meetmidtown

Midtown Implementation Program Public Information Centre

Preferred solutions and policies for transportation, stormwater, and urban design

To share information regarding preferred solutions for Stormwater and Transportation Plans, and progress on the Midtown urban design guidelines.

For an overview of the Midtown Implementation Program, visit Booth 1

Transportation Plan

The Midtown Transportation Plan will strive to create an equitable, accessible, and connected transportation system that supports a vibrant, people-oriented, and transit-supportive complete community in all seasons.

A long-term transportation plan for Midtown will look to develop a pedestrian-oriented network, improve road circulation and connections, support transit connections, support sustainable modes of travel, and accommodate density and growth.

***See Booth 2 for more information**

Stormwater Plan

The Midtown Stormwater Management Master Plan objective is to manage rain and runoff to support growth and development based on the updated OPA and road network.

As a single element can rarely perform all the necessary functions of a stormwater management system, a combination of lot-level (source), conveyance and end-of-pipe practices may be needed to meet water quantity, water quality, water balance, and erosion targets.

***See Booth 3 for more information**

Design Midtown

The Updated Designing Midtown document will follow on the objectives in the Midtown OPA and set expectations for land-owners and developers to achieve high quality urban design and architecture.

The Public Realm and Parks Plan will provide a vision for high-quality public realm including parks, privately-owned publicly accessible open spaces, streets, trails and mid-block connections.

***See Booth 4 for more information**

To stay up to date on Midtown, visit Oakville.ca/Midtown. If you have further questions or comments, contact us at Midtown@Oakville.ca"

Midtown Oakville

Why

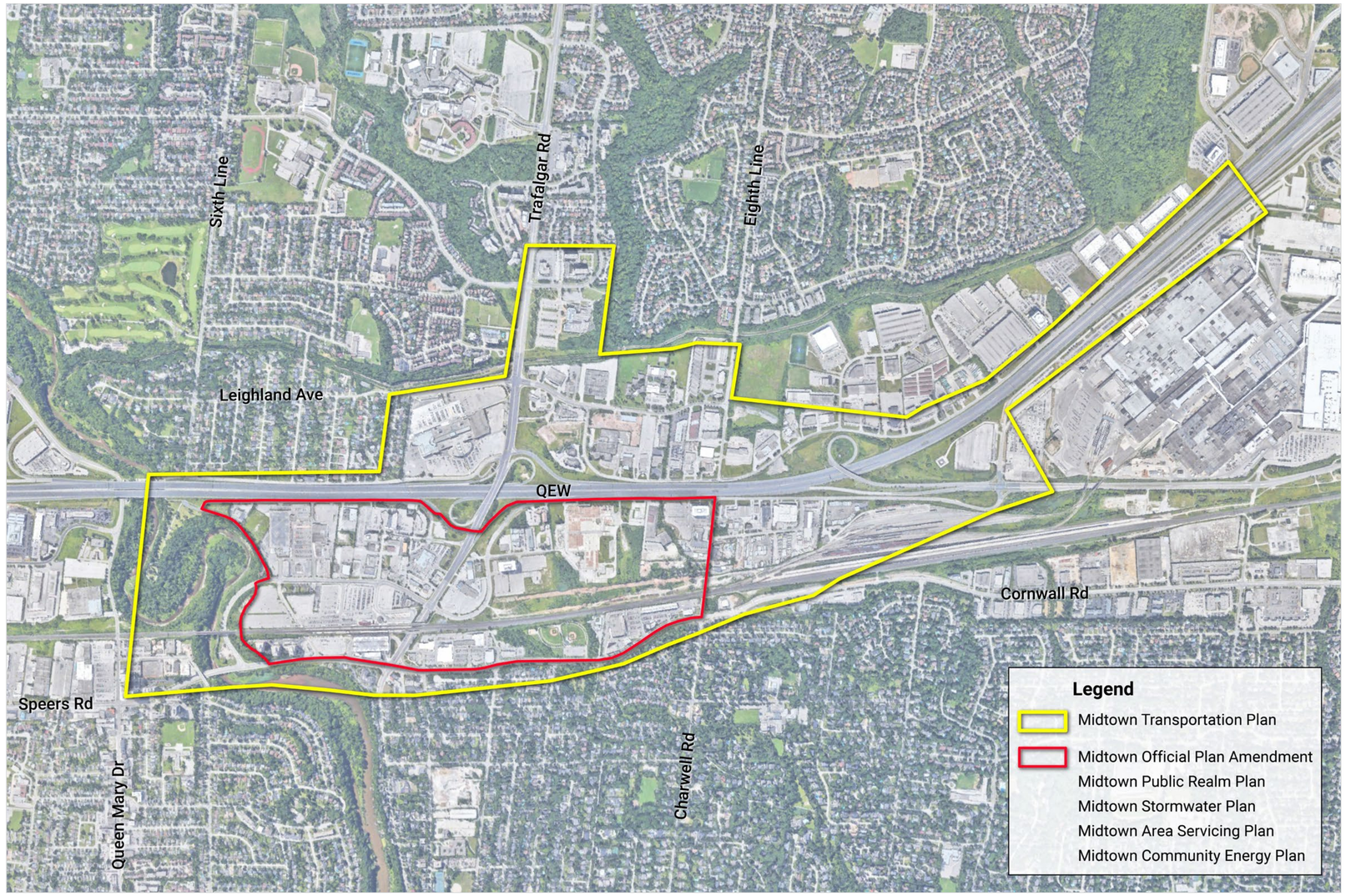
Midtown is an underdeveloped area in Oakville that is centrally located around the Oakville GO Station. With Oakville's population expected increase significantly, there is a need for the town to create more livable spaces for people of all ages and income levels.

Implementation Program

The Midtown Implementation Program will help the Town advance objectives of the Midtown Official Plan Amendment (OPA), support infrastructure delivery, and aid in review and management of development.

A range of topics will be covered by the Midtown Implementation Program, in an area generally bounded by the QEW highway to the north, Chartwell Road to the east, Sixteen Mile Creek to the west, and Cornwall Road to the south. The Midtown Transportation Plan will cover a slightly broader area to capture connections to and from major arterials and highways.

These boundaries are shown in the study area map to the right.



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Booth 1: Program Overview

Midtown Oakville Timeline & Process

Midtown Implementation Program

01 Official Plan Amendment
- Council Adopted February 18, 2025

02 Functional Planning
- Transportation Plan
- Stormwater Plan
- Area Servicing Plan
- Designing Midtown

03 Functional Design
- Functional Servicing Report
- School Strategy
- Economic Development Strategy
- Municipal Land Acquisition and Disposal Strategy
- Roadway Functional Design
- Utilities Plan
- Capital Cost Estimates

04 Phasing and Implementation
- Phasing and Implementation Strategy

05 Funding and Financing
- Capital Plan
- Cash Flow Analysis
- Funding and Financing Options

06 Development, Design and Construction
- Environmental Assessments
- Review of development applications
- Detail Design Drawings and Contract Specifications
- Construction

Midtown and Community Planning Permit System OPA

Inclusion Zoning OPA and Midtown CPP By-law with IZ

Community Improvement Plan

Midtown Implementation Program PIC#1 - October 25, 2023, Commencement of Midtown Transportation and Stormwater Plans

Council Adopted February 18, 2025

PIC #2 Alternative solutions, March 27, 2025

PIC #3 Proposed solutions, June, 2025

Midtown Transportation and Stormwater Plan - Council

Fall 2025

Late 2025

End 2025

Transportation Plan
- Develop an equitable, accessible and connected transportation system.

Stormwater Plan
- Sustainably manage rain and runoff to Lower Morrison East, Lower Morrison West, and 16 Mile Creek

Area Servicing Plan
- Water and waste water servicing capacity in alignment with Regional plans

Designing Midtown
- Guidelines for built form to achieve high-quality urban design and architecture.
- Plan for high-quality public realm including parks, streets, trails and mid-block connections.

Functional Servicing Report
- Water and waste water servicing plans within the Midtown Area for all development blocks.

School Strategy
- Options for implementing schools within mixed-use urban environments.

Economic Development Strategy
- Attracting retail and employment opportunities for Midtown.

Municipal Land Acquisition and Disposal Strategy
- Strategy for the acquisition and disposal of land to support infrastructure needs.

Roadway Functional Design
- High level road design of the Midtown transportation network.

Utilities Plan
- Review of existing and proposed utilities and alignment with functional design.

Capital Cost Estimates
- Cost estimate of public infrastructure

Phasing and Implementation Strategy
- Framework for implementation and alignment timelines for Town-led infrastructure with development and other partners.

Funding and Financing
- Funding source, impact on development charges, and timelines.

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Booth 1: Program Overview

What have we heard?

Several Public Information Centres have been held for the Midtown Implementation Program. An in-person engagement to discuss alternative solutions was held on March 27th, 2025.

54

People attended the public event

Transportation Plan

What evaluation criteria are most important?

21 Participants votes

Cost	Growth & Economic Development	Climate Change Mitigation & Natural Heritage	Livability & Cultural Heritage	Transportation Equity	Transportation Service
4	10	10	12	12	16

What type of transportation solution does Oakville need in Midtown?

Road Priority		Balanced Priority		Transit & Active Transportation Priority
1	2	5	7	5

Urban Design

What did you like or dislike in the draft guiding principles for Urban Design?

Safety for Pedestrians	*Multi-modal Priority*	*Human-scaled development*
Green Roofs	*Environmental Opportunities*	*Seperated Bikeways*
Accessible Pedestrian Infrastructure	*Recreational Potential*	*Multi-modal transport priority*
Covered Walkable Connections	*Good Water Management*	*Diverse Indigenous Plants*

Public Transport Reliance	
Traffic from Go Station	
Inadequate Sewage Treatment & Disposal	
Lack of Pedestrian Zones	

Stormwater Plan

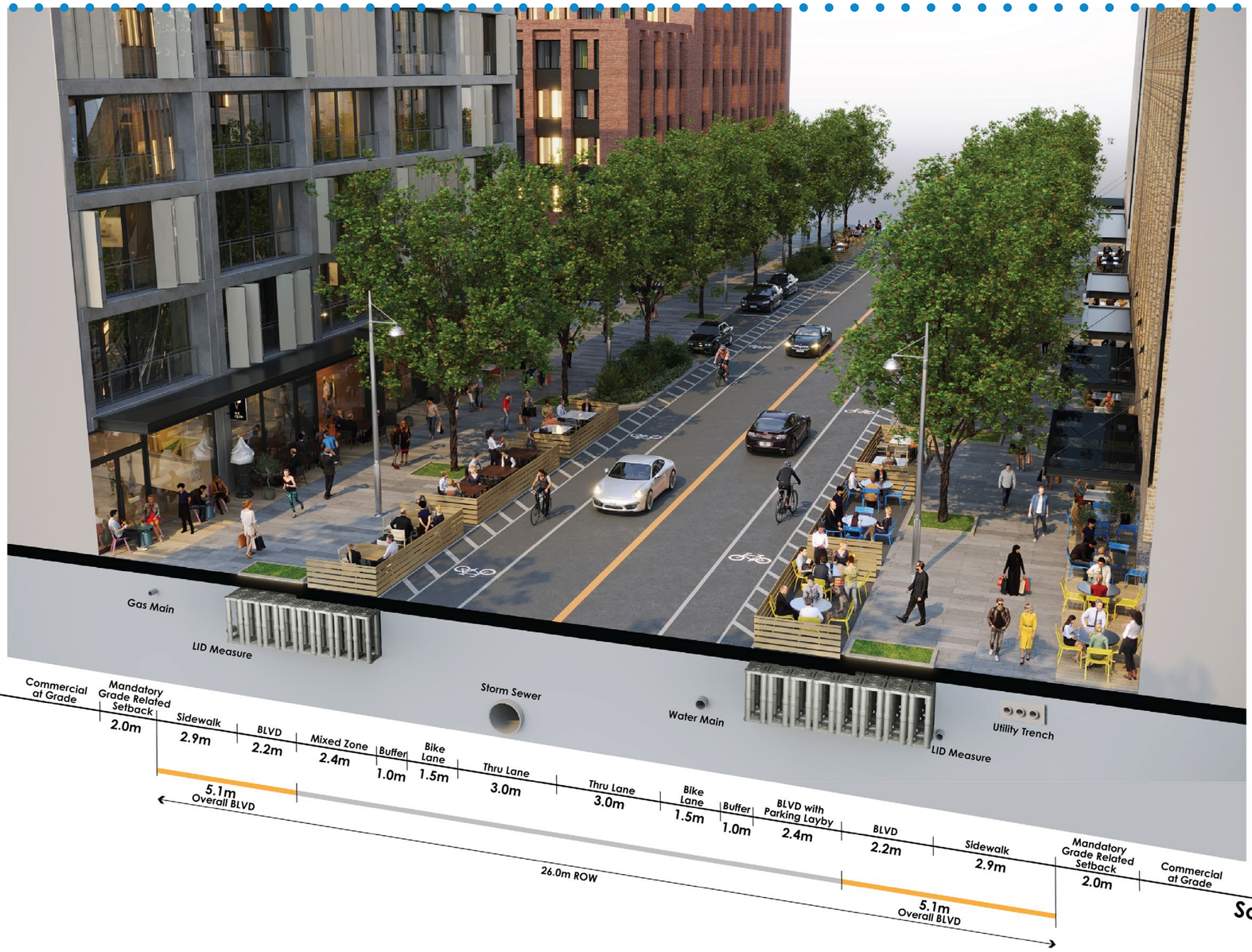
What evaluation criteria are most important?

Cost	Natural Environment	Social & Cultural	Engineering
0	6	7	11

Desired approaches

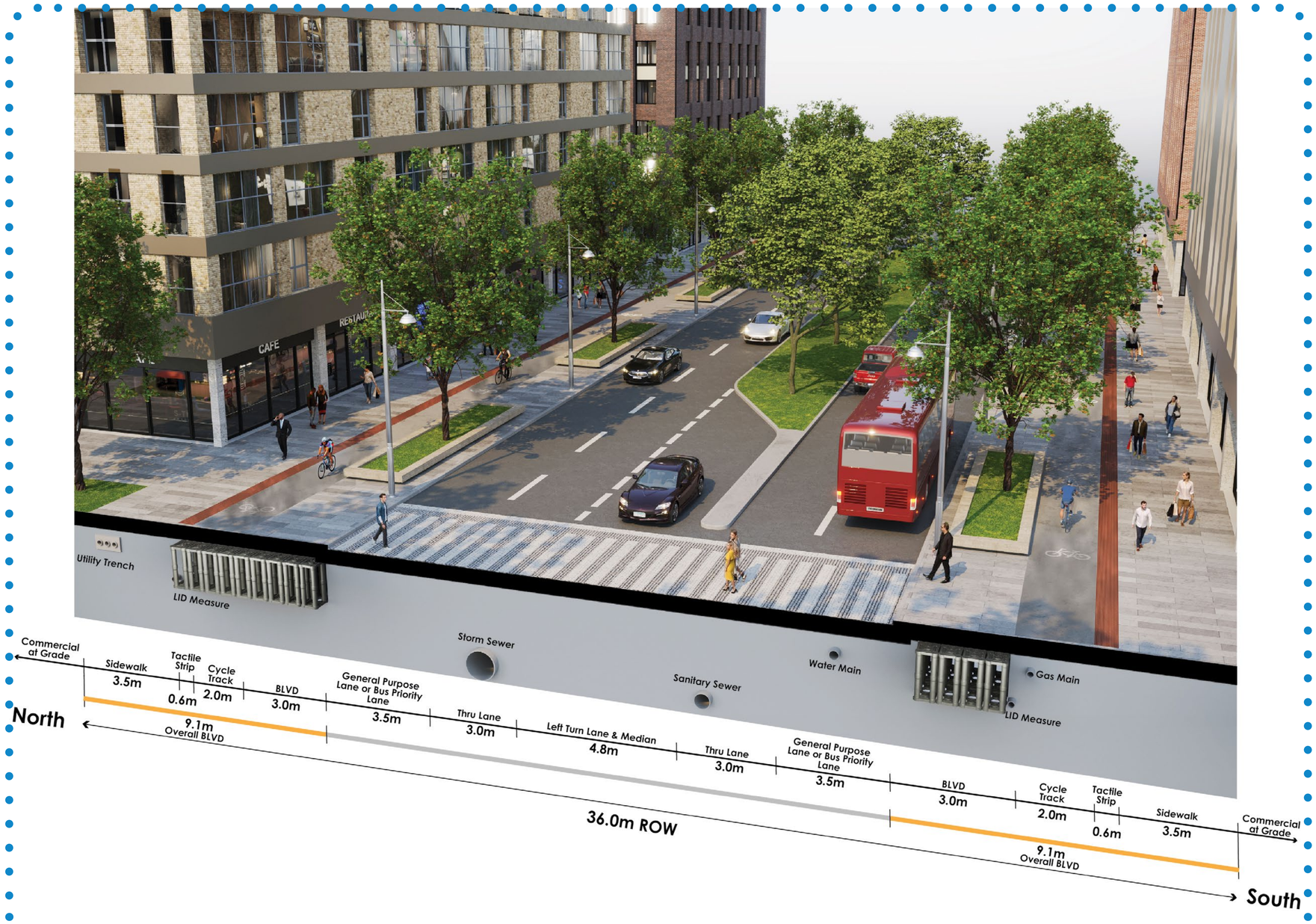
- **Rain gardens and bio-retention curb extensions**
- **Permeable pavement**
- **Tree trenches with soil cells**
- **Dry pond (above ground temporary water storage)**

ARGUS DAVIS PERSPECTIVE CROSS-SECTION



For visualization purposes only, infrastructure sizing and design to be further refined in future work.

CROSS AVENUE PERSPECTIVE CROSS-SECTION

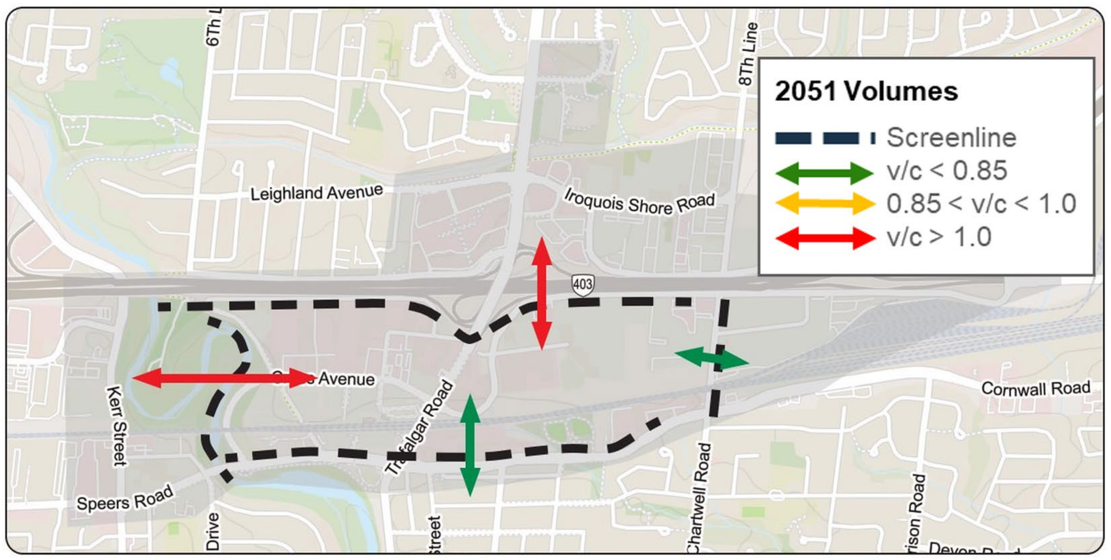


For visualization purposes only, infrastructure sizing and design to be further refined in future work.

Transportation Challenges and Opportunities

Challenges

- Projected traffic volumes exceed current capacity across physical barriers that access Midtown
- There is limited priority and access to the GO Station for pedestrians, cyclists, and buses
- High existing parking supply currently promotes auto dependency



V/C : Volume to capacity ratio

Opportunities

- Local grid network of roads
- Safe Complete Street designs for all travel modes
- New crossings of physical barriers
- Transit priority measures for efficient transit service
- Parking supply and regulation plans
- Connections to Town- and Region-wide transit and cycling initiatives
- Town travel demand management strategies

To support ongoing development in Midtown, there is a need to identify and implement year-round, accessible solutions through a phased approach aligned with the pace of growth.

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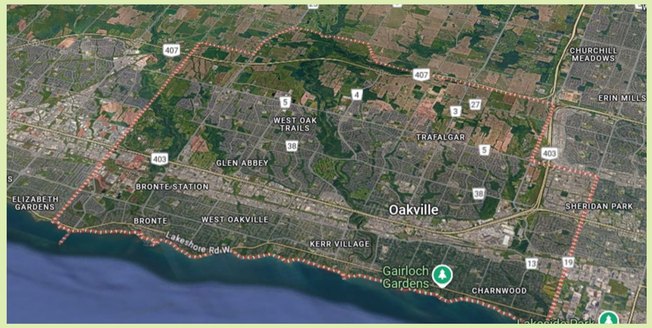
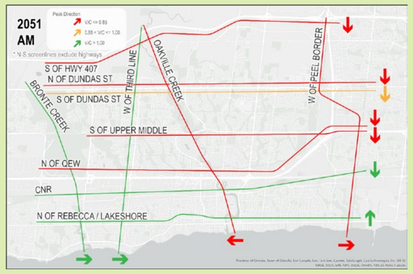
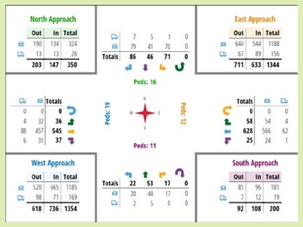
Booth 2: Transportation

Transportation Master Plan vs. Midtown Study vs. Traffic Studies

	Oakville Transportation Master Plan	Midtown Transportation Plan	Development Applications and Town-Led Studies
Scope	**Town-wide transportation analysis and capacity improvements** 	**Midtown area specific transportation analysis and capacity improvements** 	**Specific design considerations along each road and intersection** 
Analysis Outputs /	Demand and capacity crossing major transportation corridors or barriers from a Town-wide travel demand model	Travel link demand and capacity from a Midtown area travel demand model	Intersection capacity analysis for relevant intersections
Example Outcome / Decisions	Example: Determining the east-west travel demand crossing Sixteen Mile Creek and identifying capacity improvements required 	Example: Determining if Cross Avenue provides sufficient capacity to move people east and west across the Midtown area and if additional lanes are required 	Example: Determining detailed design requirements of a corridor and its intersections, including lane requirements and cycling/walking/transit facilities 

OAKVILLE

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Booth 2: Transportation

Alternative Solutions Explored

Alternative #1

- **Road priority:** increasing roadway capacity
  - Rail corridor crossing: Chartwell Road and new North-South Road extension grade separation
  - 16 Mile Creek crossing: Cross Avenue or South Service Road extension and Speers Road widening

Alternative #2

- **Transit and active transportation priority:** reducing roadway users
  - Enhanced active transportation policies/strategies
  - Transit supportive policies
  - Micro-transit and micro-mobility solution

Alternative #3

- **Balanced priority**
  - Official Plan Amendment (OPA) active transportation improvements
  - Key transit supportive policies
  - Preferred rail corridor and 16 Mile Creek crossing

Evaluation Criteria

Transportation Service
- Improves capacity
- Reduces delay
- Supports connectivity
- Improves safety

Livability and Cultural Heritage
- Supports placemaking
- Protects cultural heritage features
- Offers diverse and viable mobility choices

Growth and Economic Development
- Aligned with Midtown OPA
- Supports development consistent with OPA
- Supports the transit hub

Climate Change Mitigation and Natural Heritage
- Resilient to climate change effects
- Reduces impact to the environment
- Supports “Clean Energy” initiatives

Transportation Equity
- Benefits equity-seeking groups
- Improves transit accessibility
- Accommodates active transportation
- Protects vulnerable road users

Transportation Costs
- Minimizes Town capital expenditures
- Minimizes Town operating and maintenance costs

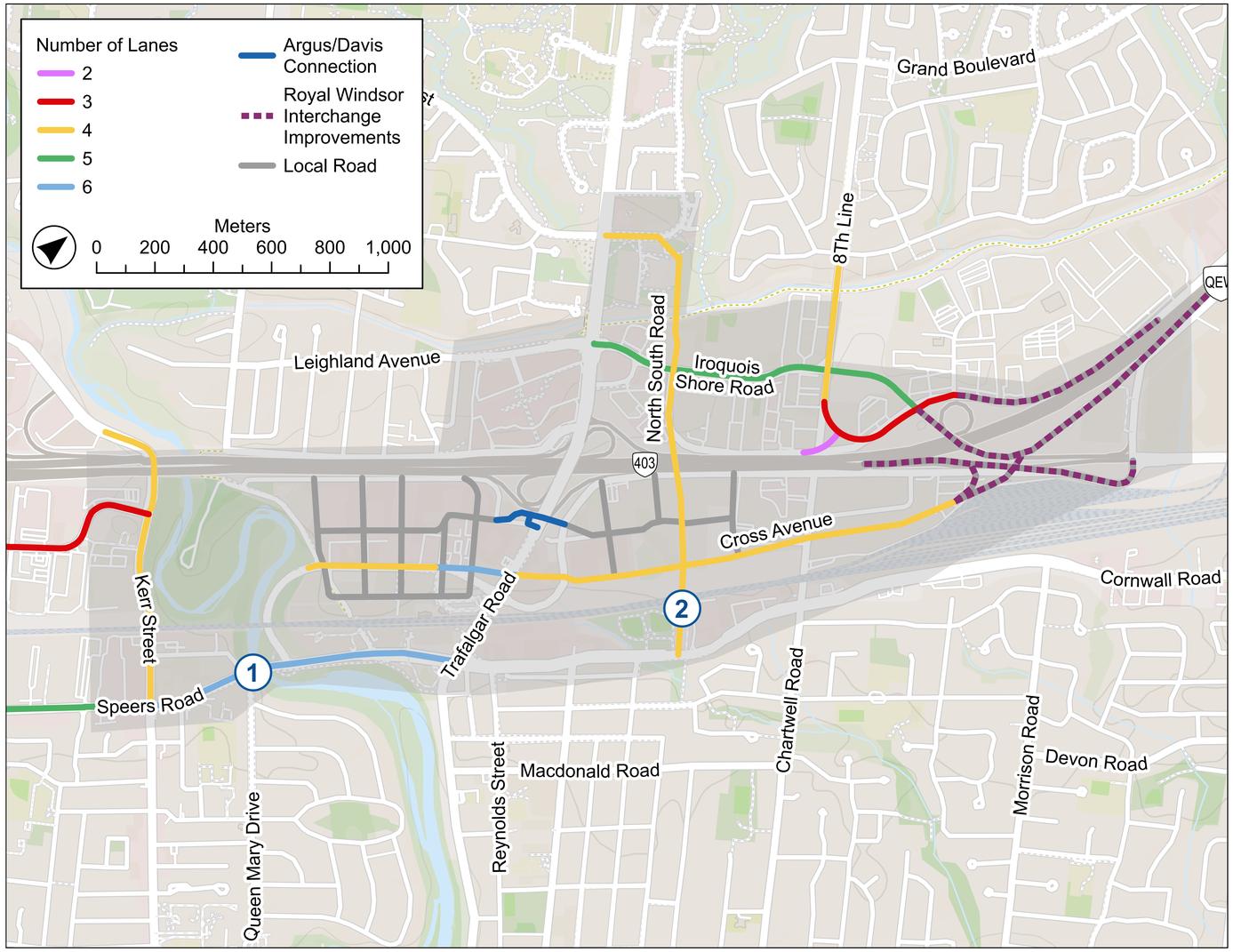
Evaluation Summary

○ Least Preferred
◑
▼
● Most Preferred

	Description	Transportation Service	Transportation Equity	Climate Change / Natural Heritage (NH)	Growth / Economic Development	Livability and Cultural Heritage	Transportation Costs
Business as Usual "Base" Scenario	**Business as Usual Improvements** • Committed and planned projects • Serves as a "base" for all alternatives	○	○	○	○	○	○
Alternative #1 - Road Priority	**Road Priority: Increasing Roadway Capacity** • Rail corridor crossing: Chartwell and new North-South Road extension • 16 Mile Creek crossing: New crossing and Speers Road widening	◑ Improves capacity but may create induced demand	◔ Limited accomodation of equity-seeking groups and AT / vulnerable users	○ Limited initiatives for clean energy, resilience or reduced greenhouse gas (GHG) emissions Potential new NH impact	◑ New roads serve vehicular demand from development	◔ Road improvements offer limited third place, healthy living or mobility choice opportunities	◔ High capital and operating costs for new road extensions and grade separations
Alternative #2 - Transit and Active Transportation Priority	**Transit and Active Transportation (AT) Priority: Reducing Vehicle Users** Enhanced active transporation policies Enhanced transit policies	◔ Some added capacity and reduced delay through AT connections and transit improvements	◑ Better accommodates AT / vulnerable users and equity-seeking groups	◕ New AT initiatives contribute to reduced GHG emissions Limited new NH impact	◑ AT and transit improvements support retail/ commercial areas	◕ AT improvements can support placemaking, sustainable transportation and mobility choices	◕ Moderate new capital and operating costs for new protected AT and transit infrastructure
Alternative #3 - Balanced Priority	**Balanced Priority** • Moderate transit and active transportation policies/strategies • Preferred rail corridor and 16 Mile Creek crossings	◕ Some added capacity and reduced delay through balanced investments in road, active transportation and transit investments	◕ Balances the needs of all users	◑ Improvements for AT and transit reduce GHG emissions Limited new NH impact	◕ New roads, AT and transit improvements serve vehicular demand and support retail/ commercial areas	◕ Balanced support for placemaking, sustainable transportation, access to third places and mobility choices	◑ Moderate to high capital and operating costs for a balanced transportation approach

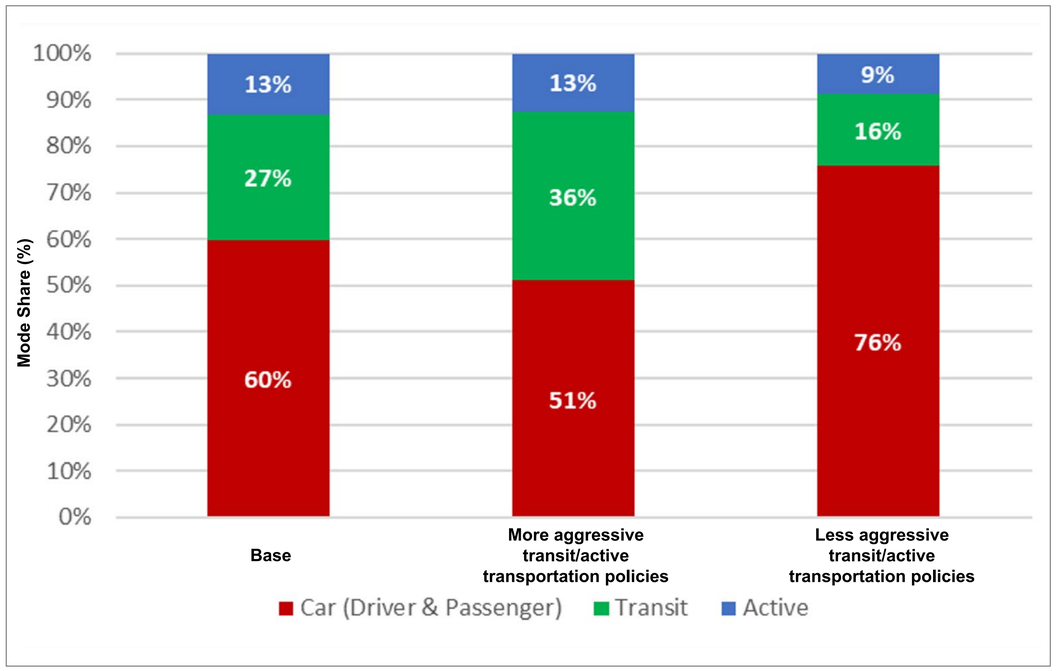
Road Improvements

- **Planned Business-as-Usual (BAU) Improvements:**
  - Cross Avenue extension and realignment to the Royal Windsor interchange
  - Royal Windsor interchange Improvements
  - New North-South Road and QEW crossing between White Oaks Boulevard and Cornwall Road
  - Eighth Line widening to 4 lanes between North Service Road and Falgarwood Drive
  - Iroquois Shore Road widening to 5 lanes between Trafalgar Road and Eighth Line
  - Iroquois Road extension between Eighth Line and North Service Road
  - Argus-Davis Connection and Trafalgar Road underpass
  - Kerr Street widening to 4 lanes between Speers Road and North Service Road
  - North Service Road urbanization and realignment
  - Local roads
- **Additional road improvements**
  - (1) Speers Road widening to 6 lanes between Kerr Street and Cross Avenue
  - (2) New North-South Road extension and rail grade separation between Cross Avenue and Cornwall Road



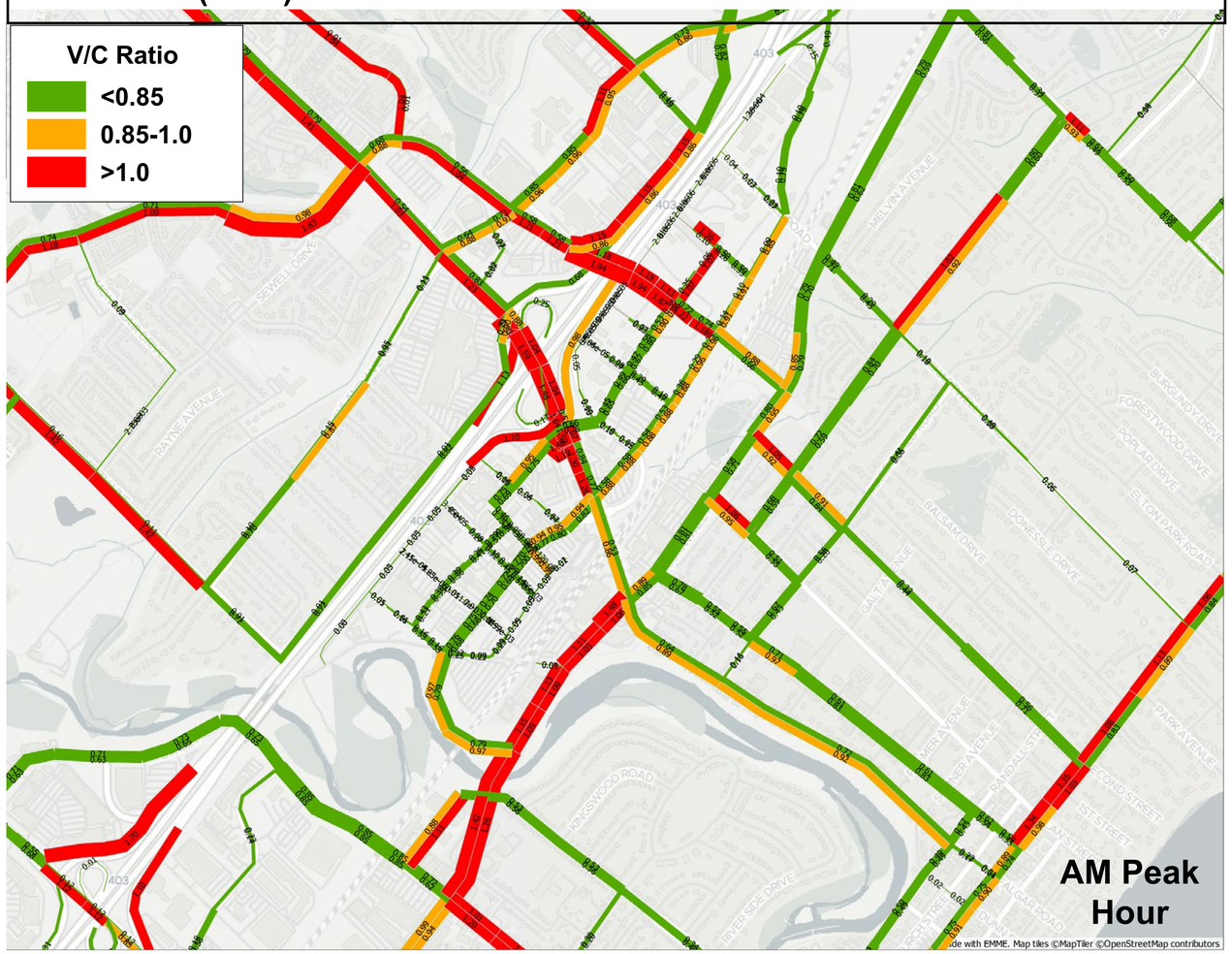
Travel Demand Modelling

- The travel forecast demand model developed for Midtown Oakville is:
  - A subarea of Halton Region's travel demand model, which was calibrated based on count data at major transportation corridors or barriers
  - A macroscopic model; area-specific studies would be subject to detailed analysis to address intersection operations, and
  - Coordinated with the model used for the Town-wide Oakville Transportation Master Plan



The results of the 2051 preferred network are shown below. The planned new improvements will be well utilized, with local roads operating well within Midtown. Road sections with high volumes relative to capacity should be further investigated through transportation impact studies.

Future (2051) Midtown Oakville Preferred Network Model Forecasts



Transportation Phasing Strategy

The phasing strategy for transportation infrastructure in Midtown Oakville is:

Informed by Travel Demand Forecasts

- Phasing is informed by a travel demand forecasting model which projects traffic growth to 2051 to address future capacity constraints

Informed by Past Plans

- Builds on and validates recommendations from previous Midtown Oakville and Town-wide Transportation Master Plan studies

Planned for Concurrency

- Coordinates with expected development and traffic patterns to maintain service levels during and after implementation

Guided by Multimodal Objectives

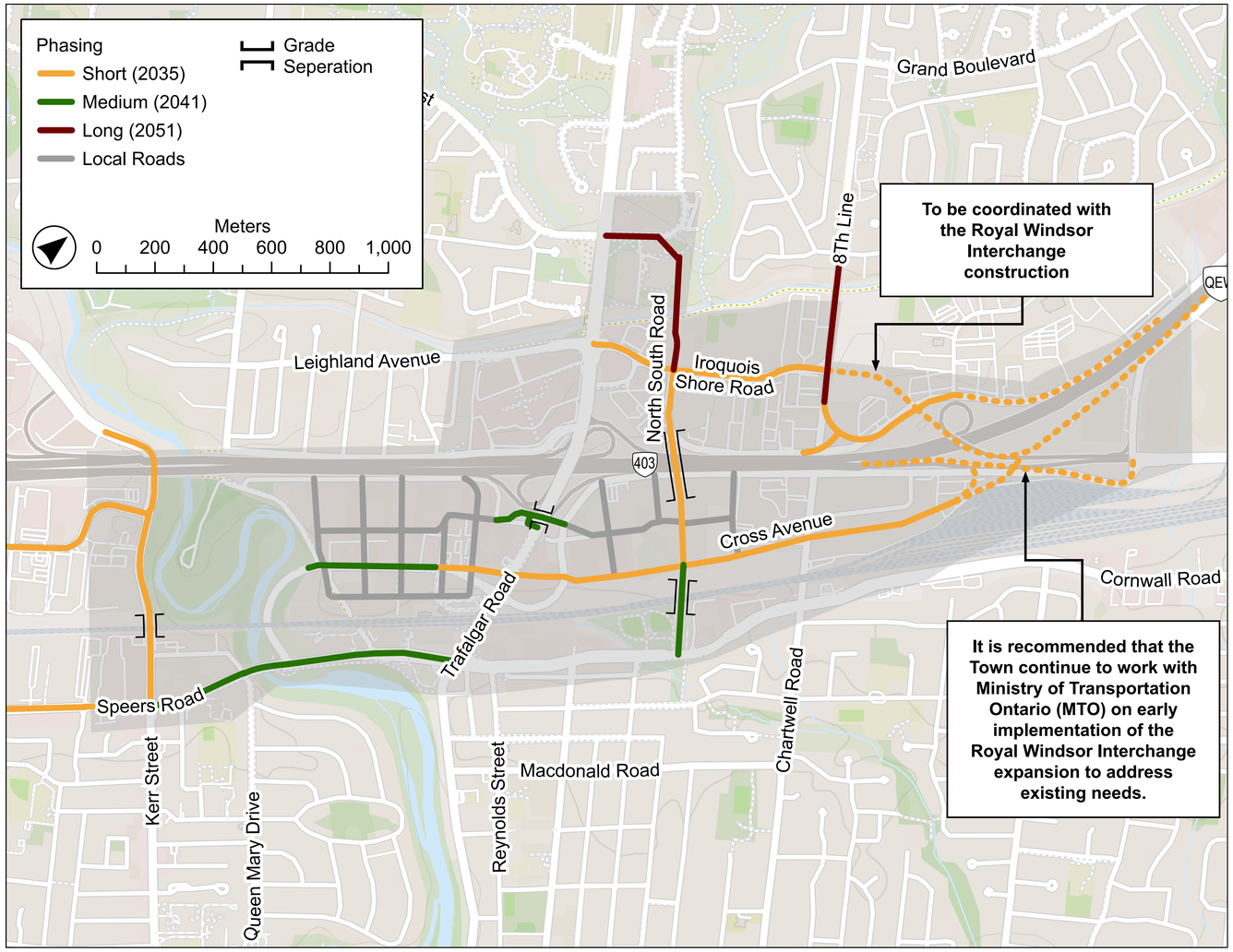
- Prioritizes early investment in transit supportive road infrastructure to support sustainable mobility

Budget-Conscious

- Sequences improvements to align with funding availability while ensuring high-impact outcomes

Coordinated with Regional and Metrolinx Plans

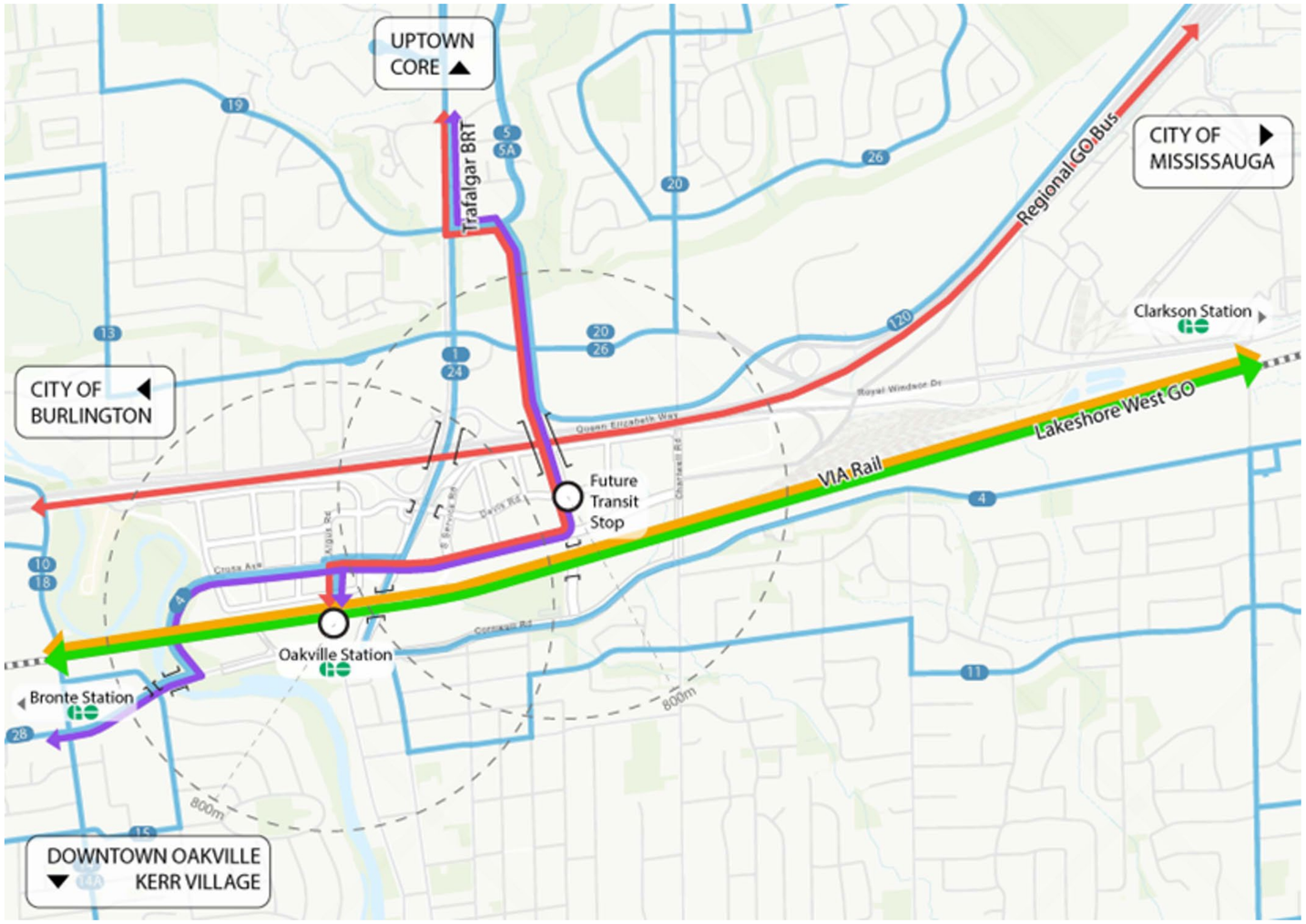
- Integrates and recognizes ongoing Halton Region studies (Integrated Master Plan) and Metrolinx Plans



Notes:
1. The interim phasing strategy for North South Road and Trafalgar Road is being coordinated with the Region of Halton.
2. The model forecasts used to establish the phasing strategy are based on Halton Region Transportation modelling forecasts (per the Joint Best Planning Estimates, 2023).

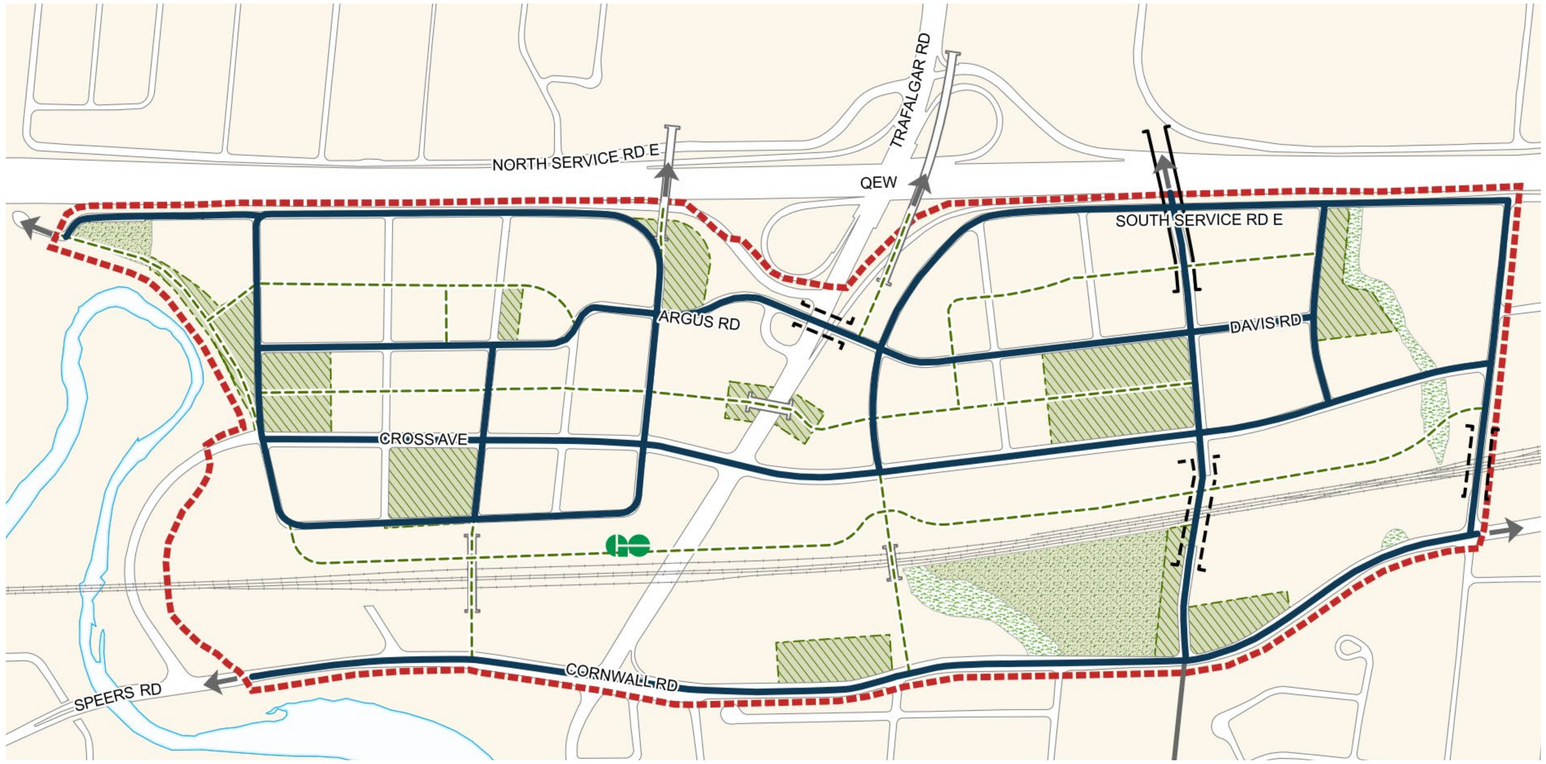
Transit Improvements

- Transit improvements reflect planned and committed improvements for the Town's transit network and include the following elements:
  - Trafalgar Bus Rapid Transit (BRT):
    - North-South Road from Cross Avenue to Trafalgar Road
    - Dedicated bus lanes along new North-South Road, from Cross Avenue to White Oaks Boulevard / Trafalgar Road
    - Re-routing of existing bus services from Trafalgar Road to the new North-South Road
- Metrolinx Regional Express Rail (RER) enhanced service improvements
- Collaboration opportunities with Metrolinx for GO Station expansion and relocation to the east
- Dundas BRT
- Transit priority along Cornwall Road/Speers Road
- Oakville Transit service level improvements as identified from the Oakville Transit Five-Year Business Plan



Active Transportation (AT) Improvements

- AT improvements reflect planned and committed improvements identified from the previous Midtown Oakville Study and adopted Official Plan Amendment (OPA), including:
  - AT crossing over the QEW east of Trafalgar Road
  - AT crossing over the QEW west of Trafalgar Road
  - AT crossing under Trafalgar Road south of the QEW
  - New Station Road extending east from Cross Avenue parallel to rail tracks
  - AT QEW crossing via the proposed extension of North-South Road
  - AT grade separated crossing via either Chartwell Road or the North-South Road extension to Cornwall Road
- The future active transportation network:
  - Recognizes the need to prioritize safety, with cycling facilities proposed along primarily local and collector roads
  - Accommodates local connections through numerous midblock
  - off-road AT connections
  - Prioritizes pedestrians and livability needs through the Argus/ Davis main street corridor
  - Supports commuter cyclists through travel AT spines via facilities along Cross Avenue, Cornwall Road and the new North-South Road
  - Supports recreational cyclists through cycling loops along local and collector streets on both sides of Trafalgar Road



PROTECTED MAJOR TRANSIT STATION AREA / GROWTH AREA BOUNDARY

OFF-ROAD ACTIVE TRANPORTATION CONNECTION

CYCLING FACILITY WITHIN RIGHT-OF-WAY

NATURAL AREA

PARKS AND OPEN SPACE

PARK (CONCEPTUAL)

FUTURE ACTIVE TRANSPORTATION BRIDGE*

FUTURE BRIDGE*

FUTURE UNDERPASS*

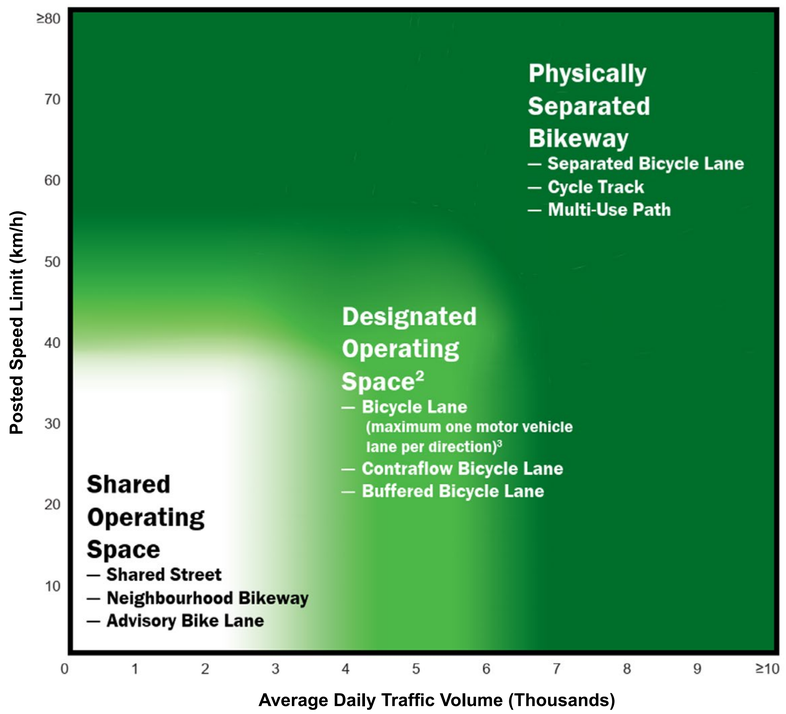
POTENTIAL ACTIVE TRANSPORTATION CONNECTION

OAKVILLE GO STATION

NOTE: WALKING FACILITIES TO BE PROVIDED ON BOTH SIDES OF ALL ROADWAYS

Active Transportation (AT) Facility Assessment

- The facility type is determined based on the graph below and is a function of Average Annual Daily Traffic (AADT) and posted speed limit



Source: Ontario Traffic Manual Book 18

- Other site-specific design factors, such as road classification, on-street parking, pedestrian activity, transit needs, intersection frequency, user safety/comfort and function of the route within the cycling network, are also considered

- The following facilities are proposed along key routes for the Midtown network

Road Name	Preferred Cycling Facility *
Cross Avenue	Cycle track on both sides
Cornwall Avenue	Multi-use paths
North-South Road	Cycle track on both sides
Argus-Davis Road	Bike lanes on both sides
Chartwell Road	Cycle track on both sides
Local roads	Varies - Sharrows/cycle tracks/ bike lanes

* Subject to design process

Example Bike Lane

Example Cycle Track

Example Multi-Use Path

Supporting Transportation Strategies

Active Transportation Strategies

- **Collaborate with Metrolinx to enhance GO Station accessibility** through amenities such as bike hubs, integration between planned station access improvements and connections to the broader network
- **Pilot a shared micromobility program** (e.g., bike share) in Midtown, at major trip destinations
- **Review the Town's summer and winter maintenance service levels** to ensure that pedestrian and cycling facilities are prioritized for snow clearing
- **Install destination or wayfinding signage** with time/distance to major destinations (e.g., Oakville GO Station, nearby parks, bicycle parking areas) by walking and cycling
- **Implement active transportation amenities (e.g. bike repair, bike shelters, etc.)** at public locations based on expected demand and use
- **Incorporate pedestrian-scale lighting** on multi-use paths to enhance year-round usability

Transit Supportive Strategies

- **Implement development subsidies for transit ridership** through employer programs or transit passes
- Investigate the opportunity to offer **free transit on holidays or for public events**
- Investigate a **public internal circulation bus route to/from the GO Station**
- Work with Oakville Transit to ensure that **bus stops are equipped with secure and convenient bike parking**

Source: Ontario Traffic Man

Supporting Transportation Strategies

Parking Management Strategies

- **Reduced parking requirements** as part of the implementation of the Bus Rapid Transit (BRT) across Midtown and surrounding the GO Station
- **Implement paid parking** in transit-oriented zones or in areas well-served by transit during peak hours of the day
- **Municipal parking supply** to address shared land uses, in addition to the proposed developer supply
- **Establish an interim parking strategy** to address short-term demands and promote the shift toward sustainable modes
- **Continue to collaborate with Metrolinx** to leverage and share carpool spaces at the GO Station
- **Optimize parking supply** to minimize excessive parking supply

Development Permit Application Strategies

- Require developers to implement **Transportation Demand Management (TDM) plans** as a condition for approval
- Encourage **Privately-Owned Publicly Accessible Spaces (POPS)** to address situations where there is insufficient space to accommodate active transportation facilities
- Require **direct, dedicated active transportation facilities** (walkways, cycle paths) to pedestrian crossings, transit stops/stations and the broader existing and planned network
- Require **secure and dedicated long-term bike parking** for residents
- Encourage **end-of-trip bicycle amenities** (e.g. showers) and **bicycle maintenance** (e.g. repair stations) facilities
- Require **car share spaces and unbundled residential parking spaces** to manage parking

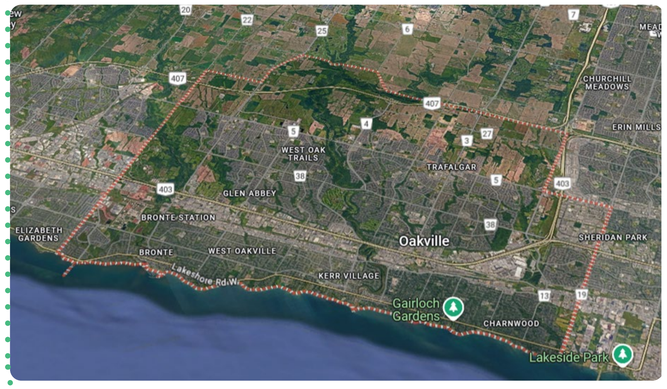
Midtown Stormwater Plan

WE ARE HERE

*Stormwater management is guided by Townwide, area and site specific studies and analysis.

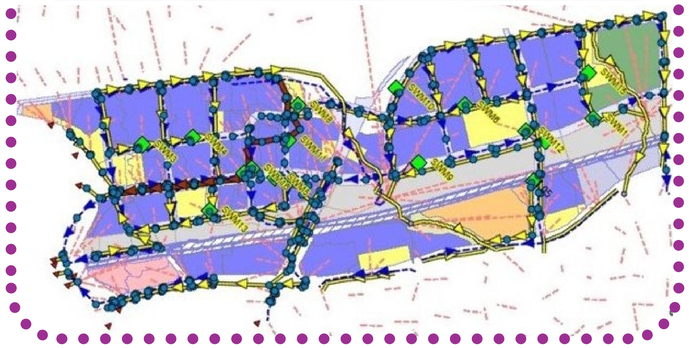
Town-wide and Subwatershed Studies

- Identify constraints and opportunities for future growth and development
- Set targets and develop criteria for:
  - Stormwater quantity and quality control
  - Runoff volume reduction and erosion control
  - Climate change adaptation and resilience



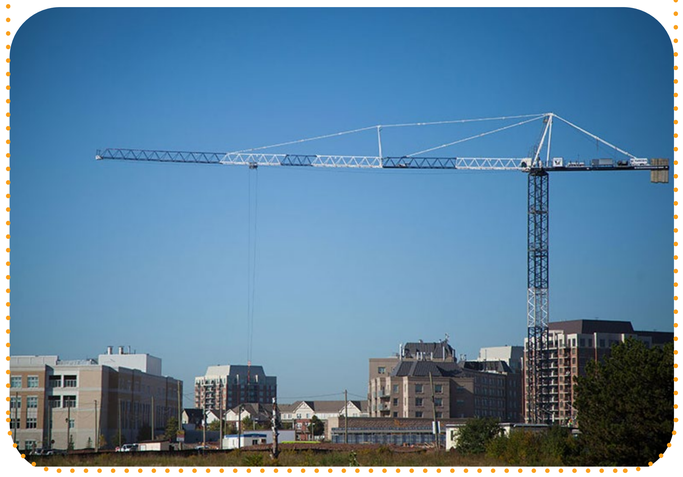
The Midtown Stormwater Plan

- The Midtown Stormwater Plan manages rain and runoff to support growth and development based on the updated OPA and road network
- Confirm constraints and opportunities for Midtown area and assess existing and future drainage conditions, to demonstrate the proposed work does not negatively impact adjacent land
- Update and verify targets and criteria established by previous studies
- Identify, evaluate and propose stormwater management measures for private and public areas to address provincial, municipal and environmental targets, policies and guidelines
- Establish a strategy and an implementation plan with policy direction

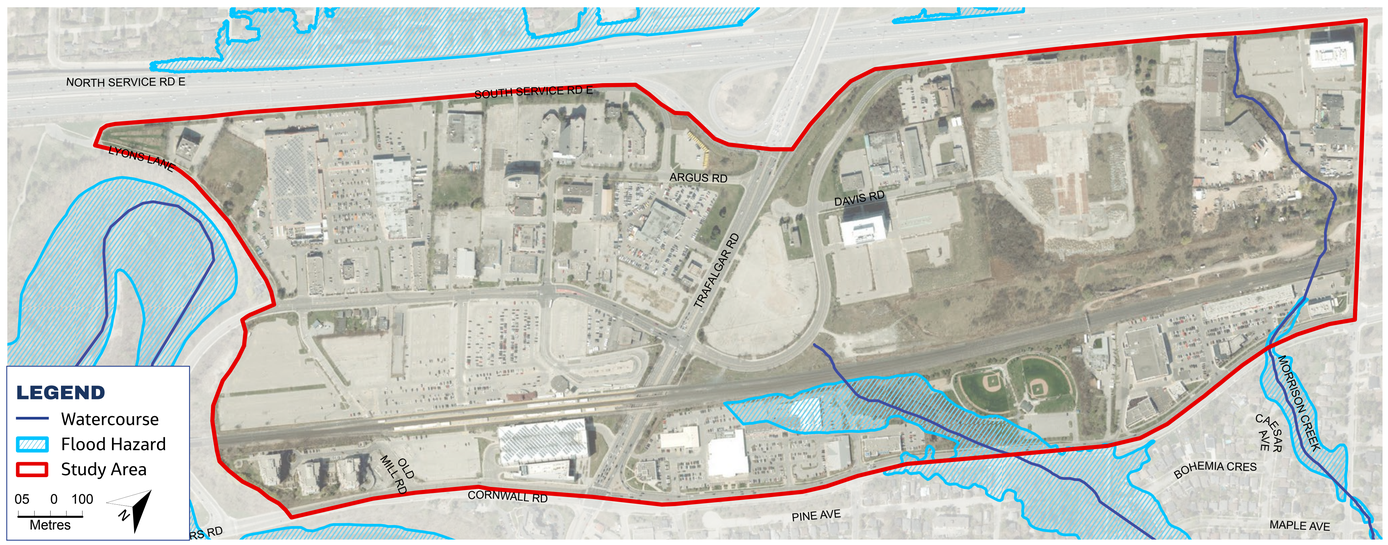


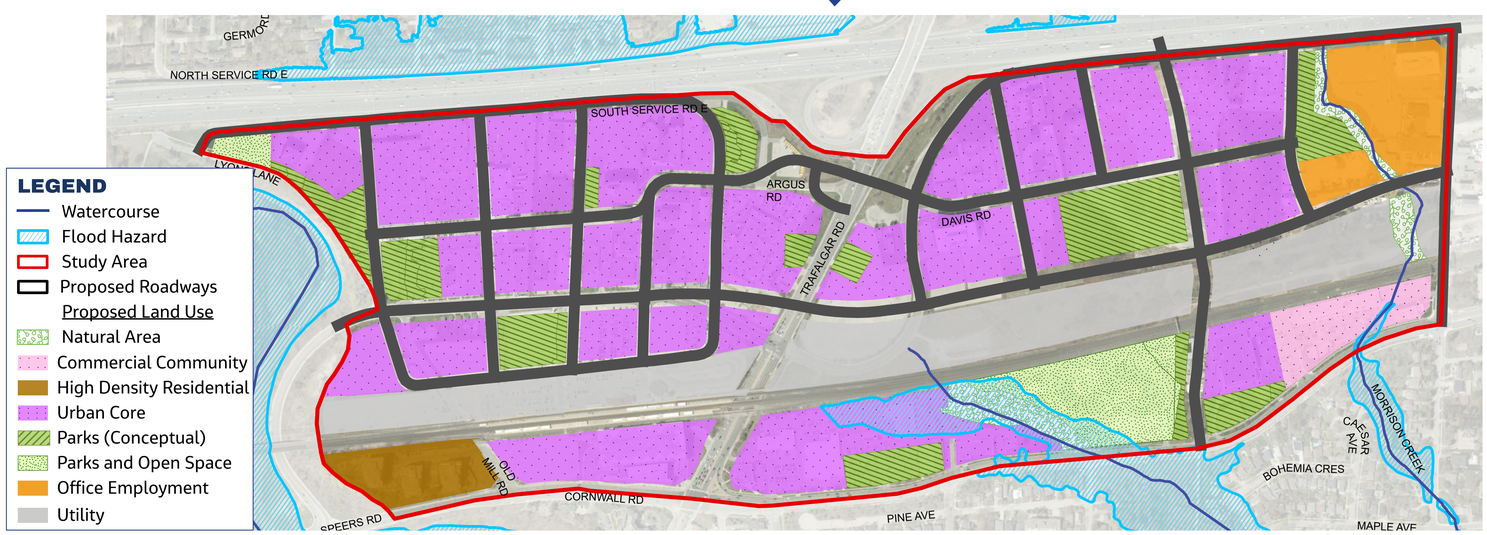
Development Applications and Site-Scale Studies

- Follow the Town's policies and procedures for drainage and stormwater management
- Apply stormwater criteria, targets and policies established by the Midtown Stormwater Plan and confirm drainage capacity and functionality
- Develop drainage plans, grading plans and specific SWM strategies and implementation plans



Stormwater Challenges and Opportunities





CHALLENGES

- Future development, including proposed roadways causes the following impacts :
  - Changes in drainage pathways
  - Pressure on the existing storm sewer system
  - Downstream flood hazard - Sixteen Mile and Lower Morrison East and West

OPPORTUNITIES

- Control on private properties, including quantity, quality and water balance
- Control using above and below-grade infrastructure along the proposed roads and within parks
- Retention opportunities (Infiltration + Reuse), Filtration opportunities (Absorption + Increase of depression storage)
- Water quality treatment

Problem / Opportunity Statement

The Midtown Stormwater Plan will determine how the town's stormwater infrastructure will support growth in a sustainable and financially responsible manner. The proposed Stormwater Plan will identify stormwater quantity and quality measures for both private and public areas to address relevant provincial and municipal policies and guidelines. Based on a comprehensive multi-criteria evaluation, preferred solutions will be proposed to be implemented at various scales to achieve a multitude of municipal and environmental targets.

The Stormwater Management (SWM) Master Plan is a key component of the overall Midtown Oakville program and must be fully integrated with the Transportation Master Plan and the public realm and servicing objectives.

Stormwater Management Alternative Solutions

Alternative #1: Conveyance and Storage

- Conveyance improvements measures:
  These measures include pipe upsizing and super pipes to control peak flows along the Right of Way (ROW)

- Underground Storage Facilities:
  These measures include manufactured storage facilities that could provide stormwater quantity management and runoff volume reduction, including detention, retention and infiltration. The implementation of these measures may take place within private properties, along the right of way and within parks and open spaces.

Alternative #2: Conveyance, Storage and Green Infrastructure

In addition to conveyance improvements and underground storage, Green Infrastructure (GI) can provide storm quality management and runoff volume reduction in addition to runoff quantity control.

Green Infrastructure measures are proposed as part of a Treatment Train approach, whereby it can be implemented within private properties and in the public realm. Types of green infrastructure measures include bioretention systems, stormwater tree pits, and permeable surfaces.

Stormwater Evaluation Criteria

The list of alternative solutions has been evaluated based on multi-faceted criteria, including engineering, natural environment, social and cultural, and financial criteria. This evaluation process includes hydrologic and hydraulic analyses and the verification and confirmation of stormwater quantity and quality targets.

The evaluation process concludes with the selection of a Stormwater Management preferred solution.

Criteria - Main categories used for the assessment of alternative solutions

Indicators - Qualitative or Quantitative metrics used to assess performance

Engineering

- Provides stormwater quantity control and flood protection
- Provides stormwater quality control
- Improves water balance
- Mitigates against erosion to receiving watercourses

Natural Environment

- Improves aquatic habitat
- Improves terrestrial habitat
- Enhances groundwater regime
- Integrates with existing environment by incorporating green infrastructure

Social and Cultural

- Results in community benefits, such as beautification associated with infrastructure upgrades and additional park space
- Ensures public safety, including safe access, ingress and egress

Cost

- Minimizes capital expenditure
- Minimize operation & maintenance cost

Evalution Summary

○ Least Preferred ◑ Less Preferred ● Most Preferred

	Description	Engineering	Natural Environment	Social and Cultural	Cost
Business as Usual "Base Scenario"	**Planned "Business as Usual" (BAU) Improvements** • Committed and planned projects • Serves as a "base" for all alternatives	○	○	○	●
Alternative #1	**Conveyance + Storage:** Onsite Control on Private Properties and Increasing Storm Sewer Capacity along ROW	◑ Improves conveyance and runoff quantity control but lacks water quality and water balance control	◔ As this option mostly deals with conveyance, it does not improve linkages with aquatic and terrestrial habitat	◔ Provides limited healthy living opportunities. Does not add to beautification. Received lowest score in previous PIC	◕ Low to moderate capital and maintenance costs.
Preferred **Alternative #2**	**Conveyance, Storage and Green Infrastructure:** Combination of Stormwater Control Measures	● Improves water quality and balance, mitigate erosion in conjunction with conveyance control	● Improves aquatic and terrestrial habitat and integrates with the natural environment	◕ Provides healthy living opportunities and beautification. May require more social awareness	◑ Moderate to high capital and maintenance costs. May require additional costs for integrating with conveyance measures

Alternative #2: Combination of SWM Measures

1 Control within Private Properties

- Onsite Quantity Control and Water Balance within Private Properties
- Onsite Quality Control within Private Properties (Achieving 80% TSS removal)

2 Control along ROW

- Green Infrastructure along ROW (e.g. Soil Cells and Permeable Pavement)
- Pipe upsizing / Superpipes
- Manufactured Treatment Devices along ROW (e.g. OGS and CB Sheilds), part of Treatment Train approach

3 Control within Parks

- Underground Storage + Green Infrastructure

SWM Measure	Type of Infrastructure	Quantity Control Target	Quality Control Target	Water Balance Control Target
Onsite Quantity Control and Water Balance within Private Properties	Storage Tanks	Yes	N/A	Yes
Onsite Quality Control within Private Properties (Achieving 80% TSS removal)	Water Quality Treatment	N/A	Yes	N/A
Pipe upsizing / Superpipes	Conveyance Pipes with Detention	Yes	N/A	N/A
Green Infrastructure along ROW (e.g. Soil Cells and Permeable Pavement)	Green Infrastructure	Yes	Yes	Yes
Manufactured Treatment Devices along ROW e.g. Oil and Grit Seperator (OGS) and Catch Basin (CB) Shields, part of Treatment Train approach	Water Quality Treatment	N/A	Yes	N/A
Underground Storage + Green Infrastructure	Storage + Green Infrastructure	Yes	Yes	Yes

Alternative #2: Combination of SWM Measures

Control within Private Properties (1)

ONSITE QUANTITY CONTROL AND WATER BALANCE WITHIN PRIVATE PROPERTIES

Underground Storage Facility

ONSITE QUALITY CONTROL WITHIN PRIVATE PROPERTIES

Jellyfish[R] Filter

Control within Parks (3)

UNDERGROUND STORAGE + GREEN INFRASTRUCTURE

Underground Storage Facility

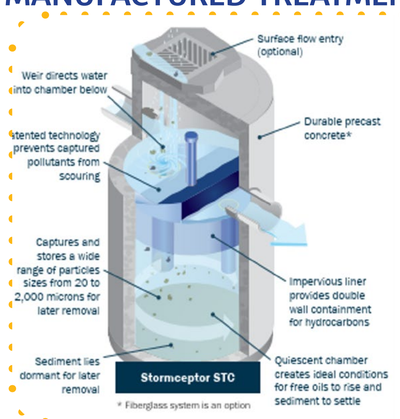
Permeable Surface and Bioswale

Control along ROW (2)

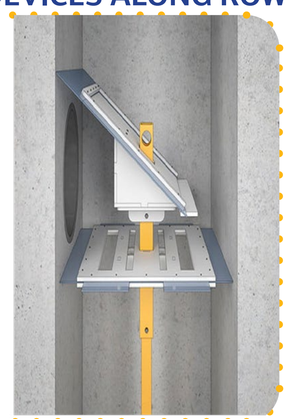
GREEN INFRASTRUCTURE ALONG ROW

Soil Cells

MANUFACTURED TREATMENT DEVICES ALONG ROW



Oil and Grit Seperator

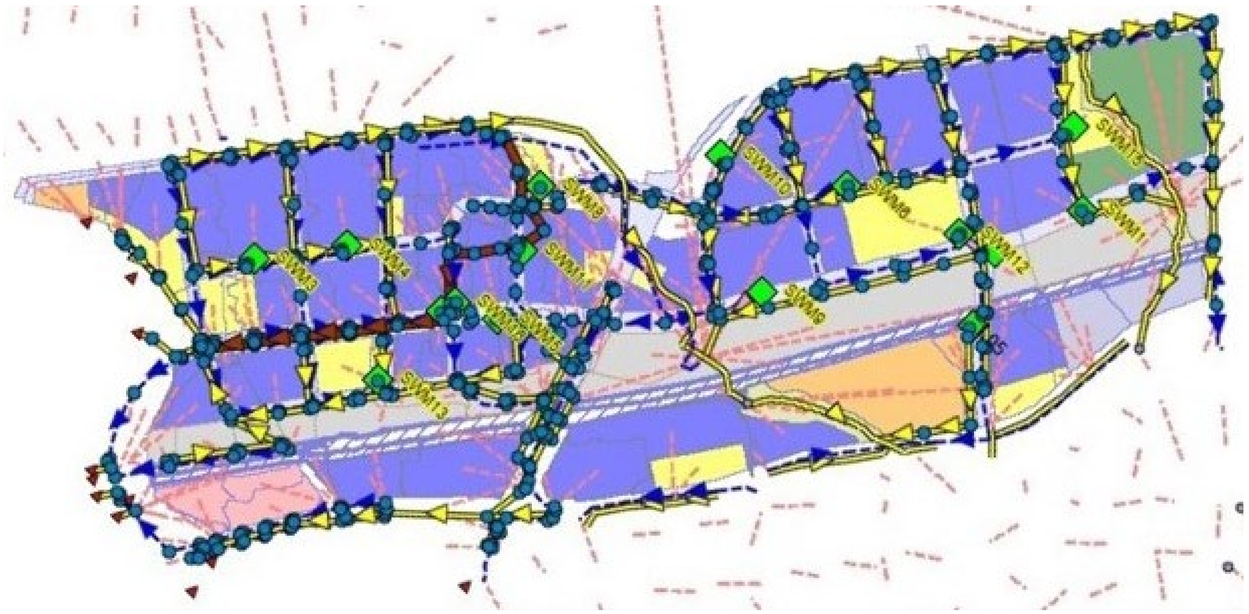


Catch Basin Shield

PIPE UPSIZING / SUPERPIPES

Superpipe

Stormwater Modelling with Alternative #2 Combination of SWM Measures



A Dual-Drainage model, comprising minor and major drainage systems, was developed. Catchments included future private properties and proposed roads. Peak flows, including Regional storm, were evaluated under uncontrolled and controlled scenarios.

Performance of minor and major drainage systems

Storm sewer capacity is expected to improve significantly

Surface ponding along major roads will be eliminated or reduced to less than curb height (15 cm) for all storm events

Outfall Metrics

Peak flows were evaluated at outfalls draining into Sixteen Mile Creek, Lower Morrison East and Lower Morrison West

Results show that the 100-year storm event and the Regional storm will be controlled at all outfalls

Recommended Directions for Stormwater Management

Within Private Properties

- Future development is to demonstrate that target peak flows and minimum storage requirements as per the Midtown Stormwater Plan are met.
- Developer to design and construct stormwater management facilities in compliance with the Midtown Stormwater Plan.
- New development is required to meet Enhanced Level 1 Protection (80% long-term removal of TSS), as per the Ministry of Environment's Stormwater Management Planning and Design Manual (2003).
- Long-term perpetual groundwater discharges are not permitted (bathtub or added storage for groundwater).
- To accommodate site constraints and conform to provincial and municipal guidelines, a 25 mm runoff volume reduction (water balance) target shall follow a hierarchical order:
    1. Retention (Infiltration, reuse, or evapotranspiration)
    2. Filtration (Absorption and increased depression storage)
    3. Conventional stormwater management (Detention and attenuation)
    - Step 3 should proceed only once Maximum Extent Possible has been attained for Steps 1 and 2 for retention and filtration.

Along Major Roads

- Implement underground storage facilities to control peak flows along major roads. The location, depth and connectivity to the municipal drainage system shall be subject to the approval of the Town in consultation with Conservation Halton.
- The capacity and functionality of proposed storm sewer pipes and super pipes shall be demonstrated. Hydraulic modelling using appropriate software shall be completed to quantify peak flows, required storage volumes, and determine Hydraulic Grade Line (HGL).
- A Treatment Train approach is encouraged to achieve water quality and runoff volume reduction targets.

Along Local Roads

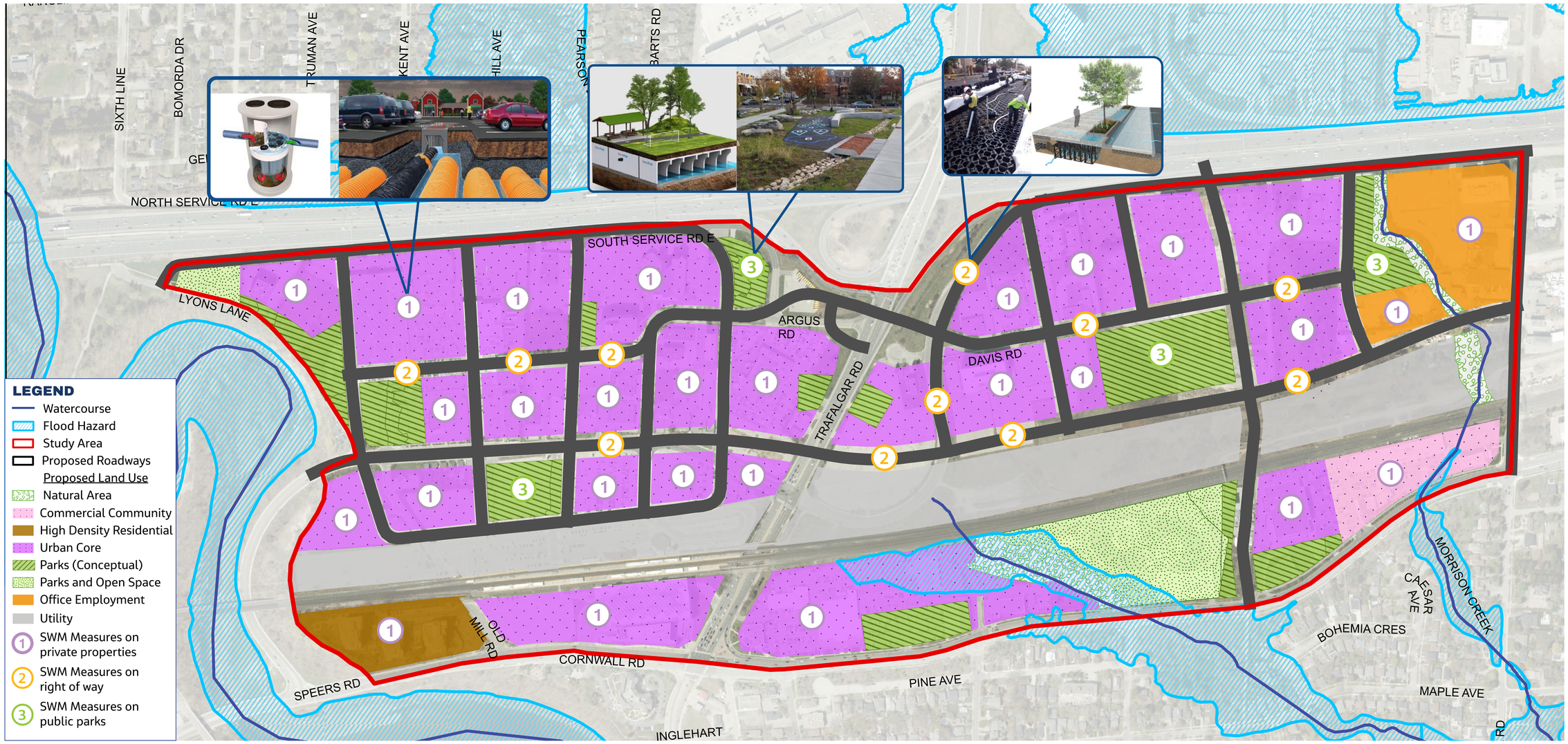
- It is the responsibility of the developer to design and construct stormwater quantity and quality measures along local roads to achieve unitary storage targets stipulated in the Midtown Stormwater Plan.
- A Treatment Train approach is encouraged to achieve water quality and runoff volume reduction targets.

Within Parks:

- Parks shall be designed to support the broader stormwater management system across Midtown and as part of a Treatment Train approach to achieve stormwater quantity and quality targets, where appropriate subject to the parks' programming and recreational uses.

Collectively, the recommended private and public stormwater control measures identified, including Green Infrastructure, shall ensure that there will be no increase in flooding within or downstream of Midtown.

Recommended Stormwater Management Measures Across Midtown



New Designing Midtown Guidelines

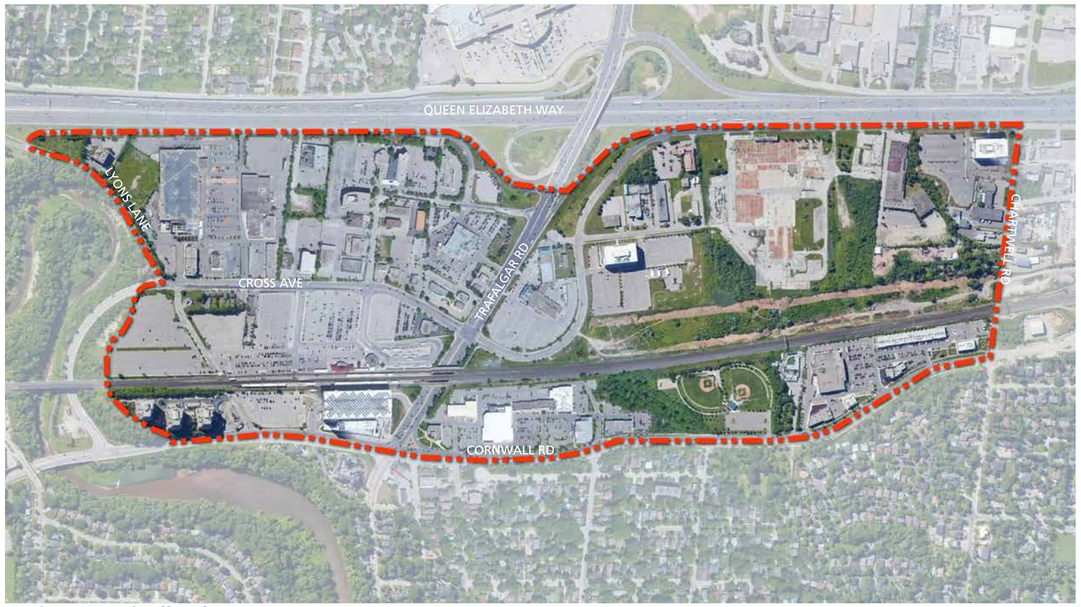
OVERVIEW

The Town's existing Designing Midtown Oakville document was completed in 2013.

This document is currently being updated to align with the recent Council adopted Official Plan Amendment (OPA No. 70) for Midtown Oakville.

Designing Midtown is a design guideline document that provides urban design direction for streets, parks and built form.

The initial directions shared in the following display panels has been developed in collaboration with the planning, engineering and transportation staff at the town and with the consultant team.



Midtown Oakville Plan Area

PURPOSE

- Support the official plan policies for Midtown with more detailed guidance on the design of built form elements
- Facilitate development and set expectations for landowners and developers to achieve high quality urban design, architecture and landscape architecture
- Define design objectives for three elements, streets, parks and built form elements and guide how these can be best combined to support good urban design
- Provide guidance on site planning, access, built form, design of buildings and their interface with the public realm at the pedestrian level
- Inform the implementation of the Midtown Community Planning Permit System

MOBILITY

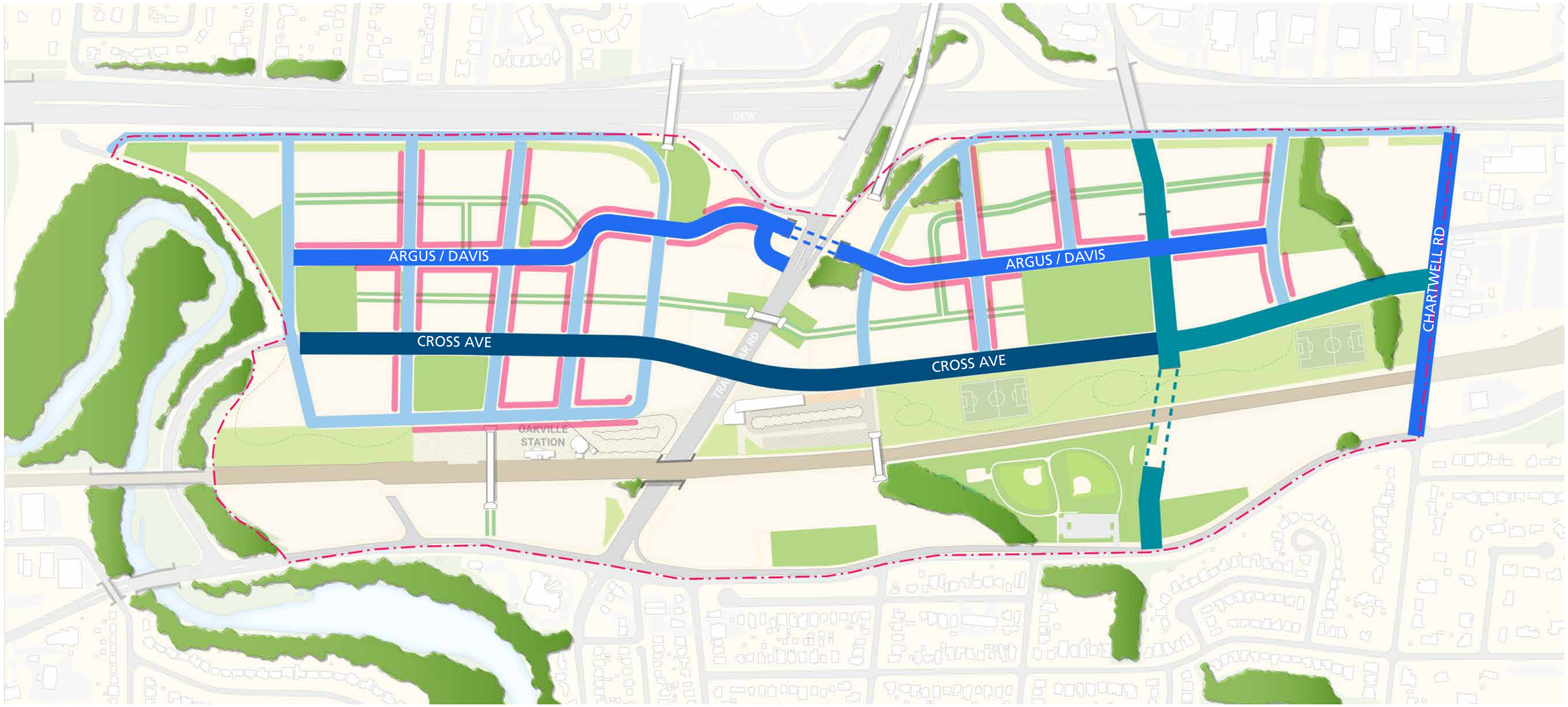
STREETS FRAMEWORK

The Streets Framework is designed for a multi-modal transportation system and a complete street lens has been applied, with a focus on walking, cycling, rolling and ease of transit use.

Legend

Primary Streets

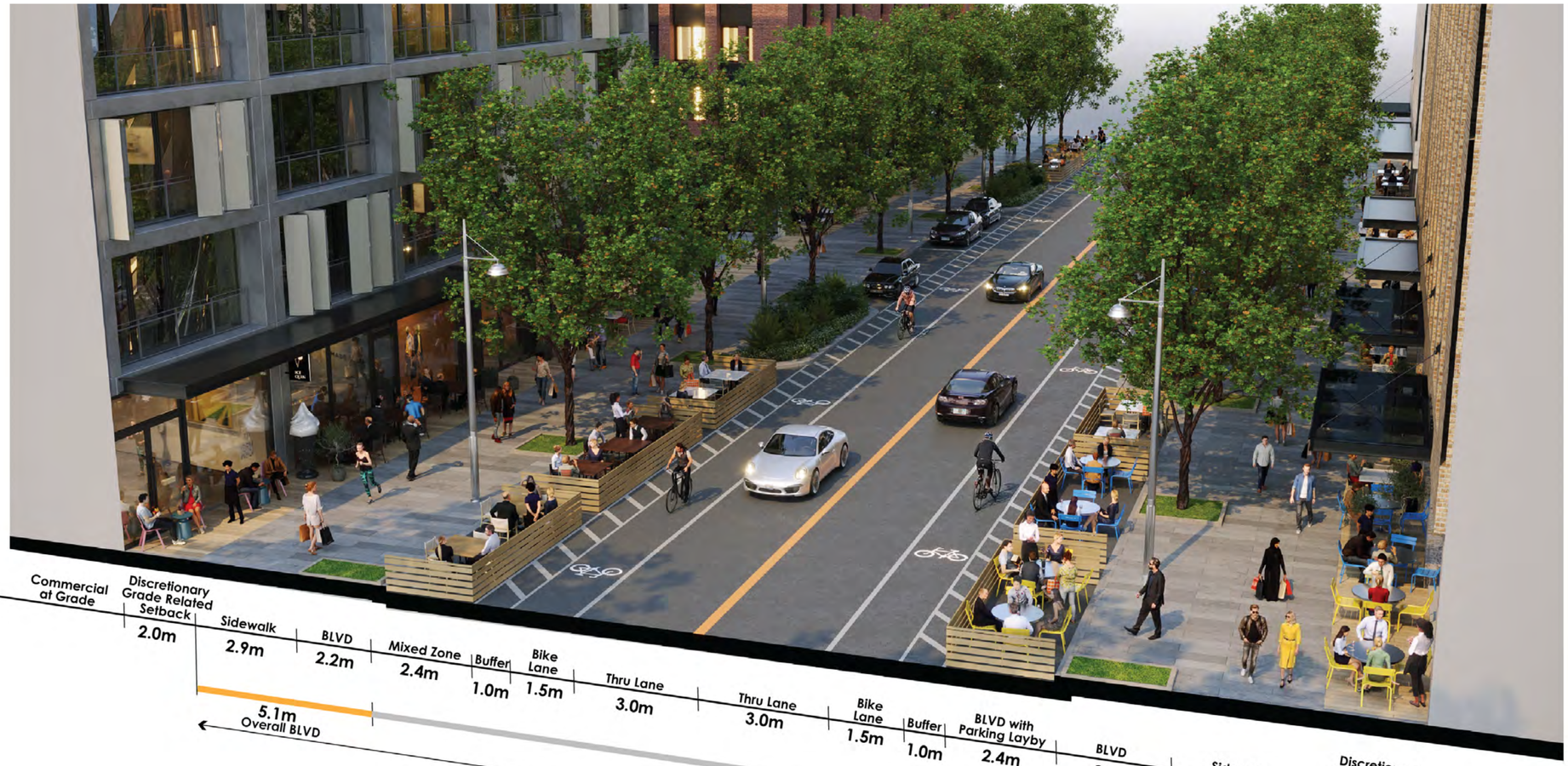
- Arterial Road (36 m)
- Minor Arterial Road (30 m)
- Collector Road (26 m)
- Local Road (20m)
- Mid-block connections
- Active Frontages



MOBILITY

ARGUS/DAVIS

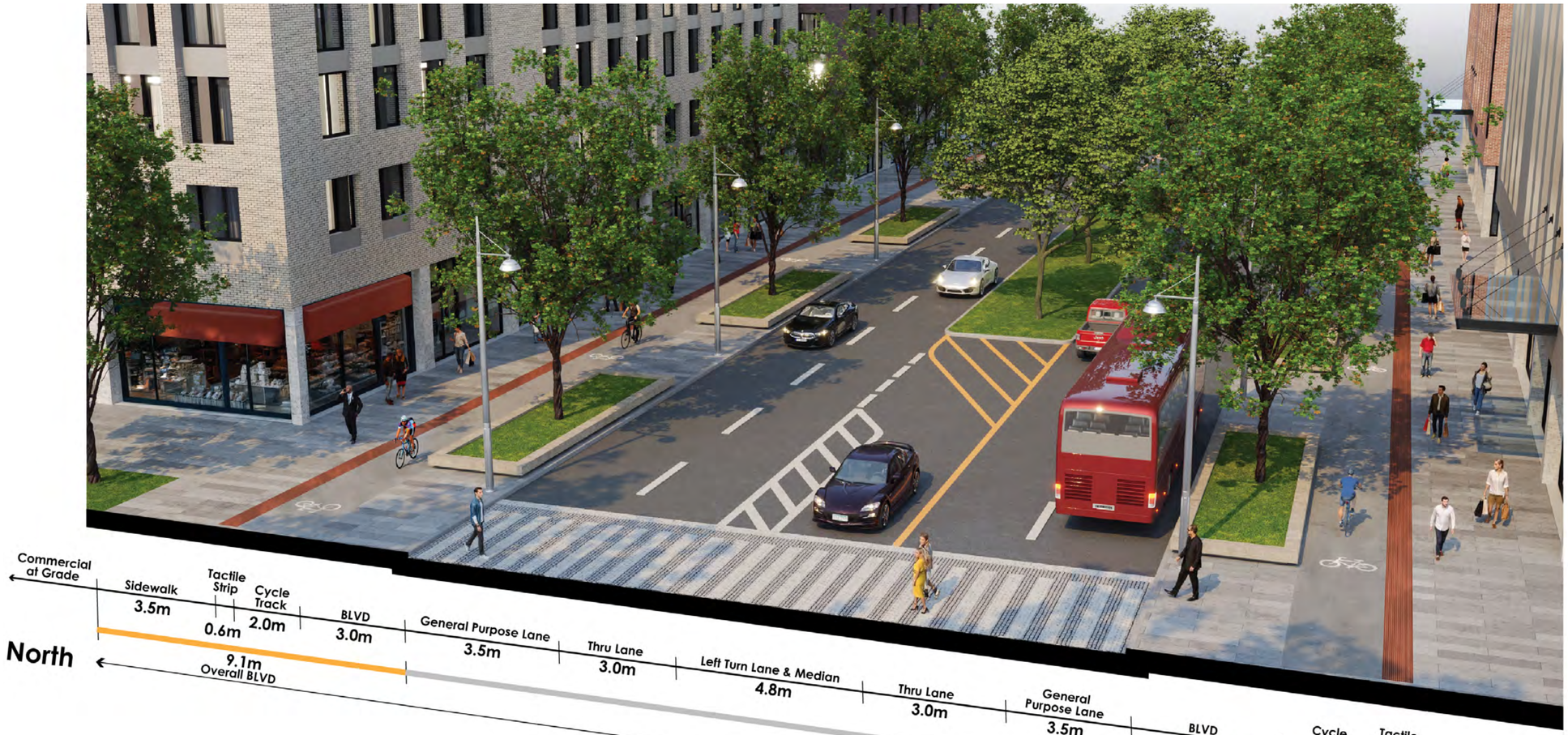
Argus/Davis is envisioned as a vibrant main street with substantial pedestrian areas and opportunities for outdoor dining. Traffic and bike movement in both directions has been organized to maximize pedestrian mobility and activity.



MOBILITY

CROSS AVE

Cross Ave provides access to the GO Station, accommodates bus routes, includes bike lanes and a generous public realm that will create a functional and attractive street that offers a high level of transit and pedestrian connectivity.



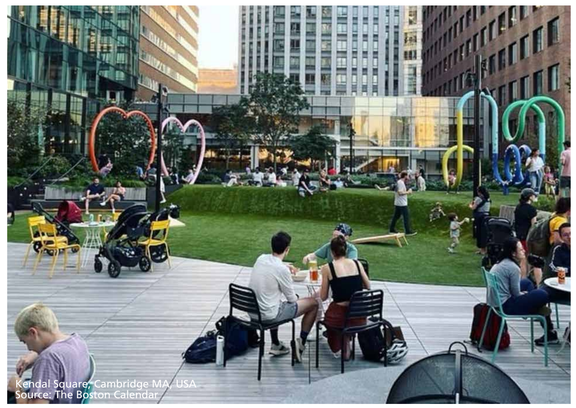
OPEN SPACE

GUIDING PRINCIPLES


Berczy Park, Toronto
Source: Claude Cormier et Associés

1 Inviting and vibrant open spaces

Support the creation of a vibrant and interesting public realm designed to create welcoming places for people to enjoy leisure pursuits, gather and celebrate, move through, take pride in, and, which are supported by an active urban street life.


Kendal Square, Cambridge MA, USA
Source: The Boston Calendar

2 Exhibit innovative and creative design excellence

Deliver design excellence through expressive design elements that contribute to a unique sense of identity and character in Midtown.


Emery Barnes Park, Vancouver
Source: Klaus Johansson

3 Diverse, enduring and permanent

Provide a range of different public spaces, recreational opportunities and amenities for diverse groups of people. Utilize materials and design details that reflect a finished and permanent character that is attractive, memorable and lasting.


Concord Community Pop-up Park, Vancouver
Source: landezine.com

4 Celebrate large spaces with a unique role and design expression

Integrate innovative and distinctive landscape design to permit large spaces to take on unique gathering and celebratory functions that bring the community together around memorable community facilities, outdoor venues, landscape installations and public art.


The Italian gardens cafe, Kensington Gardens, London, UK
Source: David Morley Architects

5 Promote safe, comfortable and accessible public spaces

Adopt Crime Prevention Through Environmental Design (CPTED) principles to support natural surveillance within open spaces, avoid disconnected spaces, and design public spaces with continuous site lines to active urban areas.


Jackson Street, St Paul Minnesota, USA
Source: Toole Design

6 Design complete streets

Design streets recognizing their many roles, functions and character supporting safe multi modal movements while providing opportunities to support Low Impact Development (LID) and universal design.


Hudson Square, NYC, USA
Source: Archdaily - Elizabeth Felicella

7 Create resilient and sustainable open space environments

Integrate sustainable and resilient urban design strategies including safe cycle tracks, retention areas, soil cells to support the development of mature trees, solar illumination, and other green strategies that support climate resiliency.

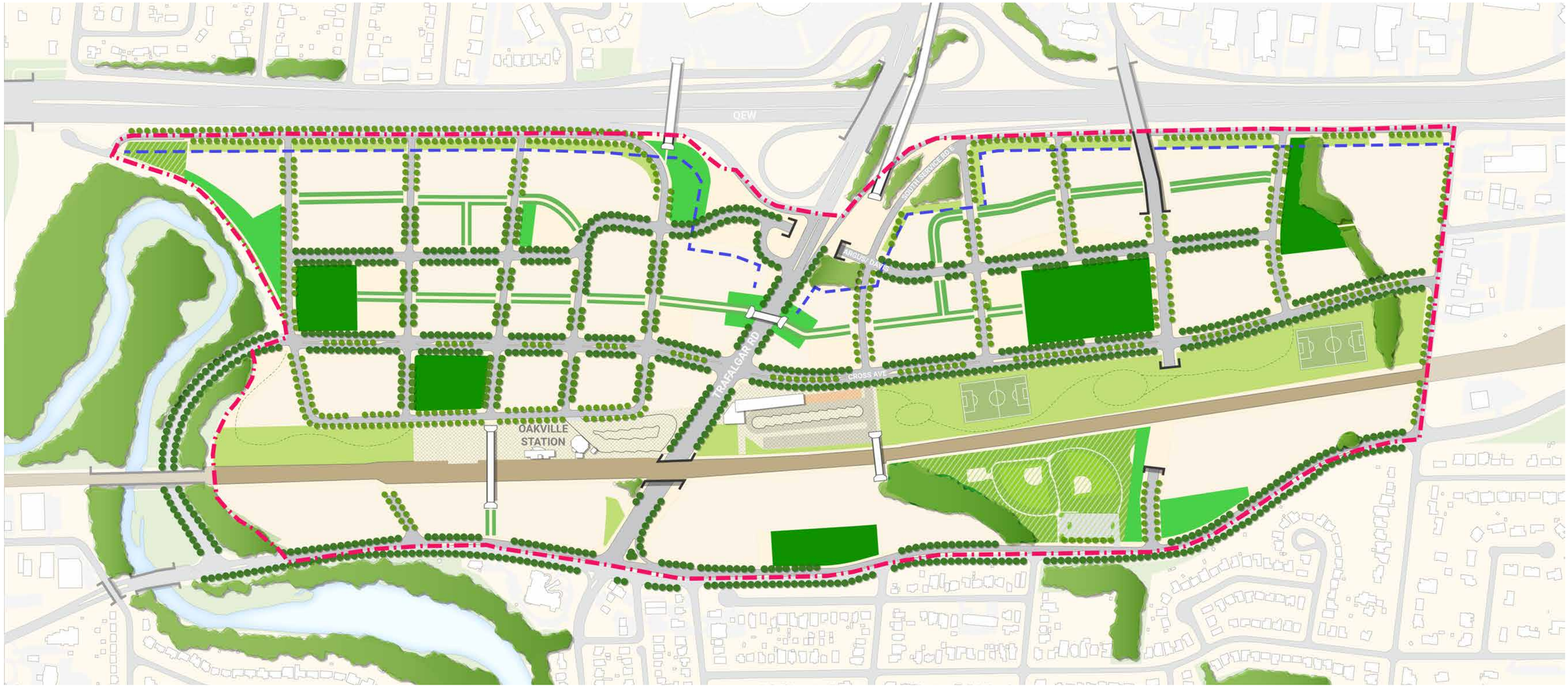
OPEN SPACE

PUBLIC REALM FRAMEWORK

The Public Realm Framework includes new and existing parks, mid-block connections, natural heritage areas, and streetscapes which create the public realm setting for Midtown. Privately owned publicly accessible open spaces (POPS) will be added through development and will support and supplement the framework.

Legend

- Public Common
- Urban Square
- Existing Park
- Natural Heritage
- Hydro Corridor
- Mid-block Connection
- 14m MTO Setback



OPEN SPACE

PARK TYPOLOGIES


Corktown Commons, West Don Lands, Toronto
Source: SHANE


St. Andrew's Playground Park, Toronto
Source: DTAH


1166 Sixth Ave
Source: 1166 Ave of Americas

1 Public Commons

Role

Public commons are large green park spaces that provide opportunities for recreation, relaxation, community gathering and interaction. Public commons typically serve the neighbourhood within a 10-minute walking radius but can also attract people from across town.

Characters

The primary character is one of large well-defined open multi-use landscape that can serve multiple functions. Public commons are well connected to their surrounding supportive active uses largely defining the street edge of the space.

Potential Programming:

- Sport courts
- Off leash dog park
- Playground/play areas, Splash pads
- Outdoor ice skating rink
- Community allotment garden
- Flower/Medicinal Garden
- Outdoor fitness/ calisthenics park
- Skateboard park/all wheels parks
- Outdoor learning areas
- Flexible space for unprogrammed activities
- Flexible space for events
- Stage/Amphitheatre
- Seating areas
- Outdoor pool

2 Urban Squares

Role

Urban squares are smaller vibrant public places for social gathering. Urban Squares typically serve the surrounding community within a 5-minute walking radius.

Characters

The primary character of an Urban Square is one of small scale, intimate and vibrant gathering destination for community, cultural and civic use.

Potential Programming:

- Playground/play areas
- Splash pads
- Community allotment garden
- Flower/Medicinal Garden
- Flexible space for unprogrammed activities
- Flexible space for events
- Stage/Amphitheatre
- Seating areas
- Outdoor eating areas
- Pop-up markets

3 Privately Owned Publicly Accessible Spaces (POPS)

Role

Contribute to the overall public realm network of connected open spaces with smaller scale social places.

Characters

POPS are shaped by the adjacent residential or commercial uses and provide an opportunity for social gathering.

Potential Programming:

- Gardens
- Flexible space for unprogrammed activities
- Flexible space for events
- Seating areas
- Fountains/water feature
- Play area

BUILT FORM

GUIDING PRINCIPLES

Sydney, Australia
Source: Concrete Playground Pty Ltd

1 Compact and human-scaled

Support a compact urban form that includes mid- and high-rise development designed to create a welcoming human-scaled building base and taller elements; collectively contributing towards an engaging public realm.

West Don Lands, Toronto
Source: Claude Cormier et Associés

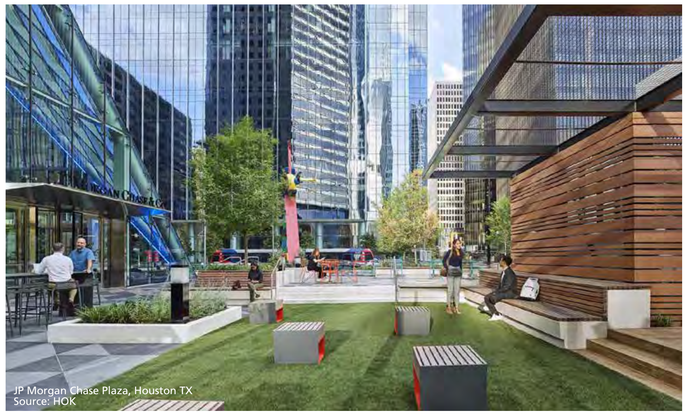
2 Ensure all built form projects are 'good neighbours'

Recognize that Midtown will evolve over many decades and individual developments must reflect best practices and accepted rules of good urban design and appropriately 'fit' both their site and the context of existing and future planned developments to come. This will achieve a harmonious context of urban form, that appears complete and finished, is well-resolved, and allows for logical additions and development phasing over time.

Canoe Landing Campus School, Toronto
Source: ZAS, Architects + Interiors

3 Enduring and permanent

Utilize materials and design details including building element design, architectural articulation and window fenestration that reflects a well conceived and enduring urban character that is attractive, memorable and lasting.



JP Morgan Chase Plaza, Houston TX
Source: HOK

4 Celebrate special places with unique design expression

Integrate innovative and distinctive architecture that reflects a unique built form perspective to reinforce special places, important view termini, institutional and office uses, and help to elevate park and open space edges as important urban places and destinations.

Source: City of Kamloops

5 Promote a safe, comfortable and accessible urban environment

Incorporate Crime Prevention through Environmental Design (CPTED) principles to support natural surveillance and easy access to safe refuge spaces, avoid isolated and disconnected spaces and non-active uses and blank walls, encourage indoor and outdoor transparency, continuous sight lines, and accommodates universal design.

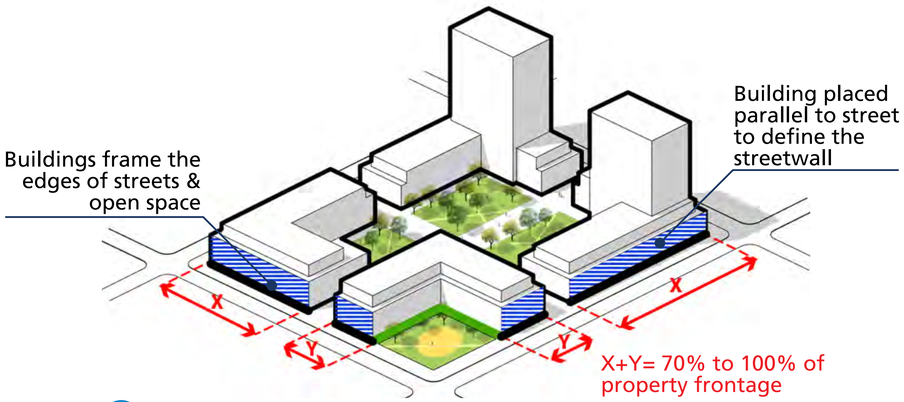
Tanner Spring Park, Portland, USA
Source: DREISEITL consulting

6 Create resilient and sustainable built environments

Integrate sustainable and resilient urban design strategies including green building practices, green roofs, grey water reuse, district energy and other strategies that can enhance quality of life and a healthy environment and natural system.

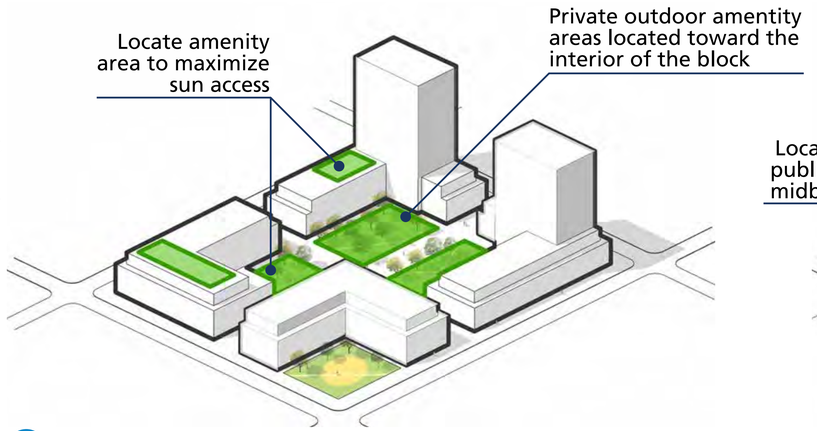
BUILT FORM

SITE ORGANIZATION



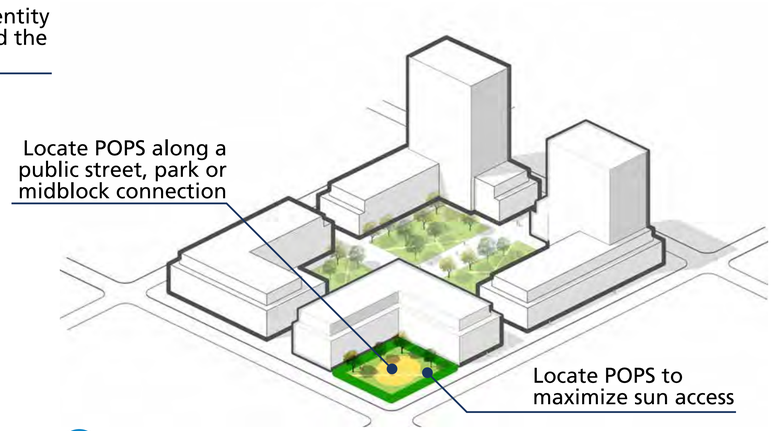
1 Building Placement

Logical and well-placed buildings serve to define and reinforce a legible and a well-ordered public realm and urban environment where people and activity can take precedence.



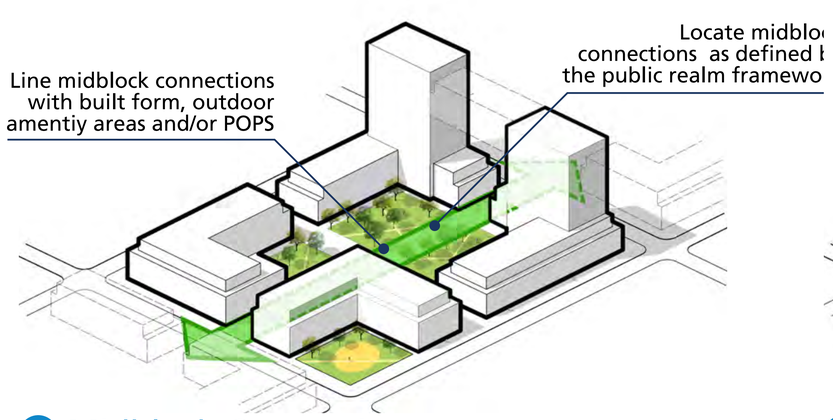
2 Outdoor Private Amenity Area

Well-placed private outdoor amenity areas should be enclosed by built form and located toward the interior of the block as a common and private amenity away from public streets and open spaces.



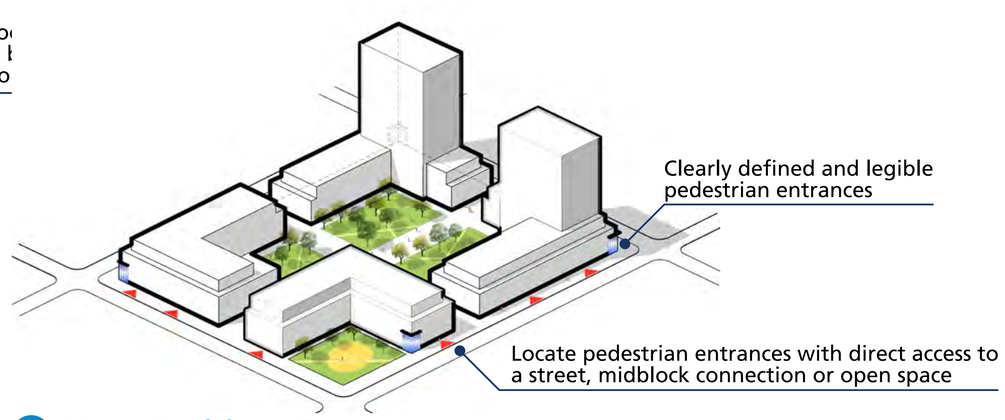
3 Privately Owned Publicly Accessible Open Space (POPS)

POPS provide small augmentations to the overall public realm. POPS can be negotiated with the Town as a community benefit to add and enrich the public realm.



4 Midblock Connections

Mid-block connections serve as a secondary non-street transportation route for pedestrians and cyclists and serve to afford greater choice and variety of mobility routes.



5 Main Building Entrances

Building and pedestrian entrances should be expressed as clear legible elements of the street frontage to support wayfinding and ease of access.

BUILT FORM

GENERAL BUILT FORM GUIDELINES

South Bank Mixed Use, Calgary
Source: Clark Builders

1 Streetwall

The design of the edge of the building facing the street influences the character and scale of the street and the pedestrian experience.

Lululemon Flagship, Vancouver
Source: MCMP Architects

2 Commercial Frontages

Commercial building frontages at the ground level including retail, office and institutional uses contribute to public life on the street.


Vancouver

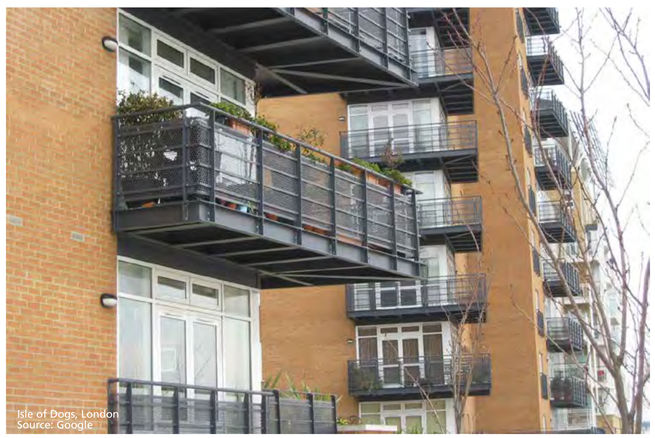
3 Residential Frontages

Residential uses on the ground level with private entrances to the public realm create a semi-public/private interface between the building and public spaces.


Avalon 1, Vancouver
Source: Ed White

4 Articulation

The arrangement of building elements and their color, texture, pattern, and materials contribute to the visual interest in the building design and the overall urban area.


Isle of Dogs, London
Source: Google

5 Balconies

Balconies can contribute to a resident's comfort and enjoyment of their spaces and contribute to visual interest in the building design.

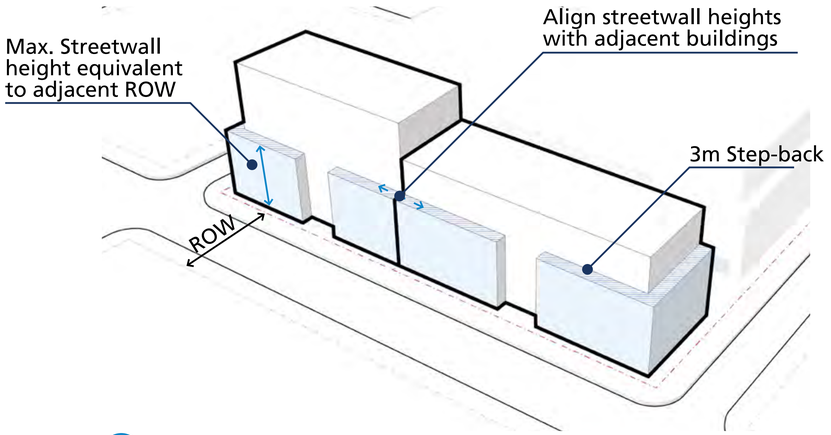

Saltwood, Portland
Source: SERA Architects

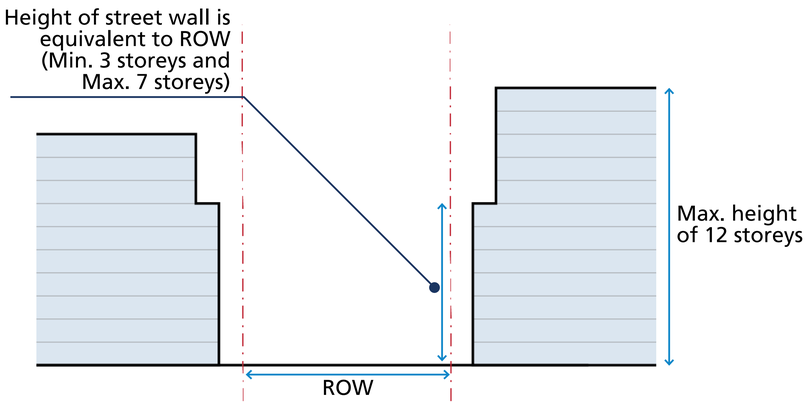
5 Exterior Biulding Materials

Building materials contribute to an overall distinct appearance of a building as well as its long-term performance.

BUILT FORM

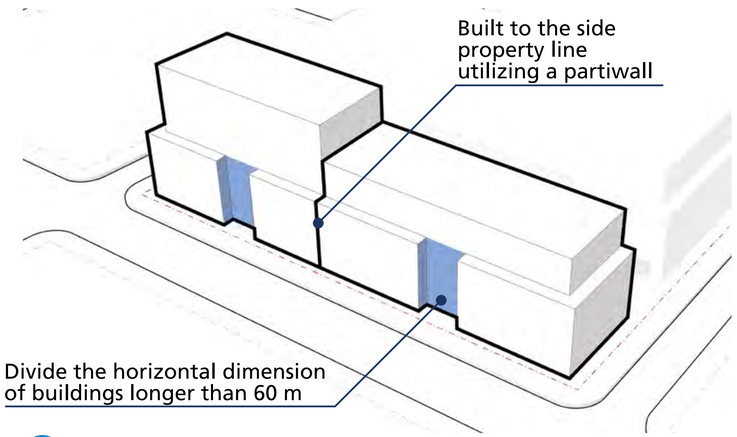
MID-RISE BUILDINGS

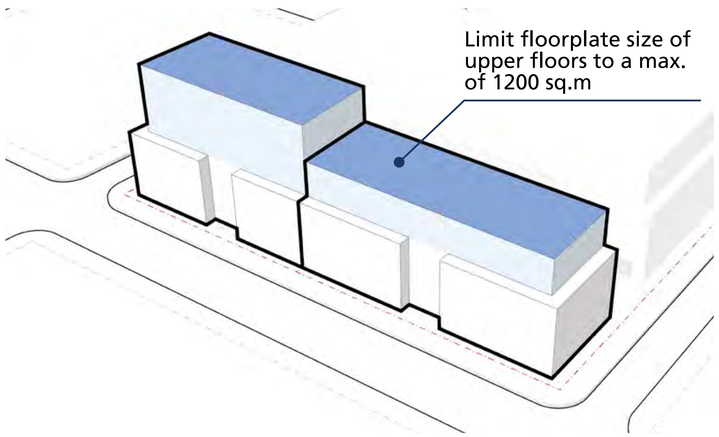




1 Mid-rise Building Height and Scale

Mid-rise buildings provide transit-supportive densities and contribute to a variety of building types, and their form should be compatible with the existing and planned context.



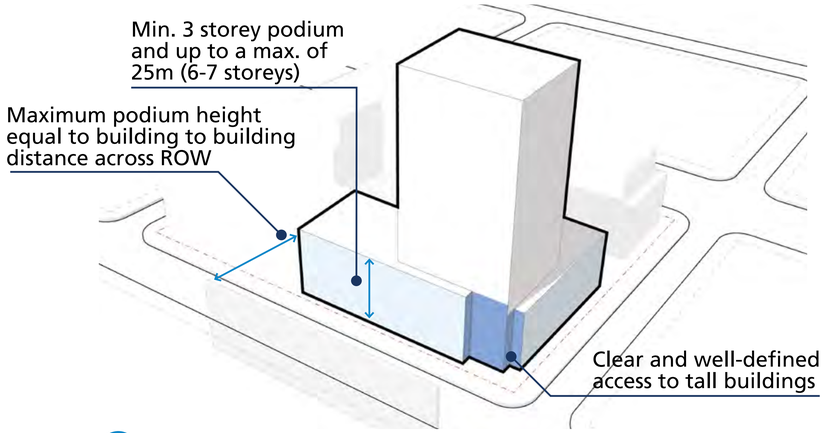


2 Mid-rise Building Massing

The massing of mid-rise buildings can be designed with setbacks, stepbacks, articulation that reduces the visual impact of a building from the pedestrian realm and limits shadowing.

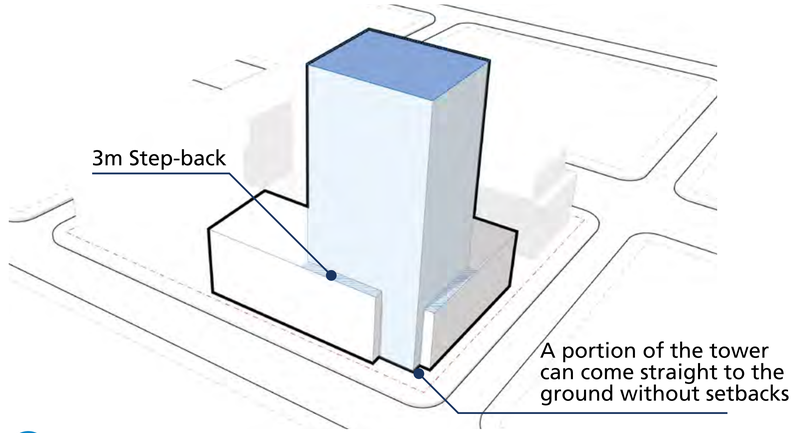
BUILT FORM

TALL BUILDINGS



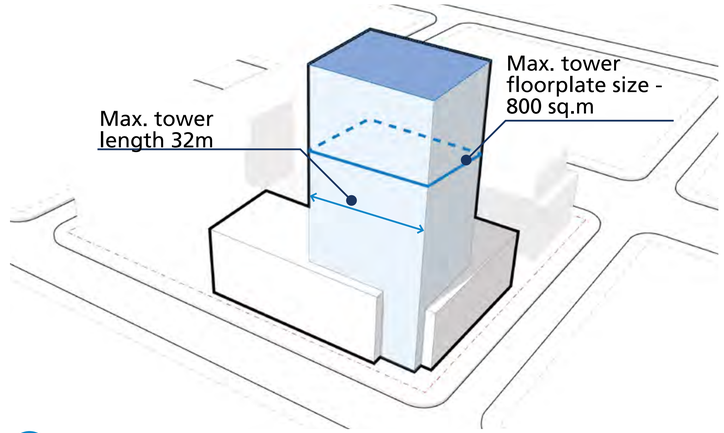
1 Podium Height and Scale

The podium base of a tall building respects the scale and proportion of the adjacent streets.



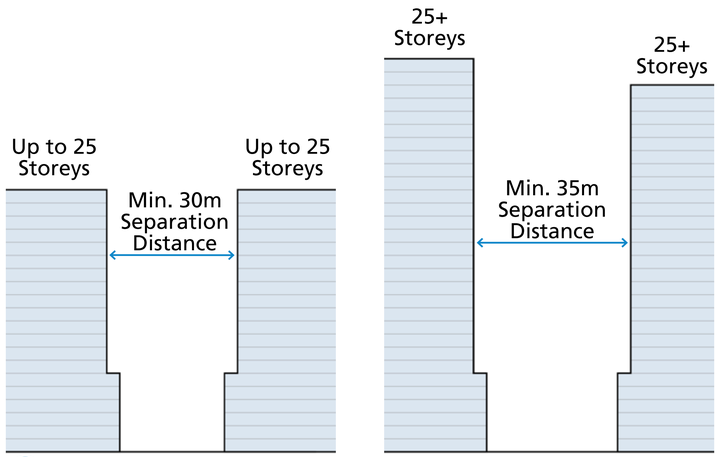
2 Tower Placement

The placement of tall buildings consider shadow impacts, tower separation and helps to reinforce the podium base.



3 Tower Floorplate

Tall buildings are designed to be slender in order to minimize shadow impacts, maximize sun exposure, and enhance the skyline.



4 Tower Separation

Appropriate tower separation distances limit shadow impacts, maintain skyview and ensure privacy for residents.