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.

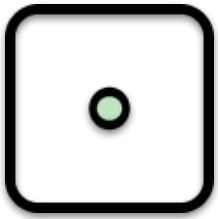
Data Structure

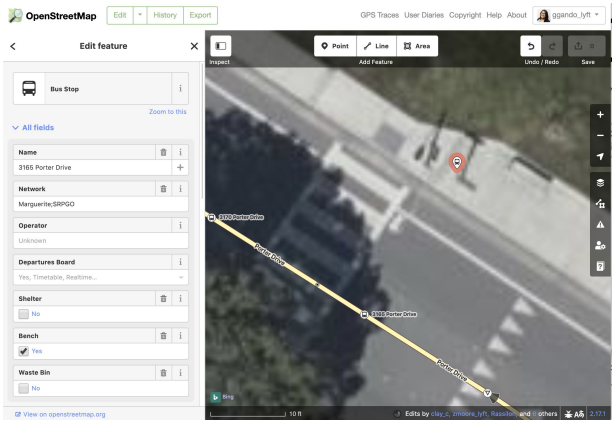
Overview

- 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

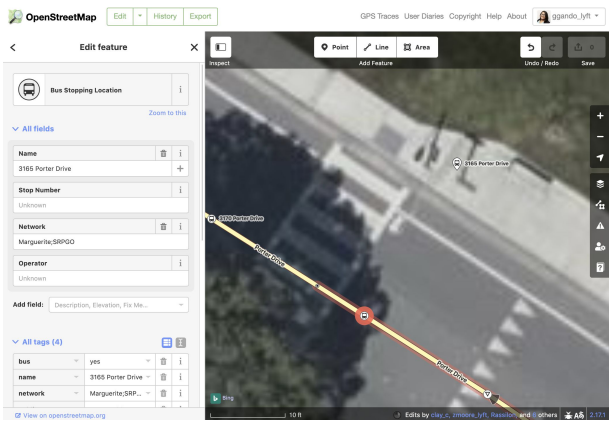
Node

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





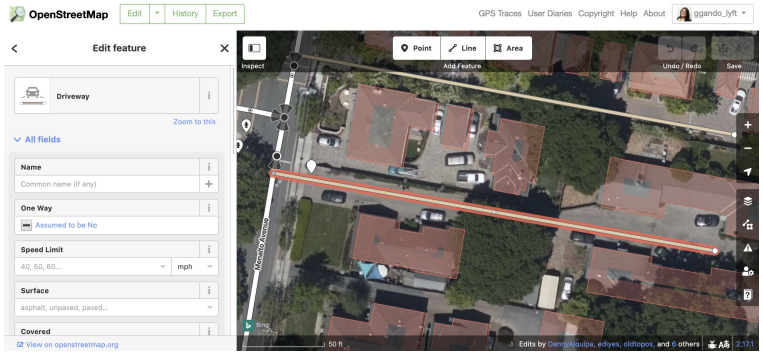
Above: Bus Stop as a Standalone Node.



Above: Bus Stop attached on a Way.

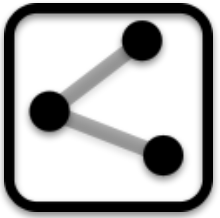
Way

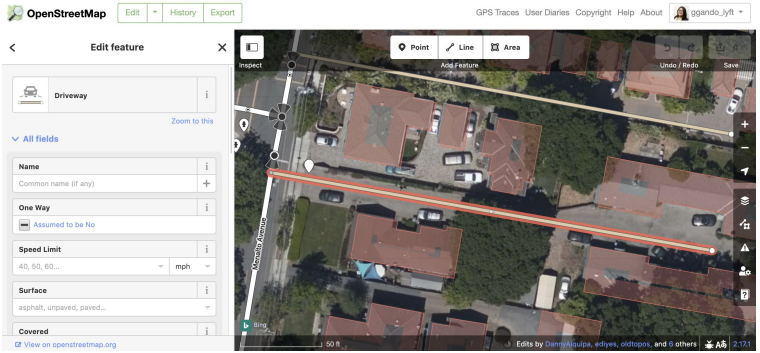
- A way is a line between two nodes
- Divided into open ways and closed ways
- A closed way is another word for a polygon
- Each way has an arbitrary direction
- Used to model anything from roads, buildings, to boundaries



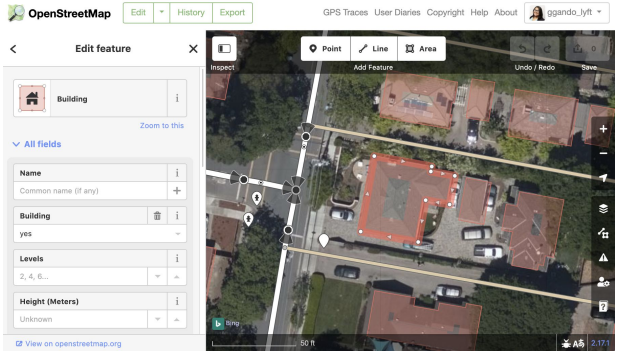
Way

- Divided into open ways and closed ways





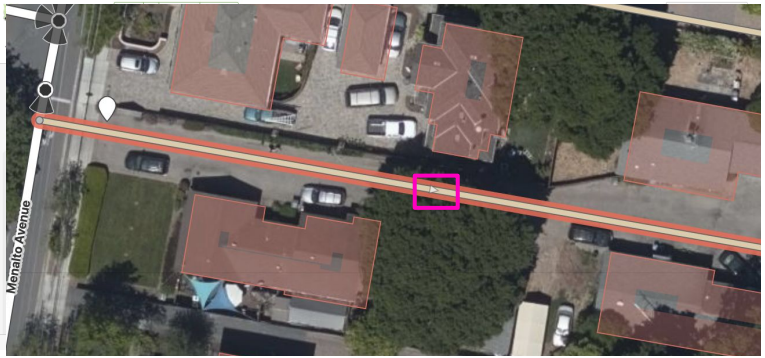
Above: Road represented as a Open Way



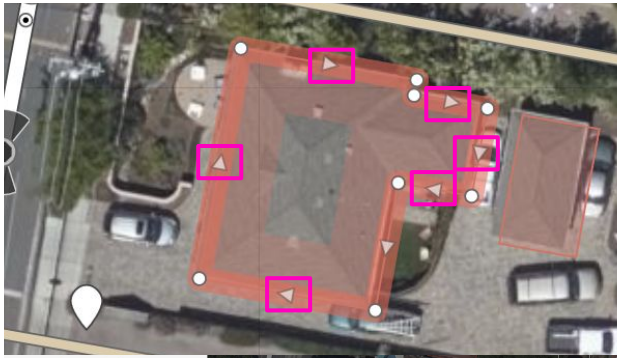
Above: Building represented as a Closed Way also known as a polygon

Way

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



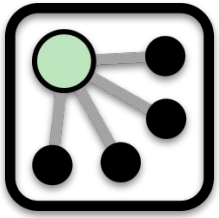
Above: Open Way has direction from left to right.



Above: Closed way has direction going clockwise.

Relations

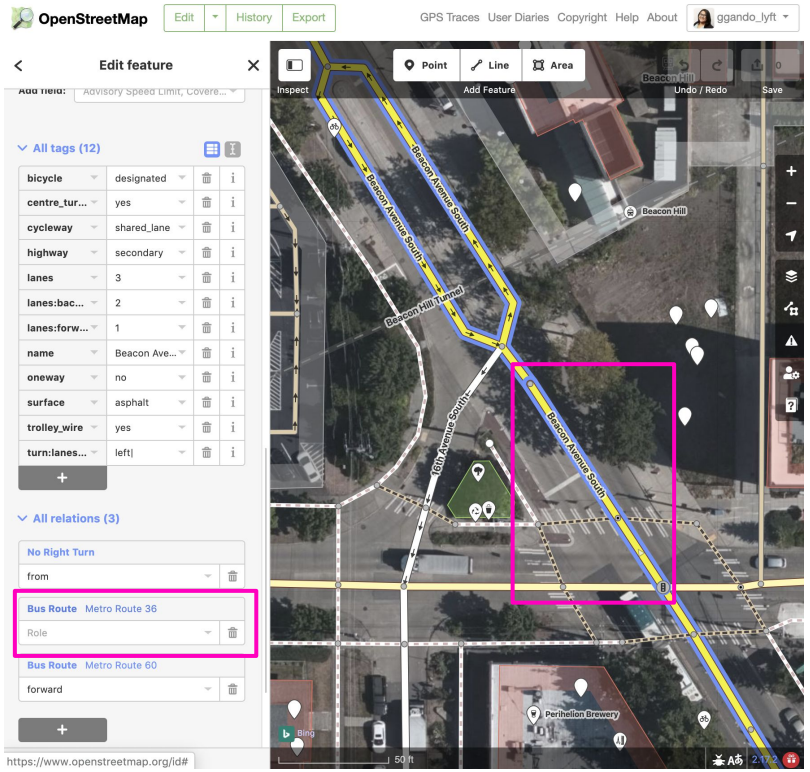
- A relation is an ordered list with some sort of theme uniting them
- A multipolygon is a type of relation used to unite complex areas made up of separate polygons
- Some examples of relations are bus routes, boundaries, and turn restrictions
- Very few projects will require relation editing
  - We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



Relations

Example

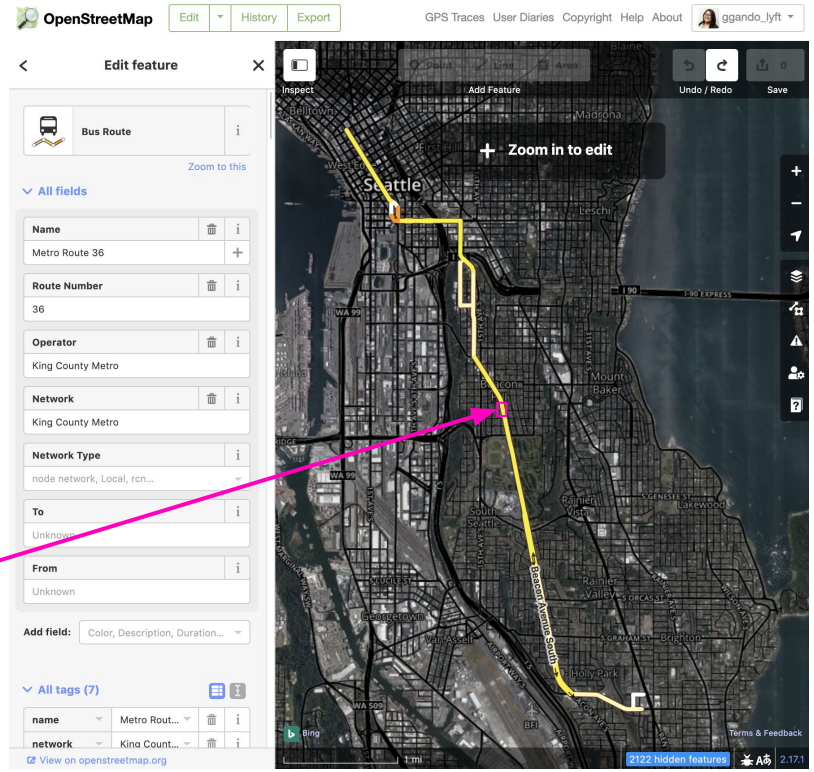
- The way that is selected is a port of the **Metro Route 36** Relation
- Instead of creating a seperate way to model the bus route, a relation is used
- All these ways combine together model this bus route



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



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

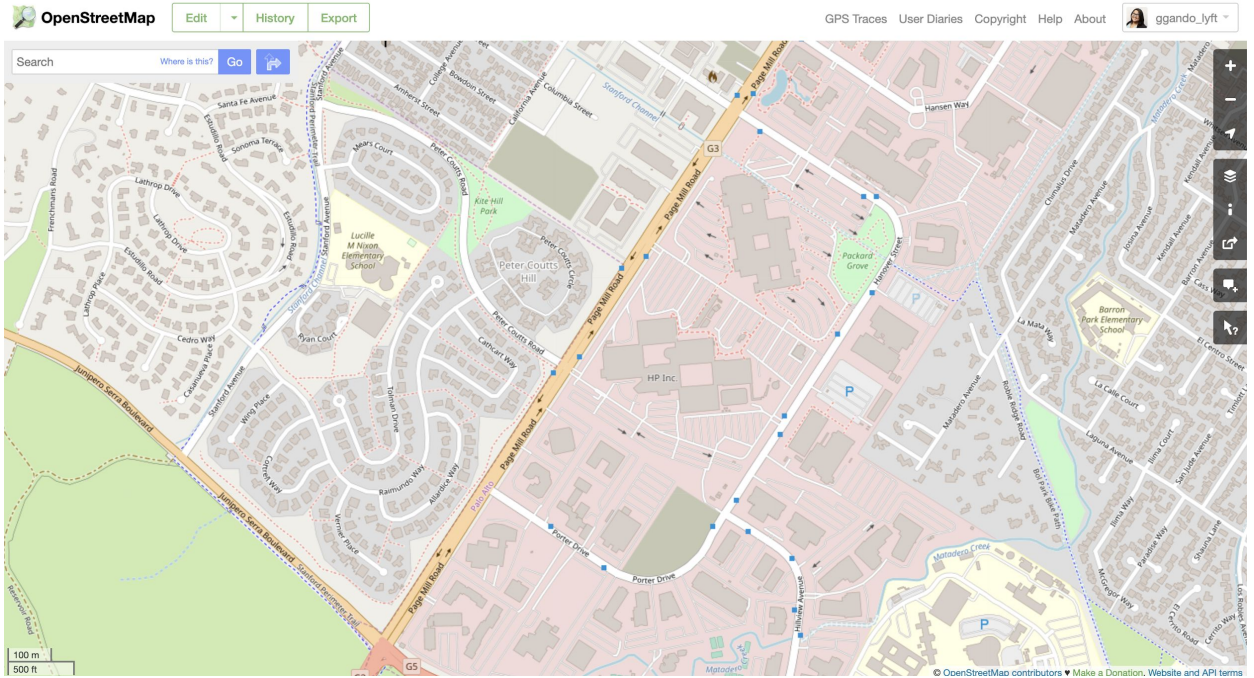
www.openstreetmap.org

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



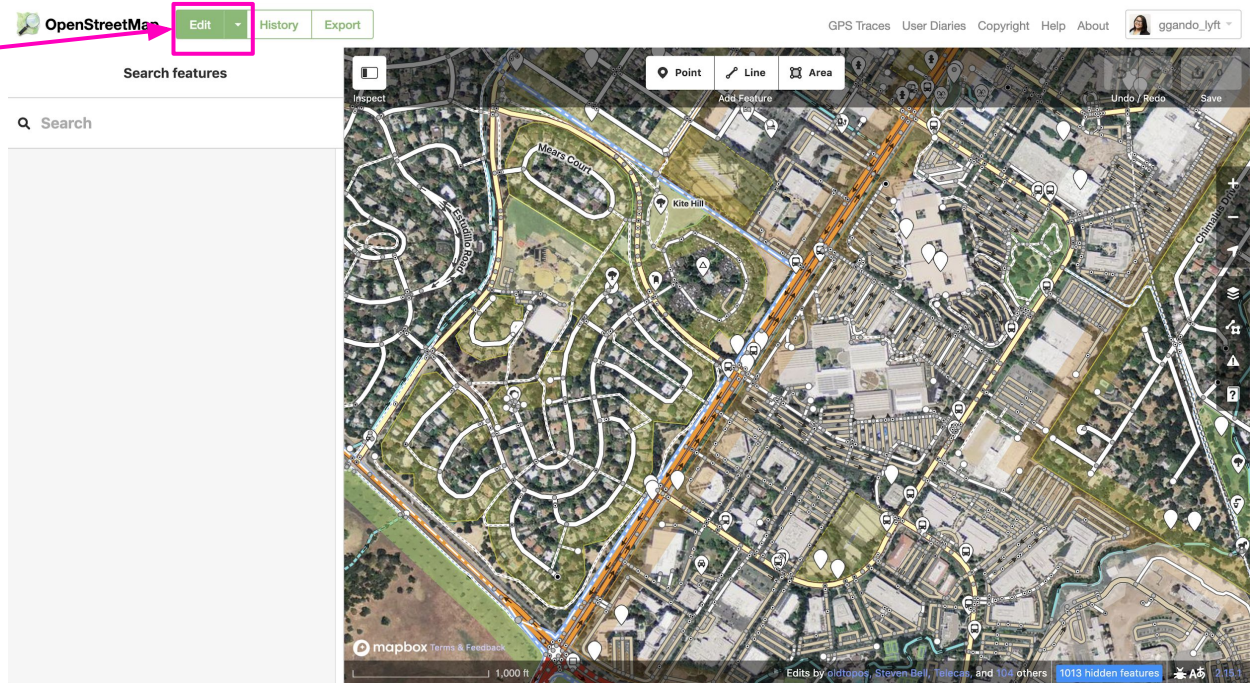
iDEditor

Editor

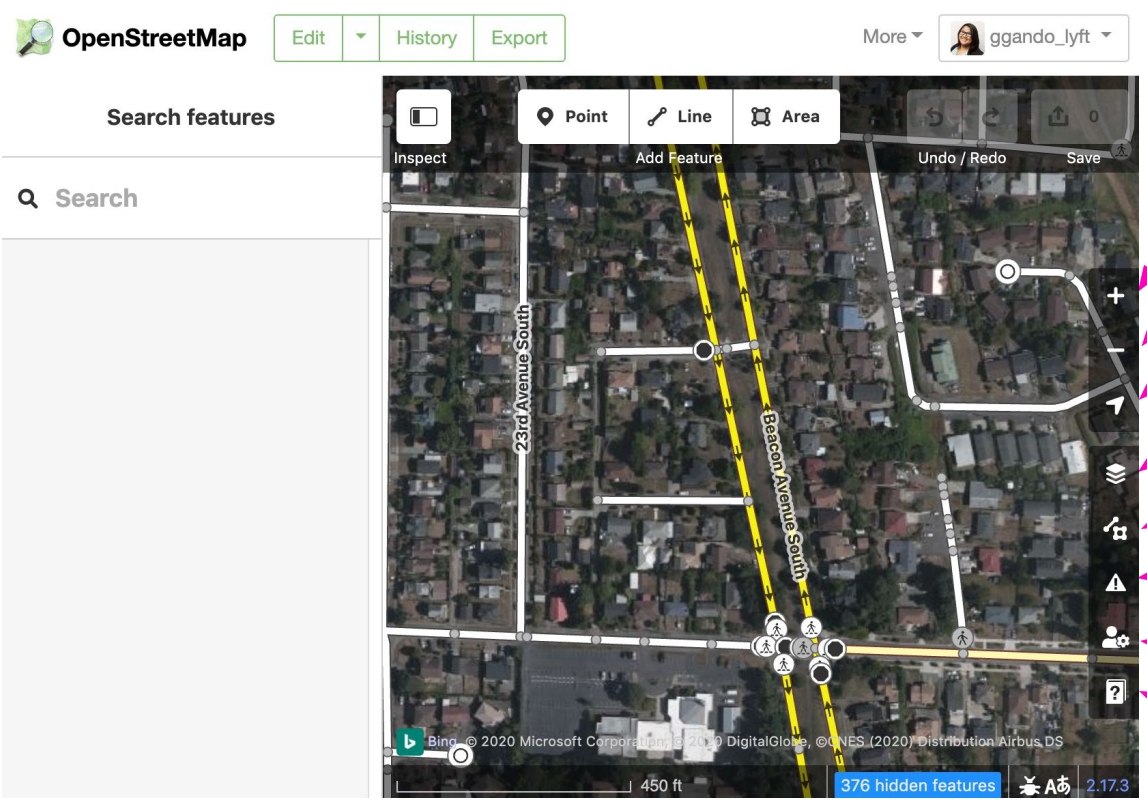
- Click Edit to open edit mode

Functionality

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



Side Panel



Zoom In

Zoom Out

Show my location

Background settings

Map data

Issues

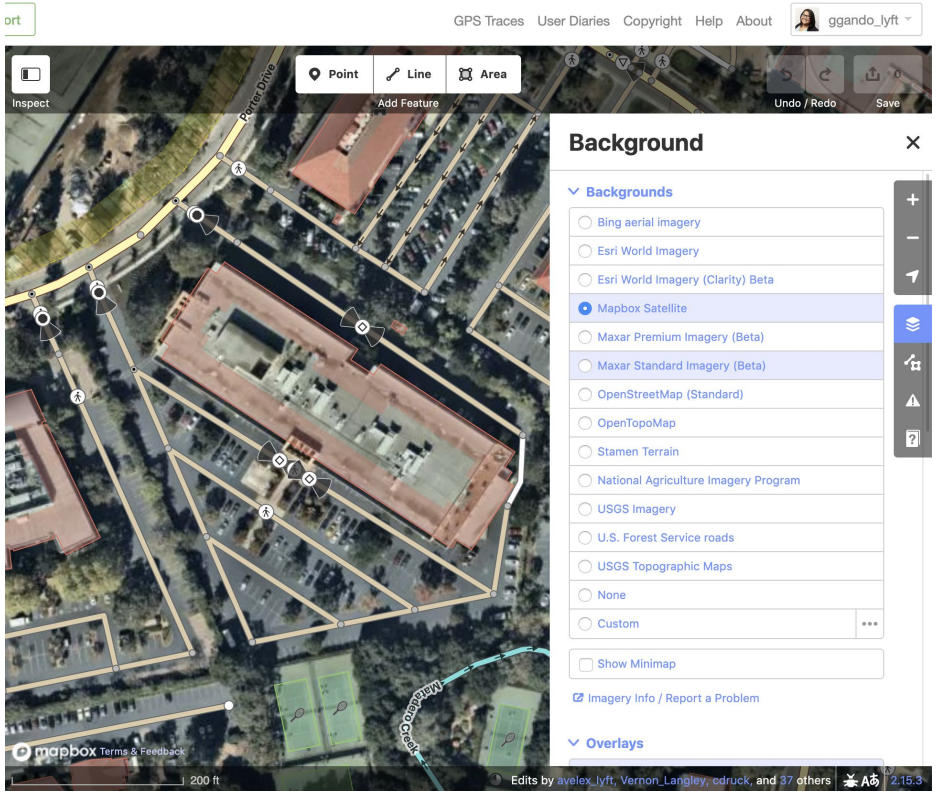
Preferences

Help

Side Panel

Background Settings

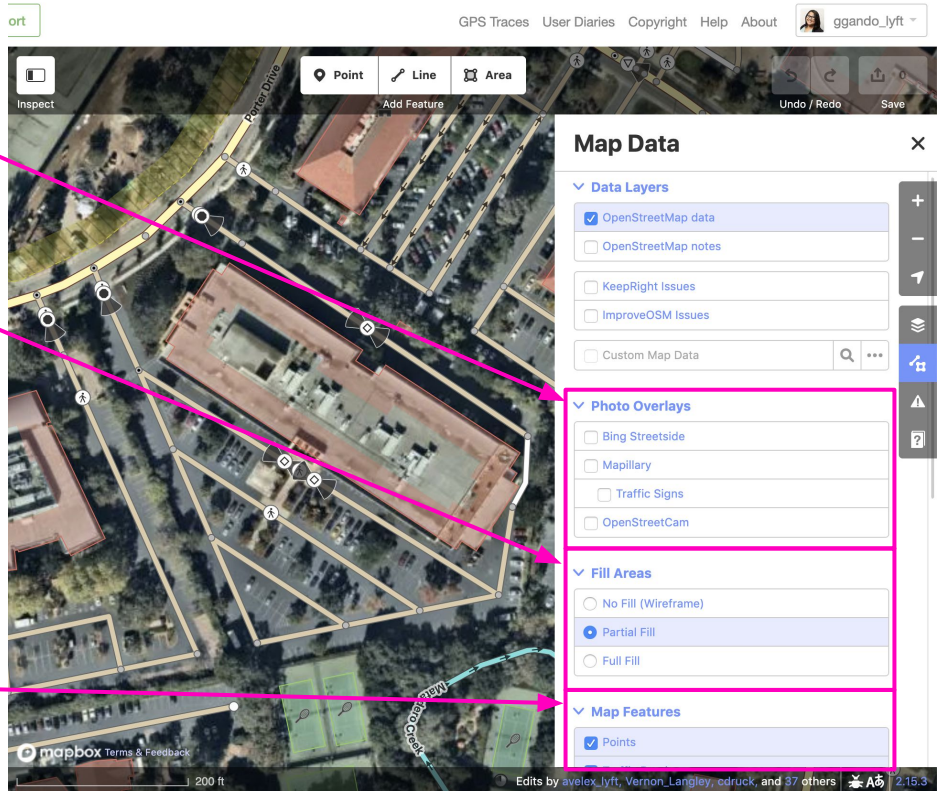
- Ability to change the aerial imagery
- **Always check project for the approved aerial imagery**



Side Panel

Display Options

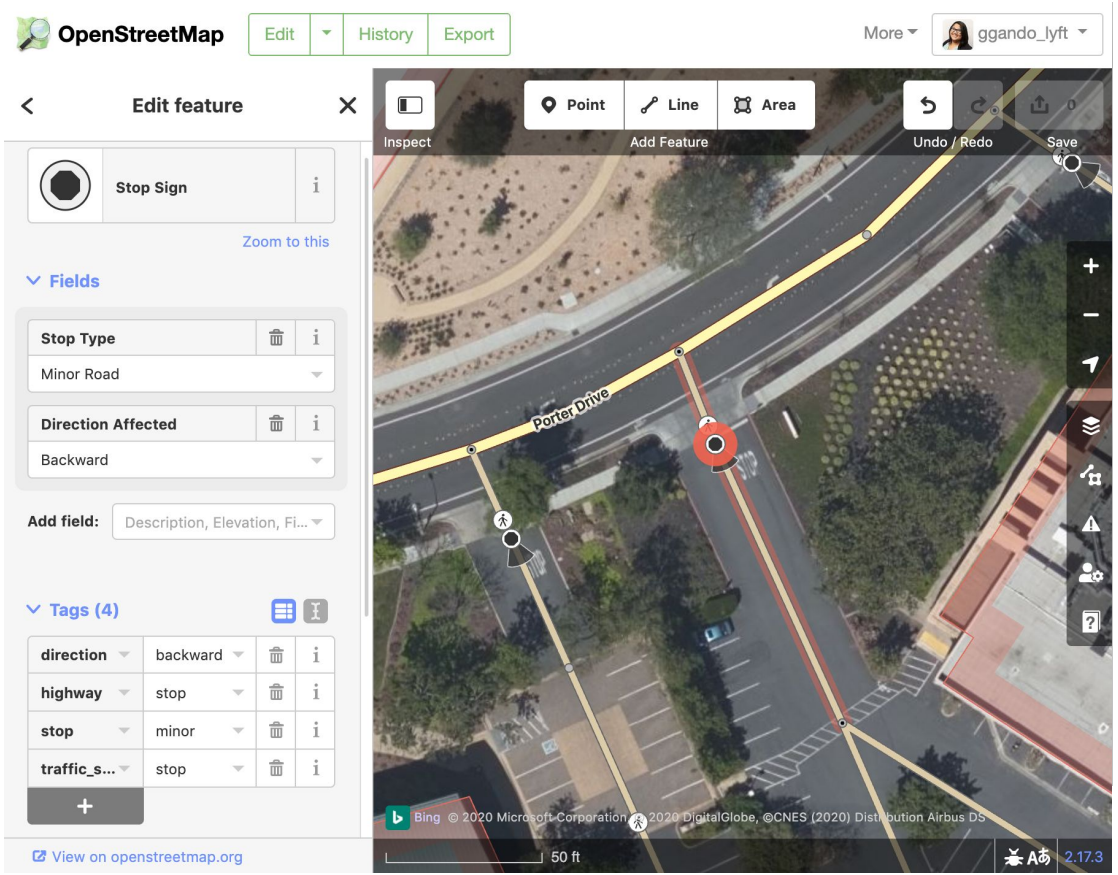
- Photo Overlays
  - Can see street level imagery if any is available
- Fill Areas
  - Can view data in Wireframe, Partial Fill, and Full Fill
  - Wireframe is useful for looking at aerial imagery being hidden under the fill of data
- Map Features
  - Can turn on and off different features



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

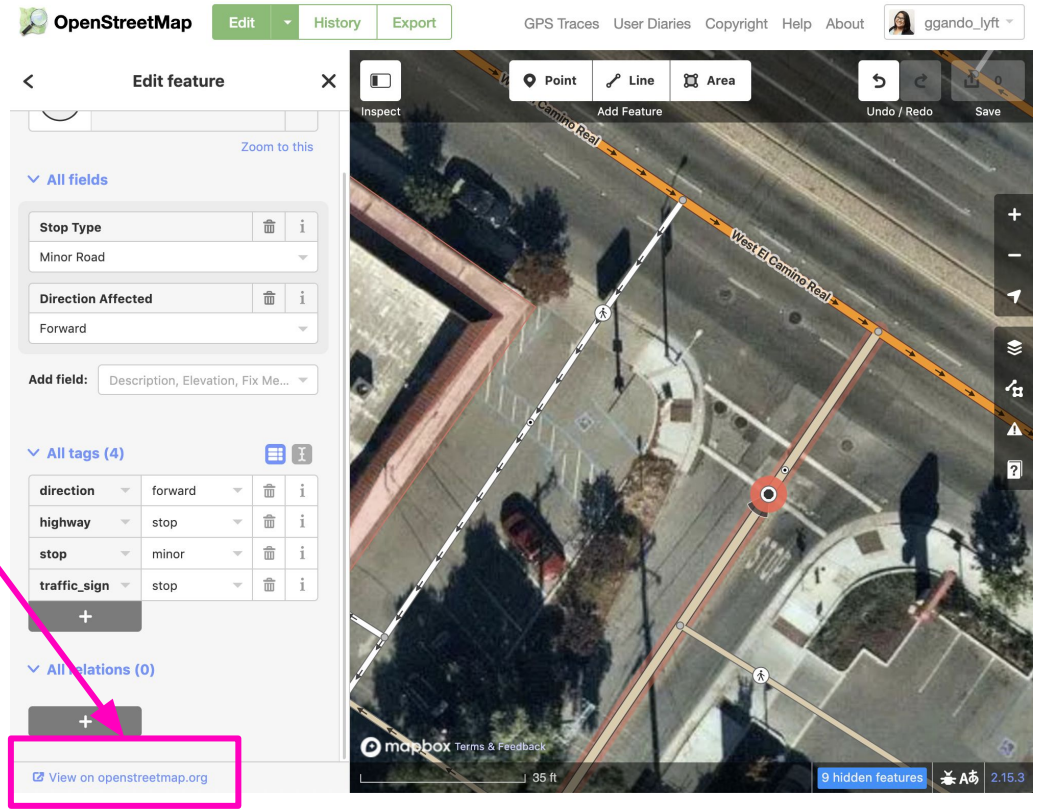


Find a specific id

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

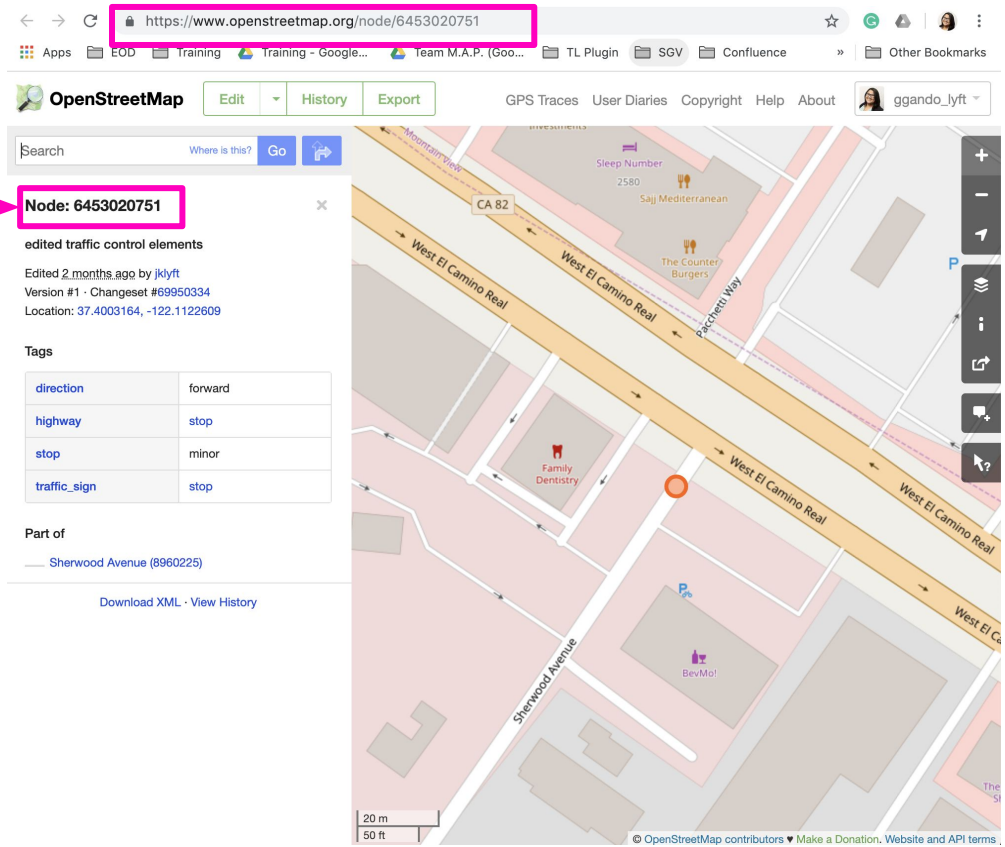


Find a Specific Way or Node ID

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

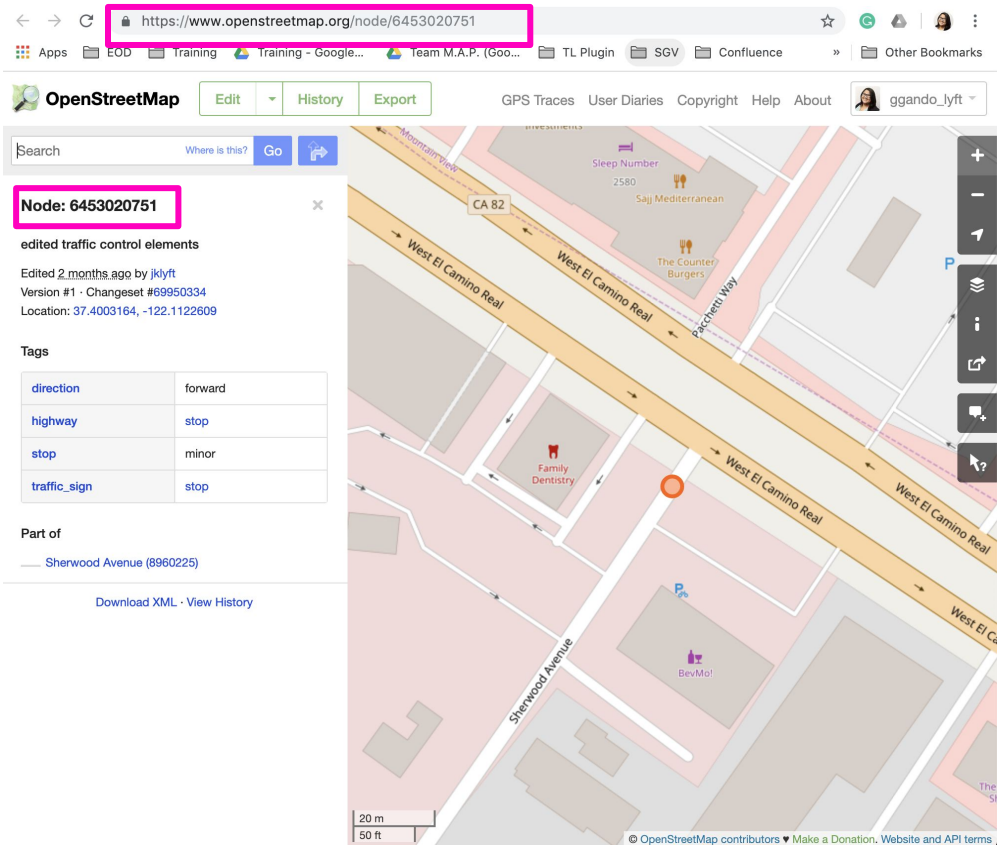


Locating Way or Node using ID

Locating Way or Node

Using a Way or Node ID

- Adding an extension to the url
- **Node**
  https://www.openstreetmap.org/node/**id**
- **Way**
  https://www.openstreetmap.org/way/**id**
- **Example**
  https://www.openstreetmap.org/way/**500185551**

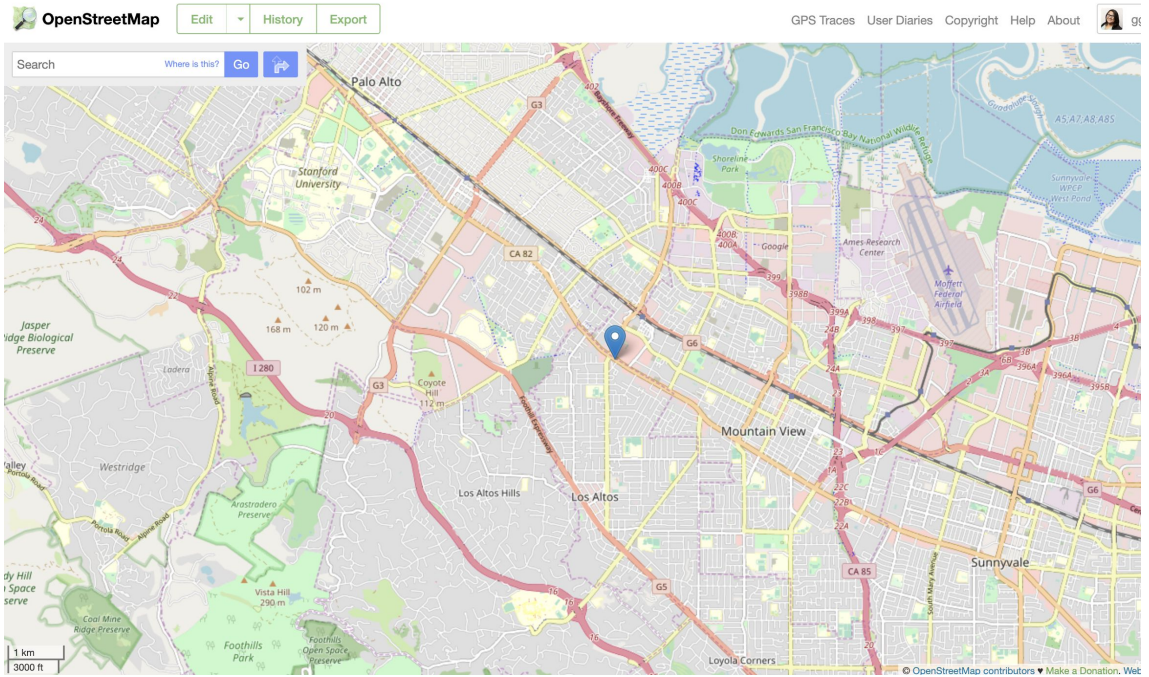


Basic Editing

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

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