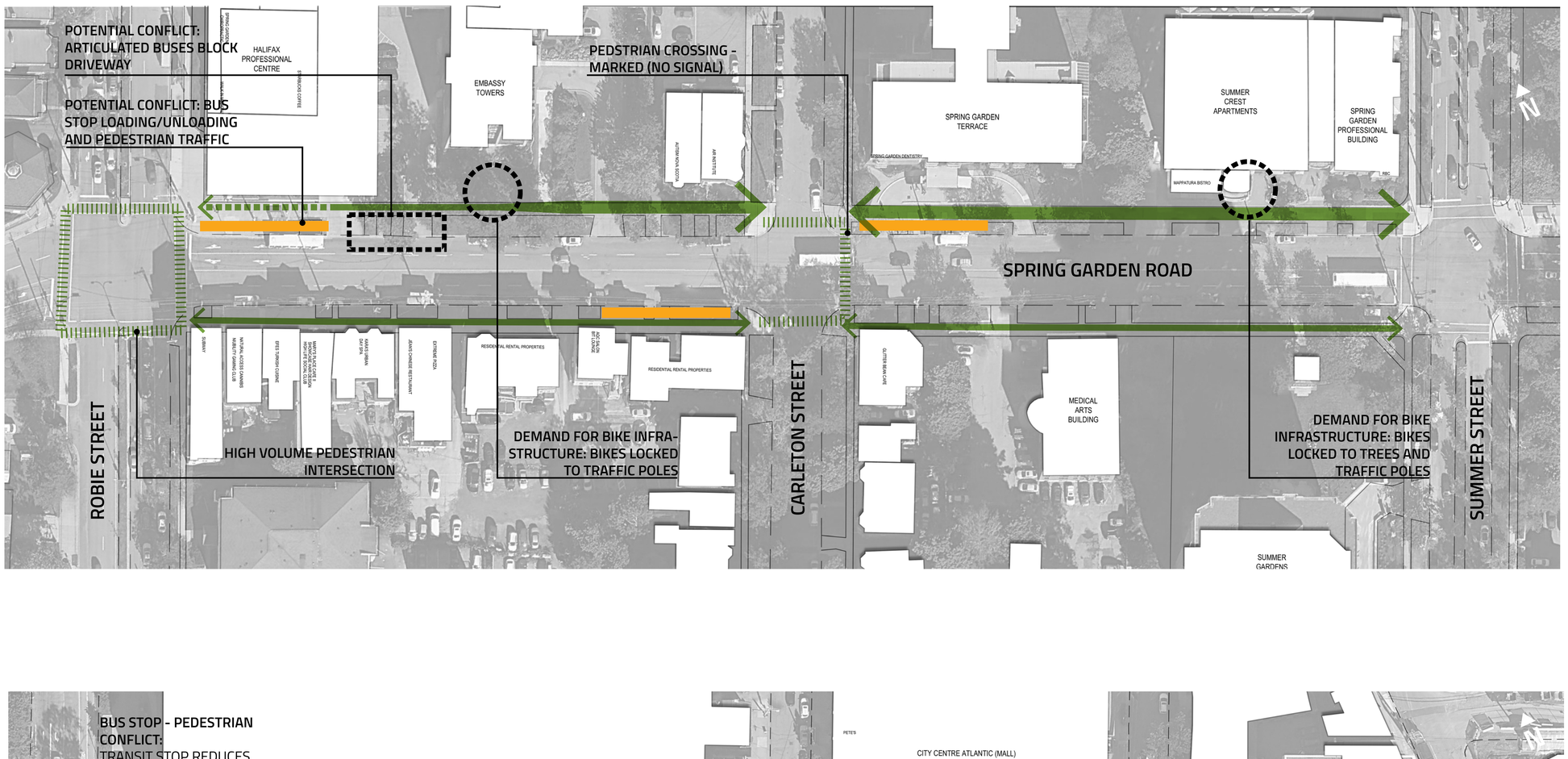
ROBIE STREET TO SUMMER STREET

- Wider 4-lane roadway cross section
- Moderate pedestrian volumes
- Adjacent residential buildings and limited small scale commercial activity
- Wide sidewalks (+2.0m) with landscape buffer
- On-street parking opportunities provide additional buffer zone for pedestrians

SOUTH PARK STREET TO QUEEN STREET

- Narrower 3 to 4-lane cross section
- Very high pedestrian volumes and frequent pick-up/drop-off/loading activity
- Dense commercial/retail land use and some local residential development
- Narrower sidewalks
- Pedestrians & transit users waiting for service must share sidewalk space



TRANSIT

- High volume transit corridor - 15 routes
- Longer travel times on buses than passenger vehicles
- Occasional delays
- High variability in travel time
- Transit provisions range from standard route information (no shelter) to standard bus shelter

PEDESTRIANS

- High volume pedestrian corridor
- Wide vehicle lane widths, poorly defined lanes
- Intersections could be improved to alleviate / provide additional space to accommodate pedestrians
- Leading Pedestrian Intervals (LPI) successful at South Park and Barrington Streets
- High volumes at pedestrian crossings
- Many areas of sidewalk congestion
- Obstacles (poles, signs, street boards, etc.) can occasionally interfere with pedestrian flow

CYCLING

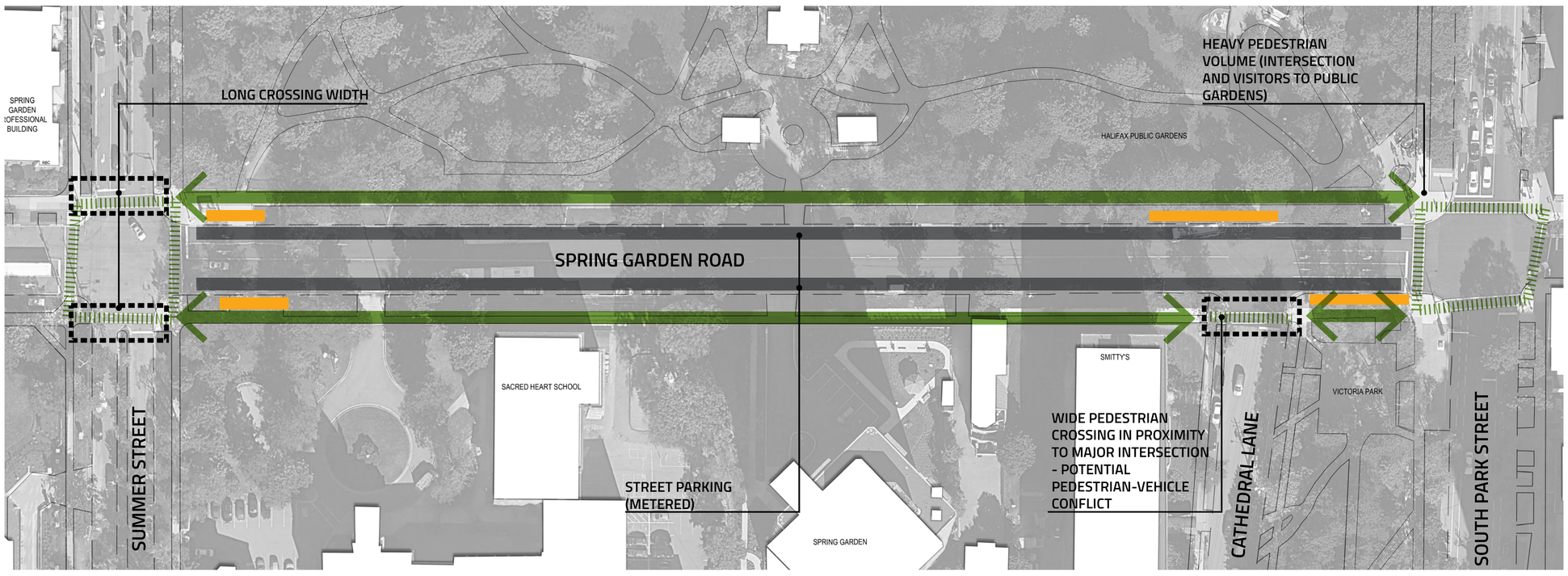
- Spring Garden not considered a priority cycling corridor
- No bicycle provisions along Spring Garden Road
- Cyclists navigate corridor in mixed traffic
- Ample space for cyclists currently exists west of South Park
- Space for cyclists is limited east of South Park
- East-west connections are provided south of Spring Garden Road; north-south connections are available from Spring Garden Road

LOADING

- Frequent loading requirements east of South Park Street
- Many businesses can be accessed from side street loading areas
- Clear and frequent evidence of inappropriate use of existing loading areas

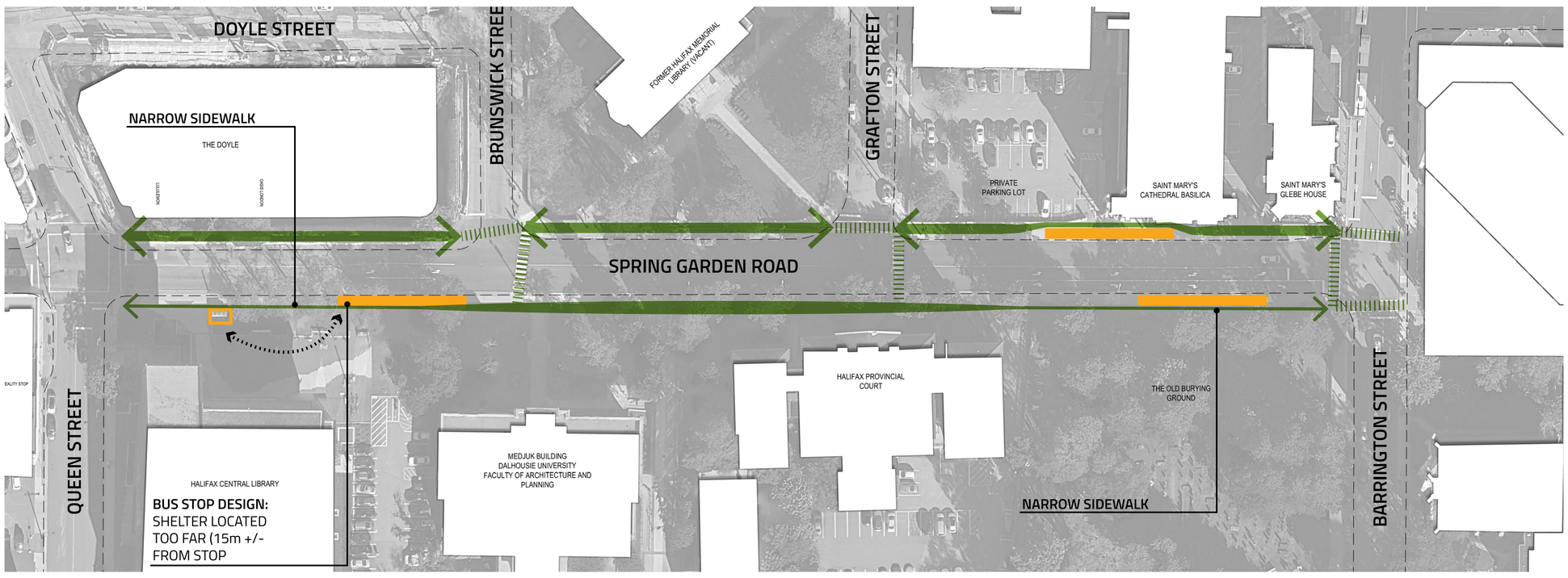
SUMMER STREET TO SOUTH PARK STREET

- Wider 4-lane roadway cross section
- Wide sidewalks (+2.0m) with landscape buffer
- Moderate pedestrian volumes
- Residential on the south side and Halifax Public Gardens on the north
- On-street parking opportunities provide additional buffer zone for pedestrians



QUEEN STREET TO BARRINGTON STREET

- Narrower 3 to 4-lane cross section
- Moderate/ high pedestrian activity
- More institutional land uses including the Halifax Public Library, Dalhousie University, and the Halifax Provincial Court



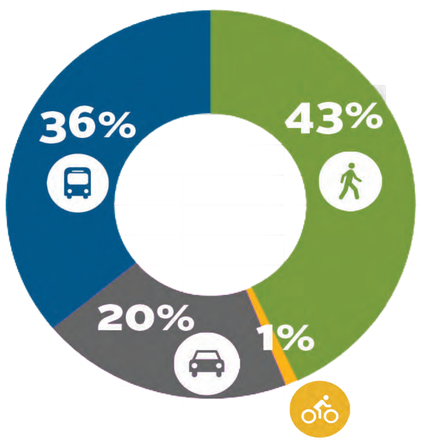
PARKING
BUS STOP
LOADING ZONE
PEDESTRIAN MOVEMENT
PEDESTRIAN MOVEMENT (CONSTRAINED)
PEDESTRIAN ROAD CROSSING
OBSTACLE TO PEDESTRIAN MOVEMENT
AREA OF POTENTIAL CONFLICT

VEHICLE TRAFFIC

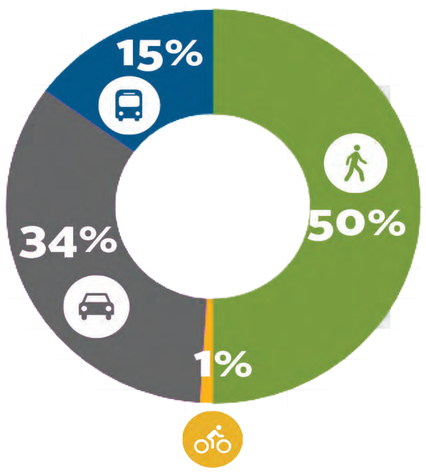
- Traffic volumes on Spring Garden are relatively low
- Traffic has not increased; and in some cases decreased, in past decade
- Operating speeds east of South Park are typically lower than the posted speed limit
- Turning movements onto or off of Spring Garden Road are affected by pedestrian movements, which contribute to vehicular or transit travel time delays
- Not a significant commuter route (Queen to South Park)
- Increased commuter use east of Queen and West of South Park
- Multiple parallel routes and options are available adjacent to Spring Garden Road
- Single lane of travel with some dedicated turn lanes for eastbound/westbound travel

TRANSPORTATION BY MODE

WEEKDAY PM PEAK



WEEKEND MID-DAY



VEHICLE SPEEDS

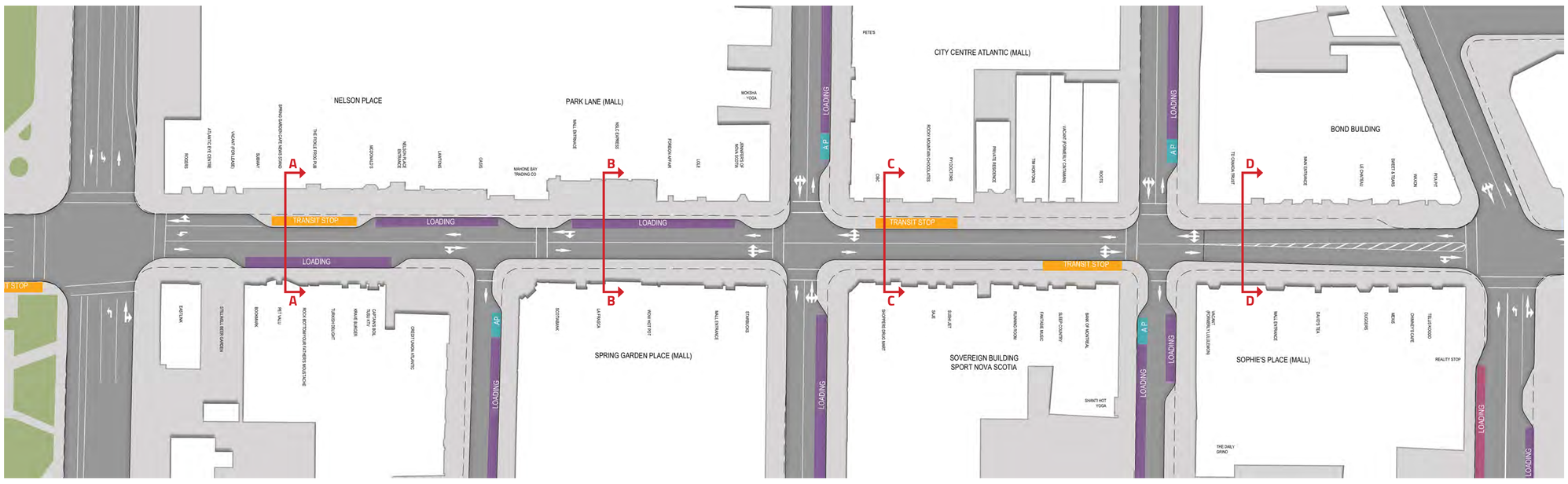
	WESTBOUND JULY 2017	EASTBOUND MAY 2018	WESTBOUND JULY 2017	EASTBOUND MAY 2018
85th percentile speed (km/hr)	31	38	33	40
% of vehicles over 50 km/hr	0.1%	0.9%	0.2%	1.7%
Average Speed (km/hr)	21	30.7	23	32.1
Max Speed		72		83

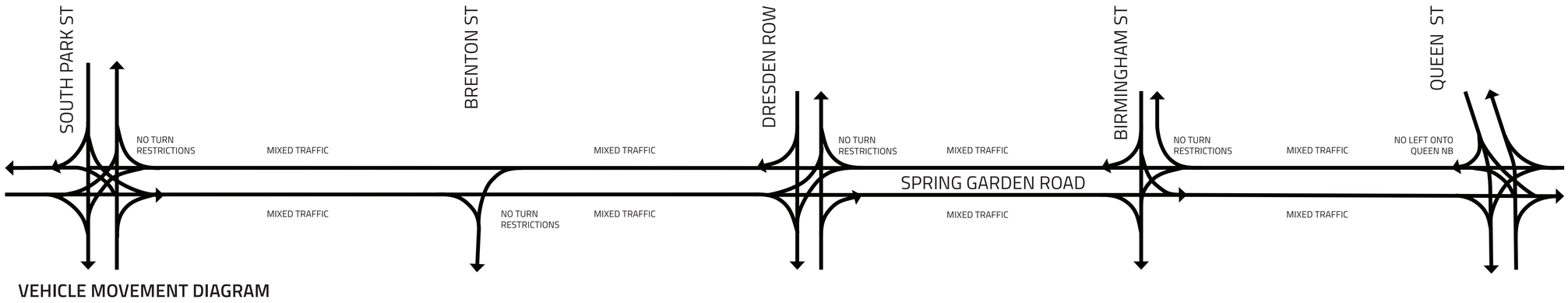
GUIDING PRINCIPLES		OBJECTIVES	HOW? (Examples)
	Encourage use of public transit by enhancing transit users' experience along Spring Garden Road	Improved transit reliability	▪ Transit bump-outs (i.e. curb extensions to enable pick-up without buses having to pull in/out of traffic ▪ Bus lane ▪ Operational transit improvements (i.e. Transit Signal Priority)
		Appropriate passenger amenities	▪ Provide safe, comfortable access and egress to buses and bus stops ▪ Design standardized, lighted bus stops ▪ Provide weather-protected, enclosed, or heated bus shelters ▪ Posted bus route information, maps, and schedules ▪ Provide transit furniture (i.e. garbage, recycling bins, benches) ▪ Provide space for accessible boarding, with 2.5m pavement for ramps
	Improve the pedestrian experience along Spring Garden Road	Ease of pedestrian movement along the corridor	▪ Smooth, durable walking surfaces ▪ Universal Accessibility best practices (i.e. Tactile walking surfaces at intersections) ▪ Sidewalk width appropriate to pedestrian volumes ▪ Widened sidewalks at intersections
		A safe pedestrian realm	▪ Adequate visibility at pedestrian -vehicle interaction points ▪ Marked crosswalks ▪ Shortened street crossings (i.e. through curb bump-outs) ▪ Raised crosswalks where appropriate ▪ Universal Accessibility best practices (i.e. Tactile walking surfaces at intersections) ▪ Design street to reduce vehicle speeds
		The street as a place to spend time; not just to move through	▪ Incorporate street elements that please and delight ▪ Respect heritage aspects of the street ▪ Recognize the street's role in contemporary urban life ▪ Design to reduce vehicle speeds ▪ Provide buffer between pedestrians and vehicles ▪ Design vegetation into the streetscape ▪ Design for storm drainage with consideration for alternative storm water management techniques ▪ Create a distinct identity and memorable experience
	Maintain functional uses on Spring Garden Road that support local businesses	Provide adequate loading areas for businesses	▪ Accommodate area loading activity ▪ Taxi-stands ▪ Create time-of-day loading restrictions for couriers / deliveries ▪ Provide Access-a-Bus loading space
		Consider parking needs along the corridor	▪ Accommodate area on-street parking ▪ Use time of day parking restrictions as appropriate ▪ Offer accessible parking spaces at key locations
	Optimize vehicular use of Spring Garden Road, in the context of the surrounding road network	Maintain east-west vehicular movement in the central downtown area, through Spring Garden Road or other streets	▪ Develop options that consider impacts of Spring Garden Rd. redesign on use and function for vehicular traffic ▪ Ensure appropriate access to and from side streets ▪ Divert traffic across the network to surrounding streets, as required ▪ Consider arterial capacity (i.e. do drivers perceive this as a through route)

1

OPTION 1
TRANSIT PRIORITIZED VEHICLE THOROUGHFARE

- Maintains Spring Garden road as a vehicular thoroughfare (connecting Barrington to South Park)
- Sidewalk extensions and bumpouts introduced for greater pedestrian amenity and shortened crosswalks
- Some vehicle turn restrictions to increase transit efficiency and safer pedestrian crossings
- Maintains some on-street loading on Spring Garden Road
- Most similar to existing conditions but with clearer definition of vehicle and pedestrian movements
- Transit stops mostly located on sidewalk extensions or bumpouts



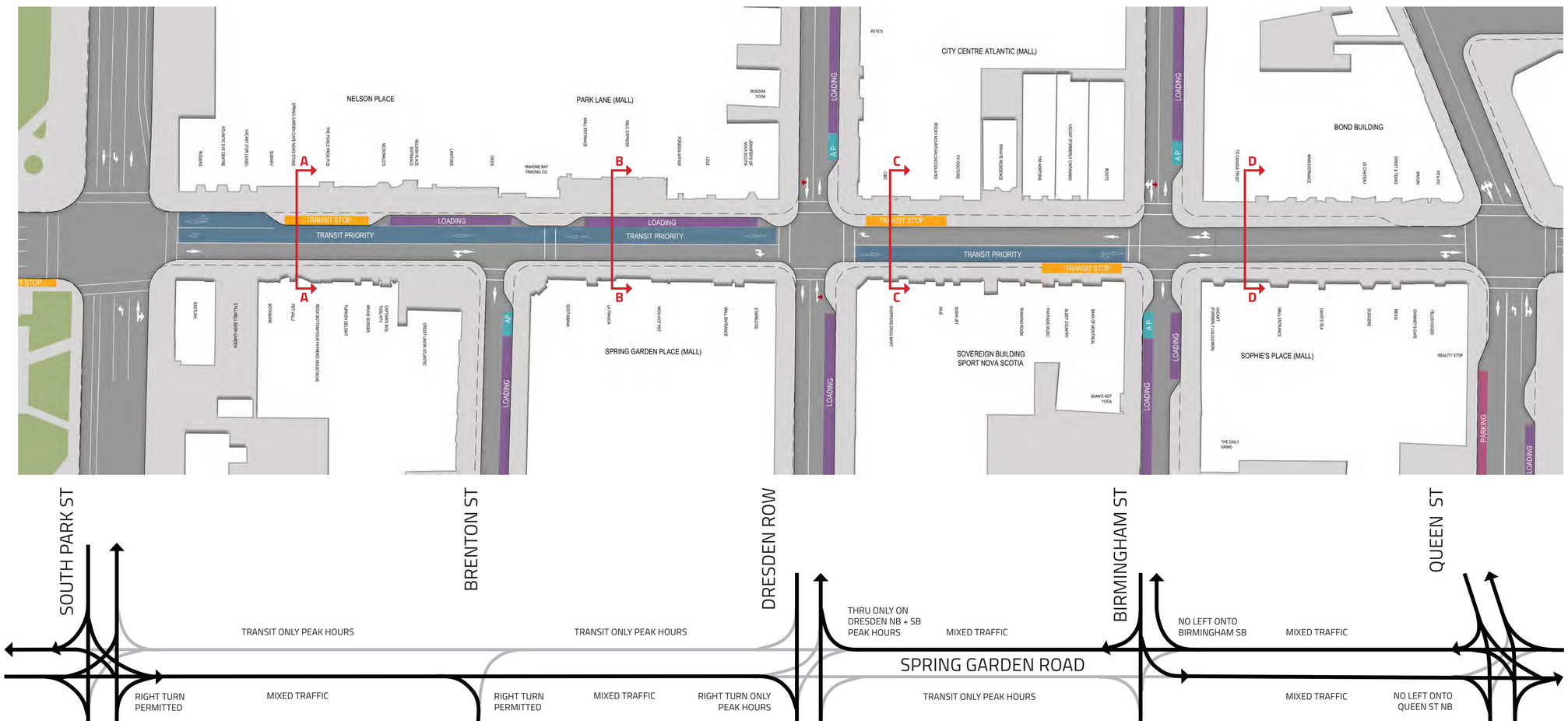


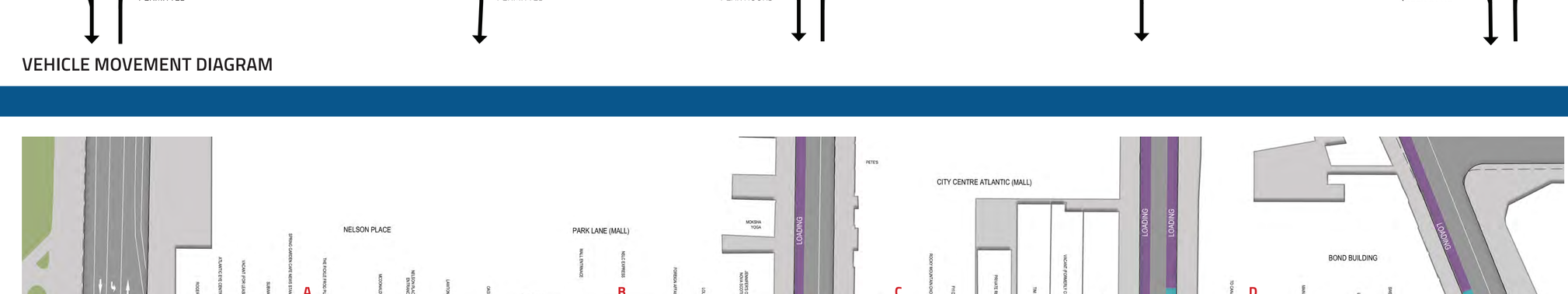
VEHICLE MOVEMENT DIAGRAM

2

OPTION 2
TURN RESTRICTED TRANSIT PRIORITY

- Restricts most left turn movements reducing the potential delay to buses and pedestrian conflicts
- No vehicular thoroughfare during the day on select blocks and in certain directions (except buses)
- Sidewalk extensions and bumpouts introduced for greater pedestrian amenity and shortened crosswalks
- Limits roadway widths to reduce pedestrian exposure at intersections
- Some on-street loading permitted
- Transit stops mostly located on sidewalk bumpouts or extensions



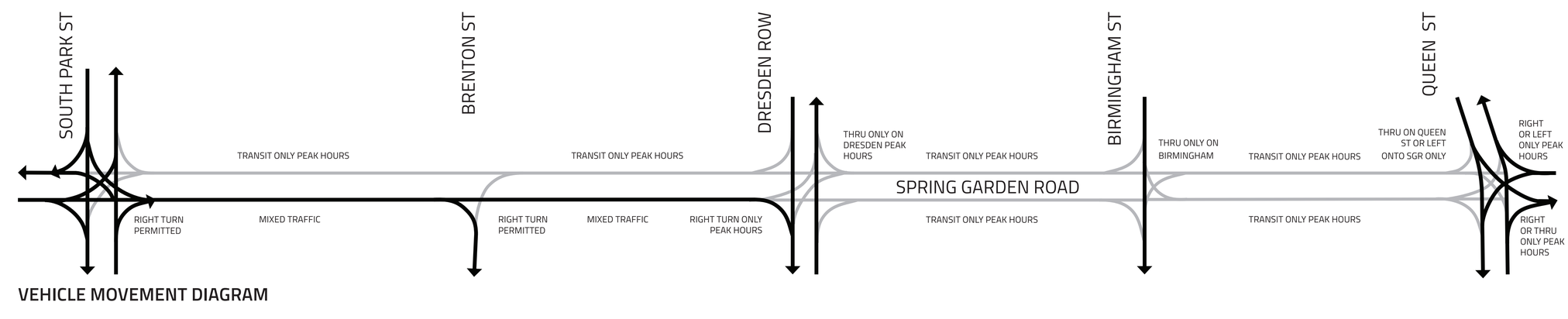


VEHICLE MOVEMENT DIAGRAM

3

OPTION 3
DAYTIME TRANSIT CORRIDOR

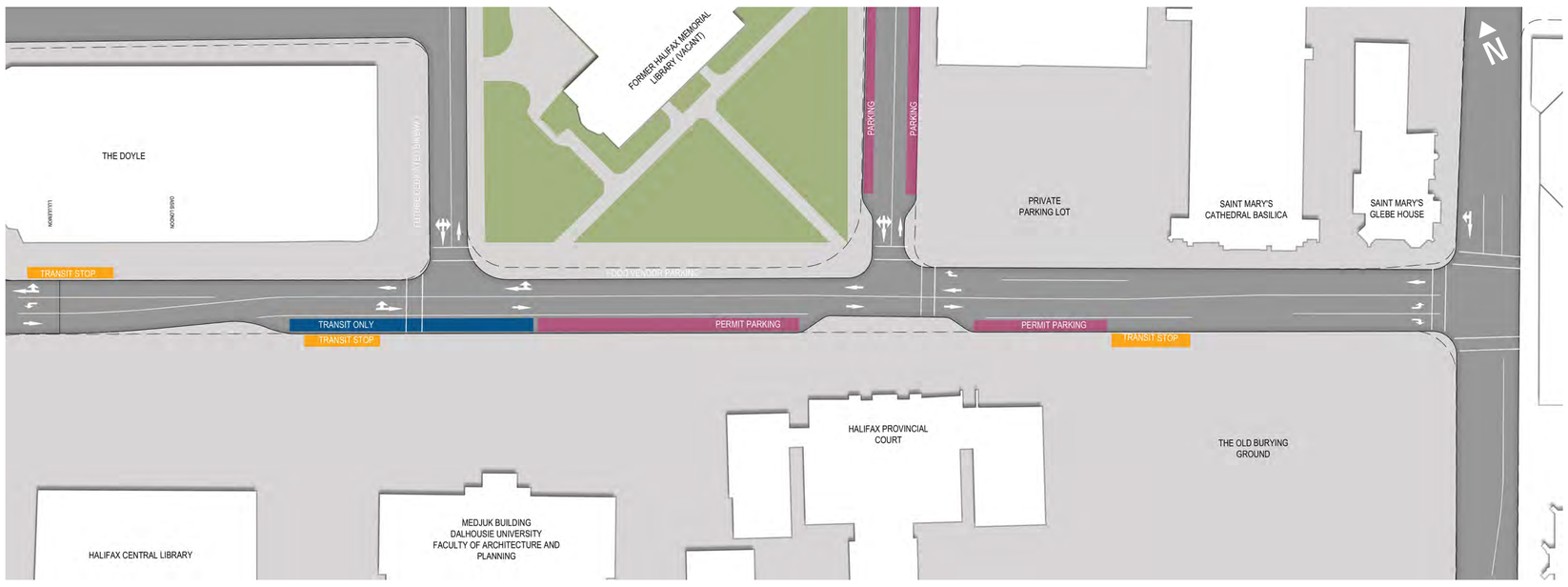
- No vehicular thoroughfare during the day on select blocks and in certain directions (except buses)
- Vehicle through movements at Dresden Row are restricted, limiting "commuter" traffic along Spring Garden Road during the day. Buses are permitted to travel through the corridor at all times
- Vehicles pushed to north/south movements and parallel routes (eg. Sackville Street & Morris Street)
- Sidewalk extensions and bumpouts introduced for greater pedestrian amenity and shortened crosswalks
- No on-street loading permitted
- North block of Birmingham Street converted to one-way to increase on-street loading capacity

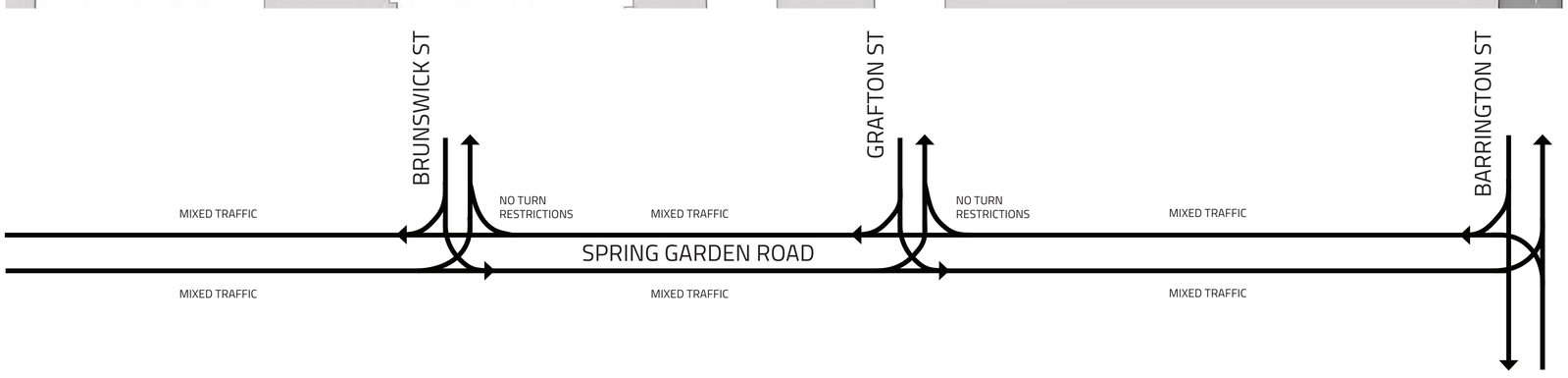


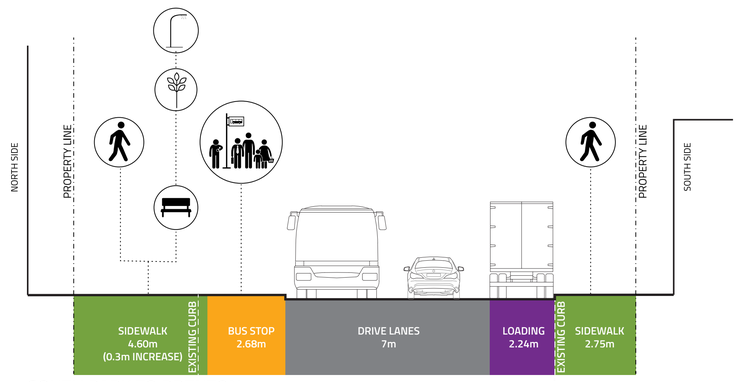
VEHICLE MOVEMENT DIAGRAM

SPRING GARDEN ROAD
FUNCTIONAL PLAN OPTIONS

SOUTH PARK STREET TO QUEEN STREET

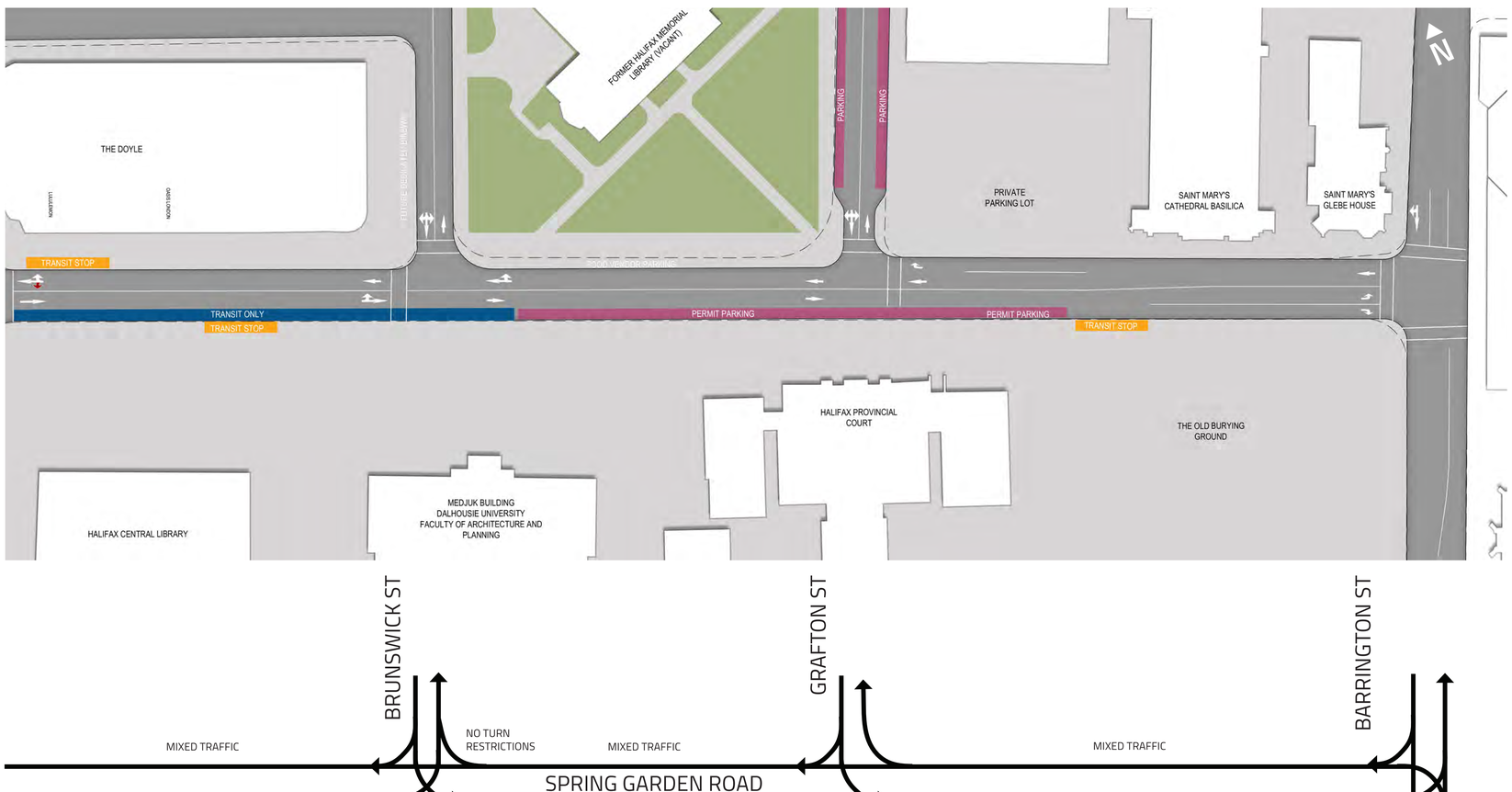


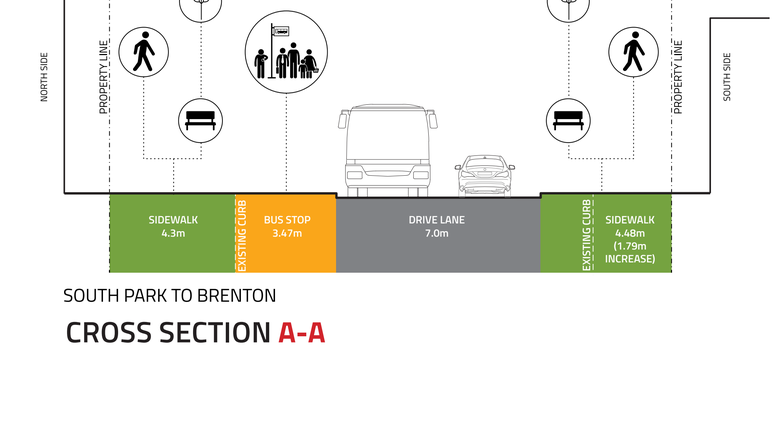




SOUTH PARK TO BRENTON

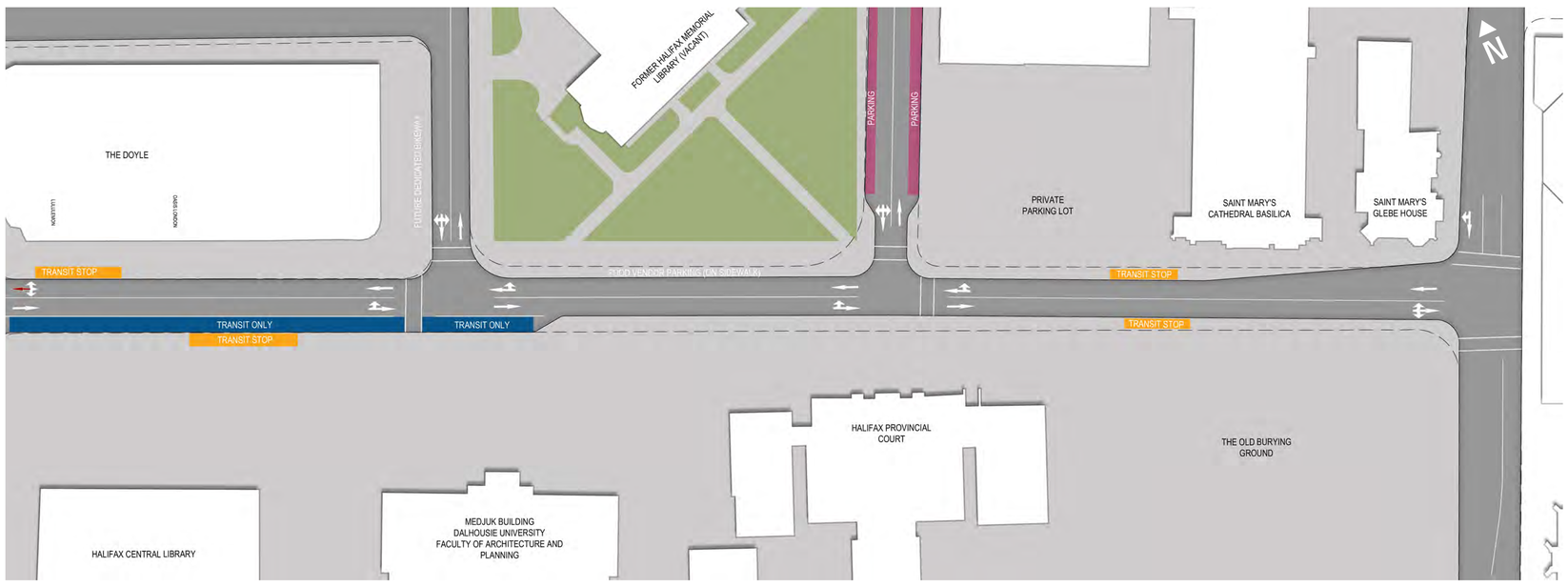
CROSS SECTION A-A

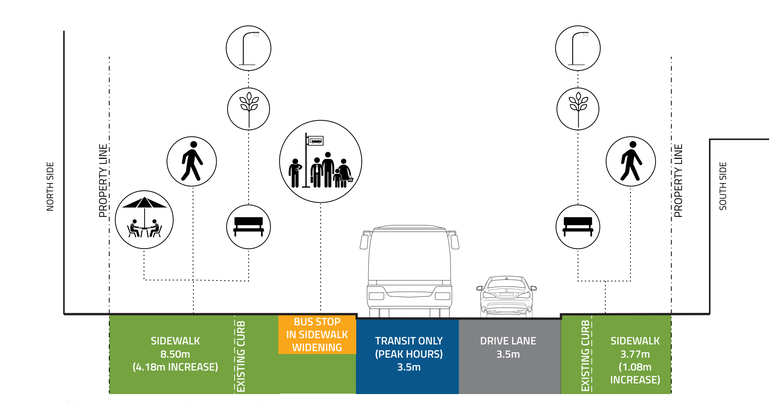




SOUTH PARK TO BRENTON

CROSS SECTION A-A

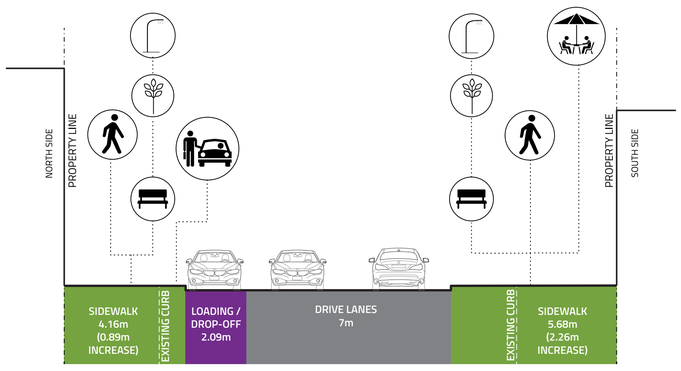




SOUTH PARK TO BRENTON

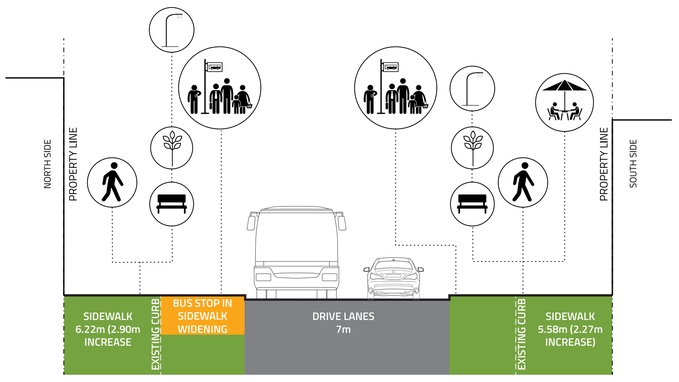
CROSS SECTION A-A

QUEEN STREET TO BARRINGTON STREET



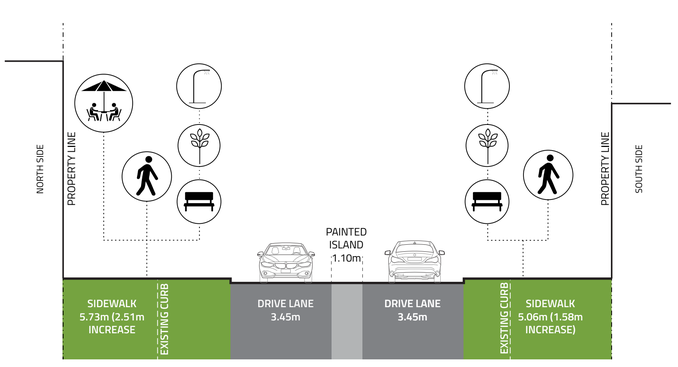
BRENTON TO DRESDEN ROW

CROSS SECTION **B-B**



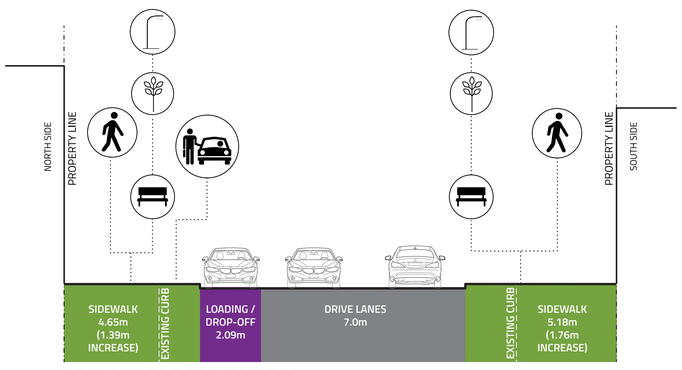
DRESDEN ROW TO BIRMINGHAM

CROSS SECTION **C-C**



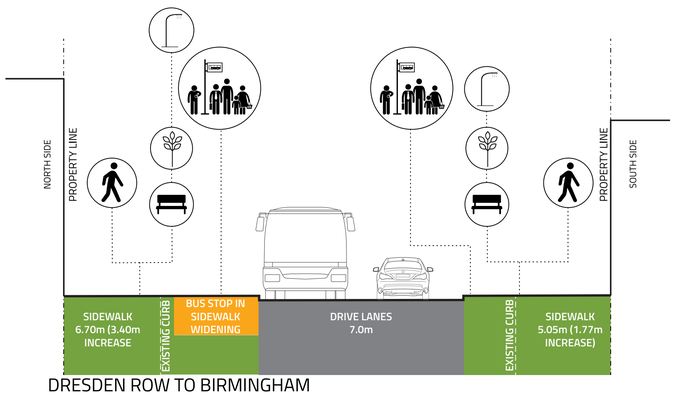
BIRMINGHAM TO QUEEN

CROSS SECTION **D-D**



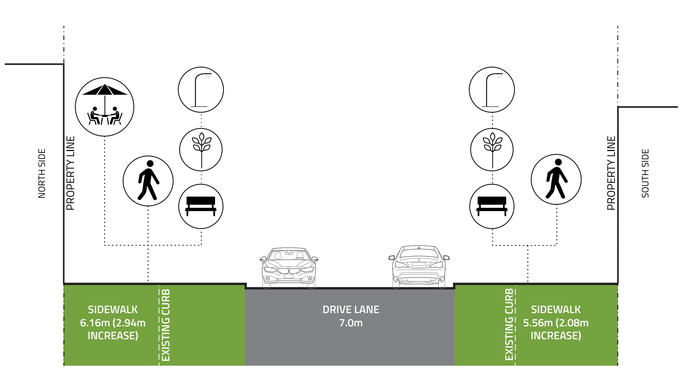
BRENTON TO DRESDEN ROW

CROSS SECTION **B-B**



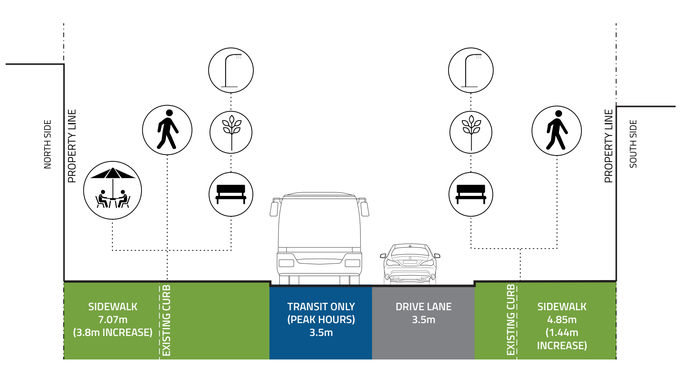
DRESDEN ROW TO BIRMINGHAM

CROSS SECTION **C-C**



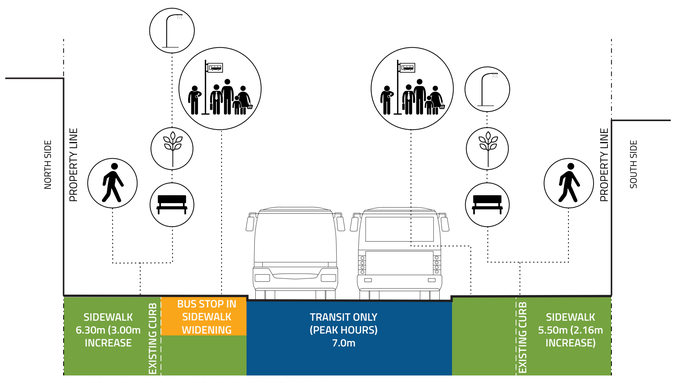
BIRMINGHAM TO QUEEN

CROSS SECTION **D-D**



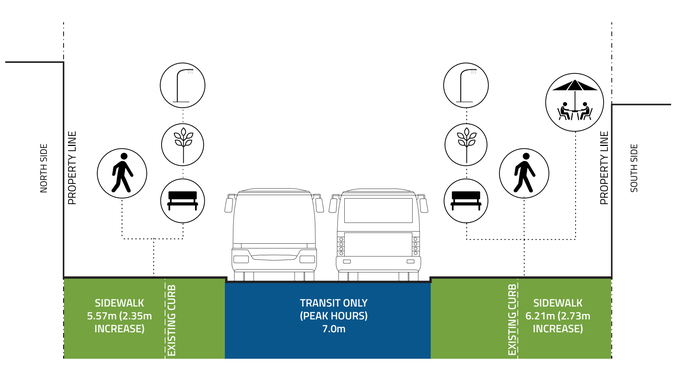
BRENTON TO DRESDEN ROW

CROSS SECTION **B-B**



DRESDEN ROW TO BIRMINGHAM

CROSS SECTION **C-C**



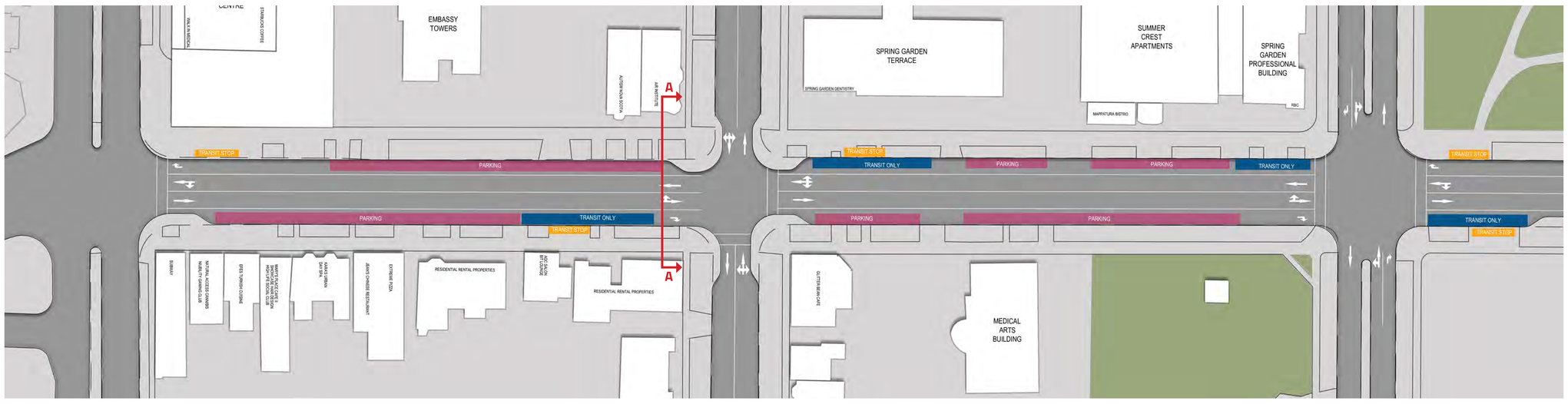
BIRMINGHAM TO QUEEN

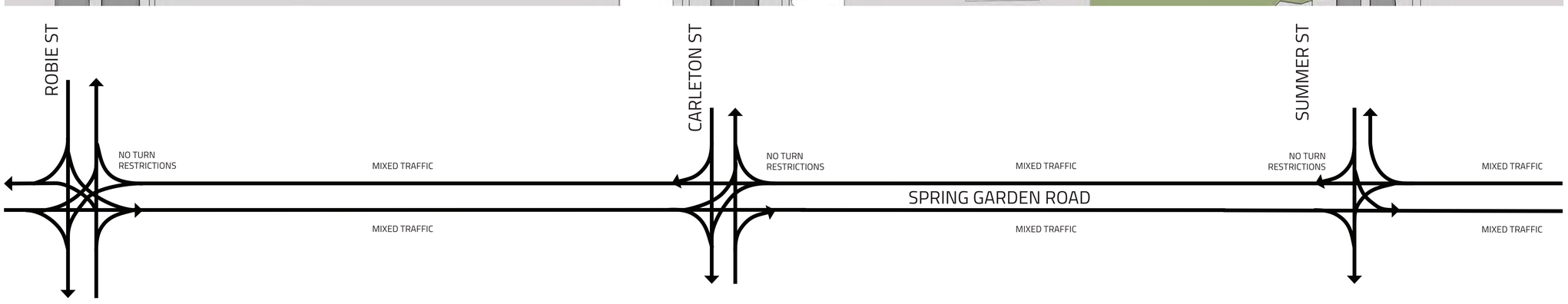
CROSS SECTION **D-D**

1

OPTION 1
BUILT FORM IMPROVEMENTS

- Improves driver guidance and reduces lane use ambiguity
- Roadside environment and access points remain similar to today
- Adequate space within the roadway to accommodate all users, including cyclists
- Relatively low cost to implement
- Provides flexibility at intersections to accommodate various turn movements and transit operations



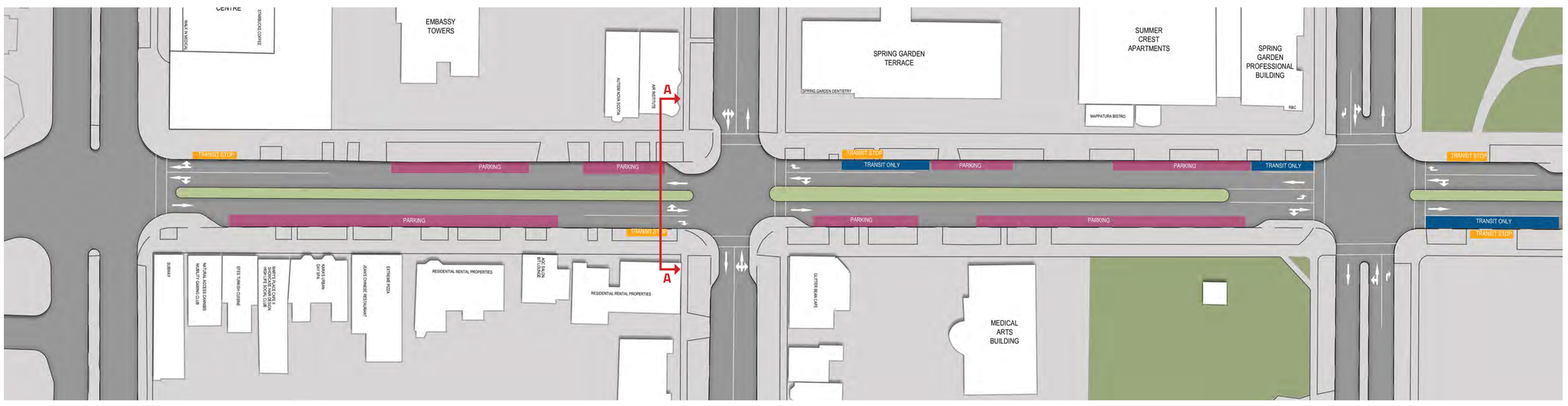


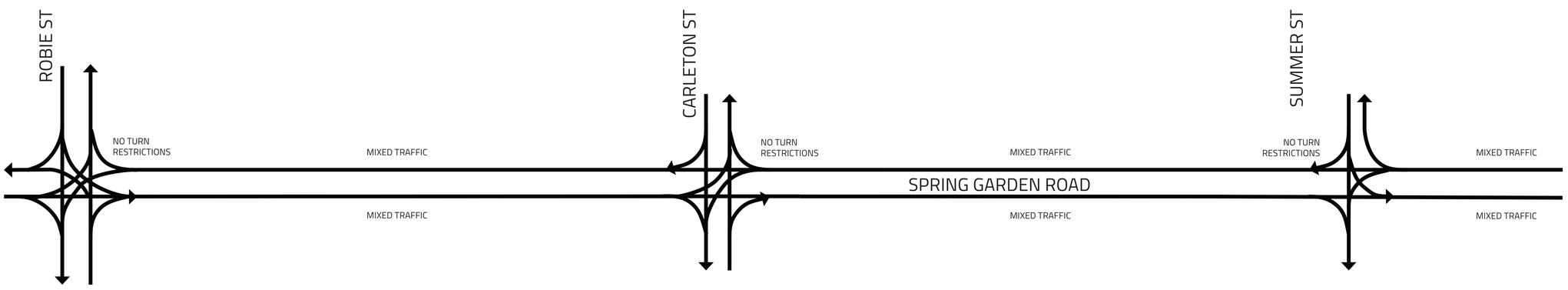
VEHICLE MOVEMENT DIAGRAM

2

OPTION 2
CENTRE BOULEVARD

- Reduces lanes widths providing better driver guidance and less ambiguity
- Provides separation between opposing traffic streams
- Provides opportunities to implement access management strategies along the corridor
- Accommodates protected left turn lanes at intersections and at driveways where required
- Provides a pedestrian refuge area for people crossing Spring Garden Road reducing pedestrian exposure
- Similar to many other streets in the Commons area (Summer, University, Cogswell, Robie, etc.)



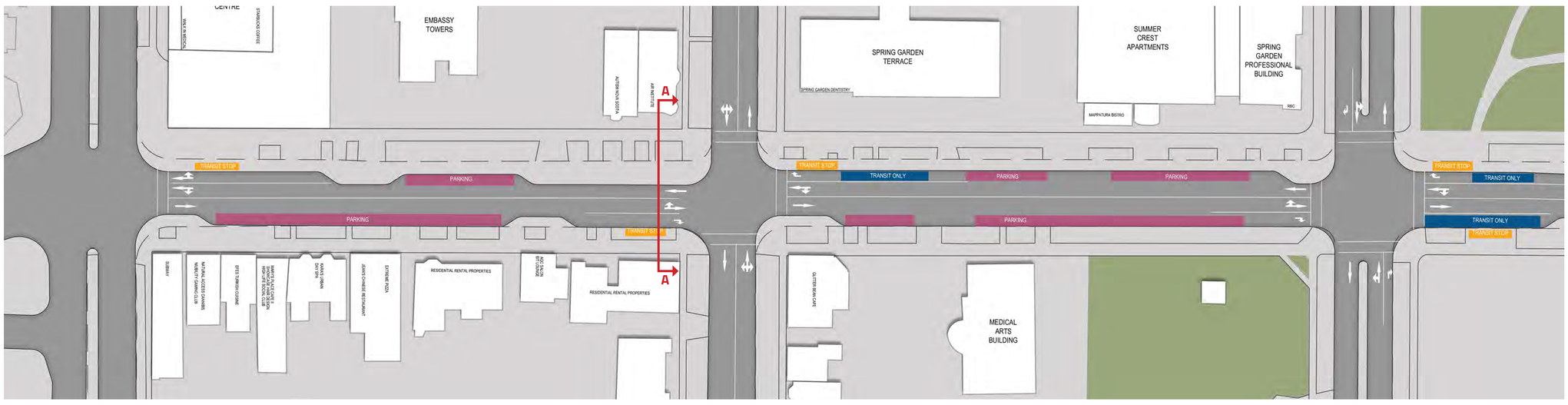


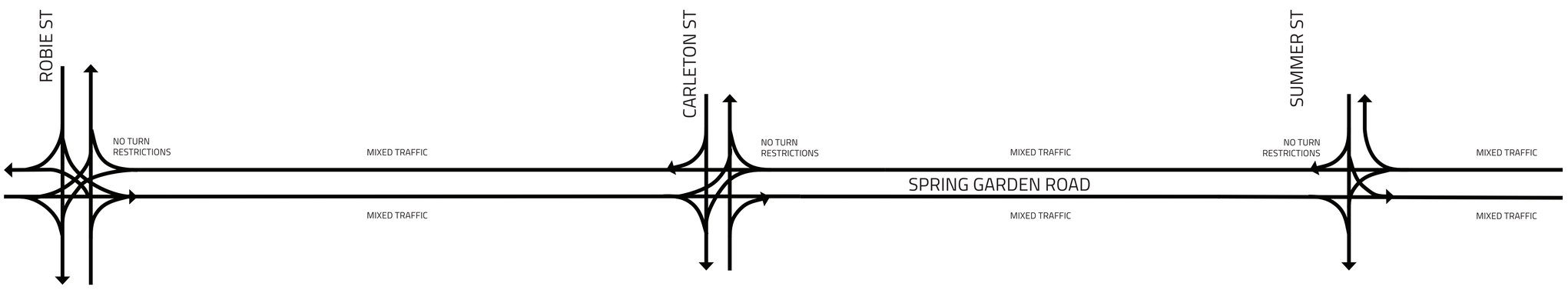
VEHICLE MOVEMENT DIAGRAM

3

OPTION 3
WIDER SIDEWALKS

- Minimizes roadway width and favours increased roadside amenity or green space
- Narrow cross section helps reduce speeds and minimize pedestrian exposure
- Minimizes unused pavement areas
- Provides opportunities for higher level off-road active transportation facilities
- Provides clear definition of parking, loading and transit areas

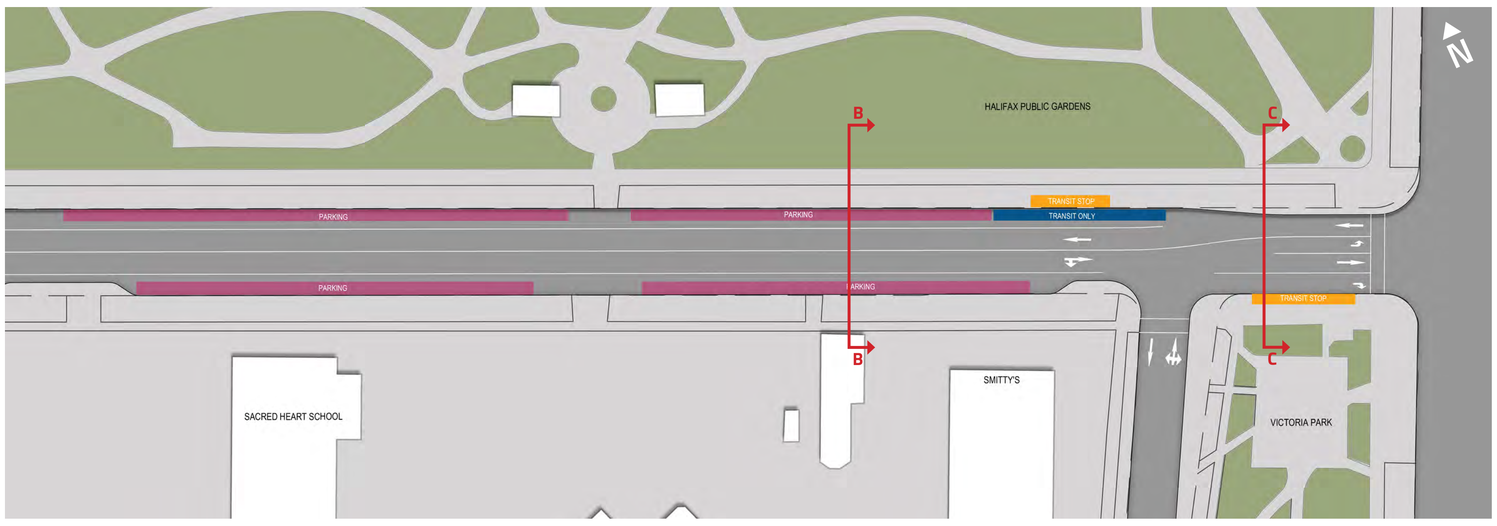


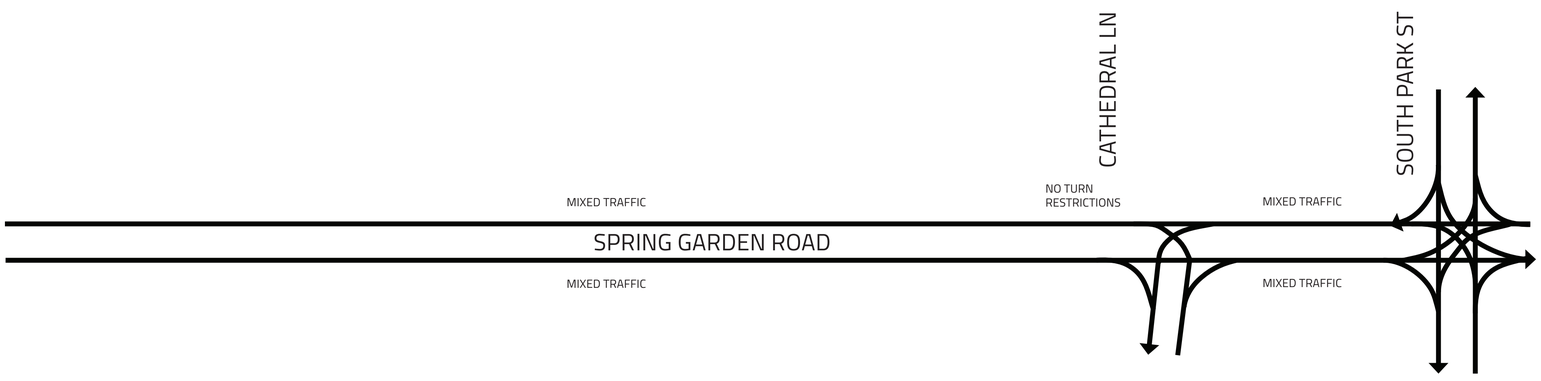


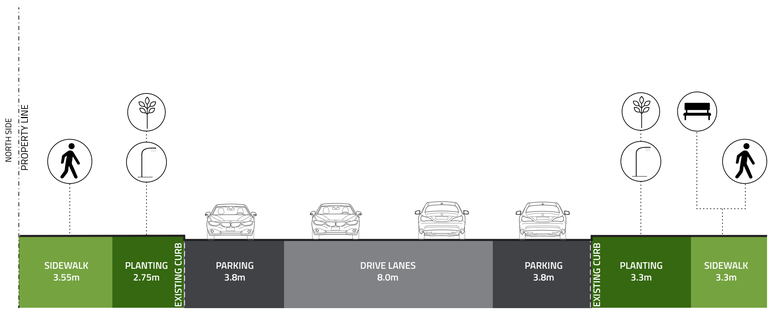
VEHICLE MOVEMENT DIAGRAM

SPRING GARDEN ROAD
FUNCTIONALPLAN OPTIONS

ROBIE STREET TO SUMMER STREET

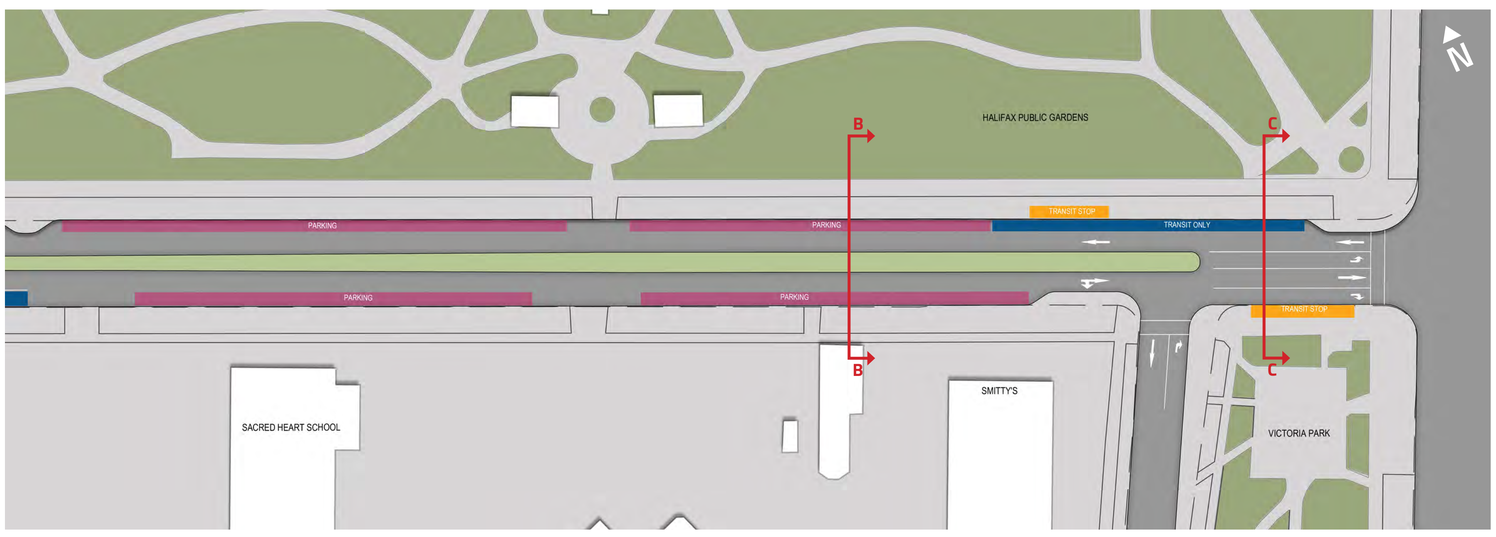




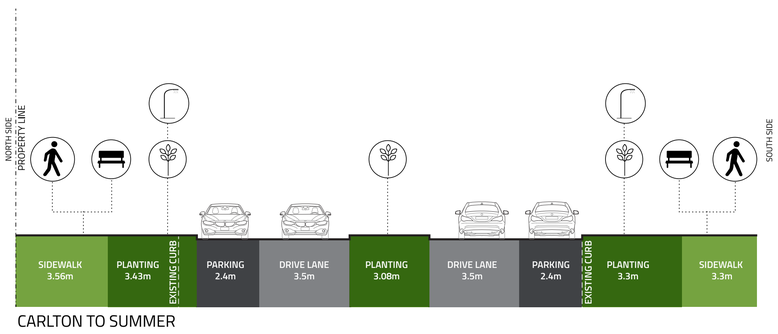


CARLTON TO SUMMER

CROSS SECTION A-A

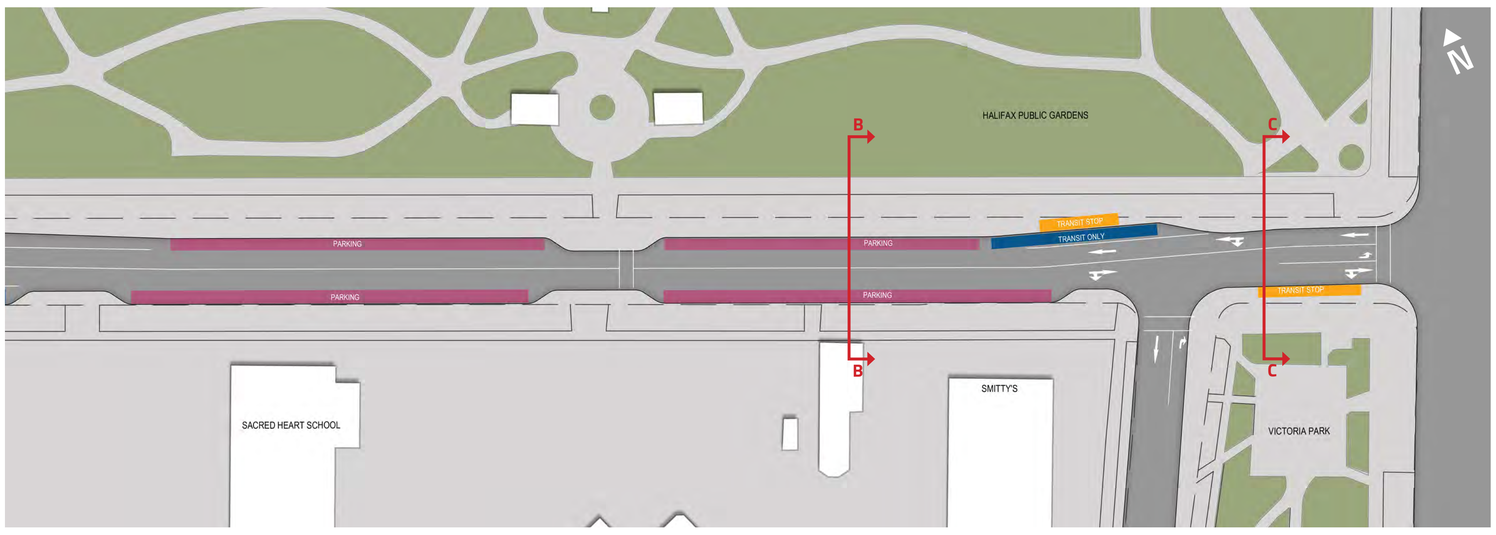


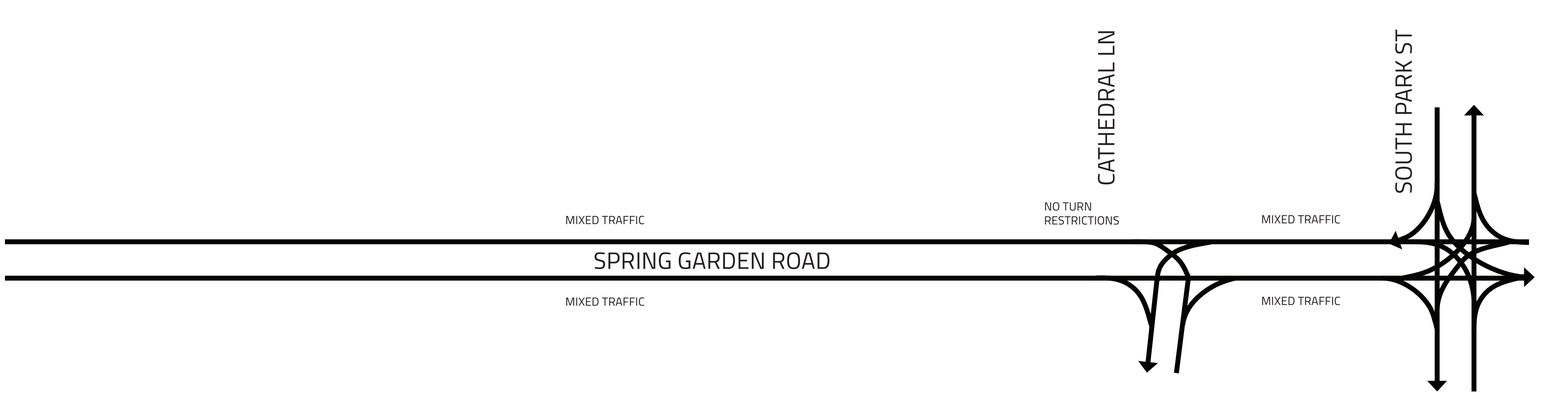


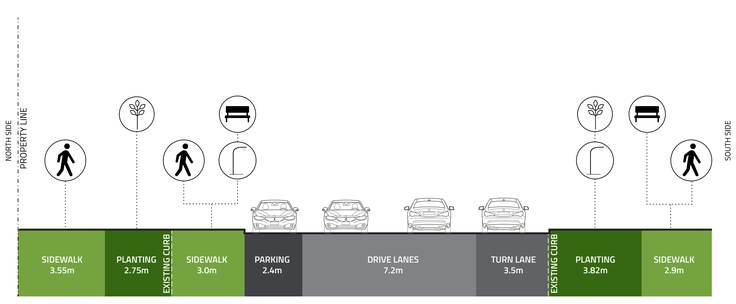


CARLTON TO SUMMER

CROSS SECTION A-A



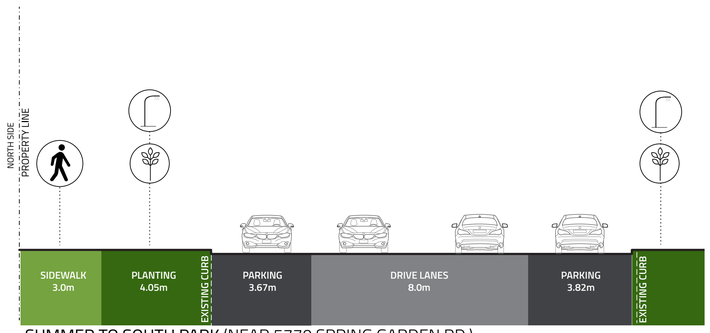




CARLTON TO SUMMER

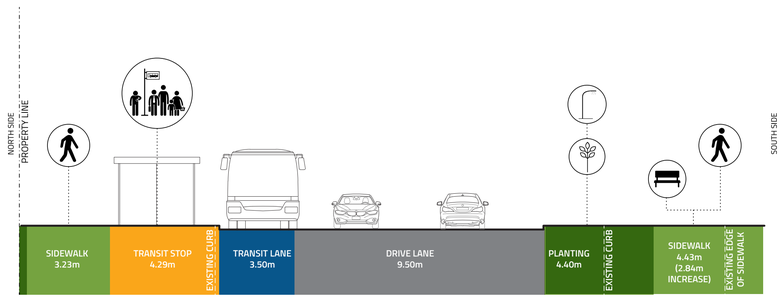
CROSS SECTION A-A

SUMMER STREET TO SOUTH PARK STREET



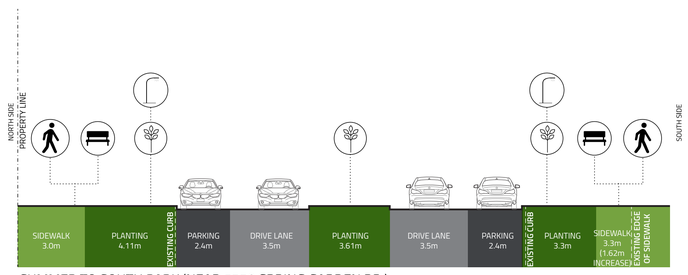
SUMMER TO SOUTH PARK (NEAR 5770 SPRING GARDEN RD.)

CROSS SECTION B-B



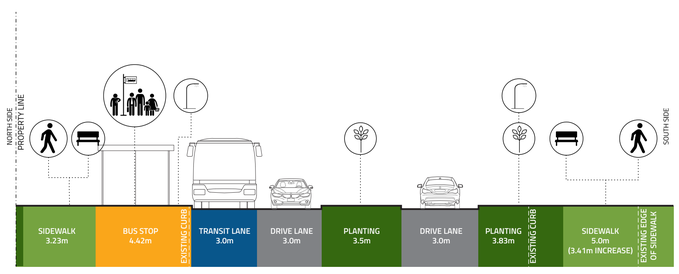
SUMMER TO SOUTH PARK (AT CATHEDRAL LANE)

CROSS SECTION C-C



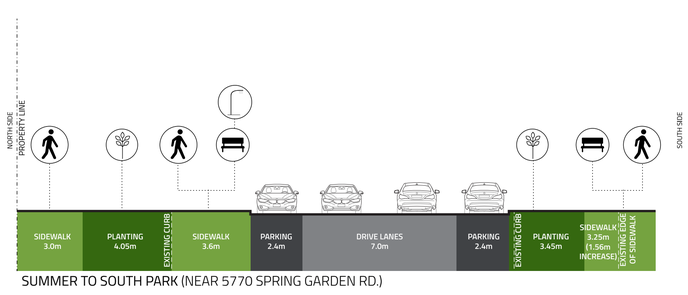
SUMMER TO SOUTH PARK (NEAR 5770 SPRING GARDEN RD.)

CROSS SECTION B-B



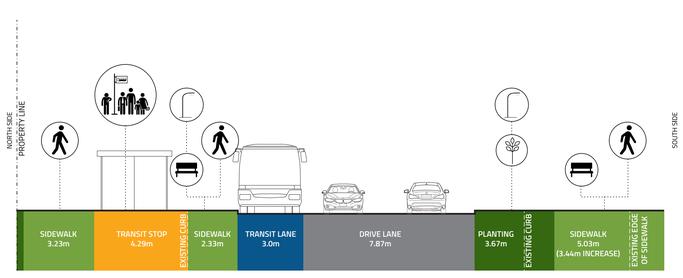
SUMMER TO SOUTH PARK (AT CATHEDRAL LANE)

CROSS SECTION C-C



SUMMER TO SOUTH PARK (NEAR 5770 SPRING GARDEN RD.)

CROSS SECTION B-B

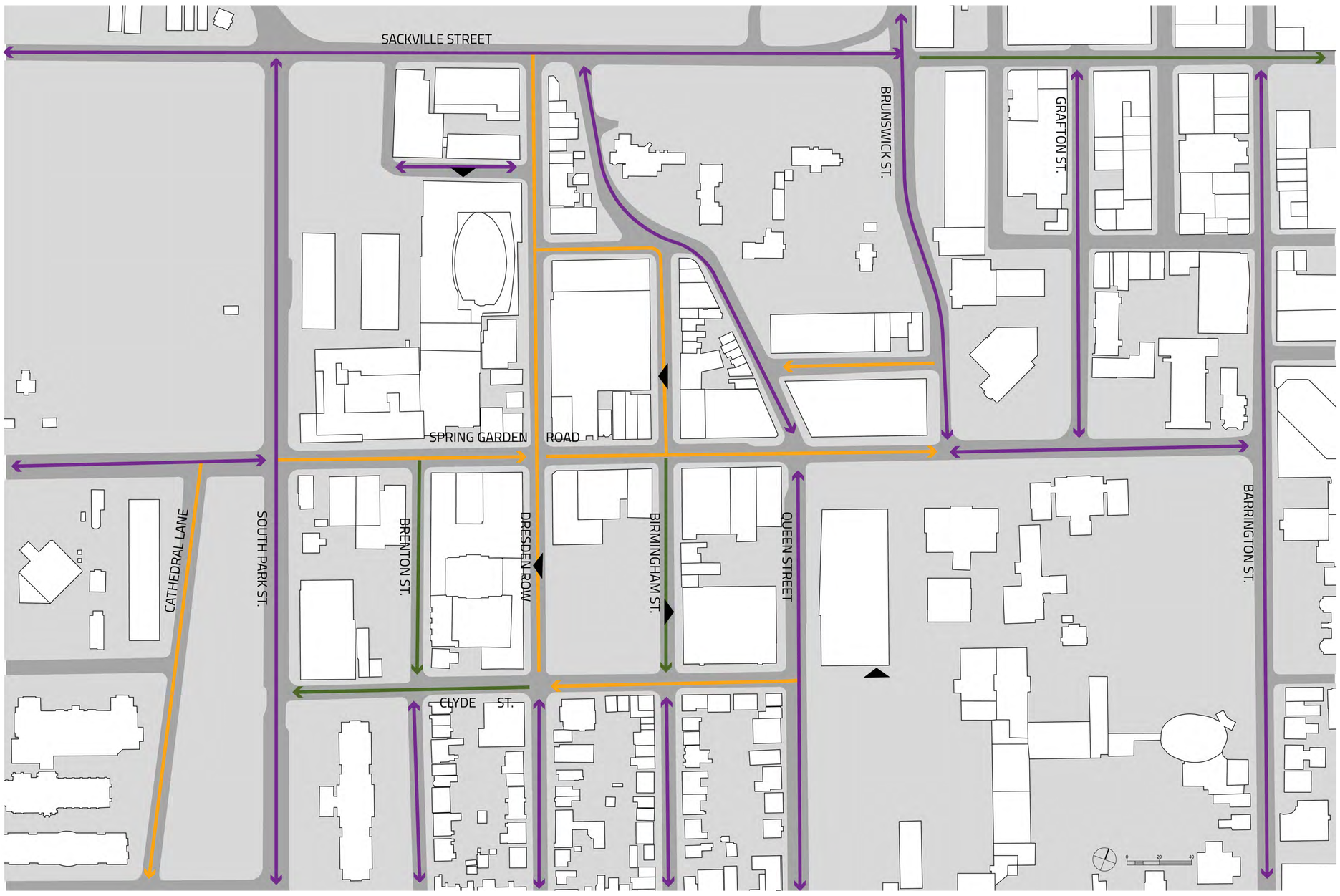


SUMMER TO SOUTH PARK (AT CATHEDRAL LANE)

CROSS SECTION C-C

OPTION 1
SPRING GARDEN ONE-WAY EASTBOUND

- Spring Garden Road as a one-way couplet with Clyde Street
- Transit and other vehicles use the Spring Garden / Clyde Street couplet
- No benefit to considering Spring Garden one-way east of Brunswick
- Consider Doyle as westbound one-way
- Sackville not considered for one-way due to its importance as a commuter route
- Challenges appear to outweigh benefits
- Not recommended



OPTION 2
BIRMINGHAM-DRESDEN ONE-WAY COUPLET

- Spring Garden remains as two-way street for entire length
- Brenton to remain as one-way southbound
- Dresden Row and Birmingham form a one-way couplet
- Increased on-street parking and loading areas
- Eliminates road width ambiguity
- Minimal impact on parkades



OTHER CONSIDERATIONS

- Spring Garden Road west of South Park NOT considered feasible as a one-way street
- Cathedral lane is a possible one-way option

EXISTING 2-WAY TO REMAIN (STATUS QUO)

EXISTING 1-WAY TO REMAIN (STATUS QUO)

STREETS CONSIDERED FOR CONVERSION TO 1-WAY

PARKADE ENTRANCE

ONE-WAY STREET CONVERSION OPTION DIAGRAMS