

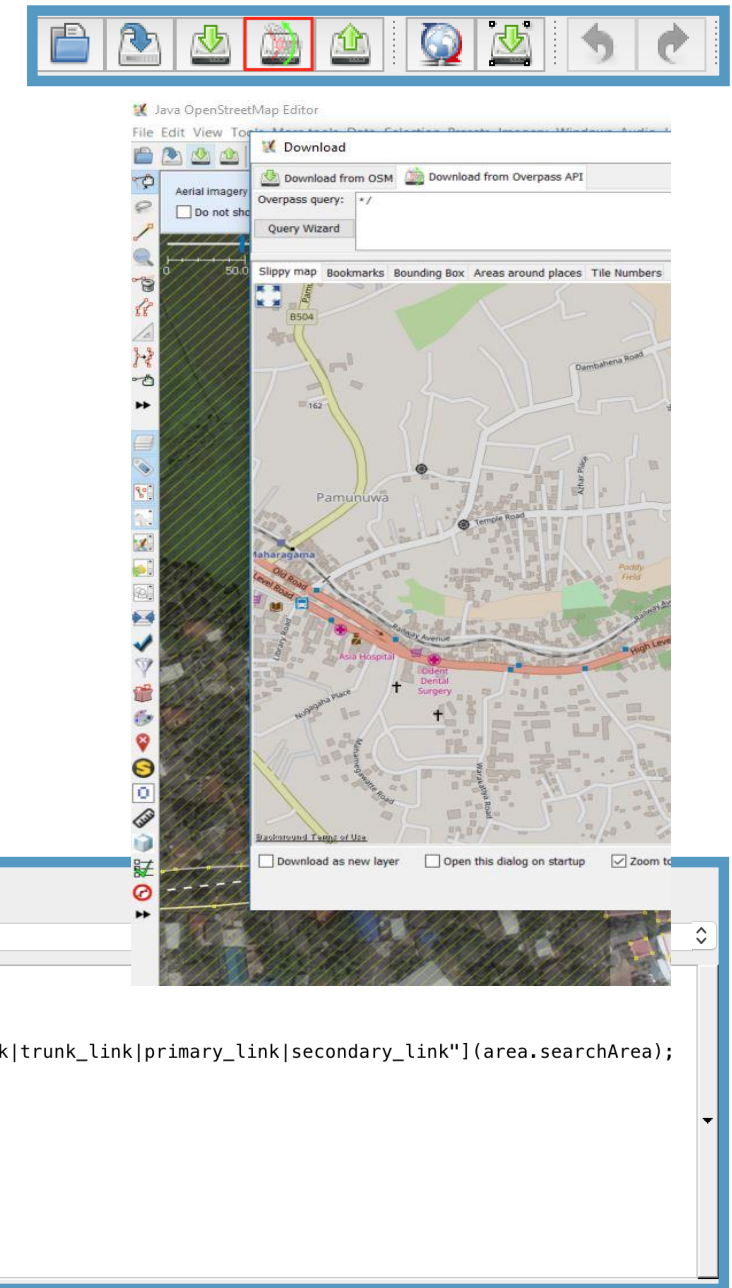
Overpass Queries

Queries

Introduction to Overpass

- Larger areas have too much data to be downloaded normally
- Overpass Queries allow us to download OpenStreetMap data subsets selectively (i.e. only highways)
- The Overpass API is a separate method to access OSM data
[Overpass Wiki Page](#)
- Theoretically, you can download up to 10 million elements via queries
- Use **option + shift + down arrow** to open the Overpass window in JOSM

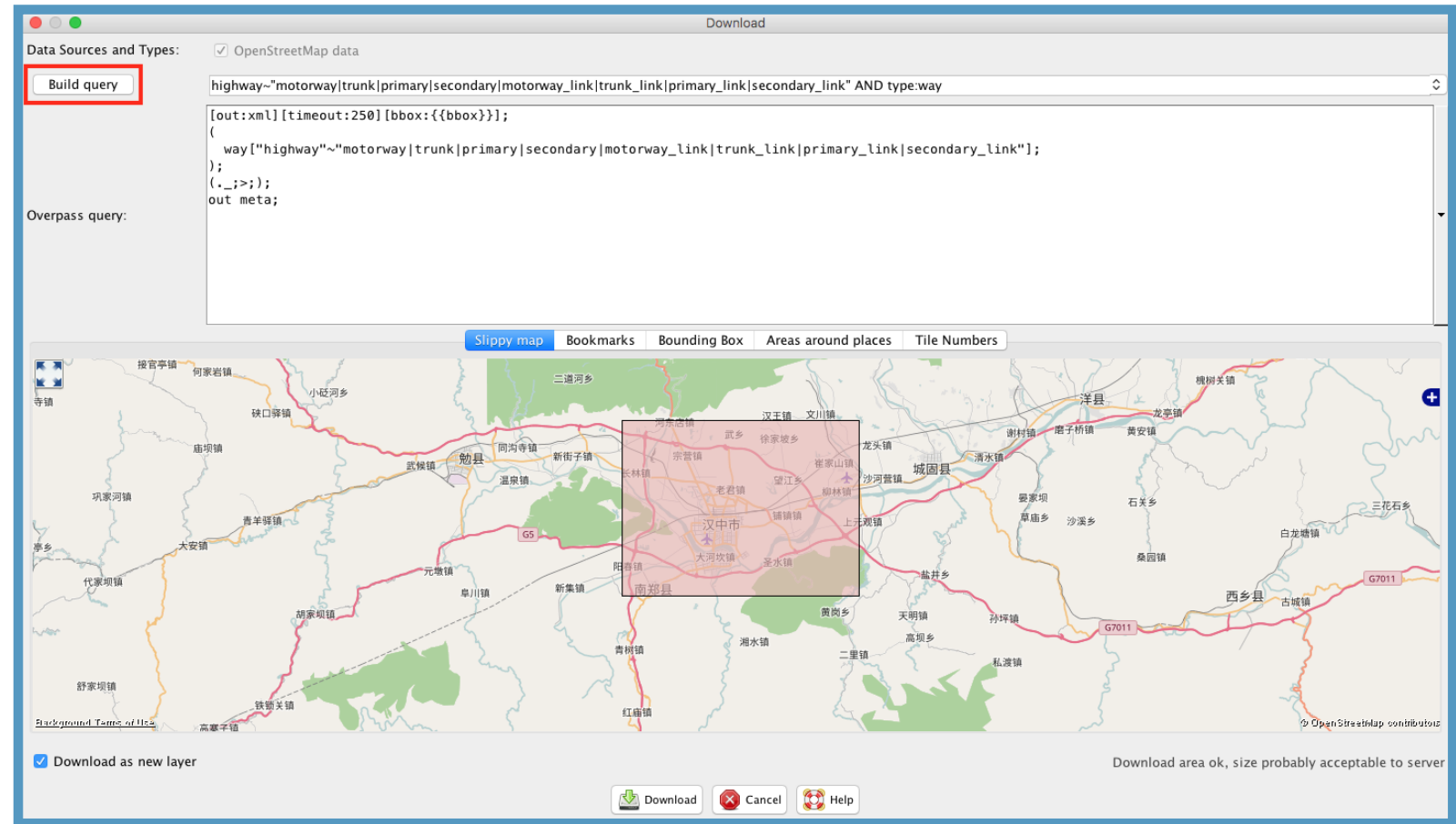
- [Query Examples](#) (OSM Wiki)
- [Overpass Turbo](#) (browser-based)



Queries

Query Builder

- This step is not required to create a query
- The “Build query” button translates your text into the API language
- Useful for simple queries
- The “Build Query” button is **required** to generate a query automatically without a custom query entered in the box.
(A blank query box results in everything downloading.)



Exercise:
Use the “Build query” button

Type: highway=*

Queries

Bounding Box High Classification Highway Query

Data Sources and Types: ☒ OpenStreetMap data

Build query

Overpass query:

```
[out:xml] [timeout:250] [bbox:{{bbox}}];
(
  way["highway"~"motorway|trunk|primary|secondary|motorway_link|trunk_link|primary_link|secondary_link"];
);
(._;>);
out meta;
```

[out:xml] [timeout:250] [bbox:{{bbox}}];

Duration of query before the process cancels

User-generated variable

way["highway"~"motorway|trunk|primary|motorway_link|trunk_link|primary_link"];

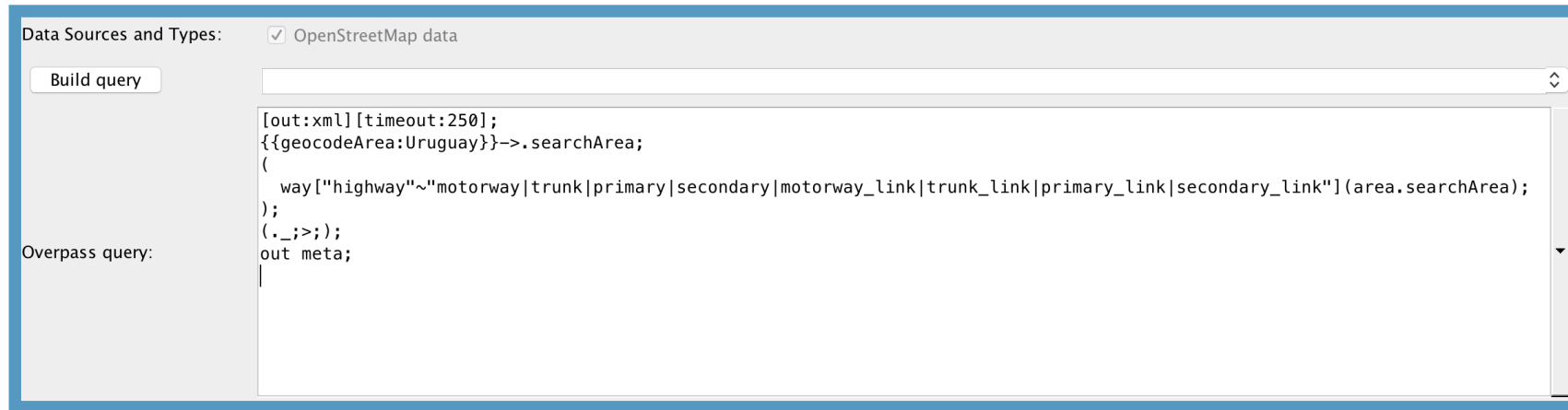
Element Type

Key of feature

List of feature values to download, separated by vertical pipes

Queries

Geocoded Area High Classification Highway Query



`{{geocodeArea:Uruguay}}->.searchArea;`

Command which defines area boundary (city, country, etc) to download within

Defined variable to be used later in query

`way["highway"~"motorway|trunk|primary|secondary"](area.searchArea);`

Element Type

Key of feature

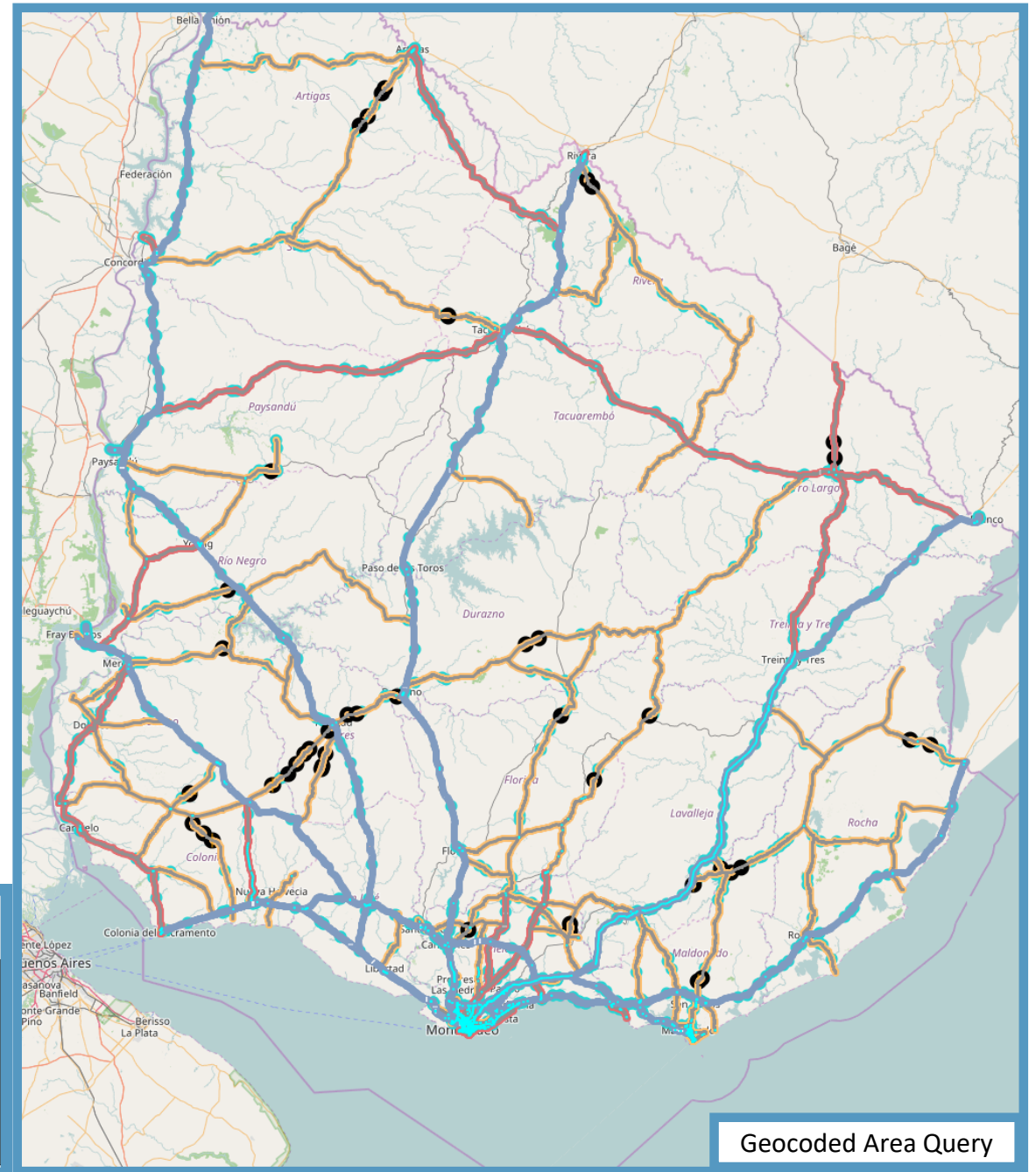
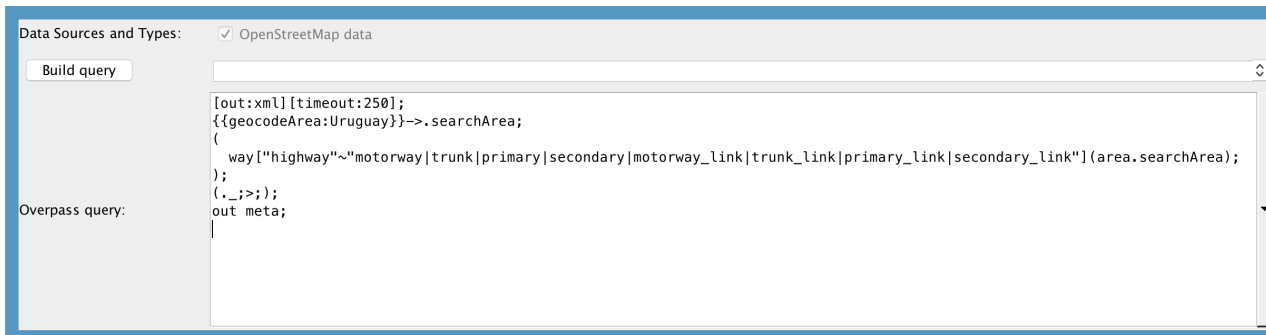
List of feature values to download, separated by vertical pipes

The variable which now limits the area to download

Queries

Result from Query

- The Overpass query results in all the high classification highways we want constrained to the Uruguay boundary
- Easily replicated for the same or other locations
- Be careful: **Connected features are NOT downloaded with high classification highways**



Geocoded Area Query

Overpass Exercise

Overpass Turbo

- New Hires are on the training database which cannot use Overpass
- Overpass Turbo runs on a very similar query language to Overpass found in JOSM
- Always double-check the timeout amount (it should be 250)

Query

```
[out:json][timeout:2500];
{{geocodeArea:Seattle}}->.searchArea;
(
way["highway"~"motorway|trunk|motorway_link|trunk_link"] (area.search
Area);

);
out body;
>;
out skel qt;
```

Link in Overpass Turbo

<http://overpass-turbo.eu/s/qBo>

Exercise:

Use the query to download “London”

Queries

Tips for Queries

- The layout of the query is very important
 - Query is executed from top to bottom
 - The **semicolons are required**
- Don't forget to edit the timeout (at the top) from 25 [seconds] to 250 or else locations with a lot of data will error out
- Store common queries in a text editor for easy reuse

Selection ▾	Function ▾	Description ▾	Example ▾
=	equals	used to search for exact feature	highway=trunk
~	contains	used to search for similar features; 'contains' queries	name~"eattle"
:	specific feature type	used in combination to filter by feature type	highway=trunk and type:way
*	all	used to search for all feature types of a key	highway=* and type:way
AND	operator	used to refine queries	ref~"OSM" and type:way
OR	operator	used to refine queries	name="a street" or ref="a street"
IN	operator	used to specify location	amenity=restaurant in "Seattle, Washington"
Around	operator	used to search near locations	amenity=pub around "Seattle, Washington"

Old queries can be accessed via these menus (highlighted in red)

The screenshot shows the OpenStreetMap query interface. At the top, there is a dropdown menu for 'Data Sources and Types' with 'OpenStreetMap data' selected. Below this is a 'Build query' button. To the right of the button is a text input field. Below the input field is a text area containing a query: `[out:xml][timeout:250]; {{geocodeArea:Uruguay}}->.searchArea; (way["highway"~"motorway|trunk|primary|secondary|motorway_link|trunk_link|primary_link|secondary_link"] (area.searchArea);); (._;>); out meta;`. The dropdown menu and the text area are highlighted with red rectangles.