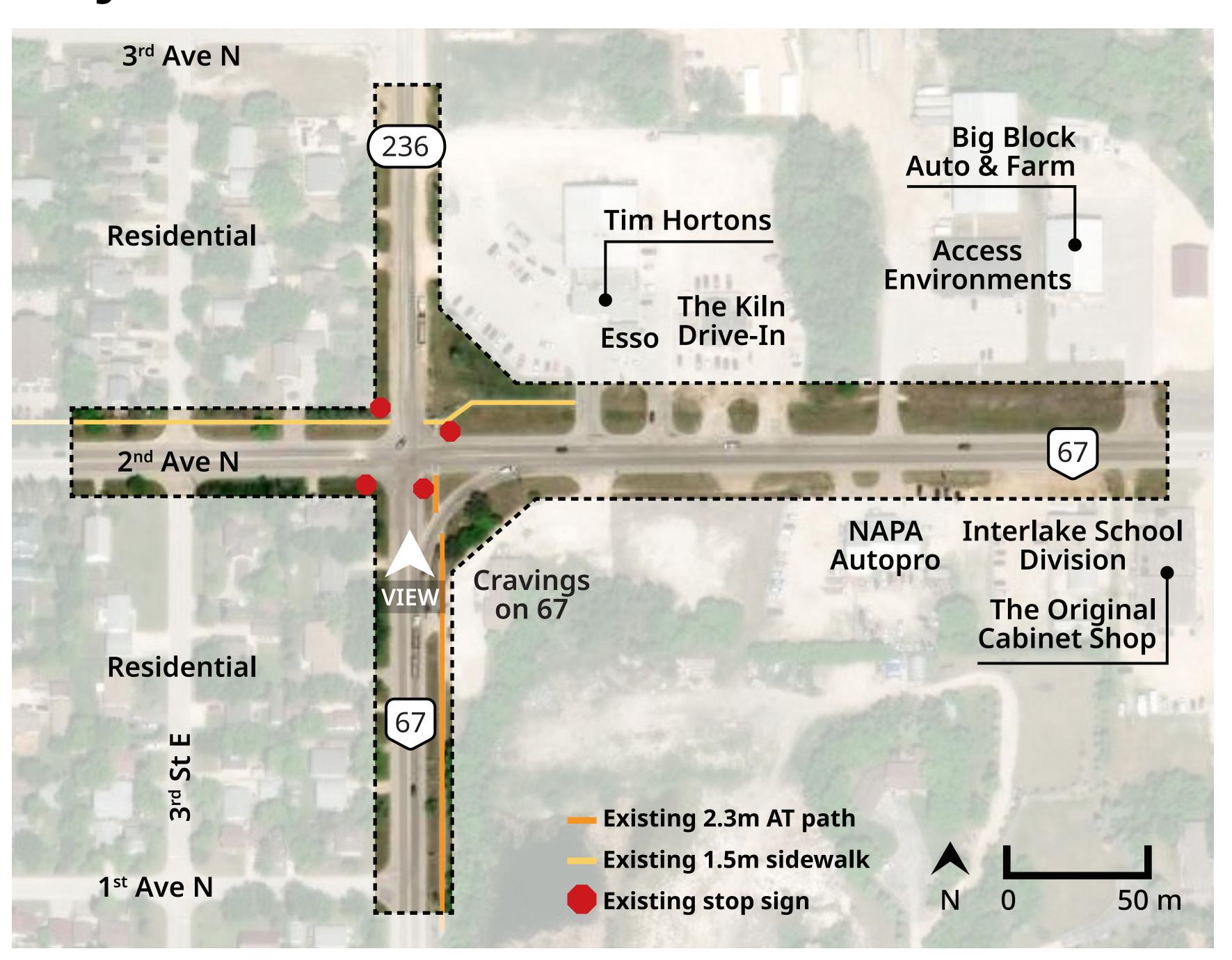
# Public Information Session

# Functional design of intersection improvements at

# PTH 67 & PR 236 (North Junction)

# Project Area



# What is this project about?

Manitoba Transportation and Infrastructure (MTI) recognized an increase in traffic volumes at the north junction of the Provincial Trunk Highway (PTH) 67 and Provincial Road (PR) 236 intersection, at this key location in Stonewall, and they have determined the need for intersection improvements.









# Site Context & Key Issues

# Why is this project important?

The intersection at PTH 67 and PR 236 (North Junction) is a gateway into Stonewall. As the Town continues to grow and develop, the traffic volumes are anticipated to increase.

Though the intersection may function satisfactorily today, growth in the area is anticipated to negatively impact its operation.

# Safety & Accesses

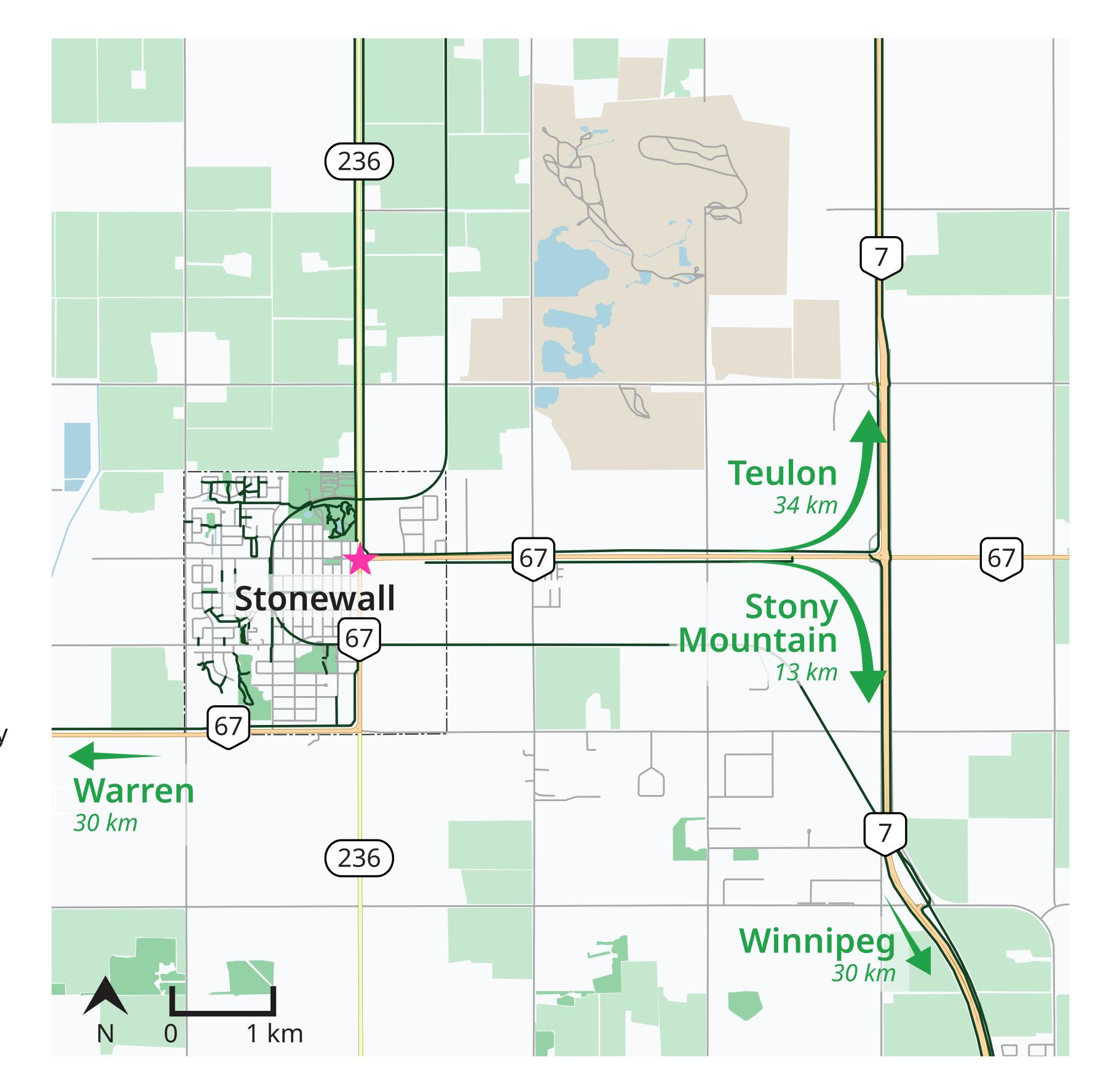
Of the 18 collisions recorded along PTH 67 between 2017 and 2021, nine occurred at the study intersection.

The number of accesses is excessive within near proximity to the study intersection.

The existing accesses in close proximity to the intersection are causing traffic delays.

# Connections

- ★ Project site
- [ ] Stonewall boundary
- Parks and greenspace
- Agricultural land
- Quarry
- Provincial Trunk Highway
- Provincial Roads
- Local roads
- Active transit pathway







# Our Process & Your Participation

# **Project Goals**

- Enhance the main intersection leading into Stonewall
- Design to accommodate continued growth and traffic volume
- Improve safety and overall level of service of intersection

# Engineering + Engagement

Engagement opportunities are taking place at regular intervals throughout this project. Design alternatives must be informed by the needs and desires of:



**Drivers** 

(personal vehicles and trucking)



**Active transportation users** 



**Pedestrians** 

# **Project Milestones**



**Site Analysis** 



Pre-Phase Engagement:
Information Gathering



Develop Design Alternatives

We are here Phase 1 Engagement: Share Design Alternatives

> Select Preferred Alternative

Phase 2 Engagement:

Present Preferred Alternative

Prepare Detailed Design Documents for Construction





# Functional Design Timeline

Pre-Phase This project begins... Engagement *Spring 2024 -***Summer 2024** Summer - Fall 2024 ----Pre-Phase **Review Existing Conditions** Pavement + Materials and Design Parameters Engagement Engineering • Analyze existing conditions, historical Soil survey, materials testing, and reporting Gather initial information from crash records, traffic patterns, utility Town of Stonewall Council Traffic impact assessment, intersection locates, topography treatment warrants, access management In-service road safety review Development of conceptual design Environmental/Regulatory Risk Assessment alternatives **WE ARE** HERE Phase 2 Phase 1 Engagement Engagement -- Fall 2024 ---- Summer 2025 --- Summer 2025 Fall 2024 -**Alternatives Evaluation** Engagement **Detailed Design** Engagement Opportunity Opportunity + Tendering + Recommendation Present preferred alternative Present design alternatives Create evaluation matrix Preparation of detailed design with feedback from Phase 1 Stakeholder meetings Stakeholder meetings documents and Recommend one tender package Public information session Public information session preferred alternative based on evaluation Refine design and drawings





# Studies Conducted

# On-Site Observations

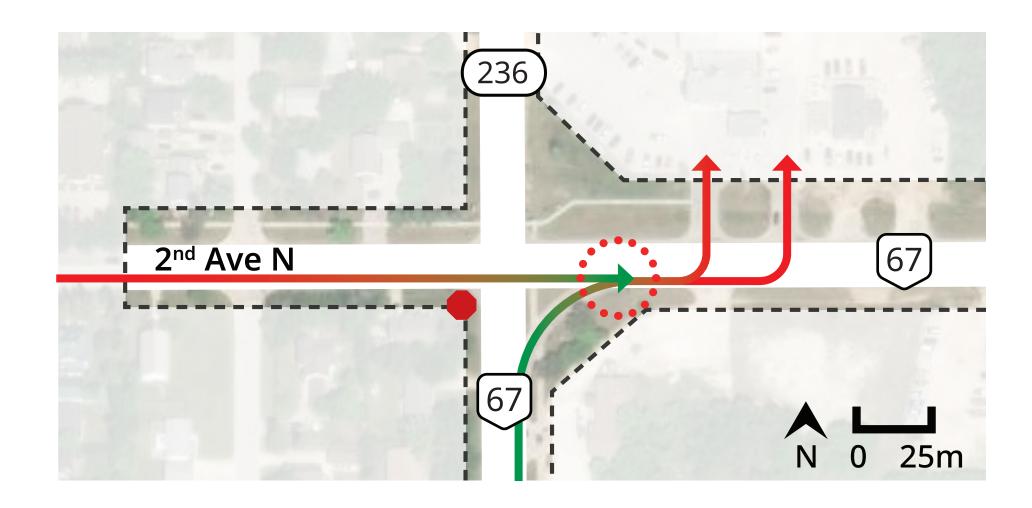
This data is collected when visiting the study site.

### This analysis:

documents and observes traffic flow firsthand.

### Results of analysis:

- A potential conflict was identified:
  - Northbound PR 236 right-turning traffic slows rapidly on PTH 67 to enter the Tim Horton's / Esso Station parking lot.
  - Westbound 2nd Ave N traffic accelerating consistently from a stop are at risk of a rear-end collision.

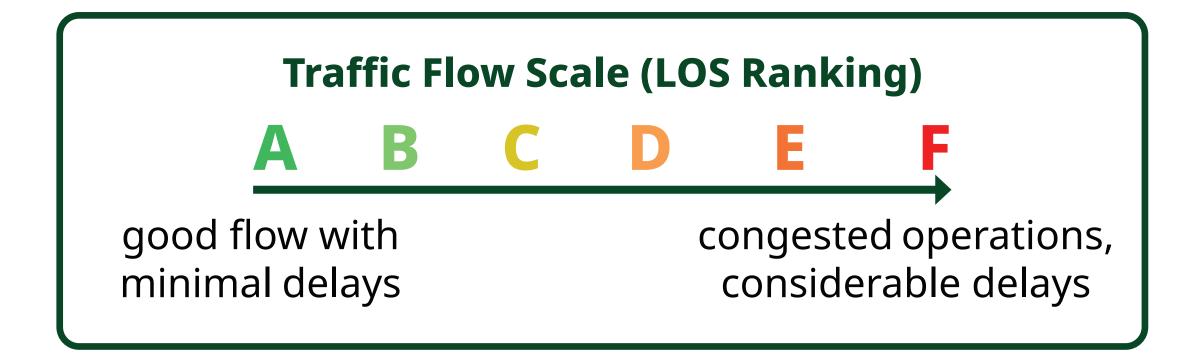


# Level of Service (LOS)

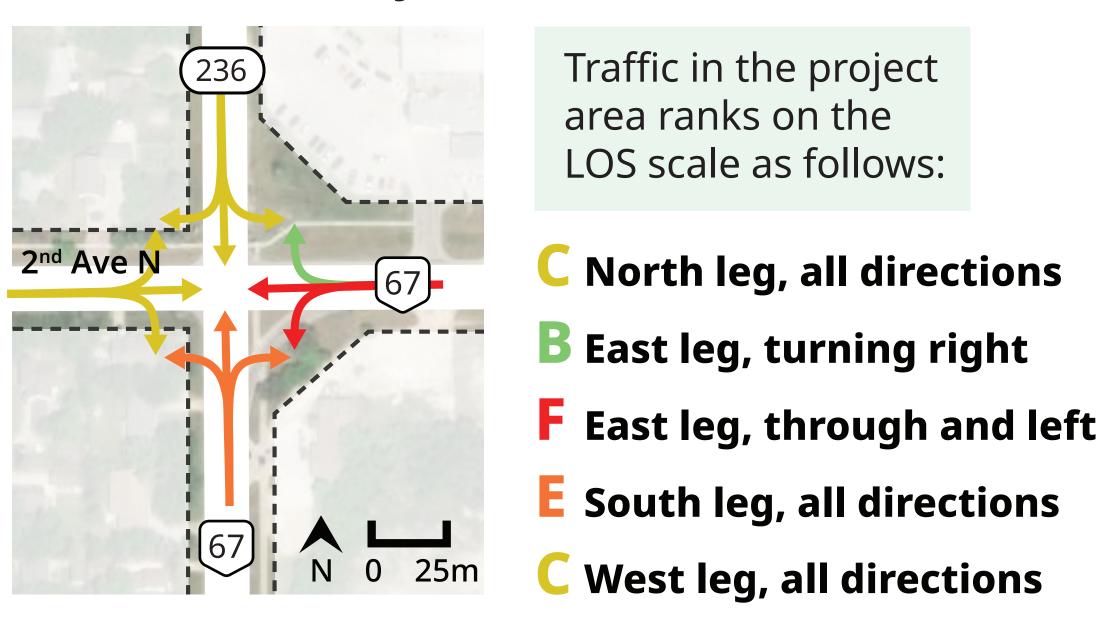
The LOS determines the operating conditions of the intersection (flow rate).

### This analysis:

uses traffic simulation software to gather information.



### Results of analysis:



# Warrant Analysis

The process to determine if improvements are needed.

### This analysis:

- review of existing conditions.
- identifies critical movements and possible negative impacts.

### Results of analysis:

- The need for **auxiliary lanes** was identified to improve the LOS for the 20-year traffic volume forecast.
- Additionally, **traffic signals** could be added to improve flow through the intersection.





# Design Considerations: Goals

The following project factors guided the development of the design alternatives.

These factors led to three alternatives that could best improve the intersection functioning.

# Safety

### Goals

- → Reduce conflict on roads
- Consolidate accesses
  to provide safer
  operations and better
  organization of vehicles
- Provide intersection lighting to improve pedestrian safety

# Active Transportation (AT)

### Goals

→ Identify potential enhancement and connections to AT network around the intersection

# Business

### Goals

Ensure patrons can access surrounding businesses by minimizing queueing at accesses

### Growth

### Goals

→ Ensure intersection can accomodate increasing number of vehicles as Stonewall grows





# Design Considerations: Key Topics

### Cost

- What is the cost to construct the alternative, from design through to construction?
- What are the on-going costs to maintain the alternative?

### Stewardship

- Network optimization (i.e. best use of existing infrastructure)?
- Does the alternative provide the flexibility to add capacity with future growth?
- Does the alternative provide a staging opportunity for construction?
- Can the alternative be replicated elsewhere within Manitoba?
- How quickly and easily can the alternative be implemented?

### Public input

 What considerations are important to the public-at-large?



# Environment

- How much additional right-of-way is needed to accommodate the design?
- What is the amount of lighting required?







# Socioeconomic impacts

- Does the alternative accommodate business development to occur to the east?
- What is the alternative's ability to accommodate an increase in traffic volume?
- What is the impact of the alternative to existing industry surrounding the study intersection?
- How does the Alternative benefit the area residents?

# Driver expectations

- Will the alternative provide consistency in the network and meet drivers' expectations?
- How does the alternative accommodate trucks?





 How does the alternative improve safety at the intersection?



### Road design

 Does the alternative meet industry standard design principles and best practices?



 How does the intersection operate with the various alternatives?





# Proposed Access Management



# Modifications

There are **25 accesses** belonging to both residents and businesses in the project area. The Town of Stonewall has jurisdiction of accesses on three of four legs of the intersection.

Revision of these accesses along PTH 67 need to ensure:

- Consolidation to provide safer operations and improved intersection operation
- Better organization of vehicles entering and exiting
- Parcels are not land locked
- Access to businesses is maintained

All three design alternatives proposed incorporate the following modifications:

- Access remains
- Access moved (existing)
- Access relocated (proposed)
- Access removed

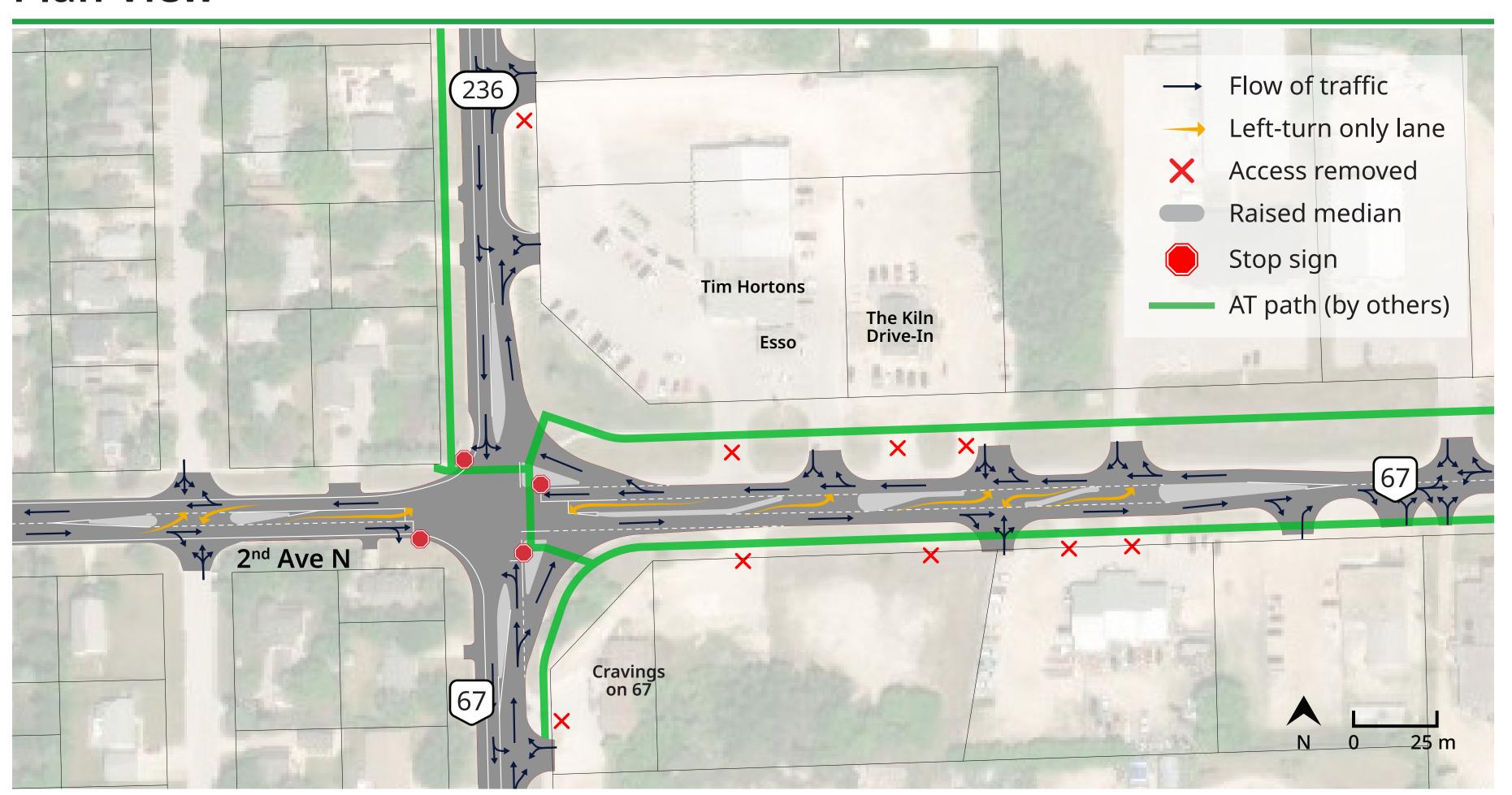


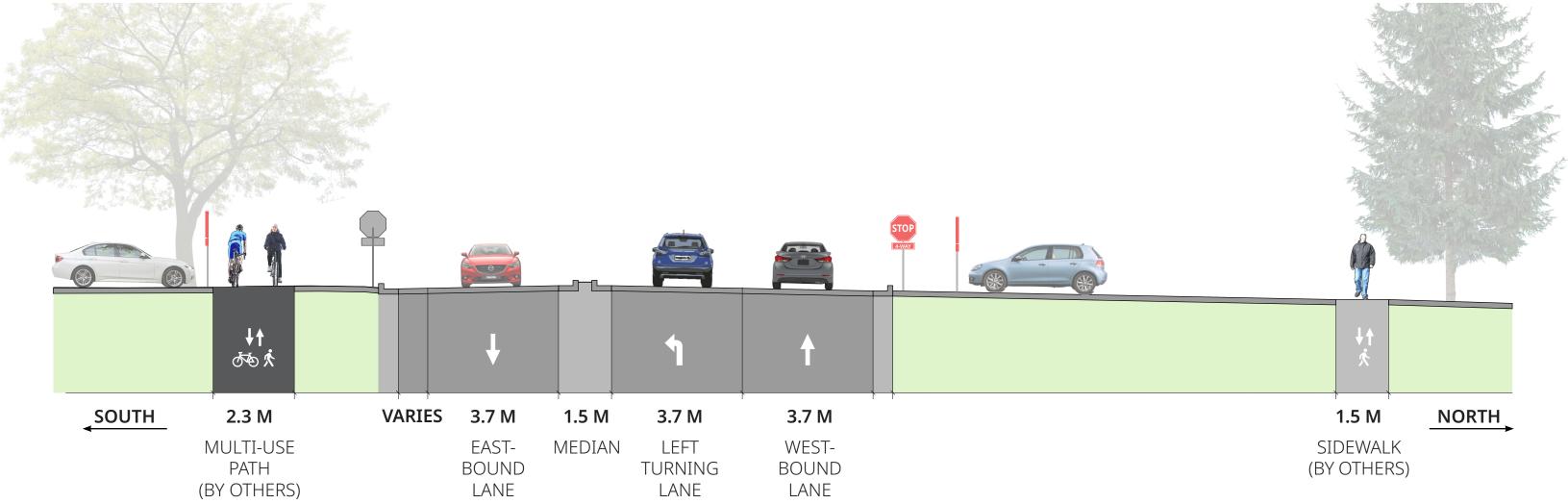


# ALTERNATIVE 1

# All-Way Stop Controlled

### Plan View





Section view of PTH 67 looking west toward intersection.



### **Design Description**

Alternative 1 represents a similar layout to the existing intersection. Geometry is refined to accommodate large trucks and increase pedestrian safety and operations at the intersection.

This alternative provides an adequate level of service for lower traffic volumes.

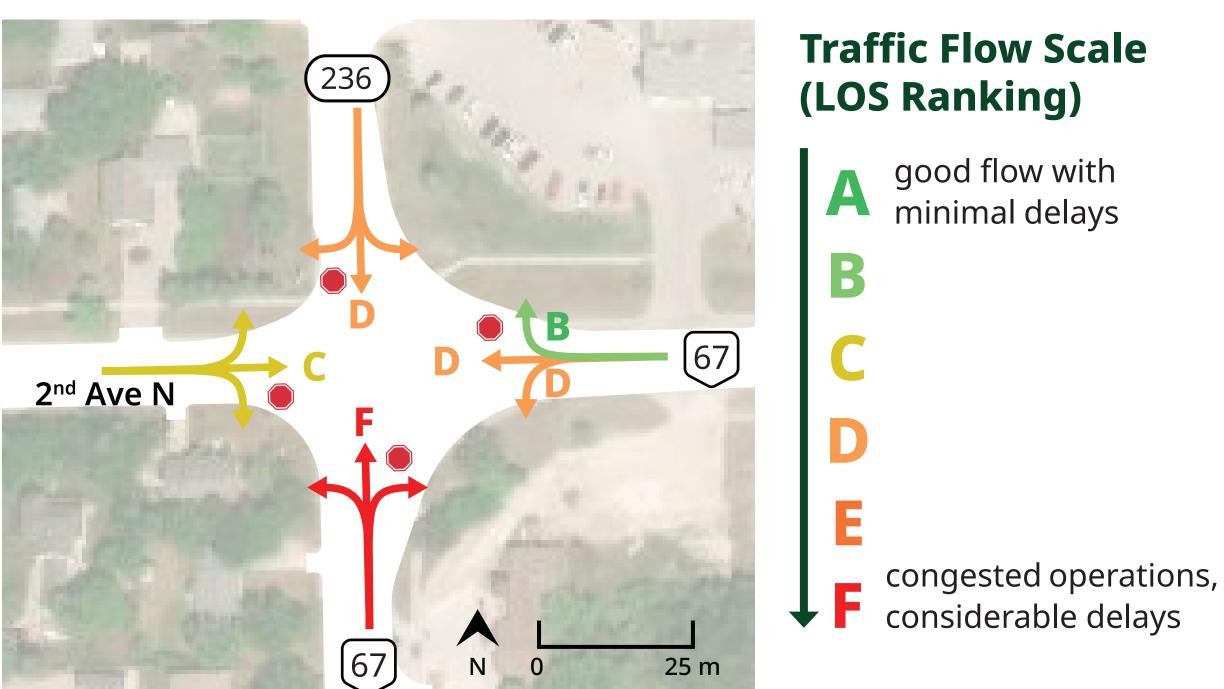
### **Benefits**

- lower maintenance cost (snow clearing)
- new left-turn lanes for accesses on PTH 67 and 2<sup>nd</sup> Ave reduce delays and queues
- site accesses expected to operate well

### Challenges

- northbound and southbound approaches expected to operate poorly, with LOS F
- site accesses expected to operate with some delay

#### Level of Service at Afternoon Peak Hour

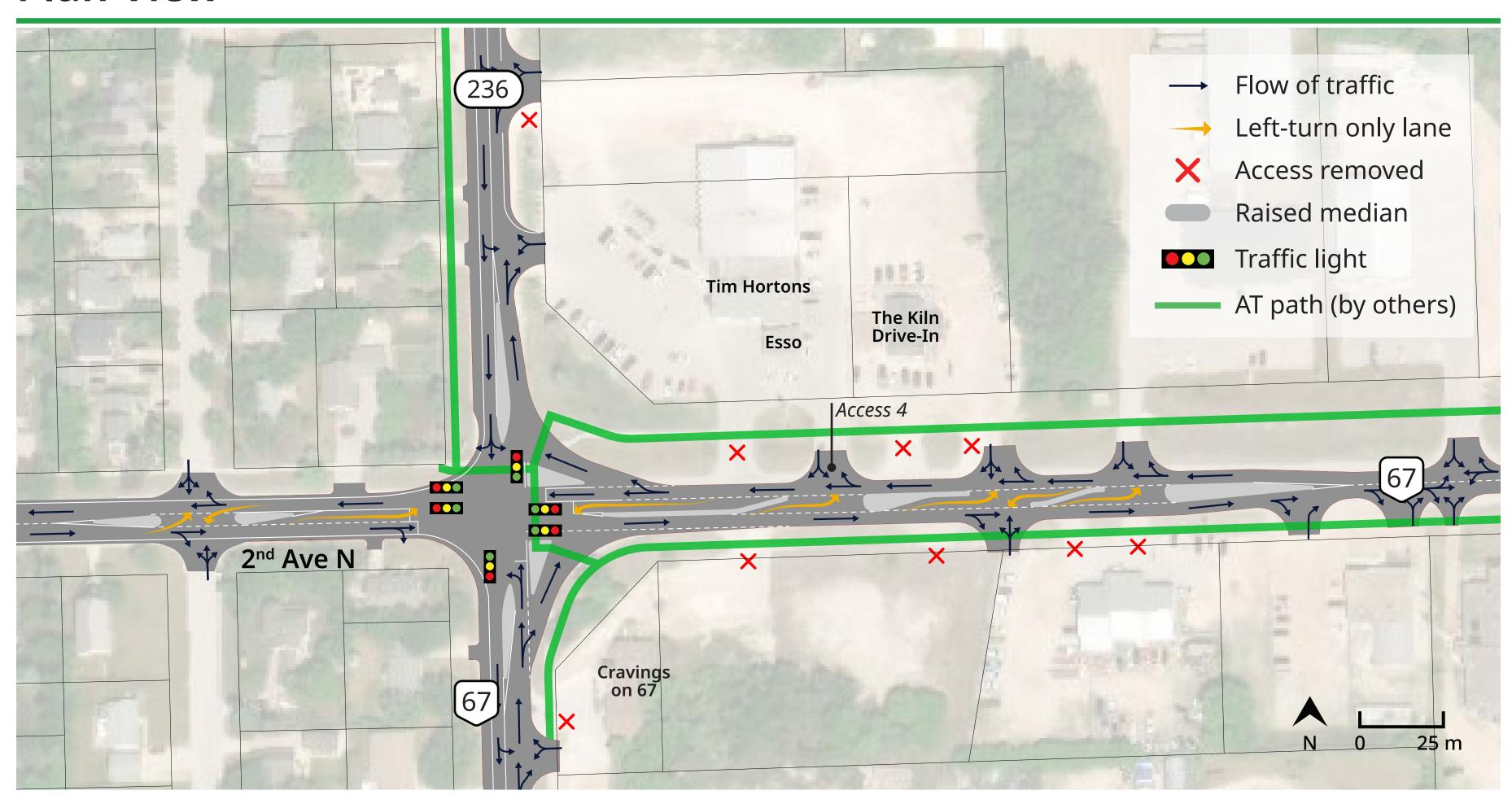


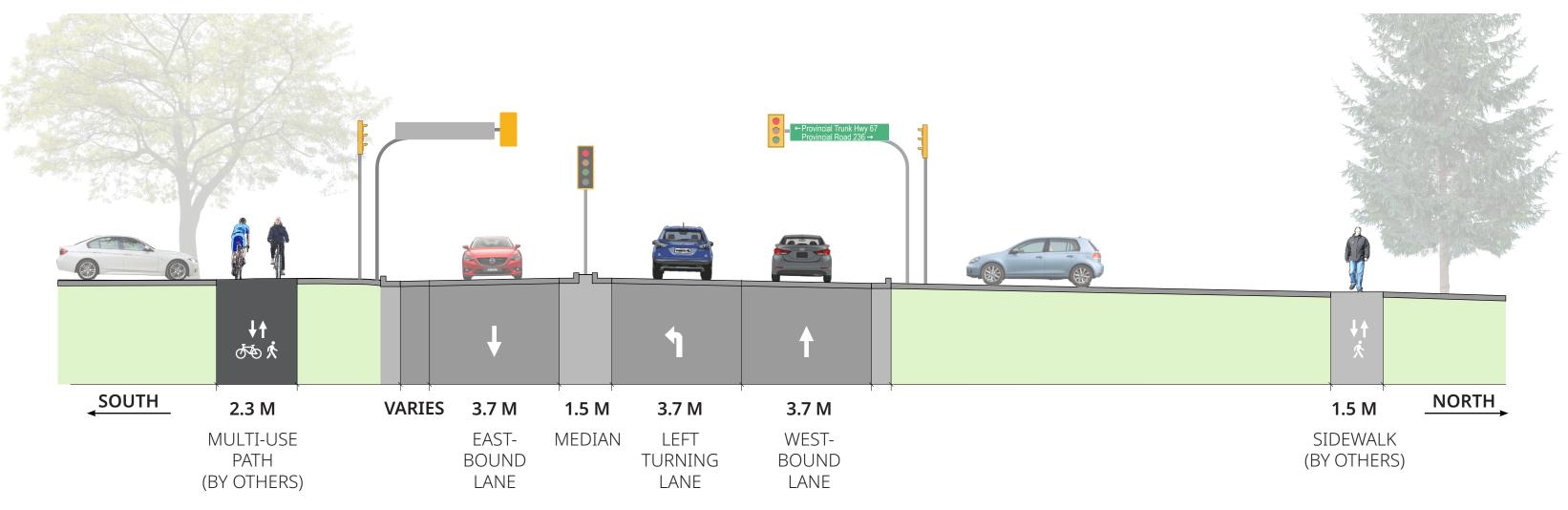


# ALTERNATIVE 2

# Traffic Signals

### Plan View





Section view of PTH 67 looking west toward intersection.

# KGS

### **Design Description**

Alternative 2 is to install traffic signals with improvements to the lanes and geometry of the existing intersection.

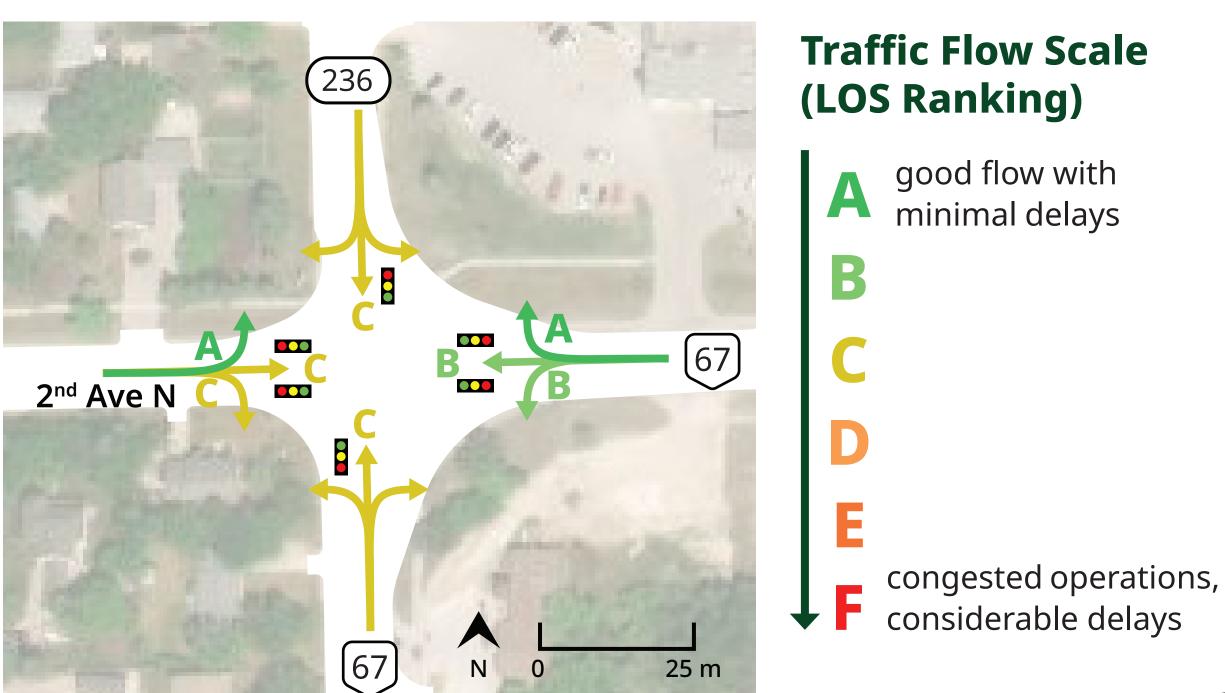
#### Benefits

- control and order
- pedestrian-friendly
- adaptable
- traffic operations improve significantly with implementation of traffic signals
- accesses will operate well overall

### Challenges

- northbound queues have the potential to block access to Cravings on PTH 67
- some queuing in eastbound through lane on PTH 67 at Access 4

#### Level of Service at Afternoon Peak Hour

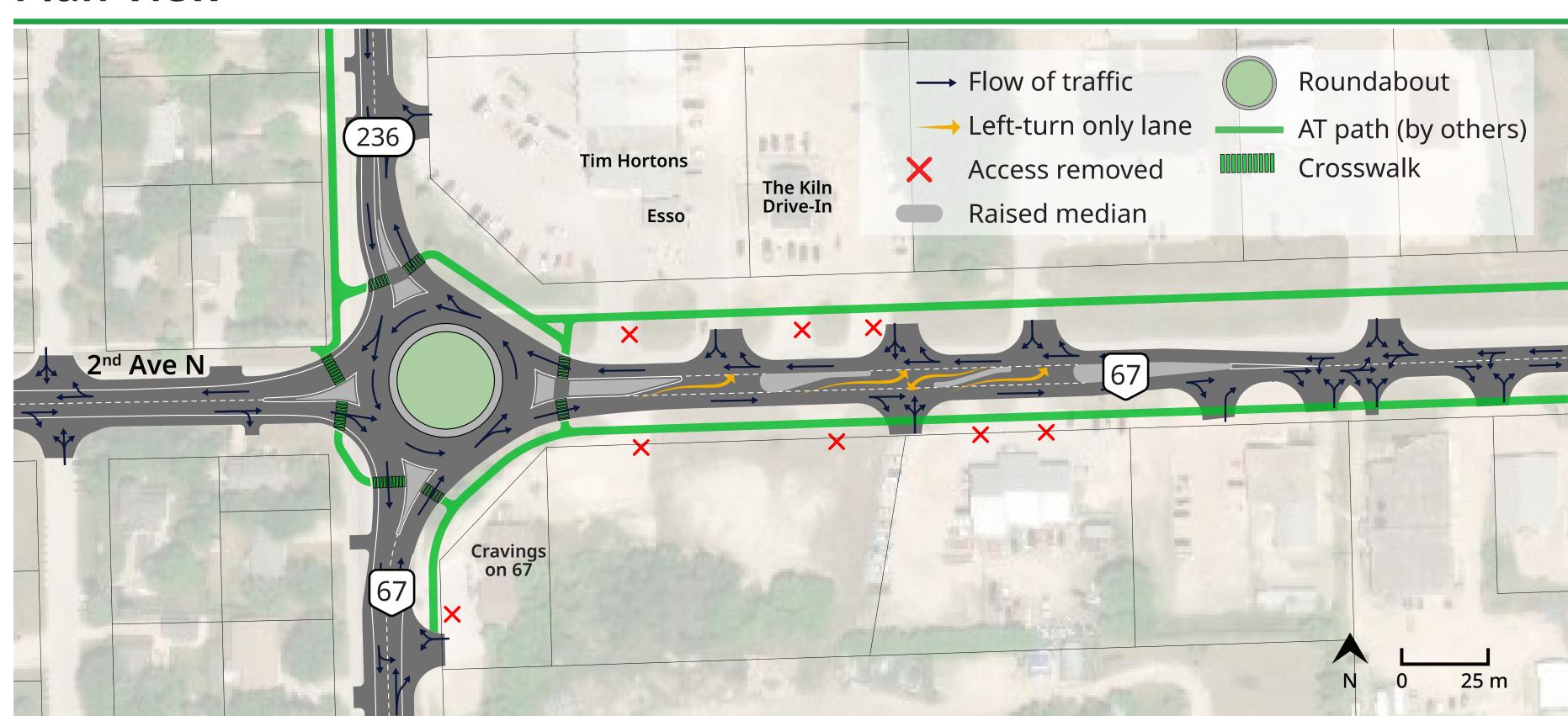


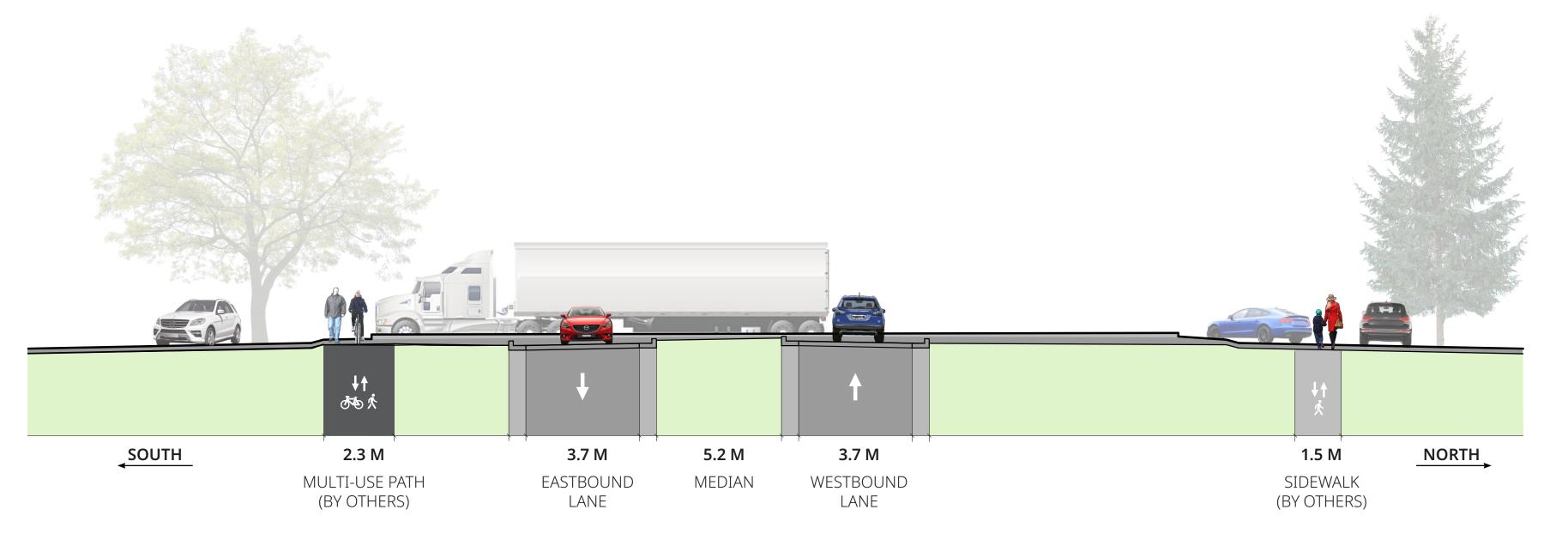


# ALTERNATIVE 3

# Roundabout

### Plan View





Section view of PTH 67 looking west toward intersection.

# KGS

### **Design Description**

Alternative 3 is a single-lane roundabout. The north and south lanes are realigned eastward to accommodate the diameter and AT pathways. Pedestrian crossing distances are reduced.

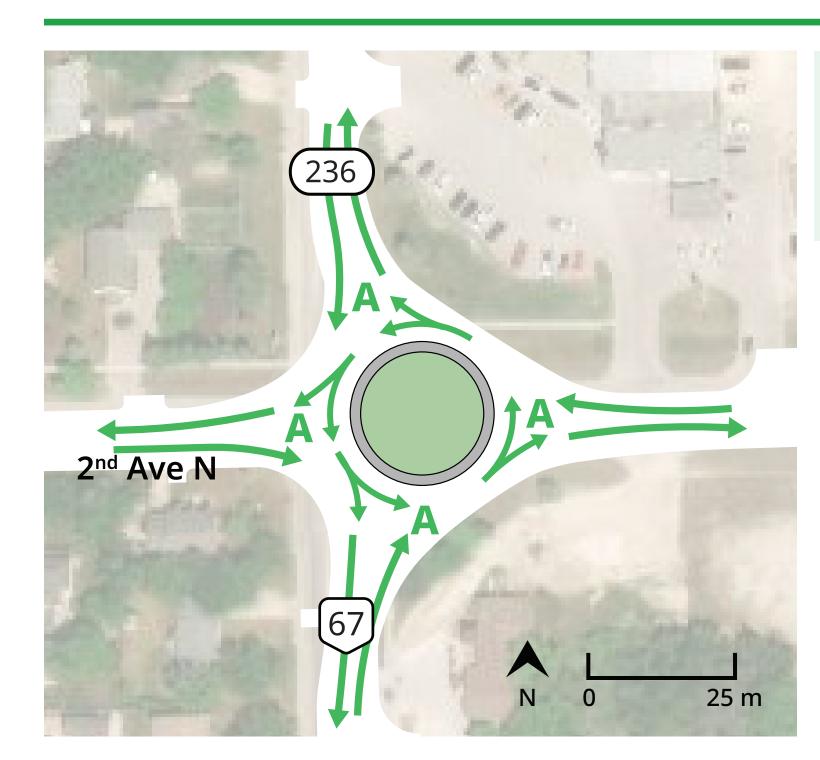
### Benefits

- enhanced safety
- reduced fuel consumption and emissions
- lower maintenance costs (snow clearing)
- provides best level of service overall with the shortest queue of vehicles during peak hours
- accesses operate well

### Challenges

- larger footprint
- more complicated construction staging

#### Level of Service at Afternoon Peak Hour



For this alternative, all traffic ranks on the flow scale at an A level.



# Thank you for your participation today!



Your feedback will be taken into consideration as the project team selects the appropriate design alternative.

# Today's Activities

Once you have reviewed the information on the project boards, we invite you to:

- 1. Share your questions and feedback with members of the project team.
- 2. Complete the mapping activity.
- 3. Complete a comment form.



Today's comment form is also available online until January 2, 2025 at:

surveymonkey.com/r/ StonewallIntersection

# Upcoming Engagement

A Public Open House will take place in Winter 2025, to present the selected alternative.



Promotion for this session will begin approximately **two weeks** before the event date.

We hope to see you there!

# Contact Us

If you have further questions/comments for the project team, please contact:

### Elise Ouellette,

Community Engagement Specialist, Scatliff + Miller + Murray



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