

Quinpool Road Functional Study

Study Objective

Halifax Regional Municipality (HRM) is seeking a proposal for a Quinpool Road redevelopment strategy, based on the principles of "Complete Streets" design philosophy.

Study Area

Quinpool Road from Preston Street (west) to Robie Street (east).

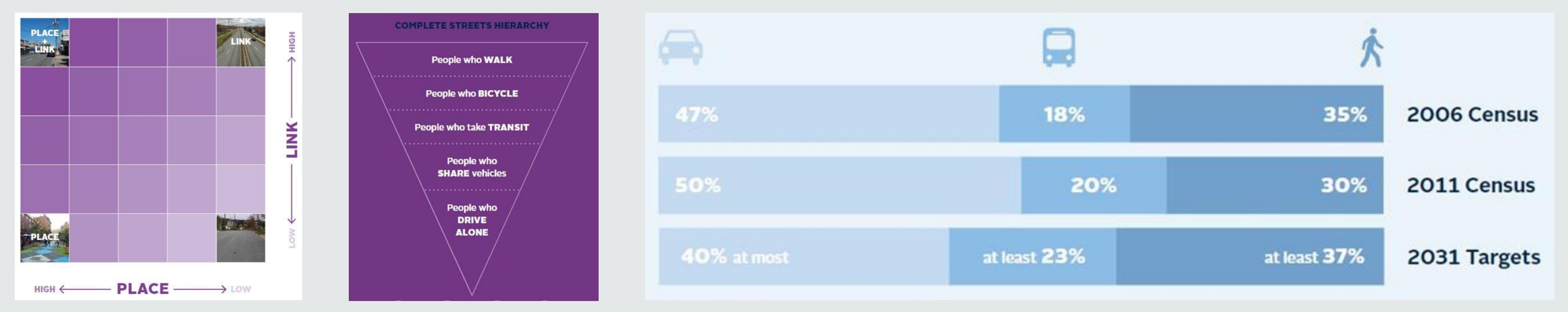
Project Deliverables

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| <p>Phase 1 – Fall 2018</p> <ul style="list-style-type: none"> Literature review Three alternative cross-sections Cross-section evaluation criteria Traffic modelling (deferred to Phase 2) Recommendation of preferred alternative | <p>Phase 2 – Winter 2019</p> <ul style="list-style-type: none"> Plan and profile drawings Traffic and lane markings plan Cross sections Details Storm drainage design Construction management plan Construction cost estimate |
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Complete Streets Design Philosophy

HRM has adopted Complete Streets as a recognized design approach in the Integrated Mobility Plan (IMP). The IMP emphasizes the following roadway design approaches:

- Consideration of the roadway's function as both a Link and a Place
- Reversing the needs analysis process, beginning with pedestrians and ending with private vehicle users
- Influencing a societal shift toward more sustainable methods of transportation



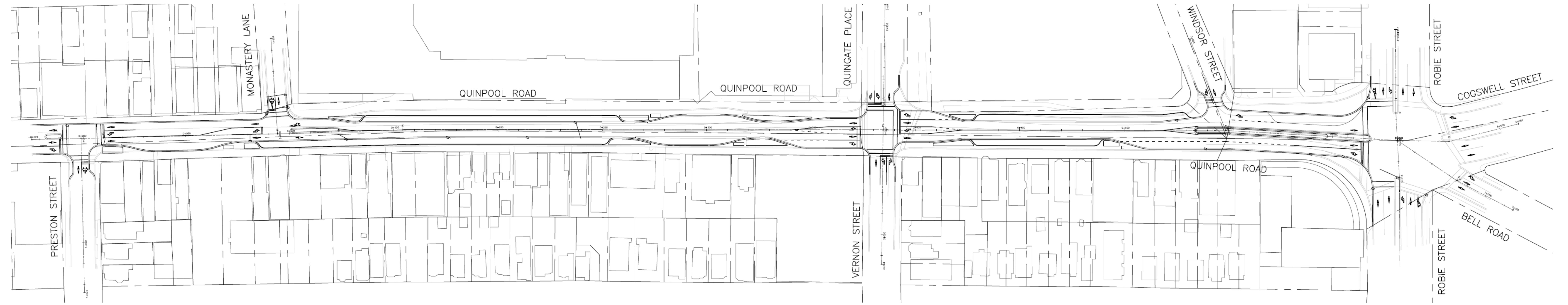
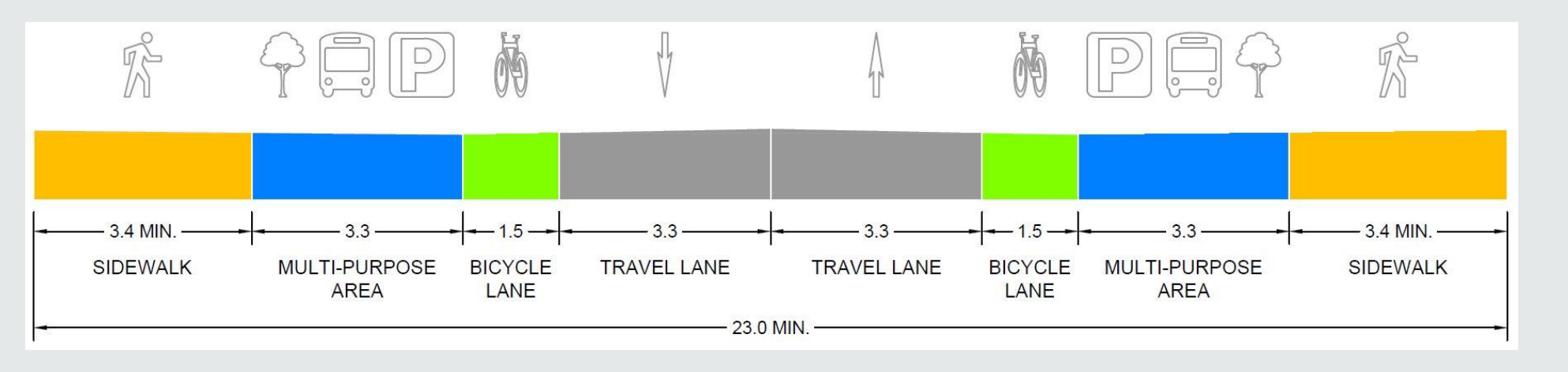
Above figures from IMP, 2017.

Selection of Cross Section

The alternative cross sections proposed in Phase 1 of this study were analyzed based on level of service and safety pertaining to each roadway user group, as well as construction and operation costs.

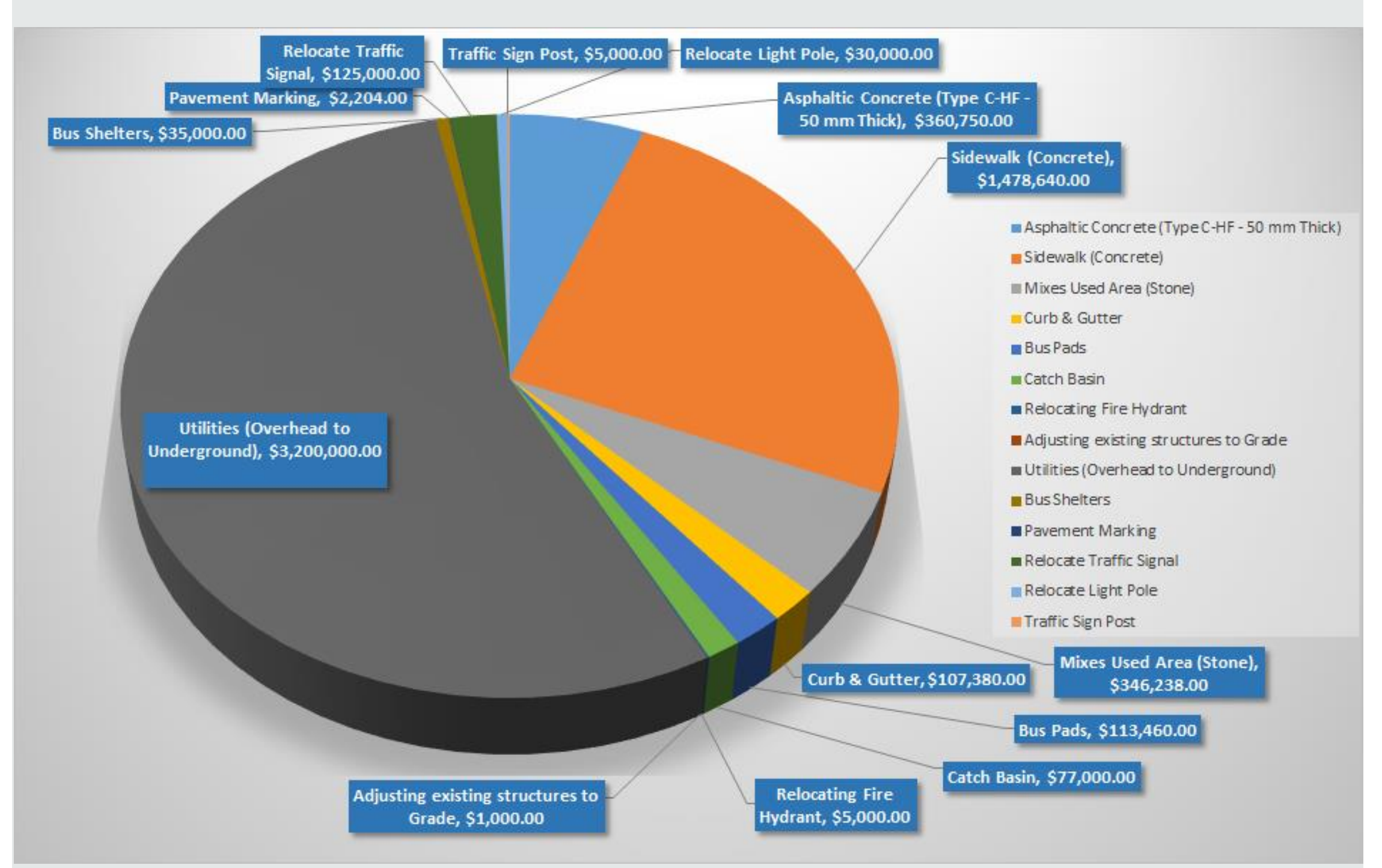
The Multi-Use Area concept was selected as the preferred alternative for the study area. It aims to provide functional space for all users as well as steady traffic flow.

Bicycle lanes were removed from this concept based on feedback received from HRM in December 2018.



Cost Estimate

The construction costs associated with implementing this design concept are outlined as follows:



Traffic Analysis

Quinpool Road is a vital corridor in the HRM transportation network. Through the Link designation, the Complete Streets design philosophy recognizes the ongoing needs of motorists. Detailed traffic analyses have been conducted to verify that the proposed roadway conditions provide an adequate level of service for motorists.

- PTV Vistro software was used to analyze intersection performance for current and proposed roadway conditions
- PTV Vissim software was used to analyze traffic flows for current and proposed roadway conditions
- Current traffic conditions are based on peak hourly counts provided by HRM
- Resulting queue lengths are reflected in the proposed intersection layouts
- Signal optimization was used to minimize traffic delays

Roadway Condition	Existing	Proposed Existing	Proposed Target (2031)
Preston Street	14 secs	35 secs	23 secs
Vernon Street / Quingate Place	19 secs	28 secs	19 secs
Robie Street	150 secs	212 secs	152 secs

References

- City of Kitchener. "Kitchener Geohub Traffic Volumes." [openkitchenergis.opendata.arcgis.com](http://openkitchenergis.opendata.arcgis.com/datasets/traffic-volumes/data). (accessed November 25, 2018).
- Complete Streets for Canada. "King Street Kitchener Ontario." [completestreetsforcanada.ca](http://completestreetsforcanada.ca/examples/king-street-kitchener). (accessed November 25, 2018).
- IMP, 2017. Integrated Mobility Plan. Halifax Regional Municipality, 1841 Argyle St., Halifax, NS, 182 pp.
- PCSDH, 2012. Philadelphia Complete Streets Design Handbook. City of Philadelphia, 1400 John F Kennedy Blvd., Philadelphia, PA, 182 pp.
- Region of Waterloo. "Region of Waterloo Open-Data Traffic Volumes." <https://rowopendata-rmw.opendata.arcgis.com/datasets/KitchenerGIS::traffic-volumes/data> (accessed November 25, 2018).