Turn Lanes

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Agenda

- Objective
- Turn Lanes
  - What They Are
  - Tags
    - Keys
    - Values
  - Multiple Values Used
  - Directionality
  - ‘none’ as a Value
  - Center Turn Lane
- Summary

Objective

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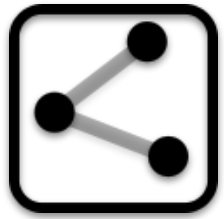
Gain a basic understanding of the basic tags used for turn lanes and how to edit turn lanes.



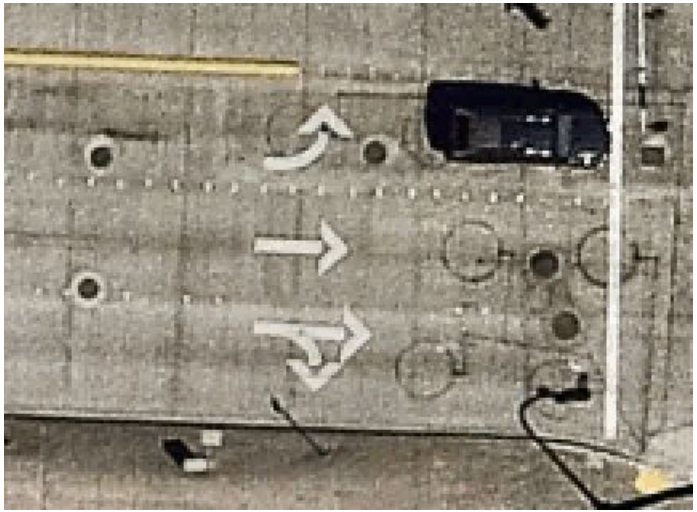
This slide deck goes over general turn lane types on ways in OSM, many more turn type values can be found on [OSM Turn Wiki].

Turn Lanes

Turn Lanes

Often enough at junctions a road will split off into different lanes containing different permissions for going through or turning into a different lane. Whenever they are clearly marked we need to model them.

Turn lanes should **not** be confused with situations where the road instead of being divided into different lanes, branches off completely into a separate way leading to another road. This is known as a link and is modeled in a completely different manner.

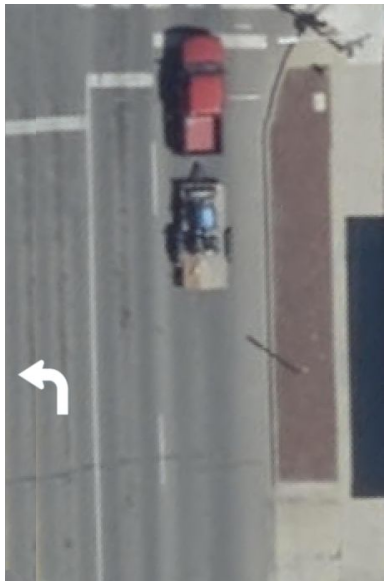


Above: An example of three turn lanes.

Turn Lane Tags Keys

- The turn lane tag is used to document the possible turns a specific lane could take. This is based off of by painted road markings or signage. **NOT** what is analyzed to be a possible turn.
- If '**turn:lanes**' is used no other key on turn lane tags is needed

Key	Explanation
turn:lanes	Used on one-way roads when you don't have to specify directionality
turn:lanes:forward	Used on bi-directional roads, to indicate the lanes going in the same direction as the inherit lane direction
turn:lanes :backward	Used on bi-directional roads, to indicate the lanes going in the opposite direction as the inherit lane direction
turn:lanes:both_ways	Used to indicate the turn lanes on lanes where traffic flows both ways, such as center left turn lanes.



Tags for the example above

Key	Value
turn:lanes:backwards	left|none|none

Example of a bidirectional road and its turn lane tags, the lanes in the forward direction are not visible. More explanation on the values in a upcoming slide.

Turn Lane Tags Values

- The values in the table below are all specific to a lane. The use of the vertical bar | will help indicate the specific lane.
- The values left, right, through all need to be supported by painted road markings or signage.
- There are more values than these 4 seen below
    - Check the [OSM Turn Tag Wiki]

Value	Explanation
left	lane for turning left
right	lane for turning right
through	lane for going straight through
none	no specific turn is being indicated

Example

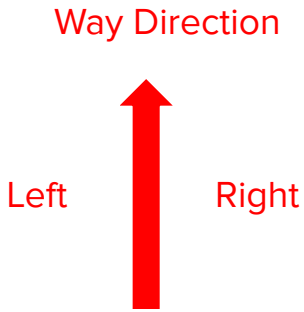
Tags for the example above

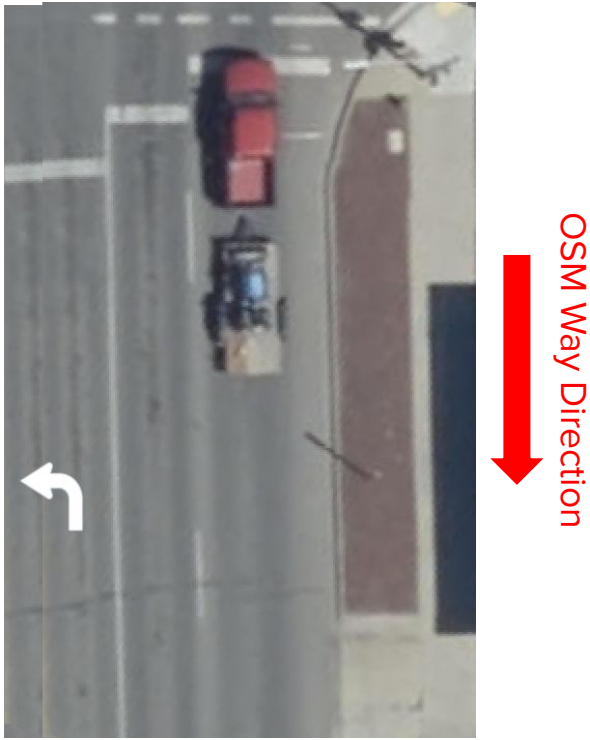
Key	Value
turn:lanes	left|through|right

*All recorded on the same **turn:lanes** key, though the values for each individual lane are separated by a vertical bar*

Left to Right

Values are recorded in the order that they actually appear on the road going from left to right (left and right in reference to the way direction).





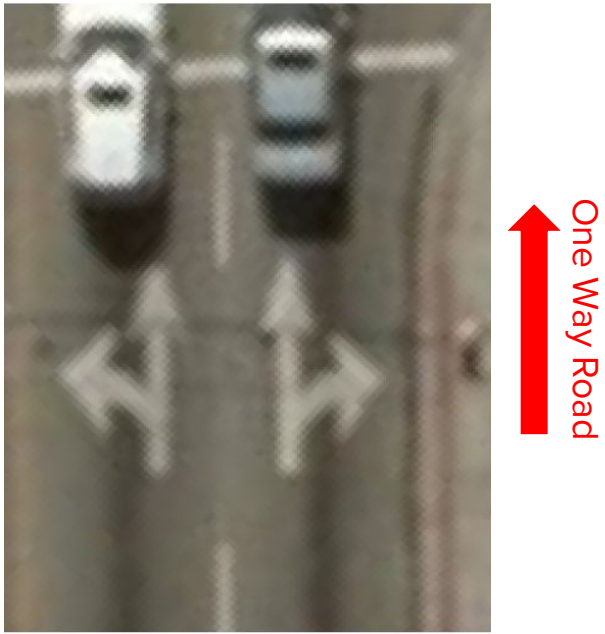
Tags for the example above

Key	Value
turn:lanes:backwards	left|none|none

Multiple Values Within a Lane

Keep in mind that some lanes may allow for multiple values.

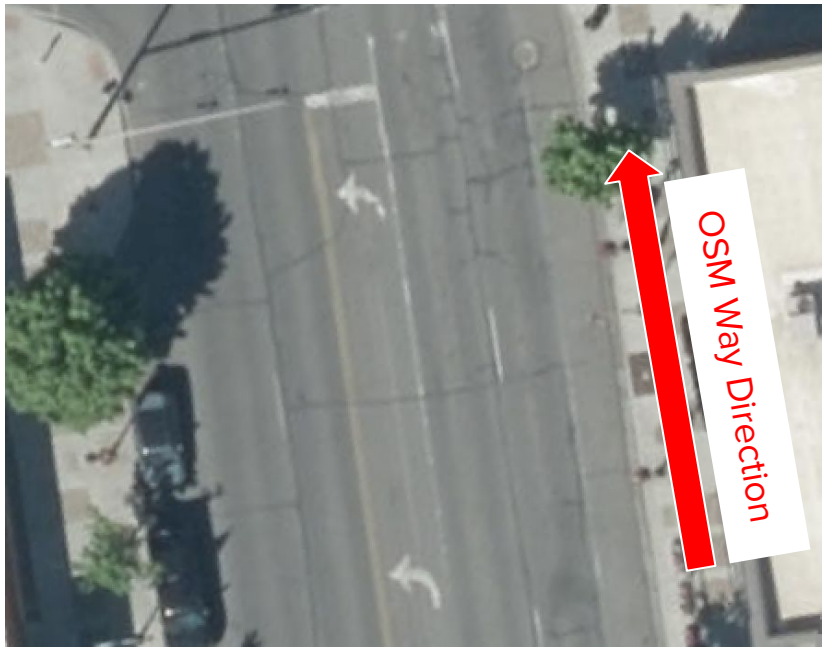
In this case such values *within a lane* are divided with a semicolon rather than with a vertical bar, though the latter still divides the separate lanes.



Tags for the example above

Key	Value
turn:lanes	left;through|through;right

Using Blank Values Instead of ‘none’



Key	Value
left	5
lanes:forward	3
lanes:backward	2
turn:lanes:forward	left|none|none

Alternatively instead of writing none, you can also leave the spaces between the vertical bars blank

ie the turn tag above would’ve been written as :

Key	Value
turn:lanes:forward	left||

Center Turn Lane Example

The center left turn lane will always turn left.

* It is not necessary to add any other turn lane tags, because they would essentially be ‘none|none’ which does not add information to the map.

Key	Value
lanes	5
lanes:forward	2
lanes:backward	2
lanes:both_ways	1
turn:lanes:both_ways	left

Examples

Example 1

Key	Value
lanes	4
lanes:forward	2
turn:lanes:backward	2
turn:lanes:forward	left;through| right

Example 2 (only applying above the white line)

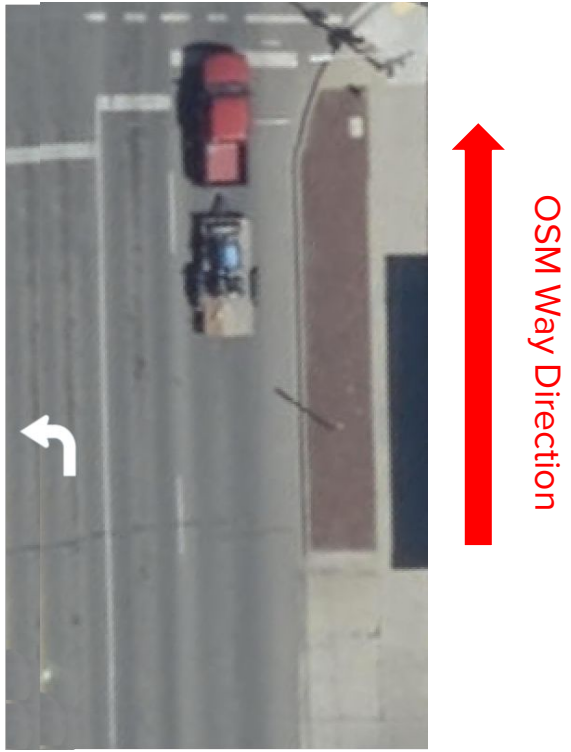
Key	Value
lanes	5
lanes:forward	2
lanes:backward	3
turn:lanes:backward	left|through|right

‘none’ Value

Whenever you use the **turn:lanes:** key, you have to account for **all** of the lanes going in the relevant direction.

Not all of the lanes on the segment may have any sort of turn markings.

If the lane has no road markings indicating turn direction use the **none** value, even if you already know there are implied turn restrictions such as a middle lane, despite having no arrows, only being able to go through.



turn:lanes:forward=left|none|none

Example 3

Key	Value
lanes	3
lanes:forward	1
lanes:backward	2
turn:lanes:backward	left|through;right

* It is not necessary to add the '**turn:lanes:forward**' tag. If you did add the tag it would be 'turn:lanes:forward=none' which would not add data to the OSM map.

Summary of Turn Lane Tags

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Key Tags

- Not all keys are necessary to tag the turn lane tags
- If the value of the key is all ‘none’, not necessary to add the key
- If ‘**turn:lanes**’ is used no other key on turn lane tags is needed
- Lane count tags are great to map alongside with turn lane tags

Key	Explanation
turn:lanes	Used on one-way roads when you don't have to specify directionality
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turn:lanes:both_ways	Used to indicate the turn lanes on lanes where traffic flows both ways, such as center left turn lanes.

Value Tags

- The values in the table below are all specific to a lane. The use of the vertical bar will help indicate the specific lane.
- When seperated by a vertical bar, values are read left to right, facing the direction that traffic flows for the set of lanes.
- The values left, right, through all need to be supported by painted road markings or signage.

Value	Explanation
left	lane for turning left
right	lane for turning right
through	lane for going straight through
none (or blank)	no specific turn is being indicated

Thank you

June 1, 2020