2024

CITY OF VICTORIA | **Transportation, Engineering and Public Works**

Douglas Street Rapid Bus Lanes

Implementation Strategy and Project Update

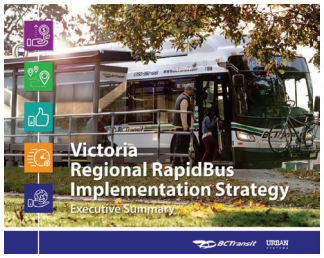
Committee of the Whole | May 16, 2024

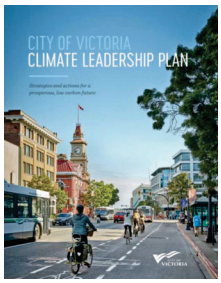
Presentation Outline

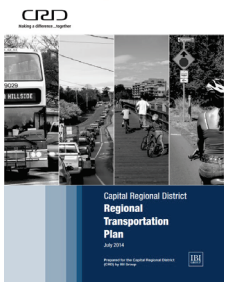
- Project background, policy context and overview of analysis to date
- Proposed design approach for the Corridor
  - Segment A (Hillside to Herald)
  - Segment B (Herald to Humboldt)
  - Segment C (Humboldt to Belleville)
- Next Steps

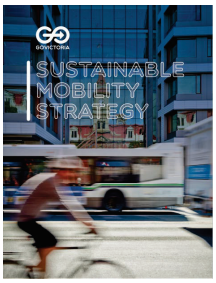
Policy Context

- Direction from Council in 2022 to advance Rapid Transit on Douglas St
- Council Strategic Plan (2023-2026)
- Official Community Plan
- Climate Leadership Plan
- Go Victoria, Sustainable Mobility Strategy
- Transit Future Plan and Victoria RapidBus Implementation Strategy
- CRD Regional Transportation Plan









Transit Priority Network (OCP)

Rapid Transit Priority Corridors

RapidBus

Frequent Transit Priority Corridors

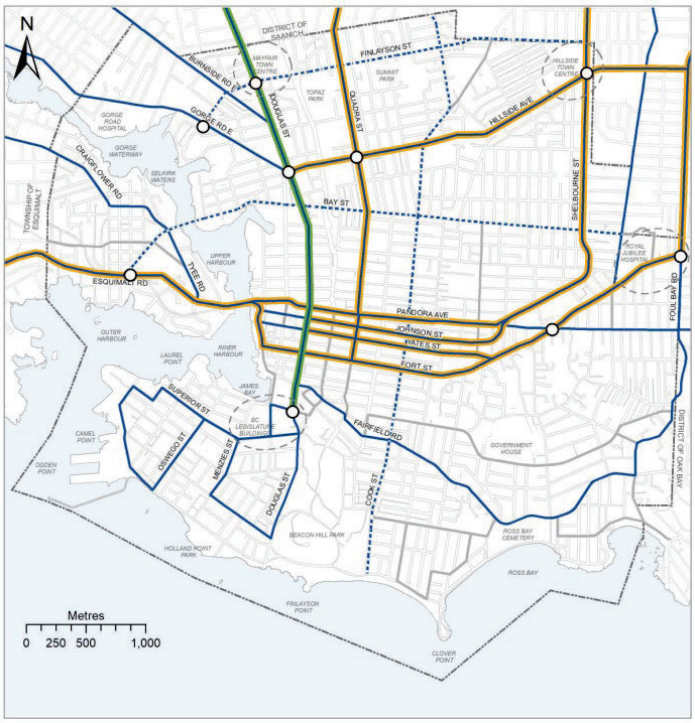
Frequent & Express Service / RapidBus Candidate

Cummulative Frequent Service

Frequent Service Candidate

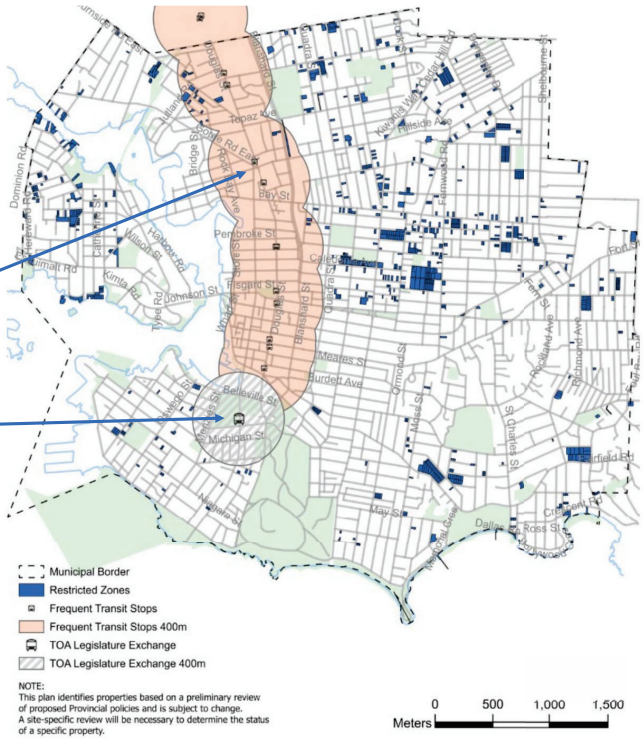
Remaining Transit Network

Local Service



Provincial Bill 44 & 47

- Small-scale multi-unit housing allowed (SSMUH) in “restricted zones”
- Certain off-street parking requirements prohibited within TOAs and for SSMUH within 400m of prescribed bus stops
- Transit Oriented Areas (TOA) with prescribed densities
  - 200m Tier: 10 storeys & 3.5 FSR
  - 400m Tier: 6 storeys & 2.5 FSR



Transit Mobility Goals

City of Victoria Goals:

- Climate Leadership Plan – 25% of all trips by Victoria residents taken by Transit by 2030
- Currently 9% of all trips by Victoria residents taken by Transit (2022)

Rapid Bus on Douglas Street

- Curbside **dedicated bus lanes** on Douglas Street North (Tolmie to Hillside) completed in 2015
- Analysis of design options for **dedicated bus lanes** for Douglas Street South (Hillside to Belleville) in 2023
- Proposed improvements for consideration 2025-2027

Segment A - Existing Conditions

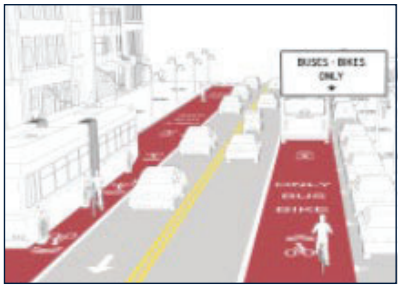
Segment A (Hillside to Herald)

- Peak-Only bus lanes provided Monday – Friday (no dedicated lane provisions on weekends)
- AM (southbound) peak-only transit lanes 6-9 am and PM (northbound) peak-only transit lanes 3-6 pm
- Off-peak and weekend transit ridership demand is high

Segment A - Design Approach

Segment A (Hillside to Herald) - Convert from Peak-Only to 24/7 Curb Side Bus Lane in 2025

- Removes ~73 on-street parking/loading stalls
  - February 2023 - utilization rate of less than 55%.
- Cyclists to be permitted in all new dedicated bus lanes proposed.



Segment A - Staff Recommendation

Transition the current time-limited **dedicated bus lanes between Hillside Avenue and Herald Street to be in effect 24 hours a day, 7 days a week starting in 2025** (Segment A as described in this report).

Segment B - Existing Conditions

Segment B (Herald to Humboldt) includes 4 general purpose lanes, one-way painted bike lanes and limited left turn availability - **NO DEDICATED BUS LANES**

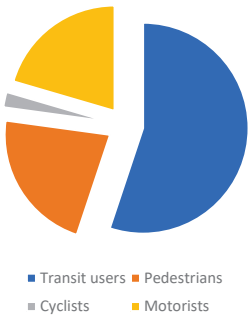
Douglas a key downtown corridor facilitating:

- Diversity of businesses and commerce activities
- Goods movement, loading and diverse mobility needs
- Parades and special events

On a typical weekday p.m. peak, Douglas Street carries approximately:

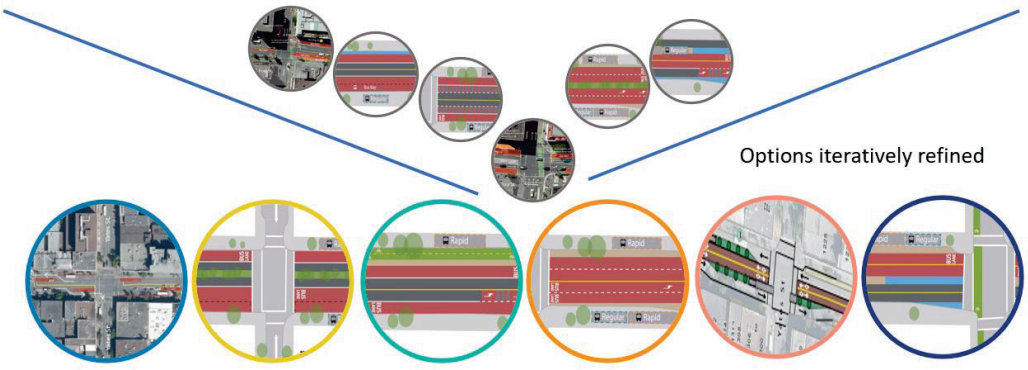
- 140 buses including 3,500 transit passengers *(1900 buses and 36,000 transit passengers / day)*
- 1,400 people walking, 150 people cycling and
- 1,300 vehicles

Douglas Street peak hour users



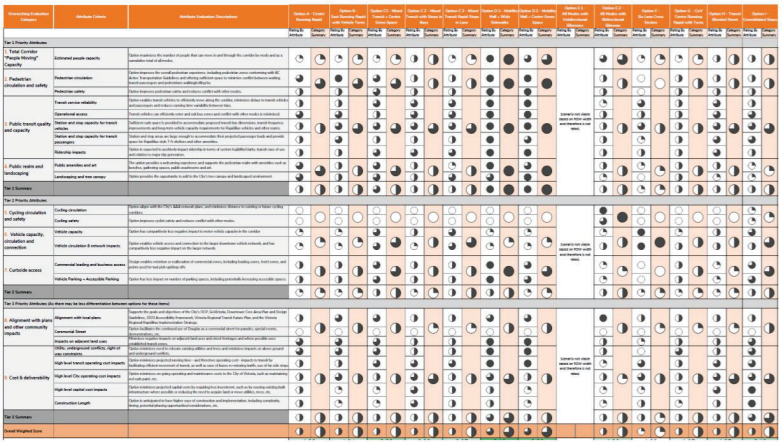
Segment B - Design Exploration

Segment B (Herald to Humboldt) – The most COMPLEX segment with lots of options explored!



Segment B - Multiple Account Evaluation

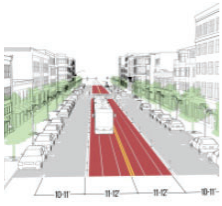
- 12 initial design scenarios analyzed by staff, consultant team and BC Transit staff
- 6 design scenarios shortlisted for further staff workshops with refined analysis
- 2 design scenarios reviewed in further detail
  - Off-set bus lanes
  - Centre-running bus lanes



Segment B - Two Options for Additional Analysis

Offset Transit Lane

Also known as “floating” or “parking-adjacent” lanes, offset transit lanes place transit vehicles in the right-most moving lane, but are offset from the curb by street parking, curb extensions, or raised cycle tracks.



Center Transit Lane

Center transit lanes can play a key role in creating high-quality transit service, especially where traffic congestion may significantly affect reliability. While traditionally found on streetcar streets, center transit lanes can be used with buses as well.

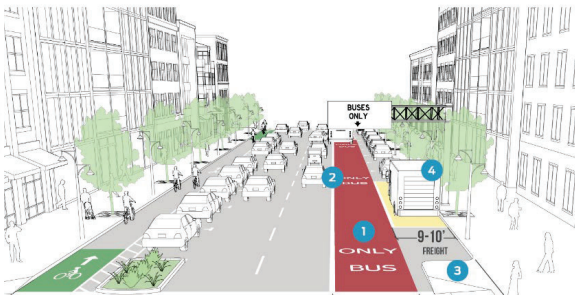
Segment B - Recommended Option (Off-set Bus Lanes)

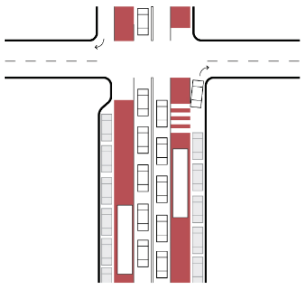
Off-set bus lanes recommended because:

- Consistent with existing Douglas bus lane to the north
- Provides an intuitive and accessible passenger loading experience
- Maintains vehicle and goods movement circulation
- Accommodates curb side uses such as accessible parking and loading to support commercial and retail services
- Preserves ability for future investment for higher levels of transit (i.e. rail)

Segment B - Design Approach

Segment B (Herald to Humboldt) – Recommendation for Off-Set Bus Lanes

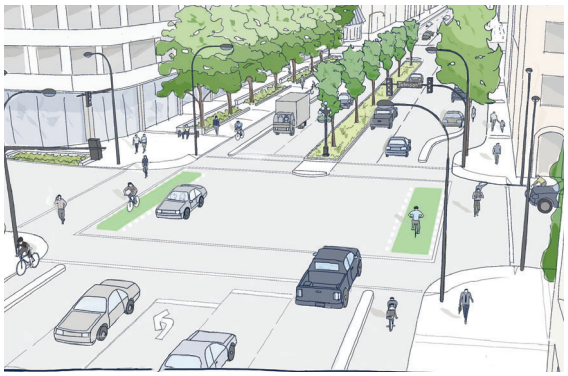




Various design considerations related to turning movements or accommodation of cyclists will need to be further analyzed through the detailed design process.

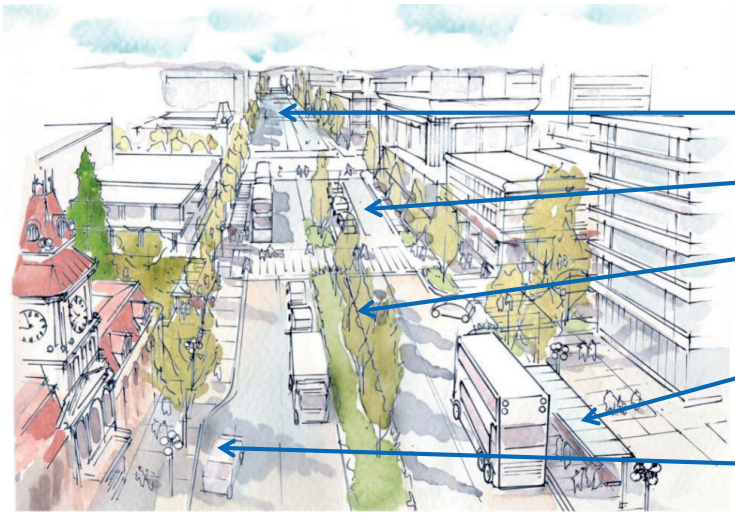
Segment B - Cycling Accommodations

Segment B (Herald to Humboldt) – Cycling Permitted in bus lane + Parallel Investments



Complete Street project (including protected bike lanes) planned for Blanshard between Fort and Caledonia in 2025

Segment B - General Design Elements



Traffic vehicle lanes reduced from 4 to 3 (includes left turn lanes)

Dedicated transit lane in both directions

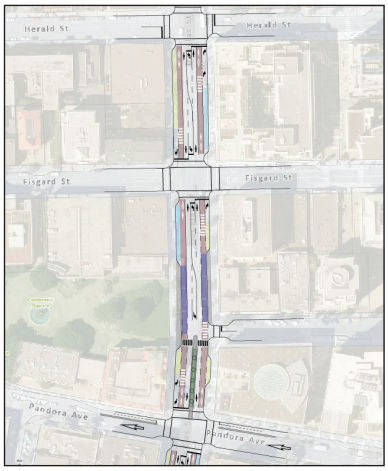
Opportunities for landscaped medians and new or improved pedestrian crossings

In lane Rapid Bus Stops and improved new transit amenities and pedestrian bulb outs – local bus stops to be outside of dedicated lanes

Accessible parking/loading at key locations

Segment B - Preliminary Design Walkthrough

Segment B (Herald to Humboldt) – Preliminary Concept (off-set bus lanes with turn lanes)

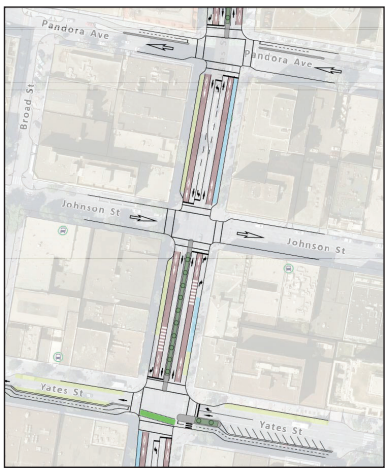


HERALD STREET to PANDORA AVENUE

- Left turn lanes added at Herald, Fisgard, Cormorant and Pandora
  - Improve safety
  - Maintains circulation
- Rapid bus stop integrated into Centennial Square
- Vehicle right turn lanes provided so turning vehicles do not hold up buses
- Opportunities for landscaped median islands and will be further explored

Segment B - Preliminary Design Walkthrough

Segment B (Herald to Humboldt) – Preliminary Concept (off-set bus lanes with turn lanes)

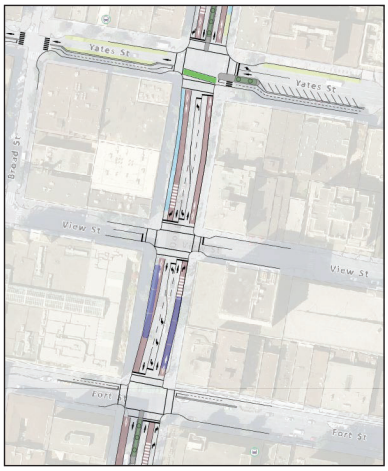


PANDORA AVENUE to YATES STREET

- Left turn lanes added at Pandora Avenue, Johnson Street and Yates Street
- Landscaped median islands would be further explored
- Vehicle right turn lanes provided so turning vehicles do not hold up buses
- Integrate with future Yates Street two-way bike lane

Segment B - Preliminary Design Walkthrough

Segment B (Herald to Humboldt) – Preliminary Concept (off-set bus lanes with turn lanes)

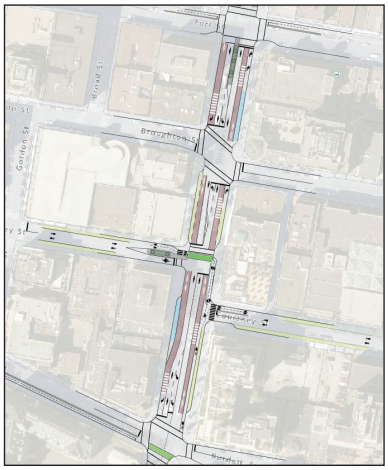


YATES STREET to FORT STREET

- Rapid bus stop located between Fort and View adjacent Bay Centre
  - Currently the busiest bus stop in the region

Segment B - Preliminary Design Walkthrough

Segment B (Herald to Humboldt) – Preliminary Concept (off-set bus lanes with turn lanes)



FORT STREET to HUMBOLDT STREET

- Left turn lanes added at Fort, Broughton, and Burdett
- Design to further explore east-west cycling connection on Courtenay Street
- Potential for future pedestrian plaza on Courtney Street

Segment B
Staff Recommendation

Commence detailed design **for dedicated bus lanes and other complete street improvements** on Douglas Street, between Hillside Avenue and Belleville Street.

Segment C - Existing Conditions

Segment C (Humboldt to Belleville) limited road right of way with 2 dedicated general purpose travel lanes, time-limited curb side loading, curb side tour bus stands and no cycling facilities - **NO DEDICATED BUS LANES**

Key features of this segment of Douglas Street:

- Lower traffic volumes than segments north
- Much narrower road right of way (18m vs. 30m)
- Majority of civic land uses including Crystal Garden and Victoria Event Centre
- Opportunity for new transit exchange functions adjacent to public plazas and new office space

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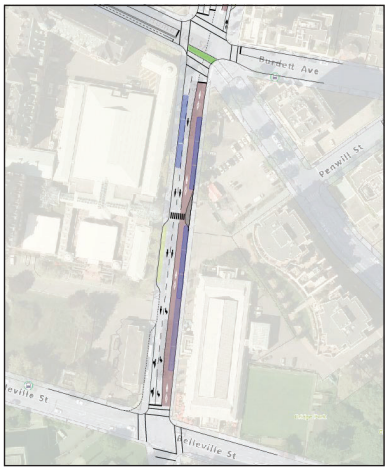
Segment C - Design Approach

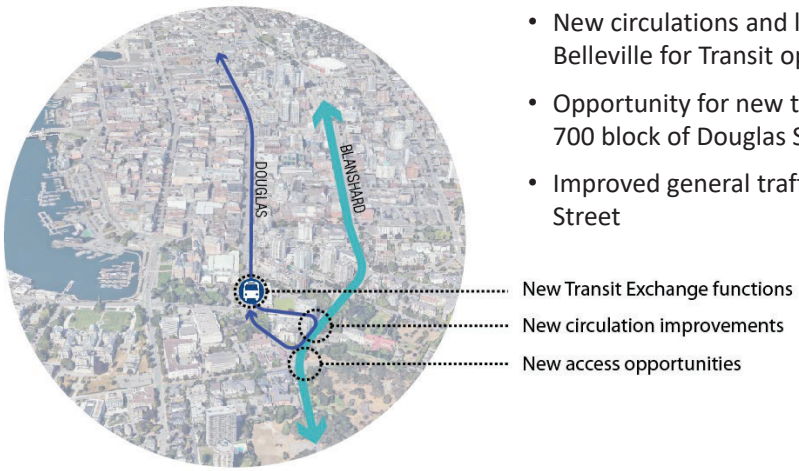
Segment C (Humboldt to Belleville) – Preliminary Concept (northbound Transit Only)



BURDETT to BELLEVILLE

- 2 southbound travel lanes shared with Transit service (further exploration of restricted / limited access for northbound traffic)
- Curbside Rapid Bus stations and transit layover space
- Opportunity for new transit exchange functions

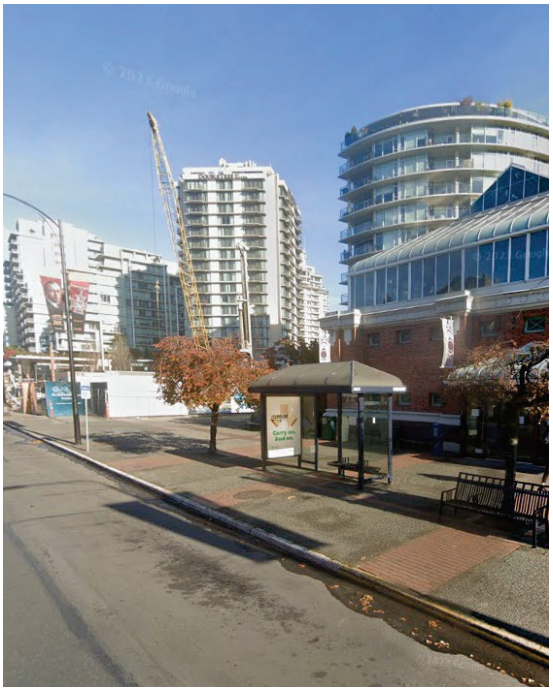
Associated Transit & Circulation Improvements



- New circulations and layover improvements south of Belleville for Transit operators
- Opportunity for new transit exchange functions on the 700 block of Douglas Street
- Improved general traffic access to James Bay via Blanshard Street

Segment C
Staff Recommendation

Commence detailed design **for dedicated bus lanes and other complete street improvements** on Douglas Street, between Hillside Avenue and Belleville Street.



Next Steps

If Approved by Council:

- BC Transit to update VRTC on design approach for Douglas Corridor improvements (June 2024)
- Implement dedicated bus lanes on Segment A - Hillside to Herald Street (Q2-Q3 2025)
- Staff report back to Council by with an update (Q1 2026) including:
  - Detailed design progress of dedicated bus lanes on Segment B and C
  - Updated project schedule
  - Funding strategy in partnership with BC Transit for upcoming Federal Transit Fund (launching in 2026)
- Construction (begin 2027 / 2028)

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Recommendations

1. Transition the current time-limited dedicated bus lanes between Hillside Avenue and Herald Street to be in effect 24 hours a day, 7 days a week starting in 2025 (Segment A as described in this report).

2. Commence detailed design for dedicated bus lanes and other complete street improvements on Douglas Street, between Hillside Avenue and Belleville Street (Segments B and C - Option F as described in this report).

3. Report back by Q1 of 2026 following the outcomes of detailed design and provide associated recommendations on next steps for project implementation.

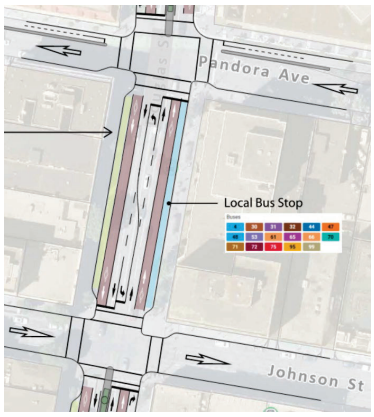
Optional Context – 6 options shortlisted

DESIGN OPTION	OPPORTUNITIES	CHALLENGES
1. MOBILITY MALL	Ample dedicated space for Transit and improved pedestrian environment	Notable impacts to vehicle access and circulation mitigation concerns – general purpose vehicle access would be restricted
2. ACCOMMODATE ALL USERS	Provides a dedicated space for all users and needs	Requires full reconstruction of Douglas Street and sidewalk narrowing to accommodate with notable impacts to bus lanes, bicycle lanes and vehicle circulation.
3. ACCOMMODATE TWO-WAY PROTECTED BIKE LANES	Provides a two-way AAA bike lane within available road space	Notable impacts to transit travel times given new traffic signal timing, impacts to parking / loading and cost concerns
4. ACCOMMODATE EXISTING LANES	Accommodates existing vehicle level of service by retaining existing vehicle lanes	Addition of dedicated bus lanes impacts parking/loading, impacts pedestrian and cycling safety/comfort and had cost concerns.
5. CENTRE RUNNING BUS LANES	Supports high volume of transit service and has minimal service interruptions	Requires boarding islands which can be less user friendly and requires removal of left turns impacting circulation and access
6. OFF-SET BUS LANES	Provides an enhanced transit service that balances road user needs and improves pedestrian and public realm experience	Reduces vehicle lane capacity and impacts existing bike infrastructure in select locations

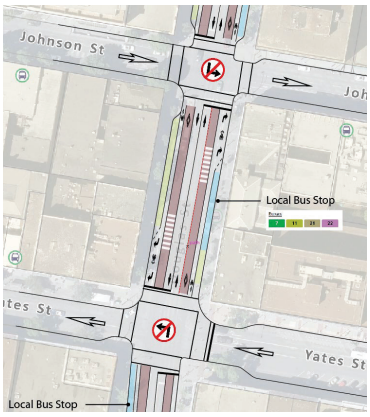
Segment B - Trade-offs and Considerations

Off-set bus lane considerations

- Limited space to include one-way protected bike lanes (sidewalk impacts)
- Existing painted bike lanes could be retained but limit transit performance and compete with space for centre left turn lanes
- Centre left turn lanes can also provide space for landscaped median islands, pedestrian refuge islands and other streetscape enhancements



Off-set bus lanes with turn lanes



Off-set bus lanes with bike lanes