

Basics of OSM & iD Editor

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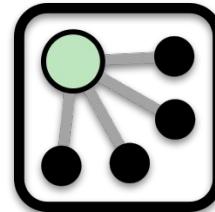
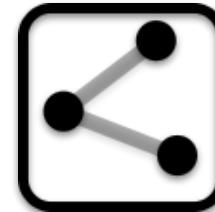
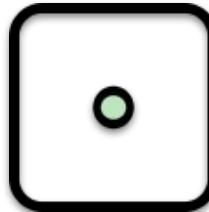
Agenda

- **Objective**
- **Data Structure**
 - **Node**
 - **Way**
 - **Relations**
 - **Tags**
- **Tools**
 - **idEditor**
 - **View**
 - **Sidebar**

Objective

Objective

**Gain a basic understanding
how to read through OSM data
on id Editor.**



Data Structure

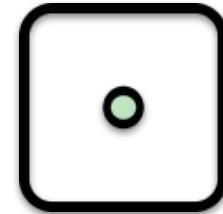
Overview

- OSM information is all in one layer
- Every object in OSM is made up of nodes, ways, relations, and their attributes
- Attributes are made of keys and values in endless combinations



Node

- A single point
- Can stand alone or in conjunction with ways
- Used to tag anything from businesses, traffic control elements, to natural features



The screenshot shows the OpenStreetMap editor interface. In the center is a satellite view of a street with a bus stop sign. A red dot marks the location of the bus stop. On the left, the 'Edit feature' panel is open for a 'Bus Stop' node. The 'All fields' section contains the following data:

Name	3165 Porter Drive
Network	Marguerite SRPGO
Operator	Unknown
Departures Board	Yes, timetable, website...
Shelter	No
Bench	Yes
Waste Bin	No

Below the panel, a yellow line labeled 'Porter Drive' extends from the bus stop sign towards the bottom right. At the bottom of the editor, there is a note: 'View on openstreetmap.org'.

Above: Bus Stop as a Standalone Node.

The screenshot shows the OpenStreetMap editor interface. In the center is a satellite view of a street with a bus stop sign. A red dot marks the location of the bus stop, which is now connected to a yellow line labeled 'Porter Drive'. On the left, the 'Edit feature' panel is open for a 'Bus Stopping Location' node. The 'All fields' section contains the following data:

Name	3165 Porter Drive
Stop Number	Unknown
Network	Marguerite SRPGO
Operator	Unknown

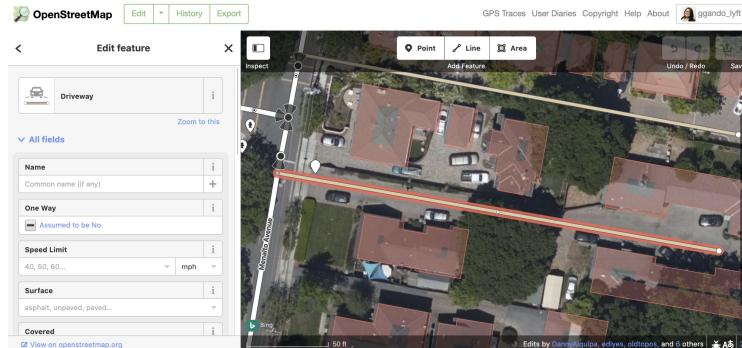
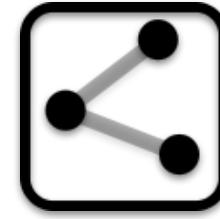
Below the panel, a note says 'Add field: Description, Elevator, Fix Me...'. At the bottom of the editor, there is a note: 'View on openstreetmap.org'.

Above: Bus Stop attached on a Way.



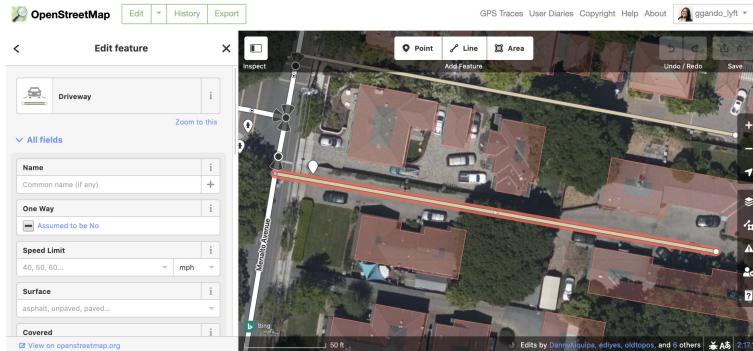
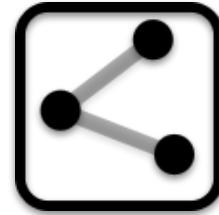
Way

- A way is a line between two nodes
- Divided into open ways and closed ways
- A closed way is another word for a polygon
- Each way has an arbitrary direction
- Used to model anything from roads, buildings, to boundaries

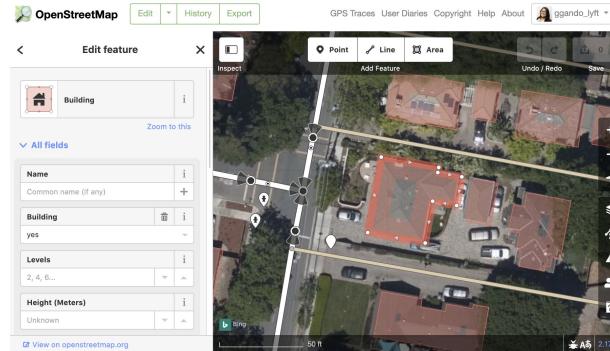


Way

- Divided into open ways and closed ways



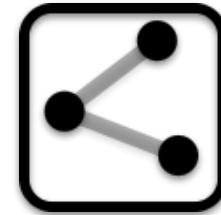
Above: Road represented as a Open Way



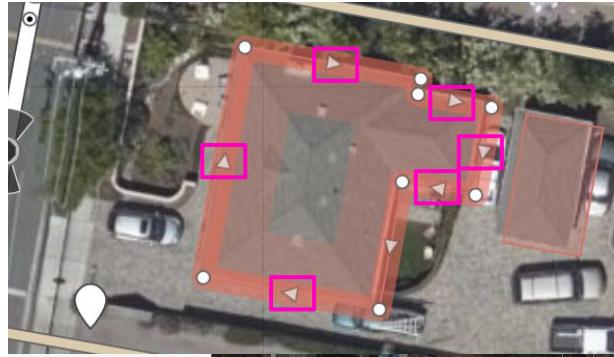
Above: Building represented as a Closed Way
also known as a polygon

Way

- Divided into open ways and closed ways
- Able to change this direction, but typically unnecessary



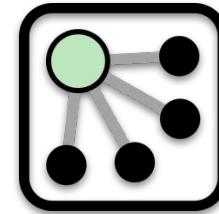
Above: Open Way has direction from left to right.



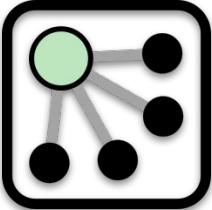
Above: Closed way has direction going clockwise.

Relations

- A relation is an ordered list with some sort of theme uniting them
- A multipolygon is a type of relation used to unite complex areas made up of separate polygons
- Some examples of relations are bus routes, boundaries, and turn restrictions
- Very few projects will require relation editing
 - We want to avoid breaking relations to keep the integrity of data in OSM intact



Relations



Example

- The way that is selected is a part of the **Metro Route 36** Relation
- Instead of creating a separate way to model the bus route, a relation is used
- All these ways combine together model this bus route

The screenshot shows the OpenStreetMap editor interface. On the left, there's a detailed view of a street segment labeled "Beacon Avenue South". A specific segment of this street is highlighted with a pink rectangle. To the left of the map, there's a sidebar with two sections: "All tags (12)" and "All relations (3)". The "All relations (3)" section contains a table with one row highlighted in pink, which corresponds to the segment shown in the map. The row is labeled "Bus Route Metro Route 36" and "Role". The URL at the bottom of the sidebar is <https://www.openstreetmap.org/id#>.



Relations

Example (continued)

- Selecting on this relation by clicking on the box
- Zoom out and visually see the whole relation
- Able to see the whole bus route
- Box is around the area of the initial way

The screenshot shows the OpenStreetMap editor interface. At the top, there's a toolbar with 'Edit', 'History', 'Export', and other options. Below it is a map of Seattle, Washington, with a yellow box highlighting a specific segment of a bus route. A pink arrow points from the text 'Box is around the area of the initial way' towards this yellow box. On the left, a modal window titled 'Edit feature' is open, showing details for a 'Bus Route' relation. The 'Name' field contains 'Metro Route 36', and the 'Route Number' field contains '36'. The 'Operator' field is 'King County Metro', and the 'Network' field is also 'King County Metro'. The 'Network Type' field is 'node network, Local, rcn...'. The 'To' field is 'Unknown', and the 'From' field is 'Unknown'. There are also sections for 'Add field:' and 'All tags (7)'. The bottom of the screen shows a footer with various links and statistics.



Tags

- Contain the attributes for OSM objects
- A Tag is a pair of a key and value
- Only one unique key for each element**
- Example: Keys and Values for the Space Needle**



Key	Value
addr:housenumber	400
addr:postcode	98109
addr:state	WA
addr:street	Broad Street
building	yes
ele	40
gnis:county_name	King
gnis:feature_id	1508574
height	158.115
man_made	tower
min_height	156.058
name	Space Needle
note	Appoximate Height at Bottom of "Halo"
opening_hours	Mo-Sa 08:00-23:00; Su 08:00-21:00
phone	+1 (206) 905-2100
seamark:landmark:category	tower
seamark:name	Space Needle
seamark:type	landmark
source	Yahoo aerial imagery;local knowledge
toilets:wheelchair	yes
tourism	attraction
tower:type	observation
website	http://www.spaceneedle.com/
wheelchair	yes
wikidata	Q5317
wikipedia	en:Space Needle

Tools

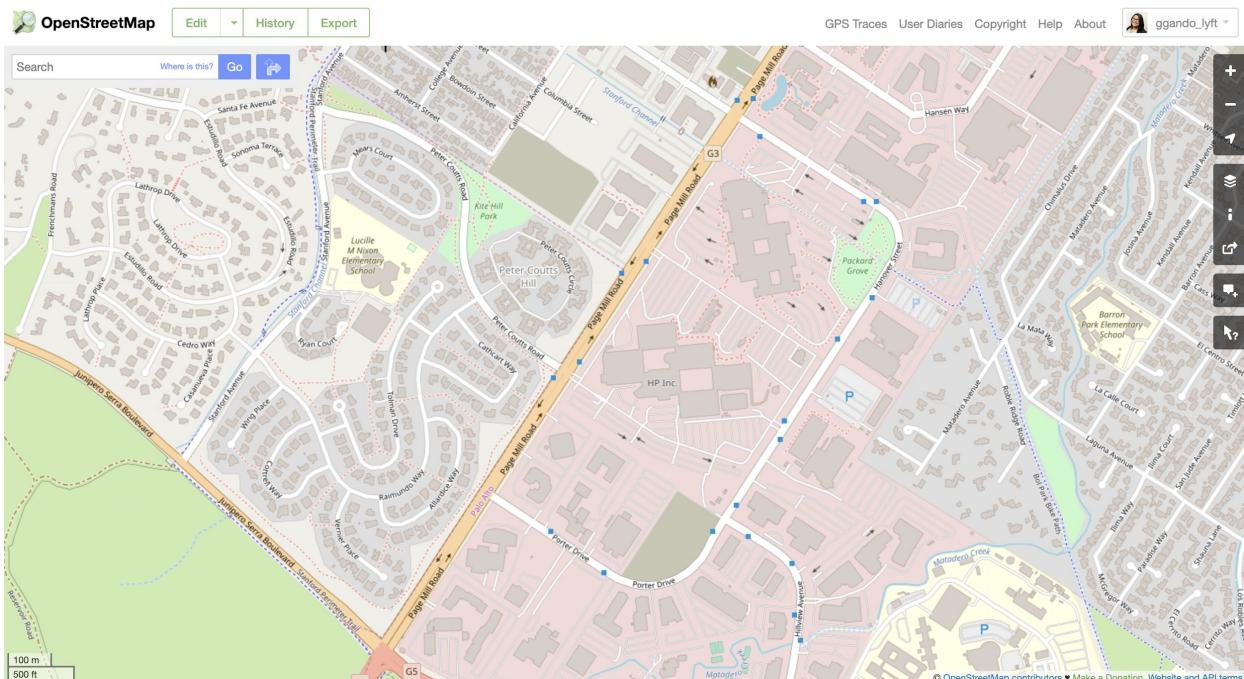
www.openstreetmap.org

iDEditor

- Online OSM Editor
- Able to view map and edit
- osm.org is a shortcut link that goes to openstreetmap.org
- **Recommended to bookmark this link**

Example to the right

- General Map, typical view when you go to osm



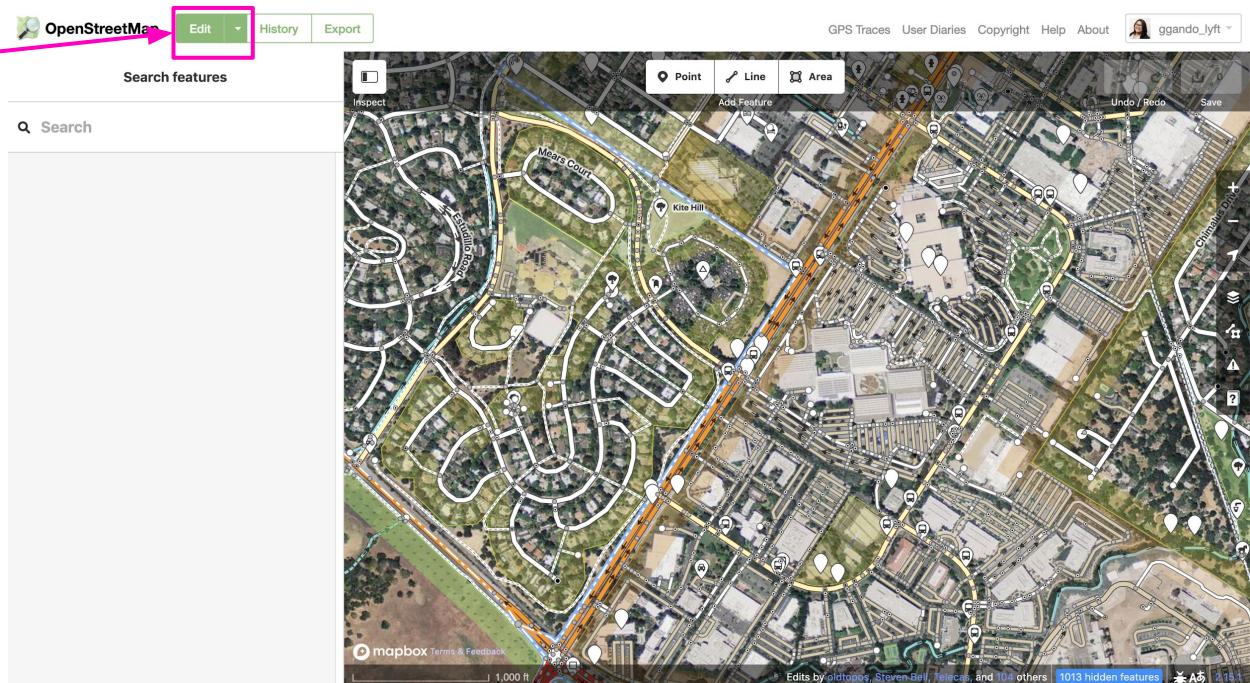
iDEditor

Editor

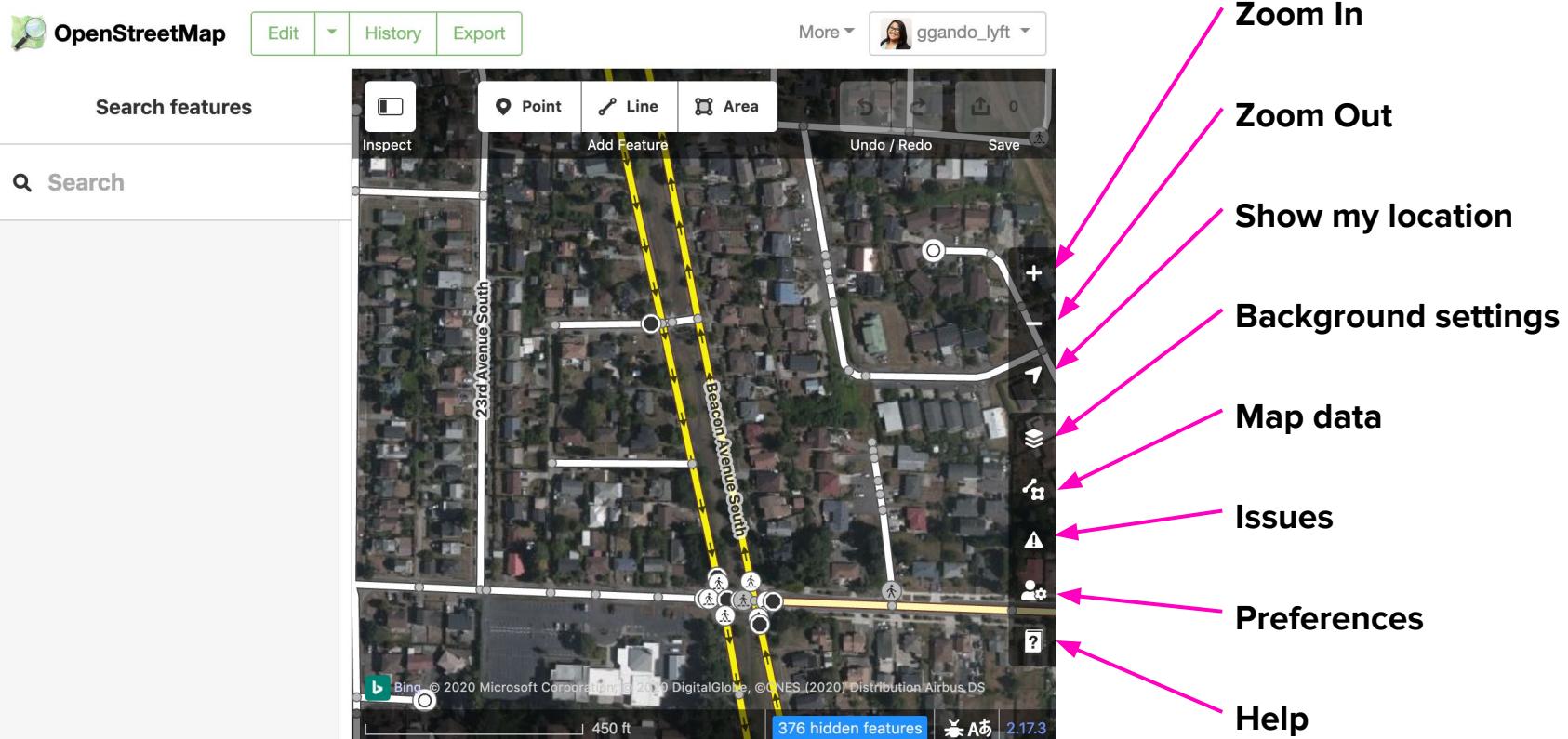
- Click **Edit** to open edit mode

Functionality

- General Map with more detail
 - Are able to visually see individual ways and nodes



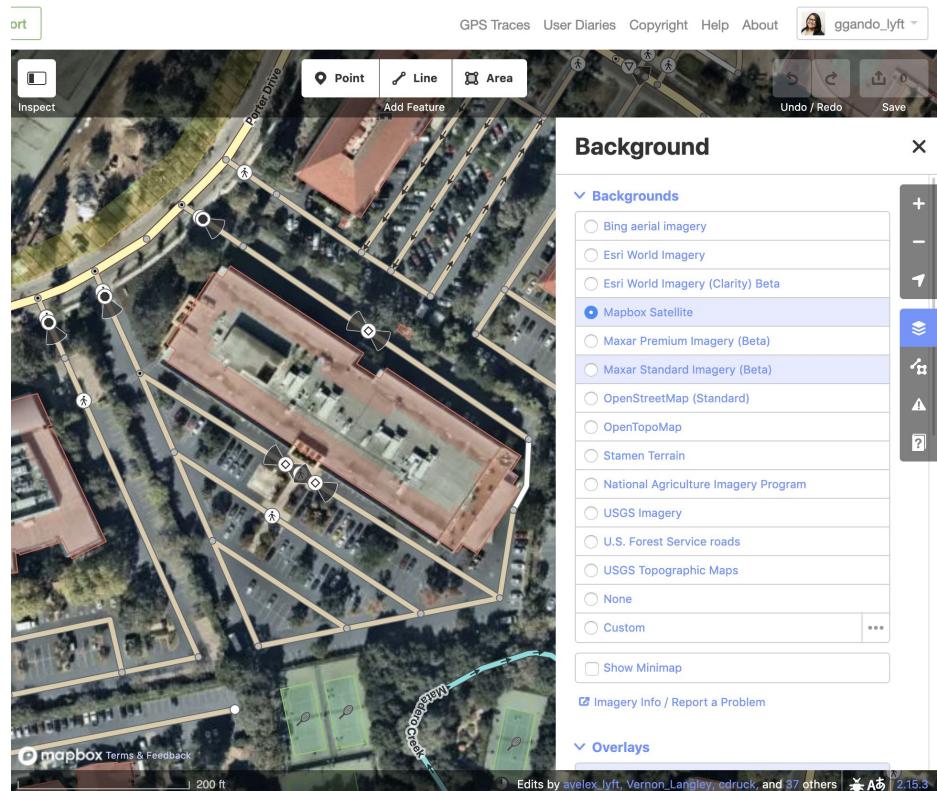
Side Panel



Side Panel

Background Settings

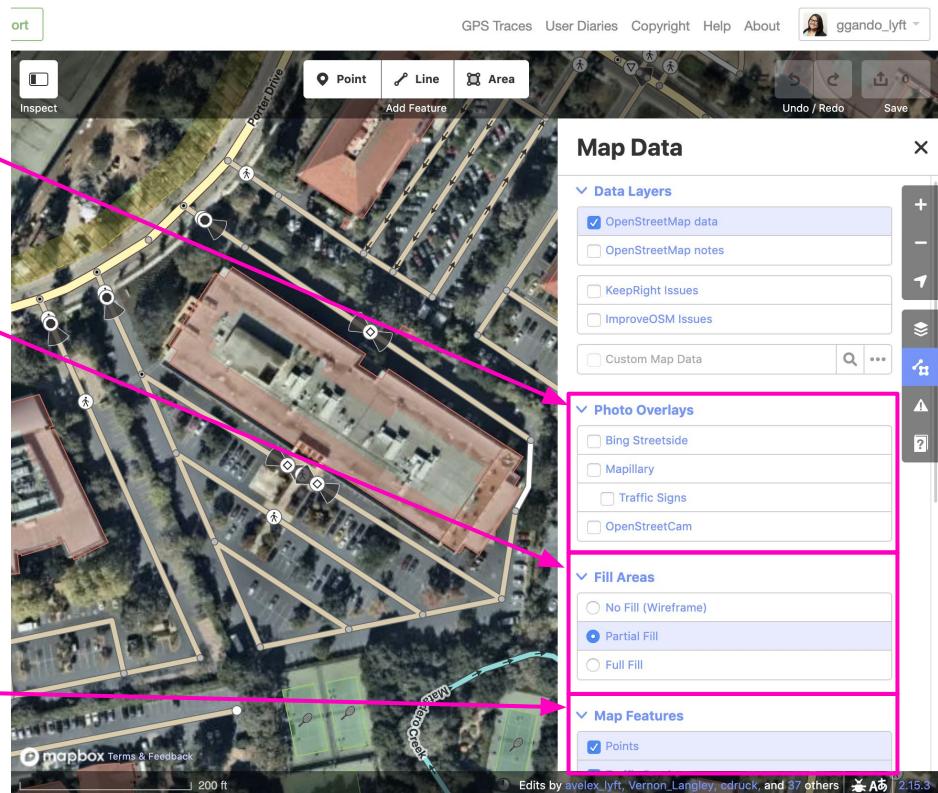
- Ability to change the aerial imagery
- **Always check project for the approved aerial imagery**



Side Panel

Display Options

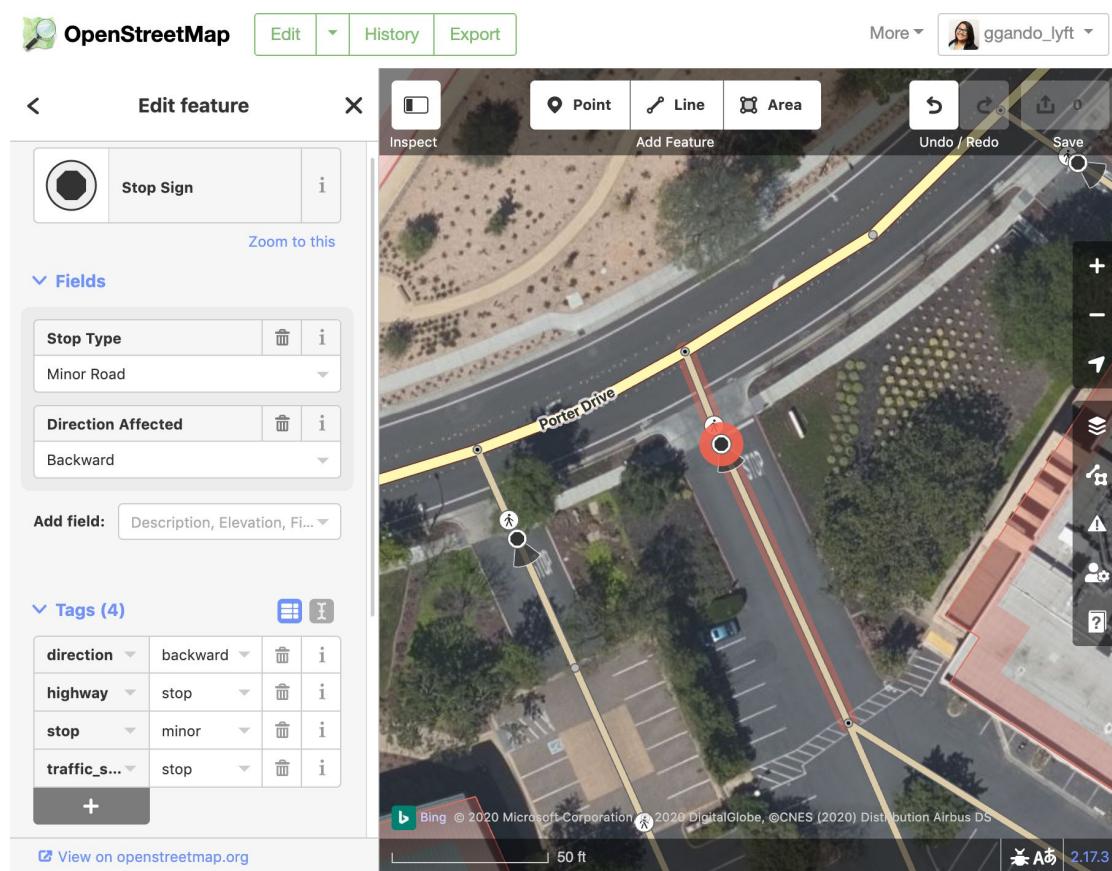
- Photo Overlays
 - Can see street level imagery if any is available
- Fill Areas
 - Can view data in Wireframe, Partial Fill, and Full Fill
 - Wireframe is useful for looking at aerial imagery being hidden under the fill of data
- Map Features
 - Can turn on and off different features



Selection

Viewing Tag List

- After clicking on a way or node, side panel will appear
- On the left side panel scroll all the way down
- Click on “All tags” drop down
- The tags will appear in table of keys and values

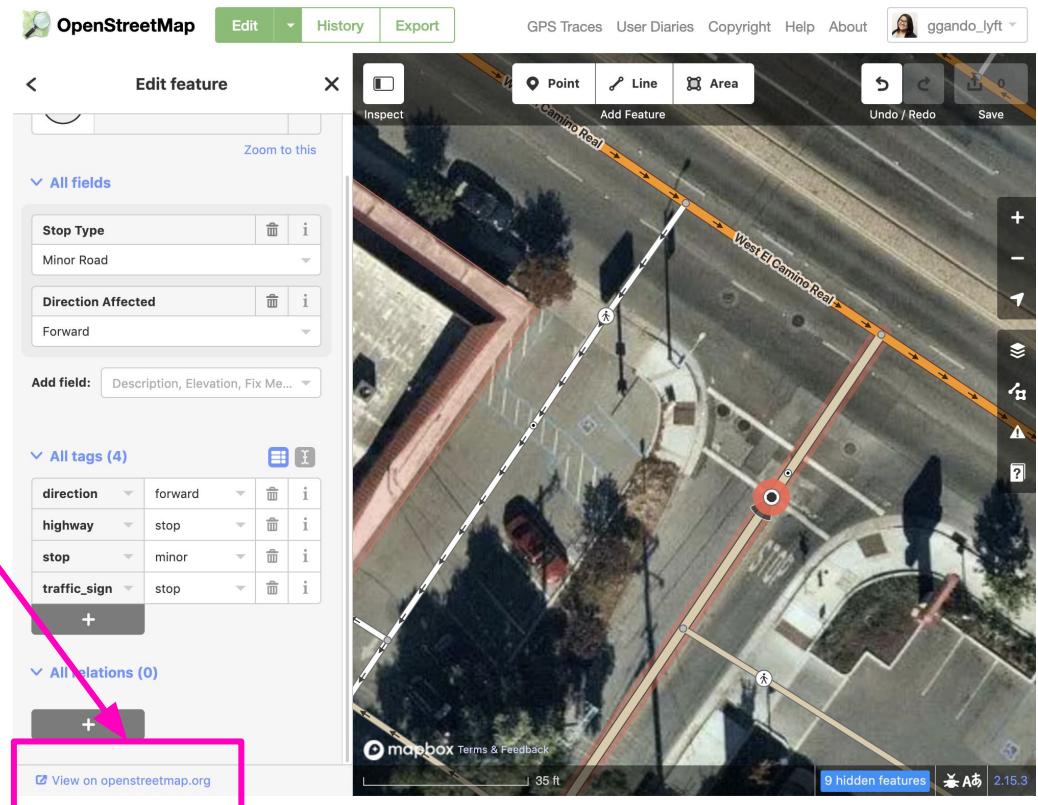


Find a specific id

Find a Specific Way or Node ID

OSM

- Have a way or node selected (it will be glowing)
- Click on the url at the bottom of the edit features box

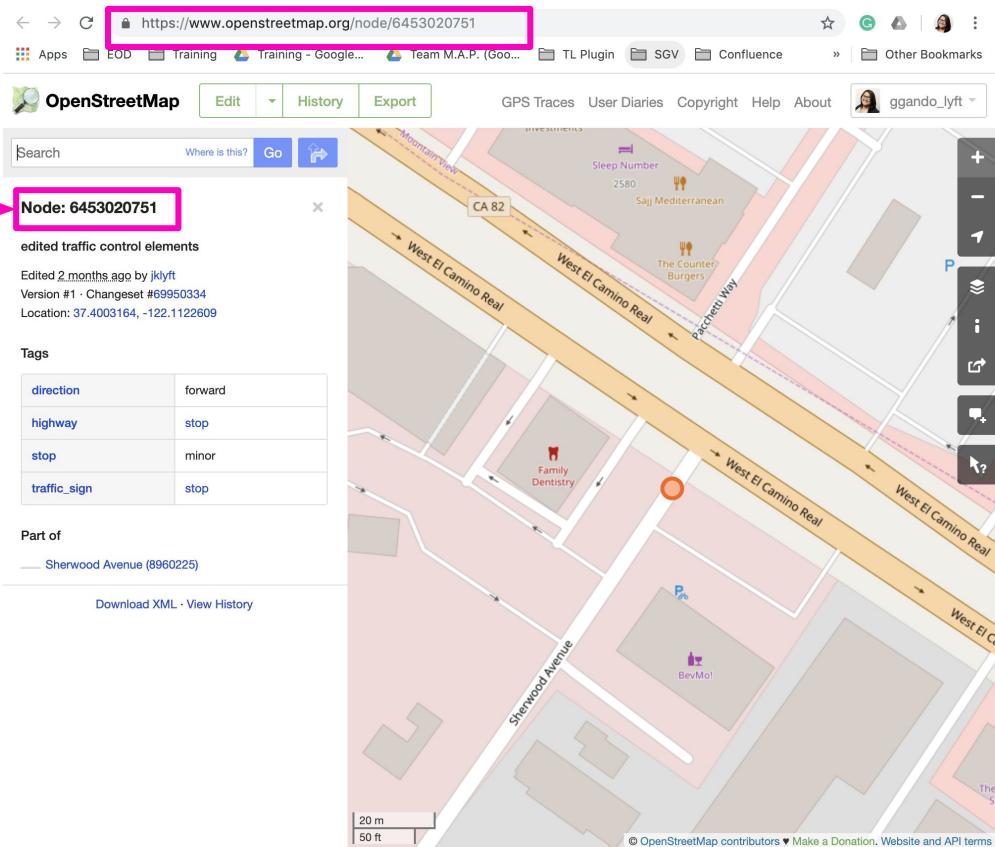


Find a Specific Way or Node ID

Another OSM Tab will Open

- On the left you will see the way/node id
- In the url bar will show way/node id also
- You can click edit and zoom in
- The url will change accordingly

Way and Node IDs are useful for directing someone to an specific feature



Locating Way or Node using ID

Locating Way or Node

Using a Way or Node ID

- Adding an extension to the url

- Node**

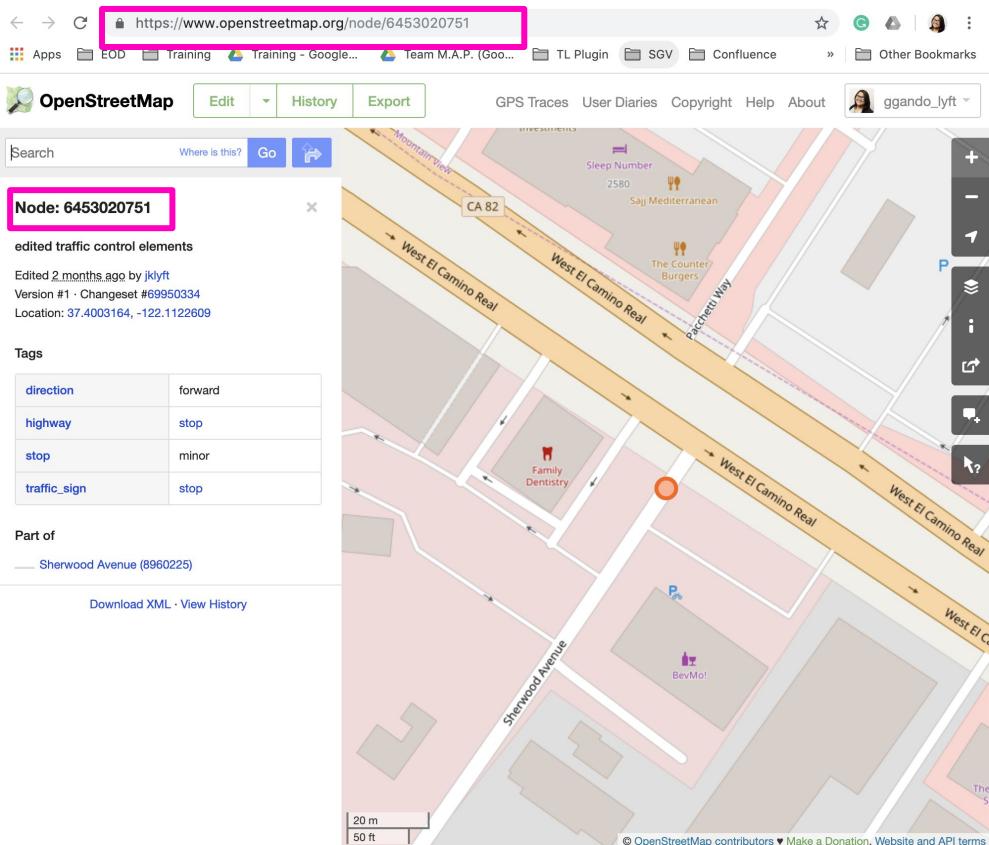
[https://www.openstreetmap.org/node/**id**](https://www.openstreetmap.org/node/6453020751)

- Way**

[https://www.openstreetmap.org/way/**id**](https://www.openstreetmap.org/way/500185551)

- Example**

[https://www.openstreetmap.org/way/
500185551](https://www.openstreetmap.org/way/500185551)

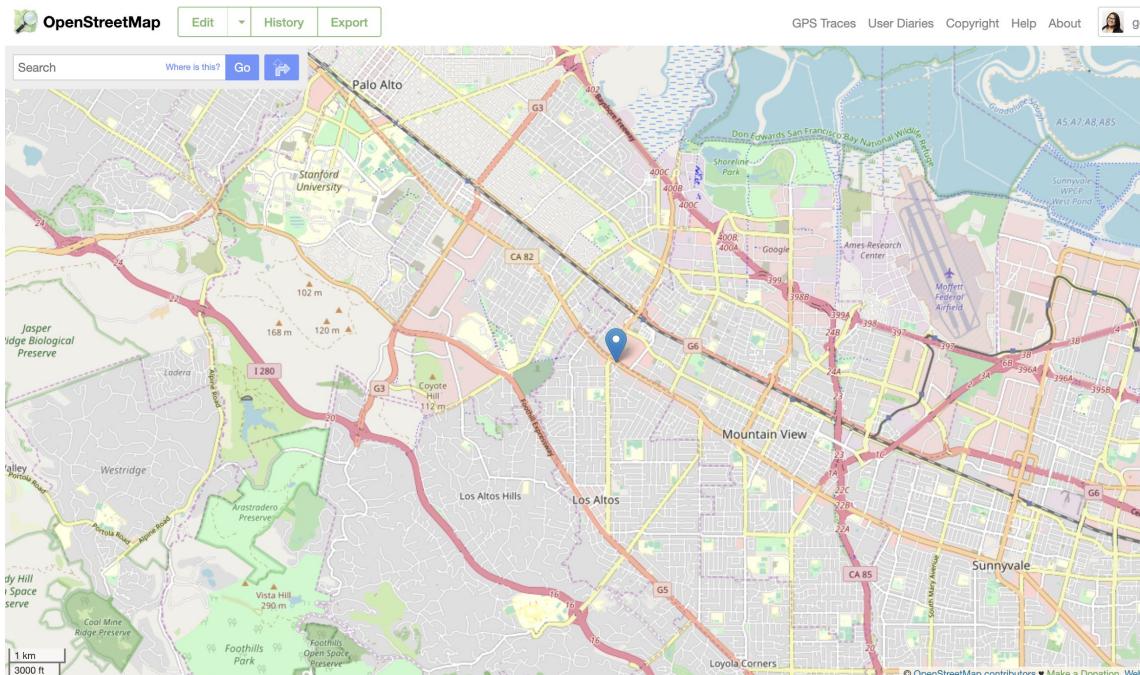


Basic Editing

Basic Editing

Videos

- How to edit/create buildings
<https://youtu.be/VPJz-AucqF4>
 - Unlikely to be editing buildings
- How to edit/create roads
<https://youtu.be/ZBLwb2nisJQ>
- Note: These videos were made for HOT (Humanitarian OpenStreetMap Team) Tasking. You will not work on HOT tasking but the videos provide a good resource.
- Editing OSM data for L5 work is done in JOSM to avoid relationship errors



Questions?



Thank you