PLANNING AROUND RAPID TRANSIT STATIONS (PARTS)

PHASE 1: EXISTING CONDITIONS AND BACKGROUND INFORMATION
VOLUME 2

December 2013
This report is supplemented by

Planning Around Rapid Transit Stations (PARTS) Volume 1: Project Plan and Background Report

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Table of Contents

1.0 Introduction ................................................................................................................. 1
1.1 Existing Conditions Explored and Captured ................................................................. 1
   Digital Three-Dimensional (3D) Model ............................................................................. 1
   Demographics ................................................................................................................. 1
   Regulatory Framework ................................................................................................... 1
   Built Form/ Development Pattern .................................................................................. 2
   Community Facilities, Landmarks, Parks and Open Space ............................................. 2
   Natural Heritage System ................................................................................................. 2
   Flood Plains .................................................................................................................... 2
   Wellhead Protection Areas ............................................................................................... 2
   Transit Network & Ridership .......................................................................................... 2
   Street, Cycling and Multi-Use Pathway Network and Walkshed .................................... 2
1.2 Existing Conditions Previously Studied, Currently under Study or Requiring Further Study ........ 3
   Market Analysis ............................................................................................................. 3
   Parking Study ................................................................................................................ 3
   Cultural Heritage Assessment ....................................................................................... 3
   Sanitary Sewer Capacity Analysis ................................................................................ 3
   Schneider Creek Floodway Modeling Update and Regulation Limit ............................. 3
   Hidden Valley Land Use Review ................................................................................... 3

2.0 Existing Condition Profiles .......................................................................................... 4
2.1 Corridor-Wide ............................................................................................................... 5
   Demographics ............................................................................................................. 7
   Regulatory Framework .................................................................................................. 8
   Built Form/ Development Pattern ................................................................................ 12
   Parks and Open Space ................................................................................................... 13
   Environmental Features ............................................................................................... 13
   Transit Network & Ridership (Current and Forecasted) .................................................. 13

2.2 Midtown ....................................................................................................................... 20
   Demographics ............................................................................................................. 22
   Regulatory Framework ................................................................................................. 23
   Built Form/ Development Pattern ................................................................................. 26
   Community Facilities, Landmarks, Parks and Open Space ......................................... 28
   Environmental Features ............................................................................................... 30
   Circulation Networks ................................................................................................. 32
2.3 Central ......................................................................................................................... 36
   Demographics ............................................................................................................. 38
   Regulatory Framework ................................................................................................. 39
   Built Form/ Development Pattern ................................................................................. 42
   Community Facilities, Landmarks, Parks and Open Space ......................................... 44
   Environmental Features ............................................................................................... 46
   Circulation Networks ................................................................................................. 49
2.4 Rockway ....................................................................................................................... 53
   Demographics ............................................................................................................. 55
   Regulatory Framework ................................................................................................. 56
   Built Form/ Development Pattern ................................................................................. 59
   Community Facilities, Landmarks, Parks and Open Space ......................................... 61
   Environmental Features ............................................................................................... 63
   Circulation Networks ................................................................................................. 66
2.5 Block Line ..................................................................................................................... 70
   Demographics ............................................................................................................. 71
   Regulatory Framework ................................................................................................. 73
   Built Form/ Development Pattern ................................................................................. 76
   Community Facilities, Landmarks, Parks and Open Space ......................................... 78
   Environmental Features ............................................................................................... 80
   Circulation Networks ................................................................................................. 83

PARTS – Phase 1 – Volume 2: Existing Conditions and Background Information | Introduction
## 2.6 Fairway

- Demographics .................................................................................................................. 87
- Regulatory Framework ........................................................................................................ 89
- Built Form/ Development Pattern ..................................................................................... 93
- Community Facilities, Landmarks, Parks and Open Space ............................................... 95
- Environmental Features .................................................................................................... 97
- Circulation Networks ......................................................................................................... 99

## 3.7 Sportsworld

- Regulatory Framework ...................................................................................................... 103
- Built Form/ Development Pattern ..................................................................................... 108
- Community Facilities, Landmarks, Parks and Open Space ............................................... 108
- Environmental Features .................................................................................................... 108
- Circulation Networks ......................................................................................................... 111

### Appendices

- Appendix A: Existing Zoning: Permitted Uses ................................................................. A-1
- Appendix B: Existing Zoning: Regulations ....................................................................... A-5
- Appendix C: Wellhead Protection Sensitivity Areas – Land Use Categories .................... A-7
- Appendix D: Data Sources and Limitations ................................................................. A-9

### Glossary of Terms
1.0 Introduction

This Existing Conditions and Background Information Report provides, and in some instances synthesizes, information pertinent to each station study area’s recommended focus area as well as the Sportsworld draft station study area. The recommended focus areas are comprised of lands, which due to their proximity to an ION LRT station stop require further study in the immediate term (2014-2017). At this time, a draft station study area (with an undefined focus and influence area) is recommended for the Sportsworld ION Station stop. The exercise that was undertaken to recommend which lands surrounding each of the ION station stops should be further studied is discussed in Section 4.2: Station Study Areas of the PARTS - Phase 1: Project Plan and Report (Volume 1). This Report provides additional data and baseline conditions to capture what exists currently within each of the recommended focus areas and the Sportsworld draft station study area in terms of physical conditions, demographics and regulatory framework. This information is supplementary to the significant amount of data and context provided through the Region of Waterloo’s Central Transit Corridor Community Building Strategy (CBS).

The information contained in this Report informed the recommended prioritization and sequencing of Station Study Area Plans and assisted with further understanding the potential for each station study area to respond to the changes that rapid transit will bring to the community. Conclusions drawn from the information contained in this Report for the purpose of prioritization are highlighted in Section 4.3: Prioritization of Station Study Areas of the PARTS - Phase 1: Project Plan and Report (Volume 1).

This Report will also be a foundation piece when completing Station Study Area Plans. Understanding the context and characteristics will be important and may help inform the creation of scenarios regarding the scale and type of land use and development that should be considered for each station study area. It will also provide information regarding the short and long term opportunities and challenges for each station study area.

1.1 Existing Conditions Explored and Captured

This Existing Conditions and Background Information Report includes:

- a description of physical context;
- demographic statistics, an examination of land use designations, zoning and built form;
- an inventory of community facilities, landmarks, parks and open space;
- an account of the presence of environmental features; and,
- an overview of the transportation/circulation networks.

Where appropriate, more details on some of these elements and factors that should be taken into consideration as part of the preparation of Station Study Area Plans are provided in this Section of the Report.

Digital Three-Dimensional (3D) Model

Over the course of Phase 1 of PARTS, a representative digital 3D model of the existing built environment was constructed for the corridor wide stations study area using Google SketchUp. In total, 19,230 buildings were modeled using baseline GIS data and supplementary data captured from site visits and other methods to mass existing buildings and depict building heights, rooflines, siting and terrain. This model serves to capture and document the existing context of the Corridor Wide Stations Study Area and has and will continue to be used to produce renderings and graphics that visually communicate scale, massing and relationship among buildings and sites. As part of Station Study Area Plans, it is anticipated that development scenarios can be created and examined against the existing context for evaluation purposes.

Demographics

The demographic information conveyed in the Report is derived from the 2011 Census data obtained from Statistics Canada that was provided by the Region of Waterloo. A current account of the density of the recommended focus areas and Sportsworld draft station study area has been estimated in terms of persons and jobs combined per hectare. As part of Station Study Area Plans, density targets will be contemplated in order to achieve a transit-supportive area. Preliminary research was conducted as part of Phase 1 regarding transit-supportive densities. Please refer to Section 3.2: Research and Best Practices of the PARTS - Phase 1: Project Plan and Report (Volume 1) for more detail. A measure of current density provides an understanding of the current status of an area relative to a future potential density target.

Regulatory Framework

The regulatory framework in terms of existing Official Plan designations and zoning has been examined and reported for each recommended focus area and the Sportsworld draft station study area. Certain land use designations and zoning are more suited than others in higher order transit areas to achieve a range of uses, densities, built form, activity and ridership. Appendix A and Appendix B summarize the zones within all recommended focus areas and the Sportsworld draft station study area and lists the permitted uses as well as any setback, height, floor space ratio and/or landscaping requirements. As such, depending on the existing land use designations and zoning categories within the station study areas and the composition and mix of designations and zones, some areas are more aligned to meet the vision for station study areas and require fewer changes to the regulatory framework currently in place. The information gathered and reported for each recommended focus area and the Sportsworld draft station study area has provided a sense of the scope of work required implementation of Station Study Area Plans. The information also has, and will continue to be utilized in the evaluation of interim direction mechanisms and tools that will be further examined in Phase 2 of PARTS. More discussion on interim direction is included in Section 5.2: Interim Direction of the PARTS - Phase 1: Project Plan and Report (Volume 1).
Built Form/ Development Pattern

The built form and development pattern was explored for each of the recommended focus areas. The digital 3D model was utilized to produce graphics that capture the heights of buildings and show the relationship of building and non-building areas. Non-built areas may include road right of ways, parking lots and paved areas, vacant land parcels, landscaping and open space/amenity areas (private or public). This exercise provided a sense of how compact development is within a recommended focus area and helped identify potential redevelopment/intensification opportunities that will be further explored at the time that Station Study Area Plans are prepared.

Community Facilities, Landmarks, Parks and Open Space

Community facilities and landmarks were inventoried and include features such as educational facilities, libraries, sport facilities, emergency services, community centres, parks, community gardens, industrial artifacts and public art. The presence of these features can influence what factors draw people to a station study area and can also contribute to establishing a distinctive character. A variety and mix of activities and attractions also promotes vitality and helps create a sense of place and identity. Having an inventory of the existence of these features has helped identify influential features within each of the recommended focus areas and Sportsworld Draft Station Study Area and has provided a better understanding of the role that each station study area may serve and what each offers (or does not offer) in terms of places to shop, play and study.

Natural Heritage System

The extent of Kitchener’s Natural Heritage System (KHNS) and the various natural heritage features that make up the system have been illustrated through the City of Kitchener Natural Heritage System Technical Background Report as part of the Official Plan Review. The Technical Background Report provided policy direction for the new draft Official Plan and recommended a policy framework to provide appropriate protection for each of the natural heritage features that make up the KHNS based on the feature’s significance and sensitivity. The Technical Background Report directs that features categorized as Core Natural Heritage Features should be afforded the greatest level of protection and that development should generally be prohibited. For lands identified as Significant Wildlife Habitat, Significant Landforms and Ecological Restoration Areas, the Technical Background Report recommended that further studies be required to determine whether development is appropriate within these features and, if so, how it should occur. Please refer to the KHNS Technical Background for more information regarding the various natural heritage features and their significance. The existence of the Natural Heritage System within the station study areas will be an important factor when considering future and potential land uses. The location of the natural heritage features have been mapped to gain an understanding of the lands within the recommended focus areas and Sportsworld draft station study area that are affected.

Flood Plains

Flood plains are areas near rivers and streams that can flood. The Grand River Conservation Authority is responsible for determining the location of these areas and identifies areas as one-zone or two-zone policy areas.

These areas are mapped in the City’s Official Plan and accompanied by policies which seek to minimize the risk of flooding to people and property. New development is generally prohibited within one-zone flood plain policy areas. The policies for two-zone flood plain policy areas are more permissive, permitting some development where the threat to people and property is not an imminent and risks can be managed through flood proofing standards. The existence of flood plains within the station study areas will place limitations on the uses that may be permitted and the standards for development. The location of the flood plain and the one-zone and two-zone policy areas have been mapped to gain an understanding of lands within the recommended focus areas and Sportsworld draft station study area that are affected.

Wellhead Protection Areas

A Wellhead Protection Area is the area around a drinking-water supply well that is vulnerable to contamination and or depletion from incompatible land uses. Wellhead Protection Areas have been identified and mapped in the Regional Official Plan. Within a Wellhead Protection Area, one or more Wellhead Protection Sensitivity Areas (WPSA) may be delineated. WPSAs are classified from 1 to 8 with 1 being the highest sensitivity area and closest to the wellhead. Not all land uses that pose a rise to drinking-water pose the same level of risk; therefore, the Region has identified four categories of land uses (A-D) based on their associated level of risk and has indicated which land uses are restricted/regulated in which WPSAs. A summary is provided in Appendix C. Accordingly, the presence of WPSAs within station study areas will have implications for the type of land uses that may be permitted and will have to be considered at the time of each plan. The locations of WPSAs have been mapped to gain an understanding of the lands within the recommended focus areas and Sportsworld draft station study area that are affected.

Transit Network & Ridership

The existing transit network and proposed transit network for 2031 as well as the current and forecasted transit ridership is documented and examined within each of the recommended focus areas and Sportsworld draft station study area. Ridership is reported collectively for the number of people getting on and off transit within the recommended focus areas and Sportsworld draft station study area at the peak PM hour (highest volume during the PM). Some areas currently have lower existing transit ridership and will require more of a paradigm shift to encourage increased transit ridership. Comparing the existing ridership and forecasted ridership provides a sense of how great a shift will be required for each station study area.

Street, Cycling and Multi-Use Pathway Network and Walkshed

Transit ridership is dependent on the ability for riders to get to and from the station stops. A fine grained pattern of streets and blocks can help to facilitate access by minimizing walking distances between destinations and providing for a range of alternative routes. Further, pedestrian/cycling routes that provide direct and convenient access to and from the ION station stop location and destinations will complement transit use. The cycling, trails and street network and the walkshed has been mapped to help identify where opportunities may exist to improve connections and mobility.
1.2 Existing Conditions Previously Studied, Currently under Study or Requiring Further Study

Market Analysis

This report does not include a market analysis as a high level assessment of current market trends and future opportunities was explored as part of the Region of Waterloo’s Central Transit Corridor Community Building Strategy (CBS) for each of the ION station stops along the ION rapid transit line. It was recognized that the Central Transit Corridor is not one real estate market, but rather it is comprised of a number of distinct submarkets. Accordingly, each of the ION station stops were identified as part of one of thirteen Market Corridor Areas. Six of these Market Corridor Areas exist within Kitchener and the grouping of the ION station stops within each Market Corridor Area is consistent with the grouping of ION station stops within each of the station study areas. For each Market Corridor Area, the CBS considered the current character, key development assets and future potential drawing from the area’s demographics, absorption and historical growth pattern.

This analysis was referred to and considered as part of the prioritization of Station Study Area Plans exercise discussed in Section 4.3: Prioritization of Station Study Areas of the PARTS - Phase 1: Project Plan and Report (Volume 1).

Paking Study

The Region of Waterloo has facilitated the preparation of several studies and background research regarding parking in relation to rapid transit and transportation demand management. This work is based on the modal shared objectives of the Regional Transportation Master Plan and it involves the Region of Waterloo and the cities of Waterloo, Kitchener and Cambridge. This information will be utilized as background data, best practices and suggested direction for the City to consider in the preparation of the Station Study Area Plans, transportation demand management and parking approach for future zoning by-law changes.

Cultural Heritage Assessment

As part of PARTS - Phase 1, Heritage Planning staff conducted a high level identification and preliminary screening of existing and potential cultural heritage resources in the corridor wide station study area. Section 3.3: Existing Conditions of the PARTS - Phase 1: Project Plan and Report (Volume 1) provides more information.

Sanitary Sewer Capacity Analysis

The City’s Engineering staff had a model developed to understand the current capacity of the existing sanitary sewer system and to project the capacity of the system if land(s) were to be developed under the current regulatory framework. Using this Sanitary Sewer Model, a general sanitary sewer analysis will be completed in Phase 2 of PARTS to gain a further understanding of the sanitary sewer system’s ability to support additional density. A description of the analysis and how it will be undertaken is provided in Section 4.1.4 of the PARTS - Phase 1: Project Plan and Report.

Schneider Creek Floodway Modeling Update and Regulation Limit

A review of the Schneider Creek floodway and flood plain is currently being undertaken by Grand River Conservation Authority and updates to the limits of the regulated area are anticipated. This work must be completed prior to the initiation of the study for the Rockway Station Area. Section 6.0: Related Initiatives of the PARTS - Phase 1: Project Plan and Report (Volume 1) provides more information.

Hidden Valley Land Use Review

The existing land use within the Hidden Valley Planning Community requires review. The existing Official Plan, Community Plan and zoning should be updated pending a decision on the Region of Waterloo’s River Road Extension Project. A portion of these lands are within the recommended influence area of the Fairway station study area. As result the timing of the Hidden Valley Land Use Review and the Station Study Area Plan should be coordinated.
2.0 Existing Condition Profiles

This Section of the Report summarizes the existing conditions data that was collected as part of Phase 1 of PARTS. Section 2.1 presents the information collectively for the five recommended focus areas and the Sportsworld draft station study area to report existing conditions corridor-wide. Sections 2.2 to 2.7 provide more detailed information for each of the recommended focus areas/draft station study area individually.

An overview of the exercise that was undertaken to recommend which lands surrounding each of the ION station stops should be further studied and how the recommended station study areas, focus areas and influence areas were defined is provided in Section 4.2: Station Study Areas of the PARTS - Phase 1: Project Plan and Report (Volume 1).
2.1 Corridor-Wide

This Section of the Report presents the information collectively for the five recommended focus areas and the Sportsworld draft station study area to report existing conditions corridor-wide. For the purposes of this Section of the Report, references to Corridor-Wide Focus Areas refers to the five recommended focus areas and the Sportsworld draft station study area.

Collectively, the Corridor-Wide Focus Areas encompass approximately 800 hectares of land along the ION rapid transit line.
Demographics

**Existing Persons - 24,022**

- Singles: 34.2%
- Semis & Duplex: 7.6%
- Row House: 9.8%
- Apartment > 5 storeys: 25.2%
- Apartment < 5 storeys: 19.9%
- Other/Unspecified: 3.2%

Currently 24,022 people live within the Corridor-Wide Focus Areas with approximately 35% residing in single detached, semi-detached and duplex dwellings, 8% in row houses and 55% residing within apartments.

**Existing Jobs - 30,209**

- Industrial: 38.5%
- Warehouse: 14.4%
- Retail: 13.5%
- Office: 5.6%
- Education: 4.4%
- Service: 23.5%
- Other: 9.8%

30,209 jobs are located within the Corridor-Wide Focus Areas. Over one third of jobs are within the office sector at 39%. Almost one quarter of jobs are office jobs at 24%. Almost 20% of jobs are in the industrial and warehousing sector.

**Existing Jobs & Person Combined/Ha - 62**

Currently an average of 62 persons and jobs combined exist per hectare within the Corridor-Wide Focus Areas.
A significant portion of the land within the Corridor-Wide Focus Areas is located within Secondary Plans (43%). Roughly 10% is located within the Downtown. Almost 8% of lands are designated for residential purposes. Almost 2% of land is designated for mixed use purposes and 15% designated for commercial purposes. Almost 13% of lands are designated for industrial purposes. Approximately 4% of the entire land area is designated Major Institutional and just under 1% is designated Open Space.
In general, the existing zoning is consistent with the existing land use designations. Almost 10% of lands within the Corridor-Wide Focus Areas are zoned with Downtown zones. Approximately one quarter of the land is zoned for residential purposes. Approximately 10% of lands are zoned with Mixed Use Zones, 5% with Commercial/Residential Zones and 13% with Commercial Zones. Almost 15% of lands are zones for industrial purposes and 13%. Approximately 13% lands within the Corridor-Wide Focus Areas are zoned with Parks, Open Space and Hazard Land zones.
The Corridor-Wide Focus Areas include a wide range of building types. The buildings within existing residential neighbourhoods are smaller in scale and form a more compact development pattern than the industrial institutional uses and commercial uses, which have larger building footprints and larger spaces between buildings. The non-built areas within the residential neighborhoods are typically open space/private amenity areas while the non-built areas within industrial, institutional and commercial uses consist predominantly of parking lots and underutilized parcels. In total, buildings cover approximately 18% of the land within the Corridor-Wide Focus Areas.
Parks and Open Space

Almost 10% of the lands within the Corridor-Wide Focus Areas are used for parkland purposes.

Environmental Features

Natural Heritage System

Approximately 9% of land within the Corridor-Wide Focus Areas form part of the Natural Heritage System. Approximately 8% of land within the Corridor-Wide Focus Areas has been identified as Core Natural Heritage Features, 8% as Ecological Restoration Areas and 0.5% as Significant Wildlife Habitat and Significant Landforms.

Flood Plain

Approximately 11% of the Corridor-Wide Focus Areas are within the floodplain, with 7.7% within the One Zone Policy Area and 3.4% within the Two Zone Policy Area.

Wellhead Protection Areas

No wellheads exist within the Corridor-Wide Focus Areas but Wellhead Protection Areas that extend from wellheads do encroach into the Corridor-Wide Focus Areas. 50.3% of land within the Corridor-Wide Focus Areas is within a Wellhead Protection Area, with 9.8% within a WPSA 4, 11.7% within a WPSA 7, and 28.9% within a WPSA 8. Information on the land uses that are restricted/regulated in each Wellhead Protection Sensitivity Area is provided in Appendix C.

Transit Network & Ridership (Current and Forecasted)

<table>
<thead>
<tr>
<th></th>
<th>PEAK PM Transit Trips</th>
</tr>
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<tbody>
<tr>
<td>Current</td>
<td>4,705</td>
</tr>
<tr>
<td>Forecasted (2031)</td>
<td>8,208</td>
</tr>
<tr>
<td>Difference between Current and Forecasted Ridership</td>
<td>3,503</td>
</tr>
</tbody>
</table>

An average of 4,705 transit trips (arrivals and departures) currently occurs within the Corridor-Wide Focus Areas during the peak PM hour. The number of transit trips is forecasted to increase by approximately 3,500 to over 8,200 by the year 2031.
Planning Around Rapid Transit Stations

Community Amenities and Facilities

- Parks
- Rivers and Lakes
- Roads and Corridors
- Highways
- Waterways
- Recommended Focus Area
- Recommended Focus Area
- Study Area
- Recommended Focus Area
- LANDMARKS
- Emergency Services
- Hospitals
- Ambulance Station
- Fire Station
- Police Station
- Sports
- Arena
- Swimming Pool
- Golf Course
- Centre
- Community Resources
- Cemetery
- Educational Facility
- Place of Worship
- Library
- Community Centre
- Community Gardens
- Public Art
- Industrial Artifacts
- Parks
- River
- Roads
- Corridors
- Highways
- Waterways

*All recommendations will be reviewed at the time that station area plans are prepared.

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Planning Around Rapid Transit Stations

Environmental Features

Natural Heritage System

Significant Wildlife Habitat and Significant Landforms

Ecological Restoration Areas

Projected Stream - Ecological Restoration

Recommended Focus Areas

*All recommended boundaries will be reviewed at the time that station area plans are prepared.