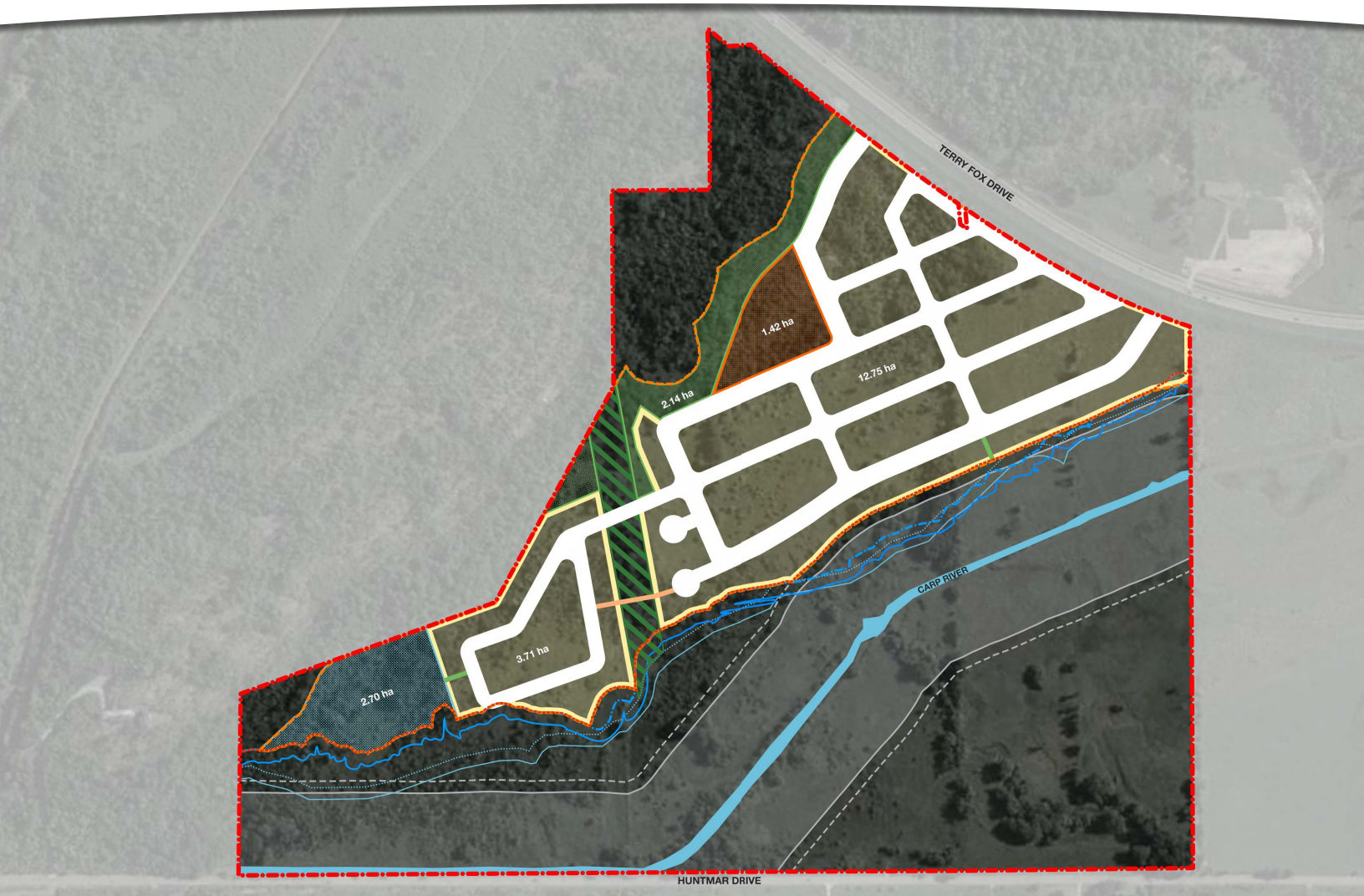
RICHCRAFT™ Group of Companies

June 2018



Transportation Impact Assessment Forecasting Report

Richcraft 820 Huntmar Road - Kanata Highlands Official Plan Amendment

PARSONS

Richcraft 820 Huntmar Road – Kanata Highlands Official Plan Amendment

Transportation Impact Assessment Forecasting Report

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envision more

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TIA Forecasting Report

1. SCREENING FORM

The screening form was completed to assess the need for a Transportation Impact Assessment (TIA) and is provided in Appendix A. The Trip Generation, Location and Safety triggers were met based on the unit count of 680 single family homes, townhomes, condos, cycling spine network, and road speed/geometry.

2. DESCRIPTION OF PROPOSED DEVELOPMENT

2.1. PROPOSED DEVELOPMENT

The proposed Official Plan Amendment (OPA) for the development at 820 Huntmar Drive is a greenfield development, forming part of the Kanata Lakes-Marchwood Lakeside-Morgan's Grant and Carp community along Terry Fox Drive. The current zoning for the developable portion is Rural Countryside (RU), permitting agricultural use, animal care establishment, animal hospital, artist studio, bed and breakfast, cemetery, detached dwelling, equestrian establishment, environmental preserve and educational area, forestry operation, group home, home-based business, home-based day care, kennel, converted retirement home, or secondary dwelling unit. The proposed OPA will redesignate these lands to Residential once they are brought into the General Urban Area. The site's local context is illustrated in Figure 1.

The development will include approximately 680 residential units, including 370 single family homes, 190 townhomes and 120 condominium units. The development will access Terry Fox Drive directly through two proposed accesses. The estimated date of occupancy is 2022 with one phase of development. The site plan is illustrated in Figure 2.

The Zoning By-Law will be the City regulatory documents primarily used for analysis of the OPA.

Figure 1: Local Context

Figure 2: Site Plan

3. EXISTING CONDITIONS

3.1. AREA ROAD NETWORK

The following City owned roads are within the study area network:

Terry Fox Road is a north-south arterial, which extends from Eagleson Road in the south (where it continues as Hope Side Road) to Herzberg Road in the north. Within the study area, Terry Fox Drive is a two-lane undivided roadway with a rural cross section on the west side and an urbanized cross-section on the east side. A paved shoulder is provided in the southbound direction and both a bike lane and multi-use pathway are provided in the northbound direction. The posted speed limit within the study area is 80 km/h and Terry Fox Drive is a trucking route.

Second Line Road is a north-south major collector, which extends from Terry Fox Drive in the south to Thomas A Dolan Parkway in the north. Within the study area, Second Line Road is a two-lane undivided roadway with a rural cross section. A paved shoulder is provided on both sides of the road and a multi-use pathway starts on the east side of the road, approximately 120m north of Terry Fox Drive. The posted speed limit within the study area is 60 km/h.

Huntsville Drive is an east-west major collector, which extends from Terry Fox Drive in the west to Kanata Avenue southeast. Within the study area, Huntsville Drive is a two-lane roadway with an urban cross section, with a median at Terry Fox Drive and a large median to the east around a large rock outcrop. Sidewalks are provided on both sides of the roadway, connecting to Terry Fox Drive sidewalk. The posted speed limit within the study area is 40 km/h.

Richardson Side Road is a east-west local road between Terry Fox Drive and Huntmar Drive. Within the study area, Kanata Avenue is a two-lane undivided roadway with a rural cross-section, including gravel and paved shoulders. The posted speed limit within the study area is 80 km/h.

Kanata Avenue is a east-west major collector, which extends from Terry Fox Drive in the east to Aird Place (where if continues as Castlefrank Road) to the southeast. Within the study area, Kanata Avenue is a two-lane undivided roadway with an urban cross section, including bike lanes in either direction. Sidewalks are provided on both sides of the roadway that connect to the Terry Fox Drive sidewalk. The posted speed limit within the study area is 60 km/h.

3.2. PEDESTRIAN/CYCLING NETWORK

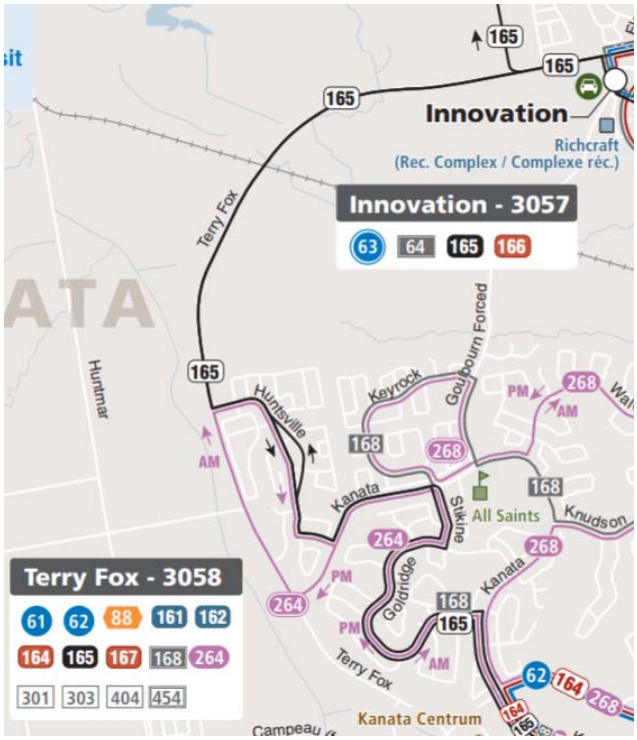
A multi-use pathway is provided along the east side of Terry Fox Drive (transitioning into a sidewalk south of Richardson Side Road) and a paved shoulder is provided on the west side. A bike lane is also provided in the northbound direction.

Per the City's Cycling Plan, Terry Fox Drive is classified as a "Spine Route".

3.3. TRANSIT NETWORK

Transit service within the vicinity of the site is currently provided by OC Transpo Route #165 and Connexion Route #264. Route #165 provides daily service looping between the Terry Fox and Innovation stations, passing the subject site twice per hour between 9am and 10pm. The Route #264 provides peak hour service to Mackenzie King station in the morning and to Terry Fox station in the afternoon. Trips pass the subject site approximately every 20 minutes between 5:30-8:20 am and 4:10-7:10pm. Stops are located on Huntsville Drive and on Terry Fox Drive at Tillsonburg Street to the south of the subject site, and beyond the Second Line Road intersection north of the site.

Figure 3: Area Transit Network

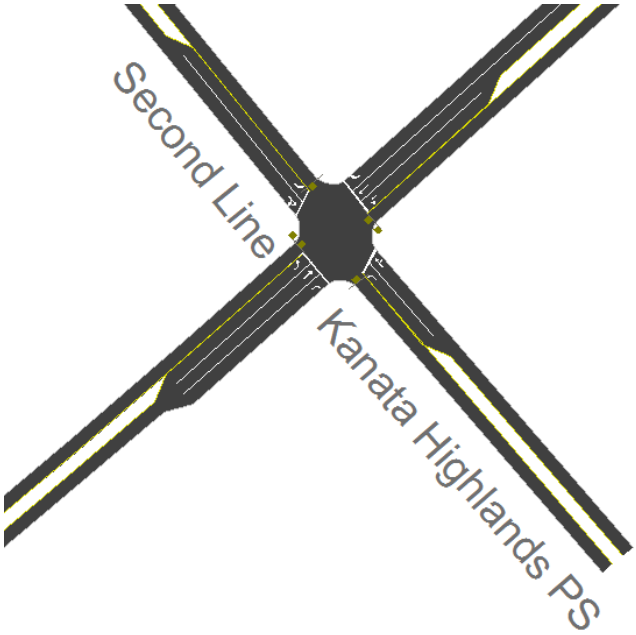


Retrieved on May 23, 2018, http://www.octranspo.com

3.4. EXISTING STUDY AREA INTERSECTION

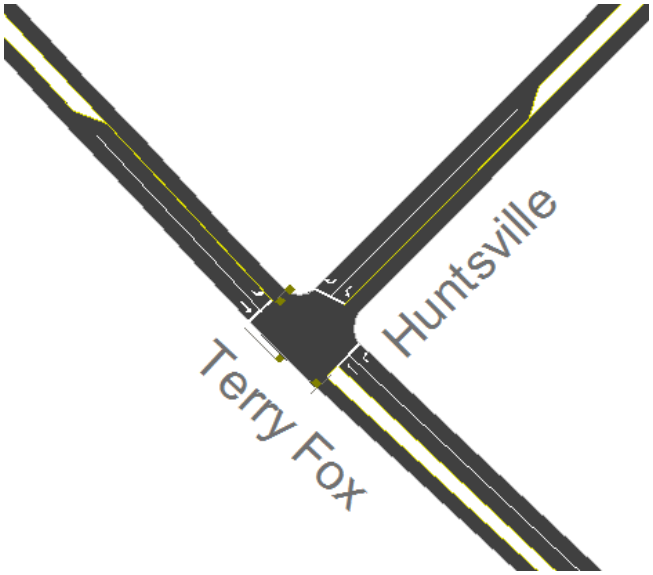
Terry Fox Drive and Second Line Road

Terry Fox Drive at Second Line Road is a signalized intersection. Along Terry Fox Drive, both of the east and west bound approaches consist of an auxiliary left-turn lane, through lane and an auxiliary right-turn lane. The north and south bound approaches consist of an auxiliary left-turn lane and a shared through/right-turn lane. Bike pockets are provided on the east and west bound approaches.



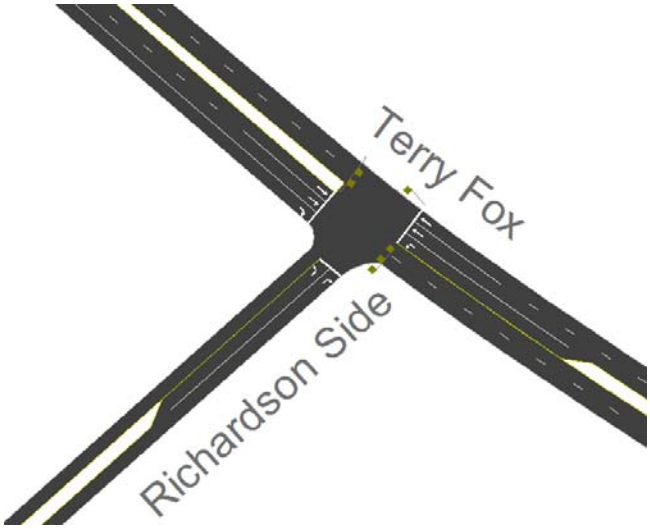
Terry Fox Drive and Huntsville Drive

Terry Fox Drive at Huntsville Drive is a stop-control on the minor approach. Along Terry Fox Drive, the northbound approach consists of a through lane and an auxiliary right-turn lane, and the southbound approach consists of an auxiliary left-turn lane and a through lane. The westbound approach consists of an auxiliary left-turn lane and right-turn lane. A bike lane is provided on the northbound approach and a paved shoulder on the southbound approach.



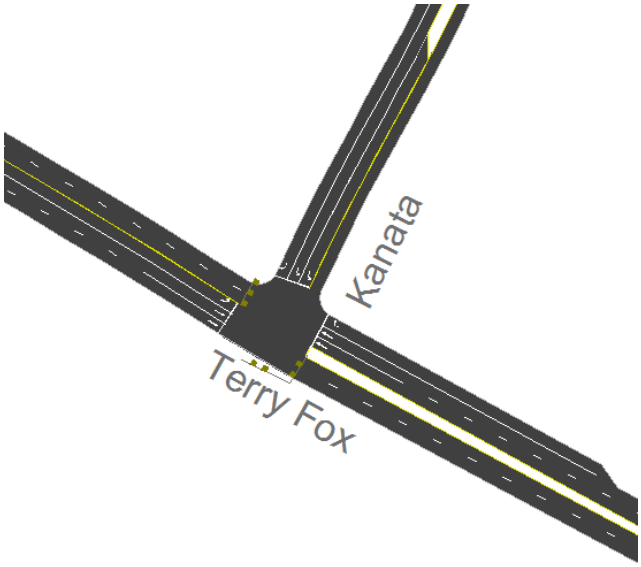
Terry Fox Drive and Richardson Side Road

Terry Fox Drive at Richardson Side Road is a signalized t-intersection. Along Terry Fox Drive, the northbound approach consists of an auxiliary left-turn lane and two through lanes, and the southbound approach consists of two through lanes and an auxiliary right-turn lane. The eastbound approach consists of an auxiliary left-turn lane and right-turn lane. Bike lanes are provided on the north and south bound approaches.



Terry Fox Drive and Kanata Avenue

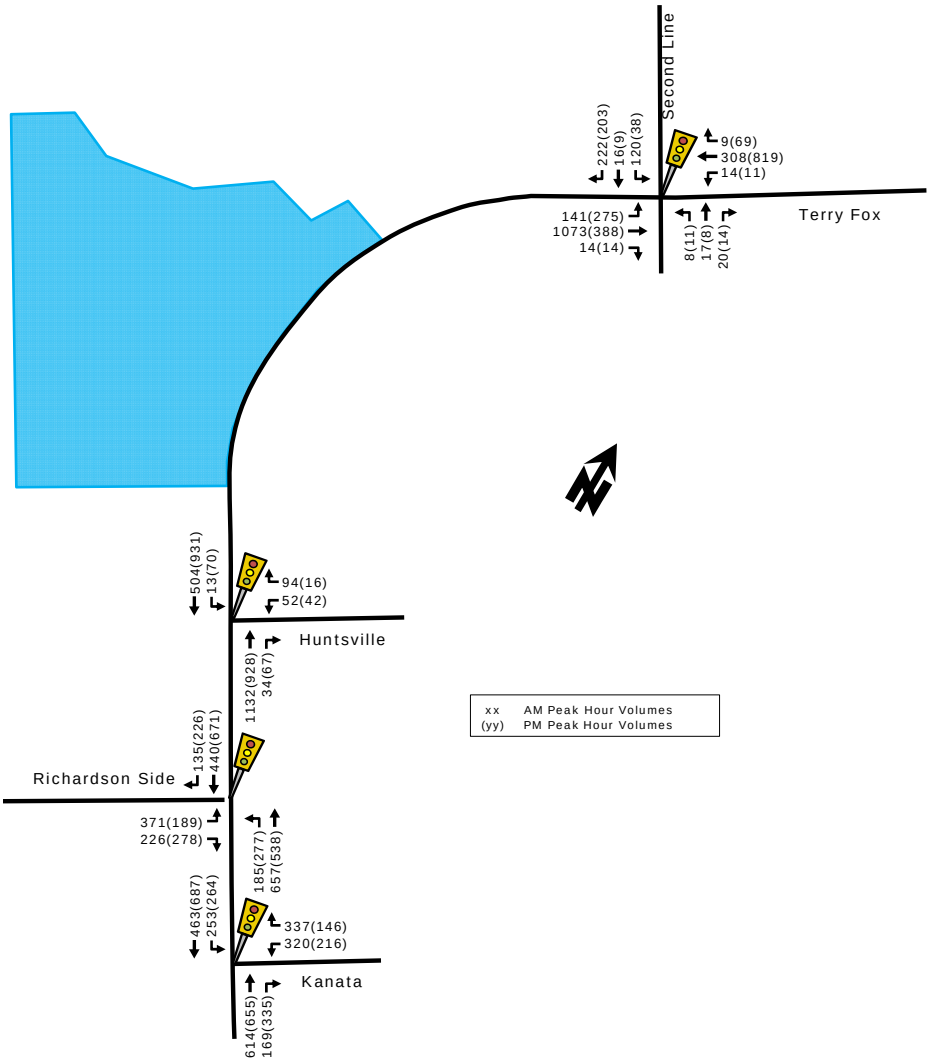
Terry Fox Drive at Kanata Avenue is a signalized t-intersection. The southbound approach consists of an auxiliary left-turn lane and two through lanes, the northbound approach consists of two through lanes and a channelized right-turn lane, and the westbound approach consists of a dual left-turn and a channelized right-turn. A bike lane is provided on all approaches, with a pocket between the through and right-turn lanes on the northbound approach, and a bike pocket for left-turns on the westbound approach.



3.5. EXISTING INTERSECTION VOLUMES

The existing peak hour traffic volumes (illustrated in Figure 4 below) were collected from City of Ottawa turning movement counts, which were completed between 2014 and 2016. The full traffic volume counts are included in Appendix B.

Figure 4: Existing Peak Hour Traffic Volumes



3.6. EXISTING ROAD SAFETY CONDITIONS

Collision history for study area roads (2012 to 2016, inclusive) was obtained from the City of Ottawa, and the collisions involved property damage (77%), and the remaining (23%) collisions involved non-fatal injuries indicating low impact speeds.

Over the five-year period, the types of collisions cited by police include: turning movement (38% or 22 collisions), rear end (34% or 20 collisions), single vehicle (other) (18% or 13 collisions), angle (13% or 9 collisions), sideswipe (6% or 4 collisions), approaching (3% of 2 collisions), and other (1% or 1 collision each).

A standard unit of measure for assessing collisions at an intersection is based on the number collisions per million entering vehicles (MEV). At intersection and road segment within the study area, reported collisions per MEV is as follows:

- 0.59 collisions/MEV at the Terry Fox Drive and Old Second Line Road intersection;
- 0.84 collisions/MEV at the Terry Fox Drive and Richardson Side Road intersection;
- 0.99 collisions/MEV at the Terry Fox Drive and Kanata Avenue intersection;
- 0.49 collisions/MEV along Terry Fox Drive between Old Second Line Road and Huntsville Drive;
- 0.14 collisions/MEV along Terry Fox Drive, between Huntsville Drive and Richardson Side Road; and
- 0.05 collisions/MEV along Terry Fox Drive, between Richardson Side Road and Tillsonburg Street.

With respect to the subject site, there does not appear to be any prevailing safety issues along the Terry Fox Drive in proximity to the site. South of the site at the intersections of Richardson Side Road and Kanata Avenue, the collision MEV rise by 40-60%. The primary collision types at both intersections are rear end and turning movement collisions, which are typical of intersections with high turning movements.

At the Kanata Avenue intersection, seven (7) of the ten (10) rear end collisions were related to slowing or stopped vehicles and are likely do to congestion. All six (6) of the turning movement collisions involved southbound left-turning vehicles. A potential mitigation would be to provide a protected phase to reduce the conflicts with northbound through vehicles.

At the Richardson Side Road intersection, the eleven (11) turning movement collisions were related to the northbound left-turn movement. Potential mitigation would be a fully protected phase to reduce conflicts with southbound through vehicles.

The source collision data as provided by the City of Ottawa and related analysis is included as Appendix C.

4. PLANNED CONDITIONS

4.1. PLANNED STUDY AREA TRANSPORTATION NETWORK CHANGES

Identified on the 'Affordable Network' map within the TMP is the connection of Campeau Road between Terry Fox Drive and Huntmar Drive during Phase 1, and the bus rapid transit network is scheduled to be extended to Terry Fox station with plans to continue to Huntmar Road. Terry Fox Drive widening, north of Richardson Side Road, is outside of the 'Affordable Network'.

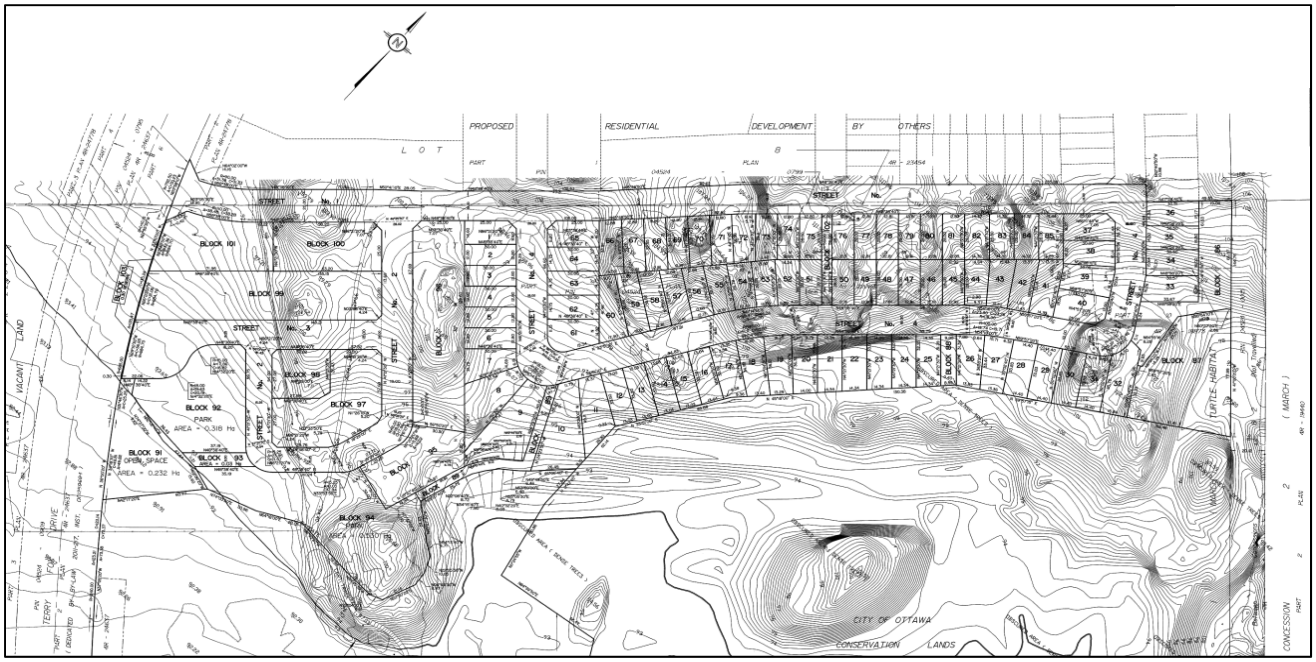
The City Ward 4 and 5 construction maps do not identify any additional network changes beyond a new road of Goulbourn Forced Road to Terry Fox Drive, west of Second Line road between 2017-2021.

4.2. OTHER AREA DEVELOPMENTS

4.2.1. RICHARDSON RIDGE PHASE 4, 467 TERRY FOX DRIVE

Richardson Ridge Phase 4 development is located at 467 Terry Fox Drive and includes 159 residential units with a single access to Terry Fox Drive. This access is shared with the Richcraft Kanata Highlands Phase 1 development to the north. Build-out was originally estimated for 2019 but maybe completed at a later horizon year. Figure 5 illustrates the proposed development.

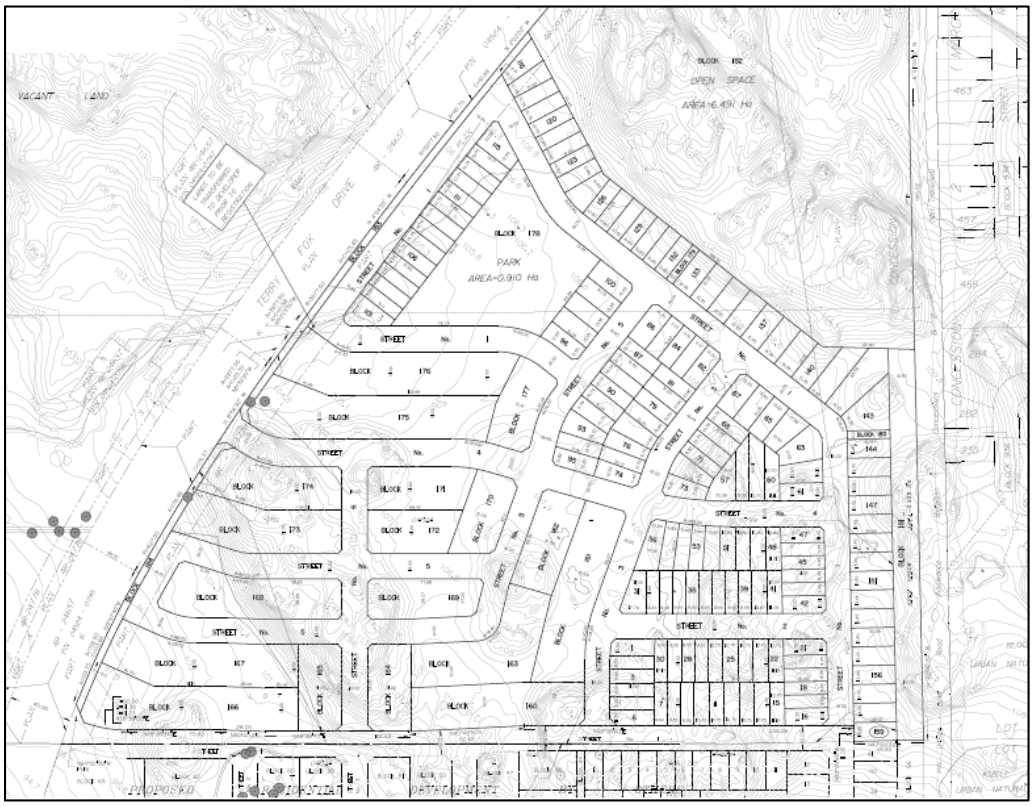
Figure 5: Regional Richardson Ridge Phase 4 Site Plan



4.2.2. RICHCRAFT – KANATA HIGHLANDS PHASE 1, 457 TERRY FOX DRIVE

Richcraft Phase 1 is located north of Regional's Richardson Ridge Phase 4 development, at 457 Terry Fox Drive. The plan of subdivision has been deemed complete and will include 435 residential units, and have two connections to Terry Fox Drive, one of which will be shared with Richard Ridge Phase 4. The assumed build-out for the development is 2021. Figure 6 illustrates the proposed development.

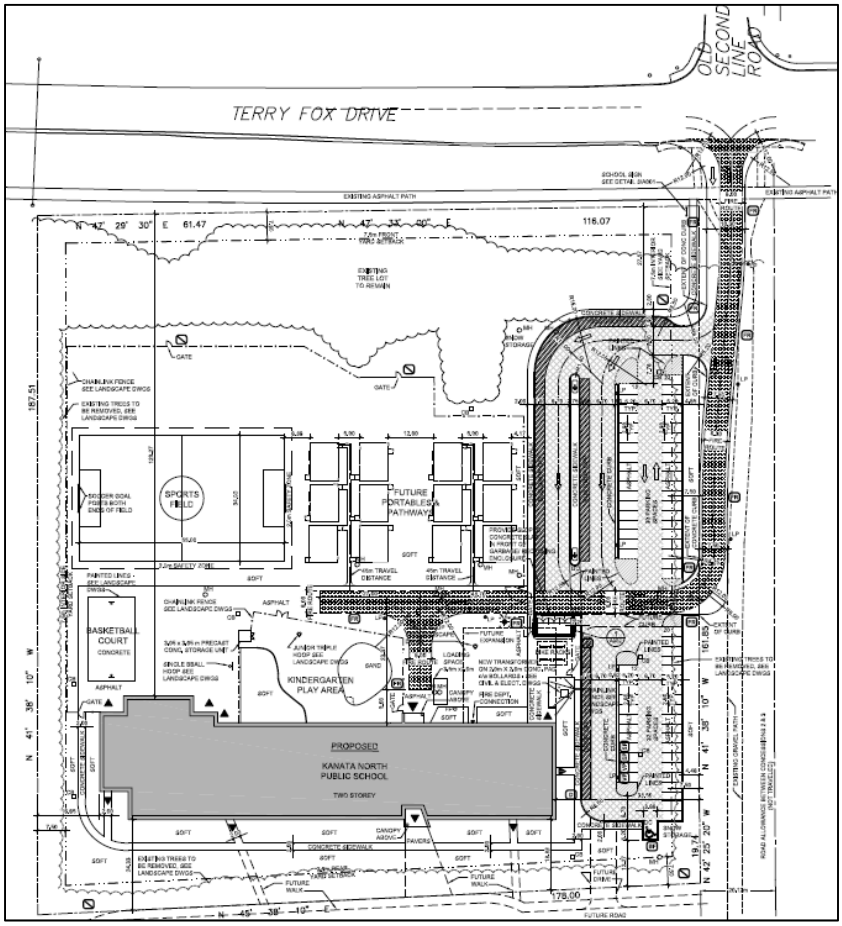
Figure 6: Richcraft Kanata Highlands Phase 1 Site Plan



4.2.3. OCDSB – KANATA HIGHLANDS ELEMENTARY PUBLIC SCHOOL, 425 TERRY FOX DRIVE

The Ottawa-Carleton District School Board completed the construction of the Kanata Highlands Elementary School in 2016, ultimately envisioned to accommodate 975 students. The school access is the fourth leg of the Terry Fox Drive and Second Line Road intersection. Figure 7 illustrates the site plan.

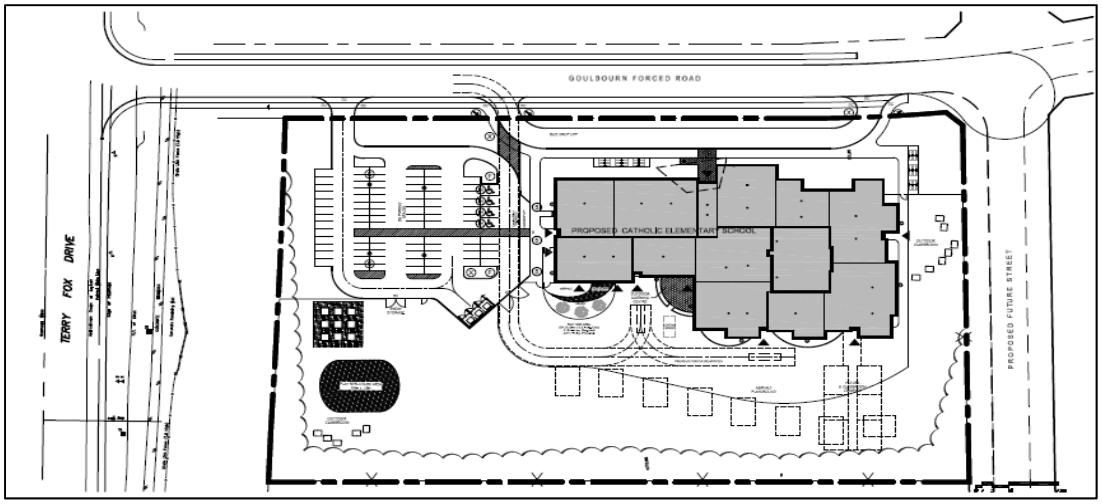
Figure 7: OCDSB Kanata Highlands Elementary Public-School Site Plan



4.2.4. OCSB – KANATA NORTH CATHOLIC ELEMENTARY SCHOOL, 785 GOULBOURN FORCED ROAD

The Ottawa Catholic School Board began planning for an elementary school site along Goulbourn Forced Road, near Terry Fox Drive in 2016. The site was initially assumed to be occupied by 2018 and include a new school and child care facility, able to accommodate 500 students and 41 pre-school/toddlers. The proposed Goulbourn Forced Road intersection at Terry Fox Drive was identified to require signalization, northbound and westbound left-turn lanes, and a sidewalk on the west side of the future Goulbourn Forced Road. Figure 8 illustrates the proposed development.

Figure 8: OCSB Kanata North Catholic Elementary School Site Plan



5. STUDY AREA

5.1. TRANSIT

As mentioned previously, transit is served within the area by Route #165 (off-peak), with Route #264 stopping south of the subject site near Huntsville Drive and Tillsonburg Street.

5.2. NETWORK CONCEPT

The SL-44 and SL-53 screenlines in close proximity to the subject site. These screenlines capture east-west travel between Richardson Side Road to Flewellyn Road, and north-south travel between Huntmar Drive to March Road on the north side of Highway 417. It is not anticipated that this development will have significant impacts on these screenlines.

5.3. INTERSECTION DESIGN

The proposed site will access the adjacent road network through two accesses on Terry Fox Drive, along with proposed intersections within 1km of the site. The Strategy Report for the Plan of Subdivision will review and document the intersection requirements if required.

6. TIME PERIODS

The weekday morning and afternoon peak hours are considered the appropriate time periods for operational analysis for this residential and retail development.

7. HORIZON YEARS

For the purposes of the operational analysis it is assumed that the subject development will be fully built and occupied by 2024. This will necessitate the analysis of 2024 and 2029 horizons.

8. EXEMPTIONS REVIEW

Based on the foregoing analysis and review of the existing conditions, it is recommended that, if required, any future work within the context of this TIA excludes the following modules and elements summarized in Table 1.

Table 1: Exemptions Review Summary

Module	Element	Exemption Consideration
4.1 Development Design	4.1.3 Circulation and Access	Not required for plans of subdivision
4.2 Parking	All Elements	Not required for plans of subdivision
4.6 Neighbourhood Traffic Management	4.6.1 Adjacent Neighbourhoods	Subject site will not connect through any other neighbourhoods.

9. DEVELOPMENT GENERATED TRAVEL DEMAND

9.1. TRIP GENERATION

9.1.1. TRIP GENERATION

Appropriate trip generation rate for the proposed development consisting of 370 detached homes, 190 townhomes and 120 condo units were obtained from the City's 2009 TRANS Trip Generation – Residential Trip Rates. These rates are summarized in Table 2.

Table 2: 2009 TRANS Trip Generation Rate

Land Use	Trip Rates	
	AM Peak	PM Peak
Detached Homes	T = 0.70(du)	T = 0.90(du)
Townhomes	T = 0.54(du)	T = 0.71(du)
High-Rise Condo	T = 0.46(du)	T = 0.46(du)
Notes: *T = Average Vehicle Trip Ends* *du = Dwelling units*		

Using the TRANS Trip Generation rate, the total amount of vehicle trips generated by the proposed townhome units were projected and the results are summarized in Table 3.

Table 3: TRANS Vehicle Trip Generation

Land Use	Data Source	Units	AM Peak (veh/h)			PM Peak (veh/h)		
			In	Out	Total	In	Out	Total
Detached Homes	TRANS	370 du	75	184	259	206	127	333
Townhomes	TRANS	190 du	38	65	103	71	64	135
High-Rise Condo	TRANS	120 du	15	40	55	31	24	55
		Total	**128**	**289**	**417**	**308**	**215**	**523**

As shown in Table 3, a total of 417 and 523 veh/h are projected to travel to/from the proposed development during the weekday morning and afternoon peak hours.

9.1.2. MODE SHARES

Using the TRANS Auto Trips projected in Table 3 and the modal share percentages from the 2011 NCR Household Origin – Destination Survey and Table 3.13 of the TRANS Trip Generation Study, the modal share for the proposed development are summarized in Table 4.

Table 4: Total Site Trip Generation

Travel Mode	AM Mode Share	AM Peak (persons/h)			PM Mode Share	PM Peak (persons/h)		
		In	Out	Total		In	Out	Total
Auto Driver	60%	128	289	417	60%	308	215	523
Auto Passenger	10%	21	49	70	20%	108	66	174
Transit	10%	20	50	70	10%	53	34	87
Non-motorized	20%	40	99	139	10%	53	34	87
Total People Trips	100%	209	487	695	100%	522	349	872
Total 'New' Auto Trips		**128**	**289**	**417**		**308**	**215**	**523**

As shown in Table 4, based on the TRANS Trip Generation method, the proposed site is projected to generate approximately 695 to 872 two-way person-trips per hour during the weekday peak hours.

9.2. TRIP DISTRIBUTION

Traffic distribution was based on the 2011 NCR Household Origin – Destination Survey, existing volume splits at study area intersections and our knowledge of the surrounding area. The resultant distribution is outlined as follows.

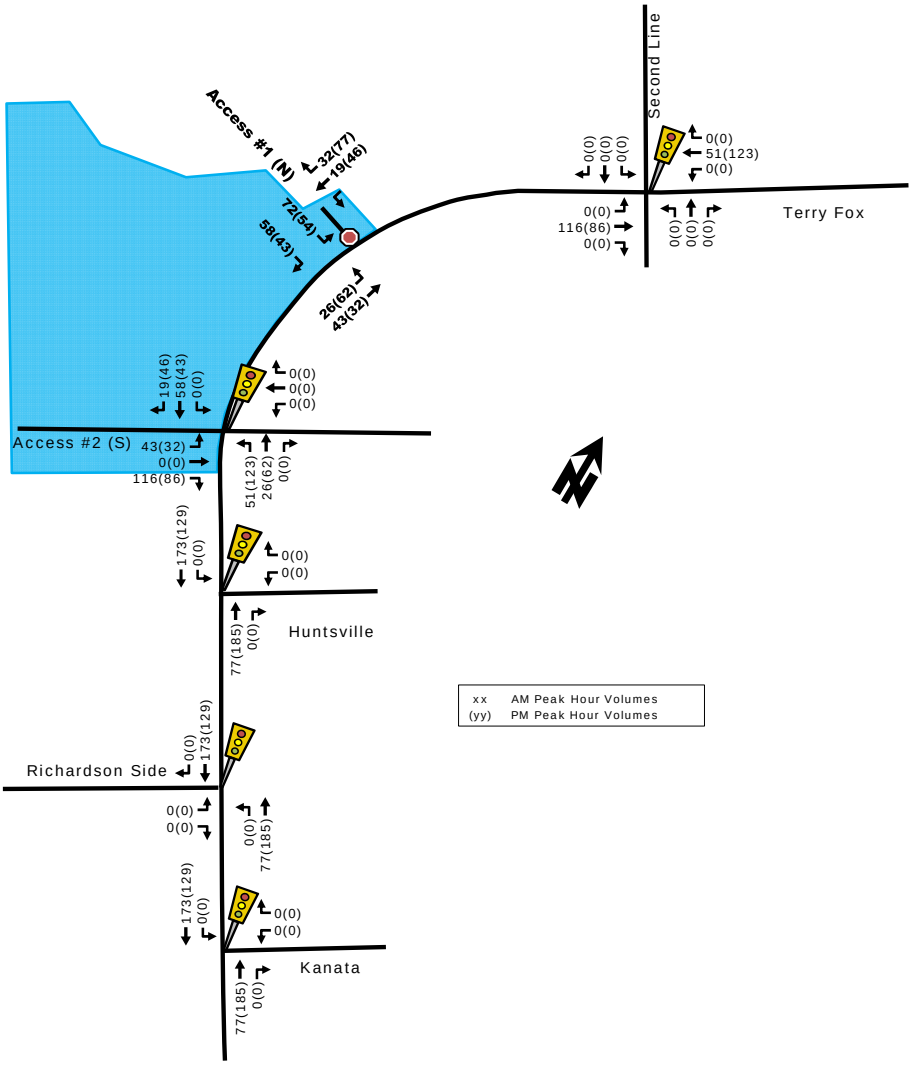
- 60% to/from the north via Terry Fox Drive
- 40% to/from the south via Terry Fox Drive

100%

9.3. TRIP ASSIGNMENT

New site generated trips were assigned to the Study Area intersections using the above distribution. Figure 9 shows the resulting volume assignment of the new site generated trip used in this analysis.

Figure 9: Site Trip Generated Trip Volumes



10. BACKGROUND NETWORK TRAVEL DEMANDS

10.1. TRANSPORTATION NETWORK PLANS

The transportation network changes have been discussed within Section 4.1 and none are anticipated to impact the transportation analysis for this development.

10.2. BACKGROUND GROWTH

Within the vicinity of the subject development is expected to continue to develop and use of Terry Fox Drive as an arterial route will also continue. As such, a 2% annual background traffic growth rate for the mainline volumes along Terry Fox Drive.

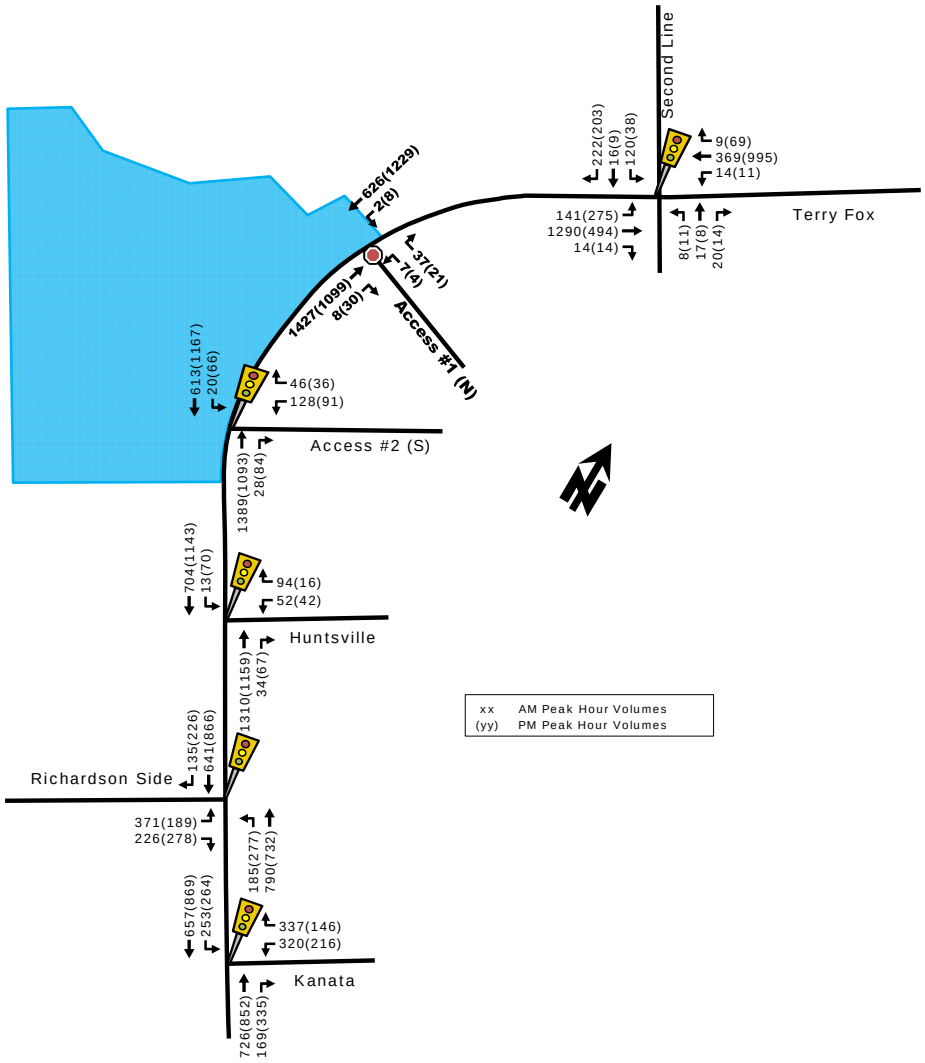
As the subject development will share the access road to Terry Fox Drive with the Richardson Ridge Phase 4 subdivision, traffic volume projections from the Richardson Ridge Subdivision are included in the background traffic growth analysis. The resultant traffic volumes for the years 2024, representing full built-out and occupancy and 2029 representing 5-years

beyond full build out are illustrated in Figure 10 and Figure 11, respectively.

10.2.1. PROJECTED BACKGROUND 2020 OPERATIONS

The projected background 2020 traffic volumes were derived by superimposing the other study area developments and the background growth rate on the existing traffic volumes. The resulting projected background 2020 traffic volumes are illustrated in Figure 10.

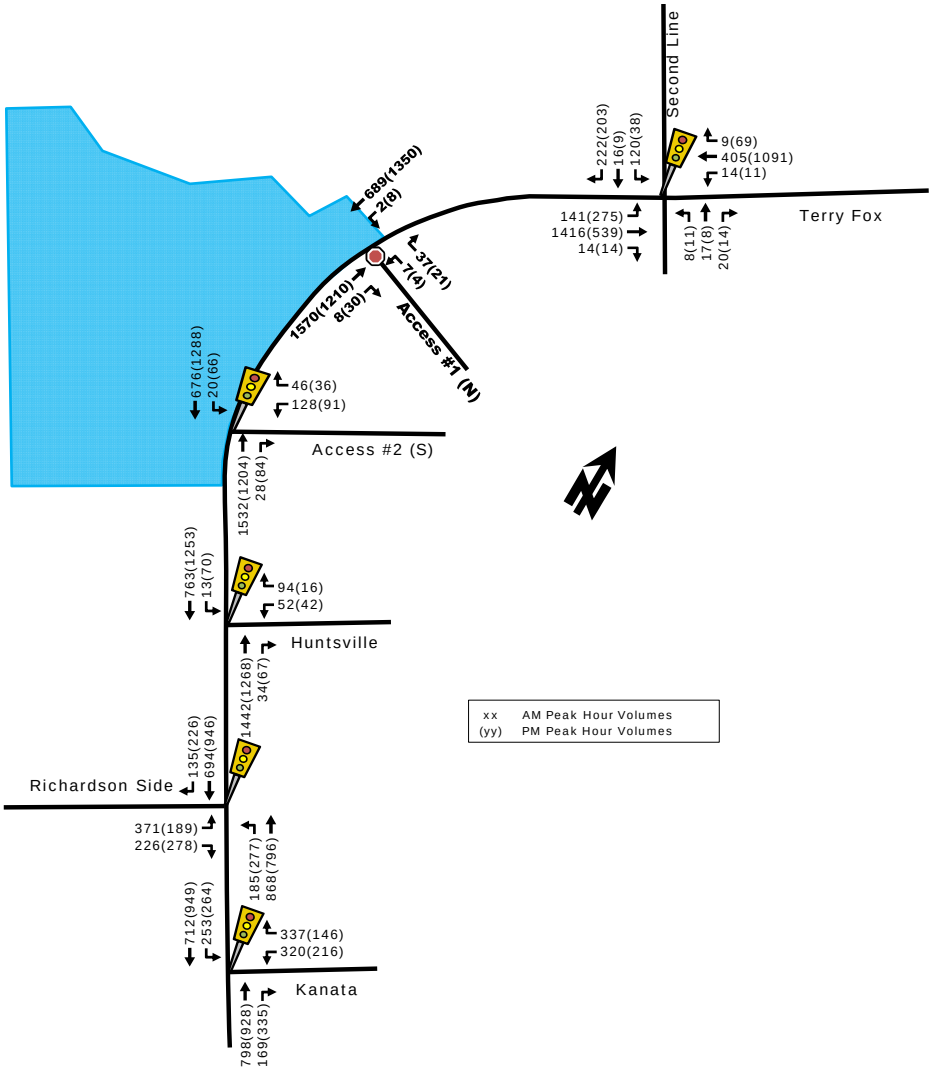
Figure 10: Projected Background 2024 Traffic Volumes



10.2.2. PROJECTED BACKGROUND 2025 OPERATIONS

The projected background 2025 traffic volumes were derived by superimposing the other study area developments and the background growth rate on the existing traffic volumes. The resulting projected background 2025 traffic volumes are illustrated in Figure 11.

Figure 11: Projected Background 2029 Traffic Volumes



10.3. OTHER DEVELOPMENTS

The City of Ottawa's Development Applications webtool has been used to determine if there are proposed developments within the area of influence of the proposed development. These developments have been discussed in greater detail in Section 4.2 and only two will have an impact on the study area intersections. Figure 12 and Figure 13 document the traffic impact of the developments on the study area intersections. These have been included in the above background analysis.

Figure 12: Richcraft Phase 1 Traffic Volumes (2024)

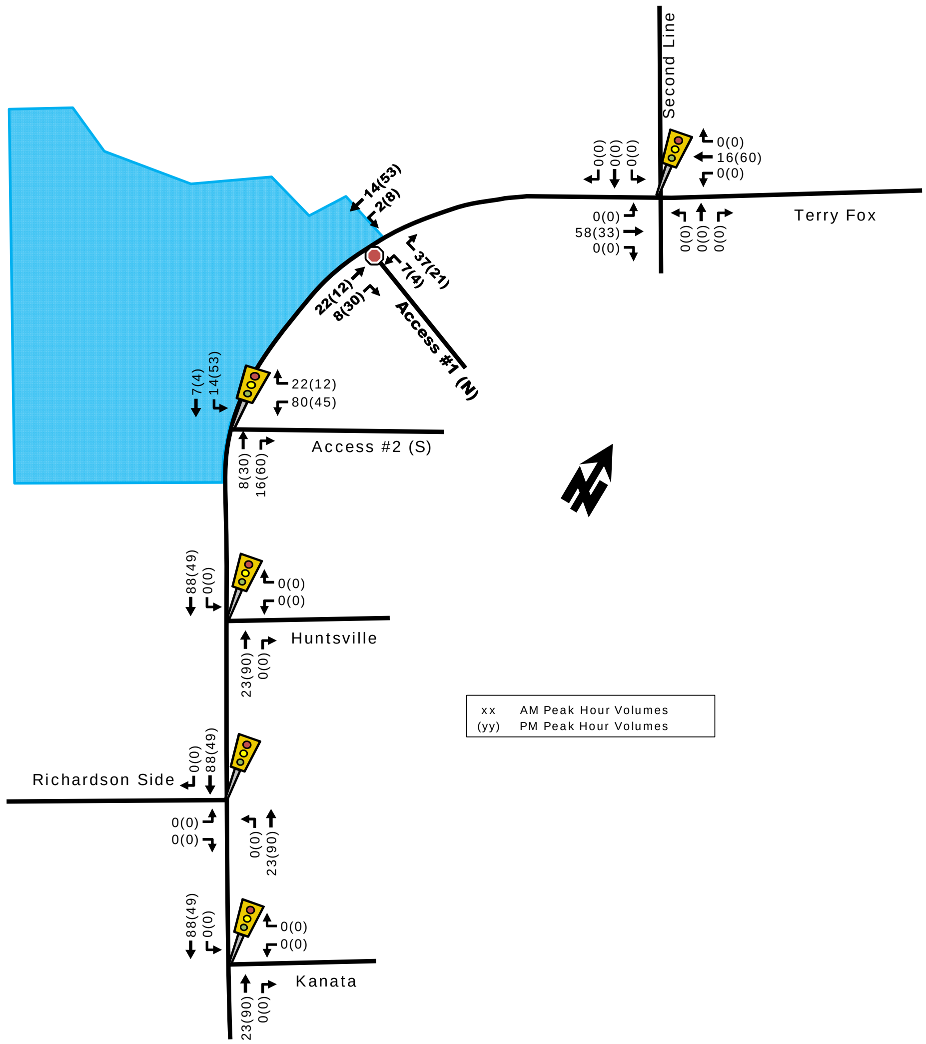
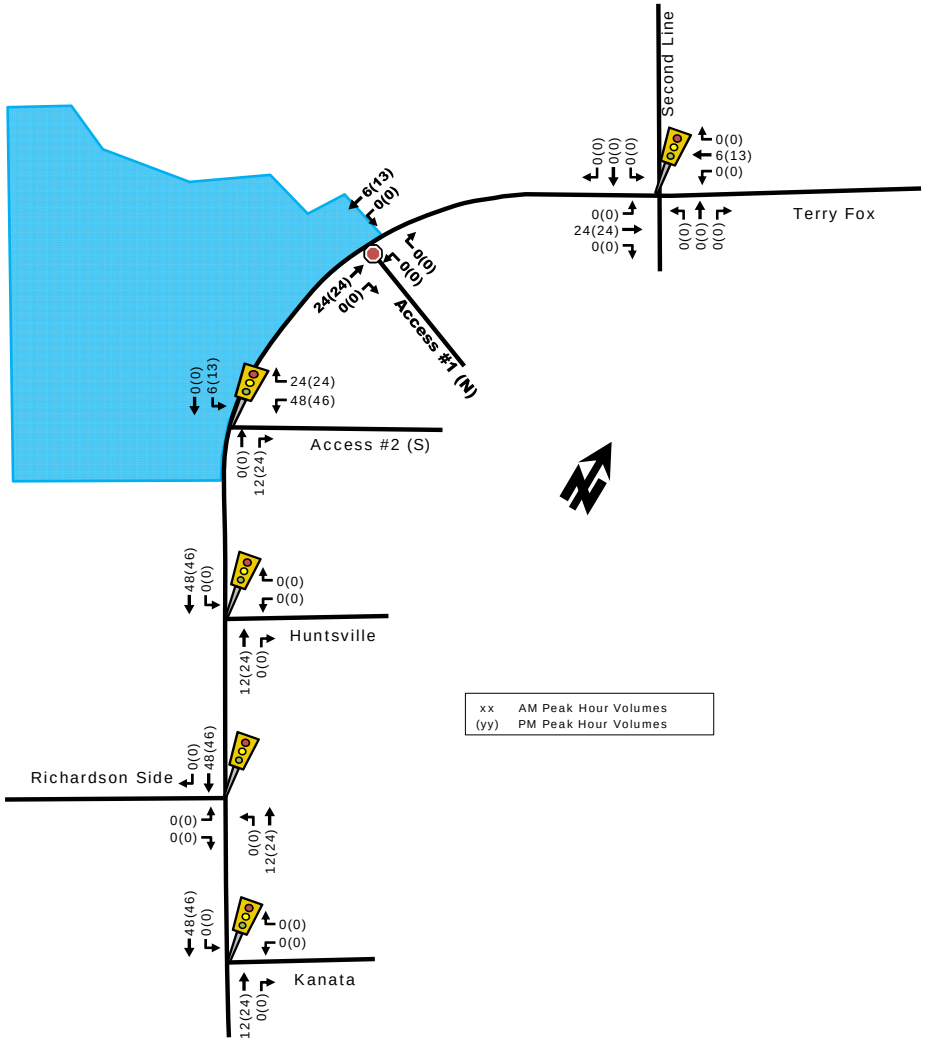


Figure 13: Regional Phase 4 Traffic Volumes (2024)



11. DEMAND RATIONALIZATION

The forecasted background volumes note the potential for widening of Terry Fox Drive to two lanes, north of Richardson Side Road, as 1,200 to 1,400 vehicles per hour is beyond the typical threshold for a single lane.

12. TRANSPORTATION DEMAND MANAGEMENT

12.1. CONTEXT FOR TDM

At this time, the OPA submission can only estimate the residential units numbers and mix types. As such, the context for TDM is limited until the Plan of Subdivision application is submitted. Overall, the location of the proposed development is on the edge of the urban boundary and connects directly to an arterial roadway. This location will be auto focused until the Terry Fox Drive widening and additional modes of travel are connected to the area.

12.2. NEED AND OPPORTUNITY

The delay of the Terry Fox Drive widening significantly limits the ability to implement a TDM program along the urban boundary. As such, the need and opportunity to provide local transit service provides the best opportunity for a reduction if auto travel. If this service cannot be achieved, any transit users will likely use their personal vehicle for the first/last mile to reach an adjacent park & ride lot (e.g. Terry Fox Station).

12.3. TDM PROGRAM

The TDM Measures Checklist will be completed and the suite of post-occupancy measures will be compiled during the Plan of Subdivision submission and the unit type, mix, and locations are confirmed.

13. TRANSIT

13.1. ROUTE CAPACITY

Table 5 summarizes the average available seats on-vehicle for the corresponding transit routes.

Given the average loads and residual capacity of route #264, no capacity constraints are noted for the area.

Table 5: Transit Capacity at Adjacent Transit Stops

Intersection	Stops	Route		Average Load at Departure	Available Seats (%)
Terry Fox Drive at Huntsville Drive	7573/7573	264	AM	1	99%
			PM	6	92%

Transit information was provided by the City of Ottawa and is included in Appendix D.

13.2. TRANSIT PRIORITY

No transit priority measures are recommended for the study area.

14. REVIEW OF NETWORK CONCEPT

The forecasted background volumes note the potential for widening of Terry Fox Drive to two lanes, north of Richardson Side Road, as 1,200 to 1,400 vehicles per hour is beyond the typical threshold for a single lane. These volumes can be addressed through the City widening of Terry Fox Drive.

15. INTERSECTION DESIGN

15.1. INTERSECTION CONTROL

The current planning for the study area intersections will maintain the signalization of Terry Fox Drive at Old Second Line Road, Richardson Sie Road and Kanata Avenue. The Huntsville Drive intersection has been designed to accommodate signalization and it is anticipated that signalization will be required to address existing and background operations.

No changes are recommended as part of this OPA submission.

15.2. INTERSECTION DESIGN

An MMLOS analysis was completed for the existing Terry Fox Drive corridor, assessing the existing geometry for the applicable levels of service for a developing community. The intersection of Old Second Line Road is adjacent to a school and it was also assumed Huntsville Drive will be signalized in the future. Table 6 summarizes the MMLOS along Terry Fox Drive.

Table 6: Terry Fox Drive MMLOS Based on Geometry

Intersection	Level of Service							
	Pedestrian (PLoS)		Bicycle (BLoS)		Transit (TLoS)		Truck (TrLoS)	
	PLoS	Target	BLoS	Target	TLoS	Target	TrLoS	Target
Signalized (Existing Geometry Only)								
Terry Fox Drive / Old Second Line Road	D	A	F	C	n/a	n/a	F	D
Terry Fox Drive / Huntsville Drive	D	C	F	C	n/a	n/a	E	D
Terry Fox Drive / Richardson Side Road	D	C	F	C	n/a	n/a	E	D
Terry Fox Drive / Kanata Avenue	D	C	F	C	n/a	n/a	C	D

No changes for these intersections are anticipated based on this OPA submission, or during the future plan of subdivision submission beyond the City's currently planned improvements and Terry Fox Drive widening.

16. NEXT STEPS

Following the circulation and review of this OPA Strategy report, any outstanding comments, within the context of an OPA submission, will be addressed. Once confirmed, an updated TIA report will be completed for the Plan of Subdivision submission, pending developer timelines. This updated report will update the forecasting and analysis components of the TIA guidelines.

Appendix A

Screening Form

PARSONS

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P: +1 613.738.4160 l F: +1 613.739.7105 l www.parsons.com

City of Ottawa 2017 TIA Guidelines

TIA Screening Form

Date	22-May-18
Project	Richcraft 820 Huntmar Road
Project Number	-

Results of Screening	Yes/No
Development Satisfies the Trip Generation Trigger	Yes
Development Satisfies the Location Trigger	Yes
Development Satisfies the Safety Trigger	Yes

Module 1.1 - Description of Proposed Development	
Municipal Address	820 Huntmar Road
Description of location	Ward 5, MARCH CON 1 PT LOTS 8 9 AND;RP 4R23454 PT PART 1
Land Use	Zoned RU - Rural Countryside, vacant naturalized and farm fields
Development Size	370 detached homes, 190 townhomes and 120 high-rise condos
Number of Accesses and Locations	Two access onto Terry Fox Drive
Development Phasing	Single phase
Buildout Year	2022
Sketch Plan / Site Plan	See attached

Module 1.2 - Trip Generation Trigger		
Land Use Type	Townhomes or Apartments	
Development Size	680	Units
Trip Generation Trigger Met?	Yes	

Module 1.3 - Location Triggers	
Development Proposes a new driveway to a boundary street that is designated as part of the City's Transit Priority, Rapid Transit, or Spine Bicycle Networks (See Sheet 3)	Yes
Development is in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone. (See Sheet 3)	No
Location Trigger Met?	Yes

Module 1.4 - Safety Triggers		
Posted Speed Limit on any boundary road	>80	km/h
Horizontal / Vertical Curvature on a boundary street limits sight lines at a proposed driveway	Yes	
A proposed driveway is within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 m of intersection in rural conditions, or within 150 m of intersection in urban/ suburban conditions) or within auxiliary lanes of an intersection;	No	
A proposed driveway makes use of an existing median break that serves an existing site	No	
There is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development	No	
The development includes a drive-thru facility	No	
Safety Trigger Met?	Yes	

Appendix B

Traffic Count Data

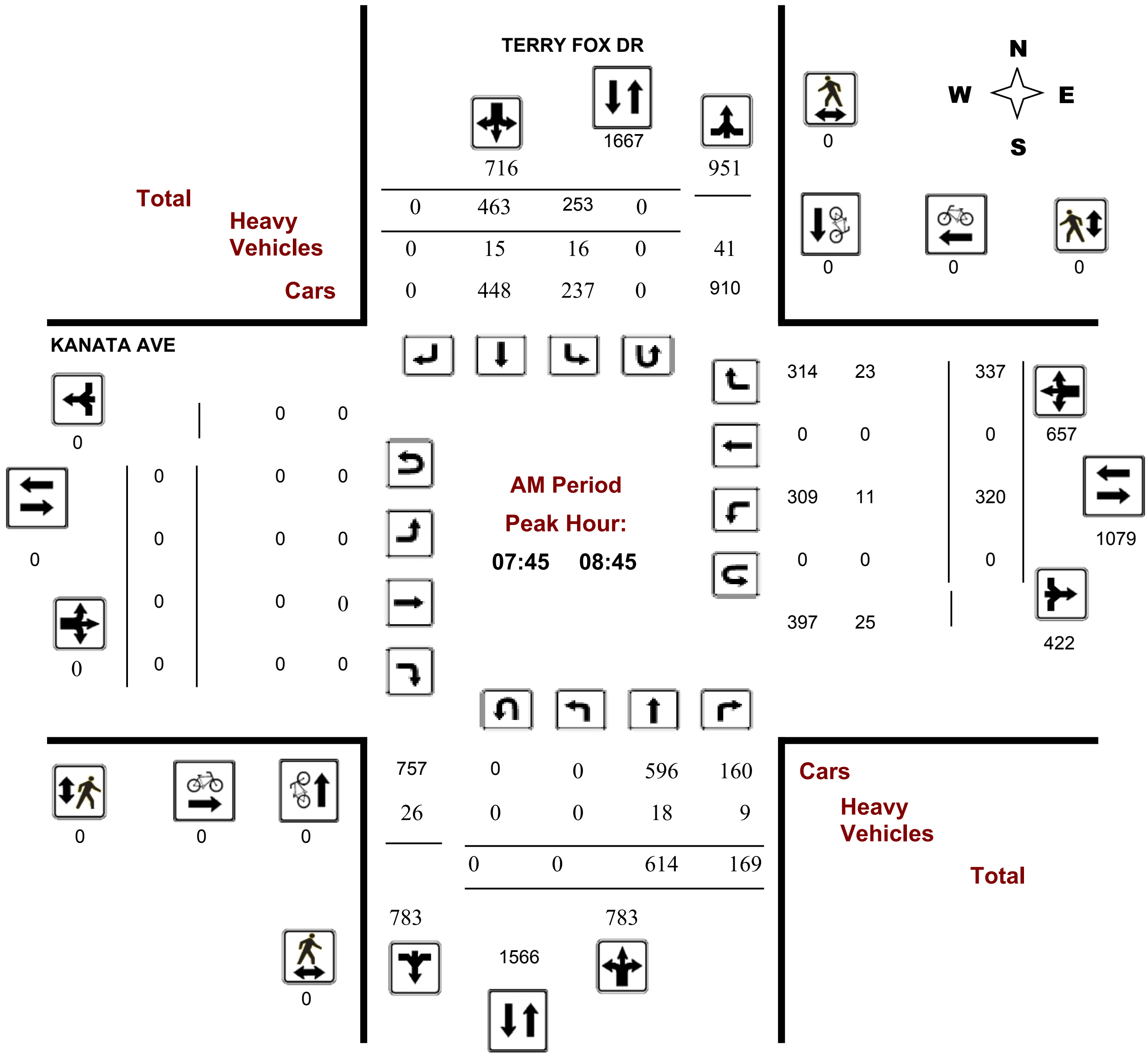
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

KANATA AVE @ TERRY FOX DR

Survey Date: Wednesday, April 11, 2018 **WO No:** 37662

Start Time: 07:00 **Device:** Miovision



Comments

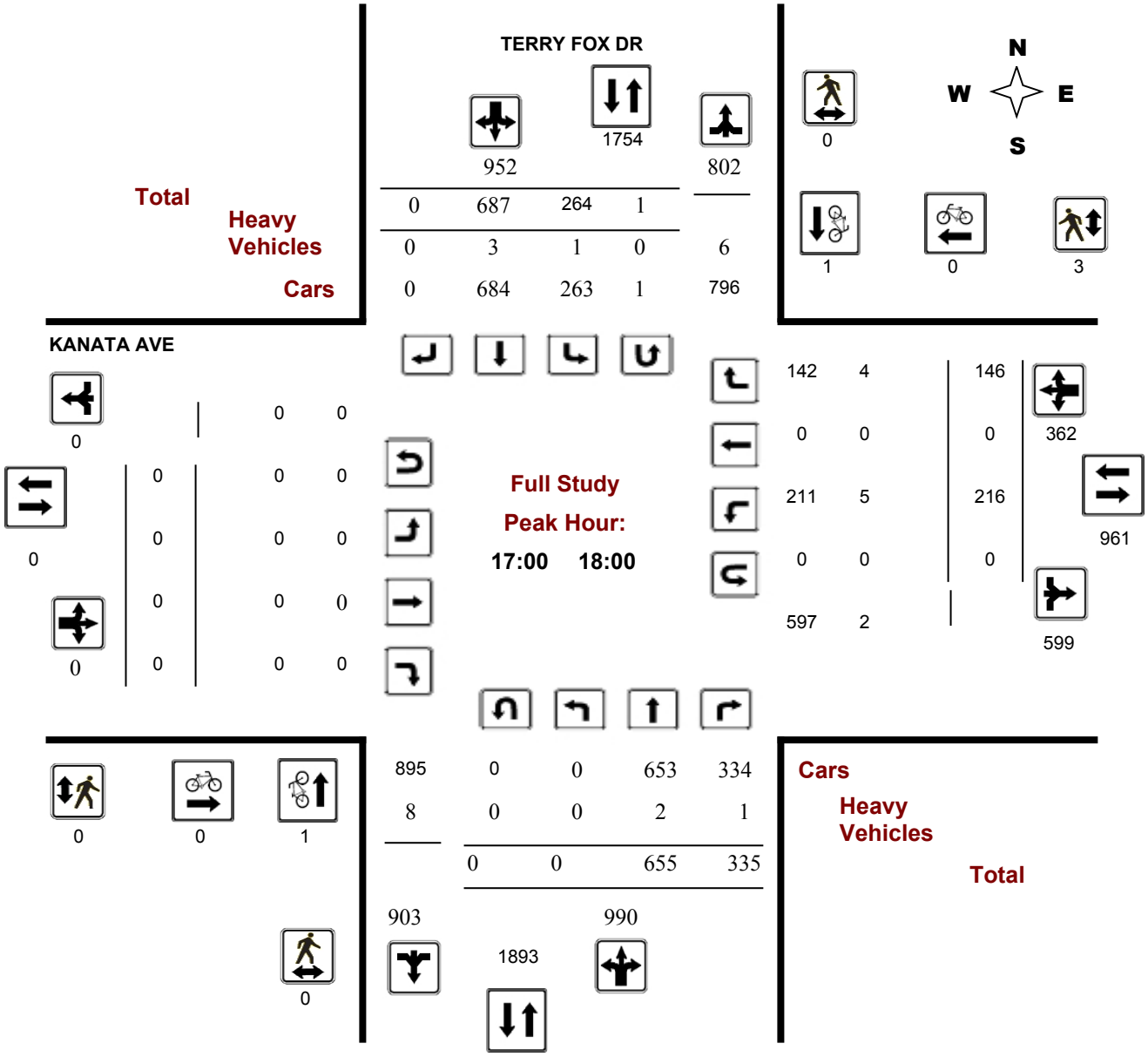
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

KANATA AVE @ TERRY FOX DR

Survey Date: Wednesday, April 11, 2018 **WO No:** 37662

Start Time: 07:00 **Device:** Miovision



Comments

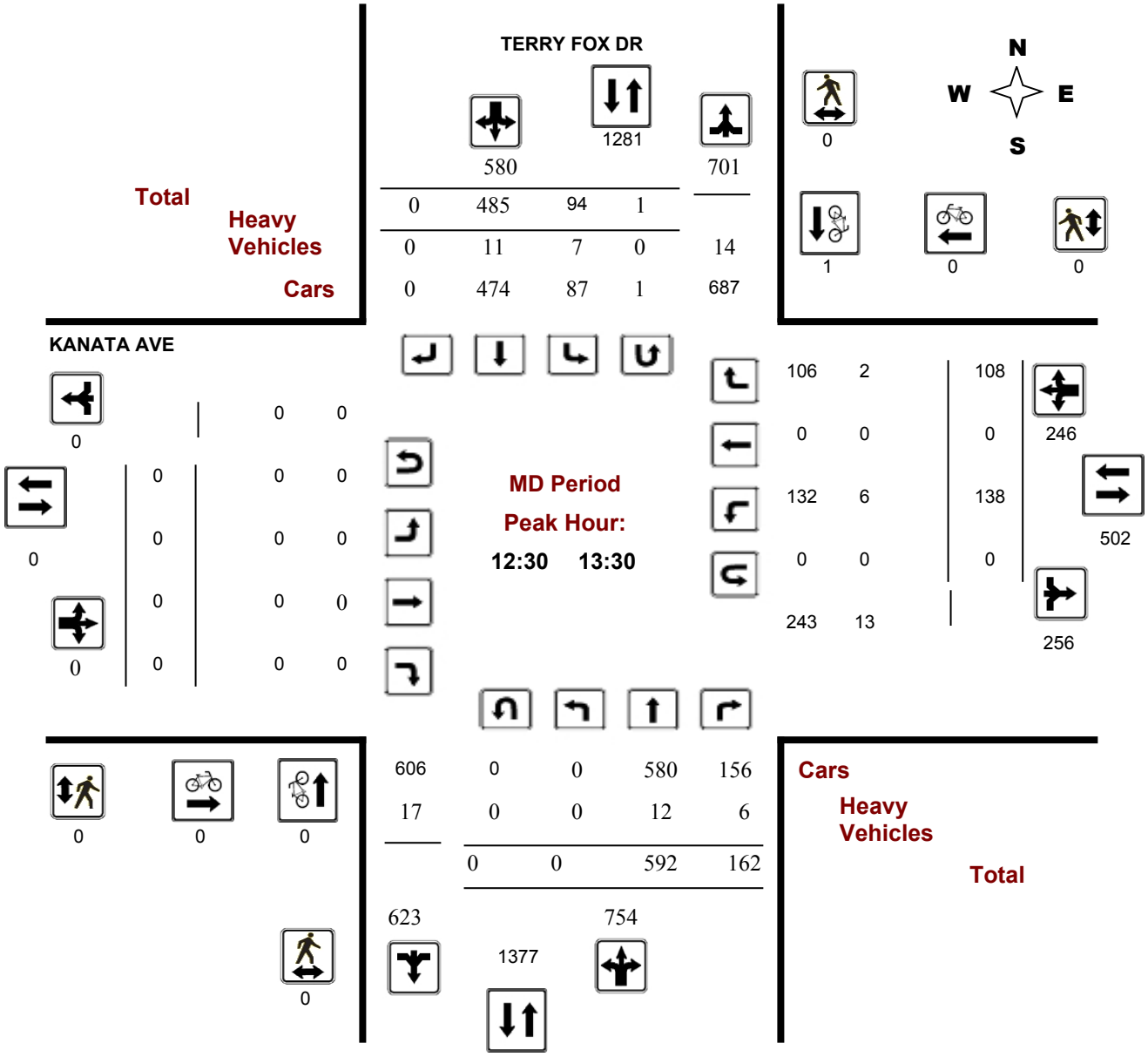
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

KANATA AVE @ TERRY FOX DR

Survey Date: Wednesday, April 11, 2018 **WO No:** 37662

Start Time: 07:00 **Device:** Miovision



Comments

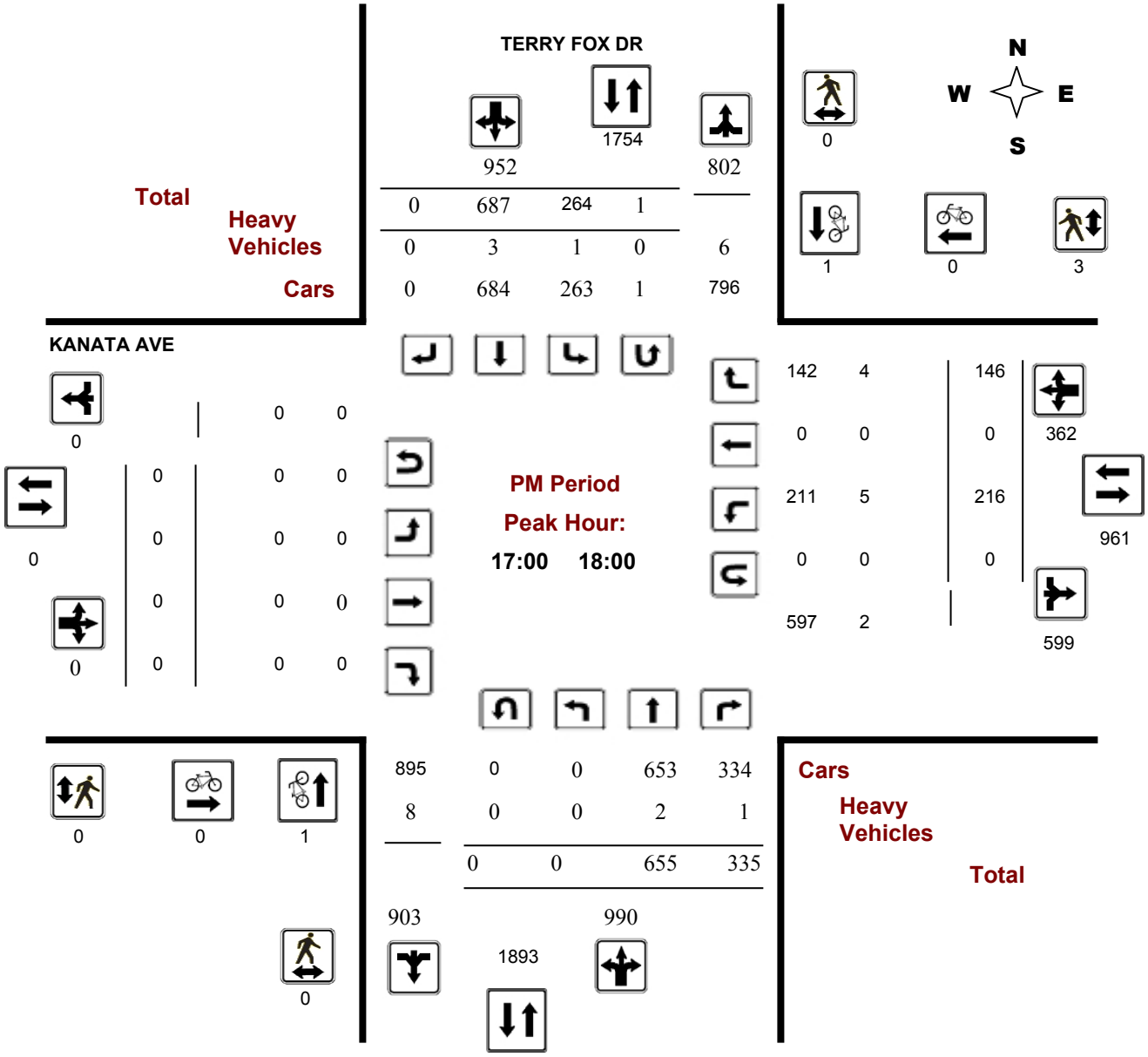
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

KANATA AVE @ TERRY FOX DR

Survey Date: Wednesday, April 11, 2018 **WO No:** 37662

Start Time: 07:00 **Device:** Miovision



Comments

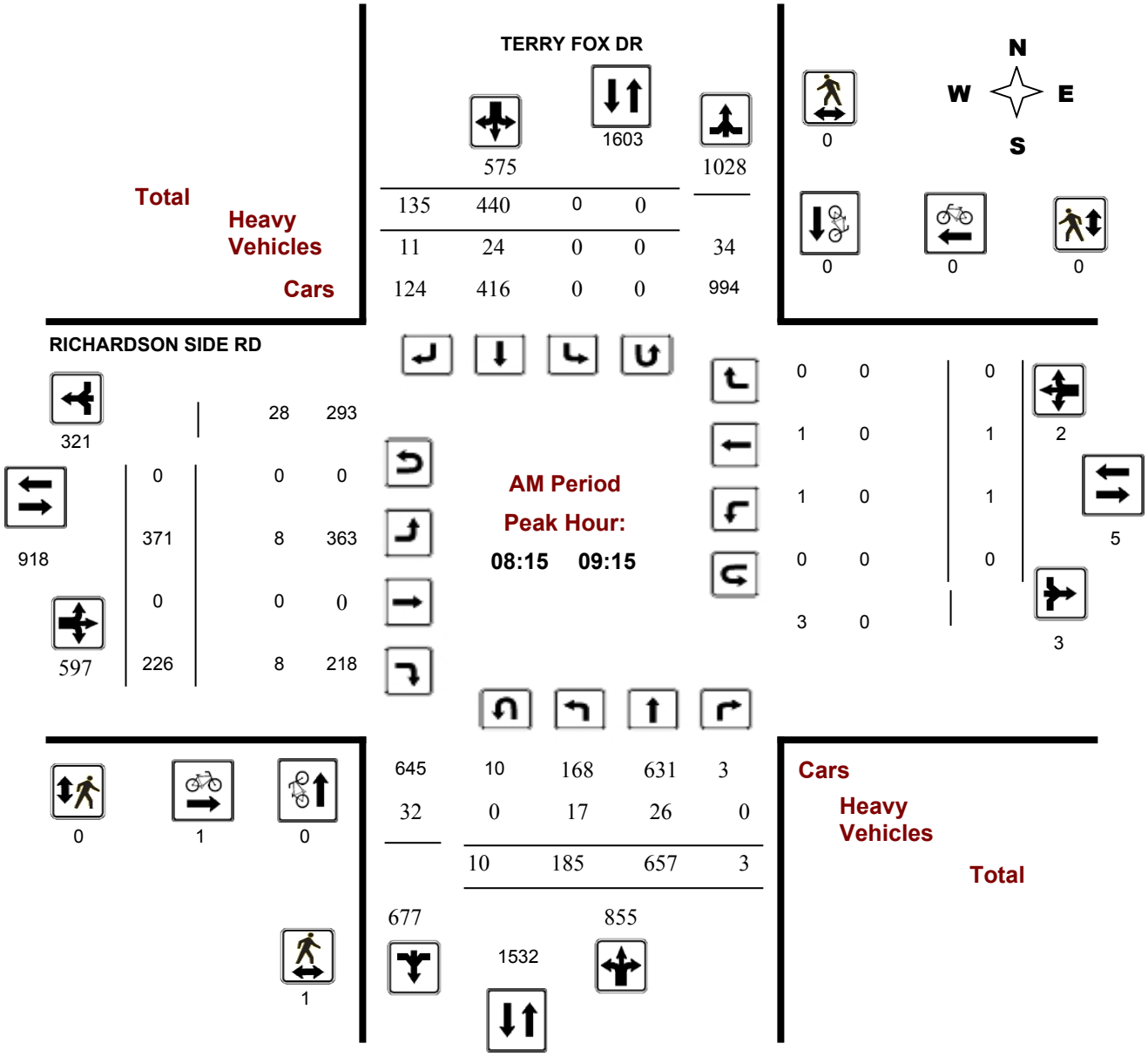
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

RICHARDSON SIDE RD @ TERRY FOX DR

Survey Date: Thursday, November 23, 2017 **WO No:** 37337

Start Time: 07:00 **Device:** Miovision



Comments

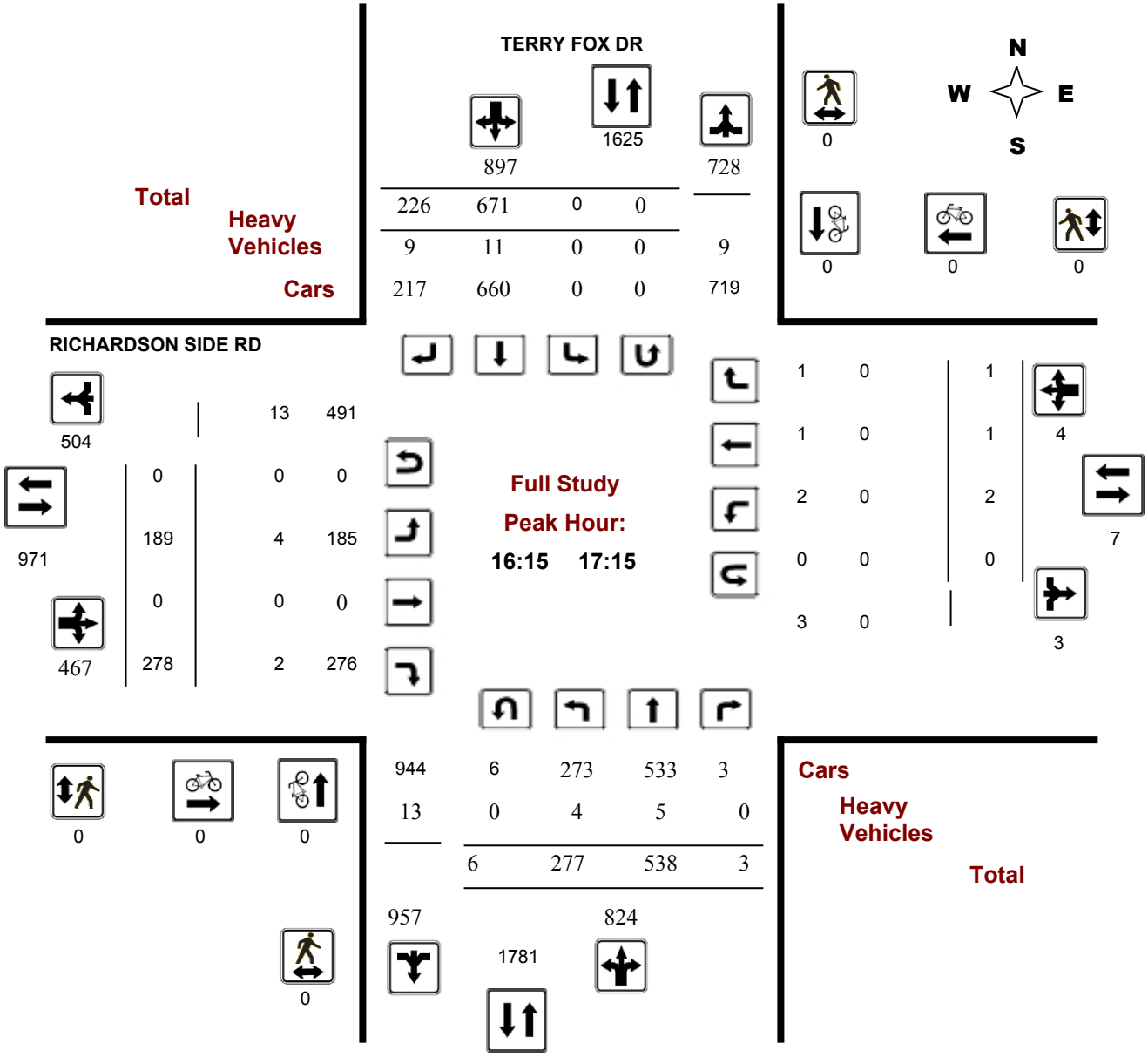
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

RICHARDSON SIDE RD @ TERRY FOX DR

Survey Date: Thursday, November 23, 2017 **WO No:** 37337

Start Time: 07:00 **Device:** Miovision



Comments

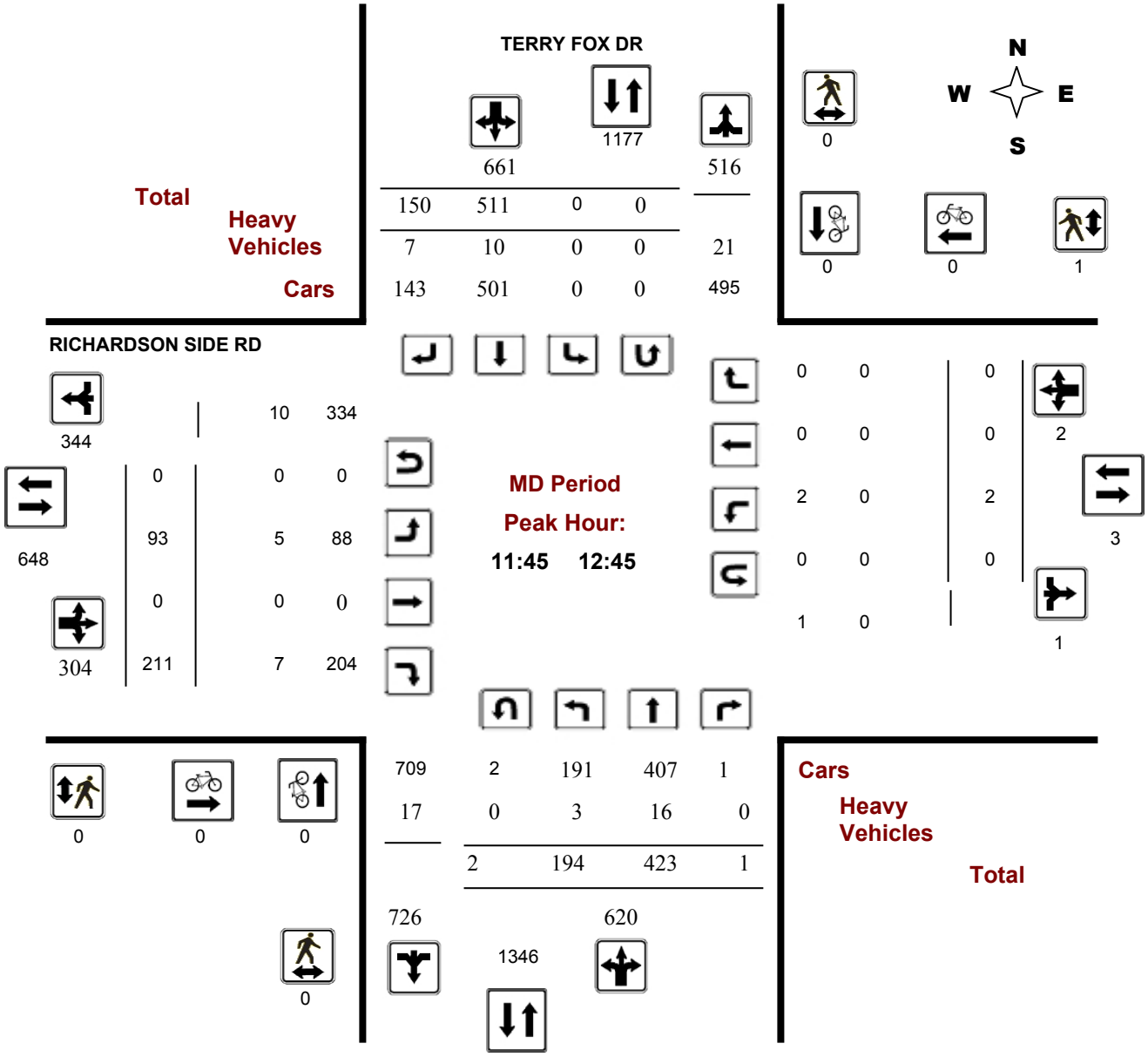
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

RICHARDSON SIDE RD @ TERRY FOX DR

Survey Date: Thursday, November 23, 2017 **WO No:** 37337

Start Time: 07:00 **Device:** Miovision



Comments

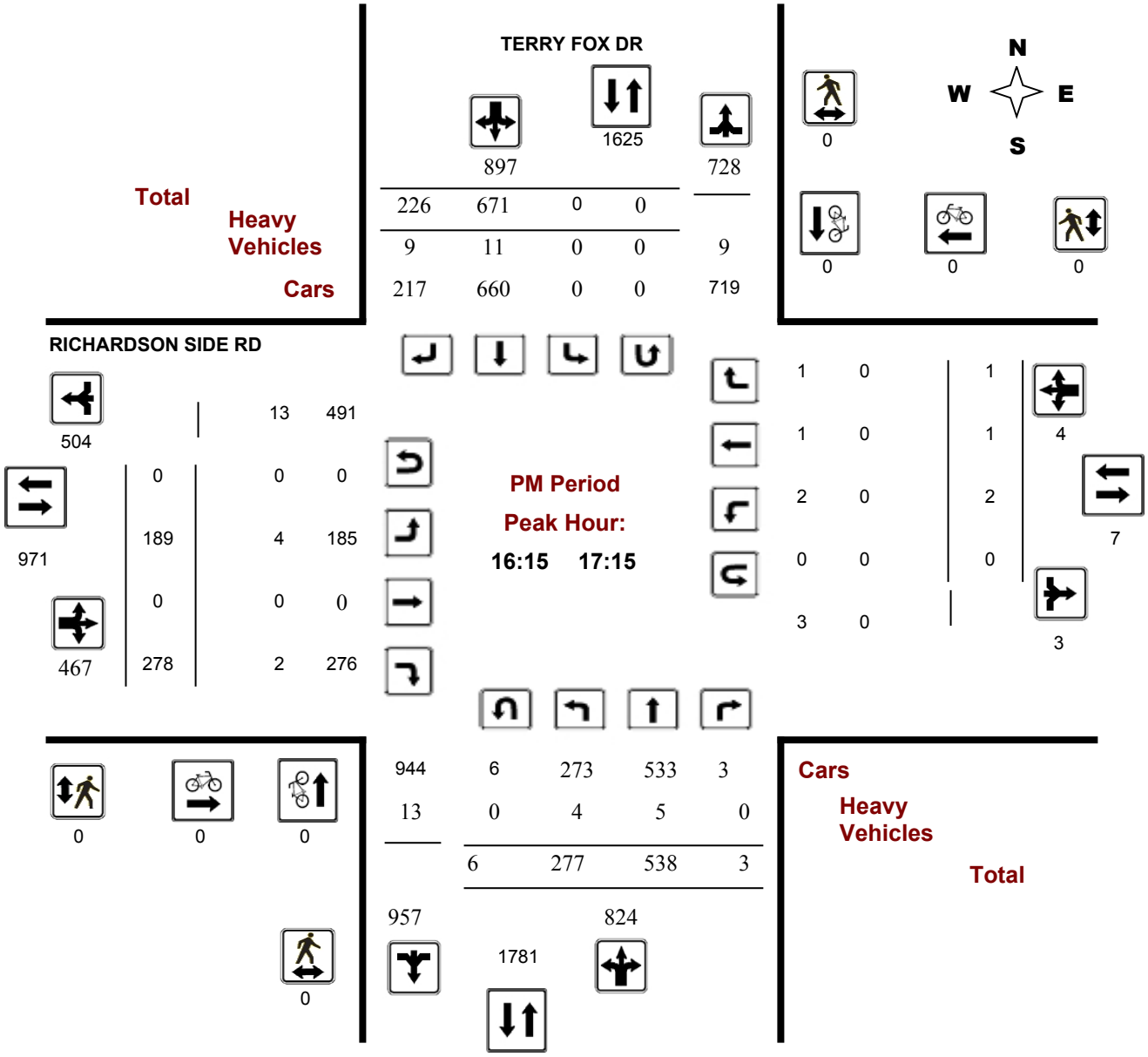
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

RICHARDSON SIDE RD @ TERRY FOX DR

Survey Date: Thursday, November 23, 2017 **WO No:** 37337

Start Time: 07:00 **Device:** Miovision



Comments

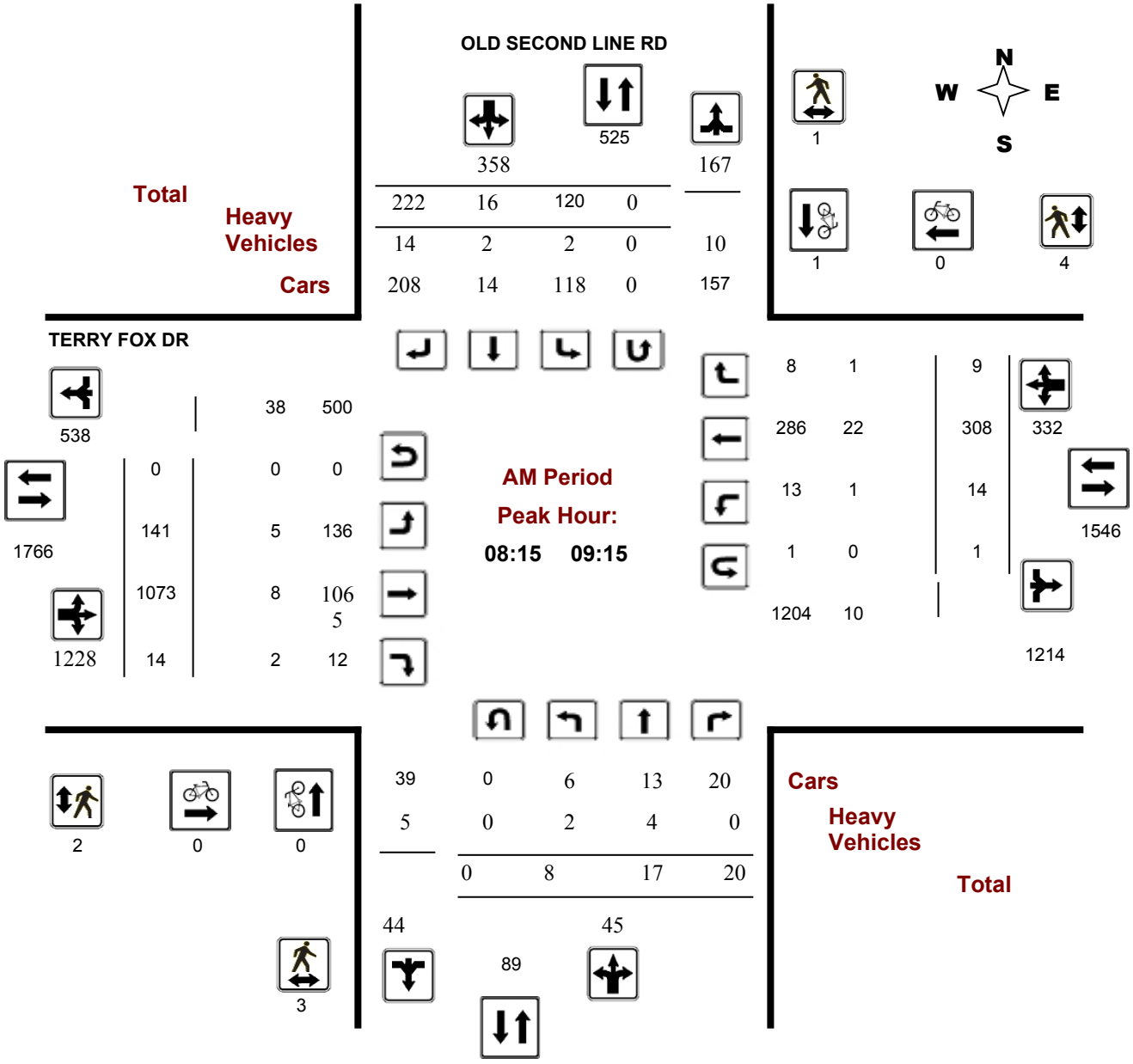
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

OLD SECOND LINE RD @ TERRY FOX DR

Survey Date: Wednesday, April 11, 2018
Start Time: 07:00

WO No: 37664
Device: Miovision



Comments

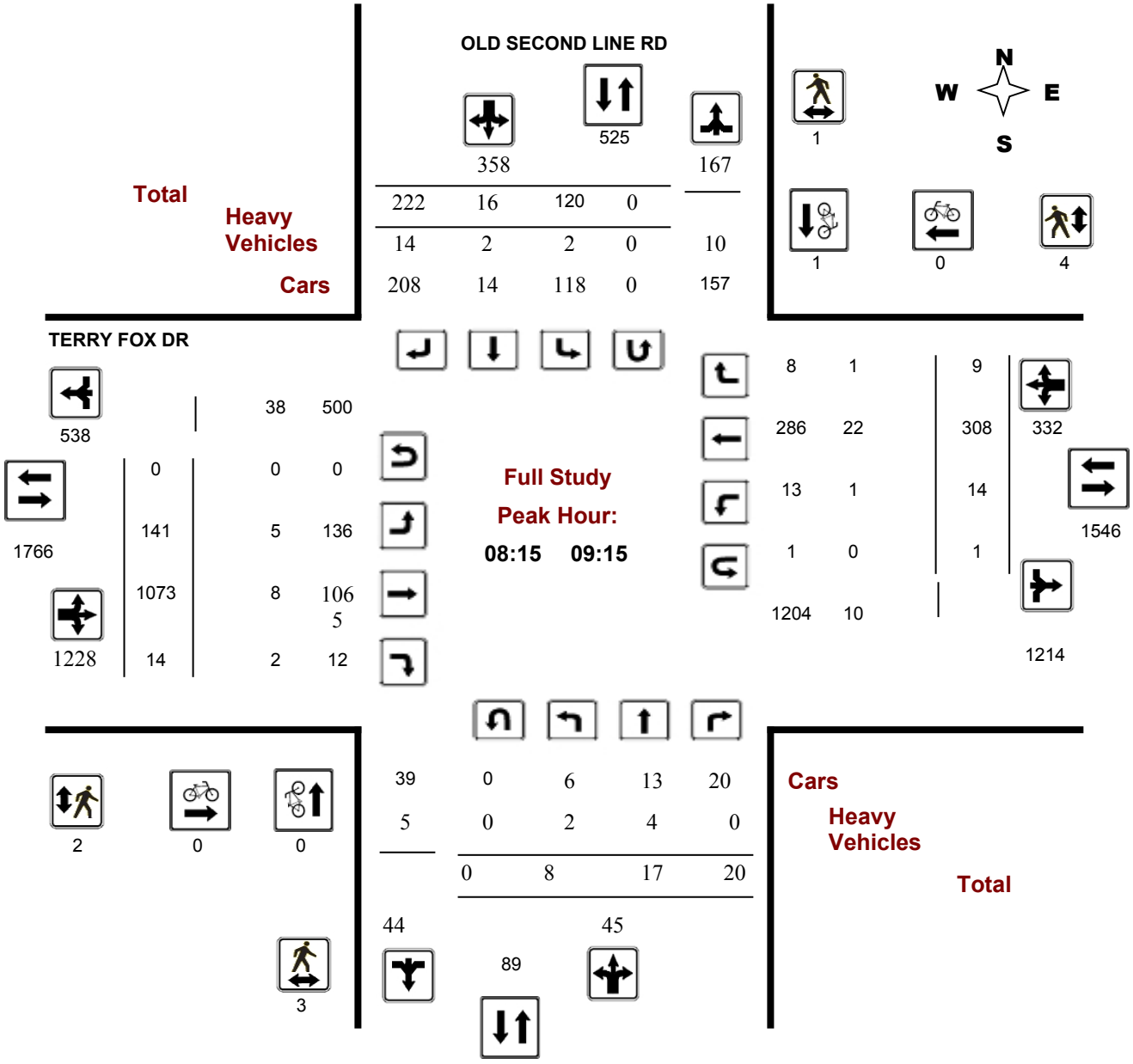
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

OLD SECOND LINE RD @ TERRY FOX DR

Survey Date: Wednesday, April 11, 2018 **WO No:** 37664

Start Time: 07:00 **Device:** Miovision



Comments

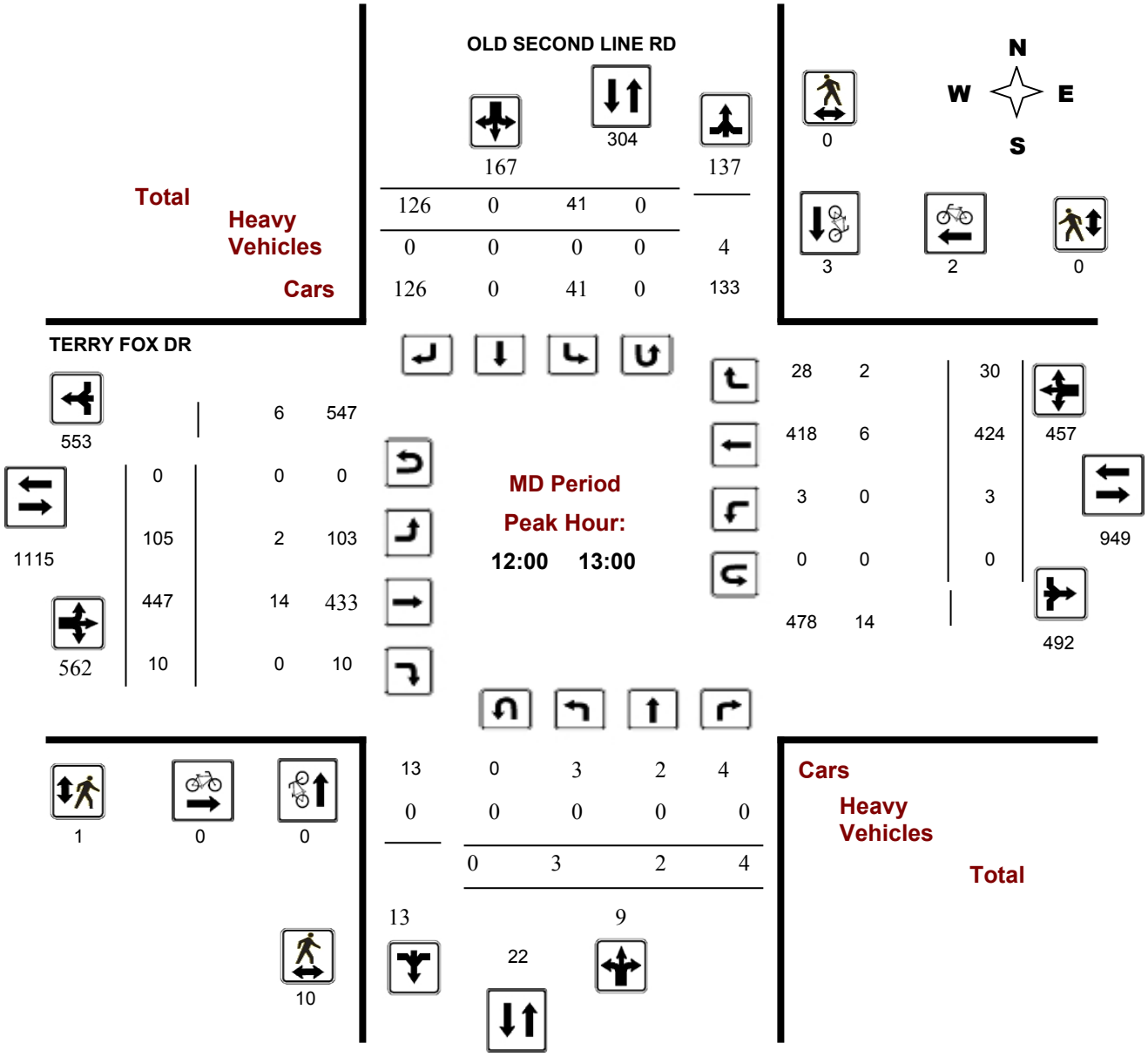
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

OLD SECOND LINE RD @ TERRY FOX DR

Survey Date: Wednesday, April 11, 2018
Start Time: 07:00

WO No: 37664
Device: Miovision



Comments

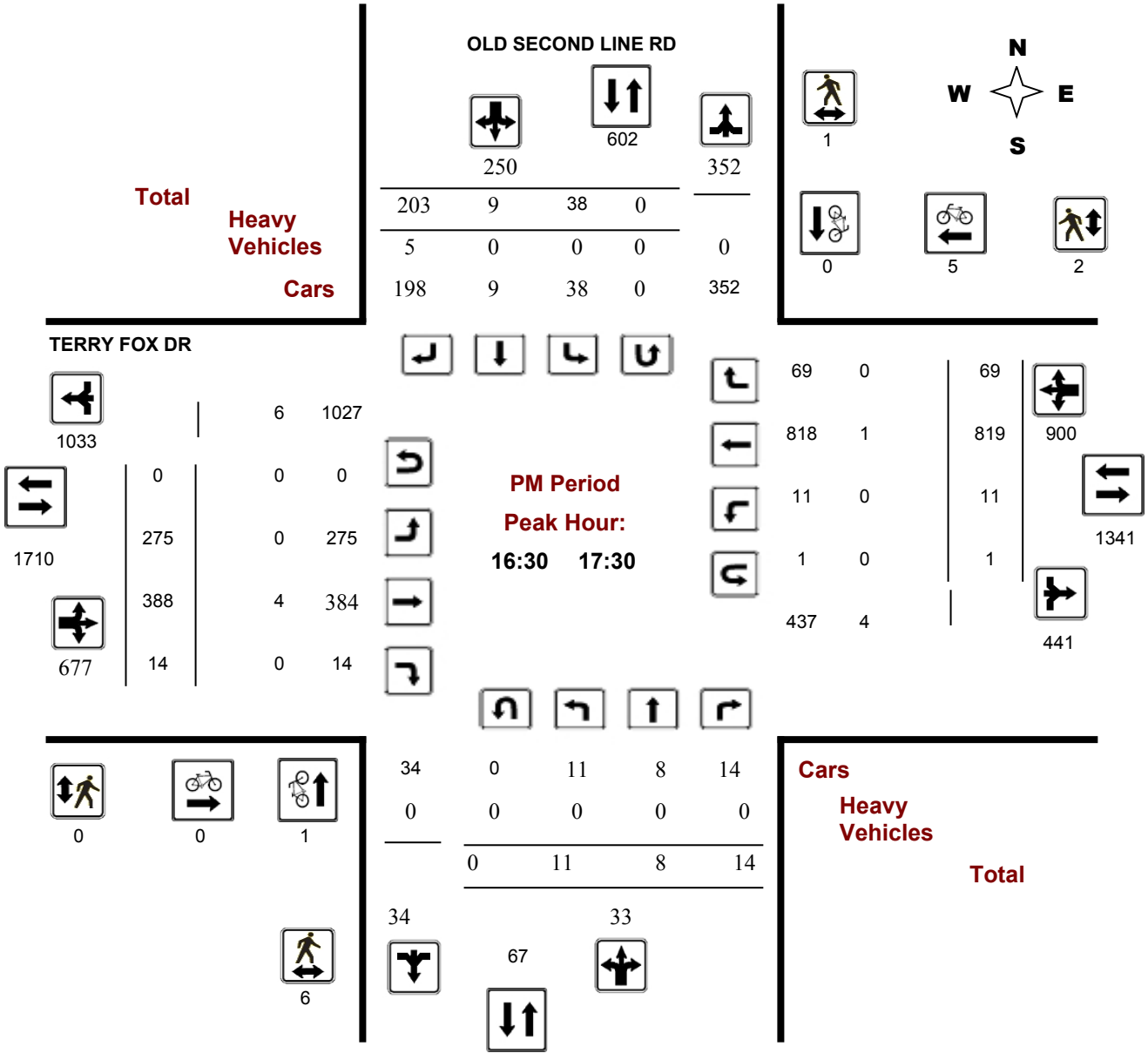
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

OLD SECOND LINE RD @ TERRY FOX DR

Survey Date: Wednesday, April 11, 2018
Start Time: 07:00

WO No: 37664
Device: Miovision



Comments

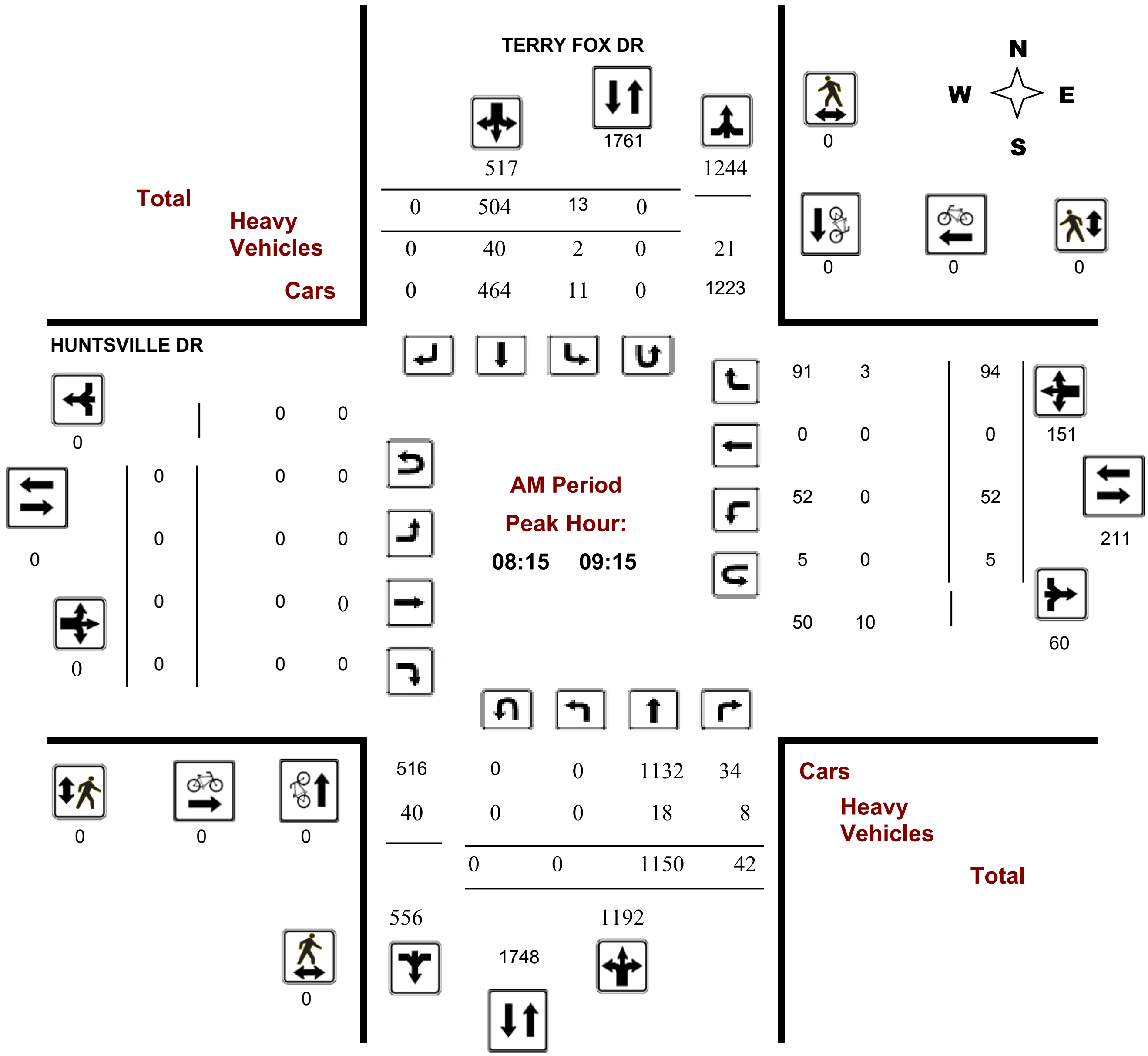
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

HUNTSVILLE DR @ TERRY FOX DR

Survey Date: Tuesday, March 20, 2018 **WO No:** 37604

Start Time: 07:00 **Device:** Miovision



Comments

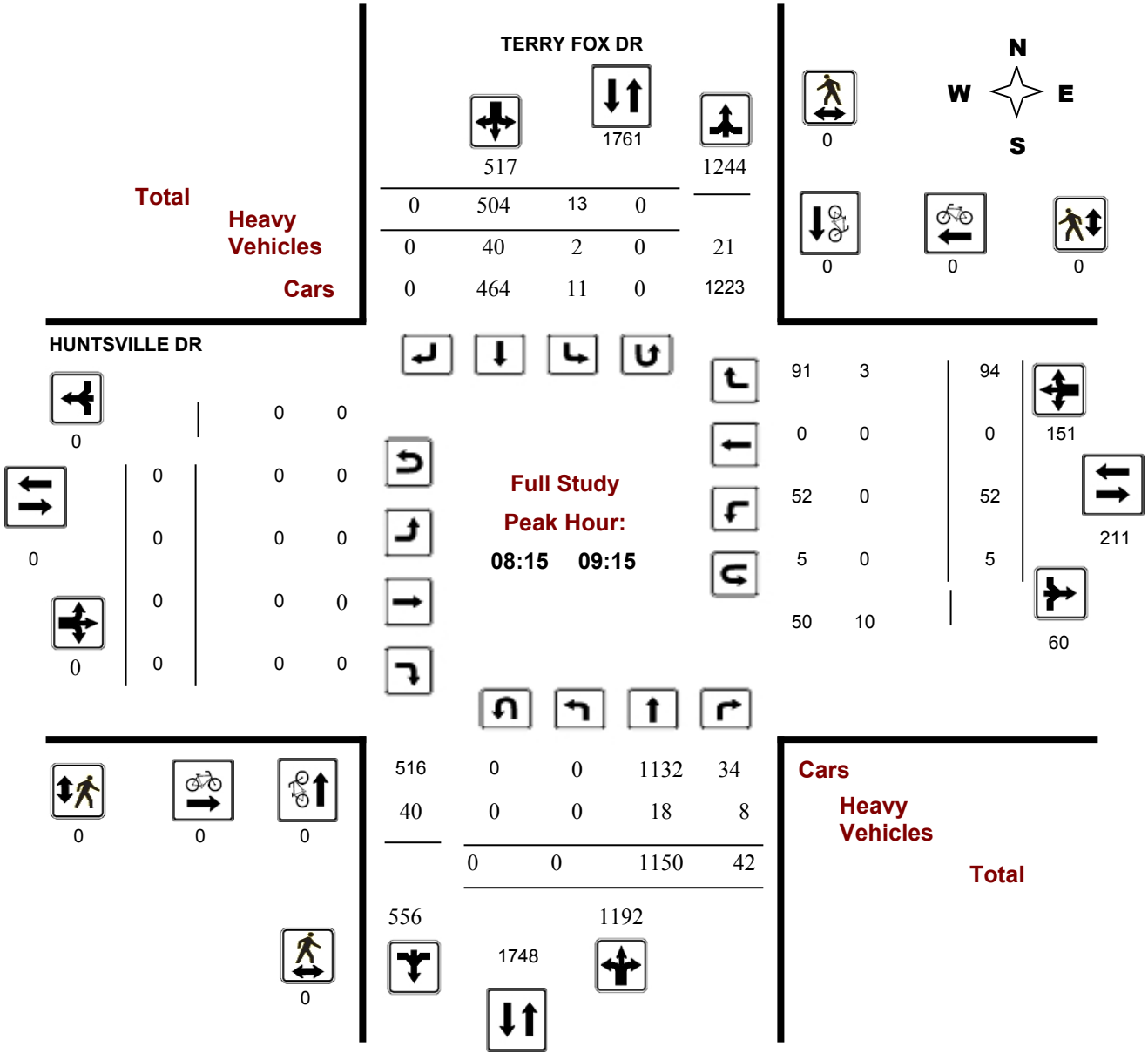
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

HUNTSVILLE DR @ TERRY FOX DR

Survey Date: Tuesday, March 20, 2018
Start Time: 07:00

WO No: 37604
Device: Miovision



Comments

Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

HUNTSVILLE DR @ TERRY FOX DR

Survey Date: Tuesday, March 20, 2018 **WO No:** 37604

Start Time: 07:00 **Device:** Miovision

MD Period Peak Hour: 12:00 13:00

TERRY FOX DR (North approach)

Southbound approach total: 537 | Two-way total: 1018 | Northbound departure: 481

	U-turn	Right	Through	Left	Departure
Total	0	513	24	0	481
Heavy Vehicles	0	10	1	0	14
Cars	0	503	23	0	467

Pedestrians crossing: 0; Bicycles: 0, 0; Pedestrians: 1

HUNTSVILLE DR (West approach)

Approach: 0 | Two-way: 0 | Departure: 0

		0	0
U-turn	0	0	0
Left	0	0	0
Through	0	0	0
Right	0	0	0

Pedestrians: 0; Bicycles: 0, 0; Pedestrians crossing: 0

East approach

	Cars	Heavy	Total
Right	19	2	21
Through	0	0	0
Left	32	3	35
U-turn	0	0	0
Departure	77	7	84

Approach: 56 | Two-way: 140 | Departure: 84

South approach

	Departure	U-turn	Left	Through	Right
Cars	535	0	0	448	54
Heavy Vehicles	13	0	0	12	6
Total	548	0	0	460	60

Departure: 548 | Two-way total: 1068 | Approach: 520

Comments

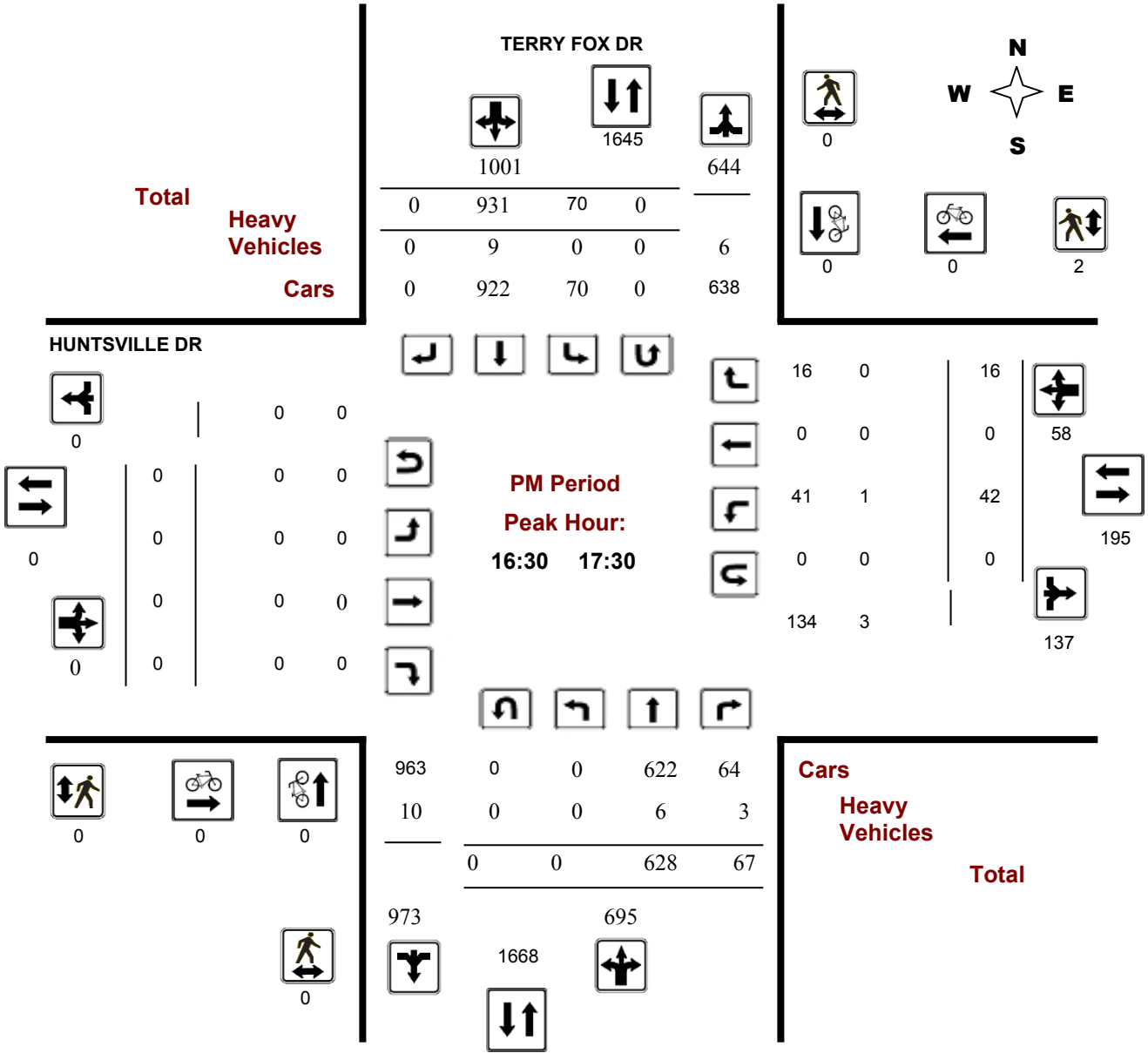
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

HUNTSVILLE DR @ TERRY FOX DR

Survey Date: Tuesday, March 20, 2018
Start Time: 07:00

WO No: 37604
Device: Miovision



Comments

Appendix C

Collision Data

Total Area

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	20	12	4	5	0	13	0	1	55	77%
Non-fatal injury	0	10	0	4	2	0	0	0	16	23%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	**20**	**22**	**4**	**9**	**2**	**13**	**0**	**1**	**71**	100%
	#2 or 28%	#1 or 31%	#5 or 6%	#4 or 13%	#6 or 3%	#3 or 18%	#8 or 0%	#7 or 1%		

KANATA AVE / TERRY FOX DR

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2014-2016	25	23,030	1095	**0.99**

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	10	4	2	1	0	2	0	0	19	76%
Non-fatal injury	0	2	0	4	0	0	0	0	6	24%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	**10**	**6**	**2**	**5**	**0**	**2**	**0**	**0**	**25**	100%
	40%	24%	8%	20%	0%	8%	0%	0%		

OLD SECOND LINE RD / TERRY FOX DR

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2014-2016	12	18,490	1095	**0.59**

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	2	2	1	1	0	3	0	0	9	75%
Non-fatal injury	0	3	0	0	0	0	0	0	3	25%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	**2**	**5**	**1**	**1**	**0**	**3**	**0**	**0**	**12**	100%
	17%	42%	8%	8%	0%	25%	0%	0%		

RICHARDSON SIDE RD / TERRY FOX DR

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2014-2016	20	21,790	1095	**0.84**

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	6	6	0	3	0	0	0	0	15	75%
Non-fatal injury	0	5	0	0	0	0	0	0	5	25%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	**6**	**11**	**0**	**3**	**0**	**0**	**0**	**0**	**20**	100%
	30%	55%	0%	15%	0%	0%	0%	0%		

TERRY FOX DR, HUNTSVILLE DR to OLD SECOND LINE RD

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2014-2016	10	18,450	1095	**0.49**

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	1	0	0	0	0	7	0	1	9	90%
Non-fatal injury	0	0	0	0	1	0	0	0	1	10%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	**1**	**0**	**0**	**0**	**1**	**7**	**0**	**1**	**10**	100%
	10%	0%	0%	0%	10%	70%	0%	10%		

TERRY FOX DR, HUNTSVILLE DR to RICHARDSON SIDE RD

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2014-2016	3	18,920	1095	**0.14**

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	1	0	0	0	0	1	0	0	2	67%
Non-fatal injury	0	0	0	0	1	0	0	0	1	33%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	**1**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**3**	100%
	33%	0%	0%	0%	33%	33%	0%	0%		

TERRY FOX DR, RICHARDSON SIDE RD to TILLSONBURG ST

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2014-2016	1	17,640	1095	**0.05**

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	0	0	1	0	0	0	0	0	1	100%
Non-fatal injury	0	0	0	0	0	0	0	0	0	0%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	100%
	0%	0%	100%	0%	0%	0%	0%	0%		

Appendix D

OC Transpo Data

Harte, Andrew

From: Stefanoff, Genya <genya.stefanoff@ottawa.ca>
Sent: Tuesday, June 12, 2018 12:05 PM
To: Harte, Andrew
Subject: RE: Terry Fox Drive - Transit Ridership Routes 165 and 264

Hi Andrew,

Please find below ridership information for Route 264 at the requested bus stops and during the AM (6-9am) and PM (3-6pm) peak periods. The data is from the September 2017 booking. Ridership data has not been provided for Route 165 as it does not operate during peak periods.

Time Period	Stop	Route	Total Boardings	Total Alightings	Average Load at Departure
AM Peak	**7573**	264	5	0	1
	1547	264	14	0	4
	7574	264	1	0	1
PM Peak	**7573**	264	0	3	6
	1547	264	0	13	1
	7574	264	0	0	6

In terms of planned bus type, Route 264 is planned to operate with mostly articulated buses.

Please let me know if your require any additional information or have any questions.

Best regards,
Genya

Genya Stefanoff, MCIP, RPP
Senior Transit Planner, Service Strategy

City of Ottawa | OC Transpo | Transportation Services Department
1500 St. Laurent Blvd., Ottawa, ON K1G 0Z8

tel: 613-580-2424 ext. 52294
genya.stefanoff@ottawa.ca

From: Stefanoff, Genya
Sent: Thursday, May 24, 2018 7:40 AM
To: 'Harte, Andrew' <Andrew.Harte@parsons.com>
Subject: RE: Terry Fox Drive - Transit Ridership Routes 165 and 264