City of Burnaby

Item	.....
Meeting	..... **2015 Jan 19**

COUNCIL REPORT

TO:	CITY MANAGER	**DATE:**	2015 January 14
FROM:	DIRECTOR PLANNING AND BUILDING	**FILE:**	PL 37500 - 01
		Reference:	*Transportation - General*

SUBJECT: PUBLIC REALM DESIGN STANDARDS FOR TOWN CENTRE STREETS

PURPOSE: To advise Council of the progress made on public realm design standards for streets in Burnaby's four Town Centres.

RECOMMENDATIONS:

1. **THAT** Council authorize staff to complete the public realm design standards for Town Centres, as outlined in this report.

2. **THAT** Council forward copies of this report to the Transportation, Traffic Safety, and Environment Committees.

REPORT

1.0 INTRODUCTION

Enhancements to the quality of the Town Centre public realm provide an opportunity to advance a broad range of the City's economic, social, and environmental goals. Accordingly, this report presents the public realm design standards that have arisen from Council's adopted policies for Burnaby's four Town Centres.

A primary impetus for developing the design standards for the Town Centres was Council's adoption of the *Supplementary Community Benefit Bonus Density Policy* on 2010 November 01. This policy calls for "additional community amenities to support and service residents and businesses within the Town Centres" with the goal of "enhancement of the livability of the City and its Town Centres". The Town Centre public realm design standards arise from that direction. Council's adoption of the Beresford Art Walk concept in 2010 provided a starting point for the design standards, the evolution of which has continued since that time.

The specific aspects and application of the Town Centre public realm design standards have been largely developed through the associated rezoning processes within Town Centres. They have been reflected in materials presented in Council workshops, at Public Hearings, and in Council reports which specify construction of roads and boulevards fronting development sites to a final standard with curb and gutter, separated pedestrian and bicycle facilities, street trees, enhanced boulevards, street lighting, and pedestrian lighting. To date, this has included the rezoning (in progress or finalized) of over 40 sites in all four Town Centres, including: Station Square, Solo, Aviara, Vantage, Met I & II, Brentwood Mall, Value Village, Noel Drive, and Southgate.

Through these applications, input from Council and a broad range of City staff, developers, architects, engineers, and residents have helped shape the standards.

As earlier rezoning applications have proceeded to construction, there are now several street segments where elements of the new streetscape have been built. These include: south side of Lougheed Highway west of Rosser Street, south side of Beresford Street west of Telford Avenue, west side of Telford Avenue south of Beresford Street, and east side of Dow Avenue south of Beresford Street.

This report presents the design standards that have evolved from an iterative and collaborative process and have been successfully installed on City streets, in support of Council's approved objectives for the City and Town Centres specifically. Over time, the designs are intended to continue to be refined through the City's development approval and detailed engineering design processes.

2.0 POLICY CONTEXT

Development of the design standard was guided by existing Council policy. This included directions from a broad range of policy documents, such as: the *Official Community Plan*, four *Town Centre Plans*, three *Sustainability Strategies*, *Burnaby Transportation Plan*, *Streetscape Beautification Strategy*, and *Supplementary Community Benefit Bonus Density Policy*. In addition, contributions were made through earlier and ongoing works incorporated into the UniverCity development, Council's Mobility Access Planning initiatives (MAP Edmonds and MAP Cascade Heights), and other similar projects such as the green street pilot project on Watling Street. Collectively, through these strategies and efforts, Council has set the direction for the role of the public realm that is to ***foster a sense of pride in the community and strengthen sense of place.***

The arising collective vision for the public realm is to design streetscapes to:

1. Enhance the experience for visitors, the business community and residents by improving the safety, access, aesthetics and greening of boulevards.

2. Be environmentally, socially and economically sustainable, by adding to the natural landscape, reducing waste, conserving resources, and working with natural systems.

3. Be strategic in nature by establishing a hierarchy of priorities and using design standards to minimize the on-going maintenance required.

4. Enhance the experience of travel by alternative modes of transportation within the city by creating enjoyable and safe environments for pedestrians, cyclists, transit users and the general travelling public.

5. Be safe and accessible for people of all ages and abilities, and not be a barrier to anyone's participation in the community.

The resulting design standards have achieved these vision statements for the Town Centre streets, where use of the public realm is highest due to the number of residents, businesses, services and destinations available within a pedestrian environment, and the prevalence of SkyTrain stations and bus stops.

3.0 PRINCIPLES GUIDING THE PUBLIC REALM DESIGN STANDARDS

Within the above policy context, the streetscape designs have been developed on the basis of the following principles:

1. **Re-create the "living room":** Streets can be the "living room" of a community, where people can gather, socialize, and share urban living. The design standards seek to create streets as places for people.

2. **Attractive:** The public realm designs strive to be more appealing and interesting, thus encouraging people to use these spaces, and enhance the attractiveness of the surrounding community.

3. **Build "Complete Streets":** They are streets on which travel feels safe and comfortable regardless of physical ability, gender, or choice of mode.

4. **Emphasize local community:** The designs can foster local travel within each Town Centre by enhancing the attractiveness of the community, and creating neighbourhood focus and character.

5. **Enhance the environment:** The designs can improve the quality of water discharged into our streams, and reduce the peak flows. They improve air quality through the use of broad-canopy street trees and by promoting low-emission transportation.

6. **Efficient use of space:** Road allowance is one of the City's most valuable assets, comprising 20% of Burnaby's total area. As public space, it can be used to achieve multiple City goals. Public realm designs can provide for superior landscaping, a more natural treatment of rain water, and more space for people while still accommodating vehicle travel.

4.0 PUBLIC REALM DESIGN STANDARDS

The Town Centre public realm design standards developed through the rezoning, engineering design and other processes are illustrated in ***Appendix A, attached***. The details and dimensions of the designs vary based on street classification, while each incorporates similar elements located in six "zones". The elements of the typical sections (applied to the four street classifications illustrated in *Appendix A*) are described below, starting at the building face and working inward to the street.

4.1 Building Setback Zone

Buildings are typically set back several metres from the public road allowance. For residential developments, this area is typically used for landscaping.

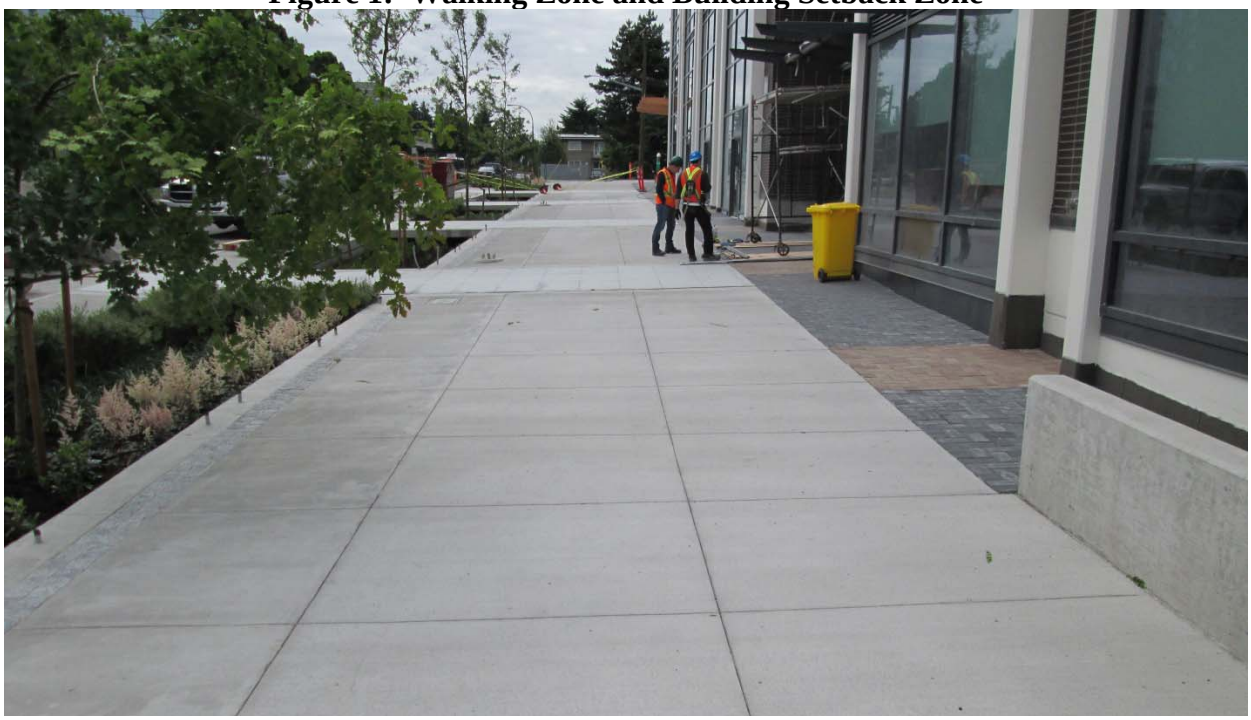
For commercial and mixed use developments, this zone can also include plazas, outdoor displays, and seating. It may also include public drinking fountains and convenient access to other public facilities and amenities, so as to support pedestrian travel and encourage more active use and enjoyment of the public realm.

The building setback zone also provides the location for access hatches for servicing underground foreign utilities, so as not to disrupt the function or attractiveness of the sidewalk and other elements of the public realm.

4.2 Walking Zone

As shown in ***Figure 1***, sidewalk widths are increased on busier streets, where pedestrian activity is expected to be higher. Sidewalks are clear of obstructions (lamp poles, mail boxes, etc.) which are placed elsewhere in the public realm (as discussed subsequently). Sidewalk joints are saw-cut rather than troweled. This creates a smoother surface, particularly for people using wheelchairs or other mobility devices.

Figure 1: Walking Zone and Building Setback Zone



At intersections, pedestrian/wheelchair ramps are aligned with each sidewalk (i.e., not a shared ramp for two perpendicular sidewalks), and include scoring to indicate the crosswalk direction

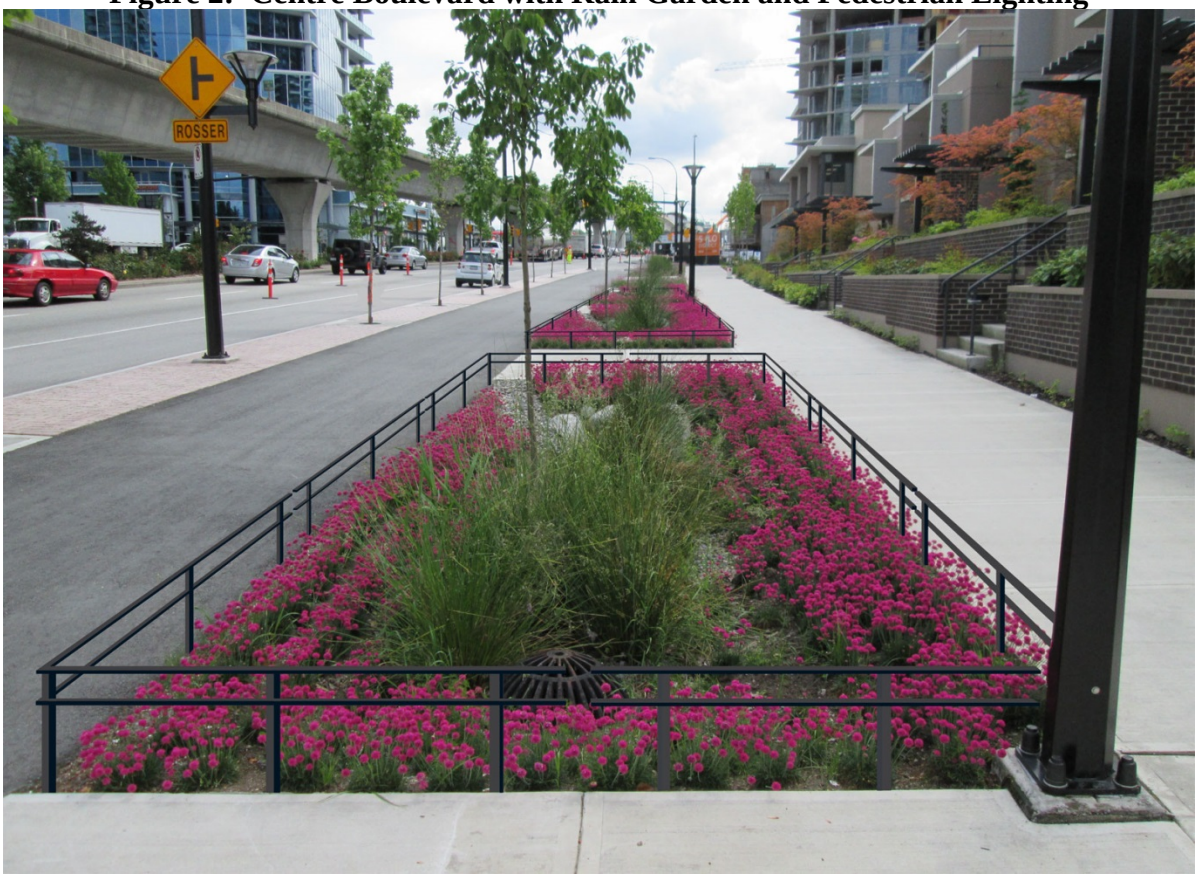
for the benefit of people with visual impairments. Where feasible, curb bulges are used to reduce the street crossing distance for pedestrians.

4.3 Centre Boulevard

The designs do not typically retain a rear landscaped boulevard within the City road allowance (back of sidewalk). Instead, a "centre boulevard" is provided between the walking and cycling zones. This is crossable by pedestrians, to provide full access from buildings to on-street parking at the curb.

The centre boulevard varies in width and treatment based on street classification. On four- and six-lane streets, a wider centre boulevard is used that incorporates multiple elements, as shown in ***Figure 2***.

Figure 2: Centre Boulevard with Rain Garden and Pedestrian Lighting



The primary landscaping in this area is with trees, shrubs, and grasses. This area is designed to assist with management of rain runoff originating within the road allowance. A facility that combines rainwater management with landscaping is referred to as a "rain garden". These typically incorporate the following functions in support of goals stated in the City's *Integrated Stormwater Management Plans*.

- improve water quality (purity and temperature) by filtering road runoff through the landscaping and soil;

- provide temporary storage of water, so that peak flows are attenuated and runoff is discharged into streams over a longer period of time; and,

- reduce the total volume discharged into streams, by allowing water to infiltrate the soil and recharge the local water table (where site conditions permit), some of which will be returned to the atmosphere through evapotranspiration from large-canopied street trees.

Sub-surface features support the health of the landscaping and protect the surrounding infrastructure. Examples include root barriers, structural soil, and overflow drains for the rain gardens (so that heavier rain volumes are directed into the storm sewer).

Rain gardens are bordered by low, ornamental railings (***Figure 2***) and inset pavers (***Figure 3***). These attractive features provide visual guidance to pedestrians and protect the landscaping. The width of the centre boulevard and the direction of rain water to that area both support larger trees that create a street tree canopy for shade, comfort, and enjoyment. The centre boulevard also provides the location for dark-sky compliant pedestrian-oriented lighting fixtures, shown in ***Figure 2***.

Figure 3: Border of Inset Pavers

Each rain garden typically runs continuously for one block, but is spanned periodically by crossings (***Figure 4***) so that pedestrians have full access from buildings to the curb. These crossings are wide enough to incorporate (***Figure 5***) amenities such as benches (for socializing and rest areas), bike racks, neighbourhood maps, wayfinding signage, and public art where appropriate.

Figure 4: Rain Garden with Crossing

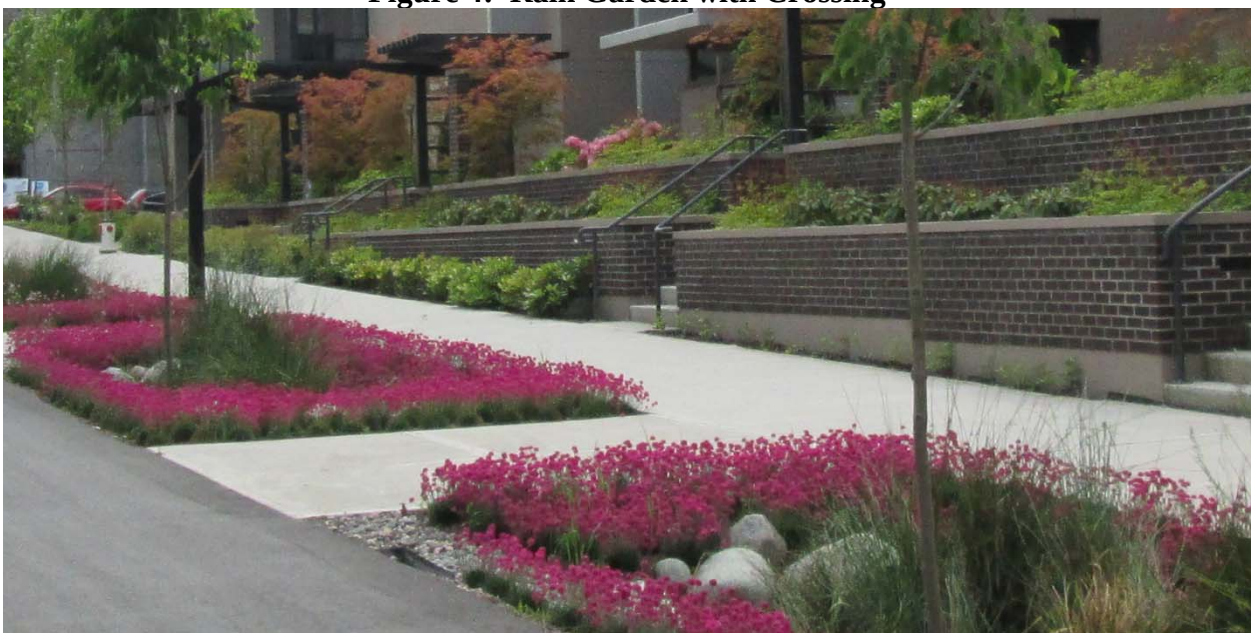


Figure 5: Street Furniture on Rain Garden Crossing

On two-lane streets, to reduce total road allowance width, the centre boulevard area is narrowed, consisting of inset pavers. Many of the features described above are instead located in the front boulevard, as discussed subsequently.

4.4 Cycling Zone

The designs incorporate bike paths which are physically separated from traffic as shown in ***Figure 6***. These provide a greater sense of comfort and safety for all users. Most cyclists ride for recreation or errands, and the bike paths are designed to facilitate slower, local trips within each Town Centre. This design supports cycling by those, such as children or infrequent cyclists, who are not comfortable in traffic. Each bike path is separated from pedestrians by the centre boulevard treatment and from car doors by the front boulevard, discussed below. Bike racks are provided on private property and/or on the crossings of the centre boulevard.

Figure 6: Bike Path

4.5 Front Boulevard

The front boulevard provides a location for street lighting and street trees. (On four- and six-lane streets, this is in addition to the trees in the centre boulevard.) The front boulevard typically has a surface of grass in residential areas and stamped asphalt or other hard surfaces in commercial/mixed-use areas, with street trees at regular intervals.

On two-lane streets, the front boulevard also incorporates amenities that, on wider streets, have already been described in the centre boulevard. This includes the pedestrian-oriented lighting fixtures and the rain gardens. Curb bulges are located between runs of on-street parking. The bulges provide space for the rain gardens (***Figure 7***), allow for larger street trees, and narrow the

perceived street width by creating a visual "line" of trees near the travel lane. Where needed, curb bulges can be lengthened to also accommodate street furniture.

Figure 7: Curb Bulge with Rain Garden

At bus stops, the centre boulevard rain gardens are omitted and the bike path is shifted into the centre boulevard area, allowing for expansion of the front boulevard. This creates a generous space for a bus shelter and the increased pedestrian activity that is seen at these locations. Where ever possible, stops include a bench, shelter, lighting, and are wheelchair-accessible. Other desirable features (not at every stop) include bus schedule information, waste/recycling receptacles, newspaper boxes, public art, and a nearby marked crosswalk.

4.6 Vehicular Zone

The vehicular zone (***Figure 8***) is used for vehicle travel. In addition, the outer lanes accommodate parking at off-peak times on six- and four-lane streets, and at all times on two-lane streets. On the latter, the parking lanes have a different appearance (e.g., pattern, texture, colour, or material) to visually distinguish them from the travel lanes. In tandem with the curb bulges, this helps to visually narrow the street and encourage lower speeds. It also enhances safety in the same way as a painted line along the edge of a rural road, by giving visual guidance to drivers.

Buses typically stop in the outside travel lane. Bus bays (pull-outs) are used where buses are stopping for longer periods (such as layovers) and in other locations where needed.

Rear laneways, where available, have landscaping, lighting, and provide locations for driveways.

Figure 8: Vehicular Zone

The above summarizes the design features that have been included in Town Centre public realm standards, as developed to date.

5.0 IMPLEMENTATION

The public realm designs are being implemented primarily through the rezoning process with costs borne by the development, which is responsible for improvement of the adjoining public realm. Developments are also providing multi-year maintenance funding for specific features, such as the rain gardens. The designs will provide for City and community benefits in a number of other areas, including: less repair of excessive stream erosion, less up-sizing of storm sewers in response to climate change (more intense storms), reduced health care costs (greater fitness due to active transportation), improved comfort and protection for pedestrians, increased travel by sustainable modes, and improved environments for community and social interactions.

Land requirements are similar to traditional designs, due to the space saved by eliminating the under-utilized rear boulevard. On average, on larger streets, an additional dedication requirement of about one metre is taken. On local residential streets, which are the most common, the designs fit within the standard 20-metre road allowance.

The application of the four standard designs to specific Town Centre streets is mapped in ***Appendix B, attached***. While the designs are intended for widespread application in the Town Centres, including new streets created through land development, there will be site-specific variations due to local conditions or constraints. Currently identified examples include:

- These designs will typically not apply on streets that are designated to retain single-family residential development, reflecting the lower intensity of usage and low pace of redevelopment.

- It is not considered feasible to obtain the necessary road allowance to achieve the full standard on Edmonds Street (between Kingsway and Canada Way) or on Dawson Street (between Gilmore and Willingdon Avenues) due to unusually shallow parcels. It is therefore anticipated that custom designs will be applied in these locations, and conceivably under other circumstances that may arise.

- Beresford Street (between Willingdon and Dow Avenues) is being implemented with the Art Walk concept previously approved by Council.

Application outside the Town Centres is generally not intended, but is proposed in two locations:

- On Kingsway between Royal Oak and Gilley Avenues, for visual and functional consistency with Kingsway to either side (i.e., in the Metrotown and Edmonds Town Centres). Taken together, the Town Centre standards would thus apply to the full length of Kingsway in Burnaby.

- On Lougheed Highway for one block between Boundary Road and Gilmore Avenue, for gateway and consistency purposes for the Brentwood Town Centre to the east.

Over time, other suitable locations may be identified through the rezoning or other processes.

6.0 CONCLUSION

This report has described design standards that have been developed to enhance the quality of the public realm on streets within Burnaby's four Town Centres, in support of a vibrant community, a thriving economy, and a healthy environment. These have arisen from a range of adopted Council policies and directions. A broad range of City staff in Planning, Engineering, and the Parks, Recreation and Cultural Services Departments have been involved in this work to date, and are supportive of the work completed to this stage. With Council concurrence, staff would finalize consistent engineering and landscape details for these design standards, as current and future development applications are advanced.

It is recommended that Council authorize staff to complete the public realm design standards for Town Centres, as outlined in this report. It is further recommended that Council forward this report to the Transportation, Traffic Safety, and Environment Committees.

Lou Pelletier, Director
PLANNING AND BUILDING

SR:sla
Attachments
cc: Deputy City Managers
Director Parks, Recreation and Cultural Services
City Clerk
Director Engineering
Director Finance

APPENDIX A

Figure A1: Typical Six-Lane Arterial Street

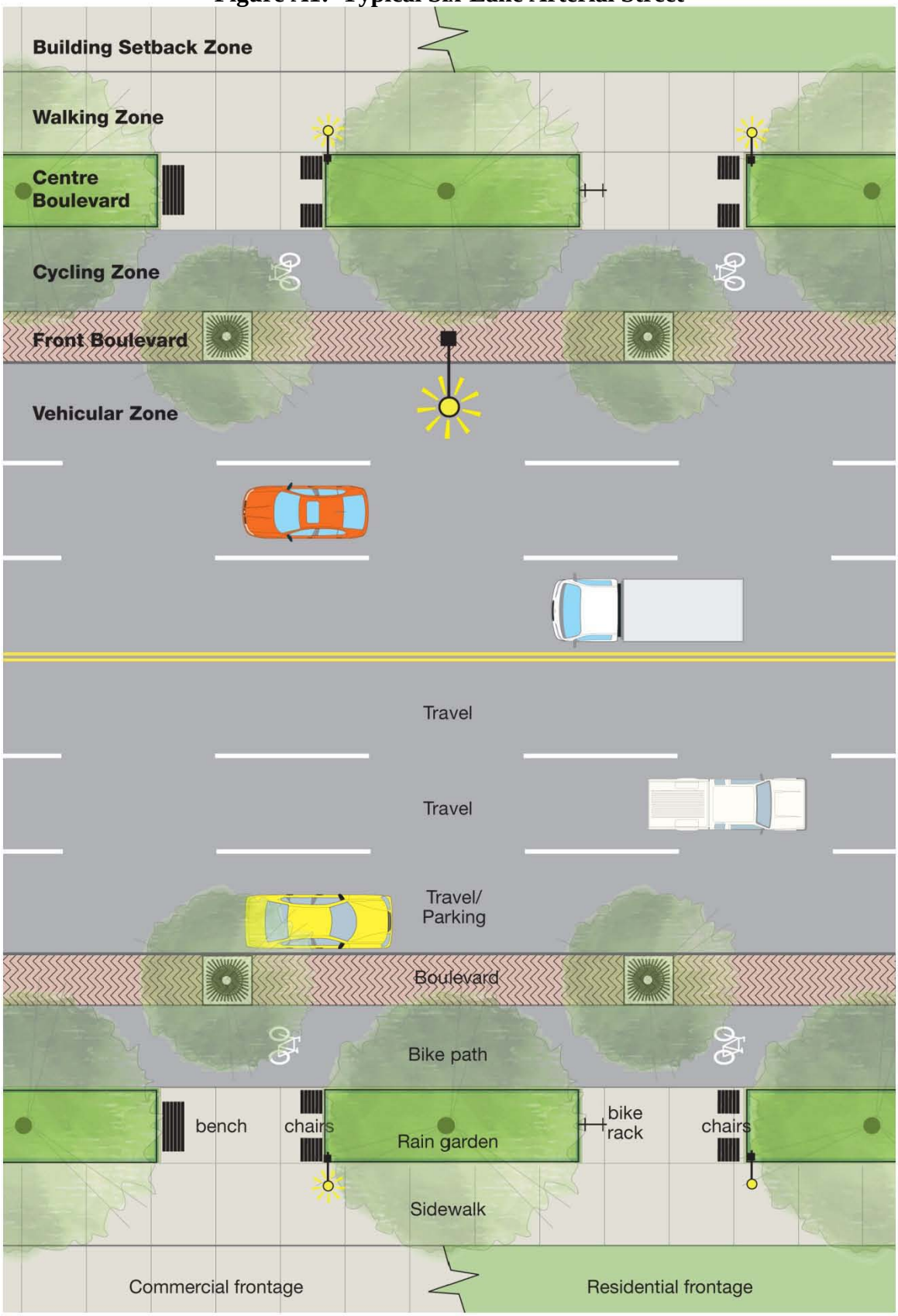


Figure A2: Typical Four-Lane Arterial or Collector Street

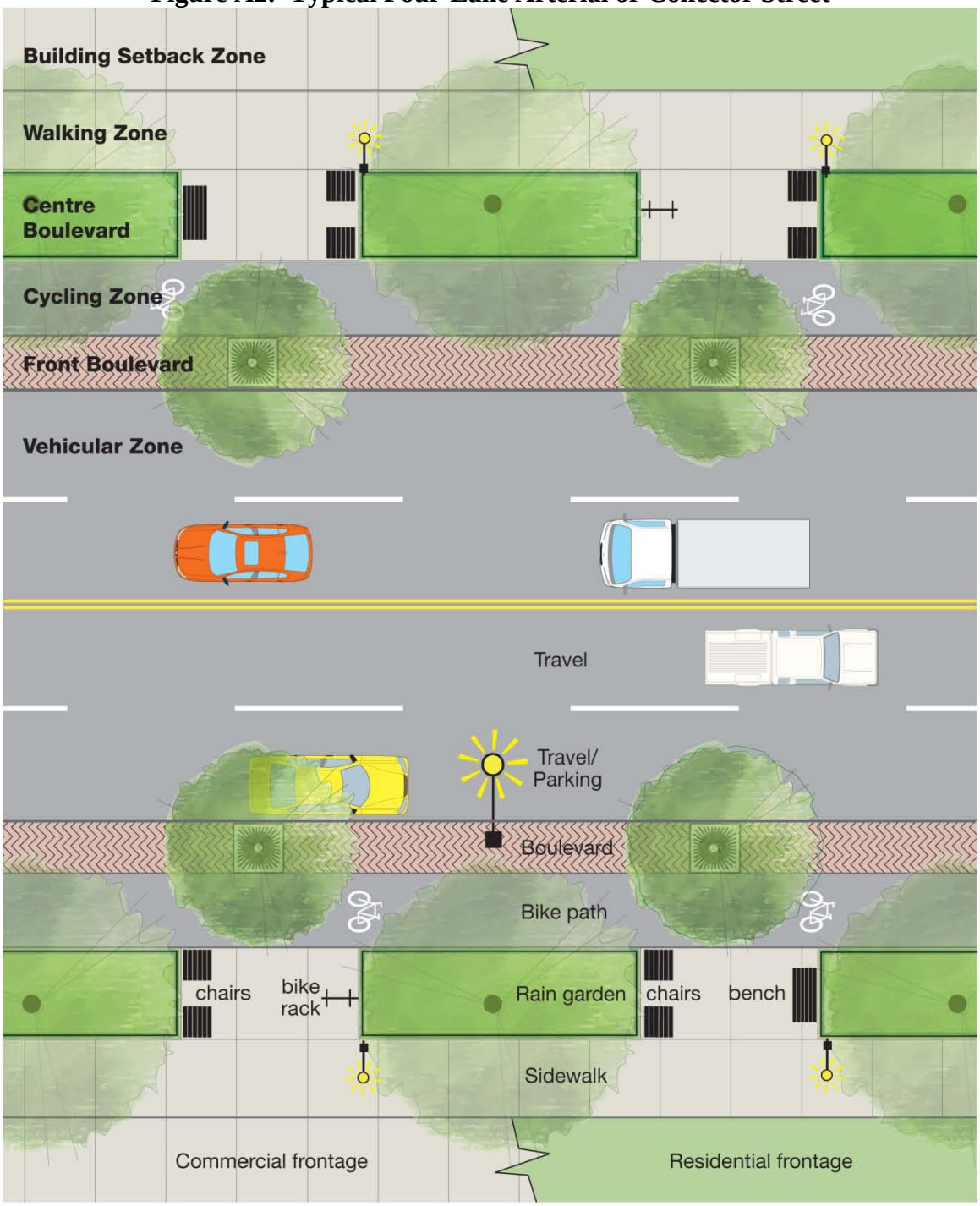


Figure A3: Typical Two-Lane Collector Street

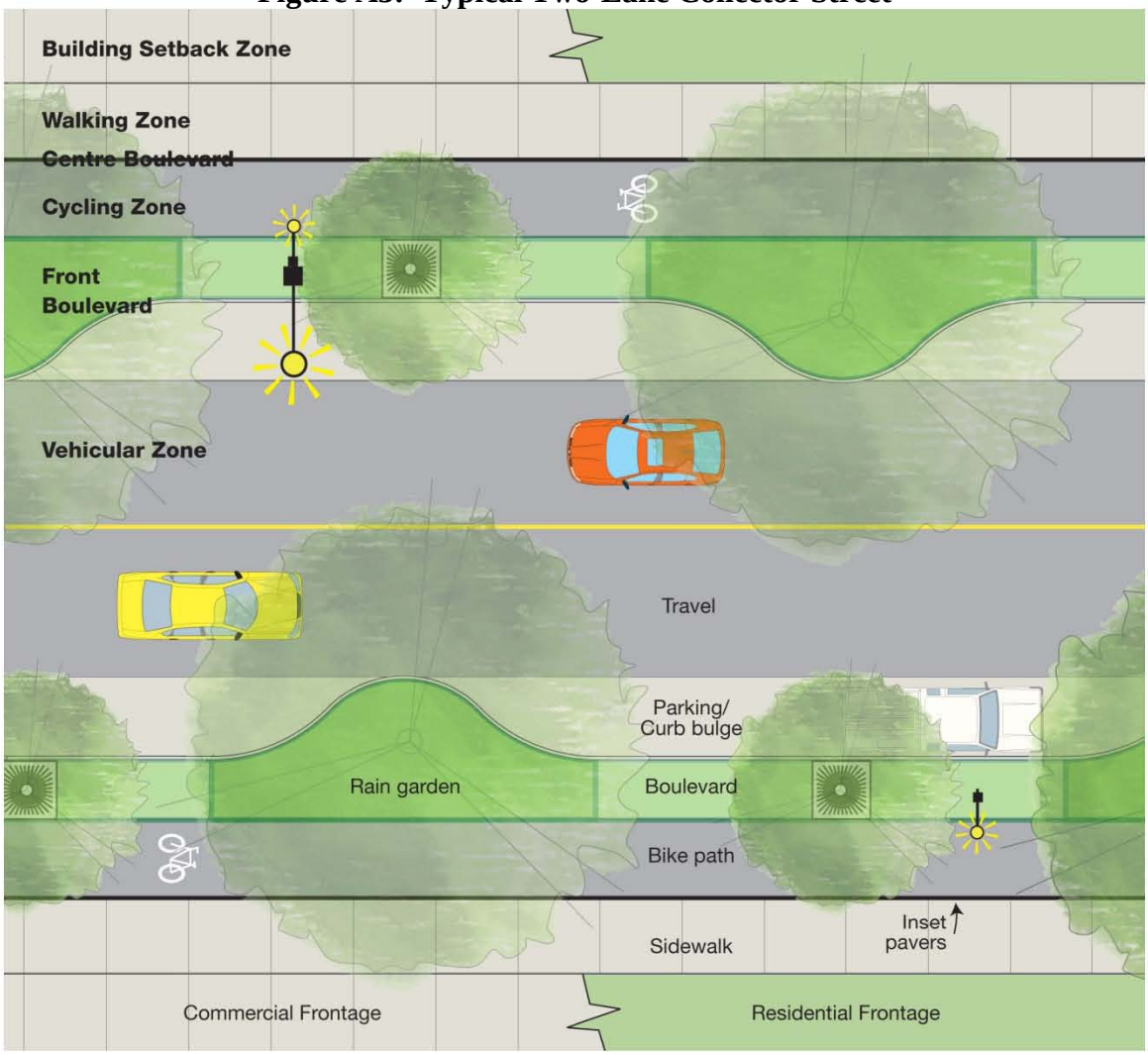
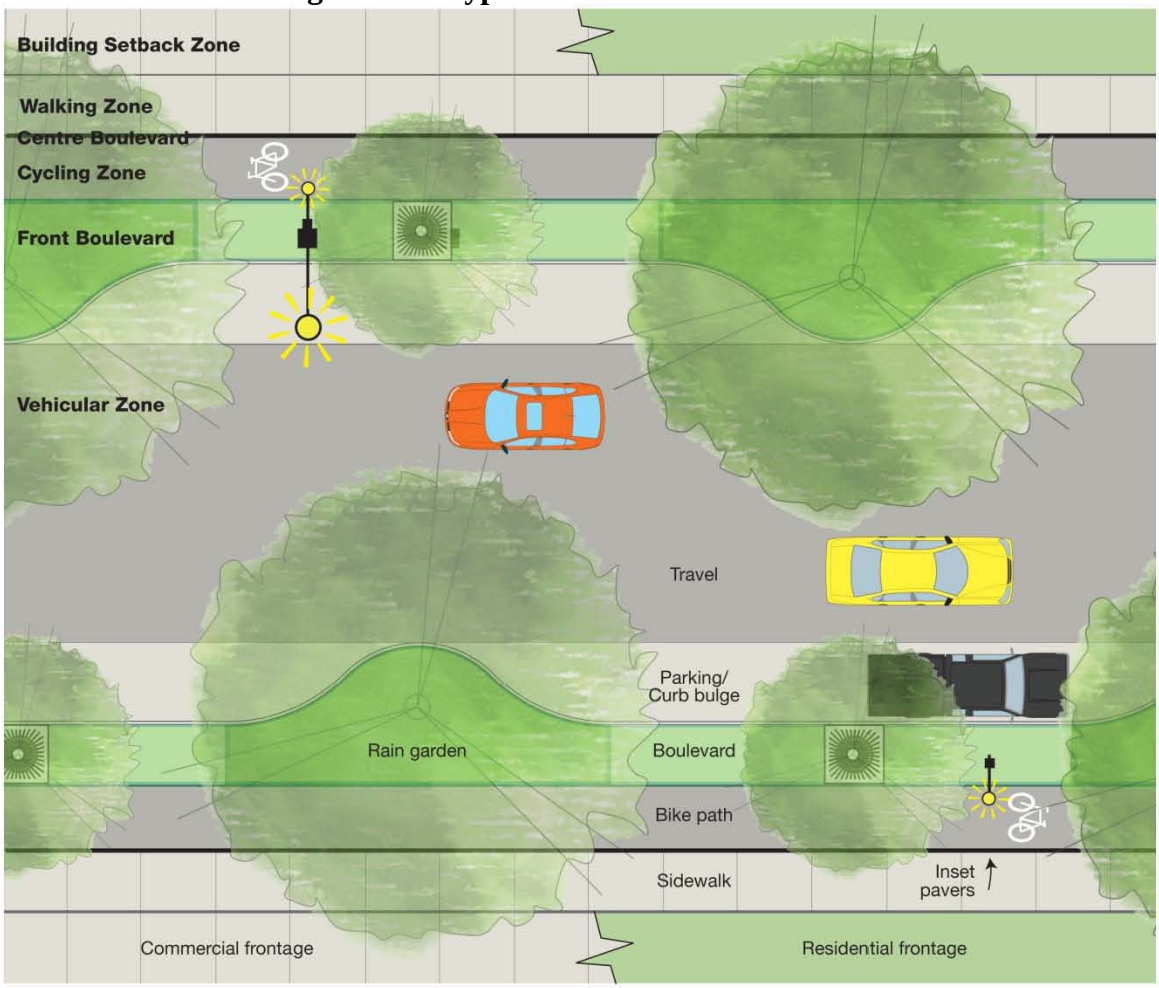
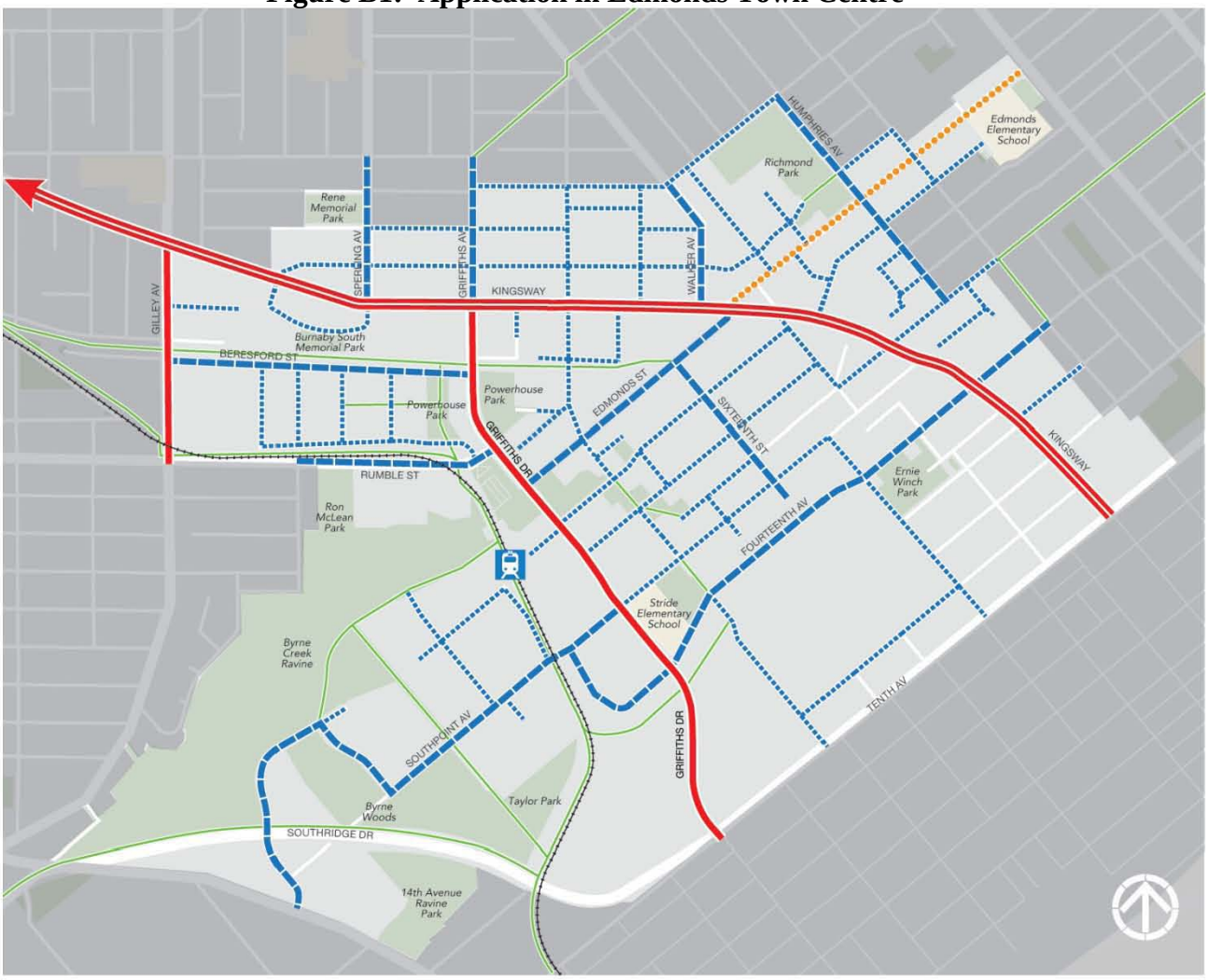


Figure A4: Typical Local Residential Street



APPENDIX B

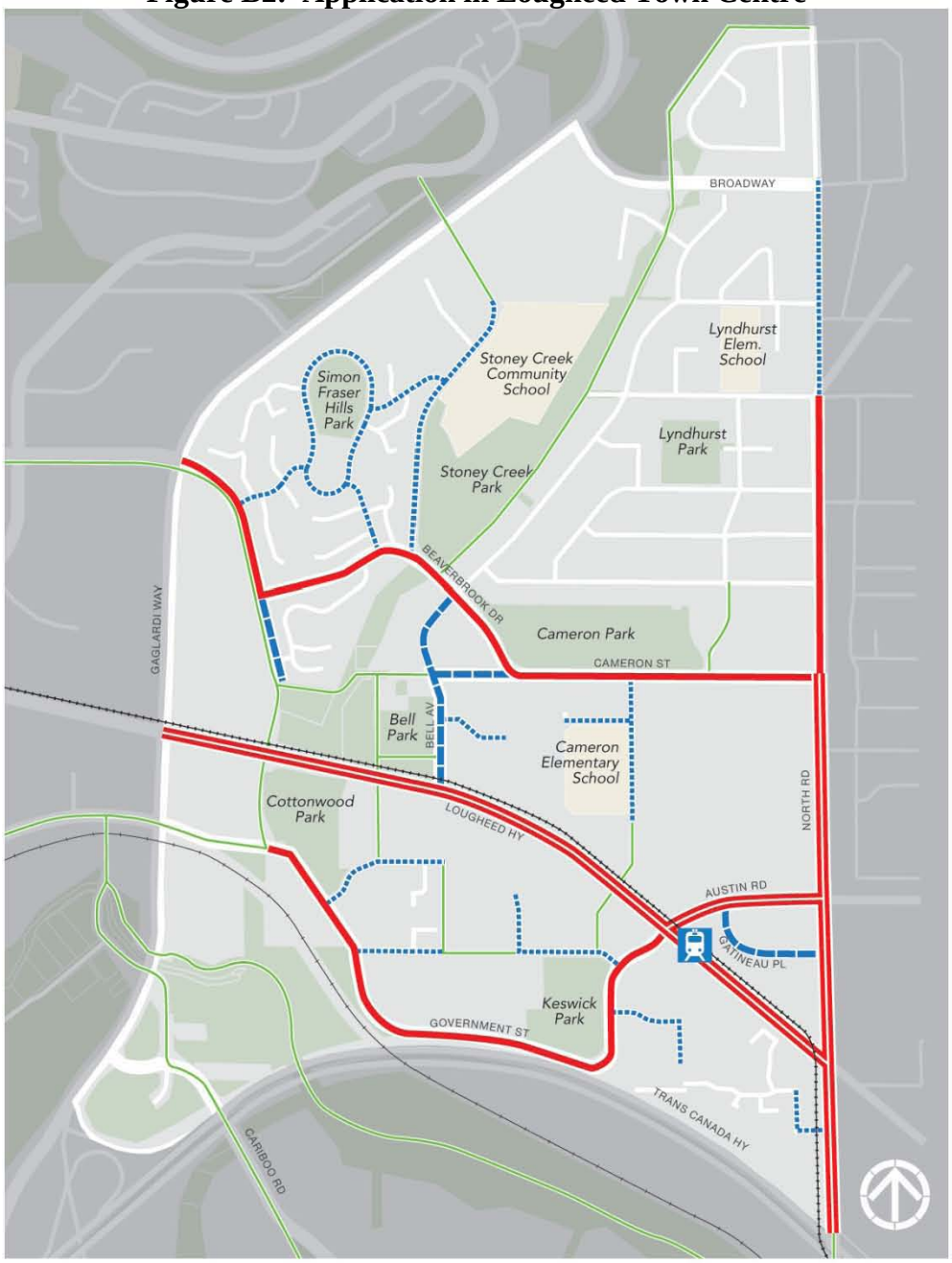
Figure B1: Application in Edmonds Town Centre



LEGEND

- Six-lane standard
- Four-lane standard
- Two-lane collector standard
- Two-lane local standard
- Custom design
- Connecting Urban Trail
- SkyTrain / Station

Figure B2: Application in Lougheed Town Centre



LEGEND

- Six-lane standard
- Four-lane standard
- Two-lane collector standard
- Two-lane local standard
- Connecting Urban Trail
- SkyTrain / Station

Figure B3: Application in Brentwood Town Centre

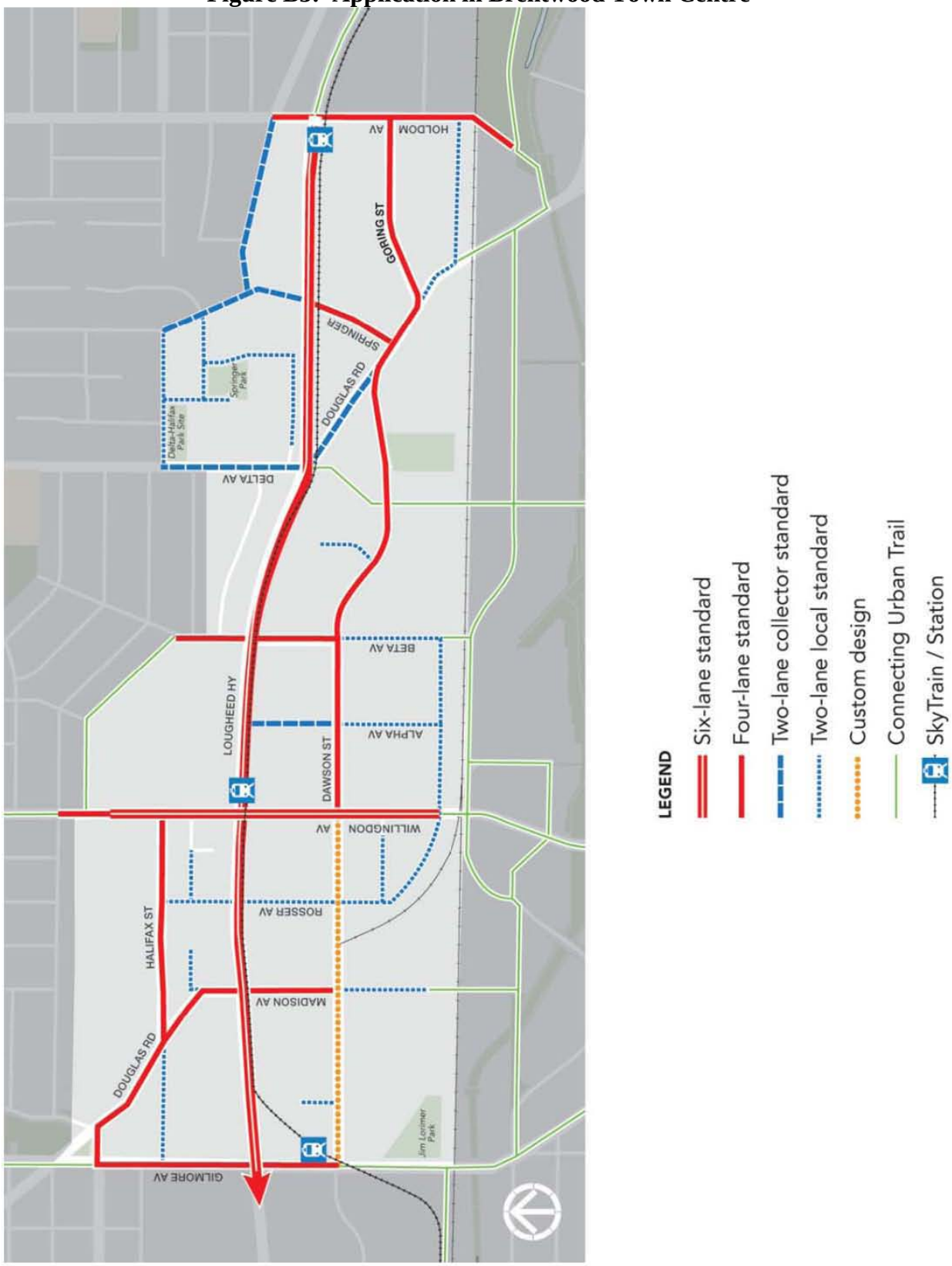


Figure B4: Application in Metrotown Town Centre