

OSM Turn Restrictions

Last Updated: *nlitvinka, 30 July 2020*

Created by: *ggando*



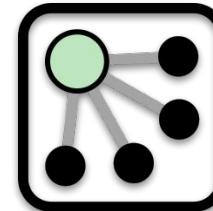
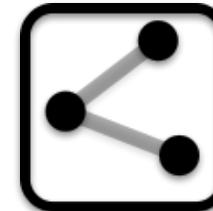
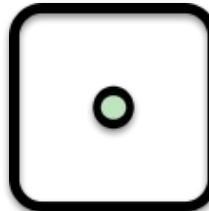
Agenda

- **Objective**
- **Turn Restrictions**
- **Turn Restriction Signs**
- **Turn Restrictions Represented as a Relation**
- **Mapping Turn Restriction in iD Editor**

Objective

Objective

**Gain a understanding of how to
read and edit turn restrictions
using OSM iD Editor.**



Turn Restrictions

Turn Restriction OSM Wiki

- Turn Restriction are different than using a Turn Lane Tag
- A turn restriction at a jun



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Relation:restriction

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A **turn restriction** at a junction is represented by a relation that has a set of tags describing the type of turn restriction. This turn restriction relation is not limited to turns, but can also be used for instance if you are only allowed to go straight on. A bus gate is another example of a use of the turn restriction relation as an alternative to `barrier=bus_trap`. At the junction passage from one side to the other is restricted (except for buses of course).

There are a number of important things that need to be taken into account when creating a turn restriction.

- There may be several turn restrictions at a junction, represented by separate relations.



Description

Used for a set of tags and members to represent a turn

Turn Restriction Signs

Turn Restriction Signs

Tag Type	iD Editor Icon	Sign Example				
No Right Turn	<table border="1"><tr><td>type</td><td>restriction</td></tr><tr><td>restriction</td><td>no_right_turn</td></tr></table>	type	restriction	restriction	no_right_turn	 
type	restriction					
restriction	no_right_turn					
No Left Turn	<table border="1"><tr><td>type</td><td>restriction</td></tr><tr><td>restriction</td><td>no_left_turn</td></tr></table>	type	restriction	restriction	no_left_turn	 
type	restriction					
restriction	no_left_turn					
No Straight On	<table border="1"><tr><td>type</td><td>restriction</td></tr><tr><td>restriction</td><td>no_straight_on</td></tr></table>	type	restriction	restriction	no_straight_on	 
type	restriction					
restriction	no_straight_on					
No U-Turn	<table border="1"><tr><td>type</td><td>restriction</td></tr><tr><td>restriction</td><td>no_u_turn</td></tr></table>	type	restriction	restriction	no_u_turn	 
type	restriction					
restriction	no_u_turn					

Turn Restriction Signs Rare

Tag Type	iD Editor Icon	Sign Example				
No Entry	<table border="1"><tr><td>type</td><td>restriction</td></tr><tr><td>restriction</td><td>no_entry</td></tr></table>	type	restriction	restriction	no_entry	 
type	restriction					
restriction	no_entry					
No Exit	<table border="1"><tr><td>type</td><td>restriction</td></tr><tr><td>restriction</td><td>no_exit</td></tr></table>	type	restriction	restriction	no_exit	 
type	restriction					
restriction	no_exit					

Turn Restriction Signs

Tag Type	iD Editor Icon	Sign Example				
Only Right Turn	<table border="1"><tr><td>type</td><td>restriction</td></tr><tr><td>restriction</td><td>only_right_turn</td></tr></table>	type	restriction	restriction	only_right_turn	 
type	restriction					
restriction	only_right_turn					
Only Left Turn	<table border="1"><tr><td>type</td><td>restriction</td></tr><tr><td>restriction</td><td>only_left_turn</td></tr></table>	type	restriction	restriction	only_left_turn	 
type	restriction					
restriction	only_left_turn					
Only Straight On	<table border="1"><tr><td>type</td><td>restriction</td></tr><tr><td>restriction</td><td>only_straight_on</td></tr></table>	type	restriction	restriction	only_straight_on	 
type	restriction					
restriction	only_straight_on					
U-Turn Only	<table border="1"><tr><td>type</td><td>restriction</td></tr><tr><td>restriction</td><td>only_u_turn</td></tr></table>	type	restriction	restriction	only_u_turn	 
type	restriction					
restriction	only_u_turn					

Turn Restrictions
Represented as a
Relation

Turn Restriction in OSM

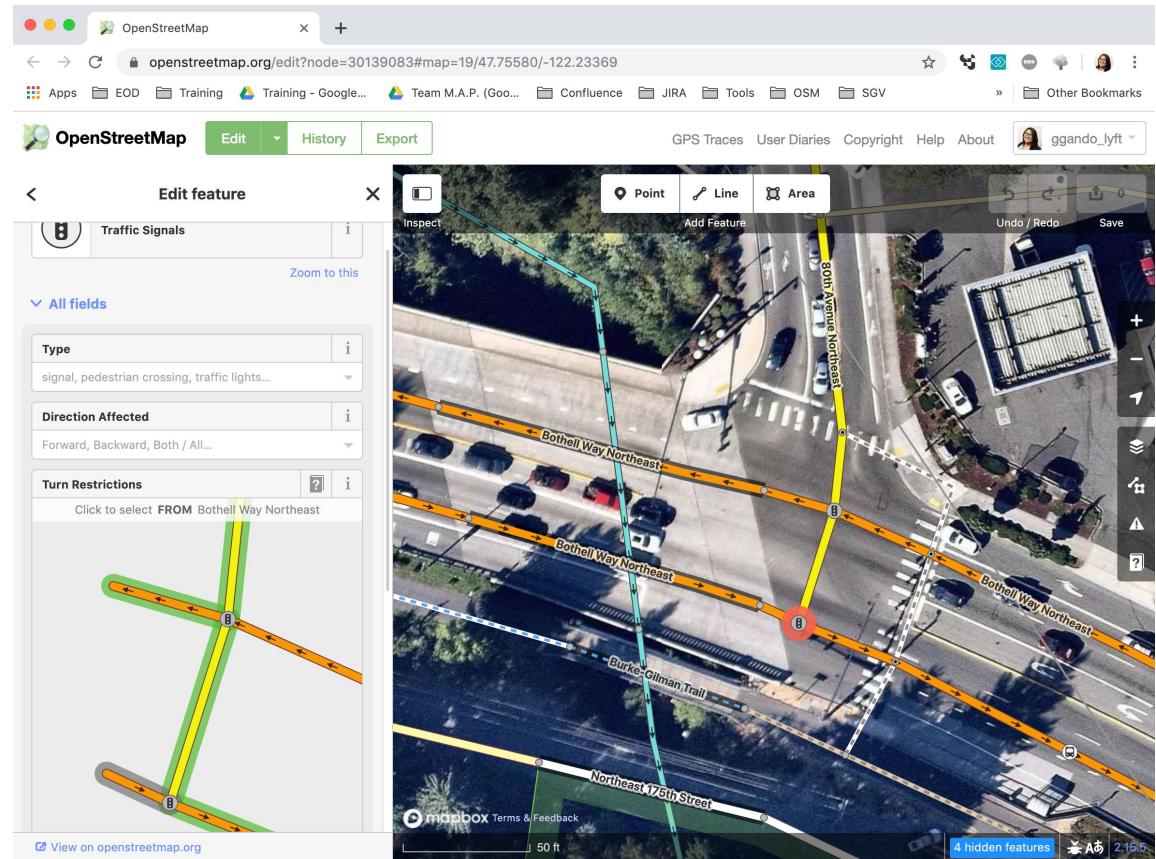
- A relation in OSM is a group of elements
- For a turn restriction it is a group of three elements
 - From
 - Via
 - To
- By using iD Editor to edit turn restrictions, this grouping of three elements will be done automatically once a turn restriction is displayed

Role	Element Type	Description
From	Way 	A way from where the restriction starts (e.g., no right turn from here).
Via	Way  Or Node 	It is important to know that the via point of a turn restriction can be either a via way or a via node. The via member connects the beginning and end ways that represent the specified maneuver.
To	Way 	The end point of the restriction.

Mapping Turn Restrictions in iD Editor

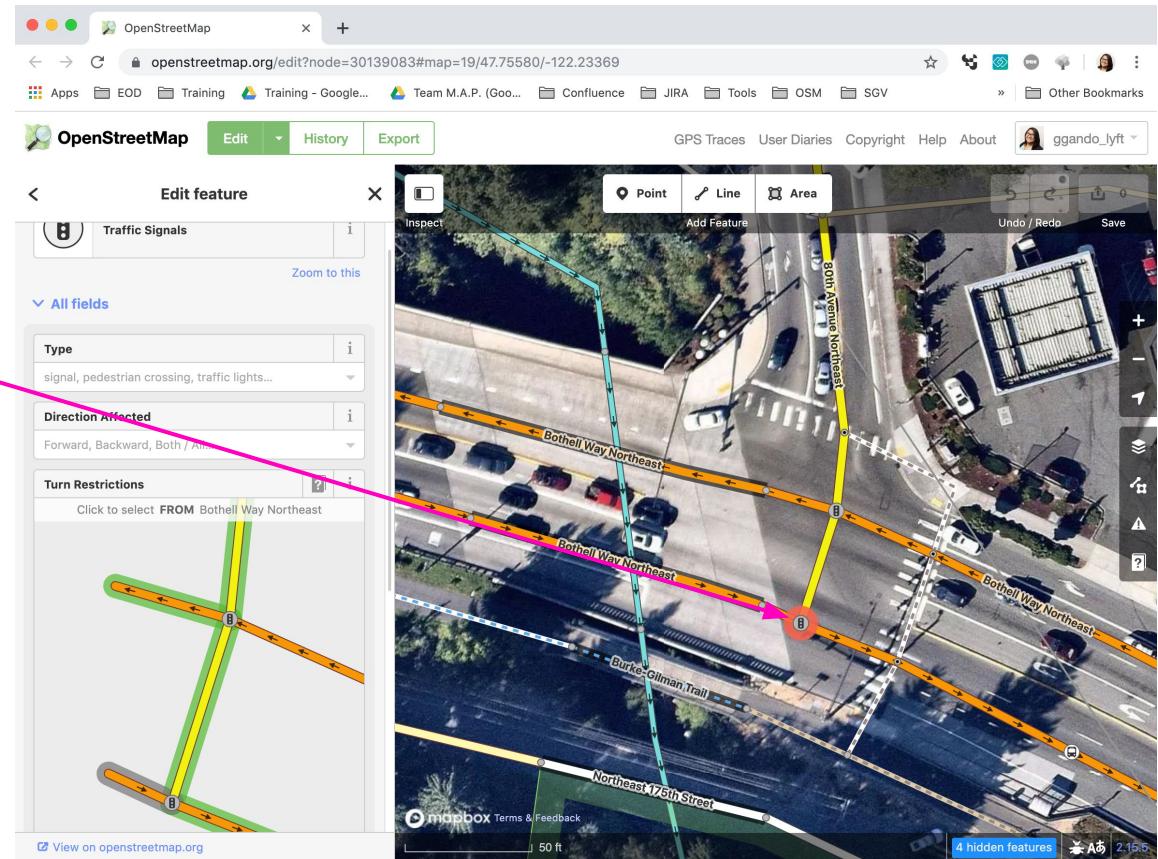
iD Editor

- Use iD Editor to analyze and edit turn restrictions
 - Easy to visualize
 - Can visually edit
- Use any open source imagery to witness paint markings or signs
- Be aware of local laws



iD Editor

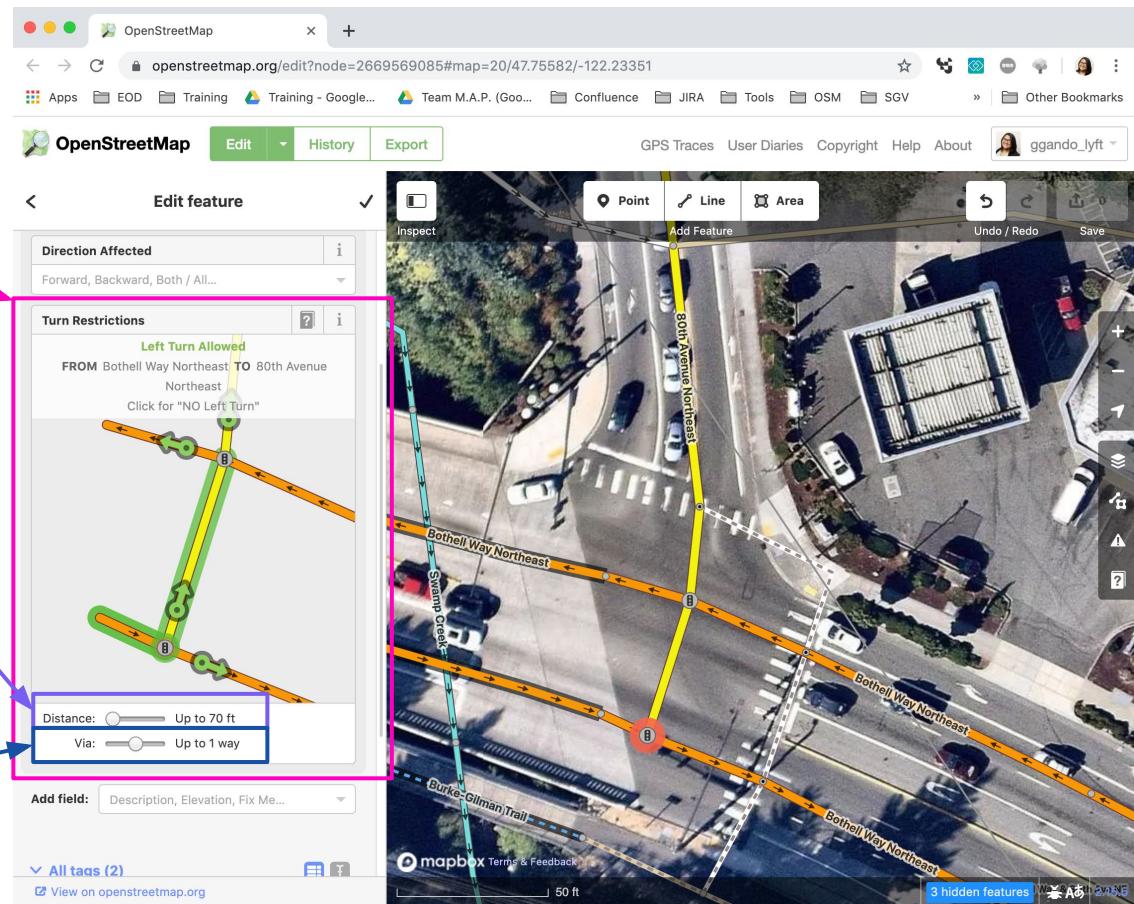
1. Click on the intersection you want to analyze in the map



iD Editor

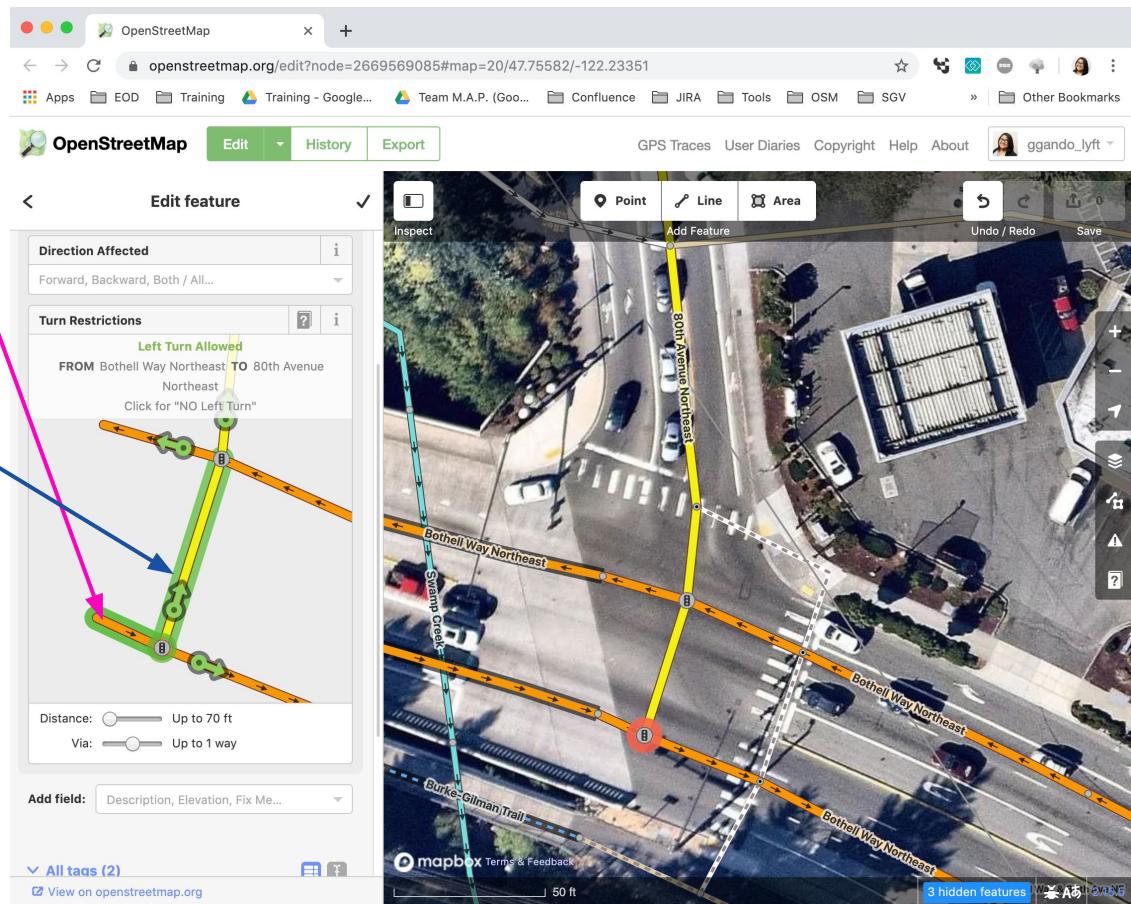
- On the left side panel scroll down to see the Turn Restriction section

- Be able to see all turns possible from the initial way
- If not all turn restrictions are visible change the **Distance**
- If a turn restriction is more than 1 element away change the **Via**



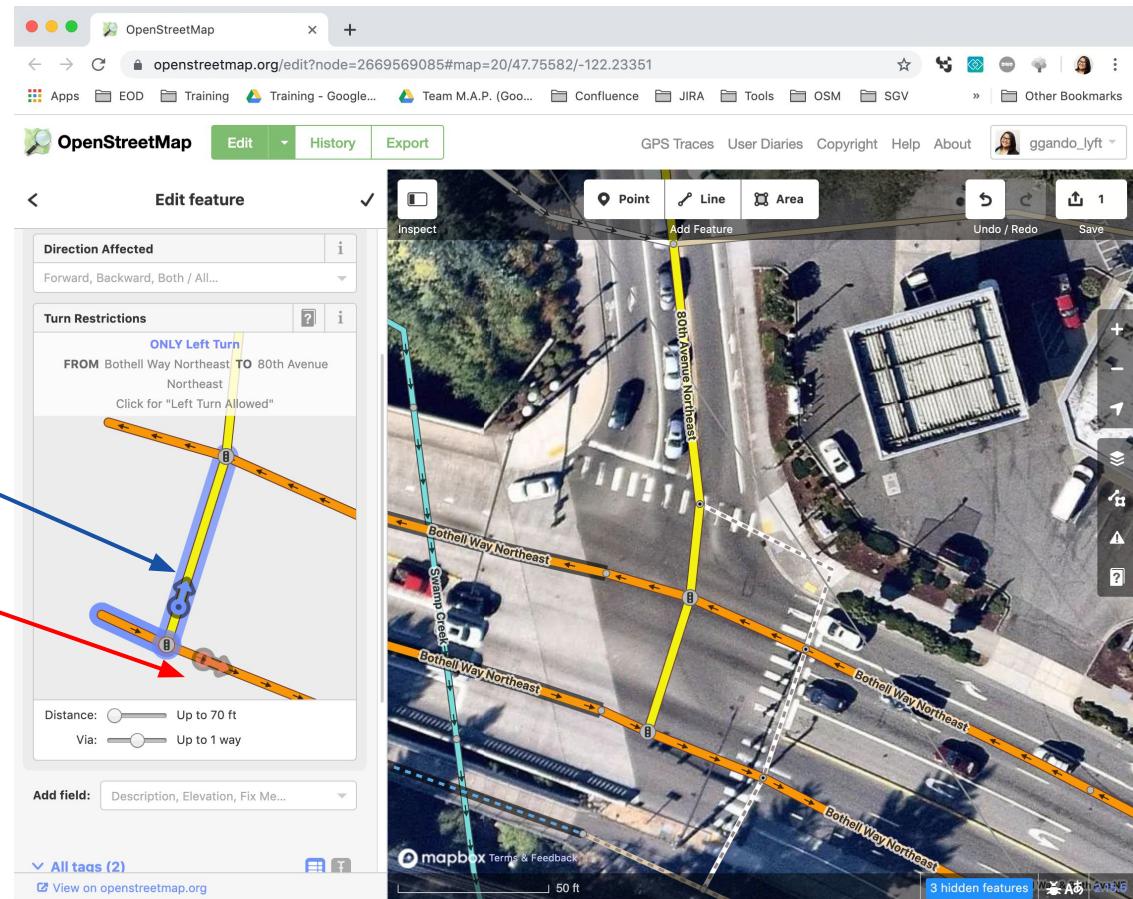
iD Editor

3. Click on Way that Approaches an intersection
 - Be able to see all turns possible from the initial way
4. On the way where the turn would complete click on turn restriction
 - By clicking this turn you will be exposed to the different kinds of turn restrictions possible



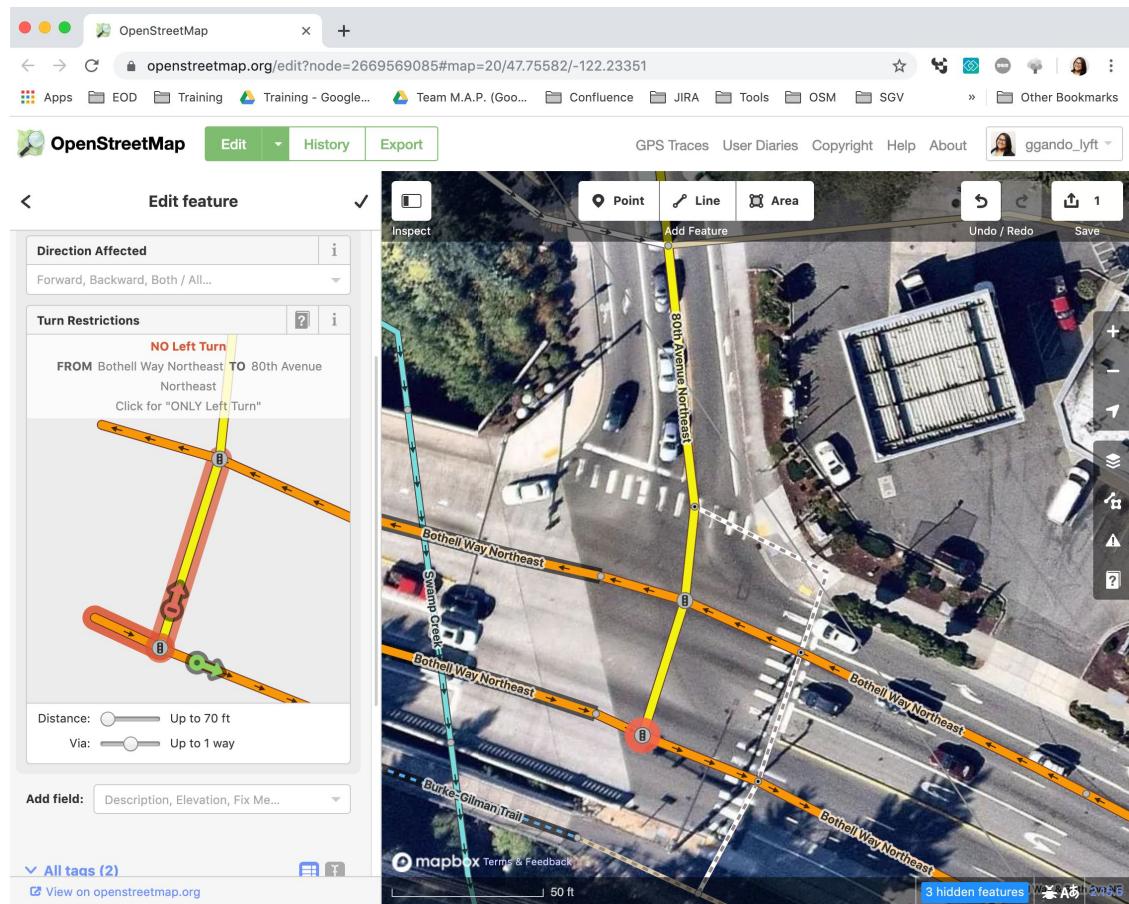
iD Editor

5. Keep clicking on the way that would end the turn to see different turn restriction possibilities
6. Clicked on this way to see
 - a **ONLY Left Turn**
 - o Other turns will updated accordingly



iD Editor

7. Clicked on this way to see a ' NO Left Turn'
 - Way will turn red

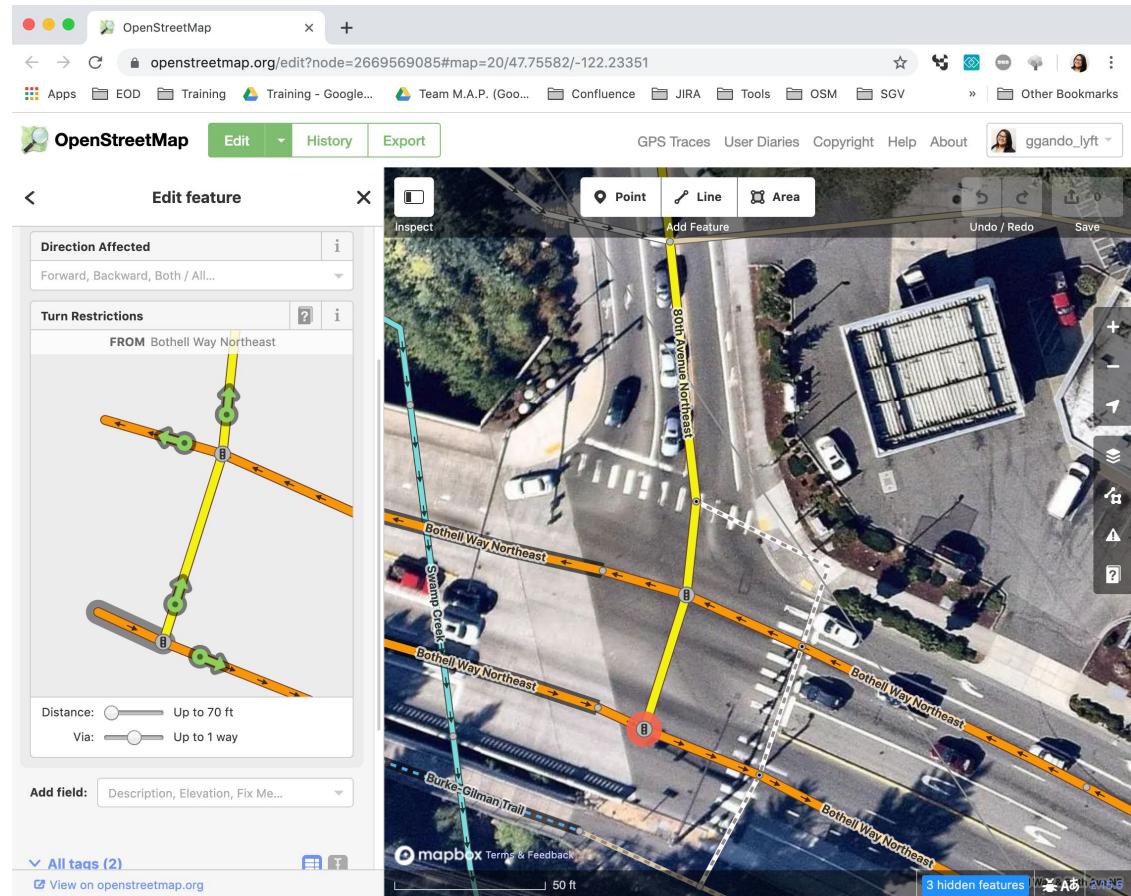


iD Editor

8. Clicked on this way again and turns to a green arrow
 - Back to the original state

Things to Note

- Can click on way again to cycle through different turn restrictions
- If there is already turn restrictions mapped arrows will not be green when you initially look at the map



Maproulete Tagging Scheme

The tags to be added to the task marked as "Not an Issue"

already_exists – TR is already mapped in OSM

one_way_road – sign indicates that street is one-way

no_tr_sign – image in the task doesn't contain TR sign

conditional_tr – TR is a conditional one, e.g. no right turn on red, schedule is attached to the TR, no TR except of taxi etc.

wrong_road – all images do not relate to this intersection approach

wrong_localization – evidence image taken from different road than highlighted in task

other – for any non mentioned above cases

Note: there might be **only one tag** per task since they're mutually exclusive



Example image for wrong_road tag

Conditional restriction

Note: We do not create or edit existing Conditional restrictions according to our Policy, but **only time-based** conditional TR should mapped as usual TR

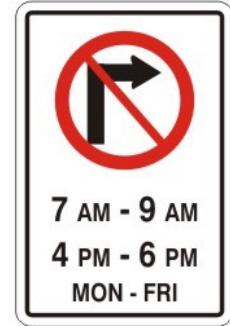
Condition:

Time and date (Mo 06:00 - 24:00; Mo - Fr 07:00 - 19:00, Jan - Mar, etc)

Vehicle usage and user group (doctor, disabled, emergency, female, etc)

Combined conditions (Sa-Su and weight > 7, etc)

More information: https://wiki.openstreetmap.org/wiki/Conditional_restrictions#Restriction_type



Rb-11A~60x90cm





Thank you