



TOWN OF OAKVILLE TRANSPORTATION MASTER PLAN REVIEW

FINAL

MARCH 2018

PREPARED FOR THE TOWN OF:



OAKVILLE



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1 Introduction

1.1 What is *Switching Gears*?

In 2013, the Town of Oakville completed a multifaceted and comprehensive Transportation Master Plan (TMP) known as '*Switching Gears*', which included an assessment of the existing transportation system within the town, and identified the town's transportation needs for anticipated growth to 2031.

In 2017, the town initiated a Transportation Master Plan Review to assess the future transportation system based on existing conditions and to identify additional transportation infrastructure needs to support growth in Oakville to 2031. The strategies identified in the TMP Review align with the objectives defined by the *Livable Oakville Plan* (Town's Official Plan) and other relevant policies identified by the town, Halton Region, and the Province. Oakville's future prosperity and success are largely dependent on the effectiveness of multi-modal travel within the town and the establishment of an interconnected system of mobility within the Greater Toronto and Hamilton Area (GTHA). The Transportation Master Plan Review will assist the town to better plan for population growth, increasing traffic demands, and changing demographics and societal values. The TMP Review will also guide initiatives to support more sustainable modes of travel.

In the Transportation Master Plan Review, a variety of transit-focused and other sustainable modal options were assessed for:

- Public transit system and network improvements, and
- Road network capacity improvements that highlight public transit opportunities

The study includes a review of active transportation (pedestrian and cycling) initiatives, network improvements, and transit-supportive land use planning and travel demand management policies.

1.2 Study Objectives

The *Switching Gears 2013* had considered the town and Halton Region's mode split targets, with a 20% transit mode share and 6% (each) mode share for Active Transportation (AT) and Transportation Demand Management (TDM), by 2031. These mode split targets were



established based on a number of factors, including planning policy documents, projects anticipated to be constructed by 2031 (by the town or by others), a recognition of the importance of transit and active transportation, and a desire to limit the impacts of congestion. This TMP has been prepared in accordance with the Town's Official Plan. The TMP builds on Section 8 of the Official Plan and serves to implement its goals, objectives and policies. The various modal options considered in the TMP work are in conjunction with the land use framework provided in the OP and conforms to its overall direction.

Since *Switching Gears 2013* was approved and implemented, growth in transit ridership, active transportation and transportation demand management have not increased at a rate that would achieve a 20% transit mode share by 2031. Transit operational costs have increased at a rate greater than what has been supported by new ridership. The transit mode share target identified in the earlier TMP remains the town's goal in order to provide more sustainable transportation facilities. However, due to various factors including current fiscal conditions, and transit mode share, higher vehicle ownership rates, delay in implementation of various regional and provincial transit improvements, it has been recognized that this transit mode share target is not fully achievable by 2031 and therefore, it is now being considered as a goal beyond the 2031 planning horizon.

There have also been changes to the province's Development Charges (DC) Act through Bill 73 – Smart Growth for Our Communities Act, 2015, which requires that projected transit ridership growth should identify the net growth due to new residents (those that are likely to be transit riders) moving to Oakville, and existing residents becoming new transit riders. As per the DC Act, Development Charges can only be collected for transit operations required to service new residents; whereas tax levy funding is required to increase transit service for existing residents.

***The primary purpose of the
TMP Review is to support DC
By-law changes by identifying
the transportation
infrastructure needs to
support growth in Oakville
with a viable transit mode
share for the interim
conditions to 2031.***

A full TMP update will be initiated to reflect the updated 2041 population and employment forecasts and supporting transportation plans and policies such as the Halton Region TMP, the Metrolinx Regional Transportation Plan, and the Greater Golden Horseshoe (GGH) Transportation Plan, once they become available.



1.3 Study Process/Approach

The Transportation Master Plan Review followed a two-phase process to evaluate the physical and social impacts of a project and to determine the most appropriate solution. Phase 1 is identifying existing or potential problems, and opportunities to address these problems and to improve upon the existing system. The subsequent Phase 2 involves generating alternative solutions, and performing evaluations to arrive at a preferred solution.

The study process included two Public Information Centres (PICs), held in May and October 2017, to present and receive input on plans and work completed to that point. Public comments received during the PIC processes are considered during the review process and documented. In order to reach a broader public audience, an online poll was conducted on the town's website to garner public feedback on existing road conditions, transit network and future transportation initiatives. The details for the public consultation process and outcomes are described in **Section 5**.

1.4 Highlights Since *Switching Gears* 2013

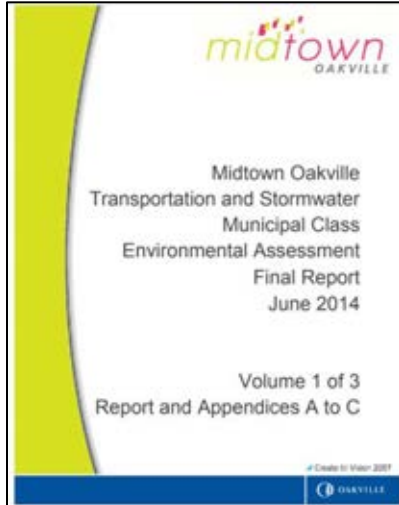
Many recommendations and projects from the *Switching Gears 2013* study have been implemented since the study completion, or are currently underway or planned. Among the recommendations were strategies and initiatives to promote Travel Demand Management techniques to achieve a reduction in peak hour auto travel by 3%, to increase active transportation mode share by 3%, and to increase transit mode share by 2031. These initiatives include the development of policies and strategies, and improvements to existing road infrastructure and transit systems.

Following are summaries of several key initiatives.

Building upon the success of the various projects and initiatives, the Transportation Master Plan Review was initiated to better support growth in Oakville with a more viable transit mode share target for the planning horizon 2031.



Midtown Strategy (2014, 2017)



The Midtown Strategy, a plan to encourage investments to transform the Midtown area into a vibrant and vertical center, was presented in 2014 and further updated in 2017. This plan was based on the vision and policies outlined in the Livable Oakville Plan. The Midtown Strategy consists of three major studies: the Midtown Oakville Class Environmental Assessment (EA), Midtown Oakville Parking Strategy, and Designing Midtown Oakville (urban design guide).

The Midtown EA identified a number of opportunities to accommodate pedestrians, cyclists, transit riders and vehicles to meet the growing needs of the Midtown Oakville area. Proposed solutions aim at improving access and circulation to and from the QEW and within Midtown Oakville, as well as increasing roadway capacity on critical links within the area. The preferred concept includes various elements such as a new north-south crossing of the QEW with designated transit lanes, the extension of Cross Avenue, widening of Iroquois Shore Road, improvements to QEW/Highway 403 interchanges, and new and improved active transportation and transit connections and facilities. Following the Midtown EA, a town-initiated official plan amendment (OPA) was proposed as an update to the planned transportation network in *Livable Oakville* continue to support the long-term redevelopment of the lands in Midtown Oakville.

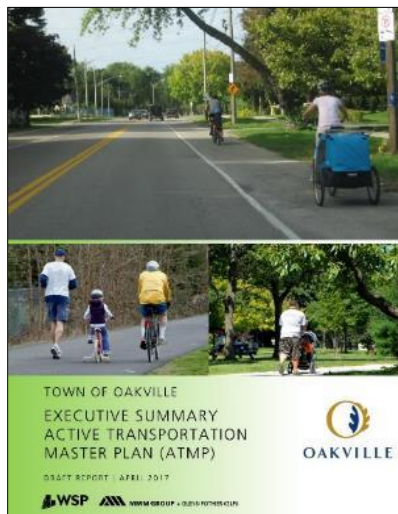


Goods Movement Study (2016)



The Town conducted a Goods Movement Study (GMS) in 2016 to support the efficient and reliable movement of goods in Oakville. The study addressed two primary topics: goods movement strategies and actions to support the TMP and other policies such as Livable Oakville Official Plan, and an update of the Town's existing 2010 heavy truck route network.

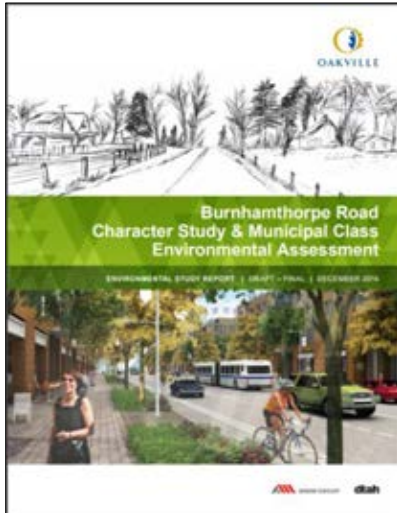
Active Transportation Master Plan Update (2017)



The Active Transportation Master Plan (ATMP) was updated in 2017, based on the original 2009 ATMP which the 2013 TMP cited. This study reviewed the existing network conditions and suggested new policies in response to new community trends, emerging design guidelines, supportive legislation and best practice. The ATMP Update proposed a total of 704 km of new walking and cycling facilities to provide a continuous, connected and integrated active transportation system. Council approved the 2017 ATMP Update and recommendations from the study are being considered in the Development Charges Background Study.

The development of an Active Sustainable School Travel Hub for Halton is currently underway in partnership with the Region of Halton and Metrolinx, and is intended to increase active transportation among children traveling to and from school. Construction of bike lanes, bike routes and multi-use trails, in support of the active transportation strategies outlined in the TMP, have been ongoing since 2013, along with the installation of bike racks on transit buses (completed) and transit stops (planned).

Road Network Improvements



Switching Gears 2013 provided various recommendations to improve the transportation network. Among the planned improvements to the local and regional road network, the extension of North Service Road from Joshua’s Creek Drive to Ford Drive has been completed. A Municipal Class Environmental Assessment (MCEA) study has since been completed on a new design for Burnhamthorpe Road from Sixteen Mile Creek to Ninth Line. Another MCEA is underway for improvements along Lakeshore Road West, which will address issues along the Lakeshore corridor including road alignment, signal timings, intersection configuration, and transit and active transportation infrastructure needs. Various road widening, road resurfacing, and grade separation projects on town roads are included in the 10-year Capital Forecast and annual capital programs.

Travel Demand Management Initiatives

The Town is actively promoting Travel Demand Management measures as part of Smart Commute, a program administered by Metrolinx with the support of local municipalities with the goal of easing gridlock in the GTHA. Travel Demand Management is the application of policies and strategies to reduce travel demand and/or redistribute the demand in space or in time. It advocates and accommodates sustainable commuting options such as carpooling, transit, cycling, walking, telework and flexible work hours. Currently the following are offered to employers who are members of *Smart Commute Halton*:



- Carpool/Ride-matching Service;
- Preferential carpool parking;
- Emergency Ride Home Program;
- Improved transit service;
- Car and bicycle sharing and trip planning;
- Sale of reduced fare transit passes for employees; and
- Bike lockers.



The identified key benefits of TDM include reduced congestion and travel time, lower commuter operating costs, and improved health. Under the Smart Commute initiative, Park & Ride facilities have been put in place. These are parking lots with transit connections that allow commuters and other travelers to leave their vehicles and transfer to a bus, rail or carpool for the remainder of their journey. Within Oakville, there are two *Park N' Ride* lots that have direct GO Bus connections inter-regionally. Highway 407 has such lots at Bronte Road and Trafalgar Road, currently with 82 and 106 parking spaces, respectively. There are also two carpool lots along QEW at Winston Churchill Boulevard and Bronte Road, with 160 and 88 spaces, respectively.

The Smart Commute program is continuously improvising to gauge participation. The Smart Commute tool makes it easy for users to explore travel options, find carpools, and track the impact of transportation choices. In addition, various events such as the Bike Month and Carpool Week encourage people to use more sustainable travel options. As of January 2017, 31 employers and 21,000 employees and students have participated in the Smart Commute initiative in the Halton Region. The benefits of the program on the Town's transportation demand is expected to become even greater in the future.

Transit Service Review (2015)

The *Switching Gears 2013* has recommended various transit policies and initiatives, including the public consultation and review of the Oakville Transit Services, which resulted in the approval of the Oakville Transit Five Year Plan in 2015. Town Council approved the Oakville Transit Five Year Plan, which is expected to improve frequency and reliability of transit service throughout the town over the next five years while reducing forecasted reliance on tax support for transit by \$1.7 million. The plan evaluates current transit operating conditions in order to identify service improvements to increase transit ridership, fleet utilization, and cost recovery. Specific initiatives (many of which have now been implemented) include the introduction of Oakville Transit real-time bus tracking, increased service frequency, expanded service to key destinations within the town and to neighbouring municipalities, and Home-to-Hub services that provide a connection between new communities in Oakville not yet served by regularly-scheduled routes and the nearest hub from their origin.

Pedestrian Safety Study (2017)

The Pedestrian Safety Study recommends the installation of new Level 2 Pedestrian Crossover control devices (PXOs) in accordance with changes to the Ontario Highway Traffic Act (HTA), which states that drivers must stop and yield the entire roadway to pedestrians and school



crossing guards before proceeding at pedestrian crossovers and school crossings. The proposed Pedestrian Safety Program contains a set of selection criteria to be used on a priority ranking system and strategies to be included in the implementation plan. Ten PXOs are planned to be constructed in 2018.

Other Initiatives

Some other ongoing initiatives based on *Switching Gears 2013* include the development of Transportation Demand Management Guidelines and Transportation Impact Assessment Guidelines, as well as safety education initiatives for pedestrians, cyclists and drivers.



2 Existing Conditions

2.1 Existing (2016) Land Use

The current land uses in Oakville include residential, employment, commercial, parkland, open space, and natural areas. The natural areas include those that are designated as the Parkway Belt and Greenbelt. A majority of the employment areas are concentrated in Downtown Oakville or in close proximity to the Queen Elizabeth Way (QEW), Highway 407, Dundas Street West, and Trafalgar Road. Currently, most of the developments are taking place north of Dundas Street West. **Figure 1** illustrates the existing and planned Urban Structure in Oakville.

In mid-2017, the town was home to 197,684 residents¹. Oakville's residential areas include low, medium and high-density residential uses, as well as a range of compatible facilities such as schools, places of worship, and recreational and commercial uses that serve the residents. The residential areas are comprised of established residential communities that have developed from the initial 19th century settlements of Downtown Oakville, Bronte and on-going developing neighborhoods, such as Palermo West and North Oakville. The character of these communities varies from the curvilinear street systems of recent development to the traditional road grids of the town's original plan of settlement based on the mouth of the Sixteen Mile Creek. Established residential areas south of Dundas Street West were reviewed to identify their characteristics. Each community is served by a network of collector and minor residential arterial roads (typically 20 to 26 m of right-of-way). The developing North Oakville area is planned as 'transit first' communities with a primary focus on transit travel.

Employment areas are designated in the *Livable Oakville Plan* as areas that provide for a mix of employment uses including industrial, manufacturing, warehousing, offices, and associated retail and ancillary facilities. The employment areas are generally located along

¹ Source: Town of Oakville Development Charge Background Study (Table 3-1)
<https://www.oakville.ca/assets/general%20-%20town%20hall/DC-BackgroundStudy-discussion.pdf>



the provincial highways including the QEW, Highway 403, and Highway 407. An Employment Mixed Use Corridor is identified along Speers Road and Cornwall Road for its mix of non-traditional employment development. In mid-2017, the town has a total employment of 97,233². According to Statistics Canada, the largest sector of employment is professional, scientific and technical services, followed by retail trade.

Similar to the development taking place in North Oakville, there is a vision for employment areas to be conducive to transit use. Currently, a large percentage of employment land is adjacent to the Oakville GO Station and is well-served by local and GO transit systems.

2.2 Existing (2016) Transportation System

This section presents a summary of the existing transportation network within the town including roadway network, transit routes, active transportation network, and goods movement network.

2.2.1 Roadway Network

The Town of Oakville is bounded by Winston Churchill Boulevard and Ninth Line on the east side, Tremaine Road and Burloak Drive on the west side, Lower Base Line and Highway 407 on the north side and Lake Ontario shoreline on the south side. Two east-west provincial highways, Highway 407 and QEW/Highway 403 provide access to the existing land uses via several supporting networks of arterial and local roads. The area highways are under the jurisdiction of the Province of Ontario's Ministry of Transportation (MTO). North-south arterial roads providing connection to Highway 403/QEW include: Burloak Drive, Bronte Road (Regional Road 25), Third Line, Dorval Drive, Trafalgar Road, Royal Windsor Drive, Ford Drive and Winston Churchill Boulevard. Most major arterials in Oakville are under the jurisdiction of Halton Region. Minor arterials, collectors and local roads providing community connections, as well as sidewalks and off-road trails are under the jurisdiction of the town.

Figure 2 shows the road network and road jurisdiction within the Town of Oakville.

² Source: Town of Oakville Development Charge Background Study (Schedule 9a)
<https://www.oakville.ca/assets/general%20-%20town%20hall/DC-BackgroundStudy-discussion.pdf>





Figure 1: Urban Structure of Oakville³
 Source: Oakville Urban Structure Review (2017)

³ The Urban Structure has been adopted by Town Council but is pending Regional approval of Official Plan Amendment (OPA 15).



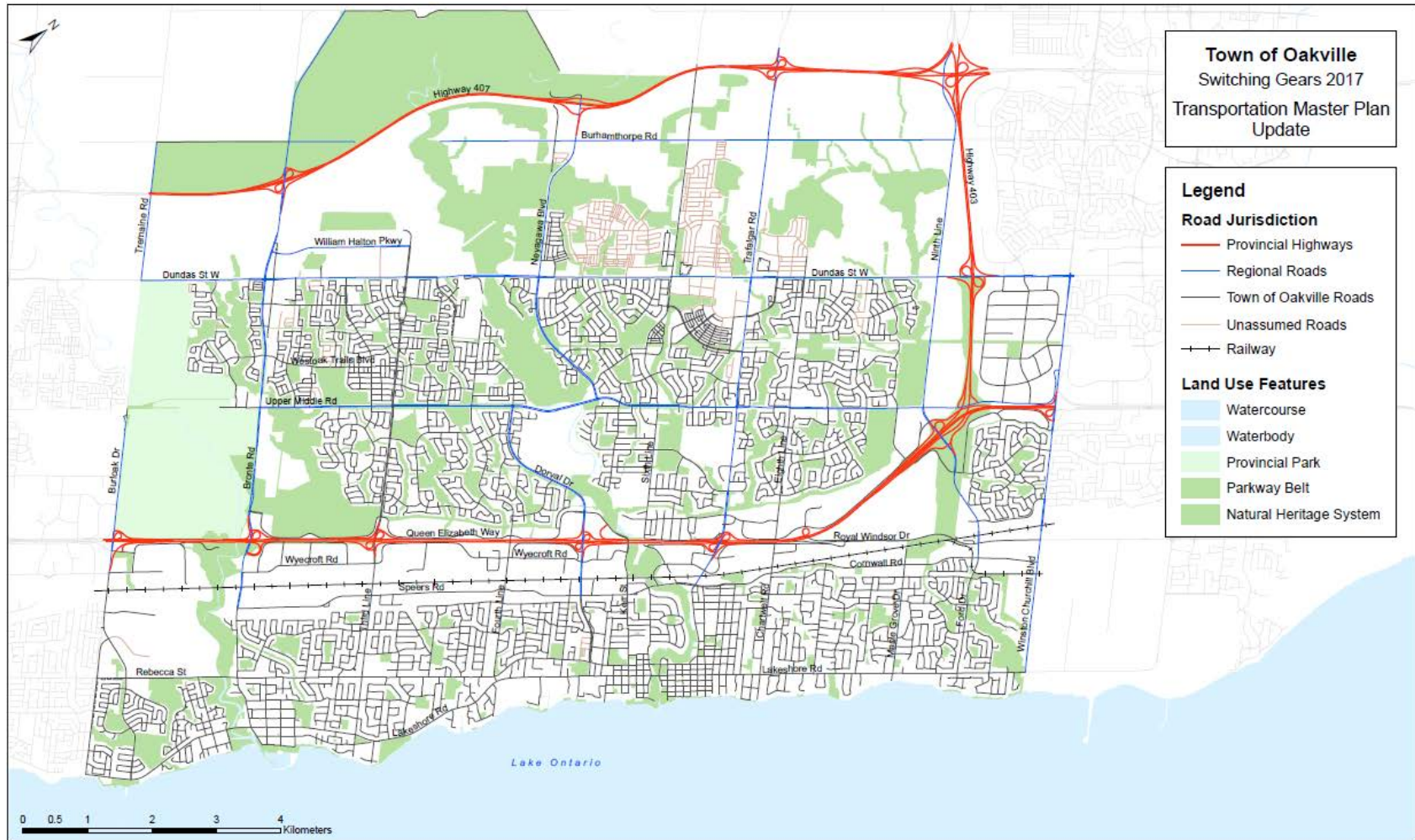


Figure 2: 2017 Town of Oakville Road System

Source: Town of Oakville GIS Data



2.2.2 Oakville Transit System

The Town of Oakville is served by the local transit authority, Oakville Transit, and the regional GO Transit. Oakville Transit provides service within the town and across its borders, while GO Transit is an inter-regional commuter based transit provider for the GTHA.

Currently, Oakville Transit provides local bus services on 23 regularly-scheduled routes, with seven additional routes serving secondary schools, and three serving senior residences in the town (as of September 2017). The number of regularly scheduled routes has decreased from the 27 routes operated in 2011. This is an effort to reallocate funding and resources to high-demand routes by eliminating low-ridership ones, as part of Phase 1 of a five-year Service Plan intended to improve rider experience for existing customers while attracting new riders. As a result, more frequent services and better connections, along with new bus routes serving growth areas were introduced. The average operating frequency for most routes is 15-30 minutes during weekday peak periods, an improvement from the 20-30 minutes observed in 2011. Off-peak and weekend services remain at a frequency of 20-60 minutes. The number of bus routes that specifically serve secondary schools and senior residences has remained the same.

The majority of the routes originate/destined from/to Bronte and Oakville GO Stations. Several routes provide connecting services into adjacent municipalities: City of Mississauga (MiWay) and City of Burlington (Burlington Transit). A system map of the current complete route network of Oakville Transit and major transfer points (effective September 3, 2017) is presented in **Figure 3**.

On top of regularly scheduled bus services, Oakville Transit provides a late night service that is an on-demand, drop-off only bus service originating from Oakville GO Station. This is a “demand responsive” service where passengers boarding the bus indicate to the driver the closest bus stop to their final destination. The driver then drops off passengers at the locations requested by the boarding passengers. As this service route varies every night, pick-up service is not available. This service starts on weekday nights from 11:40 pm and on Sundays and holidays at 7:40 pm.

Oakville Transit offers a special on-request transit service called the “Home to Hub” to neighbourhoods, which are currently not connected by regular bus services. The “Home to Hub”, originally provided to newer communities of North Oakville situated north of Dundas Street West, has been expanded to southeast Oakville as of September 2017. To use this service, passengers are required to book between one and 10 days in advance. The service



uses smaller capacity buses to pick up patrons from their driveways and drops them off at the Uptown Core Terminal from North Oakville and at the Oakville GO Station or Downtown Oakville from Southeast Oakville, where regular schedule bus connections are available. This service is available from Monday to Friday during the morning and evening rush hours.

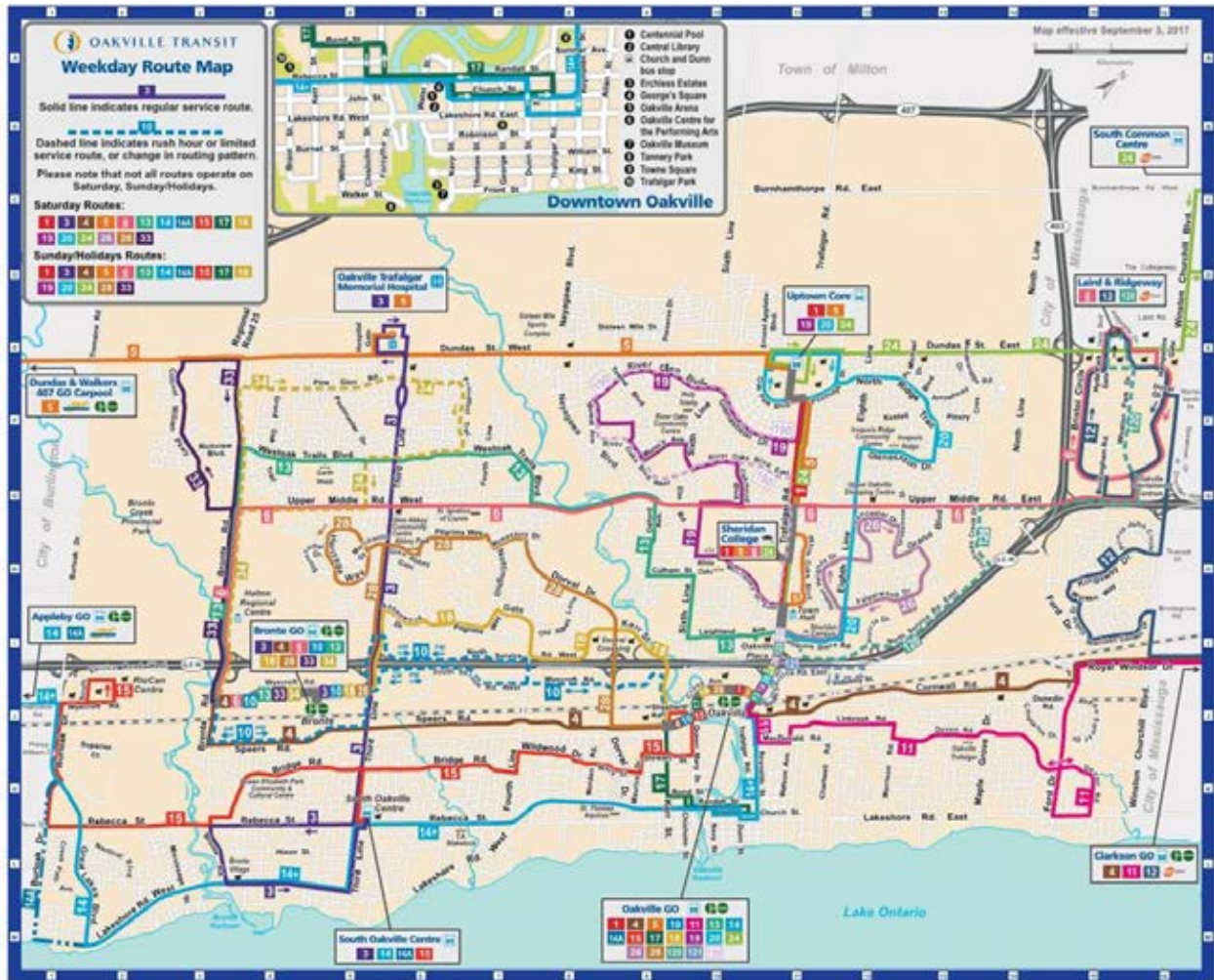


Figure 3: Oakville Transit System Map

Source: Oakville Transit, <http://oakvilletransit.ca/schedules-and-maps.html>

Oakville Transit also provides a door-to-door transportation service called “Care-A-Van” for persons with accessibility requirements. This service is available from 6 am to 2 am from Monday to Friday, from 7 am to 2 am on Saturdays, and from 8 am to 8 pm on Sundays and statutory holidays. This service is for anyone who is unable to use conventional transit services due to their accessibility requirements. It is an example of Oakville’s commitment to accessibility, which contributes to reducing auto dependence in the area.



2.2.3 GO Transit System

There are four major GO Transit stations in the Town of Oakville which provide inter-regional rail and bus services: Bronte GO Station located in Southwest Oakville, Oakville GO Station located in downtown/central Oakville, and Bronte Road at Highway 407 and Trafalgar Road at Highway 407 Park & Ride lots. Below is a list of GO Transit routes that are currently servicing the Oakville area:

- **Route 12/18:** Lakeshore West Line (Route 18) is a regularly scheduled daily commuter train service between West Harbour GO Station/Hamilton GO Centre and Union Station (Downtown Toronto). There is also a seasonal weekend train service between West Harbour GO Station and Niagara Falls VIA Station in the summer months (Route 12).
- **Route 20:** The Milton/Oakville bus route provides weekday services with one major stop at Sheridan College Trafalgar Road Campus and two major stops at the Highway 407 Park & Ride lots within the town, along its journey from Oakville GO Station to Milton GO Station.
- **Route 40:** The Hamilton/Richmond Hill Pearson Express route serves the Park and Ride lot at Highway 407 and Trafalgar Road along with several other bus stops outside of the Oakville area, between Hamilton GO Station and Toronto Pearson Airport.
- **Route 46/47:** The Highway 407 West routes provide weekday, limited stop express bus services to and from York University primarily on Highway 407. Route 46 terminates at Oakville GO Station and serves major stops at Trafalgar Road Park & Ride and Sheridan College within Oakville. Route 47 provides a connection between Hamilton GO Centre and York University, with stops at the Bronte Road Park & Ride, and Trafalgar Road Park & Ride in the Town of Oakville.

2.2.4 Railway Services

VIA Rail trains provide inter-city rail services between Oakville and major cities and destinations across Canada. The Toronto-Windsor and the Toronto-Niagara Falls trains make stops at the Oakville VIA station, which is a shared facility with the adjacent Oakville GO station. There is very limited parking space for only 18 spaces at this station although the lot adjoins the GO station parking. The VIA Rail also provides a connection to AMTRAK train into the US.



2.2.5 Active Transportation Infrastructure

The 2017 Active Transportation Master Plan (ATMP) Update was recently completed to review the existing conditions and to provide recommendations for future active transportation facilities. According to the ATMP Update, the town currently has a total of 1,488 km of routes and facilities including 70 km of bike lane, over 50 km of signed bike route, and more than 330 km of in-boulevard and off-road trails to accommodate the travel of pedestrians and cyclists. The town's active transportation network also includes over 1,000 km of sidewalks. The existing and proposed pedestrian and cycling transportation networks are presented in **Figure 4** and **Figure 5**, respectively.

The town's extensive off-road trail system provides recreational opportunities for residents of all communities. Below is a list of major trails in Oakville:

- Northwest Oakville
 - Fourteen Mile Creek Trail, McCraney Creek Trail and Taplow Creek Trail
- Southwest Oakville
 - Bronte Creek Trail, Donovan Bailey Park Trail and Nautical Woods Trail
- North/Central Oakville
 - Crosstown Trail, Nipigon/McCraney Valley Trail, Munn's Creek/Shannon Creek Trail and Sixteen Mile Creek Trail
- Northeast Oakville
 - Joshua Creek Trail North, Morrison Valley Trail and Iroquois Shoreline Woods Trail
- Southeast Oakville
 - Joshua Creek Trail South and Avonhead Ridge Trail





Figure 4: Existing and Proposed Pedestrian Network in Oakville
Source: Town of Oakville Active Transportation Master Plan (2017)



Figure 5: Existing and Proposed Cycling Network in Oakville
Source: Town of Oakville Active Transportation Master Plan (2017)

2.2.6 Goods Movement Strategy

In order to support the efficient and reliable movement of goods in town, the Goods Movement Study (GMS) was completed in 2016 in which goods movement strategies and actions were provided to support the TMP and other policies. The study presented a review and update of the existing Heavy Truck Route network. The GMS recommended that the town retains its Heavy Truck Route Network last updated in 2010. Oakville’s truck route system is based on a “restrictive” approach with four types of prohibitions and restrictions, as described below and presented in **Figure 6**:

- 24-hour (permanent) heavy truck prohibition. Most of Lakeshore Road and Rebecca Street, as well as some roads in Bronte Village, several north-south roads south of Cornwall Road and two roads north of the QEW, have permanent prohibition.
- Night time heavy truck prohibition, between 7:00 pm and 7:00 am. Third Line north of the North Service Road is the only road that has this restriction.
- Night time heavy truck prohibition, between 11:00 pm and 7:00 am. Winston Churchill Boulevard is the only road that has this restriction, over its entire length within the town.
- Load limit, with a 5 tonne per axle restriction. Several roads in North Oakville have this restriction.

As can be seen in **Figure 6**, all regional roads and provincial highways are truck routes. Municipal roads that provide access to the highways (Royal Windsor Drive and Third Line) also permit heavy trucks at all times with the exception of the night time prohibition on Third Line north of North Service Road. There are no prohibitions on most of the local roads (except as shown in **Figure 6**); however, heavy vehicles generally access these local roads only as the final point of access to or from the origin or destination.

2.3 Existing (2016) Travel Characteristics

The existing travel characteristics of Oakville were reviewed using the 2011 Transportation Tomorrow Survey (TTS) data, which is the most recent data currently available. The previous 2013 TMP used the 2006 TTS data. Travel patterns within the town were derived using the 2011 TTS data, which is most recent survey data available, including the following: hourly trips originating from Oakville, modal share summary, trip distribution (inbound, outbound and within the town) and trip length by mode.





Figure 6: Heavy Truck Prohibitions and Restrictions

Source: Town of Oakville, <https://www.oakville.ca/residents/safety-traffic.html>

2.3.1 Hourly Travel Demand

To identify the peak periods for travel demand and derive the number of trips generating from the town during the peak periods, the start time of all trips within 24 hours was extracted. For historical comparison, data was also extracted from the 2001 and 2006 TTS dataset to identify any shifts in peak demand.

Figure 7 illustrates the hourly variation for all trips originating in Oakville. It is noted that the AM peak period has a distinct peak hour. The PM peak has a broader peak period with peaks in both the mid-afternoon (after school) and late afternoon (after work). For the purpose of



this study, the AM and PM peak periods have been defined as follows: 6:00 AM to 9:00 AM and 3:00 PM to 6:00 PM, respectively.

Historical data indicates that Oakville has experienced significant growth in both peak hours. The travel demand for the rest of the day has seen growth to a lesser extent.

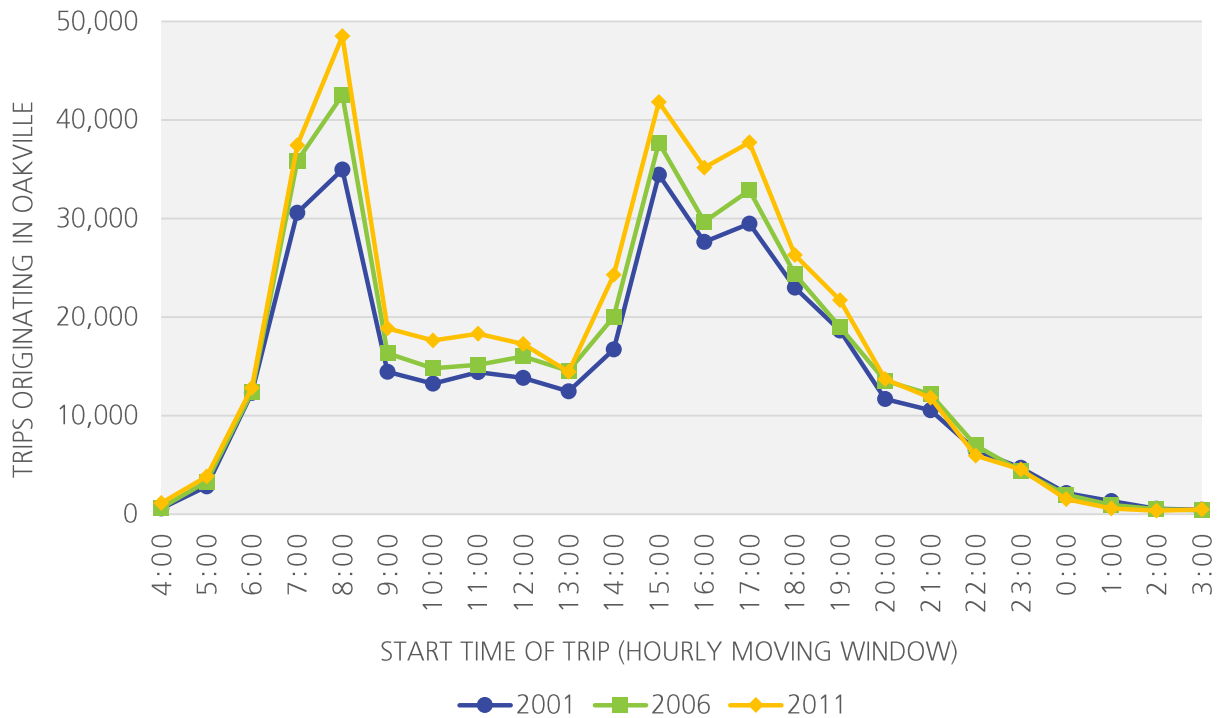


Figure 7: Hourly Volumes for Trips Originating in Oakville

Source: 2001, 2006 and 2011 Transportation Tomorrow Survey

2.3.2 Modal Share

The analysis of modal share (i.e. proportion of trips conducted by each mode of transportation) in Oakville was performed by assessing the TTS data for inbound and outbound trips, conducted during a typical weekday AM and PM Peak periods. The travel modes considered were automobile (auto driver and auto passenger), local public transit (Oakville Transit), walk/cycle, GO Rail only, joint GO Rail and local public transit, and others (motorcycle, school bus, taxi passenger, other).

The 2011 trips by mode were compared to the previous survey data set from 2006 and summarized in **Table 1**. Travel to and from Oakville is still largely dominated by automobiles. GO Transit and joint GO and local transit modes have the next highest share in the peak



directions ranging from 10% of AM outbound trips to 8% of PM inbound trips. This travel behavior suggests these trips are largely commute-based. Walk/cycle mode share is approximately 7% for the AM peak period and 3% for the PM peak period.

Table 1: Modal Share Summary

Mode	AM Peak Period		PM Peak Period	
	Outbound	Inbound	Outbound	Inbound
2011 TTS				
Automobile	77.6%	86.0%	92.2%	85.8%
Transit	2.3%	2.5%	1.9%	1.6%
Walk/Cycle	6.5%	6.9%	3.1%	2.9%
GO Rail Only	7.0%	0.2%	0.4%	5.5%
Joint GO & Public Transit	3.2%	0.3%	0.4%	2.4%
Other*	3.4%	4.1%	2.1%	1.7%
Total	100%	100%	100%	100%
2006 TTS				
Automobile	79.5%	85.8%	92.3%	87.4%
Transit	1.6%	2.1%	1.7%	1.3%
Walk/Cycle	7.5%	7.9%	3.8%	3.6%
GO Rail Only	5.2%	0.2%	0.3%	4.0%
Joint GO & Public Transit	2.9%	0.6%	0.4%	2.3%
Other*	3.4%	3.4%	1.4%	1.5%
Total	100%	100%	100%	100%

* Other includes motorcycle, taxi passenger, and school bus
 Source: 2011 and 2006 Transportation Tomorrow Survey

The high automobile mode share found in **Table 1** is consistent with the high rate of vehicle ownership per household in Oakville. The comparison between ownership in 2006 and 2011 are summarized below in **Table 2**. The average vehicle ownership in 2011 was 1.79, which is an increase from 1.76 in 2006.



Table 2: Vehicle Ownership of Oakville Households

Number of Vehicles per Household						Total Households	Total Vehicles	Average Vehicle Ownership
0	1	2	3	4	5			
2011 TTS								
2,912	19,457	32,860	7,502	1,909	217	64,857	116,404	1.79
4.5%	30.0%	50.7%	11.6%	2.9%	0.3%	-	-	-
2006 TTS								
2,823	17,033	29,144	6,216	1,045	200	56,461	99,149	1.76
5.0%	30.2%	51.6%	11.0%	1.9%	0.4%	-	-	-

Source: 2011 and 2006 Transportation Tomorrow Survey

2.3.3 Transit Usage

The 2006 and 2011 TTS data disclosed several shifts in travel behavior over the five-year period. Trips originating from Oakville in the morning peak period and returning to Oakville in the afternoon period have seen a slight decrease in the automobile mode share. The outbound AM peak period automobile trip share decreased by almost 2%. Auto mode share for trips in the off-peak directions has remained the same.

GO Transit trips have seen an increase in its outbound trips share by approximately 2% in the AM peak period and 1.3% in its inbound trips in the PM peak period. Public transit has seen an increase of approximately 0.45% during both peak periods for both outbound and inbound trips. The combined GO Rail and public transit modal share has seen an increase of 2% and 1% in the AM and PM peak period, respectively. The combined mode share of walk and cycle decreased by approximately 1% in the AM peak period and 1.3% in the PM peak period. It is of note that even though the automobile is still the predominant mode of travel in Oakville, the decrease in its share and the increase in GO Rail and local public transit usage is an indication that the travel behavior in this region is slowly changing to favour multi-modal travelling, by walking, cycling, carpooling or micro-transit (e.g. Uber).

A comparison of local transit mode share and total transit (local plus GO Transit) mode shares for the Town of Oakville and adjacent municipalities (i.e. Mississauga, Burlington, Milton, Hamilton and Brampton) are presented in **Figure 8** and **Figure 9**, respectively.



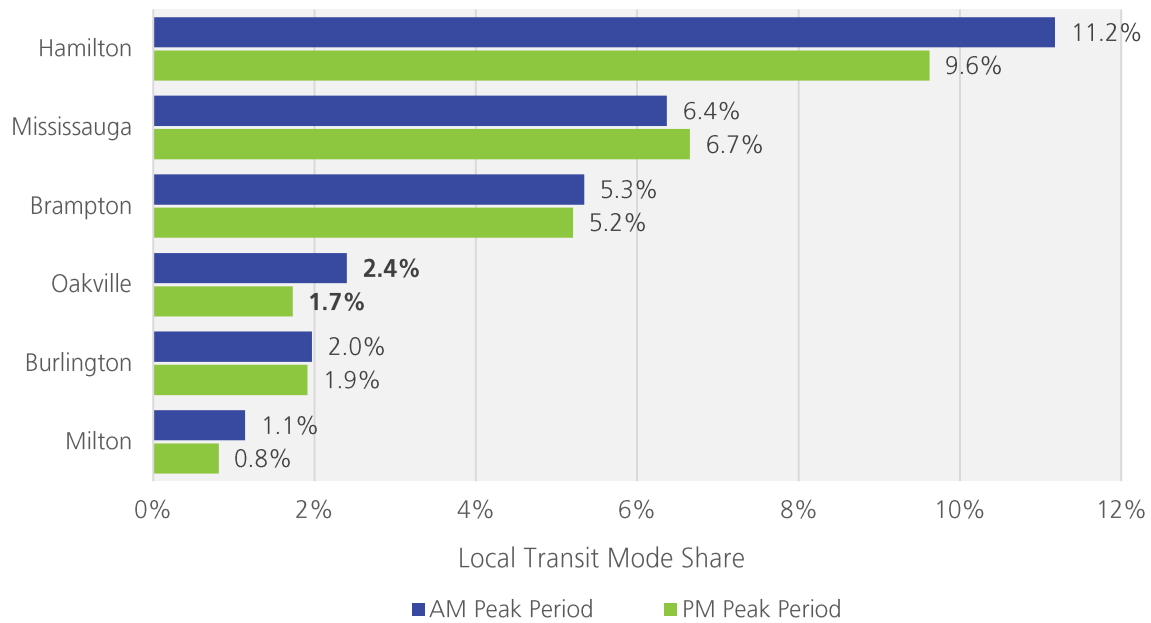


Figure 8: Local Transit Mode Share of Oakville and Neighbouring Municipalities

Source: 2011 Transportation Tomorrow Survey

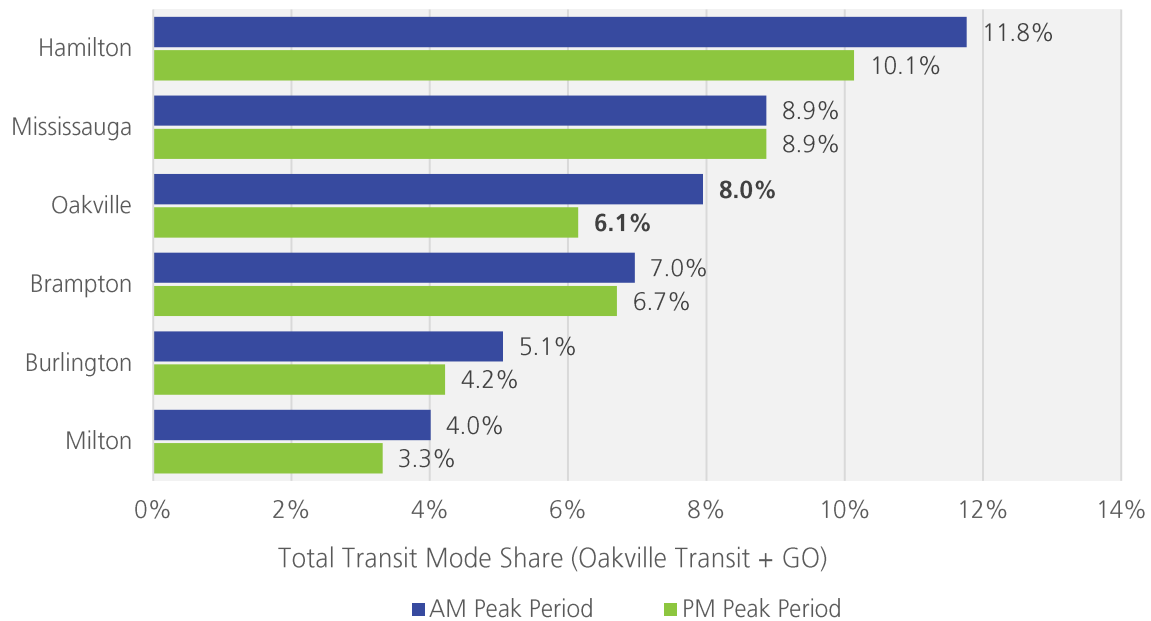


Figure 9: Total Transit Mode Share of Oakville and Neighbouring Municipalities

Source: 2011 Transportation Tomorrow Survey



As presented in **Figure 8**, the town's local transit mode shares for AM and PM peak period were 2.4% and 1.7%, respectively; which are much lower than neighbouring municipalities of Hamilton, Mississauga, and Brampton. The local transit usage for neighbouring municipalities ranges between 5% in Brampton and 11% in Hamilton. Within Halton Region, Oakville's local transit share was similar to the City of Burlington and higher than Town of Milton. The lower mode share for the local transit in town compared to other adjacent municipalities suggest that the town has the potential to expand its local transit services.

The total transit including inter-regional transit (GO Transit trips) has a strong presence in Oakville, compared to adjacent municipalities (please refer to **Figure 9**). The total transit share including both local and inter-regional transit in the AM peak period in 2011 was 8%, which was higher than Brampton at 7% and was nearly comparable to Mississauga at 8.9%. The PM peak period share was lower at 6% but still higher than Milton and Burlington with 3% to 4%, respectively.

2.3.4 Origin–Destination Patterns

The 2011 TTS trip distribution indicates that there is a high degree of 'self-containment' in the town, where most trips that originate from Oakville are also destined to Oakville. Trips that start and end in the town accounts for approximately 57% on average of all trips during the peak periods.

The majority of the trips leaving Oakville are destined to nearby municipalities with 15% of the outbound trips heading to Mississauga in the AM peak period and inbound trips entering Oakville from Mississauga during the PM peak period. Approximately 12% of all trips leaving Oakville are destined to Downtown Toronto in the AM peak period and approximately 8% trips return to Oakville from Downtown Toronto in the PM peak period. The trip distributions for all trips originating from Oakville and destined to Oakville are summarized in **Table 3**.



Table 3: Trip Distribution for Oakville Trips

Origin or Destination	AM Peak Period		PM Peak Period	
	Outbound	Inbound	Outbound	Inbound
Downtown Toronto	11.6%	0.6%	1.0%	9.0%
Rest of Toronto	5.8%	3.1%	3.4%	5.0%
Durham Region	0.1%	0.2%	0.2%	0.1%
York Region	1.2%	1.1%	0.9%	1.1%
Peel Region	17.0%	13.6%	14.8%	17.4%
– Caledon	0.0%	0.2%	0.2%	0.0%
– Brampton	1.6%	1.9%	1.7%	1.5%
– Mississauga	15.4%	11.6%	13.0%	15.9%
Halton Region	61.3%	72.7%	71.7%	63.8%
– Halton Hills	0.4%	1.0%	0.8%	0.5%
– Milton	1.1%	2.2%	2.3%	1.1%
– Oakville	55.4%	59.3%	58.5%	55.6%
– Burlington	4.4%	10.2%	10.1%	6.6%
City of Hamilton	1.8%	5.9%	5.2%	2.3%
Niagara Region	0.3%	1.1%	1.3%	0.4%
Other	0.9%	1.6%	1.5%	1.0%
Total	100%	100%	100%	100%

Source: 2011 Transportation Tomorrow Survey



2.3.5 Trip Length by Trip Mode

More than 60% and 80% of all trips originating in Oakville in the AM and PM peak periods are travelling less than 10 km in length. This was consistent with the finding that most trips that start in Oakville also end in Oakville. The automobile was the predominant mode of transportation, except for the 31-40 km cohort, where trips by GO Rail dominates in both peak periods.

For trips that were less than 10 km in distance, the 'Cycle & Walk' and public transit follow the automobile mode share in both peak periods. **Figure 10** and **Figure 11** depict the trip lengths by different modes. The overall average distance travelled by all trips was approximately 14.0 km in the AM period outbound trips and 12.8 km in the PM period inbound trips.



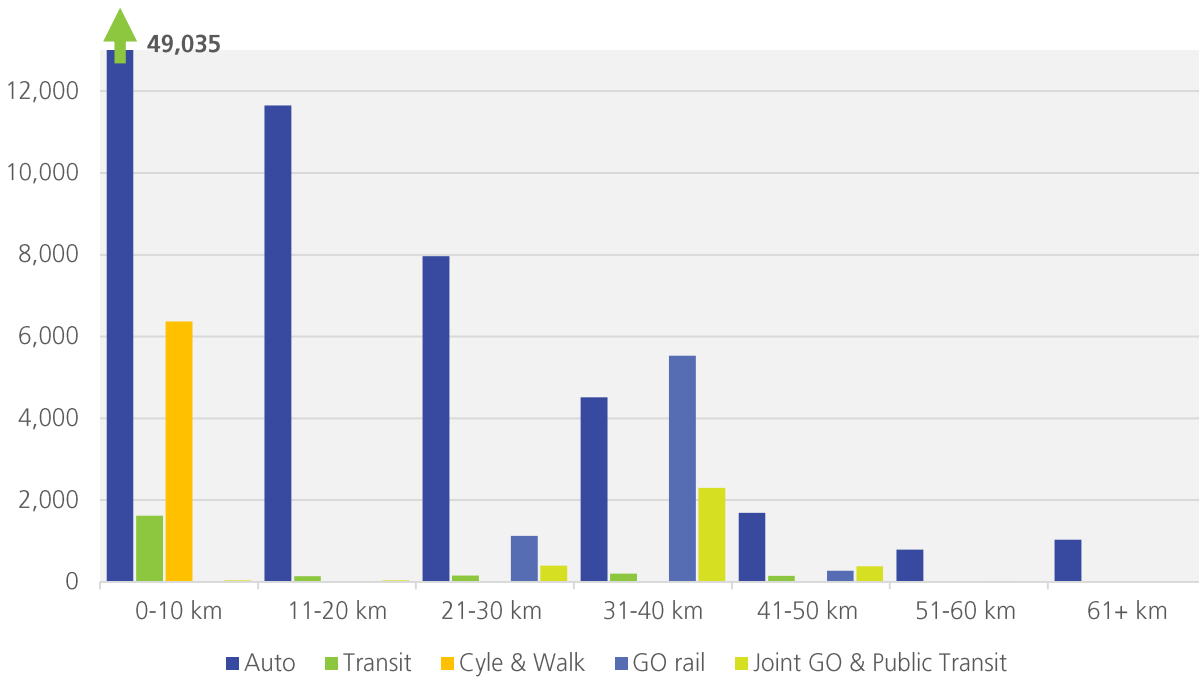


Figure 10: Trip Length by Mode - AM Peak Period

Source: 2011 Transportation Tomorrow Survey

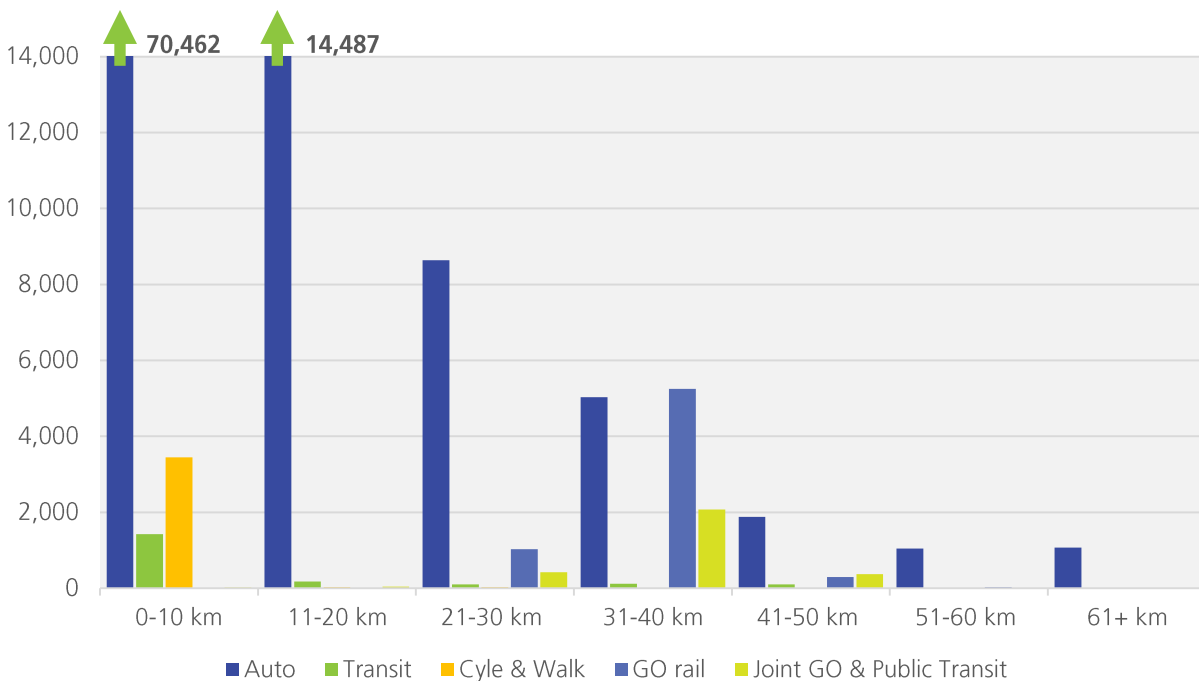


Figure 11: Trip Length by Mode - PM Peak Period

Source: 2011 Transportation Tomorrow Survey



The existing travel characteristics in Oakville have the potential to reduce reliance on automobiles. More trips that are 10 km or less in length could be conducted by cycling and walking, and local public transit. There is a strong commuter linkage between Oakville and Burlington with the potential for increased transit usage, similar to the pattern observed between Oakville and Mississauga due to their close proximity.



2.4 Existing (2016) Network Assessment

The existing transportation conditions in the town were assessed by considering screenline volume to capacity ratios and intersection operations.

2.4.1 Existing Conditions - Screenline

A screenline assessment for the existing (2016) conditions was performed using the Halton Region travel demand model. Halton Region's travel demand model, which was updated and calibrated based on 2011 TTS data by AECOM, simulates afternoon peak hour conditions for the existing (2016) and future (2031) planning horizon years. The travel demand model (EMME-based) predicts travel demands and travel patterns based on various sources of information, such as land use, road network, and existing and future travel patterns. The model also considers travel patterns associated with the special generators – e.g. new North Oakville Hospital and Sheridan College within the Halton Region. Details about the transportation modelling analysis are included in **Appendix A**.

The screenline assessment was conducted for the existing condition by considering the ratio of travel demand (i.e. projected traffic volume) to transportation capacity. The screenline results for the Town of Oakville are presented in **Figure 12**, which indicate a total of 10 lane deficiencies at the screenline level.

Significant east-west deficiencies are observed on north-south screenlines west of Bronte Road, along the Sixteen Mile Creek, east of Sixth Line, Trafalgar Road and Eighth Line, and west of Ninth Line. North-South deficiency is also present north of QEW between Bronte Road and Third Line. Most of the deficiencies are observed between Highway 407 and QEW, where most of the residential and employment developments are based.

The existing network assessment demonstrates the need for road infrastructure improvements, as well as the potential for initiatives on alternative modes of travel and transportation demand management measures. Some combination of these may be suitable for accommodating future growth and is discussed in **Section 4**.



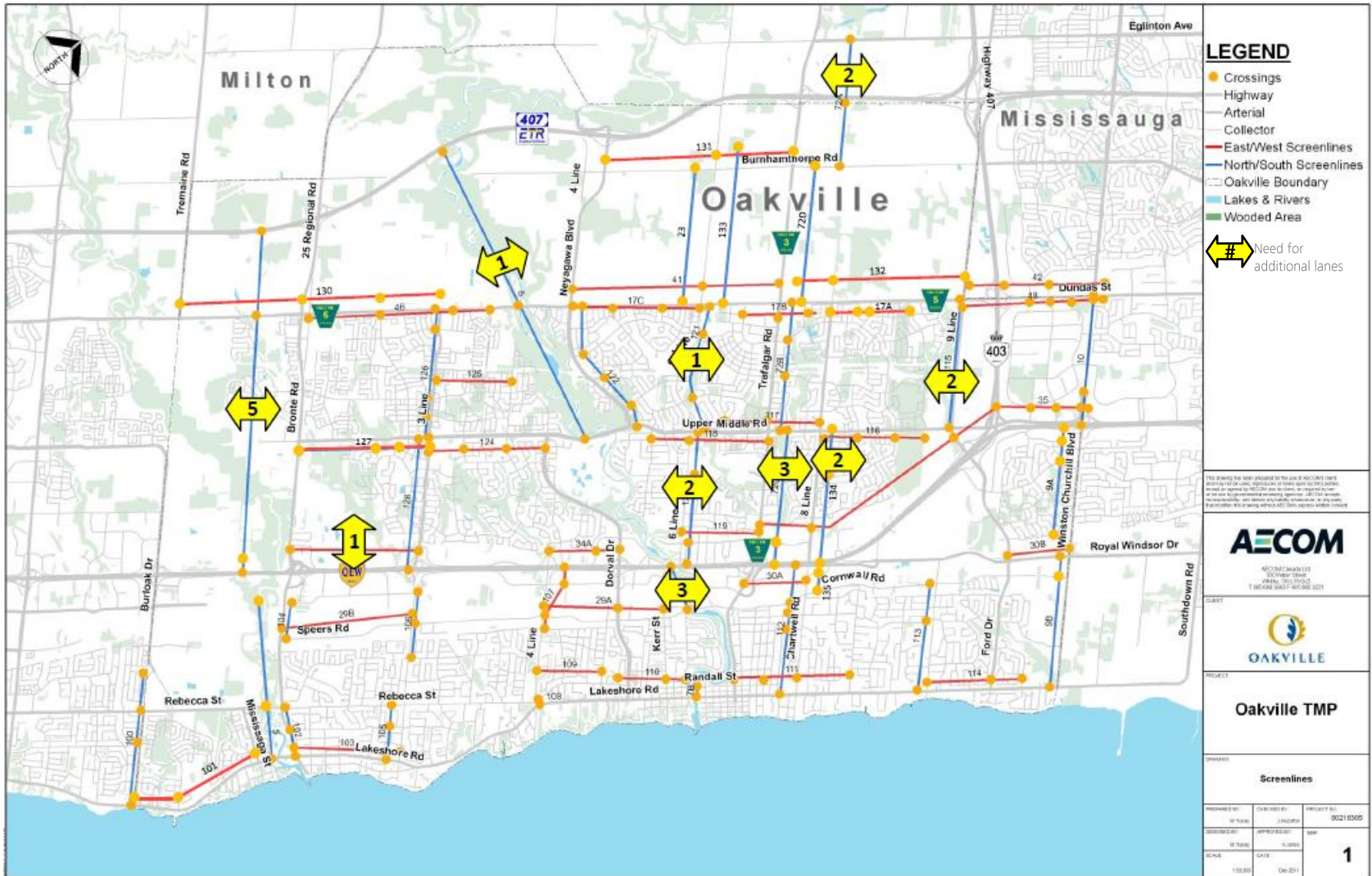


Figure 12: 2016 Existing Screenline Lane Deficiencies



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2.4.2 Existing Conditions - Intersection Operations

The 2015 Oakville Road System Report documents the traffic operations at signalized intersections under the town's jurisdiction. It is recognized that many of the major signalized intersections within Oakville are under the jurisdiction of Halton Region. Based on the assessment completed by the town, most intersections under the town's jurisdiction operate at an overall level of service (LOS C) or better. The following intersections were operating at an overall LOS D:

- Bronte Road/Rebecca Street
- Third Line/South Service Road-Wyecroft Road
- Third Line/Speers Road
- Third Line/ Rebecca Street
- Dorval Drive/ Rebecca Street
- Kerr Street/Speers Road

The following two intersections are operating at LOS E / F:

- Third Line/North Service Road, and
- Cross Avenue/Speers Road

Intersections operating at LOS D or worse are typically reviewed by the town to identify current constraints and possible improvements. At the time this report was prepared, a second southbound right turn lane was being added at Cross Avenue and Speers Road.



3 Future 2031 Conditions

3.1 Projected Land Use

The *Livable Oakville Plan* (the town’s Official Plan) provides a revised Urban Structure Review, which sets out the framework for where and how the town will grow, and forms the basis of future land use planning. The Urban Structure Review identifies nodes and corridors, or Growth Areas, as key areas of the town at the focus for transit-oriented mixed-use development and areas for intensification. These locations include Midtown Oakville (also the provincially-designated Urban Growth Centre in Oakville), Uptown Core, Palermo Village, Kerr Village, Bronte Village, Downtown Oakville, Trafalgar Road Corridor (QEW to Dundas Street) and the corridors along Dundas Street and Speers Road. Additionally, Nodes and Corridors are identified from the North Oakville East Plan to include the Trafalgar, Dundas, and Neyagawa Urban Core Areas.

The Best Planning Estimates (BPE) growth allocations were prepared in 2011 by Halton Region under the framework of Places to Grow (2006), the provincial Growth Plan. The updated population and employment growth forecasts, derived by Watson & Associates Economists Ltd. from the Halton Region BPE, indicate the following for the Town of Oakville over the next 14 years:

- 25% increase in population, from 197,684 persons in mid-2017 to 246,400 persons in mid-2031.
- 32% increase in employment, from 97,233 jobs in mid-2017 to 128,360 jobs in mid-2031.

Table 4 summarizes the BPE population and employment estimates in Oakville between 2016 and 2031.

Table 4: BPE Population and Employment Forecast for Oakville

Year	Mid-2017	Mid-2027	Mid-2031	Growth (2017-2031)
Population	197,684	240,044	246,400	25%
Employment	97,233	120,897	128,360	32%

Source: Derived by Watson & Associates Economist Ltd. from Halton Region Best Planning Estimates, 2011



3.2 Future Transportation System

Several commitments have been made at the provincial, regional and town level for new transportation infrastructure. It is noted that the success of development to accommodate growth to 2031 largely depends on the collaborative efforts between provincial, regional, and municipal agencies. The planning for transportation infrastructure in the TMP Review relies on the commitment to the provincial and regional networks; without these improvements, a need will likely arise for additional town transportation infrastructure and services.

3.2.1 MTO Proposed Highway Improvements

The Ontario Ministry of Transportation conducted a Preliminary Design Study and Class Environmental Assessment in 2013 to determine the capacity, geometric and operational improvements to Highway 403 and QEW from Trafalgar Road to Winston Churchill Boulevard. The preferred plan for 2031 includes the following improvements:

- Addition of an HOV lane in each direction on QEW from Trafalgar Road to Winston Churchill Boulevard;
- Addition of a general purpose lane in each direction on Highway 403 between QEW and Dundas Street;
- Extension of the northbound truck climbing lane on Highway 403 to Dundas Street;
- Rehabilitation and replacement of structures
- Addition of “North to East” and “East to North” ramps between Highway 403 and QEW;

The TMP Review was conducted on the basis that these improvements will be in place by 2031, so as not to overstate the required town infrastructure. It is noted that Halton Region TMP also anticipates the need for provincial highway improvements prior to 2031.

3.2.2 Halton Region Transportation Master Plan (2031)

The Halton Region Transportation Master Plan, titled *The Road to Change*, was completed in 2011. The Halton Region TMP provides policies and tools for the development of a balanced and sustainable transportation system that will support the objectives of Sustainable Halton and meet the Region’s transportation needs safely, effectively and cost-efficiently to 2031.



The Oakville TMP Review recognizes Halton Region’s commitments to help better integrate transportation facilities between local municipalities within Halton Region. The *Road to Change* report recommends the continued promotion of Transportation Demand Management measures and the development of a well-connected, safe and functional Active Transportation network. The Region’s TMP also identifies several road network improvements that are under the jurisdiction of the Town of Oakville. Speers Road from Bronte Road to Trafalgar Road and Wycroft Road - from Burloak Drive to Bronte Road are recommended for widening for the provision of exclusive transit services.

The envisioned 2031 transportation network is shown in **Figure 13**.

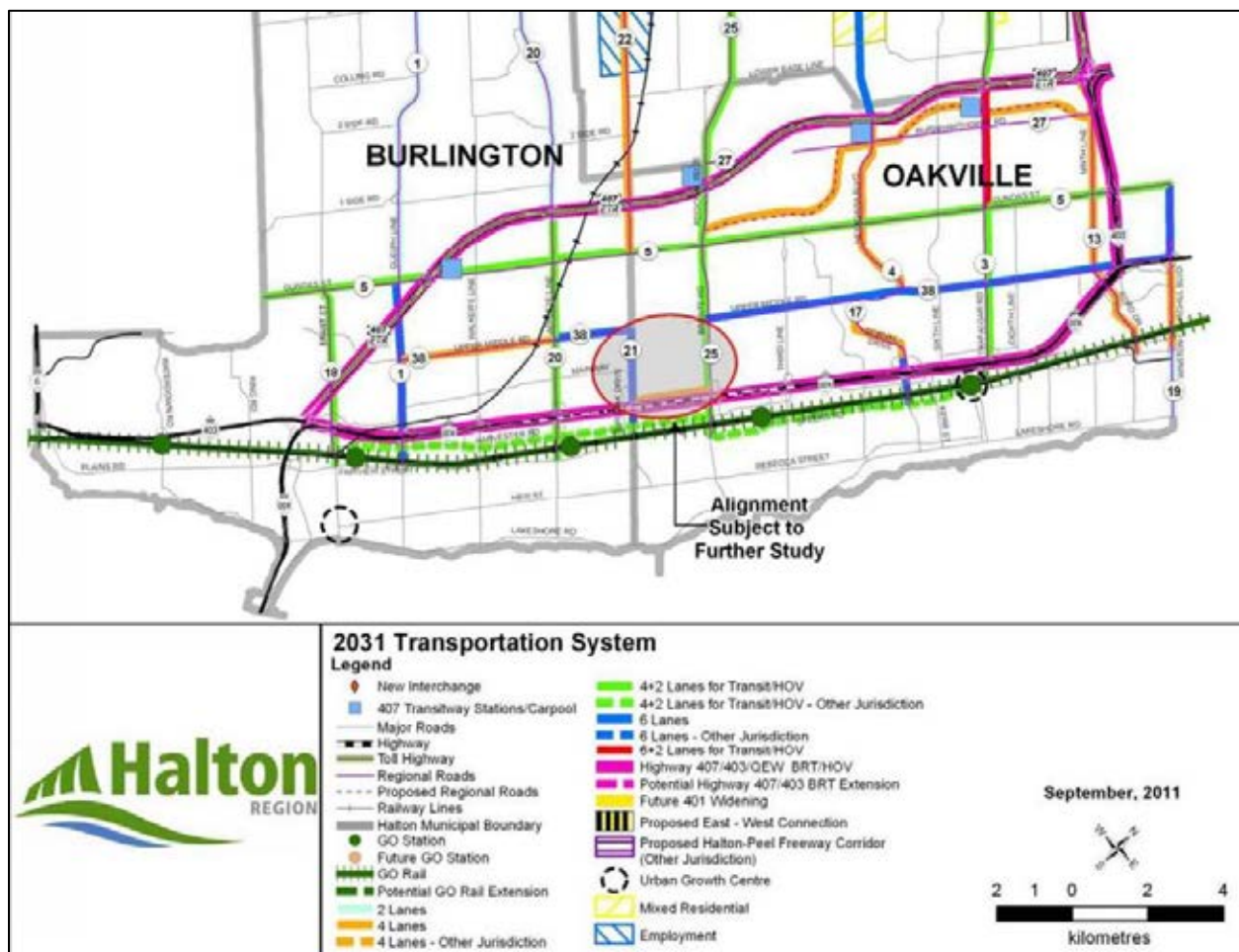


Figure 13: Halton Region TMP Recommended Network Improvements for Town of Oakville

Source: Halton Region TMP, Road to Change (2011)



The transportation projects identified in *The Road to Change* have been incorporated into the Region’s 20-year Roads Capital Program. The improvements planned and approved by the Region in the town are summarized in **Table 5** and illustrated with project timeline in **Figure 14**.

Table 5: Region of Halton Planned Improvements in the Town of Oakville (2018-2031)

Corridor	Location	Improvement Type	Start Year
Trafalgar Road	Dundas Street to Highway 407	4 to 6 lanes widening	2020
Trafalgar Road	Cornwall Road to QEW	Road reconstruction	2028
Dundas Street	Tremaine Road to Bronte Road	4 to 6 lanes widening	2019
Ford Drive	Cornwall Road to Royal Windsor Drive	Road reconstruction	2030
Ninth Line	Dundas Street to Highway 407	2 to 4 lanes widening	2023-2025
Winston Churchill Boulevard	Upper Middle Road/QEW to Dundas Street	4 to 6 lanes widening	2030
Burloak Drive ¹	North Service Road to Upper Middle Road	4 lane urbanization	2024
Burloak Drive ¹	Harvester Road to Upper Middle Road	4 to 6 lanes widening	2029
Tremaine Road ¹	Dundas Street to Britannia Road	2 to 4 lanes widening	2024-2025
Bronte Road	Speers Road to Highway 407	4 to 6 lanes widening	2025
Upper Middle Road	Bronte Road to Winston Churchill Boulevard	4 to 6 lanes widening	2026-2028
William Halton Parkway	Old Bronte Road to Hospital Gate	2 to 4 lanes widening	2019
William Halton Parkway	Third Line to Sixteen Mile Creek	New 4 lane road	2018
William Halton Parkway	Over Sixteen Mile Creek	New 4 lane bridge	2019
William Halton Parkway	Sixteen Mile Creek to Sixth Line	New 4 lane Road	2018-2019
North Service Road	Burloak Drive to Bronte Road	New 4 lane road	2031

*Note 1: Collaboration with City of Burlington and Town of Milton
Source: Halton Region Roads Capital Projects (2018-2031)*



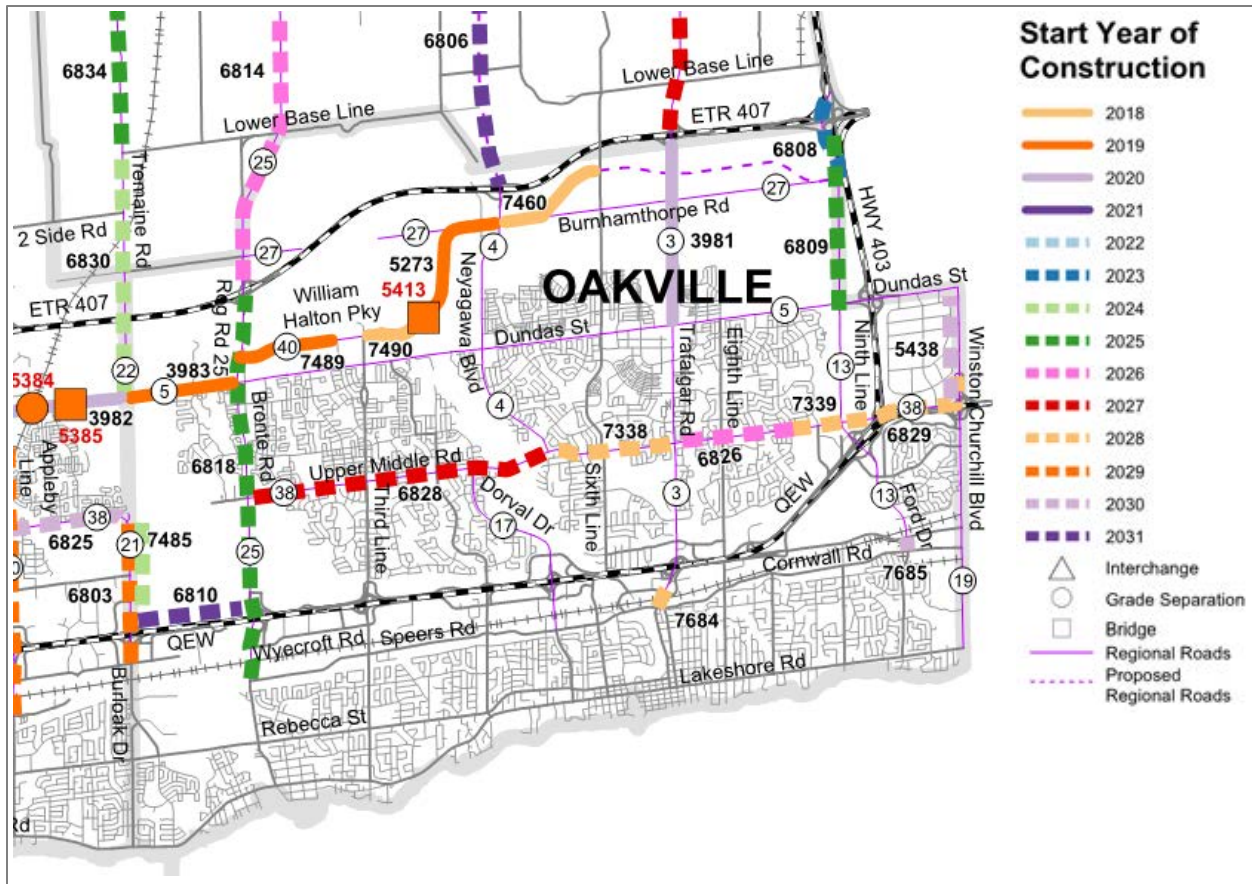


Figure 14: Halton Region Roads Capital Projects in Town of Oakville (2018-2031)

Source: Extracted from Halton Region Roads Capital Projects (2018-2031)

The Halton Region TMP identified a vision that 15 to 20 percent of all peak period trips must be accommodated by public transit by 2031. Following the TMP Study, the region-wide transportation challenges and needs were reassessed to develop the Mobility Management Strategy in 2016.

The Halton Region Mobility Management Strategy focuses on a mobility-as-a-service concept and places emphasis on a transit-oriented development. The Strategy recommends a region-wide Transit Priority Network including transit priority corridors and mobility link corridors, as presented in **Figure 15**.

Transit Priority Corridors are those where opportunities for transit-supportive measures such as Transit Signal Priority (TSP), queue jump facilities, bus shelters and other transit stop improvements, and HOV/BRT/LRT lanes are identified. Transit Priority Corridors which include portions within the Town of Oakville:



- Bronte Road/Regional Road 25 from Bronte GO Station to Steeles Avenue
- Dundas Street from Brant Street to Winston Churchill Boulevard
- Harvester/Speers/Cornwall from Brant Street to Winston Churchill Boulevard
- Trafalgar Road from Oakville GO Station to Georgetown GO Station

Mobility Links are corridors that would serve as connections to provide increased customer accessibility to important inter-municipal destinations through a variety of potential transit options, including those beyond traditional fixed route transit services. Neyagawa Boulevard/James Snow Parkway from Upper Middle Road to Milton GO is proposed as a Mobility Link Corridor within Oakville.



Figure 15: Halton Region Transit Priority Mobility Network in Town of Oakville to 2041
Source: *Mobility Management Strategy for Halton (2017)*

3.2.3 Switching Gears 2013

The *Switching Gears 2013* – Town of Oakville’s Transportation Master Plan presented long-term recommendations for network improvements to address the existing and future transportation needs. This study provides strategies and actions with emphasis on active transportation, Travel Demand Management, and public transportation. In addition, various network improvements are identified to address future travel demands. As discussed previously in **Section 2**, many of the recommendations are already implemented or being implemented. The *Switching Gears 2013* recommended network improvements are listed below, and presented in **Figure 16**.

The recommended arterial road network improvements include:

- Burloak Drive (Superior Court to Wyecroft Road) grade separation at CN rail and widen to six lanes.
- Cornwall Road (Chartwell Road to Morrison Road) widen to four lanes.
- Great Lakes Boulevard (Rebecca Street to Burloak Drive) widen to four lanes.
- Highway 403 mid-block crossing (Ninth Line to Bristol Circle).
- Kerr Street (Speers Road to QEW) grade separation at CN rail and widen to four lanes.
- North Service Road (Joshua Creek Drive to Ford Drive) realignment and new four-lane roadway.
- Sixth Line (Dundas Street to New Burnhamthorpe Road) widen to four lanes.
- Speers Road-Cornwall Road (Bronte Road to Trafalgar Road) widen to six lanes.
- South Service Road (Third Line to Fourth Line) widen to four lanes.
- Wyecroft Road (Burloak Drive to RRL, Bronte Road to Third Line, Fourth Line to Weller Court, Sinclair Road to Kerr Street) widen to four lanes.
- Wyecroft Road (RRL to Bronte Road) grade separation at Bronte Creek and new four lanes.

The recommended network improvements in the Midtown Growth Area include:

- Chartwell Road (South Service Road to Cornwall Road) widen to four lanes.
- Cross Avenue Extension from Trafalgar Road to Royal Windsor Drive.
- Eighth Line (North Service Road to Iroquois Shore Road) widen to four lanes.
- Iroquois Shore Road (Trafalgar Road to Eighth Line) widen to four lanes.
- Priority lane/active transportation crossing of the QEW (Iroquois Shore Road to Cross Avenue) new road.
- QEW crossing (Iroquois Shore Road to Cross Avenue) new four-lane road.



Following *Switching Gears 2013*, the Midtown EA was completed. This EA Study confirms the *Switching Gears 2013* recommendations and identifies detailed network configurations for the Midtown Growth Area to accommodate the planned growth in Midtown Oakville to 2031.

The recommended network improvements to address goods movement, access, and complete streets concepts include:

- Cornwall Road (Ford Drive to Winston Churchill Boulevard) widen to four lanes.
- New Burnhamthorpe Road (Tremain Road to Bronte Road) new four lanes.

Switching Gears 2013 also recognizes the need for improvements to provincial infrastructure, which include:

- Highway 403 (QEW to Highway 407) widening.
- Completion of ramps at the QEW/Highway 403 interchange.
- Widen QEW with an additional lane per direction across Sixteen Mile Creek (as alternative to North Service Road Extension crossing of Sixteen Mile Creek).
- Extend QEW HOV lanes to Winston Churchill Boulevard.

3.2.4 Oakville Road Capital Program (2017–2026)

The improvements for the Town of Oakville between the year of 2017 and 2026 are planned through the town’s Capital Forecast Program. These are projects that have been identified in the *Switching Gears 2013* TMP study and approved through the class environmental assessment process. The road projects identified by the 10-year Capital Forecast are listed in **Table 6**. The project number refers to the map in **Figure 17**.



Table 6: Road Projects under Oakville’s Planned 2017 to 2026 Capital Improvements

Project no.	Street	Location	Improvement Type	Construction Year
1	Kerr Street	Speers Road to North of QEW	Reconstruction to 4 lanes with grade separation at CN Rail line	2023/2024
2, 9, 10	Speers Road	Go Station (west of Third Line) to Kerr Street	Widening and resurfacing of a 5 lane urban roadway	2018-2020
3	North Service Road East	1 km East of Invicta Drive to Eighth Line	Reconstruction to a 3 lane urban roadway	2018
4, 13, 15, 21	Lakeshore Road West	East Street to Dorval Drive	Reconstruction to a 3 lane urban arterial road standard	2020-2023
5	Great Lakes Boulevard, Phase 2	Rebecca Street to Superior Court	Reconstruction and widening to a 4 lane urban roadway	2017
6	Wycroft Road	East of Fourth Line to Weller Court	Widening and resurfacing to a 5 lane urban roadway	2020
7, 12	Burloak Drive	Wycroft Road to Superior Court	Grade Separation at CNR tracks, Widening and resurfacing to a 6 lane urban roadway	2020/2021
8	Wycroft Road	Sinclair Road to Kerr Street	Reconstruction of a 2 lane rural to 4 lane urban roadway & center turn lane	2021
14	Sixth Line	North Park Boulevard to New Burnhamthorpe Road	Reconstruction to a 4 lane urban roadway	2021
16	North Service Road West	Third Line to Fourth Line	Reconstruction and widening to a 3 lane urban roadway	2023
18	South Service Road West	Third Line to Fourth Line	Reconstruction and widening to a 3 lane urban roadway	2025
19	Speers Road	Kerr Street to Trafalgar Road	Reconstruction and widening to a 6 lane urban roadway - (includes bridge over Sixteen Mile Creek)	2025
20	Chartwell Road	South Service Road East to Cornwall Road	Reconstruction and widening to a 4 lane urban roadway (level crossing)	2024



Project no.	Street	Location	Improvement Type	Construction Year
22	Lower Base Line	Excluding Valley Section	Reconstruction of a 2 lane rural roadway	2025
23	Wycroft Road	Bronte Road to Third Line	Reconstruction and widening to a 5 lane urban roadway	2026
24	Sixth Line	Miller Road	Northbound turn lane	2025
25	Lakeshore Road East	Navy Street to Allan Street	Reconstruction and Streetscape	2019/2020
26, 29	Bridge Road	Third Line to Warminster Road	Reconstruction to an urban standard roadway	2017-2018
27	Invicta Drive	North Service Road East to North Limit	Reconstruction to an urban standard roadway	2018
28	McCraney Street	East of Sixth Line to West of Montclair Drive	Construction of a transit layby lane	2019
30	Mary Street	Margaret Drive to Maurice Drive	Reconstruction to an urban standard roadway	2023
31	Chisholm Street	Rebecca Street to Bond Street	Reconstruction to an urban standard roadway	2021
32	Bond Street	Kerr Street to Queen Mary Drive	Reconstruction to an urban standard roadway	2021
33	Devon Road	Morrison Road to Wedgewood Drive	Reconstruction to an urban standard roadway	2022
34	Morrison Road	Cynthia Lane to Devon Road	Reconstruction to an urban standard roadway	2024
35	Elmhurst Avenue	Maple Grove Drive to Eastcourt Road	Reconstruction to an urban standard roadway	2025
36	Reynolds Street	Cornwall Road to Spruce Street	Reconstruction to an urban standard roadway	2026

Source: Town of Oakville, <https://www.oakville.ca/townhall/capital-forecast.html>

The 10-year capital forecast is updated regularly as part of the annual capital budget process.



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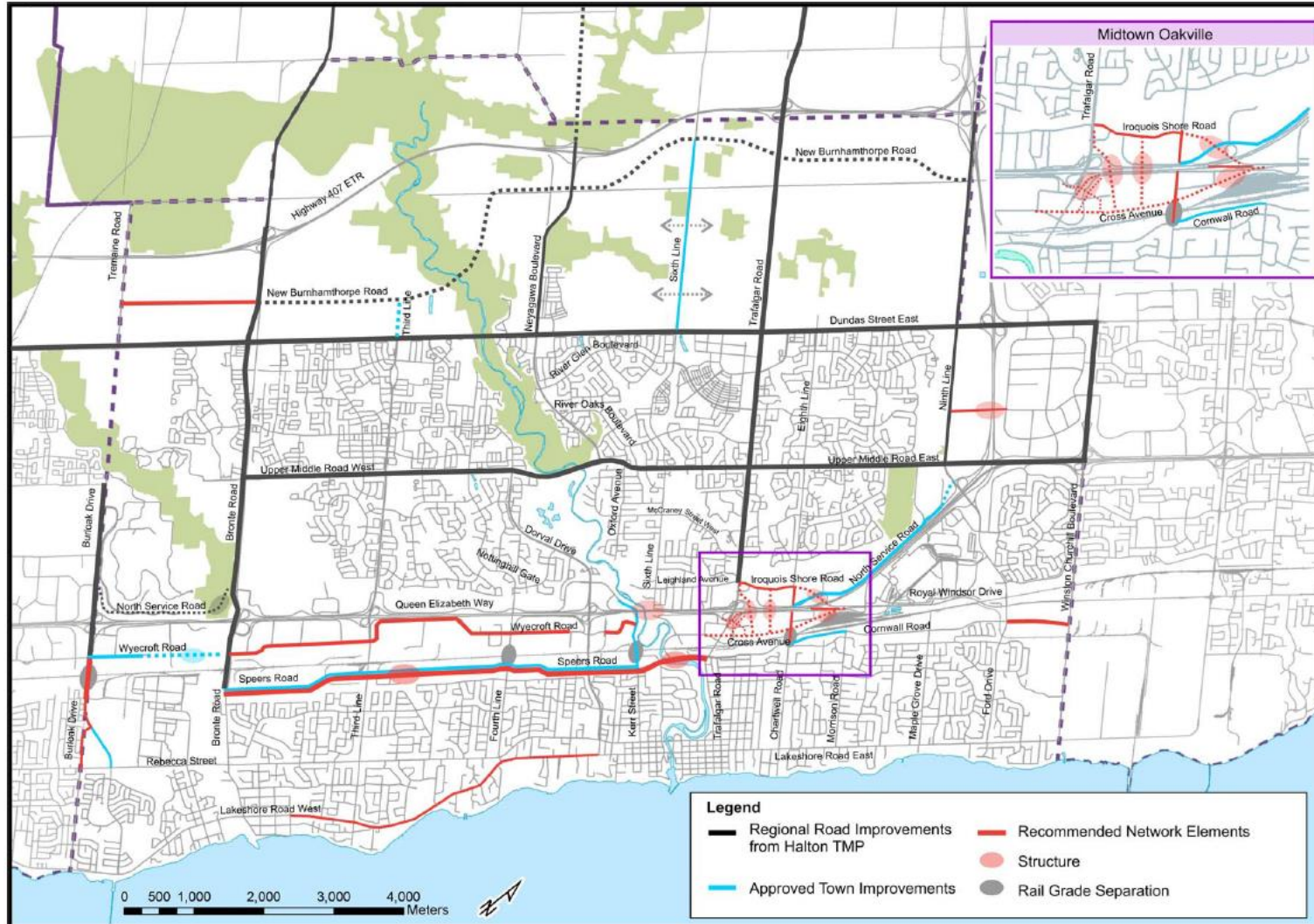


Figure 16: *Switching Gears 2013 Recommended Network*

Source: *Switching Gears 2013*



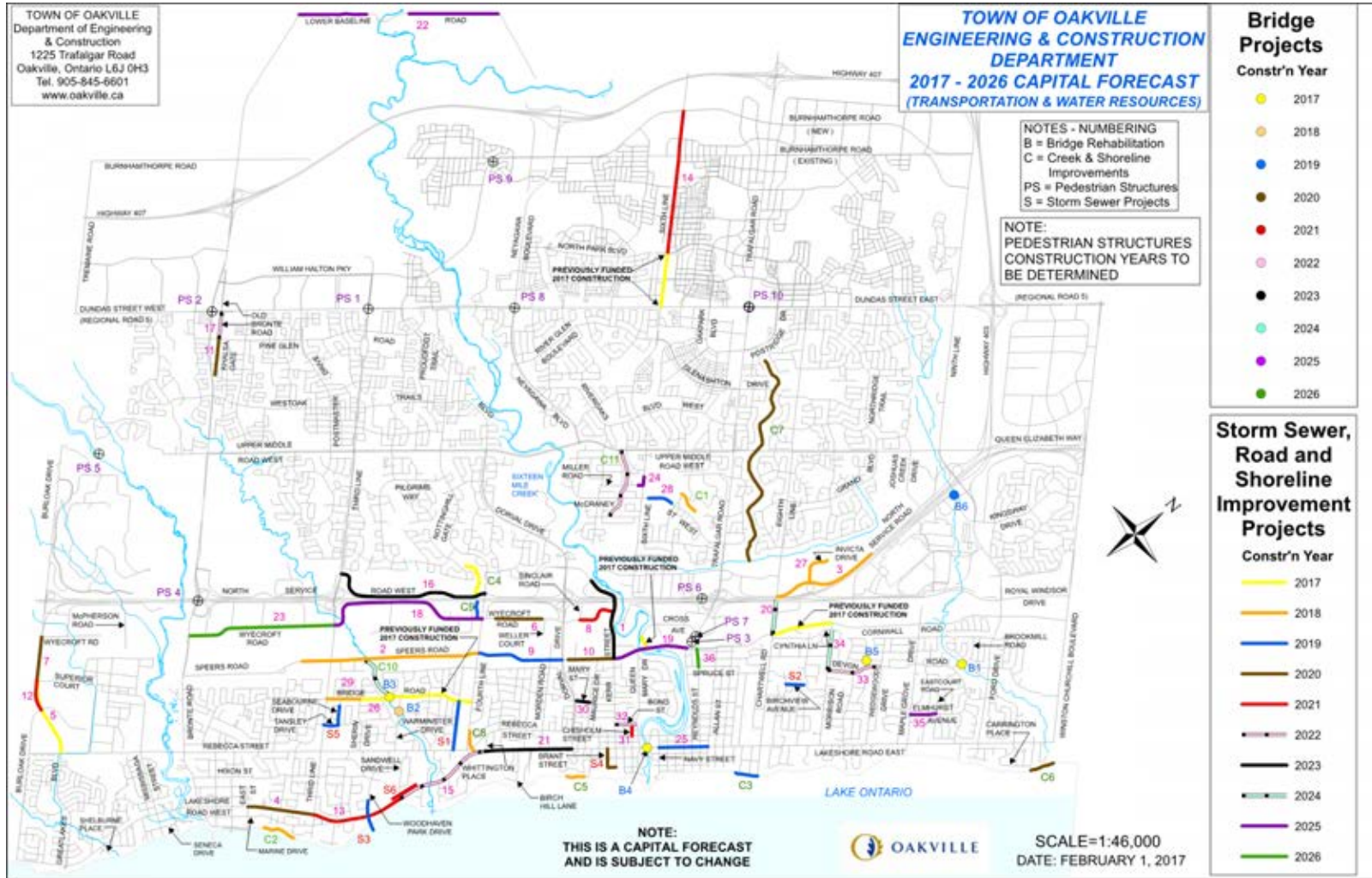


Figure 17: Town of Oakville 2017-2026 Capital Forecast Map

Source: Town of Oakville, <https://www.oakville.ca/townhall/capital-forecast.html>



3.2.5 Oakville Active Transportation Master Plan (ATMP)

The Town of Oakville introduced the Active Transportation Master Plan (ATMP) in 2009 and recommended an extensive network of facilities composed of on-road and off-road pathways as a response to the growing needs of a range of active transportation users, age and skill levels.

The 2017 ATMP Update was recently completed to respond the current community trends, emerging design guidelines, supportive legislation and best practice. It builds on the success of the 2009 ATMP as well as lessons learned from other municipalities to achieve an active transportation modal share target of 6% by 2031.

The 2017 ATMP proposes a total of 704 kilometres of new walking and cycling facilities to provide a more continuous, connected and integrated active transportation system for pedestrians and cyclists. The proposed network includes 383 km of sidewalks along regional and municipal roads, 99 km of signed bike routes, 117 km of multi-use trails, and over 100 km of bike lanes. These recommendations were built upon the proposed network in existing plans such as the North Oakville Trails Plan. The proposed 2017 ATMP active transportation networks were presented in **Section 2.2.5**, along with the existing conditions.



3.3 Future (2031) Network Assessment – Base Case

3.3.1 Screenline Lane Deficiencies

The Halton Region Travel Demand Model was used to create the Oakville model for the TMP Review. The model network was modified to include all improvements identified in *Switching Gears 2013* and the Midtown EA Study, and calibrated using 2011 TTS data. The baseline 2031 traffic conditions were assessed for the PM peak hour with projected future traffic volumes. The baseline scenario assumes that the existing mode split of 3% Active Transportation (AT), 3% Transportation Demand Management (TDM), 1% local transit, and 5% inter-regional transit for the trips starting or ending in Town of Oakville will be maintained. However, the model assumes Halton Policy transit mode share for other trips.

Figure 18 illustrates the capacity constraint and screenline lane deficiencies of the 2031 baseline road network with trend modal share. Significant east-west deficiencies exist on five north-south screenlines, with the Oakville Creek South screenline from QEW to Cornwall Road requiring two additional lanes per direction. There is also north-south deficiency at the screenline south of Upper Middle Road. **Table 7** provides a detailed list of screenline deficiencies and future lane requirements.



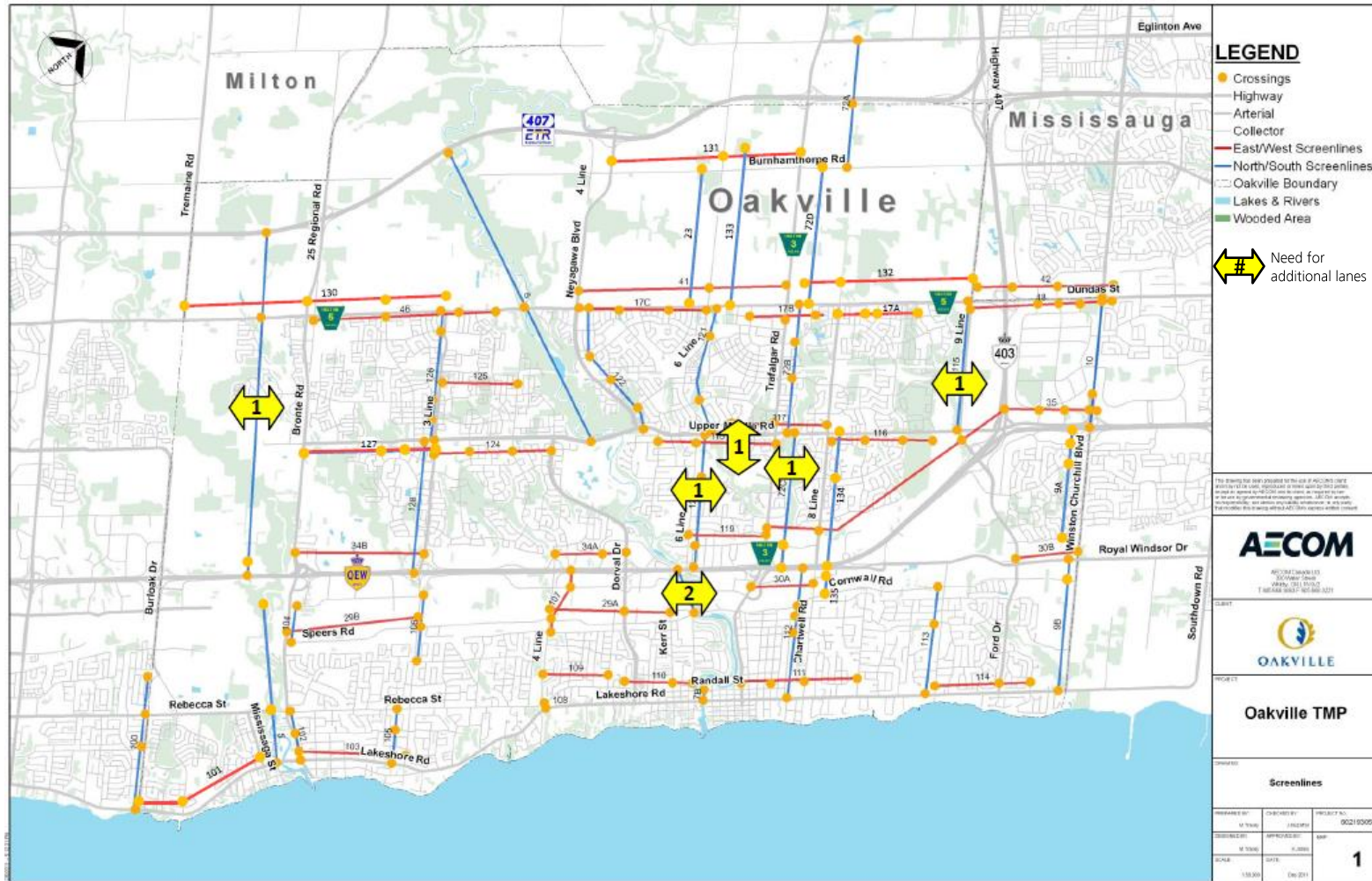


Figure 18: 2031 Baseline Scenario Screenline Lane Deficiencies



Table 7: 2031 Baseline Scenario Screenline Lane Deficiencies

SL ID	Screenline	Local Municipal Roadways for Potential Widening	Number of Lanes (per dir.)	Additional Lanes Required (per dir.)
North-South Screenline (East-West Deficiencies)				
6	Bronte Creek North - Highway 407 ETR to QEW	North Service Road West of Bronte Road (roadway v/c 0.36)	2	1
7A	Oakville Creek South - QEW to Cornwall Road	North Service Road Extension at 16 Mile Creek	1	2
72C	East of Trafalgar Road - Upper Middle Road to North Service Road	Iroquois Shore Road West of Eighth Line	2	1
115	West of Ninth Line - Dundas Street to Upper Middle Road	Bayshire Drive Extension West of Ninth Line	1	1
120	East of Sixth Line - Upper Middle Road to QEW	McCraney Street East of Sixth Line	1	1
East-West Screenline (North-South Deficiencies)				
118	South of Upper Middle Road - Oxford Avenue to Trafalgar Road	Sixth Line South of Upper Middle Road	1	1



3.3.2 Corridor Assessment - Volume to Capacity (v/c) Ratio

In addition to the screenlines, local municipal roadways approaching capacity during the 2031 PM peak hour are also identified. These are defined as roadways with a volume to capacity (v/c) ratio of over 0.9. These locations will likely experience significant congestion beyond without infrastructure improvements. North-South roadways performing near capacity include Sixth line, Eighth Line, Third Line, and Bronte Road. East-West roadways performing near capacity include McCraney Street East, Cross Avenue, and Lakeshore Road West. A complete list of identified local roads with v/c > 0.9 is presented in **Table 8**.

Table 8: Roadways Approaching Capacity in 2031 PM Peak Hour

Municipal Roadways for Potential Widening		Segment between		Direction with V/C > 0.90
North-South Roadways	1. Buckingham Road	Bristol Circle	Regional Road 38/ Upper Middle Road E	SB
	2. Sixth Line	McCraney Street W	Elm Road	Both Directions
		Sewell Drive	Culham Street	NB
	3. Oxford Avenue	Upper Middle Road W	Markle Drive	NB
	4. Eighth Line	Iroquois Shore Road	Falgarwood Drive	NB
		Upper Middle Road E	Grenville Drive	NB
	5. Nottinghill Gate	North Service Road	Old Abbey Lane	NB
	6. Third Line	Wyecroft Road	S-W On-Ramp at QEW	NB
		E-N Off-Ramp at QEW	North Service Road	NB
		Speers Road	Bridge Road	SB
	7. Bronte Road	Speers Road	Rebecca Street	SB
8. Fourth Line	Speers Road	Pinegrove Road	SB	
9. North-South Crossing across QEW (new)	Cross Avenue (new ext.)	Iroquois Shore Road	NB	



Municipal Roadways for Potential Widening		Segment between		Direction with V/C > 0.90
East-West Roadways	1. Bristol Circle	Winston Park Drive	Buckingham Road	WB
	2. McCraney Street E	Trafalgar Road	Romain Crescent	Both Directions
		Romain Crescent	Sixth Line	WB
	3. Speers Road	Cross Avenue	Kerr Street	WB
	4. Cross Avenue	Trafalgar Road	Argus Road	WB
	5. Argus Road	Trafalgar Road	Cross Avenue	Both Directions
	6. Lakeshore Road West	Third Line	Nelson Street	WB
Jones Street		Nelson Street	EB	
7. Rebecca Street	Burton Road	Fourth Line	WB	

3.4 Problem and Opportunity Statement

The Problem and Opportunity for this study mainly focus on the transit modal share, and achieving an increase in transit modal share within the town.

Problem

The town is accommodating the projected population and employment by ensuring the environmental sustainability, cultural vibrancy, economic prosperity and social well-being. The town also requires a transportation system that will accommodate future growth, incorporating the planning framework from the Livable Oakville Plan, the North Oakville Secondary Plans, and the recent Urban Structure Review.

The anticipated transit mode share target considered in *Switching Gears 2013* relied on the commitment of regional transportation infrastructure projects to increase transit ridership. Halton Region is continuing to support an increase of the transit mode share (with the goal of achieving a 20% transit mode split by 2031) through many initiatives, including:

- the Mobility Management Strategy (2017) which identified a network of Transit Priority Corridors and Mobility Hubs across the Region which were developed in consultation with the Local Municipalities;
- Defining Major Transit Requirements in Halton Region Study to assess the Major Transit Station Areas and transit priority corridors to identify the type, form, level of service and



- alternatives for the Transit Priority Mobility Network – including Dundas Street, Trafalgar Road, Speers Road/Cornwall Road, and Bronte Road in Oakville; and
- Smart Commute Halton to reduce the number of single occupant vehicles on the Region’s roads.

In addition, Provincial initiatives to support increased transit mode share are presented in the Metrolinx’s GO Station Access Plan, the Dundas BRT Business Case Study, and the Regional Transportation Plan (RTP), which include commitments to the GO Regional Express Rail (GO RER) program and a vision for a Regional Frequent Rapid Transit Network.

At the initial stage of the study, the town identified the growth in the transit mode share was lower than anticipated during the last five years. In 2015, the town conducted a Transit Service Review outlining a five-year service plan for Oakville Transit. However, the deployment of the plan was delayed by a year. Furthermore, the population and employment growths in Oakville have been slower than forecasted.

The lower than anticipated transit mode share is also challenged by changes to Development Charges Act. The TMP Review reflects the new requirements for Development Charges (DC) Act set out by Bill 73, the Provincial Smart Growth for Our Communities Act, 2015. The new DC amendments indicate that Development Charges would not be available to increase transit ridership for existing residents, but could only be used to service new residents in the town’s growth areas. Without DC funds, approaches to increase transit ridership may include funding from fare-box revenue, Provincial or Federal programs (.e.g. Gas Tax) and local taxes.

Due to the town’s current fiscal conditions, current low transit mode share, higher reliance on private autos and uncertain timeline in the implementation of various regional and provincial transit improvements, the 20% transit mode share target identified in *Switching Gears 2013* is likely not achievable by 2031. However, it remains the town’s ultimate goal with a timeline beyond 2031.



Opportunity

In the context of all the above circumstances, the TMP Review must recommend a feasible interim transit mode share target for the 2031 planning horizon year. The study must consider the existing transportation conditions and future travel demand needs, in order to pursue a transportation system which:

- is safe, efficient and accessible with choices in mobility;
- fosters the use and development of a sustainable transportation network;
- supports alternative modes of transportation to automobiles including the promotion of Travel Demand Management initiatives and the improvements to the Active Transportation network and facilities; and
- presents a realistic and financially-viable outlook on the future transit mode share target.



4 Transit Split Target Assessment

4.1 Alternative Transit Mode Split Scenarios

In addition to the baseline condition, five alternate transit mode split scenarios were developed and assessed to determine the optimal conditions for the year 2031. With the recent ATMP Update and TDM initiatives, the town will continue to encourage these modes of non-auto trips. All scenarios assume that the active transportation and TDM targets of 6% each as set out in *Switching Gears 2013* will be met by 2031. The scenarios are described below:

- **Scenario A: Growth in AT and TDM**, assumes the percentage of trips by local and inter-regional transit remains unchanged at the current level of 1% and 5%. There will be some growth in the number of transit trips due to an overall increase in trips taken by all mode.
- **Scenario B: Growth in AT and TDM and Local Transit**, assumes growth in local transit mode share based on an extrapolation of the growth rate to 2031 in the 2015 Transit Service Review Report, resulting in a 2031 PM peak period local transit mode share of 3%. There will be no increase in inter-regional transit mode share.
- **Scenario C: Growth in AT and TDM, higher growth in inter-regional transit**, assumes that no growth in local transit mode share but service improvements anticipated through Metrolinx's Regional Transportation Plan initiative will be in place and also higher transit mode share for other municipalities in Halton Region, which results in inter-regional transit share of 7%.
- **Scenario D: Growth in AT and TDM, local transit and higher growth in inter-regional transit**, assumes a 3% local transit split as outlined in Scenario B and a higher inter-regional transit share of 9%, for a total transit mode share of 12%.
- **Scenario E: Growth in AT and TDM and higher growth in local transit and inter-regional transit**, assumes high growth in both local and inter-regional transit through high investments in transit infrastructure projects for a transit mode share of 16%.

Figure 19 summarizes the transit mode split targets for 2031 under each scenario considered.



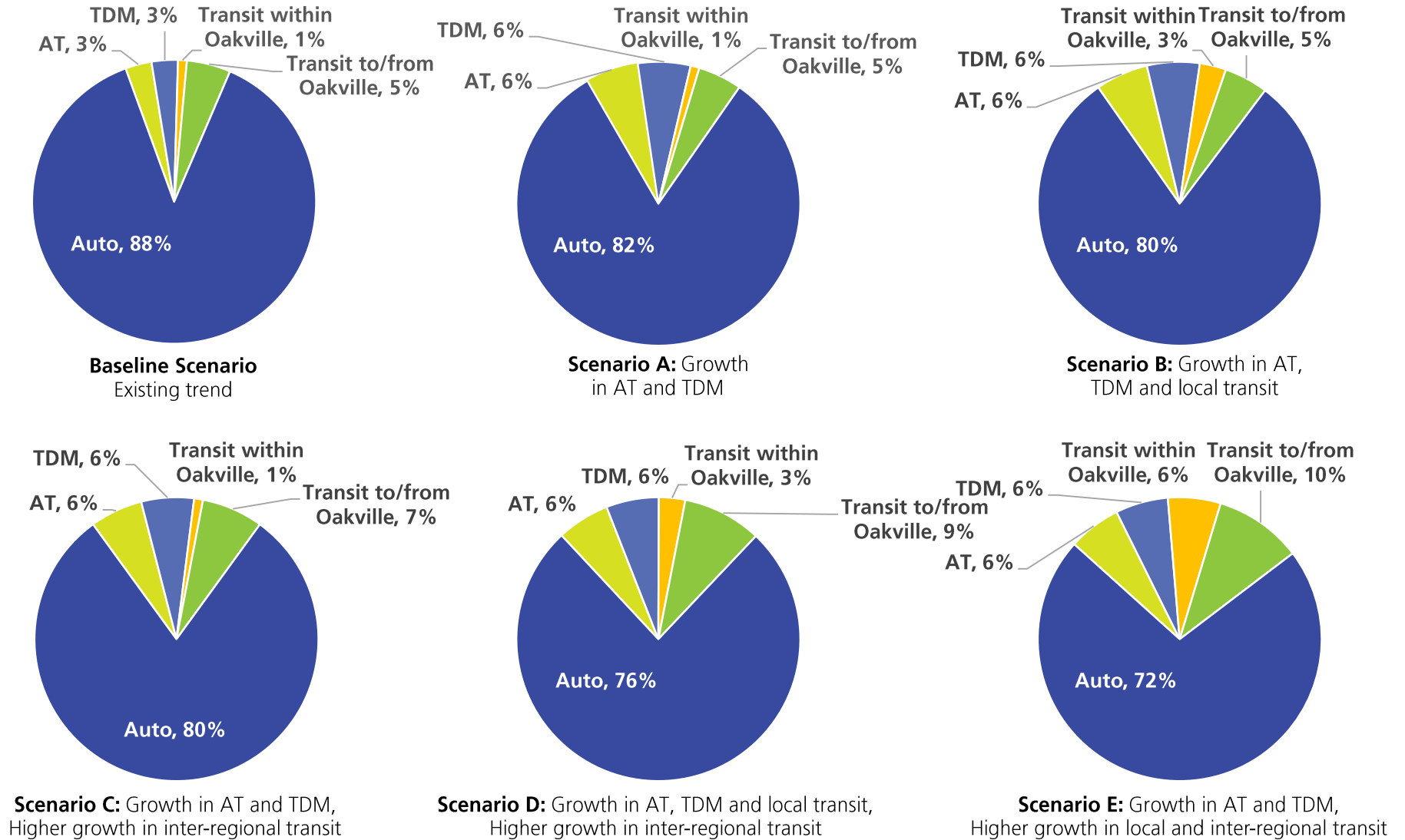


Figure 19: Alternative Transit Mode Split Scenarios for 2031



4.2 Evaluation of Alternative Transit Mode Split Scenarios

4.2.1 Evaluation Criteria

The study team, in consultation with the public through the outreach, identified the evaluation criteria and associated measures that addressed public concerns, corporate sustainability objective and typical measures associated with the environmental assessment process. The evaluation of the preferred interim transit split alternative is based on the criteria and measures listed in **Table 9**.

Table 9: Alternative Interim Transit Mode Split Scenario Evaluation Criteria

Criteria	Measures
Socio-Economic Environment	Community Considerations Noise Pollution Cultural And Built Heritage/Archaeology
Natural Environment	Ecological Footprint Natural Heritage Features & Environmental Resources Air Quality
Transportation Services	Transit Operations And Attractiveness Cycling And Pedestrian Accommodation Mobility And Accessibility Total Vehicular Delay Safety Feasibility
Cost Effectiveness	Capital Cost Affordability Annual Savings In Vehicle Operating Cost

Socio-Economic Environment Assessment

The impacts of the alternative solutions on the socio-economic environment were evaluated. Low to moderate transit share scenarios have higher road improvement demand, which could affect the distinct character, living environment and sense of community of neighbourhoods. The road infrastructure projects have the potential to impact cultural and built heritage resources or archaeological sites. Higher auto mode share also contributes to the higher noise level. High transit modal shares have less impact on the socio-economic environment.



Natural Environment Assessment

The impacts of the alternative solutions on natural environment were evaluated. Scenarios with low to moderate transit share have higher potential impacts on the town's natural environment. Such impacts include an increase in the town's ecological footprint due to required road widenings, adverse effects to the town's environmental features, natural features and areas, natural heritage systems and waterfronts, and an increase in greenhouse gas emissions from increased auto trips. Scenarios with high transit share have lower potential impacts to the natural environment.

Transportation Services Assessment

The performance and impact of alternative scenarios were evaluated using the transportation services criteria described above. All identified scenarios demonstrate a high level of support for existing and planned pedestrian and cycling facilities. Scenarios with higher transit shares encourage alternative modes of travel by providing sustainable and efficient transit operation. They are potentially associated with fewer safety impacts as auto trips are reduced. Scenarios with low transit share show a lower level of support for transit operation and infrastructure, and could potentially be related to greater safety issues. In terms of feasibility, low transit share scenarios have high potential to attain mode split targets while high transit share scenarios have a low to moderate potential and require more planning and implementation efforts.

Cost-Effectiveness Assessment

A cost assessment of alternative scenarios was performed using the cost-effectiveness criteria described above in **Table 9**. Scenarios with high transit share involve lower cost for relatively fewer road infrastructure projects, but higher cost for relatively greater number of transit infrastructure projects. Scenarios with low transit share involve the opposite, with a high cost for road infrastructure projects and low cost for transit infrastructure projects.

In terms of affordability, the cost to the town for transit projects increases and the cost to developers for road projects decreases with increase in transit share. With the increase in transit mode share, the reduction in congestion will provide potential savings in vehicle operating cost.



4.2.2 Assessment of Alternative Scenarios

The assessment of alternative transit mode share targets was based on a number of criteria, including the socio-economic environment, natural environment, transportation and cost-effectiveness. Cultural environment was also considered but was found to have little impact on the evaluation. The key findings of the evaluation of alternative transit mode scenarios are described below, and the detailed evaluation of alternative scenarios is presented in **Appendix B**:

- **Socio-Economic Environment:** In comparing all scenarios, Scenarios D and E have the fewest road improvements that could affect the character of the community/neighbourhoods, the fewest impacts to cultural and built heritage resources and cultural sites, and reduced noise levels from auto trips.
- **Natural Environment:** Comparing all scenarios, Scenario D and E have the fewest impacts on the town's ecological footprint and the least potential to impact natural features and areas due to decreased road widening. Scenarios D and E have the greatest potential to reduce CO₂ emissions annually.
- **Transportation:** In comparing all scenarios, Scenarios D and E show a higher potential for reduction in auto travel demand and a higher potential to reduce traffic delays over Scenario A, B and C. Overall, the town's goal (as identified in the *Livable Oakville Section 2.2.2*) is to provide choices for mobility by linking people and places with a sustainable transportation network consisting of roads, transit, walking and cycling trails. Based on this objective, between Scenarios D and E, Scenario E is preferred from a long-term perspective as it has the greatest emphasis on local sustainable transportation methods.
- **Cost:** In comparing all scenarios, Scenarios D and E have low capital costs to developers associated with road infrastructure projects but high costs to the town associated with growth in transit infrastructure projects. Scenario A has high capital costs to developers associated with a greater number of road infrastructure projects but the lowest costs to the town associated with transit infrastructure projects.

In summary, Scenarios D and E are equally preferred from the Socio-Economic and Natural Environment perspectives. Scenario E would be preferred in the long term as it has the highest emphasis on transit, and thus, highest potential to reduce vehicular congestion. However, for the interim conditions (2031 planning horizon), Scenario D would be preferred as it is considered to be economical and the transit goal would be more obtainable compared to Scenario E. Based on all the above considerations, *Scenario D* is identified as the preferred scenario for the interim 2031 planning horizon year.



4.3 Preferred Transit Mode Share Target

From the assessment and evaluation of the socio-economic environment, natural environment, transportation services and traffic impacts, and cost-effectiveness perspectives, it is noted that Scenario D prevails as the preferred interim solution for 2031 with growth in AT and TDM, local transit, and higher growth in inter-regional transit. The 20% transit mode share is still the town's ultimate goal in order to provide sustainable transportation options. With the proposed interim transit mode share in Scenario D, the number of capacity-constrained screenlines is reduced from seven to four in the 2031 baseline scenario with trend modal share presented in **Figure 19**.

The remaining screenline lane deficiencies are presented in **Figure 20** and **Table 10**. Comparing to the baseline scenario, the screenlines east of Sixth Line and Trafalgar Road are no longer approaching capacity. In addition, the screenline along Oakville Creek South was previously identified as requiring two additional lanes per direction. Under the preferred scenario, only one additional lane per direction is required.



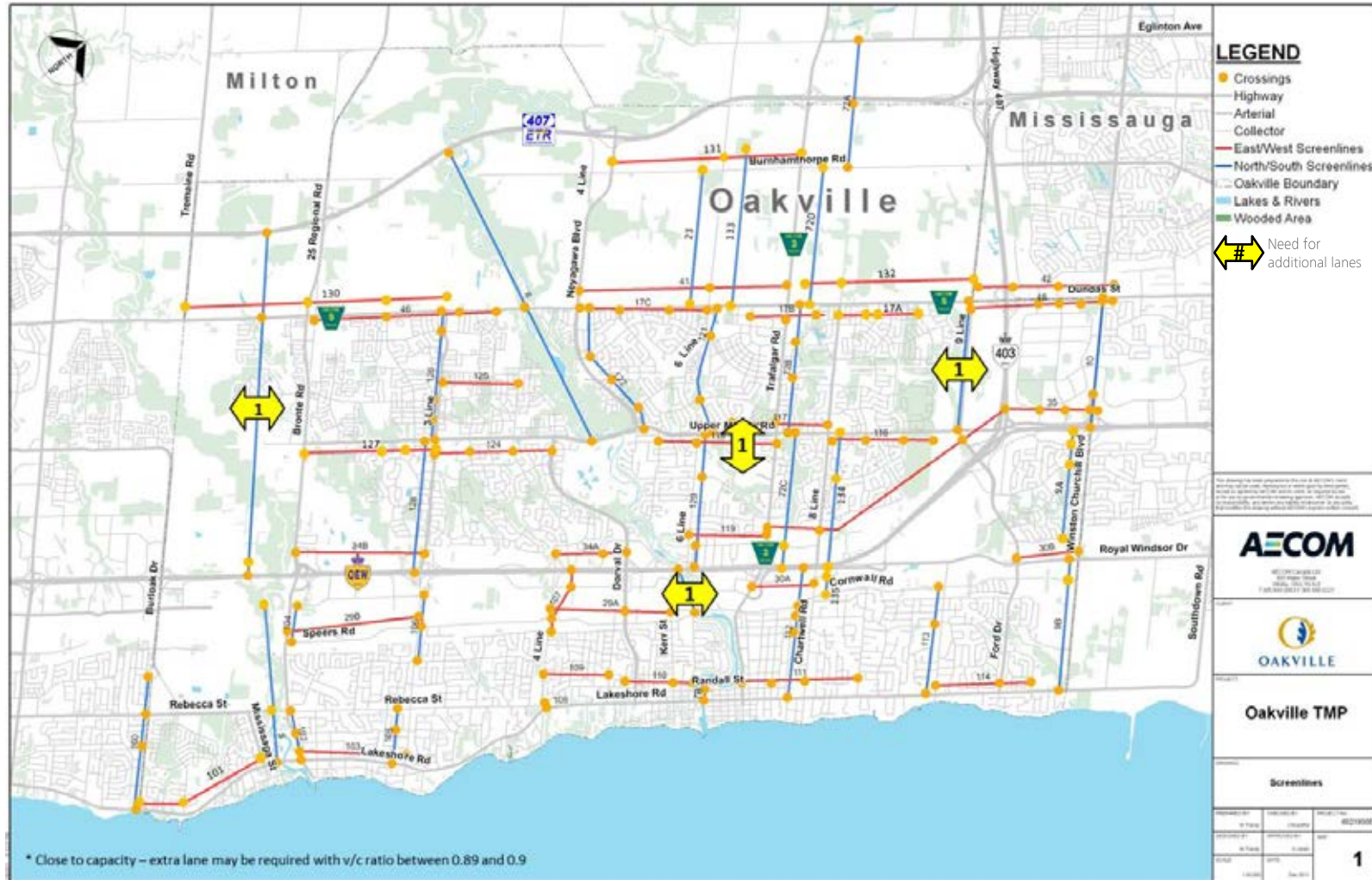


Figure 20: 2031 Screenline Lane Deficiencies for Recommended Mode Split (Scenario D)



Table 10: 2031 Preferred Scenario (Scenario D) Screenline Lane Deficiencies

SL ID	Screenline	Local Municipal Roadways for Potential Widening	Number of Lanes (per dir.)	Additional Lanes Required (per dir.)
North-South Screenline (East-West Deficiencies)				
6	Bronte Creek North - Highway 407 ETR to QEW	North Service Road West of Bronte Road	2	1
7A	Oakville Creek South - QEW to Cornwall Road	North Service Road Extension at 16 Mile Creek	1	1
115	West of Ninth Line - Dundas Street to Upper Middle Road	Bayshire Drive Extension West of Ninth Line	1	1
East-West Screenline (North-South Deficiencies)				
118	South of Upper Middle Road - Oxford Avenue to Trafalgar Road	Sixth Line South of Upper Middle Road	1	1



4.4 Recommended Road Network Improvements

The Town of Oakville applies a level-of-service threshold for road network planning studies in order to determine candidate roads for improvements. Currently, the road infrastructure needs are assessed based on a screenline and link volume to capacity (v/c) ratio of 0.90 and a level-of-service of D or better. A corridor link or screenline that is forecast to have a higher v/c ratio or lower level-of-service is seen to be ‘congested’ and a potential candidate for infrastructure improvement.

Considering the above thresholds together with the town’s policy framework (*Livable Oakville*, Urban Structure, etc.); community impacts (available property, tree canopy, connectivity) and cost for improvements (capital, operating, land, congestion cost, etc.), it was recognized that additional widening is not feasible to address screenline deficiencies (as identified above in Section 4.3). Based on the review of link level volume to capacity ratio for individual corridor, two road segments are being considered for additional network improvements over the improvements already identified in the *Switching Gears 2013*:

The evaluation of road infrastructure improvements seeks to identify a suitable balance to meet transportation capacity needs and achieve environmental, community/cultural, and financial/economic sustainability.

- **Eighth Line between Iroquois Shore Road and Falgarwood Drive:** The northbound direction is expected to operate at v/c of 1.01. The Midtown EA Study identified Eighth Line to be widened to four-lane between Iroquois Shore Road and North Service Road. It is recommended to extend the four-lane widening up to Falgarwood Drive to provide smooth traffic operations.
- **Third Line between North Service Road and Wycroft Road:** The northbound lanes are expected to operate at v/c of 0.90-0.99 and is recommended for widening from four to six lanes. Given the proximity to Bronte GO station, queue jump lanes and dedicated transit lanes for Oakville Transit services should be considered to provide additional capacity to and from the station.



It is recognized that not all identified screenline and roadway capacity deficiencies could be resolved by further widening to accommodate demand, due to various constraints such as limited right-of-way, community impacts, environmental impacts, etc. Alternative solutions should be sought to alleviate congestion including intersection improvements and the promotion of active transportation, Travel Demand Management, and public transit initiatives.



5 Public Engagement

5.1 Public and Stakeholder Consultation

A comprehensive consultation process was undertaken to gather community and stakeholder input during the Transportation Master Plan (TMP) Review process. The following section documents the public and stakeholder consultation process for the TMP Review.

A comprehensive communication plan was prepared to promote and encourage involvement in the consultation process by allowing for a reasonable exploration of issues, discussion, and collaboration. The communication plan was prepared with the following objectives in mind:

- To ensure town residents, the business community and other stakeholders were made aware of the Transportation Master Plan review;
- To keep the public and stakeholders up-to-date on the key project issues, considerations, assumptions and milestones;
- To provide opportunities for public and stakeholder engagement over the course of the study; and
- To inspire confidence in the TMP Review process and the town's recommendations.

A variety of tools were used to inform the community, including direct email, a webpage hosted on the town's website, a dedicated project email address, an online survey, social media (Facebook and Twitter), newspaper advertisements and town press releases.

5.2 Public Consultation

Public Information Centres

Two (2) Public Information Centres (PICs) were held to inform the public of the study activities and provide opportunities for the public to obtain information and ask questions to the project team.

The first PIC was held May 17, 2017 from 6:00 to 8:00 p.m. at Oakville Town Hall. The PIC provided the opportunity for the project team to update the residents on their review of the



transportation network improvements focusing on future transit targets to accommodate growth to 2031, reduction of overall congestion, and the town's upcoming Development Charge By-Law. A formal presentation was delivered followed by attendees reviewing the information provided on display boards and speaking with members of the project team.

The second PIC was held October 26, 2017 from 6:00 to 8:00 p.m. at Oakville Town Hall. Information display boards provided an overview of the draft recommendations for the transit mode split targets that were presented in PIC #1 and identified preliminary recommended road network improvements to 2031.

Summaries of each PIC were prepared to document the public consultation activities, comments received, and topics for further consideration. The PIC summaries are also included in **Appendix C**.

Online Poll

Following PIC #1, an online poll was developed to gather additional feedback outside of the formal consultation process to enhance the opportunity for input from a larger segment of the local population. The online poll was posted on the Town of Oakville website linked from the project page from June 19 to July 31, 2017. A total of 487 surveys were submitted during this time. The survey results were compiled and presented for public review at PIC #2 and are presented in the PIC #2 display boards. Suggestions received in online survey are listed in **Appendix D**.

5.3 Meetings with Technical Agencies

Relevant technical agencies were invited to participate in the Technical Agencies Committee (TAC). The TAC consisted of town staff, staff from Halton Region and adjacent local municipalities, provincial ministries, transit authorities, conservation authority, utilities, emergency services, and other affected agencies. Two (2) TAC meetings were held on the dates and locations described below:

- The first TAC meeting was held on September 18, 2017, at Oakville Town Hall and provided an overview of the study description, study procedure, various projects highlights since the completion of *Switching Gears 2013*, travel demand modeling results



for various transit mode split targets and a preliminary list of criteria for evaluation of alternatives.

- The second TAC meeting was held as a drop-in prior to the second PIC on November 26, 2017, at Oakville Town Hall. The study team provided an overview of the evaluation of transit target scenarios and draft recommendations for the transit mode split targets and identified preliminary road network improvements for 2031.

The TAC 1 meeting minutes are included in **Appendix E**.



6 Summary

The Town of Oakville completed a multifaceted and comprehensive Transportation Master Plan (TMP) known as 'Switching Gears' in 2013 which identified the town's transportation needs for anticipated growth to 2031. Following the town's and Halton Region's policies at the time, that study considered 20% transit mode share and 6% (each) mode share for Active Transportation (AT) and Transportation Demand Management (TDM), by 2031. Due to various factors including current 2017 fiscal conditions, existing local and provincial transit mode shares, higher private vehicle ownership rates in Oakville, and delay in implementation of various regional and provincial transit improvements, it was recognized that the above transit mode share target previously identified in *Switching Gears 2013* is not fully achievable by 2031.

In 2017, the town initiated a Transportation Master Plan Review to support DC By-law changes and to identify the additional transportation infrastructure needs to support growth in Oakville with a more viable transit mode share for 2031. There have also been changes to the province's Development Charges (DC) Act through Bill 73 – Smart Growth for Our Communities Act, 2015, which now requires that the projected transit ridership growth should identify the net growth due to new residents (those that are likely to be transit riders) moving to Oakville, and existing residents becoming new transit riders. As per the DC Act changes, Development Charges can now only be collected for transit operations required to service new residents, whereas tax levy funding is required to increase transit service for existing residents.

Existing Transit Modal Share

- The town's local transit mode shares for the morning and afternoon peak periods were 2.4% and 1.7%, respectively, which are much lower than neighbouring municipalities of Hamilton, Mississauga, and Brampton.
- In 2011, the total transit share in the Town, which includes both local and inter-regional transit, was 8% in the morning peak period and 6% in the afternoon peak period.



Future Transportation Conditions

The town is expected to grow by approximately 48,700 residents and 31,100 jobs in the next fourteen years. The existing trend of high auto modal share and the projected growth in the town and surrounding municipalities would result in significant congestion on the town's transportation network. In order to support its strategic vision to be the most livable town in Canada, the town requires a transportation system that will accommodate future growth, incorporating the planning framework from the Livable Oakville Plan, the North Oakville Secondary Plan, and the recent Urban Structure Review.

To determine the optimal transportation improvements for 2031, the following five alternative transit mode split target scenarios were developed and assessed in the TMP Review Study. With the recently completed Active Transportation Master Plan Update and Travel Demand Management (TDM) initiatives, all five scenarios assume 6% modal split for each of active transportation and TDM, as set out in *Switching Gears 2013*.

- **Scenario A: Growth in AT and TDM**, assumes the percentage of trips by local and inter-regional transit remains unchanged at the current level of 1% and 5%. There will be some growth in the number of transit trips due to an overall increase in trips taken by all mode.
- **Scenario B: Growth in AT and TDM and Local Transit**, assumes growth in local transit mode share based on an extrapolation of the growth rate to 2031 in the 2015 Transit Service Review Report, resulting in a 2031 PM peak period local transit mode share of 3%. There will be no increase in inter-regional transit mode share.
- **Scenario C: Growth in AT and TDM, higher growth in inter-regional transit**, assumes that no growth in local transit mode share but service improvements anticipated through Metrolinx's Regional Transportation Plan initiative will be in place and also higher transit mode share for other municipalities in Halton Region, which results in inter-regional transit share of 7%.
- **Scenario D: Growth in AT and TDM, local transit and higher growth in inter-regional transit**, assumes a 3% local transit split as outlined in Scenario B and a higher inter-regional transit share of 9%, for a total transit mode share of 12%.
- **Scenario E: Growth in AT and TDM and higher growth in local transit and inter-regional transit**, assumes high growth in both local and inter-regional transit through high investments in transit infrastructure projects for a transit mode share of 16%.



Preferred Scenario

Based on a number of evaluation criteria, encompassing those most relevant in terms of socio-economic environment, natural environment, transportation and cost-effectiveness, *Scenario D* has been identified as a preferred interim scenario for 2031.

Road Network Improvements

The future network improvement requirements were assessed for Scenario D (which assumes 12% transit mode share target for 2031 – including 3% local transit, 9% regional transit, and 6% mode share for Active Transportation and Travel Demand Management each).

The road infrastructure needs were assessed based on a segment of a corridor and screenline volume to capacity (v/c) ratio of 0.90 and a level-of-service D – i.e. a corridor that is forecast to have a higher v/c ratio or lower level-of-service is considered as heavily congested, and a potential candidate for improvement. Considering this threshold together with the town’s policy framework (Livable Oakville: Town’s Official Plan, Urban Structure, Mobility Management Strategy, etc.), community impacts (available property, tree canopy, connectivity), and relative cost (capital, operating, land, congestion cost, etc.), only two road network segments are being considered for additional network improvements in addition to the improvements already identified in *Switching Gears 2013* :

- Eighth Line between Iroquois Shore Road and Falgarwood Drive: widen to four lanes, and
- Third Line between North Service Road and Wyecroft Road: widen to six lanes. Given the proximity of this section to Bronte GO Station, queue jump lanes and dedicated transit lanes for Oakville Transit services should be considered to provide additional capacity to and from the station.

It is anticipated that a combination of improvements to active transportation, transportation demand management, transit services, provincial highways, regional roads and local roads as identified will collectively best support growth and the vision for Oakville’s future from a transportation perspective.



APPENDIX A

AECOM TRAVEL DEMAND MODELLING MEMO



To:
Lin Rogers**CC:**
Jill Stephen
Khawar Ashraf**Project name:**
Oakville Transportation Modelling Support**Project ref:**
60538801**From:**
Reza Noroozi**Date:**
January 12 2017

Memo

Subject: Transportation Modelling Support for Oakville Transportation Master Plan (TMP)

1 Introduction

AECOM has been working with the Town of Oakville to provide the modelling support for the Town of Oakville Transportation Master Plan (TMP) update. One of the main purposes of the modelling support is to evaluate the effectiveness of transit mode share scenarios aimed at resolving anticipated future traffic issues within the Town of Oakville. These scenarios have been identified by Town of Oakville, and include future policy transit mode shares, active transportation, and travel demand management strategies. This memorandum has been updated to include adjustments made to the policy mode splits by Town of Oakville in December 2017.

2 Transportation Model Update

2.1 Base Model

The Oakville TMP model was initially intended to be utilized to support the update of Transportation Master Plan. However, Oakville TMP model does not reflect the latest transportation trends observed in 2011 Transportation Tomorrow Survey (TTS), and was developed based on 2006 TTS. Therefore, the model is decided to be updated based on 2011 TTS data.

Halton Region updated its Travel Demand Model (Halton Model) in 2015. Halton Model is an EMME-based Transportation demand model which shares the core functions and procedures with the Oakville TMP model; however, the newly updated model takes advantage of the latest 2011 TTS data and migrates the model's network to be consistent with the University of Toronto Travel Modelling Group (TMG) network and standard¹. In addition to reviewing and updating the model's existing components, the model update includes a number of enhancements, including additional special generators for the new North Oakville Hospital and Sheridan College.

Similar to Oakville TMP model, the Halton model was developed for the PM peak hour, and provides forecasts up to horizon year 2031. The Halton Model was utilized as the base model for this analysis, and was further updated to assess the the mode share scenarios to support the update of Oakville Transportation Master Plan.

¹ The Travel Modelling Group (TMG) is a research group within the Department of Civil Engineering at the University of Toronto, which focuses on the development and maintenance of travel demand models covering the Greater Toronto-Hamilton Area (GTHA) in collaboration with transportation agency partners throughout the GTHA.

2.1.1 Road Network

The transportation network, described by a series of links and nodes, represents all provincial freeways and highways and arterials in the GTHA, as well as major urban and rural collector roads in Halton. Each link representing an existing or planned segment of a roadway was assigned a set of attributes including, a volume delay function, number of lanes, lane capacity, free-flow speed and truck percentage. The updated model considers a more detailed collector network in Town of Oakville and rest of Halton Region to better represent the distribution of trip generation zones throughout the study area. Moreover, the updated model deploys a coordinate system which can be easily communicated with GIS tools for post-modeling processes.

The following references were consulted to develop the 2031 road network in the model:

- Switching Gears, Oakville’s Transportation Master Plan, 2013
- Midtown Oakville Transportation and Stormwater Municipal Class, Environmental Assess, 2015
- The Road to Change, Halton Region Transportation Master Plan, 2011
- Southern Highways Program, Ministry of Transportation Ontario

2.1.2 Zone System

The model covers the same geographic area as the GTA model, but uses a more detailed zone system within Halton Region. Outside of Halton, the updated model maintains the same zones as the existing Oakville Model. In the updated model, traffic zones within the existing built boundary remains as-is since the zone boundaries were already at an appropriate level of detail relative to the major road network (i.e. within the urban areas of Oakville, Burlington and Milton, and Georgetown). Conversely, select traffic zones in some currently undeveloped areas that are slated for future growth were split into smaller zones. The updated model with 192 traffic zones in Oakville considers a more detailed zone system compared to the Oakville TMP model with 185 traffic zones.

Table 1. Traffic Zone Differences between Updated Model and Oakville TMP Model

Oakville TMP Model	Updated Model
78	189
	190
170	187
	188
	191
171	192
	193
161	160
	161
-	9716*
-	9717*

*Traffic zones for GO Rail Park& Ride facilities. Does not exist in the Oakville TMP model

2.1.3 Future Land Use Assumptions

To maintain consistency with the Oakville TMP, the future population and employment forecasts that were used as inputs to the updated model are consistent with the Region's Best Planning Estimates (BPE) version 3.032. The land use forecasts were converted from the previous TMP model's zone system to the new traffic zone system. **Table 2** summarizes the 2031 population and employment used in the updated model in Oakville.

Table 2. 2031 Population and Employment in the Updated Model (BPE 3.032)

Region	Population	Employment
North Oakville	104219	43130
South Oakville	52596	31733
East Oakville	43131	29088
West Oakville	56817	24407
Total	256763	128358

2.2 Transit Mode Split

The updated model assumes two initial scenarios for future transit demand:

- **Trend Mode Share:** Assumes that future mode splits will remain similar to the existing conditions (2011 TTS). This scenario does not consider the potential impact of transit network enhancements on ridership. Details of Trend Mode Share are shown in **Table 3**.
- **Policy Mode Share:** Assumes that future mode splits will increase as key transit network enhancements are implemented in the future. Policy mode share targets are defined to be 11% for internal trips and 20% for overall trips in 2031. Details of Trend Mode Share are shown in **Table 4**.

The noted policy mode share targets represent increases over the base year mode shares of 2.0% for trips that are internal to Halton and 4.0% for all trips that start or end in Halton. It also should be noted that the policy mode shares are combined targets for GO Rail and Local Transit. The policy mode shares are implemented within the model through a transit mode share matrix. The matrix define a mode share target on an origin-to-destination basis, with higher mode assigned to the traffic zones where transit improvements/higher order transit services are being planned for the future; different mode shares are also assigned depending on the municipality/location or origin and destination (e.g. higher mode splits to/from downtown Toronto and lower mode splits in rural areas). The updated model implements the policy mode share matrix which was developed as part of Halton Transportation Master Plan.

In the model, the transit policy mode share is recognized by reducing the auto driver demand to simulate auto driver shifts to transit modes. The policy mode split matrix is applied to the total person trip demand matrix, thereby reducing the total auto demand that is assigned to the roadway network.

The updated model has also introduced controls to ensure that the TMP transit policy mode split does not cause a decrease in "trend" or base transit mode splits at the origin-destination level; in some cases the Halton TMP policy mode split was observed to be lower than the "trend" mode split in 2011. This result is likely due to the fact that the Halton TMP policy mode splits were developed using 2006 TTS mode splits as a base condition.

As part of this analysis, a new module was developed to introduce and control transit policy mode targets for Oakville. Five independent origin-destination partitions were considered to better define policy mode share targets for trips that start or end in Oakville as follows:

- Trips from Oakville to Oakville
- Trips from Oakville to rest of Halton

- Trips from Oakville to outside of Halton
- Trips from rest of Halton to Oakville
- Trips from outside of Halton to Oakville

The new module gets the policy mode share targets as input, and adjusts the origin-destination transit trips in each partition to achieve the overall target. The Halton policy mode share matrix (11% internal and 20% overall transit mode share) was utilized to initially estimate the policy mode share in the study area, and then the mode shares were adjusted for the abovementioned partitions to achieve the targets defined as part of Oakville transportation master plan update. The new module applies an iterative adjustment approach to ensure 1) transit policy mode split does not cause a decrease in “trend” and 2) the overall policy mode share target will be achieved for each partition.

Table 3. Trend Mode Shares (PM Peak Period)

Origin	Destination									
	Oakville	Rest of Halton	Halton	Hamilton	Peel	York	Toronto	Durham	External	Total
Oakville	2%	3%	2%	2%	4%	0%	5%	0%	0%	3%
Rest of Halton	1%	1%	1%	1%	2%	0%	0%	0%	1%	1%
Halton	2%	1%	2%	2%	3%	0%	3%	0%	0%	2%
Hamilton	9%	4%	5%	7%	22%	0%	23%	8%	1%	7%
Peel	2%	1%	1%	2%	6%	2%	11%	1%	1%	5%
York	0%	0%	0%	1%	3%	3%	10%	0%	0%	4%
Toronto	55%	53%	54%	45%	31%	30%	32%	31%	20%	32%
Durham	0%	0%	0%	0%	10%	2%	7%	3%	1%	3%
External	0%	3%	2%	1%	6%	1%	4%	2%	-	3%
Total	7%	4%	5%	7%	9%	8%	28%	6%	3%	14%

Table 4. 2031 Policy Mode Shares (PM Peak Period)

Origin	Destination									
	Oakville	Rest of Halton	Halton	Hamilton	Peel	York	Toronto	Durham	External	Total
Oakville	14%	11%	13%	14%	45%	1%	59%	0%	0%	19%
Rest of Halton	9%	10%	10%	23%	16%	1%	47%	0%	1%	12%
Halton	13%	10%	11%	21%	31%	1%	53%	0%	0%	14%
Hamilton	40%	51%	49%	10%	22%	0%	26%	12%	1%	12%
Peel	35%	27%	30%	5%	9%	3%	15%	1%	1%	11%
York	0%	1%	1%	1%	5%	3%	13%	0%	0%	5%
Toronto	78%	73%	75%	57%	43%	37%	41%	43%	20%	41%
Durham	0%	0%	0%	0%	14%	3%	9%	4%	1%	5%
External	0%	3%	2%	2%	6%	3%	5%	2%	-	3%
Total	23%	17%	19%	11%	15%	10%	36%	9%	3%	20%

2.3 Active Transportation (AT)

The base model assumes existing active transportation mode shares to be maintained in the future horizon years. Active transportation trips which are considered as part of mode Other² by the model are subtracted from total generated trips in the first step of travel demand analysis. Oakville TMP specifies strategies for achieving growth in walking and cycling as a commuter mode during peak period, representing additional 3% share of trip making. The additional active transit mode share target was also introduced to the model, and will be subtracted from the total generated trips using a global reduction factor.

2.4 Travel Demand Management (TDM)

Oakville TMP specifies travel demand management initiatives to reduce peak hour travel by up to an additional 3%. The additional travel demand management trip reduction target was introduced to the model as a global factor to reduce total generated trips.

2.5 Comparison to Oakville TMP Model

The model utilized for this analysis shares the core functions and procedures with the Oakville TMP model; however, the following differences can be identified between the two models:

- The updated model utilizes 2011 TTS data whereas the 2006 TTS data was used in Oakville TMP model
- The road network in the new model considers additional improvements which were not included in the Oakville TMP model. These changes include³:
 - One additional lane on Highway 403 North/South of Upper Middle Road
 - One additional lane on Eighth Line South of Dundas Street
 - One additional lane on North Service Road East of Eighth Line
 - One additional lane on Kingsway Drive West of Winston Churchill Boulevard
- The link capacities in the updated model are slightly greater than the Oakville TMP model.

3 2031 Transit Mode Share Scenarios

Through discussions with the Town of Oakville, eight (8) scenarios were defined to assess the impact of future transit mode shares on traffic volumes and congestion in the study area. Travel demand matrices were forecasted for each scenario, and the future year auto assignments were conducted on the TMP recommended road network. The 2031 PM peak hour traffic volumes were reported at the screenline level of detail. For each scenario v/c ratio tables, screenline deficiencies, v/c ratio plots, and volume plots were provided in **Appendix B**. The scenarios can be summarized as follows:

- **Trend:** 2011 TTS transit mode shares for the entire Greater Toronto Area (GTA)
- **Oakville TMP – Do Nothing:** 2011 TTS transit mode shares for the entire GTA. This scenario does not include some of the town of Oakville road improvements which are available in other scenarios. Refer to **Appendix C** for more details.
- **Baseline:** 2011 TTS transit mode shares for trips which start or end at Oakville, and policy transit mode shares for the other trips. No additional reduction in auto trips due to active transportation and travel demand management strategies is considered.
- **Scenario A:** 2011 TTS transit mode shares for trips which start or end at Oakville, and policy transit mode shares for the other trips. 6% additional reduction in trips due to active transportation and travel demand management strategies is considered.

² Cycle, Walk, Taxi, Schoolbus, Motorcycle, Other and Unknown from TTS database

³ Refer to Appendix A for details on road network differences between the updated model and the Oakville TMP model

- **Scenario B:** Increase in transit mode shares for Oakville local trips (Oakville to Oakville) from 2% to 6%; 2011 TTS transit mode shares for other Oakville trip, and policy transit mode shares for the other trips. 6% additional reduction in trips due to active transportation and travel demand management strategies is considered.
- **Scenario C:** Increase in the overall transit mode share to 8% (trips with at least one end in Oakville). 6% additional reduction in trips due to active transportation and travel demand management strategies is considered.
- **Scenario D:** Increase in the overall transit mode share to 12% (trips with at least one end in Oakville). 6% additional reduction in trips due to active transportation and travel demand management strategies is considered.
- **Scenario E:** Increase in the overall transit mode share to 16% (trips with at least one end in Oakville). 6% additional reduction in trips due to active transportation and travel demand management strategies is considered.

To more accurately define scenarios, policy mode splits were provided for five (5) origin-destination segments in the study area based on the overall target transit mode shares as shown in **Table 5**.

Table 5. 2031 Policy Mode Share Targets in Different Scenarios (PM Peak Period)

Scenario	Transit Mode Share (%)							
	AT Share	TDM Share	Oakville to Oakville	Oakville to rest of Halton	Oakville to outside of Halton	Rest of Halton to Oakville	Outside of Halton to Oakville	Other
Baseline	Trend	Trend	2%	3%	3%	1%	20%	Halton Policy
Scenario A	6%	6%	2%	3%	3%	1%	20%	Halton Policy
Scenario B	6%	6%	6%	3%	3%	1%	20%	Halton Policy
Scenario C	6%	6%	2.2%	4.4%	12.5%	3.7%	20%	Halton Policy
Scenario D	6%	6%	6.6%	5.6%	18.5%	4.9%	23.4%	Halton Policy
Scenario E	6%	6%	13.2%	7.2%	20.5%	6.1%	25.4%	Halton Policy
Trend	Trend	Trend	Trend	Trend	Trend	Trend	Trend	Trend
Oakville TMP – Do Nothing*	Trend	Trend	Trend	Trend	Trend	Trend	Trend	Trend

* Road network is based on the Oakville TMP – Do nothing scenario

4 Scenario Comparison

Network-wide traffic assessment measures are presented and compared for different scenarios in **Table 6**. Network-wide average speed for Baseline scenario is approximately 43 km/hr; the average speed is predicted to increase by approximately 7% for Scenario A. The increase in the average speed is due to approximately 6% reduction in network-wide trips as a result of active transportation and travel demand management strategies. The network-wide average speed for Scenario B is predicted to be very similar to that of Scenario A. The network-wide average speed in Scenario C, D, and E is predicted to be approximately 46 km/hr which shows an increase of less than 1% when compared to Scenario A and B. This is due to increased mode shares for external trips from/to Oakville. Transit mode shares for Oakville local trips (Oakville to Oakville) are predicted not to impact the network-wide average speed significantly. It should be noted that the network-wide indicators consider distance travelled and time spent on all road segments in the model study area (Greater Toronto Area), therefore, the impacts of Oakville local trips on the overall indicators are not expected to be significant.

To characterize traffic conditions on Oakville road network, the same indicators were calculated along Oakville screenlines, and presented in **Table 6**. The screenline average speed is predicted to be the lowest for Trend and Oakville TMP-Do Nothing scenarios. In both scenarios, transit mode shares were assumed to be based on the 2011 TTS mode shares. However, in the Oakville TMP-Do Nothing scenario, some of future road improvements such as midtown road improvements are not considered. Screenline average speed in Baseline scenario is predicted to increase by approximately 5% when compared to Trend scenario. This is due to increase in transit mode shares for trips which use Oakville road network⁴ but start and end outside Oakville. Screenline average speeds are predicted to increase by approximately 5% for Scenario A and B when compared to Baseline scenario. This is due to approximately 6% reduction in overall trips as a result of active

⁴ Includes local, regional, and provincial roads labeled as Oakville screenlines

transportation and travel demand management strategies. Scenario C, D, and E are predicted to have screenline average speeds approximately 5-8% greater than Baseline scenario. The differences between Scenario C, D, and E can be explained by different transit mode shares between these scenarios. Screenline average speed for Scenario E is predicted to increase by approximately 1-3% when compared to Scenario C and D.

Table 6. Comparison of Network-wide and Screenline Level Measures of Performance (PM Peak Hour)

		Baseline	Scenario A	Scenario B	Scenario C	Scenario D	Scenario E	Trend	Oakville TMP – Do Nothing
Network-wide	VKT	18,797,061	17,404,423	17,397,721	17,371,630	17,325,994	17,294,338	19,867,373	19,872,648
	VKT (v/c<0.9)	11,533,790	11,434,560	11,416,318	11,428,246	11,436,989	11,426,056	11,318,649	11,292,424
	VKT(v/c>=0.9)	7,263,271	5,969,863	5,981,403	5,943,383	5,889,005	5,868,282	8,548,724	8,580,224
	VHT	437,366	377,429	377,231	376,321	374,921	373,998	486,285	487,316
	Avg. Speed (km/hr)	43.0	46.1	46.1	46.2	46.2	46.2	40.9	40.8
Screenline	VKT	290,802	271,498	269,581	267,658	261,569	256,628	306,844	306,765
	VKT (v/c<0.9)	170,451	202,426	201,668	200,378	196,137	192,912	171,433	140,276
	VKT(v/c>=0.9)	120,351	69,072	67,913	67,280	65,432	63,717	135,411	166,489
	VHT	5,481	4,891	4,832	4,787	4,620	4,480	6,073	6,438
	Avg. Speed (km/hr)	53.1	55.5	55.8	55.9	56.6	57.3	50.5	47.6

5 Conclusions

This memo documents the assessment of transit mode share scenarios to support the update of Oakville Transportation Master Plan. Eight (8) scenarios were identified by Town of Oakville. These scenarios include future policy transit mode shares, active transportation, and travel demand management strategies.

Travel demand matrices were forecasted for each scenario, and the future year auto assignments were conducted on the TMP recommended road network. The 2031 PM peak hour traffic volumes were reported at the screenline level of detail. For each scenario v/c ratio tables, screenline deficiencies, v/c ratio plots, and volume plots were provided.

Network performance measures such as vehicle-kilometer travelled (VKT), vehicle-hour travelled (VHT), and average speed were also predicted for each scenario.

APPENDICES

APPENDIX A

Differences in Road Network of Updated Model and Oakville TMP Model

SL ID	Link Tag	Description	Oakville TMP Model				Updated Model			
			Northbound/Eastbound		Southbound/Westbound		Northbound/Eastbound		Southbound/Westbound	
			Number of Lanes	Total Capacity	Number of Lanes	Total Capacity	Number of Lanes	Total Capacity	Number of Lanes	Total Capacity
6	2055	QEW West of Bronte Road - GP Lanes	3	5,100	3	5,100	3	5,400	3	5,400
7A	9874	North Service Road Extension at 16 Mile Creek	1	700	1	700	1	600	1	600
7A	2110	QEW East of Kerr Street - GP Lanes	3	5,100	3	5,100	3	5,400	3	5,400
7A	2121	Speers Road East of Kerr Street	3	2,250	3	2,250	3	2,550	3	2,550
8	2100	Upper Middle Road at 16 Mile Creek	3	2,700	3	2,700	3	2,550	3	2,550
9A	9900	Sherwood Heights Drive West of Winston Churchill Boulevard	1	700	1	700	1	850	1	850
9A	18600	Kingsway Drive West of Winston Churchill Boulevard	1	400	1	400	2	1,000	2	1,000
9A	21000	Sheridan Garden Drive West of Winston Churchill Boulevard	1	400	1	400	1	500	1	500
9B	9860	Berly Road West fo Winston Churchill Boulevard	1	850	1	850	2	1,700	2	1,700
10	23900	Dover Gate West of Winston Churchill Boulevard	1	400	1	400	1	500	1	500
10	23800	Plymouth Drive West of Winston Churchill Boulevard	1	400	1	400	1	500	1	500
10	103806	Upper Middle Road West of Winston Churchill Boulevard	3	2,250	3	2,250	3	2,550	3	2,550
17A	30600	Eighth Line South of Dundas Street	1	850	1	850	2	1,700	2	1,700
17A	14700	Prince Michael Drive South of Dundas Street	1	600	1	600	1	500	1	500
17B	28000	Oak Park Boulevard South of Dundas Street	2	800	2	800	2	1,200	2	1,200
17B	29200	Postridge Drive South of Dundas Street	2	800	2	800	2	1,200	2	1,200
17C	5400	Town Boulevard South of Dundas Street	1	400	1	400	1	500	1	500
17C	24500	Harman Gate South of Dundas Street	1	400	1	400	1	500	1	500
23	9812	Local E/W Road 4 West of Sixth Line	1	700	1	700	1	500	1	500
23	9811	Local E/W Road 3 West of Sixth Line	1	400	1	400	1	500	1	500
23	9810	Local E/W Road 2 West of Sixth Line	1	400	1	400	1	500	1	500
23	9809	Local E/W Road 1 West of Sixth Line	1	700	1	700	1	500	1	500
30A	9870	New QEW Crossing	2	1,700	2	1,700	1	800	1	800
34A	9600	Nottingham Gate North of North Service Road	1	750	1	750	1	600	1	600
34B	2302	Bronte Road North of North Service Road - GP Lanes	2	2,000	2	2,000	2	1,900	2	1,900
34B	9200	Third Line North of North Service Road	2	1,500	2	1,500	2	1,700	2	1,700
35	100301	Trafalgar Road North of Leighland Avenue	2	1,900	2	1,900	2	1,700	2	1,700
35	2308	Ninth Line South of Upper Middle Road	3	2,550	2	1,700	2	1,700	2	1,700
35	2904	Highway 403 North of Upper Middle Road	3	5,100	3	5,100	4	7,200	4	7,200
35	23600	Buckingham Road South of Bristol Circle	1	400	1	400	1	500	1	500
35	23700	Winston Park Drive South of Bristol Circle	1	400	1	400	1	500	1	500
35	103806	Upper Middle Road West of Winston Churchill Boulevard	3	2,250	3	2,250	3	2,550	3	2,550
41	9821	Local N/S Road 1 North of Dundas Street	1	400	1	400	1	500	1	500
41	9822	Local N/S Road 2 North of Dundas Street	1	400	1	400	1	500	1	500
41	9823	Local N/S Road 3 North of Dundas Street	1	400	1	400	1	500	1	500
41	9824	Local N/S Road 4 North of Dundas Street	1	400	1	400	1	500	1	500
41	2321	Trafalgar Road North of Dundas Street	3	2,850	3	2,850	2	1,900	2	1,900
42	9805	Highway 403 North of Dundas Street	3	5,100	3	5,100	4	7,200	4	7,200
42	9806	Ridgeway Drive North of Dundas Street	1	750	1	750	2	1,400	2	1,400
42	9807	Winston Churchill Boulevard North of Dundas Street	2	1,900	2	1,900	2	1,800	2	1,800
46	2128	Bronte Road South of Dundas Street - GP Lanes	2	2,000	2	2,000	2	1,900	2	1,900
46	9100	Postmaster Drive South of Dundas Street	1	600	1	600	1	400	1	400
46	9000	Third Line South of Dundas Street	2	1,500	2	1,500	2	1,700	2	1,700
46	28200	Proudfoot Trail South of Dundas Street	1	750	1	750	2	1,500	2	1,500
48	2904	Highway 403 North of Upper Middle Road	3	5,100	3	5,100	4	7,200	4	7,200
48	29500	Winston Park Drive South of Dundas Street	1	750	1	750	1	500	1	500
48	24100	Hyde Park Gate North of Bristol Circle	1	400	1	400	1	500	1	500
48	24000	Hampshire Gate North of Bristol Circle	1	400	1	400	1	500	1	500
72B	9819	Postridge Drive East of Trafalgar Road	2	800	2	800	2	1,200	2	1,200
72B	103800	Upper Middle Road East of Trafalgar Road	3	2,400	3	2,400	3	2,550	3	2,550
72C	103800	Upper Middle Road East of Trafalgar Road	3	2,400	3	2,400	3	2,550	3	2,550
72C	9861	North Service Road West of Eighth Line	1	850	1	850	1	700	1	700

SL ID	Link Tag	Description	Oakville TMP Model				Updated Model			
			Northbound/Eastbound		Southbound/Westbound		Northbound/Eastbound		Southbound/Westbound	
			Number of Lanes	Total Capacity	Number of Lanes	Total Capacity	Number of Lanes	Total Capacity	Number of Lanes	Total Capacity
72D	9838	Local E/W Road 4 East of Trafalgar Road	1	700	1	700	1	500	1	500
72D	9839	Local E/W Road 3 East of Trafalgar Road	1	400	1	400	1	500	1	500
72D	9840	Local E/W Road 2 East of Trafalgar Road	1	400	1	400	1	500	1	500
72D	9841	Local E/W Road 1 East of Trafalgar Road	1	700	1	700	1	500	1	500
100	26800	Burloak Drive North of Rebecca Street	1	850	1	850	2	1,700	1	850
101	11400	Great Lakes Boulevard North of Lakeshore Road	1	400	1	400	1	500	1	500
101	600	Mississauga Street North of Lakeshore Road	1	850	1	850	1	800	1	800
102	800	Rebecca Street East of Bronte Road	1	800	1	800	1	750	1	750
102	900	Hixon Street East of Bronte Road	1	400	1	400	1	500	1	500
102	1400	Lakeshore Road East of Bronte Road	1	900	1	900	1	950	1	950
103	2100	Third Line North of Lakeshore Road	3	2,700	3	2,700	3	2,550	3	2,550
104	700	Speers Road East of Bronte Road	3	2,850	3	2,850	3	2,550	3	2,550
105	13600	Rebecca Street West of Third Line	1	800	1	800	1	750	1	750
105	2000	Hixon Street West of Third Line	1	400	1	400	1	500	1	500
105	13700	Lakeshore Road West of Third Line	1	900	1	900	1	950	1	950
106	2300	Bridge Road East of Third Line	1	400	1	400	1	500	1	500
107	3400	Pinegrove Road East of Fourth Line	1	400	1	400	1	500	1	500
107	3800	South Service Road East of Fourth Line	1	750	1	750	1	500	1	500
109	3900	Morden Road North of Rebecca Street	1	400	1	400	1	500	1	500
110	4900	Queen Mary Drive South of Riverside Drive	1	400	1	400	1	800	1	800
111	5600	Trafalgar Road North of Church Street	1	750	1	750	2	1,500	2	1,500
111	5700	Reynolds Street North of Summer Avenue	1	400	1	400	1	700	1	700
112	5000	South Service Road West of Chartwell Road	1	500	1	500	1	700	1	700
112	19400	Maple Avenue West of Chartwell Road	1	400	1	400	1	700	1	700
114	7400	Maple Grove Drive North of Lakeshore Road	1	400	1	400	1	700	1	700
115	103803	Upper Middle Road West of Ninth Line	3	2,400	3	2,400	3	2,550	3	2,550
118	100303	Trafalgar Road South of Upper Middle Road	2	1,900	2	1,900	2	1,700	2	1,700
119	100301	Trafalgar Road North of Leighland Avenue	2	1,900	2	1,900	2	1,700	2	1,700
120	103808	Upper Middle Road East of Sixth Line	3	2,400	3	2,400	3	2,550	3	2,550
120	16400	McCraney Street East of Sixth Line	1	600	1	600	1	400	1	400
120	2110	QEW East of Kerr Street - GP Lanes	3	5,100	3	5,100	3	5,400	3	5,400
121	103808	Upper Middle Road East of Sixth Line	3	2,400	3	2,400	3	2,550	3	2,550
122	103809	Upper Middle Road East of Neyagawa Boulevard	3	2,400	3	2,400	3	2,550	3	2,550
124	20300	Third Line South of Upper Middle Road	2	1,500	2	1,500	2	1,700	2	1,700
124	16200	Nottingham Gate South of Upper Middle Road	1	700	1	700	1	600	1	600
125	10000	Third Line North of Warbler Road	2	1,500	2	1,500	2	1,700	2	1,700
125	29000	Proudfoot Trail North of Westoak Trails Boulevard	1	750	1	750	2	1,500	2	1,500
127	20300	Third Line South of Upper Middle Road	2	1,500	2	1,500	2	1,700	2	1,700
127	22900	Postmaster Drive South of Upper Middle Road	1	400	1	400	1	500	1	500
127	10250	Bronte Road South of Upper Middle Road - GP Lanes	2	2,000	2	2,000	2	1,900	2	1,900
130	9831	Bronte Road North of Dundas Street - GP Lanes	2	2,000	2	2,000	2	1,900	2	1,900
130	9832	Grand Oak Trail North of Dundas Street	1	600	1	600	1	400	1	400
130	9833	Postmaster Drive North of Dundas Street	1	600	1	600	1	400	1	400
131	9835	Neyagawa Boulevard North of Burnhamthorpe Road	2	1,800	2	1,800	2	1,700	2	1,700
131	9837	Trafalgar Road North of NNOTC	3	2,850	3	2,850	2	1,900	2	1,900
132	9842	Postridge Drive North of Dundas Street	1	400	1	400	1	500	1	500
132	9843	Eighth Line North of Dundas Street	1	700	1	700	1	500	1	500
132	9844	Prince Michael Drive North of Dundas Street	1	400	1	400	1	500	1	500
132	9845	Meadowridge Drive North of Dundas Street	1	700	1	700	1	500	1	500
133	9849	Local E/W Road 4 East of Sixth Line	1	700	1	700	1	500	1	500
133	9848	Local E/W Road 3 East of Sixth Line	1	400	1	400	1	500	1	500
133	9847	Local E/W Road 2 East of Sixth Line	1	400	1	400	1	500	1	500

SL ID	Link Tag	Description	Oakville TMP Model				Updated Model			
			Northbound/Eastbound		Southbound/Westbound		Northbound/Eastbound		Southbound/Westbound	
			Number of Lanes	Total Capacity	Number of Lanes	Total Capacity	Number of Lanes	Total Capacity	Number of Lanes	Total Capacity
133	9846	Local E/W Road 1 East of Sixth Line	1	700	1	700	1	500	1	500
134	9863	Upper Middle Road East of Eighth Line	3	2,400	3	2,400	3	2,550	3	2,550
134	9865	North Service Road East of Eighth Line	1	850	1	850	2	1,700	2	1,700
135	9866	South Service Road East of Chartwell Road	1	850	1	850	1	700	1	700

APPENDIX B

Link and Screenline Level Performance Measures of Scenarios

Baseline Scenario

AECOM
Screenline Deficiency Analysis

Oakville DC Modelling

HORIZON YEAR: 2031
Scenario: 31401
NETWORK:
TRANSIT:

2031 Eastbound/Westbound Screenline Deficiency Analysis

SL ID	Screenline	Eastbound					Westbound				
		PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required	PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required
100	East of Burloak Drive - Rebecca Street to Lakeshore Road	679	5	4,000	0.17	0	1,535	4	3,150	0.49	0
5	Bronte Creek South - QEW to Lakeshore Road	2,371	5	4,550	0.52	0	3,098	5	4,550	0.68	0
6	Bronte Creek North - Highway 407 ETR to QEW	12,166	11	15,800	0.77	0	15,753	11	15,800	1.00	1
102	East of Bronte Road - Rebecca Street to Lakeshore Road	1,280	3	2,200	0.58	0	1,220	3	2,200	0.55	0
104	East of Bronte Road - Wycroft Road to Speers Road	601	5	4,250	0.14	0	2,327	5	4,250	0.55	0
126	West of Third Line - Dundas Street to Upper Middle Road	3,388	7	5,650	0.60	0	3,651	7	5,650	0.65	0
128	West of Third Line - Upper Middle Road to North Service Road	1,599	6	4,100	0.39	0	2,050	6	4,100	0.50	0
105	West of Third Line - Rebecca Street to Lakeshore Road	1,181	3	2,200	0.54	0	1,809	3	2,200	0.82	0
106	East of Third Line - South Service Road to Bridge Road	1,325	6	5,050	0.26	0	1,890	6	5,050	0.37	0
107	East of Fourth Line - Speers Road to Pinegrove Drive	1,775	7	5,350	0.33	0	1,684	7	5,350	0.31	0
108	East of Fourth Line - Rebecca Street to Lakeshore Road	910	2	1,800	0.51	0	1,427	2	1,800	0.79	0
7	Oakville Creek North - Highway 407 ETR to Upper Middle Road	7,882	10	11,650	0.68	0	9,203	10	11,650	0.79	0
8	Oakville Creek South - QEW to Upper Middle Road	9,109	8	10,150	0.90	0	10,618	8	10,150	1.05	2
7b	Oakville Creek South - Rebecca Street to Lakeshore Road	576	2	1,700	0.34	0	1,198	2	1,700	0.70	0
122	East of Neyagawa Boulevard - Dundas Street to Upper Middle Road	3,409	8	5,850	0.58	0	3,589	8	5,850	0.61	0
23	West of Sixth Line - Burnhamthorpe Road to Dundas Street	2,687	9	6,400	0.42	0	3,347	9	6,400	0.52	0
133	East of Sixth Line - NNOTC to Dundas Street	2,968	9	6,400	0.46	0	3,835	9	6,400	0.60	0
121	East of Sixth Line - Dundas Street to Upper Middle Road	3,984	8	6,050	0.66	0	4,604	8	6,050	0.76	0
120	East of Sixth Line - Upper Middle Road to QEW	9,058	10	11,150	0.81	0	10,196	10	11,150	0.91	1
72A	East of Trafalgar Road - Lower Baseline Road to Burnhamthorpe Road	4,620	7	8,750	0.53	0	6,263	7	8,750	0.72	0
72B	East of Trafalgar Road - Dundas Street to Upper Middle Road	3,707	8	6,250	0.59	0	4,539	8	6,250	0.73	0
72C	East of Trafalgar Road - Upper Middle Road to North Service Road	10,347	10	11,950	0.87	0	11,012	10	11,950	0.92	1
72D	East of Trafalgar Road - Burnhamthorpe Road to Dundas Street	2,746	7	4,600	0.60	0	3,123	7	4,600	0.68	0
134	East of Eighth Line - South Service Road to Cornwall Road	9,925	12	13,350	0.74	0	11,199	12	13,350	0.84	0
135	East of Eighth Line - Upper Middle Road to QEW	1,793	5	4,100	0.44	0	1,891	5	4,100	0.46	0
112	West of Chartwell Road - South Service Road to Maple Avenue	2,267	8	6,050	0.37	0	2,710	8	6,050	0.45	0
115	West of Ninth Line - Dundas Street to Upper Middle Road	3,320	6	4,850	0.68	0	5,066	6	4,850	1.04	1
113	West of Maple Grove Road - Royal Windsor Drive to Lakeshore Road	956	4	3,050	0.31	0	1,649	4	3,050	0.54	0
10	Oakville/Peel Border North - Dundas Street to QEW	7,353	10	10,850	0.68	0	7,717	10	10,850	0.71	0
9A	Oakville/Peel Border South - South Sheridan Way to Sheridan Garden Drive	443	4	2,350	0.19	0	537	4	2,350	0.23	0
9B	Oakville/Peel Border South - Cornwall Road to Lakeshore Road	1,340	5	4,550	0.29	0	2,639	5	4,550	0.58	0

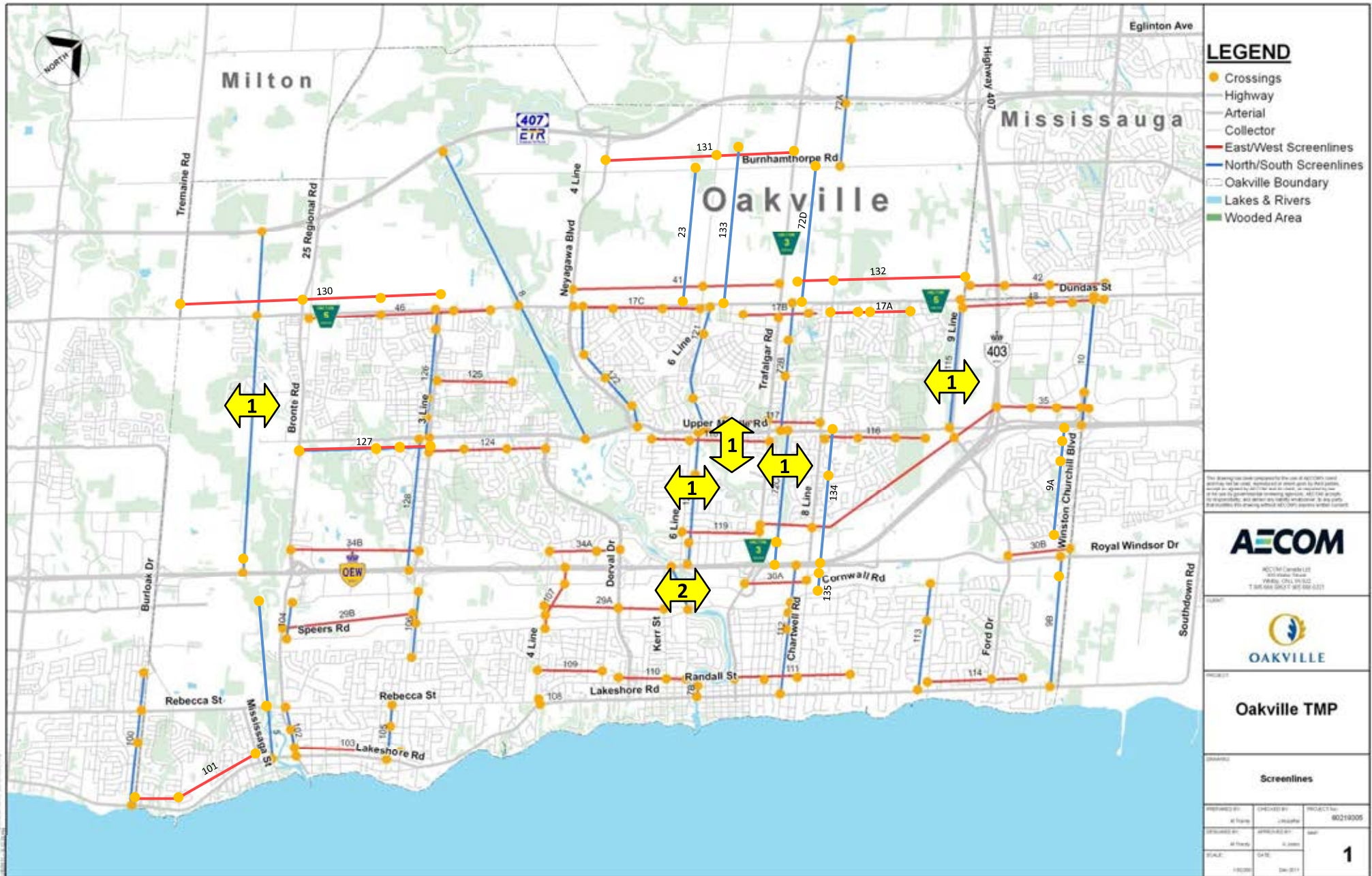
2031 Northbound/Southbound Screenline Deficiency Analysis

SL ID	Screenline	Northbound					Southbound				
		PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required	PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required
131	North of Burnhamthorpe Road/NNOTC - Neyagawa Boulevard to Trafalgar Road	3,667	5	4,350	0.84	0	3,516	5	4,350	0.81	0
130	North of Dundas Street - Tremaine Road to Third Line	3,344	9	7,150	0.47	0	4,051	9	7,150	0.57	0
41	North of Dundas Street - Neyagawa Boulevard to Trafalgar Road	4,043	10	7,100	0.57	0	4,130	10	7,100	0.58	0
132	North of Dundas Street - Postridge Drive to Ninth Line	2,528	6	3,700	0.68	0	1,728	6	3,700	0.47	0
42	North of Dundas Street - Ninth Line to Winston Churchill Boulevard	7,957	10	12,100	0.66	0	6,277	10	12,100	0.52	0
46	South of Dundas Street - Bronte Road to Proudfoot Trail	3,016	9	6,850	0.44	0	3,712	9	6,850	0.54	0
17C	South of Dundas Street - Neyagawa Boulevard to Sixth Line	2,244	6	4,400	0.51	0	2,254	6	4,400	0.51	0
178	South of Dundas Street - Oak Park Boulevard to Postridge Drive	1,086	6	4,300	0.25	0	1,074	6	4,300	0.25	0
17A	South of Dundas Street - Eighth Line to Meadowridge Drive	996	4	2,600	0.38	0	965	4	2,600	0.37	0
48	South of Dundas Street - Ninth Line to Winston Churchill Boulevard	9,593	12	13,250	0.72	0	7,771	12	13,250	0.59	0
125	North of Westoak Trails Boulevard - Third Line to Oakpoint Road	1,180	4	3,200	0.37	0	1,308	4	3,200	0.41	0
117	North of Upper Middle Road - Oakmead Boulevard to Eighth Line	2,651	4	3,050	0.87	0	1,779	4	3,050	0.58	0
127	South of Upper Middle Road - Bronte Road to Third Line	3,652	7	5,450	0.67	0	3,220	7	5,450	0.59	0
124	South of Upper Middle Road - Third Line to Dorval Drive	3,095	6	4,400	0.70	0	2,350	6	4,400	0.53	0
118	South of Upper Middle Road - Oxford Avenue to Trafalgar Road	2,751	4	2,700	1.02	1	1,805	4	2,700	0.67	0
116	South of Upper Middle Road - Eighth Line to Joshua's Creek Drive	1,189	4	2,400	0.50	0	960	4	2,400	0.40	0
119	North of Leighland Avenue - Sixth Line to Trafalgar Road	1,978	3	2,300	0.86	0	1,491	3	2,300	0.65	0
35	North of QEW - Trafalgar Road to Winston Churchill Boulevard	11,819	15	15,750	0.75	0	9,810	15	15,750	0.62	0
34B	North of QEW - Bronte Road to Third Line	3,641	5	4,550	0.80	0	2,860	5	4,550	0.63	0
34A	North of QEW - Nottinghill Gate to Dorval Drive	1,441	4	3,150	0.46	0	1,033	4	3,150	0.33	0
29B	CNR - Bronte Road to Third Line	2,612	5	4,550	0.57	0	2,738	5	4,550	0.60	0
29A	CNR - Fourth Line to Kerr Street	2,460	7	5,750	0.43	0	2,481	7	5,750	0.42	0
30A	CNR - Trafalgar Road to Chartwell Road	3,998	6	4,750	0.84	0	3,062	6	4,750	0.64	0
30B	CNR - Maple Grove Road to Winston Churchill Boulevard	2,630	4	3,600	0.73	0	1,732	4	3,600	0.48	0
109	North of Rebecca Street - Fourth Line to Morden Road	324	2	1,250	0.26	0	420	2	1,250	0.34	0
110	North of Rebecca Street - Dorval Drive to Queen Street	898	4	3,350	0.27	0	1,107	4	3,350	0.33	0
111	North of Lakeshore Road - Trafalgar Road to Morrison Road	491	6	3,750	0.13	0	909	6	3,750	0.24	0
114	North of Lakeshore Road - Maple Grove Drive to Devon Road	177	3	1,950	0.09	0	109	3	1,950	0.06	0
101	North of Lakeshore Road - Burloak Drive to Mississauga Street	165	3	2,150	0.08	0	305	3	2,150	0.14	0
103	North of Lakeshore Road - Bronte Road to Third Line	514	3	2,200	0.23	0	950	3	2,200	0.43	0

Cap = 850
 = Extra Lanes Required with v/c ratio 0.90 - 0.99
 = Extra Lanes Required with v/c ratio 1.00 - 1.29
 = Extra Lanes Required with v/c ratio > 1.30

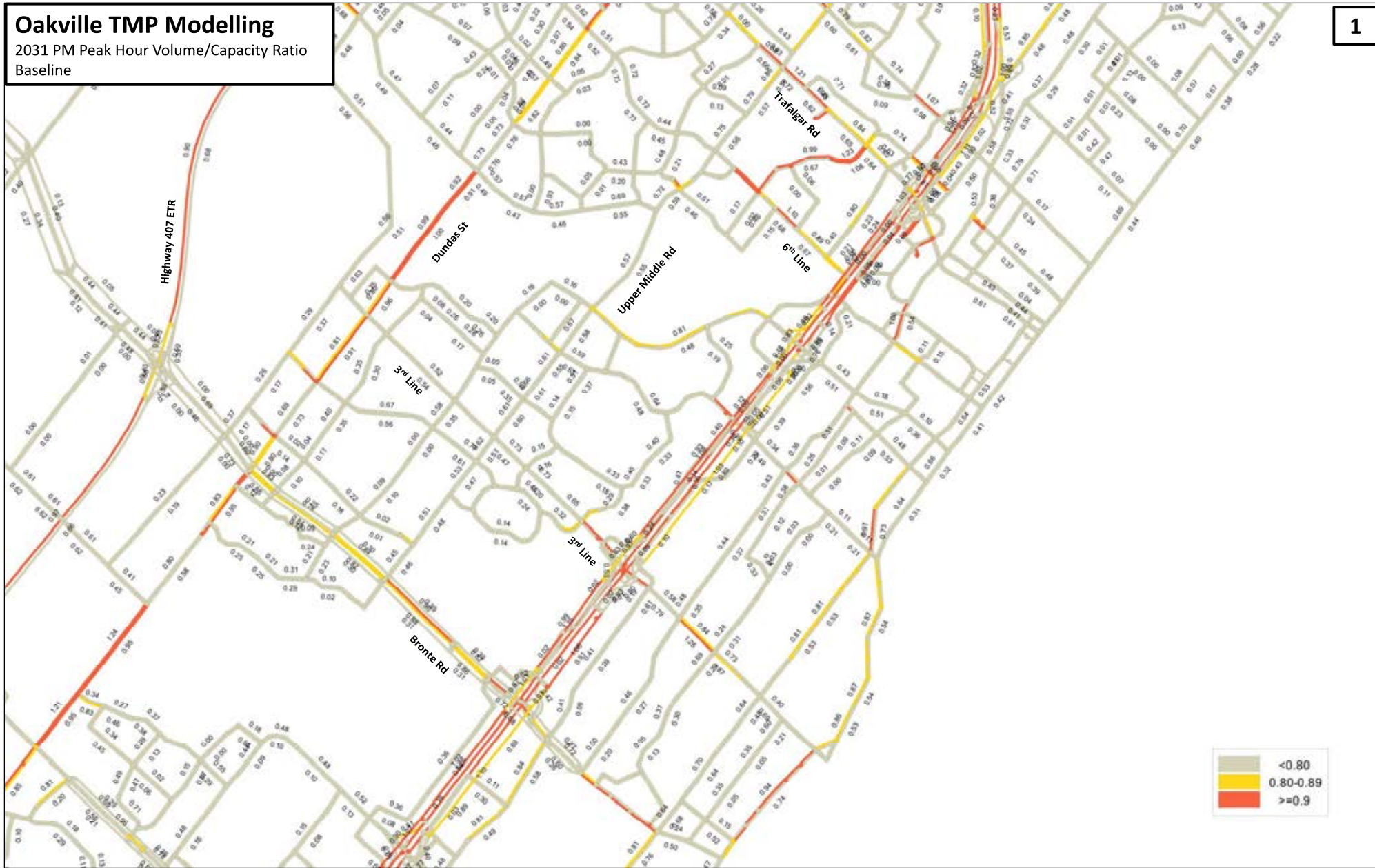
Oakville TMP Modelling - 2031 Screenline Lane Deficiencies

Baseline



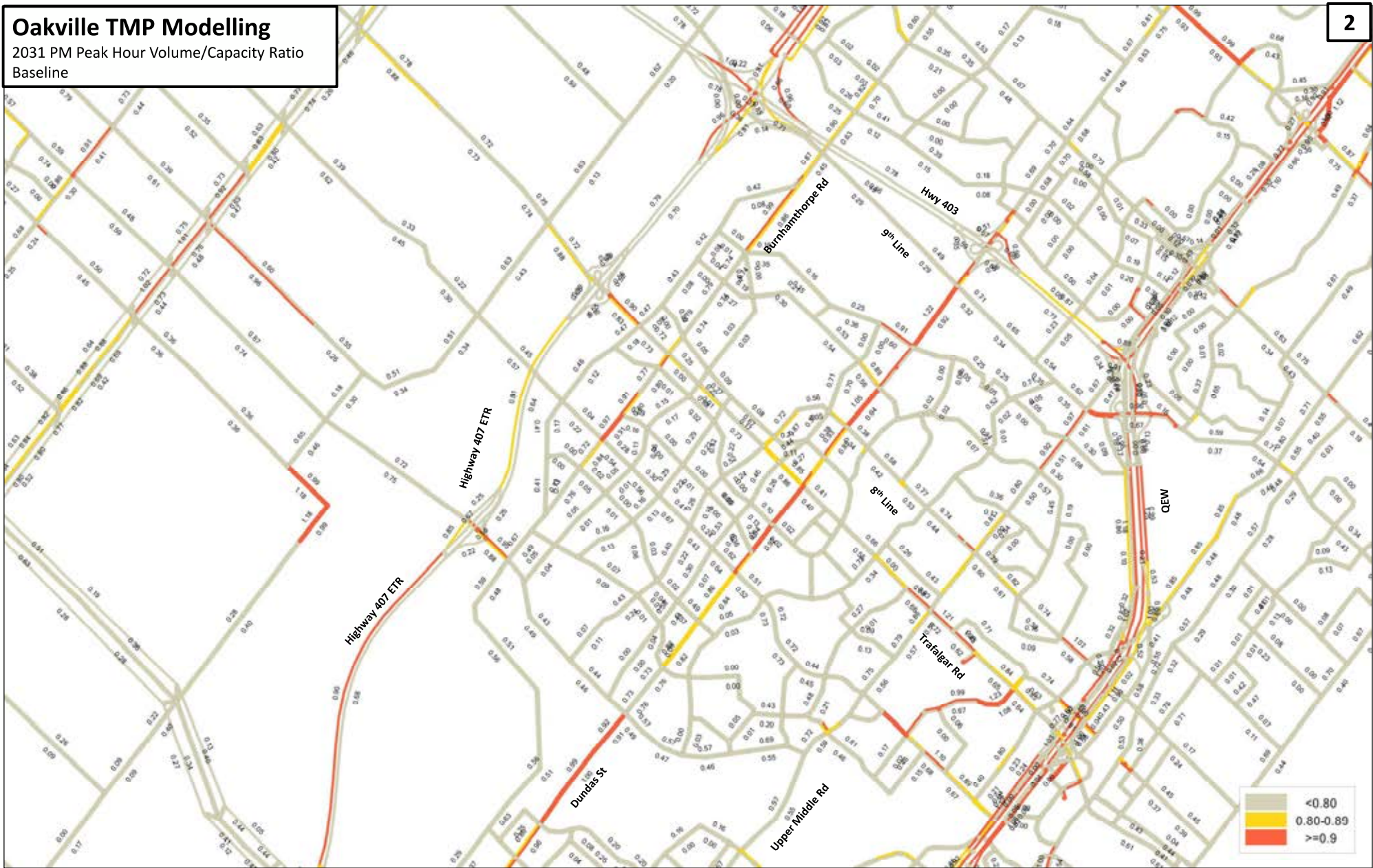
Oakville TMP Modelling

2031 PM Peak Hour Volume/Capacity Ratio
Baseline



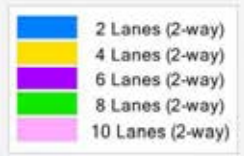
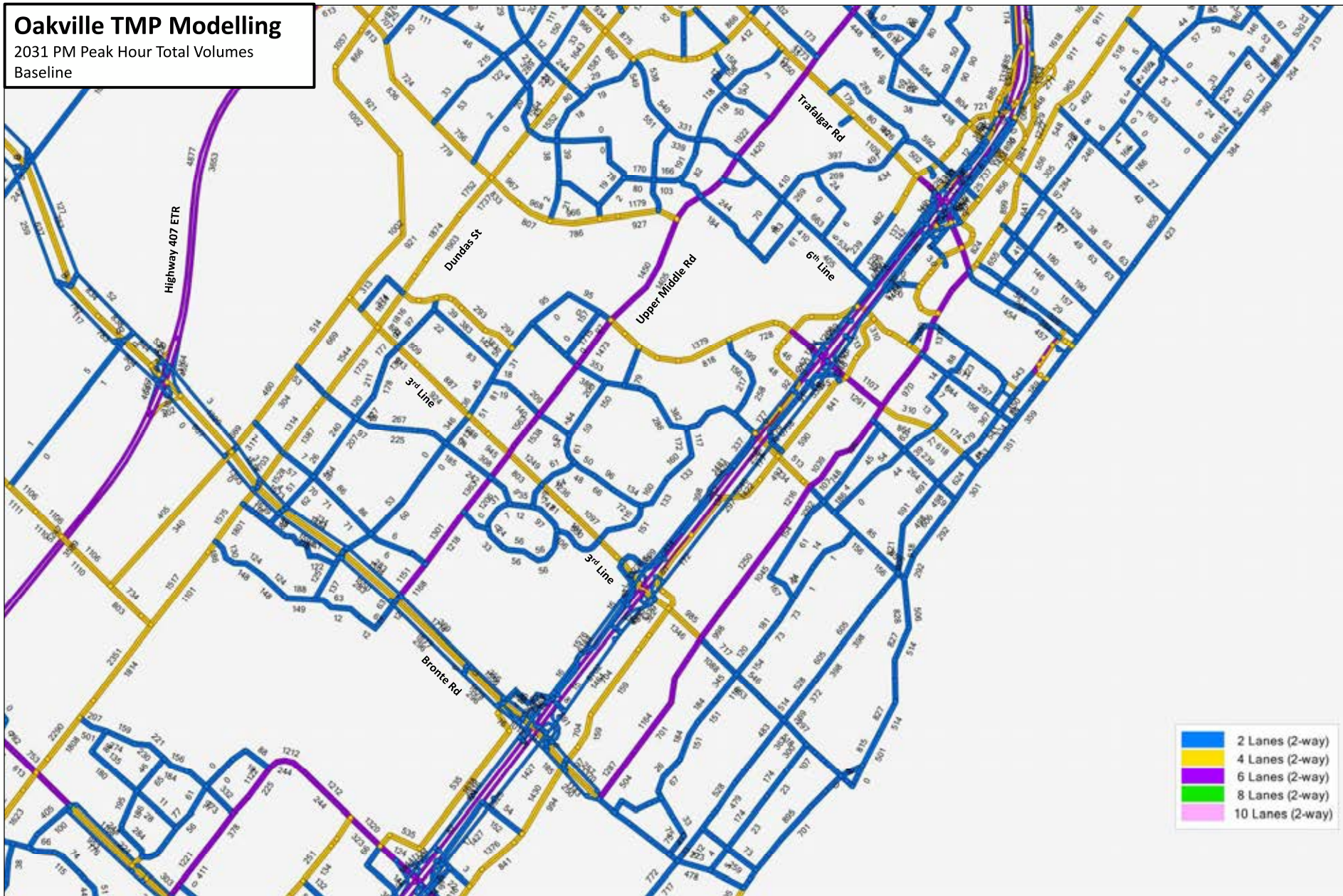
Oakville TMP Modelling

2031 PM Peak Hour Volume/Capacity Ratio
Baseline



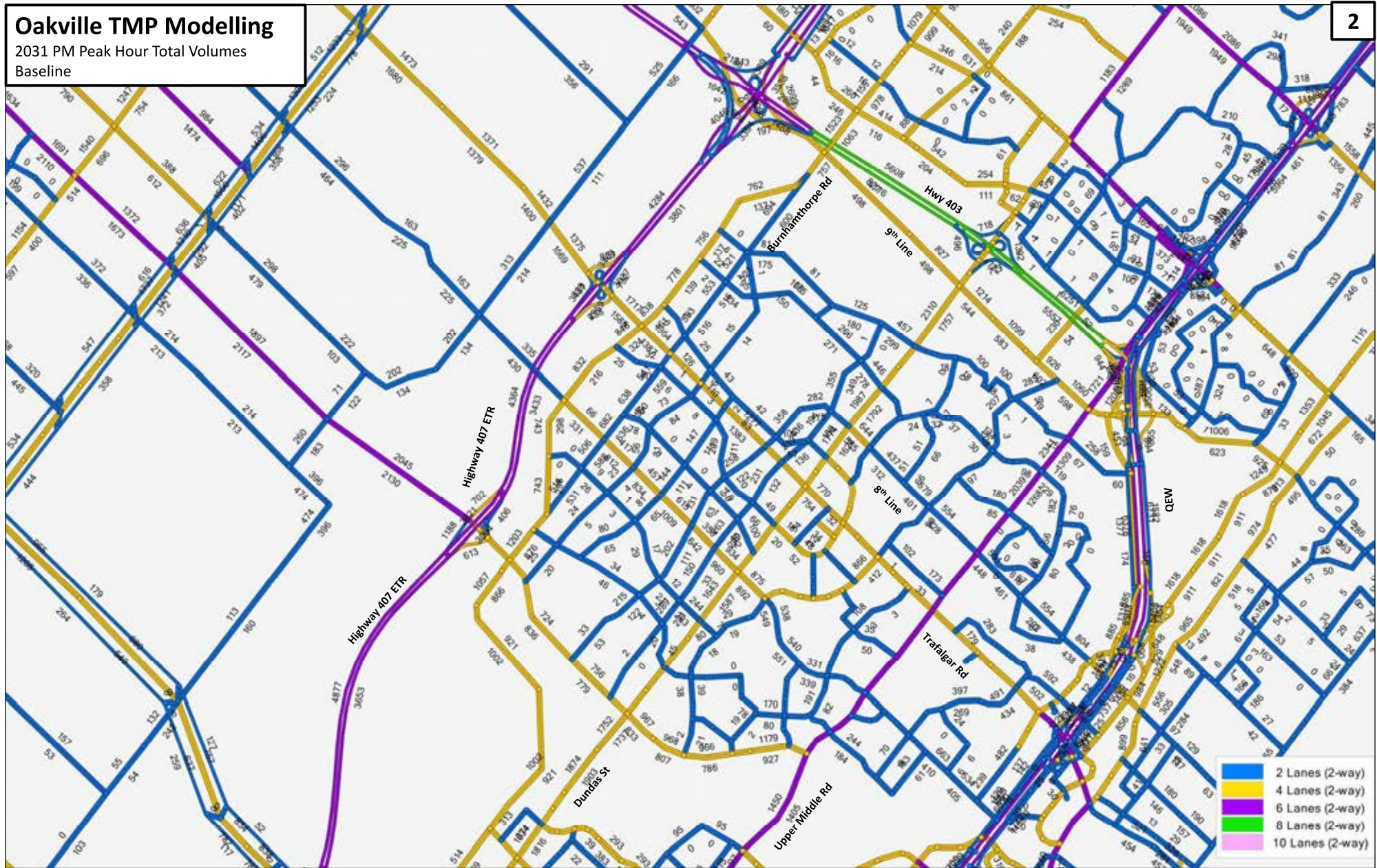
Oakville TMP Modelling

2031 PM Peak Hour Total Volumes
Baseline



Oakville TMP Modelling

2031 PM Peak Hour Total Volumes
Baseline



Scenario A

AECOM
Screenline Deficiency Analysis

Oakville DC Modelling





HORIZON YEAR: 2031
Scenario: 31402
NETWORK:
TRANSIT:

2031 Eastbound/Westbound Screenline Deficiency Analysis

SL ID	Screenline	Eastbound					Westbound				
		PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required	PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required
100	East of Burloak Drive - Rebecca Street to Lakeshore Road	617	5	4,000	0.15	0	1,406	4	3,150	0.45	0
5	Bronte Creek South - QEW to Lakeshore Road	2,179	5	4,550	0.48	0	2,871	5	4,550	0.63	0
6	Bronte Creek North - Highway 407 ETR to QEW	11,435	11	15,800	0.72	0	14,870	11	15,800	0.94	1
102	East of Bronte Road - Rebecca Street to Lakeshore Road	1,193	3	2,200	0.54	0	1,122	3	2,200	0.51	0
104	East of Bronte Road - Wycroft Road to Speers Road	500	5	4,250	0.12	0	2,131	5	4,250	0.50	0
126	West of Third Line - Dundas Street to Upper Middle Road	3,205	7	5,650	0.57	0	3,459	7	5,650	0.61	0
128	West of Third Line - Upper Middle Road to North Service Road	1,473	6	4,100	0.36	0	1,915	6	4,100	0.47	0
105	West of Third Line - Rebecca Street to Lakeshore Road	1,107	3	2,200	0.50	0	1,699	3	2,200	0.77	0
106	East of Third Line - South Service Road to Bridge Road	1,184	6	5,050	0.23	0	1,683	6	5,050	0.33	0
107	East of Fourth Line - Speers Road to Pinegrove Drive	1,616	7	5,350	0.30	0	1,464	7	5,350	0.27	0
108	East of Fourth Line - Rebecca Street to Lakeshore Road	851	2	1,800	0.47	0	1,341	2	1,800	0.75	0
7	Oakville Creek North - Highway 407 ETR to Upper Middle Road	7,199	10	11,650	0.62	0	8,465	10	11,650	0.73	0
8	Oakville Creek South - QEW to Cornwall Road	8,819	8	10,150	0.87	0	10,150	8	10,150	1.00	1
7b	Oakville Creek South - Rebecca Street to Lakeshore Road	526	2	1,700	0.31	0	1,065	2	1,700	0.63	0
122	East of Neyagawa Boulevard - Dundas Street to Upper Middle Road	3,205	8	5,850	0.55	0	3,313	8	5,850	0.57	0
23	West of Sixth Line - Burnhamthorpe Road to Dundas Street	2,455	9	6,400	0.38	0	3,035	9	6,400	0.47	0
133	East of Sixth Line - NNOTC to Dundas Street	2,714	9	6,400	0.42	0	3,449	9	6,400	0.54	0
121	East of Sixth Line - Dundas Street to Upper Middle Road	3,787	8	6,050	0.63	0	4,346	8	6,050	0.72	0
120	East of Sixth Line - Upper Middle Road to QEW	8,810	10	11,150	0.79	0	9,725	10	11,150	0.87	0
72A	East of Trafalgar Road - Lower Baseline Road to Burnhamthorpe Road	4,141	7	8,750	0.47	0	5,720	7	8,750	0.65	0
72B	East of Trafalgar Road - Dundas Street to Upper Middle Road	3,498	8	6,250	0.56	0	4,264	8	6,250	0.68	0
72C	East of Trafalgar Road - Upper Middle Road to North Service Road	10,031	10	11,950	0.84	0	10,496	10	11,950	0.88	0
72D	East of Trafalgar Road - Burnhamthorpe Road to Dundas Street	2,675	7	4,600	0.58	0	2,959	7	4,600	0.64	0
134	East of Eighth Line - South Service Road to Cornwall Road	9,597	12	13,350	0.72	0	10,654	12	13,350	0.80	0
135	East of Eighth Line - Upper Middle Road to QEW	1,626	5	4,100	0.40	0	1,719	5	4,100	0.42	0
112	West of Chartwell Road - South Service Road to Maple Avenue	2,077	8	6,050	0.34	0	2,469	8	6,050	0.41	0
115	West of Ninth Line - Dundas Street to Upper Middle Road	3,119	6	4,850	0.64	0	4,722	6	4,850	0.97	1
113	West of Maple Grove Road - Royal Windsor Drive to Lakeshore Road	856	4	3,050	0.28	0	1,476	4	3,050	0.48	0
10	Oakville/Peel Border North - Dundas Street to QEW	7,118	10	10,850	0.66	0	7,298	10	10,850	0.67	0
9A	Oakville/Peel Border South - South Sheridan Way to Sheridan Garden Drive	413	4	2,350	0.18	0	515	4	2,350	0.22	0
9B	Oakville/Peel Border South - Cornwall Road to Lakeshore Road	1,254	5	4,550	0.28	0	2,402	5	4,550	0.53	0

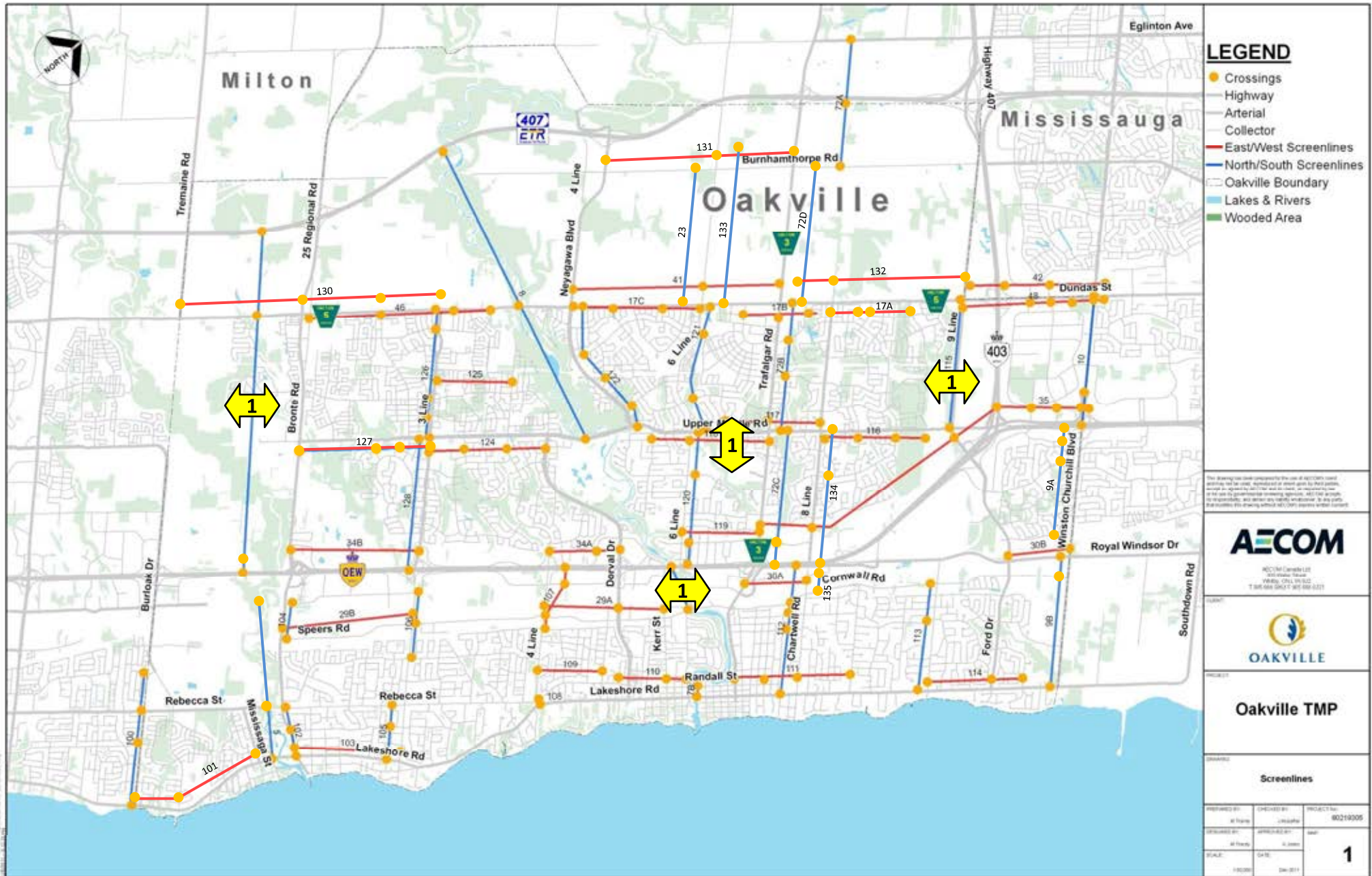
2031 Northbound/Southbound Screenline Deficiency Analysis

SL ID	Screenline	Northbound					Southbound				
		PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required	PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required
131	North of Burnhamthorpe Road/NNOTC - Neyagawa Boulevard to Trafalgar Road	3,484	5	4,350	0.80	0	3,262	5	4,350	0.75	0
130	North of Dundas Street - Tremaine Road to Third Line	3,218	9	7,150	0.45	0	3,714	9	7,150	0.52	0
41	North of Dundas Street - Neyagawa Boulevard to Trafalgar Road	3,893	10	7,100	0.55	0	3,902	10	7,100	0.55	0
132	North of Dundas Street - Postridge Drive to Ninth Line	2,298	6	3,700	0.62	0	1,634	6	3,700	0.44	0
42	North of Dundas Street - Ninth Line to Winston Churchill Boulevard	7,449	10	12,100	0.62	0	5,779	10	12,100	0.48	0
46	South of Dundas Street - Bronte Road to Proudfoot Trail	2,876	9	6,850	0.42	0	3,493	9	6,850	0.51	0
17C	South of Dundas Street - Neyagawa Boulevard to Sixth Line	2,152	6	4,400	0.49	0	2,113	6	4,400	0.48	0
17B	South of Dundas Street - Oak Park Boulevard to Postridge Drive	1,024	6	4,300	0.24	0	1,020	6	4,300	0.24	0
17A	South of Dundas Street - Eighth Line to Meadowridge Drive	957	4	2,600	0.37	0	920	4	2,600	0.35	0
48	South of Dundas Street - Ninth Line to Winston Churchill Boulevard	8,990	12	13,250	0.68	0	7,143	12	13,250	0.54	0
125	North of Westoak Trails Boulevard - Third Line to Oakpoint Road	1,096	4	3,200	0.34	0	1,250	4	3,200	0.39	0
117	North of Upper Middle Road - Oakmead Boulevard to Eighth Line	2,597	4	3,050	0.85	0	1,711	4	3,050	0.56	0
127	South of Upper Middle Road - Bronte Road to Third Line	3,486	7	5,450	0.64	0	3,000	7	5,450	0.55	0
124	South of Upper Middle Road - Third Line to Dorval Drive	2,928	6	4,400	0.67	0	2,187	6	4,400	0.50	0
118	South of Upper Middle Road - Oxford Avenue to Trafalgar Road	2,636	4	2,700	0.98	1	1,732	4	2,700	0.64	0
116	South of Upper Middle Road - Eighth Line to Joshua's Creek Drive	1,106	4	2,400	0.46	0	889	4	2,400	0.37	0
119	North of Leighland Avenue - Sixth Line to Trafalgar Road	1,905	3	2,300	0.83	0	1,450	3	2,300	0.63	0
35	North of QEW - Trafalgar Road to Winston Churchill Boulevard	11,270	15	15,750	0.72	0	9,141	15	15,750	0.58	0
34B	North of QEW - Bronte Road to Third Line	3,496	5	4,550	0.77	0	2,665	5	4,550	0.59	0
34A	North of QEW - Nottinghill Gate to Dorval Drive	1,398	4	3,150	0.44	0	985	4	3,150	0.31	0
29B	CNR - Bronte Road to Third Line	2,465	5	4,550	0.54	0	2,579	5	4,550	0.57	0
29A	CNR - Fourth Line to Kerr Street	2,301	7	5,750	0.40	0	2,214	7	5,750	0.39	0
30A	CNR - Trafalgar Road to Chartwell Road	3,805	6	4,750	0.80	0	2,866	6	4,750	0.60	0
30B	CNR - Maple Grove Road to Winston Churchill Boulevard	2,415	4	3,600	0.67	0	1,541	4	3,600	0.43	0
109	North of Rebecca Street - Fourth Line to Morden Road	919	2	1,250	0.26	0	410	2	1,250	0.33	0
110	North of Rebecca Street - Dorval Drive to Queen Street	835	4	3,350	0.25	0	1,079	4	3,350	0.32	0
111	North of Lakeshore Road - Trafalgar Road to Morrison Road	444	6	3,750	0.12	0	833	6	3,750	0.22	0
114	North of Lakeshore Road - Maple Grove Drive to Devon Road	154	3	1,950	0.08	0	103	3	1,950	0.05	0
101	North of Lakeshore Road - Burloak Drive to Mississauga Street	162	3	2,150	0.08	0	291	3	2,150	0.14	0
103	North of Lakeshore Road - Bronte Road to Third Line	468	3	2,200	0.21	0	889	3	2,200	0.40	0

Cap = 850
 = Extra Lanes Required with v/c ratio 0.90 - 0.99
 = Extra Lanes Required with v/c ratio 1.00 - 1.29
 = Extra Lanes Required with v/c ratio > 1.30
 = Close to capacity - Extra Lane may be required with v/c ratio 0.89 - 0.9

Oakville Tmp Modelling - 2031 Screenline Lane Deficiencies

Scenario A



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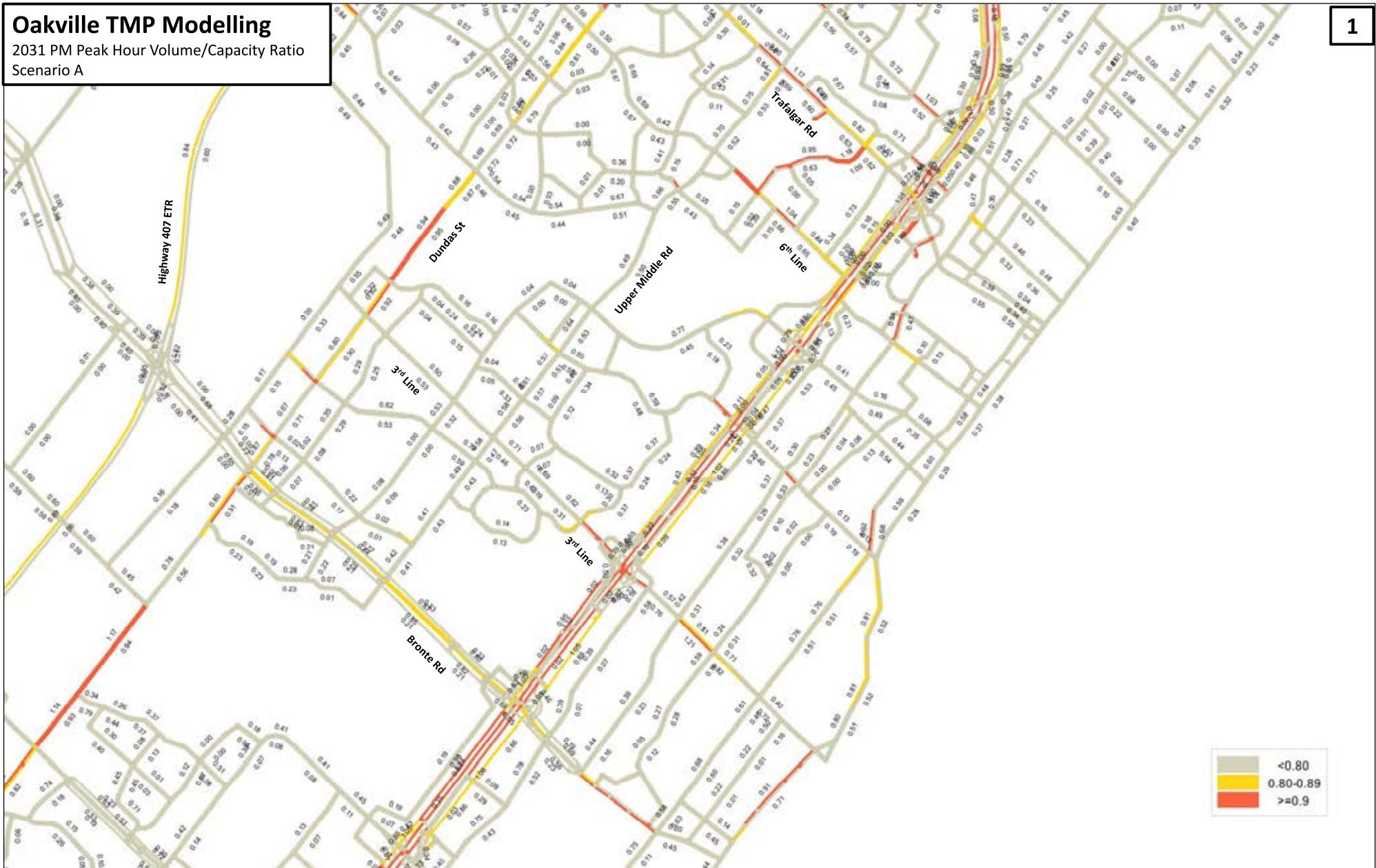
Oakville Tmp

Screenlines

PREPARED BY:	CHECKED BY:	PROJECT NO:
APPROVED BY:	DATE:	80219006
SCALE:	DATE:	1

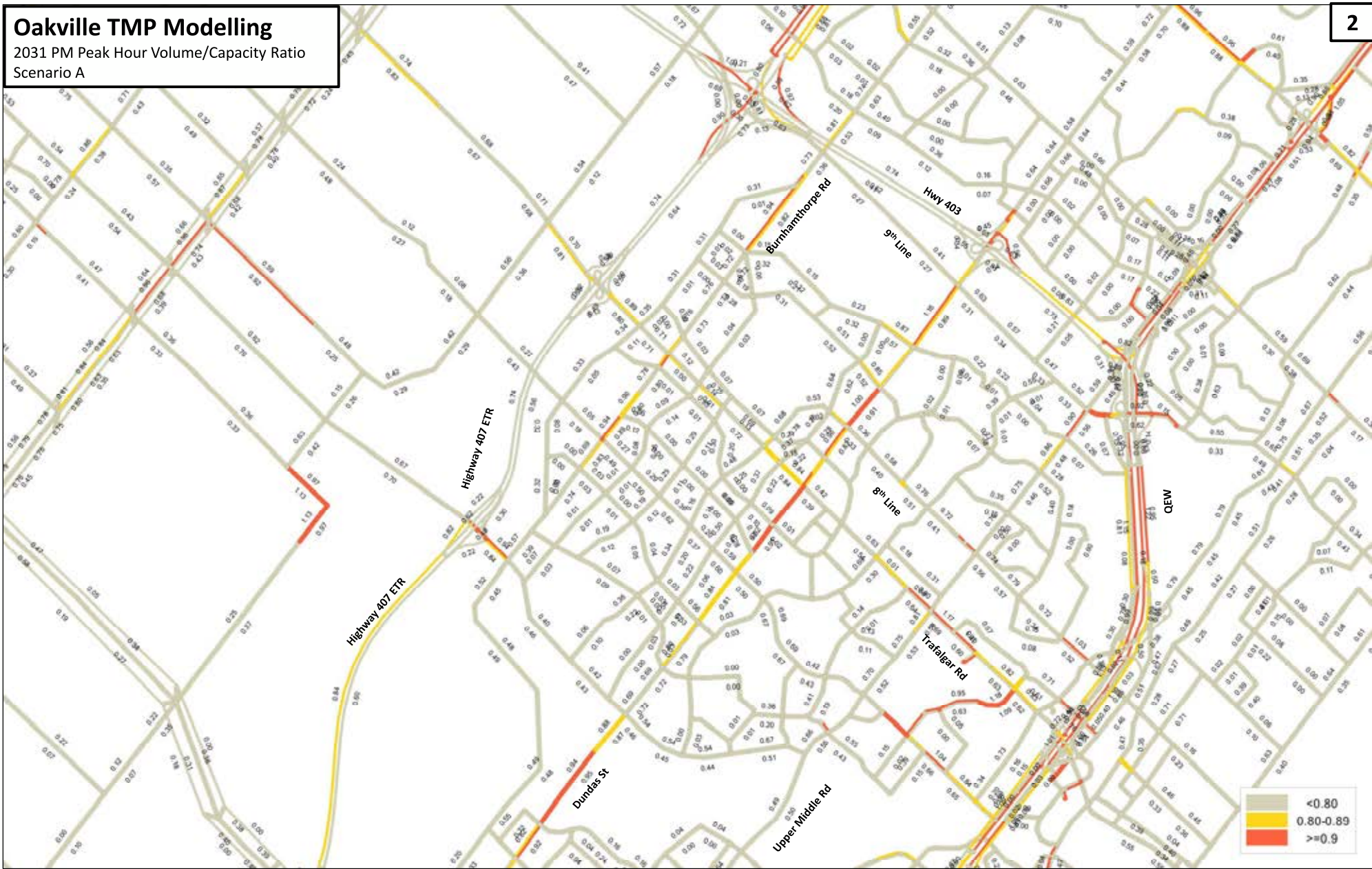
Oakville TMP Modelling

2031 PM Peak Hour Volume/Capacity Ratio
Scenario A



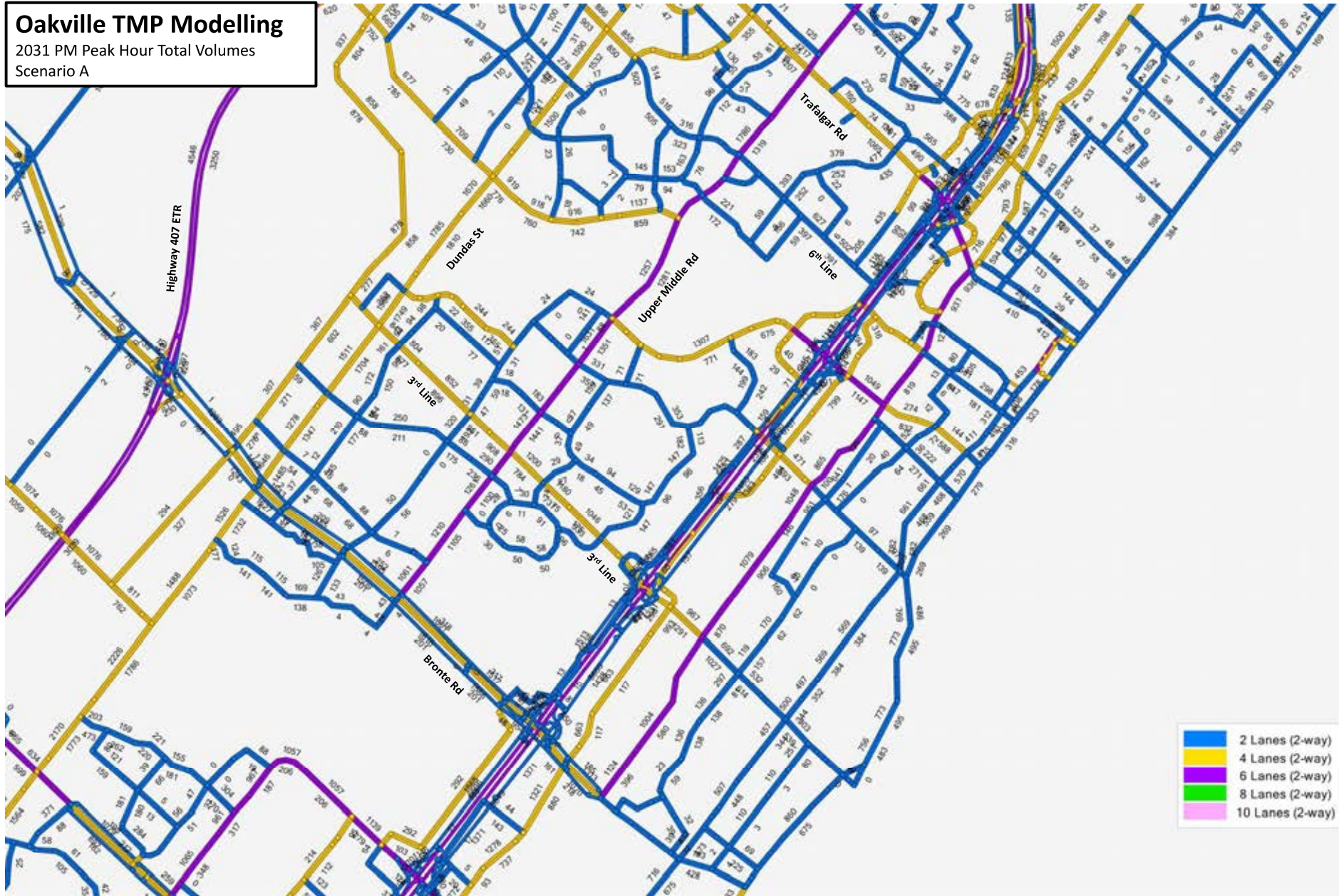
Oakville TMP Modelling

2031 PM Peak Hour Volume/Capacity Ratio
Scenario A



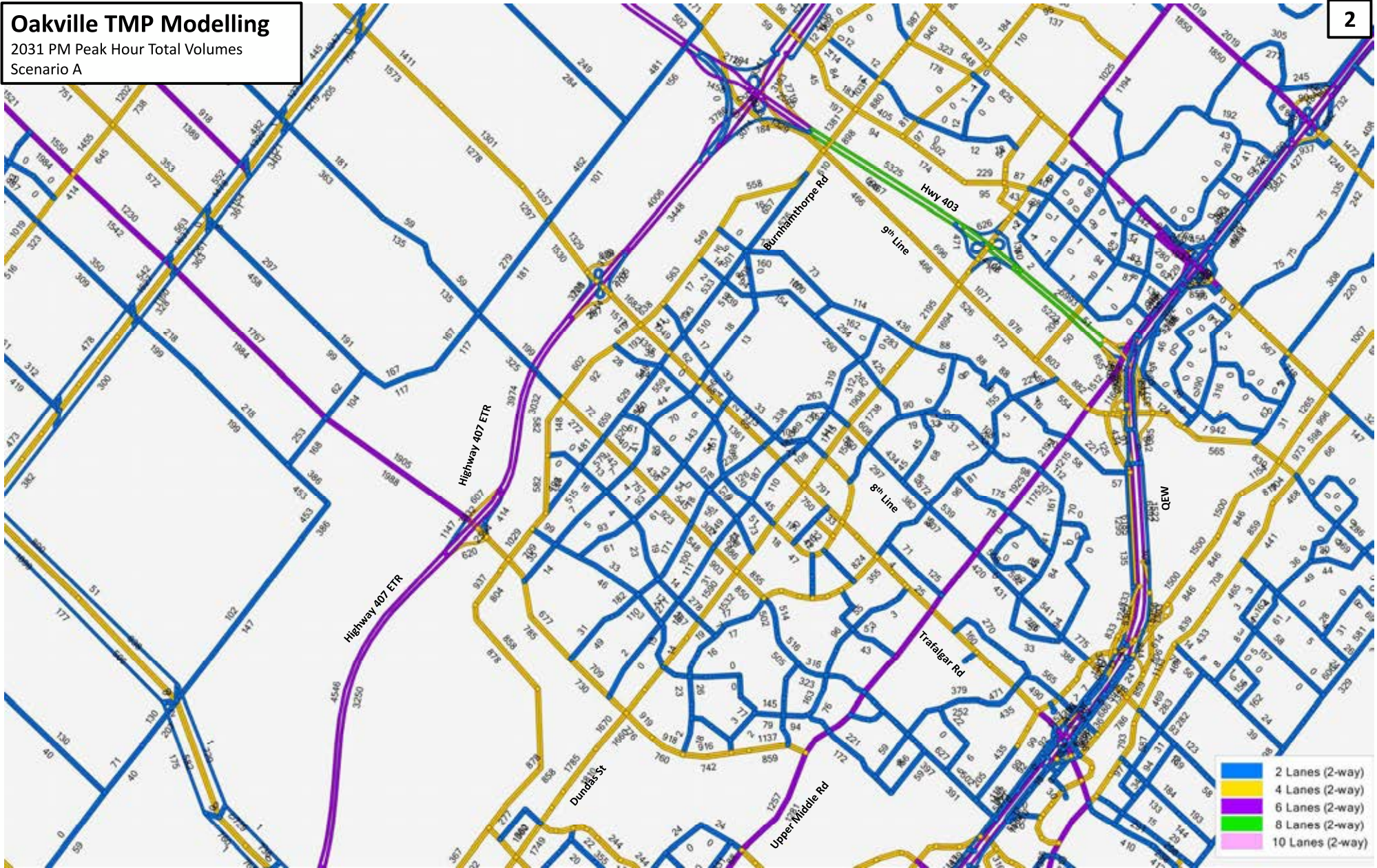
Oakville TMP Modelling

2031 PM Peak Hour Total Volumes
Scenario A



Oakville TMP Modelling

2031 PM Peak Hour Total Volumes
Scenario A



Scenario B

AECOM
Screenline Deficiency Analysis

Oakville DC Modelling





HORIZON YEAR: 2031
Scenario: 31403
NETWORK:
TRANSIT:

2031 Eastbound/Westbound Screenline Deficiency Analysis

SL ID	Screenline	Eastbound					Westbound				
		PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required	PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required
100	East of Burloak Drive - Rebecca Street to Lakeshore Road	615	5	4,000	0.15	0	1,414	4	3,150	0.45	0
5	Bronte Creek South - QEW to Lakeshore Road	2,142	5	4,550	0.47	0	2,874	5	4,550	0.63	0
6	Bronte Creek North - Highway 407 ETR to QEW	11,397	11	15,800	0.72	0	14,843	11	15,800	0.94	1
102	East of Bronte Road - Rebecca Street to Lakeshore Road	1,161	3	2,200	0.53	0	1,126	3	2,200	0.51	0
104	East of Bronte Road - Wycroft Road to Speers Road	476	5	4,250	0.11	0	2,099	5	4,250	0.49	0
126	West of Third Line - Dundas Street to Upper Middle Road	3,115	7	5,650	0.55	0	3,425	7	5,650	0.61	0
128	West of Third Line - Upper Middle Road to North Service Road	1,406	6	4,100	0.34	0	1,881	6	4,100	0.46	0
105	West of Third Line - Rebecca Street to Lakeshore Road	1,092	3	2,200	0.50	0	1,680	3	2,200	0.76	0
106	East of Third Line - South Service Road to Bridge Road	1,125	6	5,050	0.22	0	1,639	6	5,050	0.32	0
107	East of Fourth Line - Speers Road to Pinegrove Drive	1,563	7	5,350	0.29	0	1,455	7	5,350	0.27	0
108	East of Fourth Line - Rebecca Street to Lakeshore Road	837	2	1,800	0.46	0	1,333	2	1,800	0.74	0
7	Oakville Creek North - Highway 407 ETR to Upper Middle Road	7,094	10	11,650	0.61	0	8,447	10	11,650	0.73	0
8	Oakville Creek South - Highway 407 ETR to Upper Middle Road	8,724	8	10,150	0.86	0	10,124	8	10,150	1.00	1
78	Oakville Creek South - Rebecca Street to Lakeshore Road	539	2	1,700	0.32	0	1,044	2	1,700	0.61	0
122	East of Neyagawa Boulevard - Dundas Street to Upper Middle Road	3,150	8	5,850	0.54	0	3,282	8	5,850	0.56	0
23	West of Sixth Line - Burnhamthorpe Road to Dundas Street	2,413	9	6,400	0.38	0	3,029	9	6,400	0.47	0
133	East of Sixth Line - NNOTC to Dundas Street	2,676	9	6,400	0.42	0	3,411	9	6,400	0.53	0
121	East of Sixth Line - Dundas Street to Upper Middle Road	3,711	8	6,050	0.61	0	4,274	8	6,050	0.71	0
120	East of Sixth Line - Upper Middle Road to QEW	8,747	10	11,150	0.78	0	9,665	10	11,150	0.87	0
72A	East of Trafalgar Road - Lower Baseline Road to Burnhamthorpe Road	4,080	7	8,750	0.47	0	5,708	7	8,750	0.65	0
72B	East of Trafalgar Road - Dundas Street to Upper Middle Road	3,440	8	6,250	0.55	0	4,218	8	6,250	0.67	0
72C	East of Trafalgar Road - Upper Middle Road to North Service Road	9,968	10	11,950	0.83	0	10,481	10	11,950	0.88	0
72D	East of Trafalgar Road - Burnhamthorpe Road to Dundas Street	2,662	7	4,600	0.58	0	2,944	7	4,600	0.64	0
134	East of Eighth Line - South Service Road to Cornwall Road	9,529	12	13,350	0.71	0	10,616	12	13,350	0.80	0
135	East of Eighth Line - Upper Middle Road to QEW	1,588	5	4,100	0.39	0	1,718	5	4,100	0.42	0
112	West of Chartwell Road - South Service Road to Maple Avenue	2,039	8	6,050	0.34	0	2,439	8	6,050	0.40	0
115	West of Ninth Line - Dundas Street to Upper Middle Road	3,101	6	4,850	0.64	0	4,714	6	4,850	0.97	1
113	West of Maple Grove Road - Royal Windsor Drive to Lakeshore Road	825	4	3,050	0.27	0	1,433	4	3,050	0.47	0
10	Oakville/Peel Border North - Dundas Street to QEW	7,088	10	10,850	0.65	0	7,290	10	10,850	0.67	0
9A	Oakville/Peel Border South - South Sheridan Way to Sheridan Garden Drive	408	4	2,350	0.17	0	491	4	2,350	0.21	0
9B	Oakville/Peel Border South - Cornwall Road to Lakeshore Road	1,224	5	4,550	0.27	0	2,399	5	4,550	0.53	0

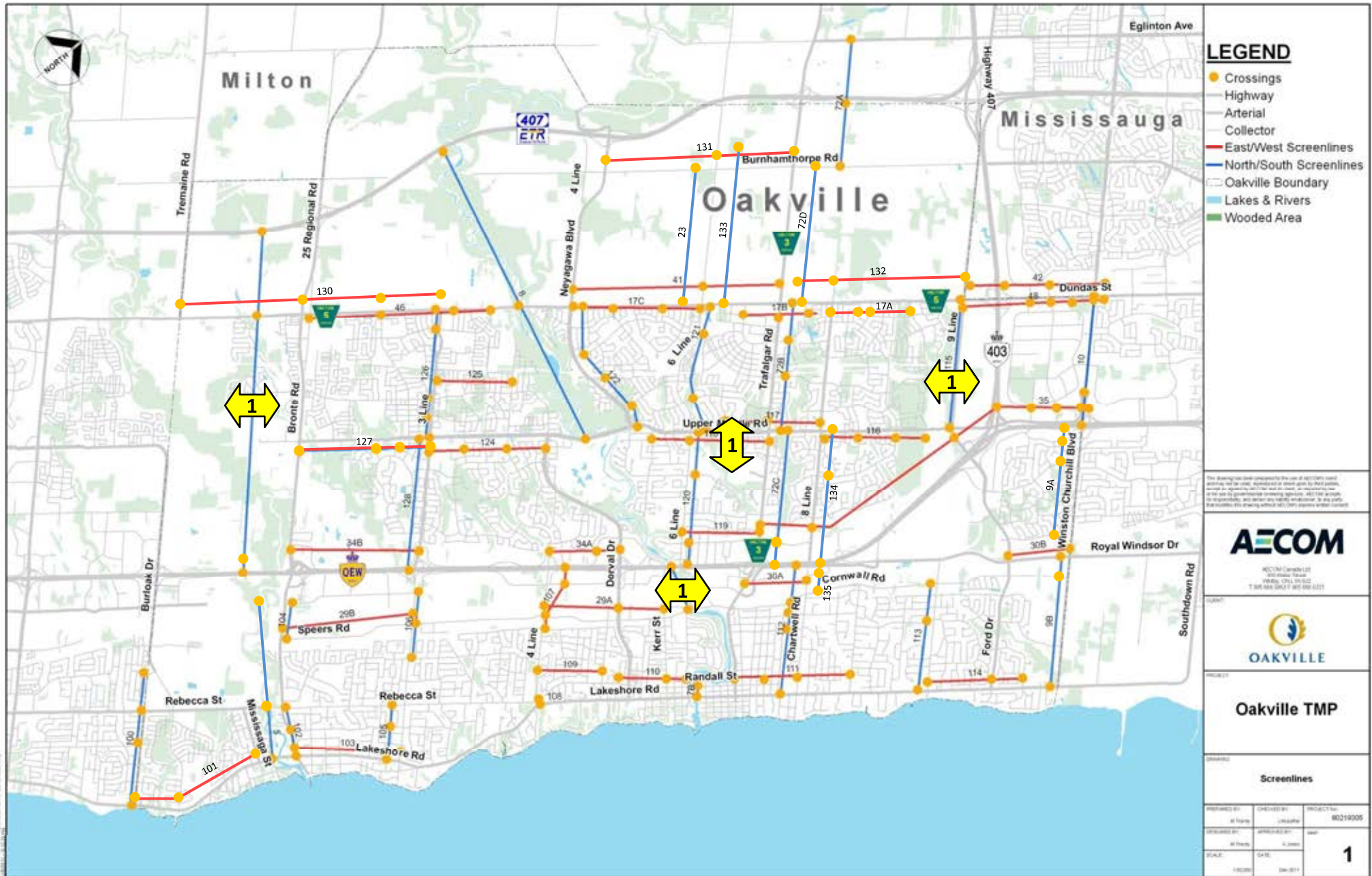
2031 Northbound/Southbound Screenline Deficiency Analysis

SL ID	Screenline	Northbound					Southbound				
		PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required	PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required
131	North of Burnhamthorpe Road/NNOTC - Neyagawa Boulevard to Trafalgar Road	3,478	5	4,350	0.80	0	3,272	5	4,350	0.75	0
130	North of Dundas Street - Tremaine Road to Third Line	3,193	9	7,150	0.45	0	3,668	9	7,150	0.51	0
41	North of Dundas Street - Neyagawa Boulevard to Trafalgar Road	3,827	10	7,100	0.54	0	3,855	10	7,100	0.54	0
132	North of Dundas Street - Postridge Drive to Ninth Line	2,273	6	3,700	0.61	0	1,611	6	3,700	0.44	0
42	North of Dundas Street - Ninth Line to Winston Churchill Boulevard	7,457	10	12,100	0.62	0	5,784	10	12,100	0.48	0
46	South of Dundas Street - Bronte Road to Proudfoot Trail	2,839	9	6,850	0.41	0	3,416	9	6,850	0.50	0
17C	South of Dundas Street - Neyagawa Boulevard to Sixth Line	2,118	6	4,400	0.48	0	2,092	6	4,400	0.48	0
178	South of Dundas Street - Oak Park Boulevard to Postridge Drive	998	6	4,300	0.23	0	1,003	6	4,300	0.23	0
17A	South of Dundas Street - Eighth Line to Meadowridge Drive	940	4	2,600	0.36	0	897	4	2,600	0.34	0
48	South of Dundas Street - Ninth Line to Winston Churchill Boulevard	8,977	12	13,250	0.68	0	7,135	12	13,250	0.54	0
125	North of Westoak Trails Boulevard - Third Line to Oakpoint Road	1,070	4	3,200	0.33	0	1,207	4	3,200	0.38	0
117	North of Upper Middle Road - Oakmead Boulevard to Eighth Line	2,579	4	3,050	0.85	0	1,668	4	3,050	0.55	0
127	South of Upper Middle Road - Bronte Road to Third Line	3,425	7	5,450	0.63	0	2,940	7	5,450	0.54	0
124	South of Upper Middle Road - Third Line to Dorval Drive	2,878	6	4,400	0.65	0	2,159	6	4,400	0.49	0
118	South of Upper Middle Road - Oxford Avenue to Trafalgar Road	2,573	4	2,700	0.95	1	1,695	4	2,700	0.63	0
116	South of Upper Middle Road - Eighth Line to Joshua's Creek Drive	1,068	4	2,400	0.45	0	850	4	2,400	0.35	0
119	North of Leighland Avenue - Sixth Line to Trafalgar Road	1,851	3	2,300	0.80	0	1,428	3	2,300	0.62	0
35	North of QEW - Trafalgar Road to Winston Churchill Boulevard	11,164	15	15,750	0.71	0	9,076	15	15,750	0.58	0
34B	North of QEW - Bronte Road to Third Line	3,442	5	4,550	0.76	0	2,634	5	4,550	0.58	0
34A	North of QEW - Nottinghill Gate to Dorval Drive	1,364	4	3,150	0.43	0	961	4	3,150	0.31	0
29B	CNR - Bronte Road to Third Line	2,428	5	4,550	0.53	0	2,536	5	4,550	0.56	0
29A	CNR - Fourth Line to Kerr Street	2,264	7	5,750	0.39	0	2,156	7	5,750	0.37	0
30A	CNR - Trafalgar Road to Chartwell Road	3,749	6	4,750	0.79	0	2,819	6	4,750	0.59	0
30B	CNR - Maple Grove Road to Winston Churchill Boulevard	2,407	4	3,600	0.67	0	1,529	4	3,600	0.42	0
109	North of Rebecca Street - Fourth Line to Morden Road	292	2	1,250	0.23	0	396	2	1,250	0.32	0
110	North of Rebecca Street - Dorval Drive to Queen Street	827	4	3,350	0.25	0	1,050	4	3,350	0.31	0
111	North of Lakeshore Road - Trafalgar Road to Morrison Road	425	6	3,750	0.11	0	780	6	3,750	0.21	0
114	North of Lakeshore Road - Maple Grove Drive to Devon Road	146	3	1,950	0.07	0	88	3	1,950	0.05	0
101	North of Lakeshore Road - Burloak Drive to Mississauga Street	167	3	2,150	0.08	0	274	3	2,150	0.13	0
103	North of Lakeshore Road - Bronte Road to Third Line	468	3	2,200	0.21	0	862	3	2,200	0.39	0

Cap = 850
 = Extra Lanes Required with v/c ratio 0.90 - 0.99
 = Extra Lanes Required with v/c ratio 1.00 - 1.29
 = Extra Lanes Required with v/c ratio > 1.30
 = Close to capacity - Extra Lane may be required with v/c ratio 0.89 - 0.9

Oakville TMP Modelling - 2031 Screenline Lane Deficiencies

Scenario B



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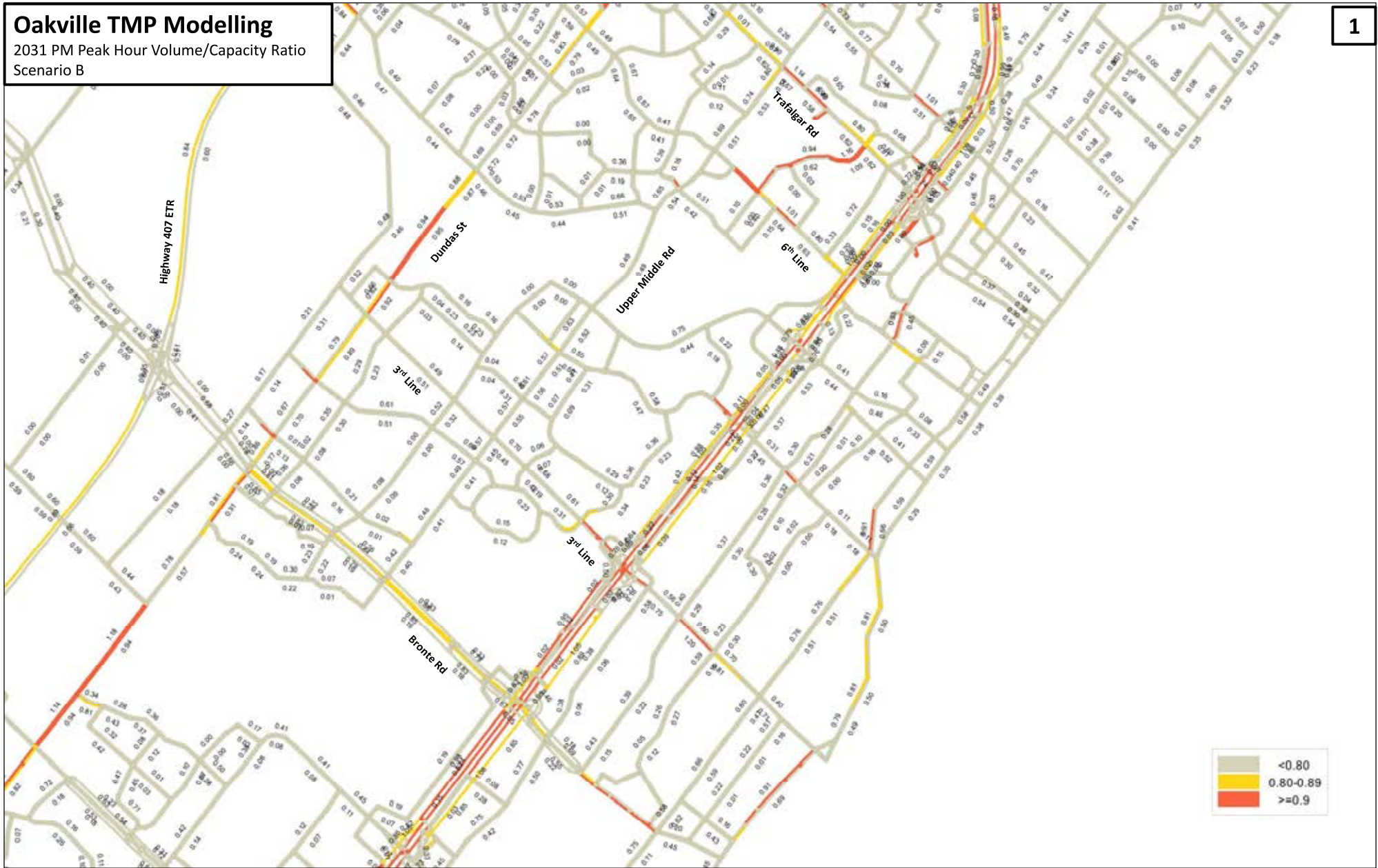
Oakville TMP

Screenlines

PREPARED BY:	CHECKED BY:	PROJECT NO:
APPROVED BY:	DATE:	80219006
SCALE:	DATE:	1

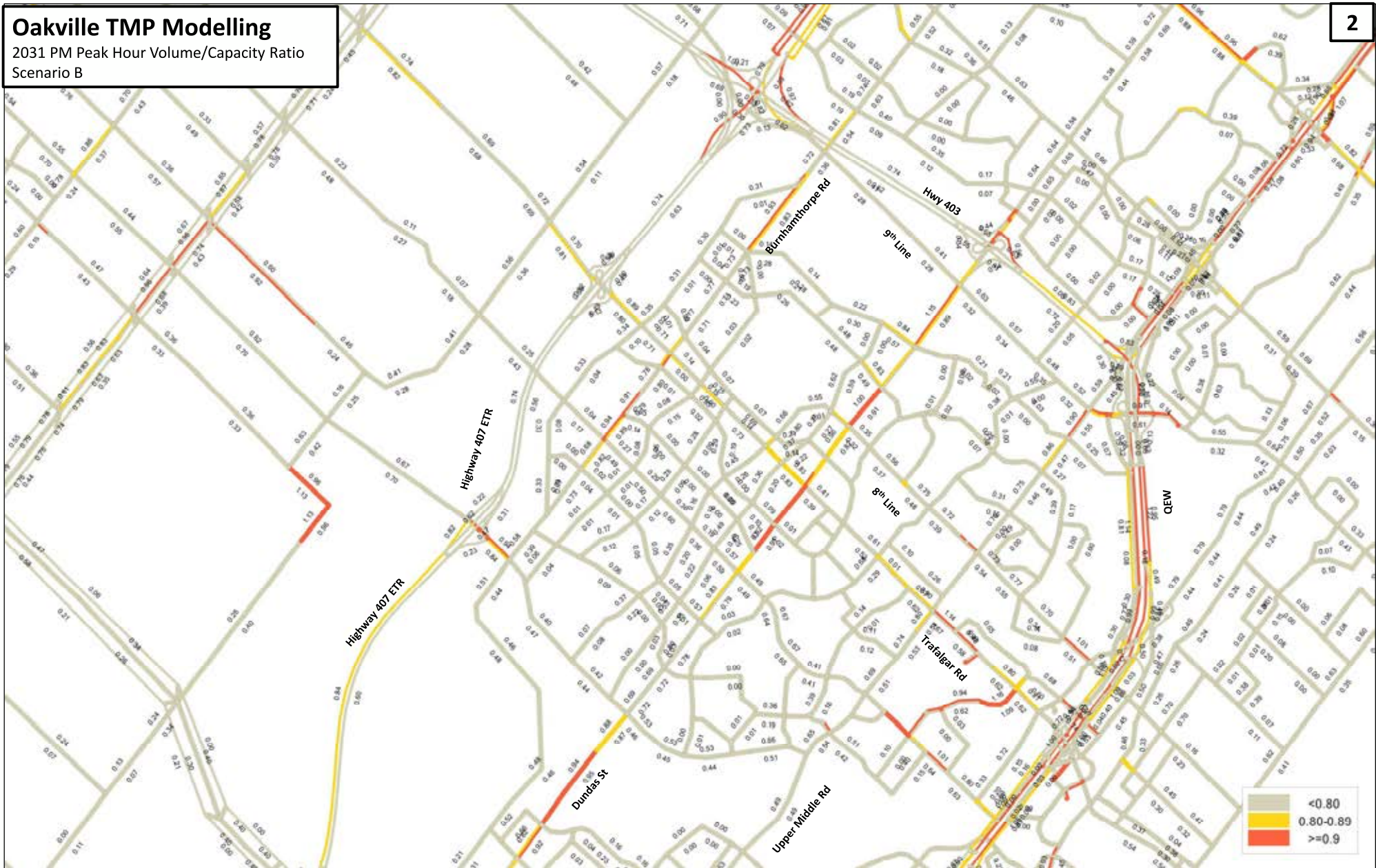
Oakville TMP Modelling

2031 PM Peak Hour Volume/Capacity Ratio
Scenario B



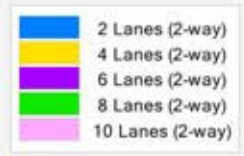
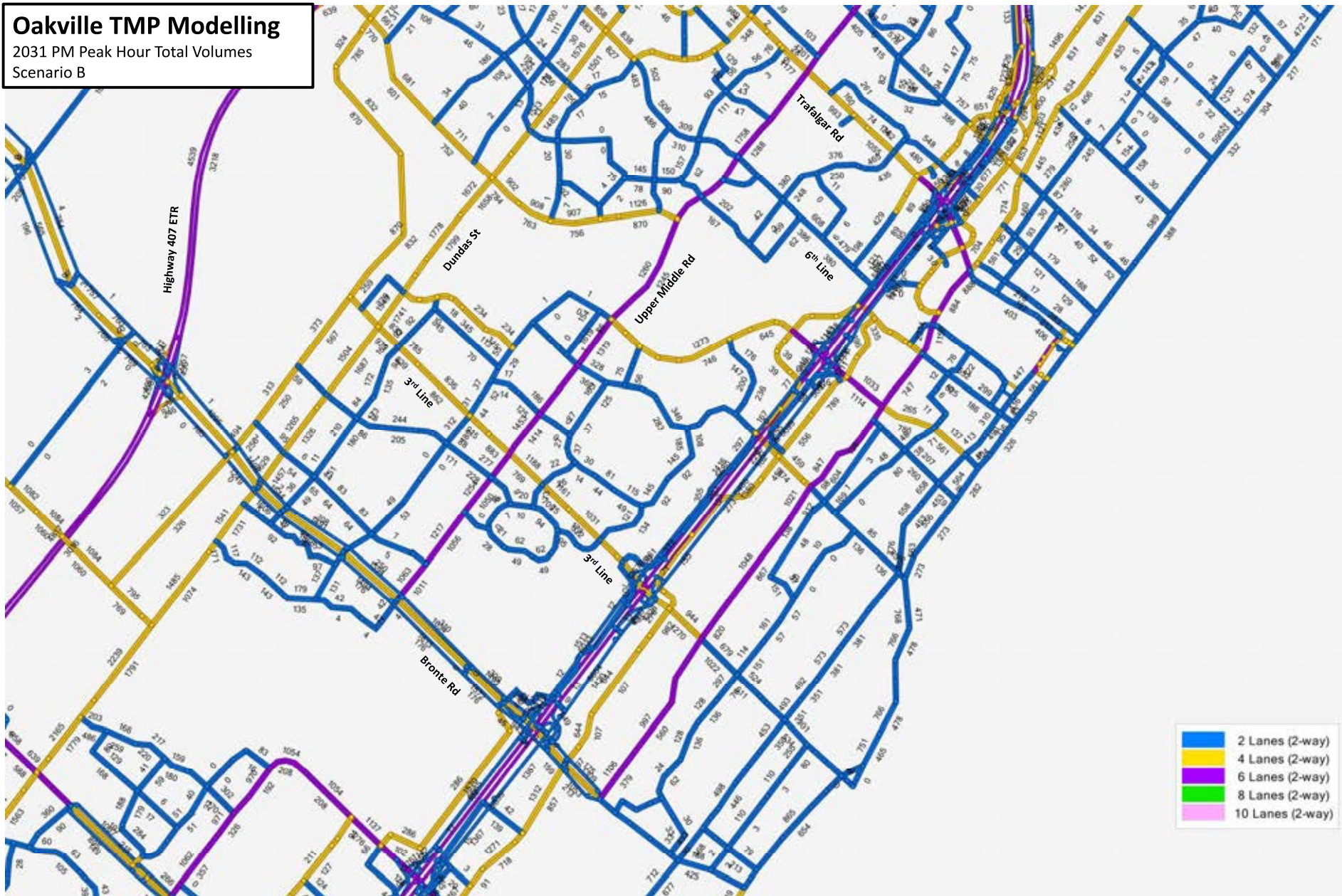
Oakville TMP Modelling

2031 PM Peak Hour Volume/Capacity Ratio
Scenario B



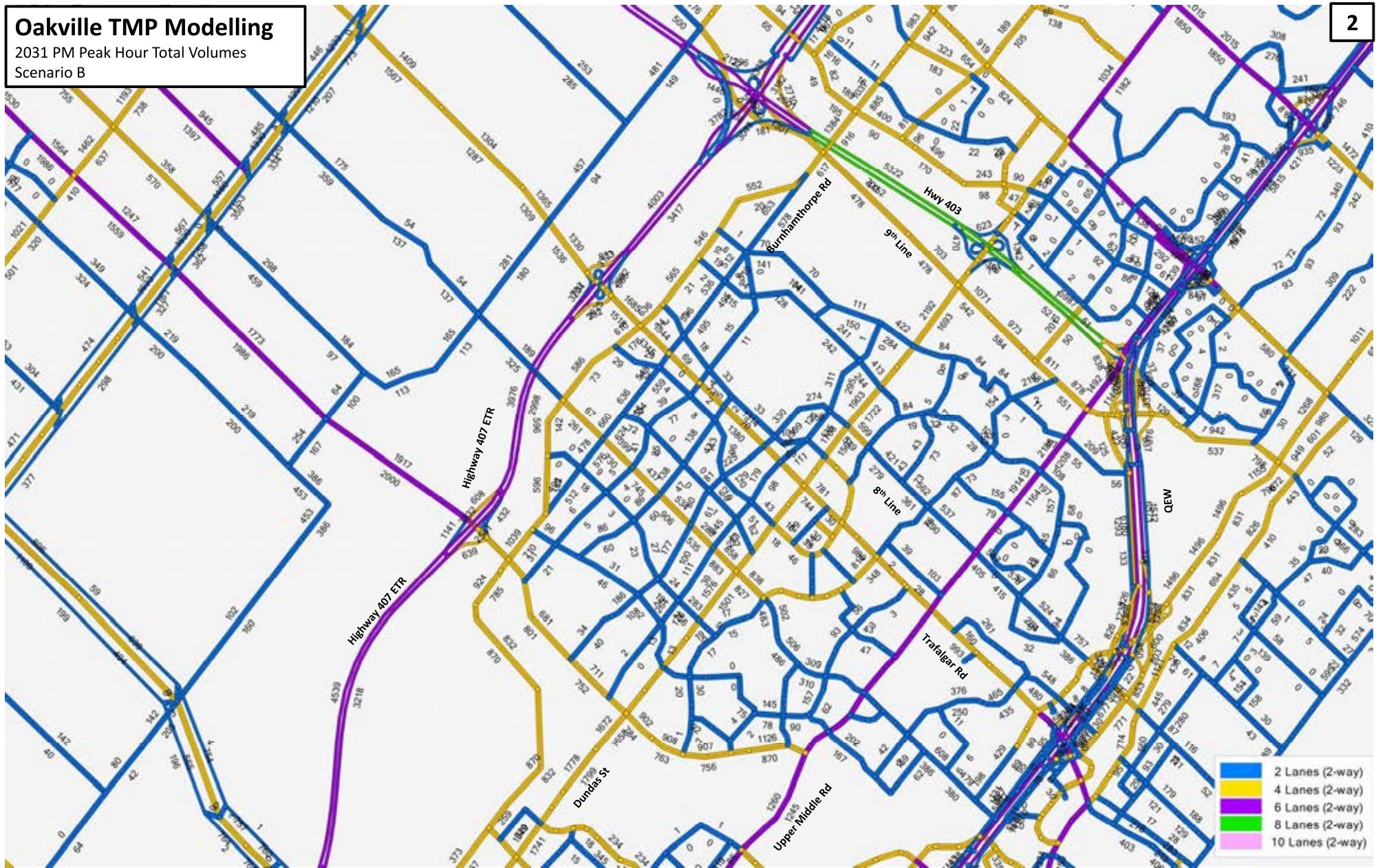
Oakville TMP Modelling

2031 PM Peak Hour Total Volumes
Scenario B



Oakville TMAP Modelling

2031 PM Peak Hour Total Volumes
Scenario B



Scenario C

AECOM
Screenline Deficiency Analysis

Oakville DC Modelling





HORIZON YEAR: 2031
Scenario: 31806
NETWORK:
TRANSIT:

2031 Eastbound/Westbound Screenline Deficiency Analysis

SL ID	Screenline	Eastbound					Westbound				
		PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required	PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required
100	East of Burloak Drive - Rebecca Street to Lakeshore Road	609	5	4,000	0.15	0	1,392	4	3,150	0.44	0
5	Bronte Creek South - QEW to Lakeshore Road	2,171	5	4,550	0.48	0	2,843	5	4,550	0.62	0
6	Bronte Creek North - Highway 407 ETR to QEW	11,367	11	15,800	0.72	0	14,724	11	15,800	0.93	1
102	East of Bronte Road - Rebecca Street to Lakeshore Road	1,188	3	2,200	0.54	0	1,124	3	2,200	0.51	0
104	East of Bronte Road - Wycroft Road to Speers Road	489	5	4,250	0.12	0	2,054	5	4,250	0.48	0
126	West of Third Line - Dundas Street to Upper Middle Road	3,144	7	5,650	0.56	0	3,421	7	5,650	0.61	0
128	West of Third Line - Upper Middle Road to North Service Road	1,423	6	4,100	0.35	0	1,885	6	4,100	0.46	0
105	West of Third Line - Rebecca Street to Lakeshore Road	1,100	3	2,200	0.50	0	1,697	3	2,200	0.77	0
106	East of Third Line - South Service Road to Bridge Road	1,171	6	5,050	0.23	0	1,654	6	5,050	0.33	0
107	East of Fourth Line - Speers Road to Pinegrove Drive	1,540	7	5,350	0.29	0	1,445	7	5,350	0.27	0
108	East of Fourth Line - Rebecca Street to Lakeshore Road	833	2	1,800	0.46	0	1,342	2	1,800	0.75	0
7	Oakville Creek North - Highway 407 ETR to Upper Middle Road	7,006	10	11,650	0.60	0	8,470	10	11,650	0.73	0
8	Oakville Creek South - Highway 407 ETR to Upper Middle Road	8,700	8	10,150	0.86	0	10,145	8	10,150	1.00	1
78	Oakville Creek South - Rebecca Street to Lakeshore Road	526	2	1,700	0.31	0	1,041	2	1,700	0.61	0
122	East of Neyagawa Boulevard - Dundas Street to Upper Middle Road	3,149	8	5,850	0.54	0	3,304	8	5,850	0.56	0
23	West of Sixth Line - Burnhamthorpe Road to Dundas Street	2,397	9	6,400	0.37	0	3,037	9	6,400	0.47	0
133	East of Sixth Line - NNOTC to Dundas Street	2,686	9	6,400	0.42	0	3,434	9	6,400	0.54	0
121	East of Sixth Line - Dundas Street to Upper Middle Road	3,683	8	6,050	0.61	0	4,300	8	6,050	0.71	0
120	East of Sixth Line - Upper Middle Road to QEW	8,661	10	11,150	0.78	0	9,679	10	11,150	0.87	0
72A	East of Trafalgar Road - Lower Baseline Road to Burnhamthorpe Road	3,791	7	8,750	0.43	0	5,739	7	8,750	0.66	0
72B	East of Trafalgar Road - Dundas Street to Upper Middle Road	3,326	8	6,250	0.53	0	4,253	8	6,250	0.68	0
72C	East of Trafalgar Road - Upper Middle Road to North Service Road	9,738	10	11,950	0.81	0	10,504	10	11,950	0.88	0
72D	East of Trafalgar Road - Burnhamthorpe Road to Dundas Street	2,646	7	4,600	0.58	0	2,967	7	4,600	0.64	0
134	East of Eighth Line - South Service Road to Cornwall Road	9,291	12	13,350	0.70	0	10,658	12	13,350	0.80	0
135	East of Eighth Line - Upper Middle Road to QEW	1,507	5	4,100	0.37	0	1,729	5	4,100	0.42	0
112	West of Chartwell Road - South Service Road to Maple Avenue	1,924	8	6,050	0.32	0	2,480	8	6,050	0.41	0
115	West of Ninth Line - Dundas Street to Upper Middle Road	2,805	6	4,850	0.58	0	4,741	6	4,850	0.98	1
113	West of Maple Grove Road - Royal Windsor Drive to Lakeshore Road	742	4	3,050	0.24	0	1,438	4	3,050	0.47	0
10	Oakville/Peel Border North - Dundas Street to QEW	6,774	10	10,850	0.62	0	7,298	10	10,850	0.67	0
9A	Oakville/Peel Border South - South Sheridan Way to Sheridan Garden Drive	397	4	2,350	0.17	0	506	4	2,350	0.22	0
9B	Oakville/Peel Border South - Cornwall Road to Lakeshore Road	1,111	5	4,550	0.24	0	2,396	5	4,550	0.53	0

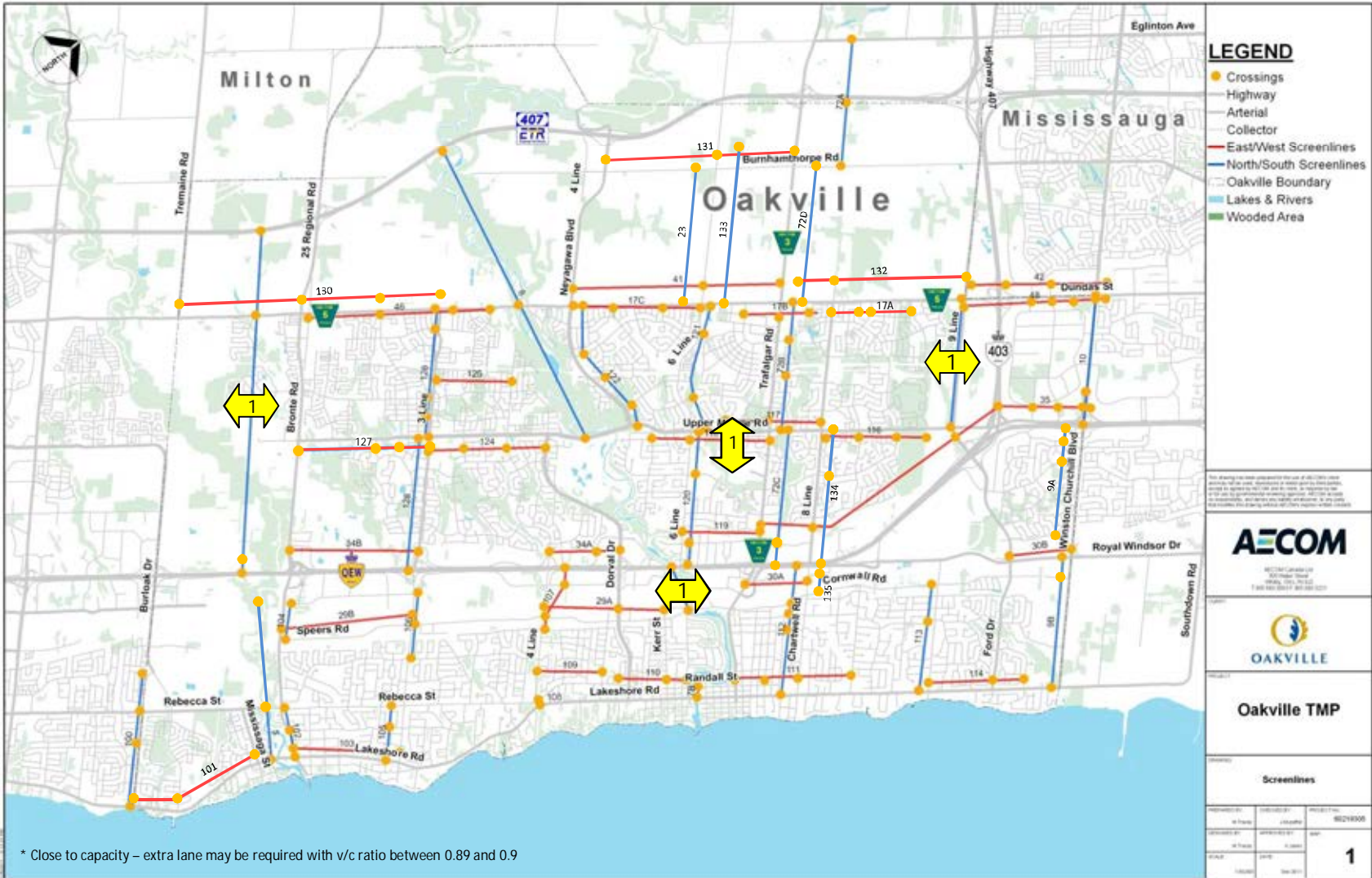
2031 Northbound/Southbound Screenline Deficiency Analysis

SL ID	Screenline	Northbound					Southbound				
		PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required	PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required
131	North of Burnhamthorpe Road/NNOTC - Nevgawa Boulevard to Trafalgar Road	3,236	5	4,350	0.74	0	3,300	5	4,350	0.76	0
130	North of Dundas Street - Tremaine Road to Third Line	3,131	9	7,150	0.44	0	3,693	9	7,150	0.52	0
41	North of Dundas Street - Nevgawa Boulevard to Trafalgar Road	3,755	10	7,100	0.53	0	3,869	10	7,100	0.54	0
132	North of Dundas Street - Postridge Drive to Ninth Line	2,188	6	3,700	0.59	0	1,583	6	3,700	0.43	0
42	North of Dundas Street - Ninth Line to Winston Churchill Boulevard	7,238	10	12,100	0.60	0	5,807	10	12,100	0.48	0
46	South of Dundas Street - Bronte Road to Proudfoot Trail	2,814	9	6,850	0.41	0	3,466	9	6,850	0.51	0
17C	South of Dundas Street - Nevgawa Boulevard to Sixth Line	2,097	6	4,400	0.48	0	2,078	6	4,400	0.47	0
17B	South of Dundas Street - Oak Park Boulevard to Postridge Drive	998	6	4,300	0.23	0	1,015	6	4,300	0.24	0
17A	South of Dundas Street - Eighth Line to Meadowridge Drive	916	4	2,600	0.35	0	925	4	2,600	0.36	0
48	South of Dundas Street - Ninth Line to Winston Churchill Boulevard	8,756	12	13,250	0.66	0	7,114	12	13,250	0.54	0
125	North of Westoak Trails Boulevard - Third Line to Oakpoint Road	1,087	4	3,200	0.34	0	1,238	4	3,200	0.39	0
117	North of Upper Middle Road - Oakmead Boulevard to Eighth Line	2,587	4	3,050	0.85	0	1,703	4	3,050	0.56	0
127	South of Upper Middle Road - Bronte Road to Third Line	3,466	7	5,450	0.64	0	2,963	7	5,450	0.54	0
124	South of Upper Middle Road - Third Line to Dorval Drive	2,908	6	4,400	0.66	0	2,186	6	4,400	0.50	0
118	South of Upper Middle Road - Oxford Avenue to Trafalgar Road	2,580	4	2,700	0.96	1	1,722	4	2,700	0.64	0
116	South of Upper Middle Road - Eighth Line to Joshua's Creek Drive	1,082	4	2,400	0.45	0	865	4	2,400	0.36	0
119	North of Leighland Avenue - Sixth Line to Trafalgar Road	1,886	3	2,300	0.82	0	1,414	3	2,300	0.61	0
35	North of QEW - Trafalgar Road to Winston Churchill Boulevard	10,962	15	15,750	0.70	0	9,023	15	15,750	0.57	0
34B	North of QEW - Bronte Road to Third Line	3,477	5	4,550	0.76	0	2,624	5	4,550	0.58	0
34A	North of QEW - Nottingham Gate to Dorval Drive	1,385	4	3,150	0.44	0	979	4	3,150	0.31	0
29B	CNR - Bronte Road to Third Line	2,425	5	4,550	0.53	0	2,566	5	4,550	0.56	0
29A	CNR - Fourth Line to Kerr Street	2,261	7	5,750	0.39	0	2,164	7	5,750	0.38	0
30A	CNR - Trafalgar Road to Chartwell Road	3,748	6	4,750	0.79	0	2,839	6	4,750	0.60	0
30B	CNR - Maple Grove Road to Winston Churchill Boulevard	2,366	4	3,600	0.66	0	1,511	4	3,600	0.42	0
109	North of Rebecca Street - Fourth Line to Morden Road	296	2	1,250	0.24	0	402	2	1,250	0.32	0
110	North of Rebecca Street - Dorval Drive to Queen Street	829	4	3,350	0.25	0	1,063	4	3,350	0.32	0
111	North of Lakeshore Road - Trafalgar Road to Morrison Road	438	6	3,750	0.12	0	801	6	3,750	0.21	0
114	North of Lakeshore Road - Maple Grove Drive to Devon Road	145	3	1,950	0.07	0	89	3	1,950	0.05	0
101	North of Lakeshore Road - Burloak Drive to Mississauga Street	157	3	2,150	0.07	0	280	3	2,150	0.13	0
103	North of Lakeshore Road - Bronte Road to Third Line	483	3	2,200	0.22	0	882	3	2,200	0.40	0

Cap = 850
 = Extra Lanes Required with v/c ratio 0.90 - 0.99
 = Extra Lanes Required with v/c ratio 1.00 - 1.29
 = Extra Lanes Required with v/c ratio > 1.30
 = Close to capacity - Extra Lane may be required with v/c ratio 0.89 - 0.9

Oakville TMP Modelling - 2031 Screenline Lane Deficiencies

Scenario C



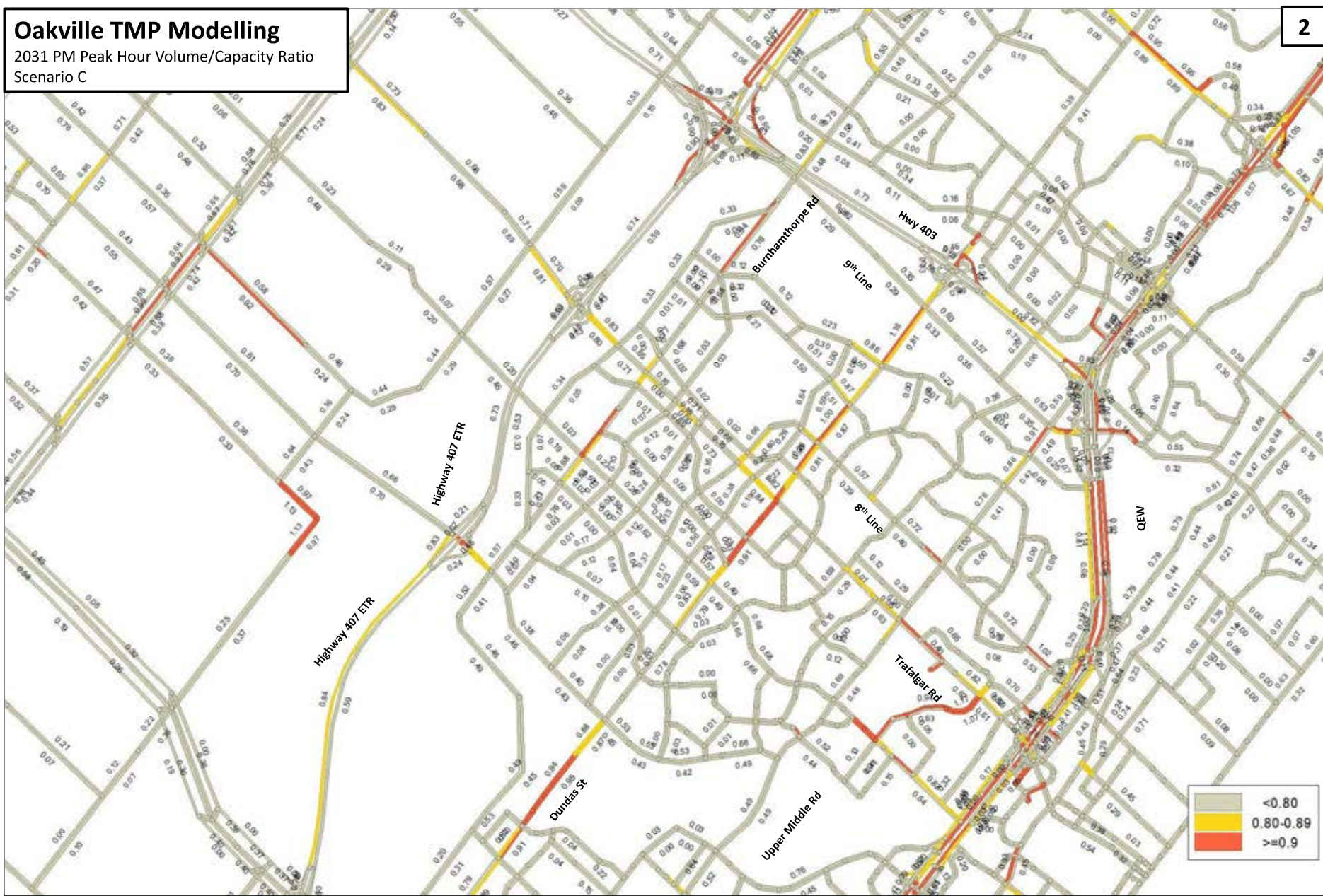
Oakville TMP Modelling

2031 PM Peak Hour Volume/Capacity Ratio
Scenario C



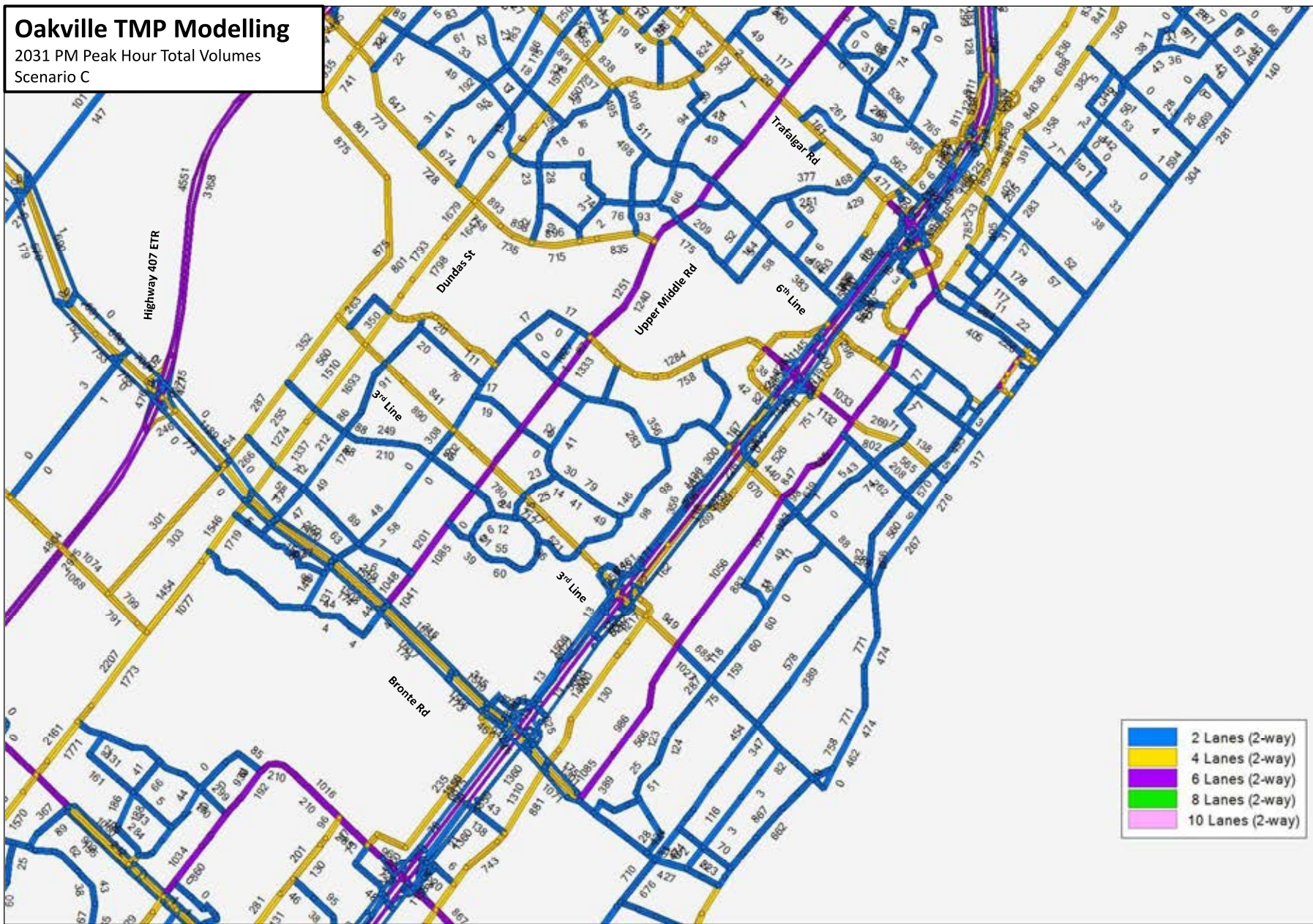
Oakville TMP Modelling

2031 PM Peak Hour Volume/Capacity Ratio
Scenario C



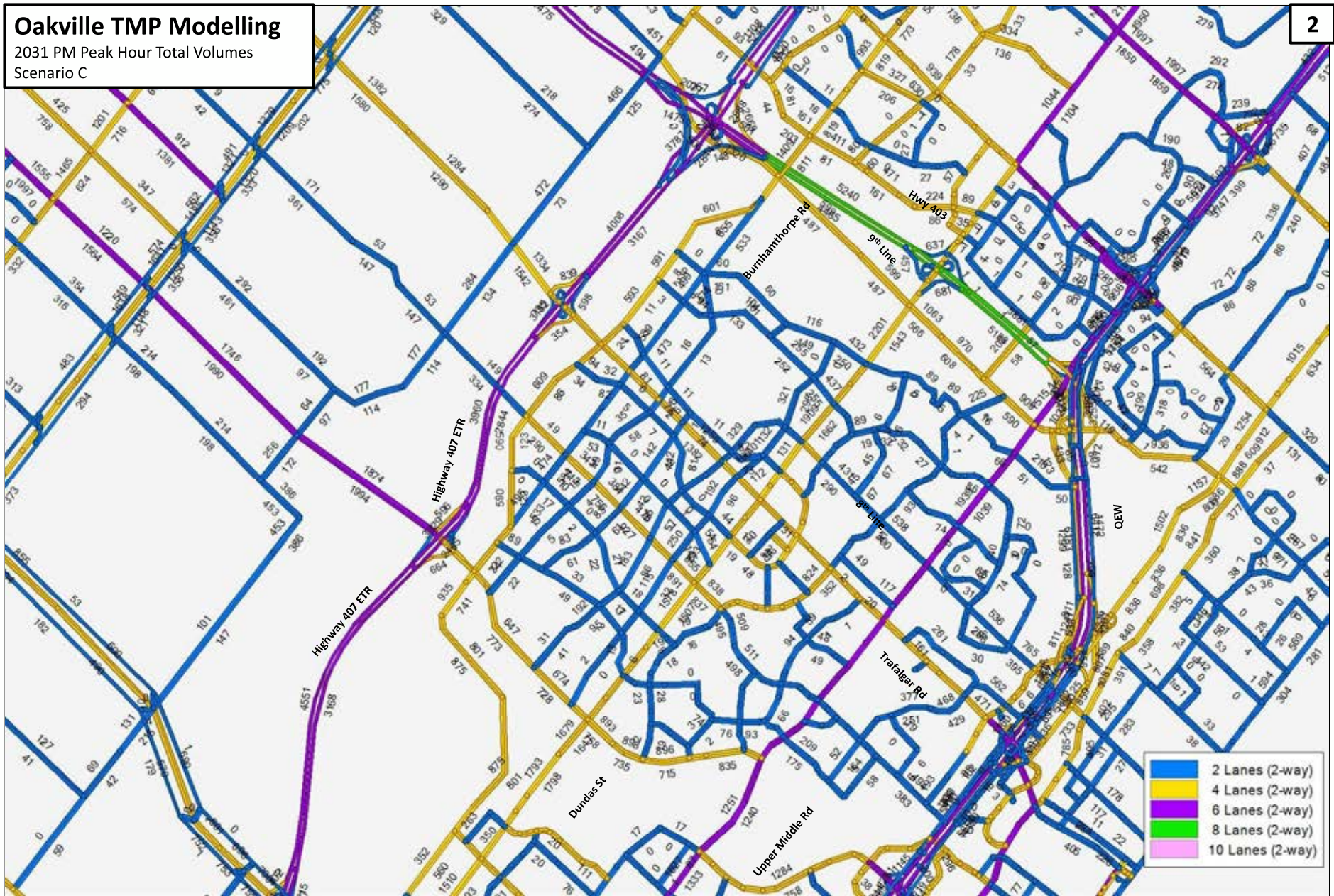
Oakville TMP Modelling

2031 PM Peak Hour Total Volumes
Scenario C



Oakville TMAP Modelling

2031 PM Peak Hour Total Volumes
Scenario C



Scenario D

AECOM
Screenline Deficiency Analysis

Oakville DC Modelling

HORIZON YEAR: 2031
Scenario: 31804
NETWORK:
TRANSIT:

2031 Eastbound/Westbound Screenline Deficiency Analysis

SL ID	Screenline	Eastbound					Westbound				
		PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required	PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required
100	East of Burloak Drive - Rebecca Street to Lakeshore Road	625	5	4,000	0.16	0	1,397	4	3,150	0.44	0
5	Bronte Creek South - QEW to Lakeshore Road	2,126	5	4,550	0.47	0	2,813	5	4,550	0.62	0
6	Bronte Creek North - Highway 407 ETR to QEW	11,314	11	15,800	0.72	0	14,607	11	15,800	0.92	1
102	East of Bronte Road - Rebecca Street to Lakeshore Road	1,143	3	2,200	0.52	0	1,097	3	2,200	0.50	0
104	East of Bronte Road - Wycroft Road to Speers Road	469	5	4,250	0.11	0	1,996	5	4,250	0.47	0
126	West of Third Line - Dundas Street to Upper Middle Road	3,044	7	5,650	0.54	0	3,386	7	5,650	0.60	0
128	West of Third Line - Upper Middle Road to North Service Road	1,363	6	4,100	0.33	0	1,855	6	4,100	0.45	0
105	West of Third Line - Rebecca Street to Lakeshore Road	1,061	3	2,200	0.48	0	1,638	3	2,200	0.74	0
106	East of Third Line - South Service Road to Bridge Road	1,087	6	5,050	0.22	0	1,587	6	5,050	0.31	0
107	East of Fourth Line - Speers Road to Pinesrove Drive	1,446	7	5,350	0.27	0	1,390	7	5,350	0.26	0
8	East of Fourth Line - Rebecca Street to Lakeshore Road	807	2	1,800	0.45	0	1,301	2	1,800	0.72	0
108	Oakville Creeek North - Highway 407 ETR to Upper Middle Road	6,799	10	11,650	0.58	0	8,314	10	11,650	0.71	0
7A	Oakville Creek South - QEW to Cornwall Road	8,569	8	10,150	0.84	0	9,996	8	10,150	0.98	1
7B	Oakville Creek South - Rebecca Street to Lakeshore Road	499	2	1,700	0.29	0	993	2	1,700	0.58	0
122	East of Neyagawa Boulevard - Dundas Street to Upper Middle Road	3,081	8	8,500	0.53	0	3,237	8	8,500	0.55	0
23	West of Sixth Line - Burnhamthorpe Road to Dundas Street	2,348	9	6,400	0.37	0	3,024	9	6,400	0.47	0
133	East of Sixth Line - NNOTC to Dundas Street	2,646	9	6,400	0.41	0	3,383	9	6,400	0.53	0
121	East of Sixth Line - Dundas Street to Upper Middle Road	3,506	8	6,050	0.58	0	4,232	8	6,050	0.70	0
120	East of Sixth Line - Upper Middle Road to QEW	8,518	10	11,150	0.76	0	9,582	10	11,150	0.86	0
72A	East of Trafalgar Road - Lower Baseline Road to Burnhamthorpe Road	3,576	7	8,750	0.41	0	5,631	7	8,750	0.64	0
72B	East of Trafalgar Road - Dundas Street to Upper Middle Road	3,176	8	6,250	0.51	0	4,168	8	6,250	0.67	0
72C	East of Trafalgar Road - Upper Middle Road to North Service Road	8,495	10	11,950	0.79	0	10,347	10	11,950	0.87	0
72D	East of Trafalgar Road - Burnhamthorpe Road to Dundas Street	2,603	7	4,600	0.57	0	2,932	7	4,600	0.64	0
134	East of Eighth Line - South Service Road to Cornwall Road	9,069	12	13,350	0.68	0	10,471	12	13,350	0.78	0
135	East of Eighth Line - Upper Middle Road to QEW	1,400	5	4,100	0.34	0	1,644	5	4,100	0.40	0
112	West of Chartwell Road - South Service Road to Maple Avenue	1,778	8	6,050	0.29	0	2,357	8	6,050	0.39	0
115	West of Ninth Line - Dundas Street to Upper Middle Road	2,581	6	4,850	0.53	0	4,604	6	4,850	0.95	1
113	West of Maple Grove Road - Royal Windsor Drive to Lakeshore Road	659	4	3,050	0.22	0	1,376	4	3,050	0.45	0
10	Oakville/Peel Border North - Dundas Street to QEW	6,616	10	10,850	0.61	0	7,167	10	10,850	0.66	0
9A	Oakville/Peel Border South - South Sheridan Way to Sheridan Garden Drive	393	4	2,350	0.17	0	551	4	2,350	0.23	0
9B	Oakville/Peel Border South - Cornwall Road to Lakeshore Road	1,037	5	4,550	0.23	0	2,328	5	4,550	0.51	0

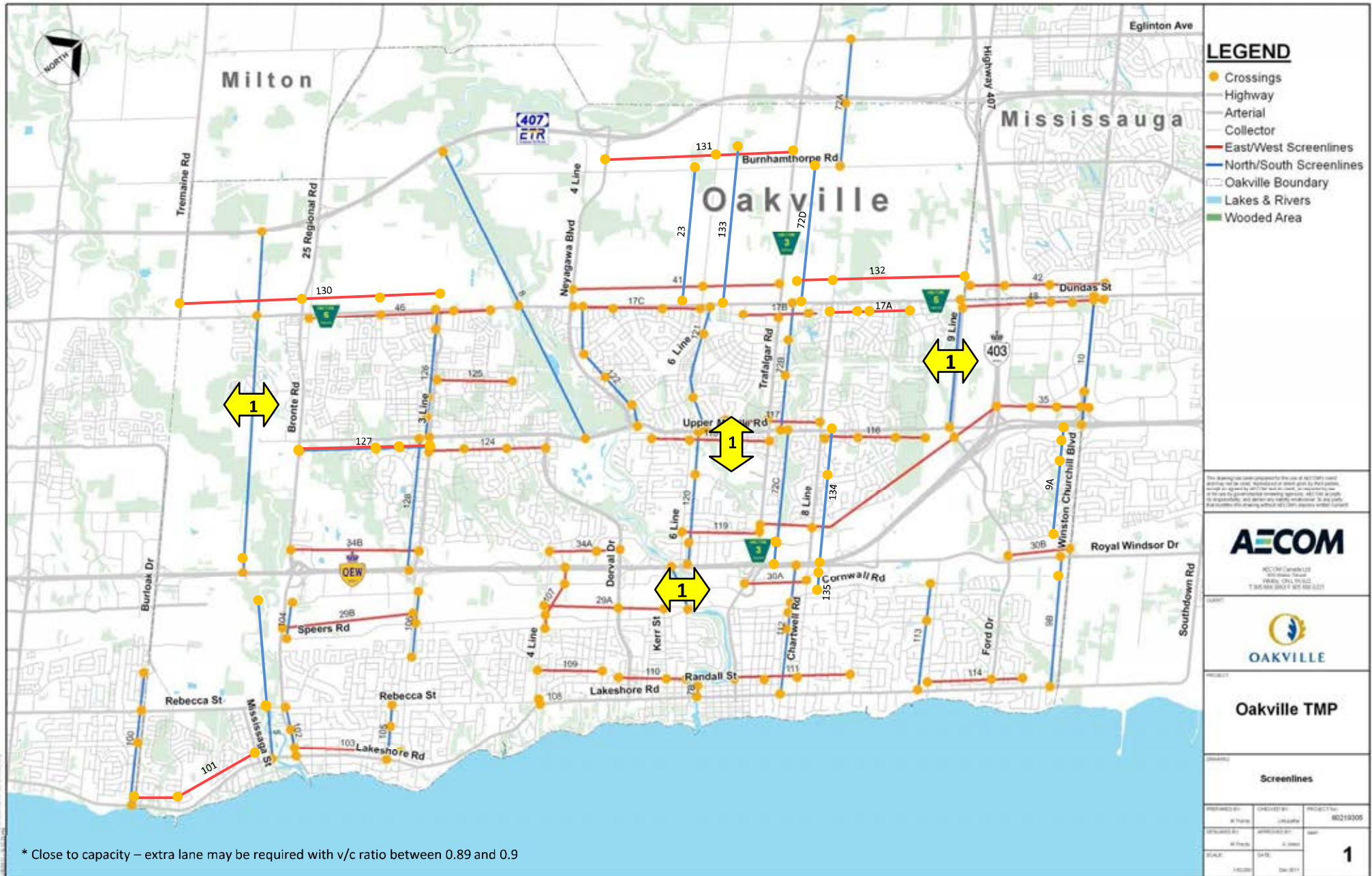
2031 Northbound/Southbound Screenline Deficiency Analysis

SL ID	Screenline	Northbound					Southbound				
		PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required	PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required
131	North of Burnhamthorpe Road/NNOTC - Nevagawa Boulevard to Trafalgar Road	3,068	5	4,350	0.71	0	3,188	5	4,350	0.73	0
130	North of Dundas Street - Tremaine Road to Third Line	3,045	9	7,150	0.43	0	3,570	9	7,150	0.50	0
41	North of Dundas Street - Nevagawa Boulevard to Trafalgar Road	3,640	10	7,100	0.51	0	3,733	10	7,100	0.53	0
132	North of Dundas Street - Postridge Drive to Ninth Line	2,079	6	3,700	0.56	0	1,486	6	3,700	0.40	0
42	North of Dundas Street - Ninth Line to Winston Churchill Boulevard	7,044	10	12,100	0.58	0	5,652	10	12,100	0.47	0
46	South of Dundas Street - Bronte Road to Proudfoot Trail	2,713	9	6,850	0.40	0	3,316	9	6,850	0.48	0
17C	South of Dundas Street - Nevagawa Boulevard to Sixth Line	2,061	6	4,400	0.47	0	2,019	6	4,400	0.46	0
17B	South of Dundas Street - Oak Park Boulevard to Postridge Drive	932	6	4,300	0.22	0	987	6	4,300	0.23	0
17A	South of Dundas Street - Eighth Line to Meadowridge Drive	865	4	2,600	0.33	0	911	4	2,600	0.35	0
48	South of Dundas Street - Ninth Line to Winston Churchill Boulevard	8,544	12	13,250	0.64	0	6,947	12	13,250	0.52	0
125	North of Westoak Trails Boulevard - Third Line to Oaksoot Road	1,030	4	3,200	0.32	0	1,192	4	3,200	0.37	0
117	North of Upper Middle Road - Oakmead Boulevard to Eighth Line	2,562	4	3,050	0.84	0	1,633	4	3,050	0.54	0
127	South of Upper Middle Road - Bronte Road to Third Line	3,339	7	5,450	0.61	0	2,846	7	5,450	0.52	0
124	South of Upper Middle Road - Third Line to Dorval Drive	2,819	6	4,400	0.64	0	2,104	6	4,400	0.48	0
118	South of Upper Middle Road - Oxford Avenue to Trafalgar Road	2,505	4	2,700	0.93	1	1,671	4	2,700	0.62	0
116	South of Upper Middle Road - Eighth Line to Joshua's Creek Drive	988	4	2,400	0.41	0	833	4	2,400	0.35	0
119	North of Leishland Avenue - Sixth Line to Trafalgar Road	1,843	3	2,300	0.80	0	1,367	3	2,300	0.59	0
35	North of QEW - Trafalgar Road to Winston Churchill Boulevard	10,695	15	15,750	0.68	0	8,786	15	15,750	0.56	0
34B	North of QEW - Bronte Road to Third Line	3,393	5	4,550	0.75	0	2,538	5	4,550	0.56	0
34A	North of QEW - Nottingham Gate to Dorval Drive	1,362	4	3,150	0.43	0	920	4	3,150	0.29	0
29B	CNR - Bronte Road to Third Line	2,332	5	4,550	0.51	0	2,472	5	4,550	0.54	0
29A	CNR - Fourth Line to Kerr Street	2,149	7	5,750	0.37	0	2,024	7	5,750	0.35	0
30A	CNR - Trafalgar Road to Chartwell Road	3,641	6	4,750	0.77	0	2,753	6	4,750	0.58	0
30B	CNR - Maple Grove Road to Winston Churchill Boulevard	2,280	4	3,600	0.63	0	1,449	4	3,600	0.40	0
109	North of Rebecca Street - Fourth Line to Morden Road	283	2	1,250	0.23	0	399	2	1,250	0.32	0
110	North of Rebecca Street - Dorval Drive to Queen Street	798	4	3,350	0.24	0	1,054	4	3,350	0.31	0
111	North of Lakeshore Road - Trafalgar Road to Morrison Road	436	6	3,750	0.12	0	749	6	3,750	0.20	0
114	North of Lakeshore Road - Maple Grove Drive to Devon Road	131	3	1,950	0.07	0	90	3	1,950	0.05	0
101	North of Lakeshore Road - Burloak Drive to Mississauga Street	168	3	2,150	0.08	0	278	3	2,150	0.13	0
103	North of Lakeshore Road - Bronte Road to Third Line	454	3	2,200	0.21	0	856	3	2,200	0.39	0

- Cap = 850
- = Extra Lanes Required with v/c ratio 0.90 - 0.99
- = Extra Lanes Required with v/c ratio 1.00 - 1.29
- = Extra Lanes Required with v/c ratio > 1.30
- = Close to capacity - Extra Lane may be required with v/c ratio 0.89 - 0.9

Oakville TMP Modelling - 2031 Screenline Lane Deficiencies

Scenario D

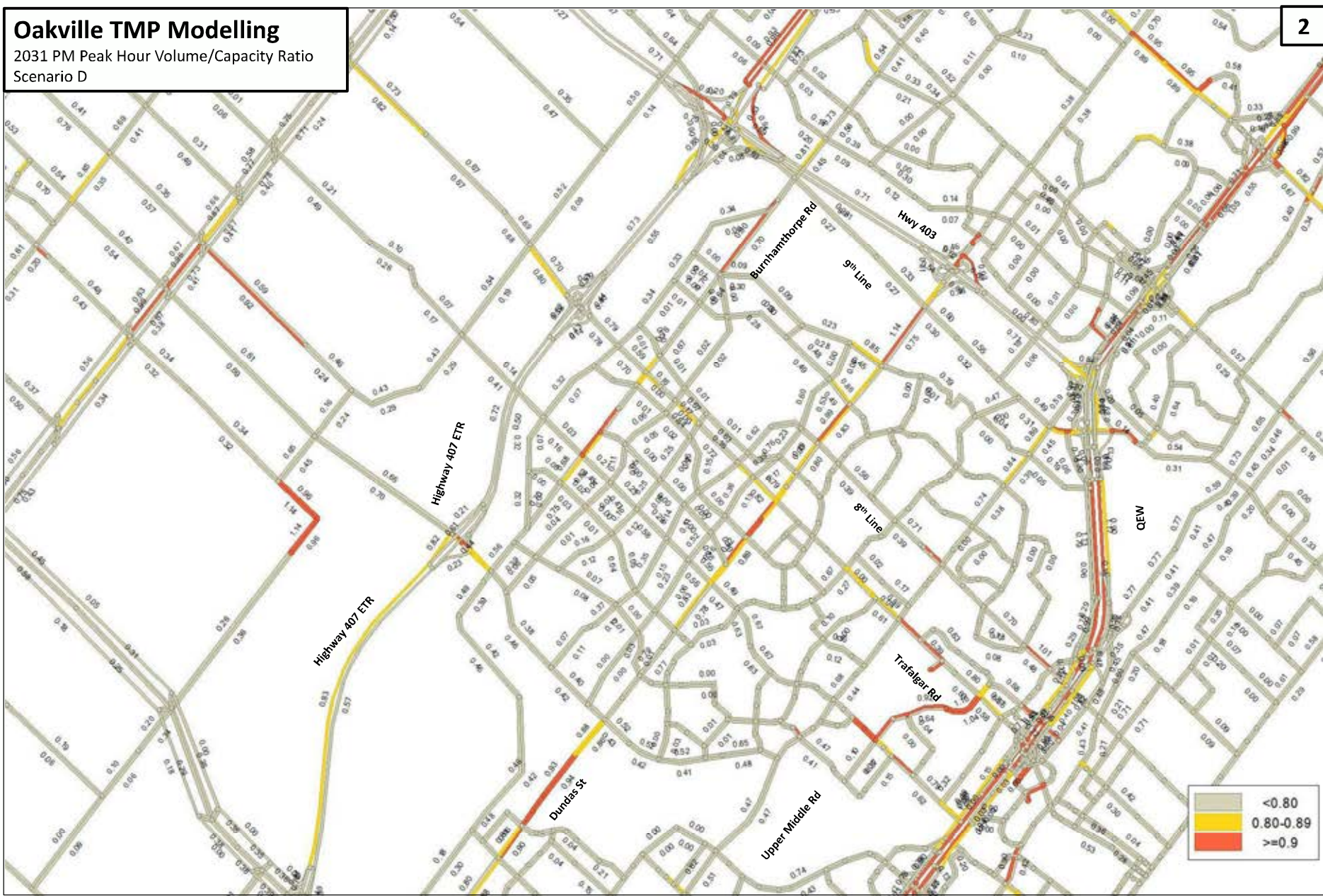


* Close to capacity – extra lane may be required with v/c ratio between 0.89 and 0.9

Oakville TMP Modelling
2031 PM Peak Hour Volume/Capacity Ratio
Scenario D

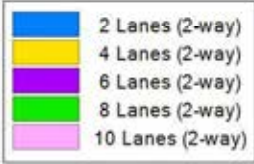
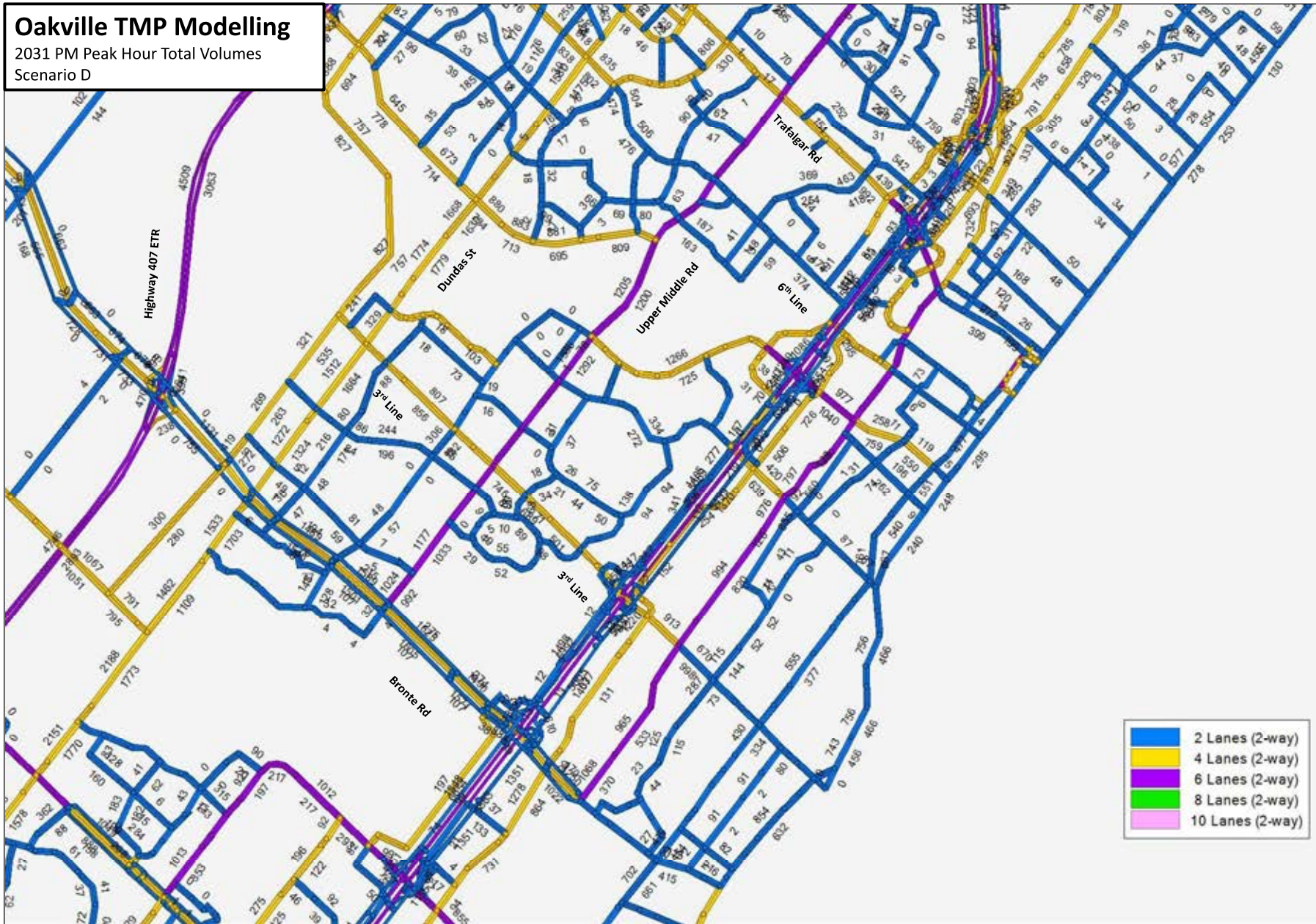


Oakville TMP Modelling
2031 PM Peak Hour Volume/Capacity Ratio
Scenario D



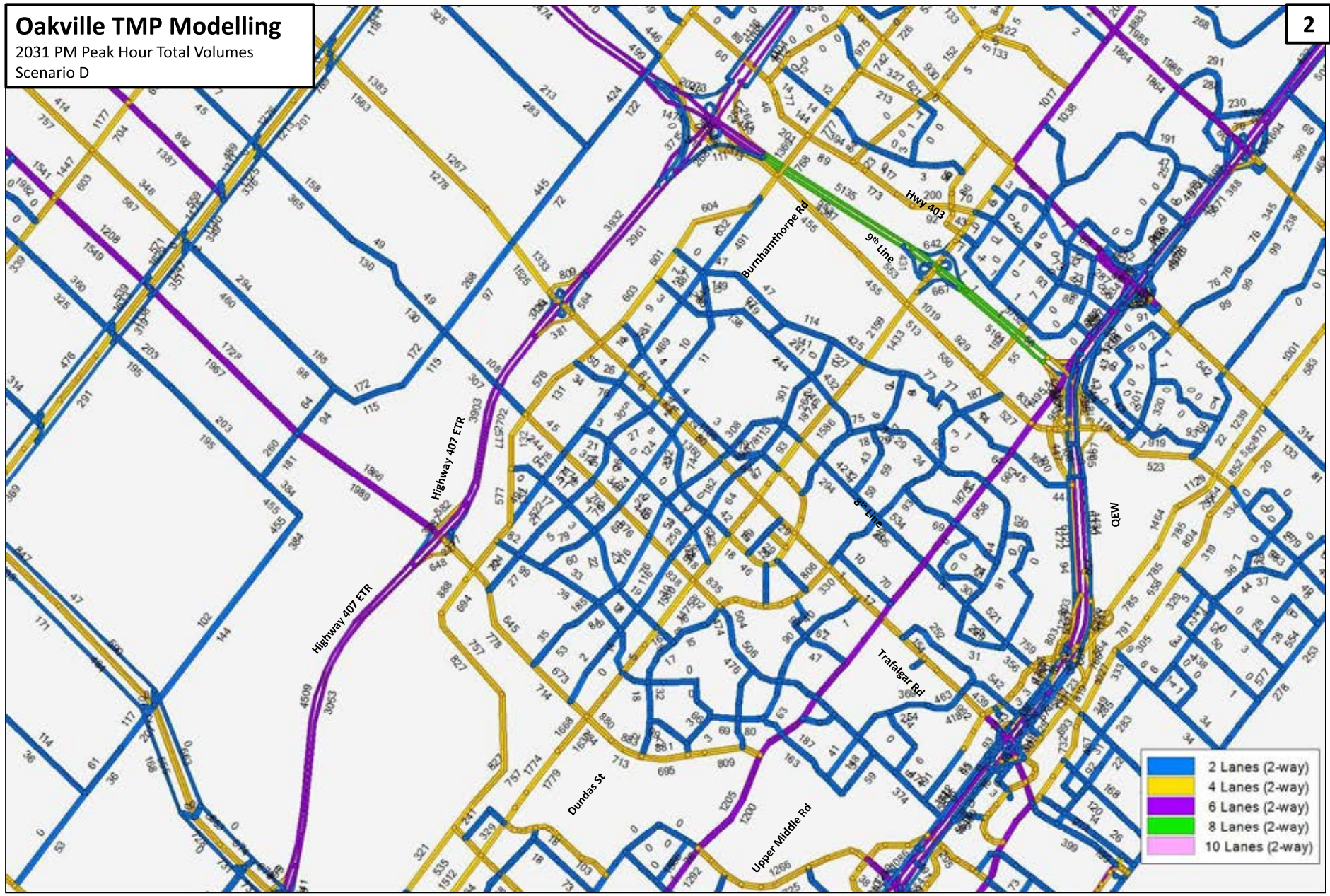
Oakville TMP Modelling

2031 PM Peak Hour Total Volumes
Scenario D



Oakville Tmp Modelling

2031 PM Peak Hour Total Volumes
Scenario D



- 2 Lanes (2-way)
- 4 Lanes (2-way)
- 6 Lanes (2-way)
- 8 Lanes (2-way)
- 10 Lanes (2-way)

Scenario E

AECOM
Screenline Deficiency Analysis

Oakville DC Modelling





HORIZON YEAR: 2031
Scenario: 31805
NETWORK:
TRANSIT:

2031 Eastbound/Westbound Screenline Deficiency Analysis

SL ID	Screenline	Eastbound				Westbound					
		PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required	PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required
100	East of Burloak Drive - Rebecca Street to Lakeshore Road	633	5	4,000	0.16	0	1,387	4	3,150	0.44	0
5	Bronte Creek South - QEW to Lakeshore Road	2,054	5	4,550	0.45	0	2,765	5	4,550	0.61	0
6	Bronte Creek North - Highway 407 ETR to QEW	11,266	11	15,800	0.71	0	14,496	11	15,800	0.92	1
102	East of Bronte Road - Rebecca Street to Lakeshore Road	1,098	3	2,200	0.50	0	1,060	3	2,200	0.48	0
104	East of Bronte Road - Wycroft Road to Speers Road	417	5	4,250	0.10	0	1,897	5	4,250	0.45	0
126	West of Third Line - Dundas Street to Upper Middle Road	2,926	7	5,650	0.52	0	3,285	7	5,650	0.58	0
128	West of Third Line - Upper Middle Road to North Service Road	1,257	6	4,100	0.31	0	1,771	6	4,100	0.43	0
105	West of Third Line - Rebecca Street to Lakeshore Road	1,041	3	2,200	0.47	0	1,589	3	2,200	0.72	0
106	East of Third Line - South Service Road to Bridge Road	1,021	6	5,050	0.20	0	1,487	6	5,050	0.29	0
107	East of Fourth Line - Speers Road to Pinegrove Drive	1,343	7	5,350	0.25	0	1,292	7	5,350	0.24	0
108	East of Fourth Line - Rebecca Street to Lakeshore Road	783	2	1,800	0.43	0	1,251	2	1,800	0.70	0
7	Oakville Creek North - Highway 407 ETR to Upper Middle Road	6,593	10	11,650	0.57	0	8,115	10	11,650	0.70	0
8	Oakville Creek South - QEW to Cornwall Road	8,460	8	10,150	0.83	0	9,821	8	10,150	0.97	1
78	Oakville Creek South - Rebecca Street to Lakeshore Road	458	2	1,700	0.27	0	937	2	1,700	0.55	0
122	East of Neyagawa Boulevard - Dundas Street to Upper Middle Road	2,946	8	5,850	0.50	0	3,139	8	5,850	0.54	0
23	West of Sixth Line - Burnhamthorpe Road to Dundas Street	2,268	9	6,400	0.35	0	2,892	9	6,400	0.45	0
133	East of Sixth Line - NNOTC to Dundas Street	2,562	9	6,400	0.40	0	3,248	9	6,400	0.51	0
121	East of Sixth Line - Dundas Street to Upper Middle Road	3,343	8	6,050	0.55	0	4,104	8	6,050	0.68	0
120	East of Sixth Line - Upper Middle Road to QEW	8,389	10	11,150	0.75	0	9,451	10	11,150	0.85	0
72A	East of Trafalgar Road - Lower Baseline Road to Burnhamthorpe Road	3,492	7	8,750	0.40	0	5,541	7	8,750	0.63	0
72B	East of Trafalgar Road - Dundas Street to Upper Middle Road	3,052	8	6,250	0.49	0	4,045	8	6,250	0.65	0
72C	East of Trafalgar Road - Upper Middle Road to North Service Road	9,382	10	11,950	0.79	0	10,197	10	11,950	0.85	0
72D	East of Trafalgar Road - Burnhamthorpe Road to Dundas Street	2,501	7	4,600	0.54	0	2,828	7	4,600	0.61	0
134	East of Eighth Line - South Service Road to Cornwall Road	8,938	12	13,350	0.67	0	10,312	12	13,350	0.77	0
135	East of Eighth Line - Upper Middle Road to QEW	1,354	5	4,100	0.33	0	1,582	5	4,100	0.39	0
112	West of Chartwell Road - South Service Road to Maple Avenue	1,722	8	6,050	0.28	0	2,261	8	6,050	0.37	0
115	West of Ninth Line - Dundas Street to Upper Middle Road	2,431	6	4,850	0.50	0	4,484	6	4,850	0.92	1
113	West of Maple Grove Road - Royal Windsor Drive to Lakeshore Road	640	4	3,050	0.21	0	1,336	4	3,050	0.44	0
10	Oakville/Peel Border North - Dundas Street to QEW	6,542	10	10,850	0.60	0	7,103	10	10,850	0.65	0
9A	Oakville/Peel Border South - South Sheridan Way to Sheridan Garden Drive	385	4	2,350	0.16	0	551	4	2,350	0.23	0
9B	Oakville/Peel Border South - Cornwall Road to Lakeshore Road	1,012	5	4,550	0.22	0	2,268	5	4,550	0.50	0

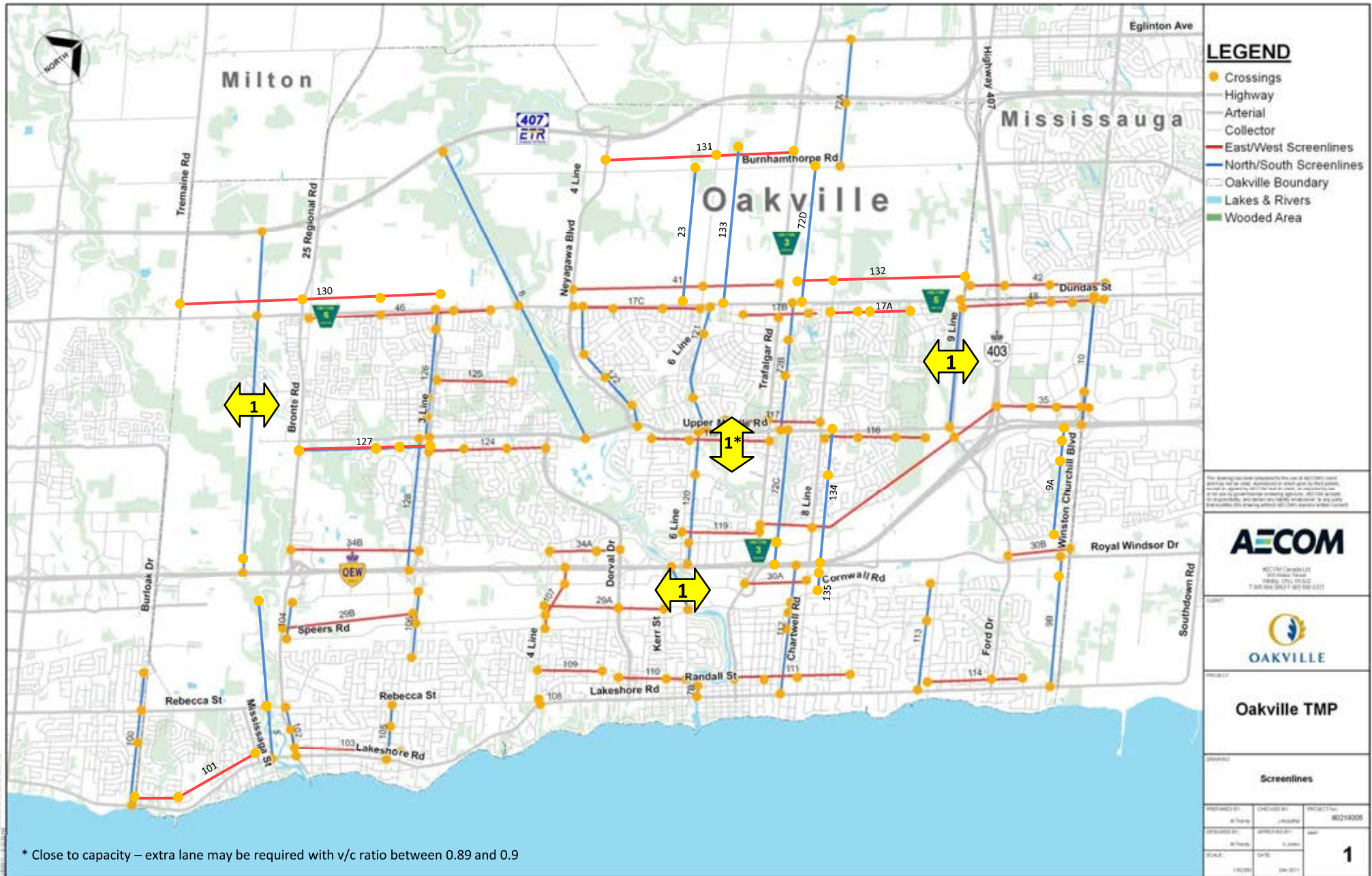
2031 Northbound/Southbound Screenline Deficiency Analysis

SL ID	Screenline	Northbound				Southbound					
		PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required	PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required
131	North of Burnhamthorpe Road/NNOTC - Nevagawa Boulevard to Trafalgar Road	3,027	5	4,350	0.70	0	3,103	5	4,350	0.71	0
130	North of Dundas Street - Tremaine Road to Third Line	2,983	9	7,150	0.42	0	3,478	9	7,150	0.49	0
41	North of Dundas Street - Nevagawa Boulevard to Trafalgar Road	3,542	10	7,100	0.50	0	3,566	10	7,100	0.50	0
132	North of Dundas Street - Postridge Drive to Ninth Line	1,988	6	3,700	0.54	0	1,404	6	3,700	0.38	0
42	North of Dundas Street - Ninth Line to Winston Churchill Boulevard	7,006	10	12,100	0.58	0	5,649	10	12,100	0.47	0
46	South of Dundas Street - Bronte Road to Proudfoot Trail	2,637	9	6,850	0.38	0	3,170	9	6,850	0.46	0
17C	South of Dundas Street - Nevagawa Boulevard to Sixth Line	1,987	6	4,400	0.45	0	1,905	6	4,400	0.43	0
17B	South of Dundas Street - Oak Park Boulevard to Postridge Drive	925	6	4,300	0.22	0	927	6	4,300	0.22	0
17A	South of Dundas Street - Eighth Line to Meadowridge Drive	816	4	2,600	0.31	0	918	4	2,600	0.35	0
48	South of Dundas Street - Ninth Line to Winston Churchill Boulevard	8,463	12	13,250	0.64	0	6,841	12	13,250	0.52	0
125	North of Westoak Trails Boulevard - Third Line to Oakpoint Road	1,002	4	3,200	0.31	0	1,108	4	3,200	0.35	0
117	North of Upper Middle Road - Oakmead Boulevard to Eighth Line	2,494	4	3,050	0.82	0	1,556	4	3,050	0.51	0
127	South of Upper Middle Road - Bronte Road to Third Line	3,187	7	5,450	0.58	0	2,693	7	5,450	0.49	0
124	South of Upper Middle Road - Third Line to Dorval Drive	2,713	6	4,400	0.62	0	1,953	6	4,400	0.44	0
118	South of Upper Middle Road - Oxford Avenue to Trafalgar Road	2,407	4	2,700	0.89	0	1,569	4	2,700	0.58	0
116	South of Upper Middle Road - Eighth Line to Joshua's Creek Drive	914	4	2,400	0.38	0	776	4	2,400	0.32	0
119	North of Leighton Avenue - Sixth Line to Trafalgar Road	1,793	3	2,300	0.78	0	1,310	3	2,300	0.57	0
35	North of QEW - Trafalgar Road to Winston Churchill Boulevard	10,506	15	15,750	0.67	0	8,574	15	15,750	0.54	0
34B	North of QEW - Bronte Road to Third Line	3,259	5	4,550	0.72	0	2,433	5	4,550	0.53	0
34A	North of QEW - Nottingham Gate to Dorval Drive	1,338	4	3,150	0.42	0	881	4	3,150	0.28	0
29B	CNR - Bronte Road to Third Line	2,246	5	4,550	0.49	0	2,367	5	4,550	0.52	0
29A	CNR - Fourth Line to Kerr Street	2,011	7	5,750	0.35	0	1,866	7	5,750	0.32	0
30A	CNR - Trafalgar Road to Chartwell Road	3,548	6	4,750	0.75	0	2,658	6	4,750	0.56	0
30B	CNR - Maple Grove Road to Winston Churchill Boulevard	2,241	4	3,600	0.62	0	1,423	4	3,600	0.40	0
109	North of Rebecca Street - Fourth Line to Morden Road	256	2	1,250	0.20	0	384	2	1,250	0.31	0
110	North of Rebecca Street - Dorval Drive to Queen Street	756	4	3,350	0.23	0	956	4	3,350	0.29	0
111	North of Lakeshore Road - Trafalgar Road to Morrison Road	409	6	3,750	0.11	0	716	6	3,750	0.19	0
114	North of Lakeshore Road - Maple Grove Drive to Devon Road	123	3	1,950	0.06	0	95	3	1,950	0.05	0
101	North of Lakeshore Road - Burloak Drive to Mississauga Street	154	3	2,150	0.07	0	257	3	2,150	0.12	0
103	North of Lakeshore Road - Bronte Road to Third Line	425	3	2,200	0.19	0	833	3	2,200	0.38	0

Cap = 850
 = Extra Lanes Required with v/c ratio 0.90 - 0.99
 = Extra Lanes Required with v/c ratio 1.00 - 1.29
 = Extra Lanes Required with v/c ratio > 1.30
 = Close to capacity - Extra Lane may be required with v/c ratio 0.89 - 0.9

Oakville TMP Modelling - 2031 Screenline Lane Deficiencies




Scenario E



* Close to capacity – extra lane may be required with v/c ratio between 0.89 and 0.9

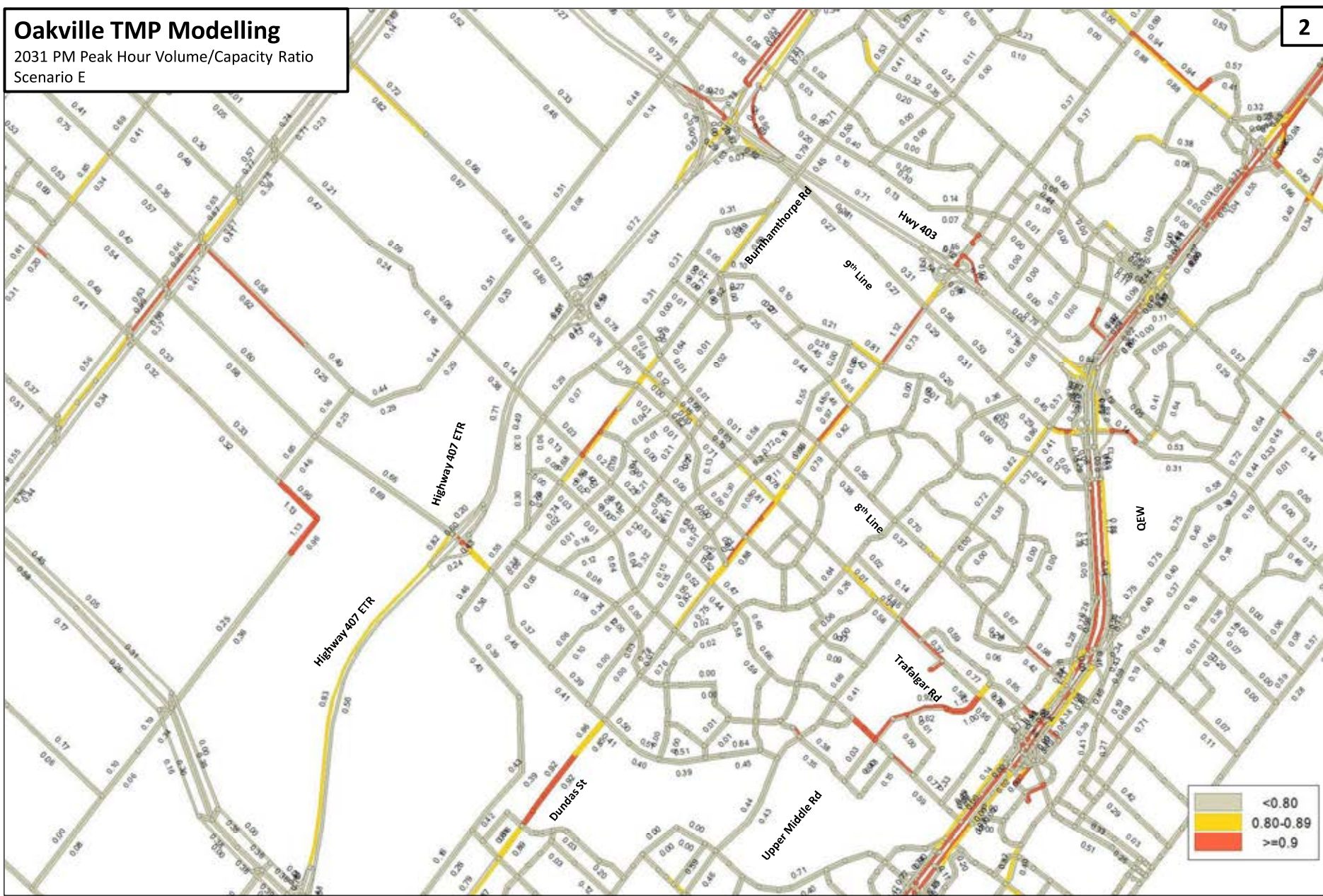
Oakville TMP Modelling
2031 PM Peak Hour Volume/Capacity Ratio
Scenario E



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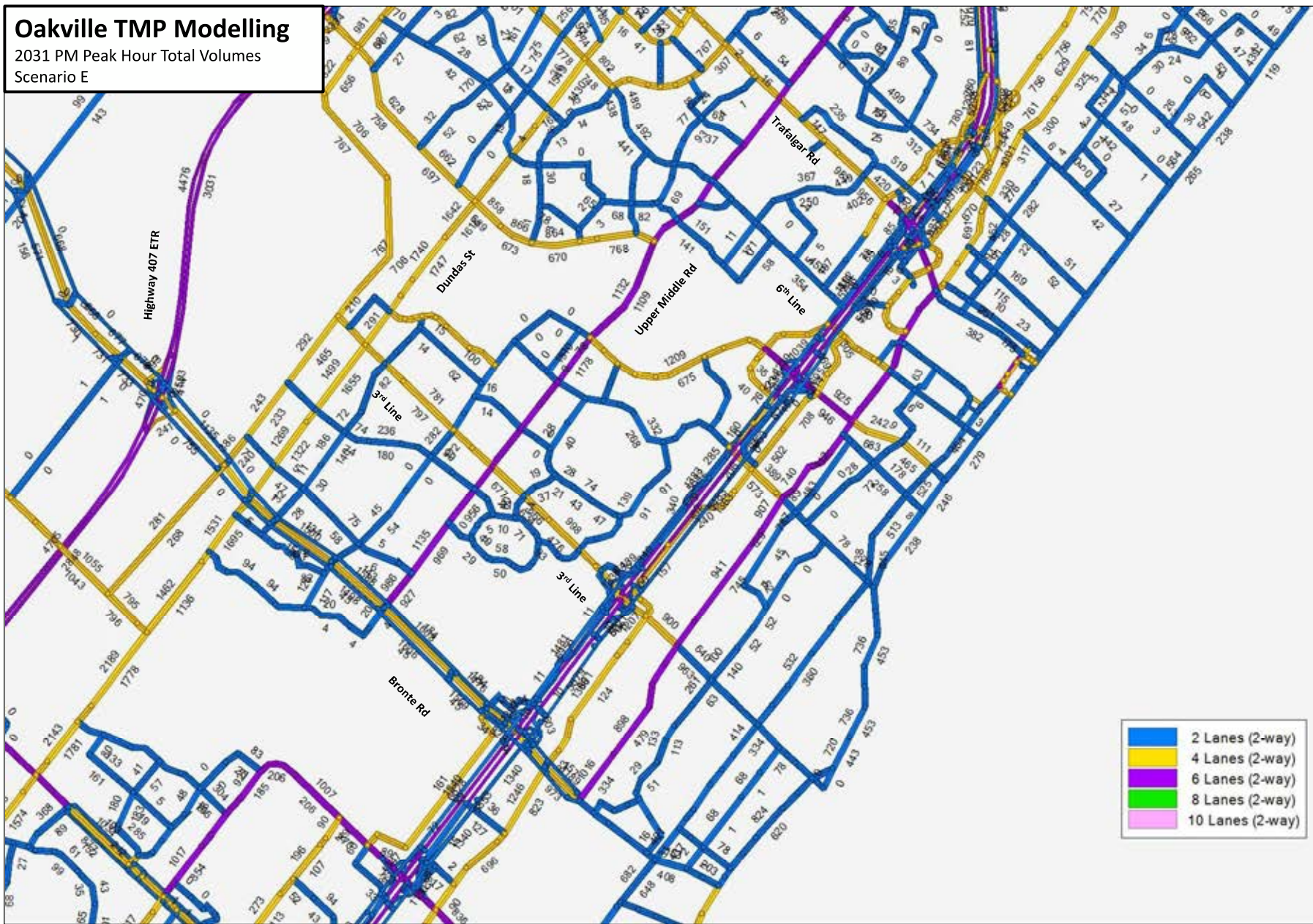
Oakville TMP Modelling

2031 PM Peak Hour Volume/Capacity Ratio
Scenario E



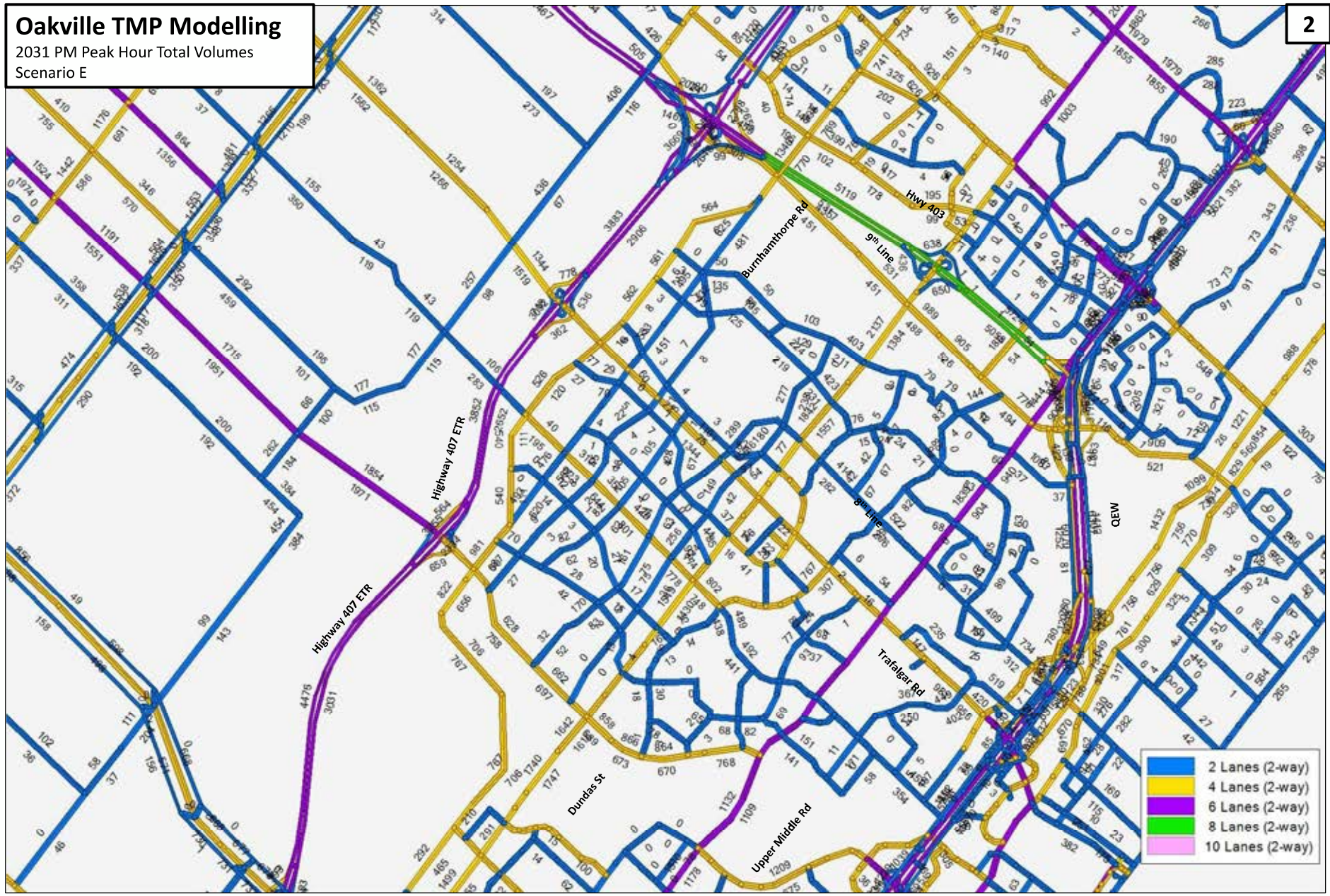
Oakville TMP Modelling

2031 PM Peak Hour Total Volumes
Scenario E



Oakville TMAP Modelling

2031 PM Peak Hour Total Volumes
Scenario E



- 2 Lanes (2-way)
- 4 Lanes (2-way)
- 6 Lanes (2-way)
- 8 Lanes (2-way)
- 10 Lanes (2-way)

Trend Scenario

AECOM
Screenline Deficiency Analysis

Oakville DC Modelling

HORIZON YEAR: 2031
Scenario: 31407
NETWORK:
TRANSIT:

2031 Eastbound/Westbound Screenline Deficiency Analysis

SL ID	Screenline	Eastbound					Westbound				
		PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required	PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required
100	East of Burloak Drive - Rebecca Street to Lakeshore Road	756	5	4,000	0.19	0	1,777	4	3,150	0.56	0
5	Bronte Creek South - QEW to Lakeshore Road	2,456	5	4,550	0.54	0	3,367	5	4,550	0.74	0
6	Bronte Creek North - Highway 407 ETR to QEW	12,726	11	15,800	0.81	0	16,825	11	15,800	1.06	4
102	East of Bronte Road - Rebecca Street to Lakeshore Road	1,286	3	2,200	0.58	0	1,279	3	2,200	0.58	0
104	East of Bronte Road - Wycroft Road to Speers Road	626	5	4,250	0.15	0	2,558	5	4,250	0.60	0
126	West of Third Line - Dundas Street to Upper Middle Road	3,441	7	5,650	0.61	0	3,829	7	5,650	0.68	0
128	West of Third Line - Upper Middle Road to North Service Road	1,633	6	4,100	0.40	0	2,248	6	4,100	0.55	0
105	West of Third Line - Rebecca Street to Lakeshore Road	1,213	3	2,200	0.55	0	1,887	3	2,200	0.86	0
106	East of Third Line - South Service Road to Bridge Road	1,404	6	5,050	0.28	0	2,263	6	5,050	0.45	0
107	East of Fourth Line - Speers Road to Pinegrove Drive	1,819	7	5,350	0.34	0	2,050	7	5,350	0.38	0
108	East of Fourth Line - Rebecca Street to Lakeshore Road	942	2	1,800	0.52	0	1,490	2	1,800	0.83	0
7	Oakville Creeek North - Highway 407 ETR to Upper Middle Road	8,192	10	11,650	0.70	0	9,996	10	11,650	0.86	0
8	Oakville Creeek South - QEW to Cornwall Road	9,310	8	10,150	0.92	1	11,150	8	10,150	1.10	3
7b	Oakville Creeek South - Rebecca Street to Lakeshore Road	604	2	1,700	0.36	0	1,361	2	1,700	0.80	0
122	East of Neyagawa Boulevard - Dundas Street to Upper Middle Road	3,482	8	5,850	0.60	0	3,809	8	5,850	0.65	0
23	West of Sixth Line - Burnhamthorpe Road to Dundas Street	2,892	9	6,400	0.45	0	3,735	9	6,400	0.58	0
133	East of Sixth Line - NNOTC to Dundas Street	3,165	9	6,400	0.49	0	4,313	9	6,400	0.67	0
121	East of Sixth Line - Dundas Street to Upper Middle Road	4,038	8	6,050	0.67	0	4,819	8	6,050	0.80	0
120	East of Sixth Line - Upper Middle Road to QEW	9,175	10	11,150	0.82	0	10,668	10	11,150	0.96	1
72A	East of Trafalgar Road - Lower Baseline Road to Burnhamthorpe Road	4,968	7	8,750	0.57	0	7,345	7	8,750	0.84	0
72B	East of Trafalgar Road - Dundas Street to Upper Middle Road	3,794	8	6,250	0.61	0	4,739	8	6,250	0.76	0
72C	East of Trafalgar Road - Upper Middle Road to North Service Road	10,531	10	11,950	0.88	0	11,539	10	11,950	0.97	1
72D	East of Trafalgar Road - Burnhamthorpe Road to Dundas Street	2,790	7	4,600	0.61	0	3,270	7	4,600	0.71	0
134	East of Eighth Line - South Service Road to Cornwall Road	10,117	12	13,350	0.76	0	11,787	12	13,350	0.88	0
135	East of Eighth Line - Upper Middle Road to QEW	1,854	5	4,100	0.45	0	2,072	5	4,100	0.51	0
112	West of Chartwell Road - South Service Road to Maple Avenue	2,362	8	6,050	0.39	0	2,963	8	6,050	0.49	0
115	West of Ninth Line - Dundas Street to Upper Middle Road	3,426	6	4,850	0.71	0	5,235	6	4,850	1.08	2
113	West of Maple Grove Road - Royal Windsor Drive to Lakeshore Road	986	4	3,050	0.32	0	1,813	4	3,050	0.59	0
10	Oakville/Peel Border North - Dundas Street to QEW	7,552	10	10,850	0.70	0	8,202	10	10,850	0.76	0
9A	Oakville/Peel Border South - South Sheridan Way to Sheridan Garden Drive	454	4	2,350	0.19	0	546	4	2,350	0.23	0
9B	Oakville/Peel Border South - Cornwall Road to Lakeshore Road	1,403	5	4,550	0.31	0	2,857	5	4,550	0.63	0

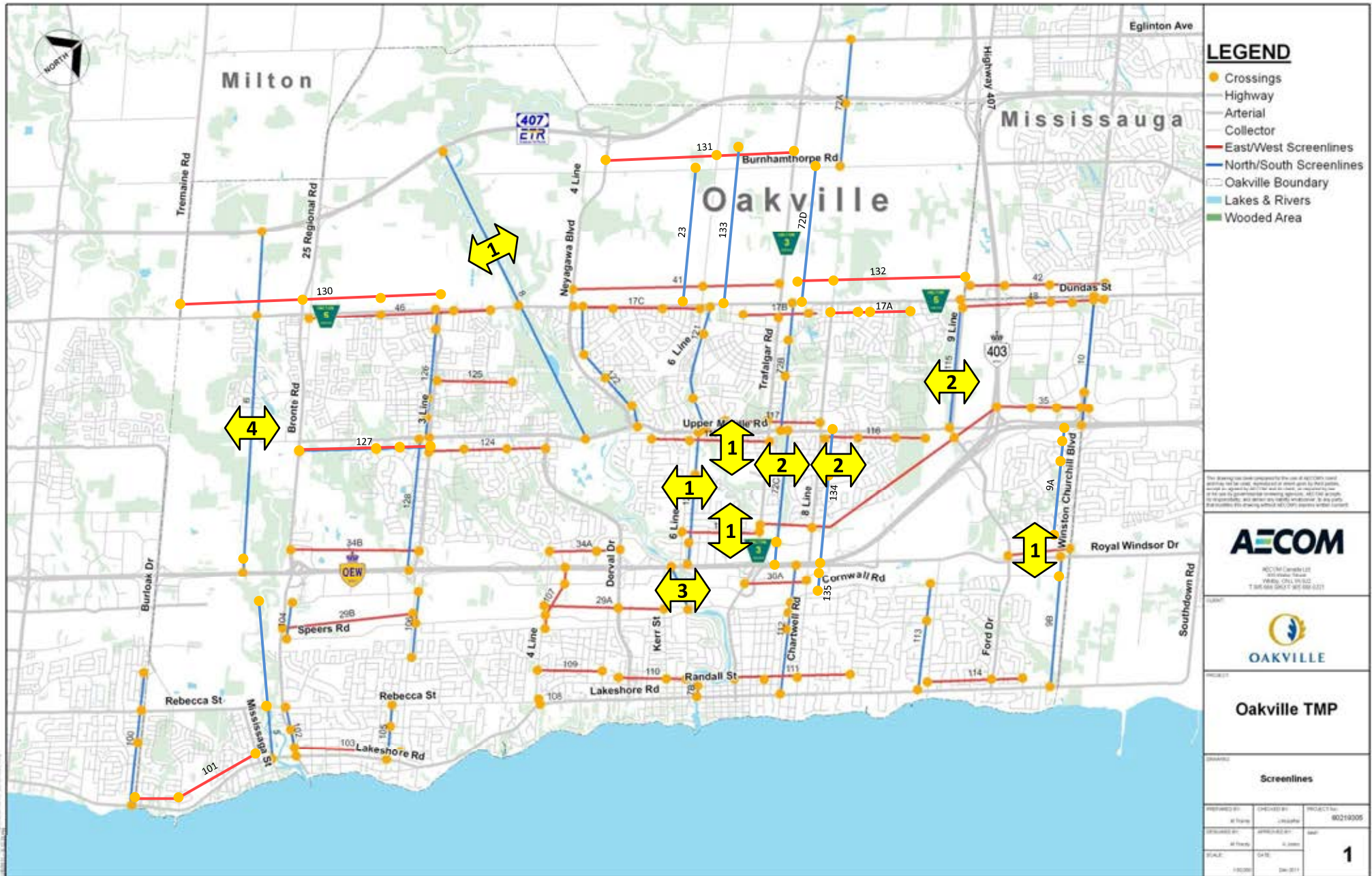
2031 Northbound/Southbound Screenline Deficiency Analysis

SL ID	Screenline	Northbound					Southbound				
		PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required	PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required
131	North of Burnhamthorpe Road/NNOTC - Neyagawa Boulevard to Trafalgar Road	3,764	5	4,350	0.87	0	3,575	5	4,350	0.82	0
130	North of Dundas Street - Tremaine Road to Third Line	3,390	9	7,150	0.47	0	4,119	9	7,150	0.58	0
41	North of Dundas Street - Neyagawa Boulevard to Trafalgar Road	4,046	10	7,100	0.57	0	4,155	10	7,100	0.59	0
132	North of Dundas Street - Postridge Drive to Ninth Line	2,632	6	3,700	0.71	0	1,835	6	3,700	0.50	0
42	North of Dundas Street - Ninth Line to Winston Churchill Boulevard	8,380	10	12,100	0.69	0	6,825	10	12,100	0.56	0
46	South of Dundas Street - Bronte Road to Proudfoot Trail	3,062	9	6,850	0.45	0	3,745	9	6,850	0.55	0
17C	South of Dundas Street - Neyagawa Boulevard to Sixth Line	2,288	6	4,400	0.52	0	2,328	6	4,400	0.53	0
17B	South of Dundas Street - Oak Park Boulevard to Postridge Drive	1,082	6	4,300	0.25	0	1,143	6	4,300	0.27	0
17A	South of Dundas Street - Eighth Line to Meadowridge Drive	1,005	4	2,600	0.39	0	967	4	2,600	0.37	0
48	South of Dundas Street - Ninth Line to Winston Churchill Boulevard	9,927	12	13,250	0.75	0	8,357	12	13,250	0.63	0
125	North of Westoak Trails Boulevard - Third Line to Oakpoint Road	1,225	4	3,200	0.38	0	1,291	4	3,200	0.40	0
117	North of Upper Middle Road - Oakmead Boulevard to Eighth Line	2,664	4	3,050	0.87	0	1,783	4	3,050	0.58	0
127	South of Upper Middle Road - Bronte Road to Third Line	3,657	7	5,450	0.67	0	3,363	7	5,450	0.62	0
124	South of Upper Middle Road - Third Line to Dorval Drive	3,128	6	4,400	0.71	0	2,377	6	4,400	0.54	0
118	South of Upper Middle Road - Oxford Avenue to Trafalgar Road	2,793	4	2,700	1.03	1	1,820	4	2,700	0.67	0
116	South of Upper Middle Road - Eighth Line to Joshua's Creek Drive	1,242	4	2,400	0.52	0	921	4	2,400	0.38	0
119	North of Leighland Avenue - Sixth Line to Trafalgar Road	1,985	3	2,300	0.86	0	1,489	3	2,300	0.65	0
35	North of QEW - Trafalgar Road to Winston Churchill Boulevard	12,049	15	15,750	0.77	0	10,260	15	15,750	0.65	0
34B	North of QEW - Bronte Road to Third Line	3,632	5	4,550	0.80	0	2,966	5	4,550	0.65	0
34A	North of QEW - Nottinghill Gate to Dorval Drive	1,414	4	3,150	0.45	0	1,037	4	3,150	0.33	0
29B	CNR - Bronte Road to Third Line	2,627	5	4,550	0.58	0	2,574	5	4,550	0.57	0
29A	CNR - Fourth Line to Kerr Street	2,383	7	5,750	0.41	0	2,511	7	5,750	0.44	0
30A	CNR - Trafalgar Road to Chartwell Road	4,065	6	4,750	0.86	0	3,161	6	4,750	0.67	0
30B	CNR - Maple Grove Road to Winston Churchill Boulevard	2,706	4	3,600	0.75	0	1,783	4	3,600	0.50	0
109	North of Rebecca Street - Fourth Line to Morden Road	325	2	1,250	0.26	0	422	2	1,250	0.34	0
110	North of Rebecca Street - Dorval Drive to Queen Street	896	4	3,350	0.27	0	1,024	4	3,350	0.31	0
111	North of Lakeshore Road - Trafalgar Road to Morrison Road	457	6	3,750	0.12	0	848	6	3,750	0.23	0
114	North of Lakeshore Road - Maple Grove Drive to Devon Road	198	3	1,950	0.10	0	114	3	1,950	0.06	0
101	North of Lakeshore Road - Burloak Drive to Mississaga Street	176	3	2,150	0.08	0	279	3	2,150	0.13	0
103	North of Lakeshore Road - Bronte Road to Third Line	498	3	2,200	0.23	0	1,040	3	2,200	0.47	0

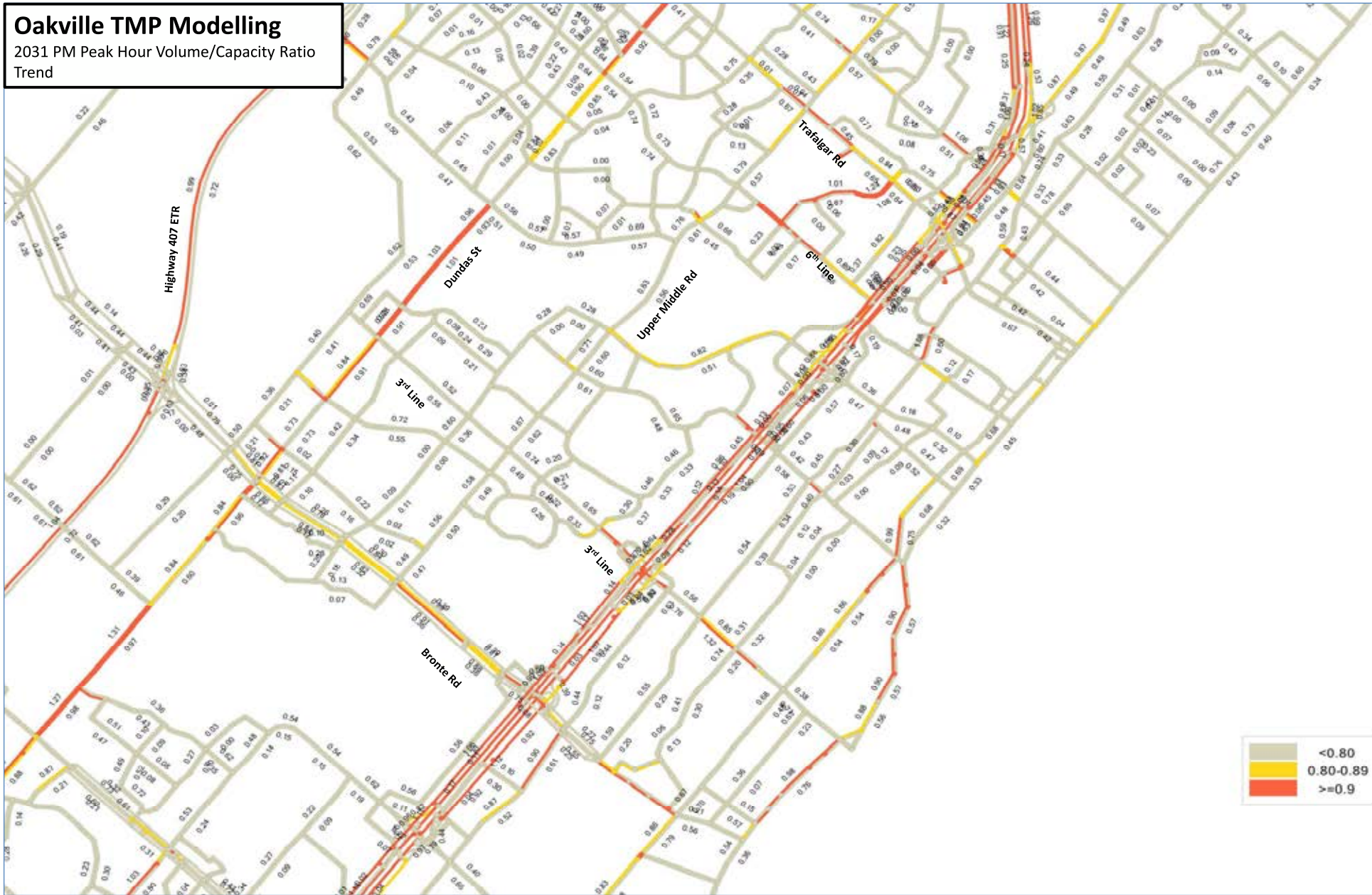
- Cap = 850
- = Extra Lanes Required with v/c ratio 0.90 - 0.99
- = Extra Lanes Required with v/c ratio 1.00 - 1.29
- = Extra Lanes Required with v/c ratio > 1.30
- = Close to capacity - Extra Lane may be required with v/c ratio 0.89 - 0.9

Oakville TMP Modelling - 2031 Screenline Lane Deficiencies

Trend

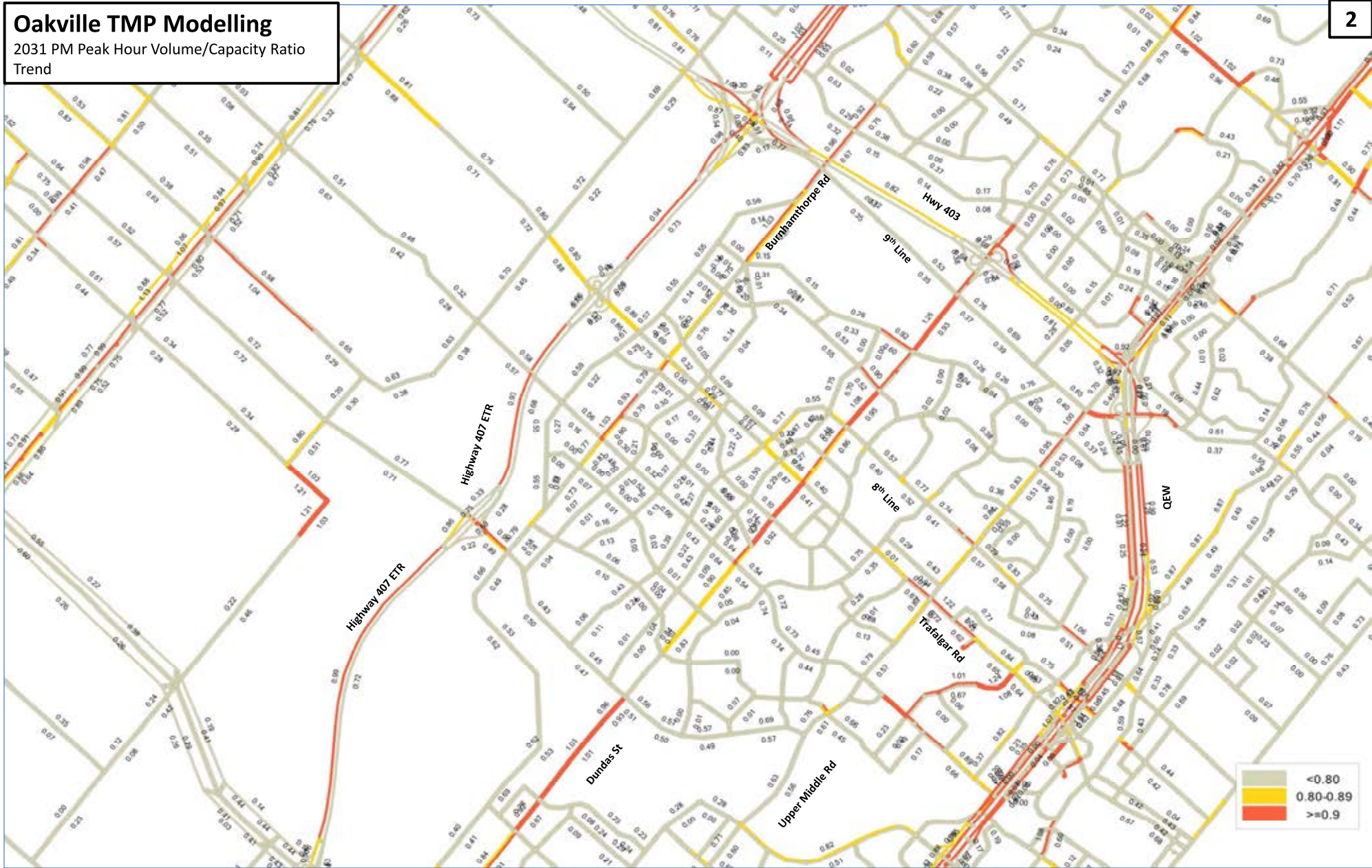


Oakville TMP Modelling
2031 PM Peak Hour Volume/Capacity Ratio
Trend



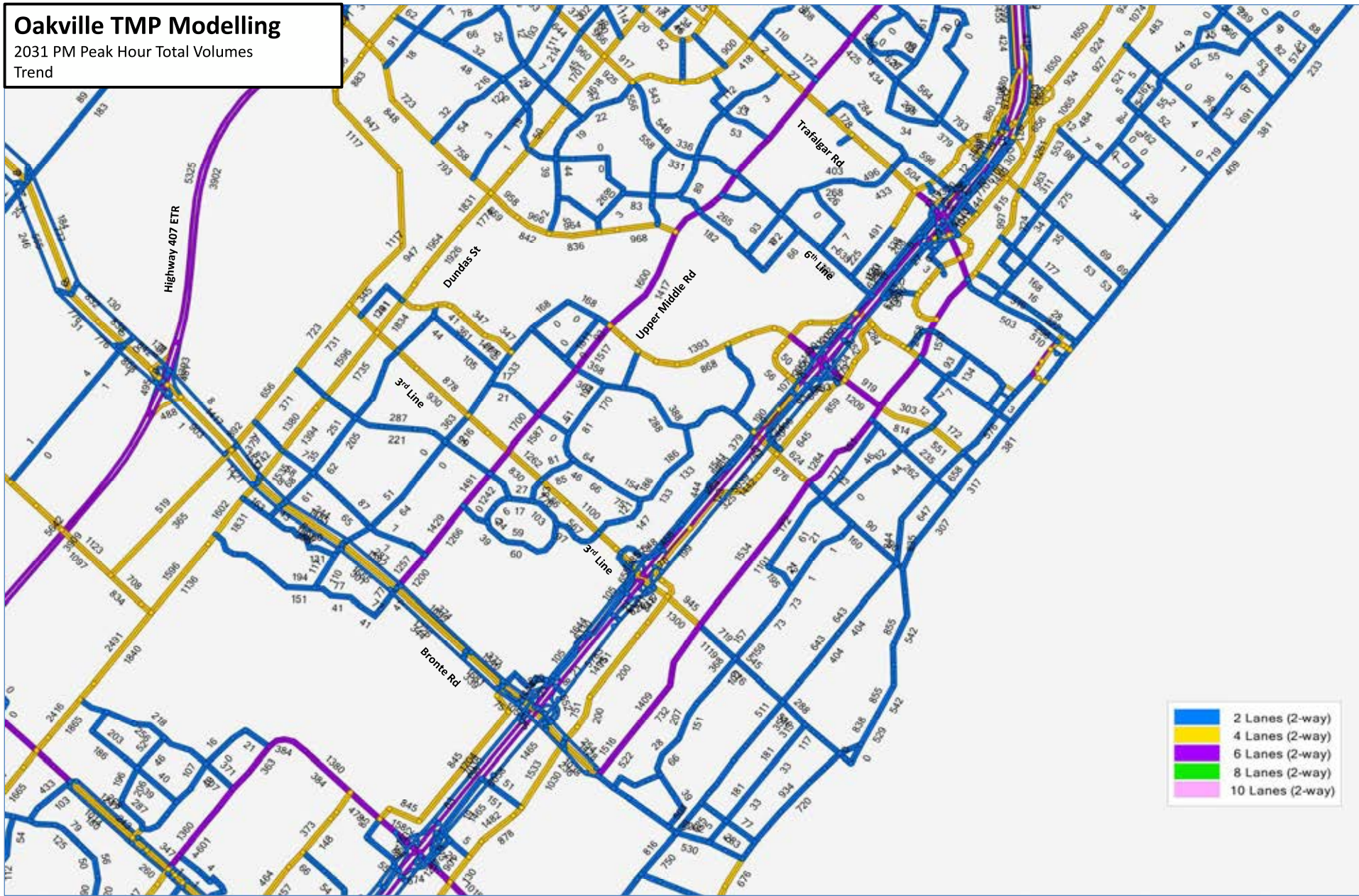
Oakville TMP Modelling

2031 PM Peak Hour Volume/Capacity Ratio
Trend



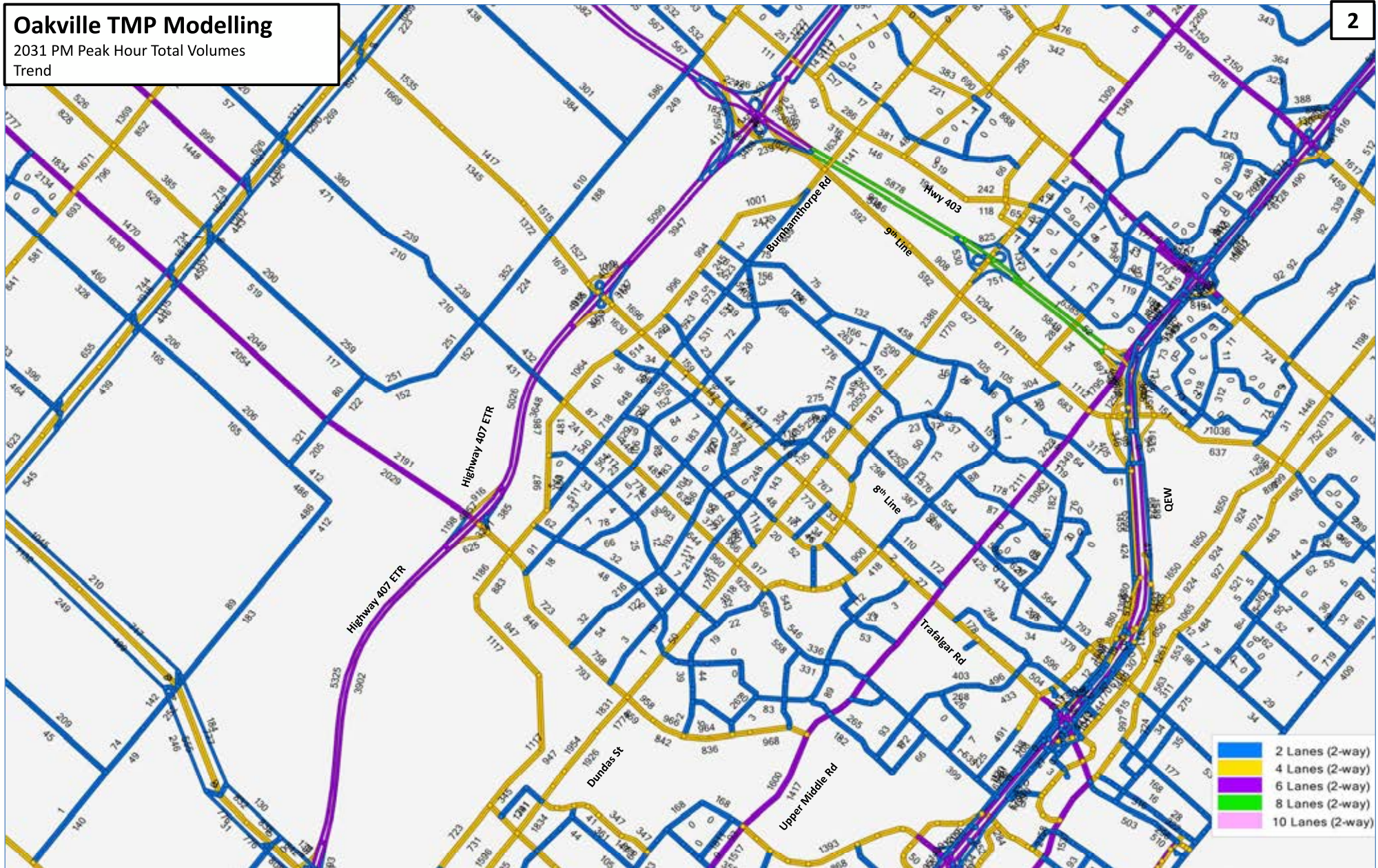
Oakville TMP Modelling

2031 PM Peak Hour Total Volumes
Trend



Oakville TMP Modelling

2031 PM Peak Hour Total Volumes
Trend



Oakville TMP-Base Case Scenario

AECOM
Screenline Deficiency Analysis

Oakville DC Modelling

HORIZON YEAR: 2031
Scenario: 31602
NETWORK:
TRANSIT:

2031 Eastbound/Westbound Screenline Deficiency Analysis

SL ID	Screenline	Eastbound					Westbound				
		PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required	PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required
100	East of Burloak Drive - Rebecca Street to Lakeshore Road	743	4	3,150	0.24	0	1,759	4	3,150	0.56	0
5	Bronte Creek South - QEW to Lakeshore Road	2,418	5	4,550	0.53	0	3,349	5	4,550	0.74	0
6	Bronte Creek North - Highway 407 ETR to QEW	12,722	11	15,800	0.81	0	16,786	11	15,800	1.06	4
102	East of Bronte Road - Rebecca Street to Lakeshore Road	1,313	3	2,200	0.60	0	1,379	3	2,200	0.63	0
104	East of Bronte Road - Wycroft Road to Speers Road	578	3	2,550	0.23	0	2,279	3	2,550	0.89	0
126	West of Third Line - Dundas Street to Upper Middle Road	3,526	7	5,650	0.62	0	3,879	7	5,650	0.69	0
128	West of Third Line - Upper Middle Road to North Service Road	1,698	6	4,100	0.41	0	2,276	6	4,100	0.56	0
105	West of Third Line - Rebecca Street to Lakeshore Road	1,198	3	2,200	0.54	0	1,939	3	2,200	0.88	0
106	East of Third Line - South Service Road to Bridge Road	1,233	4	3,250	0.38	0	1,816	4	3,250	0.56	0
107	East of Fourth Line - Speers Road to Pinegrove Drive	1,638	5	3,650	0.45	0	1,536	5	3,650	0.42	0
108	East of Fourth Line - Rebecca Street to Lakeshore Road	927	2	1,800	0.51	0	1,548	2	1,800	0.86	0
7	Oakville Creek North - Highway 407 ETR to Upper Middle Road	8,673	10	11,650	0.74	0	10,601	10	11,650	0.91	1
8	Oakville Creek South - QEW to Cornwall Road	8,671	6	8,700	1.00	1	10,182	6	8,700	1.17	3
7b	Oakville Creek South - Rebecca Street to Lakeshore Road	624	2	1,700	0.37	0	1,524	2	1,700	0.90	0
122	East of Neyagawa Boulevard - Dundas Street to Upper Middle Road	3,668	8	5,850	0.63	0	4,038	8	5,850	0.69	0
23	West of Sixth Line - Burnhamthorpe Road to Dundas Street	2,921	9	6,400	0.46	0	3,797	9	6,400	0.59	0
133	East of Sixth Line - NNOTC to Dundas Street	3,234	9	6,400	0.51	0	4,421	9	6,400	0.69	0
121	East of Sixth Line - Dundas Street to Upper Middle Road	4,056	8	6,050	0.67	0	4,812	8	6,050	0.80	0
120	East of Sixth Line - Upper Middle Road to QEW	9,252	10	11,150	0.83	0	10,644	10	11,150	0.95	1
72A	East of Trafalgar Road - Lower Baseline Road to Burnhamthorpe Road	5,170	7	8,750	0.59	0	7,700	7	8,750	0.88	0
72B	East of Trafalgar Road - Dundas Street to Upper Middle Road	3,983	8	6,250	0.64	0	4,944	8	6,250	0.79	0
72C	East of Trafalgar Road - Upper Middle Road to North Service Road	10,870	9	11,100	0.98	1	11,140	9	11,100	1.00	2
72D	East of Trafalgar Road - Burnhamthorpe Road to Dundas Street	2,859	7	4,600	0.62	0	3,304	7	4,600	0.72	0
134	East of Eighth Line - South Service Road to Cornwall Road	10,365	9	10,800	0.96	1	11,256	9	10,800	1.04	2
135	East of Eighth Line - Upper Middle Road to QEW	846	3	2,400	0.35	0	1,678	3	2,400	0.70	0
112	West of Chartwell Road - South Service Road to Maple Avenue	1,712	6	4,350	0.39	0	2,887	6	4,350	0.66	0
115	West of Ninth Line - Dundas Street to Upper Middle Road	3,339	6	4,850	0.69	0	5,345	6	4,850	1.10	2
113	West of Maple Grove Road - Royal Windsor Drive to Lakeshore Road	1,523	4	3,050	0.50	0	2,420	4	3,050	0.79	0
10	Oakville/Peel Border North - Dundas Street to QEW	8,312	10	10,850	0.77	0	9,206	10	10,850	0.85	0
9A	Oakville/Peel Border South - South Sheridan Way to Sheridan Garden Drive	713	3	1,850	0.39	0	547	3	1,850	0.30	0
9B	Oakville/Peel Border South - Cornwall Road to Lakeshore Road	1,693	4	3,700	0.46	0	2,707	4	3,700	0.73	0

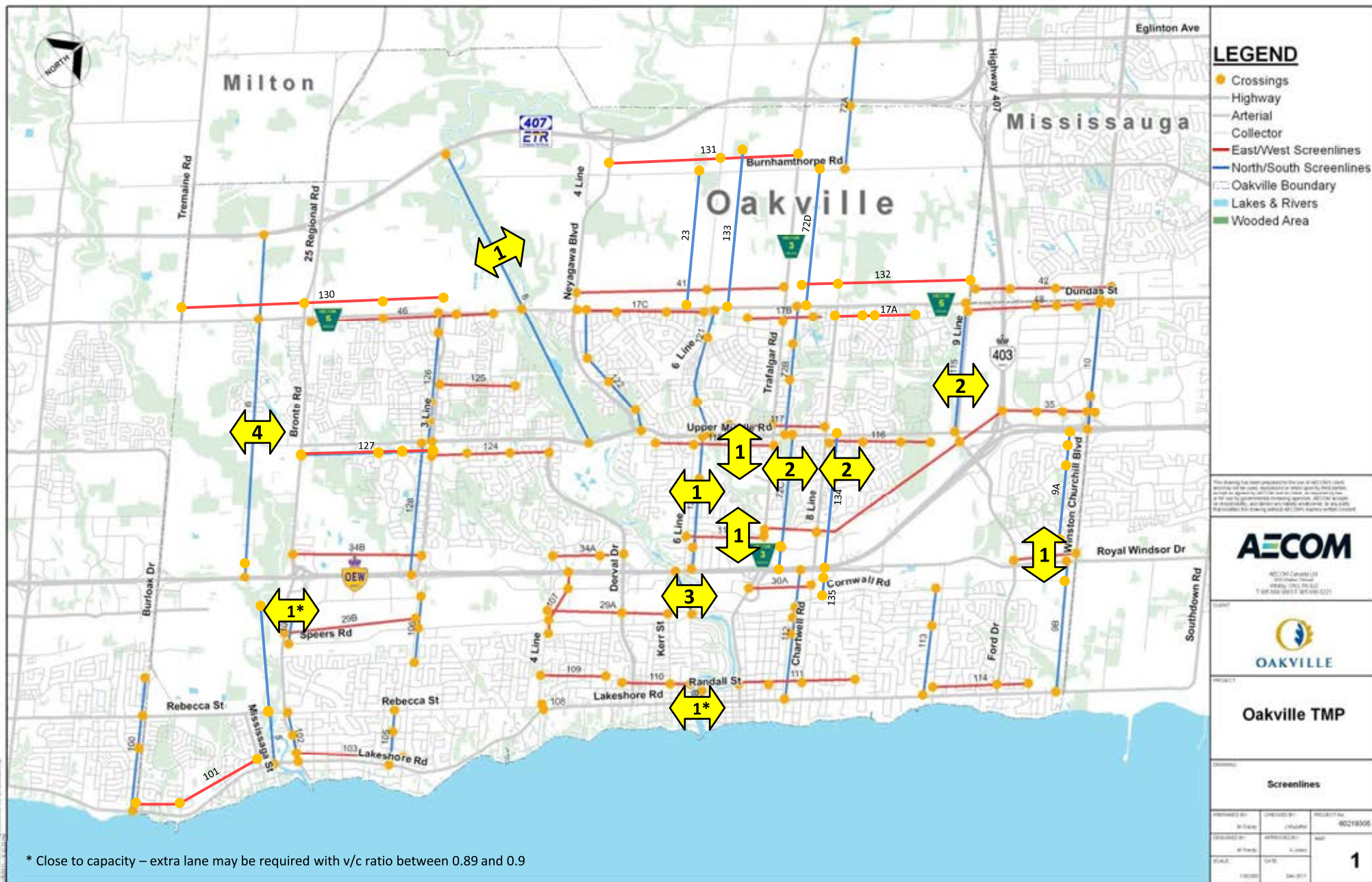
2031 Northbound/Southbound Screenline Deficiency Analysis

SL ID	Screenline	Northbound					Southbound				
		PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required	PM Peak Hour Forecasts	Number of Lanes	Total Capacity	V/C Ratio	Lanes Required
131	North of Burnhamthorpe Road/NNOTC - Neyagawa Boulevard to Trafalgar Road	4,054	6	5,300	0.76	0	3,908	6	5,300	0.74	0
130	North of Dundas Street - Tremaine Road to Third Line	3,461	9	7,150	0.48	0	4,330	9	7,150	0.61	0
41	North of Dundas Street - Neyagawa Boulevard to Trafalgar Road	4,365	11	8,050	0.54	0	4,532	11	8,050	0.56	0
132	North of Dundas Street - Postridge Drive to Ninth Line	2,565	6	3,700	0.69	0	1,688	6	3,700	0.46	0
42	North of Dundas Street - Ninth Line to Winston Churchill Boulevard	7,875	8	9,600	0.82	0	6,180	8	9,600	0.64	0
46	South of Dundas Street - Bronte Road to Proudfoot Trail	3,154	8	6,100	0.52	0	3,955	8	6,100	0.65	0
17C	South of Dundas Street - Neyagawa Boulevard to Sixth Line	2,334	6	4,400	0.53	0	2,374	6	4,400	0.54	0
178	South of Dundas Street - Oak Park Boulevard to Postridge Drive	1,287	6	4,300	0.30	0	1,366	6	4,300	0.32	0
17A	South of Dundas Street - Eighth Line to Meadowridge Drive	923	3	1,750	0.53	0	915	3	1,750	0.52	0
48	South of Dundas Street - Ninth Line to Winston Churchill Boulevard	9,366	11	11,450	0.82	0	7,874	11	11,450	0.69	0
125	North of Westoak Trails Boulevard - Third Line to Oakpoint Road	1,250	3	2,450	0.51	0	1,364	3	2,450	0.56	0
117	North of Upper Middle Road - Oakmead Boulevard to Eighth Line	2,667	4	3,050	0.87	0	1,878	4	3,050	0.62	0
127	South of Upper Middle Road - Third Line to Third Line	3,800	7	5,450	0.70	0	3,641	7	5,450	0.67	0
124	South of Upper Middle Road - Third Line to Dorval Drive	3,332	6	4,400	0.76	0	2,718	6	4,400	0.62	0
118	South of Upper Middle Road - Oxford Avenue to Trafalgar Road	2,820	4	2,700	1.04	1	1,855	4	2,700	0.69	0
116	South of Upper Middle Road - Eighth Line to Joshua's Creek Drive	1,008	4	2,400	0.42	0	914	4	2,400	0.38	0
119	North of Leighland Avenue - Sixth Line to Trafalgar Road	2,101	3	2,300	0.91	1	1,435	3	2,300	0.62	0
35	North of QEW - Trafalgar Road to Winston Churchill Boulevard	11,703	15	14,800	0.79	0	10,406	14	13,950	0.75	0
34B	North of QEW - Bronte Road to Third Line	3,778	5	4,550	0.83	0	3,212	5	4,550	0.71	0
34A	North of QEW - Nottinghill Gate to Dorval Drive	1,425	4	3,150	0.45	0	1,065	4	3,150	0.34	0
29B	CNR - Bronte Road to Third Line	2,761	5	4,550	0.61	0	2,917	5	4,550	0.64	0
29A	CNR - Fourth Line to Kerr Street	2,686	7	5,750	0.47	0	2,686	7	5,750	0.47	0
30A	CNR - Trafalgar Road to Chartwell Road	3,312	5	3,950	0.84	0	2,406	5	3,950	0.61	0
30B	CNR - Maple Grove Road to Winston Churchill Boulevard	3,310	4	3,600	0.92	1	1,804	4	3,600	0.50	0
109	North of Rebecca Street - Fourth Line to Morden Road	306	2	1,250	0.24	0	430	2	1,250	0.34	0
110	North of Rebecca Street - Dorval Drive to Queen Street	1,009	4	3,350	0.30	0	1,051	4	3,350	0.31	0
111	North of Lakeshore Road - Trafalgar Road to Morrison Road	459	5	3,000	0.15	0	877	5	3,000	0.29	0
114	North of Lakeshore Road - Maple Grove Drive to Devon Road	245	3	1,950	0.13	0	135	3	1,950	0.07	0
101	North of Lakeshore Road - Burloak Drive to Missisaga Street	181	3	2,150	0.08	0	276	3	2,150	0.13	0
102	North of Lakeshore Road - Bronte Road to Third Line	523	3	2,200	0.24	0	1,039	3	2,200	0.47	0

- Cap = 850
- = Extra Lanes Required with v/c ratio 0.90 - 0.99
- = Extra Lanes Required with v/c ratio 1.00 - 1.29
- = Extra Lanes Required with v/c ratio > 1.30
- = Close to capacity - Extra Lane may be required with v/c ratio 0.89 - 0.9

Oakville TMP Modelling - 2031 Screenline Lane Deficiencies

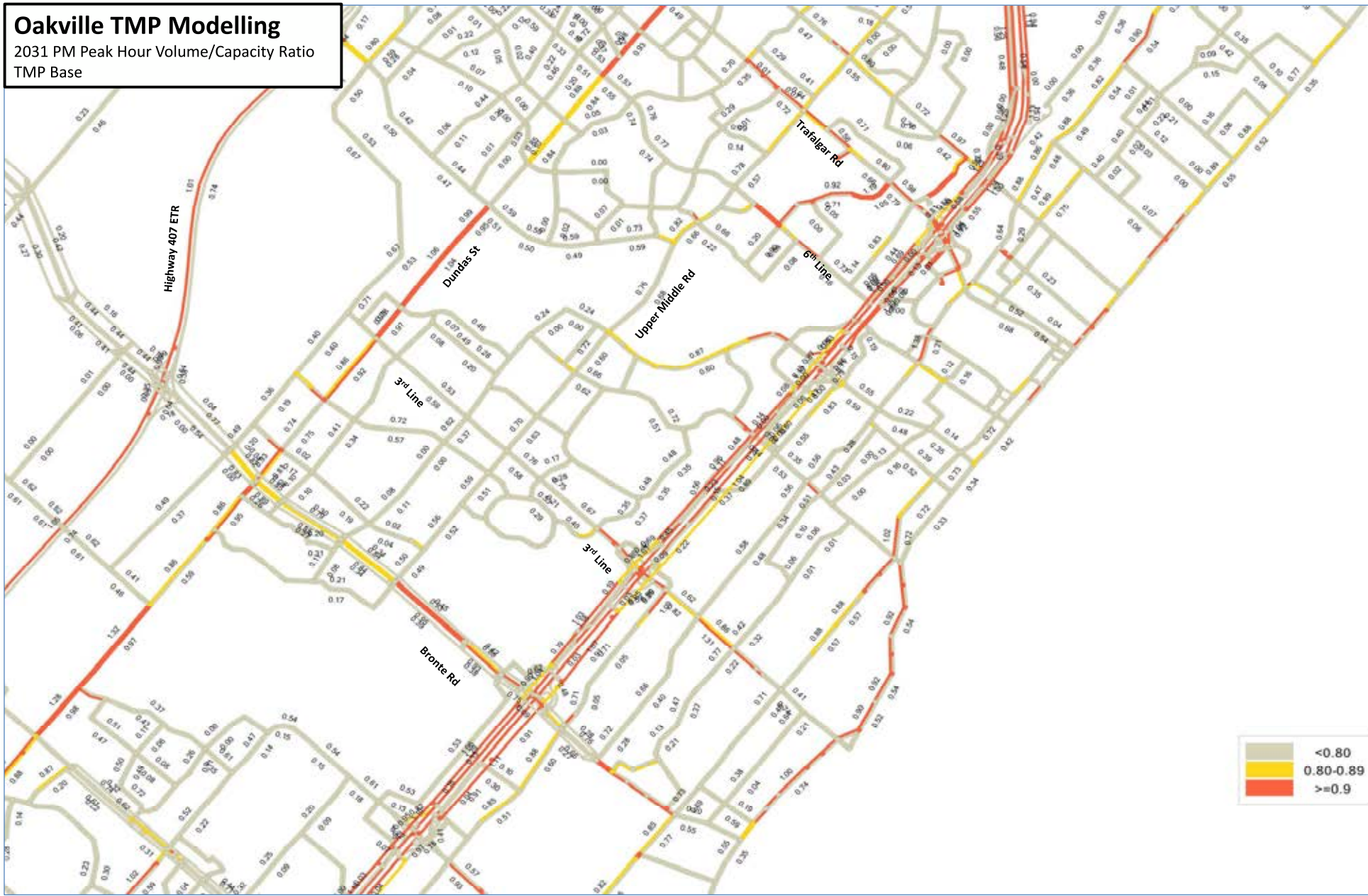
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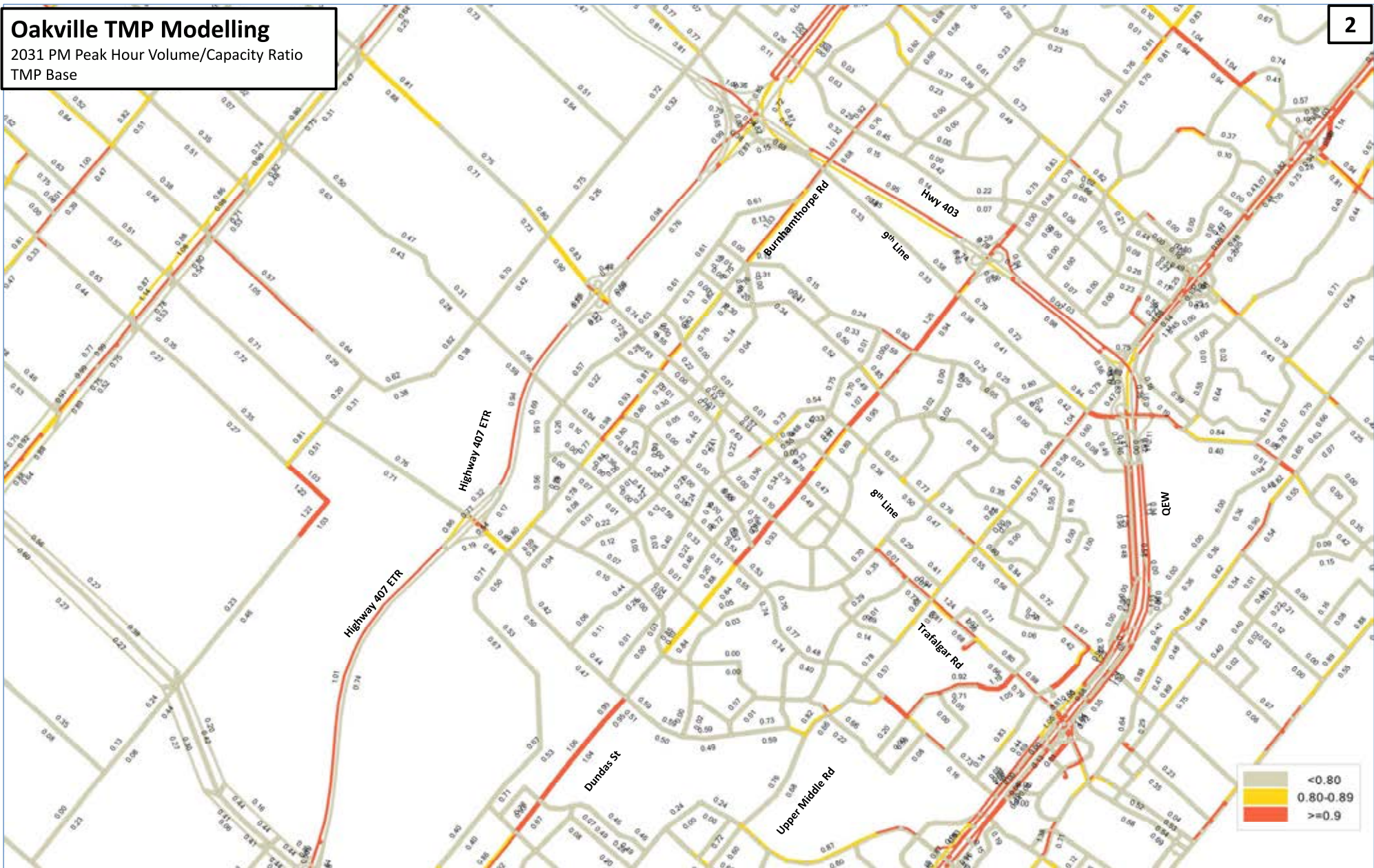
* Close to capacity – extra lane may be required with v/c ratio between 0.89 and 0.9

Oakville TMP Modelling

2031 PM Peak Hour Volume/Capacity Ratio
TMP Base

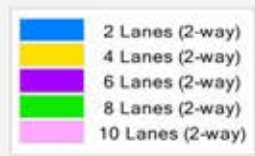
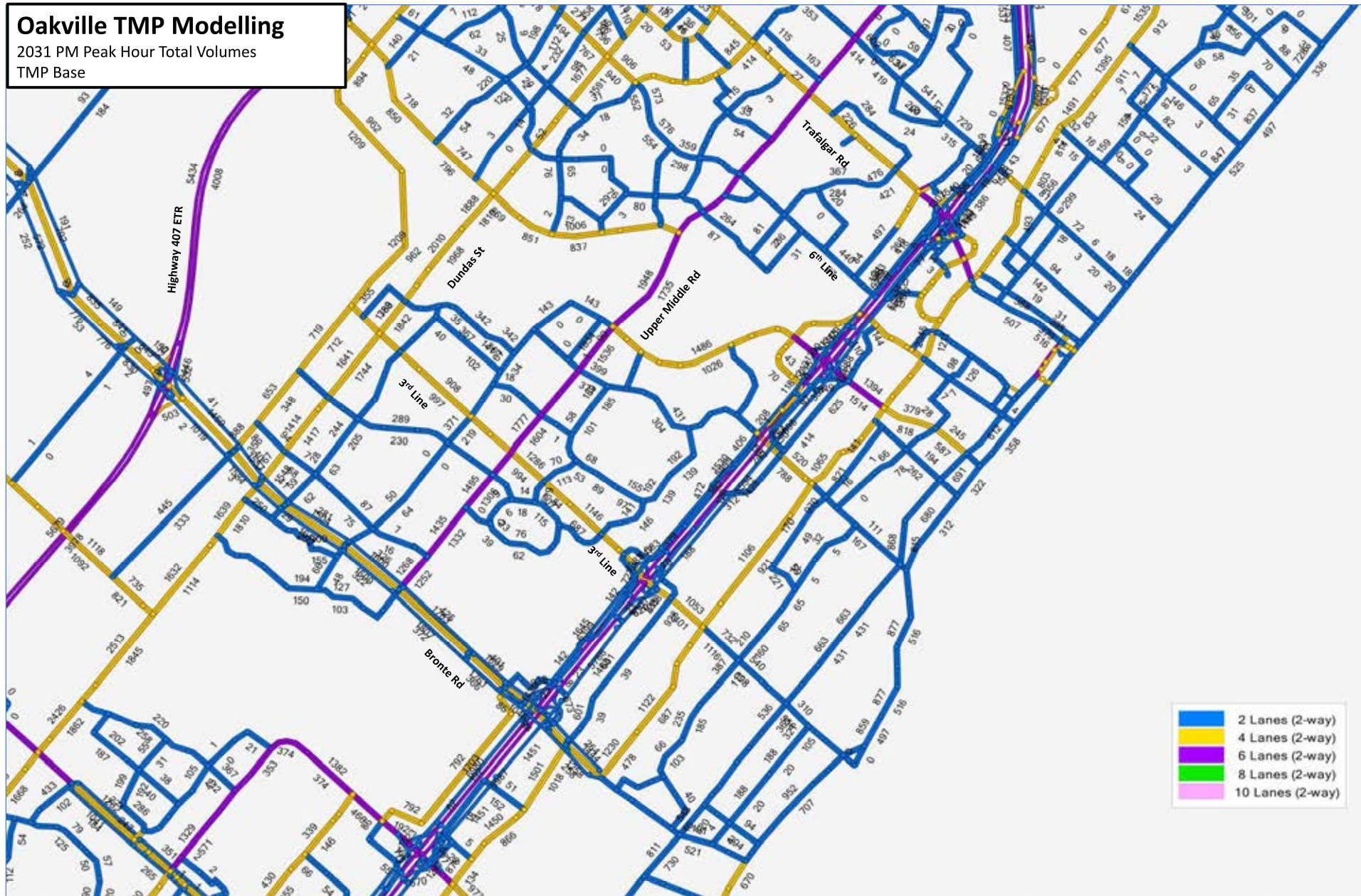


Oakville TMP Modelling
2031 PM Peak Hour Volume/Capacity Ratio
TMP Base



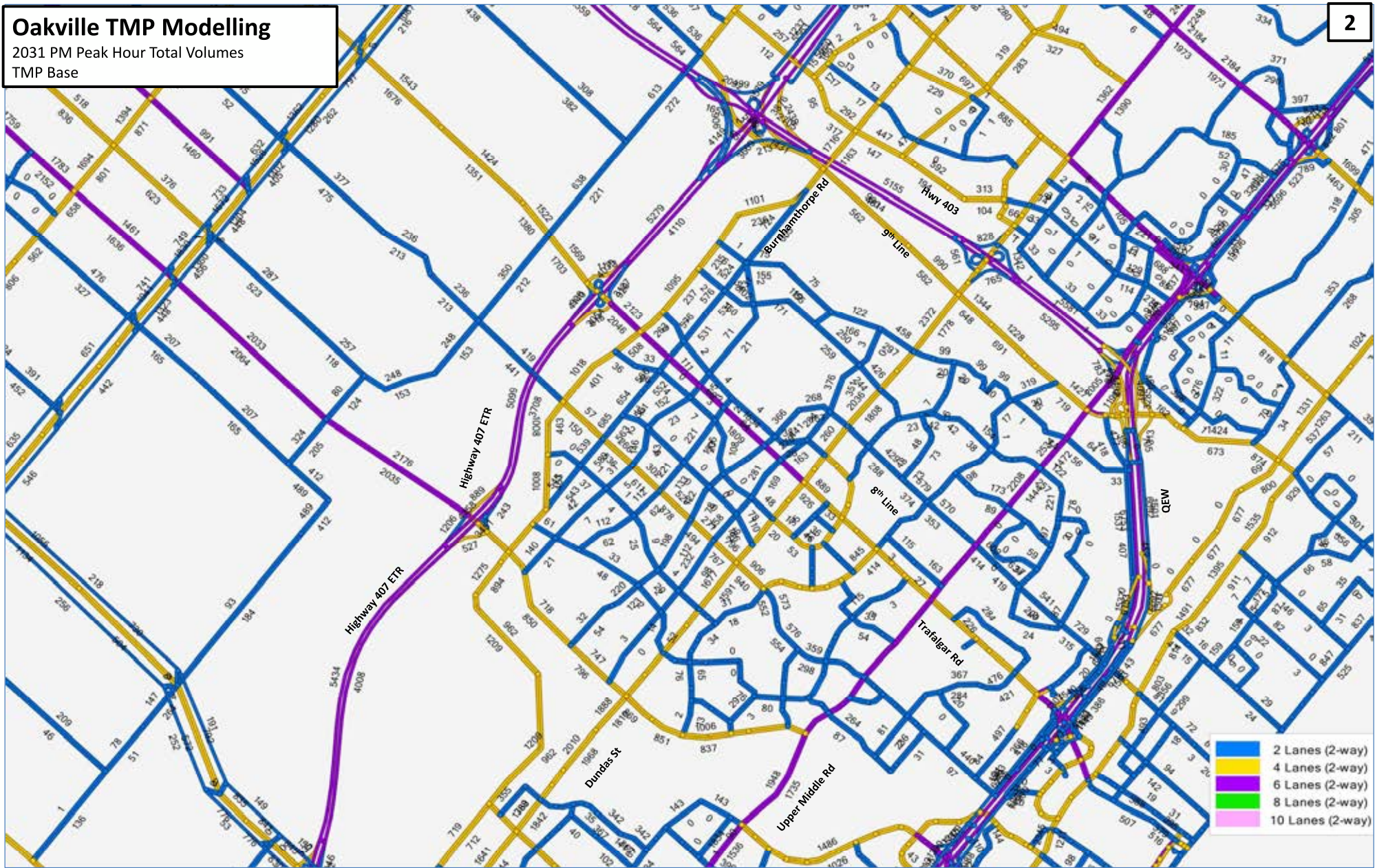
Oakville TMP Modelling

2031 PM Peak Hour Total Volumes
TMP Base



Oakville TMP Modelling

2031 PM Peak Hour Total Volumes
TMP Base

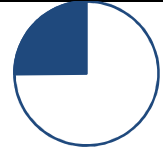

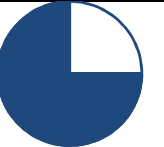
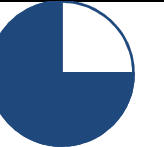
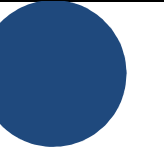
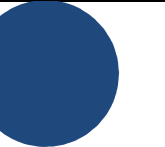


APPENDIX B

EVALUATION OF TRANSIT MODE SPLIT TARGET SCENARIOS

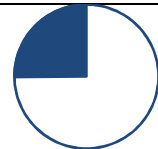
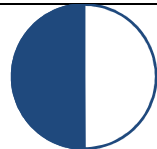
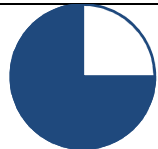
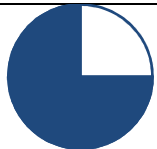
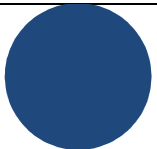
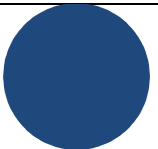


Assessment and Evaluation of Alternative Transit Mode Split Target Scenarios

Factor Group/Criteria	Measures	Baseline Scenario	Scenario A: Growth in AT and TDM	Scenario B: Growth in AT and TDM and Local Transit	Scenario C: Growth in AT and TDM, Higher Growth in Inter- Regional Transit	Scenario D: Growth in AT and TDM, Local Transit, Higher Growth in Inter-Regional Transit	Scenario E: Growth in AT and TDM, Local Transit, Higher Growth in Local Transit and Inter-Regional Transit
		AT = 3% TDM = 3% Local Transit = 1% Regional Transit = 5% Auto = 88%	AT = 6% TDM = 6% Local Transit = 1% Regional Transit = 5% Auto = 82%	AT = 6% TDM = 6% Local Transit = 3% Regional Transit = 5% Auto = 80%	AT = 6% TDM = 6% Local Transit = 1% Regional Transit = 7% Auto = 80%	AT = 6% TDM = 6% Local Transit = 3% Regional Transit = 9% Auto = 76%	AT = 6% TDM = 6% Local Transit = 6% Regional Transit = 10% Auto = 72%
Socio-Economic Environment							
Community Considerations	Ability to preserve, enhance, and protect the distinct character, living environment, and sense of community of neighbourhoods.	– Significant road improvements could affect character of community/ neighbourhoods.	– Significant road improvements could affect character of community/ neighbourhoods.	– Significant road improvements could affect character of community/ neighbourhoods.	– Less road improvements could affect character of community/ neighbourhoods.	– Less road improvements could affect character of community/ neighbourhoods.	– Less road improvements could affect character of community/ neighbourhoods.
Noise Pollution	Qualitative assessment to reduce or limit noise levels along noise sensitive areas.	– Higher auto trips contribute to higher noise levels, potentially in sensitive areas.	– Higher auto trips contribute to higher noise levels, potentially in sensitive areas.	– Moderate auto trips contribute to higher noise levels, potentially in sensitive areas.	– Moderate auto trips contribute to higher noise levels, potentially in sensitive areas.	– Lower auto trips contribute to higher noise levels, potentially in sensitive areas.	– Lower auto trips contribute to higher noise levels, potentially in sensitive areas.
Cultural and Built Heritage / Archaeology	Potential to impact cultural and built heritage resources or archaeological sites.	– High potential to impact cultural and build heritage resources and cultural sites with number of road improvements required.	– High potential to impact cultural and build heritage resources and cultural sites with number of road improvements required.	– Moderate potential to impact cultural and build heritage resources and cultural sites with number of road improvements required.	– Moderate potential to impact cultural and build heritage resources and cultural sites with number of road improvements required.	– Lower potential to impact cultural and build heritage resources and cultural sites with number of road improvements required.	– Lower potential to impact cultural and build heritage resources and cultural sites with number of road improvements required.
Summary of Socio-Economic Environment							



Assessment and Evaluation of Alternative Transit Mode Split Target Scenarios

Factor Group/Criteria	Measures	Baseline Scenario	Scenario A: Growth in AT and TDM	Scenario B: Growth in AT and TDM and Local Transit	Scenario C: Growth in AT and TDM, Higher Growth in Inter- Regional Transit	Scenario D: Growth in AT and TDM, Local Transit, Higher Growth in Inter-Regional Transit	Scenario E: Growth in AT and TDM, Local Transit, Higher Growth in Local Transit and Inter-Regional Transit
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Natural Environment							
Ecological Footprint	Qualitative assessment to reduce the Town's ecological footprint, and provide more densely populated areas.	- High potential for increase in Town's ecological footprint for required road widenings.	- High potential for increase in Town's ecological footprint for required road widenings.	- Moderate potential for increase in Town's ecological footprint for required road widenings.	- Moderate potential for increase in Town's ecological footprint for required road widenings.	- Lower potential for increase in Town's ecological footprint for required road widenings.	- Lower potential for increase in Town's ecological footprint for required road widenings.
Natural Heritage Features & Environmental Resources	Ability to preserve, enhance and protect the Town's environmental resources, natural features and areas, natural heritage systems and waterfronts.	- High potential to impact natural features and areas.	- High potential to impact natural features and areas.	- Moderate potential to impact natural features and areas.	- Moderate potential to impact natural features and areas.	- Lower potential to impact natural features and areas.	- Lower potential to impact natural features and areas.
Annual CO ₂ Emission Reduction	Quantitative assessment of the total network (tonne) -- compared to Baseline Scenario for 2031	- High potential impacts on air quality due to increased auto trip.	- Could reduce 692,837 tonne of CO ₂ annually.	- Could reduce 696,172 tonne of CO ₂ annually.	- Could reduce 826,958 tonne of CO ₂ annually	- Could reduce 831,524 tonne of CO ₂ annually	- Could reduce 835,673 tonne of CO ₂ annually.
Summary of Natural Environment							



Assessment and Evaluation of Alternative Transit Mode Split Target Scenarios

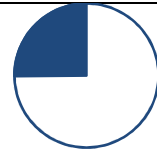
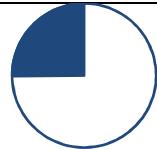
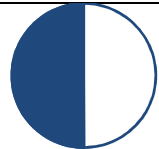
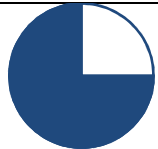

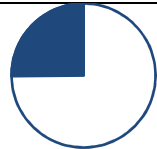
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Transportation							
Transit Operations and Attractiveness	Ability to provide sustainable and efficient transit operations to encourage alternative modes of travel.	– Low level transit operations; does not encourage alternative modes of travel.	– Low level transit operations and efficiency.	– Moderate level transit operations and efficiency.	– Moderate level transit operations and efficiency.	– Moderate level transit operations and efficiency.	– High level transit operations and efficiency.
Cycling and Pedestrian Accommodation	Ability to support existing and planned pedestrian and cycling facilities.	– Low level support for actively transportation facilities.	– High level support for actively transportation facilities.	– High level support for actively transportation facilities.	– High level support for actively transportation facilities.	– High level support for actively transportation facilities.	– High level support for actively transportation facilities.
Mobility and Accessibility	Provides choices for mobility by linking people and places with a sustainable transportation network consisting of roads, transit, walking and cycling trails.	– High emphasis on auto travel. – Low emphasis on local sustainable transportation methods.	– High emphasis on auto travel. – Low emphasis on local sustainable transportation methods.	– Moderate emphasis on auto travel. – Moderate emphasis on local sustainable transportation methods.	– Moderate emphasis on auto travel. – Low emphasis on local sustainable transportation methods.	– Lower emphasis on auto travel. – Moderate emphasis on local sustainable transportation methods.	– Lower emphasis on auto travel. – High emphasis on local sustainable transportation methods.
Savings in Total Vehicular delay (VHT) during 2031 PM Peak Hour	Quantitative assessment of the total network - compared to Baseline Scenario	–	– Could reduce the total vehicular delay by 13.7%.	– Could reduce the total vehicular delay by 13.8%.	– Could reduce the total vehicular delay by 15.6%.	– Could reduce the total vehicular delay by 15.7%.	– Could reduce the total vehicular delay by 15.7%.
Savings in Total Vehicle Km Travelled (VKT) during 2031 PM Peak Hour	Quantitative assessment of the total network - compared to Baseline Scenario	–	– Could reduce the total VKT by 7.4%	– Could reduce the total VKT by 7.5%	– Could reduce the total VKT by 8.8%	– Could reduce the total VKT by 8.9%	– Could reduce the total VKT by 8.9%
Safety	Potential qualitative assessment of the safety impacts to all transportation user types (auto, transit, cycling, pedestrian).	– Potentially greater safety issues with high number of auto trips, as well as low level active transportation trips.	– Potentially greater safety issues with high number of auto trips, as well as low level active transportation trips.	– Potentially reduced safety issues with moderate number of transit trips, as well as higher level active transportation trips.	– Potentially reduced safety issues with moderate number of transit trips, as well as higher level active transportation trips.	– Potentially lower safety issues with high number of transit trips, as well as higher level active transportation trips.	– Potentially lower safety issues with high number of transit trips, as well as higher level active transportation trips.
Feasibility	Ability to attain desired mode split.	– High potential to attain mode split goals by not investing in alternate modes of transportation.	– High potential to attain significant increase in AT/TDM.	– Moderate potential to attain significant increase in AT/TDM, significant increase in Local Transit, and moderate increase in Regional Transit.	– Moderate potential to attain significant increase in AT/TDM, no increase in Local Transit, and significant increase in Regional Transit.	– Moderate potential to attain significant increase in AT/TDM, significant increase in Local Transit, and significant increase in Regional Transit.	– Low potential to attain significant increase in AT/TDM, very significant increase in Local Transit and Regional Transit.

Assessment and Evaluation of Alternative Transit Mode Split Target Scenarios

Factor Group/Criteria	Measures	Baseline Scenario	Scenario A: Growth in AT and TDM	Scenario B: Growth in AT and TDM and Local Transit	Scenario C: Growth in AT and TDM, Higher Growth in Inter- Regional Transit	Scenario D: Growth in AT and TDM, Local Transit, Higher Growth in Inter-Regional Transit	Scenario E: Growth in AT and TDM, Local Transit, Higher Growth in Local Transit and Inter-Regional Transit
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Transportation							
Summary of Transportation							



Assessment and Evaluation of Alternative Transit Mode Split Target Scenarios

Factor Group/Criteria	Measures	Baseline Scenario	Scenario A: Growth in AT and TDM	Scenario B: Growth in AT and TDM and Local Transit	Scenario C: Growth in AT and TDM, Higher Growth in Inter- Regional Transit	Scenario D: Growth in AT and TDM, Local Transit, Higher Growth in Inter-Regional Transit	Scenario E: Growth in AT and TDM, Local Transit, Higher Growth in Local Transit and Inter-Regional Transit
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Cost							
Capital Costs	Qualitative assessment of cost of road infrastructure projects	– High cost for relatively greater number of road infrastructure projects.	– High cost for relatively greater number of road infrastructure projects.	– Moderate cost for relatively fewer number of road infrastructure projects.	– Moderate cost for relatively fewer number of road infrastructure projects.	– Low cost for relatively fewer number of road infrastructure projects.	– Low cost for relatively fewer number of road infrastructure projects.
	Qualitative assessment of cost of transit infrastructure projects	– Low cost for relatively fewer number of transit infrastructure projects.	– Low cost for relatively fewer number of transit infrastructure projects.	– Moderate cost for relatively greater number of transit infrastructure projects.	– Moderate cost for relatively greater number of transit infrastructure projects.	– High cost for relatively greater number of transit infrastructure projects.	– High cost for relatively greater number of transit infrastructure projects.
Affordability	Cost to Town for transit infrastructure projects.	– Low cost to Town for transit infrastructure projects.	– Low cost to Town transit infrastructure projects.	– Moderate cost to Town transit infrastructure projects.	– Moderate cost to Town transit infrastructure projects.	– Moderate cost to Town transit infrastructure projects.	– High cost to Town transit infrastructure projects.
	Cost to Developers for road and infrastructure projects.	– High cost to developers for road infrastructure projects.	– High cost to developers for road infrastructure projects.	– Moderate cost to developers for road infrastructure projects.	– Moderate cost to developers for road infrastructure projects.	– Moderate cost to developers for road infrastructure projects.	– Low cost to developers for road infrastructure projects.
Annual Fuel Cost Savings (Million \$)	Quantitative assessment of the total network - compared to Baseline Scenario for 2031	–	– Could result in annual savings of \$ 313 Million	– Could result in annual savings of \$ 314 Million	– Could result in annual savings of \$ 373 Million	– Could result in annual savings of \$ 375 Million	– Could result in annual savings of \$ 377 Million
Summary of Cost							



Summary Table

Factor Group/Criteria	Measures	Baseline Scenario	Scenario A: Growth in AT and TDM	Scenario B: Growth in AT and TDM and Local Transit	Scenario C: Growth in AT and TDM, Higher Growth in Inter- Regional Transit	Scenario D: Growth in AT and TDM, Local Transit, Higher Growth in Inter-Regional Transit	Scenario E: Growth in AT and TDM, Local Transit, Higher Growth in Local Transit and Inter-Regional Transit
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Summary of Socio-Economic Environment							
Summary of Natural Environment							
Summary of Transportation							
Summary of Cost							



APPENDIX C

PUBLIC INFORMATION CENTRE (PIC) SUMMARIES





OAKVILLE

**TOWN OF OAKVILLE
TRANSPORTATION MASTER PLAN (TMP)
UPDATE - 2017**

**PUBLIC INFORMATION CENTRE #1
SUMMARY BRIEF**

MAY 17, 2017



Project Team Members in Attendance	Jill Stephen – Town of Oakville Lin Rogers – Town of Oakville Kyle Martinho – Town of Oakville Neil Ahmed – WSP Keyur Shah – WSP Sandy Nairn – WSP Dawn McKinnon – WSP Ridhita Ghose – WSP
External Agencies and Interest Groups (i.e., businesses, elected officials, etc.)	<ul style="list-style-type: none"> • Nick Hutchins (Ward 3 Councillor) • Oakville Cycling Club (OCC) • Cycle Oakville • Halton Region • Livable Oakville Cycling • Halton Environmental Network (HEN)
Newspapers / Media	None
List of displays	<ol style="list-style-type: none"> 1. Welcome 2. What is the Switching Gears 2017 Update? 3. How will the TMP be updated? 4. Highlights since Switching Gears 2013 (1 of 2) 5. Highlights since Switching Gears 2013 (2 of 2) 6. Oakville's Transit Commitment 7. Funding of Transit Services and Infrastructure Improvements 8. Why are we here today? 9. Factors for Assessment of Mode Split Alternatives 10. Switching Gears 2013 – Mode Split Targets 11. Alternative Transit Mode Split Targets for 2031 12. Possible Benefits and Impacts 13. Topics for Discussion 14. Next Steps, Staying in Touch, Thank You
Number of people who signed in at visitor register	9 people signed in. 10 people attended.
Number of comment sheets received	2
<i>Quick PIC Summary</i>	Completed By: Dawn McKinnon

The first Public Information Centre (PIC #1) for the Town of Oakville's 2017 Transportation Master Plan (TMP) Update was held on Wednesday, May 17, 2017 in the Oakville Trafalgar Room at Town Hall (304-1235 Trafalgar Road, Oakville, Ontario). The drop-in style, open house session took place from 6:00 p.m. to 8:00 p.m. A brief presentation was provided at 6:30 p.m. During the presentation, 10 attendees were present.

Notification of Study Commencement and PIC #1 occurred through newspaper advertisements in the Oakville Beaver on May 4th and 11th. The advertisement was also placed on the Town's website at <http://www.oakville.ca/townhall/switching-gears-tmp.html>.

Direct notifications were mailed to contacts on the project contact list (including agencies, municipalities, and members of the public).

PIC #1 Overview and Summary of Comments

Attendees were offered a comment sheet at the welcome desk. Two (2) comment sheets were submitted at the PIC. The Project Team requested comments be submitted by Friday, June 2nd, 2017. No further comments were submitted.

The PIC panel titled 'Topics for Discussion' provided an interactive opportunity for PIC attendees to place adhesive dots and/or write notes directly on the panel or on copies of the Town's Community and Transit Map and / or Midtown Oakville Plan, which were made available for input and discussion purposes.

The key comments received at PIC #1 are summarized as follows:

- **Thoughts on congestion:**
 - Comment that an added crossing over 16 Mile Creek, south of the QEW is required to accommodate mid-town growth and provide more crossing redundancy at the creek.
- **Thoughts on transit:**
 - Reintroduce bus line #2. It would help the residents travel from Lakeshore Road East to downtown.
 - There should be buses that run along Ford Drive / Ninth Line. People are forced to drive 5 minutes away to work instead of taking a bus.
 - Bus service to Royal Windsor Drive and general provision for walking there is not conducive to using transit.
- **Thoughts on Road Widening:**
 - Resident on Upper Middle concerned about potential road widening/property impacts.
 - More road capacity required westbound direction.
 - Widen Speers Road with bike lanes.
 - This is a misleading question – 'Induced Demand' building more roads for cars = more cars. Increased cycling lanes = people getting out of cars.
 - Widen roads with bike lanes only.
- **Other:**
 - What about adding sidewalks on Ford Drive / Ninth Line? It is very dangerous walking along these dark roads at night, and going to and from work.
 - Ford Drive / Ninth Line also need more/better lighting.
 - Can the town have more small buses running more often instead of having large empty buses running?
 - When is rapid transit coming to Oakville?
 - Why are large transport trucks allowed into downtown Oakville? In Europe they are broken down and goods distributed by smaller trucks and vans.
 - Large transport trucks mixing with cyclists on roads like Rebecca Street is very dangerous.
 - There was miscommunication that the TMP Update process was not addressing cycling in a more fulsome way.

The graphic on the following page provides a representation of the interactive 'Topics for Discussion' panel after PIC attendees placed blue, round stickers to represent their thoughts on congestion, transit and road widening.

Topics for Discussion

Put your dots somewhere between the two answers provided, based on how relevant you feel they are.

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Thoughts on Congestion

How bad is congestion in the town?	Very Bad	● ●	None at All
How would you prefer to deal with congestion?	More Non-Auto Trips	● ● ● ●	Wider Roads

Thoughts on Transit

What would it take to get you to take transit on a daily basis?	Cheaper	● ●	More Convenient ●
Ride sharing is a growing trend. Would you consider a ride sharing program such as <u>Uber</u> , in your daily commute?	Very Much So		No Way ● ●
How much does the fare factor into your decision to take transit?	A lot	●	None ● ●
What do you think the percentage of total transit trips will be in 15 years?	5%		50% ● ●

Thoughts on Road Widening

Would you prefer to invest in widening roads with more lanes, or better transit?	● ● Transit	Wider Roads/ More Lanes ●
What roads do you think could be widened to relieve congestion? <i>(Write a road or put dot next to one.)</i>		



OAKVILLE

**TOWN OF OAKVILLE
TRANSPORTATION MASTER PLAN (TMP)
UPDATE - 2017**

**PUBLIC INFORMATION CENTRE #2
SUMMARY BRIEF**

OCTOBER 26, 2017



Project Team Members in Attendance	Jill Stephen – Town of Oakville Lin Rogers – Town of Oakville Anil Paul – Town of Oakville Neil Ahmed – WSP Keyur Shah – WSP Dawn McKinnon – WSP Zach Wang – WSP
External Agencies and Interest Groups (i.e., businesses, elected officials, etc.)	<ul style="list-style-type: none"> • Dave Gittings (Ward 3 Councillor) • 407 ETR • Halton Region • Oakville Cycling Club (OCC) • Cycle Oakville • Trafalgar Chartwell Residents' Association (TCRA)
Newspapers / Media	None
List of displays	<ol style="list-style-type: none"> 1. Welcome 2. What is the Switching Gears 2017 Update? 3. TMP Update Process 4. Highlights since Switching Gears 2013 (1 of 2) 5. Highlights since Switching Gears 2013 (2 of 2) 6. Oakville's Transit Commitment 7. Funding of Transit Services and Infrastructure Improvements 8. Why are we here today? 9. Factors for Assessment of Mode Split Alternatives 10. Switching Gears 2013 – Mode Split Targets 11. Alternative Transit Mode Split Targets for 2031 12. Transportation Network Assessment 13. Evaluation of Alternative Transit Mode Split Targets 14. On-Line Survey Results (1 of 2) 15. On-Line Survey Results (2 of 2) 16. 2031 Capacity Deficiencies: Scenario D 17. Preliminary Recommended Network Improvements 18. Summary 19. Next Steps & Staying in Touch
Number of people who signed in at visitor register	24
Number of comment sheets received	0
<i>Quick PIC Summary</i>	Completed By: Dawn McKinnon

The second Public Information Centre (PIC #2) for the Town of Oakville's 2017 Transportation Master Plan (TMP) Update was held on Thursday, October 26, 2017 in the Bronte and Palermo Rooms at Town Hall (1225 Trafalgar Road, Oakville, Ontario). The drop-in style, open house session took place from 6:00 p.m. to 8:00 p.m.

In advance of the public session, based on invitations as distributed, staff from Halton Region attended a Technical Advisory Committee "drop in" meeting, open from 3:30 p.m. to 4:30 p.m. This session provided an overview of the evaluation of transit target scenarios and draft recommendations for the transit mode split targets and identified preliminary road network improvements for 2031.

Notification of Study Commencement and PIC #2 occurred through newspaper advertisements in the Oakville Beaver on October 12 and 19, 2017. The advertisement was also placed on the Town's website at https://www.oakville.ca/townhall/pn-17oct12_01.html.

Direct notifications were mailed to contacts on the project contact list (including agencies, municipalities, and members of the public), including those who completed the recent TMP Update online survey and those who attended PIC #1.

PIC #2 Summary of Key Comments

Attendees were offered a comment sheet at the welcome desk, however, none were returned. A summary of key verbal comments received at PIC #2 are summarized as follows:

- Concerns related to pedestrian and cyclist safety at busy street crossings, especially when it's dark out
- Request that the Town consider incorporating additional outdoor physical activity opportunities, such as a walking track, at destinations such as the community centre and park planned at the former Oakville Trafalgar Memorial Hospital site
- Support for where the town is headed with regards to increasing transit use in the near and longer term
- Support for additional transit and bike lanes
- Interest in an AT crossing of Sixteen Mile Creek
- Interest in timing of implementation of planned improvements
- Suggestion to motivate people to try transit, such as a "free" day
- Suggestion to provide bus service improvements to existing GO stations to improve travel times
- Concern about poor bus ridership and inherent high cost to tax payers
- Concern with multi use paths or other cycle tracks/lanes through areas with private driveways
- Concern with cycling in areas where cars parked in boulevard sections of driveways (visibility issues)

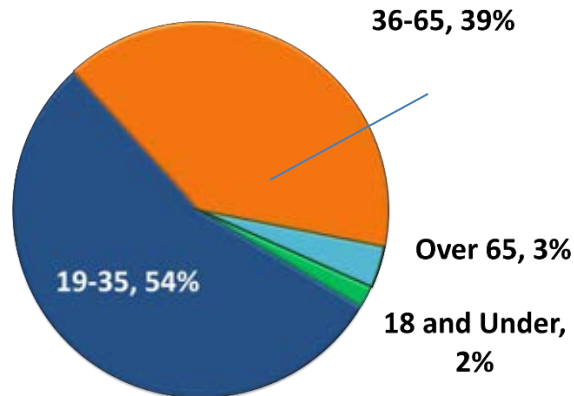
APPENDIX D

SUGGESTIONS FROM ONLINE POLL



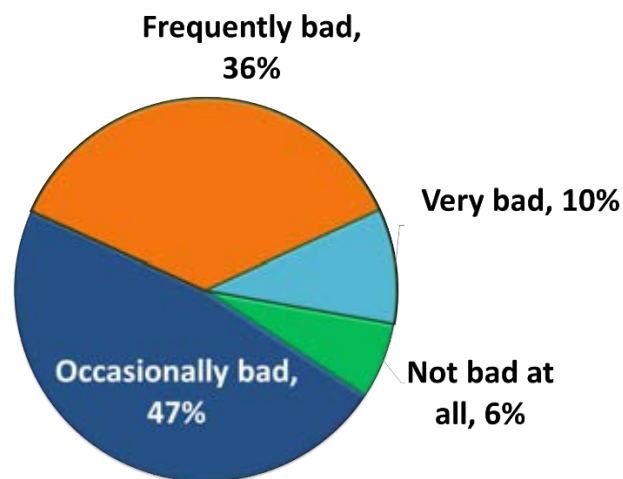
Summary of Online Poll Results

Age Groups



Of the 487 people surveyed, the majority were from the age of 19-35 (54%). 39% were from the ages of 36-65, while respondents under 18 and over 65 account for 2% and 3% respectively.

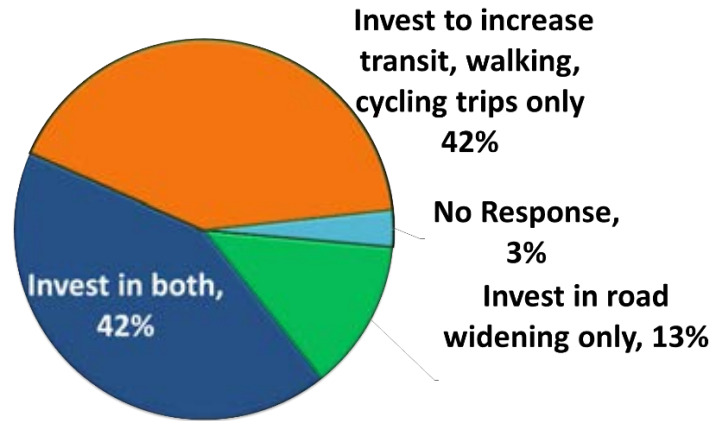
How bad is road congestion in the town?



In regards to the general condition of road congestion in the town, 47% of respondents say it is "occasionally bad", while 36% say it is "frequently bad". 10% say it is "very bad" while 6% feel it is "not bad at all".

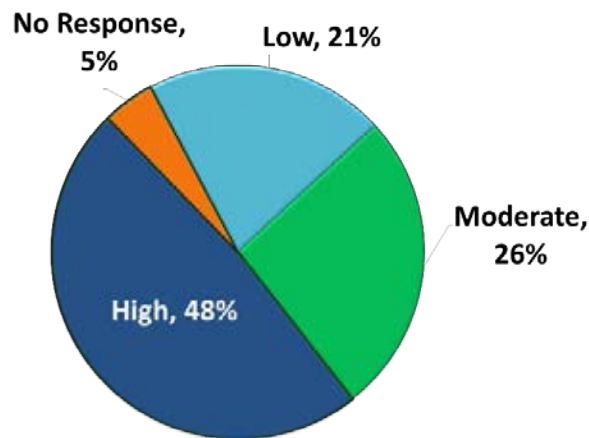


How would you prefer to deal with road congestion in the future?



In regards to dealing with road congestion, 42% of respondents prefer investing in active transportation and public transit exclusively, while 13% of respondents would like to see investments to only widening roads. Another 42% would like to see investments into both, while the remaining 3% did not respond.

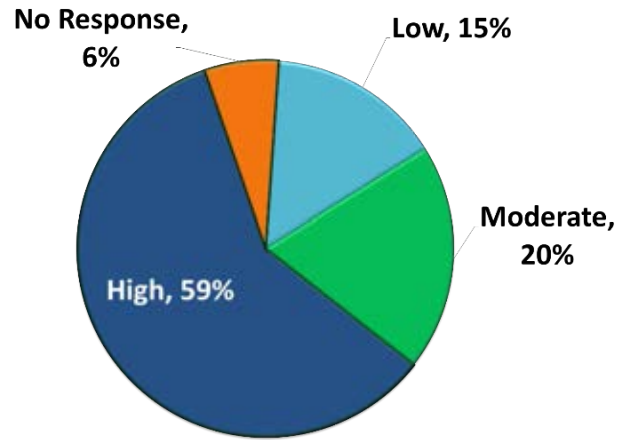
How much impact will cheaper fares have on your use of transit?



When asked about how cheaper transit fares will increase their use of transit, 48% of respondents say it will have a high impact, 26% say a moderate impact, while 21% say it will have a low impact. 5% of poll respondents did not provide a response.

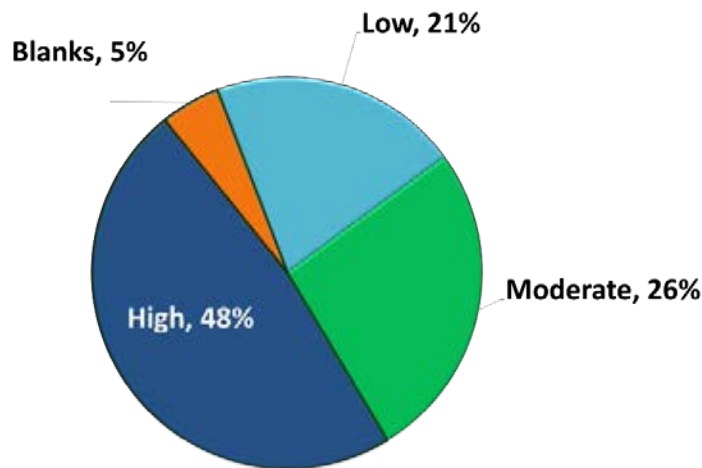


How much impact will service expansions have on your use of transit?



59% of respondents say that an expansion in services will have a high impact on their use of transit, while 20% say it will have a moderate amount of impact. 15% of respondents say the impact will be low, while 6% did not provide a response.

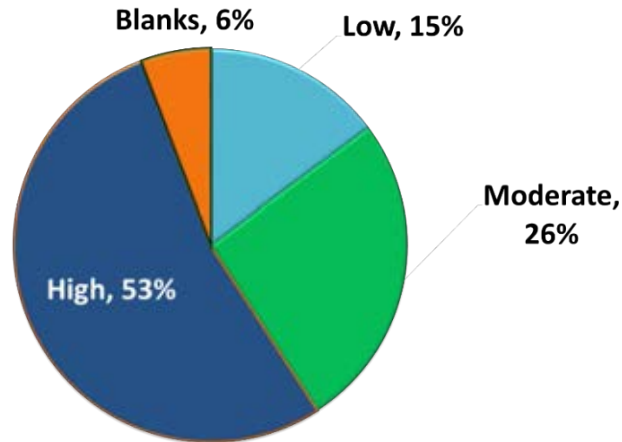
How much impact will better connectivity to GO have on your use of transit?



When asked about the impact of better GO Transit connections on use of local transit, 48% of respondents say it will have a high impact, 26% say it will have a moderate impact while 21% say a low impact. 5% of respondents did not provide a response.

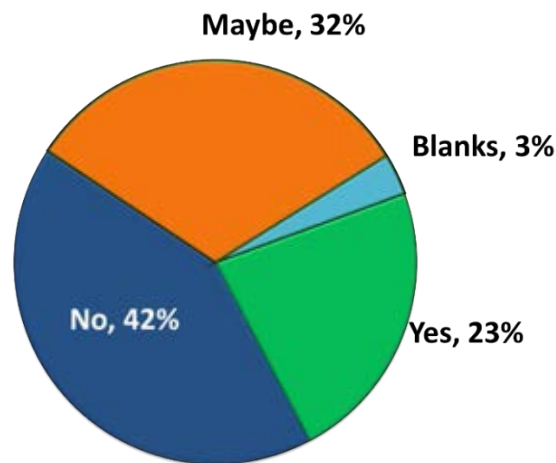


How much impact will improved services have on your use of transit?



When asked about the impact of improved services on use of local transit, 53% of respondents say it will have a high impact, 26% say it will have a moderate impact while 15% say a low impact. 6% of respondents did not provide a response.

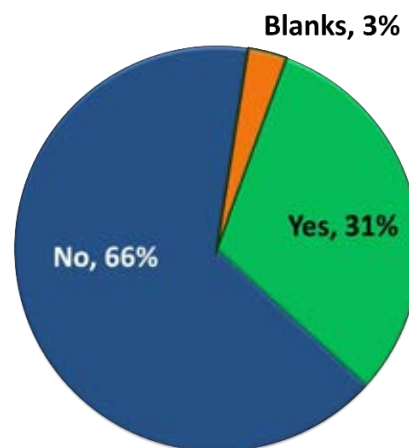
Would you consider a ride sharing program?



23% of poll respondents are willing to consider a ride sharing program in their commutes, while 42% are not. 32% may be willing to consider using ride sharing, while 3% did not respond.

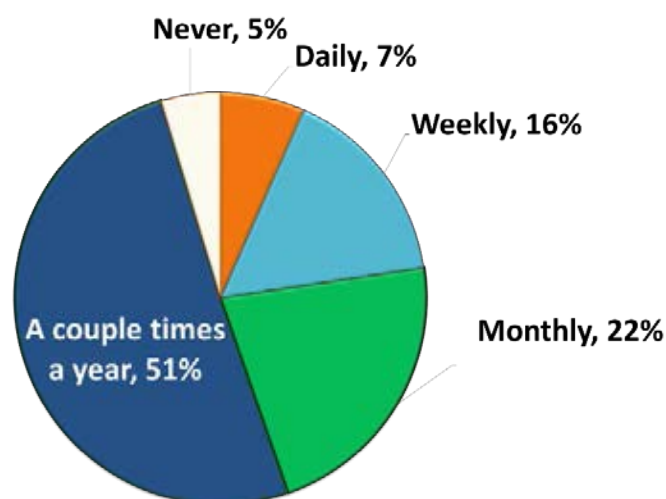


Have you used a ride sharing program?



When asked about their experiences with ride sharing programs (e.g. UBER), 31% of respondents say they have used it in the past, while 66% have not. 3% of respondents did not respond.

How often do you use ride sharing?



In the respondents that have used ride sharing in the past, 51% of them use it a couple of times a year, 22% use it monthly, 16% weekly and 7% use it daily.



Summary of Online Poll Comments

Road Infrastructure

- Extend advanced green on Dundas St. turning onto Neyagawa Blvd.
- Increase Dundas St. to higher speed (70 km/h-80km/h) zone.
- Signal coordination on corridors and intersections (e.g. Trafalgar turning onto Dundas, Neyagawa & Upper Middle, Wycroft & Dorval)
- Increased red light camera monitoring
- Invest into widening roads to increase capacity
- Invest into widening roads for Complete Streets design concepts
- Increase number of bridge crossings as opposed to widening existing bridges
- Increase number of continuous roads through the town
- Increase number of speed bumps and stop sign (e.g. Old Abbey Road needs at Parkridge Crescent Junction.)
- Develop ways to address the congestion on the QEW
- Address congestion on Sixth Line which occurs due to proximity to school zones
- Many roads are in poor conditions and need repair (e.g. Trafalgar Rd.)
- Construction of wider arterial roads will damage the Town's "character"
- Construct sound barriers for houses near major roads
- Increase options for inter-regional commutes (e.g. to and from Brampton and Mississauga)

Transit

- Promote active transportation options near GO Transit
- Frequent and improved transit services (e.g. coordination with GO Transit at Oakville GO Station, more frequent services, late night transit, better adherence to posted schedule)
- Provide more accessible transit for seniors and people with disabilities
- Adjust fares to match short distance commutes
- Electric signs need to be more informative (e.g. Indicate direction of travel)
- Provide free transit for college students and seniors
- Improve the Oakville transit app to show more accurate information
- Reduced transit costs (i.e. taxes) for non-transit users.
- Transit should have self-sufficient funding (e.g. through privatisation or higher fares).
- Clear snow piles near sidewalks during winter to allow passengers to board and exit buses.



Active Transportation

- Provide more separated and continuous bike lanes (e.g. Along Trafalgar and Dundas).
- Reduce car oriented developments and promote walkability
- Sidewalks should be cleared and salted more frequently during winter for walkability

Future Developments

- Stop development in regions where infrastructure cannot support existing traffic
- Reduce population density and stop developments that increase it
- Reduce or cancel the developments in Glen Abbey
- Focus on major Growth Hubs as opposed to spreading out development

Alternative Transportation Methods

- Consider impacts of autonomous vehicles in future decades
- Ride sharing is expensive for regular usage
- Uber is used due to infrequent transit services
- Ride sharing should be encouraged as single occupancy vehicles are inefficient



APPENDIX E
TECHNICAL AGENCIES COMMITTEE (TAC)
MEETING MINUTES





MEETING NOTES

DRAFT

JOB TITLE	Switching Gears 2017 – Transportation Master Plan Update, Town of Oakville	
PROJECT NUMBER	16M-01412-01	
DATE	18 July 2017	
TIME	2:00 p.m. to 3:00 p.m.	
VENUE	Trafalgar Room, Town Hall, Town of Oakville	
SUBJECT	TAC Meeting 1: Switching Gears 2017- TMP Update	
CLIENT	Town of Oakville	
ATTENDEES	Lin Rogers Jill Stephen <u>Subina Mérey</u> Branko Zivkovic Dan Ridgway Melissa Green-Battiston Wen Xie Kendra Willard Suzan <u>Burwells</u> Neil Ahmed Keyur Shah	Town of Oakville Town of Oakville MTO MTO Halton Hills Halton Region Halton Region Halton Region (Health) Halton District School Board WSP WSP
DISTRIBUTION	Attendees	

MATTERS ARISING	ACTION
1.0 PROJECT INTRODUCTION AND PRESENTATION – L. Rogers provided a brief introduction to the study. – N. Ahmed presented the study description, study procedure, various projects highlights since the completion of <i>Switching Gears 2013</i> , travel demand modeling results for various transit mode split targets and a preliminary list of criteria for evaluation of alternatives. Presentation slides used at this meeting are attached to these minutes.	
2.0 PROJECT DISCUSSION – M. Green-Battiston inquired about the transit mode targets expected for the future 2031 Conditions. The Town noted that transit mode split targets identified under Scenario D – (3% for the trips conducted ‘within the Oakville’ and 9% trips conducted ‘to/from Oakville’) are being considered for the interim conditions of 2031. The 20% transit mode split target identified under the previous TMP is still the goal, however, it is considered to be beyond 2031. The interim target reflects the current fiscal conditions. The subsequent complete TMP update will be conducted based on new BPEs, updated Livable Oakville,	

MEETING NOTES

<p>Growth Plan, new RTP, and future transportation and transit conditions including Automated Vehicles.</p> <ul style="list-style-type: none">– M. Green-Battiston inquired about the criteria used for the screenline assessment. The Town noted that volume to capacity ratio of 0.9 is considered for the screenline assessment.– D. Ridgway inquired if TMP Update will identify the transit service improvement requirements for 2031 conditions? The Town noted that the previous recommendations identified in the 2012 TMP are still valid and the Town will continue to implement those recommendations. The current TMP Update is a high-level policy document and this information will be used for the transit service review study.– K. Willard inquired why travel demand analysis for the TMP was conducted for the PM (afternoon) peak hour. WSP noted that the travel demand model developed for the Halton Region was utilized for the analysis, which was developed to simulate the afternoon peak hour. Traffic volumes in the afternoon peak hour are generally higher than morning peak hour, and therefore, the demand model may have been developed for the afternoon peak hour conditions.– WSP responded to W. Xie inquiry that the travel demand model may be considering a flat rate of transit mode shares for all the TAZs within the Town.– S. Mérey inquired if any assessment for the Provincial Highways is conducted for the future conditions? The Town noted that the proposed improvements identified for the Provincial Highways including Highway 403 improvements were included in the demand model as identified in the TESR. The provincial corridors were also included in the screenline analysis, however, a detailed assessment for the Provincial Highways was not conducted for the TMP Update.– The Town responded to B. Zivkovic's inquiry that Midtown improvements (as identified in Midtown EA Study) are considered for all the future 2031 scenarios. The other recommended improvements from the previous TMP are also considered for the future 2031 scenarios.	
<p>3.0 STUDY SCHEDULE /UPCOMING MEETINGS</p> <ul style="list-style-type: none">– J. Stephen presented upcoming key meeting dates for the study.	

These minutes are considered to be accurate recording of all items discussed. Written notice of discrepancies, errors or omission must be given within seven (7) days, otherwise the minutes will be accepted as written.