports are an easy and quick way to get essential information out of the application. In the Reports tab, users will access a different window for each subject. The report headings are:

- City Mileage
- Geometric Report
- Highway Log Report
- Inventory Update Form
- Jurisdiction and Admin System
- Jurisdiction and Functional Class
- Maintenance Reports
- Road Segment Reports
- Road System Ending Log Mile Report
- Road Feature Report
- Traffic Report

The screenshot shows the 'Reports' dialog box. At the top left is the title 'Reports'. On the right side are 'Close' and 'X' buttons. Below the title is a dropdown menu showing 'City Mileage' with a red box around it and an arrow pointing to the word 'Headings' on the right. Underneath is a section titled 'Route Types' with three checkboxes: 'Interstates' (checked), 'State Routes', and 'Functional Routes'. To the right of these checkboxes are 'Local Roads' and two input fields for 'From Prefix' and 'To Prefix'. Below this is a section titled 'Location' with four radio buttons: 'Statewide' (selected), 'Region' (with a dropdown menu 'Select a Region...'), 'District' (with a dropdown menu 'Select a District...'), and 'County' (with a dropdown menu 'Select a County...'). At the bottom of the dialog box are three buttons: 'Run', 'Clear', and 'Close'.

**Example 8. Traffic Reports:** An external agency urgently requires information including Traffic Information (ex. AADT) on Interstate 840 in Rutherford County.



1. Click Report Icon
2. Enter parameters (see figure)
  - a. Route Types

#### Location

- b. Statewide
- c. Region
- d. District
- e. County
3. Enter Special Case, County Sequence or Log Mile if necessary
4. Run

**Reports**

**Traffic Report**

**Route Types**

Interstates  Local Roads  
 State Routes From Prefix: \_\_\_\_\_ To Prefix: \_\_\_\_\_  
 Functional Routes

**Location**

Statewide  
 Region Select a Region...  
 District Select a District...  
 County RUTHERFORD

Route: I0840

Spcl. Cse: 0-NONE Cnty Seq. \_\_\_\_\_  
BLM \_\_\_\_\_ ELM \_\_\_\_\_

**Run** **Clear** **Close**

## Result

7/13/2017

Page 1 of 1

**Traffic Report**

Rutherford County (75) - Route: I0840, Special Case: 0-None

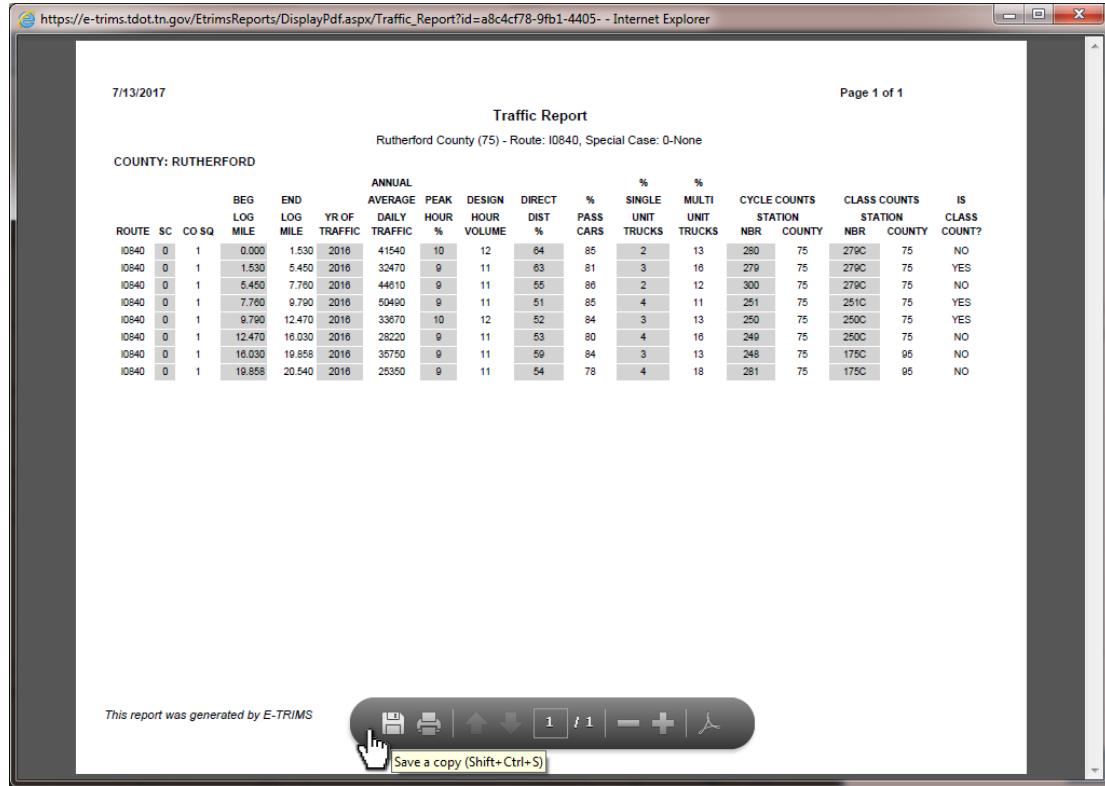
**COUNTY: RUTHERFORD**

ROUTE	SC	CO SQ	BEG LOG MILE	END LOG MILE	YR OF TRAFFIC	ANNUAL			DIRECT DIST %	% PASS CARS	% SINGLE UNIT TRUCKS	% MULTI UNIT TRUCKS	CYCLE COUNTS		CLASS COUNTS		IS CLASS COUNT?
						DAILY TRAFFIC	AVERAGE HOUR %	PEAK HOUR %					STATION NBR	STATION COUNTY	STATION NBR	STATION COUNTY	
I0840	0	1	0.000	1.530	2016	41540	10	12	64	85	2	13	280	75	279C	75	NO
I0840	0	1	1.530	5.450	2016	32470	9	11	63	81	3	16	279	75	279C	75	YES
I0840	0	1	5.450	7.760	2016	44610	9	11	55	86	2	12	300	75	279C	75	NO
I0840	0	1	7.760	9.790	2016	50490	9	11	51	85	4	11	251	75	251C	75	YES
I0840	0	1	9.790	12.470	2016	33870	10	12	52	84	3	13	250	75	250C	75	YES
I0840	0	1	12.470	16.030	2016	28220	9	11	53	80	4	16	249	75	250C	75	NO
I0840	0	1	16.030	19.858	2016	35750	9	11	59	84	3	13	248	75	175C	95	NO
I0840	0	1	19.858	20.540	2016	25350	9	11	54	78	4	18	281	75	175C	95	NO

This report was generated by E-TRIMS

## Saving/Printing a Report

Since a report is a PDF file, saving or printing it would be the same as any PDF. Hover over the bottom center of the report window to see icons (See Figure below).



**Hint 12:** In a Windows environment, use shortcuts to save and print PDF files.

**Shift+Ctrl+S** = Save a Copy

**Ctrl+P** = Print a copy

## Reference

TDOT, Hexagon E-TRIMS Task Order 2 Requirements and Design Document (March 2017)



# E-TRIMS Version 7.0

Long Range Planning Division  
James K. Polk Building  
505 Deaderick Street, Suite 1000  
Nashville, TN 37243

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