# Downtown bike routes

CentrePlan 2050
Virtual event
Wednesday, February 7, 2024

Winnipeg

**Winnipeg is located in Treaty One Territory, the home and traditional lands of the Anishinaabe (Ojibwe), Ininew (Cree), and Dakota peoples, and in the National Homeland of the Red River Métis.  Our drinking water comes from Shoal Lake 40 First Nation, in Treaty Three Territory.**

# Agenda

**Welcome and Introductions** (10 minutes)

**St. Mary Avenue and York Avenue**
Presentation (20 minutes)
Questions (15 minutes)

**Cumberland Avenue and Notre Dame Avenue**
Presentation (20 minutes)
Questions (15 minutes)

**Next Steps and Wrap up** (10 minutes)

# Downtown bike routes

The City is looking at design options for the following routes to improve connectivity to/from and within the Downtown:

- St. Mary Avenue and York Avenue
- Notre Dame Avenue and Cumberland Avenue
- William Stephenson Way
- Graham Avenue (see Re-Imagining Graham Avenue)

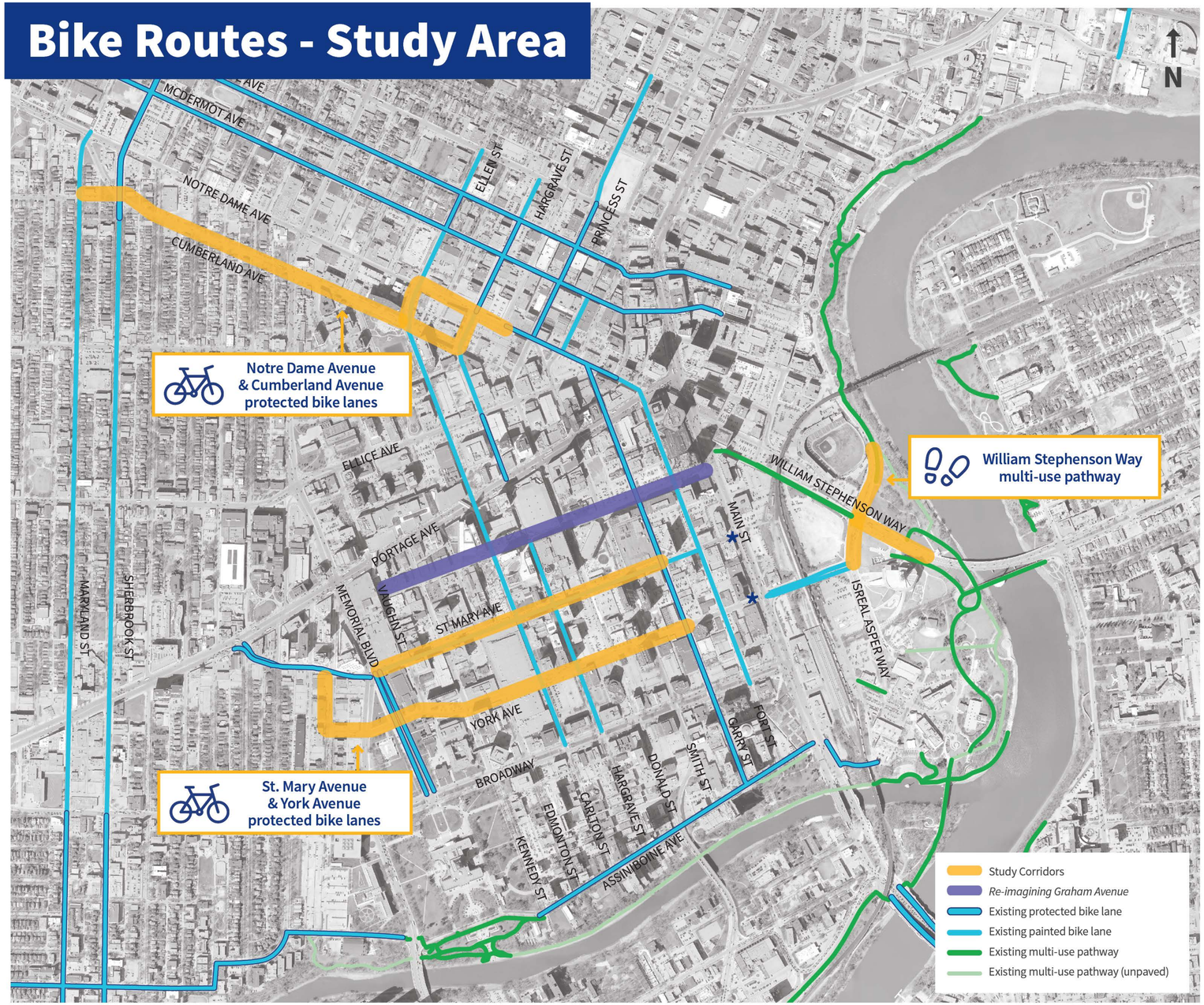
Designs will be developed that can be used for future street renewal projects and/or stand alone infrastructure projects on these streets.

The Pedestrian and Cycling Strategies (PCS) provide the long-term vision for accessible, convenient and safe walking and cycling infrastructure for people of all ages and abilities. The PCS is currently undergoing an update as part of the Transportation Master Plan 2050 project.

The design of Downtown bike routes have to consider some design factors that set Downtown apart from other areas, including limited road space, high traffic volumes, Transit, one-way streets, and demand for on-street parking and loading.

# Context

## Bike Routes - Study Area




### Protected bike lane

A physically separated, on-street lane designated exclusively for bike travel. Vehicles may be separated from bikes using raised concrete curbs, parking, or by raising the bike lane. Cyclists can enter/exit at intersections and vehicles are blocked from entering.

### Multi-use pathway

These off-street paths are physically separated from vehicles and run alongside or nearby roadways. Multi-use paths allow for bidirectional travel and are shared by cyclists, pedestrians, and other non-motorized users.

★ A future connection across Main Street will be studied as part of the Rapid Transit (Downtown Corridors) Preliminary Design study.

# Project timeline - Downtown bike routes

We are here

**PROJECT BEGINS**
Fall 2022

**PHASE 1 PUBLIC AND STAKEHOLDER ENGAGEMENT**
May 2023

**PHASE 2 PUBLIC AND STAKEHOLDER ENGAGEMENT**
February 2024

**PHASE 3 PUBLIC AND STAKEHOLDER ENGAGEMENT**
Spring 2024

2022 | 2023 | 2024

**BACKGROUND ANALYSIS**
Fall 2022 – Winter 2023

**PREPARE AND ANALYZE CONCEPTUAL BIKE ROUTE OPTIONS**
Summer – Fall 2023

**PREPARE RECOMMENDED BIKE ROUTE DESIGNS**
Winter 2024

**FINALIZE BIKE ROUTE DESIGNS**
Fall 2024

# Public engagement - Phase 1

## OPEN HOUSE

**402**

participants attended the CentrePlan 2050 public open house

## STAKEHOLDER WORKSHOP

**18**

community organizations, businesses, and insttitutions provided input on priorities, interests and concerns

## ONLINE SURVEY

**697**

responses

# Public engagement - Phase 1 what we heard

- Support for a consistent network of Downtown bike routes designed for all ages and all abilities
- Concerns about impacts to vehicle space and conflicts between cyclists and vehicles, especially at intersections
- Cyclists typically feel more comfortable biking in the same direction as traffic
- Protected bike lanes are the most comfortable type of infrastructure Downtown
- Downtown bike routes should have clear signage and wayfinding, and be well lit
- Concerns about loss of on-street parking and impacts to loading and access to properties
- Bike routes need to be maintained and kept clear of snow and debris in every season
- Trees and greenery should be included for shade and beautification

Survey respondents said the most important things to consider for protected bike lanes Downtown are:

- **Providing cyclists connections to as many destinations Downtown as possible (73% of responses)**
- **Providing wide bike lanes that can allow for cyclist passing (41% of responses)**
- **Creating additional space for street beautification such as planters and public art (28% of responses)**

# Evaluation criteria

The project team will evaluate options based on:

### CYCLING COMFORT

Attractive to the broadest number of users (all ages and all abilities).

### CONFLICTS

Safety risks posed by conflict points with intersections, accesses and driveways for all users.

### CONNECTIVITY & PROXIMITY

Fits into the overall bike network and connects to existing bike routes. Proximity to other parallel bike routes.

### MAINTENANCE

Relative cost and level of effort required for ongoing all-seasons maintenance.

### COST

Relative capital cost.

### TRAFFIC OPERATIONS

Impact to traffic operations.

### PARKING & LOADING

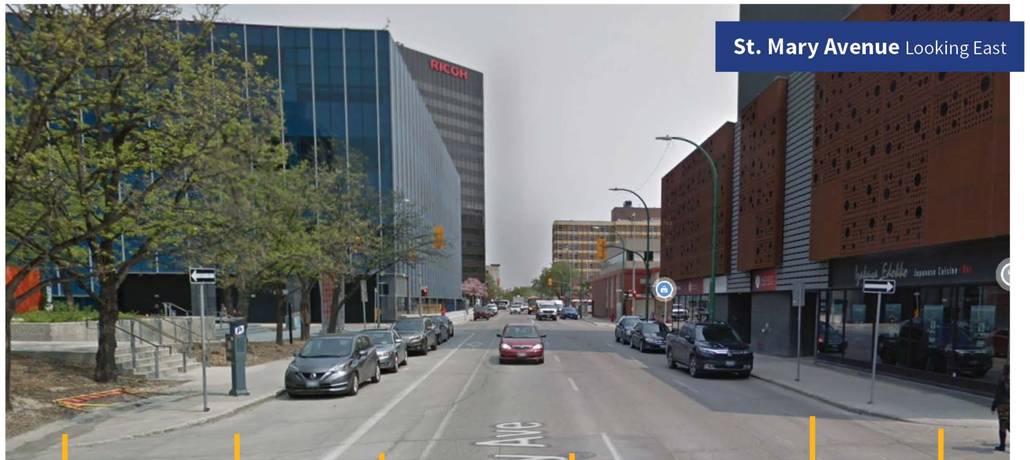
Impact to on-street parking and loading.

# St. Mary Avenue and York Avenue - Options

Two options for protected bike lanes on St. Mary Avenue and York Avenue are being considered:

- One-way protected bike lanes on both St. Mary Avenue and York Avenue
- Two-way protected bike lane on York Avenue only

**St. Mary Avenue - Existing Conditions**




- Sidewalk
- On-street parking and loading lane
- Painted bike lane
- Two full-time travel lanes
- Restricted on-street parking and loading during rush hours
- Sidewalk

**York Avenue - Existing Conditions**




- Sidewalk
- Restricted on-street parking and loading during rush hours
- Two full-time travel lanes
- Restricted on-street parking and loading during rush hours
- Sidewalk

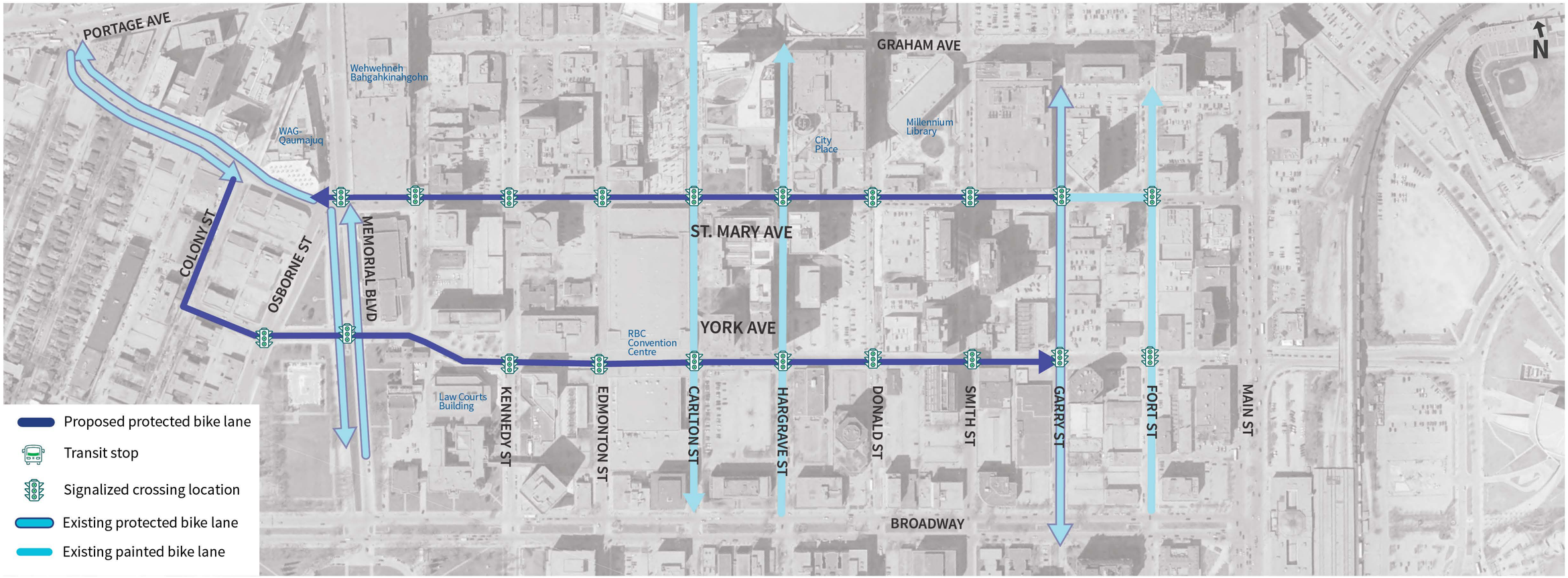
# Preferred option:
## One-way protected bike lanes on both St. Mary Avenue and York Avenue

The one-way protected bike lanes on both St. Mary Avenue and York Avenue is the preferred option. Both options are still viable. This is based on the evaluation criteria and what we heard in Phase 1:

| | |
|---|---|
| **CYCLING COMFORT** | • One-way bike lane follows the direction of traffic, which is more comfortable for cyclists and drivers<br>• Stakeholders and the public told us they are more comfortable biking in the same direction as traffic |
| **CONFLICTS** | • Crossing one-way bike lanes is typically easier for all users than crossing two-way bike lanes. Drivers, pedestrians, and other cyclists only have to scan one direction of bike traffic before determining whether it is safe to cross the bike lane. |
| **CONNECTIVITY & PROXIMITY** | • Bike access is provided to destinations on and around both St. Mary Avenue and York Avenue |
| **TRAFFIC OPERATIONS** | • One-way protected bike lanes have fewer impacts on the way traffic flows. For example, traffic signal timing is simpler than with two-way bike lanes |

# Preferred option:

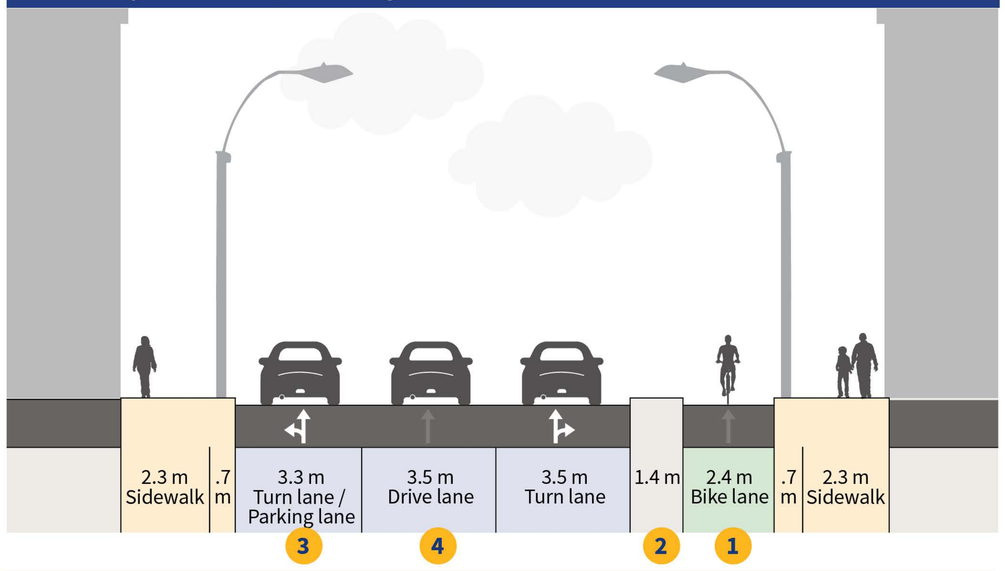
## One-way protected bike lanes on both St. Mary Avenue and York Avenue



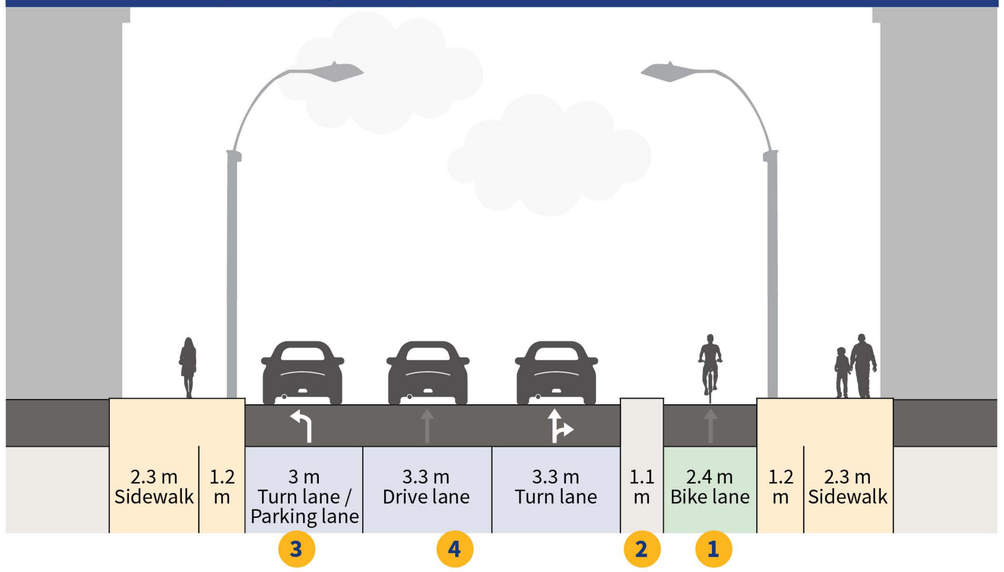
# Preferred option - Design features

## One-way protected bike lanes on both St. Mary Avenue and York Avenue

St. Mary Avenue (looking west)




York Avenue (looking east)

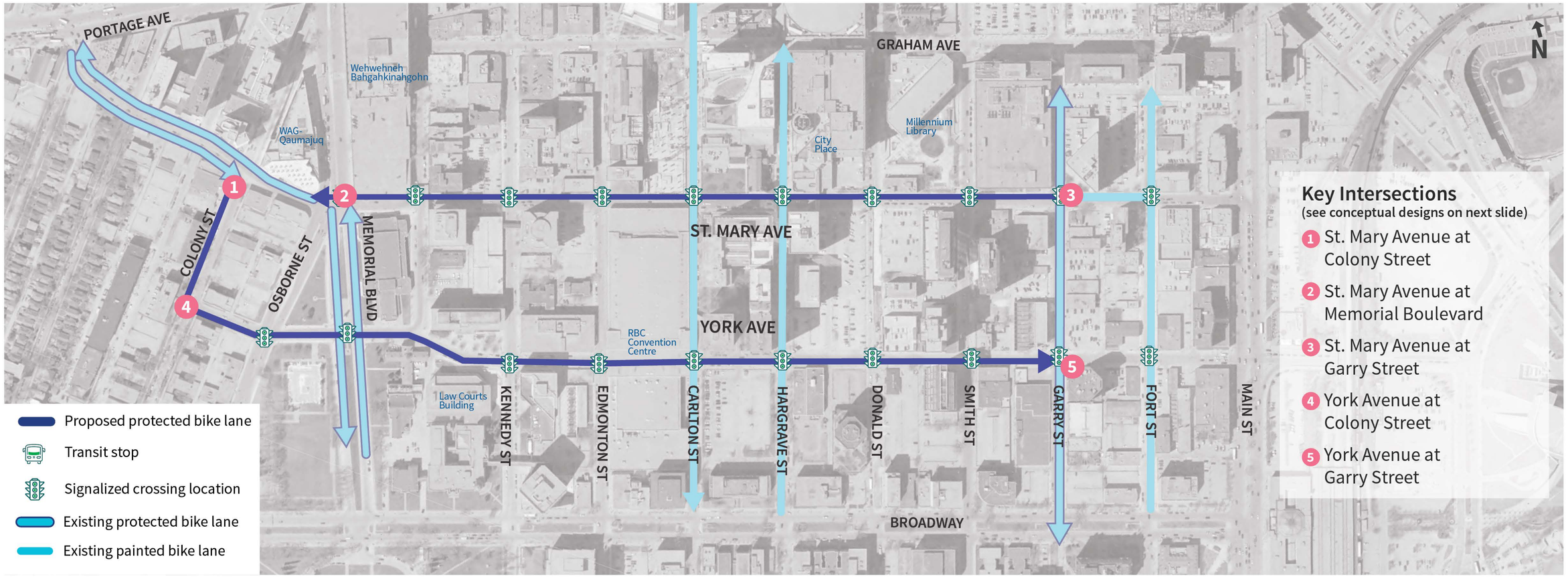



1. **Wide one-way bike lane that follows direction of traffic**
2. **Wide buffers between bike lanes and traffic**
3. **Parking and loading maintained on one side of each street**
4. **Maintains three vehicle lanes on each street**

81% of survey respondents were moderately or very familiar with one-way protected bike lanes and 81% supported them

# Preferred option - Key intersections

## One-way protected bike lanes on both St. Mary Avenue and York Avenue

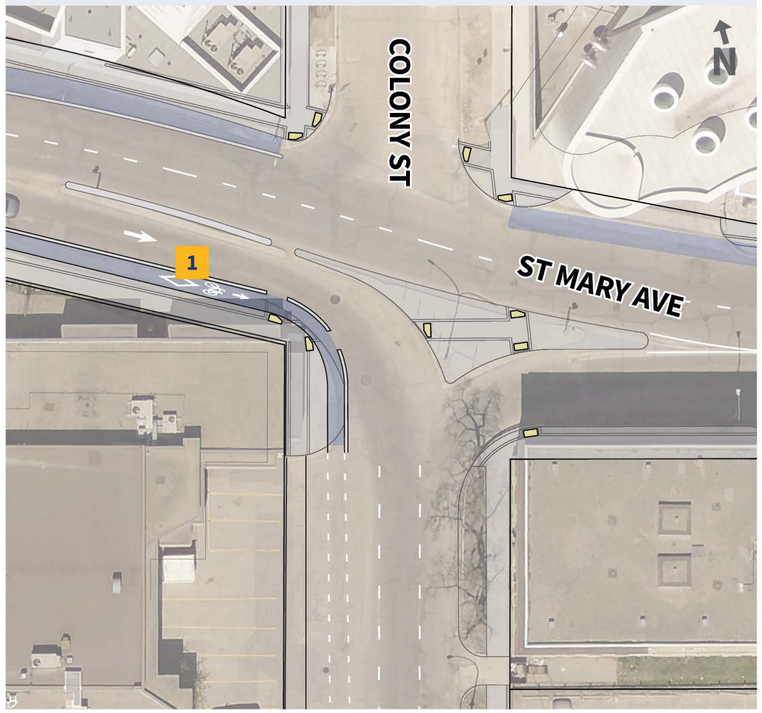


# Preferred option - Key intersections

## One-way protected bike lanes on both St. Mary Avenue and York Avenue

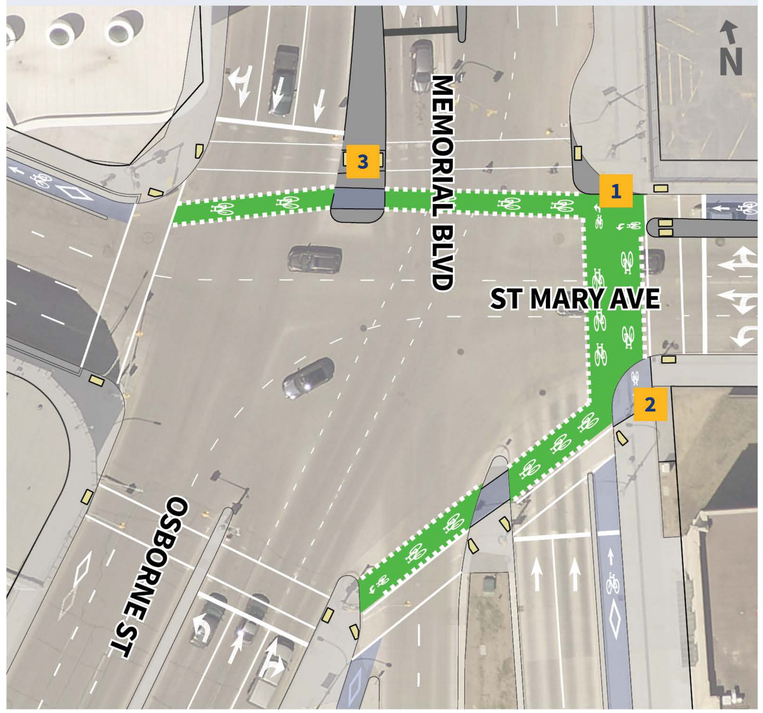
### Conceptual designs

#### 1 St. Mary Avenue at Colony Street




1 Protected bike lane

#### 2 St. Mary Avenue at Memorial Boulevard

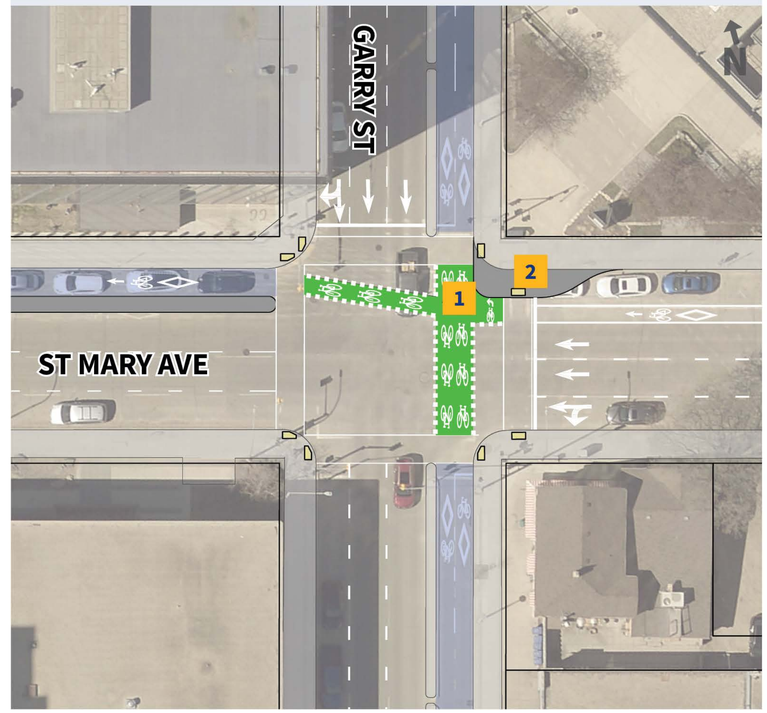



1 Bike box to enable left turn

2 Bike signal waiting area

3 Widened median to provide pedestrian and cycling refuge

#### 3 St. Mary Avenue at Garry Street




1 Bike box to enable left turn

2 Curb extension to shorten pedestrian crossing

# Preferred option - Key intersections

## One-way protected bike lanes on both St. Mary Avenue and York Avenue

### Conceptual designs

#### 4 York Avenue at Colony Street

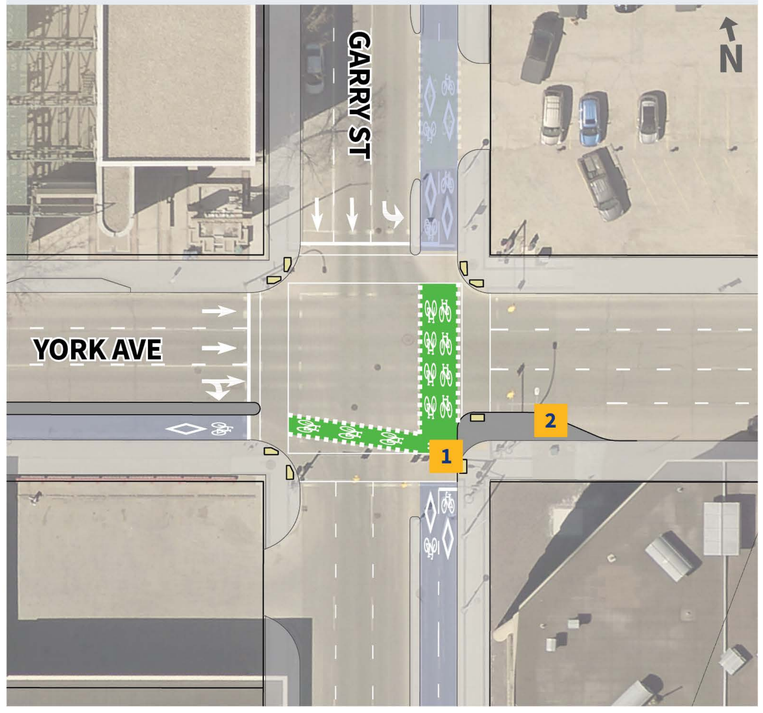



1 Colony Street realigned to improve pedestrian and cycling crossing

2 Protected bike lane

3 Curb extensions provide added boulevard space

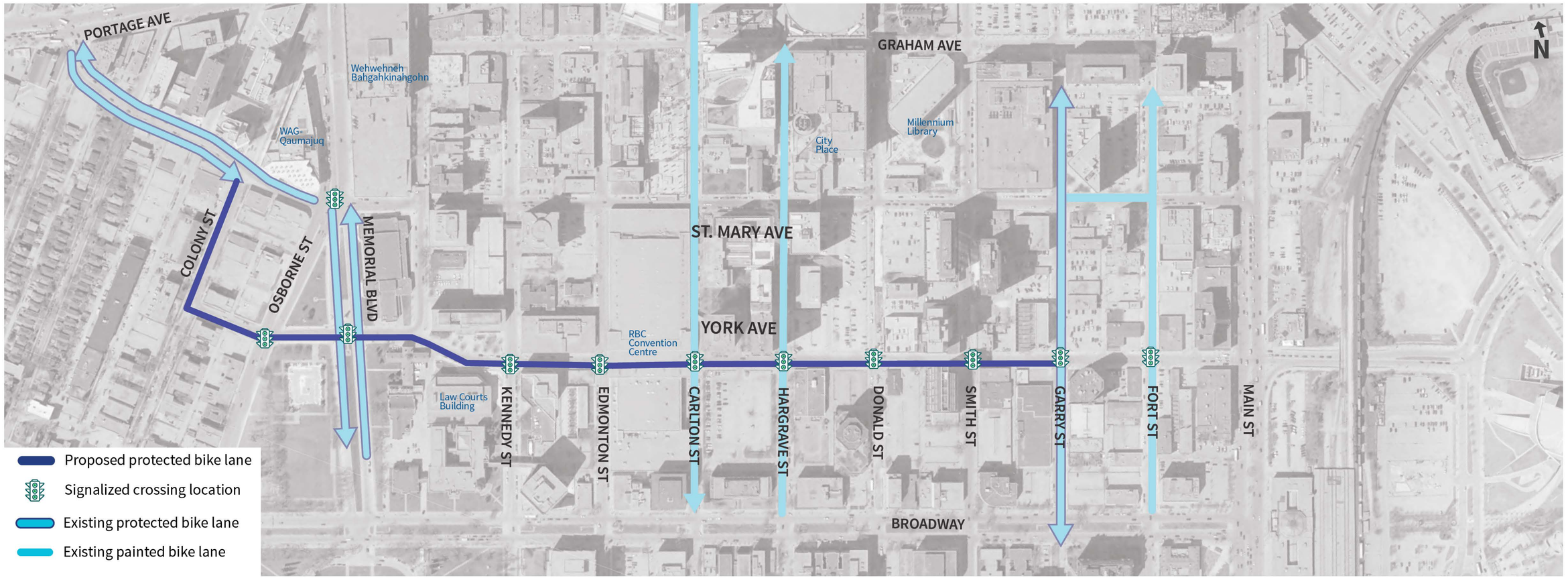
#### 5 York Avenue at Garry Street




1 Bike box to enable left turn

2 Curb extension to shorten pedestrian crossing

# Alternate option:
## Two-way protected bike lane on York Avenue only




We could install the two-way protected bike lane on either side of York Avenue:

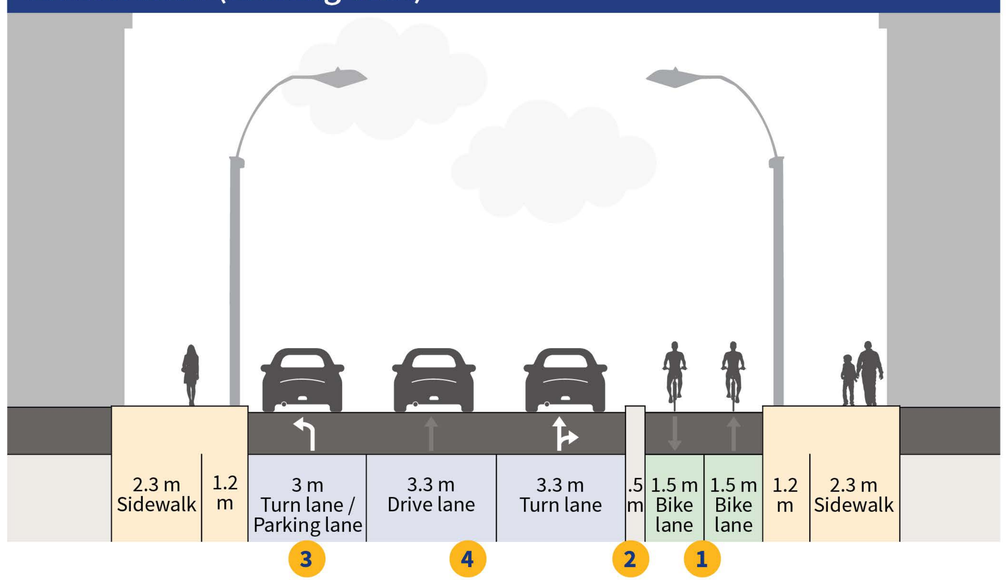
- Two-way protected bike lane on the south side of the street
- Two-way protected bike lane on the north side of the street

If a two-way protected bike lane on York Avenue is determined to be the best option, we will discuss the two options with stakeholders fronting York Ave to help inform which side of the street is optimal.

# Alternate option - Design features

## Two-way protected bike lane on York Avenue only

York Avenue (looking east)

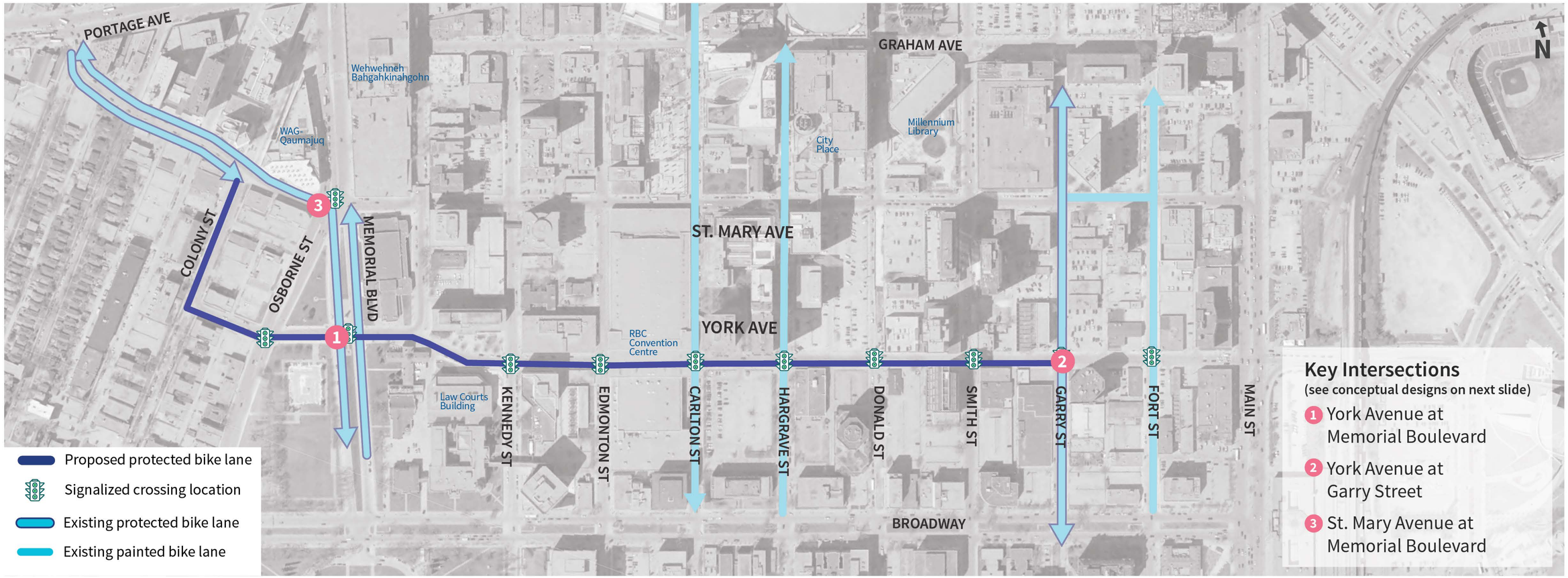



1. **Two-way bike lane does not follow direction of one-way traffic, which can be less comfortable for cyclists and drivers**
2. **Narrow buffer between bike lanes and traffic**
3. **Parking and loading maintained on one side of York Avenue**
4. **Maintains three vehicle lanes on York Avenue**

80% of survey respondents were moderately or very familiar with two-way protected bike lanes and 80% supported them

# Alternate option - Key intersections

## Two-way protected bike lane on York Avenue only



# Alternate option - Key intersections

## Two-way protected bike lane on York Avenue only

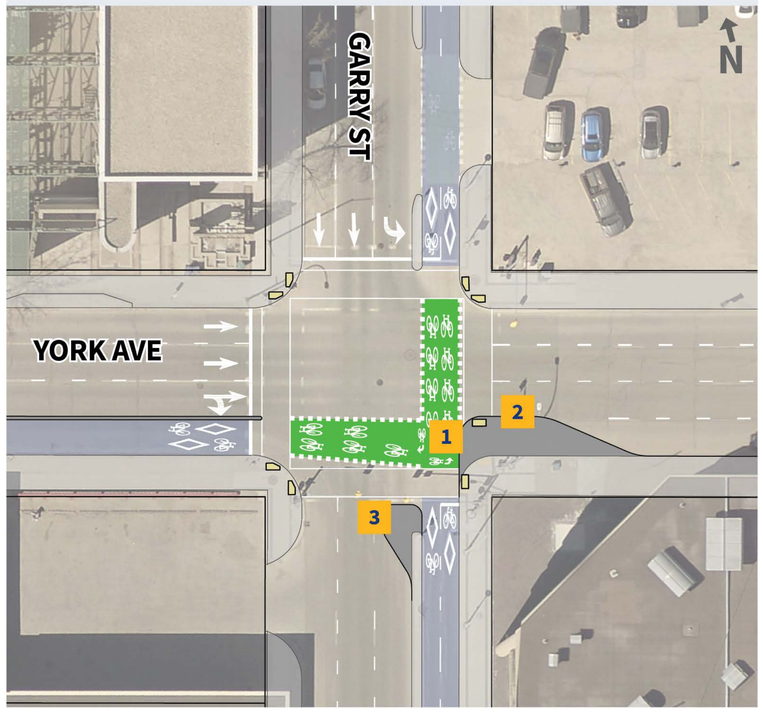
### Conceptual designs

#### 1 York Avenue at Memorial Boulevard




1 Bike box to enable left turn

#### 2 York Avenue at Garry Street

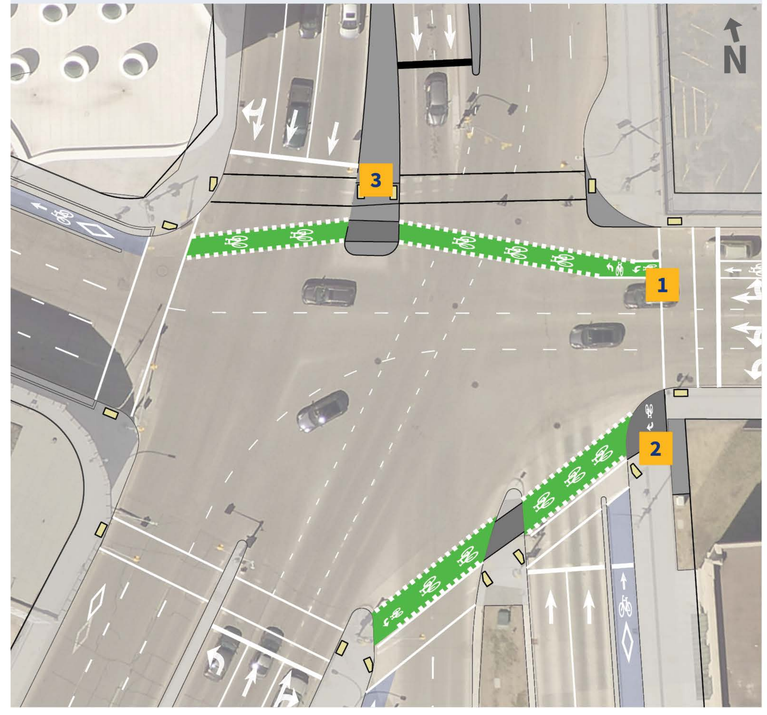



1 Bike box to enable left turn

2 Curb extension to shorten pedestrian crossing

3 Curb extension to provide space for bike turn movements

#### 3 St. Mary Avenue at Memorial Boulevard



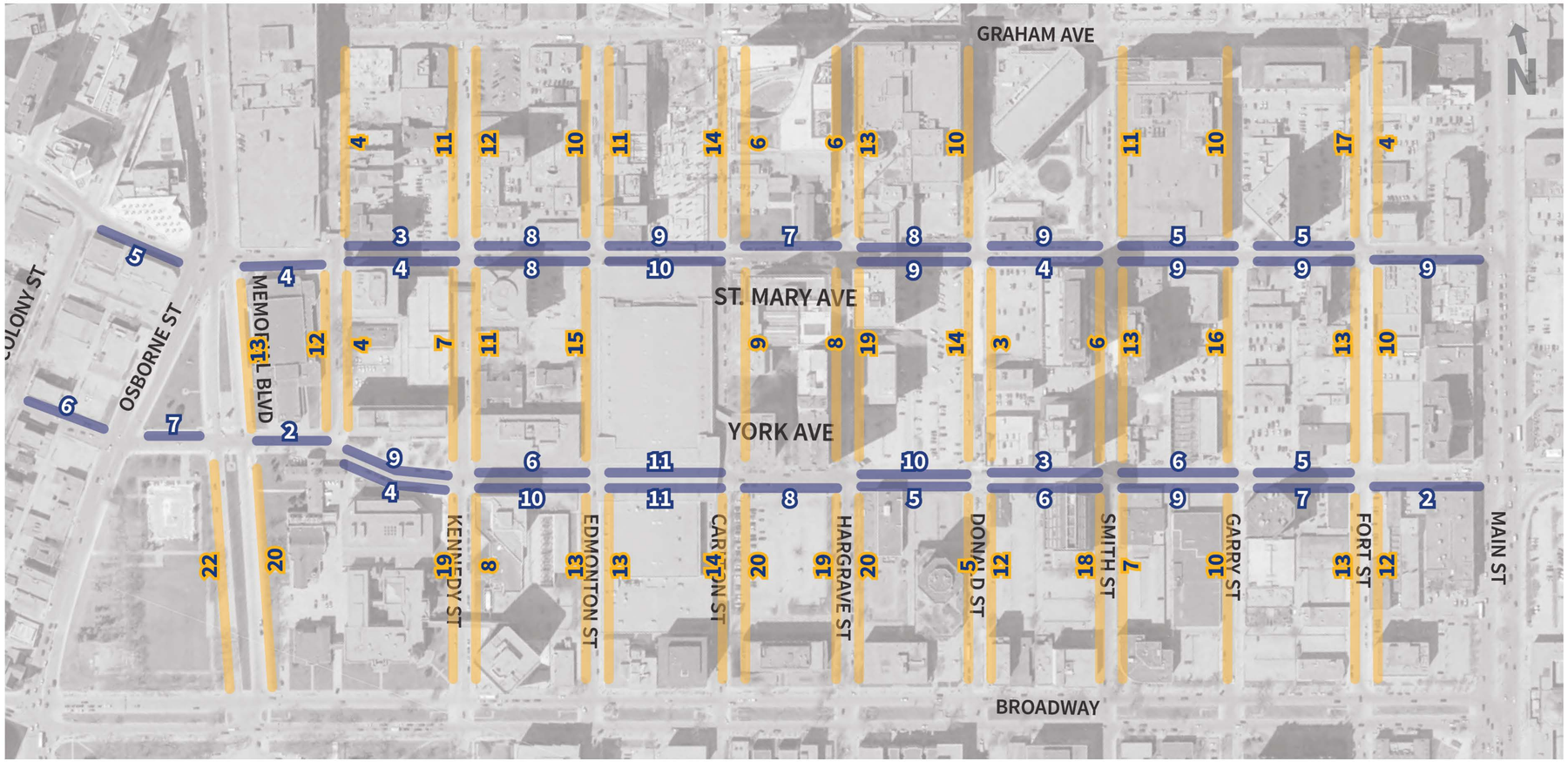

1 Bike box to enable left turn

2 Bike signal waiting area

3 Widened median to provide pedestrian and cycling refuge

# St. Mary Avenue and York Avenue - On-street parking

**Current study area parking**




| Approximate On-street Parking Stalls | St. Mary Avenue | York Avenue | North-south streets between Graham Avenue and Broadway | Total |
|---|---|---|---|---|
| **CURRENT** | **120** | **127** | **548** (no change) | **795** |
| **PREFERRED OPTION** | **76** (↓xx) | **74** (↓53) | | **698** (↓97) |
| **ALTERNATE OPTION SOUTH SIDE** | **120** (no change) | **74** (↓53) | | **742** (↓53) |
| **ALTERNATE OPTION NORTH SIDE** | **120** (no change) | **82** (↓45) | | **750** (↓45) |

# St. Mary Avenue and York Avenue - Key considerations

| EVALUATION CRITERIA | PREFERRED OPTION | ALTERNATE OPTION |
|---|---|---|
| **CYCLING COMFORT**<br>Attractive to the broadest number of users (all ages and all abilities) | • Wide buffer between bike lane and traffic<br>• One-way bike lane follows direction of traffic<br>• Wide bike lane provides opportunity for passing | • Minimum width buffer between bike lane and traffic<br>• Two-way bike lane does not follow direction of one-way traffic, which can be less comfortable for cyclists and drivers<br>• Two-way bike lane provides opportunities for passing by entering on-coming bike traffic |
| **CONFLICTS**<br>Safety risks posed by conflict points with intersections, accesses and driveways for all users | • More intersections, lanes, and driveways<br>• Crossing one-way bike lanes is typically easier for all users than crossing two-way bike lanes | • Less intersections, lanes, and driveways<br>• Crossing two-way bike lanes is typically harder for all users than crossing one-way bike lanes |
| **CONNECTIVITY & PROXIMITY**<br>Fits into the overall bike network and connects to existing bike routes. Proximity to other parallel bike routes | • Provides an east-west connection across the south portion of Downtown<br>• Bike access provided to destinations on both streets | • Provides an east-west connection across the south portion of Downtown<br>• Bike access to destinations on York Avenue only |

# St. Mary Avenue and York Avenue - Key considerations

| EVALUATION CRITERIA | PREFERRED OPTION | ALTERNATE OPTION |
|---|---|---|
| **MAINTENANCE**<br>Relative cost and level of effort required for ongoing all-seasons maintenance | • Relatively more maintenance to clear and maintain bike lanes on both streets | • Relatively less maintenance to clear and maintain one bike lane |
| **COST**<br>Relative capital cost to install protected bike lanes | • Higher capital cost to install bike lanes on two streets | • Lower capital cost to install bike lane on one street |
| **TRAFFIC OPERATIONS**<br>Impact to traffic operations | • Maintains three vehicle lanes on each street<br>• One-way bike lane crossings are less impactful to traffic operations at major intersections | • Maintains three vehicle lanes on York Avenue (no impact on St. Mary Avenue)<br>• Two-way bike traffic adds complexity to signalized intersections which may increase vehicle delay |
| **PARKING & LOADING**<br>Impact to on-street parking and loading | • Removal of on-street parking / loading spaces on St. Mary Avenue and York Avenue<br>• Parking and loading maintained on one side of each street | • Removal of on-street parking / loading spaces on York Avenue<br>• Parking and loading maintained on one side of the street on York Avenue (no impact on St. Mary Avenue) |

# St. Mary Avenue and York Avenue

# Questions / Comments

# Notre Dame Avenue and Cumberland Avenue - Options

Two options for protected bike lanes on Notre Dame Avenue and Cumberland Avenue are being considered:

- Two-way protected bike lane (south side) on Cumberland Avenue
- Two-way protected bike lane (north side) on Cumberland Avenue

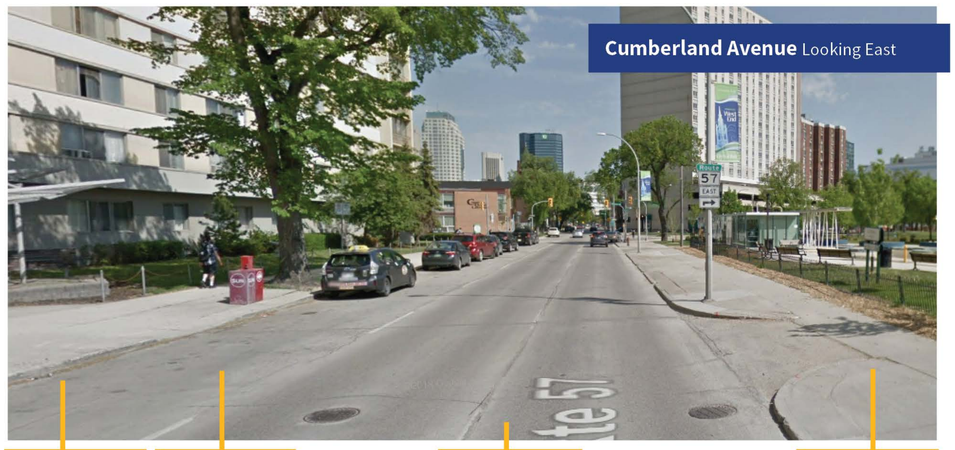
Both options include a two-way protected bike lane on the north side of Notre Dame Avenue.

We do not yet prefer one option over another at this location.

## Notre Dame Avenue - Existing Conditions




## Cumberland Avenue - Existing Conditions



# Notre Dame Avenue and Cumberland Avenue - Options

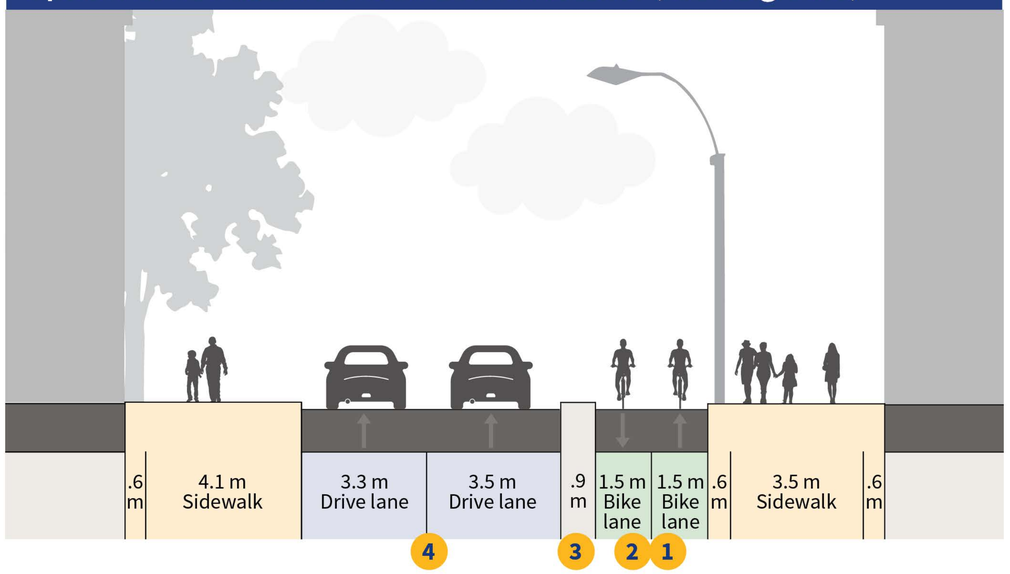



- Two-way protected bike lane (north side) on Notre Dame Avenue
- Option 1 - Two-way protected bike lane (south side) on Cumberland Avenue
- Option 2 - Two-way protected bike lane (north side) on Cumberland Avenue

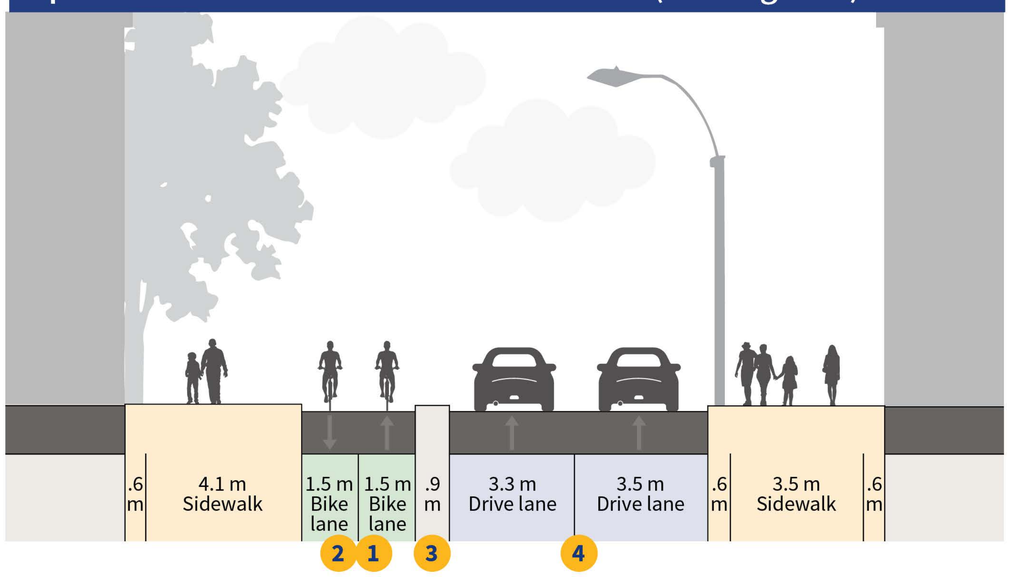
# Options 1 and 2 - Design features

## Two-way protected bike lanes on Cumberland Avenue

Option 1: South side Cumberland Avenue (looking east)




Option 2: North side Cumberland Avenue (looking east)




1. **Two-way bike lane with opportunities for passing**
2. **Two-way bike lane does not follow direction of one-way traffic, which can be less comfortable for cyclists and drivers**
3. **Narrow buffer between bike lanes and traffic**
4. **Maintains two vehicle lanes on each street with impacts to parking and loading (loss of one vehicle lane)**

51% of survey respondents had no preference for the north or south side of Cumberland Avenue, and 15% preferred the south side.

# Option 1 - Key intersections

## Two-way protected bike lane (north side) on Notre Dame Avenue

## Two-way protected bike lane (south side) on Cumberland Avenue




**Key intersections** (see conceptual designs on next slide)

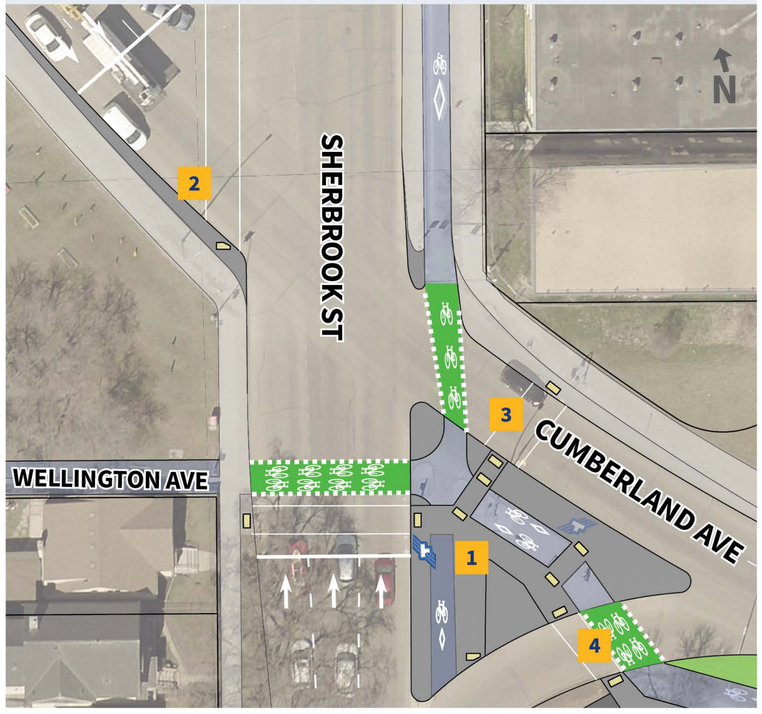
1. Cumberland Avenue at Sherbrook Street
2. Cumberland Avenue at Balmoral Street
3. Cumberland Avenue at Carlton Street
4. Cumberland Avenue at Hargrave Street
5. Notre Dame Avenue at Carlton Street
6. Notre Dame Avenue at Hargrave Street

# Option 1 - Key intersections

## Two-way protected bike lane (north side) on Notre Dame Avenue
## Two-way protected bike lane (south side) on Cumberland Avenue

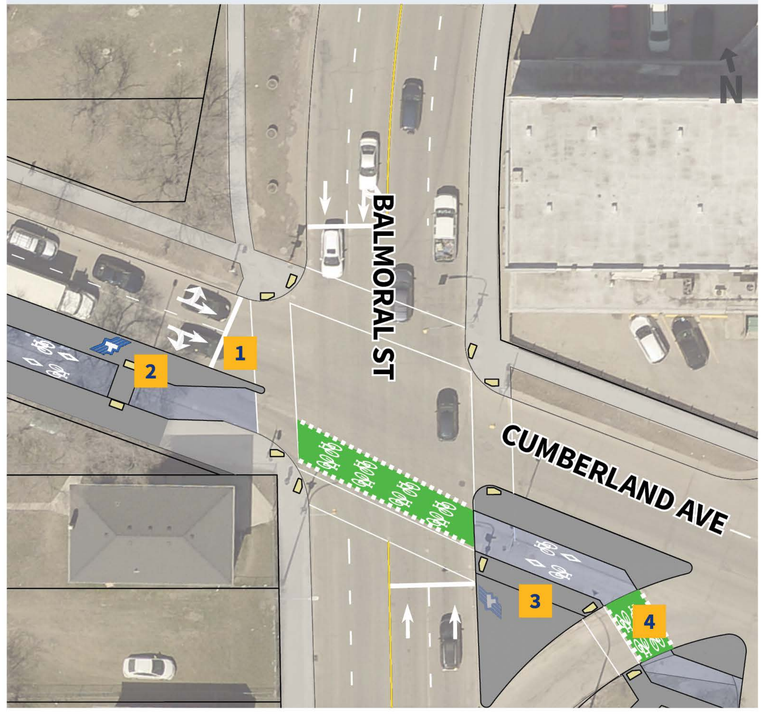
### Conceptual designs

#### 1 Cumberland Avenue at Sherbrook Street



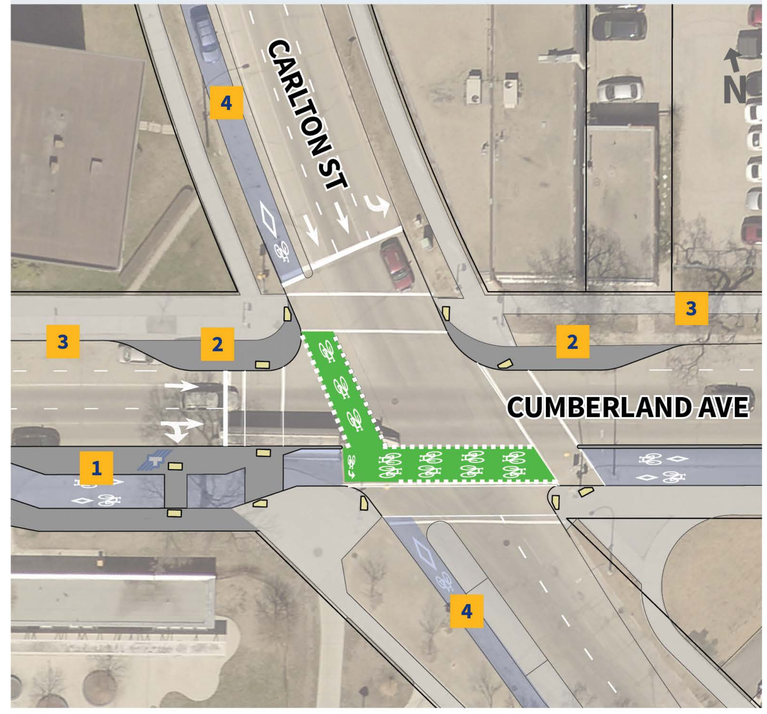

1. Redesign of right turn channel to accommodate two-way bike lane and Transit stop
2. Realigned vehicle lanes to shorten pedestrian crossing
3. Simplified connection to Wellington Avenue
4. Right-turn channel creates conflict point

#### 2 Cumberland Avenue at Balmoral Street




1. High-volume vehicle right turn
2. New island to accommodate two-way bike lane and Transit stop
3. Redesign of right turn channel to accommodate two-way bike lane and Transit stop
4. Right-turn channel creates conflict point

#### 3 Cumberland Avenue at Carlton Street



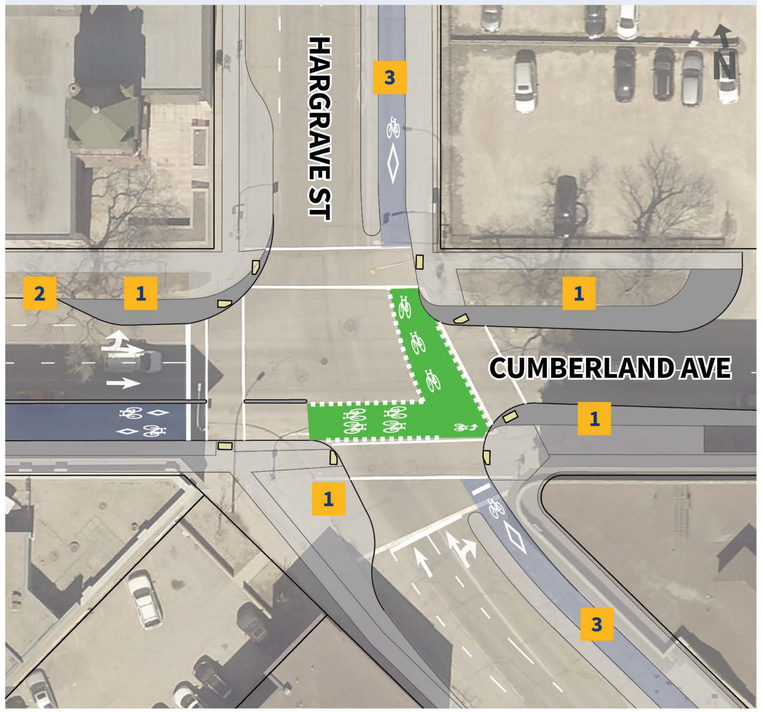

1. New island to accommodate two-way bike lane and Transit stop
2. Curb extensions to shorten pedestrian crossing
3. Narrowed sidewalk to accommodate parking and loading
4. Future protected bike lane on Carlton Street

# Option 1 - Key intersections

## Two-way protected bike lane (north side) on Notre Dame Avenue
## Two-way protected bike lane (south side) on Cumberland Avenue

### Conceptual designs

#### 4 Cumberland Avenue at Hargrave Street



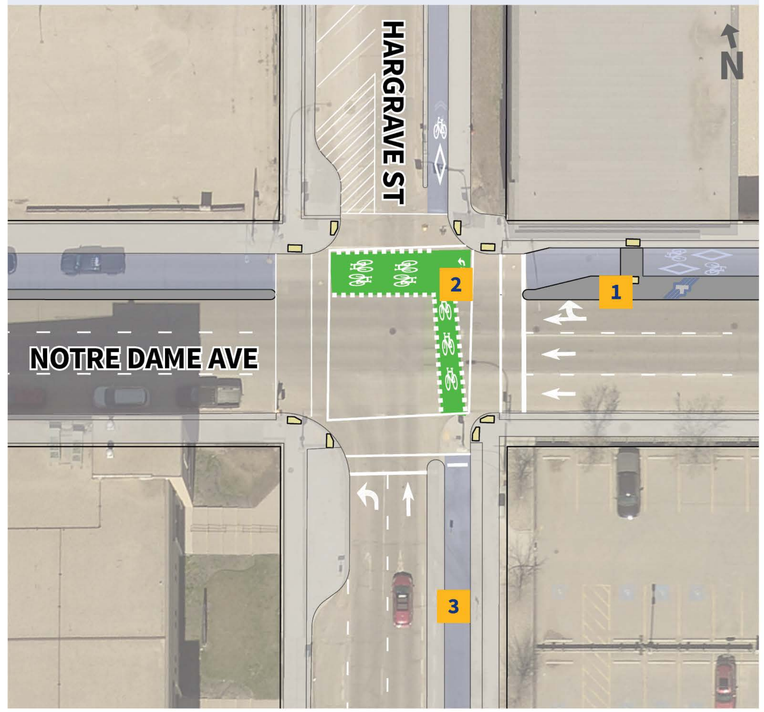

1. Curb extensions to shorten pedestrian crossing
2. Narrowed sidewalk to accommodate parking and loading
3. Future protected bike lane on Hargrave Street

#### 5 Notre Dame Avenue at Carlton Street




1. Curb extension to shorten pedestrian crossing
2. Bike box to enable left turn

#### 6 Notre Dame Avenue at Hargrave Street




1. New island to accomodate two-way bike lane and Transit stop
2. Bike box to enable left turn
3. Future protected bike lane on Hargrave Street

# Option 2 - Key intersections

## Two-way protected bike lane (north side) on Notre Dame Avenue

## Two-way protected bike lane (north side) on Cumberland Avenue




### Key intersections (see conceptual designs on next slide)

1. Cumberland Avenue at Sherbrook Street
2. Cumberland Avenue at Balmoral Street
3. Cumberland Avenue at Carlton Street
4. Cumberland Avenue at Hargrave Street
5. Notre Dame Avenue at Carlton Street
6. Notre Dame Avenue at Hargrave Street

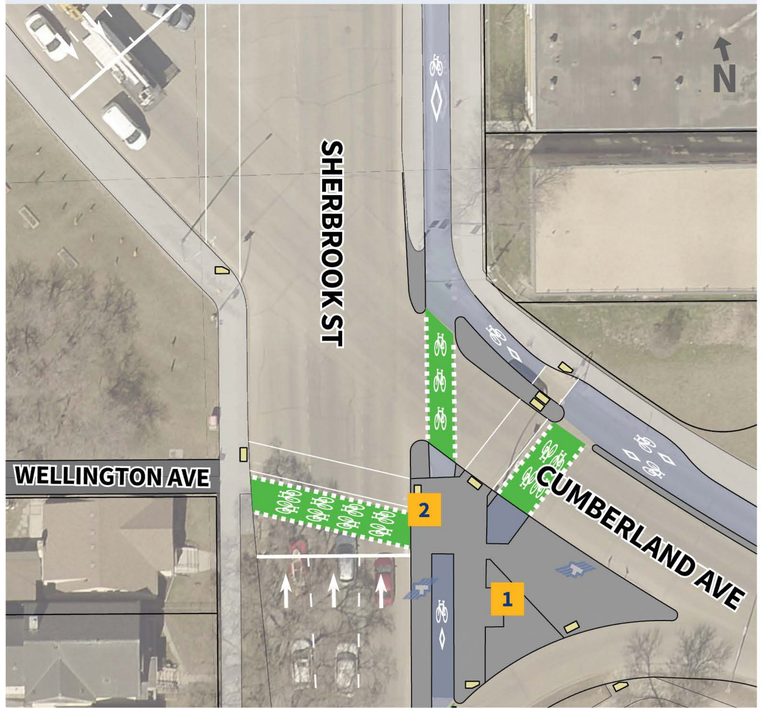
# Option 2 - Key intersections

## Two-way protected bike lane (north side) on Notre Dame Avenue

## Two-way protected bike lane (north side) on Cumberland Avenue

### Conceptual designs

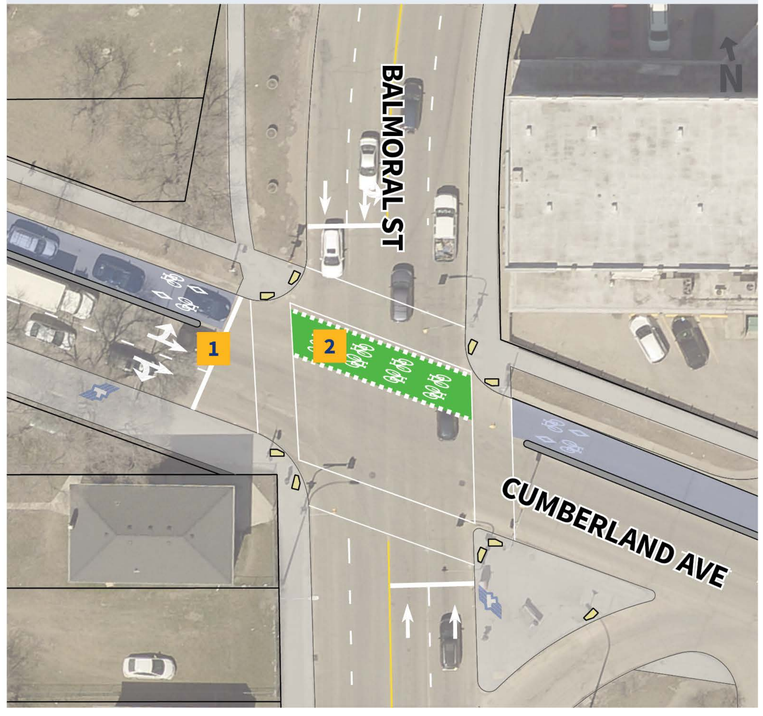
#### 1 Cumberland Avenue at Sherbrook Street




1 Redesign of right turn channel to accomodate two-way bike lane and Transit stop

2 Additional north-south crossing at Sherbrook Street to connect to Wellington Avenue

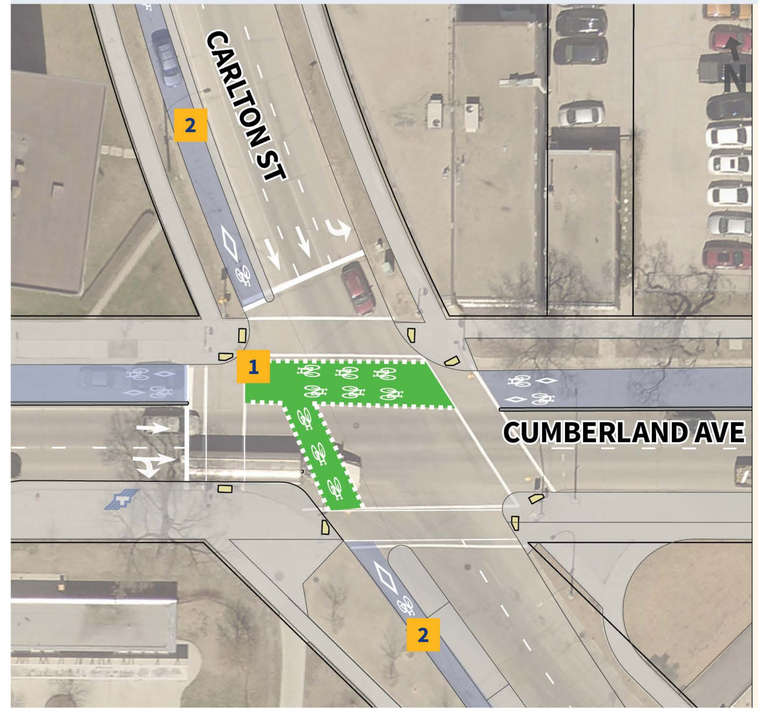
#### 2 Cumberland Avenue at Balmoral Street




1 High-volume vehicle left turn

2 Left turns may require a protected signal phase

#### 3 Cumberland Avenue at Carlton Street




1 Bike box to enable right turn onto Carlton Street

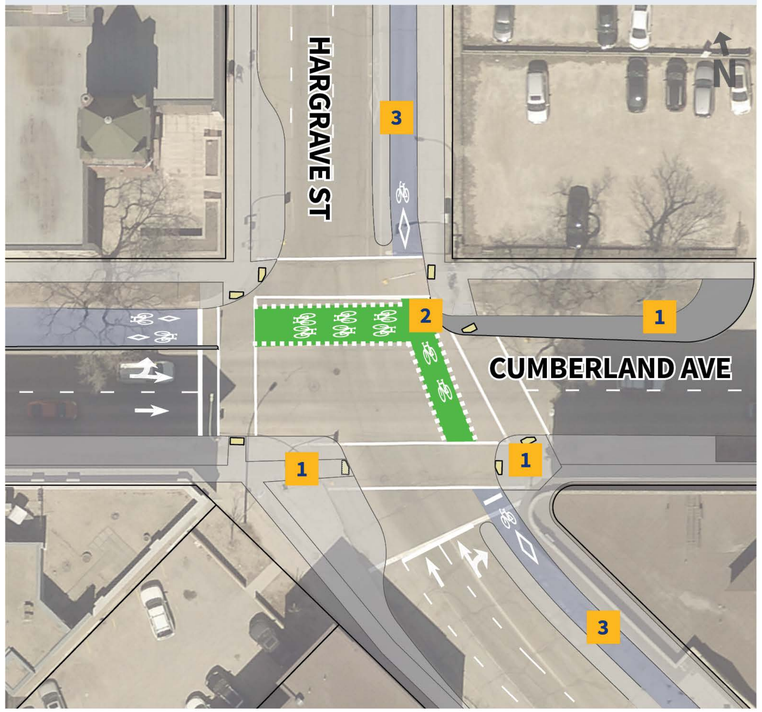
2 Future protected bike lane on Carlton Street

# Option 2 - Key intersections

## Two-way protected bike lane (north side) on Notre Dame Avenue
## Two-way protected bike lane (north side) on Cumberland Avenue

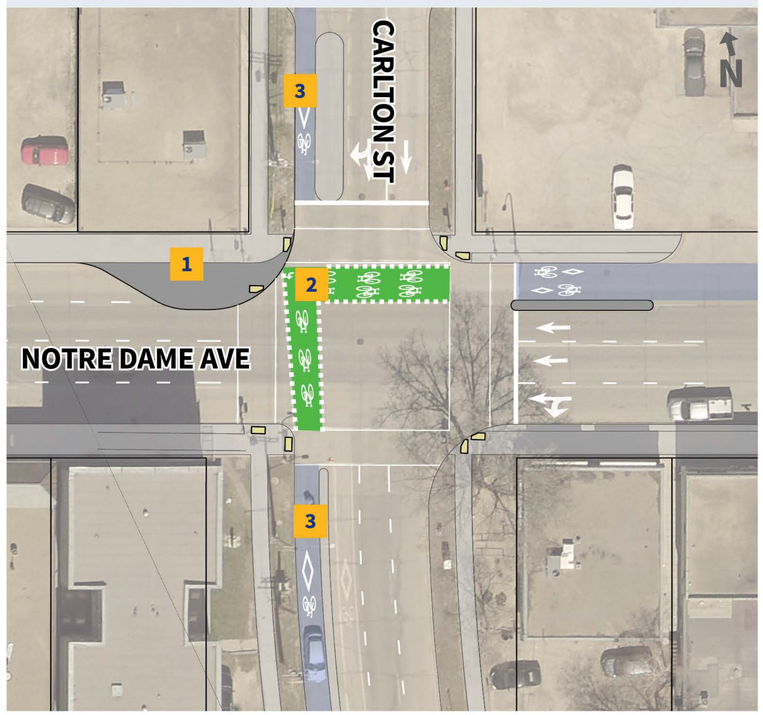
### Conceptual designs

#### 4 Cumberland Avenue at Hargrave Street



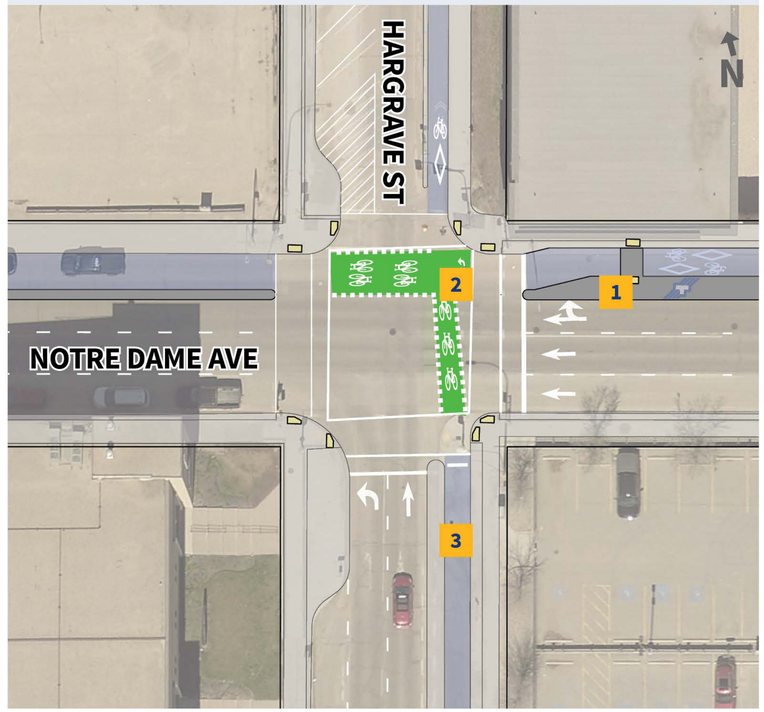

1 Curb extensions to shorten pedestrian crossing
2 Bike box to enable left turn
3 Future protected bike lane on Hargrave Street

#### 5 Notre Dame Avenue at Carlton Street




1 Curb extension to shorten pedestrian crossing
2 Bike box to enable left turn
3 Future protected bike lane on Carlton Street

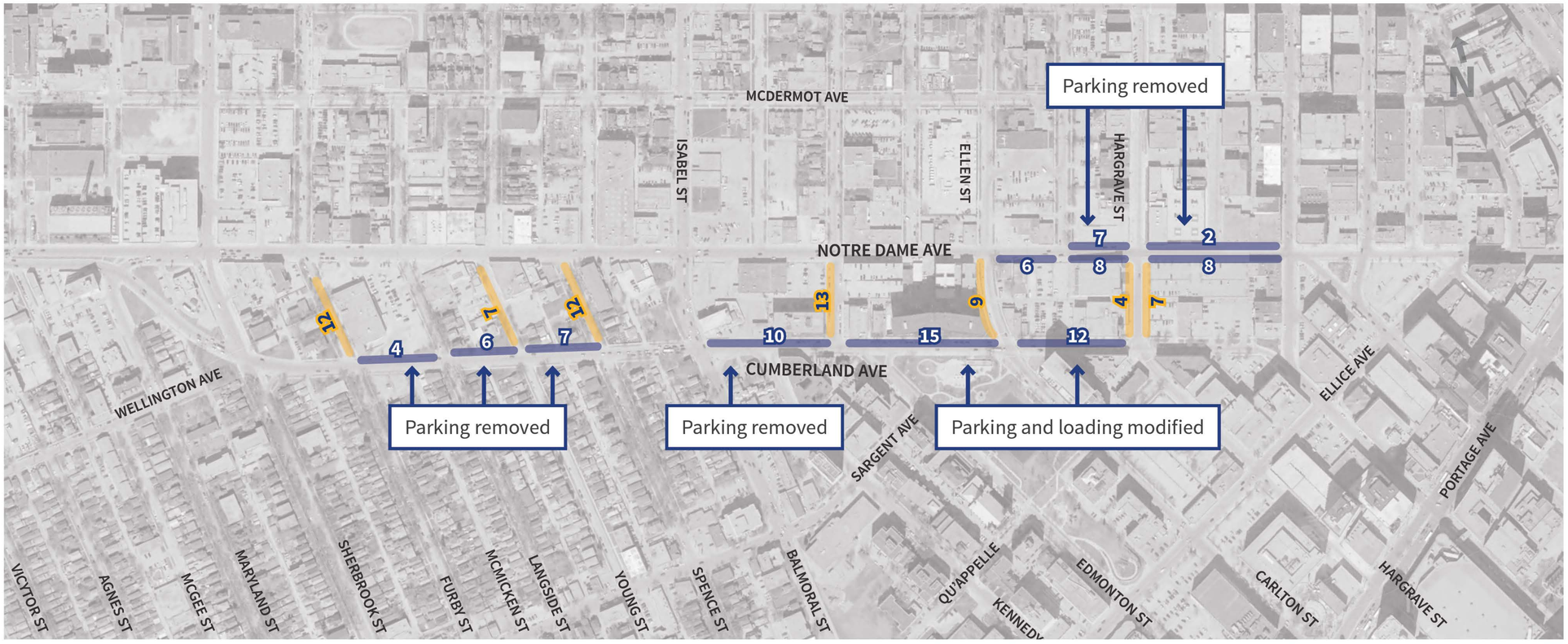
#### 6 Notre Dame Avenue at Hargrave Street




1 New island to accomodate two-way bike lane and Transit stop
2 Bike box to enable left turn
3 Future protected bike lane on Hargrave Street

# Notre Dame Avenue and Cumberland Avenue
# On-street parking

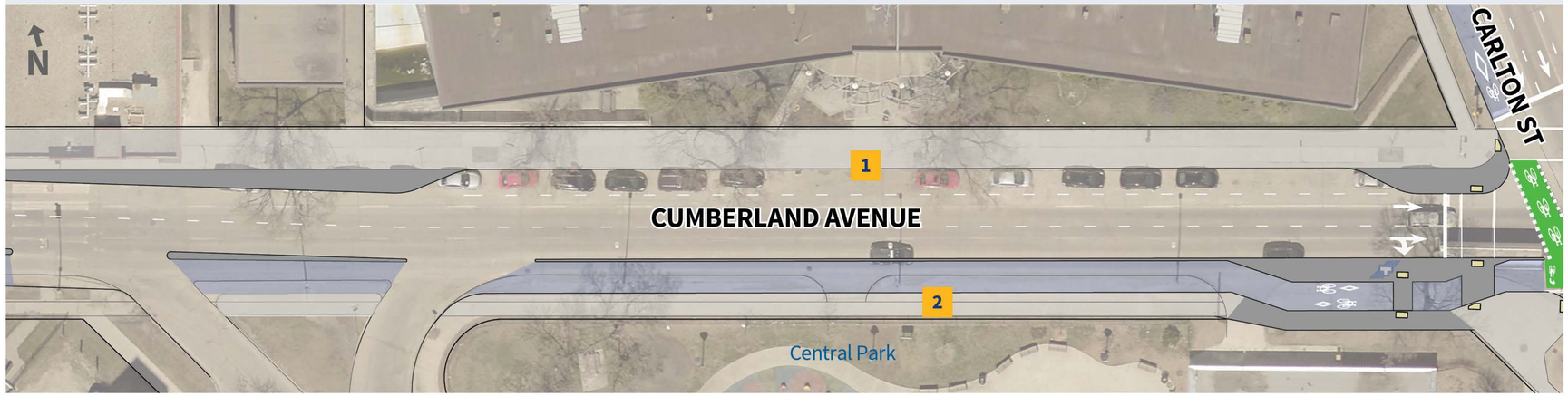
**Current study area parking**




| Approximate On-street Parking Stalls | Notre Dame Avenue | Cumberland Avenue | North-south streets between Notre Dame Avenue and Cumberland Avenue | Total |
|---|---|---|---|---|
| **CURRENT** | **31** | **54** | **64** (no change) | **149** |
| **OPTION 1** | **22** (↓9) | **22** (↓32) | | **108** (↓41) |
| **OPTION 2** | **22** (↓9) | **12** (↓42) | | **98** (↓51) |

# Notre Dame Avenue and Cumberland Avenue
# On-street parking

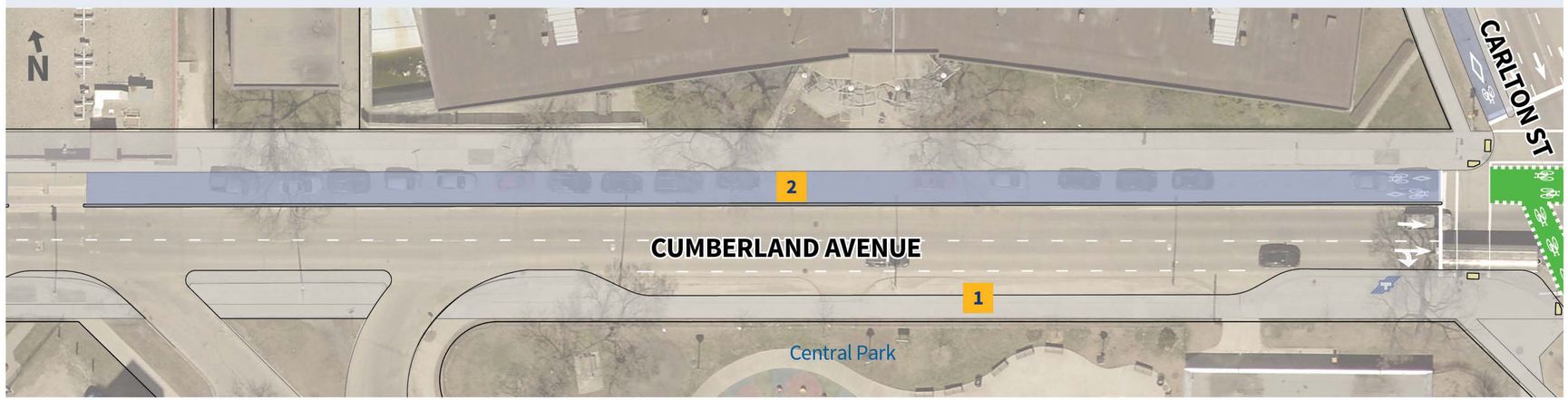
Option 1 - Parking bays on north side of Cumberland Avenue




1 Parking and loading maintained

2 Narrowed sidewalk

Option 2 - Parking bays on south side of Cumberland Avenue




1 Narrowed sidewalk to create parking bay

2 Parking and loading removed on north side of street

# Notre Dame Avenue and Cumberland Avenue
# Key considerations

| EVALUATION CRITERIA | OPTION 1 - SOUTH SIDE | OPTION 2 - NORTH SIDE |
|---|---|---|
| **CYCLING COMFORT**<br>Attractive to the broadest number of users (all ages and all abilities) | • Two-way bike lane provides opportunity for passing<br>• Standard width buffer between bike lane and traffic<br>• Two-way bike lane does not follow direction of one-way traffic, which can be less comfortable for cyclists and drivers | • Two-way bike lane provides opportunity for passing<br>• Standard width buffer between bike lane and traffic<br>• Two-way bike lane does not follow direction of one-way traffic, which can be less comfortable for cyclists and drivers |
| **CONFLICTS**<br>Safety risks posed by conflict points with intersections, accesses and driveways for all users | • More intersections, lanes, and driveways<br>• Crossing two-way bike lanes is typically harder for all users than crossing one-way bike lanes<br>• Right-turn channels introduce additional conflict points<br>• Bike lanes located on same side of street as bus stops can create conflicts between bikes and bus passengers. | • Less intersections, lanes, and driveways<br>• Crossing two-way bike lanes is typically harder for all users than crossing one-way bike lanes<br>• Bike lanes located on opposite side of street as bus stops removes conflicts between bikes and bus passengers |
| **CONNECTIVITY & PROXIMITY**<br>Fits into the overall bike network and connects to existing bike routes. Proximity to other parallel bike routes | • Simplified connection to Wellington Avenue<br>• Direct connection to Central Park<br>• Direct connections to Transit | • Additional north-south crossing at Sherbrook Street to connect to Wellington Avenue<br>• Lack of direct connection to Central Park<br>• Lack of direct connections to Transit |

# Notre Dame Avenue and Cumberland Avenue
# Key considerations

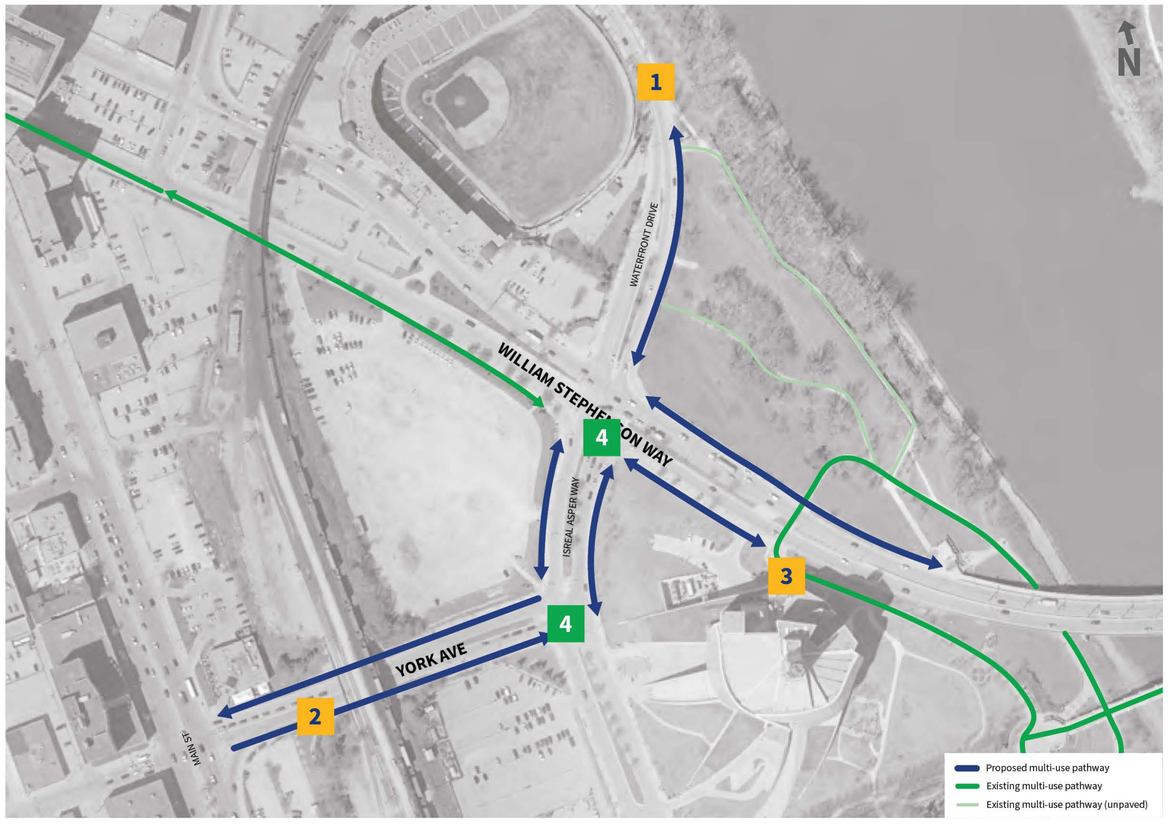
| EVALUATION CRITERIA | OPTION 1 - SOUTH SIDE | OPTION 2 - NORTH SIDE |
|---|---|---|
| **MAINTENANCE**<br>Relative cost and level of effort required for ongoing all-seasons maintenance | • No notable difference in maintenance requirements | • No notable difference in maintenance requirements |
| **COST**<br>Relative capital cost to install protected bike lanes | • Relatively higher capital cost associated with reconstruction of right turn channels and Transit integration | • Relatively lower capital cost |
| **TRAFFIC OPERATIONS**<br>Impact to traffic operations | • High right turn volumes at Balmoral Street and at Carlton Street | • Left turns may require a protected signal phase<br>• High left turn volumes at Balmoral Street and at Hargrave Street |
| **PARKING & LOADING**<br>Impact to on-street parking and loading | • Opportunity to maintain more on-street parking/loading on north side between Edmonton Street and Hargrave Street | • Opportunity to maintain some on-street parking/loading on south side between Edmonton Street and Carlton Street |

# Notre Dame Avenue and Cumberland Avenue

# Questions / Comments

# William Stephenson Way

***This is the same design we shared in Phase 1. We will share a refined design in Phase 3.***




| | Existing | Proposed |
|---|---|---|
| **Bike Infrastructure** | **Multi-use pathways, sidewalks and unpaved paths** | **Multi-use pathways** |
| **Design Considerations** | 1 Existing shared sidewalk | Opportunities to widen existing sidewalks to accommodate multi-use pathways<br><br>Opportunities for additional trees and landscaping<br><br>Opportunities to relocate streetlights and signal poles and remove abandoned tree wells |
| **Parking & Loading** | On-street parking on William Stephenson Way and Waterfront Drive, no on-street parking on Israel Asper Way | Potential impacts to on-street parking on William Stephenson Way and Waterfront Drive |
| **Intersections & Connections** | 2 Limited connection options due to underpass<br><br>3 Pedestrian half-signal | 4 Opportunities for enhanced bike and pedestrian crossings |
| **Access to Destinations** | Pathway access to The Forks, Exchange District and Esplanade Riel Pedestrian Bridge | Bike access provided to Downtown, access to The Forks, Exchange District, Esplanade Riel Pedestrian Bridge, Provencher Bridge and Waterfront Drive |

# Next steps

- Determine best option for each route
- Refine design for each route based on feedback
- Prepare recommended bike route designs
- Phase 3 Public and Stakeholder Engagement: Share recommended bike route designs
- Finalize bike route designs

# Thank you!
# Questions / Comments

centreplan2050@winnipeg.ca | 204-986-4243

Take the survey or add a pin to the map by February 16.

Scan here for more information or visit:
**winnipeg.ca/centreplan2050**