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LNOS MAP EDITOR USER'S GUIDE

Descartes® Route Planner™

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Descartes® Route Planner™

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Welcome to LNOS Map Editor

Features

LNOS Map Editor is a web-based tool for editing maps, such as adding road closures or changing road speeds. It is designed to work with LNOS *Pathing Service*, which provides a set of web services to support the Descartes® Route Planner™ application in executing routing, scheduling and optimization functions.

Known Issues

Browser Back/Next Buttons Not Working

In the **Edit** page, using the browser's **Back** or **Next** buttons will not navigate to the previous or next page in the browse history.

Only Selected Map Edit Displays

When displaying a map edit in detail, only the selected map edit is displayed on the map. Other map edits nearby and within the map viewing area are not displayed.

'Remember Me' Option Not Working

Currently, users will need to provide credentials regardless of whether or not the **Remember Me** checkbox is selected.

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Document Conventions

This document uses the following conventions:

- Names of windows, frames, dialogs, menus, list boxes, and lists begin with uppercase and are bolded. (Tools menu, Save button)
- Key combinations that you press appear in mixed case. If the keys are joined by a plus sign (+), press and hold the first key simultaneously with the remaining keys (for example, CTRL+ALT+DEL).
- Text that you type appears in `Courier New` font. (Enter `USERID` in the login field.)
- Cross-references to other documents, or to sections within the current document, appear in underlined italics. (See *Saving a File* for details.)
- *Italics* are used for emphasis throughout this document.

⮑ **Note**— Information important to a particular task or function is introduced with the note format and icon.

ⓘ **Tip**— Information that may make completing a task easier, but isn't essential to the task, is introduced with the tip format and icon.

⚠ **Warning— This warning format indicates information that you need to pay particular attention to. Ignoring information presented as a warning could lead to damage and unexpected results. Disregarding information presented as a warning may result in damage to your software or data.**

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Using LNOS Map Editor

Open http://<server>/mapeditor in one of the supported browsers, where <server> is the name of the server where LNOS Map Editor is running. A login page will be displayed. Proceed to login with your Descartes Route Planner credentials.

In addition to map navigation, Map display also supports searching location by Postal Code or City, State/Province and locating Latitude/Longitude on the map.

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Map Display
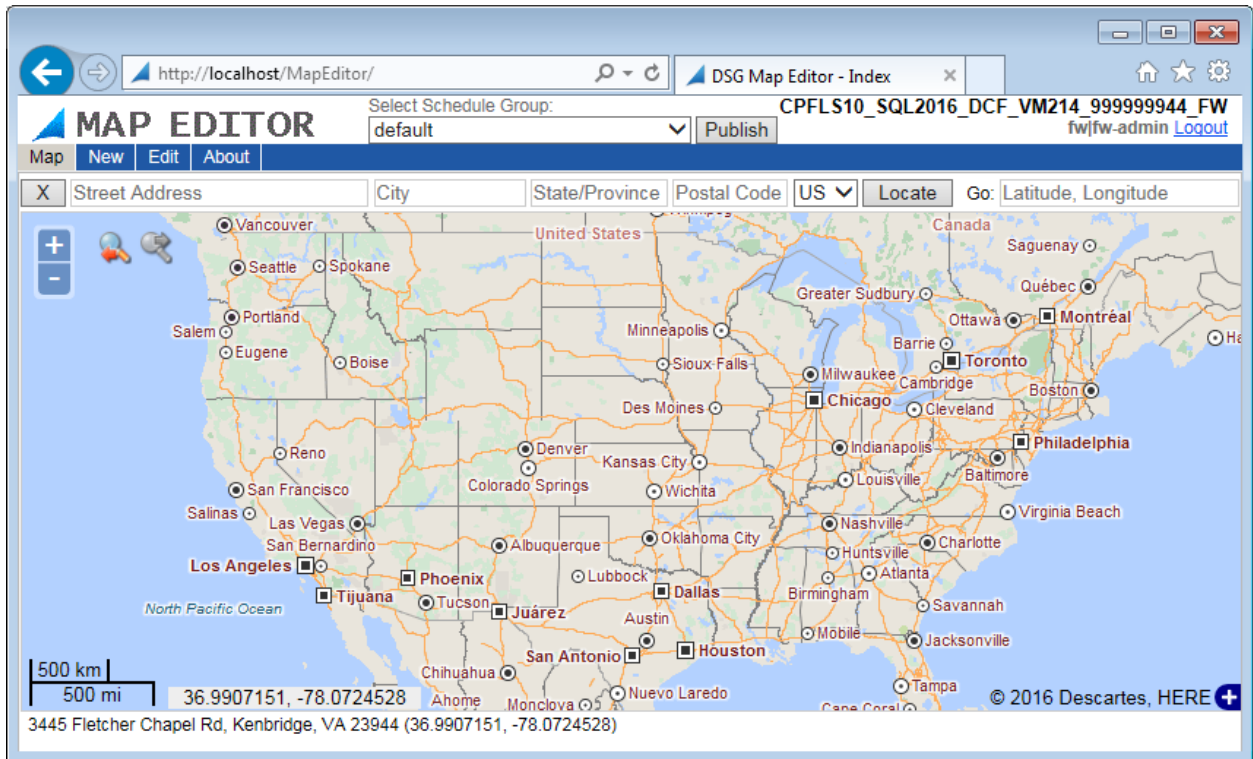
Map data © 1987-2016 HERE

Map Navigation

Zoom-In/Zoom-Out:

- Click the "+" icon to zoom in, "-" to zoom out. Click and hold the mouse button down will continue to zoom in or out until the button is released.
- Scroll mouse wheel up or down to zoom in or out, respectively.

Selective Zoom: Hold down the Shift key, click and drag to select a rectangle on the map to zoom in.

Pan:

- Click on the map; hold the mouse button and then drag.
- Click and drag the rectangle shown in the Overview Map on the lower right corner to pan over larger area.

Center and Zoom-in: Double click a position on the map, the map will be re-centered to that position and zoom in one level.


Navigation History:

Changes to map display (zooming in, out, and panning) are recorded in the navigation history. Click the icon with red or green to traverse history backward or forward, respectively.
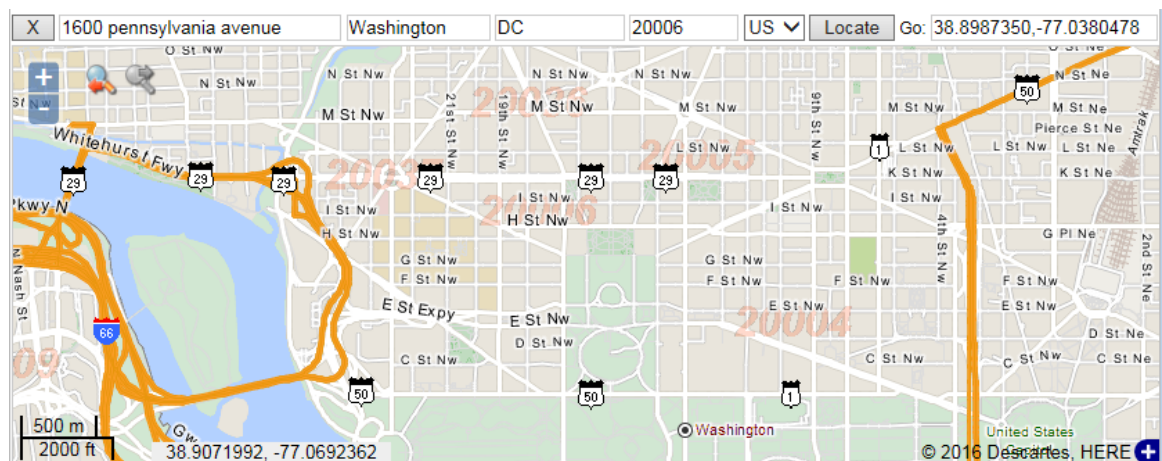
Geocoding and Reverse Geocoding

The Geocoding function is performed by Descartes Route Planner, thereby using the same preference for geocoding provider and the licensed map coverage. Request for geocoding will be submitted to the same Descartes Route Planner instance that was used to authenticate the user.

To geocode a location, fill in Street Address, City, State/Province, Postal Code and Country in their respective geocoding fields and press **Locate**. Press X to clear the fields.
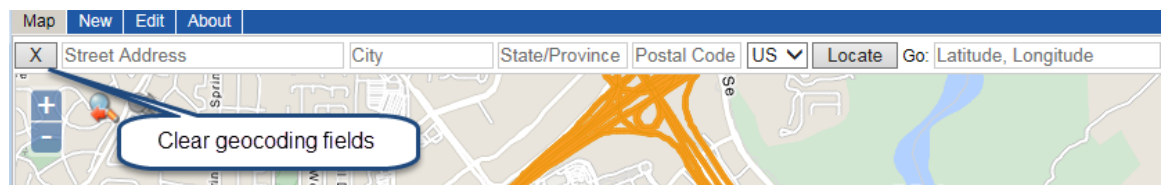
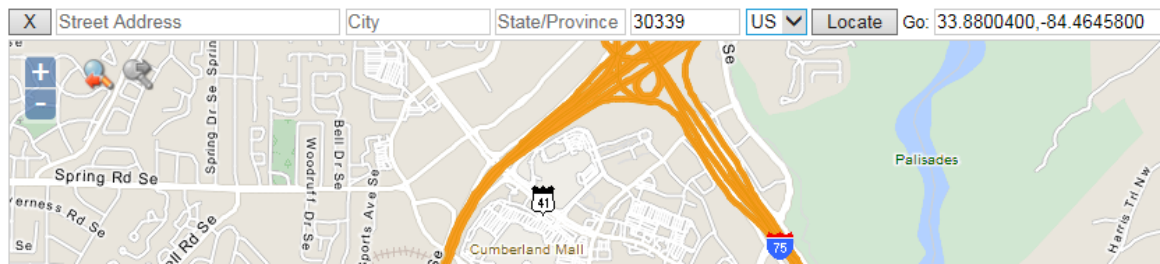*Map data © 1987-2016 HERE*

Geocode by Full Address: Type the full address in their respective fields and press **Locate**. The map will be re-centered on the latitude and longitude of the geocoded location, as show in the Go field.

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**Geocode by Postal Code Only:** Type a postal code or zip code in the Postal Code field, select the country of the postal code and press **Locate**. (the latitude and longitude shown in the Go field is the centroid of the area covered by the postal code)
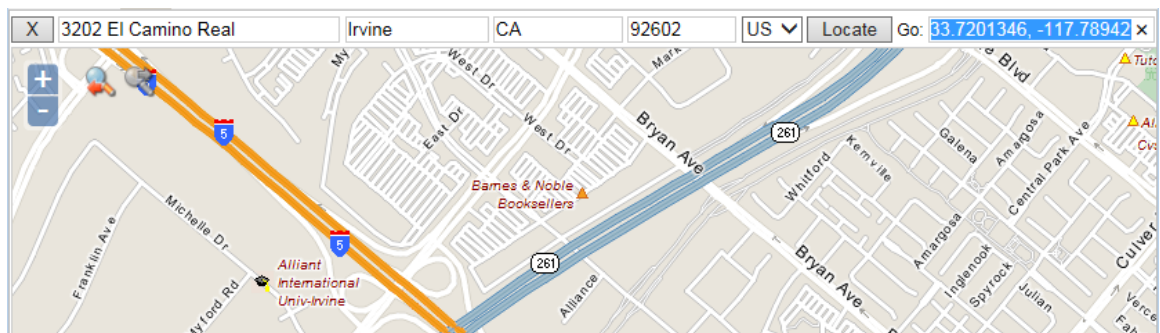

Map data © 1987-2016 HERE

Geocode by City State/Province Only: Type City and State or Province in their respective fields, select the country of the city and press **Locate** (the latitude and longitude shown in the Go field is the centroid of the area covered by the city)
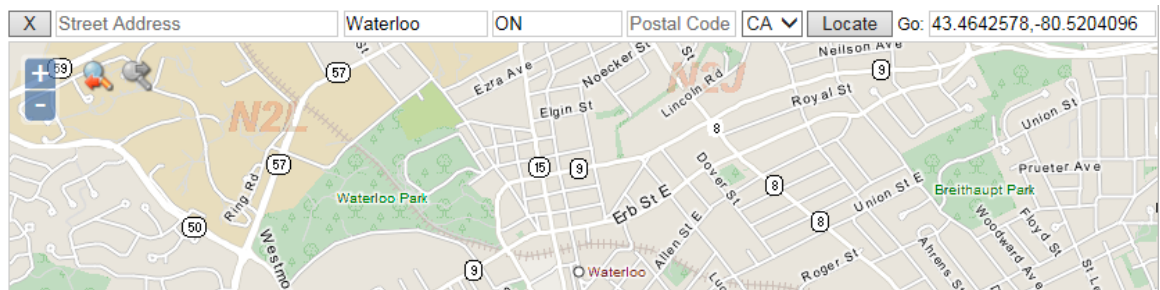
Map data © 1987-2016 HERE

Reverse Geocode by Longitude/Latitude: Type latitude, longitude in the Go field and press **Enter**. The map will center on the latitude, longitude and display Street Address, City, State, Zip Code in the Locate fields.

> **Note**—Reverse geocoding is performed by AltaMap's GeoServerWS.

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Creating Map Edits

Select a Schedule Group from the **Select Schedule Group** drop-down menu, which will own the new map edit.

Click **New** on the menu and use one of the map navigation features to display the area where new map edits will be created.

The unit for the Change Speed field depends on the login user's preference configured in Descartes Route Planner. MPH (miles per hour) will be displayed if Measurement System is US (British Imperial System). If it is Metric, then KPH (Kilometers per hour) will be displayed.

Map data © 1987-2016 HERE

The Status of a map edit determines how the map edit will be used, either by the user interface or the pathing engine.

- **Production:** the only status that will be considered by the pathing engine if its effective date also spans the start time of a stop to be routed
- **Staging:** the map edit will be promoted to production at the next recycle of the Map Editor application pool
- **Test/Development:** the map edit will not be used by the pathing engine

- **Template:** a template to store common settings, such as map display area, Road Change, Effective Date, and Comments, from which to create new map edits.

To create a set of map edits in the same area having the same setting, change Status to Template to create a template first by doing the following:

1   Type in a descriptive name for the template. Choose a prefix so that all templates will be listed together.

2   Select Template from the **Status** dropdown list.

3   Set the Road Change and Effective Date and fill in the Comments field. Comments are optional but recommended.

4   Save the template.

Alternatively, new map edits can be created directly without deriving them from a common template.

Configure Vehicle Criteria

Vehicle Criteria can be configured to further restrict when the map edit should be considered by the pathing engine, in addition to satisfying the Effective Date.

Selecting **Apply to Commercial Vehicles only** will restrict the map edit to commercial vehicles only, i.e., Straight Truck and Articulated Truck, and also display additional configurable criteria for further restrictions.

Selecting **Apply to Haz Mat Vehicles** only will restrict the map edit to commercial vehicles having Hazardous Material onboard en route the road segments marked by the edit.

Vehicle's dimensions and gross weight can also be used as criteria to apply further restrictions. The pathing engine will not consider the map edit unless a commercial vehicle's gross weight, height, width, or length exceeds its configured limit.

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In the following example, the map edit will only apply to commercial vehicles when its gross weight exceeds 30,000 Kilograms, or its width exceeds 260 Centimeters.
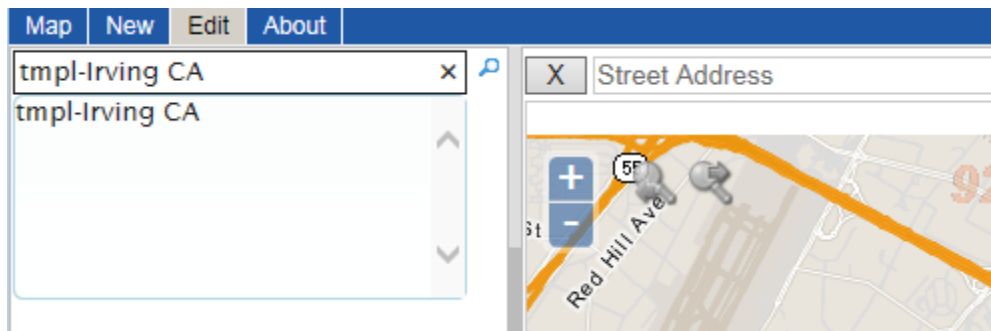

Modifying Map Edits

Click **Edit** on from the menu to modify existing edits or create new ones from a template. To create a new map edit from the template:

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Type tmpl-Irving in the search box and click tmpl-Irving CA from the list of suggestions. The function of each icon on the tool bar is annotated in the following image.
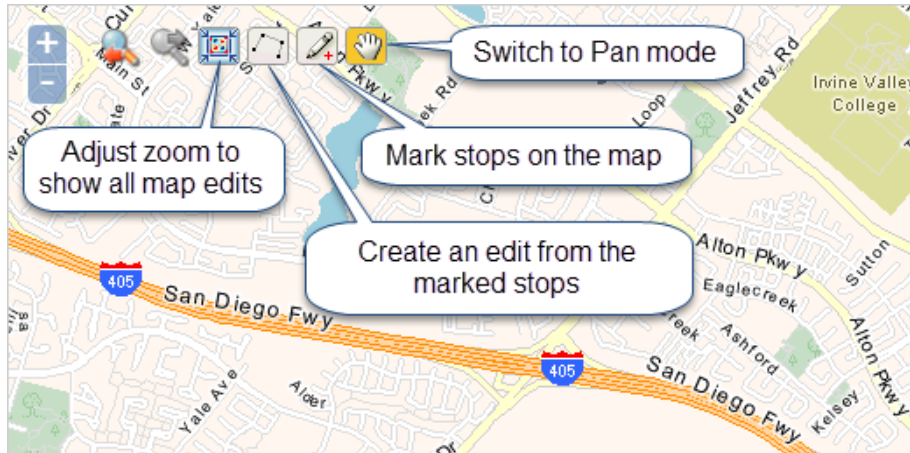
Map data © 1987-2016 HERE

⮩ **Note—** It is important to click on the correct side of a road where the map edit is to be applied. Closing a two-way road will require creating two edits, one for each direction. Both can be included in the same map edit if they share the same settings.

⮩ **Note—** The address of the point hovered over by the mouse will be displayed in the status bar at the bottom. Confirm that address is correct before marking the point as a stop.


Map data © 1987-2016 HERE

Uses following sequence to create a map edit:

1   Click to start marking the stops on the map from which to create an edit that complies with traffic rules. Press ESC to undo the last mark.

⮩ **Note—** To create an edit that covers a long stretch of read, please refer to the tips, **Creating map edits for long stretch of road**, described later in this section.

2   Click to create an edit from the first stop to the last stop, and any additional stops in between. Hit CTRL+Z to undo the newly created edit.

3 With the cursor still in crosshair shape, mark new stops on the map and repeat step #2 to create additional edits if necessary.

4 Choose a Status for the new map edit.

5 Choose Road Change, either Prevent Use or Change Speed.

6 Set effect Date, either Always or Select Date Range and set Start and End date.

7 Update the Comments field.

8 Click **Save As** and enter a descriptive name for this map edit when prompted.

⮑ **Note**— Click **Save** only when modifying the template itself and not creating new map edit from it.

Delete Map Edits

Click the **Delete** button to delete the map edit.
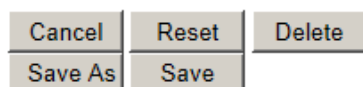
Publish Map Edits from the UI

In order for LNOS Pathing Service (LPS) to download the latest Production map edits, the edits must be published first. Map edits are grouped and published by Schedule Group. For each selected Schedule Group, Map Editor will first promote all Staging edits to Production and then notify LPS that an update is available for download.
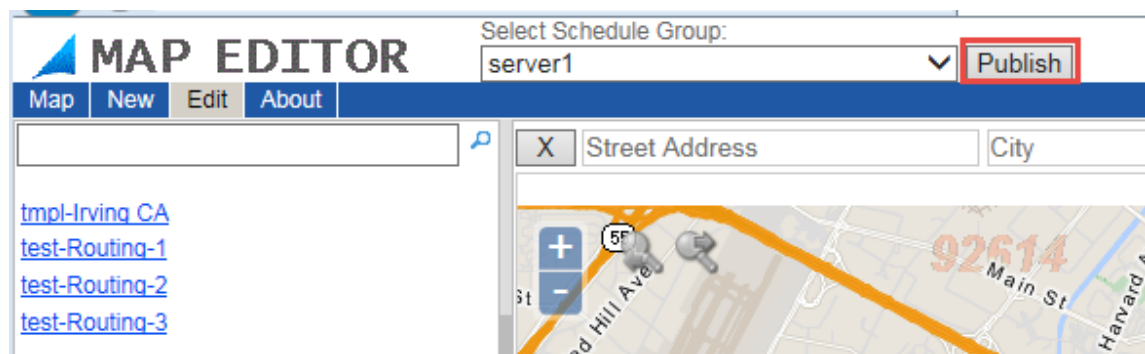
Map data © 1987-2016 HERE

To publish, first select the Schedule Group you want to publish and click **Publish**. The following confirmation dialog will ask you to confirm.

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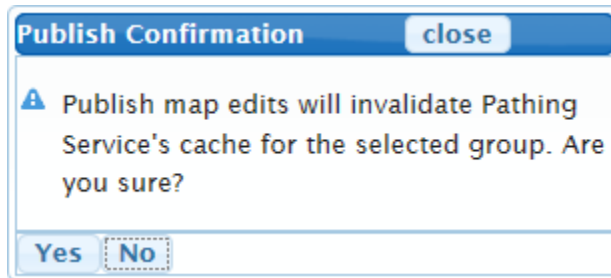
➲ **Note—** Since any change to the Production map edits will invalidate the entire cache that LPS has built up for the selected group. Pathing performance will be degraded while LPS is rebuilding the cache. The time to publish map edits should be planned ahead.

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Publish Map Edits through a REST API

A REST API has been provided to support publishing map edits on demand or at a scheduled time through automation. For security reason, the Publish API is only accessible from the server where the Map Editor is installed.

API Title	Publish
URL	**http://localhost/mapeditor/publish**
Method	**POST**
Form Data	CompanyName=[string] LoginName=[string] Password=[string] RoutePlannerURL=[URL-encoded string] OrgName=[string] GroupName=[string] **Example** CompanyName=fw LoginName=fw-admin Password=cs RoutePlannerURL=http://fleetwisevm114/lnos%20fw%20ui OrgName=SVRATDEVSQL1_SQL2008_DCF_VM112_999999944_FW GroupName=Default
Success Response	Success
Error Response	Failed or error message

An example of using Postman REST Client to execute Publish API is show below.

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A **Download** API has been added to facilitate automation and troubleshoot when Publish API failed.

API Title	Download
URL	**http://localhost/mapeditor/download**
Method	**GET | POST**
Success Response	List of Map Edits available for download
Error Response	Error message

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An example of using Postman REST Client to execute Download API is show below.
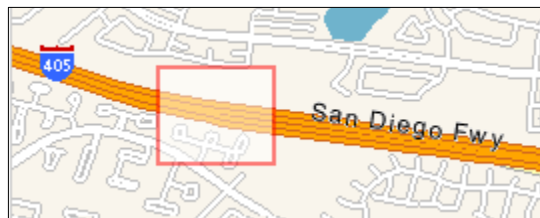
DESCARTES™
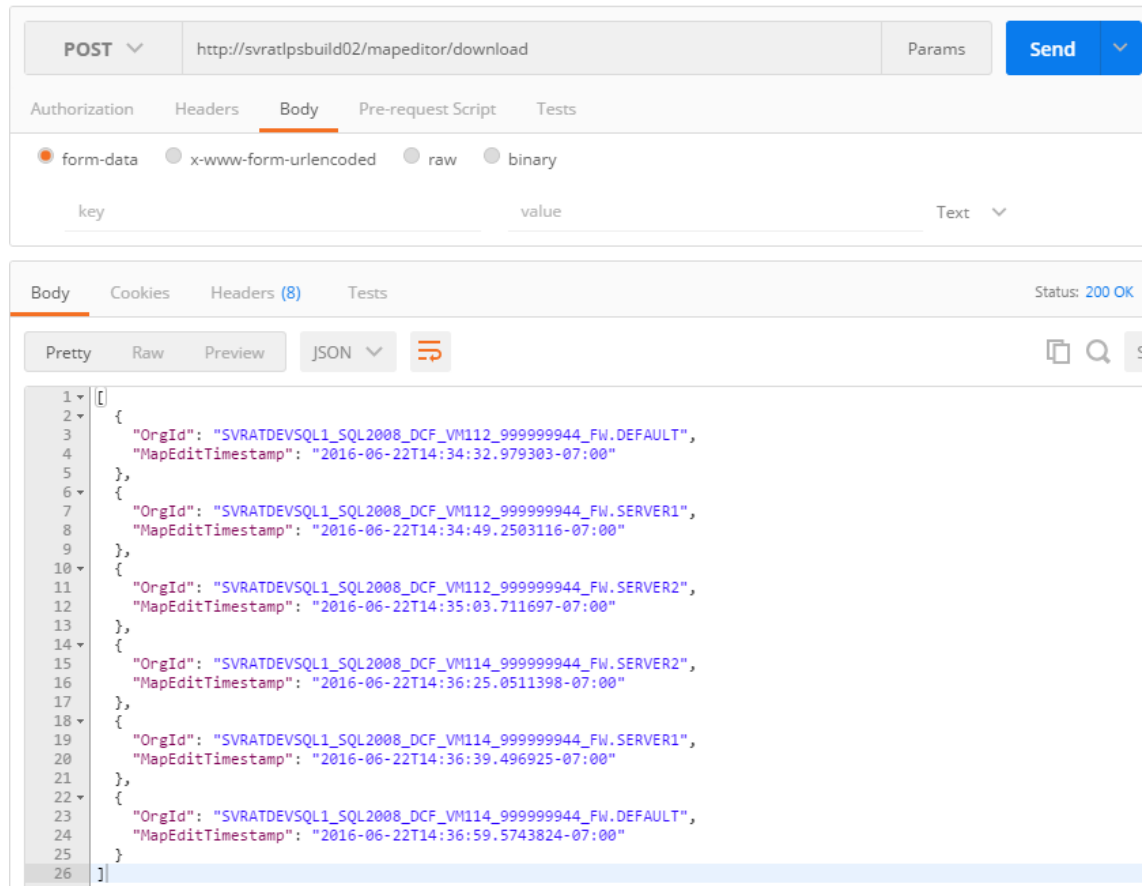
Creating Map Edits for a Long Stretch of Road

Using the following sequence is recommended when creating a map edit that applies to a long stretch of road, such as the one shown below.
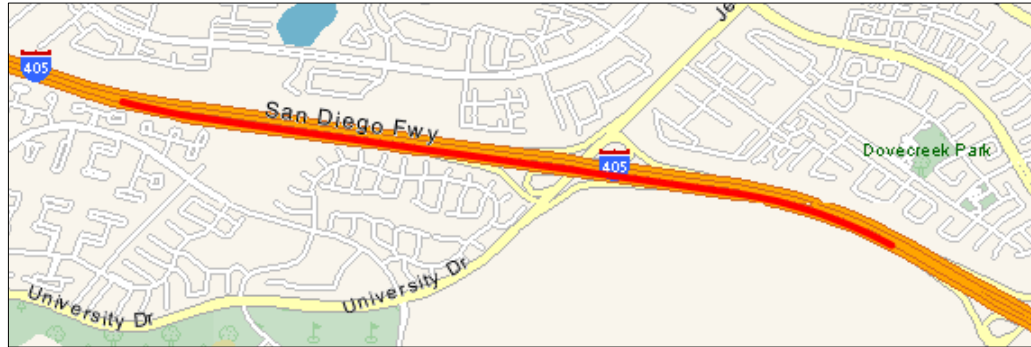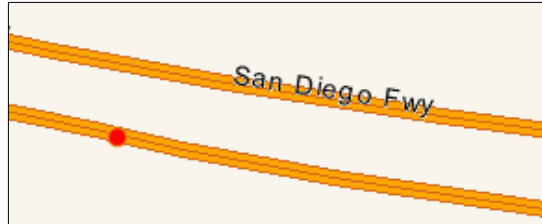

Map data © 1987-2016 HERE
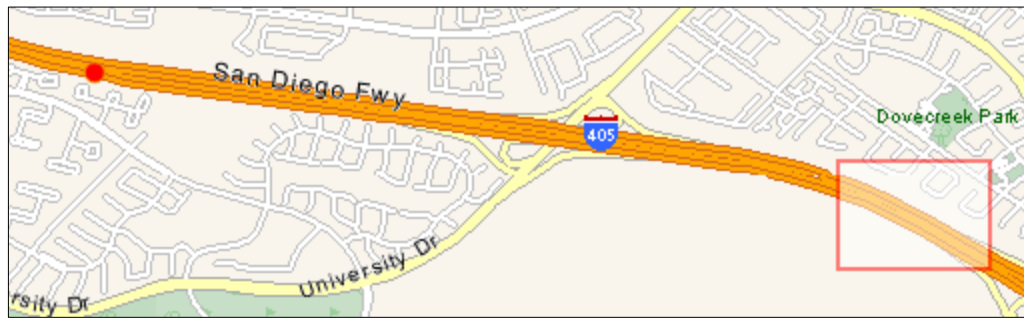
1 Use Selective Zoom to the starting area.

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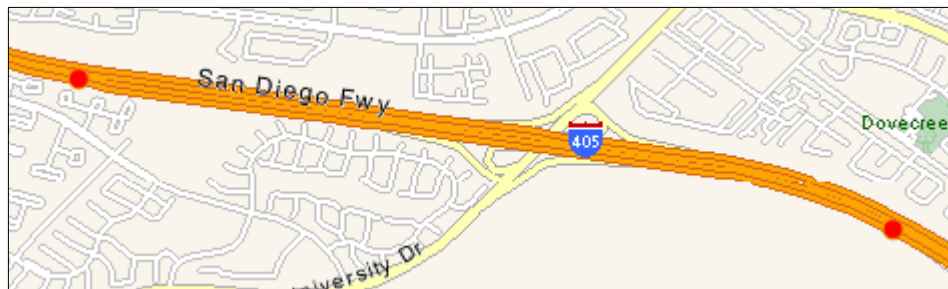**2**   Mark the first stop.

Map data © 1987-2016 HERE

3   Click the Navigate Back icon in red

Map data © 1987-2016 HERE

4   Use Select Zoom to the ending area, mark the last stop and click the **Navigate Back** icon again.

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5   Click to create the edit.