



Teston Road Environmental Assessment Study

250 m west of Pine Valley Drive and Kleinburg
Summit Way

Transportation and Traffic Analysis Report

City of Vaughan

October 7, 2020



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1 Introduction

HDR has been retained by the City of Vaughan to undertake a Schedule ‘B’ Class Environmental Assessment (EA) for the Teston Road corridor between 250 m west of Pine Valley Drive and Kleinburg Summit Way. This EA study will focus on identifying improvements to address transportation needs for pedestrians, cyclists, transit users and motorists.

1.1 Background

Teston Road is a two-lane rural major arterial roadway with one lane in each direction. Teston Road within the study area (shown in **Figure 1-1**) is under the jurisdiction of the City of Vaughan. The study area crosses four planning blocks of the City of Vaughan including blocks 47, 48, 54, and 55. Within the study area, Teston Road currently faces several safety and operational issues such as narrow unpaved shoulders with restricted clear zones, hidden driveways, pavement deterioration, speeding and run-off-road collisions, adherence to stopping sight distance requirements, and lack of pedestrian and cycling facilities.

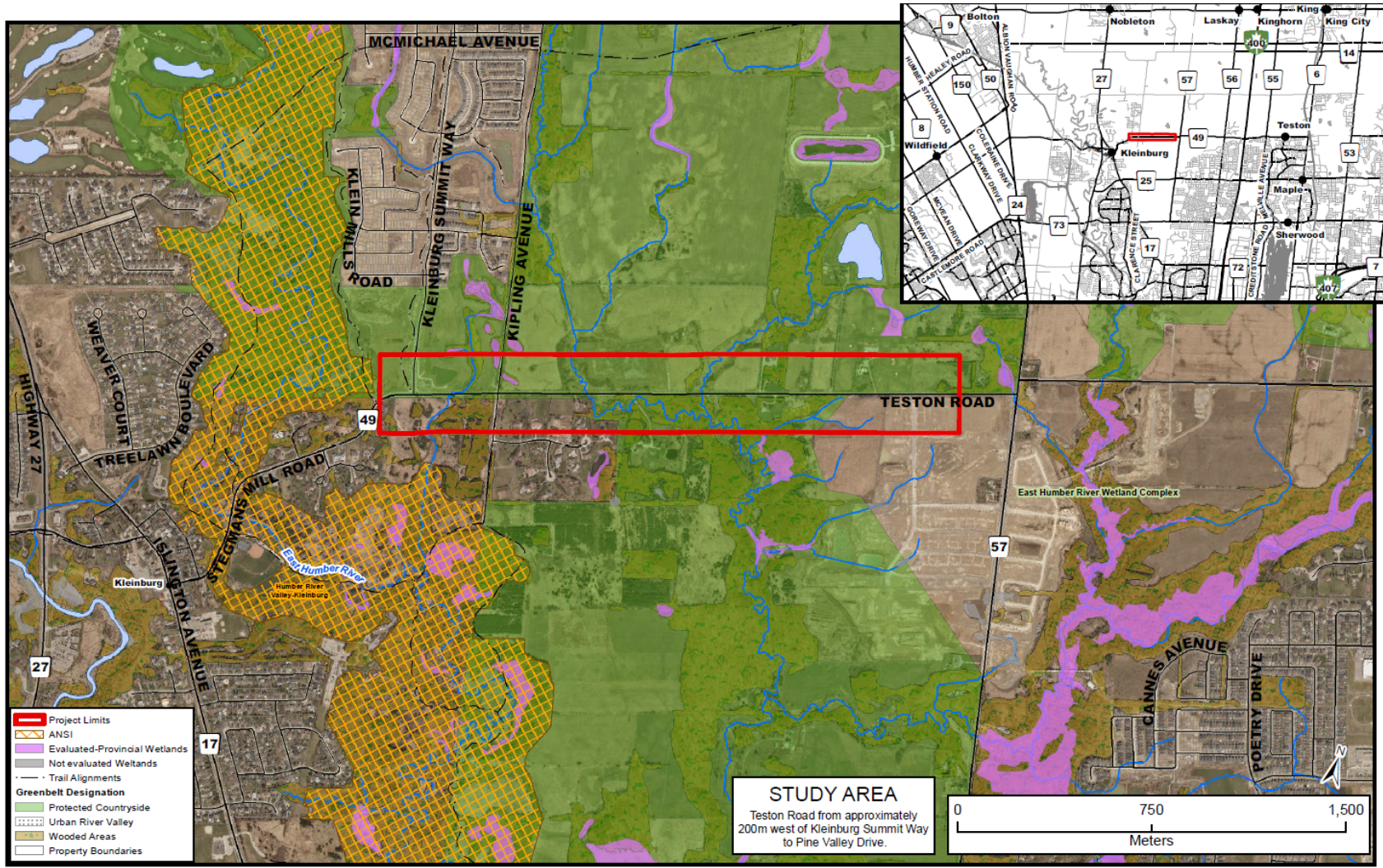
1.2 Study Purpose

The purpose of the Teston Road Class EA study is to determine specific improvements to accommodate the current and future transportation needs of pedestrians, cyclists, transit users and motorists and to improve operation and safety for all modes of transportation along Teston Road corridor from 250 m west of Pine Valley Drive to Kleinburg Summit Way.

1.3 Study Scope

This Transportation and Traffic Analysis report analyzes the existing conditions along the corridor and establishes an updated baseline for existing and future transportation conditions to the 2031 horizon year (with a sensitivity analysis to the 2041 horizon year). The analysis includes intersection capacity analysis along Teston Road; estimates and examines traffic growth and expected future traffic volumes; analyzes the traffic impacts from the introduction of the projected traffic volumes; and, finally, proposes infrastructure improvements to address the deficiencies and accommodate the future traffic growth for the horizon years.

Figure 1-1: Study Area



2 Planning Context

This section provides context for the study in relation to planning policies and guidance at the provincial, regional and local municipal level.

2.1 Provincial Planning Context

Provincial planning policies, summarized in **Table 2-1**, were reviewed to identify their relevance to the Teston road EA.

Table 2-1: Provincial Planning Policies

Provincial Planning Document	Directions	Impact to Teston Road EA
Provincial Policy Statement, Ontario, 2014	<p><u>Description:</u> Provides direction on land use planning and development, and the transportation system.</p> <p><u>Directions:</u> The most relevant land use and transportation policies) include:</p> <ul style="list-style-type: none"> • 1.6.7.1 Safe, energy efficient, transportation systems that move people and goods and address projected needs • 1.6.7.2 Use of travel demand management (TDM) strategies to maximize efficiency • 1.6.7.3 A multimodal transportation system that provides connections within and among transportation systems and modes including across jurisdictional boundaries • 1.6.7.4 Land use patterns that minimize length and number of vehicle trips to support transit and active transportation • 1.6.7.5 Integrate transportation and land use considerations at all stages of planning • 1.6.8.2 Protect for major goods movement facilities and corridors • 1.6.8.3 New development should be compatible with the long-term purposes of the corridor 	The Teston Road EA will consider projected needs for both people and goods, encourage travel demand management, and consider all travel modes.

Provincial Planning Document	Directions	Impact to Teston Road EA
<p>Growth Plan for the Greater Golden Horseshoe, Ministry of Municipal Affairs, 2006, 2013, 2017 Update</p>	<p><u>Description:</u> The Growth Plan for the Greater Golden Horseshoe (GGH) was released on June 16, 2006, and is a long-term plan that aims to:</p> <ul style="list-style-type: none"> • Revitalize downtowns • Create complete communities • Provide housing options to meet the needs of people at any age • Curb urban sprawl and protect farmland and green spaces • Reduce traffic gridlock by improving access to a greater range of transportation options <p>The June 2013 amendment extended the growth planning horizon to 2041 while the 2016 update identified new intensification targets.</p> <p><u>Directions:</u> The Growth Plan defines specific policies for where and how to grow, including the identification of defined urbanized areas versus a protected Greenbelt Area. The plan also identifies Urban Growth Centres across the Greater Toronto Area (GTA), Major Transit Station Areas and Intensification Corridors.</p> <p>There has been a 2017 update to the Growth Plan.</p>	<p>The analysis will ensure to adhere to the Growth Plan guidelines as it is adjacent to greenbelt boundary.</p>
<p>2041 Regional Transportation Plan updated in 2018 from The Big Move, Metrolinx, 2008</p>	<p><u>Description:</u> The Big Move is the Greater Toronto and Hamilton Area’s (GTHA’s) multi-modal long-range regional transportation plan. Since 2008 this plan has been providing strategic direction for planning, designing and building a regional transportation network that enhances quality of life, environment, and prosperity.</p> <p><u>Directions:</u> The Big Move sets the context for Regional Express Rail (RER), a frequent all-day, two-way express rail service on existing GO Rail lines with 15 minute frequencies using future electrification infrastructure.</p> <p>In order to support the expanded services, improvement to infrastructure is needed:</p> <ul style="list-style-type: none"> • Track expansion, including upgrade of existing structures within corridor such as culverts, bridges • Grade separations • Maintenance and storage facilities • Electrification infrastructure • Station Expansion (parking, building, pedestrian access, etc.) • New station(s) along corridor that will optimize ridership and minimize delay <p>As of 2018, the 2008 Big Move has been updated to the 2041 Regional Transportation Plan (RTP)</p>	<p>The study will ensure to analyze transit supportive planning along the corridor within the study area.</p>

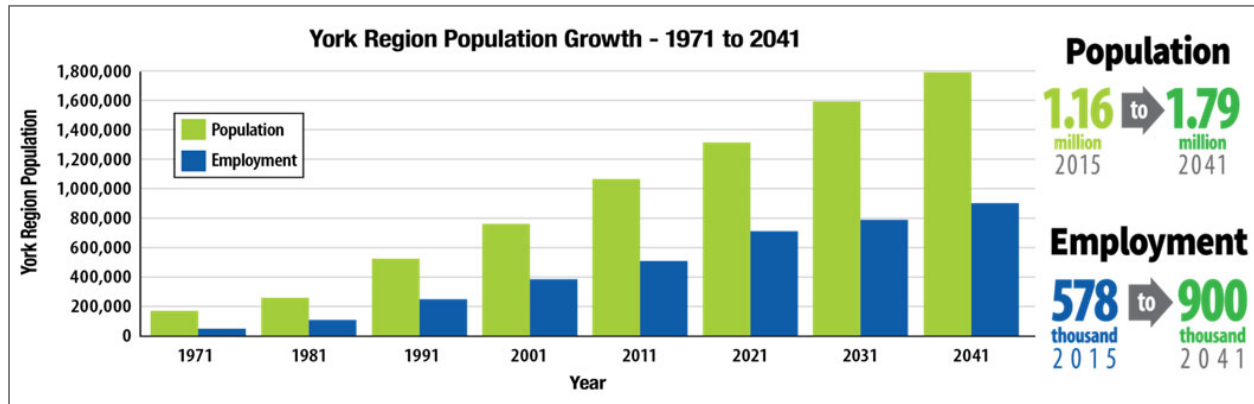
Provincial Planning Document	Directions	Impact to Teston Road EA
<p>Transit-Supportive Guidelines, Ministry of Transportation, 2012</p>	<p><u>Description:</u> Identifies best practices in Ontario, North America and abroad for transit-friendly land-use planning, urban design, and operations.</p> <p><u>Directions:</u> Key directions relevant to the Teston Road EA include layout and spacing of arterial and collector streets:</p> <ul style="list-style-type: none"> • Street networks are fine-grained and interconnected to provide efficient transit services and connections to transit stops • Eliminate unnecessary jogs or breaks in the network • Spacing of arterial and collector roads should support a maximum 400 m walk from the interior of a block to a transit stop, and facilitate higher levels of walking and cycling • Access routes to transit stops, such as pedestrian pathways or local roads, should be spaced no greater than 200 m apart. <p>Key directions for planning around major transit station areas include:</p> <ul style="list-style-type: none"> • A rational progression of facilities from passenger pick up and drop off / bus transfer / parking areas to ticketing and wayfinding, safe and comfortable waiting areas, and finally to transit loading areas • Organize surface parking areas into smaller modules to facilitate defined walking and cycling paths to the stations and also establish future development parcels over time • Prioritize pedestrian access • Limit free surface parking where frequent feeder transit service is available 	<p>The road analysis shall be in accordance with the Transit Supportive Guidelines.</p>
<p>#CycleON: Ontario's Cycling Strategy, Ministry of Transportation, 2013</p>	<p><u>Description:</u> Identifies a vision for cycling in the province over the next 20 years where cycling is valued as a core mode of transportation.</p> <p><u>Directions:</u> Key directions relevant to the Teston Road EA include:</p> <ul style="list-style-type: none"> • Partner with municipalities to implement Complete Streets policies and develop active transportation plans • Partner with municipalities / transit agencies to integrate cycling and transit • Develop a funding partnership to build provincial and municipal cycling routes, including pilot program funding to gather data and test new ideas • Create communities that have a built form that supports and promotes cycling for all trips under 5 km 	<p>The Teston Road EA strives to plan for cycling infrastructure and complete communities in accordance with this plan.</p>

Provincial Planning Document	Directions	Impact to Teston Road EA
Ontario's Climate Change Action Plan	<p><u>Description:</u> Identifies a five-year plan to fight climate change, reduce greenhouse gas pollution, and transition to a low-carbon economy.</p> <p><u>Directions:</u> Specific action areas are identified to meet specific greenhouse gas emission reduction targets:</p> <ul style="list-style-type: none"> • Transportation: Becoming a North American leader in low-carbon and zero-emission transportation <ul style="list-style-type: none"> ○ Increase the use of electric vehicles ○ Support cycling and walking ○ Support the accelerated construction of GO Regional Express Rail • Land use planning: Support low-carbon communities <ul style="list-style-type: none"> ○ Strengthen climate change policies in the municipal land use planning process ○ Eliminate minimum parking requirements 	<p>The implementation of Active Transportation and Travel Demand Management (TDM) to promote sustainable mode of transportation to increase the number of active transportation trips and reduce the number of single-occupancy vehicles will be considered during the alternative analysis.</p>
Greenbelt Plan (2017)	<p><u>Description:</u> In concert with the Growth Plan, Niagara Escarpment Plan (NEP) and Oak Ridges Moraine Conservation Plan (ORCMP), and further to the PPS, the Greenbelt Plan establishes land use planning framework for the GGH to support a clean and healthy environment, a thriving economy and social equity.</p> <p><u>Directions:</u> Identifies areas where urbanization should not occur in order to protect the ecological, agricultural, and hydrological land use. Lands identified in the NEP and ORCMP are also included in the Greenbelt Plan.</p>	<p>Teston Road EA strives to support the achievement of complete communities and community hubs that are conveniently accessible by active transportation and transit. Infrastructure will integrate with land use planning while minimizing environmental impacts in the Protected Countryside of the Greenbelt Area.</p>

2.2 Regional Planning Context

York Region is one of the fastest growing municipalities in the GTA. Since 1971, York Region's population has increased nearly seven-fold. Population and employment growth are expected to continue across the Region. As such, the transportation system and other infrastructure must be prepared to accommodate future growth. As illustrated in **Figure 2-1**, by 2041 regional population will reach 1.79 million, while employment will reach 900,000.

Figure 2-1: York Region Population and Employment Growth – 1971 to 2041



Source: Regional Municipality of York

Given this anticipated growth, the York Region Official Plan and Transportation Master Plan build upon provincial planning guidance and provide more specific direction on the need for transportation improvements to support growth in the Region, and these documents are summarized below.

2.2.1 Regional Official Plan (April 2019)

The Regional Official Plan represents the Region’s vision and plan for the way communities are designed, serviced, and supported. As shown below, the objectives of the Plan include: Sustainable Natural Environment, Healthy Communities, and Economic vitality.

The plan emphasizes interconnected and accessible mobility systems, with a priority on pedestrian movement, and on transit use and access. Some of objectives related to the Teston Road include: create an active transportation system and programs that encourage walking, cycling and the use of public transit, provide transit service that is convenient and accessible to all residents and workers of York Region, ensure streets support all modes of transportation including walking, cycling, transit, automobile use, and the efficient movement of goods, plan and protect future urban and rural streets to accommodate transportation demands, and promote a linked and efficient network for goods movement that supports economic vitality and minimizes conflicts with sensitive land uses.

2.2.2 Regional Transportation Master Plan (November 2016)

York Region’s Transportation Master Plan (YRTMP) addresses the Region’s mobility needs to 2041. It provides a 25 year outlook to:

Create an advanced interconnected system of mobility in the GTHA in order to give York Region residents and businesses a competitive advantage, making York Region the best place to live, work and play in the GTHA.

The YRTMP has five objectives:

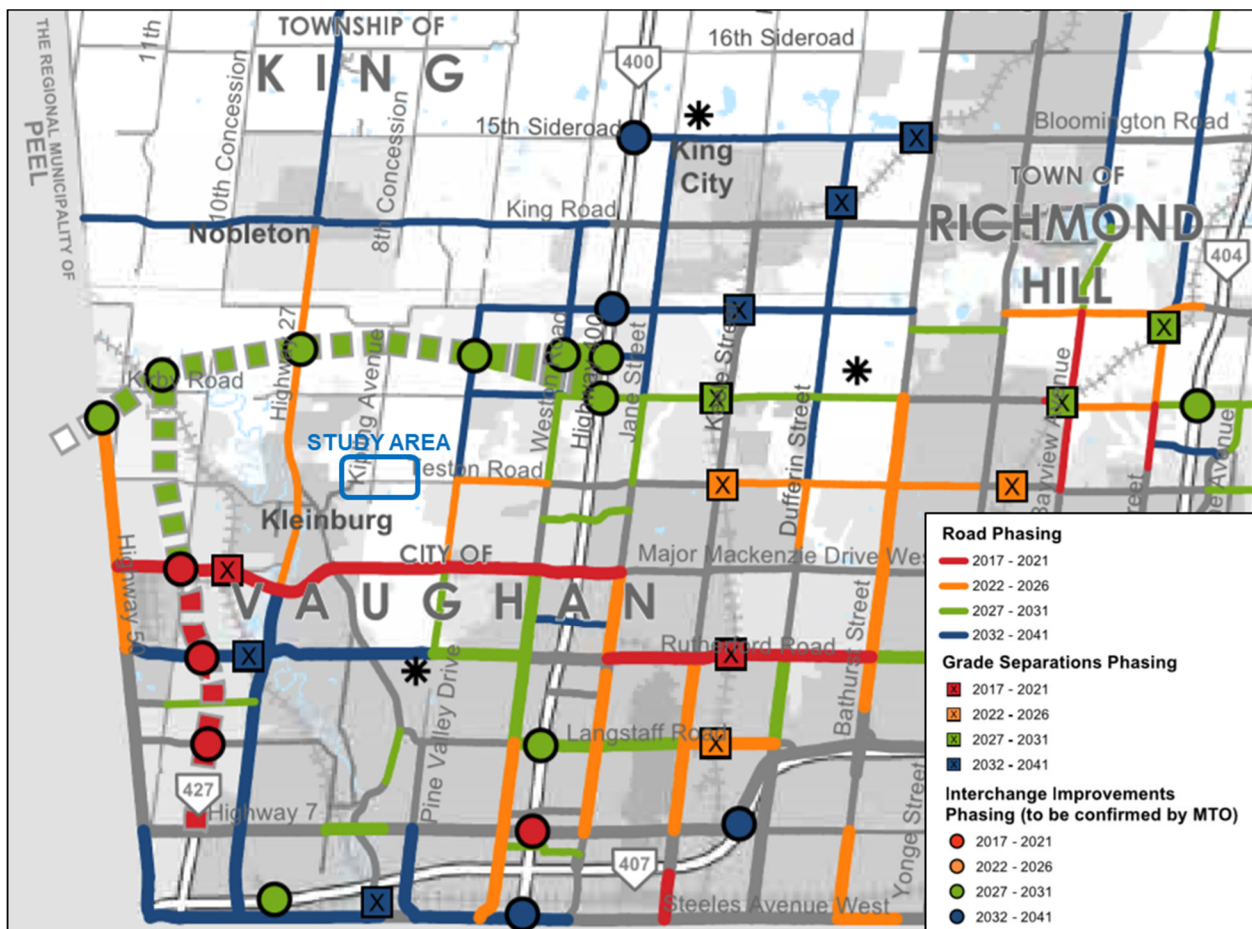
1. Create a world class transit system
2. Develop a road network fit for the future
3. Integrate active transportation in Urban Areas
4. Maximize the potential of employment areas
5. Make the last mile work

Additional mode-specific details on YRTMP recommendations are provided in the following sections.

Road Network Recommendations

Figure 2-2 illustrates the 2041 road network from the YRTMP. As shown, no road improvements are planned for the study area.

Figure 2-2: YRTMP Proposed 2041 Road Network

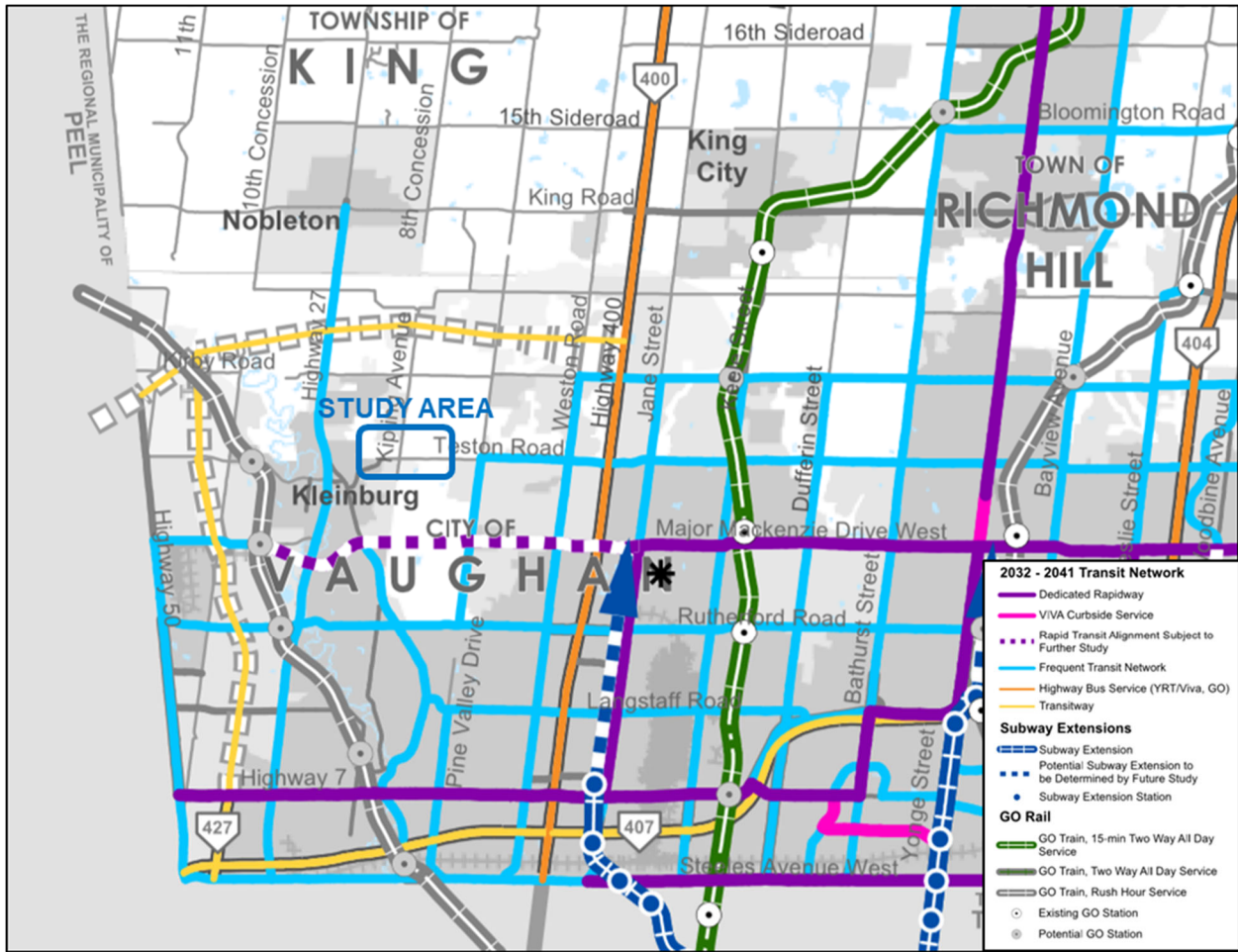


Source: York Region Transportation Master Plan 2016

Transit Network Recommendations

Figure 2-3 illustrates the Region’s currently planned long-term 2041 transit network. As shown below, the planned Frequent Transit Network (15 minute service or better as defined in the YRTMP) is not planned for this section of Teston Road. It should be noted however that local routes may still be identified to serve this area in the future.

Figure 2-3: YRTMP Proposed 2041 Transit Network

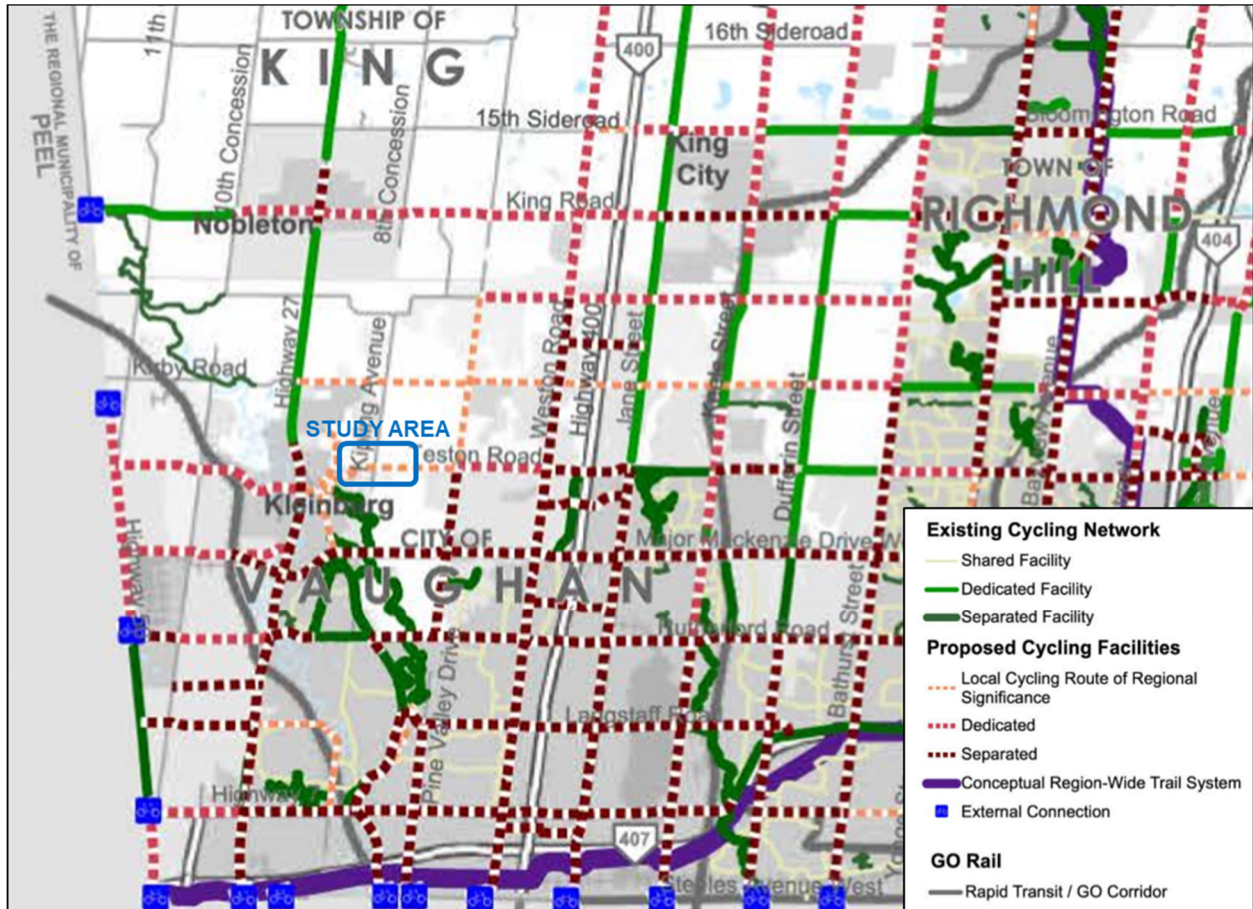


Source: York Region Transportation Master Plan 2016

Cycling Network Recommendations

The York Region TMP recommended cycling infrastructure for a 10-year horizon and for a 25-year horizon. For the 2041 network, the York Region TMP recommended a local cycling route through the study area as shown in **Figure 2-4**.

Figure 2-4: YRTMP Proposed 2041 Cycling Network

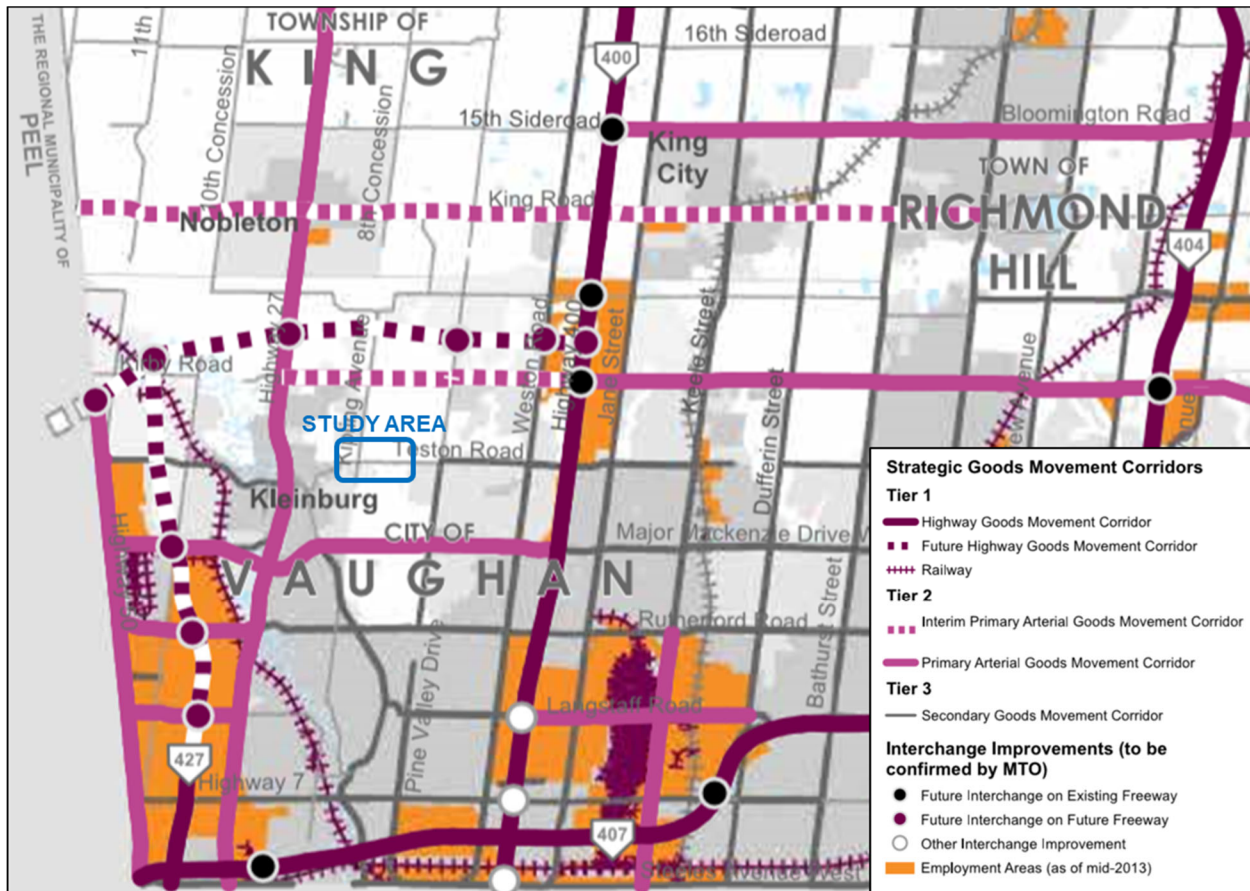


Source: York Region Transportation Master Plan 2016

Goods Movement Network Recommendations

York Region’s Strategic Goods Movement Network provides a framework for future goods movement. It consists of a hierarchy of corridors, identifying all freeways as Tier 1 corridors, strategic arterial roads as Tier 2 corridors, and all other Regional roadways as secondary goods movement corridors. The Region’s Proposed Strategic Goods Movement Network is illustrated for the study area in **Figure 2-5**.

Figure 2-5: YRTMP Proposed Strategic Goods Movement Network



Source: York Region Transportation Master Plan 2016

2.3 Municipal Planning Context

2.3.1 City of Vaughan Official Plan

The City of Vaughan Official Plan 2010 (VOP 2010) was approved by Council on September 7, 2010. The Plan was endorsed by Regional Council on June 28, 2012. VOP 2010 is part of a Growth Management Strategy “that will shape the future of the City and guide its continued transformation into a vibrant, beautiful and sustainable City.”

The following policies, with VOP 2010 references in brackets, are of relevance to the study area:

- To establish a comprehensive transportation network that allows a full range of mobility options, including walking, cycling and transit (4.1.1.1).
- That the street network will be the basis for enhanced transportation opportunities, including transit, walking, cycling, and place making initiatives. Existing rights-of way should be designed to optimize the efficient movement for a variety of modes, potentially resulting in reduced capacity for cars where overall capacity increases can be achieved (4.1.1.5).
- To support the development of a comprehensive network of on-street and off-street pedestrian and bicycle routes, through the implementation of the City's Pedestrian and Cycling Master Plan and York Region's Pedestrian and Cycling Master Plan; and to facilitate walking and cycling and to promote convenience and connectivity (4.1.1.6).
- To plan for a street network that prioritizes safe and efficient pedestrian travel while effectively accommodating cyclists, transit and other vehicles, and to create more pedestrian and transit-friendly street cross-sections (4.2.1.2).

Schedule 9 (**Figure 2-6**) and Schedule 10 (**Figure 2-7**) in the VOP 2010 identify the City's Future Transportation Network and Major Transit Network, respectively. It is noted that these schedules were developed prior to the completion of the 2016 York Region TMP and, as such, incorporate Regional plans based upon the previous version of the York Region TMP.

Figure 2-6: Schedule 9 - Future Transportation Network

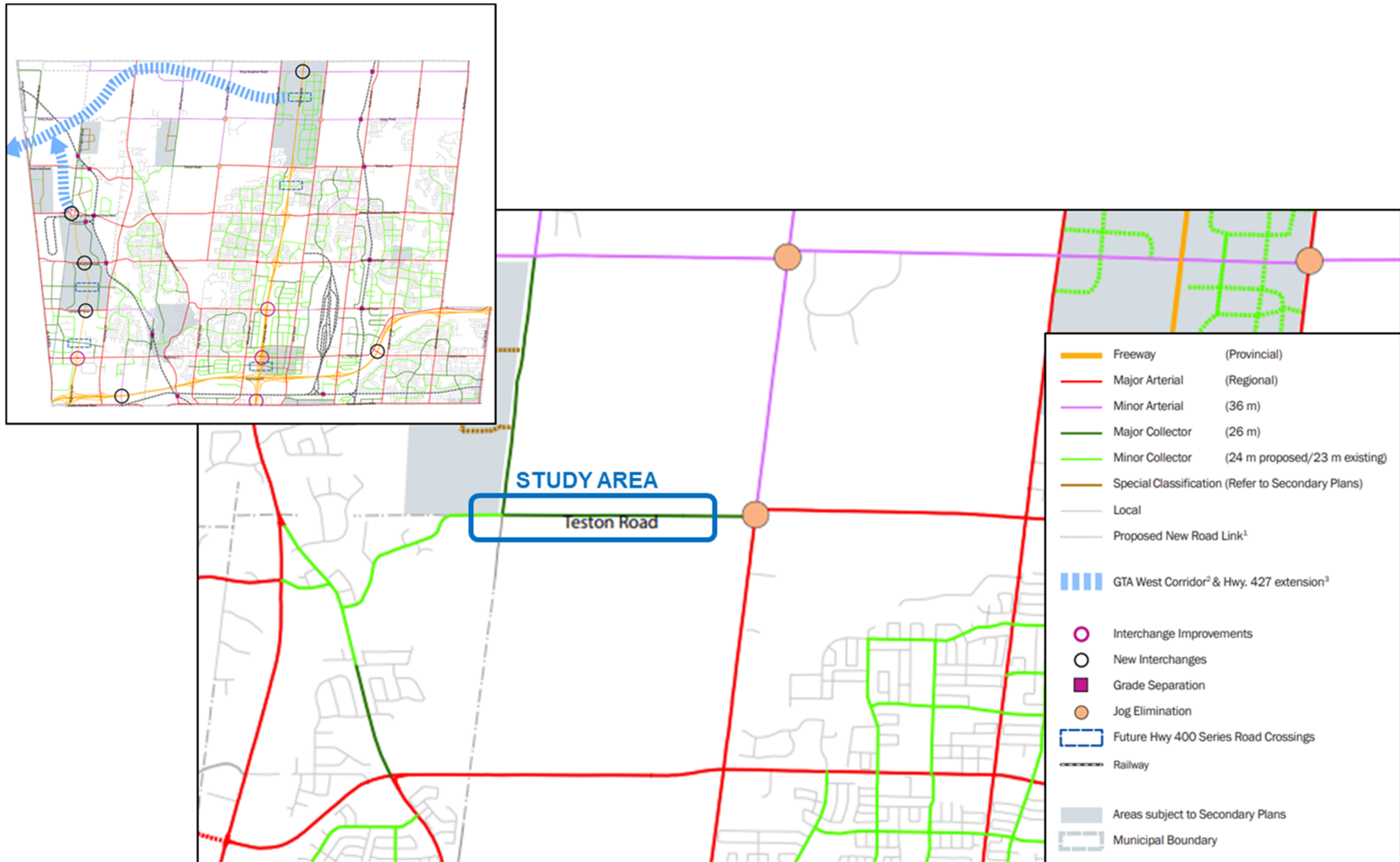
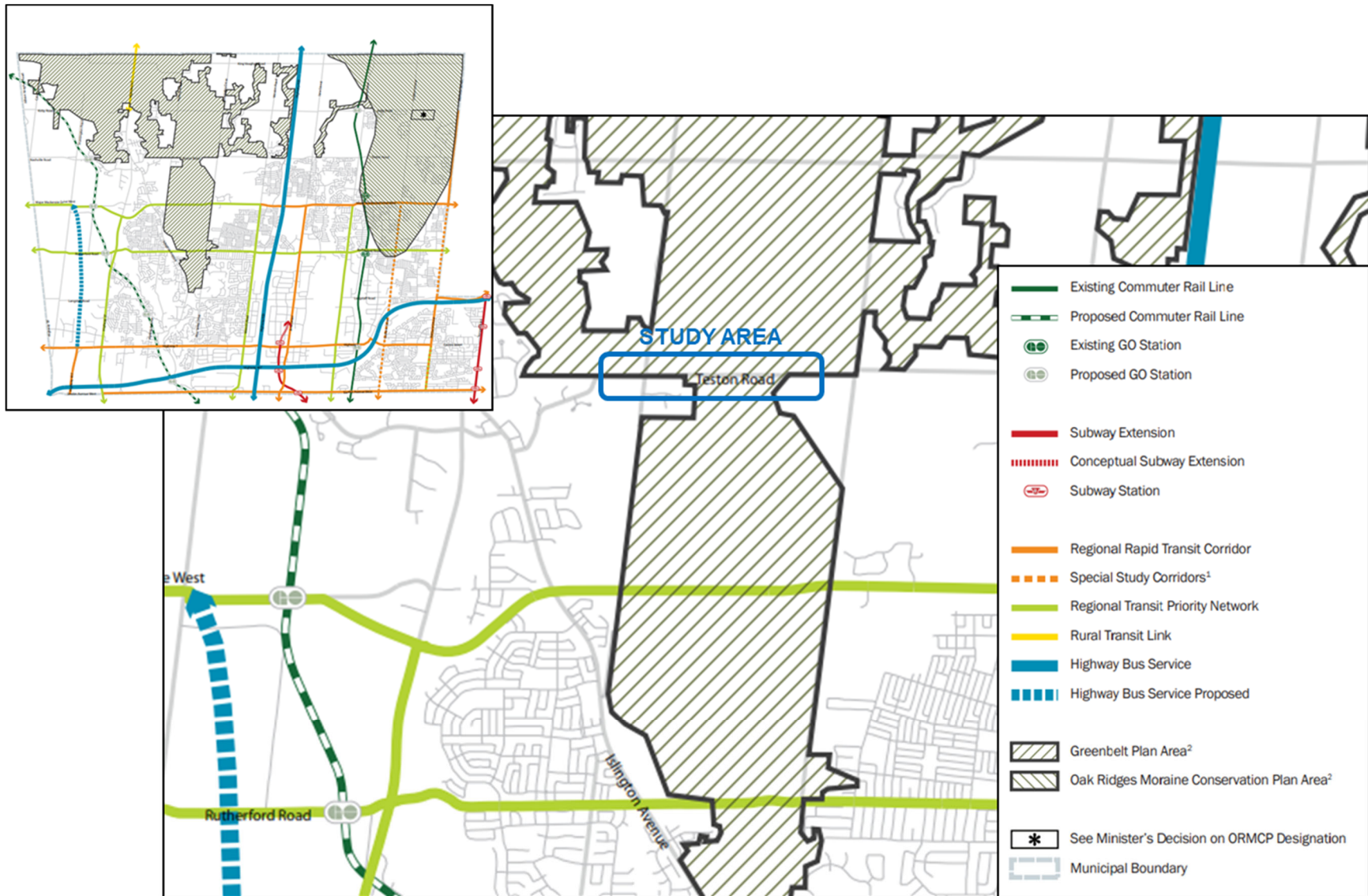


Figure 2-7: Schedule 10 – Major Transit Network



2.3.2 Green Directions Vaughan

Green Directions Vaughan is the City’s community sustainability and environmental master plan. It identifies actions to ensure the health, well-being and vitality of the community. In relation to the Teston Road EA, this plan provides direction to ensure that getting around Vaughan is easy and has a low environmental impact. The Teston Road EA will look to promote sustainable and active transportation in accordance with Green Directions Vaughan.

2.3.3 City of Vaughan Transportation Master Plan 2013: A New Path

The Vaughan Transportation Master Plan (VTMP) identifies city-wide transportation needs to the year 2031, including local improvements, strong Regional investments in transit service, arterial road improvements, sidewalks, on-street and off-street bicycle facilities, and a mix of land uses. It should be noted that the VTMP is currently being updated.

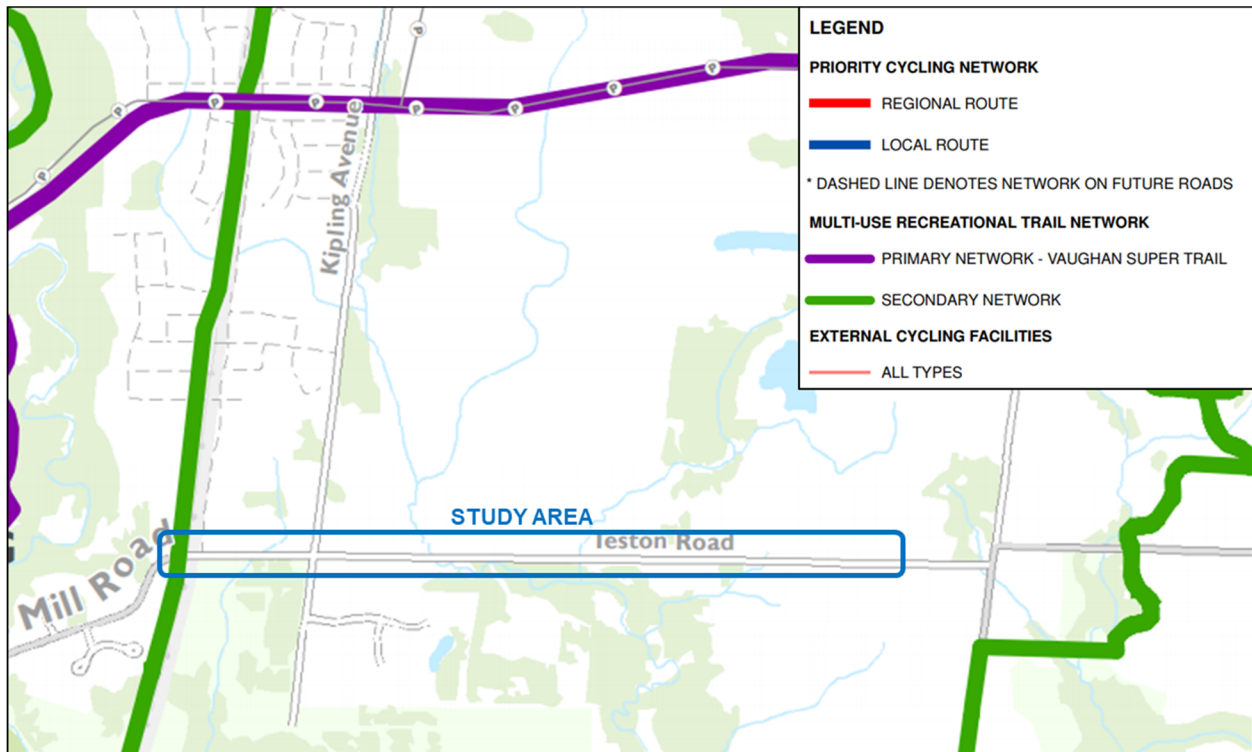
2.3.4 City of Vaughan Pedestrian and Bicycle Master Plan

The City of Vaughan adopted the Pedestrian and Cycling Master Plan in January 2007 and is currently undertaking an update. The Plan has a 20-year horizon. The central intent of the plan is to guide improvements to existing and proposed pedestrian and cycling infrastructure to create a friendlier environment for residents. The two central goals of the plan are:

- To create new environments and enhance existing ones for both pedestrians and cyclists in the City of Vaughan. These environments should be supported by developing a visible and connected pedestrian and cycling network in Vaughan that integrates, enhances and expands the existing on- and off-road pedestrian and cycling facilities.
- To facilitate an increase in walking and cycling for leisure and utilitarian purposes.

The Pedestrian and Bicycle Master Plan update endorses the Vaughan Super Trail, a signature active transportation facility that links communities to one another, and increases accessibility for residents and visitors to important cultural, natural, heritage, and public space destinations. Cycling facilities are not identified on Teston Road as shown in **Figure 2-8**. However, the City of Vaughan policy is to explore active transportation facilities on all arterial roads and this study will explore the need for cycling facilities on Teston Road.

Figure 2-8: Pedestrian and Bicycle Master Plan Update (Draft)¹



Source: Pedestrian and Bicycle Master Plan Update

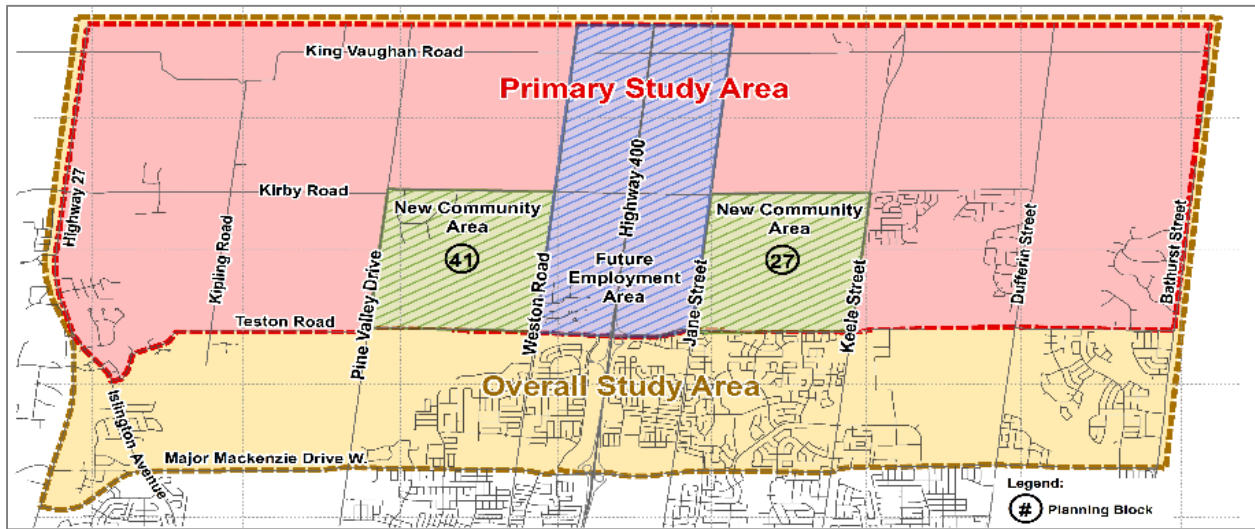
2.3.5 North Vaughan and New Communities Transportation Master Plan

The North Vaughan and New Communities Transportation Master Plan (NVNCTMP) is a long-range plan that supports policies, programs and infrastructure required to meet existing and future mobility needs and provide context for transportation decisions within North Vaughan. The primary and overall study areas are shown in **Figure 2-9**.

The objective of the plan is to look at both internal and external factors that contribute to achieving sustainable transportation for residents and businesses while ensuring recommendations of the plan address the transportation network needs from immediate to future growth.

¹ Source: https://www.vaughan.ca/projects/projects_and_studies/pedestrian_master_plan/Pages/default.aspx

Figure 2-9: NVNCTMP Primary and Overall Study Area



Source: North Vaughan and New Communities Transportation Master Plan, August 2019

3 Existing Transportation Conditions

This section provides an overview of existing conditions within the study area. Data was obtained from various sources including City of Vaughan, York Region, Ministry of Transportation (MTO), Transportation Tomorrow Survey (TTS), Google Maps, and the City’s GIS and travel data.

3.1 Existing Transportation Infrastructure

3.1.1 Existing Road Network

The Teston Road corridor (shown in **Figure 3-1**) is designated as an east-west major arterial. It is under the jurisdiction of the City of Vaughan within the study area. It has a posted speed limit of 40 km/h west of Kipling Avenue and 60 km/h east of Kipling Avenue within the study area.

Figure 3-1: Existing Transportation Conditions along Teston Road



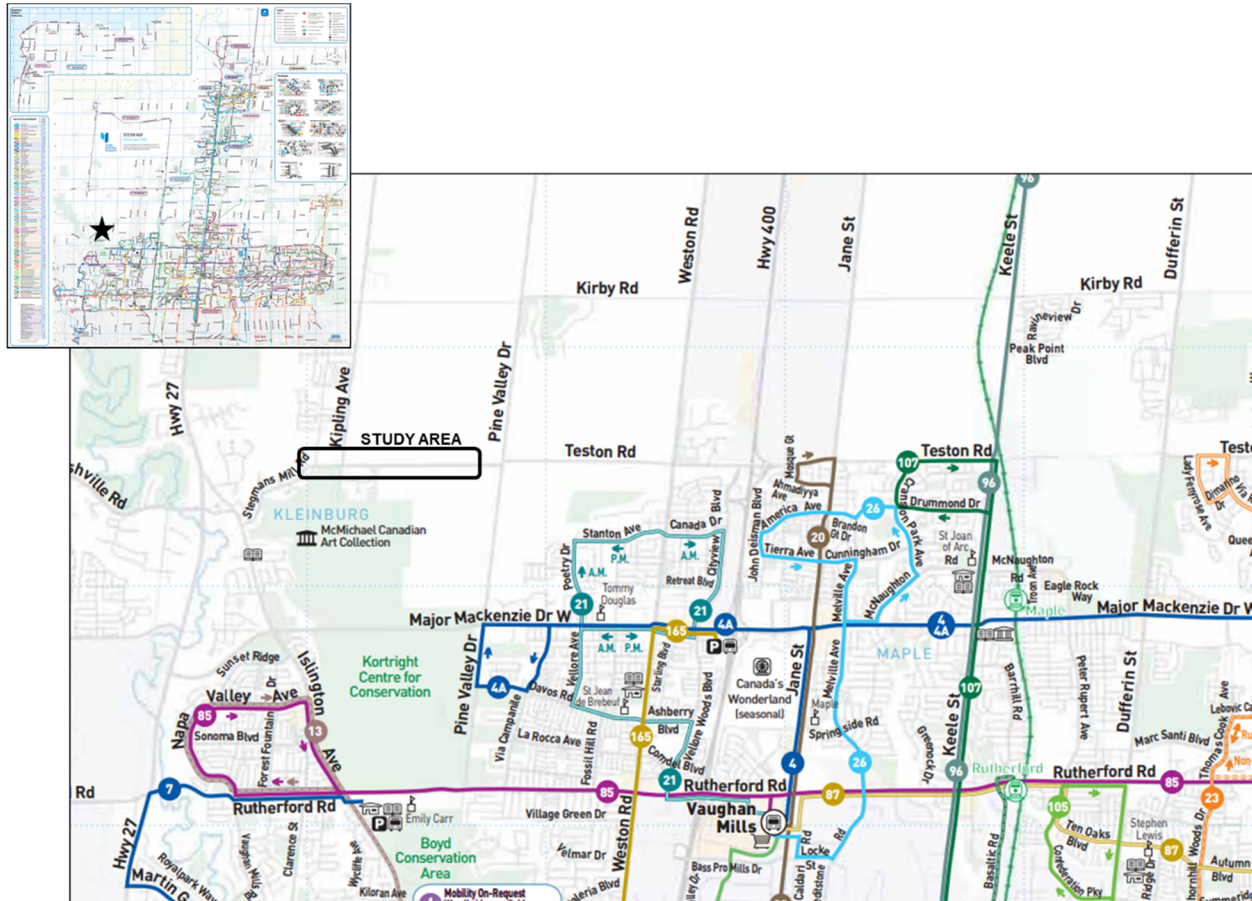
Image Source: Google Maps

The corridor within the study area has two (2) unsignalized intersections at Kleinburg Summit Way and at Kipling Avenue. Kipling Avenue and Kleinburg Summit Way are designated as collectors.

3.1.2 Existing Transit Network

City of Vaughan is serviced by York Region Transit (YRT). There are currently no transit routes within the study area as shown in **Figure 3-2**.

Figure 3-2: Existing Transit Network

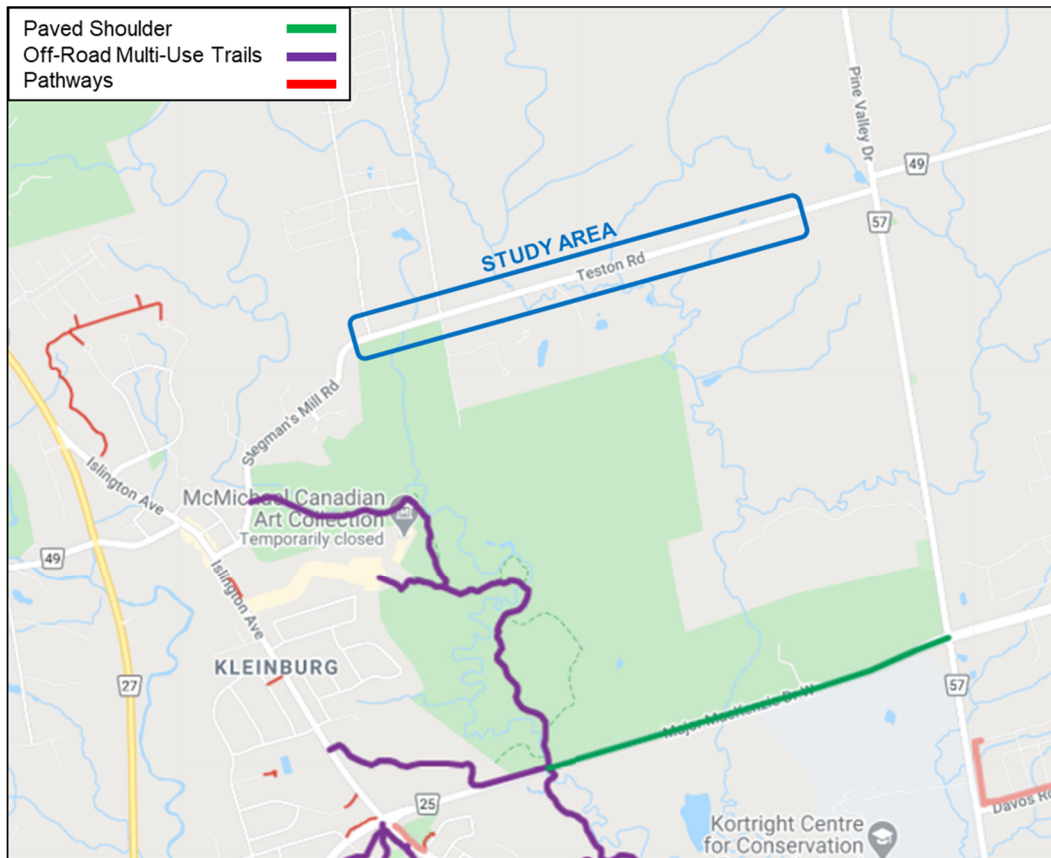


Source: York Region Transit System Map, April, 2020

3.1.3 Existing Pedestrian / Cyclist Network

There are currently no pedestrian facilities on Teston Road within the study area. As shown in **Figure 3-3**, there is a currently an off-road multi-use trail in the Kortright Conservation Lands south of the study area.

Figure 3-3: Existing Pedestrian / Cycling Network



Source: Vaughan Cycling Map, June 2015

3.2 Travel Patterns and Mode Share

The following section summarizes travel and mode share data from the 2016 Transportation Tomorrow Survey (TTS) for trips made by residents within the broader secondary study area (shown in **Figure 3-4**). The secondary study area includes the adjacent traffic zones (zones 2019, 2020, 2021, 2046, 2047, 2048, 2051, 2052, and 2053), bounded by Kirby Road to the north, Major Mackenzie Drive to the south, Weston Road to the east, and Highway 27 to the west.

During a typical day, approximately 4,990 trips were completed during the AM Peak Period by people residing within the area. The trips were destined for various locations across the GTA as shown in **Figure 3-4**. Of the total trips, 86% were made by car (including 11% passengers), 5% by transit, and 5% by active modes such as walking or cycling, as illustrated in **Figure 3-5**.

Figure 3-4: Distribution of Study Area AM Work Trips (TTS 2016)

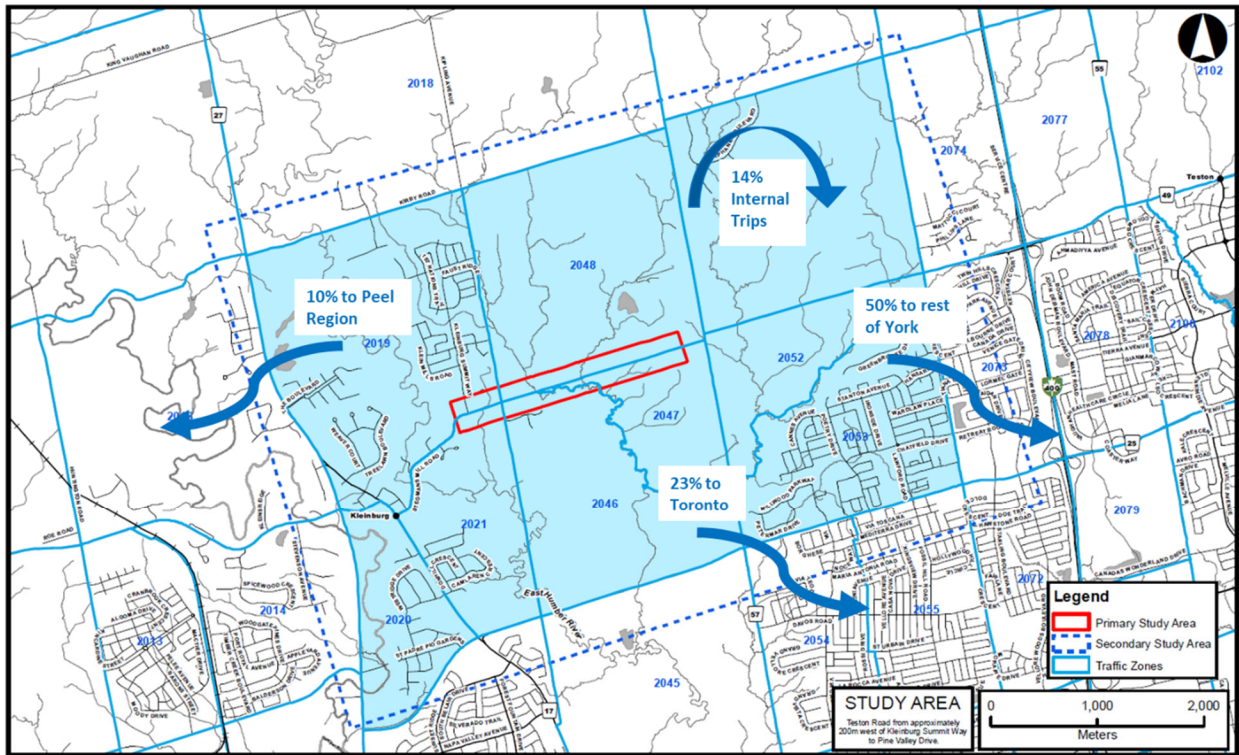
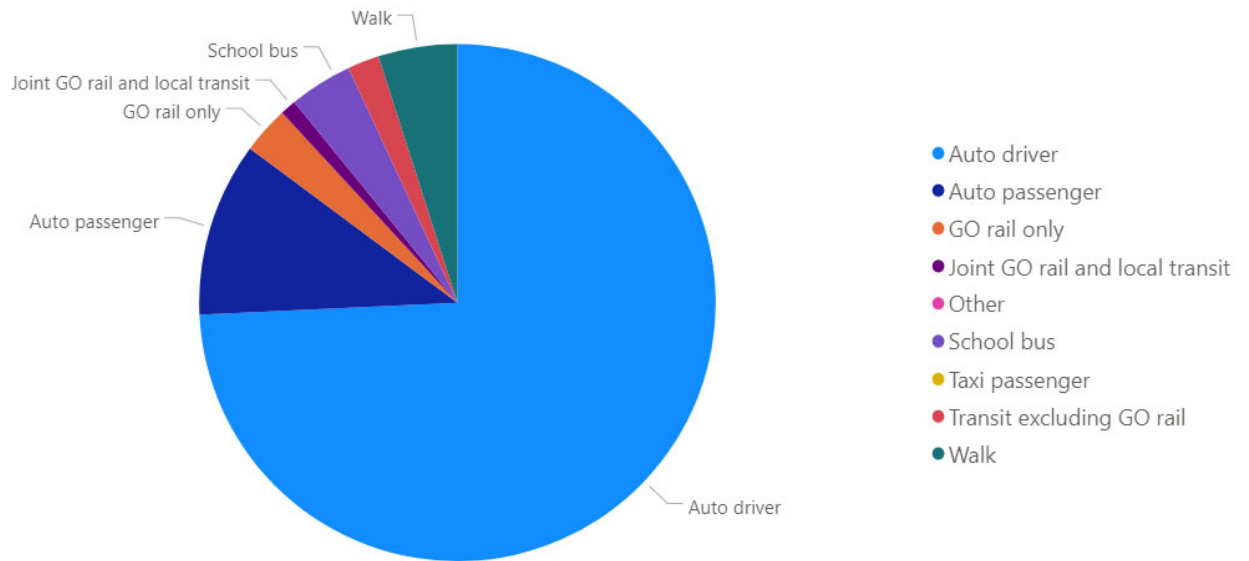


Figure 3-5: Mode Share – Secondary Study Area



3.3 Transit Level of Service

York Region's Transportation Mobility Plan Guidelines for Development Applications (2016) was used for the multimodal (Transit, Pedestrian, Bicycle) level of service

analysis. Transit level of service (shown in **Table 3-1**) is determined by the access to transit stops, transit headways and transit vehicle performance approaching the intersection.

Table 3-1: Transit Level of Service Criteria

Level of Service	Access to Transit Stops	Transit Headways	Intersection Approach (transit or curb lanes)	
			Delay (seconds/veh)	v/c
A	90% within <=200m	<=5 minutes	<=10	0 to 0.60
B	90% within <=500m and 70% within <=200m	>5-10 minutes	>10-20	0.61 to 0.70
C	90% within <=500m and 50% within <=200m	>10-15 minutes	>20-35	0.71 to 0.80
D	100% within <=600m	>15-20 minutes	>35-55	0.81 to 0.90
E	100% within <=800m	>20-30 minutes	>55-80	0.91 to 1.00
F	100% >800m	>30 minutes	>80	>1.00

The transit level of service result summary is shown in **Table 3-2**. As there is no transit service within the study area, the existing transit level of service is poor (LOS F).

Table 3-2: Transit Level of Service Summary

Intersection	Direction	Access to Transit Stops	Transit Headways	Intersection Approach (transit or curb lanes)
		LOS	LOS	LOS
Teston Road / Kleinburg Summit Way	Eastbound	F	F	F
	Westbound	F	F	F
	Southbound	F	F	F
Teston Road / Kipling Avenue	Eastbound	F	F	F
	Westbound	F	F	F
	Northbound	F	F	F
	Southbound	F	F	F

3.4 Pedestrian/ Cyclists Level of Service

The pedestrian level of service (**Table 3-3**) is based on sidewalk width and buffer width. The pedestrian level of service is calculated for each intersection and road segment as the pedestrian’s experience is determined by both the conditions between intersections and at intersection crossings themselves.

Table 3-3: Pedestrian Level of Service Criteria

Level of Service	Segment	Intersection
A	≥2.0 m sidewalk with minimum 3.5 m buffer including planting and edge zone; or ≥3.0 m multi-use path	<ul style="list-style-type: none"> • ≥2.0 m sidewalk with minimum 3.5 m buffer including planting and edge zone; or ≥3.0 m multi-use path • Pedestrian signal head with sufficient pedestrian clearance time • Clearly delineated cross-walk
B	≥1.5 m sidewalk with minimum 1.0 m buffer including edge zone; or <3.0 m multi-use path	<ul style="list-style-type: none"> • ≥1.5 m sidewalk with minimum 1.0 m buffer including edge zone; or <3.0 m multi-use path • Pedestrian signal head with sufficient pedestrian clearance time • Clearly delineated cross-walk
C	≥1.5 m curb-faced sidewalk (no buffer)	<ul style="list-style-type: none"> • ≥1.5 m curb-faced sidewalk (no buffer) • Pedestrian signal head with sufficient pedestrian clearance time • Clearly delineated cross-walk
D	<1.5 m sidewalk	<ul style="list-style-type: none"> • <1.5 m sidewalk • Pedestrian signal head with sufficient pedestrian clearance time • No Clearly delineated cross-walk
E	Paved shoulder or no sidewalk provision	<ul style="list-style-type: none"> • Paved shoulder or no sidewalk provision • No pedestrian signal head • No clearly delineated cross-walk
F	No sidewalk provision	<ul style="list-style-type: none"> • No sidewalk provision • No pedestrian signal head • Not clearly delineated cross-walk

The pedestrian level of service result is shown in **Table 3-4**. Within the study area, there are no dedicated sidewalks and no pedestrian crossings at the unsignalized intersections resulting in poor level of service (LOS F).

Table 3-4: Pedestrian Level of Service Summary

Intersection	Direction	Segment	Segment	Intersection
		Description	LOS	LOS
Teston Road / Kleinburg Summit Way	Eastbound	Teston Road	F	F
	Westbound	Teston Road	F	F
	Southbound	Kleinburg Summit Way	F	F
Teston Road / Kipling Avenue	Eastbound	Teston Road	F	F
	Westbound	Teston Road	F	F
	Northbound	Kipling Avenue	F	F
	Southbound	Kipling Avenue	F	F

Bicycle level of service (**Table 3-5**) is based on the availability and quality of cycling facilities within the study area.

Table 3-5: Bicycle Level of Service Criteria

Level of Service	Segment	Intersection
A	Separated cycling facilities (e.g. cycle tracks, multi-use path)	Separated cycling facilities Bicycle box or clearly delineated bicycle treatment or bicycle signal head
B	≥1.8 m dedicated cycling facilities (e.g. bicycle lanes with and without buffer)	>1.8 m dedicated cycling facilities (e.g. bicycle lanes with and without buffer), Bicycle box, clearly delineated bicycle treatment or bicycle signal head
C	<1.8 m dedicated cycling facilities with no buffer	<1.8 m dedicated cycling facilities with no buffer, Bicycle box, clearly delineated bicycle treatment or bicycle signal head
D	≤1.5 m bicycle lane with no buffer	≤1.5 m bicycle lane and no buffer Bicycle treatment
E	Shared facilities (e.g. signed routes, sharrows or paved shoulder with minimum 1.2 m in constrained area)	Shared facilities (e.g. signed routes, sharrows or paved shoulder with minimum 1.2 m in constrained area) No clearly delineated bicycle treatment
F	No bicycle provision	No bicycle provision

The bicycle level of service result summary is shown in **Table 3-6**. The study corridor currently does not accommodate for cyclists along the road segments or at intersections resulting in poor level of service (LOS F). There are, however, opportunities to provide a connection to the Kortright Conservation trails in the future.

Table 3-6: Bicycle Level of Service Summary

Intersection	Direction	Segment	Segment	Intersection
		Description	LOS	LOS
Teston Road / Kleinburg Summit Way	Eastbound	Teston Road	F	F
	Westbound	Teston Road	F	F
	Southbound	Kleinburg Summit Way	F	F
Teston Road / Kipling Avenue	Eastbound	Teston Road	F	F
	Westbound	Teston Road	F	F
	Northbound	Kipling Avenue	F	F
	Southbound	Kipling Avenue	F	F

3.5 Vehicle Traffic Operations

This section describes the existing vehicle traffic operations at the unsignalized intersections along the study corridor. It should be noted that Teston Road at Pine Valley Drive is not within the study area and the analysis for this intersection has been previously completed as part of York Region’s Teston Road (Pine Valley Drive to Weston Road) EA in 2016.

3.5.1 Data Collection

The turning movement counts (TMC) and signal timing plans for the study area were provided by the City of Vaughan. **Table 3-7** lists the traffic volume counts used for the existing condition analyses. Detailed TMCs are provided in **Appendix A**.

Table 3-7: Turning Movement Counts Inventory

No.	Intersection	Intersection Control	Date	Source
1	Teston Road at Kleinburg Summit Way	Unsignalized	October, 2019	Provided by City of Vaughan
2	Teston Road at Kipling Avenue	Unsignalized	December, 2019	Provided by City of Vaughan

3.5.2 Lane Configuration and Intersection Volumes

Figure 3-6 and **Figure 3-7** illustrate lane configuration and existing traffic volumes at key study area intersections. It is noted that existing turning movement counts were balanced between intersections.

Figure 3-6: Lane Configuration

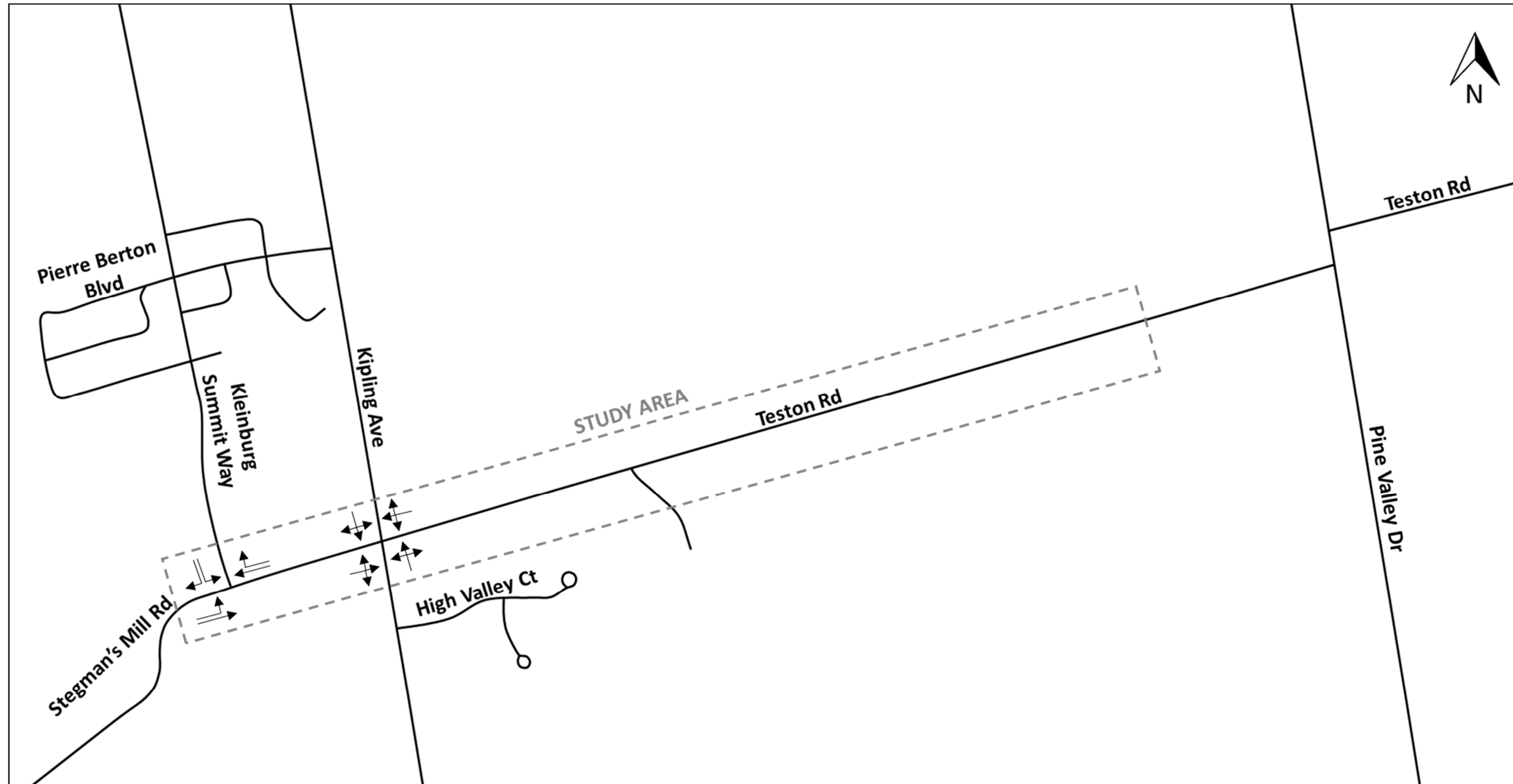
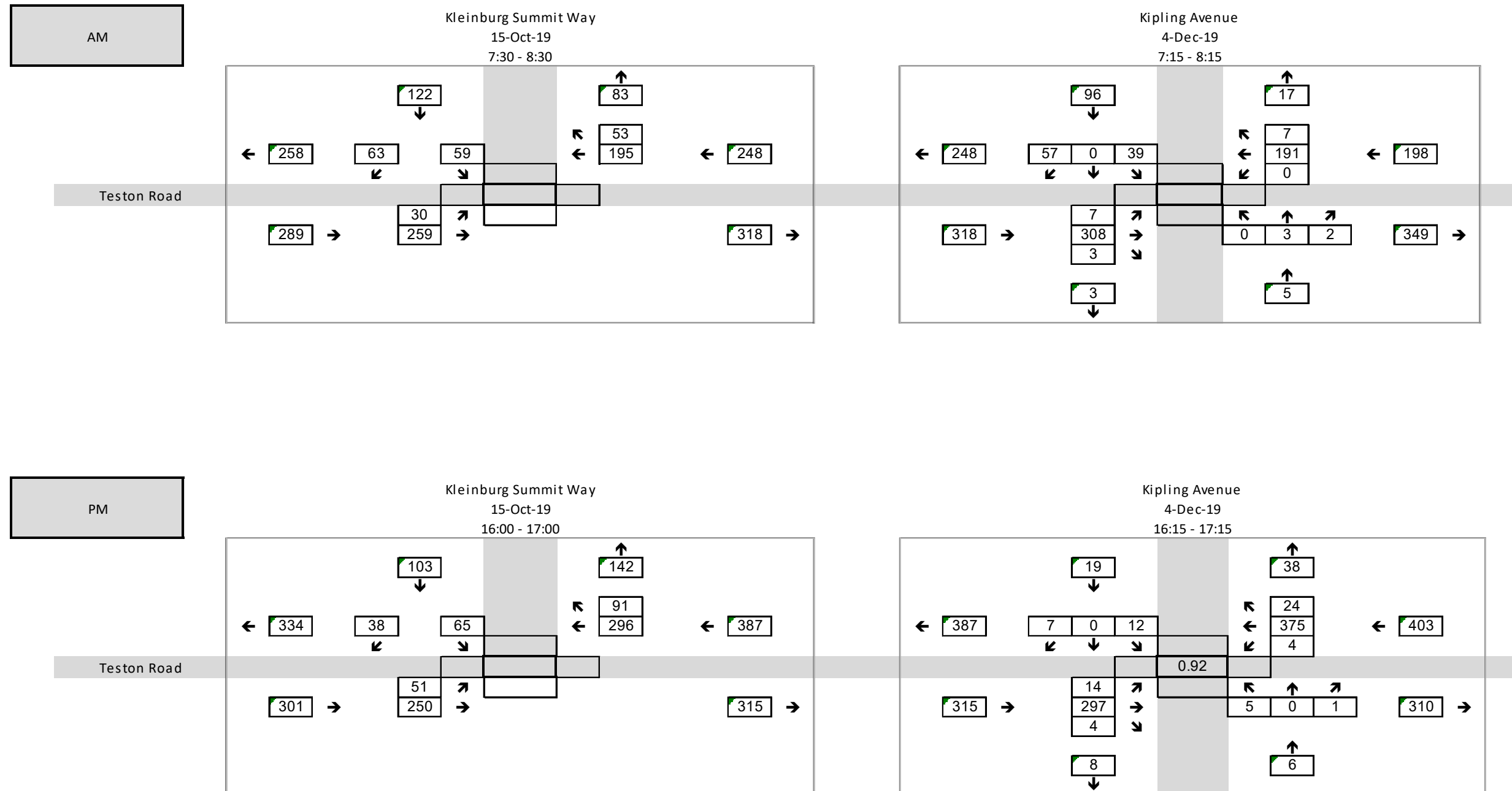


Figure 3-7: Existing Turning Movement Volumes (AM and PM Peak Hour)



3.5.3 Existing Peak Hour Traffic Analysis

Traffic analysis was conducted to determine existing conditions at key intersections within the study area using performance metrics such as level of service (LOS) and volume-to-capacity (v/c) ratio.

Traffic operations for all the intersections within the study area were analyzed using Synchro software. The Synchro software was developed based on the Highway Capacity Manual (HCM 2000) methodologies and provides a detailed assessment of traffic operations including levels of service (LOS), delays and volume to capacity ratios for overall, approaches, as well as individual movements at unsignalized and signalized intersections. LOS describes the “driver experience” on a transportation facility, with each LOS associated with the average delay each driver would experience at an intersection (**Table 3-8**).

Table 3-8: Level of Service Descriptions

LOS	Signalized Intersections	Unsignalized Intersections		
	Description	Delay	Description	Delay
A	Very seldom does a vehicle wait longer than one red light. The approach appears open, turns are easily made and drivers have freedom of operation.	≤10 sec	Little or no traffic delay occurs. Approaches appear open, turning movements are easily made, and drivers have freedom of operation.	≤10 sec
B	An occasional green light is fully used and many greens approach full use. Many drivers begin to feel somewhat restricted within groups of vehicles approaching the intersection.	≤20 sec	Short traffic delays occur. Many drivers begin to feel somewhat restricted in terms of freedom of operation.	≤15 sec
C	Intersection operation is stable but often has fully used greens. Drivers feel more restricted and occasionally may wait more than one red light. Queues may develop behind turning vehicles.	≤35 sec	Average traffic delays occur. Operations are generally stable, but drivers emerging from the minor street may experience difficulty in completing their movement. This may occasionally impact on the stability of flow on the major street.	≤25 sec
D	Drivers experience increasing restriction and instability of traffic flow. There are substantial delays to vehicles during short peaks within the peak hour, but there is enough time with lower demand to permit occasional clearing of queues and prevent excessive backups.	≤55 sec	Long traffic delays occur. Drivers emerging from minor streets experience significant restriction and frustration. Drivers on the major street will experience congestion and delay.	≤35 sec
E	The capacity of the road is reached. There are long queues of vehicles waiting upstream of the intersection and delays to vehicles may extend to several signal cycles.	≤80 sec	Very long traffic delays occur. Operations approach the capacity of the intersection.	≤50 sec

F	Vehicle demand exceeds the available capacity and delays extending through the peak hour are experienced.	>80 sec	Vehicle demand exceeds the available capacity. Very long traffic delays occur frequently.	>50 sec
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The v/c ratio represents how full a road or intersection movement is, based on actual volumes versus the maximum number of vehicles that can be served by the intersection. A v/c ratio between 0.00 and 0.49 means that less than half the capacity is being used by vehicles; this is generally associated with good operating conditions. As the v/c ratio approaches 1.00, traffic conditions worsen and at 1.00 the theoretical maximum capacity is reached and operations are generally poor. The v/c ratio can exceed 1.00, indicating very poor operations and extended traffic delays.

The “critical movements” identified in the capacity analyses summary tables are those having an LOS of E or F and/or a v/c ratio of 0.85 or greater for signalized intersections. Since the analysis is based on actual volumes, v/c ratios greater than 1.00 indicates that the counted traffic volumes exceeded the capacity calculated by the analysis procedure/software. Individual movements at intersections with calculated v/c ratio greater than 1.00 are operating essentially above capacity and can be expected to experience severe recurring queuing and congestion during both the AM and PM peak periods.

The existing traffic volumes were analyzed using existing lane configuration and signal timings provided by the City. The traffic operational analysis results of the study area intersections are summarized in **Table 3-9**. Detailed Synchro outputs are provided in **Appendix B**.

Table 3-9: Synchro Results – Existing Conditions

Intersection	Approach/Movement		AM Peak Hour			PM Peak Hour		
			Delay (s)	LOS	v/c	Delay (s)	LOS	v/c
Teston Road at Kleinburg Summit Way (Unsignalized)	EB	EBL	7.8	A	0.03	8.4	A	0.05
		EBT	0.0	A	0.17	0.0	A	0.16
	WB	WBT	0.0	A	0.12	0.0	A	0.19
		WBR	0.0	A	0.03	0.0	A	0.06
	SB	SBL	12.3	B	0.15	15.6	C	0.21
		SBR	12.3	B	0.15	15.6	C	0.21
	Overall Intersection		2.6	A	0.27	2.6	A	0.33
Teston Road at Kipling Avenue (Unsignalized)	EB	EBLTR	0.3	A	0.01	0.5	A	0.01
	WB	WBLTR	0.0	A	0.00	0.1	A	0.00
	NB	NBLTR	12.1	B	0.01	16.8	C	0.02
	SB	SBLTR	12.5	B	0.18	16.9	C	0.06
	Overall Intersection		2.2	A	0.41	0.8	A	0.35

Based on the intersection capacity analyses results presented in **Table 3-9**, the two intersections within the study area are operating at overall LOS A. The overall intersection LOS are illustrated in **Figure 3-8** and **Figure 3-9**.

Figure 3-8: Existing Intersection Level of Service (AM Peak Hour)

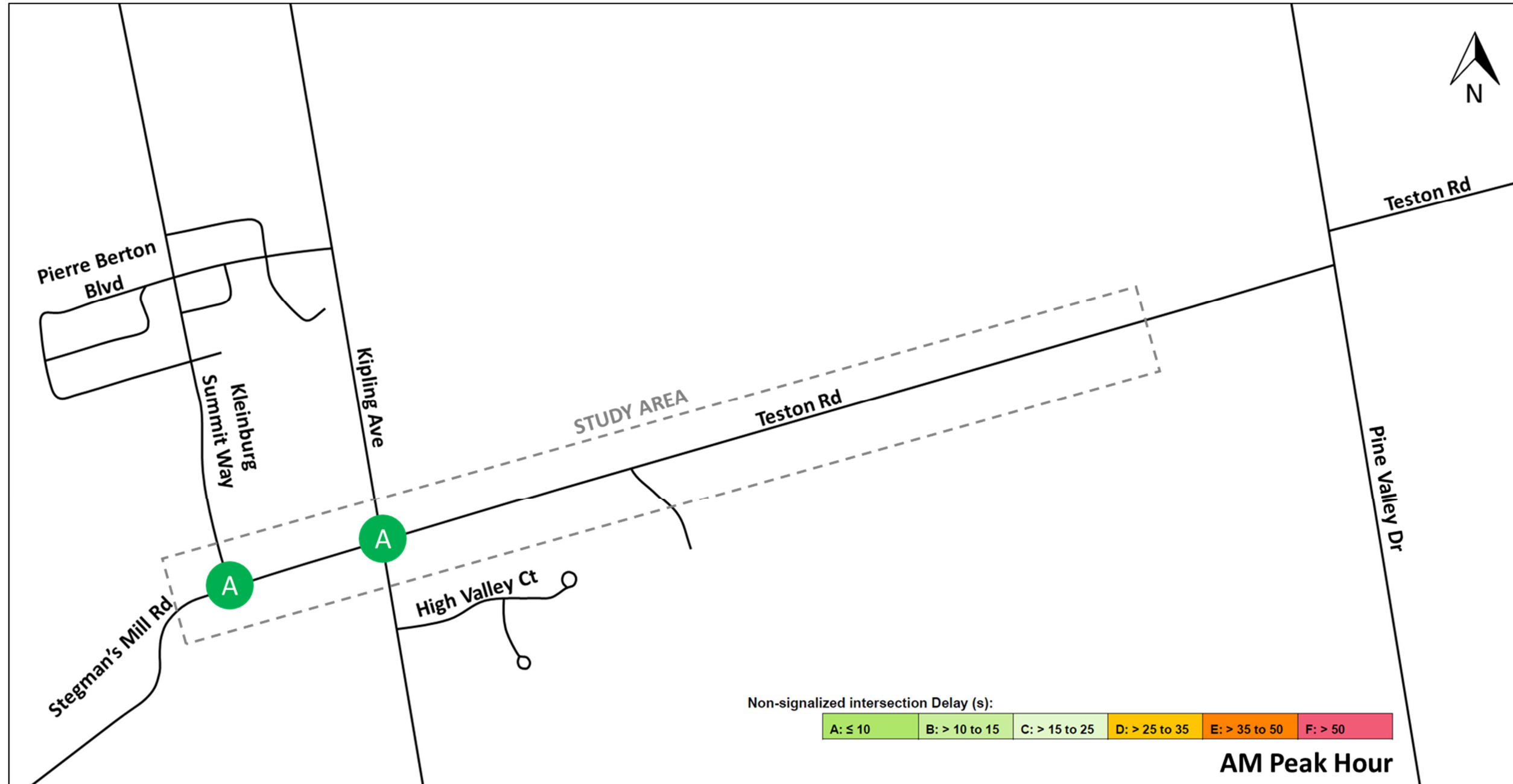
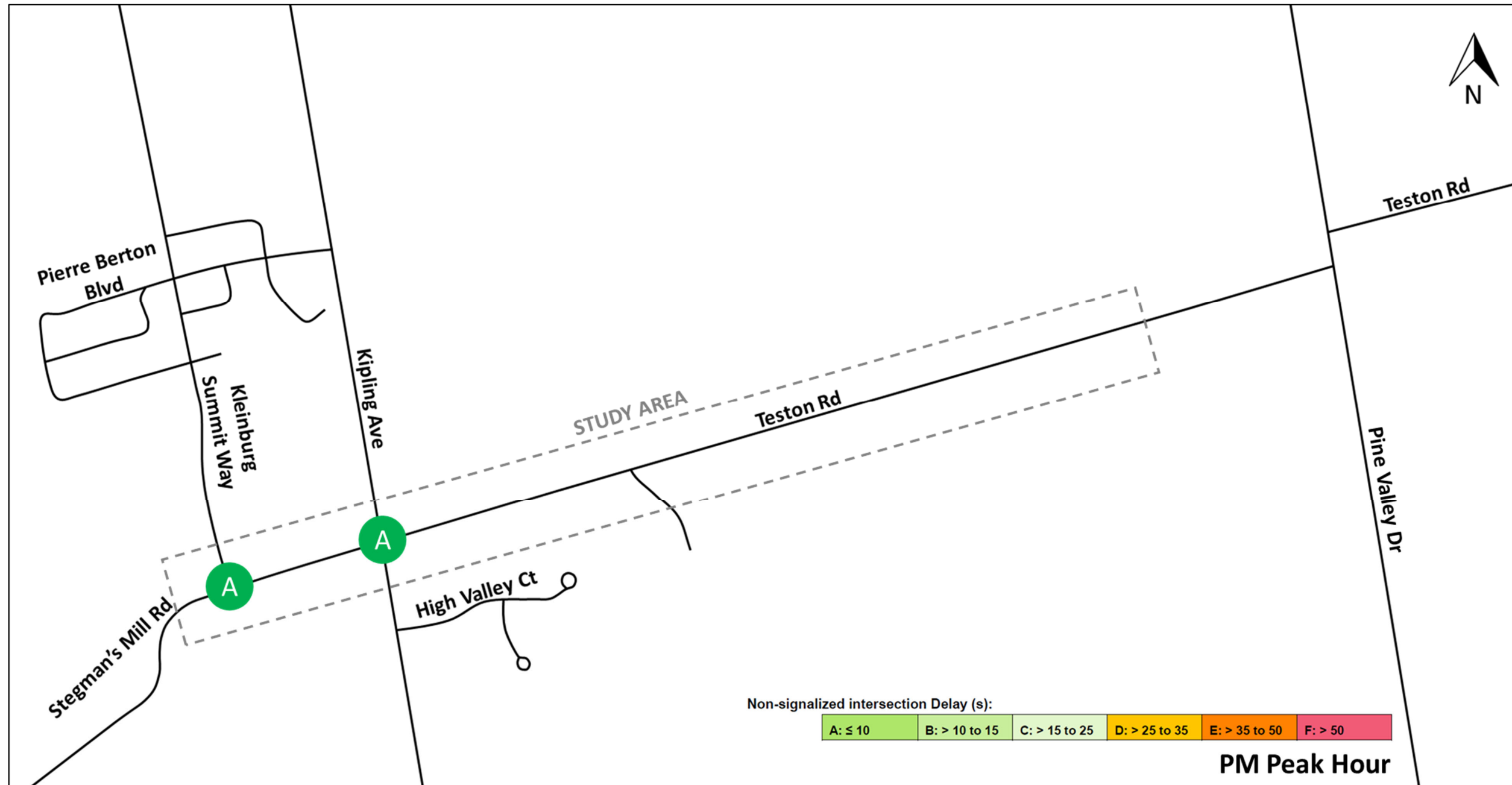


Figure 3-9: Existing Intersection Level of Service (PM Peak Hour)



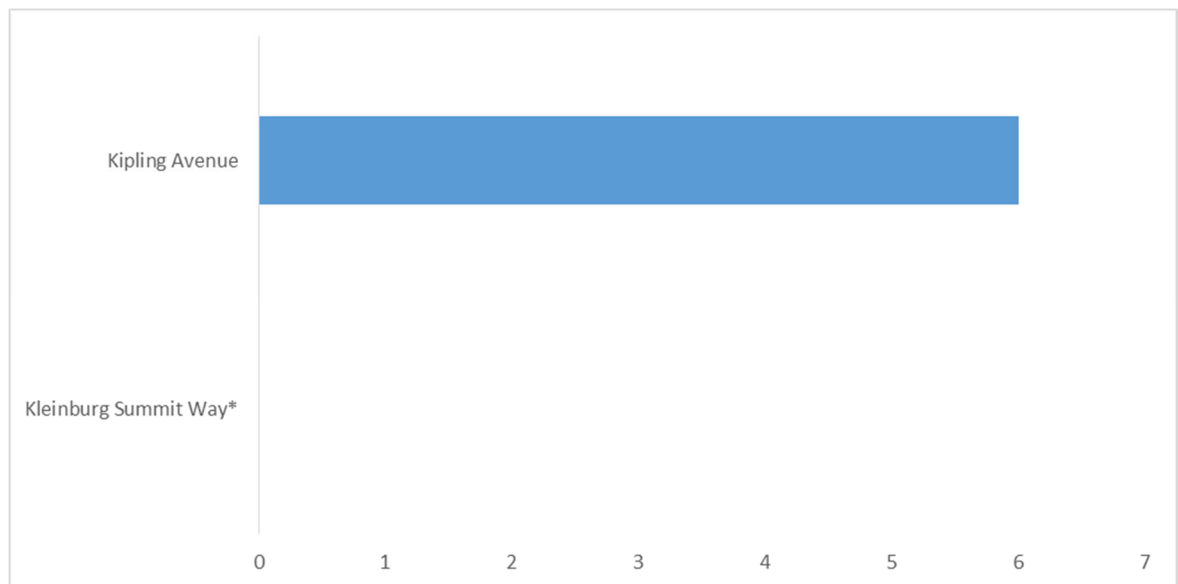
4 Traffic Collision Review

Intersection collision data was provided by York Region and City of Vaughan for collisions spanning the five years between January 1, 2015 and December 31, 2019.

4.1 Total Collisions

A total of 6 collisions were reported for the intersection at Teston Road and Kipling Avenue as summarized in **Figure 4-1**. It is noted that no data is available for the intersection at Teston Road and Kleinburg Summit Way and 13 mid-block collisions were also identified between Kleinburg Summit Way and Pine Valley Drive.

Figure 4-1: Number of Collisions by Intersection



*Data not available

Collisions were analyzed by year, weekday, month of occurrence, severity, initial impact type, environmental condition, and light condition to identify trends and patterns in the collisions.

4.2 Study Area Collisions

Overall collision statistics for the mid-block between Kleinburg Summit Way and Pine Valley Drive are provided in **Figure 4-2**. As shown, the number of collisions have increased since 2015. The majority of collision are single-vehicle collisions with a relatively high number of collision resulting from loss of control (27%) and animal (deer) (18%) collisions.

Figure 4-2: Kleinburg Summit Way to Pine Valley Drive Mid-block Collisions (January 2015 to December 2019)

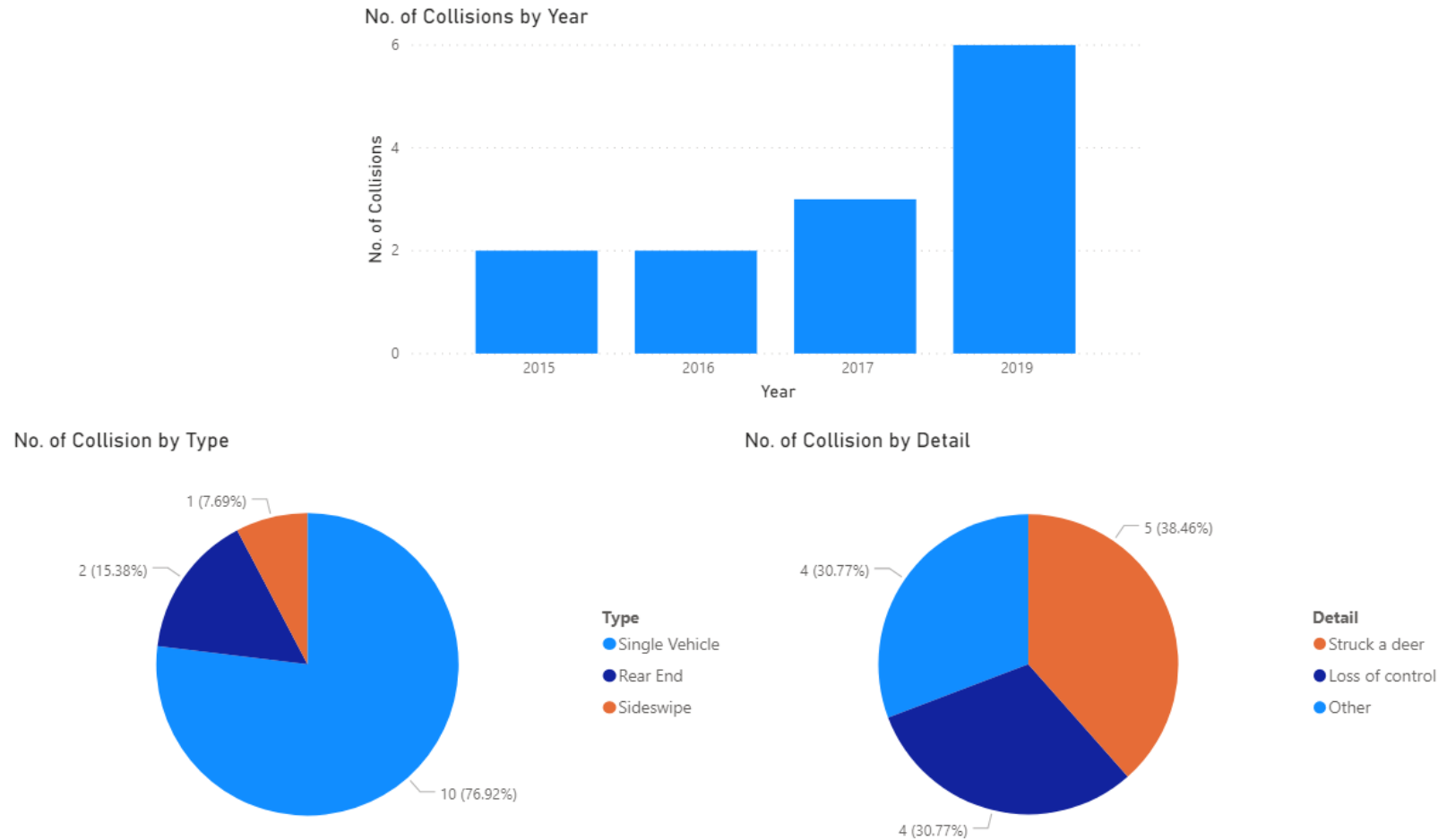
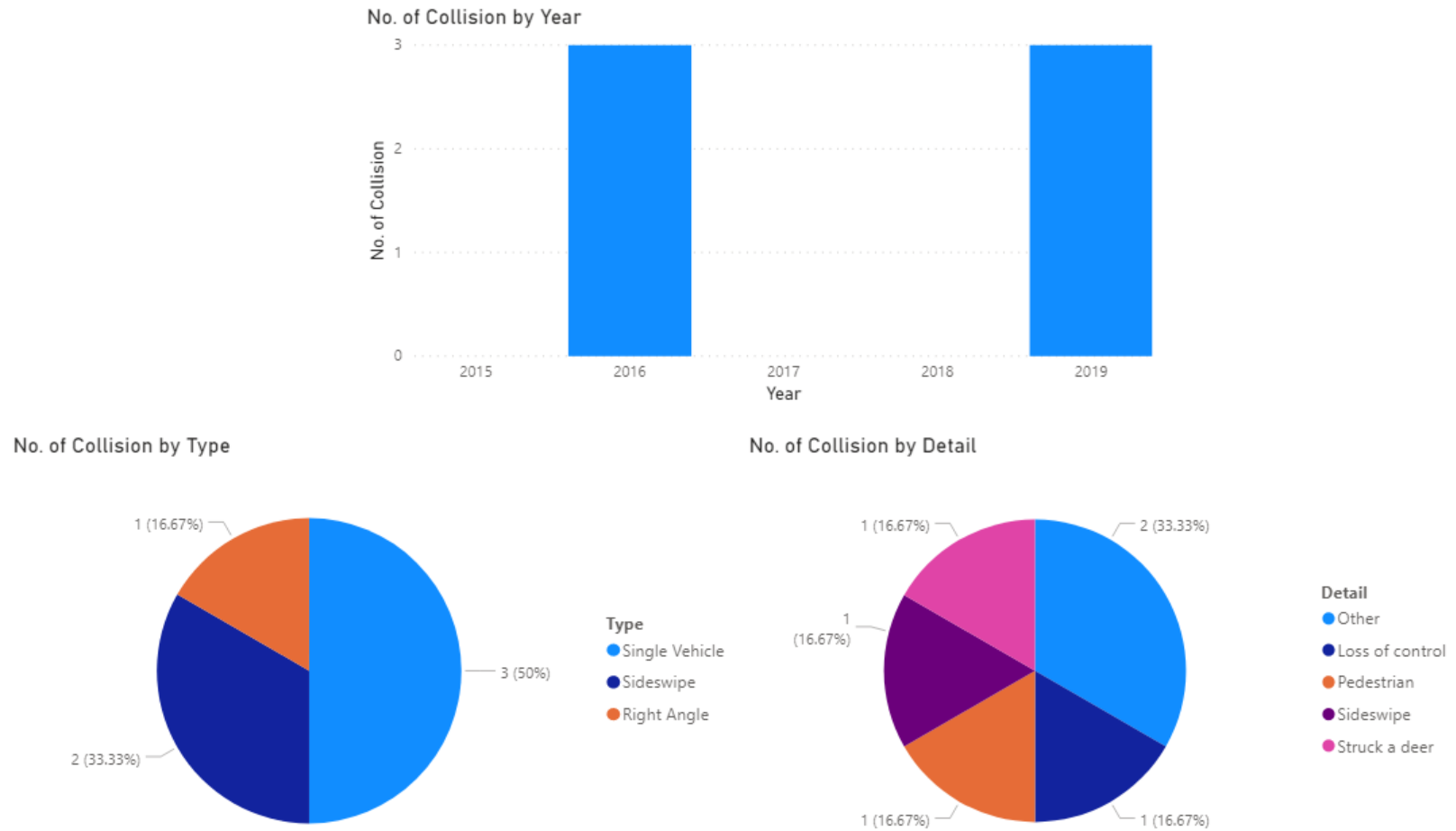


Figure 4-3 illustrates the number of collision at the intersection at Teston Road and Kipling Avenue. As shown in the figure, there has been an equal number of collisions in both 2016 and 2019 with half involving only a single vehicle.

Figure 4-3: Kipling Avenue Intersection Collisions (January 2015 to December 2019)



4.3 Average Collision Rate

Average collision rates were calculated to identify any critical intersection that would not have been otherwise identified due to the low number of collisions at the study intersections. Collision rates per million vehicle-kilometres (MVK) for each of the intersections is calculated using the following formula:

$$\text{Intersection Collision Rate} = \frac{\text{Number of Collisions} \times 1,000,000}{\text{AADT} \times 365 \times \text{Years}}$$

For this calculation, the Annual Average Daily Traffic (AADT) was estimated to be ten times the average of the AM and PM peak hour volumes. The collision rate for the study intersections are presented in **Table 4-1**.

Table 4-1: Average Collision Rates of Intersections

Intersection	Total Collisions (2015-2019)	Intersection Collision Rate
Teston Road & Kipling Avenue	6	1.10
Teston Road & Kleinburg Summit Way*	n/a	n/a

*Data not available

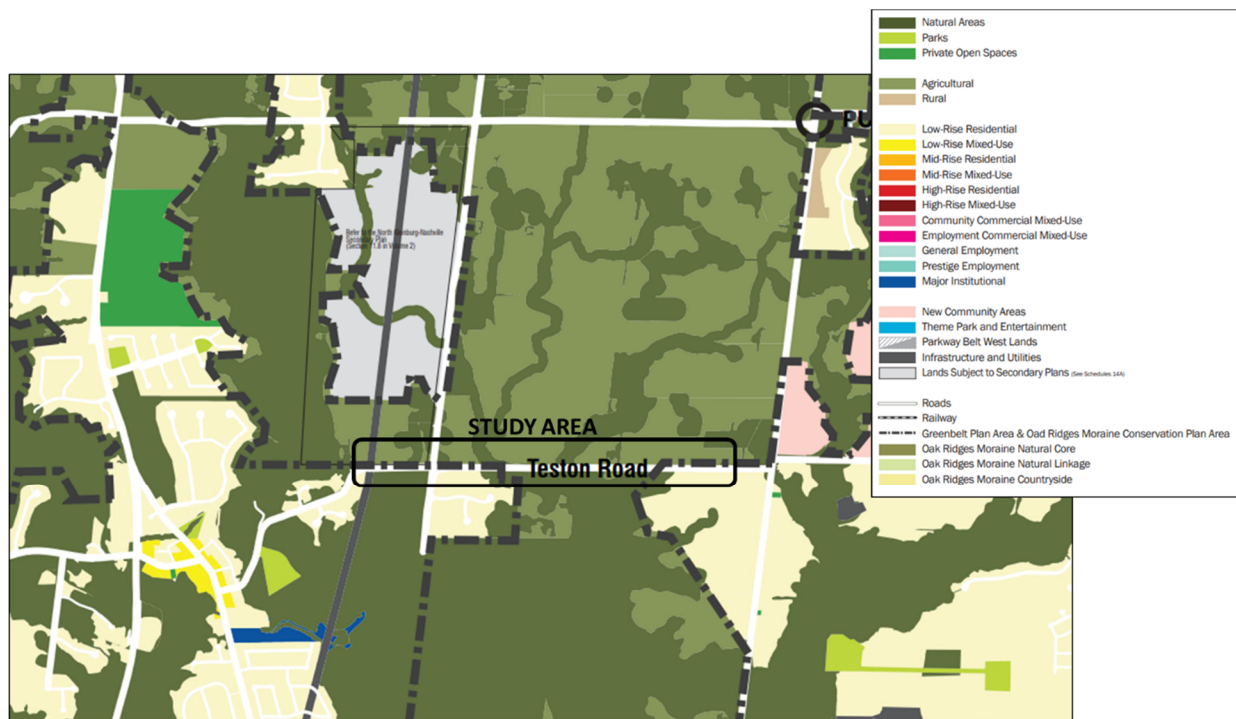
5 Future Transportation Conditions

This section presents the analysis methodology and results for operations under future conditions. The future conditions horizon years is 2031, consistent with NVNCTMP, with a sensitivity analysis for the year 2041 which is the ultimate horizon year for the Teston Road EA study. Travel demand in the study area was forecast using the Regional travel demand model. Intersection operational performance analysis was conducted using Synchro/SimTraffic.

5.1 Land Use and Future Development Context

Land uses adjacent to Teston Road through the study limits currently consist of the Greenbelt, natural areas with agricultural land as well as low-rise residential houses located on the southeast corner of Teston Road and Kipling Avenue. **Figure 5-1** shows the future planned land use designations along the corridor and surrounding area as identified in the Vaughan Official Plan. Future development in Blocks 47 and 55 are adjacent to the study corridor.

Figure 5-1: Land Use – Schedule 13 Official Plan (2019)



5.1.1 2031 Population and Employment Growth

The 2031 population and employment forecasts for this study are consistent with the NVNCTMP, and the breakdown by traffic zone in the travel demand model for the

Teston Road EA secondary study area are presented in **Table 5-1**. York Region’s interim 45% intensification land use scenario is being used in this analysis and it is noted that York Region is currently undertaking a Municipal Comprehensive Review which will update the Regional population and employment growth forecasts to align with new targets set forth by the 2017 Provincial Growth Plan Amendment.

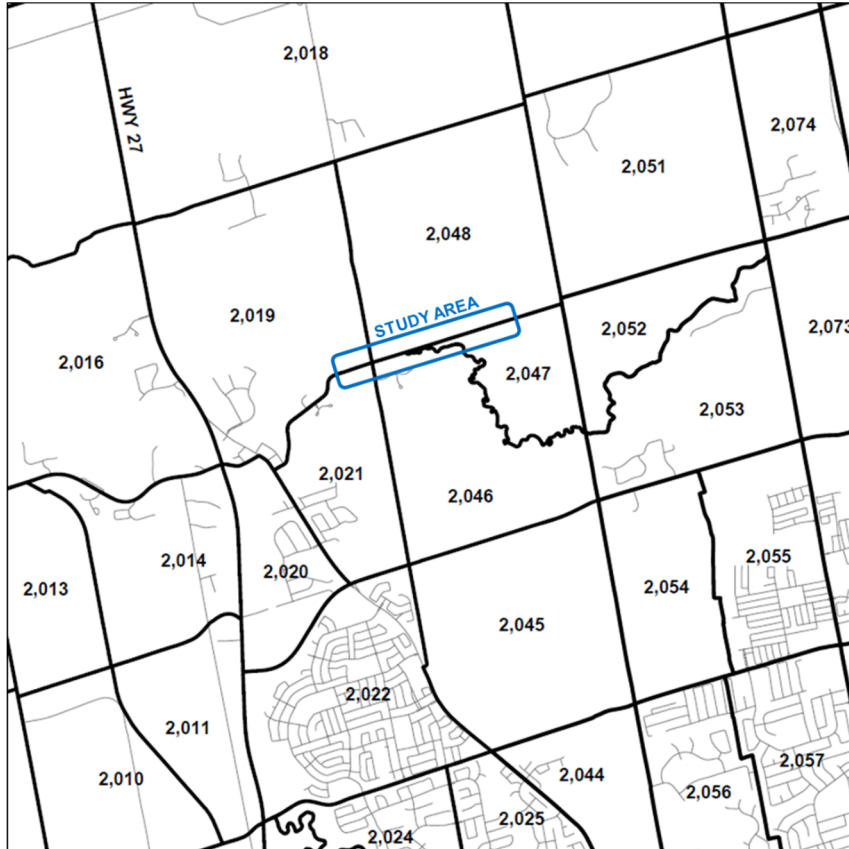
Table 5-1: Secondary Study Area Population and Employment, 2011 and 2031

Traffic Zone	Planning Block	2011 Population	2031 Population	2011 Employment	2031 Employment
2019	55	1,348	3,465	387	373
2020	54	1,209	3,465	419	373
2021	54	799	1,304	172	486
2046	47	93	36	5	115
2047	47	19	90	1	5
2048	48	93	2,542	104	144
2051	41	279	10,180	52	1,982
2052	40	0	3,167	0	451
2053	40	1,810	8,954	63	1,316
TOTAL	-	5,650	33,203	1,203	5,245

Source: NVNCTMP October 2019, York Region 45% Intensification Scenario

A map of the traffic zones in the study area is shown in **Figure 5-2**.

Figure 5-2: Traffic Zones within the Study Area



Source: University of Toronto – Data Management Group – 2006 Traffic Zone Boundaries

5.2 Emme Travel Demand Model Calibration

The Emme travel demand model includes a 2011 base year and a future horizon year of 2031. The 2011 model was compared against observed traffic volumes at locations across “screenlines” to understand the model’s ability to replicate actual traffic patterns.

5.2.1 Calibration Methodology

The modelled link volumes from the Emme model were compared to the observed turning movement counts using the ratio of model to observed traffic and GEH statistic, which is an empirical formula named after its inventor, Geoffrey E. Havers who developed it in the 1970s.

The GEH statistic is able to address both absolute and relative difference between the modelled and observed volume. It avoids some pitfalls that occur when using simply the relative difference, primarily by allowing for greater variance between modelled and observed data at lower values, but requiring lesser variance at higher values.

The GEH statistic is calculated as:

$$GEH = \sqrt{\frac{2(M - C)^2}{M + C}}$$

Where M is the hourly modelled volume and C is the observed volume (count).

A GEH value less than 5 is considered a good match between the modelled and observed volume; a value between 5 and 10 is acceptable; and a value higher than 10 usually requires further attention for model calibration. Typically, when 80% to 85% of GEH values are less than 5 it is considered as very close match between the modelled and observed volume.

Through an iterative process, modifications to the network assumptions were made to improve model calibration. Specifically, capacity assumptions on Major Mackenzie Drive, from Islington Avenue to Highway 27, was increased from 700 vehicles per hour per lane to 900 vehicles per hour per lane to be consistent with the other segments of Major Mackenzie Drive.

The GEH and the model to observed traffic volume ratio are provided in **Table 5-2** for east-west traffic and in **Table 5-3** for north-south traffic.

Table 5-2: East-West Traffic Model to Observed Comparison

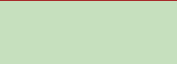
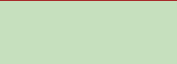
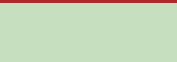
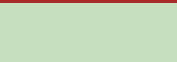
East-West Traffic Screenline:	AM Peak Hour Volumes - Peak Direction WB			
	2011 Counts	2011 Model	Model / Observed	GEH
East of Highway 27				
Kirby Rd	143	224	1.57	6
Teston Rd	299	177	0.59	8
Major Mackenzie Dr	657	762	1.16	4
Total	1,099	1,163	1.06	2
West of Weston Road				
Kirby Rd	63	144	2.29	8
Teston Rd	253	157	0.62	7
Major Mackenzie Dr	1,199	902	0.75	9
Total	1,515	1,203	0.79	8
Legend				
Model / Observed within 25%				
GEH <= 10				

Table 5-3: North-South Traffic Model to Observed Comparison

North-South Traffic Screenline:	AM Peak Hour Volumes - Peak Direction SB			
	2011 Counts	2011 Model	Model / Observed	GEH
North of Teston Road				
Hwy 27	1,110	909	0.82	6
Kipling Ave	198	159	0.80	3
Pine Valley Dr	198	270	1.36	5
Total	1,506	1,338	0.89	4
North of Major Mackenzie Drive				
Hwy 27	1,206	1,380	1.14	5
Islington Ave	558	698	1.25	6
Pine Valley Dr	299	285	0.95	1
Total	2,063	2,363	1.15	6
Legend				
Model / Observed within 25%				
GEH <= 10				

5.3 2031 Travel Demand Forecasting

The York Region travel demand forecasting model used for the NVNCTMP was utilized for this study. The model includes all Regional road and transit improvements by 2031 as per the York Region TMP, with the following exceptions:

- No GTA West Corridor Freeway
- No new freeway interchange at Kirby Road at Highway 400
- No new freeway interchange at 19th Avenue at Highway 404

These improvements are unlikely to be in place by 2031 and the decision was made to exclude these improvements in the analysis for 2031.

5.3.1 Screenline Analysis

To assess the current level of traffic congestion on roadways throughout the study area, a link (road segment) and screenline (grouping of road segments) volume-to-capacity (v/c) analysis was conducted. The link volume describes the number of cars that travel along a specific segment of the network over a period of time and is collected through traffic counts in the field. These link volumes were divided by the capacity of the roadway to develop v/c ratios for each roadway link during the AM peak hour. Road network conditions at the mid-block or link level were also assessed using the v/c ratios and are shown in **Table 5-5**. The v/c ratio reflects peak hour traffic demand measured against roadway capacity. A description of the v/c ratios is provided in **Table 5-4**.

Table 5-4: Link V/C Ratios and Operating Condition

V/C Ratio	Level of Service (LOS)	Operating Condition
Less than 0.85	LOS A-C	Free-flow, very little to moderate delay
Between 0.85 and 0.99	LOS D-E	Approaching or at capacity, users experience delays and queuing
Greater than 1.00	LOS F	Over capacity, severe delays, and queuing

For a particular link or screenline, a v/c ratio of less than 0.85 represents near free flow conditions in which little delay is experienced. Between 0.86 and 0.99, as the link approaches capacity, a moderate to high amount of delay is experienced. Above 0.99, the link is at capacity, and major delays and queuing are occurring consistently during the peak periods. The capacity of roadways within the study area are based on the roadway type definitions from the York Region model and are a function of the existing roadway conditions including free-flow speed and density of access points.

A screenline capacity analysis was completed for Teston Road and the two parallel arterial roads, Kirby Road and Major Mackenzie Drive. **Table 5-5** summarizes the screenline analysis.

Table 5-5: 2031 Screenline Analysis

Screenline:	AM Peak Hour Volume		Capacity		V/C Ratio	
	Existing	2031 Model	Existing	2031 Model	Existing	2031 Model
East of Highway 27						
Kirby Rd	224	311	700	900	0.32	0.35
Teston Rd	177	189	700	700	0.25	0.27
Major Mackenzie Dr	762	1,717	900	2,700	0.85	0.64
Total	986	2,028	1,600	3,600	0.62	0.56
West of Weston Road						
Kirby Rd	144	510	700	900	0.21	0.57
Teston Rd	157	1,133	700	1400	0.22	0.81
Major Mackenzie Dr	902	2,130	900	2,700	1.00	0.79
Total	1,046	2,640	1,600	3,600	0.65	0.73

Based on projected demand by 2031, the screenline locations are operating below capacity in 2031 and therefore no additional capacity is required along the study corridor.

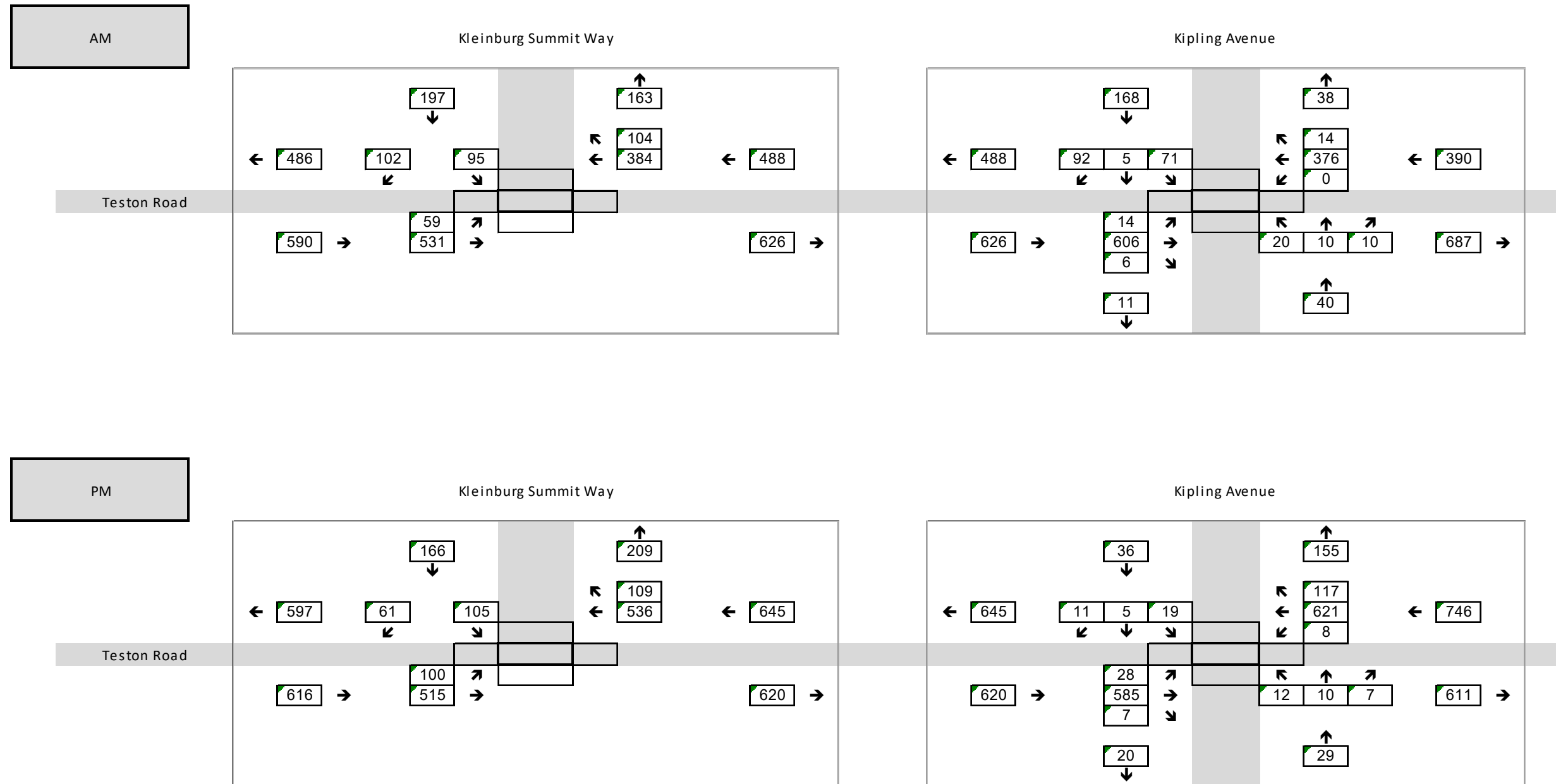
5.3.2 Intersection Volumes

Once the model was refined, 2011 to 2031 traffic growth (AM peak hour) was extracted from the refined model and applied to observed turning movement counts (TMCs) along Teston Road. A two-lane cross-section (no widening for Teston Road) was assumed in model runs that generated the growth rates.

Various adjustments were then made to observe traffic counts to account for the re-distribution of traffic and balancing along Teston Road. **Figure 5-3** illustrates forecast traffic volumes at key study area intersections.



Figure 5-3: Future (2031) Turning Movement Volumes



5.4 2031 Intersection Operations Analysis

Synchro/SimTraffic 9 was utilized to conduct a HCM and queue analysis at each intersection. A detailed assessment, including level of service (LOS), delay, volume to capacity (v/c) ratios, as well as queue and storage length analysis for turn lanes, was conducted at the study intersections for AM and PM peak hours.

The traffic operational analysis results for the intersections along Teston Road are summarized in **Table 5-6**. Critical delays (LOS E or F) and v/c ratios greater than 1.00 are highlighted. Detailed Synchro reports are provided in **Appendix C**.

Table 5-6: Synchro Results – 2031

Intersection	Approach/Movement		AM Peak Hour			PM Peak Hour		
			Delay (s)	LOS	v/c	Delay (s)	LOS	v/c
Teston Road at Kleinburg Summit Way (Unsignalized)	EB	EBL	8.7	A	0.06	9.5	A	0.12
		EBT	0.0	A	0.34	0.0	A	0.33
	WB	WBT	0.0	A	0.25	0.0	A	0.34
		WBR	0.0	A	0.07	0.0	A	0.07
	SB	SBL	28.8	D	0.56	89.2	F	0.94
		SBR	28.8	D	0.56	89.2	F	0.94
	Overall Intersection			4.8	A	0.40	11.0	B
Teston Road at Kipling Avenue (Unsignalized)	EB	EBLTR	0.4	A	0.02	1.3	A	0.05
	WB	WBLTR	0.0	A	0.00	0.3	A	0.01
	NB	NBLTR	31.1	D	0.22	0.20	E	0.20
	SB	SBLTR	36.6	E	0.63	43.5	E	0.29
	Overall Intersection			6.1	A	0.60	2.4	A

Based on the intersection capacity analyses results presented in **Table 5-6**, the intersections within the study area are operating at overall LOS B or better. Traffic signals may be installed at the intersections to improve the operations. Based on the projected volumes, signals are not warranted, however, they are recommended to provide opportunity for pedestrian crossings and improve pedestrian safety at the intersections.

5.5 2041 Sensitivity Analysis

The York Region Emme model was utilized to undertake a screenline capacity analysis for Teston Road and the two parallel arterial roads, Kirby Road and Major Mackenzie Drive for the year 2041. **Table 5-7** summarizes the screenline analysis.

Table 5-7: 2041 Screenline Analysis

Screenline:	AM Peak Hour	
	Volume	V/C Ratio
East of Highway 27	2041 Model	2041 Model
Kirby Rd	416	0.59
Teston Rd	377	0.54
Major Mackenzie Dr	1782	0.85
Total	2575	0.74
West of Weston Road		
Kirby Rd	1018	0.73
Teston Rd	1189	0.74
Major Mackenzie Dr	2172	0.80
Total	4379	0.77

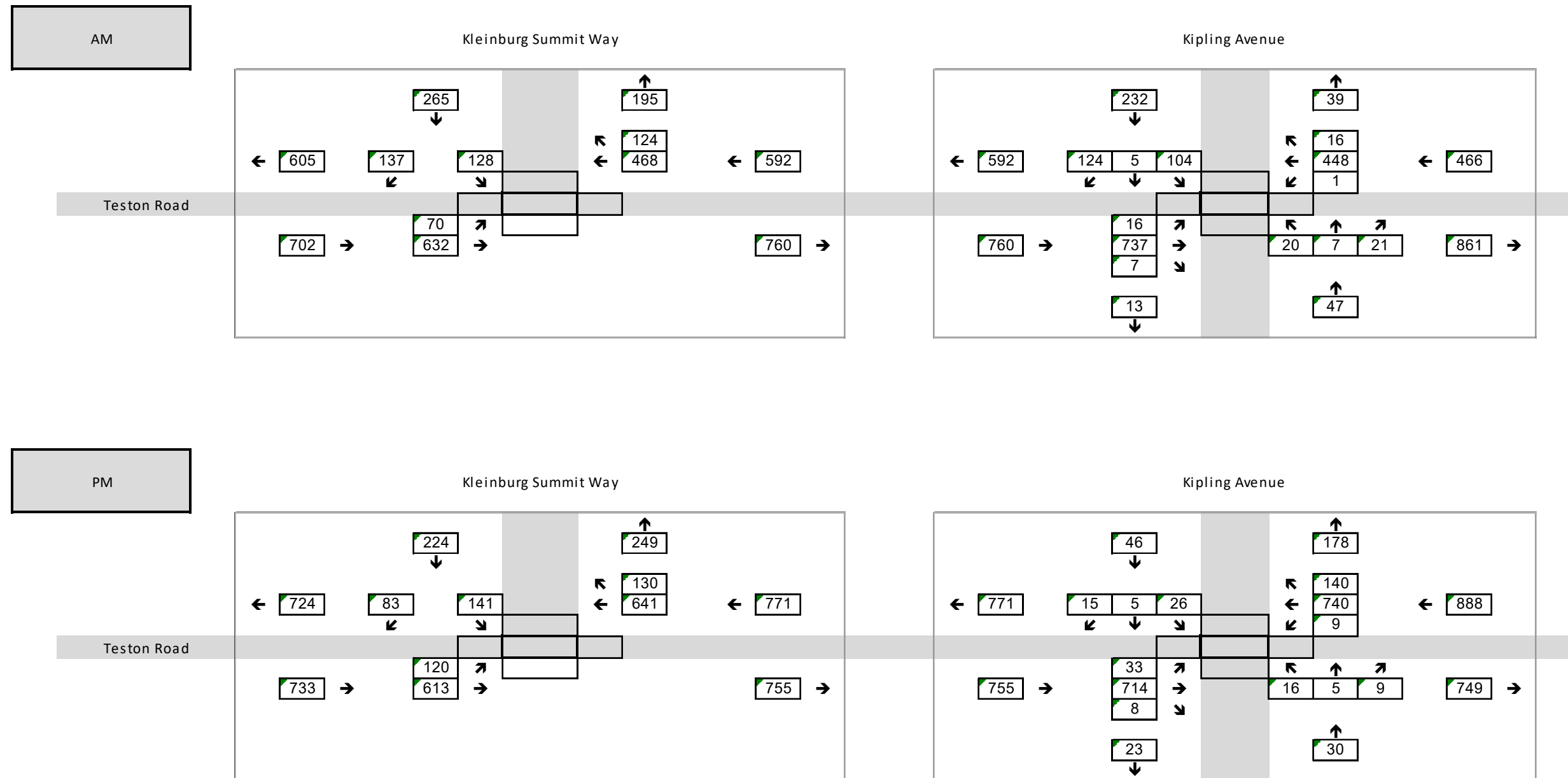
Based on projected demand by 2041, the screenline locations are operating below capacity in 2041 and therefore no additional capacity is required on the study corridor.

5.5.1 2041 Intersection Volumes and Operations Analysis

York Region EMME models' 2031 to 2041 traffic growth (AM peak hour) was extracted from the model and applied to the 2031 volumes along Teston Road.

Figure 5-4 illustrates forecast traffic volumes at key study area intersections.

Figure 5-4: Future (2041) Turning Movement Volumes





The traffic operational analysis results for the intersections along Teston Road are summarized in **Table 5-8**. Critical delays (LOS E or F) and v/c ratios greater than 1.00 are highlighted. Detailed Synchro reports are provided in **Appendix C**.

Table 5-8: Synchro Results – 2041

Intersection	Approach/Movement		AM Peak Hour			PM Peak Hour		
			Delay (s)	LOS	v/c	Delay (s)	LOS	v/c
Teston Road at Kleinburg Summit Way (Unsignalized)	EB	EBL	9.1	A	0.08	10.3	B	0.16
		EBT	0.0	A	0.40	0.0	A	0.39
	WB	WBT	0.0	A	0.30	0.0	A	0.41
		WBR	0.0	A	0.08	0.0	A	0.08
	SB	SBL	140.8	F	1.14	588.6	F	2.11
		SBR	140.8	F	1.14	588.6	F	2.11
	Overall Intersection		24.3	C	0.47	76.9	F	0.58
Teston Road at Kipling Avenue (Unsignalized)	EB	EBLTR	0.6	A	0.02	2.0	A	0.07
	WB	WBLTR	0.0	A	0.00	0.3	A	0.01
	NB	NBLTR	48.9	E	0.40	77.2	F	0.40
	SB	SBLTR	211.6	F	1.29	103.2	F	0.61
	Overall Intersection		34.2	D	0.76	5.1	A	0.69

Based on the intersection capacity analyses results presented in **Table 5-8**, the intersections within the study area require the installation of traffic signals which are anticipated to significantly improve the traffic operation to LOS C and better at both intersections.

5.6 Future Transit and Active Transportation Conditions

As documented in **Section 3.1.2**, there is no existing transit service along the study corridor. There are also no known plans for future transit service along the study corridor based on the information available at the time of this EA.

As noted in **Section 2.3.4**, the City’s Pedestrian and Bicycle Master Plan (PBMP) Update is developing a visible and connected pedestrian and cycling network in Vaughan that integrates, enhances and expands the existing on- and off-road pedestrian and cycling facilities. While the PBMP did not identify cycling facilities on Teston Road, the City of Vaughan policy is to explore active transportation facilities on all arterial roads. Sidewalks and cycling facilities will be considered across the entire study corridor in the next phase of the study. York Region’s Teston Road (Pine Valley Drive to Weston Road) detailed design will implement a multi-use path on the south side of Teston Road between Weston Road and 250m west of Pine Valley Drive. There are opportunities to provide a facility along the current Teston Road

study corridor to tie into this soon to be constructed facility to provide continuity with the adjacent segment.

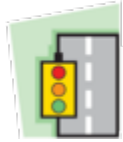
6 Conclusions and Next Steps

The transportation and traffic analysis assessed the existing traffic conditions at the key intersections and midblock segments along Teston Road between 250 m west of Pine Valley Drive and Kleinburg Summit Way; estimated and examined the traffic growth and expected future traffic volumes; and analyzed the traffic impacts from the introduction of the projected traffic volumes.

Base on the analysis results, additional capacity on Teston Road within the study area is not required, and as such, additional vehicular lanes are not recommended. However, adequate accommodation for other roadway users such as pedestrians and cyclists will be considered in the next phase of the study.



Appendix A. Turning Movement Counts



Ontario Traffic Inc.
TRAFFIC MONITORING  SERVICES & PRODUCTS

Project #19036 - City of Vaughan

Intersection Count Report

Intersection: Kleinburg Summit Way & Teston Rd
Municipality: Vaughan
Count Date: Oct 15, 2019
Site Code: 1903600072
Count Categories: Cars, Trucks, Bicycles, Pedestrians
Count Period: 07:00-09:00, 15:00-18:00
Weather: Clear



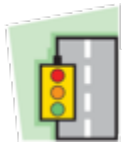
Traffic Count Map

Intersection: Kleinburg Summit Way & Teston Rd

Municipality: Vaughan

Count Date: Oct 15, 2019





Ontario Traffic Inc.
TRAFFIC MONITORING + SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Kleinburg Summit Way & Teston Rd
Municipality: Vaughan
Count Date: Oct 15, 2019

Teston Rd - Traffic Summary

Hour	East Approach Totals						West Approach Totals					
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles					
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	0	164	59	0	223	0	32	263	0	0	295	0
08:00 - 09:00	0	209	46	0	255	0	35	236	0	0	271	0
BREAK												
15:00 - 16:00	0	222	78	0	300	0	57	217	0	0	274	2
16:00 - 17:00	0	293	90	0	383	0	51	250	0	0	301	1
17:00 - 18:00	0	220	54	0	274	0	35	198	0	0	233	4
GRAND TOTAL	0	1108	327	0	1435	0	210	1164	0	0	1374	7



Ontario Traffic Inc.
TRAFFIC MONITORING + SERVICES & PRODUCTS

Traffic Count Data

Intersection: Kleinburg Summit Way & Teston Rd
Municipality: Vaughan
Count Date: Oct 15, 2019

North Approach - Kleinburg Summit Way

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	12	0	4	0	16	6	0	1	0	7	0	0	0	0	0	0
07:15	5	0	6	0	11	9	0	1	0	10	0	0	0	0	0	0
07:30	16	0	14	0	30	1	0	0	0	1	0	0	0	0	0	0
07:45	3	0	14	0	17	6	0	1	0	7	0	0	0	0	0	0
08:00	8	0	19	0	27	9	0	2	0	11	0	0	0	0	0	0
08:15	9	0	12	0	21	4	0	1	0	5	0	0	0	0	0	0
08:30	6	0	10	0	16	3	0	0	0	3	0	0	0	0	0	0
08:45	8	0	10	0	18	7	0	0	0	7	0	0	0	0	0	0
SUBTOTAL	67	0	89	0	156	45	0	6	0	51	0	0	0	0	0	0



Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Kleinburg Summit Way & Teston Rd
Municipality: Vaughan
Count Date: Oct 15, 2019

North Approach - Kleinburg Summit Way

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
15:00	0	0	8	0	8	9	0	1	0	10	0	0	0	0	0	0
15:15	7	0	9	0	16	8	0	3	0	11	0	0	0	0	0	0
15:30	7	0	11	0	18	8	0	2	0	10	0	0	0	0	0	0
15:45	6	0	10	0	16	7	0	0	0	7	0	0	0	0	0	0
16:00	14	0	9	0	23	5	0	1	0	6	0	0	0	0	0	0
16:15	13	0	10	0	23	8	0	1	0	9	0	0	0	0	0	0
16:30	7	0	7	0	14	6	0	2	0	8	0	0	2	0	2	0
16:45	7	0	5	0	12	5	0	1	0	6	0	0	0	0	0	0
17:00	14	0	9	0	23	3	0	0	0	3	0	0	0	0	0	0
17:15	9	0	7	0	16	3	0	1	0	4	0	0	0	0	0	0
17:30	11	0	6	0	17	2	0	0	0	2	0	0	0	0	0	0
17:45	7	0	8	0	15	1	0	2	0	3	1	0	0	0	1	0
SUBTOTAL	102	0	99	0	201	65	0	14	0	79	1	0	2	0	3	0
GRAND TOTAL	169	0	188	0	357	110	0	20	0	130	1	0	2	0	3	0



Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Kleinburg Summit Way & Teston Rd
Municipality: Vaughan
Count Date: Oct 15, 2019

East Approach - Teston Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	0	28	11	0	39	0	2	7	0	9	0	0	0	0	0	0
07:15	0	36	12	0	48	0	5	4	0	9	0	0	0	0	0	0
07:30	0	43	7	0	50	0	2	1	0	3	0	0	0	0	0	0
07:45	0	43	7	0	50	0	5	9	0	14	0	0	1	0	1	0
08:00	0	50	12	0	62	0	1	6	0	7	0	0	0	0	0	0
08:15	0	51	7	0	58	0	0	3	0	3	0	0	0	0	0	0
08:30	0	54	5	0	59	0	0	4	0	4	0	0	0	0	0	0
08:45	0	51	4	0	55	0	2	5	0	7	0	0	0	0	0	0
SUBTOTAL	0	356	65	0	421	0	17	39	0	56	0	0	1	0	1	0



Ontario Traffic Inc.
TRAFFIC MONITORING + SERVICES & PRODUCTS

Traffic Count Data

Intersection: Kleinburg Summit Way & Teston Rd
Municipality: Vaughan
Count Date: Oct 15, 2019

East Approach - Teston Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
15:00	0	53	12	0	65	0	3	6	0	9	0	0	0	0	0	0
15:15	0	48	8	0	56	0	3	10	0	13	0	0	0	0	0	0
15:30	0	51	10	0	61	0	4	9	0	13	0	0	0	0	0	0
15:45	0	55	17	0	72	0	5	6	0	11	0	0	0	0	0	0
16:00	0	65	16	0	81	0	5	10	0	15	0	0	0	0	0	0
16:15	0	70	9	0	79	0	3	13	0	16	0	0	0	0	0	0
16:30	0	70	9	0	79	0	4	7	0	11	0	0	0	0	0	0
16:45	0	75	20	0	95	0	1	6	0	7	0	0	0	0	0	0
17:00	0	62	14	0	76	0	1	5	0	6	0	0	0	0	0	0
17:15	0	65	12	0	77	0	2	1	0	3	0	0	0	0	0	0
17:30	0	48	8	0	56	0	0	1	0	1	0	0	0	0	0	0
17:45	0	41	12	0	53	0	1	1	0	2	0	0	0	0	0	0
SUBTOTAL	0	703	147	0	850	0	32	75	0	107	0	0	0	0	0	0
GRAND TOTAL	0	1059	212	0	1271	0	49	114	0	163	0	0	1	0	1	0



Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Kleinburg Summit Way & Teston Rd
Municipality: Vaughan
Count Date: Oct 15, 2019

West Approach - Teston Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	10	65	0	0	75	0	4	0	0	4	0	0	0	0	0	0
07:15	6	56	0	0	62	1	3	0	0	4	0	0	0	0	0	0
07:30	9	66	0	0	75	0	1	0	0	1	0	0	0	0	0	0
07:45	6	67	0	0	73	0	1	0	0	1	0	0	0	0	0	0
08:00	5	58	0	0	63	0	0	0	0	0	0	0	0	0	0	0
08:15	10	53	0	0	63	0	0	0	0	0	0	0	0	0	0	0
08:30	11	65	0	0	76	0	0	0	0	0	0	0	0	0	0	0
08:45	9	57	0	0	66	0	3	0	0	3	0	0	0	0	0	0
SUBTOTAL	66	487	0	0	553	1	12	0	0	13	0	0	0	0	0	0



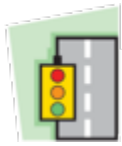
Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Kleinburg Summit Way & Teston Rd
Municipality: Vaughan
Count Date: Oct 15, 2019

West Approach - Teston Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
15:00	10	47	0	0	57	3	2	0	0	5	0	0	0	0	0	0
15:15	11	56	0	0	67	2	2	0	0	4	0	0	0	0	0	0
15:30	16	53	0	0	69	2	4	0	0	6	0	0	0	0	0	1
15:45	12	51	0	0	63	1	2	0	0	3	0	0	0	0	0	1
16:00	13	52	0	0	65	1	1	0	0	2	2	0	0	0	2	0
16:15	13	58	0	0	71	1	3	0	0	4	0	0	0	0	0	0
16:30	10	64	0	0	74	1	2	0	0	3	0	0	0	0	0	1
16:45	10	66	0	0	76	0	4	0	0	4	0	0	0	0	0	0
17:00	10	57	0	0	67	1	2	0	0	3	0	0	0	0	0	1
17:15	7	51	0	0	58	0	2	0	0	2	0	0	0	0	0	0
17:30	11	41	0	0	52	0	1	0	0	1	0	0	0	0	0	3
17:45	6	43	0	0	49	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	129	639	0	0	768	12	26	0	0	38	2	0	0	0	2	7
GRAND TOTAL	195	1126	0	0	1321	13	38	0	0	51	2	0	0	0	2	7



Peak Hour Diagram

Specified Period

From: 07:00:00
To: 09:00:00

One Hour Peak

From: 07:30:00
To: 08:30:00

Intersection: Kleinburg Summit Way & Teston Rd
Site ID: 1903600072
Count Date: Oct 15, 2019

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Teston Rd runs E/W

North Approach

	Out	In	Total
	95	63	158
	24	19	43
	0	1	1
Totals	119	83	202

Kleinburg Summit Way

	0	0	0
	4	20	0
	59	36	0
Totals	63	56	0

East Approach

	Out	In	Total
	220	280	500
	27	22	49
	1	0	1
Totals	248	302	550

Teston Rd

			Totals
0	0	0	0
0	0	30	30
0	2	244	246

Peds: 0



Peds: 0

Peds: 0

Peds: 0

Teston Rd

Totals			
0	0	0	0
53	33	19	1
195	187	8	0

West Approach

	Out	In	Total
	274	246	520
	2	12	14
	0	0	0
Totals	276	258	534

- Cars

- Trucks

- Bicycles

Comments



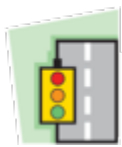
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Peak Hour Summary

Intersection: Kleinburg Summit Way & Teston Rd
Count Date: Oct 15, 2019
Period: 07:00 - 09:00

Peak Hour Data (07:30 - 08:30)

Start Time	North Approach Kleinburg Summit Way						South Approach				East Approach Teston Rd						West Approach Teston Rd						Total Vehicles			
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻		Peds	Total	
07:30	17		14	0	0	31					0			45	8	0	0	53	9	67			0	0	76	160
07:45	9		15	0	0	24					0			48	17	0	0	65	6	68			0	0	74	163
08:00	17		21	0	0	38					0			51	18	0	0	69	5	58			0	0	63	170
08:15	13		13	0	0	26					0			51	10	0	0	61	10	53			0	0	63	150
Grand Total	56		63	0	0	119					0	0		195	53	0	0	248	30	246			0	0	276	643
Approach %	47.1		52.9	0		-					-			78.6	21.4	0		-	10.9	89.1			0		-	
Totals %	8.7		9.8	0		18.5					0			30.3	8.2	0		38.6	4.7	38.3			0		42.9	
PHF	0.82		0.75	0		0.78					0			0.96	0.74	0		0.9	0.75	0.9			0		0.91	0.95
Cars	36		59	0		95					0			187	33	0		220	30	244			0		274	589
% Cars	64.3		93.7	0		79.8					0			95.9	62.3	0		88.7	100	99.2			0		99.3	91.6
Trucks	20		4	0		24					0			8	19	0		27	0	2			0		2	53
% Trucks	35.7		6.3	0		20.2					0			4.1	35.8	0		10.9	0	0.8			0		0.7	8.2
Bicycles	0		0	0		0					0			0	1	0		1	0	0			0		0	1
% Bicycles	0		0	0		0					0			0	1.9	0		0.4	0	0			0		0	0.2
Peds					0	-					0	-						0					0	-	0	
% Peds					0	-					0	-						0					0	-	0	



Peak Hour Diagram

Specified Period

From: 15:00:00
To: 18:00:00

One Hour Peak

From: 16:00:00
To: 17:00:00

Intersection: Kleinburg Summit Way & Teston Rd
Site ID: 1903600072
Count Date: Oct 15, 2019

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Teston Rd runs E/W

North Approach

	Out	In	Total
	72	100	172
	29	39	68
	2	2	4
Totals	103	141	244

Kleinburg Summit Way

	2	0	0
	5	24	0
	31	41	0
Totals	38	65	0

East Approach

	Out	In	Total
	334	281	615
	49	34	83
	0	0	0
Totals	383	315	698

Teston Rd

			Totals
0	0	0	0
2	3	46	51
0	10	240	250

Peds: 0

Peds: 1



Peds: 0

Peds: 0

Teston Rd

Totals			
0	0	0	0
90	54	36	0
293	280	13	0

West Approach

	Out	In	Total
	286	311	597
	13	18	31
	2	2	4
Totals	301	331	632

- Cars

- Trucks

- Bicycles

Comments



Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Kleinburg Summit Way & Teston Rd
Count Date: Oct 15, 2019
Period: 15:00 - 18:00

Peak Hour Data (16:00 - 17:00)

Start Time	North Approach Kleinburg Summit Way						South Approach				East Approach Teston Rd						West Approach Teston Rd						Total Vehicles			
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻		Peds	Total	
16:00	19		10	0	0	29					0			70	26	0	0	96	16	53			0	0	69	194
16:15	21		11	0	0	32					0			73	22	0	0	95	14	61			0	0	75	202
16:30	13		11	0	0	24					0			74	16	0	0	90	11	66			0	1	77	191
16:45	12		6	0	0	18					0			76	26	0	0	102	10	70			0	0	80	200
Grand Total	65		38	0	0	103					0	0		293	90	0	0	383	51	250			0	1	301	787
Approach %	63.1		36.9	0	-	-					-	-		76.5	23.5	0	-	-	16.9	83.1			0	-	-	-
Totals %	8.3		4.8	0	-	13.1					0	-		37.2	11.4	0	-	48.7	6.5	31.8			0	-	38.2	-
PHF	0.77		0.86	0	0.8						0			0.96	0.87	0	0.94		0.8	0.89			0	0.94	0.97	
Cars	41		31	0	-	72					0	-		280	54	0	-	334	46	240			0	-	286	692
% Cars	63.1		81.6	0	-	69.9					0	-		95.6	60	0	-	87.2	90.2	96			0	-	95	87.9
Trucks	24		5	0	-	29					0	-		13	36	0	-	49	3	10			0	-	13	91
% Trucks	36.9		13.2	0	-	28.2					0	-		4.4	40	0	-	12.8	5.9	4			0	-	4.3	11.6
Bicycles	0		2	0	-	2					0	-		0	0	0	-	0	2	0			0	-	2	4
% Bicycles	0		5.3	0	-	1.9					0	-		0	0	0	-	0	3.9	0			0	-	0.7	0.5
Peds					0	-					0	-						0					1	-	1	
% Peds					0	-					0	-						0					100	-		

Ontario Traffic, Inc.
 17705 Leslie St., Unit 6
 Newmarket, Ontario L3Y 3E3
 Tel: (905) 898-7711 Fax: (905) 898-3664

Site Code: 69
 Station ID: M2
 Teston Rd between Kipling Ave &
 Kleinburg Summit Way
 Date Start: 17-Sep-19
 Date End: 19-Sep-19
 Date Start: 17-Sep-19

EB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
09/17/19	0	3	3	0	0	0	0	0	0	0	0	0	0	6
01:00	0	3	2	0	0	0	0	0	0	0	0	0	0	5
02:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
03:00	0	1	3	0	0	0	0	0	0	0	0	0	0	4
04:00	0	6	1	0	0	0	0	0	0	0	0	0	0	7
05:00	0	39	22	1	1	0	0	0	0	0	0	0	0	63
06:00	0	131	72	1	3	0	0	0	0	0	0	0	0	207
07:00	0	247	102	3	1	0	0	0	0	0	0	0	0	353
08:00	0	209	99	3	2	0	0	2	0	0	0	1	0	316
09:00	0	127	92	0	1	0	0	0	0	1	1	0	0	222
10:00	2	76	55	2	4	0	0	0	0	0	1	0	0	140
11:00	3	65	58	3	5	1	0	0	0	1	0	0	0	136
12 PM	1	64	63	0	4	1	1	0	0	0	0	0	0	134
13:00	1	76	52	1	1	0	1	1	0	0	0	0	0	133
14:00	2	81	65	2	4	1	0	2	0	0	0	0	0	157
15:00	1	120	84	1	4	1	1	0	0	0	0	0	0	212
16:00	2	164	98	3	5	0	0	1	0	0	0	0	0	273
17:00	1	149	105	0	6	0	0	1	0	0	0	0	0	262
18:00	2	114	71	0	0	0	0	0	0	0	0	0	0	187
19:00	9	93	60	0	1	0	0	0	0	0	0	1	0	164
20:00	0	61	34	0	0	0	0	0	0	0	0	0	0	95
21:00	0	41	25	0	0	0	0	0	0	0	0	0	0	66
22:00	0	30	13	0	0	0	0	0	0	0	0	0	0	43
23:00	0	18	5	0	0	0	0	0	0	0	0	0	0	23
Day Total	24	1921	1184	20	42	4	3	7	0	2	2	2	0	3211
Percent	0.7%	59.8%	36.9%	0.6%	1.3%	0.1%	0.1%	0.2%	0.0%	0.1%	0.1%	0.1%	0.0%	
AM Peak	11:00	07:00	07:00	07:00	11:00	11:00		08:00		09:00	09:00	08:00		07:00
Vol.	3	247	102	3	5	1		2		1	1	1		353
PM Peak	19:00	16:00	17:00	16:00	17:00	12:00	12:00	14:00				19:00		16:00
Vol.	9	164	105	3	6	1	1	2				1		273

Ontario Traffic, Inc.
 17705 Leslie St., Unit 6
 Newmarket, Ontario L3Y 3E3
 Tel: (905) 898-7711 Fax: (905) 898-3664

Site Code: 69
 Station ID: M2
 Teston Rd between Kipling Ave &
 Kleinburg Summit Way
 Date Start: 17-Sep-19
 Date End: 19-Sep-19
 Date Start: 17-Sep-19

EB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
09/18/19	0	4	4	0	0	0	0	0	0	0	0	0	0	8
01:00	0	5	3	0	0	0	0	0	0	0	0	0	0	8
02:00	0	0	1	0	1	1	0	0	0	0	0	0	0	3
03:00	0	2	2	0	0	0	0	0	0	0	0	0	0	4
04:00	0	9	2	0	0	0	0	0	0	0	0	0	0	11
05:00	0	44	18	0	0	0	0	0	0	0	0	0	0	62
06:00	0	98	74	2	1	0	0	0	0	0	0	0	0	175
07:00	0	289	119	3	1	0	0	0	0	0	0	0	0	412
08:00	0	165	110	0	1	0	0	0	1	0	0	0	0	277
09:00	0	115	95	2	4	0	0	0	0	0	0	0	0	216
10:00	1	59	63	3	2	0	0	0	0	0	0	0	0	128
11:00	1	78	63	1	1	0	1	1	0	0	0	0	0	146
12 PM	2	55	66	4	2	0	0	0	0	0	0	0	1	130
13:00	0	77	60	2	5	0	0	0	0	0	0	0	0	144
14:00	1	87	69	2	5	0	0	0	0	0	0	0	0	164
15:00	3	110	83	3	2	2	1	0	0	0	0	0	0	204
16:00	3	181	85	5	5	2	0	0	0	0	0	0	0	281
17:00	3	195	115	0	5	1	0	0	0	0	0	0	0	319
18:00	1	120	75	0	1	0	0	0	0	0	0	0	0	197
19:00	2	77	62	0	0	0	0	0	0	0	0	0	0	141
20:00	0	59	36	0	0	0	0	0	0	0	0	0	0	95
21:00	0	154	56	0	0	0	0	0	0	0	0	0	0	210
22:00	0	76	26	0	1	0	0	0	0	0	0	0	0	103
23:00	1	50	24	0	1	0	0	0	0	0	0	0	0	76
Day Total	18	2109	1311	27	38	6	2	1	1	0	0	0	1	3514
Percent	0.5%	60.0%	37.3%	0.8%	1.1%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	10:00	07:00	07:00	07:00	09:00	02:00	11:00	11:00	08:00					07:00
Vol.	1	289	119	3	4	1	1	1	1					412
PM Peak	15:00	17:00	17:00	16:00	13:00	15:00	15:00						12:00	17:00
Vol.	3	195	115	5	5	2	1						1	319

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Site Code: 69
 Station ID: M2
 Teston Rd between Kipling Ave &
 Kleinburg Summit Way
 Date Start: 17-Sep-19
 Date End: 19-Sep-19
 Date Start: 17-Sep-19

EB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
09/19/19	0	20	4	0	0	0	0	0	0	0	0	0	0	24
01:00	0	9	4	0	0	0	0	0	0	0	0	0	0	13
02:00	0	7	3	0	0	0	0	0	0	0	0	0	0	10
03:00	0	9	5	1	0	0	0	0	0	0	0	0	0	15
04:00	0	19	6	0	0	0	0	0	0	0	0	0	0	25
05:00	0	32	15	0	1	0	0	0	0	0	0	0	0	48
06:00	0	121	75	4	2	0	0	1	0	0	0	0	0	203
07:00	0	265	144	6	1	0	0	1	0	0	0	0	0	417
08:00	1	226	97	1	3	0	0	0	0	0	0	0	0	328
09:00	1	131	87	1	4	1	0	0	0	0	0	0	1	226
10:00	1	82	67	1	6	1	0	1	0	1	0	0	0	160
11:00	0	65	57	1	1	1	0	0	0	0	0	0	0	125
12 PM	2	50	55	1	2	0	0	0	0	0	0	0	0	110
13:00	4	85	60	2	0	0	0	0	0	0	0	0	0	151
14:00	3	91	71	1	3	0	0	1	0	0	0	0	0	170
15:00	1	143	73	2	2	0	0	0	0	0	0	0	0	221
16:00	1	154	106	4	5	0	1	1	0	0	0	0	0	272
17:00	1	183	98	1	1	0	0	1	0	0	0	0	0	285
18:00	6	120	90	0	1	0	1	0	0	0	0	0	0	218
19:00	1	91	60	0	1	0	0	0	0	0	1	0	0	154
20:00	3	60	27	0	0	0	0	0	0	0	0	0	0	90
21:00	1	88	58	0	0	0	0	0	0	0	0	0	0	147
22:00	2	77	38	0	1	1	0	0	0	0	0	0	0	119
23:00	0	54	23	0	0	0	0	0	0	0	0	0	0	77
Day Total	28	2182	1323	26	34	4	2	6	0	1	1	0	1	3608
Percent	0.8%	60.5%	36.7%	0.7%	0.9%	0.1%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	07:00	07:00	07:00	10:00	09:00		06:00		10:00			09:00	07:00
Vol.	1	265	144	6	6	1		1		1			1	417
PM Peak	18:00	17:00	16:00	16:00	16:00	22:00	16:00	14:00			19:00			17:00
Vol.	6	183	106	4	5	1	1	1			1			285
Grand Total	70	6212	3818	73	114	14	7	14	1	3	3	2	2	10333
Percent	0.7%	60.1%	36.9%	0.7%	1.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	

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Site Code: 69
 Station ID: M2
 Teston Rd between Kipling Ave &
 Kleinburg Summit Way
 Date Start: 17-Sep-19
 Date End: 19-Sep-19
 Date Start: 17-Sep-19

WB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
09/17/19	0	9	4	0	0	0	0	0	0	0	0	0	0	13
01:00	0	5	2	0	0	0	0	0	0	0	0	0	0	7
02:00	0	7	2	0	0	0	0	0	0	0	0	0	0	9
03:00	0	3	1	1	0	0	0	0	0	0	0	0	0	5
04:00	0	2	2	0	0	0	0	0	0	0	0	0	0	4
05:00	0	21	14	0	0	0	0	0	0	0	0	0	1	36
06:00	2	71	42	1	2	0	0	0	0	0	0	0	0	118
07:00	0	148	45	9	2	0	0	0	0	0	1	0	0	205
08:00	0	169	68	0	1	1	0	2	0	0	0	0	1	242
09:00	0	133	49	4	4	1	0	0	0	0	0	0	0	191
10:00	1	78	50	3	0	0	0	1	0	0	0	0	0	133
11:00	0	71	39	2	3	0	0	0	1	0	1	0	0	117
12 PM	0	89	54	1	1	1	0	0	1	0	0	0	0	147
13:00	1	107	56	1	3	1	0	0	0	0	0	0	0	169
14:00	3	128	72	3	2	0	0	0	0	0	0	0	0	208
15:00	0	210	97	3	3	0	2	1	0	0	0	0	0	316
16:00	1	292	94	2	1	0	0	0	0	1	0	0	0	391
17:00	1	338	94	2	2	1	0	0	0	0	0	0	0	438
18:00	0	262	85	1	1	0	0	0	0	0	0	0	0	349
19:00	1	148	57	0	0	0	0	0	0	0	0	0	0	206
20:00	1	103	47	0	0	0	0	1	0	0	0	0	0	152
21:00	3	62	23	0	0	0	0	0	0	0	0	0	0	88
22:00	0	40	9	0	0	0	0	0	0	0	0	0	0	49
23:00	0	30	4	0	0	0	0	0	0	0	0	0	0	34
Day Total	14	2526	1010	33	25	5	2	5	2	1	2	0	2	3627
Percent	0.4%	69.6%	27.8%	0.9%	0.7%	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%	0.0%	0.1%	
AM Peak	06:00	08:00	08:00	07:00	09:00	08:00		08:00	11:00		07:00		05:00	08:00
Vol.	2	169	68	9	4	1		2	1		1		1	242
PM Peak	14:00	17:00	15:00	14:00	13:00	12:00	15:00	15:00	12:00	16:00				17:00
Vol.	3	338	97	3	3	1	2	1	1	1				438

Ontario Traffic, Inc.
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 Tel: (905) 898-7711 Fax: (905) 898-3664

Site Code: 69
 Station ID: M2
 Teston Rd between Kipling Ave &
 Kleinburg Summit Way
 Date Start: 17-Sep-19
 Date End: 19-Sep-19
 Date Start: 17-Sep-19

WB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
09/18/19	0	8	0	0	0	0	0	0	0	0	0	0	0	8
01:00	0	7	0	0	0	0	0	0	0	0	0	0	0	7
02:00	0	6	1	0	0	0	0	0	0	0	0	0	0	7
03:00	0	1	2	1	0	0	0	0	0	0	0	0	0	4
04:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
05:00	0	22	8	1	0	0	0	0	0	0	0	0	0	31
06:00	2	75	40	3	1	0	0	0	0	0	0	0	0	121
07:00	3	138	50	6	2	0	0	0	1	0	0	0	0	200
08:00	0	177	81	1	6	1	0	0	0	0	0	0	0	266
09:00	0	122	53	5	4	0	1	1	0	0	0	0	0	186
10:00	1	95	46	1	1	0	0	0	0	1	0	0	1	146
11:00	1	74	49	4	3	0	0	0	0	0	0	0	0	131
12 PM	0	91	40	3	0	0	0	0	0	0	0	0	0	134
13:00	0	96	56	0	3	1	0	0	0	0	0	0	0	156
14:00	1	143	65	3	6	0	0	0	0	0	0	0	0	218
15:00	1	229	119	4	0	1	0	1	0	0	0	0	0	355
16:00	0	326	98	1	0	0	0	0	0	0	0	0	0	425
17:00	1	334	85	4	0	0	0	1	0	1	1	0	0	427
18:00	2	257	77	1	1	0	1	1	0	0	0	0	0	340
19:00	1	166	46	0	1	0	0	0	0	0	0	0	0	214
20:00	3	103	36	0	0	0	0	0	0	0	0	0	0	142
21:00	0	166	63	0	0	0	0	0	0	0	0	0	0	229
22:00	0	97	29	0	0	0	0	0	0	0	0	0	0	126
23:00	0	64	16	0	0	0	0	0	0	0	0	0	0	80
Day Total	16	2798	1061	38	28	3	2	4	1	2	1	0	1	3955
Percent	0.4%	70.7%	26.8%	1.0%	0.7%	0.1%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	
AM Peak	07:00	08:00	08:00	07:00	08:00	08:00	09:00	09:00	07:00	10:00			10:00	08:00
Vol.	3	177	81	6	6	1	1	1	1	1			1	266
PM Peak	20:00	17:00	15:00	15:00	14:00	13:00	18:00	15:00		17:00	17:00			17:00
Vol.	3	334	119	4	6	1	1	1		1	1			427

Ontario Traffic, Inc.
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Site Code: 69
 Station ID: M2
 Teston Rd between Kipling Ave &
 Kleinburg Summit Way
 Date Start: 17-Sep-19
 Date End: 19-Sep-19
 Date Start: 17-Sep-19

WB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
09/19/19	0	25	9	0	0	0	0	0	0	0	0	0	0	34
01:00	0	11	5	0	0	0	0	0	0	0	0	0	0	16
02:00	0	11	3	0	0	0	0	0	0	0	0	0	0	14
03:00	0	5	5	1	0	0	0	0	0	0	0	0	0	11
04:00	0	6	5	1	0	0	0	0	0	0	0	0	0	12
05:00	0	25	7	0	1	0	0	0	0	0	0	0	0	33
06:00	2	74	35	3	1	0	0	0	0	0	0	0	0	115
07:00	0	146	51	4	4	1	0	2	0	0	0	0	0	208
08:00	0	172	76	2	4	0	0	1	1	0	0	0	0	256
09:00	0	122	49	1	3	1	0	0	0	0	0	0	0	176
10:00	0	73	44	1	3	1	0	1	0	0	0	0	0	123
11:00	0	88	37	0	1	0	0	0	0	0	0	0	0	126
12 PM	1	116	49	1	2	0	0	0	0	0	0	0	0	169
13:00	1	88	61	1	0	1	0	0	0	0	0	0	0	152
14:00	2	130	69	2	1	0	0	0	0	0	0	0	0	204
15:00	0	238	99	4	0	0	0	0	0	0	0	0	0	341
16:00	1	322	100	2	2	1	1	2	0	0	0	0	0	431
17:00	1	330	98	2	3	0	2	2	0	0	0	0	0	438
18:00	2	222	79	1	1	1	1	0	1	0	0	0	0	308
19:00	1	134	42	0	2	0	0	0	0	0	0	0	0	179
20:00	1	104	34	0	0	0	0	0	0	0	0	0	0	139
21:00	0	175	38	0	0	0	0	0	0	0	0	0	0	213
22:00	0	119	35	0	0	1	0	0	0	0	0	0	0	155
23:00	0	83	24	0	0	0	0	0	0	0	0	0	0	107
Day Total	12	2819	1054	26	28	7	4	8	2	0	0	0	0	3960
Percent	0.3%	71.2%	26.6%	0.7%	0.7%	0.2%	0.1%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	06:00	08:00	08:00	07:00	07:00	07:00		07:00	08:00					08:00
Vol.	2	172	76	4	4	1		2	1					256
PM Peak	14:00	17:00	16:00	15:00	17:00	13:00	17:00	16:00	18:00					17:00
Vol.	2	330	100	4	3	1	2	2	1					438
Grand Total	42	8143	3125	97	81	15	8	17	5	3	3	0	3	11542
Percent	0.4%	70.6%	27.1%	0.8%	0.7%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	

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 Teston Rd between Kipling Ave &
 Kleinburg Summit Way
 Date Start: 17-Sep-19
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 Date Start: 17-Sep-19

EB, WB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
09/17/19	0	12	7	0	0	0	0	0	0	0	0	0	0	19
01:00	0	8	4	0	0	0	0	0	0	0	0	0	0	12
02:00	0	10	2	0	0	0	0	0	0	0	0	0	0	12
03:00	0	4	4	1	0	0	0	0	0	0	0	0	0	9
04:00	0	8	3	0	0	0	0	0	0	0	0	0	0	11
05:00	0	60	36	1	1	0	0	0	0	0	0	0	1	99
06:00	2	202	114	2	5	0	0	0	0	0	0	0	0	325
07:00	0	395	147	12	3	0	0	0	0	0	1	0	0	558
08:00	0	378	167	3	3	1	0	4	0	0	0	1	1	558
09:00	0	260	141	4	5	1	0	0	0	1	1	0	0	413
10:00	3	154	105	5	4	0	0	1	0	0	1	0	0	273
11:00	3	136	97	5	8	1	0	0	1	1	1	0	0	253
12 PM	1	153	117	1	5	2	1	0	1	0	0	0	0	281
13:00	2	183	108	2	4	1	1	1	0	0	0	0	0	302
14:00	5	209	137	5	6	1	0	2	0	0	0	0	0	365
15:00	1	330	181	4	7	1	3	1	0	0	0	0	0	528
16:00	3	456	192	5	6	0	0	1	0	1	0	0	0	664
17:00	2	487	199	2	8	1	0	1	0	0	0	0	0	700
18:00	2	376	156	1	1	0	0	0	0	0	0	0	0	536
19:00	10	241	117	0	1	0	0	0	0	0	0	1	0	370
20:00	1	164	81	0	0	0	0	1	0	0	0	0	0	247
21:00	3	103	48	0	0	0	0	0	0	0	0	0	0	154
22:00	0	70	22	0	0	0	0	0	0	0	0	0	0	92
23:00	0	48	9	0	0	0	0	0	0	0	0	0	0	57
Day Total	38	4447	2194	53	67	9	5	12	2	3	4	2	2	6838
Percent	0.6%	65.0%	32.1%	0.8%	1.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.1%	0.0%	0.0%	
AM Peak	10:00	07:00	08:00	07:00	11:00	08:00		08:00	11:00	09:00	07:00	08:00	05:00	07:00
Vol.	3	395	167	12	8	1		4	1	1	1	1	1	558
PM Peak	19:00	17:00	17:00	14:00	17:00	12:00	15:00	14:00	12:00	16:00		19:00		17:00
Vol.	10	487	199	5	8	2	3	2	1	1		1		700

Ontario Traffic, Inc.
 17705 Leslie St., Unit 6
 Newmarket, Ontario L3Y 3E3
 Tel: (905) 898-7711 Fax: (905) 898-3664

Site Code: 69
 Station ID: M2
 Teston Rd between Kipling Ave &
 Kleinburg Summit Way
 Date Start: 17-Sep-19
 Date End: 19-Sep-19
 Date Start: 17-Sep-19

EB, WB

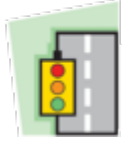
Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
09/18/19	0	12	4	0	0	0	0	0	0	0	0	0	0	16
01:00	0	12	3	0	0	0	0	0	0	0	0	0	0	15
02:00	0	6	2	0	1	1	0	0	0	0	0	0	0	10
03:00	0	3	4	1	0	0	0	0	0	0	0	0	0	8
04:00	0	10	3	0	0	0	0	0	0	0	0	0	0	13
05:00	0	66	26	1	0	0	0	0	0	0	0	0	0	93
06:00	2	173	114	5	2	0	0	0	0	0	0	0	0	296
07:00	3	427	169	9	3	0	0	0	1	0	0	0	0	612
08:00	0	342	191	1	7	1	0	0	1	0	0	0	0	543
09:00	0	237	148	7	8	0	1	1	0	0	0	0	0	402
10:00	2	154	109	4	3	0	0	0	0	1	0	0	1	274
11:00	2	152	112	5	4	0	1	1	0	0	0	0	0	277
12 PM	2	146	106	7	2	0	0	0	0	0	0	0	1	264
13:00	0	173	116	2	8	1	0	0	0	0	0	0	0	300
14:00	2	230	134	5	11	0	0	0	0	0	0	0	0	382
15:00	4	339	202	7	2	3	1	1	0	0	0	0	0	559
16:00	3	507	183	6	5	2	0	0	0	0	0	0	0	706
17:00	4	529	200	4	5	1	0	1	0	1	1	0	0	746
18:00	3	377	152	1	2	0	1	1	0	0	0	0	0	537
19:00	3	243	108	0	1	0	0	0	0	0	0	0	0	355
20:00	3	162	72	0	0	0	0	0	0	0	0	0	0	237
21:00	0	320	119	0	0	0	0	0	0	0	0	0	0	439
22:00	0	173	55	0	1	0	0	0	0	0	0	0	0	229
23:00	1	114	40	0	1	0	0	0	0	0	0	0	0	156
Day Total	34	4907	2372	65	66	9	4	5	2	2	1	0	2	7469
Percent	0.5%	65.7%	31.8%	0.9%	0.9%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	07:00	08:00	07:00	09:00	02:00	09:00	09:00	07:00	10:00			10:00	07:00
Vol.	3	427	191	9	8	1	1	1	1	1			1	612
PM Peak	15:00	17:00	15:00	12:00	14:00	15:00	15:00	15:00		17:00	17:00		12:00	17:00
Vol.	4	529	202	7	11	3	1	1		1	1		1	746

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 Teston Rd between Kipling Ave &
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 Date Start: 17-Sep-19
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EB, WB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
09/19/19	0	45	13	0	0	0	0	0	0	0	0	0	0	58
01:00	0	20	9	0	0	0	0	0	0	0	0	0	0	29
02:00	0	18	6	0	0	0	0	0	0	0	0	0	0	24
03:00	0	14	10	2	0	0	0	0	0	0	0	0	0	26
04:00	0	25	11	1	0	0	0	0	0	0	0	0	0	37
05:00	0	57	22	0	2	0	0	0	0	0	0	0	0	81
06:00	2	195	110	7	3	0	0	1	0	0	0	0	0	318
07:00	0	411	195	10	5	1	0	3	0	0	0	0	0	625
08:00	1	398	173	3	7	0	0	1	1	0	0	0	0	584
09:00	1	253	136	2	7	2	0	0	0	0	0	0	1	402
10:00	1	155	111	2	9	2	0	2	0	1	0	0	0	283
11:00	0	153	94	1	2	1	0	0	0	0	0	0	0	251
12 PM	3	166	104	2	4	0	0	0	0	0	0	0	0	279
13:00	5	173	121	3	0	1	0	0	0	0	0	0	0	303
14:00	5	221	140	3	4	0	0	1	0	0	0	0	0	374
15:00	1	381	172	6	2	0	0	0	0	0	0	0	0	562
16:00	2	476	206	6	7	1	2	3	0	0	0	0	0	703
17:00	2	513	196	3	4	0	2	3	0	0	0	0	0	723
18:00	8	342	169	1	2	1	2	0	1	0	0	0	0	526
19:00	2	225	102	0	3	0	0	0	0	0	1	0	0	333
20:00	4	164	61	0	0	0	0	0	0	0	0	0	0	229
21:00	1	263	96	0	0	0	0	0	0	0	0	0	0	360
22:00	2	196	73	0	1	2	0	0	0	0	0	0	0	274
23:00	0	137	47	0	0	0	0	0	0	0	0	0	0	184
Day Total	40	5001	2377	52	62	11	6	14	2	1	1	0	1	7568
Percent	0.5%	66.1%	31.4%	0.7%	0.8%	0.1%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	06:00	07:00	07:00	07:00	10:00	09:00		07:00	08:00	10:00			09:00	07:00
Vol.	2	411	195	10	9	2		3	1	1			1	625
PM Peak	18:00	17:00	16:00	15:00	16:00	22:00	16:00	16:00	18:00		19:00			17:00
Vol.	8	513	206	6	7	2	2	3	1		1			723
Grand Total	112	14355	6943	170	195	29	15	31	6	6	6	2	5	21875
Percent	0.5%	65.6%	31.7%	0.8%	0.9%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	



Ontario Traffic Inc.
TRAFFIC MONITORING  SERVICES & PRODUCTS

Project #19366 - City of Vaughan

Intersection Count Report

Intersection: Teston Rd & Kleinburg Summit Way
Municipality: Vaughan
Count Date: Nov 26, 2019
Site Code: 1936600024
Count Categories: Cars, Trucks, Buses, Bicycles, Pedestrians
Count Period: 07:00-10:00, 14:00-19:00
Weather: Clear



Traffic Count Map

Intersection: Teston Rd & Kleinburg Summit Way

Municipality: Vaughan

Count Date: Nov 26, 2019





Ontario Traffic Inc.
TRAFFIC MONITORING + SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Teston Rd & Kleinburg Summit Way
Municipality: Vaughan
Count Date: Nov 26, 2019

Teston Rd - Traffic Summary

Hour	East Approach Totals						West Approach Totals					
	Includes Cars, Trucks, Buses, Bicycles						Includes Cars, Trucks, Buses, Bicycles					
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	0	155	50	0	205	0	36	307	0	0	343	0
08:00 - 09:00	0	209	43	0	252	0	20	221	0	0	241	0
09:00 - 10:00	0	163	37	0	200	0	16	161	0	0	177	0
BREAK												
14:00 - 15:00	0	171	42	0	213	0	24	118	0	0	142	0
15:00 - 16:00	0	280	36	0	316	0	33	192	0	0	225	0
16:00 - 17:00	0	352	22	0	374	0	32	199	0	0	231	0
17:00 - 18:00	0	312	24	0	336	0	36	233	0	0	269	0
18:00 - 19:00	0	267	48	0	315	0	43	161	0	0	204	0
GRAND TOTAL	0	1909	302	0	2211	0	240	1592	0	0	1832	0



Ontario Traffic Inc.
TRAFFIC MONITORING + SERVICES & PRODUCTS

Traffic Count Data

Intersection: Teston Rd & Kleinburg Summit Way
Municipality: Vaughan
Count Date: Nov 26, 2019

North Approach - Kleinburg Summit Way

Start Time	Cars					Trucks					Buses					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	11	0	8	0	19	8	0	0	0	8	0	0	2	0	2	0	0	0	0	0	0
07:15	9	0	14	0	23	7	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0
07:30	9	0	10	0	19	5	0	1	0	6	1	0	0	0	1	0	0	0	0	0	0
07:45	8	0	16	0	24	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
08:00	5	0	16	0	21	7	0	2	0	9	0	0	2	0	2	0	0	0	0	0	0
08:15	11	0	11	0	22	6	0	2	0	8	0	0	0	0	0	0	0	0	0	0	0
08:30	4	0	7	1	12	9	0	1	0	10	0	0	0	0	0	0	0	0	0	0	0
08:45	12	0	13	0	25	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0
09:00	6	0	9	0	15	8	0	1	0	9	0	0	0	0	0	0	0	0	0	0	0
09:15	8	0	8	0	16	8	0	3	0	11	0	0	0	0	0	0	0	0	0	0	0
09:30	3	0	8	0	11	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
09:45	3	0	7	0	10	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	89	0	127	1	217	65	0	11	0	76	1	0	5	0	6	0	0	0	0	0	0



Ontario Traffic Inc.
TRAFFIC MONITORING + SERVICES & PRODUCTS

Traffic Count Data

Intersection: Teston Rd & Kleinburg Summit Way
Municipality: Vaughan
Count Date: Nov 26, 2019

North Approach - Kleinburg Summit Way

Start Time	Cars				Total	Trucks				Total	Buses				Total	Bicycles				Total Peds
	←	↑	→	↻		←	↑	→	↻		←	↑	→	↻		←	↑	→	↻	
14:00	2	0	1	0	3	6	0	1	0	7	0	0	1	0	1	0	0	0	0	0
14:15	3	0	4	0	7	3	0	1	0	4	0	0	0	0	0	0	0	0	0	0
14:30	6	0	7	0	13	4	0	2	0	6	0	0	0	0	0	0	0	0	0	0
14:45	6	0	5	0	11	11	0	2	0	13	0	0	0	0	0	0	0	0	0	0
15:00	3	0	5	0	8	7	0	0	0	7	0	0	0	0	0	0	0	0	0	0
15:15	4	0	3	0	7	2	0	4	0	6	0	0	0	0	0	0	0	0	0	0
15:30	3	0	9	0	12	7	0	1	0	8	0	0	0	0	0	0	0	0	0	0
15:45	3	0	2	0	5	9	0	0	0	9	0	0	0	0	0	0	0	0	0	0
16:00	3	0	6	0	9	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0
16:15	6	0	6	0	12	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
16:30	8	0	8	0	16	2	0	5	0	7	0	0	0	0	0	0	0	0	0	0
16:45	10	0	8	0	18	3	0	1	0	4	0	0	0	0	0	0	0	0	0	0
17:00	6	0	12	0	18	2	0	4	0	6	0	0	0	0	0	0	0	0	0	0
17:15	3	0	11	0	14	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0
17:30	8	0	5	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	2	0	5	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	3	0	2	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	2	0	6	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	3	0	5	0	8	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
18:45	4	0	6	0	10	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	88	0	116	0	204	61	0	25	0	86	0	0	1	0	1	0	0	0	0	0

Start Time	Cars					Trucks					Buses					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
GRAND TOTAL	177	0	243	1	421	126	0	36	0	162	1	0	6	0	7	0	0	0	0	0	0





Ontario Traffic Inc.
TRAFFIC MONITORING + SERVICES & PRODUCTS

Traffic Count Data

Intersection: Teston Rd & Kleinburg Summit Way
Municipality: Vaughan
Count Date: Nov 26, 2019

East Approach - Teston Rd

Start Time	Cars					Trucks					Buses					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	0	38	4	0	42	0	4	7	0	11	0	0	2	0	2	0	0	0	0	0	0
07:15	0	33	11	0	44	0	5	5	0	10	0	0	0	0	0	0	0	0	0	0	0
07:30	0	30	10	0	40	0	3	2	0	5	0	0	1	0	1	0	0	0	0	0	0
07:45	0	37	3	0	40	0	5	5	0	10	0	0	0	0	0	0	0	0	0	0	0
08:00	0	46	5	0	51	0	6	6	0	12	0	1	0	0	1	0	0	0	0	0	0
08:15	0	44	2	0	46	0	7	10	0	17	0	0	0	0	0	0	0	0	0	0	0
08:30	0	50	3	0	53	0	7	2	0	9	0	0	0	0	0	0	0	0	0	0	0
08:45	0	38	5	0	43	0	10	10	0	20	0	0	0	0	0	0	0	0	0	0	0
09:00	0	34	0	0	34	0	10	8	0	18	0	0	0	0	0	0	0	0	0	0	0
09:15	0	38	3	0	41	0	6	4	0	10	0	0	0	0	0	0	0	0	0	0	0
09:30	0	33	1	0	34	0	7	8	0	15	0	0	0	0	0	0	0	0	0	0	0
09:45	0	27	4	0	31	0	8	9	0	17	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	448	51	0	499	0	78	76	0	154	0	1	3	0	4	0	0	0	0	0	0



Ontario Traffic Inc.
TRAFFIC MONITORING + SERVICES & PRODUCTS

Traffic Count Data

Intersection: Teston Rd & Kleinburg Summit Way
Municipality: Vaughan
Count Date: Nov 26, 2019

East Approach - Teston Rd

Start Time	Cars					Trucks					Buses					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
14:00	0	17	4	0	21	0	4	5	0	9	0	0	0	0	0	0	1	0	0	1	0
14:15	0	36	1	0	37	0	5	2	0	7	0	0	0	0	0	0	0	0	0	0	0
14:30	0	44	5	0	49	0	7	15	0	22	0	0	0	0	0	0	0	0	0	0	0
14:45	0	48	8	0	56	0	8	2	0	10	0	1	0	0	1	0	0	0	0	0	0
15:00	0	39	4	0	43	0	6	3	0	9	0	0	0	0	0	0	0	0	0	0	0
15:15	0	75	3	0	78	0	9	7	0	16	0	0	0	0	0	0	0	0	0	0	0
15:30	0	61	2	0	63	0	12	10	0	22	0	0	0	0	0	0	0	0	0	0	0
15:45	0	67	5	0	72	0	10	2	0	12	0	1	0	0	1	0	0	0	0	0	0
16:00	0	66	6	0	72	0	11	0	0	11	0	0	0	0	0	0	1	0	0	1	0
16:15	0	74	3	0	77	0	10	0	0	10	0	0	0	0	0	0	1	0	0	1	0
16:30	0	73	5	0	78	0	8	2	0	10	0	0	0	0	0	0	0	0	0	0	0
16:45	0	98	6	0	104	0	10	0	0	10	0	0	0	0	0	0	0	0	0	0	0
17:00	0	63	4	0	67	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0
17:15	0	74	7	0	81	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0
17:30	0	82	4	0	86	0	4	2	0	6	0	0	0	0	0	0	0	0	0	0	0
17:45	0	72	6	0	78	0	5	1	0	6	0	0	0	0	0	0	0	0	0	0	0
18:00	0	85	12	0	97	0	3	1	0	4	0	0	0	0	0	0	0	0	0	0	0
18:15	0	64	11	0	75	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0
18:30	0	60	15	0	75	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
18:45	0	46	8	0	54	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	1244	119	0	1363	0	133	53	0	186	0	2	0	0	2	0	3	0	0	3	0

Start Time	Cars					Trucks					Buses					Bicycles					Total Peds
	↶	↑	↷	↶	Total	↶	↑	↷	↶	Total	↶	↑	↷	↶	Total	↶	↑	↷	↶	Total	
GRAND TOTAL	0	1692	170	0	1862	0	211	129	0	340	0	3	3	0	6	0	3	0	0	3	0





Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Teston Rd & Kleinburg Summit Way
Municipality: Vaughan
Count Date: Nov 26, 2019

West Approach - Teston Rd

Start Time	Cars					Trucks					Buses					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	7	52	0	0	59	3	2	0	0	5	0	0	0	0	0	0	0	0	0	0	0
07:15	7	77	0	0	84	4	5	0	0	9	0	1	0	0	1	0	0	0	0	0	0
07:30	9	84	0	0	93	2	9	0	0	11	0	0	0	0	0	0	0	0	0	0	0
07:45	2	71	0	0	73	2	5	0	0	7	0	1	0	0	1	0	0	0	0	0	0
08:00	5	44	0	0	49	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0
08:15	4	50	0	0	54	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0
08:30	4	65	0	0	69	1	6	0	0	7	0	0	0	0	0	0	0	0	0	0	0
08:45	3	46	0	0	49	2	3	0	0	5	0	0	0	0	0	0	0	0	0	0	0
09:00	1	48	0	0	49	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0
09:15	6	44	0	0	50	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0
09:30	4	26	0	0	30	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0
09:45	2	30	0	0	32	3	2	0	0	5	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	54	637	0	0	691	18	50	0	0	68	0	2	0	0	2	0	0	0	0	0	0



Ontario Traffic Inc.
TRAFFIC MONITORING + SERVICES & PRODUCTS

Traffic Count Data

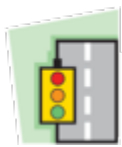
Intersection: Teston Rd & Kleinburg Summit Way
Municipality: Vaughan
Count Date: Nov 26, 2019

West Approach - Teston Rd

Start Time	Cars					Trucks					Buses					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
14:00	6	22	0	0	28	3	5	0	0	8	0	0	0	0	0	0	0	0	0	0	0
14:15	3	22	0	0	25	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0
14:30	6	27	0	0	33	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0
14:45	5	30	0	0	35	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0
15:00	2	45	0	0	47	2	2	0	0	4	1	0	0	0	1	0	0	0	0	0	0
15:15	5	47	0	0	52	1	3	0	0	4	2	0	0	0	2	0	1	0	0	0	1
15:30	11	36	0	0	47	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0
15:45	8	40	0	0	48	0	8	0	0	8	1	2	0	0	3	0	0	0	0	0	0
16:00	2	41	0	0	43	1	7	0	0	8	0	0	0	0	0	0	0	0	0	0	0
16:15	7	30	0	0	37	1	4	0	0	5	1	0	0	0	1	0	0	0	0	0	0
16:30	9	53	0	0	62	1	9	0	0	10	0	1	0	0	1	0	0	0	0	0	0
16:45	9	47	0	0	56	0	7	0	0	7	1	0	0	0	1	0	0	0	0	0	0
17:00	10	48	0	0	58	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0
17:15	10	61	0	0	71	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0
17:30	9	58	0	0	67	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0
17:45	6	42	0	0	48	1	5	0	0	6	0	0	0	0	0	0	0	0	0	0	0
18:00	13	41	0	0	54	1	3	0	0	4	0	0	0	0	0	0	0	0	0	0	0
18:15	13	47	0	0	60	1	6	0	0	7	0	0	0	0	0	0	0	0	0	0	0
18:30	6	30	0	0	36	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0
18:45	8	31	0	0	39	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	148	798	0	0	946	14	101	0	0	115	6	3	0	0	9	0	1	0	0	0	1

Start Time	Cars					Trucks					Buses					Bicycles					Total Peds	
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total		
GRAND TOTAL	202	1435	0	0	1637	32	151	0	0	183	6	5	0	0	11	0	1	0	0	1	0	





Peak Hour Diagram

Specified Period

From: 07:00:00
To: 10:00:00

One Hour Peak

From: 07:15:00
To: 08:15:00

Intersection: Teston Rd & Kleinburg Summit Way
Site ID: 1936600024
Count Date: Nov 26, 2019

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Teston Rd runs E/W

North Approach

	Out	In	Total
	87	52	139
	22	26	48
	4	1	5
	0	0	0
Totals	113	79	192

Kleinburg Summit Way

	0	0	0
	3	1	0
	3	19	0
	56	31	0
Totals	62	51	0

East Approach

	Out	In	Total
	175	307	482
	37	43	80
	2	3	5
	0	0	0
Totals	214	353	567

Teston Rd

				Totals
0	0	0	0	0
0	0	8	23	31
0	2	24	276	302

Peds: 0



Peds: 0

Peds: 0

Peds: 0

Teston Rd

Totals				
0	0	0	0	0
48	29	18	1	0
166	146	19	1	0

West Approach

	Out	In	Total
	299	202	501
	32	22	54
	2	4	6
	0	0	0
Totals	333	228	561

- Cars

- Trucks

- Buses

- Bicycles

Comments



Ontario Traffic Inc.
TRAFFIC MONITORING + SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Teston Rd & Kleinburg Summit Way
Count Date: Nov 26, 2019
Period: 07:00 - 10:00

Peak Hour Data (07:15 - 08:15)

Start Time	North Approach Kleinburg Summit Way						South Approach				East Approach Teston Rd						West Approach Teston Rd						Total Vehicles			
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻		Peds	Total	
07:15	16		14	0	0	30					0			38	16	0	0	54	11	83			0	0	94	178
07:30	15		11	0	0	26					0			33	13	0	0	46	11	93			0	0	104	176
07:45	8		17	0	0	25					0			42	8	0	0	50	4	77			0	0	81	156
08:00	12		20	0	0	32					0			53	11	0	0	64	5	49			0	0	54	150
Grand Total	51		62	0	0	113					0	0		166	48	0	0	214	31	302			0	0	333	660
Approach %	45.1		54.9	0	-	-					-	-		77.6	22.4	0	-	-	9.3	90.7			0	-	-	
Totals %	7.7		9.4	0	17.1						0			25.2	7.3	0	32.4		4.7	45.8			0	50.5		
PHF	0.8		0.78	0	0.88						0			0.78	0.75	0	0.84		0.7	0.81			0	0.8	0.93	
Cars	31		56	0	87						0			146	29	0	175		23	276			0	299	561	
% Cars	60.8		90.3	0	77						0			88	60.4	0	81.8		74.2	91.4			0	89.8	85	
Trucks	19		3	0	22						0			19	18	0	37		8	24			0	32	91	
% Trucks	37.3		4.8	0	19.5						0			11.4	37.5	0	17.3		25.8	7.9			0	9.6	13.8	
Buses	1		3	0	4						0			1	1	0	2		0	2			0	2	8	
% Buses	2		4.8	0	3.5						0			0.6	2.1	0	0.9		0	0.7			0	0.6	1.2	
Bicycles	0		0	0	0						0			0	0	0	0		0	0			0	0	0	
% Bicycles	0		0	0	0						0			0	0	0	0		0	0			0	0	0	
Peds					0	-					0	-					0	-					0	-	0	
% Peds					0	-					0	-					0	-					0	-	0	



Peak Hour Diagram

Specified Period

From: 14:00:00
To: 19:00:00

One Hour Peak

From: 16:30:00
To: 17:30:00

Intersection: Teston Rd & Kleinburg Summit Way
Site ID: 1936600024
Count Date: Nov 26, 2019

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Teston Rd runs E/W

North Approach

	Out	In	Total
	66	60	126
	20	3	23
	0	1	1
	0	0	0
Totals	86	64	150

Kleinburg Summit Way

	0	0	0
	0	0	0
	12	8	0
	39	27	0
Totals	51	35	0

East Approach

	Out	In	Total
	330	236	566
	32	38	70
	0	1	1
	0	0	0
Totals	362	275	637

Teston Rd

				Totals
0	0	0	0	0
0	1	1	38	40
0	1	30	209	240

Peds: 0

Peds: 0



Peds: 0

Peds: 0

Teston Rd

Totals				
0	0	0	0	0
24	22	2	0	0
338	308	30	0	0

West Approach

	Out	In	Total
	247	347	594
	31	42	73
	2	0	2
	0	0	0
Totals	280	389	669

- Cars

- Trucks

- Buses

- Bicycles

Comments



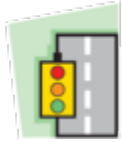
Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Teston Rd & Kleinburg Summit Way
 Count Date: Nov 26, 2019
 Period: 14:00 - 19:00

Peak Hour Data (16:30 - 17:30)

Start Time	North Approach Kleinburg Summit Way						South Approach				East Approach Teston Rd						West Approach Teston Rd						Total Vehicles		
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻		Peds	Total
16:30	10		13	0	0	23					0			81	7	0	0	88	10	63		0	0	73	184
16:45	13		9	0	0	22					0			108	6	0	0	114	10	54		0	0	64	200
17:00	8		16	0	0	24					0			69	4	0	0	73	10	55		0	0	65	162
17:15	4		13	0	0	17					0			80	7	0	0	87	10	68		0	0	78	182
Grand Total	35		51	0	0	86					0	0		338	24	0	0	362	40	240		0	0	280	728
Approach %	40.7		59.3	0	-	-					-	-		93.4	6.6	0	-	-	14.3	85.7		0	-	-	-
Totals %	4.8		7	0	11.8						0			46.4	3.3	0	49.7		5.5	33		0	38.5		
PHF	0.67		0.8	0	0.9						0			0.78	0.86	0	0.79		1	0.88		0	0.9	0.91	
Cars	27		39	0	66						0			308	22	0	330		38	209		0	247	643	
% Cars	77.1		76.5	0	76.7						0			91.1	91.7	0	91.2		95	87.1		0	88.2	88.3	
Trucks	8		12	0	20						0			30	2	0	32		1	30		0	31	83	
% Trucks	22.9		23.5	0	23.3						0			8.9	8.3	0	8.8		2.5	12.5		0	11.1	11.4	
Buses	0		0	0	0						0			0	0	0	0		1	1		0	2	2	
% Buses	0		0	0	0						0			0	0	0	0		2.5	0.4		0	0.7	0.3	
Bicycles	0		0	0	0						0			0	0	0	0		0	0		0	0	0	
% Bicycles	0		0	0	0						0			0	0	0	0		0	0		0	0	0	
Peds					0	-					0	-					0	-				0	-	0	
% Peds					0	-					0	-					0	-				0	-	0	



Ontario Traffic Inc.
TRAFFIC MONITORING  SERVICES & PRODUCTS

Project #19366 - City of Vaughan

Intersection Count Report

Intersection: Teston Rd & Kipling Ave
Municipality: Vaughan
Count Date: Dec 04, 2019
Site Code: 1936600023
Count Categories: Cars, Trucks, Buses, Bicycles, Pedestrians
Count Period: 07:00-10:00, 14:00-19:00
Weather: Clear

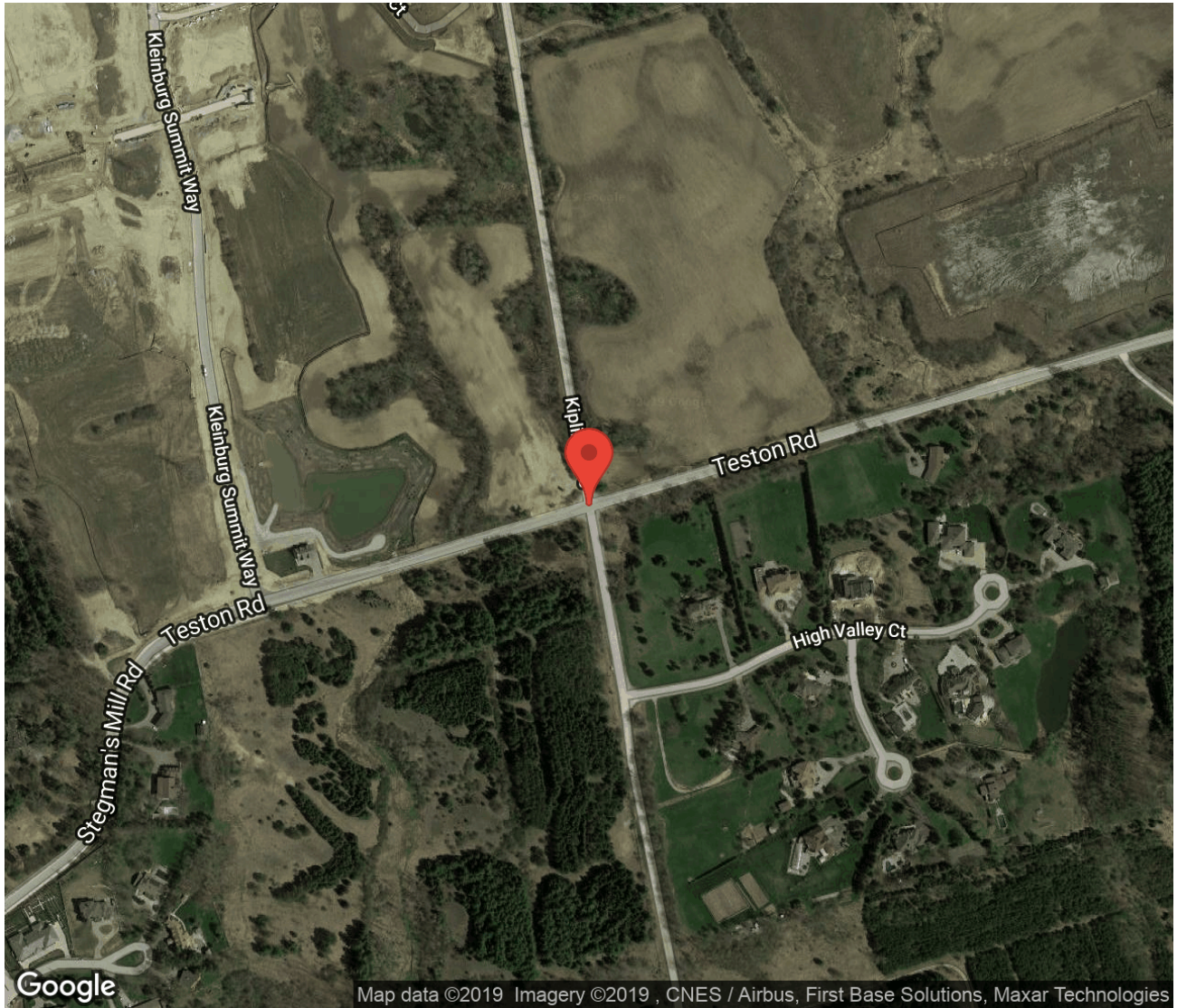


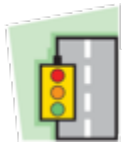
Traffic Count Map

Intersection: Teston Rd & Kipling Ave

Municipality: Vaughan

Count Date: Dec 04, 2019





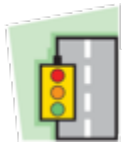
Ontario Traffic Inc.
TRAFFIC MONITORING + SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Teston Rd & Kipling Ave
Municipality: Vaughan
Count Date: Dec 04, 2019

- Traffic Summary

Hour	North Approach Totals						South Approach Totals					
	Includes Cars, Trucks, Buses, Bicycles						Includes Cars, Trucks, Buses, Bicycles					
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	35	0	40	1	76	0	1	1	1	0	3	0
08:00 - 09:00	37	0	33	0	70	0	3	2	4	0	9	0
09:00 - 10:00	26	1	11	0	38	0	6	1	5	0	12	0
BREAK												
14:00 - 15:00	13	0	3	0	16	0	2	0	4	0	6	0
15:00 - 16:00	11	1	8	0	20	0	2	2	6	0	10	0
16:00 - 17:00	10	0	5	0	15	0	5	0	1	0	6	0
17:00 - 18:00	14	0	8	0	22	0	1	1	2	0	4	0
18:00 - 19:00	17	0	8	0	25	0	0	1	2	0	3	0
GRAND TOTAL	163	2	116	1	282	0	20	8	25	0	53	0



Ontario Traffic Inc.
TRAFFIC MONITORING + SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Teston Rd & Kipling Ave
Municipality: Vaughan
Count Date: Dec 04, 2019

- Traffic Summary

Hour	East Approach Totals						West Approach Totals					
	Includes Cars, Trucks, Buses, Bicycles						Includes Cars, Trucks, Buses, Bicycles					
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	0	157	5	0	162	0	6	306	2	0	314	0
08:00 - 09:00	1	171	11	0	183	0	11	251	1	0	263	0
09:00 - 10:00	3	171	7	0	181	0	8	186	4	0	198	0
BREAK												
14:00 - 15:00	4	182	17	1	204	0	3	131	3	0	137	0
15:00 - 16:00	8	308	17	0	333	0	9	193	3	0	205	0
16:00 - 17:00	8	356	22	0	386	0	12	256	2	0	270	0
17:00 - 18:00	1	353	28	0	382	0	8	258	5	0	271	0
18:00 - 19:00	1	225	24	0	250	0	6	135	2	0	143	0
GRAND TOTAL	26	1923	131	1	2081	0	63	1716	22	0	1801	0



Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Teston Rd & Kipling Ave
Municipality: Vaughan
Count Date: Dec 04, 2019

North Approach -

Start Time	Cars					Trucks					Buses					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	7	0	3	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	9	0	7	0	16	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0
07:30	5	0	8	0	13	0	0	3	1	4	0	0	0	0	0	0	0	0	0	0	0
07:45	13	0	13	0	26	1	0	2	0	3	0	0	1	0	1	0	0	0	0	0	0
08:00	11	0	10	0	21	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	0
08:15	13	0	9	0	22	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
08:30	5	0	5	0	10	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
08:45	6	0	5	0	11	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
09:00	10	1	3	0	14	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
09:15	4	0	4	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30	6	0	2	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45	5	0	1	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	94	1	70	0	165	4	0	12	1	17	0	0	2	0	2	0	0	0	0	0	0

Start Time	Cars					Trucks					Buses					Total Peds				
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total					
GRAND TOTAL	150	2	96	0	248	13	0	18	1	32	0	0	2	0	2	0	0	0	0	0



Start Time	Cars					Trucks					Buses					Total Peds				
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total					
GRAND TOTAL	17	5	21	0	43	3	3	4	0	10	0	0	0	0	0	0	0	0	0	0





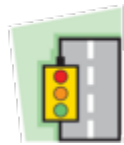
Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Teston Rd & Kipling Ave
Municipality: Vaughan
Count Date: Dec 04, 2019

East Approach -

Start Time	Cars					Trucks					Buses					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	0	28	1	0	29	0	4	2	0	6	0	0	0	0	0	0	0	0	0	0	0
07:15	0	35	1	0	36	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0
07:30	0	31	0	0	31	0	6	0	0	6	0	2	1	0	3	0	0	0	0	0	0
07:45	0	40	0	0	40	0	3	0	0	3	0	1	0	0	1	0	0	0	0	0	0
08:00	0	35	4	0	39	0	5	1	0	6	0	0	0	0	0	0	0	0	0	0	0
08:15	1	34	2	0	37	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0
08:30	0	40	3	0	43	0	10	0	0	10	0	0	0	0	0	0	0	0	0	0	0
08:45	0	35	1	0	36	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0
09:00	1	41	3	0	45	1	5	0	0	6	0	0	0	0	0	0	0	0	0	0	0
09:15	1	35	0	0	36	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0
09:30	0	45	1	0	46	0	11	0	0	11	0	0	0	0	0	0	0	0	0	0	0
09:45	0	21	3	0	24	0	5	0	0	5	0	2	0	0	2	0	0	0	0	0	0
SUBTOTAL	3	420	19	0	442	1	74	3	0	78	0	5	1	0	6	0	0	0	0	0	0



Ontario Traffic Inc.
TRAFFIC MONITORING + SERVICES & PRODUCTS

Traffic Count Data

Intersection: Teston Rd & Kipling Ave
Municipality: Vaughan
Count Date: Dec 04, 2019

East Approach -

Start Time	Cars					Trucks					Buses					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
14:00	1	27	2	0	30	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0
14:15	1	35	3	0	39	0	7	1	0	8	0	0	0	0	0	0	0	0	0	0	0
14:30	1	43	3	0	47	0	11	0	0	11	0	0	0	0	0	0	0	0	0	0	0
14:45	1	43	8	1	53	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0	0
15:00	2	60	4	0	66	1	11	0	0	12	0	0	0	0	0	0	0	0	0	0	0
15:15	1	65	3	0	69	0	11	0	0	11	0	0	0	0	0	0	0	0	0	0	0
15:30	2	76	2	0	80	0	12	0	0	12	0	1	0	0	1	0	0	0	0	0	0
15:45	2	64	8	0	74	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0
16:00	2	73	2	0	77	2	9	1	0	12	0	0	0	0	0	0	0	0	0	0	0
16:15	0	83	8	0	91	0	11	1	0	12	0	0	0	0	0	0	0	0	0	0	0
16:30	0	76	6	0	82	2	13	1	0	16	0	0	0	0	0	0	0	0	0	0	0
16:45	2	82	2	0	86	0	9	1	0	10	0	0	0	0	0	0	0	0	0	0	0
17:00	0	87	4	0	91	0	13	1	0	14	0	1	0	0	1	0	0	0	0	0	0
17:15	0	81	7	0	88	0	6	1	0	7	0	0	0	0	0	0	0	0	0	0	0
17:30	1	68	5	0	74	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0
17:45	0	88	10	0	98	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0
18:00	0	72	7	0	79	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0
18:15	0	46	5	0	51	0	4	1	0	5	0	0	0	0	0	0	0	0	0	0	0
18:30	0	51	4	0	55	0	5	1	0	6	0	0	0	0	0	0	0	0	0	0	0
18:45	1	42	6	0	49	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	17	1262	99	1	1379	5	160	9	0	174	0	2	0	0	2	0	0	0	0	0	0

Start Time	Cars					Trucks					Buses					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
GRAND TOTAL	20	1682	118	1	1821	6	234	12	0	252	0	7	1	0	8	0	0	0	0	0	0





Ontario Traffic Inc.
TRAFFIC MONITORING + SERVICES & PRODUCTS

Traffic Count Data

Intersection: Teston Rd & Kipling Ave
Municipality: Vaughan
Count Date: Dec 04, 2019

West Approach -

Start Time	Cars					Trucks					Buses					Bicycles					Total Peds	
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total		
07:00	1	55	0	0	56	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	68	1	0	69	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0
07:30	1	87	0	0	88	0	7	0	0	7	0	1	0	0	1	0	0	0	0	0	0	0
07:45	1	72	1	0	74	2	7	0	0	9	1	0	0	0	1	0	0	0	0	0	0	0
08:00	1	53	0	0	54	1	6	1	0	8	0	1	0	0	1	0	0	0	0	0	0	0
08:15	2	51	0	0	53	0	4	0	0	4	0	1	0	0	1	0	0	0	0	0	0	0
08:30	6	63	0	0	69	0	8	0	0	8	0	1	0	0	1	0	0	0	0	0	0	0
08:45	1	54	0	0	55	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0
09:00	0	69	0	0	69	0	8	1	0	9	0	0	0	0	0	0	0	0	0	0	0	0
09:15	3	32	1	0	36	0	7	1	0	8	0	0	0	0	0	0	0	0	0	0	0	0
09:30	4	31	0	0	35	0	6	1	0	7	0	0	0	0	0	0	0	0	0	0	0	0
09:45	1	28	0	0	29	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	21	663	3	0	687	3	76	4	0	83	1	4	0	0	5	0	0	0	0	0	0	0

Start Time	Cars					Trucks					Buses					Total Peds					
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total						
GRAND TOTAL	58	1519	17	0	1594	4	188	5	0	197	1	9	0	0	10	0	0	0	0	0	0



Peak Hour Diagram

Specified Period

From: 07:00:00
To: 10:00:00

One Hour Peak

From: 07:15:00
To: 08:15:00

Intersection: Teston Rd & Kipling Ave
Site ID: 1936600023
Count Date: Dec 04, 2019

Weather conditions:

**** Unsignalized Intersection ****

Major Road: runs E/W

North Approach

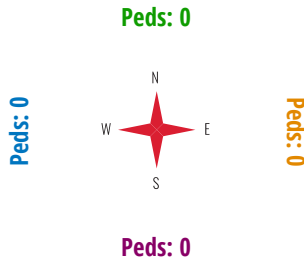
	Out	In	Total
	76	11	87
	11	5	16
	2	2	4
	0	0	0
Totals	89	18	107

	0	0	0	0
	2	0	0	0
	9	0	1	1
	38	0	38	0
Totals	49	0	39	1

East Approach

	Out	In	Total
	146	320	466
	22	27	49
	4	2	6
	0	0	0
Totals	172	349	521

				Totals
0	0	0	0	0
0	1	3	3	7
0	2	26	280	308
0	0	1	2	3



Totals				
0	0	0	0	0
7	5	1	1	0
165	141	21	3	0
0	0	0	0	0

West Approach

	Out	In	Total
	285	179	464
	30	30	60
	3	5	8
	0	0	0
Totals	318	214	532

Totals				
0	3	2	0	
	0	3	2	0
	0	0	0	0
	0	0	0	0
	0	0	0	0

South Approach

	Out	In	Total
	5	2	7
	0	1	1
	0	0	0
	0	0	0
Totals	5	3	8

- Cars

- Trucks

- Buses

- Bicycles

Comments



Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Teston Rd & Kipling Ave
Count Date: Dec 04, 2019
Period: 07:00 - 10:00

Peak Hour Data (07:15 - 08:15)

Start Time	North Approach						South Approach						East Approach						West Approach						Total Vehicles
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	
07:15	9	0	10	0	0	19	0	1	0	0	0	1	0	42	1	0	0	43	0	74	1	0	0	75	138
07:30	5	0	11	1	0	17	0	0	0	0	0	0	0	39	1	0	0	40	1	95	0	0	0	96	153
07:45	14	0	16	0	0	30	0	0	1	0	0	1	0	44	0	0	0	44	4	79	1	0	0	84	159
08:00	11	0	12	0	0	23	0	2	1	0	0	3	0	40	5	0	0	45	2	60	1	0	0	63	134
Grand Total	39	0	49	1	0	89	0	3	2	0	0	5	0	165	7	0	0	172	7	308	3	0	0	318	584
Approach %	43.8	0	55.1	1.1	-	-	0	60	40	0	-	-	0	95.9	4.1	0	-	2.2	96.9	0.9	0	-	-		
Totals %	6.7	0	8.4	0.2	-	15.2	0	0.5	0.3	0	0.9	-	0	28.3	1.2	0	29.5	1.2	52.7	0.5	0	-	54.5		
PHF	0.7	0	0.77	0.25	-	0.74	0	0.38	0.5	0	0.42	-	0	0.94	0.35	0	0.96	0.44	0.81	0.75	0	-	0.83	0.92	
Cars	38	0	38	0	-	76	0	3	2	0	5	-	0	141	5	0	146	3	280	2	0	-	285	512	
% Cars	97.4	0	77.6	0	-	85.4	0	100	100	0	100	-	0	85.5	71.4	0	84.9	42.9	90.9	66.7	0	-	89.6	87.7	
Trucks	1	0	9	1	-	11	0	0	0	0	0	-	0	21	1	0	22	3	26	1	0	-	30	63	
% Trucks	2.6	0	18.4	100	-	12.4	0	0	0	0	0	-	0	12.7	14.3	0	12.8	42.9	8.4	33.3	0	-	9.4	10.8	
Buses	0	0	2	0	-	2	0	0	0	0	0	-	0	3	1	0	4	1	2	0	0	-	3	9	
% Buses	0	0	4.1	0	-	2.2	0	0	0	0	0	-	0	1.8	14.3	0	2.3	14.3	0.6	0	0	-	0.9	1.5	
Bicycles	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	-	0	0	
% Bicycles	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	-	0	0	
Peds					0	-					0	-					0	-					0	-	0
% Peds					0	-					0	-					0	-					0	-	0

Peak Hour Diagram

Specified Period

From: 14:00:00
To: 19:00:00

One Hour Peak

From: 16:15:00
To: 17:15:00

Intersection: Teston Rd & Kipling Ave
Site ID: 1936600023
Count Date: Dec 04, 2019

Weather conditions:

**** Unsignalized Intersection ****

Major Road: runs E/W

North Approach

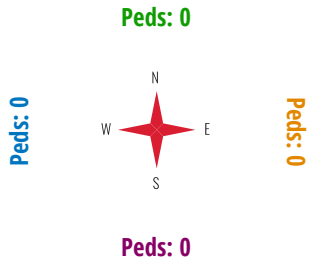
	Out	In	Total
	12	31	43
	7	5	12
	0	0	0
	0	0	0
Totals	19	36	55

	0	0	0	0
	0	0	0	0
	0	0	7	0
	7	0	5	0
Totals	7	0	12	0

East Approach

	Out	In	Total
	350	224	574
	52	38	90
	1	2	3
	0	0	0
Totals	403	264	667

				Totals
0	0	0	0	0
0	0	1	11	12
0	2	30	219	251
0	0	0	3	3



Totals				
0	0	0	0	0
24	20	4	0	0
375	328	46	1	0
4	2	2	0	0

West Approach

	Out	In	Total
	233	339	572
	31	47	78
	2	1	3
	0	0	0
Totals	266	387	653

Totals	5	0	1	0
	4	0	0	0
	1	0	1	0
	0	0	0	0
	0	0	0	0

South Approach

	Out	In	Total
	4	5	9
	2	2	4
	0	0	0
	0	0	0
Totals	6	7	13

- Cars

- Trucks

- Buses

- Bicycles

Comments



Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

















Intersection: Teston Rd & Kipling Ave
Count Date: Dec 04, 2019
Period: 14:00 - 19:00

Peak Hour Data (16:15 - 17:15)

Start Time	North Approach						South Approach						East Approach						West Approach						Total Vehicles	
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total		
16:15	2	0	1	0	0	3	1	0	0	0	0	1	0	94	9	0	0	103	3	76	2	0	0	81	188	
16:30	0	0	2	0	0	2	1	0	0	0	0	1	2	89	7	0	0	98	2	63	0	0	0	65	166	
16:45	5	0	1	0	0	6	2	0	1	0	0	3	2	91	3	0	0	96	6	50	0	0	0	56	161	
17:00	5	0	3	0	0	8	1	0	0	0	0	1	0	101	5	0	0	106	1	62	1	0	0	64	179	
Grand Total	12	0	7	0	0	19	5	0	1	0	0	6	4	375	24	0	0	403	12	251	3	0	0	266	694	
Approach %	63.2	0	36.8	0	-	-	83.3	0	16.7	0	-	-	1	93.1	6	0	-	-	4.5	94.4	1.1	0	-	-		
Totals %	1.7	0	1	0	-	2.7	0.7	0	0.1	0	-	0.9	0.6	54	3.5	0	-	58.1	1.7	36.2	0.4	0	-	-	38.3	
PHF	0.6	0	0.58	0	0	0.59	0.63	0	0.25	0	0	0.5	0.5	0.93	0.67	0	0	0.95	0.5	0.83	0.38	0	0	0	0.82	0.92
Cars	5	0	7	0	0	12	4	0	0	0	0	4	2	328	20	0	0	350	11	219	3	0	0	233	599	
% Cars	41.7	0	100	0	0	63.2	80	0	0	0	0	66.7	50	87.5	83.3	0	0	86.8	91.7	87.3	100	0	0	0	87.6	86.3
Trucks	7	0	0	0	0	7	1	0	1	0	0	2	2	46	4	0	0	52	1	30	0	0	0	31	92	
% Trucks	58.3	0	0	0	0	36.8	20	0	100	0	0	33.3	50	12.3	16.7	0	0	12.9	8.3	12	0	0	0	11.7	13.3	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0	0	0	2	3	
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0	0	0	0.2	0	0.8	0	0	0	0	0.8	0.4
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peds					0	-					0	-					0	-					0	-	0	0
% Peds					0	-					0	-					0	-					0	-	0	0

Appendix B. Existing (2019) Synchro Reports

Lanes, Volumes, Timings
 3: Kipling Avenue & Teston Road

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	308	3	0	191	7	0	3	2	39	0	57
Future Volume (vph)	7	308	3	0	191	7	0	3	2	39	0	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.999			0.995			0.946			0.920	
Fl _t Protected		0.999									0.980	
Satd. Flow (prot)	0	1738	0	0	1655	0	0	1817	0	0	1515	0
Fl _t Permitted		0.999									0.980	
Satd. Flow (perm)	0	1738	0	0	1655	0	0	1817	0	0	1515	0
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		331.3			2003.1			289.4			482.7	
Travel Time (s)		19.9			120.2			20.8			34.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	57%	9%	33%	0%	15%	29%	0%	0%	0%	3%	0%	22%
Adj. Flow (vph)	8	335	3	0	208	8	0	3	2	42	0	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	346	0	0	216	0	0	5	0	0	104	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	41.0%
	ICU Level of Service A
Analysis Period (min)	15

Lanes, Volumes, Timings
 10: Teston Road & Kleinburg Summit Way



















Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	30	259	195	53	59	63
Future Volume (vph)	30	259	195	53	59	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	95.0			35.0	0.0	35.0
Storage Lanes	1			1	1	1
Taper Length (m)	7.6				7.6	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1825	1902	1847	1201	1342	1541
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1825	1902	1847	1201	1342	1541
Link Speed (k/h)		40	40		50	
Link Distance (m)		255.0	331.3		330.2	
Travel Time (s)		23.0	29.8		23.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	4%	36%	36%	6%
Adj. Flow (vph)	33	282	212	58	64	68
Shared Lane Traffic (%)						
Lane Group Flow (vph)	33	282	212	58	64	68
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		3.7	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.9	4.9		4.9	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	26.9%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings

3: Kipling Avenue & Teston Road

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	297	4	4	375	24	5	0	1	12	0	7
Future Volume (vph)	14	297	4	4	375	24	5	0	1	12	0	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.998			0.992			0.977			0.949	
Fl _t Protected		0.998						0.960			0.970	
Satd. Flow (prot)	0	1699	0	0	1678	0	0	1544	0	0	1301	0
Fl _t Permitted		0.998						0.960			0.970	
Satd. Flow (perm)	0	1699	0	0	1678	0	0	1544	0	0	1301	0
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		331.3			2003.1			289.4			482.7	
Travel Time (s)		19.9			120.2			20.8			34.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	13%	0%	50%	13%	17%	20%	0%	0%	58%	0%	0%
Adj. Flow (vph)	15	323	4	4	408	26	5	0	1	13	0	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	342	0	0	438	0	0	6	0	0	21	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	34.8%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
 10: Teston Road & Kleinburg Summit Way



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	51	250	296	91	65	38
Future Volume (vph)	51	250	296	91	65	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	95.0			35.0	0.0	35.0
Storage Lanes	1			1	1	1
Taper Length (m)	7.6				7.6	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1722	1847	1847	1166	1332	1445
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1722	1847	1847	1166	1332	1445
Link Speed (k/h)		40	40		50	
Link Distance (m)		255.0	331.3		330.2	
Travel Time (s)		23.0	29.8		23.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	4%	4%	40%	37%	13%
Adj. Flow (vph)	55	272	322	99	71	41
Shared Lane Traffic (%)						
Lane Group Flow (vph)	55	272	322	99	71	41
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		3.7	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.9	4.9		4.9	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

















Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	32.5%
Analysis Period (min)	15
	ICU Level of Service A



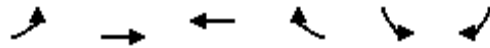
Appendix C. Future Synchro Reports

Lanes, Volumes, Timings
 3: Kipling Avenue & Teston Road

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	606	6	1	376	14	20	5	10	71	2	92
Future Volume (vph)	14	606	6	1	376	14	20	5	10	71	2	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.995			0.961			0.925	
Flt Protected		0.999						0.972			0.979	
Satd. Flow (prot)	0	1738	0	0	1656	0	0	1794	0	0	1532	0
Flt Permitted		0.999						0.972			0.979	
Satd. Flow (perm)	0	1738	0	0	1656	0	0	1794	0	0	1532	0
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		331.3			2003.1			289.4			482.7	
Travel Time (s)		19.9			120.2			20.8			34.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	57%	9%	33%	0%	15%	29%	0%	0%	0%	3%	0%	22%
Adj. Flow (vph)	15	659	7	1	409	15	22	5	11	77	2	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	681	0	0	425	0	0	38	0	0	179	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	60.2%
ICU Level of Service	B
Analysis Period (min)	15

Lanes, Volumes, Timings
 10: Teston Road & Kleinburg Summit Way



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	59	531	384	104	95	102
Future Volume (vph)	59	531	384	104	95	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	95.0			35.0	0.0	35.0
Storage Lanes	1			1	1	1
Taper Length (m)	7.6				7.6	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1825	1902	1847	1201	1342	1541
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1825	1902	1847	1201	1342	1541
Link Speed (k/h)		40	40		50	
Link Distance (m)		255.0	331.3		330.2	
Travel Time (s)		23.0	29.8		23.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	4%	36%	36%	6%
Adj. Flow (vph)	64	577	417	113	103	111
Shared Lane Traffic (%)						
Lane Group Flow (vph)	64	577	417	113	103	111
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		3.7	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.9	4.9		4.9	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	39.9%			ICU Level of Service A		
Analysis Period (min)	15					

Lanes, Volumes, Timings
3: Kipling Avenue & Teston Road

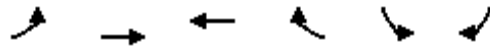


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	28	585	7	8	621	117	12	5	7	19	5	11
Future Volume (vph)	28	585	7	8	621	117	12	5	7	19	5	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.979			0.958			0.957	
Flt Protected		0.998			0.999			0.976			0.973	
Satd. Flow (prot)	0	1717	0	0	1606	0	0	1796	0	0	1647	0
Flt Permitted		0.998			0.999			0.976			0.973	
Satd. Flow (perm)	0	1717	0	0	1606	0	0	1796	0	0	1647	0
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		331.3			2003.1			289.4			482.7	
Travel Time (s)		19.9			120.2			20.8			34.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	57%	9%	33%	0%	15%	29%	0%	0%	0%	3%	0%	22%
Adj. Flow (vph)	30	636	8	9	675	127	13	5	8	21	5	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	674	0	0	811	0	0	26	0	0	38	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	58.7%
ICU Level of Service	B
Analysis Period (min)	15

Lanes, Volumes, Timings
 10: Teston Road & Kleinburg Summit Way



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	100	515	536	109	105	61
Future Volume (vph)	100	515	536	109	105	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	95.0			35.0	0.0	35.0
Storage Lanes	1			1	1	1
Taper Length (m)	7.6				7.6	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1825	1902	1847	1201	1342	1541
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1825	1902	1847	1201	1342	1541
Link Speed (k/h)		40	40		50	
Link Distance (m)		255.0	331.3		330.2	
Travel Time (s)		23.0	29.8		23.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	4%	36%	36%	6%
Adj. Flow (vph)	109	560	583	118	114	66
Shared Lane Traffic (%)						
Lane Group Flow (vph)	109	560	583	118	114	66
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		3.7	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.9	4.9		4.9	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	49.6%
Analysis Period (min)	15
	ICU Level of Service A