

WINDSOR TRUCK ROUTE

STUDY



ENVIRONMENT, TRANSPORTATION AND
PUBLIC SAFETY COMMITTEE PRESENTATION

June 25, 2025

 **ARCADIS**

in association with
David Kriger Consultants Inc.
and **GLPi**

AGENDA

- **Overview**
- **Recommended Network**
- **Mitigating Measures**
- **Implementation**
- **Supporting Strategies**
- **Questions and Comments**



Overview



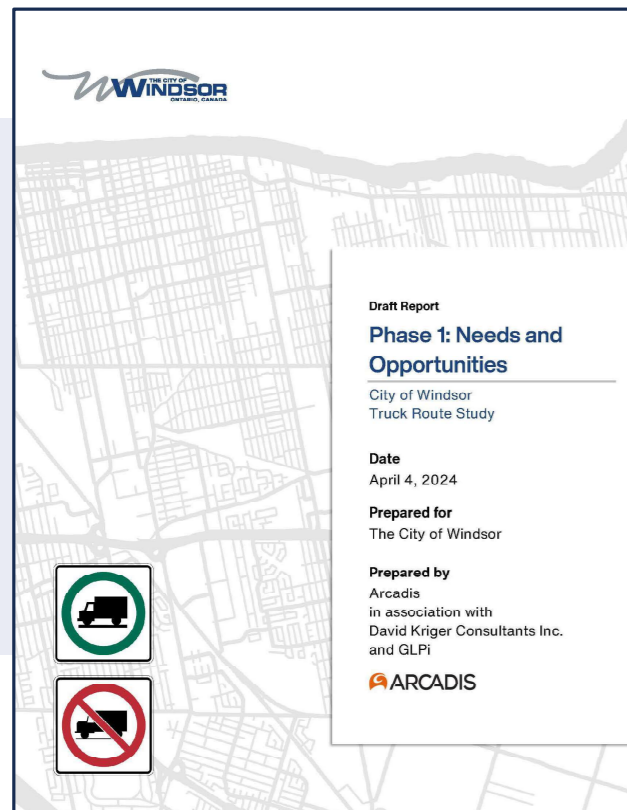
STUDY OVERVIEW

Truck Route Study

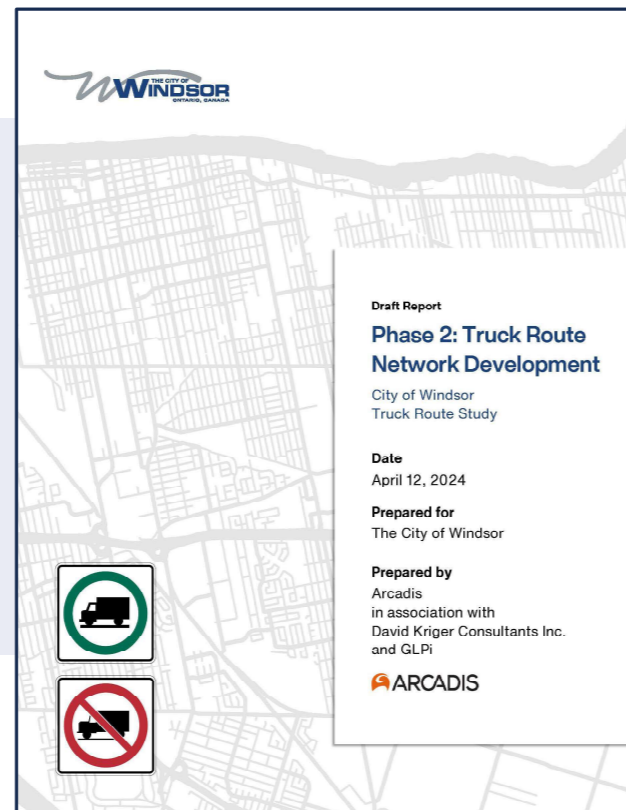
The Truck Route Study was undertaken to review and update the City of Windsor's truck route network while addressing the changing context, needs and priorities in the city.

Truck Route Study Summary Report

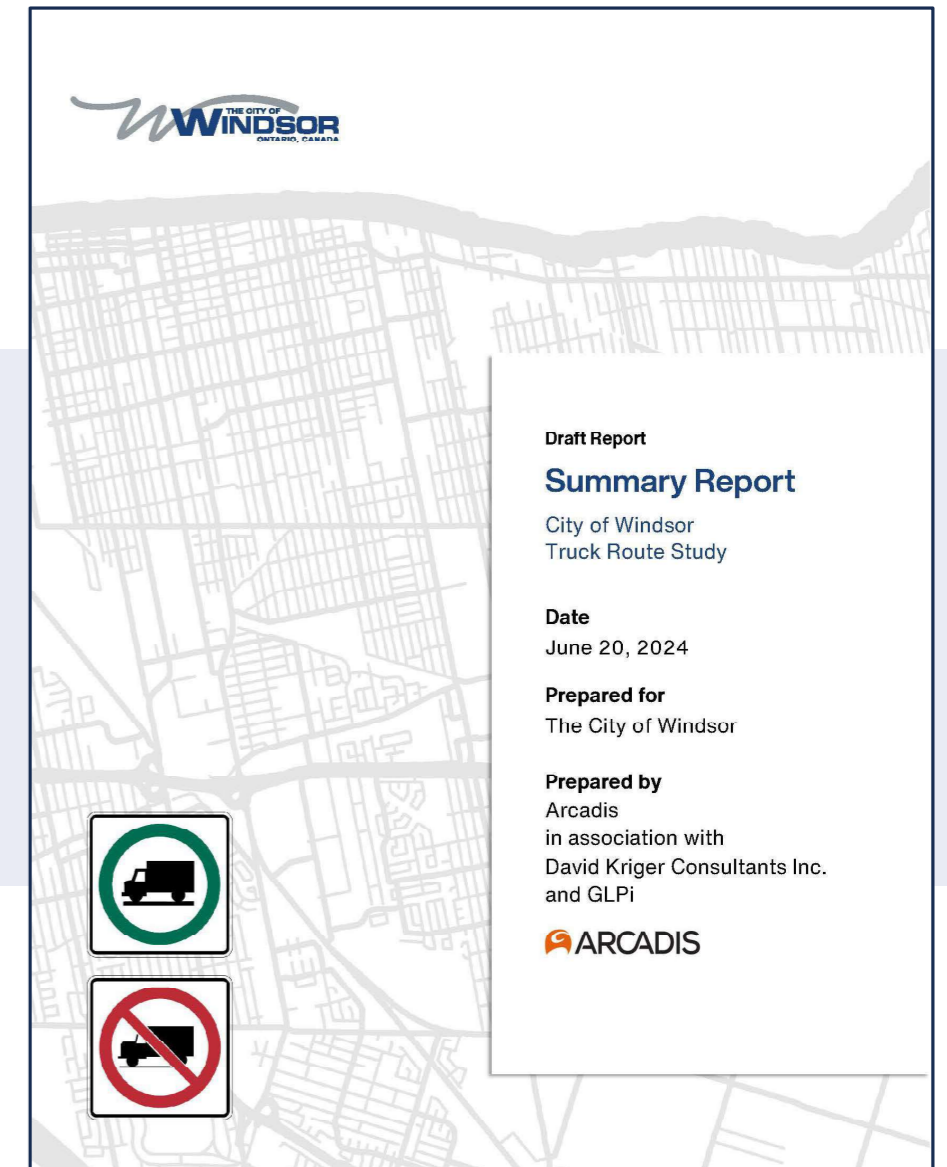
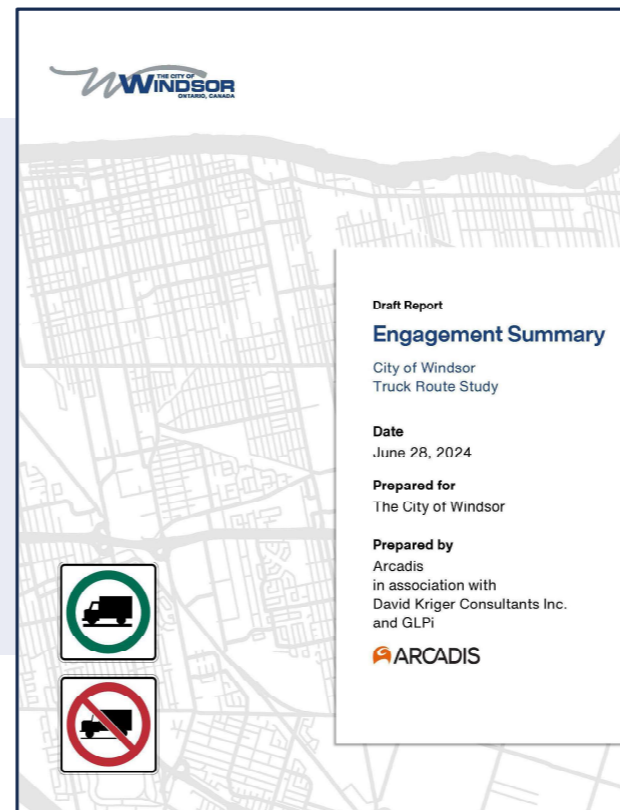
Phase 1: Needs and Opportunities Report



Phase 2: Network Development Report



Engagement Summary Report



How does the Truck Route Study fit with the broader transportation system?

The Truck Route Study is informed by **local**, **regional** and **provincial** plans and policies to ensure the recommended truck routes work together with other government priorities.



Windsor-Essex



City of Windsor

- Official Plan
- Vision Zero
- AT Master Plan
- South Sandwich South Master Servicing Plan
- Sandwich St Reconstruction EA
- Banwell Road EA
- Central Box Study Area EA
- Provincial/Division Rd EA

Greater Region

- Essex-Windsor Regional TMP
- Windsor Area Long Range Transportation Study
- Lauzon Parkway Improvements EA
- County Road 42 EA

Province of Ontario

- Provincial Policy Statement
- Connecting the Southwest
- LCV Program
- Province-Wide Cycling Network

STUDY ENGAGEMENT



PHASE 1 Identify Needs and Opportunities

PHASE 2 Draft Truck Route Network Development

PHASE 3 Recommended Truck Route Network

Round 1 Engagement *October 2023*

- Public Information Centre 1
- Goods Movement Community Meeting 1
- Municipal/Government Meeting
- BIA Meeting 1

Round 2 Engagement *April 2024*

- Public Information Centre 2
- Goods Movement Community Meeting 2
- BIA Meeting 2
- Advisory Group Meeting

City Approval

- ETPS Committee Presentation
- Council Presentation



Public Information Centre 2, WFCU Centre

Common concerns:

- Safety/adequate separation for pedestrians and cyclists alongside truck routes
- Noise, vibrations, dust and air pollution impacts for residents
- Inappropriate cut-through truck traffic impacting communities

Common needs:

- Pedestrian/cyclist separation from trucks and/or safety measures
- Truck route operations improvements
- Maintenance (cleaning and surface repair) of truck routes
- Continued/improved truck route connectivity
- Maintain adequate access and redundancy to Ambassador Bridge and other key trucking locations
- Enforcement of and education about truck routes

Study Principles

Principles guided the development of the truck route network, and all study outcomes aimed to follow them.



SUPPORT SAFETY OUTCOMES



SUPPORT ENVIRONMENTAL AND PUBLIC HEALTH



PROVIDE A CONNECTED TRUCK ROUTE NETWORK



DESIGN FOR RELIABILITY AND REDUNDANCY



SIMPLIFY ENFORCEMENT REQUIREMENTS



PLAN FOR CONSISTENCY AND ADAPTABILITY

Objectives

The objectives, and related criteria, were used to assess candidate truck routes in Windsor.



OBJECTIVE 1:
OPTIMIZE GOODS
MOVEMENT EFFICIENCY



OBJECTIVE 2:
MAINTAIN COMMUNITY
LIVABILITY AND INTEGRITY

Recommended Network



The study followed a step-by-step Network Development Process:

- 1 Select candidate road segments
- 2 Evaluate road segments
- 3 Create a draft truck route network
- 4 Address issues and mitigations
- 5 Finalize truck route network



OBJECTIVE 1: OPTIMIZE GOODS MOVEMENT EFFICIENCY

- Prioritize higher functional road classes – e.g. arterial vs. local roads
- Prioritize higher-capacity roads – roads with wider widths and more lanes
- Prioritize roads with higher current truck volumes

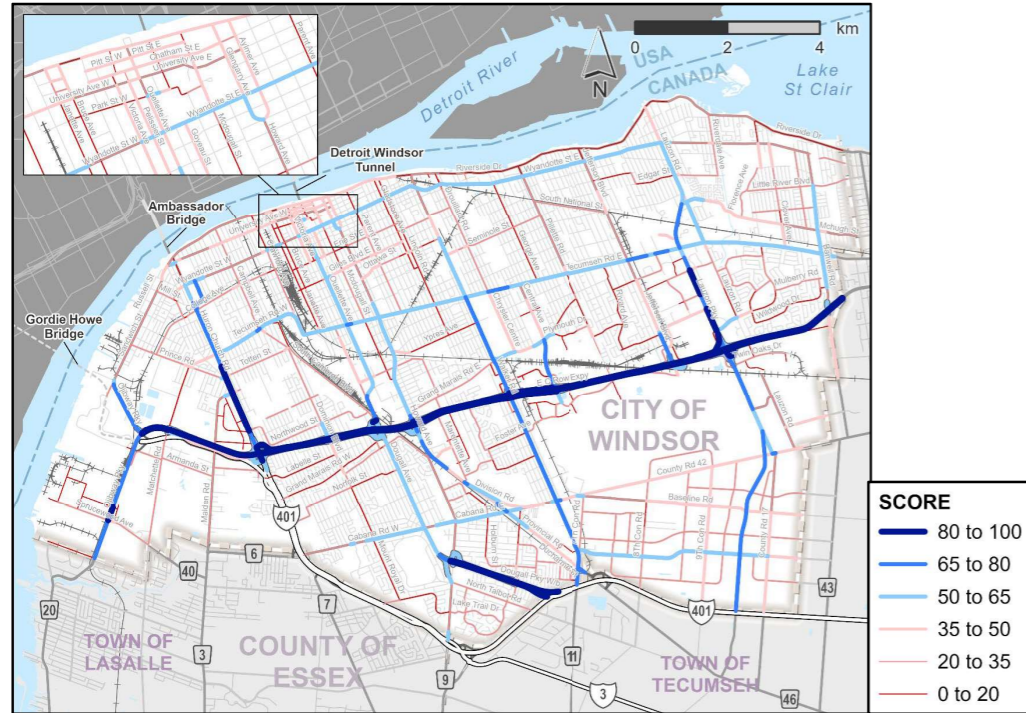


OBJECTIVE 2: MAINTAIN COMMUNITY LIVABILITY AND INTEGRITY

- Prioritize routes that run alongside appropriate adjacent land uses
- Prioritize routes with lower pedestrian volumes and cyclist volumes
- Prioritize routes that do not require sharing road space with the cycling network

ROAD SEGMENT SCORING RESULTS

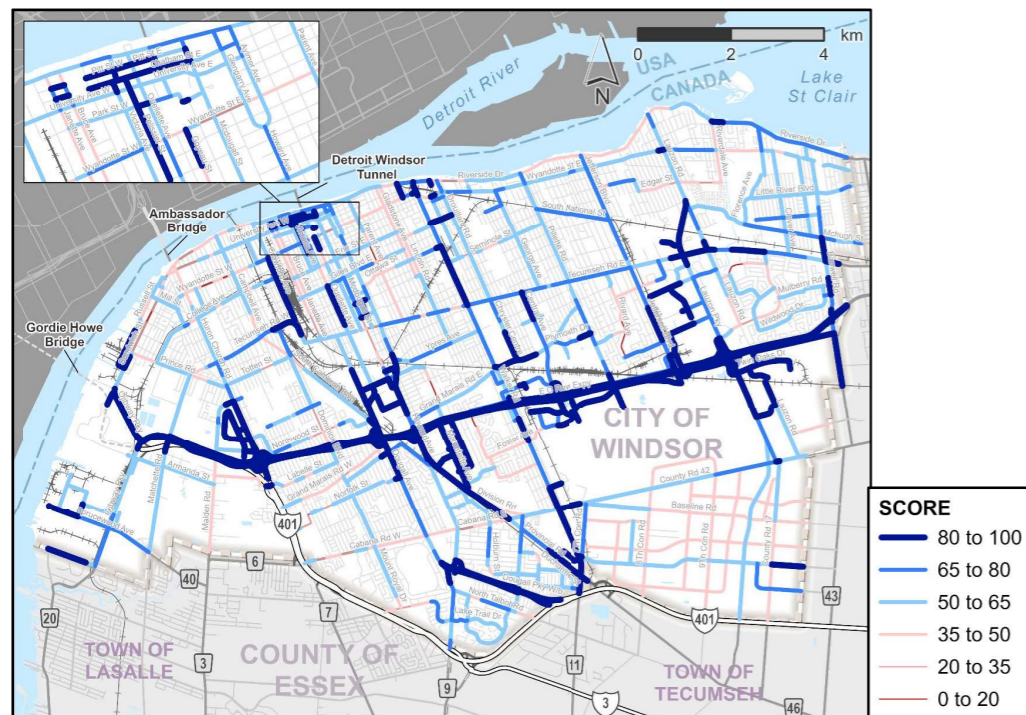
Results for Objective 1: Optimize Goods Movement Efficiency



Overall Scoring Results



Results for Objective 2: Maintain Community Livability and Integrity



TRUCK ROUTE CONNECTIVITY GUIDELINES

In developing the **draft truck route networks**, priority was given to road segments with a higher combined score while also aiming to implement the following **network connectivity guidelines**:

1. Connect to each **provincial highway interchange**.
2. Connect to each **international border crossing**.
3. Connect to **intermodal freight terminals**.
4. Connect to each **upper-tier road in Essex County** suitable for heavy trucks.
5. Connect key **truck origins and destinations** — factories, industrial sites, commercial areas, etc. — without the need for long detours.
6. Provide **truck route redundancy**.
7. Avoid “**spurs**” or “**dead-ends**”.
8. Ensure that the resulting truck route network has a **reasonable density**.

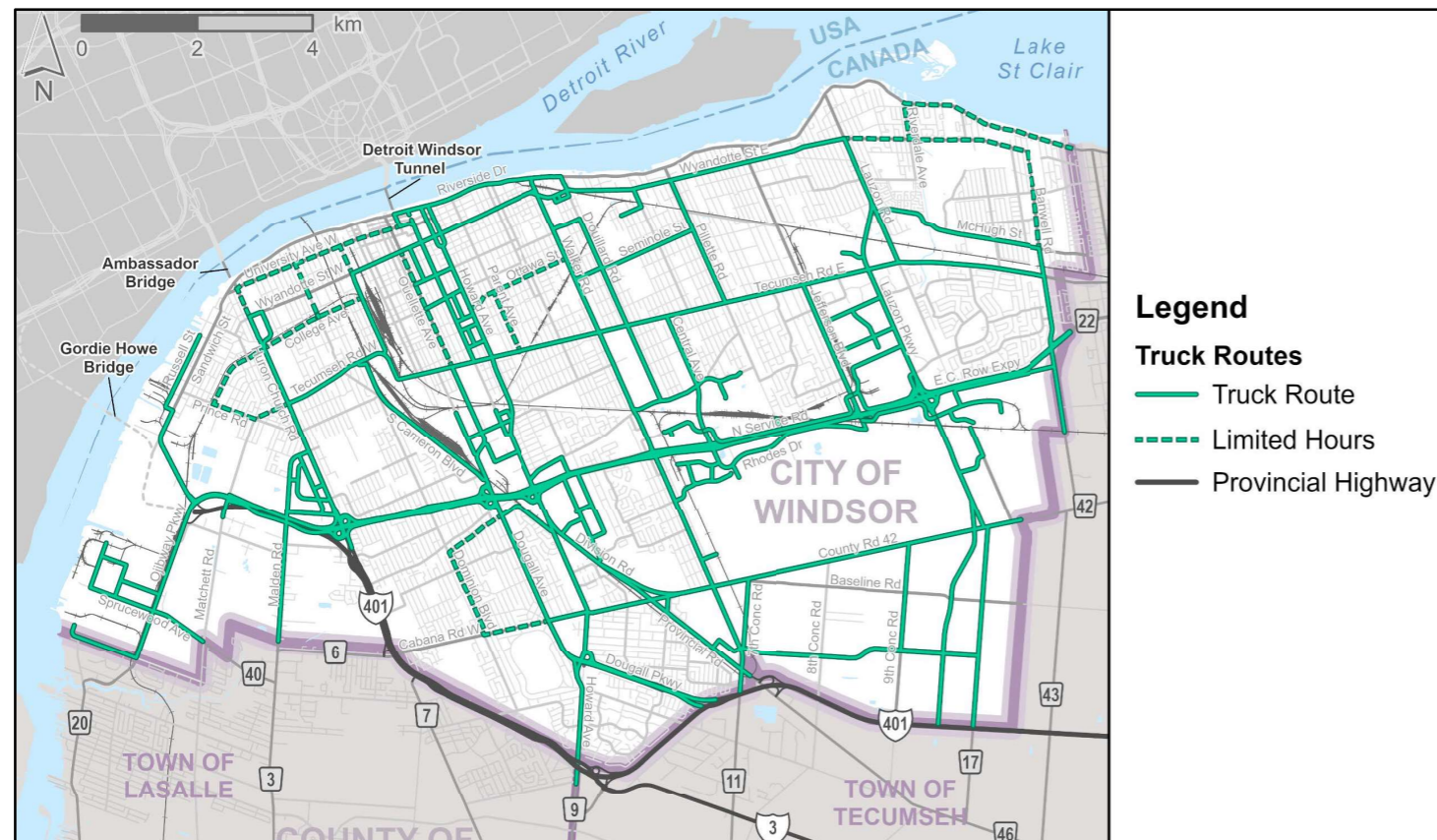


DRAFT TRUCK ROUTE NETWORK OPTIONS

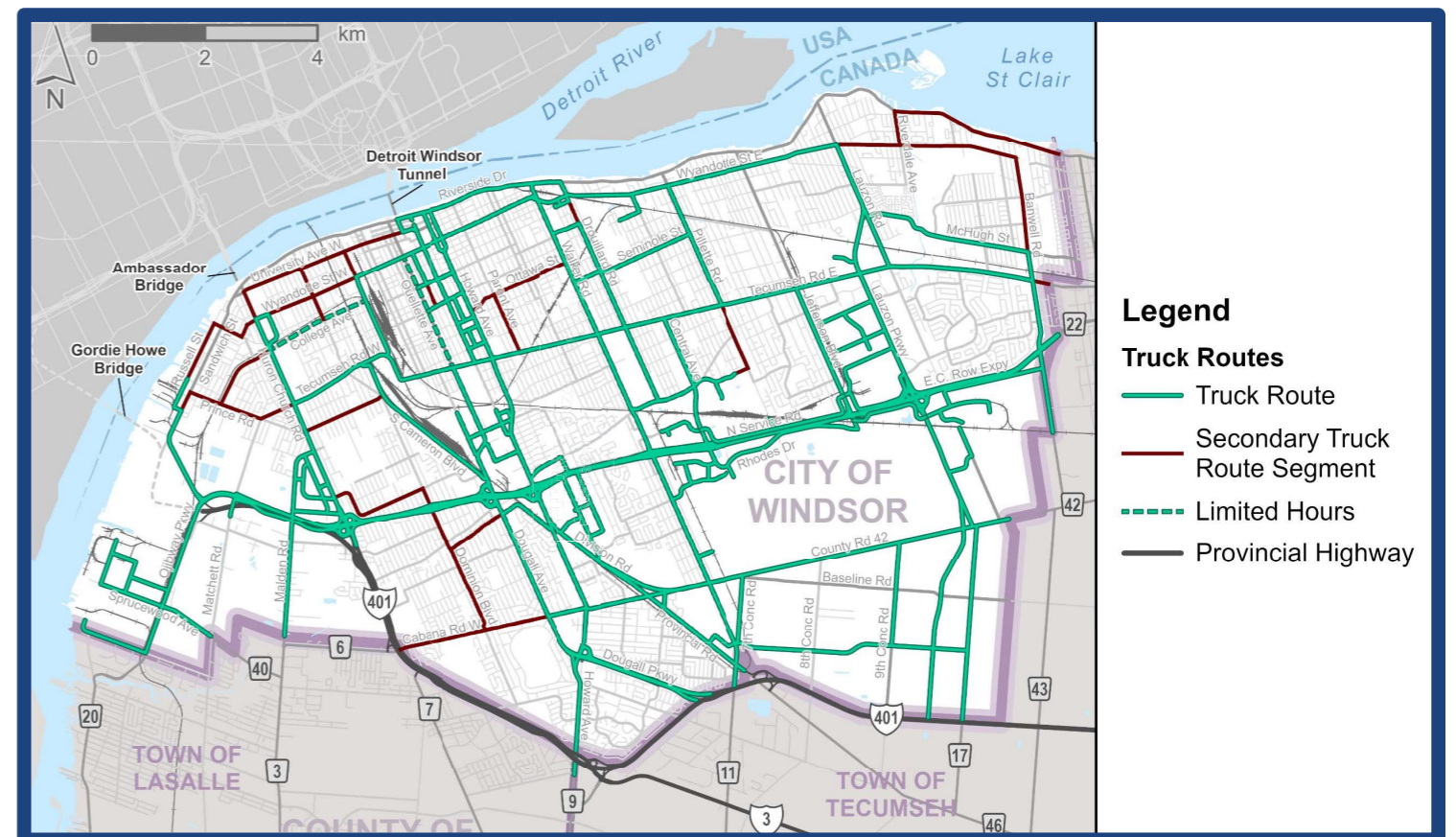
Two DRAFT network options were developed.

Revisions to the preferred network option were made based on input from members of the public, stakeholders and the City.

DRAFT Simple Network (Single-Tier)



DRAFT Dual-Tier Network - Preferred Option





Primary routes function as per current Windsor Traffic by-law:

- **“Trucks”** that must use the designated truck route network are those vehicles with 4,500 kg or more gross vehicle weight or registered gross weight
- Trucks are allowed to use non-designated roads only as the shortest access and egress between their origin/destination and the designated truck route

Trucks with **4+ axles** are **only** permitted to use **Primary Routes** for **through travel**



LOCAL DELIVERY ROUTES

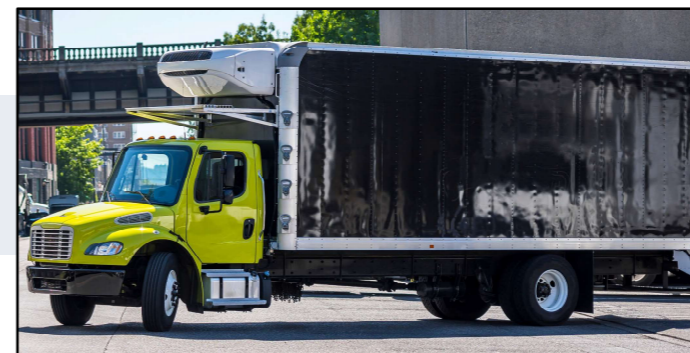


Local delivery routes are designated for and restricted to smaller trucks (up to 3 axles) for through travel

- Larger trucks are to use these routes only for local deliveries

Trucks with **up to 3 axles** are permitted to use both **Primary Routes** and **Local Delivery Routes** for through travel

2-axle truck



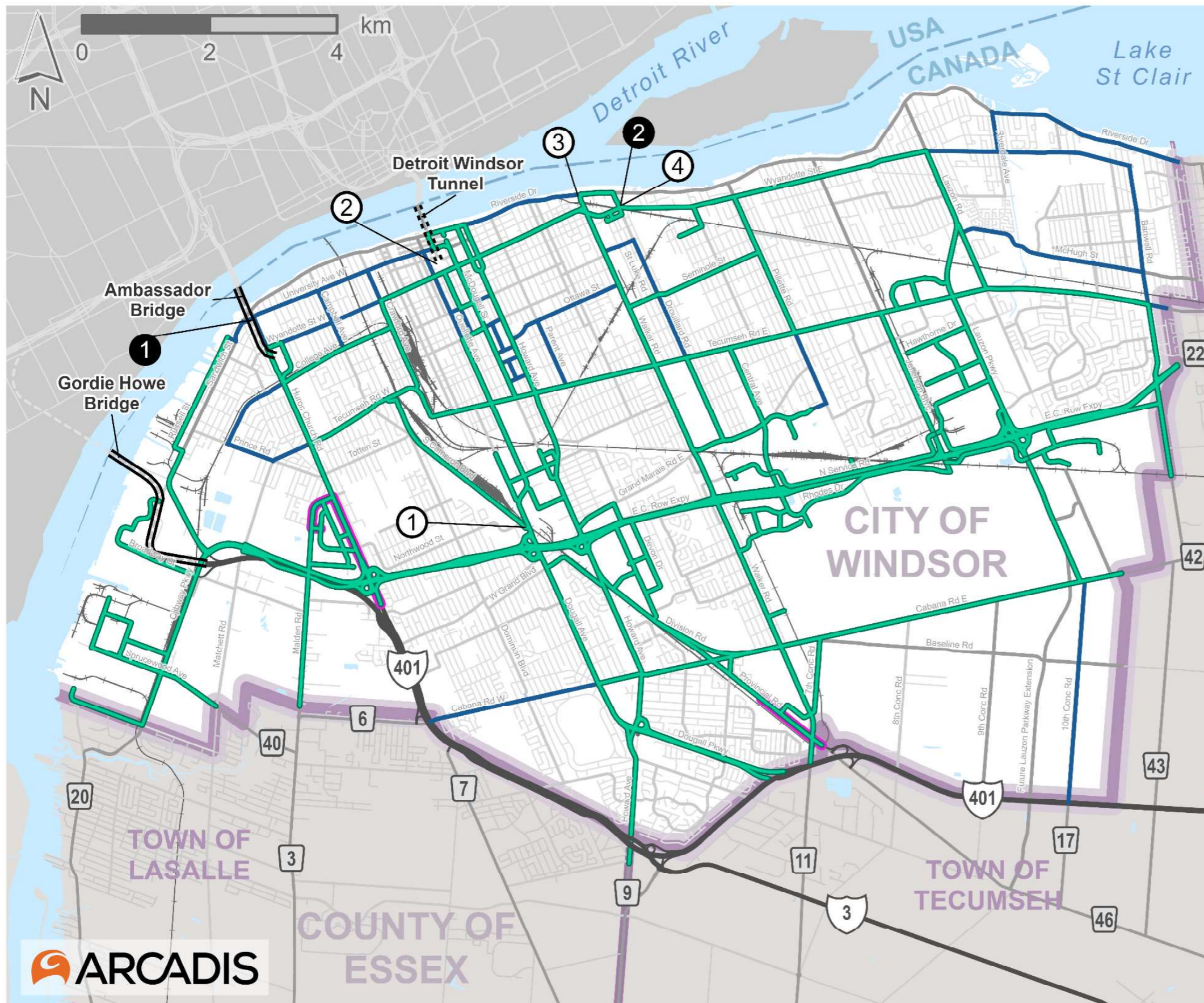
3-axle truck



Example of a “3-axle truck”, permitted on Local Delivery Routes

Axles spaced no more than one metre apart can be considered as a single axle, consistent with Ontario Highway Traffic Act, 1990, section 114 (1)

RECOMMENDED NEAR-TERM NETWORK (0-5 YEARS)



Truck Routes

- Primary Truck Route
- Local Delivery Route
- Municipal LCV Route
- Provincial Highway

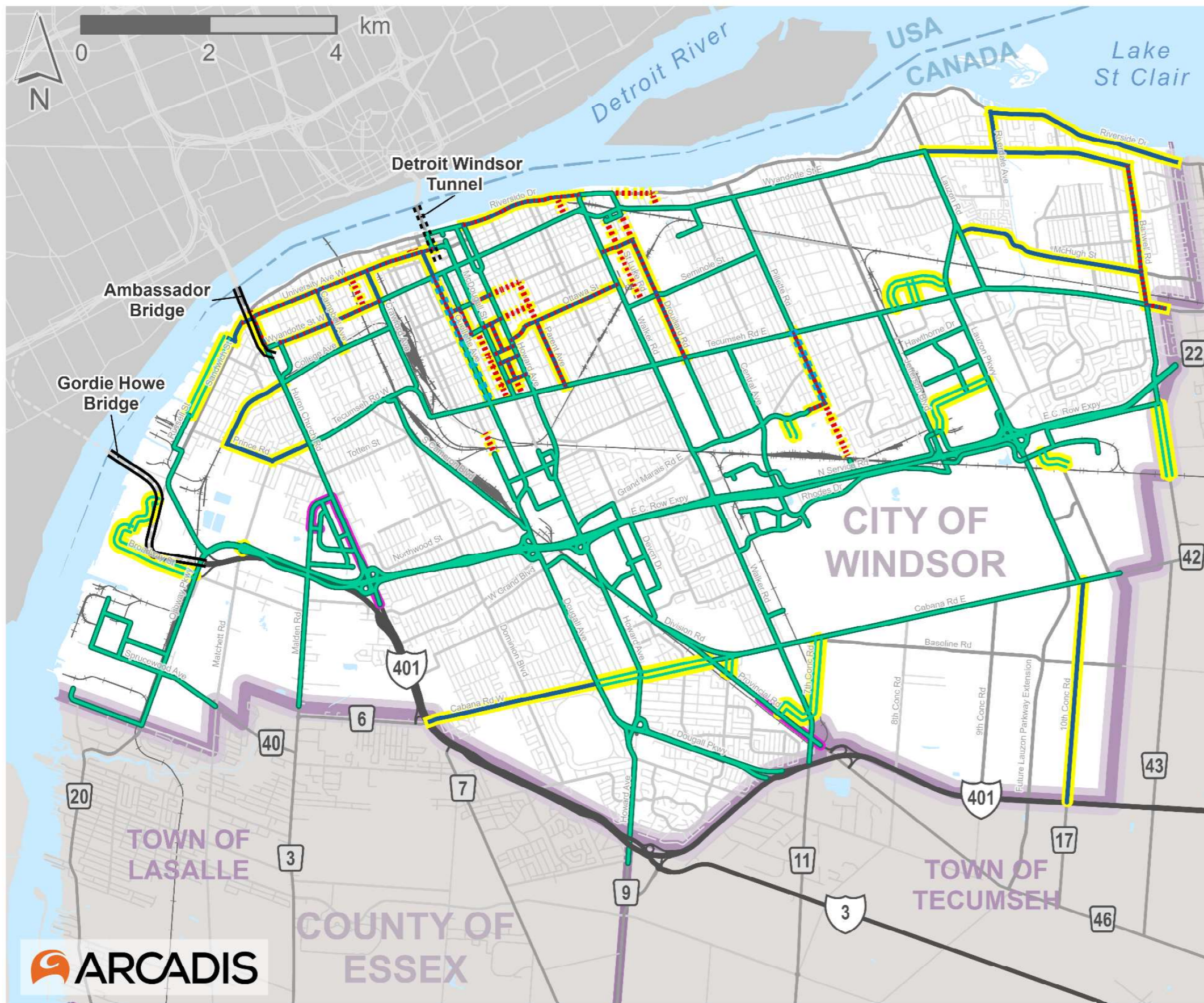
Turning Limitations

- 1** Sandwich St/University Ave single-lane roundabout
No left turns permitted for all vehicles from Wyandotte St to Drouillard Rd northbound and southbound.
- 2** Geometric constraints prohibit trucks from turning right from eastbound Wyandotte St to Drouillard Rd.

Height Limitations

- 1** Dougall Ave: Rail underpass north of S Cameron Blvd 4.3 m clearance
- 2** Detroit Windsor Tunnel: 3.8 m clearance
- 3** Walker Rd: Underpass south of Riverside Dr 4.5 m clearance
- 4** Wyandotte St/Drouillard Rd: Rail underpass 4.1 m clearance

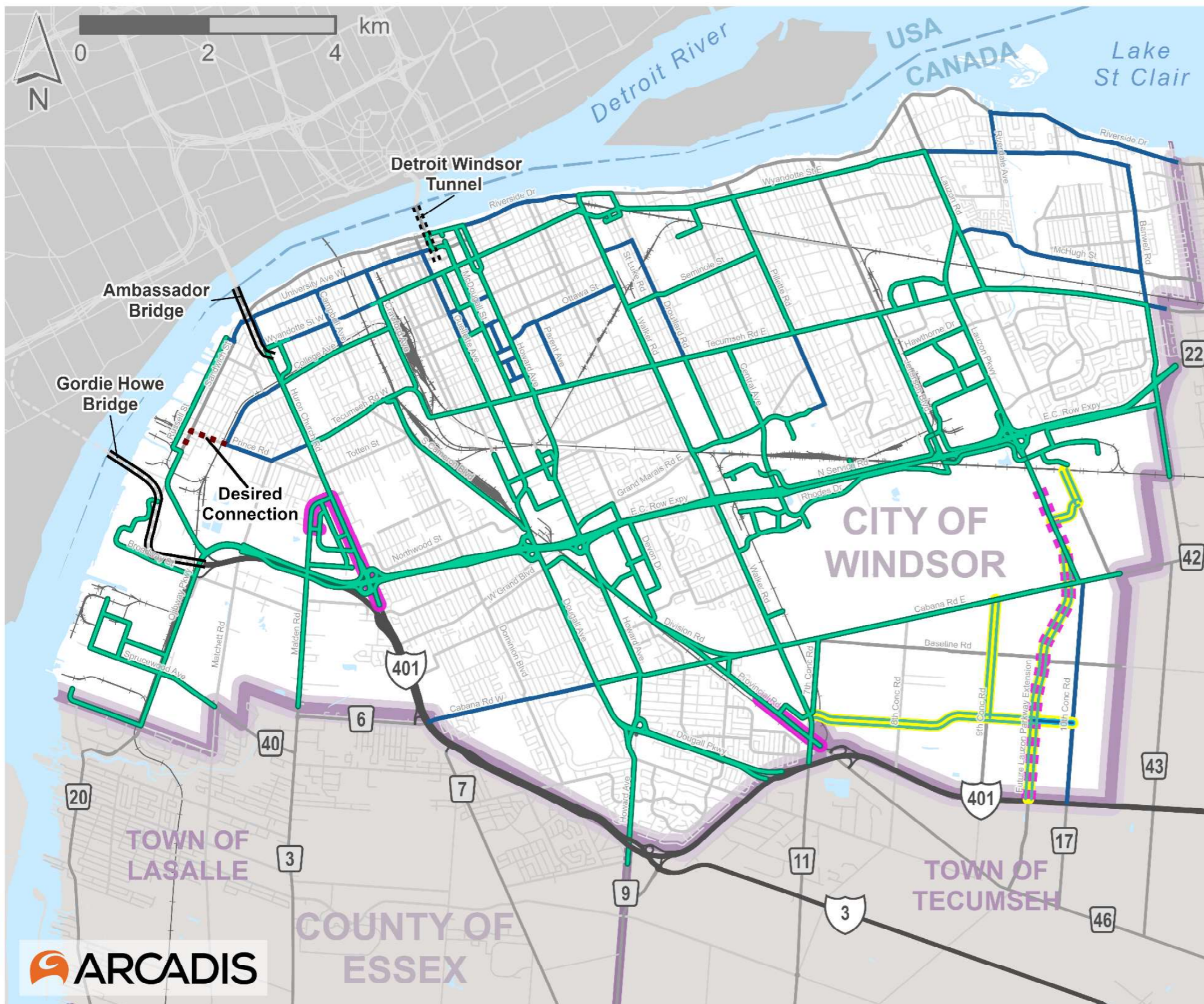
RECOMMENDED NEAR-TERM NETWORK - CHANGES RELATIVE TO CURRENT



Truck Routes

- Primary Truck Route
- New Primary Truck Route
- Removed Primary Truck Route
- New Local Delivery Route
- Primary Truck Route Changed to Local Delivery Route
- Previous Truck Route Time Restrictions Removed
- Municipal LCV Route
- Provincial Highway

RECOMMENDED LONG-TERM NETWORK - CHANGES RELATIVE TO NEAR-TERM



Truck Routes

- Primary Truck Route
- = New Primary Truck Route
- Local Delivery Route
- = New Local Delivery Route
- Municipal LCV Route
- - - Opportunity For Future Municipal LCV Route
- Provincial Highway

Mitigating Measures



MITIGATING MEASURES

While trucks support economic activity and help provide valuable services, their large size and heavy weight create challenges:

- **potential negative impacts on other road users**
- **operational challenges**

Mitigating measures were identified based on current best practices, **for further review by the City.**

Mitigating measures for **newly-designated truck route segments** are anticipated to be **feasible to implement in the short term** e.g. cycling route modifications, demarcating pedestrian crossing path at intersections.

The scope of the Windsor Truck Route study did **NOT include** a comprehensive safety and operational review of the truck route network.

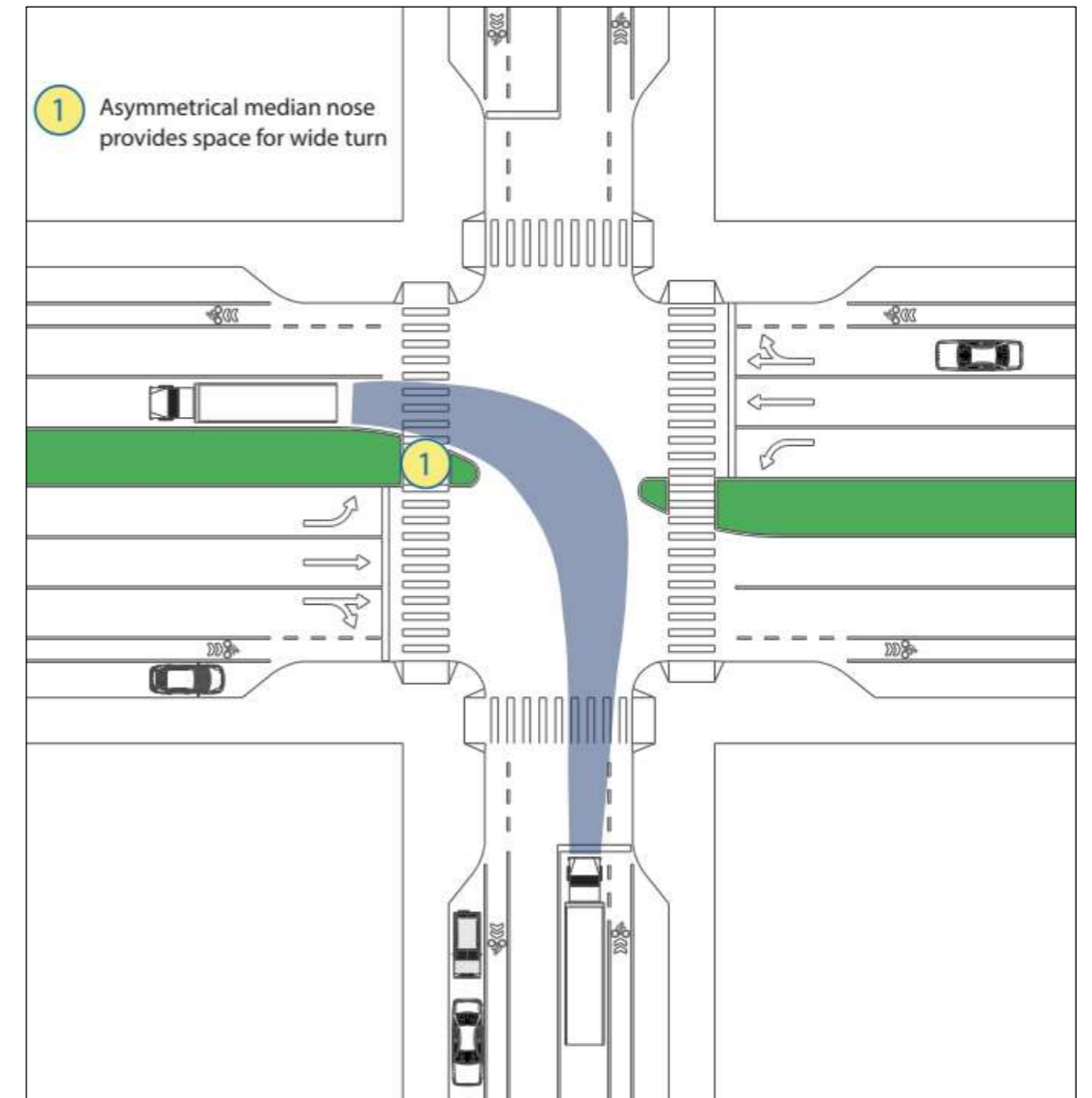
MITIGATING MEASURES (CONT'D)

Reduce potential negative impacts:

- Increase pedestrian crossing safety
- Increase separation between motorized traffic and cyclists and/or pedestrians

Address operational challenges:

- Intersection improvements or modifications such as moving stop bars back
- Turning restrictions
- Traffic signal timing changes
- Provide a safe means to turn back



Multi-Modal Intersection Design Examples

Complete Streets Considerations for Freight and Emergency Vehicle Operations (NYSERDA, 2018)

Implementation



Implement Mitigating Measures

- Address potential concerns on **newly designated truck route network segments** before designating

Determine Signage Needs

- Confirm **Local Delivery Route Signage**
- Develop a Road Signage Plan

Traffic By-Law Update

Education and Enforcement

- Emergency services and enforcement
- Public
- Council and other area politicians
- Industry stakeholders

Monitor Impacts



OVER 3 AXLES
EXCEPT
LOCAL DELIVERY

Supporting Strategies



SUPPORTING STRATEGIES

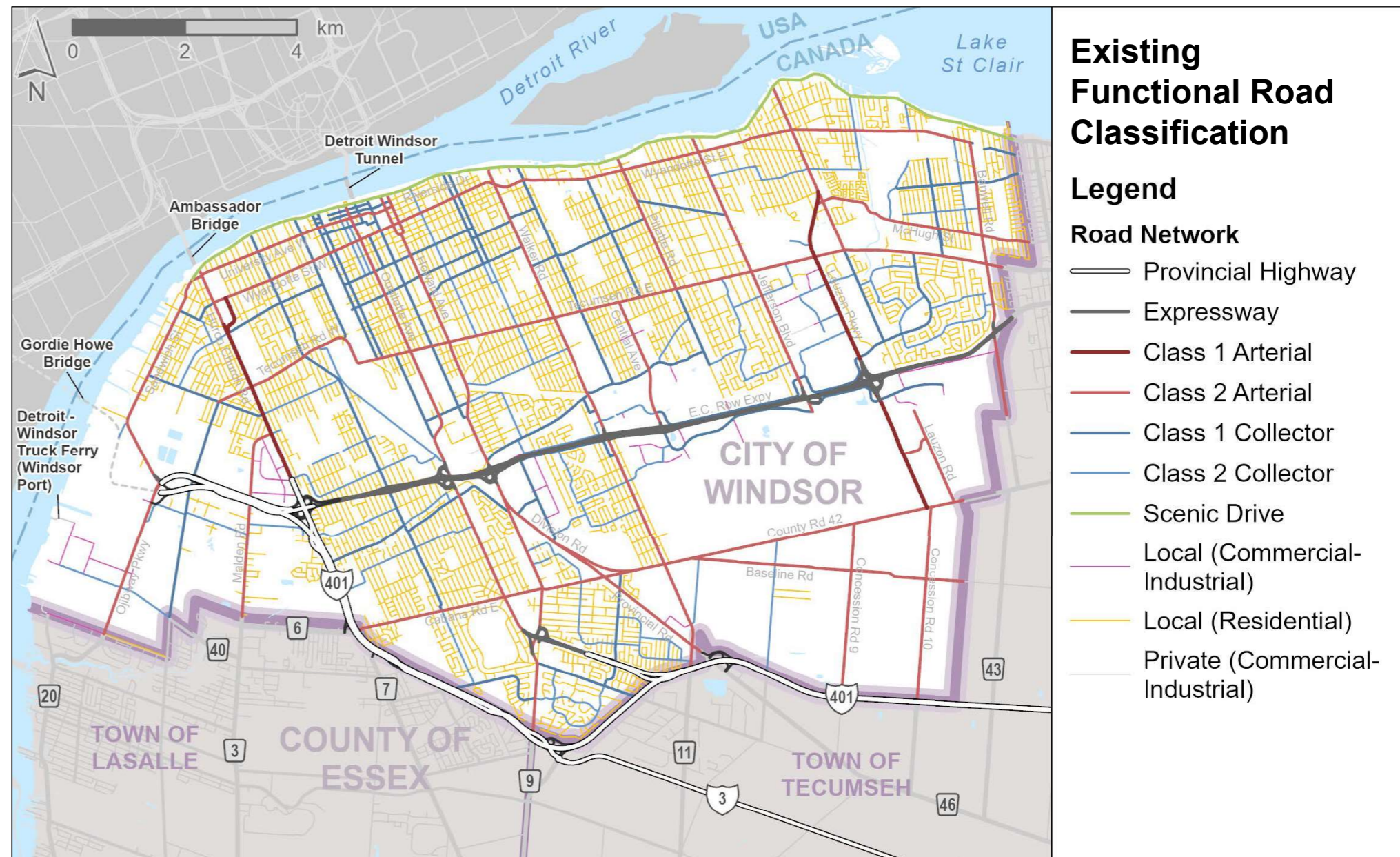
Supporting strategies complement the truck route network, and strengthen traffic operations and transportation planning.

Multimodal Network Planning and Operations

- **Function Road Classification Review**
- **Truck Route Prioritization in Road Maintenance**
- **Truck Routes in Complete Streets Guidance**
- **Signal Optimization**

Truck Parking

- *No change is proposed to City's traffic by-law*



Reducing Environmental Impacts

- Review Parked Vehicle Idling By-Law

Monitoring Truck Traffic and Impacts

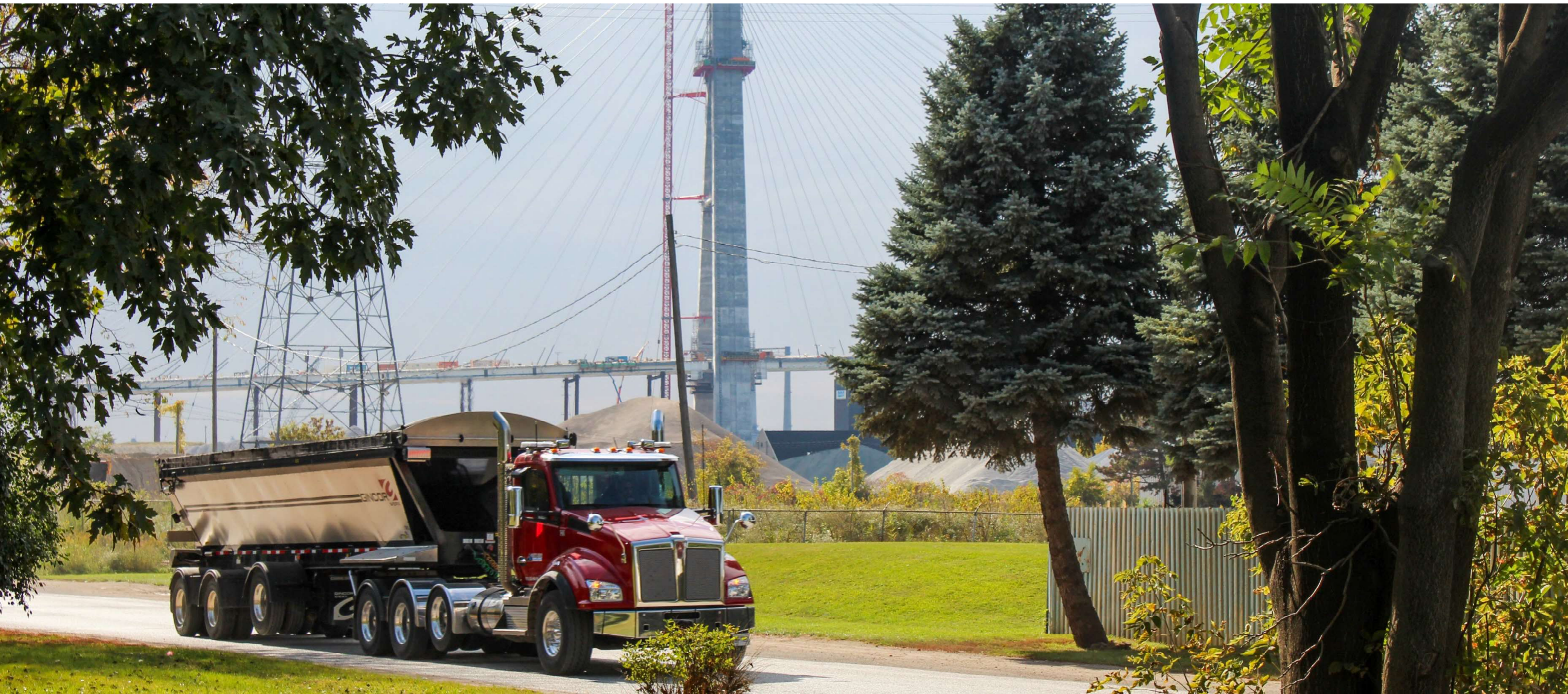
- Continue Intersection Traffic Classification Counts
- Monitor Gordie Howe International Bridge Traffic Impacts

Communications

- Communicate Temporary Network Changes
- Ongoing Stakeholder and Public Engagement

Planning for the Future

- Planning for Long Combination Vehicles
- Establish a Process for Updating the Truck Route Network
- Planning for Truck Routes and Bicycle Routes
- Integrating Trucks into Designs for Planned Road Improvements



QUESTIONS AND COMMENTS



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THANK YOU



WINDSOR **TRUCK ROUTE** STUDY

[letstalk.citywindsor.ca/
truck-route-study](http://letstalk.citywindsor.ca/truck-route-study)

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