





Resiliency through integrated and collaborative land use, transportation planning and corridor design.



Overview of Project

Lessons Learned from the Dundas Connects Master Plan

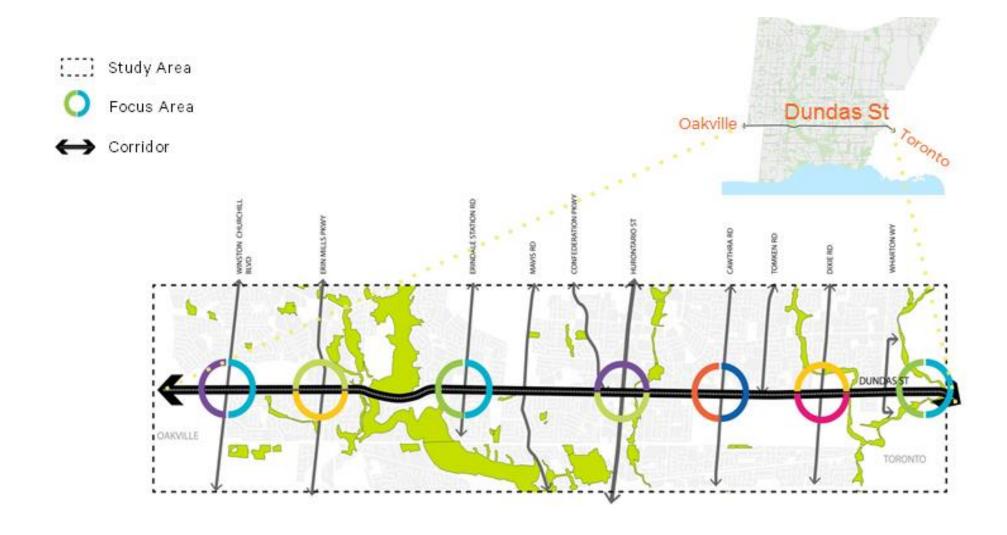
Integrating Land Use, Transportation and Corridor Design

- Growth and demand driving land use vision in the corridor;
- Land use vision informing the transit mode choice in the corridor;
- Transit mode choice influencing the corridor design;
- Corridor design feeding back to land use and development integration.





Dundas Connects Study Area



Integrating Land Use, Transportation and Corridor Design

How much intensification should come to Dundas Street?

Where should it be located?



Transportation Key Questions

What sort of transit should Dundas Street feature?

Do Nothing



Bus Rapid Transit



Light Rail Transit



SkyTrain



Subway



Corridor Design Key Questions

How can the street be transformed into a place for all users?



Providing Context

Lessons Learned from the Dundas Connects Master Plan

Drivers of Change

Growth is Happening

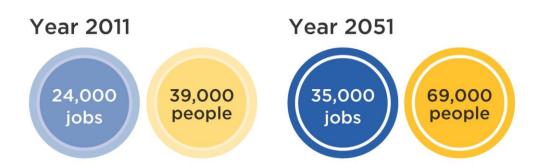
Region is growing; Mississauga is out of 'greenfield'; Dundas Street has capacity to support growth

Matching Transit with Growth

Future ridership; capacity; cost

Redesign Dundas Street

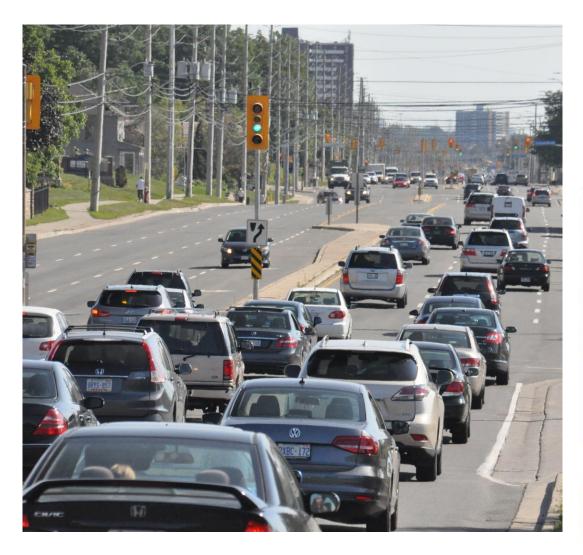
Limited right-of-way; standards for safety and accessibility



The Land Use-Transportation Relationship

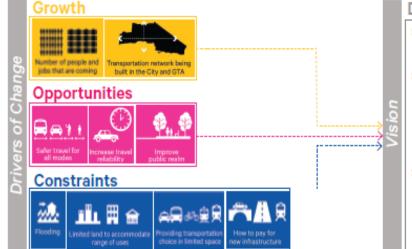
Density	Mode	Station Spacing	Ridership
Low	Surface Transit Bus	0.4-0.8 km ○——	****
MEDIUM	BRT		*****
MEDIUM-HIGH	LRT	0	***********
HIGH	SUBWAY	1.5 - 16 km	

Opportunities and Constraints





From Drivers of Change to Vision



Dundas Street will be...

- > An urban, rapid-transit-served arterial that is walkable, bikeable, accessible, and affordable
- A place that will see substantial growth in population and employment. This growth will be focused in targeted areas along the corridor, preserving and protecting today's stable residential neighbourhoods and heritage assets
- A corridor with public spaces, a public realm, community services and facilities that support a high quality of life

To achieve the vision...

- > Create opportunities for transit-supportive intensification
- > Encourage a greater mix of land uses
- > Enhance connectivity between areas
- Develop new affordable housing, parks and open spaces, and maintain diverse commercial spaces for retail, office and employment uses
- Redesign Dundas Street to include dedicated transit, bike facilities, safe sidewalks, and an enhanced public realm, while maintaining capacity for vehicles
- > Integrate flood mitigation measures into the design and development of the corridor

Impacts and Results

Lessons Learned from the Dundas Connects Master Plan

Study Recommendations

The Dundas Connects study recommends changes to land use and urban design, transportation systems, and corridor design along Dundas Street over the next 35 to 40 years.

The most significant changes recommended as a result of the study include:

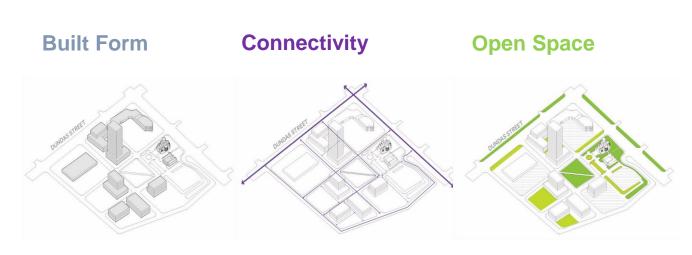
- Mixed use, transit-supportive intensification across Dundas Street and seven broader Focus Areas
- Implementing Bus Rapid Transit (BRT) along Dundas Street
- Creating a complete street for all users

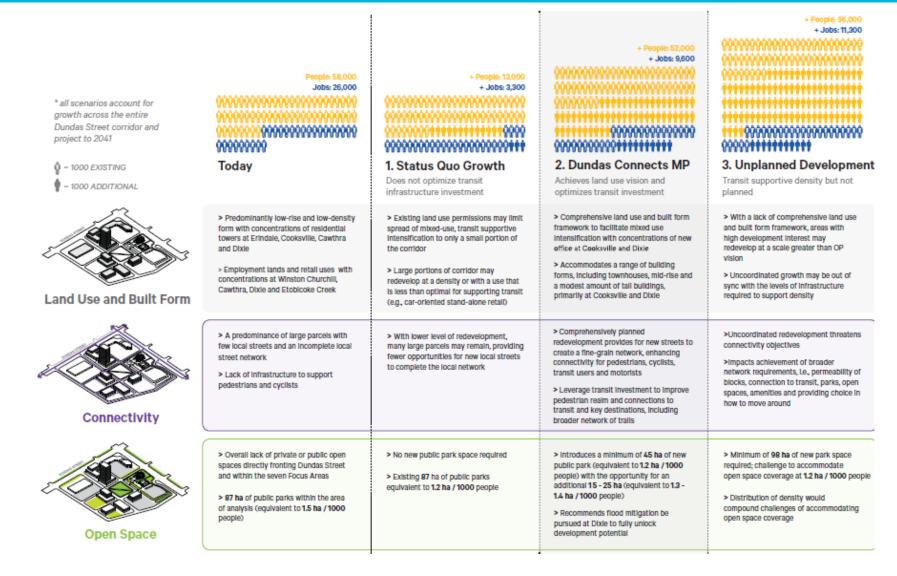
Lessons Learned from the Dundas Connects Master Plan

Feedback from Consultation

- Mixed-use with a balance of residential, office and commercial uses
- Intensification and height at major intersections
- Transition to low- and mid-rise beyond major intersections
- Maintain and support affordability and diversity, and increase green spaces



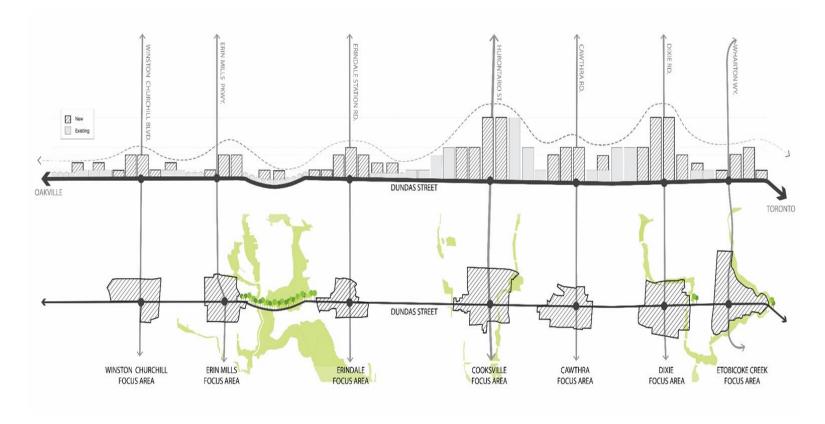






Planning for Growth and Change

Predominantly mid-rise (5-12 storeys); taller buildings (<25 storeys) in Dixie and Cooksville Focus Areas



This level of growth and development corresponds to the provision of dedicated rapid transit service along the Dundas Corridor.

LAND USE AND URBAN DESIGN RECOMMENDATIONS

Encourage Mixed-Use, Transit-Supportive Intensification across Dundas Street

- Dundas Street is part of a local and regional transportation network. This east-west spine is ideally situated to accommodate change as Mississauga continues to develop.
- To ensure that growth is transit-supportive, development will feature a mix of uses with places to live, work, and play. New development
 will be dense enough to provide ridership for the future transit line, optimizing the use of this significant public investment.



7 Plan for a Greater Level of Intensification in Focus Areas

- Focus Areas provide opportunities for introducing a mix of residential and employment uses in a range of building heights and types.
 These uses will be integrated with new public streets and private connections, community facilities, and high-quality open spaces.
- Not all Focus Areas will grow to the same extent. Some have numerous large sites or other conditions that can better enable growth, such
 as the intersection of one or more higher-order transit lines.



3 Enhance Access and Connectivity

 Secure key local public streets and additional private connections to serve development sites, provide additional frontage conditions, and improve connections to Dundas Street, transit facilities, and key destinations.



LAND USE AND URBAN DESIGN RECOMMENDATIONS

4 Create a Network of Open Spaces and Community Facilities and a Beautiful Public Realm

- A range of new open spaces including public parks, urban squares, publicly accessible privately owned open spaces, and enhanced streetscapes will be introduced in tandem with new development. New community facilities will be introduced within walking distance of transit stops and centrally located within the community.
- New public streets and private connections will provide access to new open spaces and community facilities, as well as existing open spaces.
- · An integrated, beautiful public realm that contributes to a healthy city.



- Dundas Street will retain its existing stock of affordable housing both publicly subsidized and private, market rental and support the
 creation of new affordable housing within new higher-density developments.
- . The City of Mississauga is developing its Affordable Housing Strategy. Many of the strategy's tools will be used on Dundas Street.





Encourage Street-Related Retail and Provide Supports to Maintain Existing Businesses

- Dundas Street is home to a diverse array of commercial and retail businesses, both large and small. Maintaining this fabric of stores and services as growth and change occurs over time will be critical for the continued socio-economic health of Dundas Street.
- There are also opportunities to provide spaces for new commercial and retail business as redevelopment occurs over time.



Lessons Learned from the Dundas Connects Master Plan

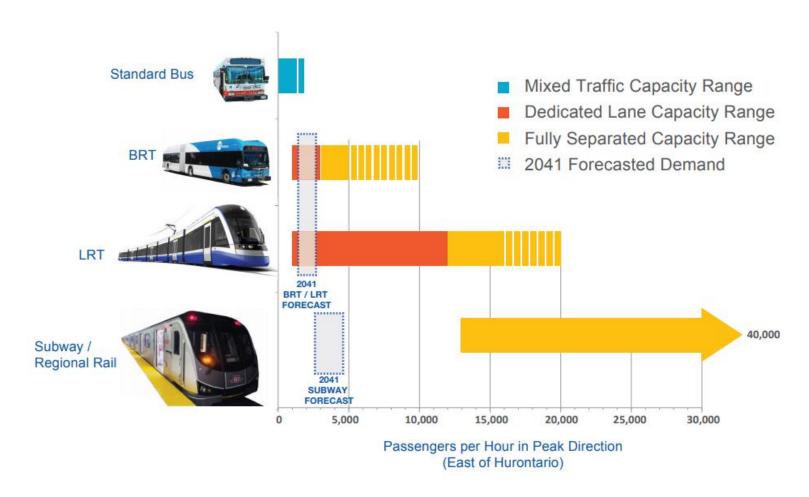
Feedback from Consultation

Support improved transit that is:

- Cost-effective
- Adaptable
- Matches ridership projections
- Compatible with cars



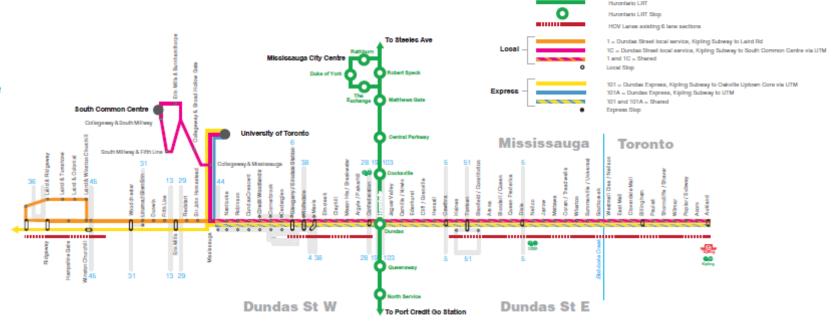
Capacity Range and 2041 Demand for Transit Mode Alternatives





Improved Conventional Bus Service

- · Current mix of express and local service
- Extended HOV Lanes or Bus Lanes Queue Jumps at busy intersections
- Transit Signal Priority
- · Passenger Information Systems
- Higher Frequency and Longer Service Hours
- · Updated low-floor vehicles
- · Improved stop amenities







Dundas BRT

Bus Rapid Transit (BRT)

- Buses, stops, guideway, and technology combine to provide a higher quality of service than standard bus routes
- Operates in dedicated bus lanes, either in the median or curbside
- · Average speeds 15 45 km/h



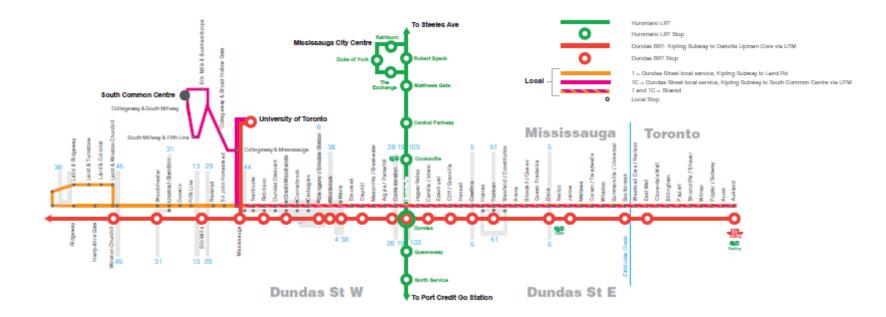




Dundas BRT

Bus Rapid Transit (BRT)

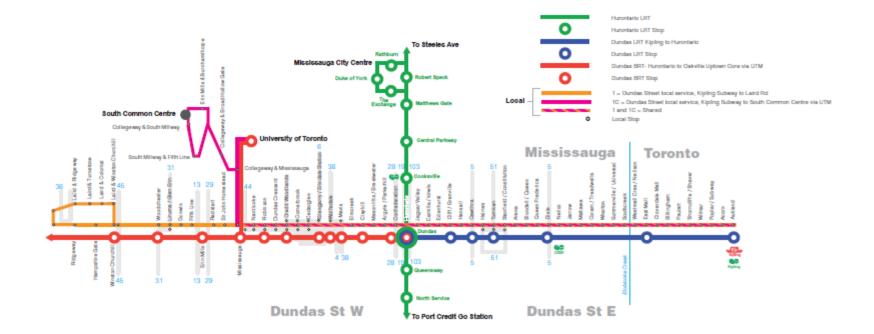
- Buses, stops, guideway, and technology combine to provide a higher quality of service than standard bus routes
- Operates in dedicated bus lanes, either in the median or curbside
- · Average speeds 15 45 km/h





Light Rail Transit (LRT)

- Moderate size, medium speed trains (one, two, or three cars)
- · Operates in dedicated median lanes
- · Average speeds 15 35 km/h



Transportation Recommendations

Implement Bus Rapid Transit (BRT) Along the Dundas Street Corridor

- BRT service will use dedicated transit lanes on Dundas Street across Mississauga. There will be 20 stops, including three terminals (Kipling Mobility Hub, University of Toronto Mississauga, and Ridgeway Drive)
- The portion of the guideway within the City of Toronto could be available to both MiWay and other transit providers, subject to further study
- BRT could operate up to every three minutes during peak periods in both directions, and every 10 minutes in both directions during nonpeak periods and on weekends
- . A frequent all-stops BRT route will form the trunk service in the corridor
- · Consideration will be given to skip-stop or express bus operation in the BRT guideway according to demand
- MiWay and TTC buses may use the Toronto segment of the guideway between Highway 427 and Kipling Mobility Hub

Accommodate BRT on Dundas Street by Respecting Corridor Characteristics

- BRT will run in a dedicated median guideway from The Credit Woodlands in the City of Mississauga through to the City of Mississauga / City of Toronto municipal boundary, and on to Kipling Mobility Hub in the City of Toronto
- Between The Credit Woodlands and Mississauga Road, BRT will run in a dedicated reversible median lane during peak periods, i.e.,
 eastbound in the reversible lane during the AM peak period, westbound during the PM peak period
- . Between Mississauga Road and Ridgeway Drive, BRT will run as a curbside operation in dedicated transit lanes
- For the portion of the guideway from Kipling Mobility Hub in the City of Toronto westerly to the City of Mississauga municipal boundary, the proposed alignment of the guideway within either the median or as part of the existing curbside HOV lanes will need to be confirmed in conjunction with the City of Toronto

3 Retain Local Bus Service

 A lower-frequency curbside local bus service will continue to run throughout Dundas Street to complement the BRT service. Stops are typically spaced 250 m to 400 m apart to reduce walking distance to transit for mid-block users







Transportation Recommendations

4 Maintain Four General Traffic Lanes Along Dundas Street

· Dundas Street will have four general purpose through-traffic lanes (two eastbound, two westbound) throughout Mississauga



Introduce Branded Stops and Stations

- . The BRT stops and stations will be clearly branded as express service to differentiate it from local bus services
- . The University of Toronto Mississauga campus will be served by a mix of BRT and local bus routes
- . A Park & Ride facility will form the western terminus of the BRT trunk service, in the vicinity of Ridgeway Drive and Dundas Street



6 Allow for Potential Direct Connections to GO

 BRT connections between Dundas Street and the Cooksville GO Station will be incorporated in a potential Cook Street extension to Cooksville GO Station, and BRT access to the Dixie GO Station will be via a new north-south road connecting to Dixie GO Station. Dundas Street BRT services will terminate at the new Kipling Mobility Hub



Transportation Recommendations

7 Ensure BRT is Scalable for Future Transit Solutions

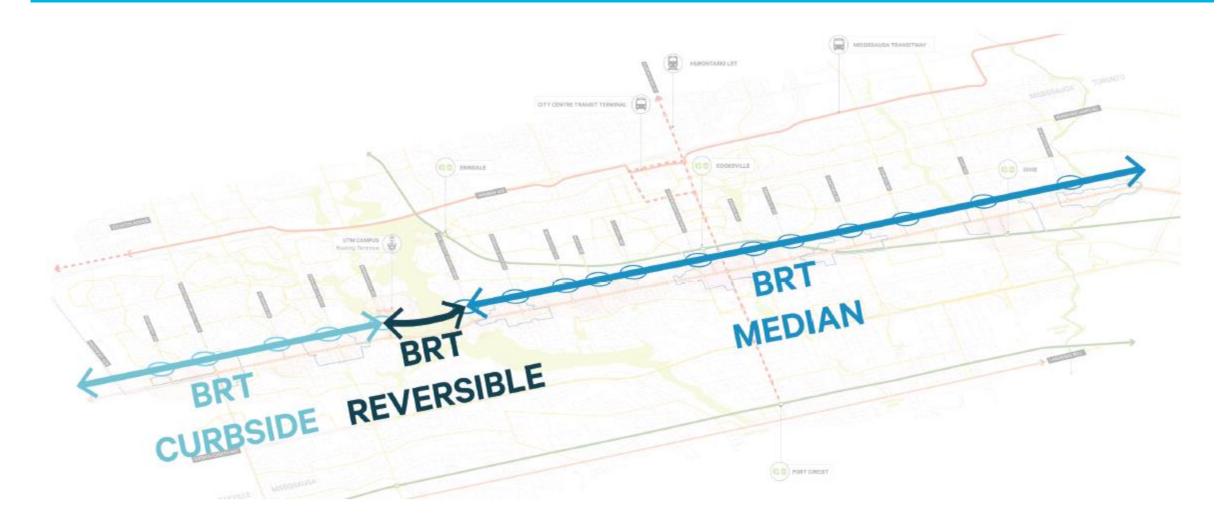
- . Design median BRT to allow for possible Light Rail Transit (LRT) in the future
- For curbside BRT, purchase (or protect through the development application process) sufficient property to allow transition to median BRT or LRT, if and when future demand warrants

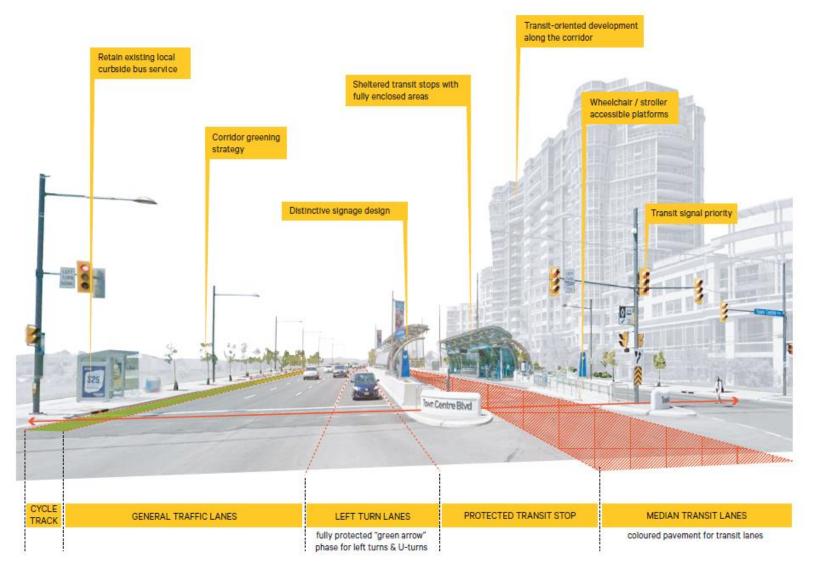


8 Create a Street for All Users that Connects to the Broader Transportation Network

. Build new rapid transit, local streets, cycle tracks, multi-use trails, and sidewalks to enhance the overall transportation network







Corridor Design

Lessons Learned from the Dundas Connects Master Plan

Corridor Design

Feedback from Consultation

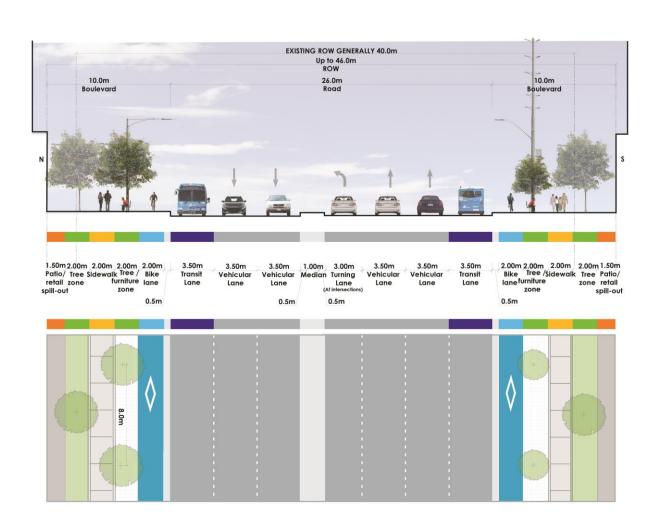
- Be flexible and creative
- Prioritize pedestrian and cyclist safety
- Keep vehicular traffic flowing
- Maximize public realm features wherever possible using wide sidewalks, trees, and street furniture



Corridor Design

Guiding Principles

- Achieve a mobility mix in a constrained environment that balances the needs of all users
- Provide vibrant, safe, and accessible pedestrian space
- Provide a cycling facility that is safe, clearly marked, and intuitive to use
- Provide sufficient access to properties
- Support social and economic vitality along the street
- Provide a continuous, green street



Corridor Design Recommendations

Create a Complete Street for All Users

- Design Dundas Street to facilitate active transportation
- Redesign and rebalance the street to accommodate pedestrians, cyclists, transit users, and motorists



2 Reallocate Road Space to Meet Projected Needs

- · Introduce into Focus Areas a mix of residential and employment uses in a range of building heights and types
- Integrate new uses with new public streets and private connections, community services and facilities, and high-quality open spaces.
- Recognize that not all Focus Areas will grow to the same extent some have numerous large sites or other conditions that can better
 enable growth



3 Enhance Pedestrian Space

- Design Dundas Street to be safe and accessible
- Provide pedestrian space that includes wider sidewalks, healthy trees, and amenities including furniture, lighting and wayfinding infrastructure
- · Provide more frequent, safe crossing points across the corridor



Corridor Design Recommendations

Provide Safe Cycling Infrastructure

- Introduce continuous, protected cycle lanes for the majority of the corridor, so as to reduce conflicts with vehicles and pedestrians, and connect to transit facilities and the broader cycling network
- Where there are space constraints such as the Highway 403 interchange or the Credit River bridge crossing, provide alternative cycling infrastructure such as a multi-use trail



5 Enhance Access

- · Provide intersections for left turns and U-turns so as to maintain access to properties along Dundas Street
- Secure key local street connections to serve development sites, provide additional frontage conditions, and improve connections to Dundas Street, transit facilities, and key destinations

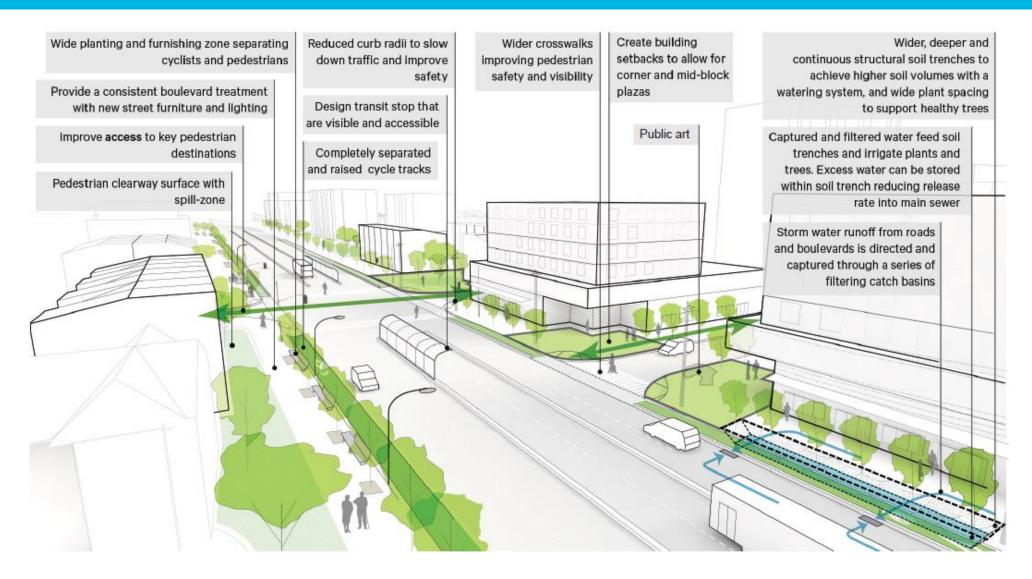


Coordinate with Utilities to Realize Streetscape Plan

 Work with public and private utilities to coordinate the timing of capital improvements in the street to ensure that any relocations or new infrastructure is located outside of both the proposed soil trenches for trees and the primary paths of travel



Corridor Design – Streetscape Guidelines



Corridor Design – Complete Street



Corridor Design – Enhanced Public Realm



Questions and Discussion

Lessons Learned from the Dundas Connects

Master Plan