Sketchbook
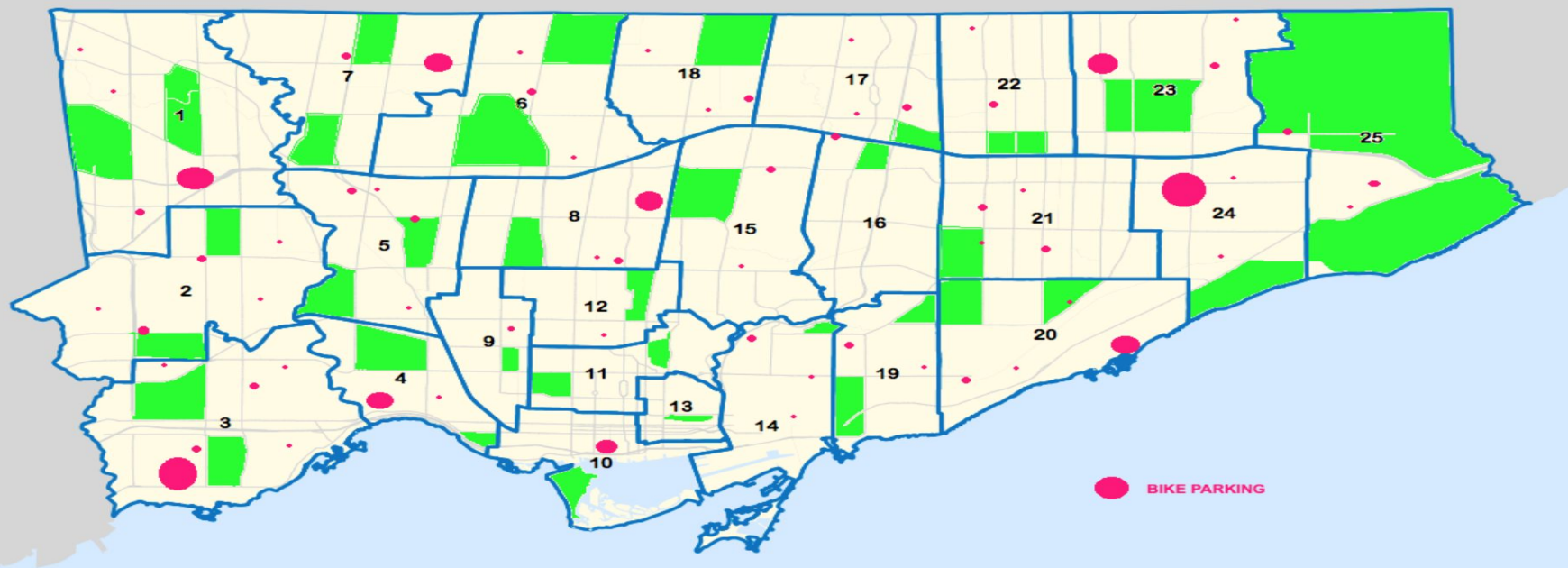
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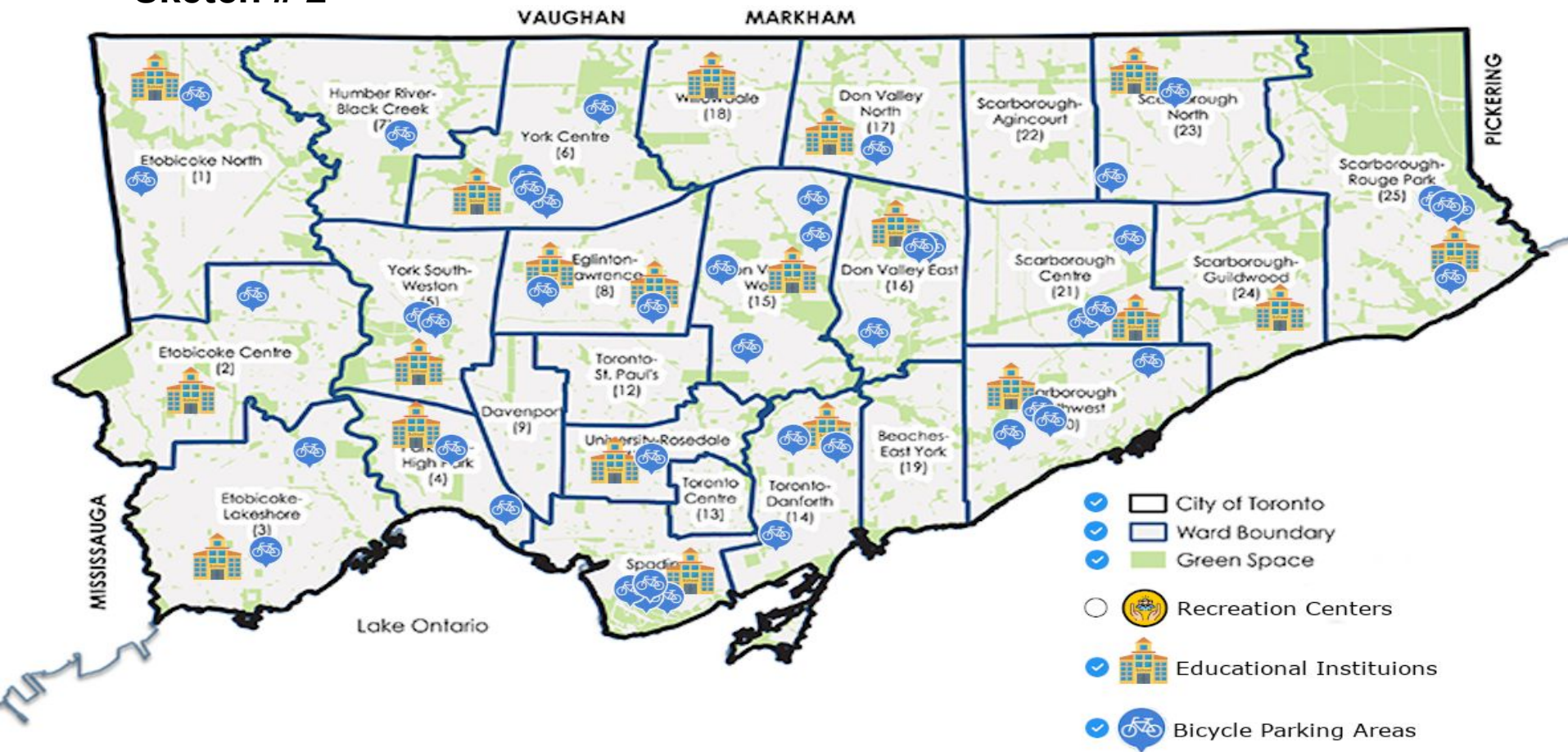
Sketch # 1

Positives - Sketch # 1

- Very easy to distinguish boundaries for different wards
- Very easy to identify parks in green
- Very easy to see where there is bike parking in each ward
- Simple and intuitive enough for users to understand how this map works

Drawbacks - Sketch # 1

- Hard to tell what type of bicycle parking is available. More details needed somehow.
- Does not show if bicycle parking is full or not which could be a very interesting interactive tool
- Not enough text to provide more description of wards and bicycle parking
- Lack of interactivity which can perhaps be introduced through a tooltip when you hover over or other encodings.
- Currently you can only see boundaries at the ward/municipalities level. Users may want to see boundaries even more granular at the community level.

Sketch # 2

Positives - Sketch # 2

- Able to show the disparity between bicycle areas in all wards.
- Checkboxes allow viewers to interact with the map and compare wards with relevance to bicycle parking areas.
- Wards are separated by boundaries and have their names written on them for ease of recognition.
- The icons are self explanatory and straightforward which negates the need for informative labels.
- Icons can also be stacked on top of each other in a formation to show the multitude of bicycle racks available at a spot.

Drawbacks - Sketch # 2

- Can become somewhat confusing with more checkboxes ticked
- Possible to overload the system if the data is too large resulting in a buggy/laggy visualization
- Doesn't display population density for each ward and therefore can be misleading
- Vague in terms of specific information about bicycle parking spots (type of parking/availability etc)

Sketch #3
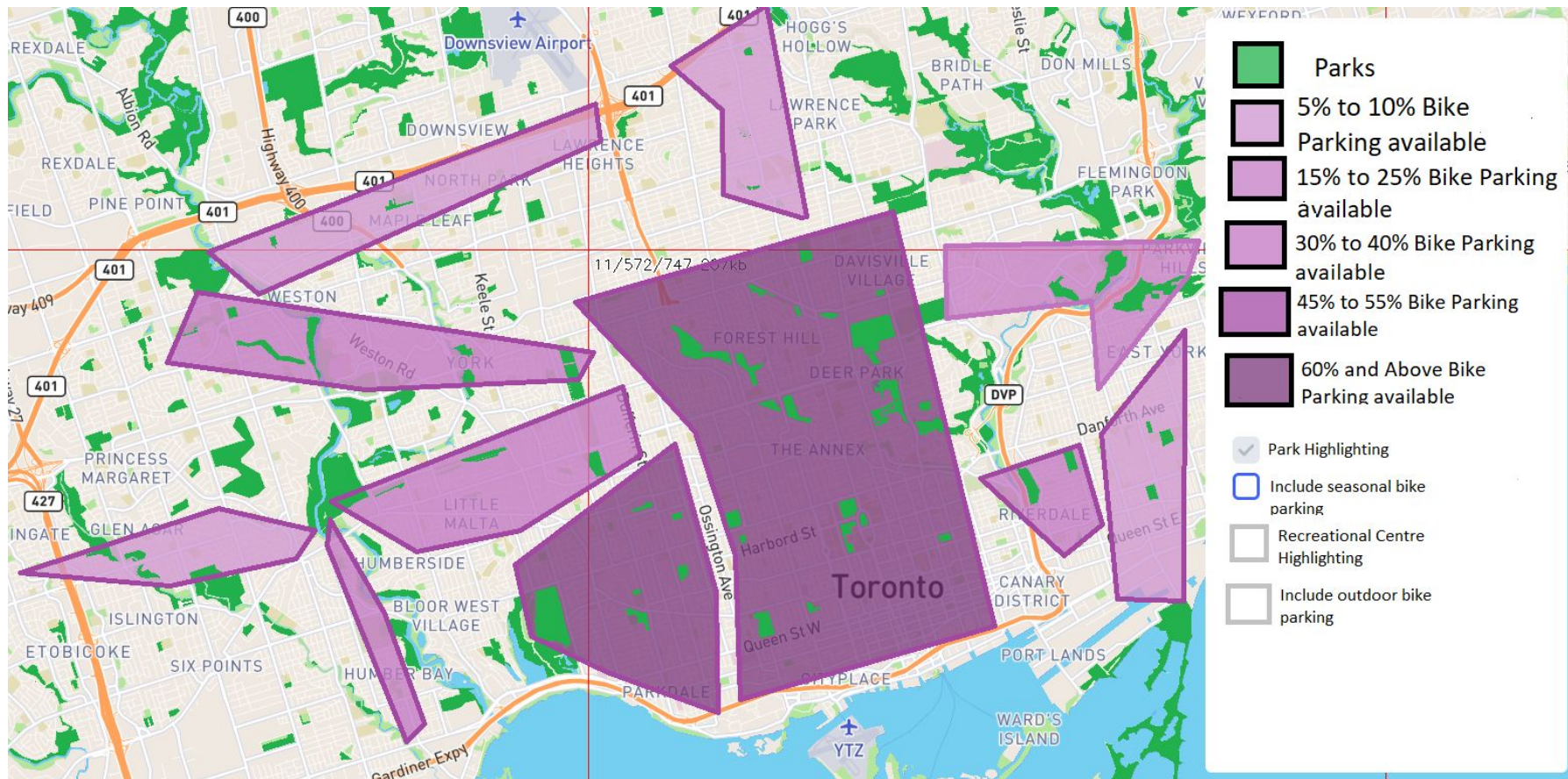
The Visualization

- **What** - A geospatial map representation of Toronto with a purple lumination scale for the density of bike parking available relative to the specific region/ward. There is also interactivity for the user in terms of the display including parks and recreational centre highlighting as well as the purple density bit scale to darken/lighten based on the inclusion of seasonal and/or outdoor parking.
- **Why** - To map out and identify wards with a need for increased bicycle parking based on the existing densities of bicycle parking spread around the city with emphasis on the need for bike parking growth around target areas such as parks and recreational centres as well as taking into account outdoor and seasonal bike parking.

The Visualization

- **How** - Toronto mapped out geospatially using the longitude, latitude pairs then colour coding a purple luminosity based density scale of the amount of concentration of bicycle parking available in the ward/region relative to bike parking that fits within the confines of an area of longitude, latitude pairs that make up a ward. The results could be filtered through user interactivity to include outdoor and/or seasonal parking as well as highlighting recreational centres and parks.
- **Dataset Type:** Geometry (Spatial)

The Positives

- Luminosity based colour coding scale that doesn't conflict with existing colours that appear on the map
- The ability to highlight colours on top of the bike parking density colour scale to emphasis on parks and/or recreational centres if the user is interested in that area of the investigation
- User interactivity with filters for highlighting and including/excluding datasets such as outdoor and seasonal parking
- A holistic visual representation of Toronto for *exploration* with regards to the data through a visual map as opposed to presenting the raw longitude, latitude pairs or displaying a quantity calculated measure for the concentration of bike parking available in various regions. Maps are easier to see the differences geospatially where areas are spread thin, especially when taking into account the relative locations of recreational centres and parks.

Drawbacks

- Could overload the user with the amount of colours from the map and the colours coming from the park, recreational centre highlighting as well as the density of parking luminosity scale.
- Might be difficult to distinguish between user interactivity capabilities such as park and recreational centre highlighting and including seasonal and outdoor bike parking with the legend featuring the actual colour coding used for the density of bike parking (purple) and parks (green).
  - Might be ideal to make the Legend separate from the user interactivity filter features
- The map is too detailed, areas such as highways does not need to be mapped out, bicycles would not be used to travel these routes as the target user is bicyclists.
- Labelling and splitting the map based on wards would be more beneficial towards showing problem wards to the specific stakeholders (ward MPs).