



**Town of Oakville  
North Oakville Secondary Plan**

**Transit Plan**

**August 2009**



# Town of Oakville

## North Oakville Secondary Plan

### Transit Plan

#### Table of Contents

1.	Introduction	1
1.1	Principles of Transit-First	1
1.2	Transit Oriented Development	2
2.	Transit in Oakville	2
2.1	Oakville Transit Strategy	3
2.2	Oakville Transportation Master Plan	4
2.2.1	Objectives of the Oakville Transportation Master Plan	4
2.3	North Oakville Secondary Plan (NOSP)	5
2.3.1	Road Network	5
2.3.2	Transit Service Concept	5
2.3.3	Ultimate Conditions	5
2.4	Transit-First Policies	6
3.	Transit-First Planning Process	6
3.1	Development Review and Approval Process	7
3.1.1	Modifications to Existing Process	7
3.1.2	Conditions of Draft Plan of Subdivision Approval	9
3.1.3	Development Engineering Procedures and Guidelines Manual	9
3.1.4	Transportation and Traffic Impact Study Requirements	10
3.2	Urban Design Guidelines	10
3.3	Transit-First Planning Guidelines	11
3.4	Service Implementation and Monitoring	11
3.4.1	Phasing	11
3.4.2	Early Implementation Incentives and Programs	12
3.4.3	Assumption of Subdivision	12
3.5	Stakeholder Involvement	13
4.	Sources of Reference Material	14

#### APPENDICES

- A. Developer's Toolkit
- B. Service Design Standards - 2009



# Town of Oakville

## North Oakville Secondary Plan

### Transit Plan

## 1. Introduction

Auto-based development has created streets that are more conducive to the efficient movement of traffic at the expense of transit and pedestrian movement. The Town's planning approach in North Oakville requires the implementation of elements of pedestrian- and transit-friendly development to help alleviate future traffic growth and reduce the need for future road widenings for cars. This requires a design review process with policies and guidelines for North Oakville that reflects the Town's Transit-First planning approach and associated Transit-Oriented Development principles.

Along with the early introduction of transit, the creation of safe and efficient pedestrian routes leading to transit services in the community is one of the underlying principles of Transit-First. The Town's Transit-First planning approach in North Oakville promotes enhanced transit use through the incorporation of design standards and planning criteria in the development review stage that support the early introduction of sustainable transit.

A Transit-First approach to creating and approving development plans in North Oakville is required to ensure that elements of Transit-Oriented Development (TOD) are reflected in future road and transit service designs. TOD encourages mixed-use development within a defined transit node or corridor, with a focus on pedestrian access to transit services and local amenities. TOD is implemented through planning principles that incorporate transit-supportive urban design and land use elements with appropriate implementation strategies.

This document and the Developers' Toolkit will serve to integrate Transit-First elements into the existing development approval process, putting transit first in the North Oakville development review process.

### 1.1 Principles of Transit-First

Transit-First has the benefit of being environmentally friendly and supporting land use intensification and reduced roadway rights-of-way from the very onset of development, which promotes the fundamental objective of environmental sustainability.

Transit-First's emphasis on introducing transit services early in the phasing of new development

is aimed at capturing transit ridership prior to people in new development areas establishing travel habits that rely solely on the automobile. Once the habit of using the automobile is established, the later introduction of transit services needs to be more attractive to the individual than continuing to use their car. This is particularly the case for commuters and students with set travel patterns.

To achieve the early introduction of transit, services need to be phased in so that initial services are convenient and timely, but cost-effective to deliver. An interconnected grid of roads provides the flexibility to more easily operate transit earlier in the development of neighbourhoods and employment areas. These initial transit services will be intensified as demand grows to establish regularly scheduled local routes consistent with the policies established in local transportation plans.

The early introduction of transit services and the need for transit to provide a viable travel alternative at all stages of development is a fundamental element of the transportation policies and network in North Oakville.

As a basic premise of the Transit-First approach, the transportation network and corridor design reflects the priority given to transit.

## 1.2 Transit Oriented Development

Transit-Oriented Development is an important component of the Town's Transit-First planning approach in North Oakville. TOD policies provide direction for area development, in terms of density, mix of uses, built form, walkability and so forth to encourage and support mobility options that benefit both local communities and the municipality as a whole. The objectives of TOD are:

- encourage mixed, transit-supportive land uses with a range of housing choices;
- encourage increased densities and mixed-uses around transit terminals and major transit stops;
- achieve safe, accessible, pedestrian-oriented design;
- make each community distinctive and attractive with a sense of place;
- encourage transit use, without excluding the auto; and
- support comprehensive Transportation Demand Management (TDM).

Transit-Oriented Development, including guidelines pertaining to transit-supportive and non transit-supportive land uses, is presented in more detail in the Developers' Toolkit (see Appendix A).

## 2. Transit in Oakville

Oakville Transit provides service to residents in the urban area of the town, which is the area bounded by Dundas Street to the north, Lake Ontario to the south, Winston Churchill Boulevard to the east and Burloak Drive to the west. As of September 2009, there will be 26 routes offering local service in addition to connections with neighbouring transit services in Mississauga and

Burlington, and inter-regional GO bus and train services.

To optimize the level of customer service, routes are designed using service standards (refer to Appendix B), which have been established to minimize service duplication, transfers and travel time, with some standards specific to GO-destined trips.

Lakeshore corridor GO Transit services influence the schedule of Oakville routes, with scheduled arrival and departure times coincident with many of those GO trains. Specifically, Oakville Transit routes are scheduled to meet most eastbound trains in the morning and most westbound trains in the afternoon. The Oakville GO station is currently a stronger point of convergence for routes than the Bronte GO station.

To complement the fixed-route service, Oakville Transit currently uses senior specials, express routes, school specials and accessible, door-to-door care-A-van service. Minimum frequencies for fixed-routes are 20, 30 and 60 minutes for peak, mid-day, and evening/weekend service, respectively.

Transit priority measures have not yet been implemented in Oakville, nor have high occupancy vehicle (HOV) lanes or reserved bus lanes (RBL).

## 2.1 Oakville Transit Strategy

Town Council has identified transit as an integral part of the transportation and land use plans for Oakville. The transit strategy is generally based on the Oakville Transportation Master Plan (TMP) and the town-wide transit strategy presented in the TMP.

The transit network and hierarchy of services in the North Oakville transit strategy relate directly to the land-use designations and road network in the Town's North Oakville Secondary Plan (NOSP) by reflecting the intensity and mix of uses in corridors and utilizing the continuous and connected grid network of roads. Consequently, transit services in North Oakville are expected to serve planned development and operate effectively and efficiently.

At the top of the hierarchy is the GO Rail service, meeting the needs of the inter-regional traveler. Currently focused primarily on commuter trips to Toronto, increasing levels of service including reverse flow trips, will make GO Rail an effective choice for a wider range of inter-regional travel, including mid-day trips and trips to eastern portions of the GTA, as well as Mississauga, Burlington and Hamilton.

GO Transit has also begun to expand its inter-regional bus network, and expanded services in the Highway 407 and Highway 403 corridors will eventually lead to the development of bus rapid transit (BRT) services with high-frequency connections to much of the GTA. Effective connections to these services will be an important role for Oakville Transit, just as connections to GO Rail service are now.

There are three existing stations in the Lakeshore GO corridor that are used by Oakville residents - the Bronte, Oakville and the Clarkson GO stations. The Clarkson GO station is located in West Mississauga, but is heavily used by residents in the southeast area of Oakville, namely for connections at Union Station. The Oakville GO Station also serves as an endpoint for a bus route to North Toronto, which travels via the 403.

In addition, there is a 407 GO bus service that currently serves park-and-ride stops at Highway 407 interchanges with Trafalgar Road, Dundas Street and Bronte Road. There is also a planned park-and-ride facility at the Neyagawa Boulevard / 407 interchange. Oakville Transit routes will serve these terminals as development occurs north of Dundas Street.

Within Oakville, the planned hierarchy includes high-frequency services in the major corridors – Dundas and Trafalgar – supported by HOV lanes that work to reduce transit delays and improve travel for commuters who share their ride. In key locations, or more broadly in the longer term, certain facilities will be converted to Reserved Bus Lanes (RBL) where the volume of transit vehicles and potential delay warrants.

Trafalgar Road, between the QEW and Oakville GO station on the Lakeshore West line, is a prime early candidate for RBL. Ongoing work with the Region of Halton has advanced the vision of transit in centre median exclusive bus lanes. This transit vision supports the mix and intensity of uses for the Trafalgar Urban Core by accommodating a pedestrian-friendly streetscape and high-frequency transit that connects to inter-regional service along Highway 407, the Oakville GO station to the south, and a variety of mixed uses along Trafalgar Road, including the Uptown Core, Sheridan College, and the planned Mid-Town Core.

## 2.2 Oakville Transportation Master Plan

The Oakville TMP has taken a balanced approach to the development of the transportation network, and the availability of alternative choices for commuters, students, seniors, work trips, shopping trips, school trips and medical trips. Transit is regarded as an important tool in preventing congestion and environmental degradation and keeping Oakville livable. As Oakville grows, it is expected to change considerably, but without transit demand, more and wider road connections will grow. To help support continued economic growth and development, the Oakville TMP identifies a transportation strategy that encourages complementary and integrated local and inter-regional transit.

### 2.2.1 Objectives of the Oakville Transportation Master Plan

The Town of Oakville TMP establishes policy direction and infrastructure plans in Oakville to 2021. The objective of the TMP is to provide a transportation strategy that:

- respects the natural, social and cultural environments;
- promotes economic viability and recognizes the vital role of goods movement;
- establishes implementation priorities and recognizes available funding sources;
- supports and assists in achieving the established community goals in the Town of Oakville Official Plan;
- promotes a more sustainable transportation system and good planning principles;
- meets forecasted demands at acceptable levels of service;
- reflects goals for transportation demand management and the provision of alternative modes of travel, and recognizes changing and emerging technologies in transportation; and
- promotes strong local transit that:
  - provides local mobility for all residents;



- supports GO Transit rail and bus corridor services; and
- connects conveniently to future inter-regional transit initiatives in the Region of Halton and the GTA.

The TMP is a foundation document for this Transit Plan.

## 2.3 North Oakville Secondary Plan (NOSP)

Future development north of Dundas Street in the Town of Oakville warranted particular consideration in the TMP due to the vast geographic area of North Oakville and the level of development that is anticipated.

For these reasons, the NOSP has been completed in parallel with the TMP, and the recommendations of the two studies have been integrated and coordinated. The two studies are the foundation for the implementation of Transit-First principles and the establishment of transit corridors in North Oakville. The NOSP serves as an additional foundation document for this Transit Plan.

### 2.3.1 Road Network

The NOSP accommodates automobiles, transit vehicles, pedestrians and cyclists by providing an efficient network of roads and design elements that enhance the street for all users. The result is a comprehensive plan that promotes direct travel, reduces the potential for traffic congestion, supports several modes of travel, and provides a package of roadway design treatments. Cross-sections of transit streets have been provided in the Developers' Toolkit (Appendix A).

### 2.3.2 Transit Service Concept

The recommended transit service concept for Oakville is shown in the Developers' Toolkit (Appendix A), with the North Oakville concept emphasized in Exhibit 5A and 5B. Transit services in this strategy are designed in two layers: corridor services, comprising Primary and Secondary Corridors, and Community Services. The hierarchy of services, in terms of the function and frequency of the transit service associated with each, relate directly to the land use and densities that are permitted.

This hierarchy of transit services is interconnected, with connections to transit terminals, major destinations, and neighbourhoods within North Oakville, and communities and planned transit facilities outside North Oakville. This will make travel by transit convenient and attractive and maximize transit ridership potential.

Corridor services, including Primary and Secondary Corridors, and Community Services are presented in detail in the Developer's Toolkit (Appendix A).

### 2.3.3 Ultimate Conditions

It is possible (and may be highly desirable) for the plan to evolve and be enhanced over time. A key element of its evolution will be the integration of services in Oakville with a broadly expanded network of services throughout the GTA, such as enhanced all-day rail service on the Lakeshore

line, more frequent inter-regional bus service on transit way facilities in the highway corridors, and the completion of other regional initiatives in Brampton, Mississauga, York and Toronto.

The transition to an enhanced transit plan would involve:

- several community corridors promoted to secondary corridors, meaning they have more frequent services, and benefit from the introduction of some transit priority; and
- several secondary corridor services increased, changing their status to primary corridors.

In the primary corridors, signal priority and transit priority infrastructure will be more prevalent.

## 2.4 Transit-First Policies

The NOSP identifies transit requirements in Oakville and policies related to Transit-First development. Transit-First plan submissions are to be reflected in the procedures established in the Town of Oakville's Development Engineering Procedures and Guidelines Manual as an element of subdivision engineering approvals. The Town policies, which set out the requirements for approval, reflect the Transit-First design requirements of Oakville Transit. Approval will be required from Development Services, in consultation with Oakville Transit for policies regarding the:

- location of bus stops, transit nodes and terminals;
- layout of bus stops and the provision of pedestrian amenities;
- ultimate build-out conditions for primary and secondary corridors and intersections;
- identification of pedestrian and bicycle routes to bus stops; and
- implementation of new routes and staging requirements, including bus turning facilities until full build-out of the road network in the development area.

## 3. Transit-First Planning Process

To ensure that Transit-First principles are applied in the design of future development in Oakville, a review process will be implemented to engage stakeholders in a consistent and effective manner. The review team will comprise Town staff who will assess the development plans against design standards and the impacts of increased transit levels on roadways. Approvals will be granted only when plans fully incorporate the required elements of the Transit-First Plan in the immediate and ultimate build-out of the development.

Transit-First requires creating a regulatory environment that encourages rather than discourages transit-oriented development by promoting development opportunities through proactive involvement with the development community. To achieve Transit-First development, Oakville needs to do more than passively allow transit to develop over time. Oakville should encourage the development community to participate in Transit-First development and actively pursue partnerships with stakeholders. The process is outlined through the following steps:

- review and approval process

- urban design guidelines
- transit-first planning guidelines
- service implementation and monitoring
- stakeholder involvement.

## 3.1 Development Review and Approval Process

The Town of Oakville Development Services Department focuses on growth-related development and the provision of urban infrastructure review, approvals and inspections. This department provides technical comments on applications being processed by Planning Services. Once this urban infrastructure is built and meets town standards for assumption, ownership moves from the developer to the Town and the Town's Infrastructure Services Commission assumes responsibility for the maintenance and upkeep as outlined through Town standards. This document outlines a process that integrates the provision of transit design elements into the existing infrastructure review process.

### 3.1.1 Modifications to Existing Process

To facilitate the development of a transit-supportive urban structure the following measures shall be reflected in all development proposals:

- development, particularly at transit stops and stations, shall be designed at densities supportive of transit and reflect the type and frequency of transit service planned for the area and/or corridor;
- provision of a road pattern and related pedestrian routes that provide for direct pedestrian access to transit routes and stops;
- documentation of walking distances to ensure that all areas within the Planning Area are adequately serviced by transit;
- provision for transit stops and bus bays on arterial, avenue and connector roads, and where appropriate, the incorporation of these features into road design requirements;
- the relevant provisions of the NOSP Section 7.5; and
- the policies and objectives of the Halton Transportation Master Plan.

Development plans shall be designed with specific regard to the safe, convenient and efficient provision of public transit.

As a basis for the development of the system of transit services, the Town has prepared its Transit Plan, which identifies the network and frequency of transit in North Oakville.

The Transit Service Concept in Exhibit 5A and 5B of the Developers' Toolkit, which illustrates a hierarchy of Primary and Secondary Transit Corridors and Community Services, serves as the basis for the development of the Functional Servicing Study and subsequent Transit Facilities Plans.

The development review and approval process will be linked to milestones in the planning

process, and outline applicant requirements as an application moves through the process.

The two major components developers must submit are a Functional Servicing Study and a Transit Facilities Plan.

As established during the applicant's pre-consultation process, a Functional Servicing Study will be required for most development applications as part of a complete application. From a transit perspective, they must include:

- ultimate location of transit streets;
- ultimate location of transit stops, by type, and the associated passenger amenities, and demonstration of the incorporation of these features into road design requirements, where appropriate;
- intersection locations for transit-priority treatment, where applicable;
- ultimate connections to adjacent development areas;
- demonstration that roadway design will appropriately and adequately accommodate anticipated transit services at ultimate development to the satisfaction of the Town;
- demonstration that the road pattern and related pedestrian routes provide for direct pedestrian access to transit routes and stops to the satisfaction of the Town;
- documentation of walking distances to ensure that all areas within the Planning Area are adequately serviced by transit to the satisfaction of the Town.

A Transit Facilities Plan must be submitted and reviewed to the Town's satisfaction prior to draft approval. A Transit Facilities Plan must include:

- location and design of transit streets;
- location and design of transit stops, and related passenger amenities for each bus stop;
- location and design of transit-priority treatments at intersections, where applicable;
- demonstration that roadway design will appropriately and adequately accommodate anticipated transit services to the satisfaction of the Town; and
- associated property requirements.

The role of the Town is to provide the following framework to standardize the procedure for the review of developments with respect to the Town's Transit-First planning approach. To achieve this:

1. Applicants will be provided with the Developers' Toolkit. The applicant is to be provided with the Developer's Toolkit at an initial pre-consultation meeting.
2. Applicants will submit a Functional Servicing Study and Transit Facilities Plan to the Town's review team who will verify that a draft plan of subdivision conforms to the Town's Transit Plan at the initial phase of development, and all subsequent phases up to the ultimate build-out of the development.

To ensure that the existing approvals process is conducive to the Town's Transit-First principles, the previous procedure for plan approval has been modified to include the following:

- review of plan submissions (within a Transit-First context) by Development Services, in consultation with Oakville Transit, within the established Town of Oakville Development Engineering Procedures and Guidelines;
- addition of Transit-First elements within the existing urban design standards and servicing requirements for municipal roads;
- general elements for Transit-First planning and design criteria;
- requirements for Composite Above Ground / Utility Plan submissions after draft approval; and
- requirements for planning and staging of new developments in a Transit-First context.

Development Services, in consultation with Oakville Transit will review development plans with regard to the phasing of transit services at all stages of development, while ensuring the Town's Transit Plan is reflected at each of these stages.

### 3.1.2 Conditions of Draft Plan of Subdivision Approval

The Town will require conditions of draft plan of subdivision approval to ensure appropriate regard for the Town's Transit-First planning principles and implement approved Transit Facilities Plans. Conditions of approval may relate to:

- the phasing of the subdivision to maintain a contiguous transit service area and avoid "leap-frogging" of development that can result in lengthy transit routes with limited ridership potential;
- the phasing of development to require "transit streets" (i.e., Avenues, Connectors) to be constructed first in the phasing of development;
- the phasing of housing construction to require that houses on transit streets are constructed first;
- require that transit streets be constructed to provide a needed transit link to the satisfaction of the Town, even where transit streets may not be part of an initial phase;
- require upgraded roadways that will appropriately accommodate transit vehicles during initial or interim phases to the satisfaction of the Town; and
- agreeing to implement an approved Transit Facilities Plan.

In addition, where it has been mutually agreed between the Developer and the Town, a contribution by the developer to the Town's early implementation initiatives and programs for transit services will be included.

### 3.1.3 Development Engineering Procedures and Guidelines Manual

The Development Engineering Procedures and Guidelines Manual will include the following additional clauses:

Transit Facilities Plan - The Town's Transit Plan specifies required transit corridors, facilities and amenities, and their placement. The above ground services plan may be used to illustrate the location of transit corridors and facilities within a plan of subdivision. Transit Corridors should be

defined, and transit facilities should be identified for initial, interim and full build-out stages, where applicable. The Transit Facilities Plan is to be submitted to Development Services for approval. The applicant shall contact Development Services a minimum of 90 days prior to the registration of the plan of subdivision to allow for the review and ordering of materials through Oakville Transit in conformity with an approved Transit Facilities Plan.

Schedule "M" - The components of the Transit Facilities Plan shall be added to the required cost estimates.

Plan Submission Review and Approval - Oakville Transit approval of the following transit requirements shall be required for initial, interim and full build-out stages of development, where applicable:

- location and design of transit streets;
- location and design of transit stops, and related passenger amenities;
- phasing of sidewalk installations and pedestrian routing plans to transit stop locations; and
- transit-priority treatments at intersections.

Assumption Clearances - Oakville Transit to be added to the list of Town Departments required to provide clearance prior to the assumption of the subdivision by the Town. This circulation for clearance will ensure that deficiencies are addressed by the applicant.

### 3.1.4 Transportation Impact Study Requirements

The Town's requirements for Transportation Impact Studies have been modified to reflect the Town's Transit-First planning principles and to specifically identify requirements with respect to the review and assessment of existing transit capacity and the nature of future required transit improvements at interim and ultimate planning horizons.

## 3.2 Urban Design Guidelines

Urban Design Guidelines have been established for implementation of the policies in the North Oakville Secondary Plan. They are intended to provide Transit-First design parameters for the public and private sector in preparing development concepts, as well as general design direction in the assessment of development applications.

The physical design concepts included in the guidelines illustrate typical situations. They are not intended to be prescriptive, but rather to provide examples of appropriate approaches to physical design issues.

The guidelines are structured as follows, providing key directions and areas where there can be variations regarding:

- vision and guiding design principles;
- general urban design guidelines with respect to built form and open space;
- urban core areas;

- neighbourhoods in general urban and suburban areas;
- neighbourhood centres;
- transitional areas; and
- employment areas.

### 3.3 Transit-First Planning Guidelines

The Town will provide applicants with the following materials to ensure that the Town's Transit-First planning approach is implemented:

- identification of transit streets from recommended transit concepts in the TMP and NOSP;
- boulevard and ROW guidelines by road type;
- thresholds for transit service implementation;
- identification of transit service levels required by corridor, based on residential and employment density, which refer to the ultimate build-out conditions to achieve the service concept in the Oakville TMP;
- service design standards and technology levels;
- transit intersection technology and stop type;
- transit amenities by bus stop type; and
- planned locations of transit stations, transit nodes, and major and minor bus stops.

These guidelines are presented in the Developers' Toolkit (Appendix A).

### 3.4 Service Implementation and Monitoring

#### 3.4.1 Phasing

Overall, development in North Oakville will be phased to maintain a contiguous transit service area and avoid "leap-frogging" of development that can result in lengthy transit routes with limited ridership potential.

With respect to roadway infrastructure, "transit streets" will be required to be constructed in the first phase of development. Where applicable, the Town will encourage construction of houses on transit streets first when initiating new construction.

As an appropriate road system must be in place, so where transit streets are not part of an initial or interim phase of development, the Town may require that transit streets be constructed to provide a needed transit link. Alternatively, other roadways may be required to be constructed to standards that will appropriately accommodate anticipated transit vehicles in the initial or interim phase.

In general, thresholds for the initial introduction of transit services in a draft plan of subdivision may comprise:

- a minimum 100 occupied residential units for targeted destination service (e.g., shuttle); and
- a minimum 250 occupied residential units for local service.

These thresholds will be established based on monitoring of building permits that are issued by the Town.

### 3.4.2 Early Implementation Incentives and Programs

As part of promoting the early implementation of sustainable transit services in North Oakville, the Town will consider and encourage, as appropriate, any of a number of initiatives aimed at supporting the implementation of appropriate transit services at the outset of development. Appropriate incentives and programs will be identified by Town staff in consultation with the applicant as part of the development review process when reviewing development applications and shall be mutually agreed upon as a condition of approval.

Early implementation incentives and programs for consideration and possible implementation in North Oakville include:

- transit passes for homebuyers;
- Sustainability Subsidy (i.e., developer funds the gap between the target and actual revenue-to-cost (R/C) ratio);
- marketing strategy for new home sales;
- developer-funded shuttle services (e.g., commuter and school);
- Transportation Management Association or Ratepayer Association; and
- employer-provided transit passes.

These potential initiatives are presented in further detail in the Developer's Toolkit.

### 3.4.3 Assumption of Subdivision

Following completion of construction, the "Certificate Recommending the Assumption of the Subdivision by the Town" is submitted to the Development Services Department, and is circulated to a number of agencies and Town Departments, which shall include Oakville Transit. Should there be deficiencies between the construction of transit facilities when compared to the approved Transit Facilities Plan, the onus is on the applicant to ensure that these deficiencies are addressed.

Oakville Transit will be included on the list of Town Departments that can deem a subdivision to be deficient in terms of the application of design standards, as part of obtaining this approval.



## 3.5 Stakeholder Involvement

Responsibilities for each of the stakeholders in this process need to be clearly defined. While the priorities for some stakeholders are not currently related to transit, an understanding of stakeholder priorities is important in creating a successful, collaborative effort.

Stakeholder relations in the Transit-First process will involve:

- building strategic partnerships with neighbouring municipalities, GO Transit, Metrolinx and MTO (Highway 407 transit-way) to achieve a seamless inter-regional transit service, implement aggressive transit priority initiatives and other Travel Demand Management measures and collaborate on the Smart Commute program;
- establishing the role of Oakville Transit as a stakeholder in the engineering approval process, partnering with other Town Departments;
- collaborating with regional partners—municipalities, GO Transit, Metrolinx, MTO—on consistent roadway and transit priority standards (including HOV and RBL) to facilitate seamless transit service throughout the GTA, and Greater Golden Horseshoe; and
- communicating with applicants regarding submission requirements.

## 4. Sources of Reference Material

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# **APPENDIX A**

## **DEVELOPER'S TOOLKIT**

### **TRANSIT PLAN**

#### **NORTH OAKVILLE SECONDARY PLAN**

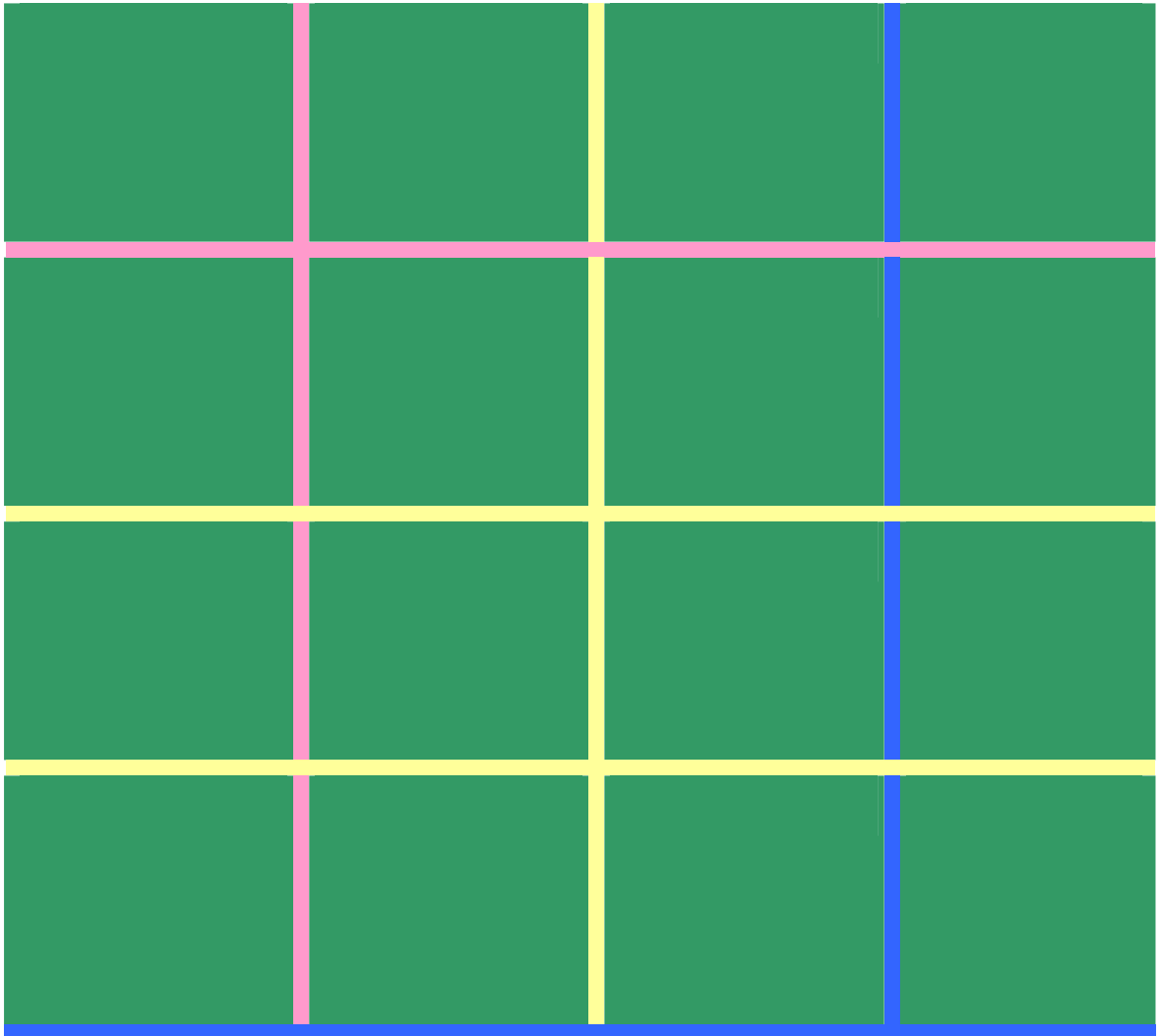


## North Oakville Secondary Plan

### Transit Plan

# Developer's Toolkit

Final Draft - August 2009







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## Transit Plan

### Developer's Toolkit

**FINAL DRAFT**

## Table of Contents

1. Transit-First Planning Process	1
1.1 Principles of Transit-First	1
2. Transit-Oriented Development	2
2.1 Transit-Supportive Land Uses	2
2.2 Non Transit-Supportive Land Uses	2
3. Transit Streets and Corridors	5
3.1 Road Network	5
3.2 Transit Service Concept	6
3.2.1 Corridor Service	6
3.2.2 Primary Transit Corridors	6
3.2.3 Secondary Transit Corridors	7
3.2.4 Local Services	7
3.3 Roadway Cross-Sections	12
4. Transit Stations and Stops	20
4.1 Transit Terminals	20
4.2 Transit Nodes	20
4.3 Transit Stops	29
5. Passenger Amenities by Bus Stop Type	31
6. Service Implementation and Monitoring	33
7. Early Implementation Incentives and Programs	35
7.1 Transit Passes for Homebuyers	35
7.2 Sustainability Subsidy	35
7.3 Developer-Funded Shuttle Services	36
7.4 Transportation Management Association / Ratepayer Association	36
7.5 Employer-provided Transit Passes	36
8. Applicant Submission Requirements	37

# North Oakville Secondary Plan

## Transit Plan

### Developer's Toolkit

**FINAL DRAFT**

### Table of Exhibits

Exhibit 1 ~ Transit-Supportive Land Uses	3
Exhibit 2 ~ Non Transit-Supportive Land Uses	4
Exhibit 3 ~ Identification of Transit Corridors	5
Exhibit 4 ~ TMP Transit Strategy	8
Exhibit 5A ~ North Oakville East Transportation Plan	9
Exhibit 5B ~ North Oakville West Transportation Plan	10
Exhibit 6 ~ Oakville Transit Service Route Map (September 2009)	11
Exhibit 7 ~ Minor Arterial / Transit Corridor (26.0m ROW) - General Urban and Employment Lands	13
Exhibit 8 ~ Avenue / Transit Corridor (22.0m ROW) – General Urban and Suburban Area	14
Exhibit 9 ~ Avenue / Transit Corridor (22.0m ROW) – Employment Lands	15
Exhibit 10 ~ Avenue / Transit Corridor (24.0m ROW) – Urban Core Area	16
Exhibit 11 ~ Connector / Transit Corridor (19.0m ROW) - General Urban Area	17
Exhibit 12 ~ Local Road (17.0m ROW) - Residential	18



# North Oakville Secondary Plan

## Transit Plan

### Developer's Toolkit

**FINAL DRAFT**

### Table of Exhibits (Continued)

Exhibit 13 ~ Local Road (20.0m ROW) - Employment Lands	19
Exhibit 14 ~ Transit Node / Terminal	21
Exhibit 15 ~ Stop A, Sheltered Info Stop	22
Exhibit 16 ~ Stop B, Info Stop	23
Exhibit 17 ~ Stop C, Comfort	24
Exhibit 18 ~ Stop D, Basic	25
Exhibit 19 ~ Typical Intersection Plan for Avenue and Connector Transit Corridors in Urban Core	26
Exhibit 20 ~ Typical Intersection Plan for Neighbour Centre	27
Exhibit 21 ~ Transit Considerations by Transit Streets	28
Exhibit 22 ~ Warrants for Bus Stop Levels of Amenities	29
Exhibit 23 ~ Passenger Amenities by Bus Stop Type	32
Exhibit 24 ~ Temporary Bus Loop Layout (Typical)	34
Exhibit 25 ~ Transit Facilities Plan (for Illustration Purposes Only)	40



# 1. Transit-First Planning Process

Auto-based development has created streets that are more conducive to the efficient movement of traffic at the expense of transit and pedestrian movement. The Town's planning approach in North Oakville requires the implementation of elements of pedestrian- and transit-friendly development to help alleviate future traffic growth and reduce the need for future road widenings for cars. This requires a design review process with policies and guidelines for North Oakville that reflects the Town's Transit-First planning approach and associated Transit-Oriented Development principles.

Along with the early introduction of transit, the creation of safe and efficient pedestrian routes leading to transit services in the community is one of the underlying principles of Transit-First. The Town's Transit-First planning approach in North Oakville promotes enhanced transit use through the incorporation of design standards and planning criteria in the development review stage that support the early introduction of sustainable transit.

A Transit-First approach to creating and approving development plans in North Oakville is required to ensure that elements of Transit-Oriented Development (TOD) are reflected in future road and transit service designs. TOD encourages mixed-use development within a defined transit node or corridor, with a focus on pedestrian access to transit services and local amenities. TOD is implemented through planning principles that incorporate transit-supportive urban design and land use elements with appropriate implementation strategies.

This document will serve to integrate Transit-First elements into the existing development approval process, putting transit first in the North Oakville development review process.

## 1.1 Principles of Transit-First

Transit-First has the benefit of being environmentally friendly and supporting land use intensification and reduced roadway rights-of-way from the very onset of development, which promotes the fundamental objective of environmental sustainability.

Transit-First's emphasis on introducing transit services early in the phasing of new development is aimed at capturing transit ridership prior to people in new development areas establishing travel habits that rely solely on the automobile. Once the habit of using the automobile is established, the later introduction of transit services needs to be more attractive to the individual than continuing to use their car. This is particularly the case for commuters and students with set travel patterns.

To achieve the early introduction of transit, services need to be phased in so that initial services are convenient and timely, but cost-effective to deliver. An interconnected grid of roads provides the flexibility to more easily operate transit earlier in the development of neighbourhoods and employment areas. These initial transit services will be intensified as demand grows to establish regularly scheduled local routes consistent with the policies established in local transportation plans.

The early introduction of transit services and the need for transit to provide a viable travel alternative at all stages of development is a fundamental element of the transportation policies and network in North Oakville.

As a basic premise of the Transit-First approach, the transportation network and corridor design reflects the priority given to transit.

## 2. Transit-Oriented Development

Transit-Oriented Development (TOD) is an important component of the Town's Transit-First planning approach in North Oakville. TOD policies provide direction for area development, in terms of density, mix of uses, built form, walkability and so forth. This will create mobility options that benefit both local communities and the municipality as a whole. The objectives of TOD are:

- encourage mixed, transit-supportive land uses, including a range of housing choices
- encourage increased densities and mixed-uses around transit terminals and major transit stops
- achieve safe, accessible, pedestrian-oriented design
- make each community distinctive and attractive
- encourage transit use, without excluding the auto
- support comprehensive Transportation Demand Management (TDM)

### 2.1 Transit-Supportive Land Uses

Transit-supportive land use can contribute to increased use of transit in addition to creating a more efficient transportation network. Transit-supportive land uses should be located in areas that are designated as transit nodes and corridors. Transit-oriented development at major transit nodes and along important transit corridors should reflect:

- high employment and residential densities
- attractive and direct pedestrian connections
- placement of building entrances oriented to allow convenient access to transit stop;
- encouragement of transportation demand outside of peak hours or in the opposite direction of the peak traffic flow
- a "park once" environment

Examples of transit-supportive development are provided in Exhibit 1.

### 2.2 Non Transit-Supportive Land Uses

Auto-oriented planning and design should not be encouraged in areas of transit-oriented development. Instead, the focus should be on pedestrian and transit trips. Land uses that are auto-oriented typically:

- generate a high proportion of auto trips
- are designed for auto use
- are low-density developments on large parcels of land

- have large, surfaced parking lots
- lack adequate pedestrian connections
- do not create travel demand outside the peak hours

Non transit-supportive land uses should be located away from transit nodes and corridors to encourage and maintain transit supportiveness at these locations. Examples of non transit-supportive development are provided in Exhibit 2.

## Exhibit 1 ~ Transit-Supportive Land Uses

Land Use	Example
Employment	Commercial office Call centres Research facilities Light manufacturing
Institutions	High schools Universities and colleges Hospitals Medical clinics and health care facilities Libraries Cultural facilities
Residential	High-rise and walk-up apartments Rowhouses and street townhouses Affordable housing Small-lot detached homes
Retail	Pedestrian-oriented street retail Shopping centre retail with pedestrian connections
Service	Childcare facilities Personal care services Restaurants and cafes
Social	Recreation centres Theatres

## Exhibit 2 ~ Non Transit-Supportive Land Uses

Land Use	Example
Auto-Oriented	Auto service shops Auto sales and display Car washes Drive-thru's Service stations Surfaced parking lots
Low-Density Industrial	Recycling depots Warehouses Storage facilities
Low-Density Residential	Single-detached homes on large lots
Low-Density Commercial	Big box retail
Other	Regional parks Funeral homes Large format faith facilities Sports complexes

### 3. Transit Streets and Corridors

The Oakville Transportation Master Plan (TMP) and North Oakville Secondary Plan (NOSP) form the basis of transportation planning in North Oakville, in part, by identifying a network of transit corridors.

#### 3.1 Road Network

The NOSP accommodates automobiles, transit vehicles, pedestrians and cyclists by providing an efficient network of roads and design elements that enhance the street for all users. Streets that have been designated as transit corridors are presented in Exhibit 3. The result is a comprehensive plan that promotes direct travel, reduces the potential for traffic congestion, supports alternative modes of travel, and provides a package of transit-supportive design treatments.

Exhibit 3 ~ Identification of Transit Corridors

Corridor Type	Roadways	Service Frequency	Hierarchy of Connections
Primary Transit Corridors	Dundas Street Trafalgar Road	2-5 minutes RBL 3-10 minutes HOV	These services would operate beyond the Town's boundaries, serving Burlington, Mississauga, Milton and north Halton and provide primary connections to interregional transit services at the Oakville, Clarkson and Bronte GO Train stations, and the stations along Highway 407 at Trafalgar and Bronte.
Secondary Transit Corridors	New Burnhamthorpe Road Neyagawa Boulevard Sixth Line Third Line Bronte Road Avenues	10-15 minutes	Connections to primary corridors  Connections to community services
Local Service	Connector and local roads	15-30 minutes	Connections with primary transit corridors  Connections with secondary transit corridors

## 3.2 Transit Service Concept

The recommended TMP Transit Strategy for Oakville is shown in Exhibit 4, with the North Oakville Secondary Plan concept illustrated in Exhibits 5A and 5B. The current (September 2009) transit routes are shown in Exhibit 6.

Transit services are designed in two layers: corridor services, comprising Primary and Secondary Corridors, and Community Services. The hierarchy of these services, in terms of the function and frequency of the transit service associated with each, relate directly to the surrounding land use.

These transit services create connections to terminals, major destinations, and neighbourhoods within North Oakville, and to communities and planned transit facilities outside North Oakville. This will make travel by transit convenient and attractive and thus maximize the ability of residents and employees to use transit.

### 3.2.1 Corridor Service

Corridor services provide the basic grid of the service, including inter-municipal connections and connections to the inter-regional network of transit services. Primary and secondary corridors are distinguished by the level of service they offer, and are generally consistent with the arterial or collector road on which they operate.

In addition, the design of transit streets - Arterials, Avenues and Connectors - have been designed specifically to accommodate the function and frequency of the transit service that is planned. Therefore, facilities in the corridors appropriately reflect the priority of corridors. For example, in the Trafalgar Road corridor, where there is a combination of local, regional and inter-regional services, a median transit-way can be accommodated. Along Primary Transit corridors, effective and efficient transit is supported through the potential for High-Occupancy Vehicle (HOV) lanes and transit priority measures at intersections.

### 3.2.2 Primary Transit Corridors

Primary Transit Corridor services provide high-frequency service connections within Oakville, as well as inter-municipal connections and connections to the inter-regional network of services.

Primary Transit Corridors are identified along Dundas Street and Trafalgar Road within the town. These services would operate beyond the town's boundaries, serving Burlington, Mississauga, Milton and north Halton. These Primary Transit Corridors connect the Palermo and Uptown Core areas on Dundas Street at Bronte Road and at Trafalgar Road. They also provide primary connections to inter-regional transit services at the Oakville, Bronte and Clarkson GO Train stations, and the terminals along Highway 407 at Trafalgar Road, Neyagawa Boulevard and Bronte Road.

Transit service in the Primary Transit Corridors is shown with service intervals ranging from two to five minutes. This means that routes operating in these corridors will combine to provide these service levels. It does not necessarily mean that a single route will operate at that level.

To ensure that services in these Primary Corridors operate with minimum delay, additional infrastructure will be used to provide transit priority. This will include Reserved Bus Lanes (RBL) and HOV lanes, as well as signal priority measures. This is particularly important close to major destinations such as GO stations, where converging routes may combine in the range of 30 to 40 buses per hour. Short segments of reserved bus lanes may be used in some key areas.



For the Primary Transit Corridors, corresponding infrastructure requirements through North Oakville are:

- initially high-frequency bus services, and ultimately separate transit-way facilities along Highway 407, to provide for inter-regional transit connecting urban centres in Mississauga, Brampton, south York Region, and Hamilton
- initially HOV with ultimate frequencies for RBLs along Dundas Street, to provide for higher frequency bus services connecting the Uptown Core and Palermo nodes to Burlington and Mississauga
- initially HOV with ultimate frequencies for RBLs along Trafalgar Road, to provide for higher frequency bus services connecting the Lakeshore GO rail service at the Oakville GO station and the Midtown Core to the Uptown Core to the 407 inter-regional transit service network at a Trafalgar Road transit centre

### 3.2.3 Secondary Transit Corridors

Secondary Transit Corridors are similar to the Primary Corridors in that they provide a high level of service, operate on the grid network of streets and provide cross-boundary connections.

Secondary corridors are characterized by service levels, in the 7- to 10-minute interval range, and somewhat restricted continuity, depending on the road network. In some cases, these services will provide cross-boundary connections to adjacent municipalities, where the road connections are available.

In key bottleneck areas, it will be necessary to provide additional infrastructure for transit priority in these corridors.

Secondary Transit Corridors in North Oakville include New Burnhamthorpe Road, Neyagawa Boulevard, Sixth Line, Third Line and key Avenue/Transit Corridors in the Town's North Oakville Secondary Plan.

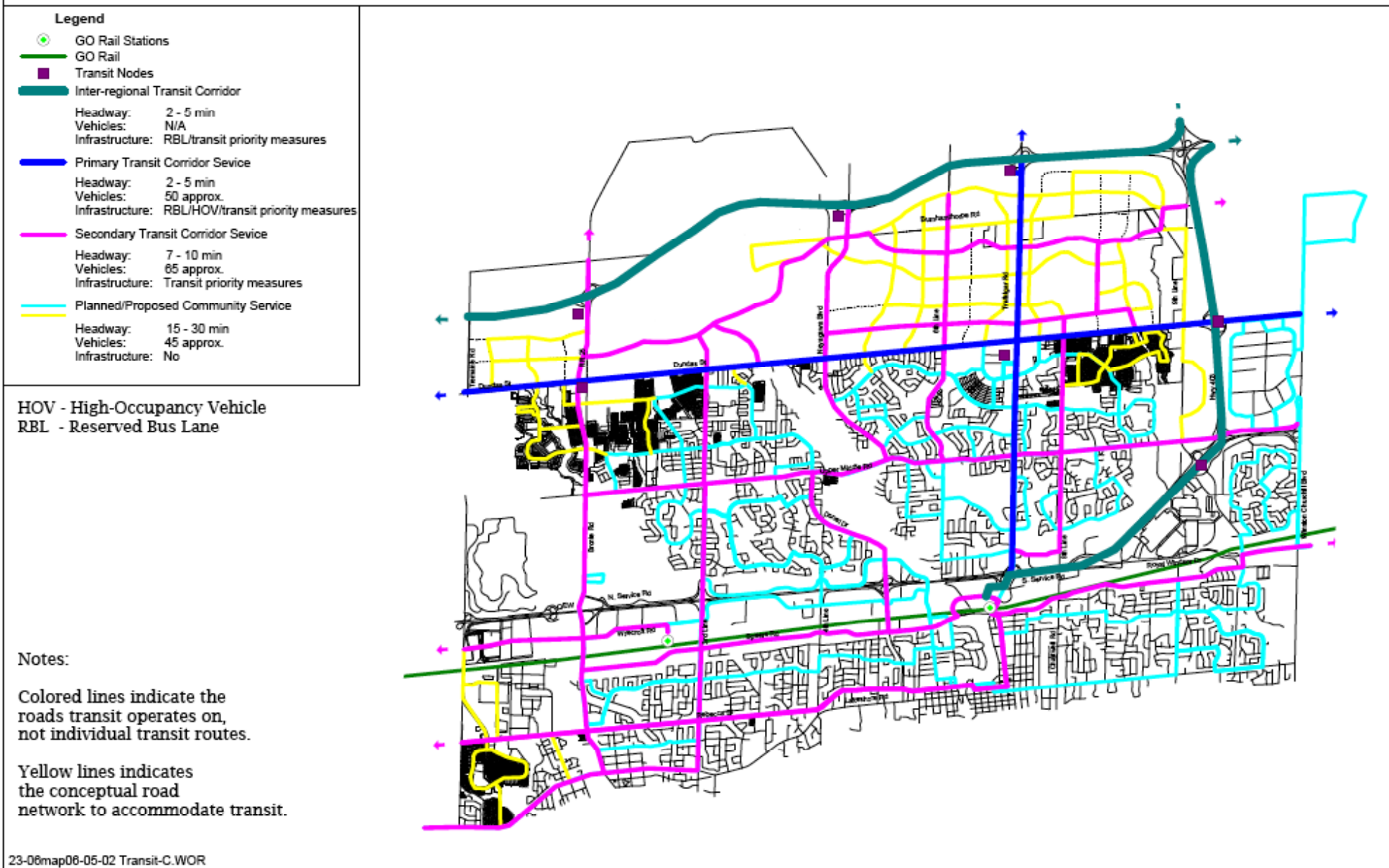
### 3.2.4 Local Services

Local services respond to changing levels of transit demands. The interconnected and continuous grid network of roads accommodates this flexibility.

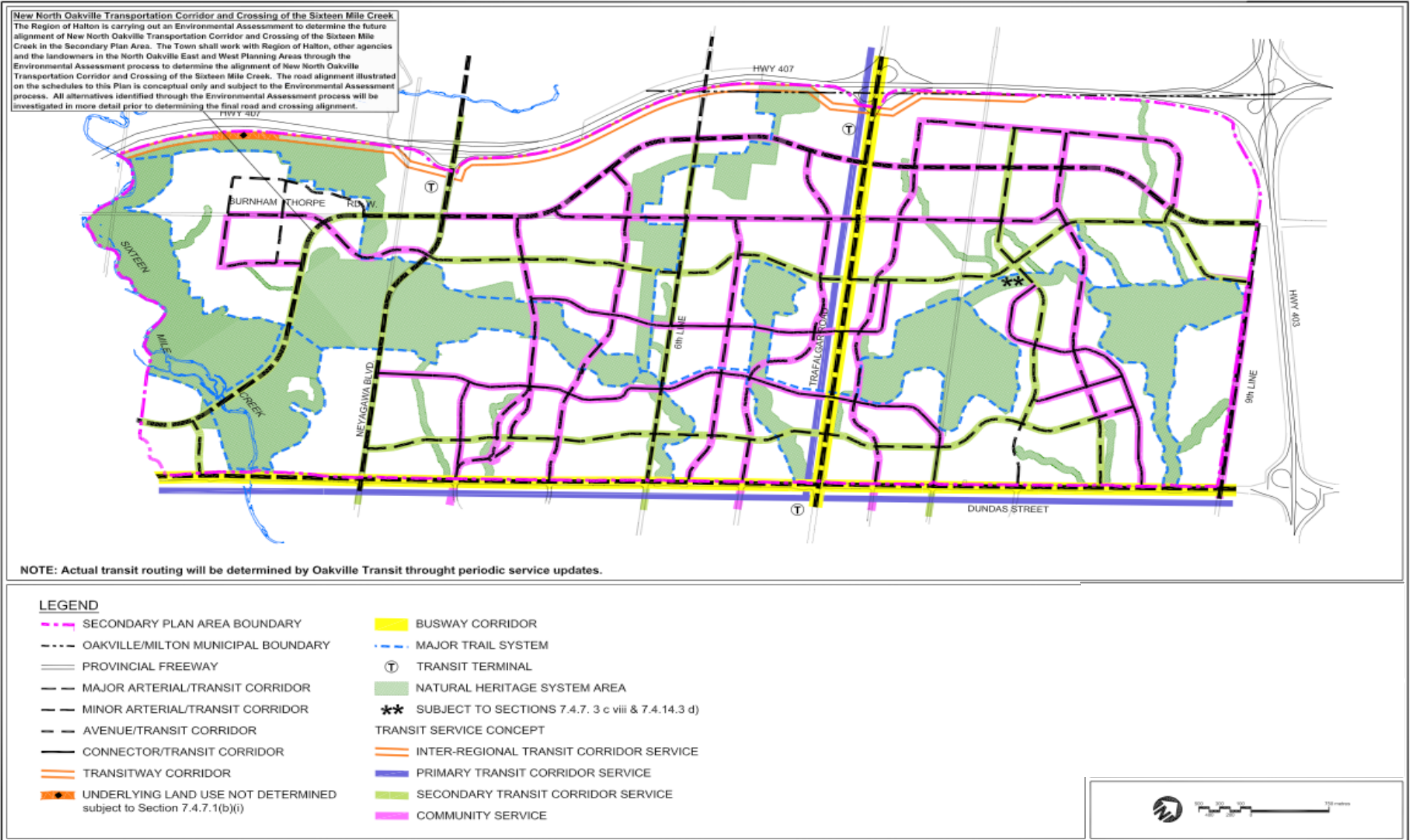
Local services provide the highest degree of local access at the neighbourhood level. Some routes will be very similar to many of the existing local routes, operating at similar levels of service – between 15 and 30 minutes. These routes provide direct access to lower demand and existing areas, and operate on the network of arterial, avenue and connector roads. Riders will use these routes to access local destinations, such as schools or shopping, and as connections to the corridor routes for longer distance trips.

In addition, special bus services may be provided to connect to major destinations in their local areas, including the major shopping areas, potential transit-way stations, commuter lots, and inter-regional transit nodes. These could be operated on fixed routes or as direct shuttles to the inter-regional stations.

# Exhibit 4 ~ TMP Transit Strategy



# Exhibit 5A ~ North Oakville East Transportation Plan



# Exhibit 5B ~ North Oakville West Transportation Plan



NOTE: This Plan must be read in conjunction with NOW 1, NOW 2 & NOW 3  
 NOTE: Actual transit routing will be determined by Oakville Transit through periodic service updates.

**LEGEND**

- - - SECONDARY PLAN AREA BOUNDARY
  - PROVINCIAL FREEWAY
  - - - MAJOR ARTERIAL/TRANSIT CORRIDOR
  - - - MINOR ARTERIAL/TRANSIT CORRIDOR
  - - - AVENUE/TRANSIT CORRIDOR
  - TRANSITWAY CORRIDOR
  - BUSWAY CORRIDOR
  - - - MAJOR TRAIL SYSTEM
  - T TRANSIT TERMINAL
  - NATURAL HERITAGE SYSTEM AREA
- TRANSIT SERVICE CONCEPT**
- INTER-REGIONAL TRANSIT CORRIDOR SERVICE
  - PRIMARY TRANSIT CORRIDOR SERVICE
  - SECONDARY TRANSIT CORRIDOR SERVICE
  - COMMUNITY SERVICE

**Town of Oakville**  
 North Oakville West of Sixteen  
 Mile Creek Secondary Plan

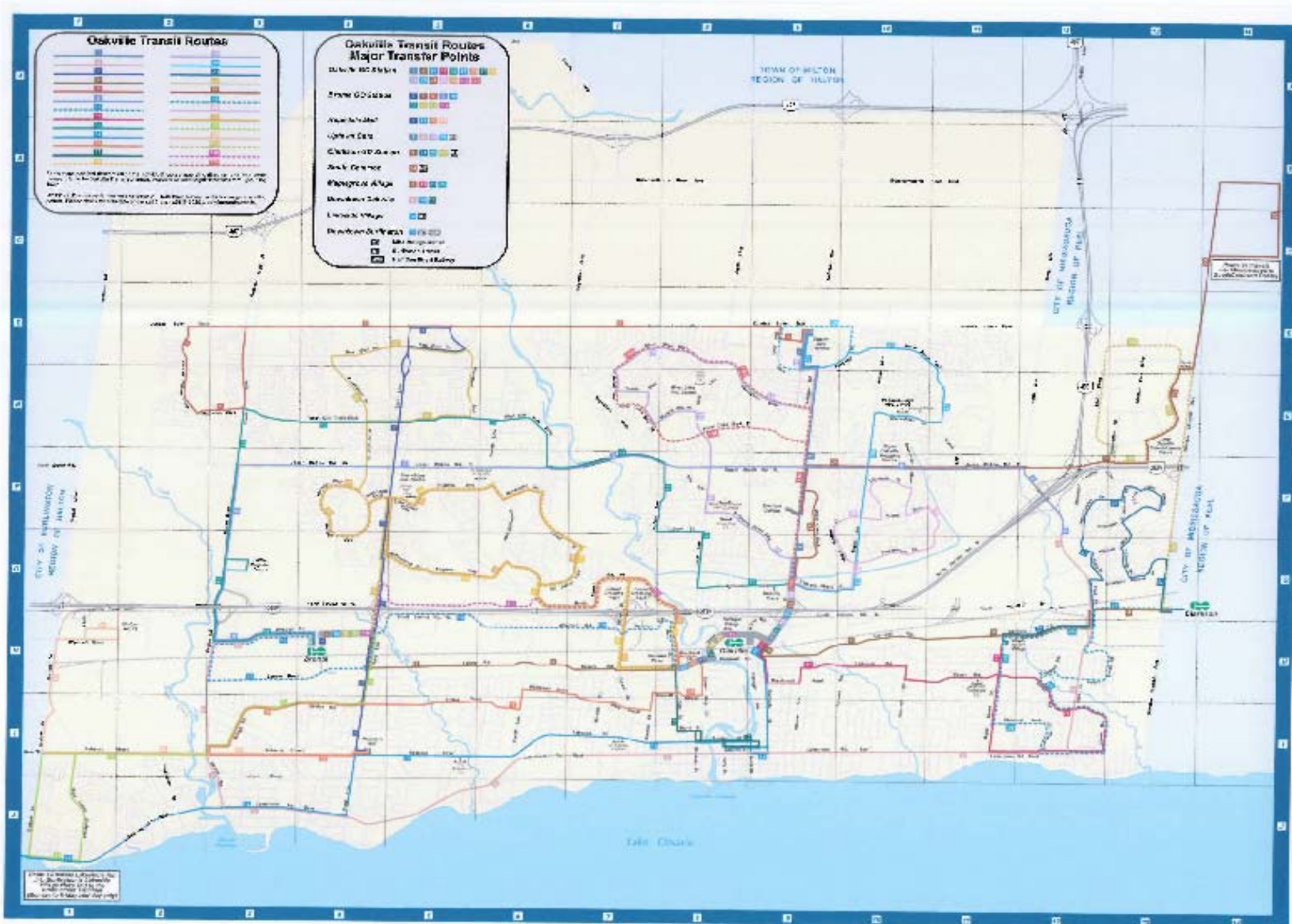
**FIGURE NOW 4**  
*Transportation Plan*

April 2009





# Exhibit 6 ~ Oakville Transit Service Route Map (September 2009)



### 3.3 Roadway Cross-Sections

Exhibits 7 to 13 present the roadway cross-sections for North Oakville. Of particular relevance are the boulevard widths, which range from 4.25 to 8.75 metres, requiring different approaches to the size and placement of transit facilities and the provision of pedestrian access. It is anticipated that there will be instances where the provision of transit stops and related amenities will require additional property, beyond the standard right-of-way. Where necessary, the Town may require additional property for the purpose of implementing required transit facilities. Additional property requirements will be identified and approved as part of the submission of Transit Facilities Plan during the Draft Plan of Subdivision review process. Additional requirements for the location and the provision of facilities are discussed later in this document.

Exhibit 7 ~ Minor Arterial / Transit Corridor (26.0m ROW) – General Urban and Employment Lands

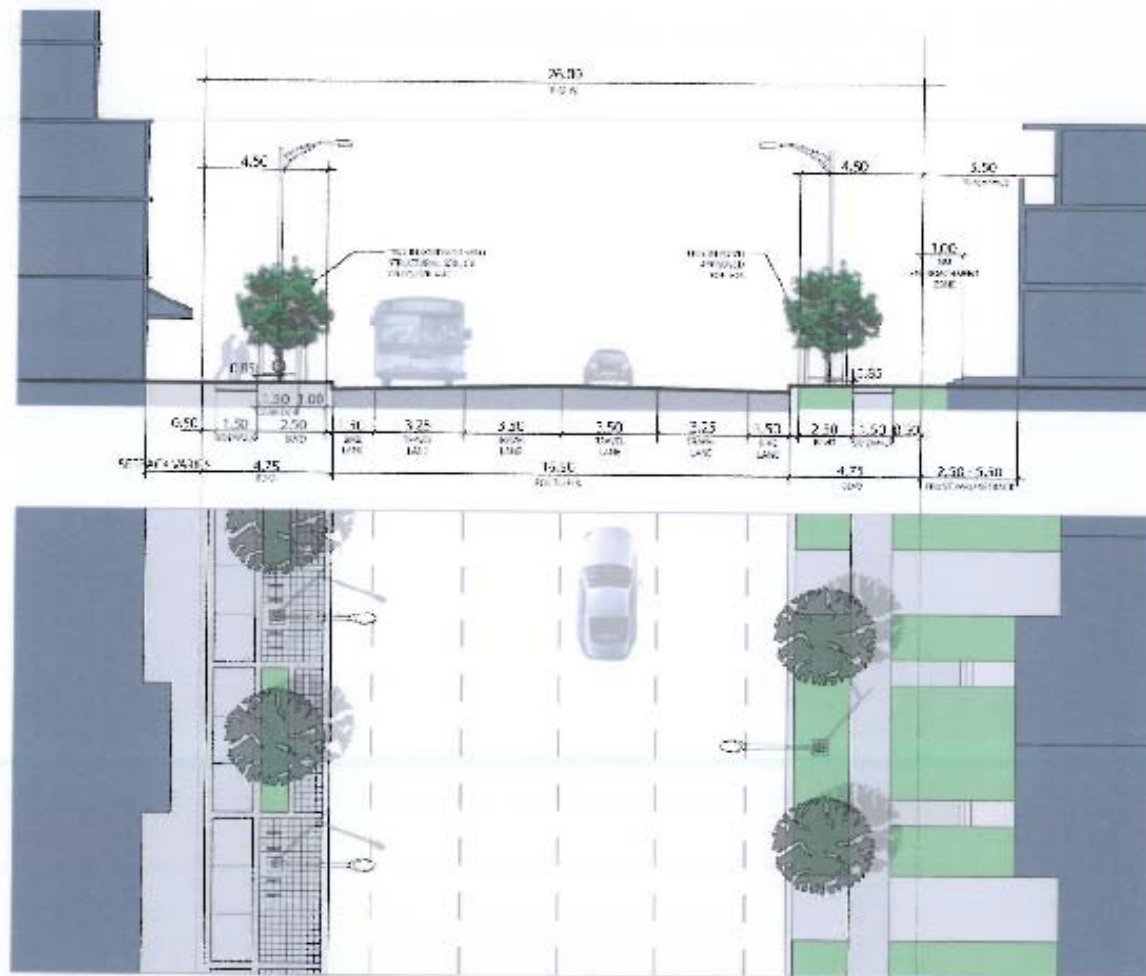


Exhibit 3.5 Minor Arterial/Transit Corridor  
(26.0m ROW) - General Urban and Employment Lands

Exhibit 8 ~ Avenue / Transit Corridor (22.0m ROW) – General Urban and Suburban Area

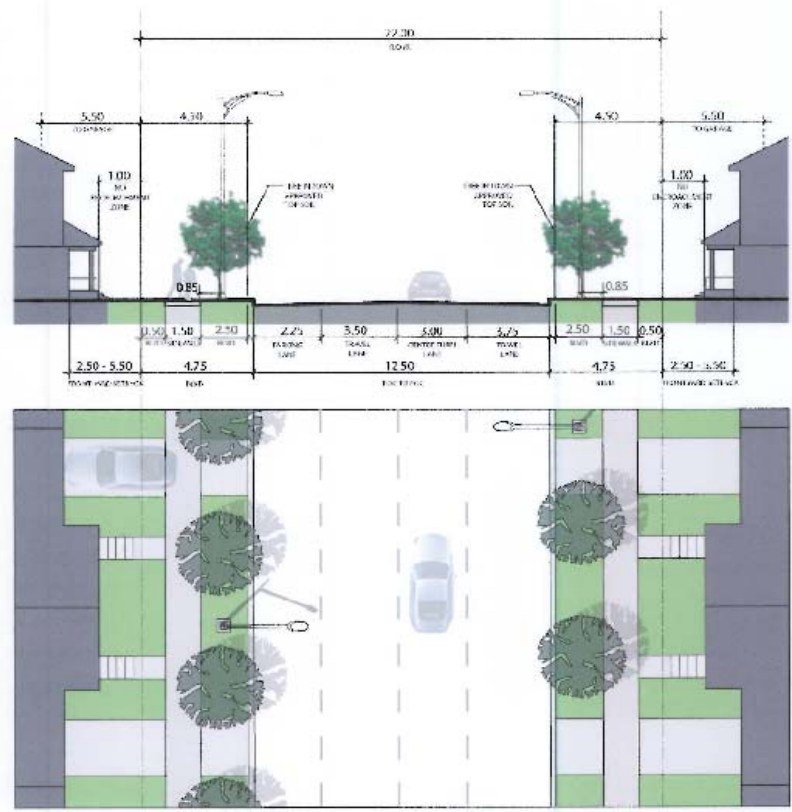


Exhibit 3.6 Avenue/ Transit Corridor (22.0m ROW) - General Urban Area and Sub-Urban Area



Exhibit 9 ~ Avenue / Transit Corridor (22.0m ROW) – Employment Lands

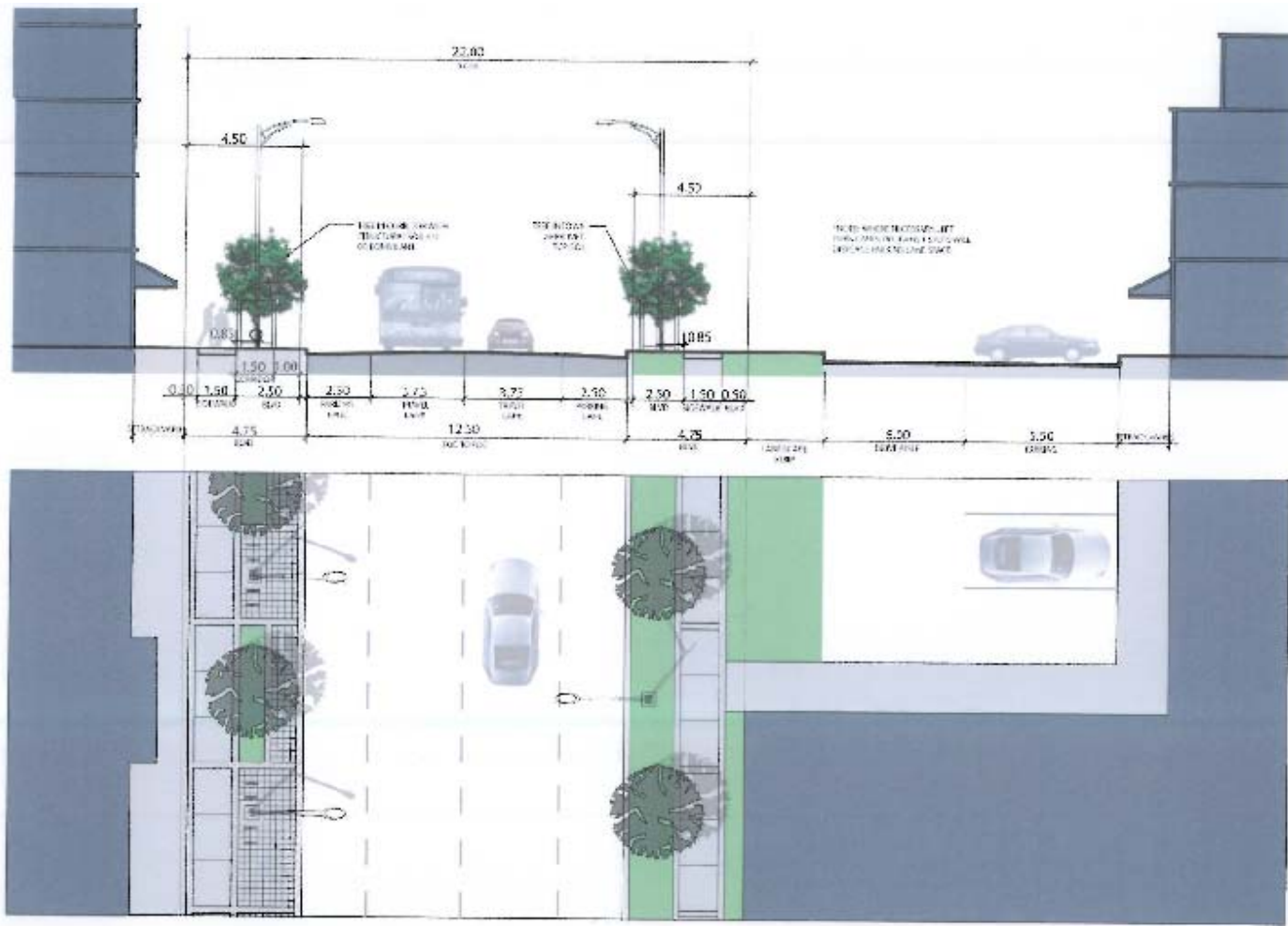


Exhibit 3.8 Avenue/Transit Corridor (22.)m ROW) - Employment Lands

Exhibit 10 ~ Avenue / Transit Corridor (24.0m ROW) – Urban Core Area

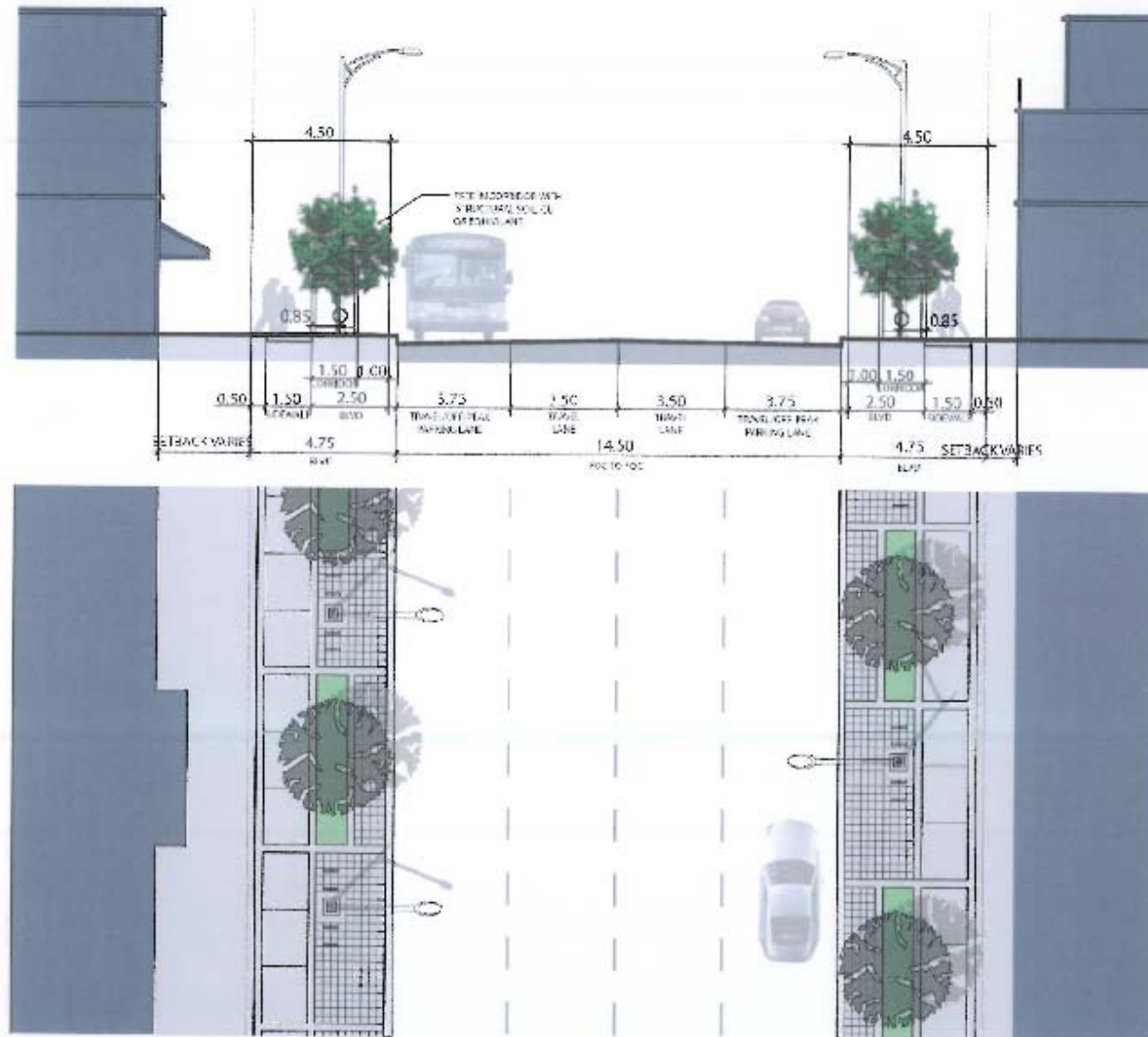


Exhibit 11 ~ Connector / Transit Corridor (19.0m ROW) – General Urban Area

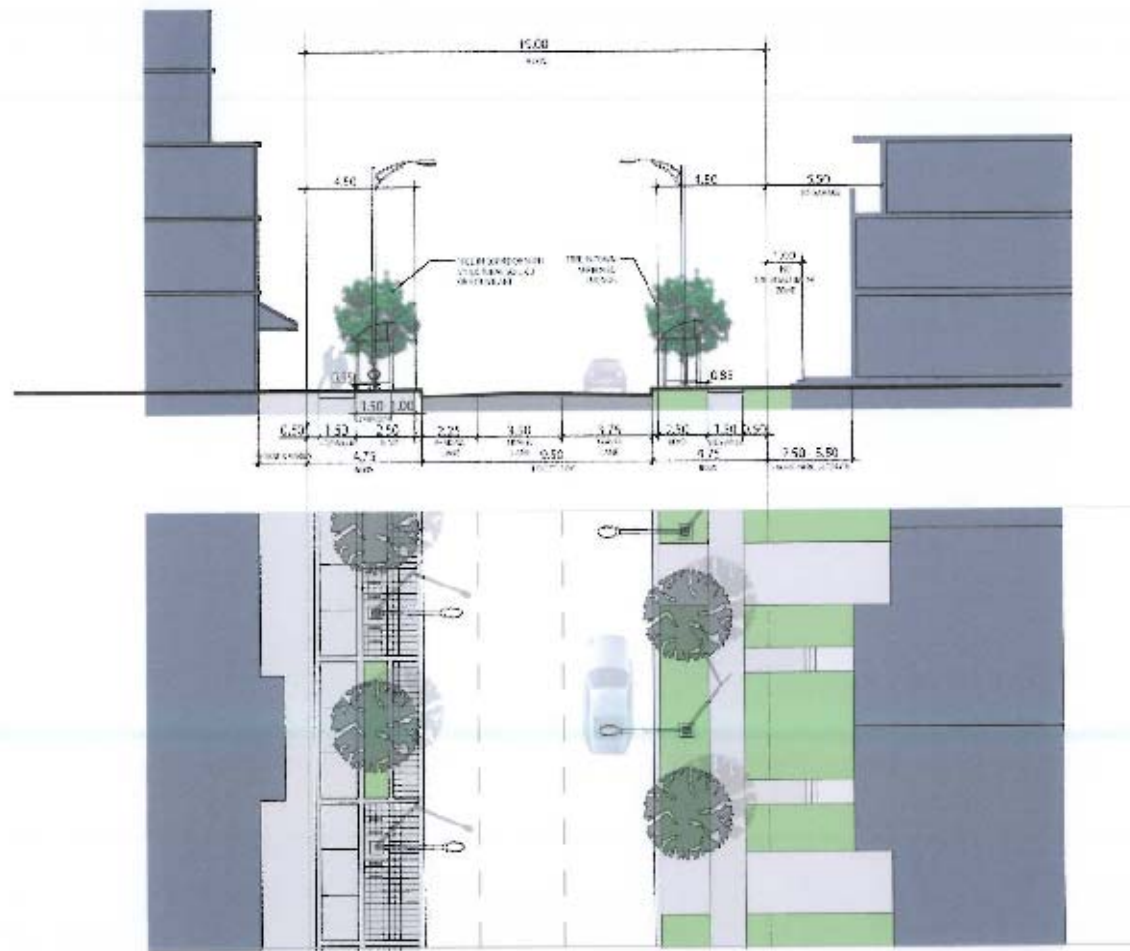


Exhibit 3.11 Connector/Transit Corridor  
(19.0 ROW) - General Urban Area

# Exhibit 12 ~ Local Road (17.0m ROW) – Residential



Exhibit 3.14 Local Road  
(17.0m ROW) - Typical - Option 2

# Exhibit 13 ~ Local Road (20.0m ROW) – Employment Lands

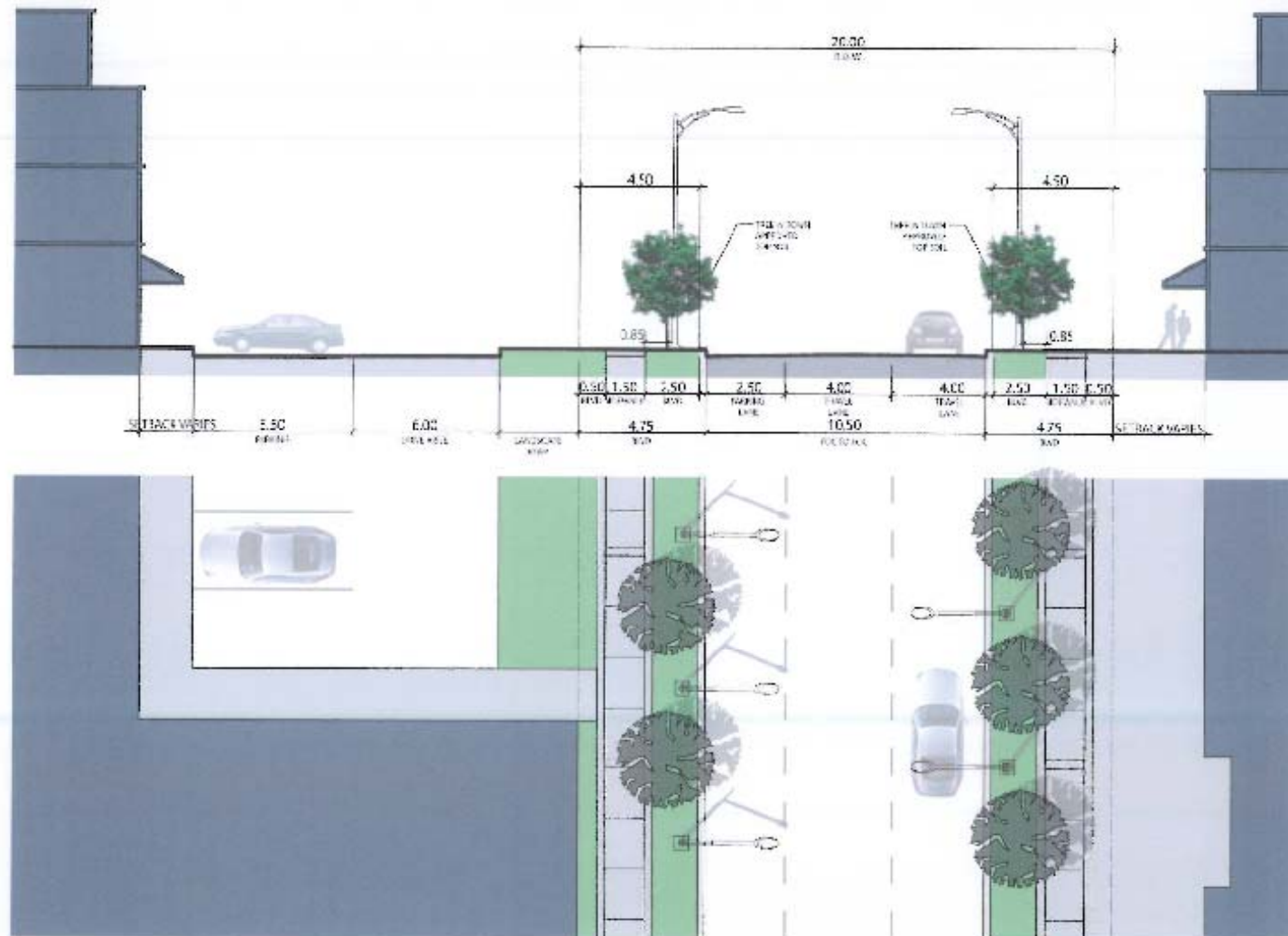


Exhibit 3.16 Local Road  
(20.0m ROW) - Employment Lands

## 4. Transit Stations and Stops

The allocation of passenger amenities should be based upon the needs and volumes of passengers at each stop. Illustrations of bus stop types are provided in Exhibits 14 to 18. Exhibits 19 and 20 provide plans for possible transit stop locations relative to the roadway and intersections, where applicable. Exhibit 21 provides a summary of transit street links and the stop considerations for these roadway sections. The bus stop types are summarized in the remainder of this section.

### 4.1 Transit Terminals

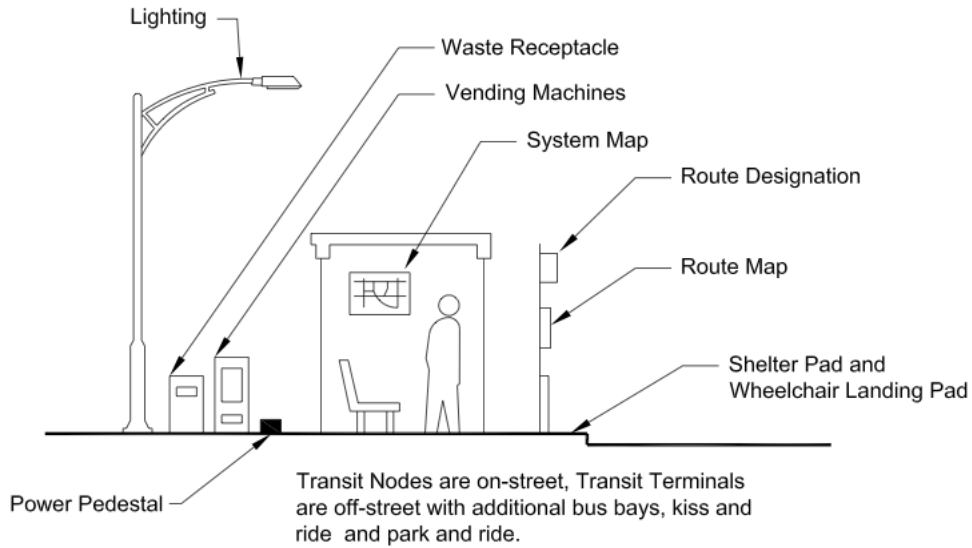
Transit terminals are implemented off-street at route end-points, and will include passenger amenities such as shelters, benches, bus bays, Park-and-Ride, Kiss-and-Ride, vending machines, waste receptacles, power pedestals and lighting. Transit terminals will be fully accessible. Interim conditions may not include all of these passenger amenities. The locations for transit terminals in Oakville include:

- Oakville GO station / Mid-Town Core
- Bronte GO station
- Uptown Core (Dundas Street at Trafalgar Road)
- Palermo Node (Dundas Street at Bronte Road)
- Highway 407 Transit-way at Trafalgar Road
- Highway 407 Transit-way at Neyagawa Boulevard
- Highway 407 Transit-way at Bronte Road

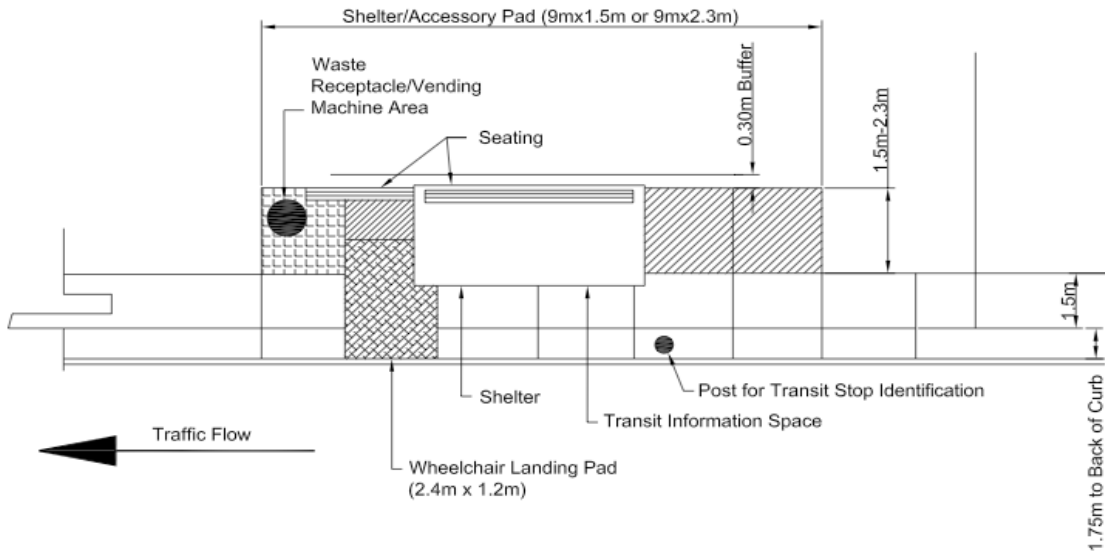
### 4.2 Transit Nodes

Transit nodes are implemented on-street at the junctions of primary corridors with either primary or secondary corridors. Passenger amenities will include shelters, benches, vending machines, waste receptacles, power pedestals and lighting, and will be fully accessible.

# Exhibit 14 ~ Transit Node / Terminal

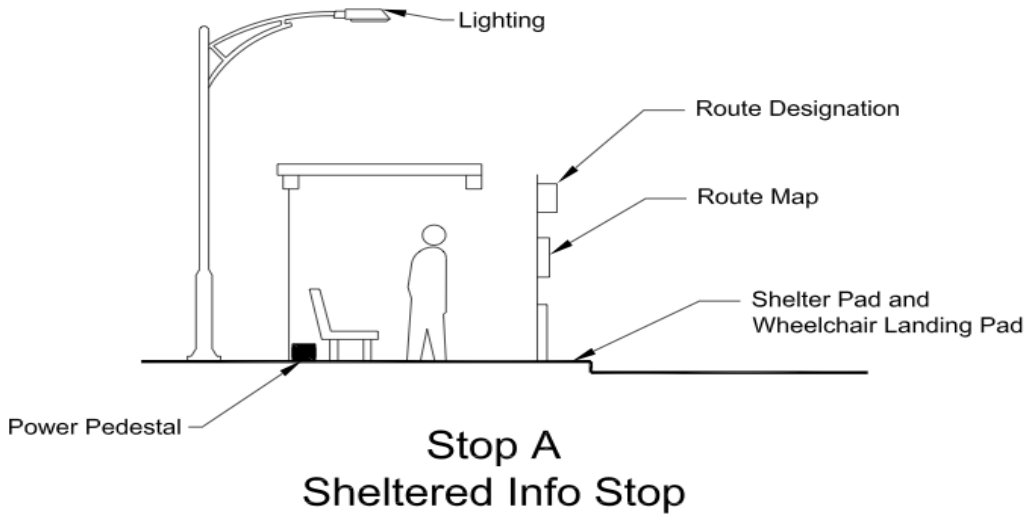


## Transit Node / Transit Terminal



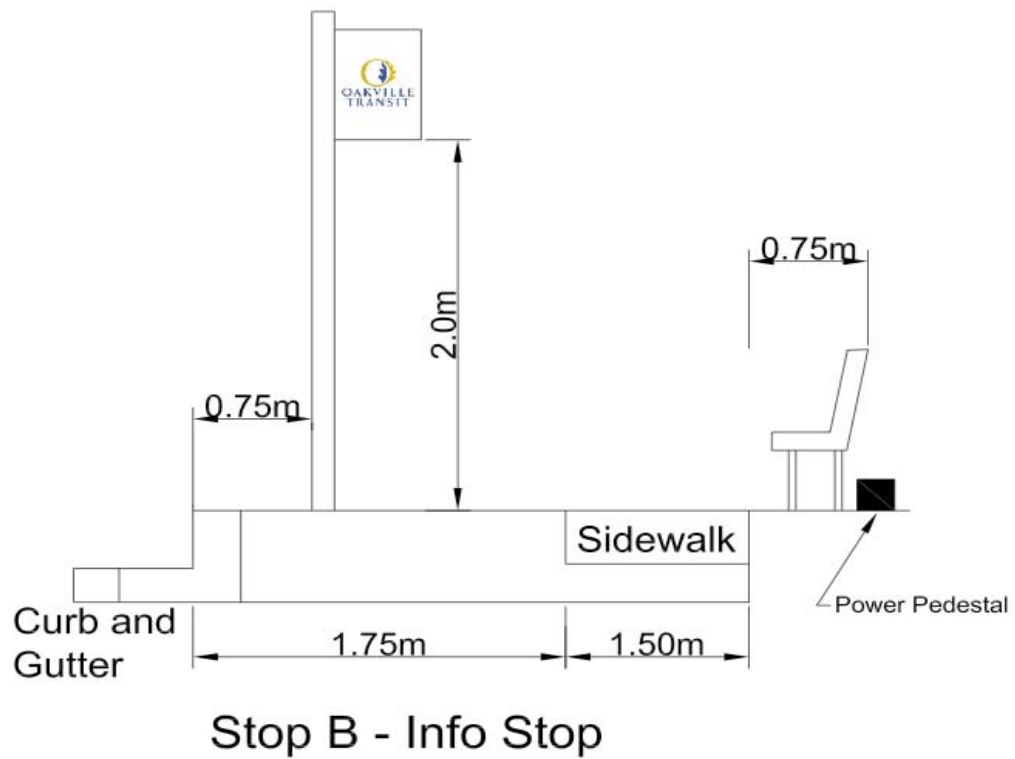
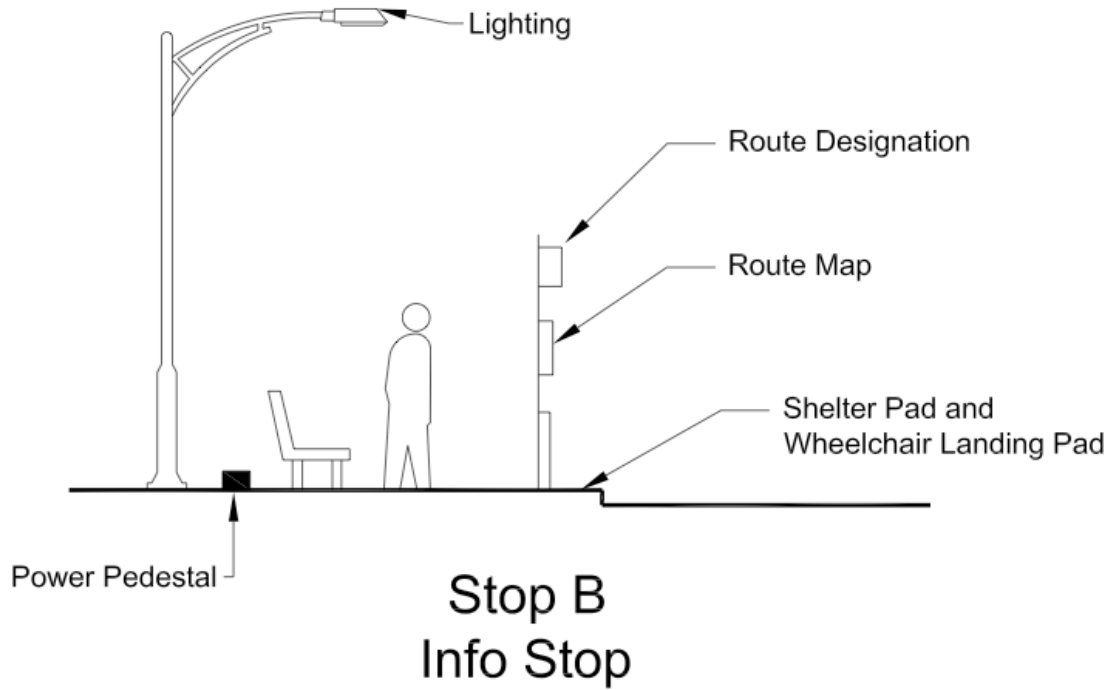
## Transit Node / Transit Terminal (1 per 2 Bus Bays)

Exhibit 15 ~ Stop A, Sheltered Info Stop



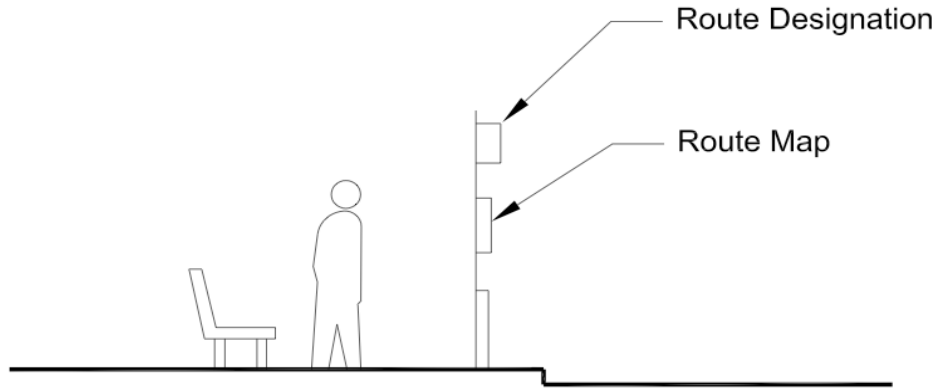


# Exhibit 16 ~ Stop B, Info Stop

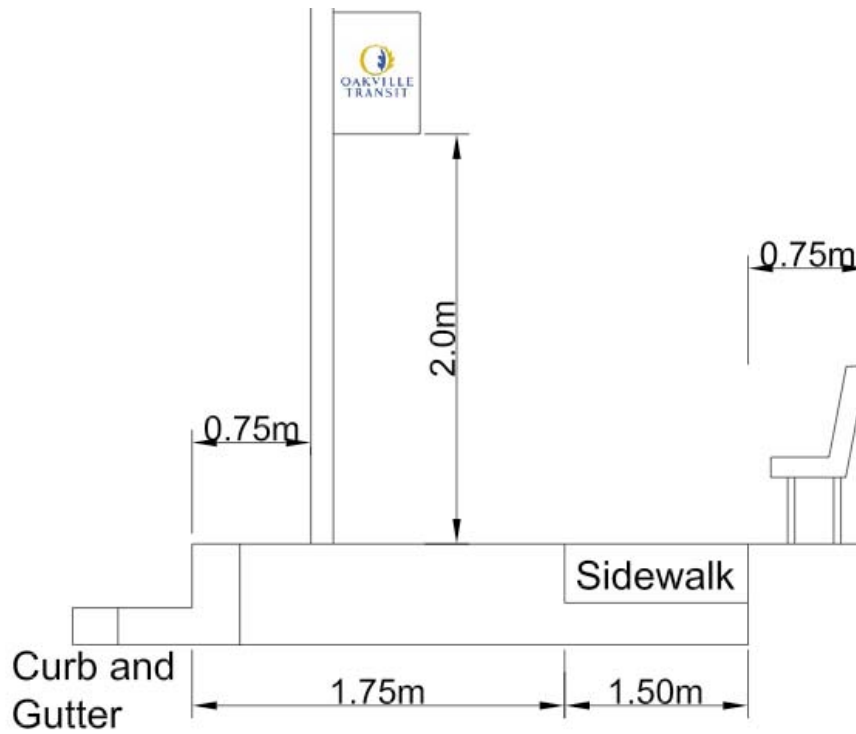


# Exhibit 17 ~ Stop C, Comfort

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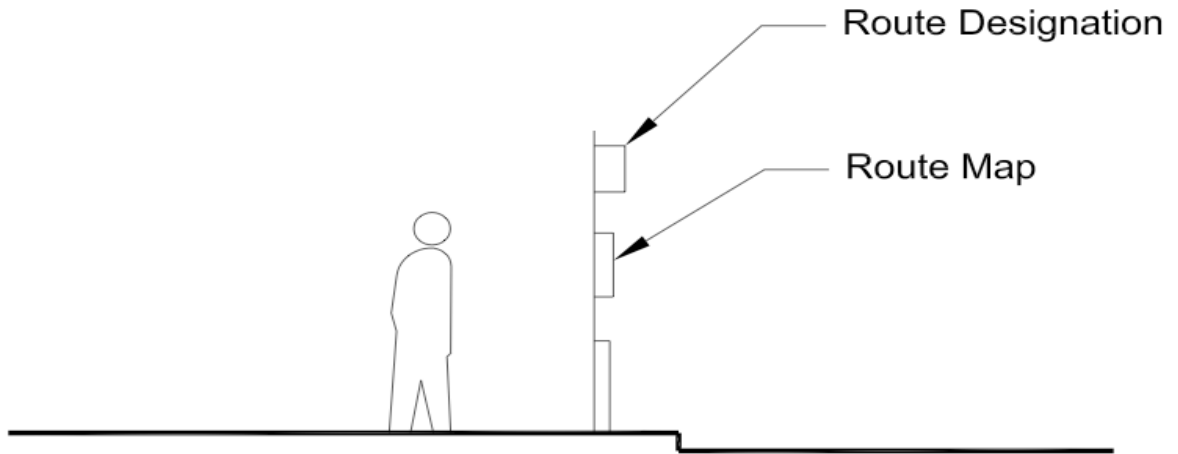


## Stop C Comfort

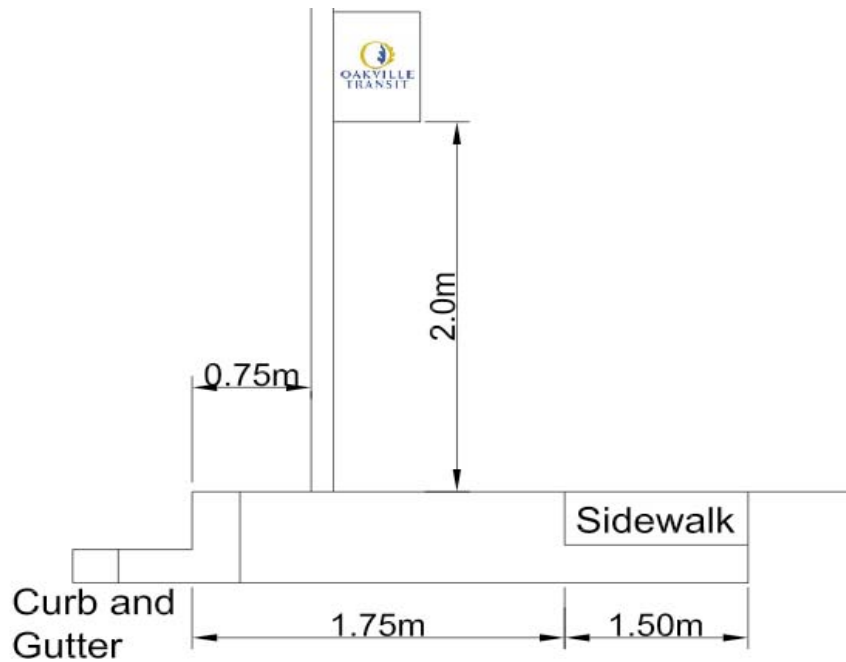


## Stop C - Comfort

Exhibit 18 ~ Stop D, Basic



# Stop D Basic



# Stop D - Basic

Exhibit 19~ Typical Intersection Plan for Avenue and Connector Transit Corridors in Urban Core

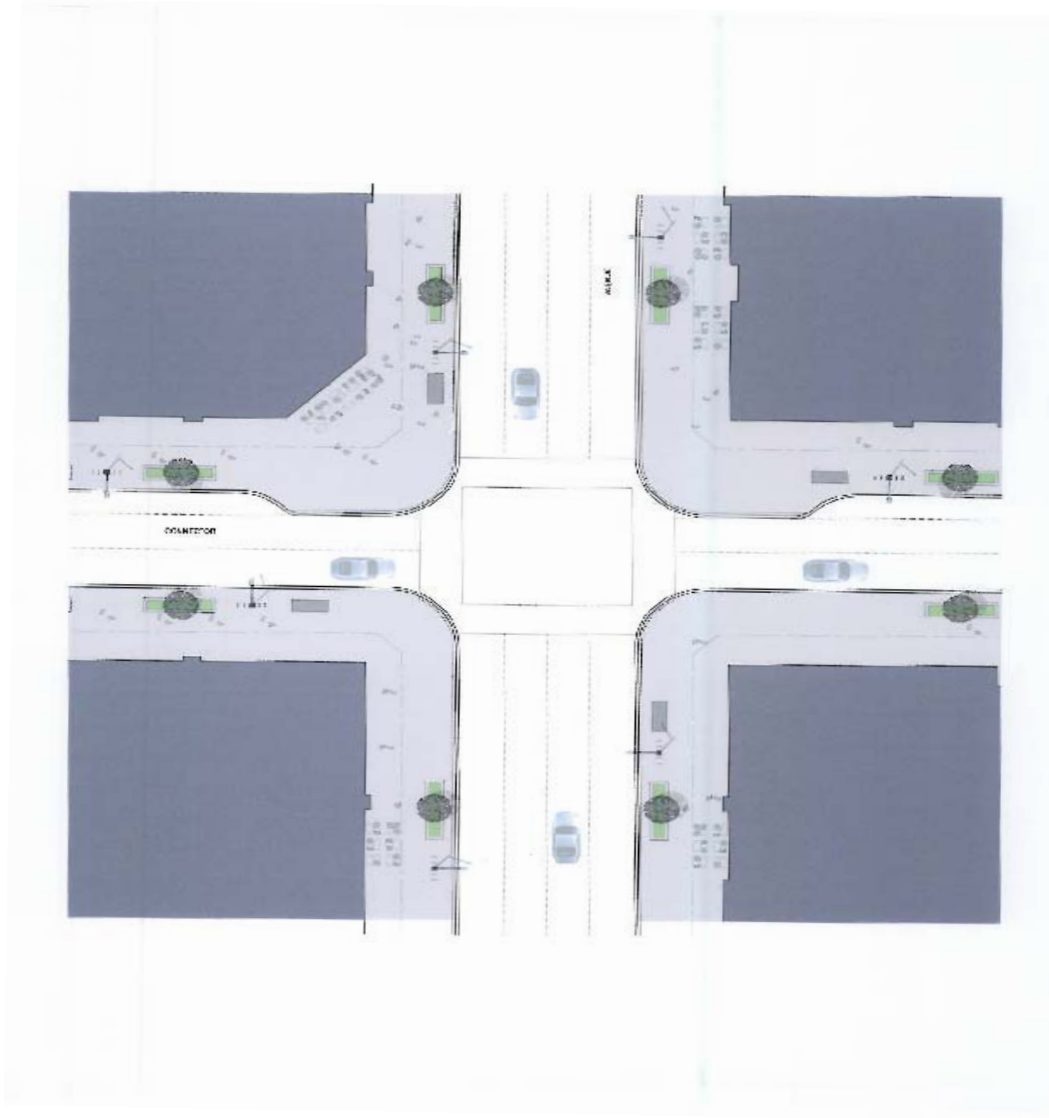
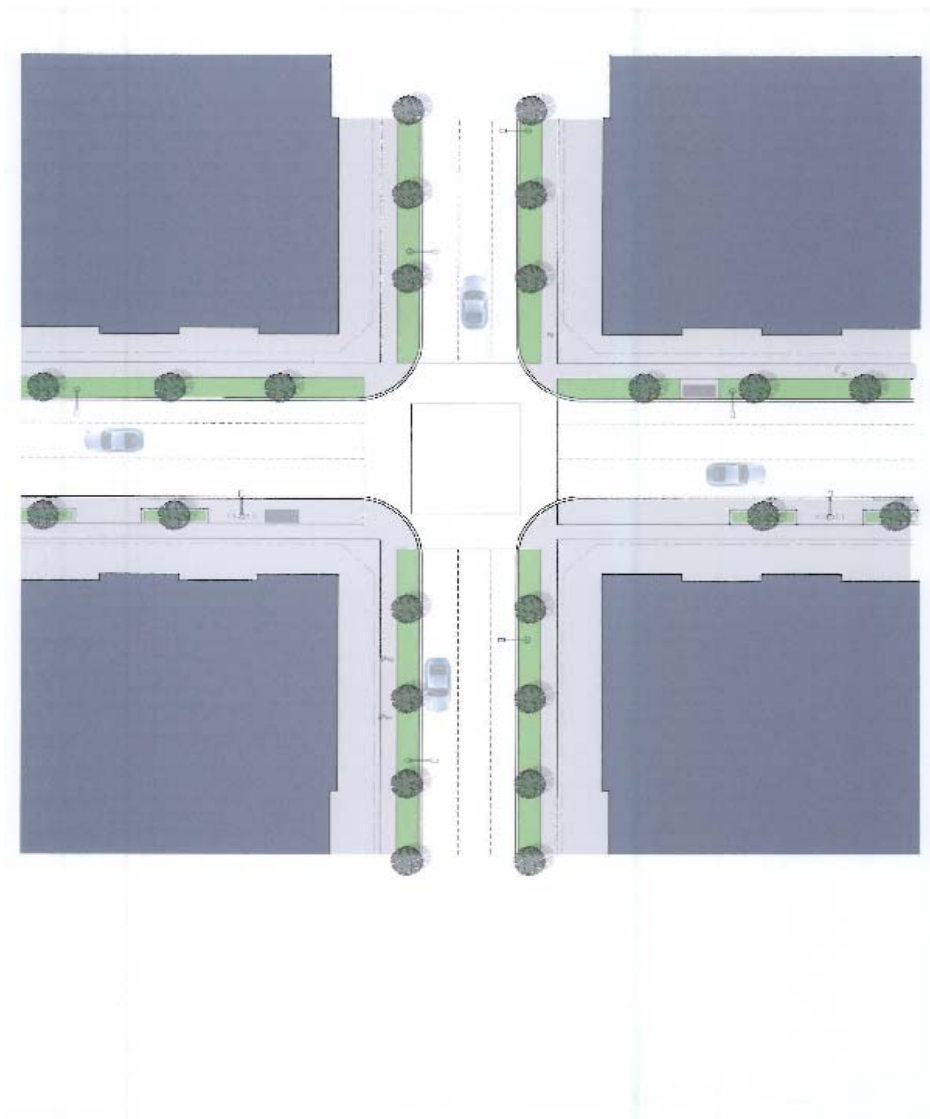


Exhibit 20 ~ Typical Intersection Plan for Neighbourhood Centre



## Exhibit 21 ~ Transit Considerations by Transit Streets

Oakville Transit Streets							Notes
	Termina	Node	Stop A	Stop B	Stop C	Stop D	
Trafalgar Road	X	X	X	X	X	X	On raised median
Minor Arterial/Transit Corridor (General Urban and Employment)	X	X	X	X	X	X	Between road and sidewalk
Avenue / Transit Corridor (General Urban and Sub-urban)					X	X	May require additional right-of-way widening to accommodate increased boulevard
Avenue / Transit Corridor (Urban Centre Area)	X	X	X	X	X	X	Between road and sidewalk
Avenue (Employment Lands)	X	X	X	X	X	X	Between road and sidewalk
Avenue / Transit Corridor (Urban Core Area)	X	X	X	X	X	X	Between road and sidewalk
Avenue / Transit Corridor (Core Preserve)	X	X	X	X	X	X	Between sidewalk and property line
Connector (General Urban Area)					X	X	May require additional right-of-way widening to accommodate increased boulevard
Connector/Transit Corridor (Core Preserve)					X	X	May require additional right-of-way widening to accommodate increased boulevard Provision for mid-block pedestrian access
Local Road (Employment Lands)					X	X	May require additional right-of-way widening to accommodate increased boulevard Provision for mid-block pedestrian access
Local Road (Flanking Core Preserve)					X	X	May require additional right-of-way widening to accommodate increased boulevard Provision for mid-block pedestrian access
Local Road (Typical)					X	X	May require additional right-of-way widening to accommodate increased boulevard Provision for mid-block pedestrian access
Connector/Transit Corridor (Flanking Core Preserve)					X	X	May require additional right-of-way widening to accommodate increased boulevard Provision for mid-block pedestrian access

## 4.3 Transit Stops

There will be a transit stop at the centre of each neighbourhood. Additional stops will be located so that all residents and employees are predominantly within 400 metres walking distance of a transit stop. The following transit stops types will be designated depending on customer needs, and will be determined through warrants outlined in Exhibit 22:

Stop A will be a sheltered 'Info' stop, with a bench, shelter, lighting, power pedestal and wheelchair-landing pad.

Stop B will be an 'Info' stop with a bench, lighting, power pedestal and wheelchair landing pad.

Stop C will be a 'Comfort' stop with a bench and wheelchair landing pad.

Stop D will be a 'Basic' stop implemented at the maximum spacing of 250 metres along a transit route and will have a wheelchair landing pad.

Safe and convenient pedestrian routes will be provided to all stops, and all stops will be accessible by an assistive mobility device.

### Exhibit 22 ~ Warrants for Bus Stop Levels of Amenities

Activity	Justification	Points
High Boarding / Transfer Location	Local Road	1
	Connector	2
	Arterial / Avenue	10
Mobility Needs Location	Seniors group home, medical clinics, libraries, hospital, shopping malls and hospitals.	7
Activity Location	Apartment, secondary and post secondary schools.	3
Exposure to Elements	A stop with high speed traffic (60 km/hr or more) or on a road with more than two lanes.	3
Wait Time	Headways of 20 minutes (or more) between buses	2
Request	Request from Public	2

Route end points (at ultimate build-out) warrant the implementation of **Transit Terminals**.

Intersections of Primary to Primary, Primary to Secondary corridors and interim route end points warrant the implementation of a **Transit Node**.

Based on the warrants presented in Exhibit 22:

- Greater than 10 points warrants the implementation of **Stop A - Sheltered Info**.
- Greater than 7 points warrants the implementation of **Stop B - Info**.
- Greater than 5 points warrants the implementation of **Stop C - Comfort**.
- 250 metre bus stop spacing warrants the implementation of **Stop D - Basic**.



## 5. Passenger Amenities by Bus Stop Type

Passenger amenities should be placed with consideration to the pedestrian circulation and an unobstructed landing pad to ensure that ramps can be deployed at accessible bus stops. Amenities by stop type are listed as Exhibit 23.

Shelters provide a comfortable area for passengers to wait in an area protected by the elements. It can also help to define the bus stop in addition to providing a place to mount network and route information. To ensure that shelters are adequately maintained from trash and graffiti, ongoing maintenance is required.

Benches are another comfort amenity that is relevant in addressing the needs of an aging society. Benches are low-cost when compared to a shelter, and can have many of the same benefits, such as stop identification. As with shelters, there are the additional costs of ongoing maintenance.

Vending machines are a popular passenger amenity, providing daily papers and other reading material to passengers while waiting. The downside is the degree of refuse that can be caused, which may be visually unappealing unless ongoing maintenance is provided. Care must be taken in the placement of these components to ensure that pedestrian circulation is not impeded.

Lighting is a safety feature that increases the visibility in the area of a bus stop, increasing passenger safety from crime and traffic. Lighting can be costly and requires maintenance.

Waste receptacles can help to keep garbage and recyclables in a confined area, keeping the passenger area clean. Reducing the amount of garbage that is carried on and may be left on the bus can impact even the cleanliness of the bus. Ongoing removal of refuse is required to keep unpleasant odours from emanating from the receptacle.

Passenger information - As much clear, current and concise passenger information should be given as possible, with care taken not to inundate the passenger. This information should always include a sign and post designating the route with additional system maps provided at terminals, nodes and high-use bus stops. In addition, provision for future connections to an electronic information system should be made where required as noted below.

Power pedestals are an amenity that will facilitate the provision of passenger information in a 'less static' form, as technologies are developed to replace the existing paper-based information. By providing a power pedestal at designated stops, this transition can be seamless when the technology arrives.

Bus bays provide a designated location at a transit terminal for a bus to stop and allow passengers to board and alight. Bus bays allow transit terminals to function as transfer centres, facilitating connections to inter- and intra-regional services from the Oakville Transit services. Bus bays are generally discouraged on-street, except at time or schedule adjustment points.

Kiss-and-Ride facilities designate a zone for passenger pick up and drop off where passengers can conveniently access transit services.

Park-and-Ride facilities allow access to transit for passengers who use an automobile for part of their trip. Parking is provided specifically for this purpose.

## Exhibit 23 ~ Passenger Amenities by Bus Stop Type

Feature	Transit Terminal	Transit Node	Stop A	Stop B	Stop C	Stop D
Sign and Post	S	S	S	S	S	S
Benches	S	S	S	S	S	O
Shelters	S	S	S	O	O	O
Route Designation	S	S	S	S	S	S
Route Schedules	S	S	S	S	S	S
Route Map(s)	S	S	S	S	S	S
System Map	S	S	O	O	O	O
Waste Receptacle	S	S	O	O	O	O
Shelter Pads	S	S	S	S	S	S
Lighting	S	S	S	S	O	O
Vending Machines	S	S	O	O	O	O
Power Pedestal	S	S	S	S	O	O
Off-Street Bus Bays	S	O	O	O	O	O
Kiss and Ride *	S	O	O	O	O	O
Park and Ride *	S	O	O	O	O	O

\* Does not include informal facilities that may be arranged at existing shopping malls, hospitals, apartments or schools.

S = Standard; O = Optional

## 6. Service Implementation and Monitoring

The basic premise of transit service implementation is to introduce initial service as soon as possible. The level of development in a given area will drive the level of service in that area, from initial introductory service to the TMP-designated service at ultimate build-out.

An industry standard is to consider an area well served if 90 percent of the trip generators are within a 400-metre walking distance. Therefore, it can be assumed that a development is at ultimate build-out once 90 percent of the development has been occupied. As a development reaches this threshold, the TMP designated level of service will be implemented in the applicable transit service corridors.

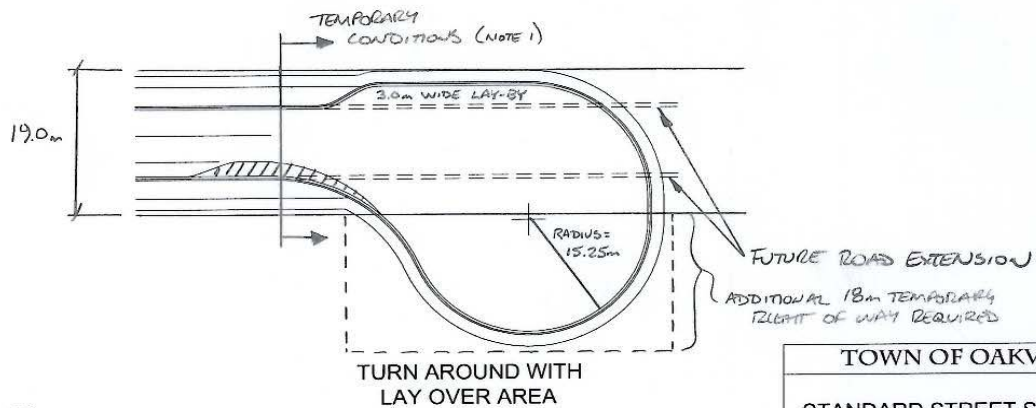
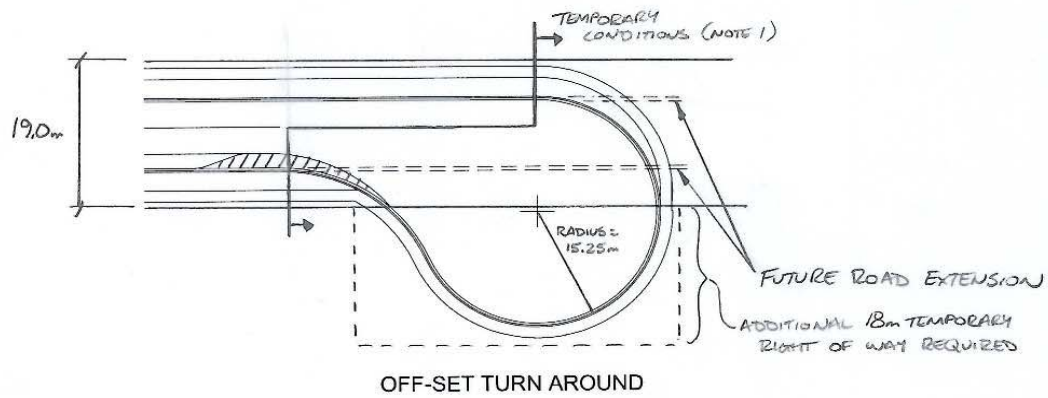
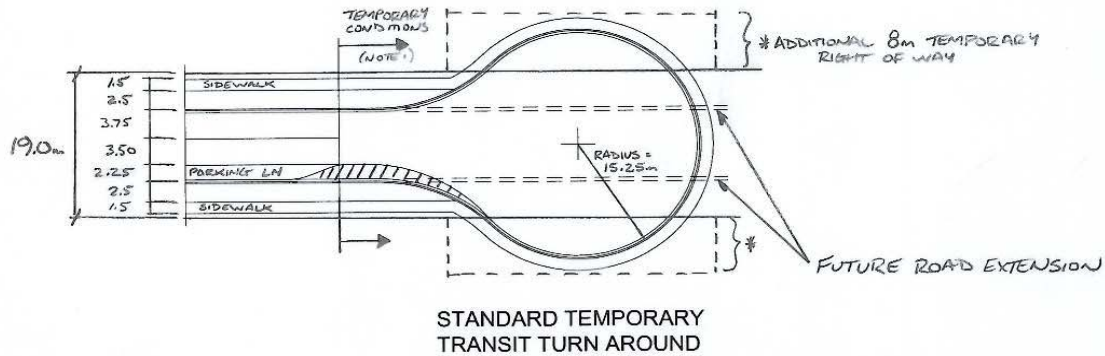
Temporary bus loops may be required on an interim basis to permit bus maneuvering during roadway staging, as illustrated on Exhibit 24.

The TMP designations for corridors will include the following service designs:

- Base network - Provides rapid connections to significant locations in Oakville, inter-regional GO services and neighbouring transit services in Mississauga and Burlington. The base network includes primary and secondary corridors.
- Local routes – Connects neighbourhoods to the base grid network using transfers at significant landmarks and transit nodes and reflects modified service standards for walking distance and service.
- Special Services – Fixed route service using lower-capacity buses. Special bus routes typically serve a number of trip generators on one route that may include seniors' residences, high-density developments, recreation facilities, shopping malls, hospitals or clinics.
- School transit – School service will initially be provided by the Halton School Board. Students will have the option of using transit services as the service levels increase, and routes to local schools become more convenient. The school board then, will have the option of reallocating school bus services to areas of higher need.

At ultimate build-out, the subdivision will be served by fixed routes - either local or base transit routes (at the discretion of Oakville Transit Planning Staff).

# Exhibit 24 ~ Temporary Bus Loop Layout (Typical)



NOTES  
 1. CURBS AND SIDEWALKS WITHIN TEMPORARY CONDITION AREA MAY BE CONSTRUCTED OF ASPHALT WHERE DURATION OF EXISTANCE IS EXPECTED TO BE LESS THAN 3 YEARS

<b>TOWN OF OAKVILLE</b>	
<b>STANDARD STREET SECTION TEMPORARY TRANSIT TURN AROUND</b>	
APPROVED	REVISION DATE
DIRECTOR OF ENGINEERING AND CONSTRUCTION	August 2009

## 7. Early Implementation Incentives and Programs

As part of promoting the early implementation of sustainable transit services in North Oakville, the Town will consider and encourage, as appropriate, a number of initiatives aimed at supporting the implementation of appropriate transit services at the outset of development. Appropriate incentives and programs will be identified by Town staff in consultation with the applicant as part of the development review process, and shall be mutually agreed upon as a condition of development.

Early implementation incentives and programs for consideration and possible implementation in North Oakville comprise:

- transit passes for homebuyers
- Sustainability Subsidy (i.e., developer funds the gap between the target and actual revenue-to-cost (R/C) ratio)
- developer-funded shuttle services (e.g., commuter and school)
- Transportation Management Association or Ratepayer Association
- employer-provided transit passes

### 7.1 Transit Passes for Homebuyers

Where the Town deems it to be appropriate, developers may be encouraged to purchase an annual transit pass on behalf of homebuyers and, in turn, provide that pass to the homebuyer for their use. The transit pass requirement may be implemented prior to issuance of building permits. The provision of a transit pass would also be a required clause in purchase agreements between the homebuilder and homebuyer.

### 7.2 Sustainability Subsidy

Where the Town deems it to be appropriate, developers may be encouraged to fund the gap between the target and actual Revenue-to-Cost (R/C) ratios resulting from the early implementation of Community Service in a subdivision or neighbourhood.

Oakville Transit will have established R/C targets for considering the implementation of all transit services. Where it is deemed by Oakville that the operation of a form of Community Service is appropriate in a developing area, but unlikely to meet the established R/C target for the specific type of service, the developer will be encouraged to enter into an agreement with the Town to subsidize the implementation of the service for a period of one year, at which point the service will be subject to review in accordance with the Town's standard monitoring practices.

## 7.3 Developer-Funded Shuttle Services

Where the Town deems it appropriate, developers can be encouraged to fund the capital and operating cost of implementing initial shuttle service in a subdivision or neighbourhood where it is deemed by Oakville that the operation of a form of community service is not yet viable in a developing area and that shuttle service is an appropriate approach to the early introduction of transit services. Shuttle services may be developed and implemented as feeder services to: inter-regional transit corridors, GO and Oakville Transit terminals, high schools, community services and major institutional uses. Shuttle service operating hours and levels of service will be determined by the Town based on anticipated market needs at the time.

## 7.4 Transportation Management Association / Ratepayer Association

Transportation Management Associations, as well as ratepayer associations can play a key support role in promoting Transportation Demand Management (TDM), particularly the use of alternative travel modes such as transit.

Where the Town deems appropriate, developers can be required to contribute funds for the purpose of establishing and maintaining TMAs or similar associations with the purpose of promoting and supporting the use of alternative modes of travel early in the development of North Oakville. Eligible costs to be covered by developers can include initial start-up costs, as well as continuing operating costs. The costs that are applicable to a developer are to be determined based on the scope and extent of the association's activities.

## 7.5 Employer-provided Transit Passes

Employer-provided transit passes are one form of TDM measure that can be implemented by TMAs. Where the Town deems appropriate, major employers can be required by the Town to commit to participate in local TMAs and provide a financial contribution as part of providing transit passes for their employees. The commitment to participate and contribute to such an initiative would require a clause in agreements between the developer and Town that commits purchasers or tenants in employment areas in North Oakville to participate.

## 8. Applicant Submission Requirements

As a basis for the development of the system of transit services, the Town has prepared a Transit Plan, which identifies the network and frequency of transit in North Oakville.

Prior to approval of any plan of subdivision, a Functional Servicing Study must be submitted by the applicant, in conjunction with the Town, and approved by the Town. With respect to transit, it will identify transit facilities in the plan of subdivision and how they will reflect the Town's Transit Plan by integrating the existing and proposed transit network and by connecting to major inter-modal terminals. In particular, the Functional Servicing Study will show and describe the ultimate location of transit facilities, including stop and shelter facilities and transit signal priority measures. A Functional Servicing Study that identifies the ultimate transit service will be a required component of submitting a complete planning application.

The Transit Service Concept in Exhibit 5A and 5B, which illustrates a hierarchy of primary and secondary transit corridors and community services, serves as the basis for the development of the Functional Servicing Study and subsequent Transit Facilities Plans.

Applicants will submit an appropriate study and plans to the Town's review team who will verify that a draft plan of subdivision conforms to the Town's Transit Plan at the initial phase of development, and all subsequent phases up to the ultimate build-out of the development.

Ultimate conditions with respect to transit service corridors and facilities are to be reflected in the Functional Servicing Study completed for a development area. The initial or interim and other stages will be reflected within the subsequent submission of a Transit Facilities Plan. A Transit Facilities Plan must be submitted prior to draft plan approval by Town Council.

A Functional Servicing Study and subsequent Transit Facilities Plan will provide the following level of detail:

### Functional Servicing Study

- ultimate location of transit streets
- ultimate location of transit stops, by type, and the associated passenger amenities, and demonstration of the incorporation of these features into road design requirements, where appropriate
- intersection locations for transit-priority treatment, where applicable
- ultimate connections to adjacent development areas
- demonstration that roadway design will appropriately and adequately accommodate anticipated transit services at ultimate development to the satisfaction of the town
- demonstration that the road pattern and related pedestrian routes provide for direct pedestrian access to transit routes and stops to the satisfaction of the town

- documentation that 90 percent of trip generators are within 400m walking distance to transit to ensure that all areas within the Planning Area are adequately serviced by transit to the satisfaction of the town

#### Transit Facilities Plan

- location and design of transit streets
- location and design of transit stops, and related passenger amenities for each bus stop
- location and design of transit-priority treatments at intersections, where applicable;
- demonstration that roadway design will appropriately and adequately accommodate anticipated transit services to the satisfaction of the Town
- associated property requirements

To ensure a complete submission and timely review process, applicants are required to submit Transit Facilities Plans reflecting:

- initial development
- interim phases of development
- full build-out

The Transit Facilities Plan addresses transit facilities at the draft application stage and their integration into the transit network.

The Town will require conditions of approval to ensure adequate and appropriate regard for the Town's Transit-First planning principles in the implementation of development in North Oakville. Conditions of approval may relate to, but are not limited to, such matters as:

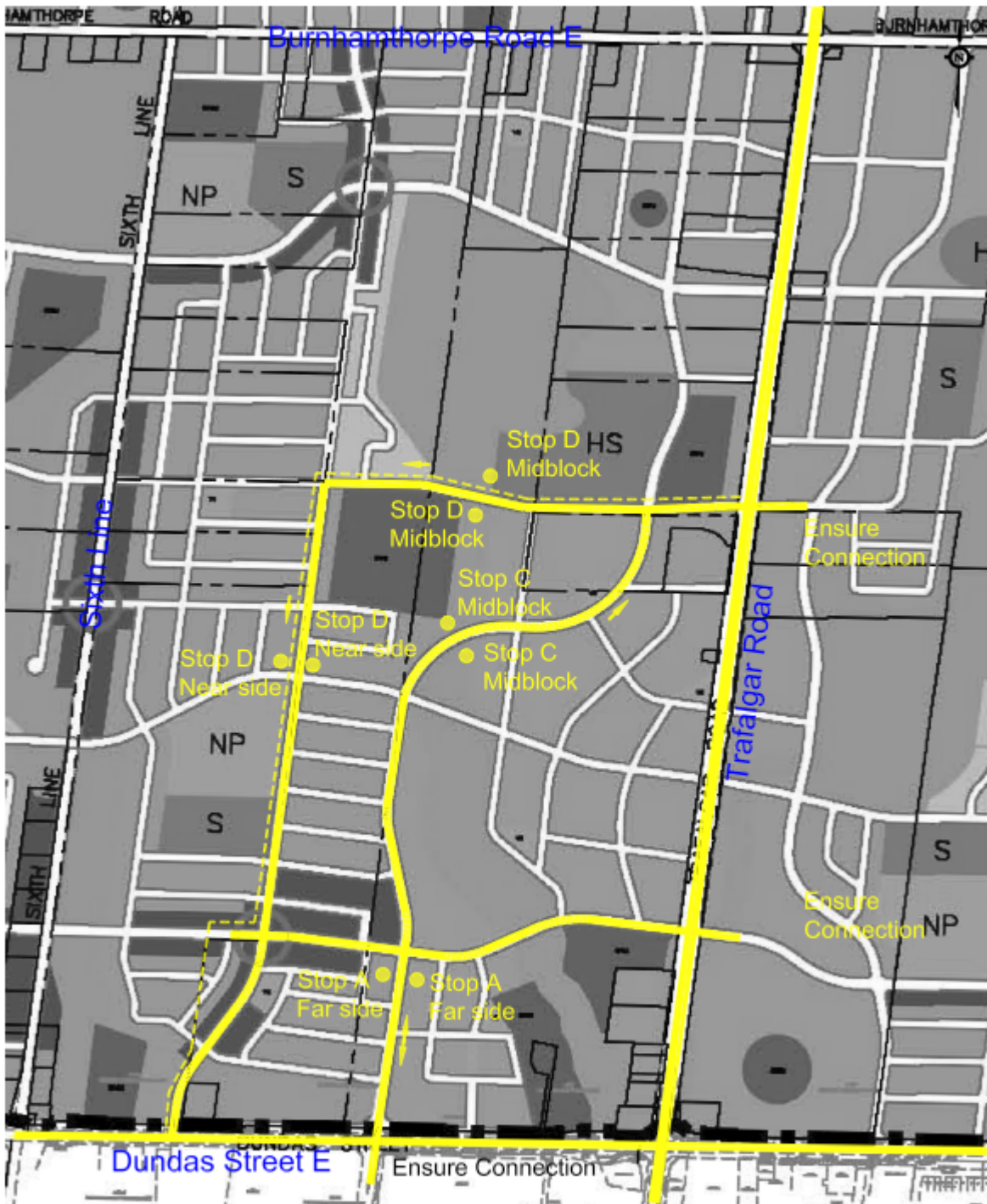
- the phasing of the subdivision to maintain a contiguous transit service area and avoid "leap-frogging" of development that can result in lengthy transit routes with limited ridership potential
- the phasing of development to require "transit streets" (i.e., Avenues, Connectors) to be constructed first in the phasing of development
- the phasing of housing construction to require that houses on transit streets are constructed first
- require that transit streets be constructed to provide a needed transit link to the satisfaction of the Town, even where transit streets may not be part of an initial phase
- require upgraded roadways that will appropriately accommodate transit vehicles during initial or interim phases to the satisfaction of the Town
- agreeing to implement an approved Transit Facilities Plan



In addition, where it has been mutually agreed between the Developer and the Town, a contribution by the developer to the Town's early implementation initiatives and programs for transit services will be included.

Following completion of construction, the "Certificate Recommending the Assumption of the Subdivision by the Town" is to be submitted to the Development Services Department, and circulated to a number of agencies and Town Departments, including Oakville Transit. Should there be deficiencies between the construction of transit facilities when compared to the approved Transit Facilities Plan, the onus is on the applicant to ensure that these deficiencies are addressed.

Exhibit 25 ~ Transit Facilities Plan (for Illustration Purposes Only)



Functional Servicing Plan  
Routing in Consultation with Oakville Transit

# **APPENDIX B**

## **OAKVILLE TRANSIT SERVICE DESIGN STANDARDS**

### **NORTH OAKVILLE SECONDARY PLAN**





# TRANSIT SERVICE DESIGN STANDARDS

# 2009

# Transit Service Design Standards

Transit service design standards will guide Oakville Transit in determining appropriate service levels (when transit service will be provided, how often it will be provided, and where it will be provided).

These standards will define the conditions that require action when standards are not met and allow flexibility to respond to varied customer needs and community expectations in an accountable, efficient and equitable manner.

## 1.0 STRATEGIC GOALS

The service standards are aligned with the following corporate strategic goals:

- To continuously improve our programs and services
- To have programs and services which are accessible
- To have programs and services which are fiscally sustainable
- To be environmentally sustainable
- To be accountable in everything we do

## 2.0 SERVICE DESIGN MEASURES

### 2.1 Service Area

The Transit system shall serve the urban area of the Town as defined by the Official Plan, subject to the provisions of the approved service design standards, and recognizing the need to operate limited service beyond Town limits to facilitate and encourage service integration with neighboring communities.

### 2.2 Route System

Routes should be designed for optimal customer service with consideration to geographical coverage, minimal duplication of services, convenient transfers and waiting time between transfers, ease of system use, optimization of fleet resources and minimum travel time (directness of routes).

All routes should operate on consistent headways throughout the day, with increased frequency on designated routes during peak operating times. As well, routes should remain unchanged throughout the periods of operation.

### 2.3 Frequency of Service

The minimum frequency should recognize the ability for a transit customer to arrive at work, school or other destination within a reasonable time from the departure point and in advance their scheduled activity.

#### Minimum Frequencies

	Peak	Midday	Evening	Weekends/ Holidays
Primary Corridor	10 mins	20 mins	20 mins	20 mins
Secondary Corridor	20 mins	40 mins	40 mins	40 mins
Local Service	20 mins	30 mins	60 mins	60 mins

### 2.4 Walking Distance/Route Coverage

Areas will be considered for transit service if they are beyond a 400 metre walk from an existing transit route. At least 90% of residents will be within 400 metres of a bus stop within the urbanized area. All multiple dwelling units in medium and high density developments must be within 300 metres of a bus stop.

### 2.5 Customer Comfort/Vehicle Loading

Oakville Transit will design its services to keep the number of passengers on its vehicles at a comfortable level, always within the limits of safety.

The number of buses required for a route shall be determined as follows: Maximum route loading will not exceed 150% of seated capacity per bus on average for more than 5 minutes during the morning and afternoon peak period. (At all other times, maximum passenger loads on buses shall not exceed the seated load capacity in any given 60 minute period for more than 5 minutes)

### 2.6 Warrants for Introducing New Services

#### New routes

Services introduced in new areas not previously served should be guaranteed for a minimum of 18 months to ensure enough time for travel patterns to adjust. At the end of the 18 month period, the service must meet the minimum Route Performance threshold.

#### Extensions to existing routes

Extension to existing routes will be evaluated against existing services and implemented on a priority basis, subject to budget availability, for a period of 6 months. After 6 months of operation, routes are reviewed to determine if they qualify for continuation based on current data.

Routes whose performance does not meet approved standards shall undergo substantial review and revision to improve their economic performance to bring them within the limits of the standards. If such revisions are not possible, discontinuation of service on the route shall be recommended by staff.

#### Warrants for new service

Transit services in new subdivisions north of Dundas Street shall be provided in a manner consistent with the North Oakville “transit first” approach. In all other cases, the warrants for new services shall be as follows:

- A minimum density greater than 45 residents/jobs per hectare for Primary Corridor Service; 20 – 30 residents/jobs per hectare for Secondary Corridor Service; and 10 – 20 residents/jobs per hectare for Local Service. New subdivisions that are located beyond a 500 metre walk of transit service and have a minimum 200 households or 500 residents shall be provided with conventional transit service
- An adequate road and pedestrian access system is in place
- The projected passenger revenue will recover 30% of the estimated marginal cost of operation within 12 months. To assist in meeting the



cost recovery target, peak period only operation is generally introduced initially and the service expanded as further development occurs.

- Peak period service to be introduced within one year of a new subdivision being opened or when it is 30% complete; full weekday service when 75% complete, and weekend service to be introduced upon further review of demand.

## 2.7 New Routes or Route Changes

Routing proposals must meet 4 principal routing criteria;

1. Routes must be safe and operationally feasible
2. There should be no major deviation of a corridor service, except at the end of routes
3. The route should serve an area not already served
4. There should be no avoidable duplication of service

If any of these criteria cannot be met, the proposal should be reconsidered. If it passes the initial criteria, the proposal should be further assessed to ensure that it has a positive net benefit; that more riders would benefit from the change than those who would be inconvenienced. Finally, the additional cost of the new route, route portion, or routing change, and the economic performance are calculated. If the economic performance is above average, the change can be implemented, subject to the availability of funds within the approved transit operating budget.

*Oakville Transit shall not undertake any revision or rerouting of its existing transit service that cannot be justified operationally as a means of increasing ridership levels and productivity on any or all routes.*

## 2.8 Additional periods of service

Additional periods of service such as midday or evening are assessed for their economic performance only, assuming that the routing has already met the minimum operational standards during the current periods of service. While any additional period of service can be considered, routes are typically implemented in sequence:

Peaks  
Midday and Evening  
Saturday  
Sunday and Holidays

If the economic assessment shows the economic performance for the period in question 'to be above average', service improvement can be accelerated subject to budget availability. If the assessment is 'below average' the service proposal should be referred to a review.

Modified routing proposals can be considered for additional periods of service to improve economic performance or ridership, provided they conform to the operation standards described in the assessment of new or revised routes.

## 2.9 Express Services

Express services can be considered if they meet 2 criteria:

- The express service design saves at least 15% of travel time relative to the current service design and;
- The majority of passengers can board and alight at express stops

Limited stop service may be used to meet the passenger access requirements.

## 2.10 Accessibility

Oakville Transit will provide travel information to all potential care-A-van (para- transit) passengers, to encourage use of conventional transit service whenever possible, thereby enabling specialized door to door services to better serve those that do not have a choice.

Winter control activities at bus stop landing areas shall be scheduled within 48 hours of a snowfall.

All newly installed bus stop landing pads shall provide, at a minimum, a paved surface aligned with the front doors of buses. Where feasible, landing pads will be provided to align with the front and back doors.

All conventional transit vehicles shall be low floor wheelchair accessible.

In all matters of accessibility, staff will refer to the Annual Accessibility Plan for identification of barriers and strategies to eliminate same. Standards will be reviewed and adjusted as required by Accessibility for Ontarians with Disabilities Act (AODA) standards being developed.

The accessibility of bus stops and associated amenities will be revisited to ensure compliance with the AODA Built Environment Standards, Transportation Standards, and Information and Communications Standards currently under development.



## 3.0 FACILITIES AND CUSTOMER AMENITIES

### 3.1 Bus Stop Placement

The location of bus stops should be coordinated with the design of walkways, intersections and the surrounding development and infrastructure to minimize walking distances and provide for reasonable bus stop spacing.

A bus stop will be implemented where it can provide a safe point of entry and exit, and where it can be well delineated and maintained. Minimum stop spacing shall be 250 metres, unless otherwise required by reason of safety or in areas of high demand.

### 3.2 Considerations in Stop Placement and Amenity Level

The preference is for stops to be located at intersections. Bus stops at intersections should be located in the safest position, near-side with consideration to traffic and street conditions. Far-side stops may be considered in special circumstances, on a case by case basis. In order of preference, stops should be located at:

- a) Signalized intersections
- b) Intersections with stop sign conditions
- c) Intersections

Other considerations for bus stop placement include:

- Mid block stops will be required to address 250 metre minimum and no intersection in proximity
- Accessibility of the actual stop location (for people with mobility devices)

- High boarding locations and transfer locations
- Mobility needs location; for example
  - Seniors residence
  - Group home
  - Medical clinic
  - Library
  - Hospital
  - Shopping Mall
- Activity location; for example
  - Apartment building
  - Secondary school
  - Post-secondary school
- Request from the public

### 3.3 Shelters

Shelters may be provided where appropriate and possible. Priority factors in selecting bus stops as candidates for shelters include:

- Terminals
- Transfer points
- High boarding locations
- Unique exposure to inclement weather
- In front of seniors residences and other institutional facilities
- Stops where customers may be exposed to extended wait times

