

Mapillary for ArcGIS Tutorial

October 2015

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Overview

Mapillary is a fast and easy street imagery solution. With Mapillary, anyone can collect street level photos with smartphone apps and off-the-shelf equipment. Photos are available minutes after uploading and are connected to construct a 3D view of the landscape.

Mapillary for ArcGIS connects your GIS data with street level photos. ArcGIS Online organization members can navigate streets through photos using Mapillary's web-based viewer. By loading in your ArcGIS feature layers or basemaps, you can use Mapillary's street level photos to add, edit and update data. Edits are synced right back to ArcGIS Online.

Technical and Business Requirements

To use Mapillary for ArcGIS on the web, you need:

Operating System:

- Mac OS X 10.9 Mavericks (comes bundled with Safari 7.1)
- Windows 8.1 (comes bundled with Internet Explorer 11)
- Windows 7 or Windows 8 **with IE11 manually installed**

Browser:

- Chrome 43.0+
- Firefox 38+
- Safari 7.1+
- **Safari 6.1 with WebGL manually enabled**
- Internet Explorer 11+
- Edge

To connect to ArcGIS, you will need to be an admin user in an ArcGIS Online organization account.

Limitations:

- Mapillary for ArcGIS only supports point layers today. If you are interested in support for line or polygon layers, please contact Mapillary at sales@mapillary.com to provide feedback for future improvements.
- Mapillary for ArcGIS is only supported on the web today. You can still use Mapillary's mobile apps for capturing photos.

Getting Started with Mapillary for ArcGIS

Before you use Mapillary for ArcGIS, determine which images you will be using for your project and how you will obtain them. Since Mapillary uses images uploaded from any source, you can use street level photos which:

- you obtain directly by deploying dedicated street inspection fleets and/or other resources (e.g., garbage trucks, contracted surveying teams) using the Mapillary app on smartphones or other devices
- are from other sources, and which you have a right or license to reuse
- are contributed by citizens as part of a community engagement effort
- may already exist in Mapillary's crowdsourced database on Mapillary.com

For more information on easy capture and upload using Mapillary tools, please refer to the Mapillary User Guide here: <https://github.com/mapillary/UserGuide/wiki> or the Mapillary Help Center here: <http://www.mapillary.com/map/help>.

Once you have determined which street level photos to use configure your Mapillary for ArcGIS app:

- Login to Mapillary.com.
- Go to your *Settings*.
- On the *Connections* tab, click the “Connect” button to authenticate with Esri ArcGIS using secure OAuth protocol.

The screenshot shows the Mapillary website interface. At the top, there is a navigation bar with links for "How It Works", "Community", "Business", "Blog", and "Help". On the far right of the top bar, there are "Projects", "Superpowers", and a dropdown for "Janine". Below the top bar, there is a secondary navigation bar with links for "SETTINGS", "Profile", "Notifications", "Organizations", "Projects", "Connections", "Integrations", and "Invite". The "Connections" link is highlighted. To the right of this secondary bar is a sidebar with options like "My Profile", "Manual Uploads", "Settings", and "Sign Out". The main content area has a heading "Your connections" and a message stating "Currently there are no connections with your Mapillary account". Below this, there is a section titled "Connect your account" with a "ArcGIS" button. Underneath the "ArcGIS" button, there is an "Esri ArcGIS" logo and a "Connect" button. The "esri" logo is also present below the "ArcGIS" button.

- On the *Organizations* tab, click on your organization name (if you do not see an *Organizations* tab, please contact sales@mapillary.com).

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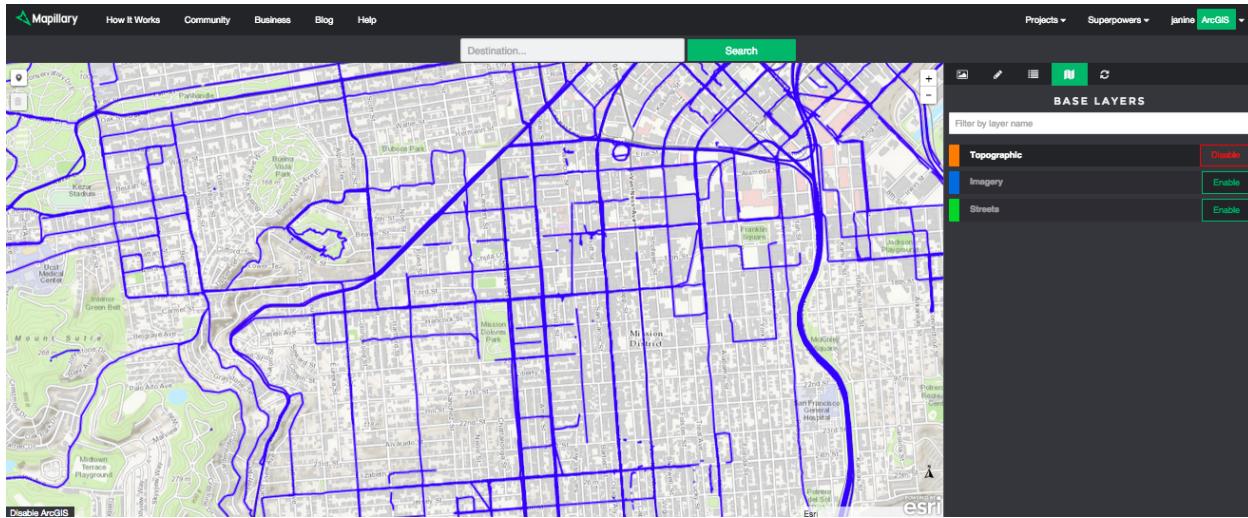
- Click the “Buy” button on your organization page and purchase the Mapillary for ArcGIS application.

The screenshot shows the 'Organizations' section of the Mapillary for ArcGIS application settings. At the top, there are navigation links: SETTINGS, Profile, Notifications, Organizations, Projects, Connections, Integrations, and Invite. Below this, the path 'Organizations > ESRI' is shown. The main content area has a header 'Mapillary'. On the left, there's a 'Add new member' form with a 'New user's name' input field and an 'Add' button. Below it is an 'Actions' section with a 'Remove organization' button. On the right, there's a 'Members' list showing five users: gyllen (ADMIN), janine (ADMIN), peterneubauer (ADMIN), knikel (ADMIN), and dcarroll (ADMIN). Below the members is an 'Invite by e-mail' section with a text input field for email addresses and a 'Send' button. At the bottom, there's an 'Applications' section for 'MAPILLARY FOR ARCGIS' with a 'Buy' button. A note states: 'You have access to the ArcGIS Online organization Mapillary (d3tLM21Ebt7bEjgD). Mapillary on ArcGIS Online will be connected to ESRI on Mapillary if you purchase the plugin.'

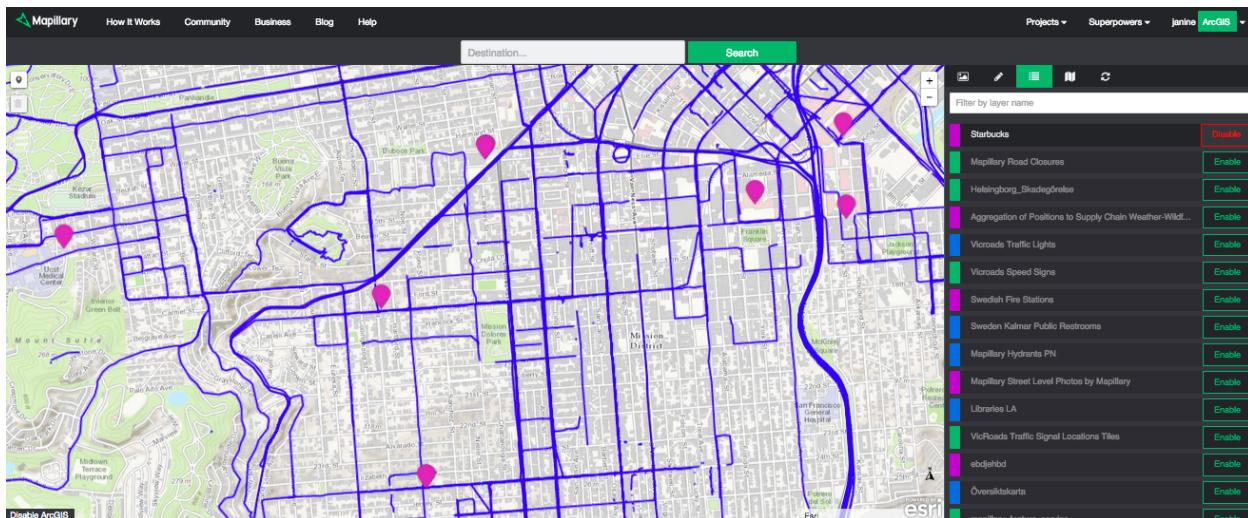
- Invite other members of your ArcGIS organization using the “Invite by email” box.

Editing a Feature Layer

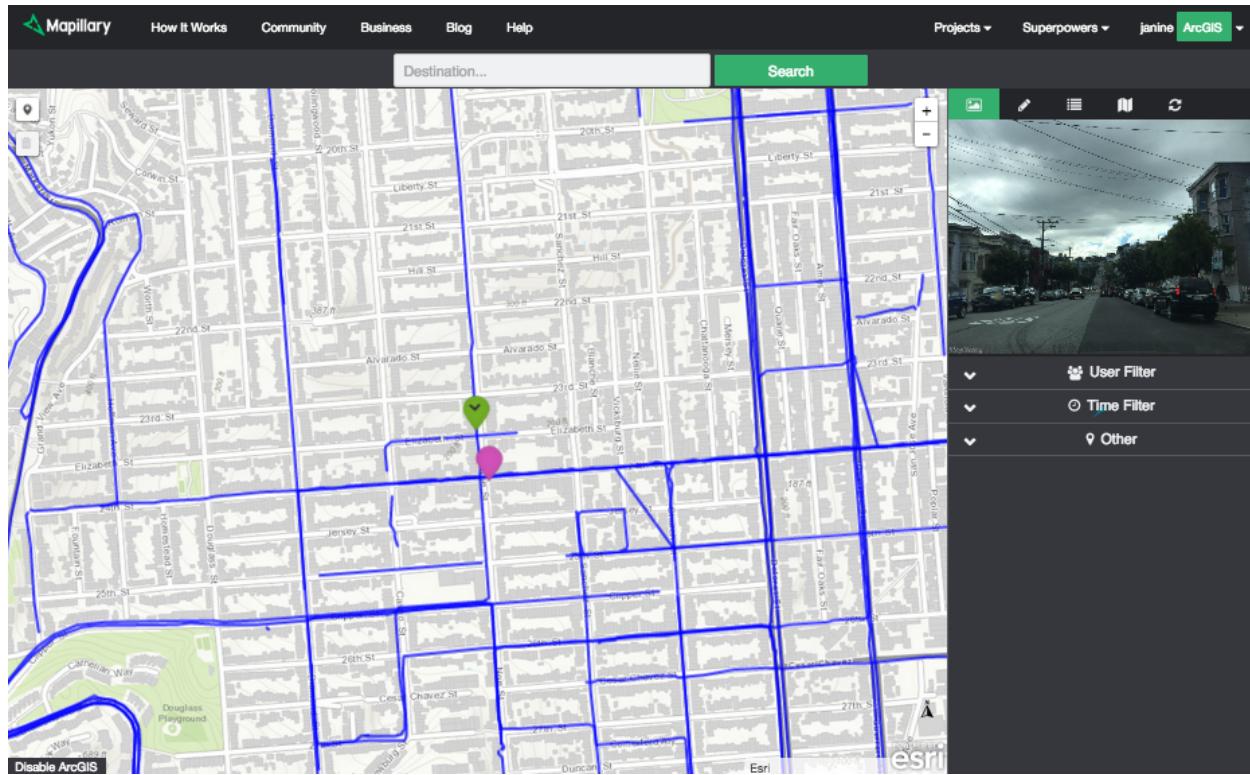
- Make sure the ArcGIS map is enabled. The ArcGIS map should be enabled by default, but if there is a green “Enable ArcGIS” button on the lower left corner of the map, click the button and you will see the ArcGIS map.
- Select your preferred basemap.



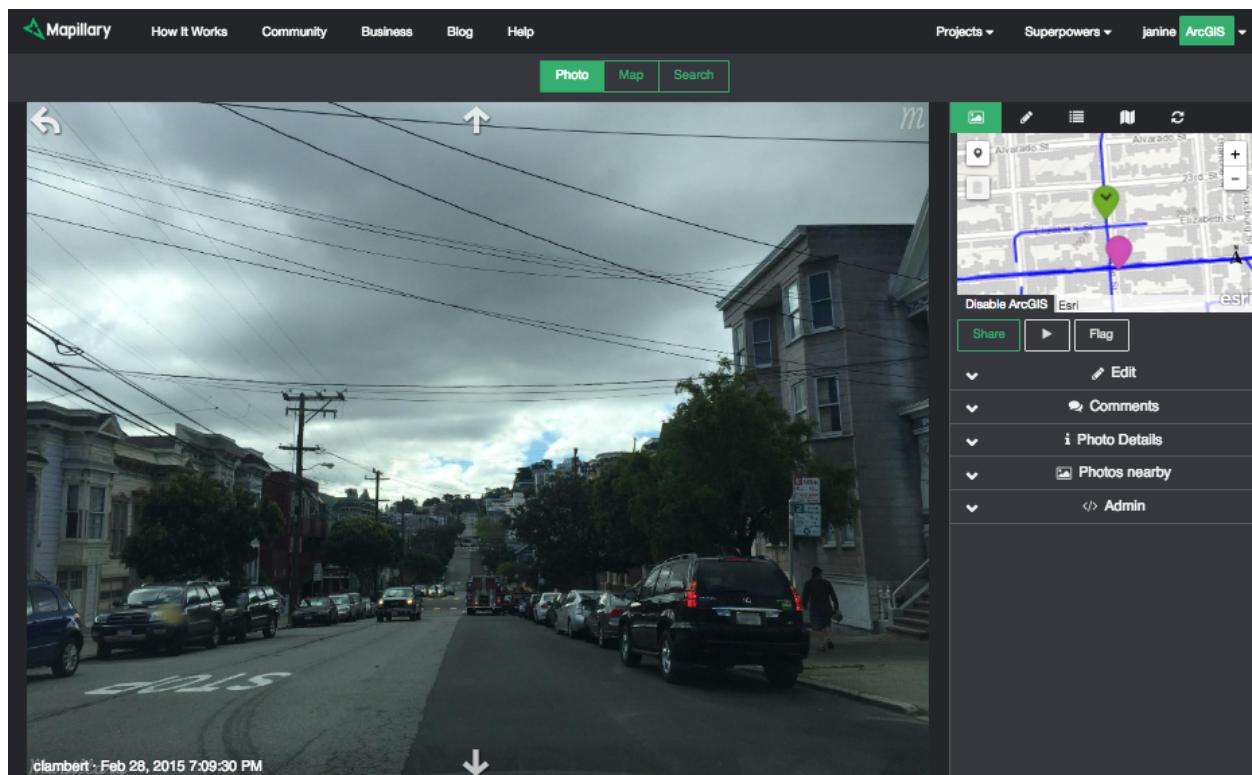
- Enable the feature layer which you would like to edit.



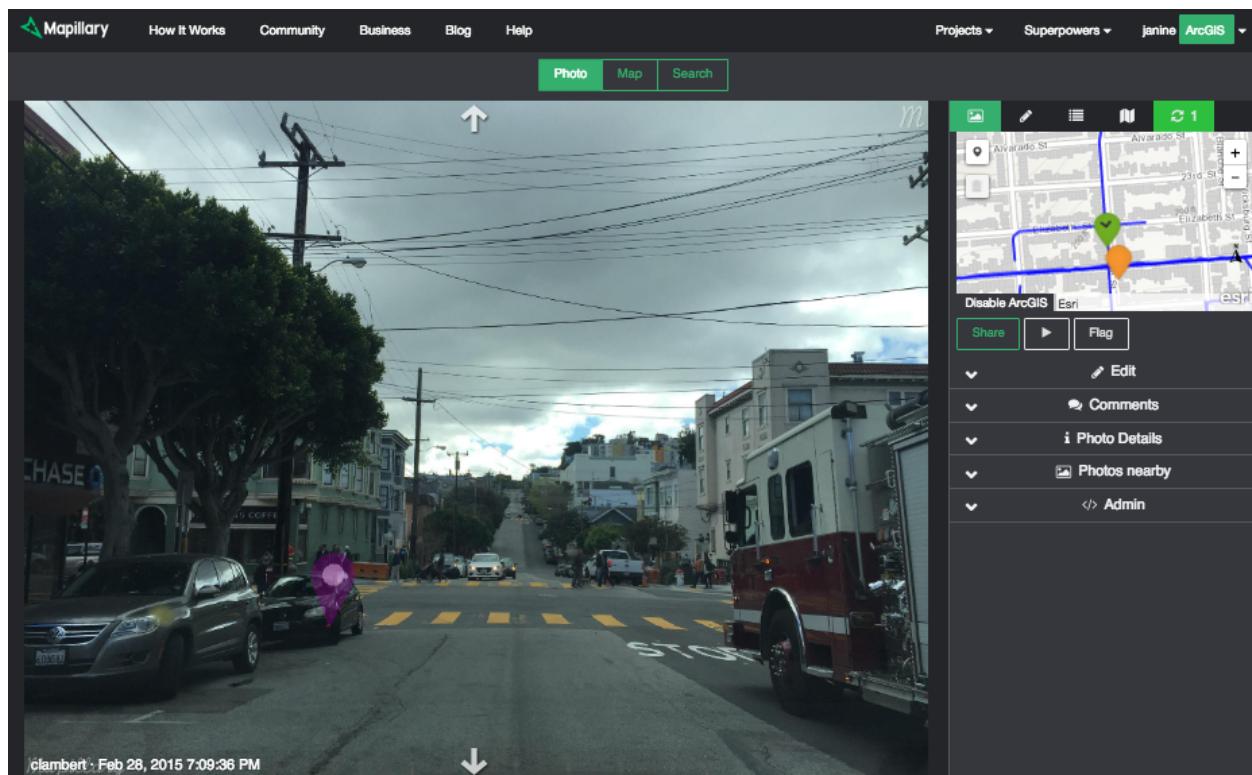
- Select the *Photo* tab to see Mapillary street level photos corresponding to the map.



- Click on the photo in *Photo* tab to navigate through the 3D landscape (you may click the arrows in the photo, or use the arrow keys on your keyboard)

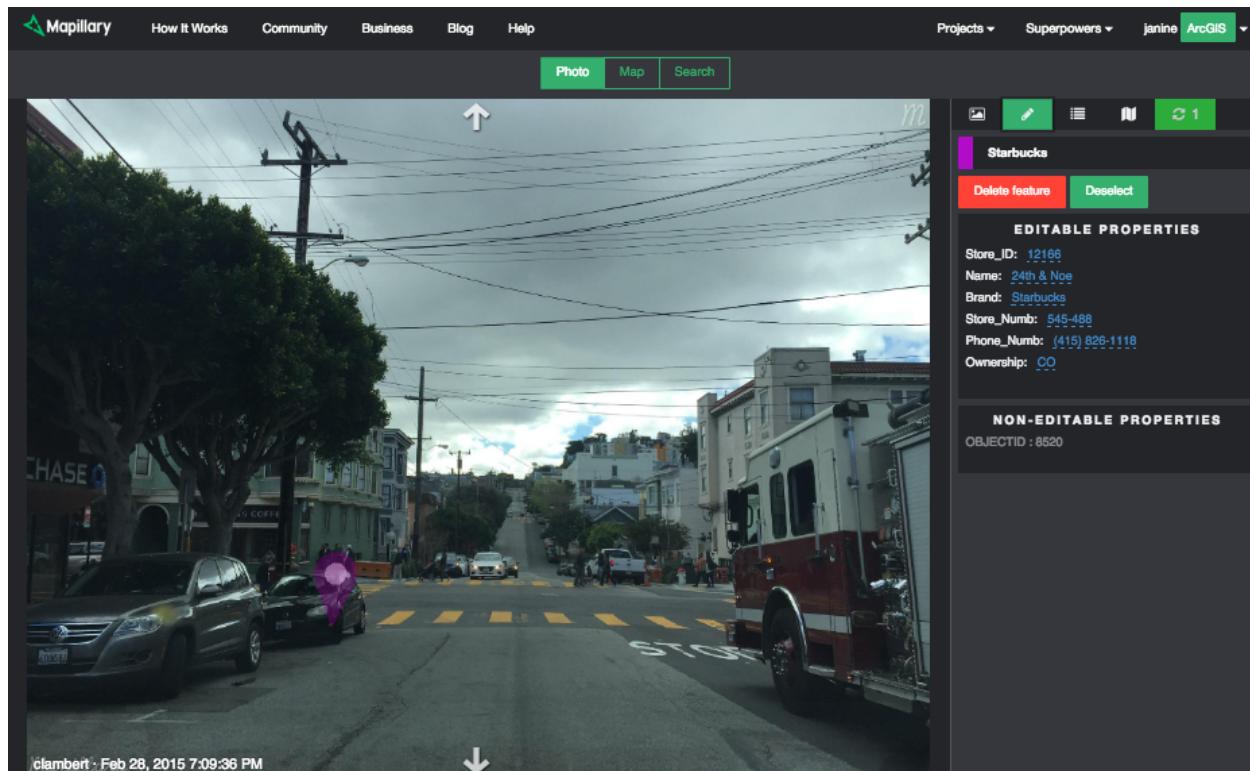


- To select a marker, click on the marker on the map (the marker will change color when selected).

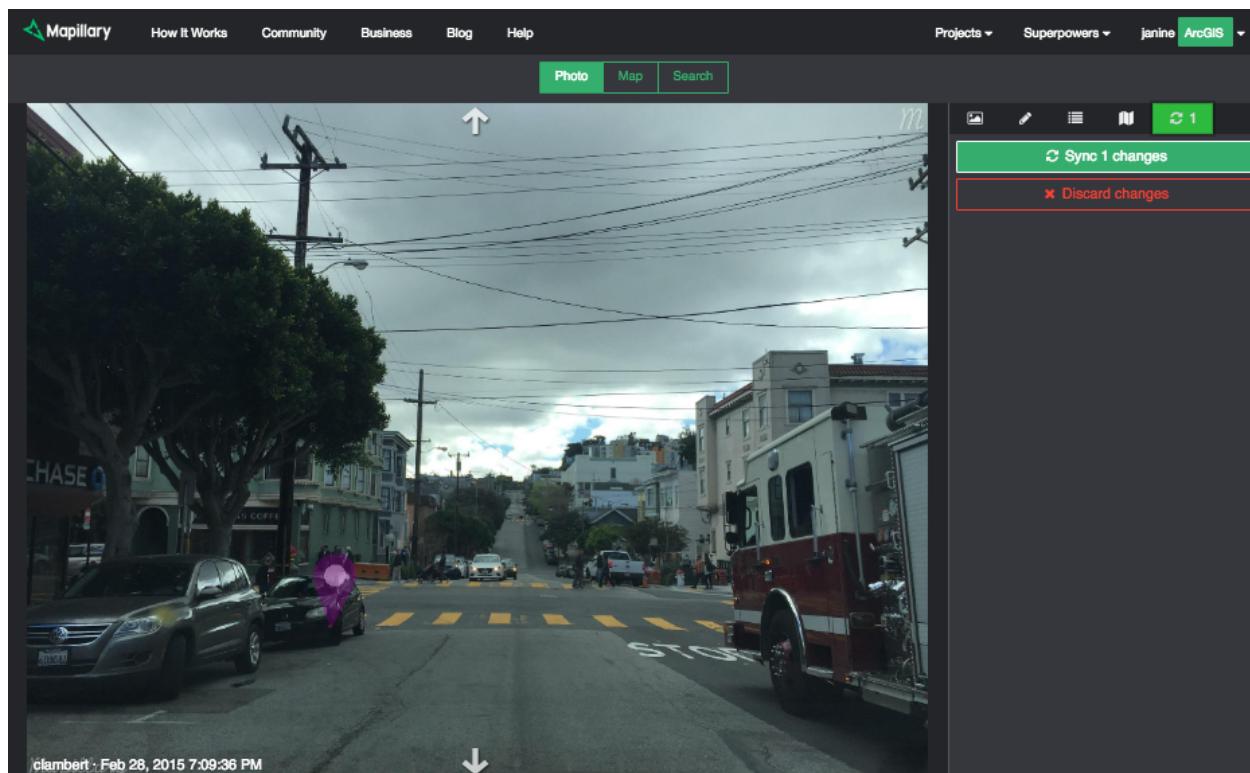


- If the marker is not in the right location, move the selected marker by clicking anywhere on the map or within the photo.

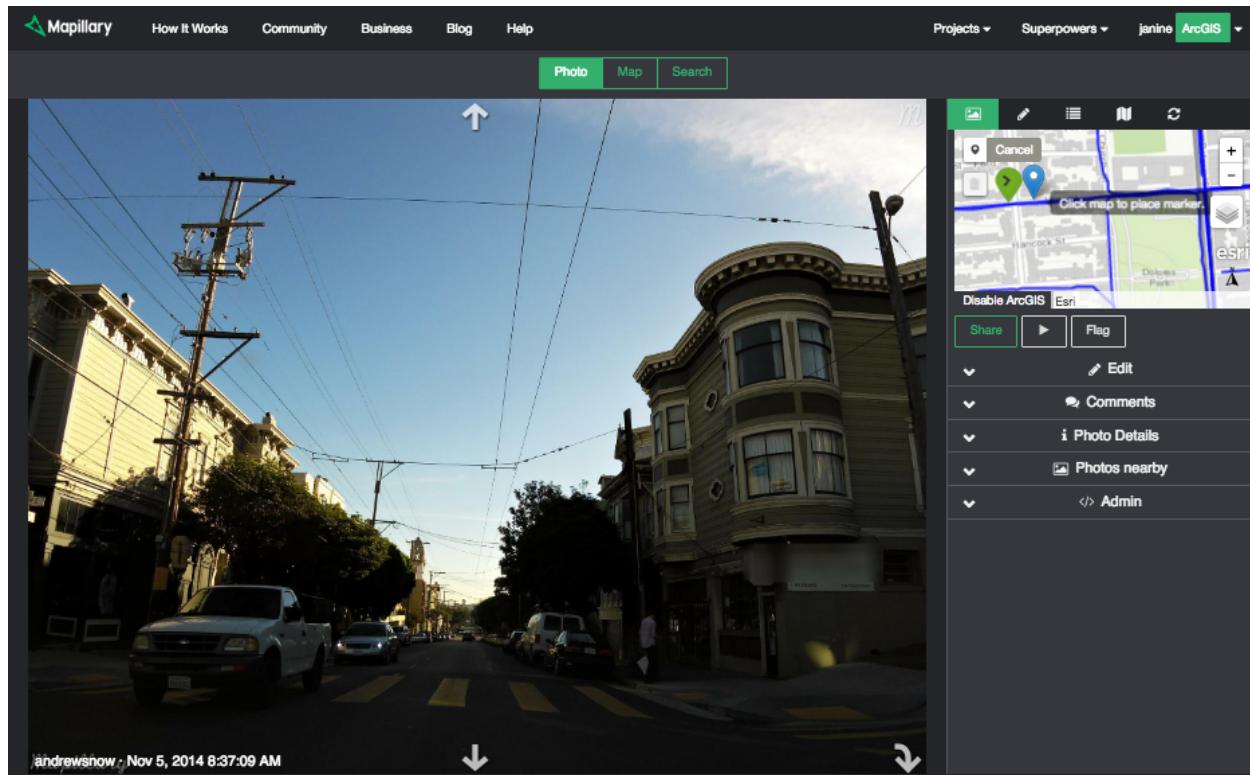
- Edit and update information about the selected marker in the *Edit* tab.



- All changes and edits can be synced back to ArcGIS Online by clicking on the sync button.



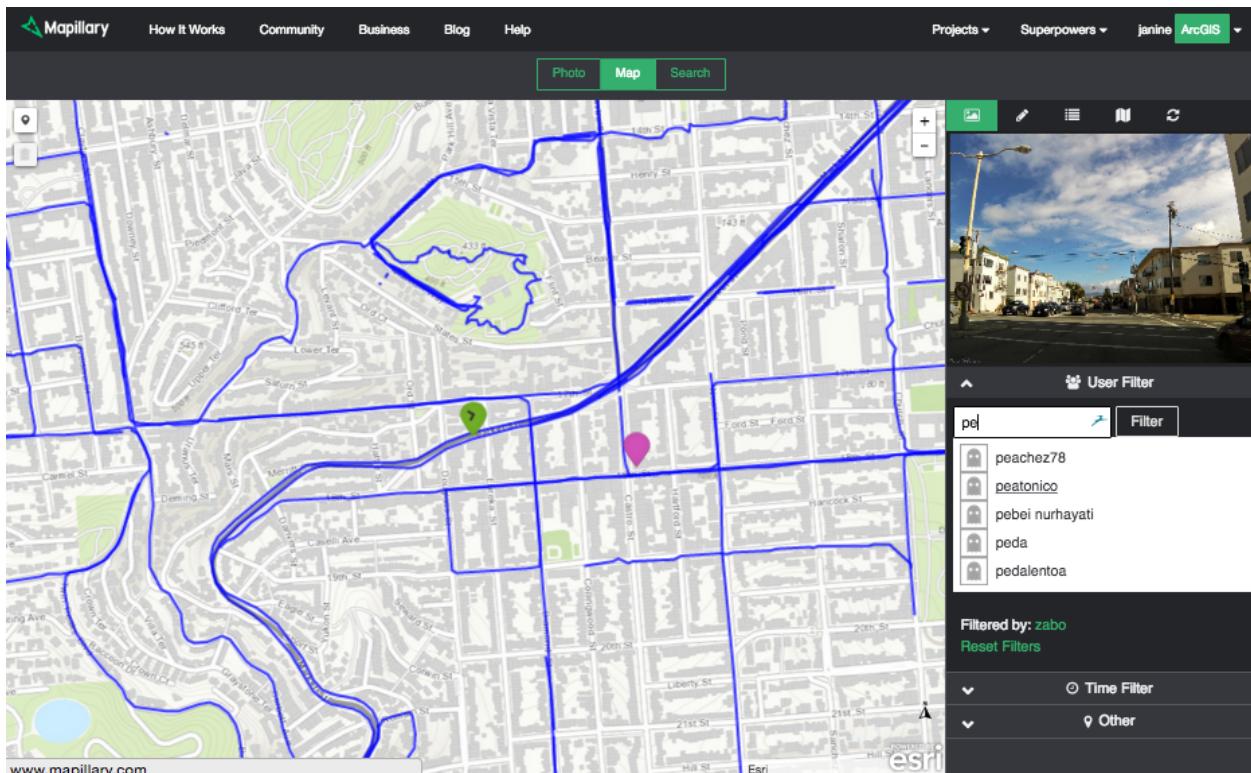
- To add a new marker, click on the marker icon in the map and place it at the desired location. You can save the marker and continue to move it or edit its information.



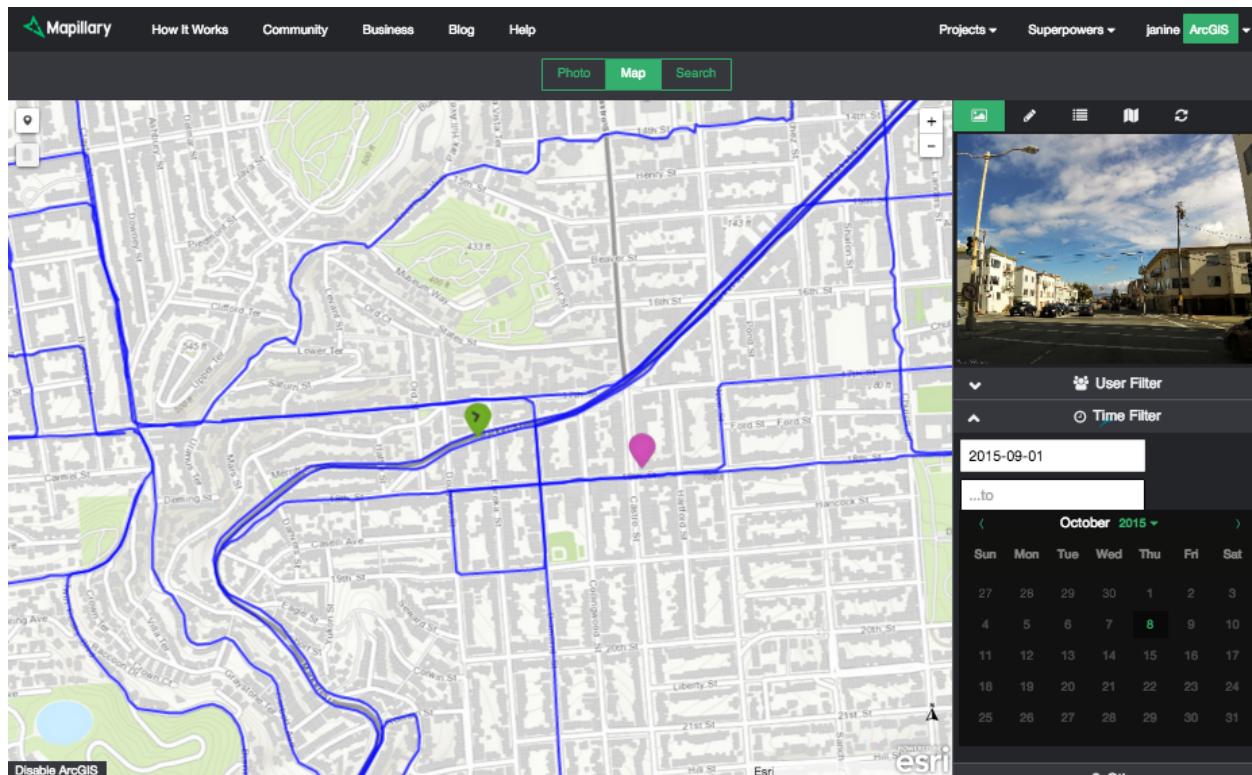
- To remove a selected marker, delete it from the *Edit* tab.

Advanced Features

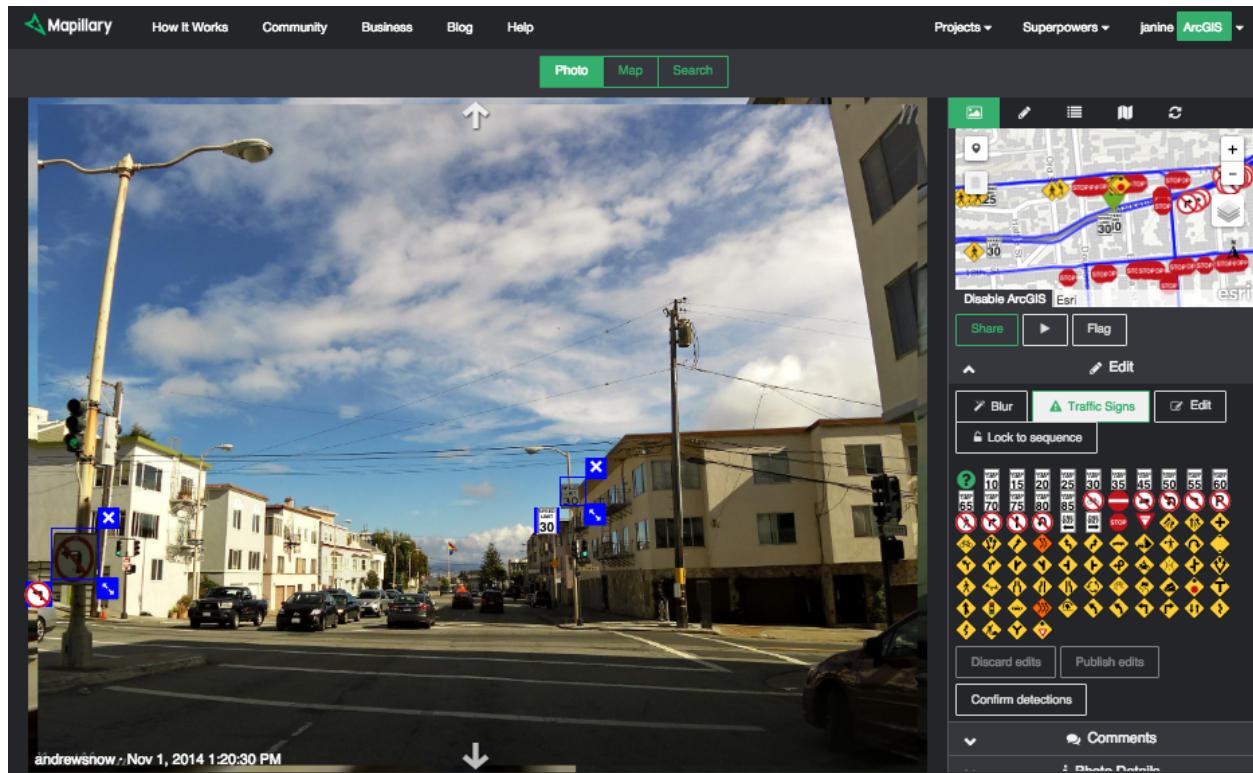
- If you are capturing photos with specific inspection teams or are running a crowdsourced community campaign, and would like to identify specific contributors, use the User Filter in the Map View.



- If you are interested in comparing photos captured at different times (e.g. before and after a capital project or environmental conditions during different seasons), use the Time Filter in the Map View.



- If you would like to preview Mapillary's automated traffic sign detection feature, click on the Edit dropdown in the *Photo* tab and click "Traffic Signs". If you would like to learn more about this feature or are interested in automated detection of similar objects , please contact the Mapillary team at sales@mapillary.com.



Contact

For questions and feedback, please email Mapillary at sales@mapillary.com. You may also reach us for realtime support on our Slack chat channel at <https://mapillary.slack.com/messages/arcgis-early-access/>