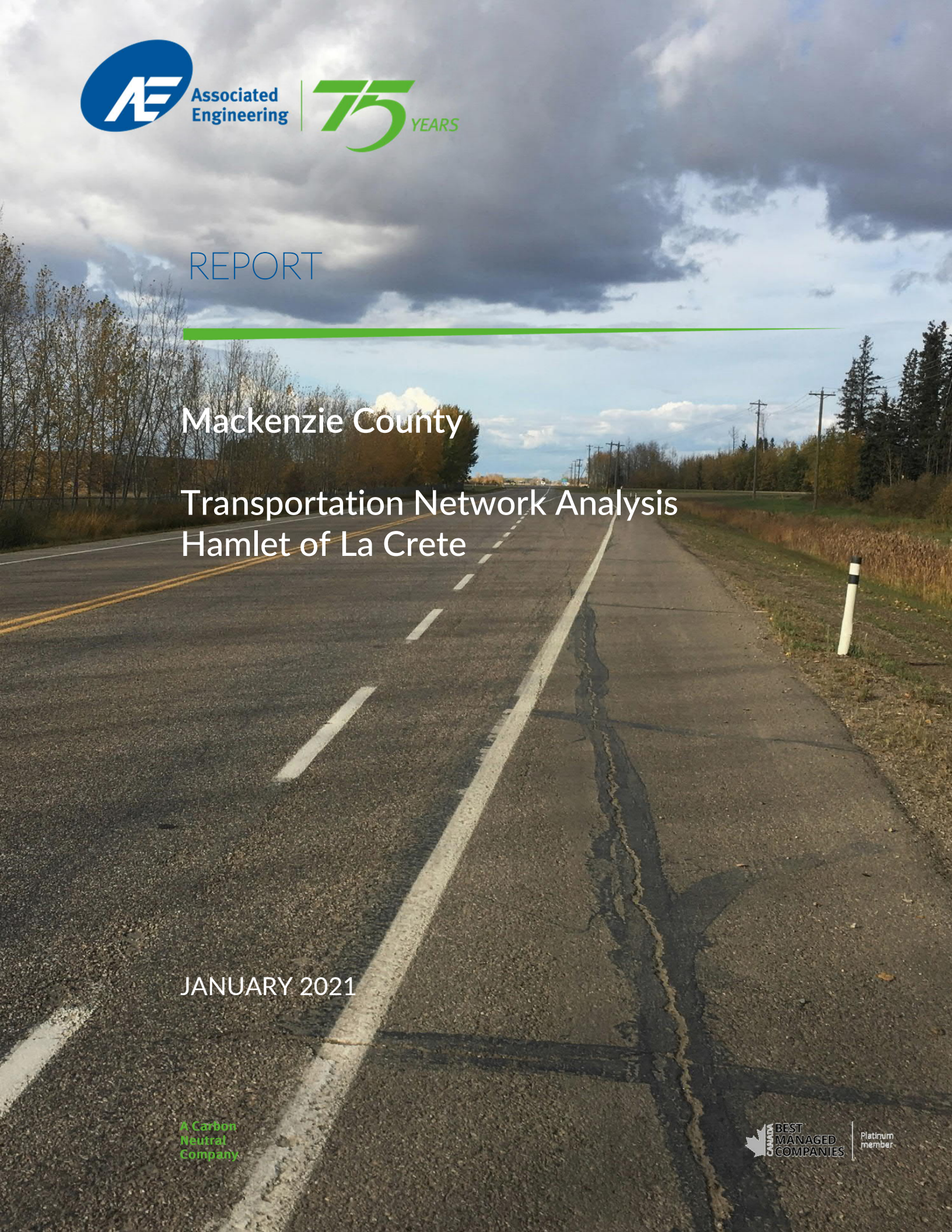

Associated Engineering

75 YEARS

REPORT

Mackenzie County

Transportation Network Analysis
Hamlet of La Crete

JANUARY 2021

A Carbon Neutral Company

CANADA BEST MANAGED COMPANIES Platinum member


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1 INTRODUCTION

The hamlet of La Crête is located in northwest Alberta and is the largest of the three hamlets within Mackenzie County, accounting for about 22% of the County's total population (2006 data). In 2011, La Crête had a total population of 2400 residents. Its main economy is agriculture and forestry with industrial growth on the rise. A significant amount of planning work, including transportation planning, has already been completed to chart the hamlet's forward progress. The County retained Associated Engineering (AE) to review the policies and plans completed to date to recommend a long-term transportation network for La Crête that leverages existing infrastructure and supports anticipated future growth. Included in this transportation study is an analysis of the four highway intersections accessing the hamlet, which considers the impact of upcoming future development identified by the County.

2 BACKGROUND INFORMATION REVIEW

2.1 County Policy Documents

The County provided various background documents that were reviewed in the preparation of this study. The documents included:

- Municipal Development Plan
- Area Structure Plan Bylaw No. 895-13 (2013)
- Urban Development Standards
- Sustainability Plan
- Industrial Growth Strategy
- Transportation Master Plan (Draft)

Relevant findings are summarized in the sections below and have been incorporated into aspects of this study wherever possible. When developing a recommendation for the long-term transportation network, the goals and mandates described below were taken into consideration.

2.1.1 Municipal Development Plan (MDP)

The MDP, prepared in 2009 and most recently amended in 2013, guides growth and development of the County until 2031. A major theme identified in the MDP is to ensure that the County is a desirable place to live and raise a family. Various goals from the MDP which are relevant to this theme, including development, the transportation system, and the environment are summarized in Table 2-1 below.

Table 2-1
MDP Goals for Development and Transportation

Goal / Vision	Topic	Relevant Action in Study
Development and growth shall be directed to specific locations	Development	Information noted
Development in hamlets shall be orderly, efficient and contiguous	Development	Road network to follow same characteristics
Transportation system shall be safe and convenient	Transportation	Road network should also be safe and convenient
Integrity of natural areas shall be protected	Environment	Avoid proposing road networks through natural areas
Future subdivisions next to a highway shall protect the integrity of the highway and may require a service road, subject to Alberta Transportation (AT) requirements	Development, Transportation	Consult AT on development adjacent to highway
Each hamlet will grow within or contiguous to their boundaries to accommodate long-term growth	Development	Plan network for long-term growth
Optimize the use of existing services and infrastructure and strengthen the long-term viability of all hamlets	Development, Transportation	Leverage existing road infrastructure during network development
Plan for a positive growth rate in all hamlets	Development	Plan network with positive growth

Goal / Vision	Topic	Relevant Action in Study
Plan for future subdivision and development of residential areas	Development	Plan network for future subdivision and residential development
Develop the hamlet in accordance with the Hamlet of La Crête Area Structure Plan (ASP) Bylaw 895-13	Development	Plan network to accommodate the La Crête ASP
Commercial uses shall be limited to existing commercial areas, the locations shown in the area structure plans for La Crête or, in the commercial policy areas shown	Development	Identifies planned commercial nodes within/near the hamlet
Mackenzie County shall promote the development of one compact, viable central business district	Development	Information noted
Industrial parks or industrial uses shall have simple and direct access to truck routes, highways or rail networks	Transportation	Ensure access to industrial uses is as direct and simple as possible
Provide an efficient and effective transportation network for the movement of people and goods	Transportation	Recommend a network that is efficient and effective
Guarantee sufficient right-of-way provision for roads in order to allow their expansion in the future, if necessary	Transportation	Recommend a network with sufficient road right of ways for the long-term
Mackenzie County shall protect transportation corridors required to implement the Transportation Master Plan (TMP)	Transportation	Align network to TMP where possible, keeping in mind that it is not yet approved by Council
All roads shall be developed in accordance with the specifications of Mackenzie County's Minimum Design Standards for Local Improvements	Transportation	Plan network in accordance with County design standards
Mackenzie County shall encourage the incorporation of pedestrian and bicycle paths designed as integral parts of municipal parks and neighbourhoods	Development Transportation	Plan network to incorporate pedestrian and cyclist accommodation

According to the MDP, La Crête has a residential land supply consisting of approximately 683 ha for residential development and approximately 150 ha for future country residential development within its current boundaries. Based on typical hamlet and country residential densities, La Crête could accommodate a population of around 19,300 people. This is about eight times the current population. It is evident that there is enough land within the hamlet to accommodate a sizeable increase in population growth for decades to come and that La Crête can continue development as population and demands grow without worrying about expanding hamlet boundaries. However, when planning for future development, it is important to also simultaneously plan for an appropriate road network that is logical and safe and allows for adequate protection of future road right of ways.

2.1.2 Area Structure Plan Bylaw No. 895-13 (2013)

La Crête's ASP was signed into a bylaw in 2013. Its policy for residential areas is to encourage connectivity between neighbourhoods through the provision of streets that are designed to support safe pedestrian, cycle and vehicle movements. This underscores the need to plan for a road cross-section that also incorporates cycling and pedestrian accommodation in addition to regular vehicle traffic. The bylaw includes two cross-sections, shown in Figure 2-1 and Figure 2-2 and described below:

- **Green Link** roads are intended to be developed with shared paths down one side of the street. These links are intended to provide connections for active modes to major parks, schools and the town centre.

- **Town Centre** roads are intended to improve the walking environment through the town centre to support a pedestrian friendly environment. This includes wider sidewalks, trees, and pedestrian scale street lights.

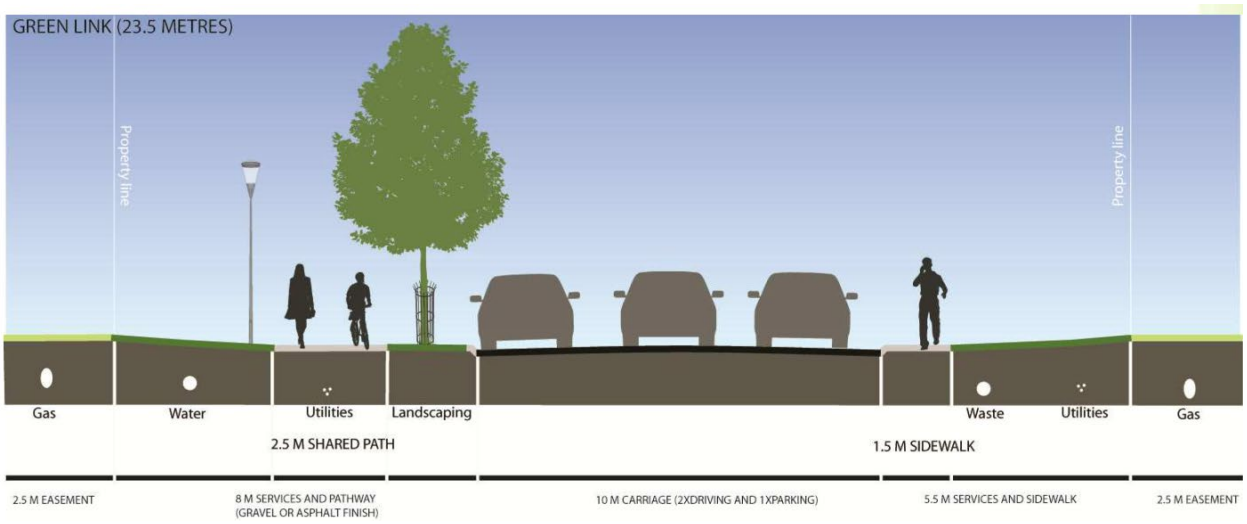

Figure 2-1
Green Link Cross-Section

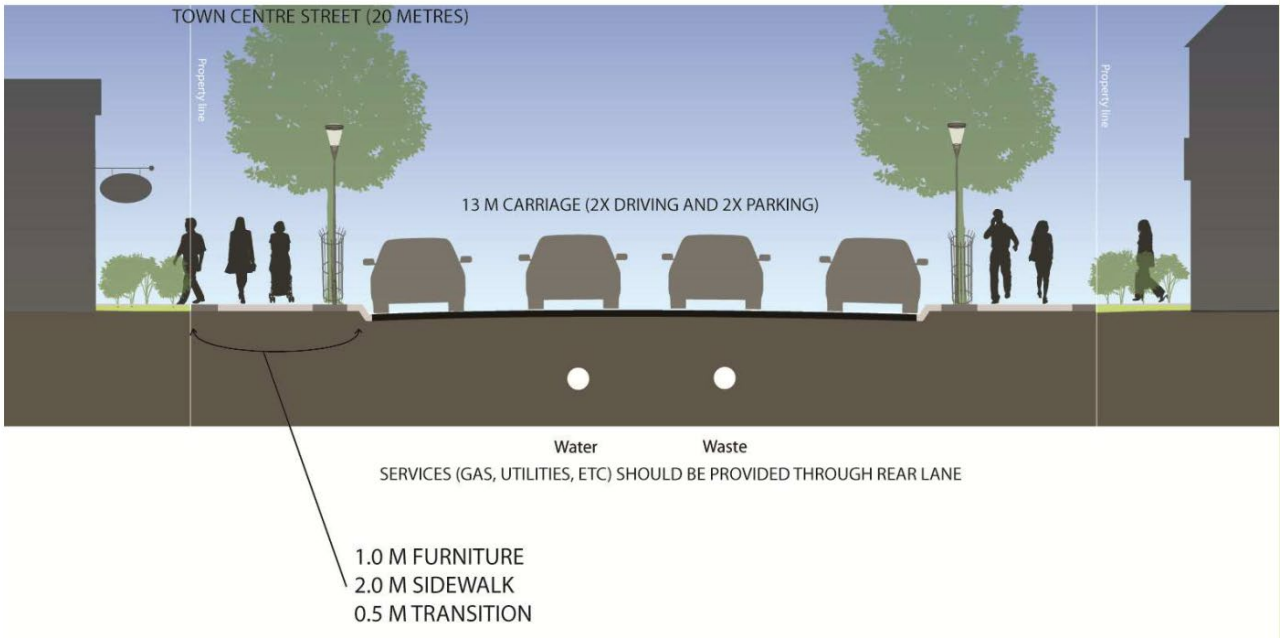

Figure 2-2
Town Centre Street Cross-Section

As per the ASP, these road profiles are identified as the road standards for the areas shown in the Roads and Access Map of the ASP. The Roads and Access Map identifies key trails to maintain and to be created during new development and redevelopment. The ASP mandates that trail rights of way within a Municipal Reserve should be a minimum of 4 m wide, with the trail surface a minimum of 2 m wide. The ASP notes that all roadways, intersections and accesses should be developed to Mackenzie County standards. Also, the local road system should allow for

several vehicular and pedestrian route alternatives linking community destinations. Along with these considerations, the ASP Roads and Access Map has been used as a starting point to develop the proposed long-term transportation network map.

2.1.3 Urban Development Standards

The Urban Development Standards (UDS), approved in June 2002 and last amended in February 2017, were developed to ensure consistent development is maintained within the hamlets of Mackenzie County. Items in the standards relevant to the transportation system include:

Roadway Spacing:

- Arterial roads to be placed a minimum of 800 m apart.
- Collector roads to be spaced 300 – 400 m apart.
- Arterials to be intersected every 300 – 400 m by collector roads.

Intersections:

- Anticipated that traffic signals will be required where arterial roads intersect, and potentially where collector roads intersect with arterials.
- Roundabouts are encouraged at intersections that are anticipated to see high volumes but where signalization is not warranted.

Pedestrian Accommodation:

- Sidewalks shall be located in all areas where even moderate levels of pedestrian traffic are anticipated.
- Sidewalks shall be located along both sides of arterial roads, both sides of collector roads where high traffic volumes are anticipated, and on one side along low volume collectors and local roads.
- Greenlink corridors shall have a sidewalk and an asphalt path, on opposite sides of the road. This same standard shall apply to arterial and high-volume collector roads.
- Where sidewalks are required along roads constructed to Rural Standard*, the sidewalk shall be either 1.5 m wide concrete or 2.4 m wide asphalt.

*The UDS defines Rural Standard as “built up asphalt surfaced roads with swales/ditches, power, and street lighting”. Urban Standard is defined as “curb and gutter, sidewalk, underground power, metal light standards with underground servicing, asphalt surfacing and storm sewer”.

The UDS contains the table shown in Figure 2-3 that identifies which standard applies depending on zoning and road classification.

Road Classification	Zoning					
	Residential		Commercial		Industrial	
	HR, MHC, MHS	HCR	HCC1, HC2, TC1	HC1, GC1	HI1, LG1	HI2
Arterial Hamlet 40 m min ROW width	urban or rural standard* sidewalk u/g power	urban or rural standard* sidewalk u/g power	urban or rural standard* sidewalk u/g power	urban or rural standard* sidewalk u/g power	urban or rural standard* sidewalk u/g power	urban or rural standard* sidewalk u/g power
Collector Hamlet 26 m min ROW width	urban standard	rural standard sidewalk u/g power	urban standard	urban or rural standard* sidewalk u/g power	rural standard sidewalk o/h power	rural standard o/h power
Local Hamlet 20 m min ROW width	urban standard	rural standard u/g power	urban standard	urban or rural standard* sidewalk u/g power	rural standard o/h power	rural standard o/h power
Core Hamlet 22 m min ROW width	urban standard	N/A	urban standard	N/A	N/A	N/A

* Denotes that the standard will be decided by evaluating anticipated traffic volumes, design speed, continuity with existing infrastructure and future proposed upgrades, and other criteria as deemed necessary.

Figure 2-3
Roadway Standards Based on Zoning

2.1.4 Sustainability Plan

The Mackenzie County Sustainability Plan was approved in January 2016. Its purpose is to project a picture of what a community expects to look like in the future and a plan on how to achieve that vision. According to the Sustainability Plan, the greatest challenges facing the County and its residents are the distance to market and deficient transportation infrastructure. Therefore, the Plan has identified two economic goals to address these hurdles:

- **Economic Goal 1:** The Region's transportation system reduces travel time and increases safe, comfortable and efficient travel between its communities and between the County and major destinations beyond its borders.
- **Economic Goal 2:** The Region's transportation system provides an economically efficient access to business and industrial markets outside of County boundaries.

A strategy to achieve these goals involves maintaining a strong and consistent approach with Provincial and Federal governments and other parties (i.e. NADC, NTAC) to request the completion and upgrade of northern transportation corridors. This will:

- Facilitate the safe and efficient movement of goods to, from and within the County.
- Strengthen economically, socially and environmentally sustainable opportunities for the movement of people, as well as agricultural and resource sector goods.

2.1.5 Industrial Growth Strategy

An Industrial Growth Strategy is under development for La Crête and exists in draft form as of October 2020. It is a response to the economic growth pressure that the hamlet is facing and the associated servicing constraints. The Strategy provides a vision for future industrial development in the La Crête area for the next 20 years. There is a desire to minimize industrial traffic through the hamlet and to provide safer access to the community from Hwy 697. Current policies enable this Strategy to promote a transition in downtown La Crête away from active industrial uses in the hamlet core. The MPD designates over 1,600 ha for existing and future industrial development. The Strategy's development suitability model shows the following three nodes of highest suitability for industrial development:

- The largest suitable area is in and around the existing La Crête Sawmills along Hwy 697, south of La Crête. This area has been identified due to the existing highway infrastructure improvements, servicing infrastructure connectivity, and an ample supply of larger parcels for future development.
- The second-largest area of suitability is north of the hamlet, in the area previously identified by the industrial lands review as a priority area for future development (along 100 St).
- The other area of highest development suitability is directly east of La Crête along Hwy 697. This area benefits from direct highway access, servicing infrastructure, and an overall lack of limiting factors.

The Industrial Growth Strategy recommends developing two service roads running parallel to Hwy 697 to accommodate additional development. The first service road is proposed one quarter section west of Hwy 697 from Twp Rd 1060 (South Access) to Twp Rd 1062 (109 Ave) for 3.2 km and should be prioritized starting with the northern half. The second service road is proposed for 1.6 km one quarter section east of Hwy 697 from Twp Rd 1060 south to the existing truck turning improvements on Twp Rd 1055. Both service roads should be designed to accommodate transport trucks.

To accommodate the proposed industrial growth areas, the Strategy recommends improvement of 100 St north of 109 Ave (Twp Rd 1062) to Twp Rd 1064, and Twp Rd 1064 east of 100 St to Hwy 697. Similarly, the following intersections have been identified for improvement over the life of the Strategy: the new intersection of Twp Rd 1064 with Hwy 697, Hwy 697 and Twp Rd 1062 (109 Ave), Hwy 697 and Twp Rd 1061 (94 Ave), and 100 St and 109 Ave (Twp Rd 1062).

2.1.6 Transportation Master Plan (TMP)

A draft version of the TMP for La Crête was completed in October 2014, and the final version was completed in July 2015. It is understood that the TMP has not been adopted by Council. However, AE has reviewed both the draft and final TMP in preparation of this study and has used it to gain an understanding of the transportation history and vision for the future. The four primary goals of the TMP are to:

1. Provide an effective transportation network to allow the efficient movement of people and goods between all residential, business and industrial sections of the community.
2. Provide residents, employees and customers a wide range of mobility choices such as driving, walking and cycling.
3. Place a high priority on the safety and security of people, equipment, goods and property in the design and operation of the transportation system.
4. Educate the public on healthy transportation choices and minimize the environmental impacts of the transportation system.

A hierarchy of road classifications was recommended to meet the transportation needs of the County, including arterials, commercial arterials, primary collectors, neighbourhood collectors, industrial streets, core area roads and local streets. The functions of each road type are summarized in Table 2-2 and are intended to align with Transportation Association of Canada (TAC) and City of Edmonton practices.

Table 2-2
Roadway Classification Function and Access

Roadway Class	Function	Access
Arterials	Support larger volumes of traffic accessing or egressing La Crête, providing a means for traffic to flow from collector and local roads	Limited; concentrated on fixed locations with accesses shared between properties
Commercial Arterials	Support larger volumes of traffic within the commercial area (mainly 100 St) that are generated within the area itself	Provide access for commercial vehicles
Primary Collectors	Carry moderate volumes between local road and arterial road systems	Access to adjacent land use is important
Neighbourhood Collectors	Carry low volumes between local roads and arterial roads	Access to adjacent residential uses is essential
Core Area Roads	Carry relatively high volume of traffic at low speeds	Access to commercial and business establishments in the core
Local Roads	Carry low volumes that originate in or are destined to adjacent uses	Main intention is to provide access
Industrial Roads	Support a moderate volume of traffic consisting of commercial vehicles and other business traffic	Some restrictions may apply

According to the TMP, the existing right-of-ways (ROW) within La Crête are 20 m wide, except for arterial roads which are 30 m wide. These widths conform to City of Edmonton standards for local roadways, which require a 16-17 m ROW for residential local roads and a 20 m ROW for industrial local roads. Some of the City of Edmonton minor collector cross-sections are 20 m or less, but other collector types and arterials require more width than 20 m. As previously mentioned, there are two recommended cross-sections for roads within the hamlet: Green Link and Town Centre Corridors.

It should be noted that some Green Link corridors as identified in the ASP are not wide enough to accommodate the recommended cross-section (100 Ave, 104 St, 98 Ave). If those corridors are to be upgraded with the recommended cross-section, purchase of right-of-way will be required. Alternate routes may be pursued, however the existing road right-of ways (mainly 20 m wide) fall short of being able to accommodate the desired cross-section.

The TMP identifies the following noteworthy items specific to upgrading the La Crête road network:

- The County has identified 94 Ave, 99 Ave, and 105 St as priority areas requiring repair over the next 15 years.
- The County has identified an east-west collector road along the south boundary of the hamlet as a critical investment to divert through traffic around 94 Ave.
- 100 Ave and 108 St will play major roles in connecting future residential development to the hamlet's core.

- The County has identified plans to upgrade the existing rural roadways bordering La Crête to meet arterial standards, allowing improved access for industrial and heavy agricultural traffic through La Crête.
- 94 Ave between 100 St and 113 St is currently identified as a Hamlet Arterial Roadway. However, County staff have indicated that this road does not currently allow heavy vehicle traffic due to the presence of multiple schools. The TMP recommends reclassifying this portion of road to a Hamlet Collector Road, and that heavy truck and industrial traffic be rerouted north on 113 St to 109 Ave. Depending on future growth, this route may be eventually expanded into a full bypass.
- The TMP recommends that Warrant Studies for the intersections adjacent to schools on 94 Ave be conducted to determine if signalization is required to ensure the safety of pedestrians trying to cross 100 St.
- Mackenzie County standards indicate that an urban road with an 11.5 m top is sufficient for a 60 km/h speed limit within a 30 m right-of-way. The TMP suggests a possibility of installing a 2-lane arterial roadway to account for planned growth. It is noted that the standards do not include a detail for 2-lane arterial roads.
- Mackenzie County design standards indicate that roads with an AADT value of less than 200 should typically be designed to have a gravel surface finish.
- The TMP recommends that the hamlet's pedestrian network should provide an effective means for pedestrians to access the various parks planned to be developed in the future.

2.2 Population

Mackenzie County's MDP uses a linear compounded method to estimate three different scenarios for projecting population growth in La Crête: a conservative growth rate of 10.0% / 5 years, the anticipated growth rate of 20.0% / 5 years, and optimistic growth rate of 35.0% / 5 years. In 2006, the recorded population according to Statistics Canada was 2,166. Mackenzie County completed a municipal census in 2018, which showed the population of La Crête as 3,643. This shows an actual historical yearly growth rate of 3.38%, which is slightly under the anticipated growth rate projected in the MDP. Using the same linear method as in the MDP, AE projected possible population scenarios for La Crête in 2021, 2026, 2031, and 2041 (20-year horizon), as shown in Table 2-3.

Table 2-3
Population Projections Based on MDP

Year	Conservative Growth 10% / 5 years	Historical Growth 3.4% / year	Anticipated Growth 20% / 5 years	Optimistic Growth 35% / 5 years
2018	3,643	3,643	3,643	3,643
2021	3,862	4,025	4,080	4,408
2026	4,248	4,753	4,896	5,951
2031	4,673	5,612	5,875	8,034
2041	5,654	7,825	8,461	14,641

2.3 Traffic Volume Data

Alberta Transportation has available historical traffic volumes on Hwy 697 along the intersections accessing La Crête. Recent counts along Hwy 697 at Twp Rd 1062 (109 Ave) are showing a high growth in recent years, likely associated with the recent growth of La Crête, but are expected to stabilize over time and become more similar to the growth rates at Twp Rd 1060 (South Access). AE reviewed the available history going back to 2002 to determine a more accurate historical growth rate and determined that the high recent growth rate was indeed preceded by a period of low or non-existent growth. The historical growth rate was calculated using the data available from 2005-2019 with the method shown in Section A.4.3 of the AT Highway Geometric Design Guide (HGDG). The volumes and growth rates are shown in **Table 2-4** and **Figure 2-4**. The cells which do not contain a volume did not have data available for that year in that location. To determine the overall growth rate in the area, the average of all six locations was taken.

Turning movement counts for Average Annual Daily Traffic (AADT) and both peak hours were obtained from the AT Traffic Mapping website. Information was available at Twp Rd 1062 (109 Ave), Twp Rd 1060 (South Access), and Twp Rd 1055 (Sawmill Access). The 2019 data was used to perform the analyses of the Hwy 697 intersections and is included in **Appendix A**.

Table 2-4
Historical Traffic Volumes on Hwy 697 near La Crête

Location on Hwy 697	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2005-2019 Growth Rate
E of Twp Rd 1062 (N Acc. / 109 Ave)	-	-	-	1760	1760	1760	-	1720	1740	1910	1910	1910	2060	2100	2400	2400	2400	2870	2.76%
S of Twp Rd 1062 (N Acc. / 109 Ave)	-	-	-	440	440	440	-	440	480	560	560	560	600	640	800	800	800	1050	4.15%
N of Twp Rd 1060 (S Acc.)	290	290	-	460	460	460	460	460	500	940	940	940	940	1000	1200	1200	1200	1240	4.49%
S of Twp Rd 1060 (S Access)	1250	1250	-	1360	1360	1360	1360	1360	1460	1520	1520	1520	1520	1700	1700	1700	1700	1740	1.56%
N of Twp Rd 1055 (Sawmill Access)	1250	1250	1390	1390	1390	1390	1390	1390	1490	1520	1520	1520	1520	1700	1700	1700	1700	1740	1.44%
S of Twp Rd 1055 (Sawmill Access)	1060	1060	1290	1290	1290	1290	1290	1290	1420	1440	1440	1440	1440	1600	1600	1600	1600	1640	1.52%
																		Average Growth Rate of Hwy 697 near La Crête:	**2.65%**

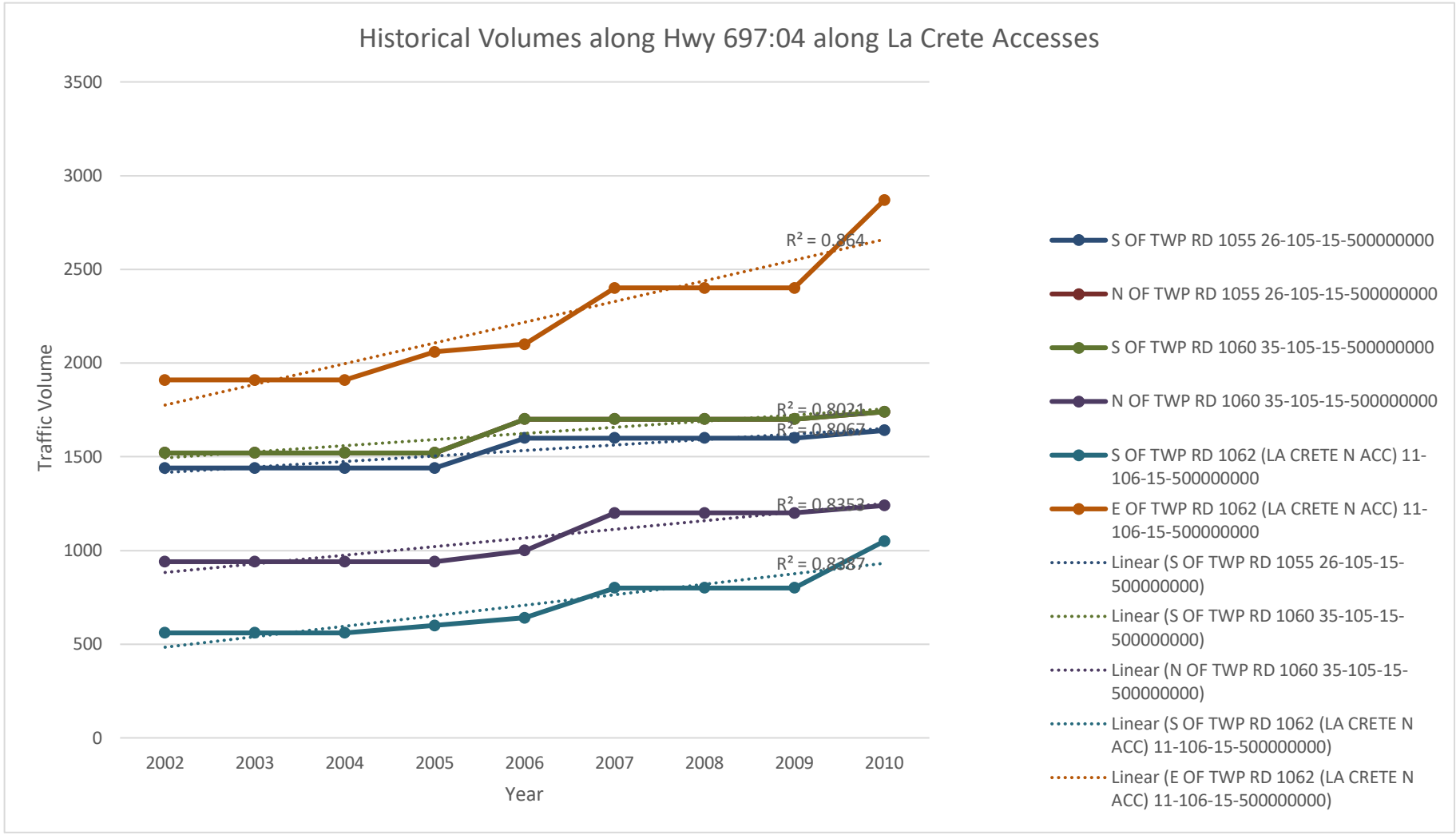

Figure 2-4
Historical Traffic Volumes on Hwy 697 near La Crête

There were no historical turning movements available for the intersections within La Crête, however the County provided information on traffic volumes counted at selective road links in 2013 on a weekday. To determine future traffic volumes, AE used the formula shown in Section A.4.3. of the Alberta Transportation Highway Geometric Design Guide. The 2013 counts were used as the base year and were projected to future counts in the 2021 and 2041 horizons, as shown in **Figure 2-5**. These horizons correspond with the timelines of development identified by the County and will be discussed later in this report.

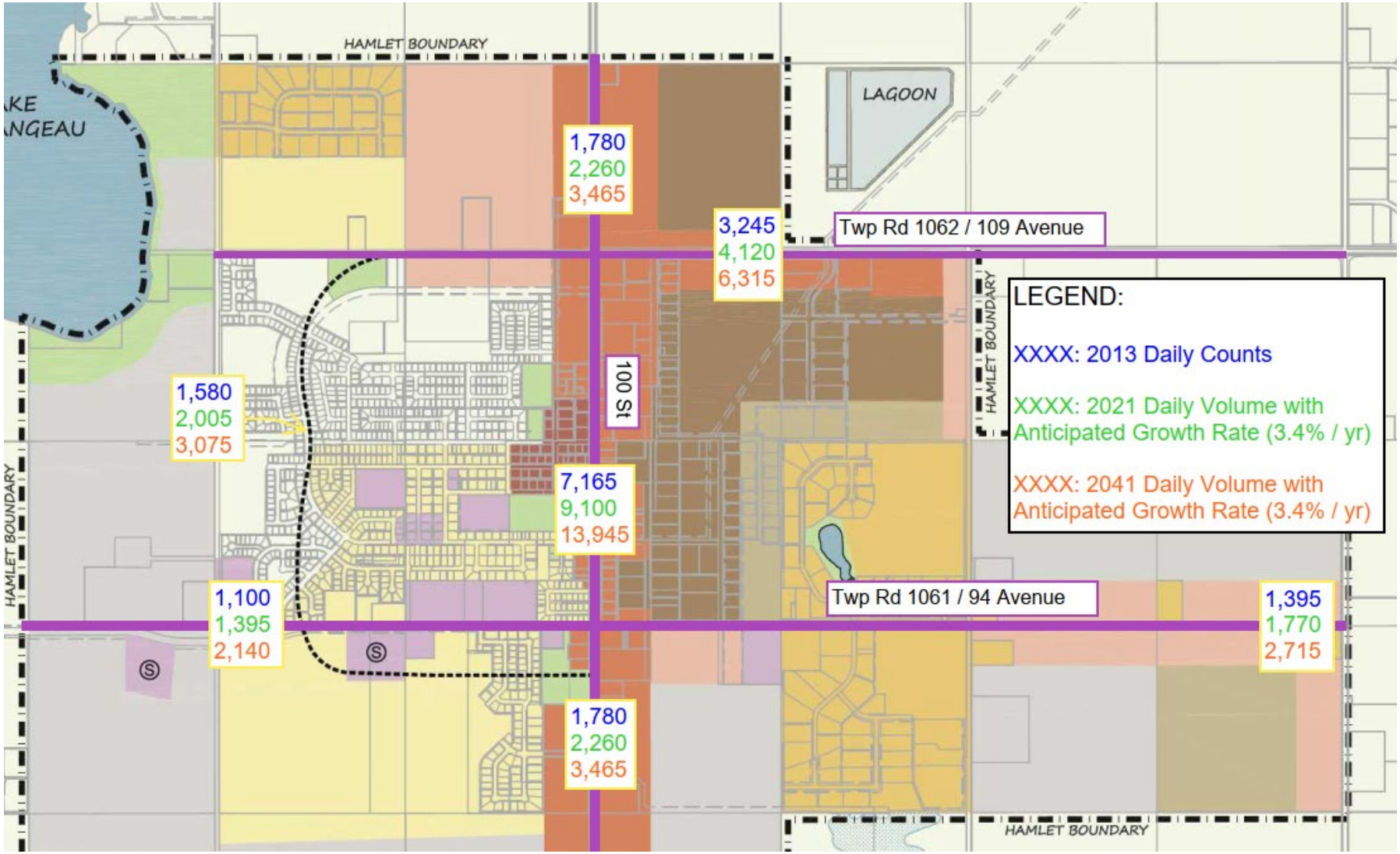

Figure 2-5
2013 Daily Traffic Counts Projected to 2021 and 2041

2.4 Collision Data

The latest provincial collision data from Alberta Transportation's Collision Information Application is from 2012-2016. La Crête is accessed via Hwy 697, control section 4, identified as 697:04 by AT. The collision rates for provincial highways similar in nature to Hwy 697:04 were averaged and compared to the collision rates for Hwy 697:04. The comparison is shown in Table 2-5. Rates are shown per 100 million vehicle kilometres (100 MVKM).

Table 2-5
Collision Rates for Hwy 697:04 versus Provincial Total from 2012-2016

Location	AADT in 2012-2016	Animal Collision Rate / 100 MVKM	Non-Animal Collision Rate / 100 MVKM	Total Collision Rate / 100 MVKM
Hwy 697:04	1170 - 1370	52.57	46.84	99.41
All Three Digit Highways	700 – 2000	71.53	42.78	114.3
All Undivided Highways with AADT closest to Hwy 697:04	1100 – 1400	73.64	38.80	112.4
All Provincial Undivided Highways	700 - 2000	69.96	38.42	108.4

This indicates that historically Hwy 697:04 has not seen a total collision rate higher than the provincial average for all undivided highways with AADT between 700 – 2000. Its total collision rate is also lower than the total rates of highways with traffic volumes most similar to Hwy 697:04 and all three-digit highways with AADT between 700 - 2000. However, the non-animal collision rates for Hwy 697:04 have been higher than the provincial average and other highways similar in nature.

Detailed collision data on Hwy 697 along the La Crête accesses was also reviewed to understand the type of collisions that have occurred along that stretch of highway, and to discern any patterns. The latest data available from AT was from the years 2008-2017. The results are summarized below:

<u>At the Twp Rd 1062 (109 Ave) intersection:</u>

- 6 collisions occurred, 4 of which were after sunset
- Most occurred around the PM peak hour, between 4:45 and 6:30 PM
- 4/6 collisions resulted in property damage only, and 2 resulted in minor injuries
- 3/6 collisions resulted in a vehicle going into the right ditch, 1 was due to a vehicle going into the left ditch, 1 was a head on collision and 1 was a right-angle collision

<u>Between the Twp Rd 1062 (109 Ave) and Twp Rd 1061 (94 Ave) intersections:</u>

- 16 collisions occurred, 10 of which were after sunset or before sunrise
- 14/16 collisions resulted in property damage only, 1 resulted in minor injuries and 1 resulted in major injuries
- 11/16 collisions occurred due to a vehicle striking an animal
- 2/16 collisions resulted in a vehicle going into the right ditch, 1 was due to a vehicle crossing the centre line, 1 was due to striking a non-fixed object on the roadway, and 1 was due to passing a left-turning vehicle

At the Twp Rd 1061 (94 Ave) intersection:

- 2 collisions occurred, both of which were after sunset
- 1 collision resulted in property damage only and the other resulted in major injuries
- 1 collision occurred when a vehicle hit a fixed object in the right ditch, and the other was a right-angle collision

Between the Twp Rd 1061 (94 Ave) and Twp Rd 1061 (Airport Access) intersections:

- 4 collisions occurred, 2 of which were before sunrise
- All the collisions resulted in property damage only
- 3 collisions occurred when a vehicle struck an animal, and 1 collision occurred when a vehicle struck an object in the right ditch

At the Twp Rd 1061 (Airport Access) intersection:

- 2 collisions occurred, 1 of which was after sunset
- Both collisions resulted in minor injuries
- 1 collision resulted when a vehicle turned left across the path of an oncoming vehicle, and the other was a rear end collision

At the Twp Rd 1060 (South Access) intersection:

- No collisions recorded

Between the Twp Rd 1060 (South Access) and Twp Rd 1055 (Sawmill Access) intersections:

- 7 collisions occurred, all of which were after sunset or before sunrise
- 6/7 collisions resulted in property damage only, while 1 resulted in major injuries
- 6/7 collisions occurred due to a vehicle striking an animal, and 1 occurred when a vehicle overturned in the left ditch

At the Twp Rd 1055 (Sawmill Access) intersection:

- 3 collisions occurred, all of which were after sunset or before sunrise
- 2/3 collisions resulted in minor injuries, and 1 resulted in property damage only
- 1 collision occurred due to a vehicle striking an animal, 1 occurred when a vehicle ran off the road to the left, and the other occurred when a vehicle sideswiped a parked vehicle

Collision data described above is presented in detail in **Appendix B**. From reviewing the data, the highway along La Crête does not present a major concern in terms of collision patterns. Upgrades to the intersection configurations are likely to alleviate some concerns, as would the installation of lights. As many of the collisions occurred during the dark, completing illumination warrants at the intersections would indicate whether there is a need for lighting.

2.5 Site Visit

Based on discussions with the County and AT, six intersections were examined in detail during the site visit; four on Hwy 697 and two within the hamlet. The findings are described below. Site photos are included in **Appendix C**.

2.5.1 Hwy 697 and Twp Rd 1062 (109 Ave)

This intersection is referred to as the north access into La Crête. Hwy 697 forms the east and south legs, whereas Twp Rd 1062 forms the west leg. The north leg is a gravel road, Rge Rd 151, that serves a residential subdivision and then terminates. There are residential farming properties in the northeast and southeast quadrants, and a farm field in the southwest corner. The northwest corner is primarily forested. The intersection is not illuminated. The intersection configuration as seen during the site visit is described in **Table 2-6**. All measurements shown are approximate and rounded to the nearest multiple of five.

Table 2-6
Configuration of Hwy 697 and Twp Rd 1062 Intersection

Leg	Road Name	Control Type	Lane Configuration	Other Items
North	Rge Rd 151	Stop-controlled	• Single lane in each direction. • No tapers.	• Posted speed is 60 km/h. • "No Exit" sign is present.
East	Hwy 697	Free-flow	• Shared through/left turn lane. • 3.5 m right turn deceleration lane with 75 m parallel lane and 200 m taper. • Eastbound acceleration lane with 90 m taper.	• Posted speed is 100 km/h. • There is an advance warning sign about logging trucks.
South	Hwy 697	Stop-controlled	• There appears to be a southbound acceleration lane, but the paint lines are mostly gone except a few faded dashed lines at the end of the 100 m taper. • The pavement is wider for approximately 115 m south of the intersection as though to accommodate a right turn lane, but the markings were not visible.	• Posted speed is 100 km/h. • The "STOP" pavement marking is faded. • Overhead power lines parallel Hwy 697 along the east side. • Rumble strips are present in advance of the stop condition.
West	Twp Rd 1062 (109 Ave)	Free-flow	• Shared 3.7 m through/left lane. • Right turn deceleration lane with a 75 m parallel lane, 90 m taper, 3 m wide lane, and 0.7 m shoulder. • Westbound acceleration lane with 50 m parallel lane and 180 m taper.	• Posted speed is 100 km/h. • A quad trail is present on the north side of Hwy 697. • Overhead power lines parallel Hwy 697 on its north side.

Based on the configuration and approximate measurements, this intersection appears to have been constructed as a Type IIIc intersection. Prior to the site visit, AE was made aware that the highway has very narrow shoulders and is planned for a grade-widening east of Twp Rd 1062. Therefore, AE took some approximate measurements to confirm. East of the intersection, the westbound through lane was 3.9 m, the eastbound through lane was 3.7 m, and the shoulders were 0.5 m on either side, for a total width of 8.6 m. South of the intersection past the tapers, the highway cross section was measured to have a 1 m shoulder on the west side, a 3.6 m southbound lane, a 3.8 m northbound lane, and a 0.7 m shoulder on the east side, for a total width of 9.1 m. The 2019 AADT on Hwy 697 was 2870. According to the Alberta Transportation Functional Classification Map, Hwy 697 is classified as Rural Arterial Undivided (RAU). Figure G-1.1 in the AT Highway Geometric Design Guide shows that a RAU with an AADT of 2870 should be 10 m wide, meaning that the existing highway does not meet these standards.

It was also noted during the site visit that water was ponding in the northwest corner, and cattails and ponding water were observed around the culvert at the southeast corner. Sideslope measurements were taken in the intersection corners and found to be:

- Northeast corner ranged from 15-35%, and there is also a steep drop-off on the edge of pavement.
- Southeast corner ranged from 19-28%.
- Southwest corner ranged from 17–30%.
- Northwest corner ranged from 28-36%.

Some of these sideslopes are steeper than minimum requirements. Section G.6.3 of the HGDG states that on any roadway where the 85th percentile running speed exceeds 100 km/h, any existing sideslopes of 3:1 or steeper should be identified as candidate locations for improvement. If improvements are being made to this intersection and the 85th percentile running speed exceeds 100 km/h, it is recommended that any sideslopes 3:1 or steeper should be improved as recommended in Table G.6.3a. This table shows that for an AADT range between 1500 and 4000, sideslopes should be improved to 5:1 if possible, and at a minimum to 4:1.

2.5.2 Hwy 697 and Twp Rd 1061 (94 Ave)

Twp Rd 1061 (94 Ave) provides access into La Crête from Hwy 697 halfway between the north and south accesses. The intersection of Hwy 697 and Twp Rd 1061 (94 Ave) is a three-legged intersection, surrounded by agricultural use. There are residences in the northeast and southwest quadrants. There were no turning arrows visible during the site visit. The intersection is not illuminated. The intersection configuration as seen during the site visit is described in Table 2-7. All measurements shown are approximate and rounded to the nearest multiple of five.

Table 2-7
Configuration of Hwy 697 and Twp Rd 1061 (94 Ave) Intersection

Leg	Road Name	Control Type	Lane Configuration	Other Items
North	Hwy 697	Free-flow	• 3.7 m through lane • 3.7 m right turn deceleration lane with a 90 m taper and 1.0 m shoulder.	• Posted speed is 100 km/h. • There is a field access by the end of the northbound bypass taper. • Overhead power lines parallel the highway on the east side.
South	Hwy 697	Free-flow	• 3.7 m shared through/left-turn lane. • 3.5 m northbound bypass lane with 70 m north taper, 50 m of full lane, 80 m south taper, and 1.0 m shoulder. • Southbound acceleration lane consisting of 85 m taper.	• Posted speed is 100 km/h. • Overhead power lines parallel the highway on the east side.
West	Twp Rd 1061 (94 Ave)	Stop-controlled	• Shared left/right turn lane. • No tapers.	• Posted speed is 80 km/h. • Advance “Stop Ahead” sign. • No rumble strips to indicate of an upcoming stop condition; may be due to proximity of residences. • A 20 km/h quad trail sign is present in the northwest corner.

Based on the configuration and approximate measurements, it is determined that this intersection was constructed with an Alberta Transportation Type IIa configuration.

Delineators are present around the intersection. Drainage appears to be functioning moderately well, with a potential low spot on the southeast corner at the culvert where cattails were observed. Sideslope measurements were taken at random intervals in the intersection corners and found to be:

- East side ranged from 23 – 24%.
- Southwest corner ranged from 29% - 35%, with the high end of the range around the stop sign.
- Northwest corner ranged from 17% - 23%.

The sideslopes on the east side and in the northwest corner are shallower than 4:1. However there is a steep area in the southwest corner. If improvements are being made to this intersection and the 85th percentile running speed exceeds 100 km/h, it is recommended that any sideslopes 3:1 or steeper should be improved as recommended in Table G.6.3a of the HGDG.

2.5.3 Hwy 697 and Twp Rd 1060 (South Access)

The intersection of Hwy 697 and Twp Rd 1060 (South Access) is a four-legged intersection. Surrounding land uses include a combination of industrial and agricultural on the northwest quadrant, residential in the northeast quadrant, and agricultural use in the southeast and southwest quadrants. Pavement markings / arrows were visible during the site visit. The intersection is not illuminated. The intersection configuration as seen during the site visit is described in Table 2-8. All measurements shown are approximate and rounded to the nearest multiple of five.

Table 2-8
Configuration of Hwy 697 and Twp Rd 1060 (South Access) Intersection

Leg	Road Name	Control Type	Lane Configuration	Other Items
North	Hwy 697	Free-flow	• 3.7 m shared through/left lane. • Right turn deceleration lane with 100 m taper, 85 m parallel lane, and 1.0 m shoulder. • 3.3 m northbound acceleration lane with 60 m parallel lane, 120 m taper, and 0.9 m shoulder.	• Posted speed is 100 km/h. • A field access is located within the northbound acceleration lane, approximately 55 m north of the intersection. • Overhead powerlines parallel highway along the east side.
East	Twp Rd 1060	Stop-controlled	• Shared through/left/right turn lane.	• Twp Rd 1060 is gravel going east.
South	Hwy 697	Free-flow	• 3.8 m shared through/left lane. • 2.9 m right turn deceleration lane with 32 m parallel lane, 215 m taper, and 0.9 m shoulder • Southbound acceleration lane with 80 m taper.	• Posted speed is 100 km/h. • Overhead powerlines parallel the highway along the east side.
West	Twp Rd 1060	Stop-controlled	• Shared through/left lane. • Channelized eastbound to southbound right turn, yield-controlled and separated by a large depressed grassed island.	• Twp Rd 1060 is paved. • No rumble strips to indicate of an upcoming stop condition; may be due to proximity of residences.

Based on the above rough measurements, it is determined that this intersection mostly closely resembles an AT Type IVb configuration, modified to include a channelized right turn.

An anecdotal observation made during the site visit was that many more northbound cars appeared to be turning left rather than right, yet there is a dedicated right turn lane and a shared through/left. Looking at the 2019 AADT turning movement counts, 330 vehicles turned left, 490 vehicles went straight, and 60 turned right at this intersection. This intersection configuration was re-examined during this analysis to determine suitability of lane assignments.

Some water was noticed to be pooling in the depressed pork chop island. Sideslope measurements were taken at random intervals in the intersection corners and found to be:

- Northeast corner ranged from 23 – 45%, with the steepest part at the turning radius.
- Southeast corner ranged from 26% - 36%
- Southwest corner ranged from 24 – 32%
- The steeper sideslopes on the southwest side of the southbound right turn lane averaged from 37 – 43%, and from 39-40% on the north side. The pavement sideslope of the southbound right turn lane was observed to be steep and the pavement was cracking off in the shoulder.
- Sideslopes in northwest corner averaged at 27-30%.

Some of these sideslopes are steeper than minimum requirements. If improvements are being made to this intersection and the 85th percentile running speed exceeds 100 km/h, it is recommended that any sideslopes 3:1 or steeper should be improved as recommended in Table G.6.3a of the HGDG.

2.5.4 Hwy 697 and Twp Rd 1055 (Sawmill Access)

Twp Rd 1055 provides the main access to the La Crête Sawmill, which is located just west of Hwy 697 and south of Twp Rd 1055. The east leg does not provide through traffic, ending at a residential property about 250 m from the highway. There is an agricultural field in the intersection's northwest quadrant, residential use in the northeast, and a combination of residential/agricultural uses in the southeast corner. The intersection is a unique design because it has a channelized northbound turn ramp which is on the east side of the highway. It was constructed to replace a standard northbound left turn for the long logging trucks; instead, they take the exit to the right to Twp Rd 1055, where they turn left (after stopping) and go straight west through the intersection (after stopping) to reach the Sawmill. The intersection configuration as seen during the site visit is described in Table 2-9. All measurements shown are approximate and rounded to the nearest multiple of five.

Table 2-9
Configuration of Hwy 697 and Twp Rd 1055 (Sawmill Access) Intersection

Leg	Road Name	Control Type	Lane Configuration	Other Items
North	Hwy 697	Free-flow	• Shared left/through lane. • 200 m channelized right turn lane with yield control. • Northbound acceleration lane with 100 m taper.	• Posted speed is 100 km/h. • Residential access just north of the taper. • Overhead powerlines parallel the highway along the east side. • There is a section of graveled road along the radius of the right turn, followed by asphalt.
East	Twp Rd 1055	Stop-controlled	• Shared left/through/right lane.	• East leg is gravel-surfaced.
South	Hwy 697	Free-flow	• Shared left/through lane.	• Posted speed is 100 km/h.

Leg	Road Name	Control Type	Lane Configuration	Other Items
			• Channelized turn lane that allows logging trucks to complete left turn. • Southbound acceleration lane with a 90 m taper.	• Overhead powerlines parallel the highway along the east side.
West	Twp Rd 1055	Stop-controlled	• Shared left/through/right lane.	• Overhead powerlines parallel Twp Rd 1055 on its south side.

Based on the above rough measurements, it is determined that this intersection mostly closely resembles an AT Type IIb intersection, modified to include the separated northbound left turn and southbound right turn for logging trucks.

AE also measured the highway south of the intersection to identify whether the narrow shoulders are also a concern in this area. The cross-section was found to be: 1.0 m west shoulder, 3.9 m southbound lane, 3.5 m northbound lane, and 1.2 m east shoulder. As previously mentioned, the recommended width for this highway classification in Chapter G of the Highway Geometric Design Guide is 10 m. This section of highway is slightly short of this but is wider than the section of Hwy 697 east of Twp Rd 1062 (109 Ave).

In the northeast corner of the intersection, some water was ponding during the site visit, and the culvert end was damaged. Cattails and reeds were observed in the ditch south of the channelized northbound right turn ramp, meaning drainage could be an issue. Sideslope measurements were taken at random intervals in the intersection corners and found to be:

- Northeast corner ranged from 23-26%.
- Southeast corner averaged around 23%.
- Southwest corner ranged from 29-30%.
- Northwest corner averaged around 22% near the yield sign within the island. On the outside of the turning lane, the slope is very flat which could lead to ponding in the spring.

The sideslopes at this intersection are all shallower than 3:1, meeting the minimum requirement on highways where the 85th percentile running speed exceeds 100 km/h.

2.5.5 100 St and 109 Ave (Twp Rd 1062)

The intersection of 100 St and 109 Ave (Twp Rd 1062) provides the main access from the north into La Crête. The northeast corner is primarily agricultural use, and the northwest and southeast quadrants are commercial/industrial use. The southwest corner contains an empty field. All four legs of the intersection are paved, though during the inspection the painted lines appeared faded. Illumination is provided along the south side of the east leg and along the west side of the south leg. The intersection configuration as seen during the site visit is described in **Table 2-10**.

Table 2-10
Configuration of 100 St and 109 Ave (Twp Rd 1062) Intersection

Leg	Road Name	Control Type	Lane Configuration	Other Items
North	100 St	Free-flow	• Shared left/through/right lane.	• Posted speed 50 km/h. • No curb and gutter. • Crosswalk across north leg. • Overhead powerlines on east side. • Truck ban sign for northbound traffic.
East	109 Ave	Stop-controlled	• Shared left/through/right lane.	• Posted speed 70 km/h. • Flashing lights at stop control. • No curb and gutter. • Separated paved trail along north side. • Overhead powerlines on north side. • No rumble strips in advance of stop, which could be a safety concern.
South	100 St	Free-flow	• Shared left/through lane. • Unmarked right turn lane.	• Posted speed 50 km/h. • Curb and gutter starts approximately 50 metres south of the intersection. • 20 km/h quad trail sign in southeast corner.
West	109 Ave	Stop-controlled	• Shared left/through/right lane.	• Posted speed 70 km/h. • Flashing lights at stop control. • No curb and gutter. • Crosswalk across the west leg. • Overhead power lines on north side.

The ditch drainage appears to be working properly. A catchbasin manhole is present in the southeast corner. There are culverts under 100 St on the north approach, and a culvert under the asphalt trail in the northeast corner. Sideslope measurements were taken in the intersection corners and found to be:

- Northeast corner ranged from 29-30%.
- Southeast corner averaged around 9%.
- Southwest corner has no sideslope as the sidewalk is raised above the road.
- Northwest corner has steep sideslopes, ranging from 30 – 38% at their steepest.

Since the westbound traffic is travelling at highway speed and is required to come to a complete stop at this intersection, the County may wish to consider installing advance rumble strips to provide warning to motorists. Another recommendation to improve safety at this location is to complete an updated turning movement count and complete a signal warrant analysis to identify when signals would be required at this intersection.

2.5.6 100 St and 94 Ave (Twp Rd 1061)

As 94 Ave (Twp Rd 1061) provides access into La Crête from Hwy 697, it intersects with 100 St, the main north-south arterial through the hamlet. At this intersection, there are commercial properties in all quadrants, except for the southeast quadrant which contains an empty field. The posted speed is 50 km/h at all legs. During the inspection it was noted that there are no turn arrows to indicate intended lane movements, and the lane lines are faded. Illumination is present along the west side of 100 St. The intersection configuration as seen during the site visit is described in Table 2-11.

Table 2-11
Configuration of 100 St and 94 Ave (Twp Rd 1061) Intersection

Leg	Road Name	Control Type	Lane Configuration	Other Items
North	100 St	Free-flow	• Shared through/left lane. • Shared through/right lane. • 4-lane urban cross-section with curb and gutter.	• Separated sidewalk along west side. • Crosswalk across the approach with button-activated lights on both sides but no signage. • Overhead powerlines along east side.
East	94 Ave	Stop-controlled	• Shared through/left lane. • Right turn lane.	• No curb ramp or sidewalk to receive pedestrians from west. • Overhead powerlines along north side.
South	100 St	Free-flow	• Shared through/left lane. • Shared through/right lane. • 4-lane urban cross-section with curb and gutter.	• Separated sidewalk along west side. • Overhead powerlines along east side.
West	94 Ave	Stop-controlled	• Shared left/through lane that widens to include a short right-turn lane. • Rural cross-section with no shoulder and no curb and gutter.	• Right turn lane is missing a turn arrow. • Crosswalk across the west leg with 2 painted lines to delineate the width. • Sidewalk along north side, separated by a ditch. • Manhole in northwest ditch. • Overhead powerlines along north side.

Based on the County's request, a signalization warrant analysis was performed as part of this study with turning movement counts that were manually taken. The results of the analysis are discussed in a subsequent section of this report. It is also recommended to install new pavement markings at this intersection to indicate lane assignments.

3 UPCOMING DEVELOPMENT

The residential population resides generally on the west side of La Crête, while the town centre and industrial areas are generally situated within the middle and east side. It is anticipated that La Crête will continue to grow for many years, and there are several areas within the hamlet suitable for future development. Mackenzie County has provided information on the Lake Side Real Estate Subdivision and six parcels within the north section of La Crête, all of which are described in the subsequent sections. The ASP and Industrial Growth Strategy also provide information on where the future development is anticipated in and around La Crête.

3.1 Lake Side Real Estate Subdivision

The Lake Side Real Estate Subdivision is proposed within NE-11-106-15-W5M, on land that is currently being used for agricultural purposes. It is located immediately southwest of the intersection of Hwy 697 and Twp Rd 1062 (109 Ave). This subdivision would have a significant impact on volumes at that intersection. Therefore, as confirmed with AT, the analysis for this intersection included a review of the intersection configuration with the anticipated development traffic.

The subdivision is planned in four phases, with the last phase anticipated to begin construction in 2030. This means that within the 20-year horizon, the entire subdivision would be completed. Three of the four phases are planned as rural (industrial) uses, while one phase is planned as highway commercial. AT has indicated they would not permit a new access to be constructed into the subdivision from Hwy 697. Therefore, all the development traffic would be accessing the development off Twp Rd 1062 (109 Ave), or by a future east-west road in the south half of the development. The layout of the proposed subdivision is included in **Appendix D**.

3.2 Select Development Subdivision

The Select Development Subdivision is proposed to be in NW-10-106-15-W5M, south of Twp Rd 1062 (109 Ave) and east of 99 St. The land is currently being used as a hayfield and is proposed to be subdivided into 16 commercial and industrial lots with a north-south road on the east side. One of the accesses would be via 99 St and 105 Ave, where 105 Ave would be connected to the new road. The new road would also be connected to 101 Ave at the south end of the subdivision. This subdivision was included in the six upcoming development parcels identified by the County, as described in **Section 3.4**. The layout of the proposed subdivision is included in **Appendix D**.

3.3 Area Structure Plan

The Area Structure Plan shows a development staging plan for residential and commercial land uses within La Crête. This plan is shown in **Figure 3-1**.

Figure 3-1
Development Staging Map of La Crete

This plan indicates that residential development will continue to spread alongside existing residential development, mainly within the west and south sides of the hamlet with some to the east as well. Commercial development will be focussed around 109 Ave and 100 St, as well as pockets alongside existing commercial uses throughout the hamlet. Though a Traffic Impact Assessment (TIA) will be required for each development that goes in, knowing about these nodes of future development assists with determining whether the road classification on the adjacent road network will continue to be suitable as development progresses.

3.4 County-Identified Growth

Further to the ASP, the County identified six land parcels within the northern part of La Crête that are slated for development within the next twenty years, as shown in Figure 3-2. These parcels are zoned for several different types of proposed land use, including: Rural Industrial, Light Industrial, Highway Commercial, Institutional, and Heavy Industrial. According to the County, the types of uses that apply to these land types include:

- Rural Industrial: timberbound shop, heavier industrial lots
- Light Industrial: tire/auto repairs, utility buildings, transportation companies
- Institutional: hospital, birth centre
- Heavy Industrial: fuel stations (cardlock), gas co-op, auto part stores

The land uses and areas as identified by the County will be incorporated into the highway intersection assessments in the subsequent sections.

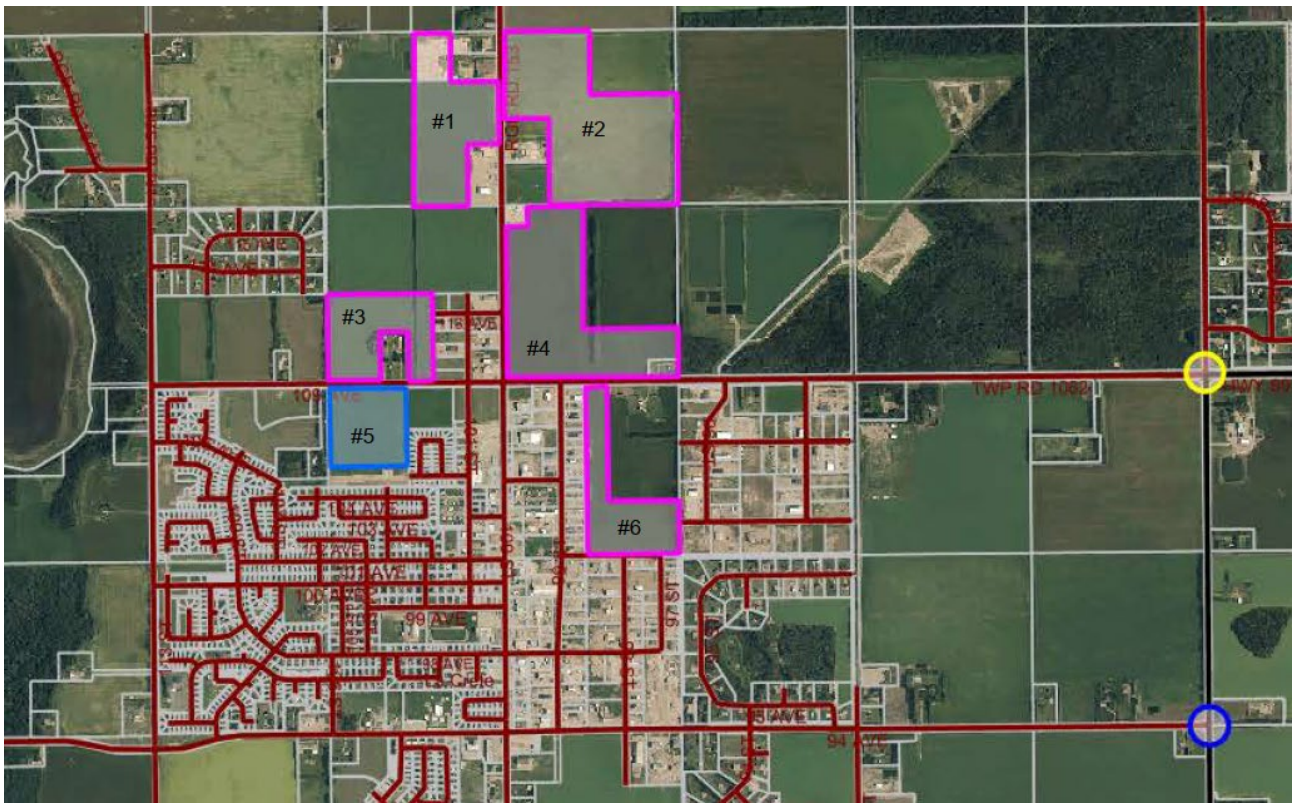

Figure 3-2
Upcoming Development in La Crête

3.5 Industrial Growth Strategy

The Industrial Growth Strategy used a development suitability model to show areas with the highest suitability for industrial development, as shown in **Figure 3-3**.

The Strategy specifically identified the three most suitable areas for industrial growth as:

1. Within and around the existing La Crête Sawmills along Hwy 697
2. North of the hamlet along 100 St
3. Directly east of La Crête along Hwy 697

As desired in County documents, this supports a shift away from industrial uses within the hamlet's core. These areas should be serviced by roads that are able to handle heavy truck traffic. The development of the proposed transportation network allows for this.

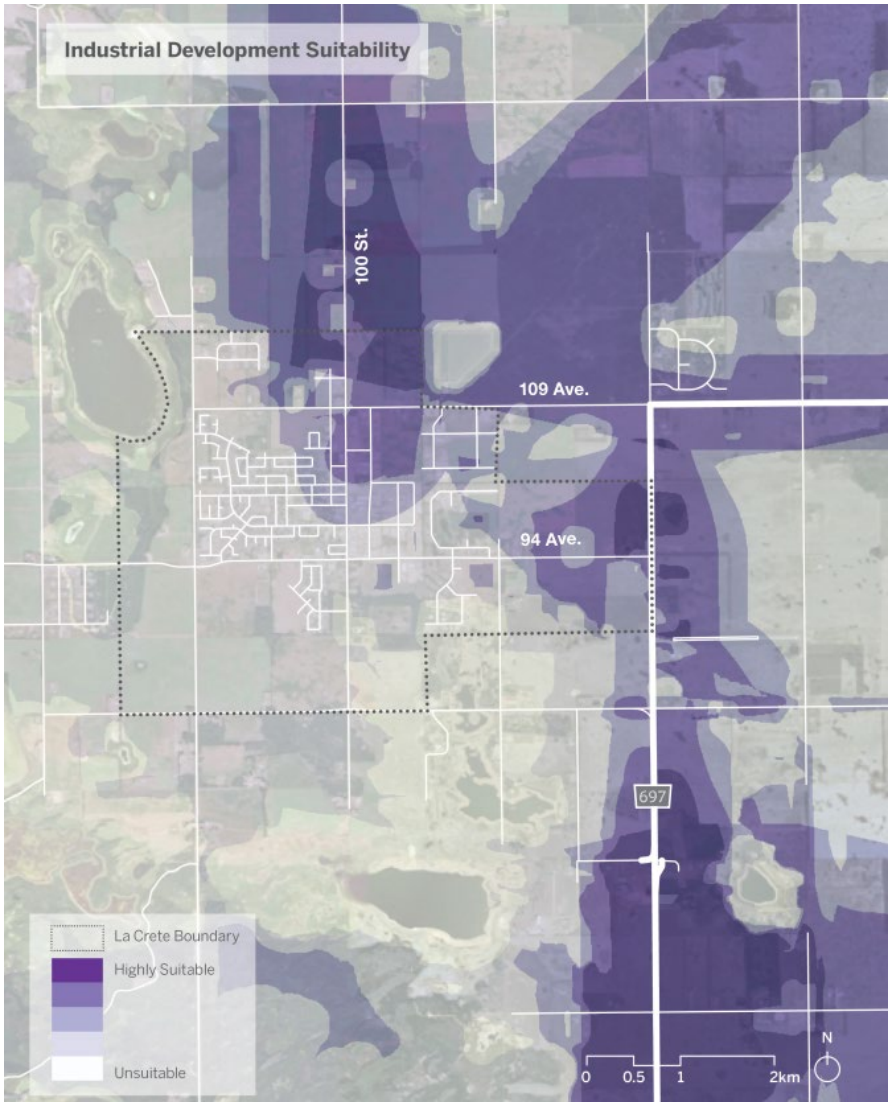

Figure 3-3
Suitable Areas for Industrial Growth

4 PROPOSED TRANSPORTATION NETWORK

4.1 Road Classifications

La Crête's TMP describes the desire to have a road hierarchy and identifies the function of each road classification. The TAC recommendations for traffic volumes on various road types from the Guidelines for Canadian Roads is shown in Table 4-1. The recommended volumes are compared to the estimated traffic volumes that were projected from available 2013 counts on selected roads in La Crête, using the historical annual growth rate of 3.4%.

Table 4-1
Traffic Volumes Based on Road Classification

Road Classification	TAC Guidelines for Recommended Volumes	Example Road in La Crête	Volume of Road in 2021 (Anticipated Growth Rate)	Volume of Road in 2041 (Anticipated Growth Rate)
Major Arterial	10,000 – 30,000	100 St between 109 Ave & 94 Ave	9,100	13,945
Minor Arterial	5,000 – 20,000	109 Ave	4,120	6,315
Residential Collector	<8,000	109 St	2,005	3,075
		94 Ave	1,395 – 1,770	2,140 – 2,715
Industrial/Commercial Collector	1,000 – 12,000	100 St north of 109 Ave	2,260	3,465
		100 St south of 94 Ave	2,260	3,465

The road classifications proposed for the long-term transportation network and shown on Figure 4-1 include:

- Major arterial (based on Town Centre cross-section)
- Minor Arterial (based on Green Link cross-section)
- Collector (based on modified version of Green Link cross-section depending on County budget and priorities)

During future development, allowance should be made to accommodate the width of the desired road cross-sections, regardless of when the road will actually be constructed.

4.2 County Concerns

As requested by Mackenzie County Council, this study has also incorporated consideration for snow clearing within the road cross-section and accommodation of the turning movements of large trucks.

4.2.1 Snow Clearing

As previously stated, two cross-sections have been identified within County documents for the road network; the Green Link and Town Centre cross-sections. The County has voiced concerns about the lack of storage space for snow within existing road right-of-ways and would like to ensure the problem is mitigated in design of future roadways. There are several locations throughout La Crête with ditch drainage. In such cases, snow can be placed along the ditch but should be stored in conjunction with filter sock placement to avoid spreading road salts and other contaminants throughout the ditch drainage system.

In the existing areas with curb and gutter, snow can be left on the roads until it can be taken to a snow storage facility. Temporary street parking bans may be necessary in these situations, and adequate notice should be provided to residents about an upcoming ban on street parking. In cul-de-sacs, snow can be piled in the middle until there is time for it to be take to a proper snow storage site that has various environmental controls in place.

To minimize snow storage problems going forward, AE recommends the following:

For the Green Link cross-section, the predominant proposed changes are:

- Parking lane on right, with crowned road (not parabolic)
- Snow storage on both sides: left – on planted buffer, right – 1.5m wide hardscape (or grass cover)
- Remove monowalk, and place sidewalk to be next to hardscape / snow storage area
- Move shared-use path further from the road

For the Town Centre cross-section, the predominant proposed changes are:

- Reduce road width from 13.0 m to 12.0 m
- Crowned road
- Add hardscape area next to parking for snow storage (both sides)
- Reduce sidewalk from 2.0 m to 1.7 m

The proposed revised Green Link and Town Centre cross-sections are shown in **Figure 4-1** and **Figure 4-2**.

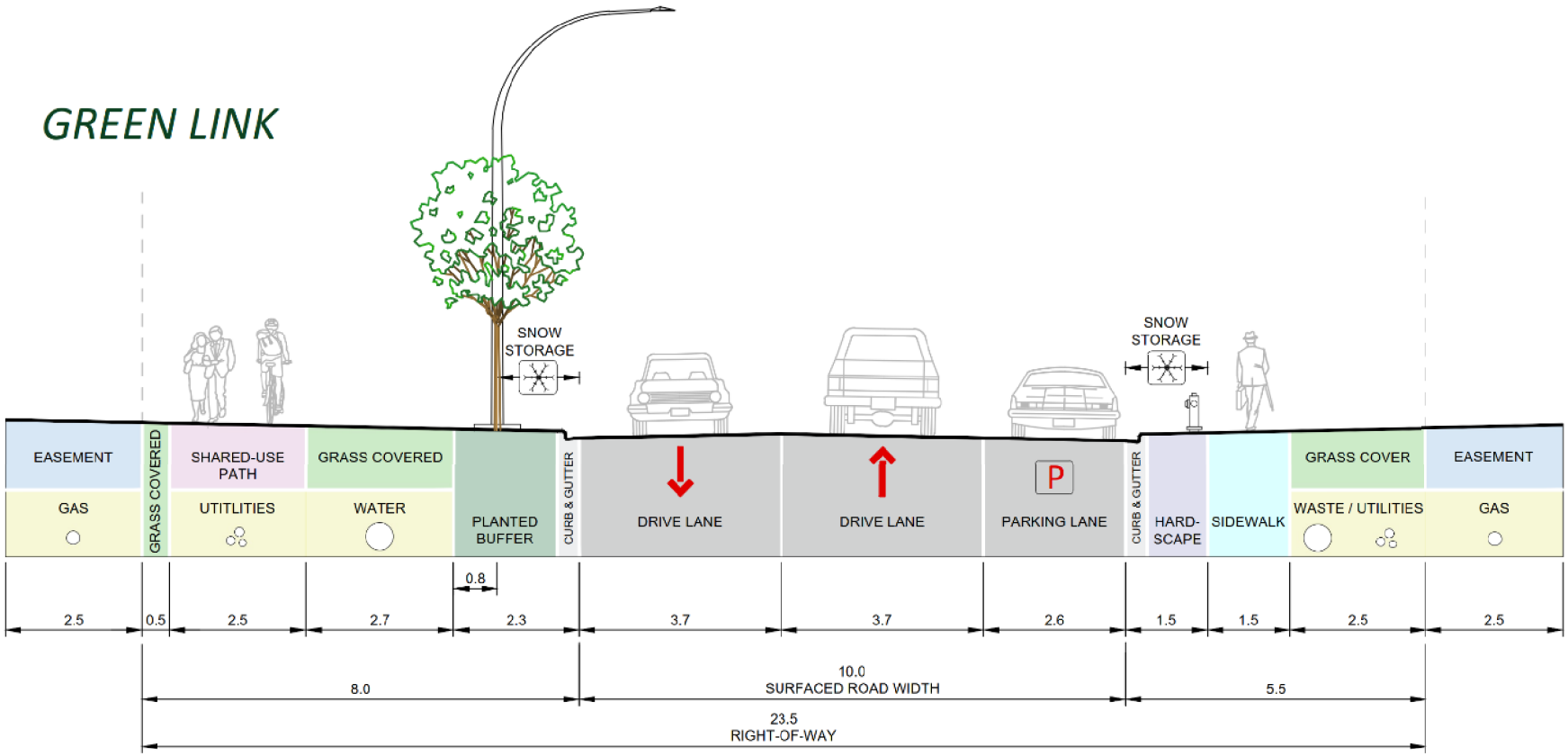

Figure 4-1
Proposed Revised Green Link Cross-Section

CITY CENTRE STREET

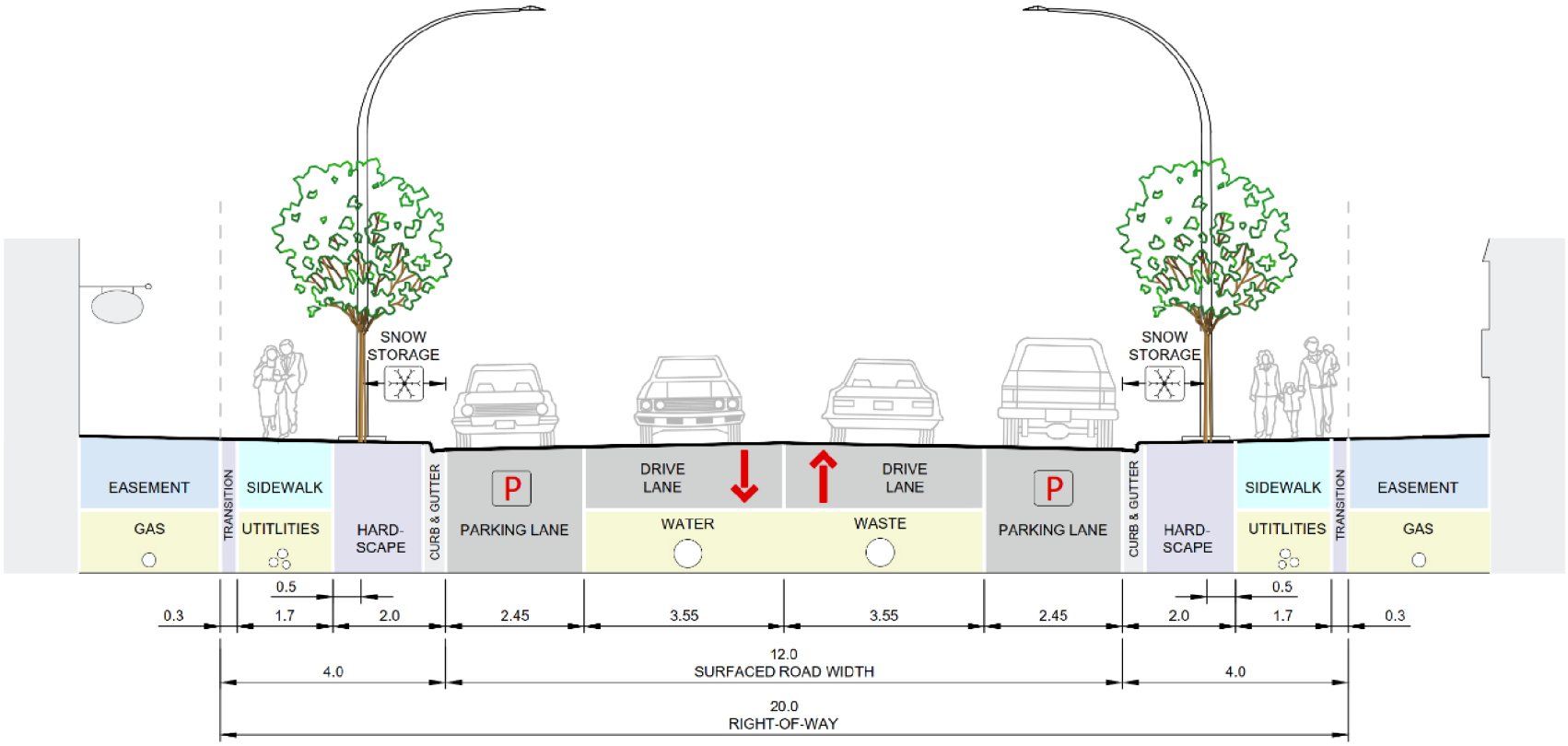

Figure 4-2
Proposed Revised Town Centre Cross-Section

4.2.2 Truck Accommodation

The County has noted that large trucks are having trouble making certain turning movements at existing intersections in La Crête. This is especially a concern along 100 St, along which trucks require access to several industrial and commercial properties.

Mackenzie County's General Municipal Improvements Standards, Section G.5.13, Horizontal Alignment, identifies the following curb return radius requirements:

- At residential local road intersections: 7.5 m
- At residential collector road intersections: 12.5 m
- At industrial and commercial road intersections (to accommodate trucks turning): 15 m
- For arterial road intersections, curb returns shall be designed to properly accommodate the design vehicle types and expected volumes of traffic.

Section G.5.15 Intersections and Approaches, states that geometric requirements for industrial approaches shall be:

- Light industrial approach:
  - Minimum turning radius: 12 – 15 m
  - Minimum road surface width: 11.5 m
- Heavy industrial approach:
  - Minimum turning radius: 15 m
  - Minimum road surface width: 15 m

Based on the above, it is expected that the intersections along 100 St have been designed with curb return radii of 15 m, and that industrial accesses have turning radii ranging from 12 – 15 m, both using a simple curve. The County standards also note that for standards not referenced within the document, the latest version of the TAC Standards or AT Standards should be used.

According to Section D.5.2 in Chapter D of the AT HGDG, 16 m and 80 m radii compound curves have proven to be an ideal combination for accommodating the medium turning path of the WB-21 design vehicle on a 90 degree turn, with slight modification to radii being required for small and larger skew angles. Two-centred curves take less pavement area than three-centred curves and can fit better within constrained urban areas.

The TAC Geometric Design Guide for Canadian Roads, Section 9.13.2, Corner Radius Considerations and Design recommends that a two-centred compound curve is the preferred design for all types of large trucks and usually fits the minimum inside sweep of a design tractor trailer combination adequately. It also says that although a three-centred curve better fits the inside sweep of a tractor trailer combination, there are many benefits to using two-centred curves, such as:

- Less pavement area
- Intersecting road vehicles are forced to proceed more slowly with two-centred curves
- Stop signs can be placed closer to the intersecting road centreline with two-centred curves
- Two-centred curve design tends to be more economical

The radii combination was checked using software that shows the design vehicle is able to make the turn adequately. Various combinations in terms of number of curves in the compound curve, curve offset, and curve radii were tested. The simple (one curve) 15 m radius, shown in Figure 4-3, is compared to the two more favourable options, the two-centred curve in Figure 4-4 (recommended option) and the three-centred curve in Figure 4-5.

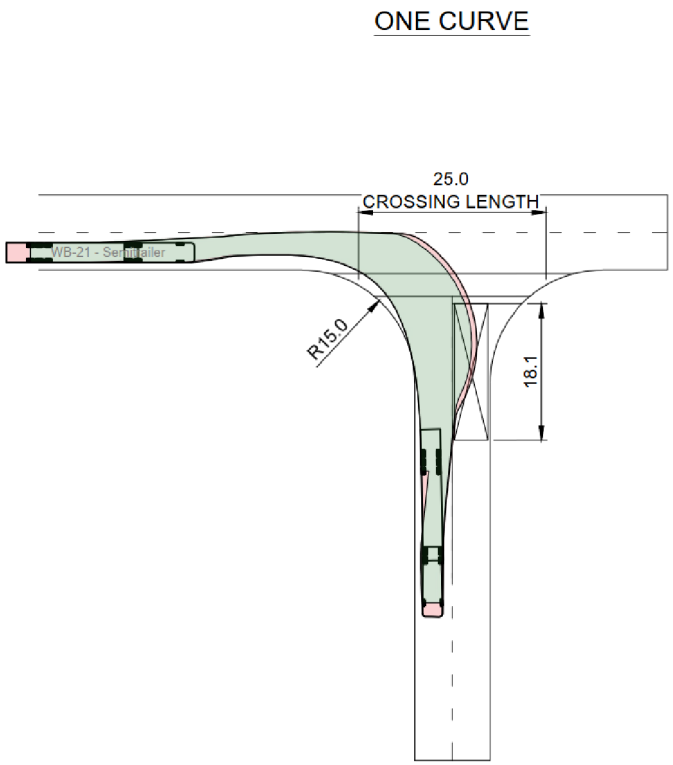

Figure 4-3
Simple Curve (15.0 m radius) Option

Figure 4-3 shows the swept path of the truck and how much it intrudes into the oncoming lane of the intersecting road. Using a simple curve with a typical 15.0 m radius, the oncoming traffic waiting at the intersecting road will be required to be set 18.1 m back from the intersection to avoid being in the path of the truck.

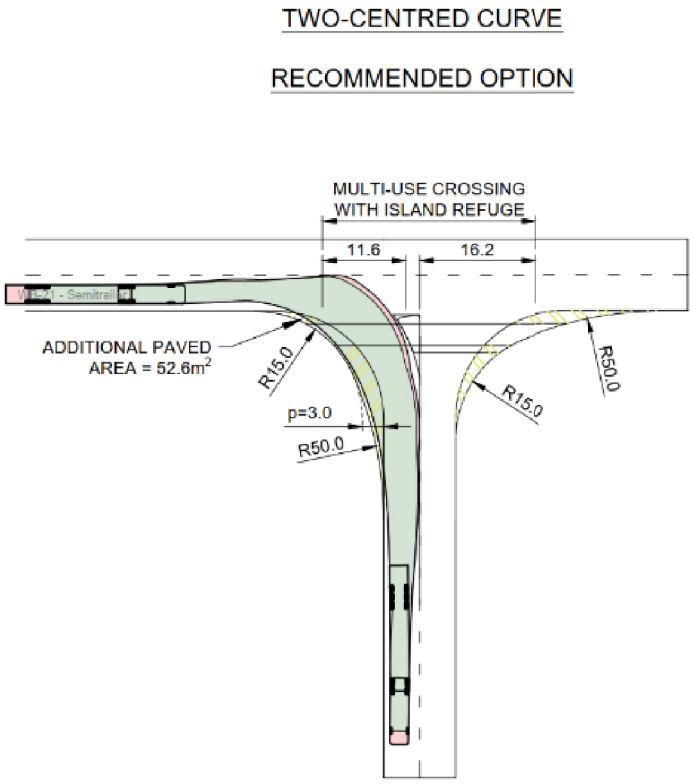

Figure 4-4
Two-Centred Curve (Recommended Option)

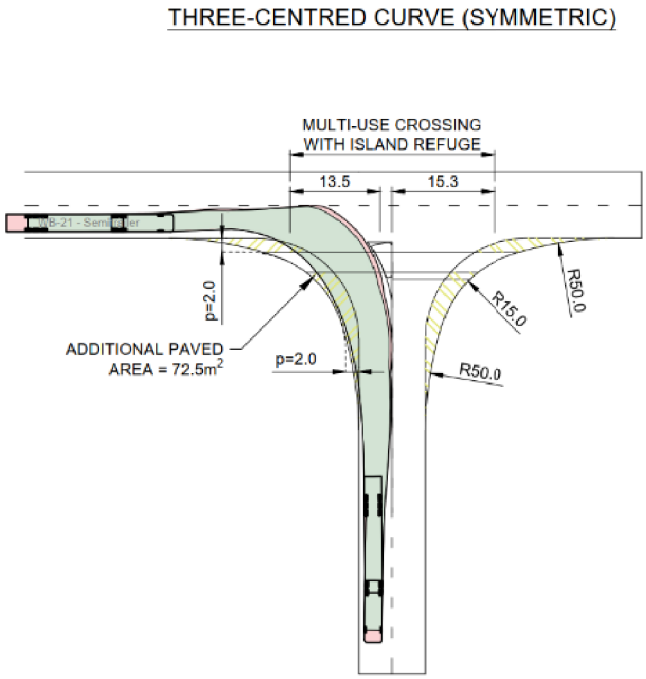

Figure 4-5
Three-Centred Curve

Figure 4-4 and Figure 4-5 show two options that will accommodate a WB-21 vehicle. The two-centred compound curve is the preferred option as it requires less pavement widening (52.6 m^2 per curve) compared to the three-centred compound curve option (72.5 m^2 per curve). It should, however, be noted that due to the increased width of the intersection, the crosswalk has also increased. It is therefore recommended to also construct a refuge island for pedestrians crossing the road.

Going forward, AE recommends that the County give careful consideration to the existing and proposed truck routes within the hamlet and where it will be necessary to accommodate large vehicles. New construction should make allowance for these large turns. Along 100 St, truck traffic is likely to use the east, north, and south legs of the main intersections throughout the hamlet, i.e. 109 Ave, 94 Ave, and Twp Rd 1060, as well as any business accesses where large trucks are expected. When existing intersections are upgraded along 100 St, the new design should allow for proper turning radii of large trucks where they are the design vehicle. Realizing that 100 St is in the well-established core of the hamlet with a constrained environment, design may favor two-centred curves over three-centred curves for the reasons listed above. However, it is also important to recognize that increasing the corner radii of intersections may have impacts such as requiring purchase of right-of-way, modification to existing sidewalks and crosswalks, traffic post or illumination realignment, underground utility relocation, and more.

4.3 Proposed Maps

AE used a combination of the development staging map and the roads and access map in the ASP, the road classification map from the TMP, the map from the Industrial Growth Strategy, and information on future development to develop a proposed long-term transportation network for La Crête. The proposed road network is shown in **Figure 4-6**. Once a draft of the road network was developed, the roads and access map was also used to inform the creation of a proposed trails network for La Crête, which is shown in **Figure 4-7**. Green Link corridors, existing trails, and future land use were all considered. A truck route map was also developed to show where roads should be constructed to allow for truck traffic and is shown in **Figure 4-8**.

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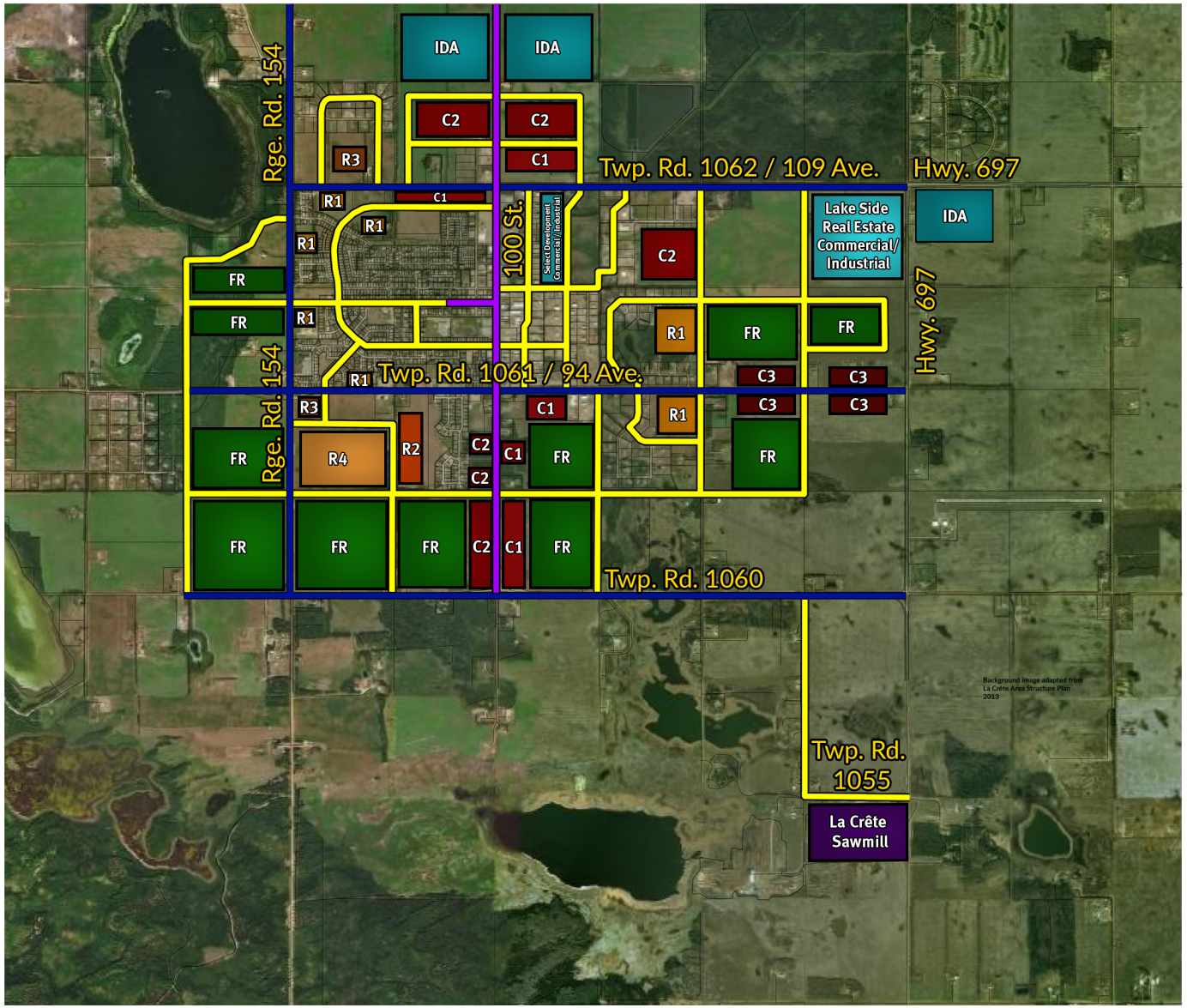

Mackenzie County

LEGEND

- Major Arterial (Town Ctr.)
- Minor Arterial (Green Link)
- Collector (modified Green Link)

ASP DEVELOPMENT STAGING

- R1 - Residential Stage 1
- R2 - Residential Stage 2
- R3 - Residential Stage 3
- R4 - Residential Stage 4
- C1 - Commercial Stage 1
- C2 - Commercial Stage 2
- C3 - Commercial Stage 3
- FR - Future Residential
- IDA - Priority area identified for Industrial Development in the Industrial Growth Strategy

FIGURE 4-6
Proposed Road Network for La Crête

Associated Engineering

CANADA'S BEST MANAGED COMPANIES
Platinum member

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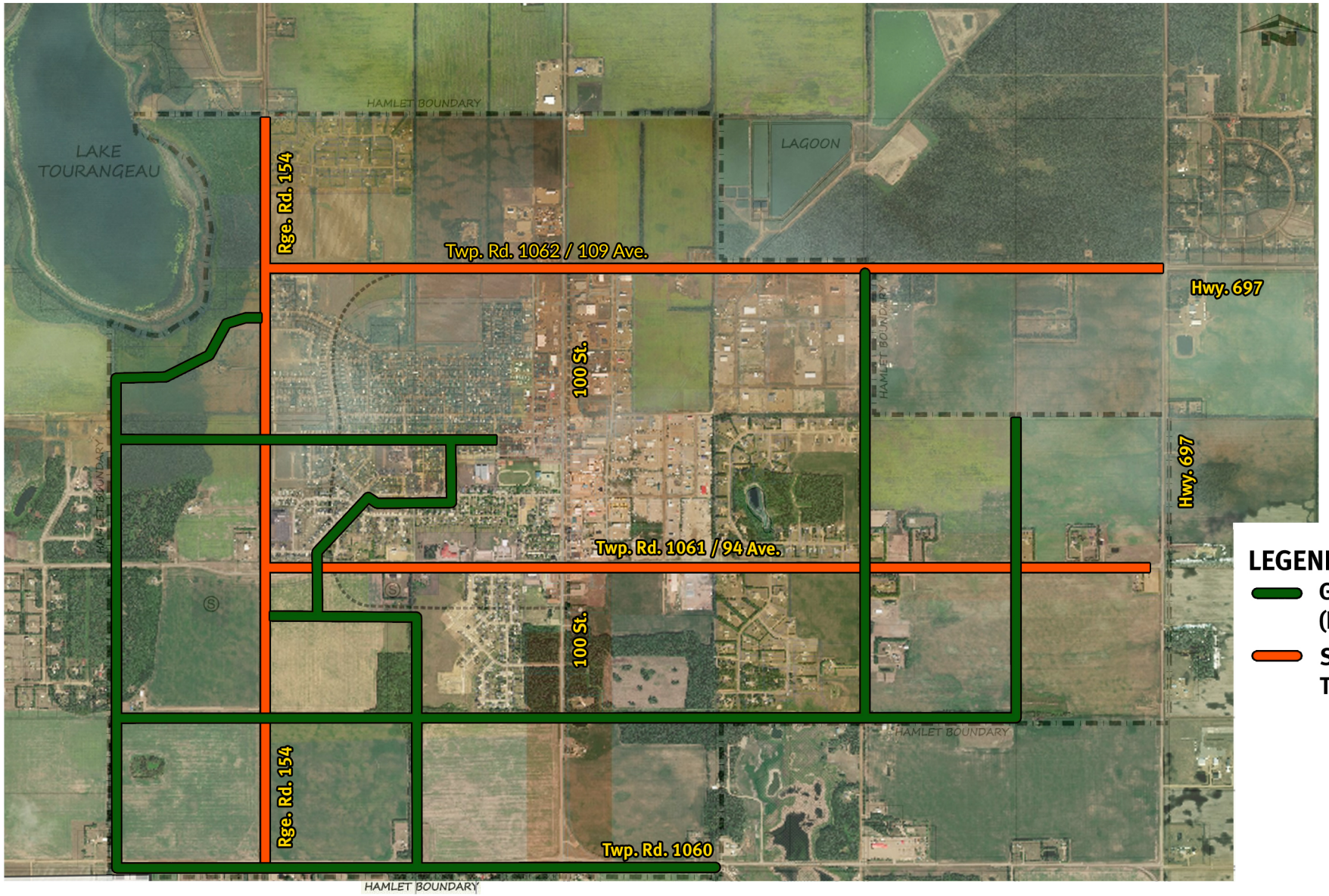

Mackenzie County

LEGEND

- Green Link (has SUP)
- Separated Trail

Associated Engineering

BEST MANAGED COMPANIES
Platinum member

FIGURE 4-7
Proposed Trails Network for La Crête

Background image adapted from
La Crête Area Structure Plan
2013

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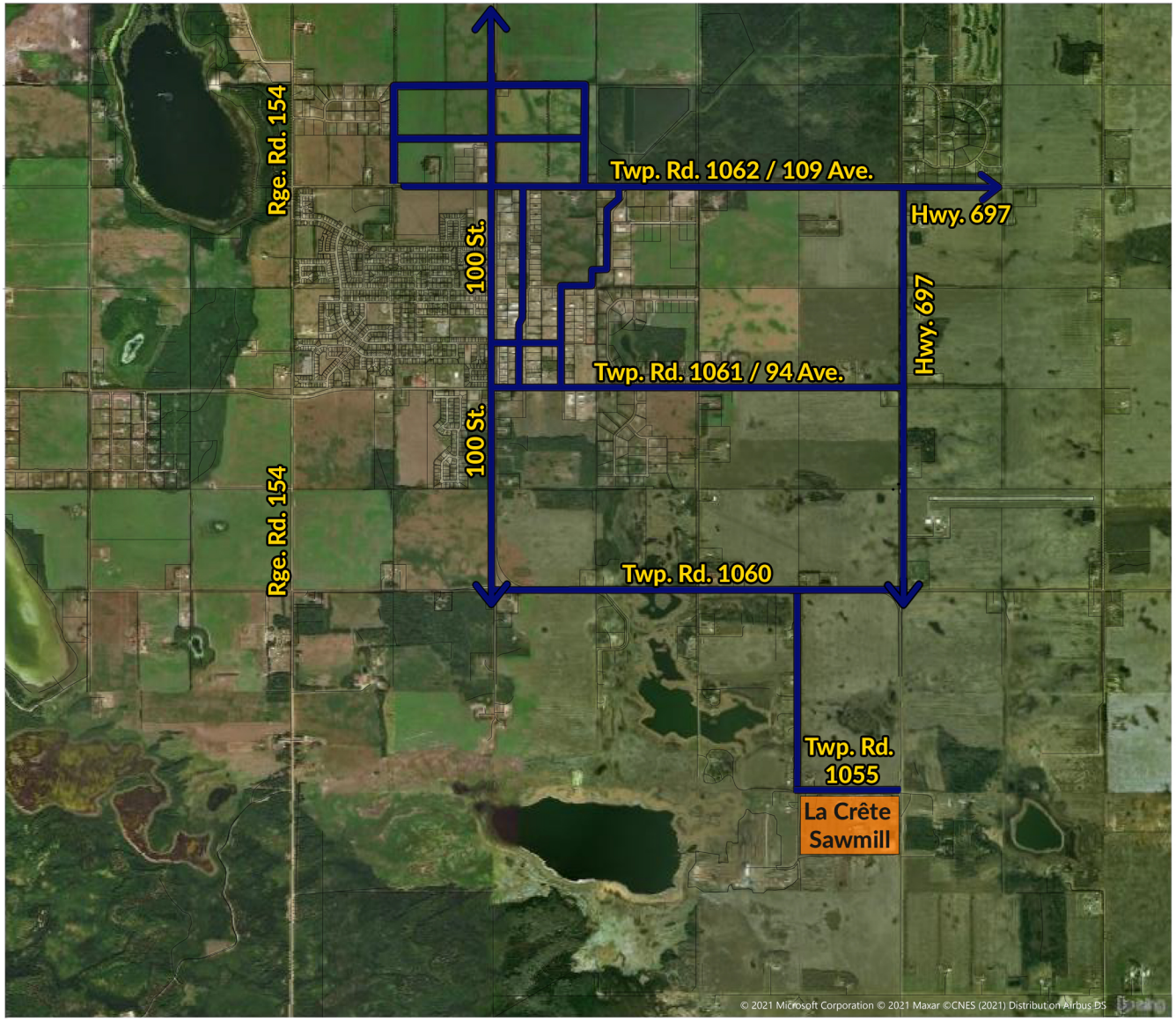


Mackenzie County

LEGEND

Truck Route

Associated Engineering

Canada's Best Managed Companies
Platinum member

FIGURE 4-8
Proposed Truck Routes for La Crête
Background image adapted from La Crête Area Structure Plan 2013

5 DEVELOPMENT TRAFFIC VOLUMES

5.1 Development Phasing

The Lake Side Real Estate subdivision consists of four phases, three of which are proposed to be classified as "rural industrial" while one phase is proposed to be "highway commercial". The Lake Side Real Estate subdivision is proposed to be constructed in four phases, with construction of the last phase beginning in 2030. Several of the County-identified parcels are expected to be completed within the next 5-10 years, and all are expected to be completed within 20 years. The analysis horizons were selected based on the staging information provided for Lake Side Subdivision and the staging information for Parcels 1-6 identified by the County, and are as follows:

- 2021 – Phase 1 (P1) of Lake Side completed
- 2025 - Phase 2 (P2) of Lake Side and County Parcels 1 and 5 fully completed, County Parcels 2 and 6 50% completed, and County Parcels 3 and 4 25% completed
- 2026 – Phase 3 (P3) of Lake Side completed
- 2031 – Phase 4 (P4) of Lake Side completed and County Parcels 3 and 4 50% completed
- 2041 – County Parcels 2, 3, 4 and 6 fully completed
- 2051 - 20-year horizon from opening day of the last phase of Lake Side

The phasing and areas of the upcoming developments in La Crête, including the Lake Side Subdivision and the six parcels identified by the County, are shown in Table 5-1. The locations of the developments are shown in Figure 5-1.

Table 5-1
Staging and Areas of Development

Horizon Year	Assumed Development Completed	Proposed Land Use	Total Area (ha)
2021	Lake Side P1 – 100%	Rural Industrial	12.07
2025	Lake Side P2 – 100%	Rural Industrial	17.08
	County Parcel 1 – 100%	Rural Industrial	23.11
	County Parcel 2 - 50%	Rural Industrial	22.21
	County Parcel 3 - 25%	Light Industrial	4.155
	County Parcel 4 - 25%	Highway Commercial and Light Industrial	9.088
	County Parcel 5 – 100%	Institutional	13.26
	County Parcel 6 - 50%	Heavy Industrial	5.56
2026	Lake Side P3 – 100%	Highway Commercial	8.609
2031	Lake Side P4 – 100%	Rural Industrial	15.89
	County Parcel 3 - 50%	Light Industrial	8.310
	County Parcel 4 - 50%	Highway Commercial and Light Industrial	18.18
2041	County Parcel 2 - 100%	Rural Industrial	44.41

Horizon Year	Assumed Development Completed	Proposed Land Use	Total Area (ha)
	County Parcel 3 - 100%	Light Industrial	16.62
	County Parcel 4 - 100%	Highway Commercial and Light Industrial	36.35
	County Parcel 6 - 100%	Heavy Industrial	11.12

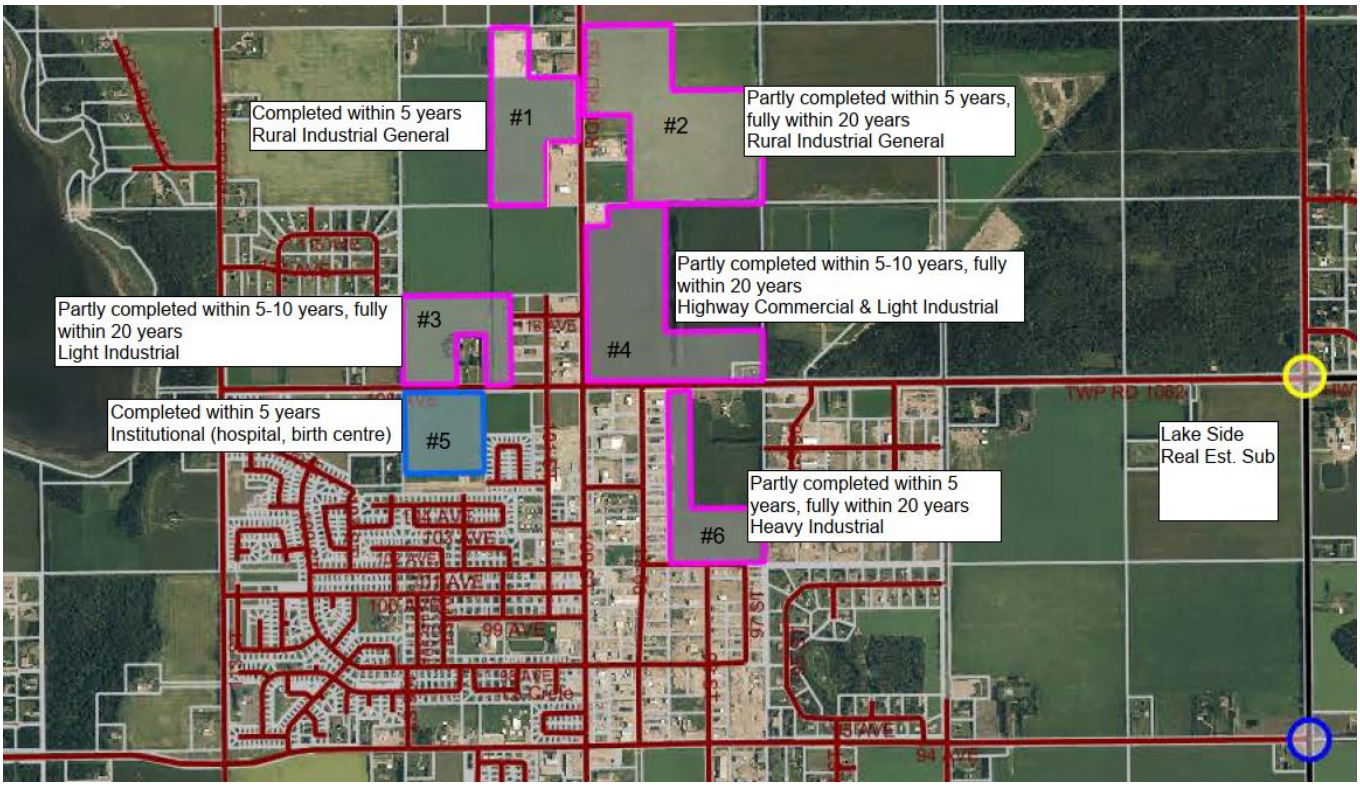


Figure 5-1
Upcoming Development Identified by the County

5.2 Estimation of Development-Generated Volumes

5.2.1 Land Uses and Areas

Development traffic volumes were estimated using information available from the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition). The areas provided in the site plan for the Lake Side Real Estate Subdivision and for the County-identified parcels within La Crête are for total land parcels rather than the building floor areas with each development, which is what the ITE Trip Generation Numbers are based on. At this time, the County does not know the exact land uses proposed for each parcel, and the total floor areas of the development are unknown. It should be noted that without knowing the exact land uses and areas, this analysis requires more assumptions and faces more uncertainty than a typical TIA. However, it is understood that the County would like to gain an understanding of the improvements that will be required at the Hwy 697 and Twp Rd 1062 (109 Ave)

intersection for planning purposes. Therefore, AE used their best judgement to estimate the most applicable land use as defined in the Trip Generation Manual to determine appropriate trip generation rates. AE recommends that a TIA supplement be completed once the land uses are identified and detailed site plans with building areas are developed, in advance of any intersection construction work if possible, to confirm that the estimates and assumptions made in this report are appropriate. The TIA's should also analyze the impact of the development on the affected intersections within La Crête.

Though the County does not know exact land uses proposed within each parcel, they provided examples of the types of businesses for each zoning type. They are as follows:

- Rural industrial general: timberbound shop, heavy industrial lots
- Light industrial: tire/auto repair, utility buildings, transportation companies
- Institutional: hospital, birth centre
- Heavy industrial: fuel stations (cardlock), gas co-op, auto part stores

The definition of potential applicable land use codes and the selected land uses are shown in Table 5-2.

Table 5-2
Potential Land Use Codes

ITE Land Use Code and Label	Definition	Selection
110: General Light Industrial	A light industrial facility is a free-standing facility devoted to a single use. The facility has an emphasis on activities other than manufacturing and typically has minimal office space. Typical light industrial activities include printing, material testing, and assembly of data processing equipment.	This land use code was selected for **Light Industrial (Parcel 3 and a portion of 4).**
130: Industrial Park	An industrial park contains a number of industrial or related facilities. It is characterized by a mix of manufacturing, service, and warehouse facilities with a wide variation in the proportion of each type of use from one location to another. Many industrial parks contain highly diversified facilities – some with a large number of small businesses and others with one or two dominant industries.	This land use code was selected for **Rural Industrial (Parcels 1 and 2, and Phases 1, 2 and 4 of Lake Side)** and **Heavy Industrial (Parcel 6)**. It was deemed more applicable than "Light Industrial" or "Manufacturing" due to the potential in varied use throughout the area.
140: Manufacturing	A manufacturing facility is an area where the primary activity is the conversion of raw materials or parts into finished products. Size and type of activity may vary substantially from one facility to another. In addition to the actual production of goods, manufacturing facilities generally also have office, warehouse, research, and associated functions.	Not selected as the primary function of the industrial areas will not be manufacturing.
150: Warehousing	A warehouse is primarily devoted to the storage of materials, but it may also include office and maintenance areas.	Not selected as the primary function of the industrial areas will not be dedicated to warehousing.

ITE Land Use Code and Label	Definition	Selection
610: Hospital	A hospital is any institution where medical or surgical care and overnight accommodations are provided to non-ambulatory and ambulatory patients. The term "hospital" does not refer to medical clinics or nursing homes.	This land use code was selected for **Institutional (Parcel 5)**, as it is understood that a hospital is planned for this parcel.
770: Business Park	A business park consists of a group of flex-type or incubator one or two-story buildings served by a common roadway system. The tenant space is flexible and lends itself to a variety of uses. Tenants may be start-up companies or small mature companies that require a variety of space. The average mix is 20-30% office/commercial and 70-80% industrial/warehousing.	Not selected as the development will not be primarily buildings for industrial/warehousing use with tenant spaces.
820: Shopping Centre	A shopping centre is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. A shopping centre's composition is related to its market area in terms of size, location, and type of store. A shopping centre also provides on-site parking facilities sufficient to serve its own parking demands. Many shopping centres, in addition to the integrated unit of shops in one building or enclosed around a mall, include outparcels. These buildings are typically drive-in banks, retail stores, restaurants or small offices.	This code was selected for **Highway Commercial (portion of Parcel 4 and Phase 3 of Lake Side)** as it is the most applicable land use code. It is based on surveyed data of shopping centers that include neighbourhood centers, community centers, regional centers, and super regional centers.
823: Factory Outlet Centre	A factory outlet centre is a shopping centre that primarily houses factory outlet stores, attracting customers from a wide geographic area, very often from a larger area than a regional shopping centre.	Not selected as the phase will not be primarily made up of factory outlet stores.

According to the La Crête Industrial Profile, the estimated building site coverage ratio is 4.3% for La Crête's total industrial lands. However, AE also approximated the ratio of existing buildings to total parcel area within the industrial areas in La Crête. The square footage of some businesses was obtained from the Industrial Profile and the rest were approximated off Google Earth. This process is shown in Table 5-3 and is intended to cover a variety of potential uses.

Table 5-3
Existing Industrial Parcels in La Crête with Parcel and Building Areas

Parcel	Quarter Section	Current Use	Total Parcel Area	Approximate Building Area	Ratio of Building Area to Parcel Area
Plan 0727718 Block 2, Lot 1	NE10-106-15-5	True North Powersports – ATV Repair Shop	1.25 ha 12,500 m^2	1,000 m^2	8%
Plan 1321868 Block 2, Lot 1	NE10-106-15-5	Alberta Ltd. Kubota Farm and Rach	2.51 ha 25,100 m^2	1,280 m^2	5%

Parcel	Quarter Section	Current Use	Total Parcel Area	Approximate Building Area	Ratio of Building Area to Parcel Area
Plan 0727718 Block 2, Lot 9	NE10-106-15-5	Built Rite Structures - General Contractor	1.01 ha 10,100 m^2	820 m^2	8%
Plan 1521632 Block 5, Lot 5	NE10-106-15-5	Forest Trotter LP – Logging Contractor	2.14 ha 21,400 m^2	1,090 m^2	5%
Plan 9621721 Block 18, Lot 7	SW10-106-15-5	George's Roofing – Rolled Metal Products Supplier	0.653 ha 6,530 m^2	1,030 m^2	16%
Plan 0227658 Block 21, Lot 1	SW10-106-15-5	Screwy Louie's Locks & Glass – Glass and Mirror Shop	4,350 m^2 (approx.)	175 m^2	4%
Plan 0424214 Block 1, Lot 1	SE16-106-15-5	Integra Tire – Tire Shop	2.02 ha 20,200 m^2	1,815 m^2	9%
Plan 0924475 Block 2, Lot 2	SE16-106-15-5	Ok Tire – Auto Repair Shop	1.02 ha 10,200 m^2	1,530 m^2	15%
Plan 9823499 Block 1, Lot 1	SW2-106-15-5	Northern Road Builders LP – Construction Company	4.87 ha 48,700 m^2	1,990 m^2	4%

As evidenced in Table 5-3, the ratio of industrial building area to total parcel area ranges from 4 – 16%. Though the estimated building site coverage ratio is 4.3%, it is unclear whether this ratio applies to all industrial uses that will be included in these developments. To be conservative, the average of the ratios shown in Table 5-3 was used rather than 4.3%. This average was calculated to be 8.2% and was applied to the total area of each industrial parcel to calculate an estimated floor area for ITE trip generation.

To determine a gross floor area for the commercial areas, AE approximated the ratio of existing buildings to total parcel area within the existing commercial areas in La Crête. The building areas were obtained from the La Crête Retail Analysis or were approximated off Google Earth. This process is shown in Table 5-4.

Table 5-4
Existing Commercial Parcels in La Crête with Parcel and Building Areas

Parcel	Quarter Section	Use	Total Parcel Area	Approximate Building Area	Ratio of Building Area to Parcel Area
Plan 0627695, Block 24, Lot 1	NW10-106-15-5	Super J Foods – Supermarket	1.34 ha 13,400 m^2	2,090 m^2	16%
Plan 1160NY Block 4, Lot 1	NE9-106-15-5	Tuffline Power Sports	0.372 ha 3,720 m^2	560 m^2	15%
Plan 9820781 Block 4, Lot 6	NE9-106-15-5	Country Grill Steak and Ribs	0.4 ha 4,000 m^2	390 m^2	10%

Parcel	Quarter Section	Use	Total Parcel Area	Approximate Building Area	Ratio of Building Area to Parcel Area
Plan 1822539, Block 1, Lot L	NE4-106-15-5	The Espresso House FitLife Burger Shack Agriculture Financial Services	1.339 ha 13,390 m^2	3,080 m^2	23%
Plan 9020454, Block 5, Lot 18	SW10-106-15-5	UFA Farm & Ranch Supply Store	1.617 ha 16,170 m^2	2,140 m^2	13%

As evidenced in **Table 5-4**, the ratio of commercial building area to total parcel area ranges from 10 – 23%. Therefore, the average of the above ratios, 15.4%, was applied to the total area of the commercial phases to calculate an estimated floor area for ITE trip generation.

Parcel 5 is planned for a future hospital, as identified by the County. At this time, the size is unknown. Therefore, the size was approximated using St. Theresa General Hospital in Fort Vermilion, as it is assumed that the La Crête facility would be similar in size. The size of St. Theresa is approximately 3235 m^2, or 0.3235 ha. This size was used to establish trip generation for Parcel 5.

Since the average ratios of building area to parcel area calculated above do not include the road area allowance, they were slightly reduced to account for road and public utility lot allowances within the Lake Side Subdivision and Parcels 1-6. The road allowances within the Lake Side Subdivision have been identified in the site plan provided and are as follows:

- Phase 1: 3.67 ha for new roadway and 0.386 ha for MUL (assumed to be municipal/public utility lot) out of a total of 8.015 ha
- Phase 2: 1.93 ha for new roadway and 0.323 ha for MUL out of a total of 14.827 ha
- Phase 3: 0.355 ha for MUL out of a total of 18.254 ha, with roadway constructed already as part of Phase 1
- Phase 4: 3.37 ha for new roadway and 0.323 ha for MUL out of a total of 12.196 ha

This is a total of 10.36 ha for roadway and MUL out of a total subdivision area of 53.29 ha, or 19.4%. Therefore, the total areas of Parcels 1-6 were also reduced by 19.4% to account for internal roads and municipal utility lots. Then, either the commercial or industrial building to total parcel area ratio was applied to each area to obtain an estimated floor area.

The trip generation in the AM and PM peaks for all land use codes was estimated based on the estimated floor areas for each parcel, using the setting of "general urban/suburban" during weekday peak hours of adjacent street traffic. A copy of the land use code figures can be found in **Appendix E**.

The adjusted areas for each development area based on the total estimated gross floor area and the corresponding AM and PM peak trips generated by area in each horizon year are shown in **Table 5-5.**

Table 5-5
Trip Generation Based on Estimated Floor Area

Horizon Year	Assumed Development Completed	Selected Land Use Code	Land Area (ha)*	Estimated Floor Area (ha)		Generated Trips AM Peak			Generated Trips PM Peak		
				ha	ft^2	Rate / 1000 ft^2	Trips In	Trips Out	Rate / 1000 ft^2	Trips In	Trips Out
2021	Lake Side P1 – 100%	Industrial Park (130)	12.1	0.6572	70744	0.4	23	5	0.4	6	22
2025	Lake Side P2 – 100%	Industrial Park (130)	17.1	1.216	130895	0.4	42	10	0.4	11	41
	County Parcel 1 – 100%	Industrial Park (130)	23.1	1.527	164406	0.4	53	12	0.4	14	52
	County Parcel 2 - 50%	Industrial Park (130)	22.1	1.468	158004	0.4	51	12	0.4	13	50
	County Parcel 3 - 25%	Light Industrial (110)	4.16	0.2746	29559	0.7	18	2	0.63	2	16
	County Parcel 4 - 25%	Shopping Centre (820) (50%) Light Industrial (110) (50%)	4.54 4.54	0.5640 0.3003	60710 32326	0.94 0.7	35 20	22 3	3.81 0.63	111 3	120 18
	County Parcel 5 – 100%	Hospital (610)	13.3	0.3235	34821	0.89	21	10	0.97	11	23
	County Parcel 6 - 50%	Industrial Park (130)	5.56	0.3675	39554	0.4	13	3	0.4	3	12
2026	Lake Side P3 – 100%	Shopping Centre (820)	8.61	1.271	136822	0.94	80	49	3.81	250	271
2031	Lake Side P4 – 100%	Industrial Park (130)	15.9	1.000	107647	0.4	35	8	0.4	9	34
	County Parcel 3 - 50%	Light Industrial (110)	8.31	0.5492	59118	0.7	36	5	0.63	5	32
	County Parcel 4 - 50%	Shopping Centre (820) (50%) Light Industrial (110) (50%)	9.09 9.09	1.128 0.6008	121448 64667	0.94 0.7	71 40	43 5	3.81 0.63	222 5	241 35
2041	County Parcel 2 - 100%	Industrial Park (130)	44.4	2.935	315936	0.4	102	24	0.4	27	100
	County Parcel 3 - 100%	Light Industrial (110)	16.6	1.098	118236	0.7	73	10	0.63	10	65
	County Parcel 4 - 100%	Shopping Centre (820) (50%) Light Industrial (110) (50%)	18.2 18.2	2.256 1.201	242829 129298	0.94 0.7	142 80	87 11	3.81 0.63	444 11	481 71
	County Parcel 6 - 100%	Industrial Park (130)	11.1	0.7349	79109	0.4	26	6	0.4	7	25

*Land area is adjusted to exclude estimated percentage of total parcel that would be roads and public utility lots.

5.2.2 Pass-by Trips

The number of trips generated by the Lake Side Real Estate Subdivision and County-identified Parcel 4 will consider pass-by trips for the commercial land use. These trips are not new traffic added to the road, but existing road users entering the development as a detour to their ultimate destination. The ITE Trip Generation Manual explains that pass-by trips typically occur where commercial retail units are situated adjacent to a busy street as the development attracts motorists already on a street system for a different purpose. The convenience of the development such as a gas station being "on the way" encourages detour, however it is not considered to be the primary trip destination. It has been assumed that the trips associated with the commercial developments will consist both of pass-by trips which are already part of the network and have been diverted from the highway or township road, and of new trips created because of the development. The industrial and hospital land use codes do not have pass-by data because the nature of the developments do not commonly create pass-by trips and are considered to be the intended destination of the road user. Based on ITE Trip Generation Handbook Appendix E, the pass-by trip percentage for land use code 820 which will be factored into this assessment is 14% in the PM peak, meaning that 14% of all trips generated in the PM peak will be removed from the total new trips generated. No pass-by data was available for the AM peak. The pass-by trip reductions that are applicable in this study are shown in Table 5-6.

Table 5-6
Pass-by Trips for Commerial Land Uses

Horizon Year	Development	Pass-by Trip % PM Peak	Pass-by Trips In	Pass-by Trips Out	Total Trips In	Total Trips Out
2025	County Parcel 4 - 25%	14	16	17	95	103
2026	County Parcel 4 - 25%	14	16	17	95	103
	Lake Side P3 – 100%	14	35	38	215	233
2031	County Parcel 4 – 50%	14	31	34	191	207
	Lake Side P3 – 100%	14	35	38	215	233
2041	County Parcel 4 – 100%	14	62	67	382	414
	Lake Side P3 – 100%	14	35	38	215	233

5.2.3 Trip Distribution

All the upcoming development will have an impact on the Hwy 697 and Twp Rd 1062 (109 Ave) intersection, as it is the most direct access to both Lake Side Subdivision and the County-identified Parcels 1-6. It is also expected to impact the Hwy 697 and Twp Rd 1061 (94 Ave) intersection, the Hwy 697 and Twp Rd 1060 (South Access) intersection, and have a minor impact on the Hwy 697 and Twp Rd 1055 (Sawmill Access) intersection. The trip assignment methodology for the developments is described below. It is understood that Alberta Transportation will not allow any additional accesses to be constructed along Hwy 697 as there are already several existing accesses along the highway between the township roads providing access into La Crête.

Lake Side Subdivision:

- All the Lake Side Subdivision development traffic will be entering/exiting through an access off Twp Rd 1062 on the north side of the development. The proposed development does have allowance for a future access to the south, but that is currently an undeveloped quarter section and the County has not indicated timelines for construction of this road connection.
- Traffic accessing Lake Side Subdivision has been split at 109 Ave according to the 2019 AT peak hour data percentage of traffic going eastbound versus westbound on Twp Rd 1062 / 109 Ave.
- Any Lake Side development traffic coming from and going to the east would be added to the Hwy 697 and Twp Road 1062 (109 Ave) intersection.
- The additional development traffic making the eastbound right and the northbound left at Hwy 697 and Twp Rd 1062 (109 Ave) has been added as through traffic to the Twp Road 1061, Twp Rd 1060, and Twp Rd 1055 intersections.

County Parcels 1-6:

- For the County-identified Parcels 1-6, it has been assumed that no traffic would make a southbound right turn at the Hwy 697 and Twp Rd 1061 (94 Ave) or Hwy 697 and Twp Rd 1060 (South Access) intersections only to proceed back north to the parcels.
- The traffic generated by Parcels 1-6 was distributed at the 100 St and 109 Ave (Twp Rd 1062) intersection and subsequently at the 100 St and 94 Ave intersection (Twp Rd 1061) using the percentage split as determined from the 2020 manual count data for the AM and PM peaks.
- Development traffic passing through the 100 St and 94 Ave (Twp Rd 1061) intersection was assumed to be split at the 100 St and Twp Rd 1060 (South Access) intersection using the same percentage split as seen in the 2020 manual count for 100 St and 94 Ave, because no data was available for the Twp Rd 1060 intersection.
- The development traffic from Parcels 1-6 that passed through the 100 St and 94 Ave (Twp Rd 1061) intersection via the southbound left and the westbound right was added to the Hwy 697 and Twp Rd 1061 (94 Ave) intersection in the form of eastbound right and northbound left turns.
- The development traffic from Parcels 1-6 that passed through the 100 St and Twp Rd 1060 (South Access) intersection via the southbound through and the northbound through was added to the Hwy 697 and Twp Rd 1060 (South Access) intersection in the form of eastbound right and northbound left turns.
- The development traffic from Parcels 1 and 2 is assumed to all travel to/from the south, as these developments are at the north hamlet limits and there is no development or easy highway access to the north.
- The development traffic from Parcels 3 and 5 was split between eastbound and westbound according to the 2020 manual turning movement data on the west leg of the 100 St and 109 Ave (Twp Rd 1062) intersection.
- It was assumed that Parcel 4 would have an access on 109 Ave and an access on 100 St. Since the parcel layout is unknown, it was further assumed that the development traffic would be split 50/50 between the two accesses. Half the traffic using the 100 St access was distributed using the percentage split at the 100 St and 109 Ave (Twp Rd 1062) intersection. The other half of the traffic using the 109 Ave access was distributed along 109 Ave using the percentage split of eastbound versus westbound.
- The traffic generated by Parcel 6 was distributed at its assumed access on 109 Ave using the percentage split on 109 Ave east of 100 St.

The percentage splits are shown in **Figure 5-2**.

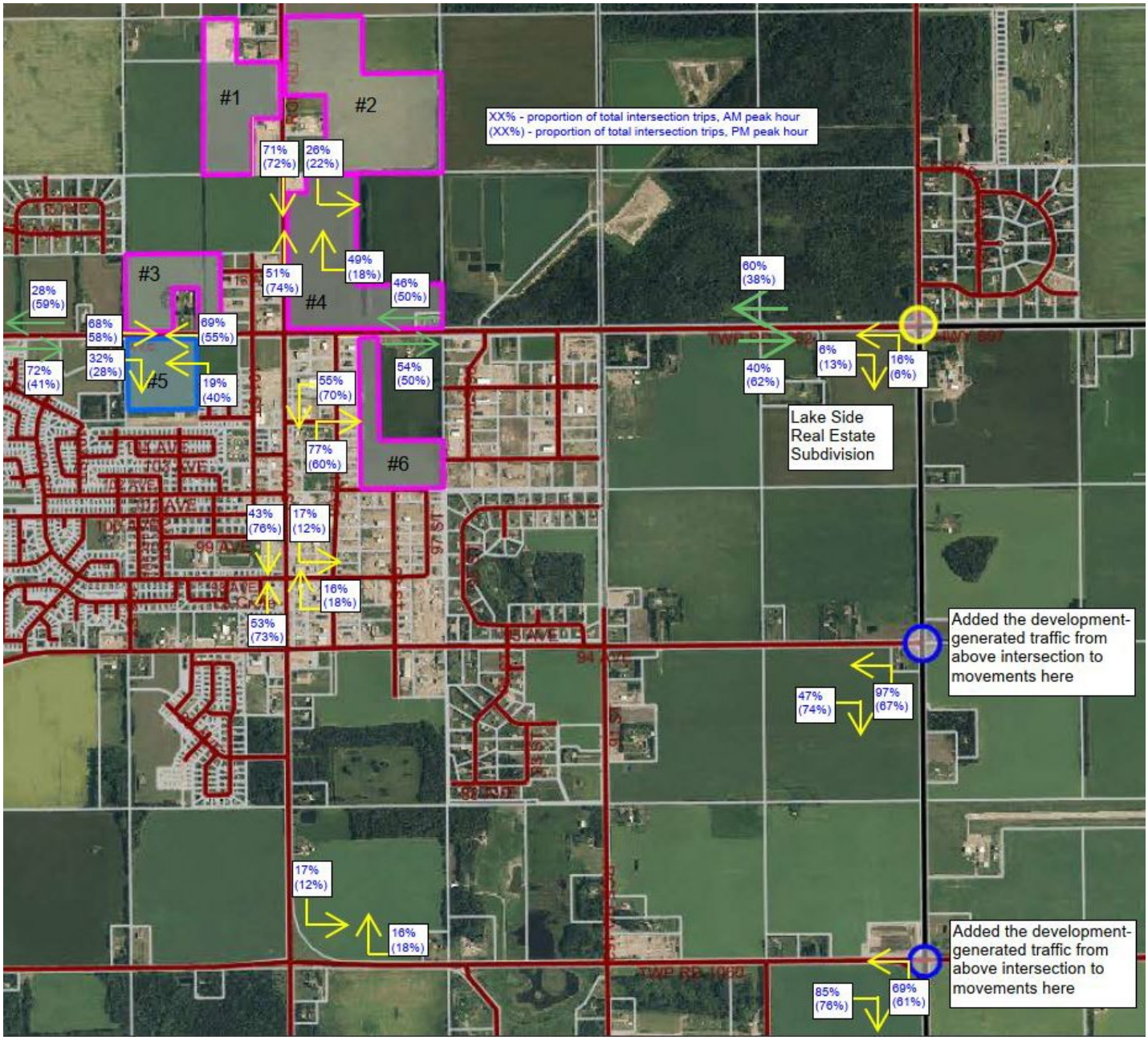


Figure 5-2
Trip Distribution According to Traffic Count Percentage Splits

6 HWY 697 AND TWP RD 1062 (109 AVE) INTERSECTION ASSESSMENT

6.1 Background

The Hwy 697 and Twp Rd 1062 (109 Ave) intersection was analyzed using background traffic volumes and anticipated development traffic from the parcels identified in La Crête, as well as the traffic generated by the Lake Side Real Estate Subdivision.

The County shared a Traffic Impact Assessment (TIA) that was completed in January 2006 for the development in SW 13-106-15-W5M (the northeast quadrant of the intersection), which determined that the intersection of Hwy 697 and Twp Rd 1062 (109 Ave) would require upgrading to a Type IIId intersection following full size development (using a design horizon of 2025). This development has now been constructed but the intersection has not been upgraded. As determined during the site visit, this intersection's current configuration is a modified Type IIIc treatment.

6.2 Traffic Volumes

6.2.1 Background Traffic

The highway traffic volumes at this intersection have been increasing over the last few years, but prior to that, the volumes were stable. As recommended by Alberta Transportation, the high growth rate recently seen at this intersection is expected to stabilize in the long term. Therefore, the average historical growth rate of 2.76% was applied to the background highway traffic and grown out to each design horizon. A 1% growth rate was applied to the traffic movements on the minor roads (Twp Rd 1062 / 109 Ave and Rge Rd 151). The 20-year horizon from full build out is considered to be 2051, so background traffic was grown until then. Background traffic volumes for existing day (2019) and the established design horizons are shown in **Figure 6-1** to **Figure 6-7** for AADT and both peak hours.

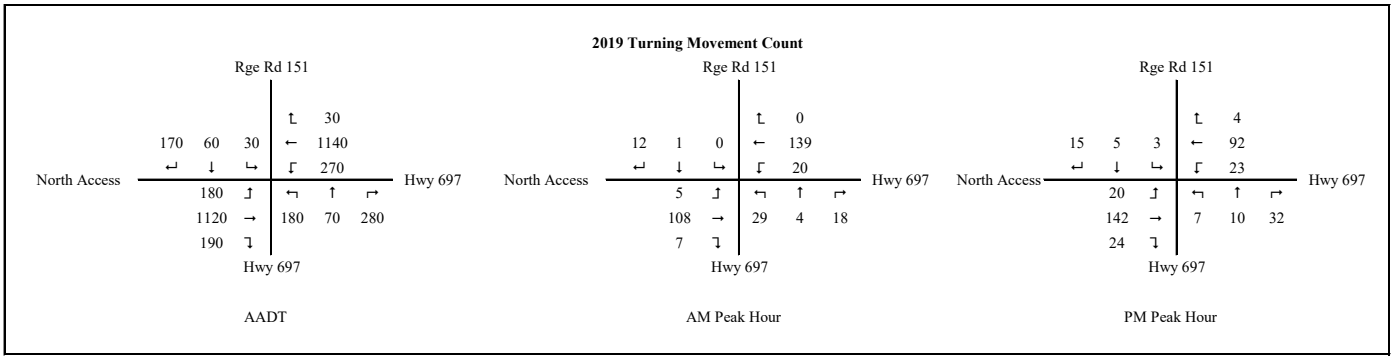


Figure 6-1
2019 Background Volumes for Hwy 697 and Twp Rd 1062 (109 Ave)

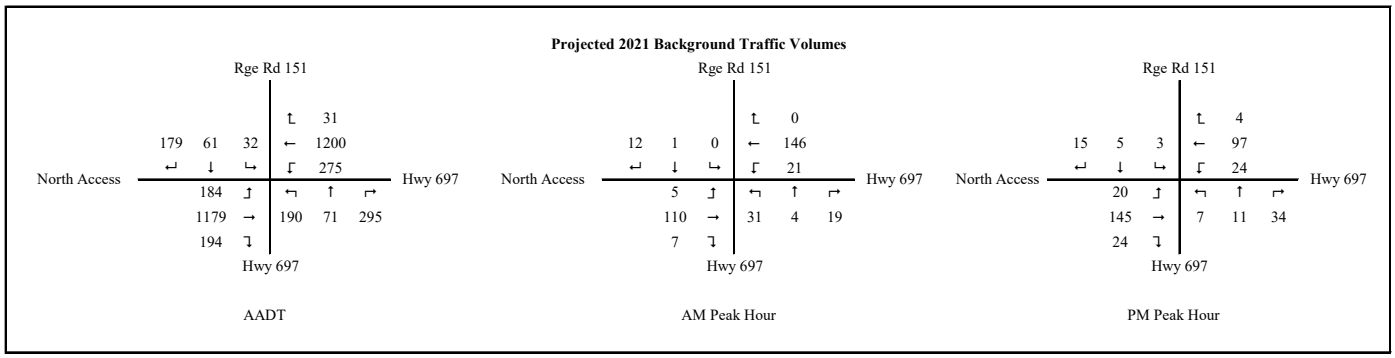


Figure 6-2
2021 Background Volumes for Hwy 697 and Twp Rd 1062 (109 Ave)

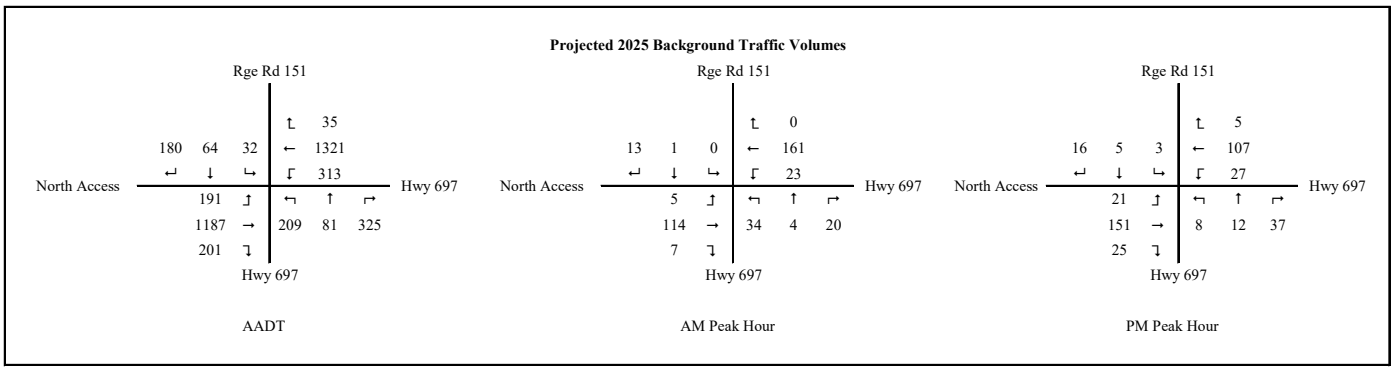


Figure 6-3
2025 Background Volumes for Hwy 697 and Twp Rd 1062 (109 Ave)

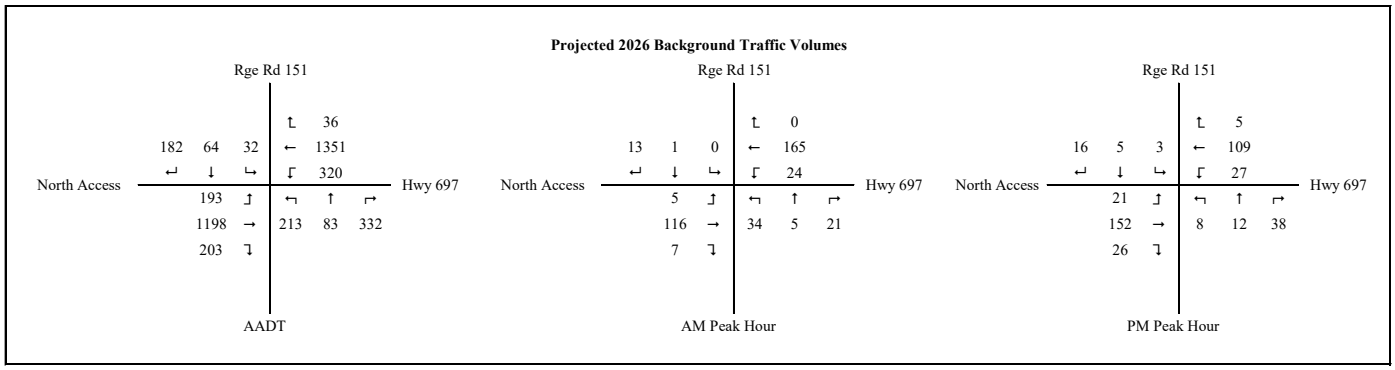


Figure 6-4
2026 Background Volumes for Hwy 697 and Twp Rd 1062 (109 Ave)

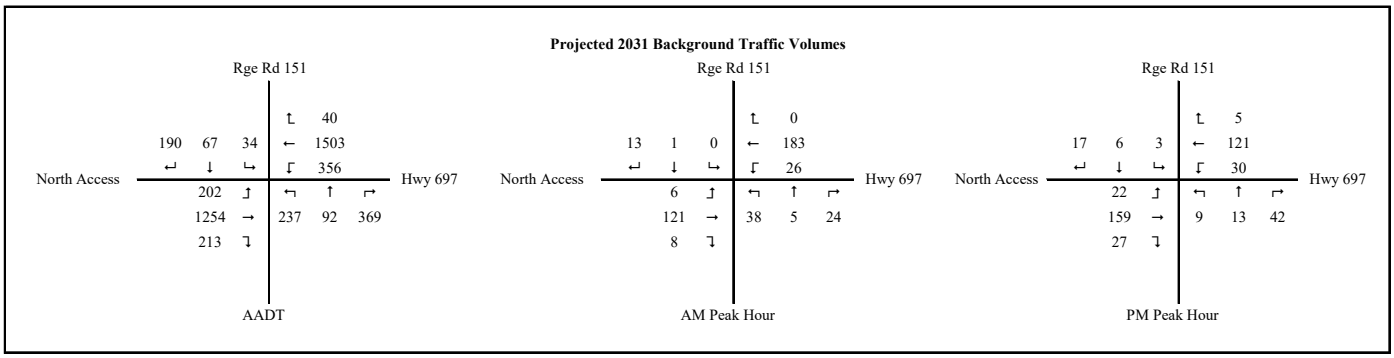


Figure 6-5
2031 Background Volumes for Hwy 697 and Twp Rd 1062 (109 Ave)

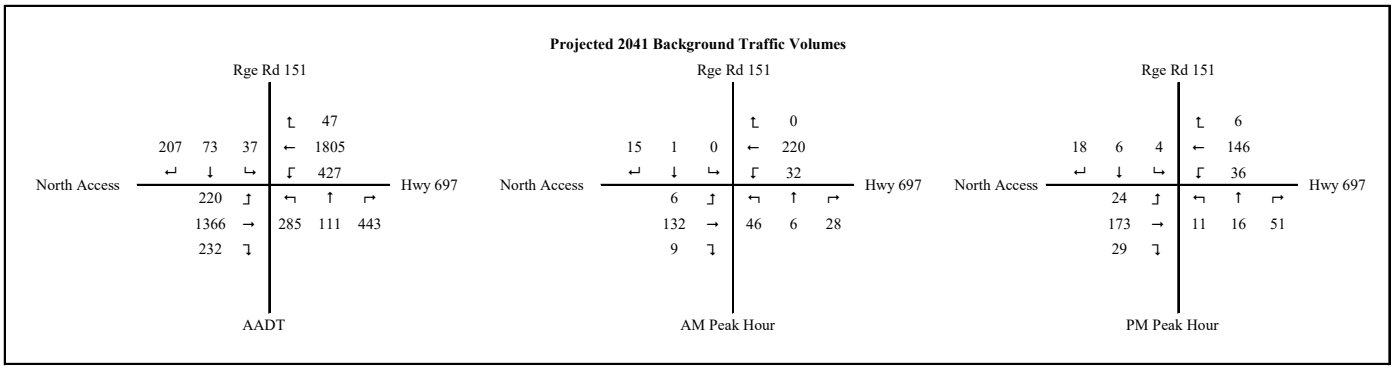


Figure 6-6
2041 Background Volumes for Hwy 697 and Twp Rd 1062 (109 Ave)

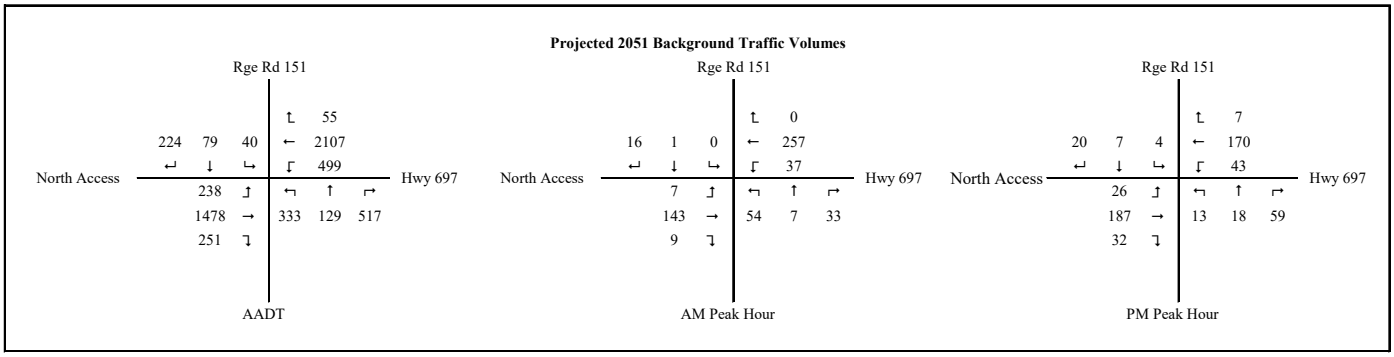


Figure 6-7
2051 Background Volumes for Hwy 697 and Twp Rd 1062 (109 Ave)

6.2.2 Development Traffic

The estimated development traffic volumes for the AM and PM peak at the Hwy 697 and Twp Rd 1062 (109 Ave) intersection using the design horizons and trip generation and assignment methods described in the previous section are shown for each development in **Figure 6-8** through **6-12.**

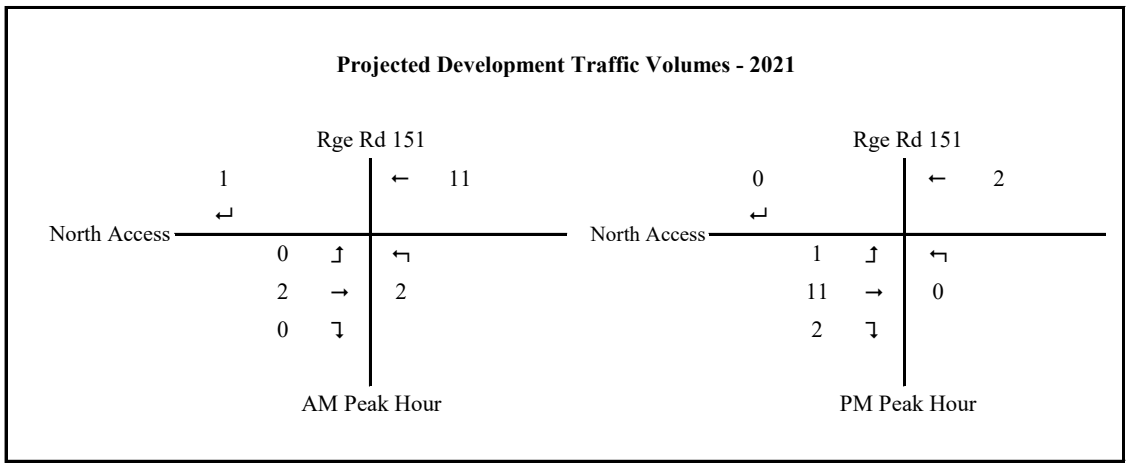


Figure 6-8
2021 Development Volumes for Hwy 697 and Twp Rd 1062 (109 Ave)

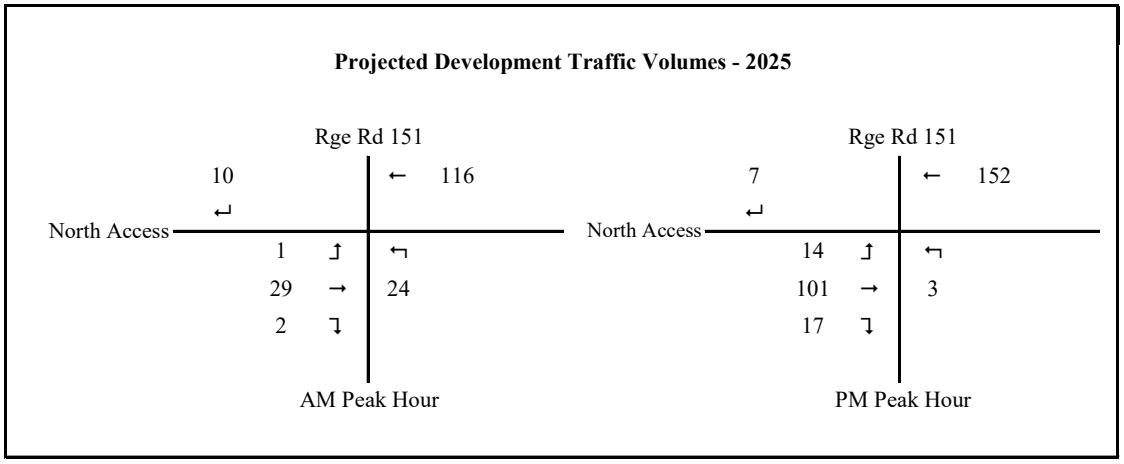


Figure 6-9
2025 Development Volumes for Hwy 697 and Twp Rd 1062 (109 Ave)

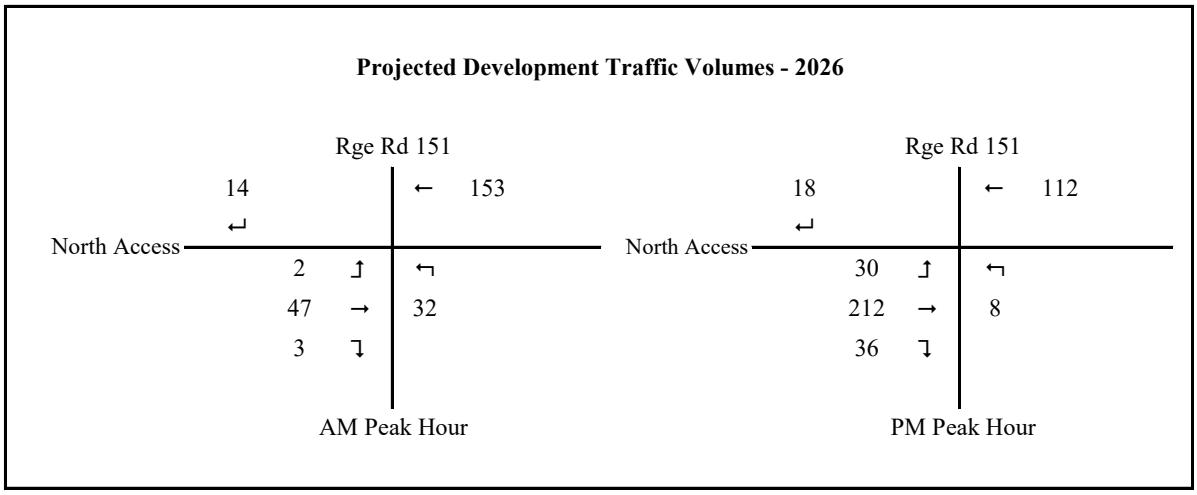


Figure 6-10
2026 Development Volumes for Hwy 697 and Twp Rd 1062 (109 Ave)

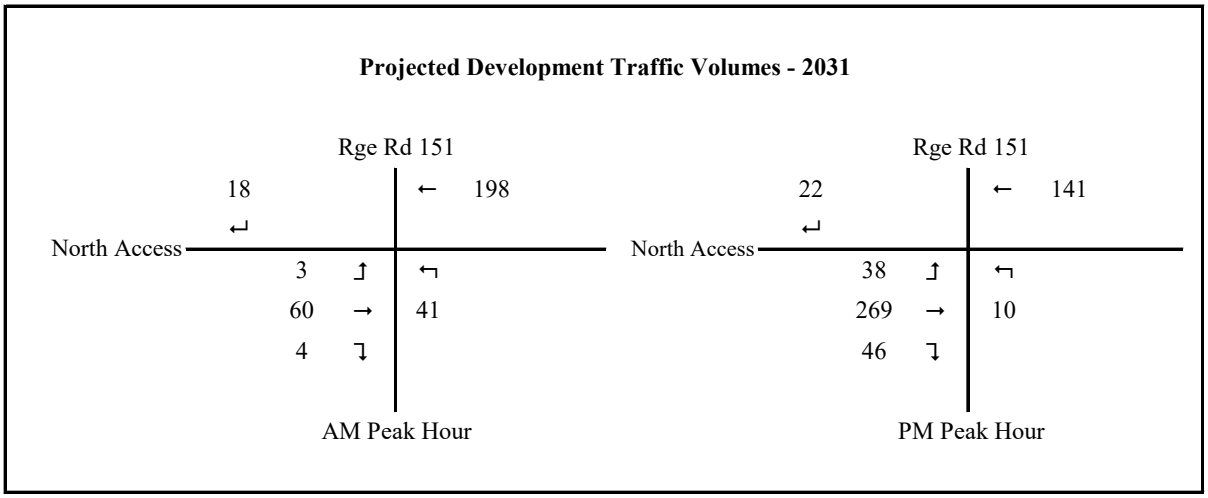


Figure 6-11
2031 Development Volumes for Hwy 697 and Twp Rd 1062 (109 Ave)

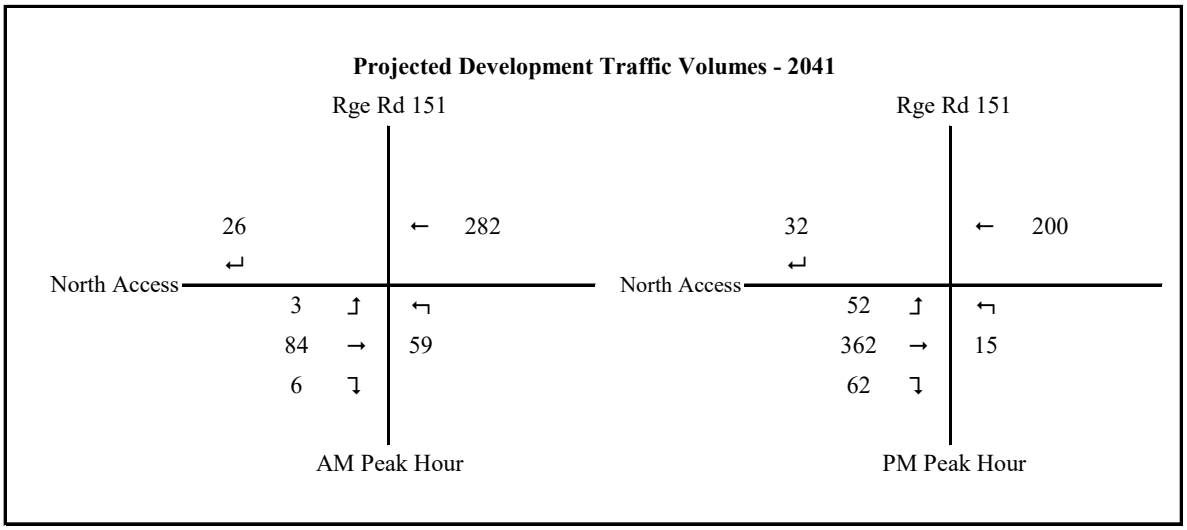


Figure 6-12
2041 Development Volumes for Hwy 697 and Twp Rd 1062 (109 Ave)

6.2.3 Combined Traffic

To determine the combined traffic volumes, the development traffic was added to the background volumes for each development horizon. These traffic volumes form the basis of the analysis for this study and are presented in Figure 6-13 to Figure 6-18.

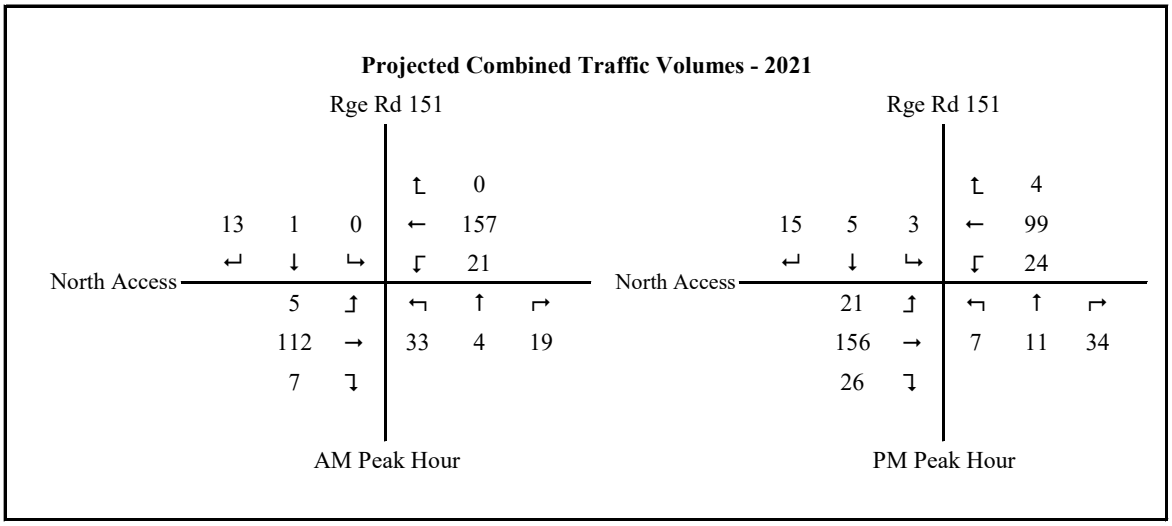


Figure 6-13
2021 Combined Volumes for Hwy 697 and Twp Rd 1062 (109 Ave)

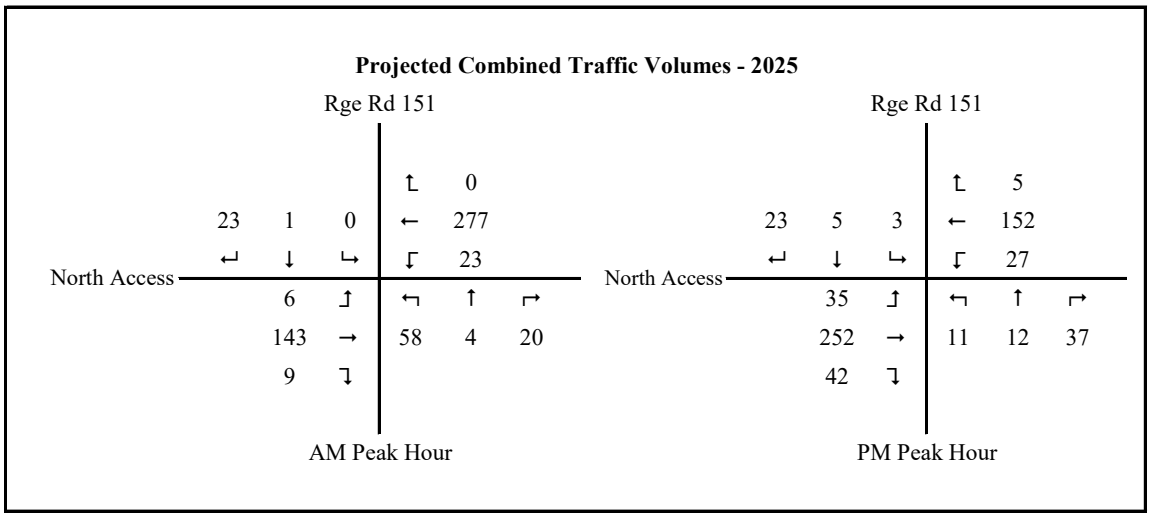


Figure 6-14
2025 Combined Volumes for Hwy 697 and Twp Rd 1062 (109 Ave)

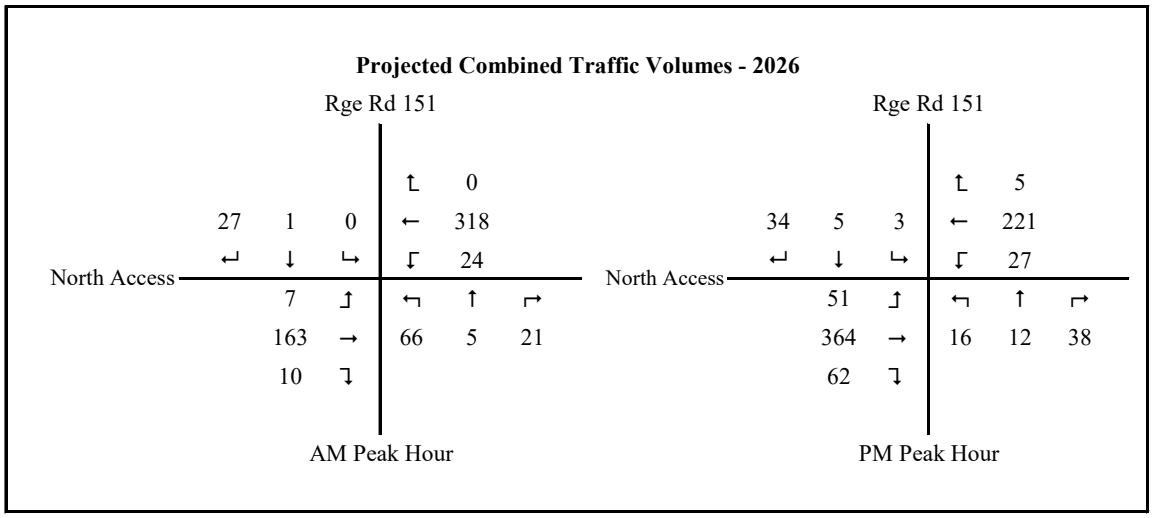


Figure 6-15
2026 Combined Volumes for Hwy 697 and Twp Rd 1062 (109 Ave)

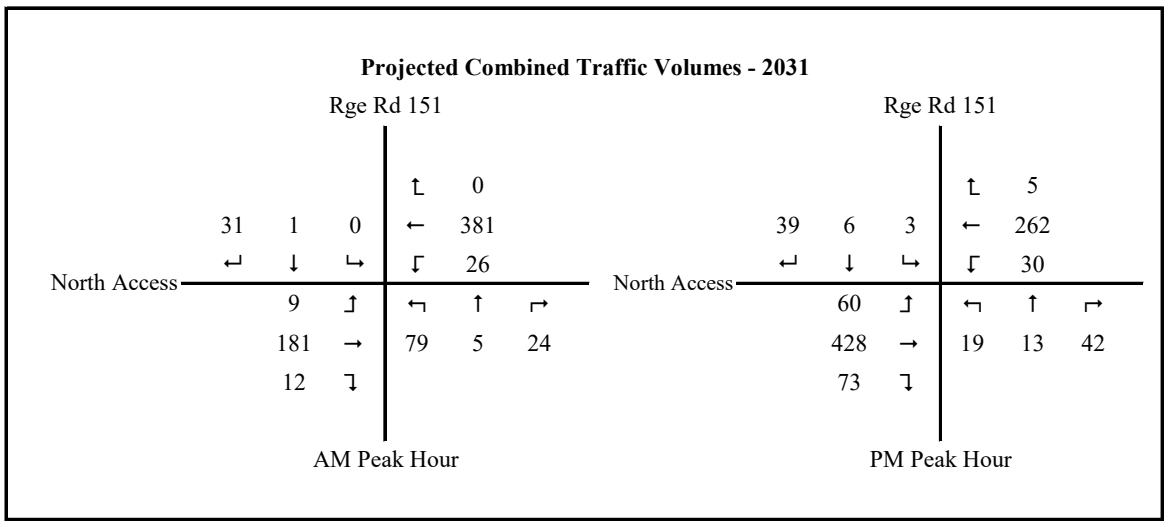


Figure 6-16
2031 Combined Volumes for Hwy 697 and Twp Rd 1062 (109 Ave)

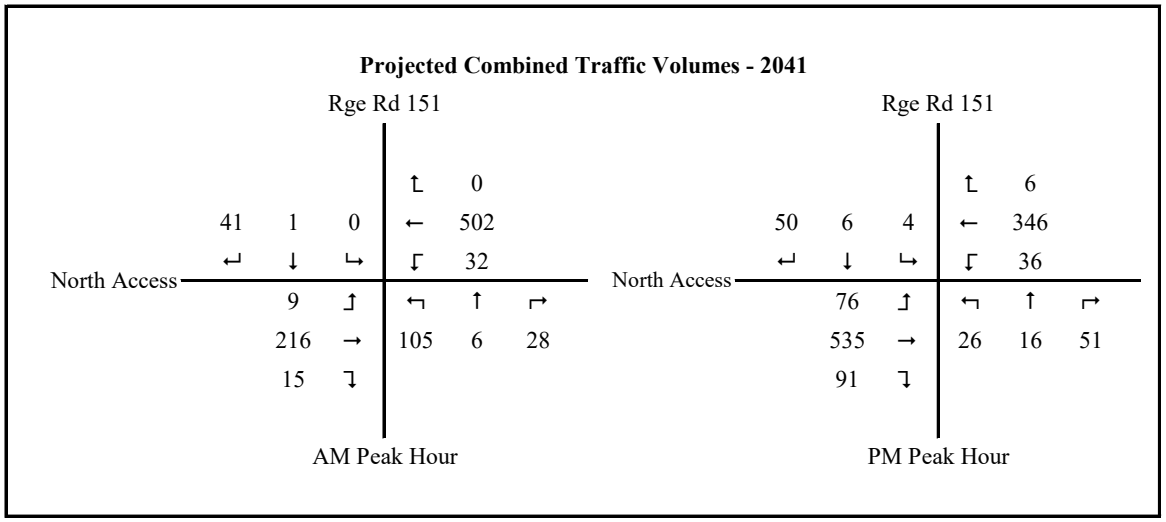


Figure 6-17
2041 Combined Volumes for Hwy 697 and Twp Rd 1062 (109 Ave)

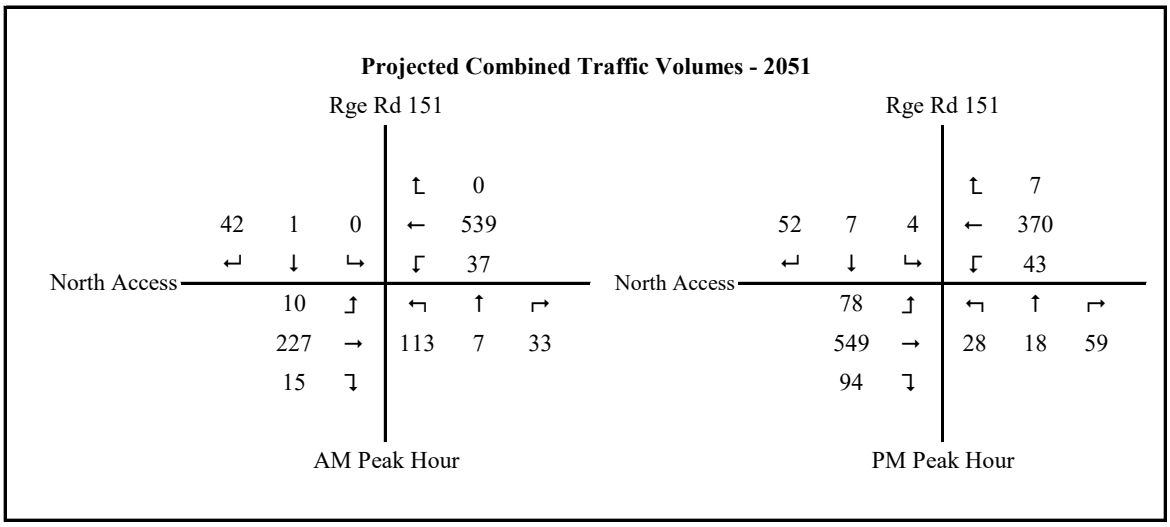


Figure 6-18
2051 Combined Volumes for Hwy 697 and Twp Rd 1062 (109 Ave)

6.3 Alberta Transportation Warrant Analysis

According to Figure D-7.4 (included **in Appendix F**) of the Highway Geometric Design Guide, this intersection warrants a detailed analysis to determine the appropriate treatment using the 2019 volumes. A warrant analysis was completed for both the left turns and right turns for eastbound and westbound traffic in each design horizon, using the combined estimates that include both the projected background traffic and the estimated development traffic.

6.3.1 Left-Turn Warrant

The left turn warrant analysis for each design horizon was completed as per Section D.7.6, using a design speed of 110 km/h. **Table 6-1** through **Table 6-6** show the left turn warrants for 2021, 2025, 2026, 2031, 2041 and 2051. **Table 6-7** shows the left turn warrant with background traffic only in 2051.

Table 6-1
2021 Left Turn Warrant Analysis for Hwy 697 and Twp Rd 1062 (109 Ave

Hwy 697 & Twp Rd 1062	2021 AM – EB	2021 AM – WB	2021 PM – EB	2021 PM - WB
VL (Left-Turning Volume)	5	21	21	24
VA (Advancing Volume)	124	178	202	127
% Left Turns	4%	12%	10%	19%
VO (Opposing Volume)	178	124	127	202
Treatment Warranted	Type II	Type III	Type III	Type III

Table 6-2
2025 Left Turn Warrant Analysis for Hwy 697 and Twp Rd 1062 (109 Ave)

Hwy 697 & Twp Rd 1062	2025 AM – EB	2025 AM – WB	2025 PM – EB	2025 PM - WB
VL (Left-Turning Volume)	6	23	35	27
VA (Advancing Volume)	158	300	330	184
% Left Turns	4%	8%	11%	15%
VO (Opposing Volume)	300	158	184	330
Treatment Warranted	Type II	Type IV	Type IV	Type IV
Storage Length (if any)	N/A	0 m	0 m	0 m

Table 6-3
2026 Left Turn Warrant Analysis for Hwy 697 and Twp Rd 1062 (109 Ave)

Hwy 697 & Twp Rd 1062	2026 AM – EB	2026 AM – WB	2026 PM – EB	2026 PM – WB
VL (Left-Turning Volume)	7	24	51	27
VA (Advancing Volume)	180	342	477	253
% Left Turns	4%	7%	11%	11%
VO (Opposing Volume)	342	180	253	477
Treatment Warranted	Type III	Type IV	Type IV	Type IV
Storage Length (if any)	N/A	0 m	10 m	0 m

Table 6-4
2031 Left Turn Warrant Analysis for Hwy 697 and Twp Rd 1062 (109 Ave)

Hwy 697 & Twp Rd 1062	2031 AM – EB	2031 AM – WB	2031 PM – EB	2031 PM – WB
VL (Left-Turning Volume)	9	26	60	30
VA (Advancing Volume)	202	407	562	297
% Left Turns	4%	6%	11%	10%
VO (Opposing Volume)	407	202	297	562
Treatment Warranted	Type III	Type IV	Type IV	Type IV
Storage Length (if any)	N/A	0 m	15 m	0 m

Table 6-5
2041 Leff Turn Warrant Analysis for Hwy 697 and Twp Rd 1062 (109 Ave)

Hwy 697 & Twp Rd 1062	2041 AM – EB	2041 AM – WB	2041 PM – EB	2041 PM – WB
VL (Left-Turning Volume)	9	32	76	36
VA (Advancing Volume)	240	534	703	388
% Left Turns	4%	6%	11%	9%
VO (Opposing Volume)	534	240	388	703
Treatment Warranted	Type IV	Type IV	Type IV	Type IV
Storage Length (if any)	0 m	10 m	25 m	10 m

Table 6-6
2051 Left Turn Warrant Analysis for Hwy 697 and Twp Rd 1062 (109 Ave)

Hwy 697 & Twp Rd 1062	2051 AM – EB	2051 AM – WB	2051 PM – EB	2051 PM – WB
VL (Left-Turning Volume)	10	37	78	43
VA (Advancing Volume)	252	576	722	420
% Left Turns	4%	6%	11%	10%
VO (Opposing Volume)	576	252	420	722
Treatment Warranted	Type IV	Type IV	Type IV	Type IV
Storage Length (if any)	0 m	10 m	35 m	15 m

Table 6-7
2051 Left Turn Warrant Analysis for Hwy 697 and Twp Rd 1062 (109 Ave) – Background Traffic Only

Hwy 697 & Twp Rd 1062	2051 AM – EB	2051 AM – WB	2051 PM – EB	2051 PM – WB
VL (Left-Turning Volume)	7	37	26	43
VA (Advancing Volume)	159	294	245	220
% Left Turns	4%	13%	11%	20%
VO (Opposing Volume)	294	159	220	245
Treatment Warranted	Type II	Type IV	Type IV	Type IV
Storage Length (if any)	N/A	0 m	0 m	0 m

6.3.2 Right-Turn Warrant

The right-turn warrant analysis based on AT's HGDG requires an exclusive right-turn lane when all three of the following conditions are met:

1. Main (or through) road AADT ≥ 1,800 – condition met in 2019
2. Intersecting road AADT ≥ 900 – condition met in 2019
3. Right-turn daily traffic volume ≥ 360 for the movement in question - the projected eastbound right turning combined volumes exceed 360 starting in year 2026, so an exclusive eastbound right turn is warranted. The westbound right turn volumes are not projected to exceed 360 within the furthest horizon of 2051.

If an exclusive right turn lane is warranted, the standard Alberta Transportation Type IVd layout should be used.

6.3.3 Combined Warrant Analysis

As seen in the left turn warrant analysis, an Alberta Transportation Type IV treatment becomes warranted for both the eastbound and westbound left turns in 2025. In 2041 at full build out of all development, 25 m of additional storage length will be required for the eastbound left turn and 10 m of extra storage length for the westbound left turn. In 2051, 35 m of additional storage length will be required for the eastbound left turn and 15 of additional storage length will be required for the westbound left turn.

The right turn warrant analysis indicates that the intersection treatment will require an exclusive right turn lane for the eastbound right by 2026. No exclusive right turn is required for the westbound right.

Without the developments, a Type IV treatment would still be required but without the additional storage lengths for the left turns and without an exclusive eastbound right-turn.

As stated in Section D.7.8, a channelized intersection may be warranted at intersections with high through traffic volumes (above 4,000 AADT). It states that where both left and right turn lanes are required, this is usually a good candidate for channelization. The estimated traffic volumes will exceed 4,000 AADT in 2051 at this intersection growing the background traffic only, i.e. without the development.

This intersection will require upgrading from its current Type IIIc configuration to meet the estimated background traffic volumes as well as the combined traffic volumes. As recommended in Section D.7.8, channelization for the eastbound right-turn should be considered in the design of this intersection upgrade to avoid the need for a six-lane flared intersection, which is very wide, and to avoid delay of vehicles on the intersecting road. The island should be depressed due to the rural setting of the intersection. It should be noted that a channelized right turn would modify the intersection treatment to a Type V configuration, which requires Alberta Transportation approval.

Another important consideration is that channelization of the eastbound right will require more right-of way and may affect the northeast corner of the proposed Lake Side Subdivision plan.

6.4 Capacity Analysis

The Synchro analysis program is based on the ITE Highway Capacity Manual (HCM) 2010 and was used to analyze the capacity of the study intersection and determine the need for additional intersection and capacity improvements. This program applies the methodology established by the HCM to output a level of service (LOS) for a study intersection, given the lane designations, vehicular volumes, signal timing and heavy vehicle percentages. Intersection operations are typically rated by two measures: LOS and volume-to-capacity ratios (v/c).

Level of service is based on the estimate average delay per vehicle for all traffic passing through an intersection. A high LOS is a result of a very low average delay; the highest LOS is identified as LOS A. A low LOS is identified as LOS F. The LOS categories vary depending on whether an intersection is signalized, stop, or yield-controlled. The HCM justifies this difference by noting that drivers stopped at a signal light will have more tolerance for delays because they will perceive that eventually they will get their turn. Table 6-8 identifies the LOS criteria for intersections.

Table 6-8
Level of Service for Intersections

Level of Service	Average Stop Control Delay per Vehicle (s)
A	Less than 10
B	10 – 15
C	15 – 25
D	25 – 35
E	35 – 50
F	greater than 50

The v/c ratio of an intersection describes the extent to which the traffic volumes can be accommodated by the theoretical capacity of the intersection. A v/c ratio below 0.9 indicates that there is generally sufficient capacity to accommodate the traffic on the approach or at the intersection. A value between 0.9 and 1.0 suggests unstable operations and congestion may occur as volumes are nearing the theoretical capacity of the roadway. A calculated value over 1.0 indicates that volumes are theoretically exceeding capacity.

For this study, a minimum LOS D was required for the intersection and for each approach; individual movements were allowed to operate at LOS E.

In developing the Synchro model for this intersection, Associated Engineering used the following input parameters presented in Table 6-9. The results of the capacity analysis completed using these inputs have been summarized in the following sections. The Synchro reports can be found in **Appendix G**.

Table 6-9
Synchro Analysis Input Parameters

Parameter	Value
Ideal Saturation Flow Rate	1,900 vehicles per hour
Analysis Period	15 minutes
Speed Limit – Hwy 697 / Twp Rd 1062	100 km/h
Speed Limit – Hwy 697 - South Leg	100 km/h
Speed Limit – Rge Rd 151 – North leg	60 km/h
Turning Speed	Program Default
Lane Utilization	Program Default
Peak Hour Factor	0.92
Growth Factor	1.0
Heavy Vehicle Percentage	As shown in AT counts

Based on the Alberta Transportation turning movement diagram for this intersection, the heavy vehicle percentage (single unit trucks and tractor trailer units) is expected to be:

- North leg: 0% in both peaks
- East leg: 7.4% in the AM peak, 6.8% in the PM peak
- South leg: 10.2% in the AM peak, 10.9% in the PM peak
- West leg: 5% in both peaks

Table 6-10 shows the capacity analysis results in each horizon year for the existing intersection configuration.

Table 6-10
Capacity Analysis Summary for Existing Intersection Configuration (Type III)

Analysis Period	Peak Hour	Highest Approach Delay (s)	Lowest Approach LOS	Max V/C Ratio	Intersection Delay (s)	Intersection LOS
Background 2021	AM	11.0	B	0.09	2.6	A
	PM	10.5	B	0.08	2.9	A
Background 2051	AM	13.9	B	0.20	3.4	A
	PM	12.2	B	0.16	3.5	A
Combined Traffic 2021	AM	11.2	B	0.09	2.6	A
	PM	10.6	B	0.08	2.9	A
Combined Traffic 2031	AM	19.8	C	0.33	3.8	A
	PM	20.0	C	0.25	3.3	B
Combined Traffic 2051	AM	51.2	F	0.71	8.8	C

Analysis Period	Peak Hour	Highest Approach Delay (s)	Lowest Approach LOS	Max V/C Ratio	Intersection Delay (s)	Intersection LOS
	PM	44.9	E	0.57	5.8	D

The results show that with the existing configuration, the development traffic would cause the intersection to operate at an overall LOS D by 2051, and the northbound movement would be failing. The addition of the developments has increased the northbound left turning volume, which is forced to wait for a gap in the heavy eastbound and westbound movements. The long delay faced by the northbound left turning traffic could lead to loss of patience in drivers that may end up proceeding when they shouldn't, increasing the potential for collisions.

Table 6-11 shows the results in each year using the upgraded intersection configuration, based on the Alberta Transportation warrant requirements.

Table 6-11
Capacity Analysis Summary for Improved Intersection (Type V with Channelization)

Analysis Period	Peak Hour	Highest Approach Delay (s)	Lowest Approach LOS	Max V/C Ratio	Intersection Delay (s)	Intersection LOS
Background 2021	AM	11.0	B	0.09	2.6	A
	PM	10.5	B	0.09	2.8	A
Background 2051	AM	13.9	B	0.20	3.2	A
	PM	12.2	B	0.16	3.4	A
Combined Traffic 2021	AM	11.2	B	0.10	2.6	A
	PM	10.6	B	0.10	2.8	A
Combined Traffic 2031	AM	19.8	C	19.8	3.7	A
	PM	19.9	C	0.27	2.9	A
Combined Traffic 2051	AM	51.2	F	0.71	8.6	A
	PM	44.4	E	0.57	5.2	B

With the upgraded configuration, the intersection operational performance improves to LOS B, though the northbound approach still fails by the 2051 horizon in the AM peak.

A sensitivity analysis was performed using a separated northbound left turn to allow northbound through and right turns to proceed without being delayed by the left turns. However, the northbound left turn would still operate at LOS F in 2051. Ultimately it would be up to Alberta Transportation to determine whether they are accepting of LOS F for the northbound approach, especially if the overall intersection LOS is A or B. The Lake Side Subdivision accounts for a significant portion of the total development traffic added to Hwy 697 and Twp Rd 1062 (109 Ave). If a connection is provided to the Lake Side Subdivision on its south side to Twp Rd 1061 / 94 Ave, this would shift some of the traffic away from Twp Rd 1062 and improve the operations at that intersection. It is recommended that the County maintain allowance for a future possible south access to the Lake Side Subdivision, and the access can be added as

development needs dictate. 2051 is still 30 years in the future and significant changes to development in the area and background traffic patterns could occur.

6.5 Signalization Warrant

A traffic signal warrant analysis was completed using the procedures outlined by TAC. In accordance with AT's policy, in an urban area, a warrant score exceeding 100 indicates that traffic signals are warranted, and in rural areas a score of 80 is typically used as a threshold for requiring signals.

A signalization warrant analysis was performed for the intersection of Hwy 697 and Twp Rd 1062 (109 Ave). Using 2019 traffic counts, the intersection resulted in a score of 7. With the estimated combined 2051 traffic counts, the intersection resulted in a score of 60. Signals are not warranted in the design horizon with the development traffic. The signal warrant sheets are included in **Appendix H**.

6.6 Illumination Warrant

An illumination warrant was completed for the intersection of Hwy 697 and Twp Rd 1062 (109 Ave) using the TAC Warrant for Intersection Lighting. Under existing conditions, the intersection received a score of 71, which is lower than the warranting condition of 120. When the traffic volumes increase and development proceeds near the intersection, this will increase the warrant score, resulting in a higher need for illumination. Channelization of the intersection would also increase the warrant score. With the recommended improvements and increased traffic volumes in 2051 the intersection received a score of 176, exceeding the warranting conditions. It is recommended that lighting is installed in conjunction with any intersection improvements at this intersection to improve safety conditions and increase visibility of the main approach into La Crête. The lighting warrant sheets are included in **Appendix H**.

7 HWY 697 AND TWP RD 1061 (94 AVE) INTERSECTION ASSESSMENT

The Hwy 697 and Twp Rd 1061 (94 Ave) intersection was analyzed using background traffic volumes and anticipated development traffic from the parcels identified in La Crête.

7.1 Traffic Volumes

7.1.1 Background Traffic

No turning movement counts were available from Alberta Transportation for this intersection, so traffic volumes were estimated using proportions of the turning volumes counted at the adjacent intersections. The following assumptions were used:

- The average was taken between the northbound left-turning traffic at Twp Rd 1062 (109 Ave) and the northbound left-turning traffic at Twp Rd 1060 (South Access). This average was applied to the northbound left-turning volume approaching Twp Rd 1061 (94 Ave).
- A similar percentage of southbound right-turning traffic would be likely to occur at Twp Rd 1061 (94 Ave) as at Twp Rd 1060 (South Access).

The estimated 2019 AADT and peak hour turning movement volumes for Hwy 697 and Twp Rd 1061 (94 Ave) are shown in **Figure 7-1**.

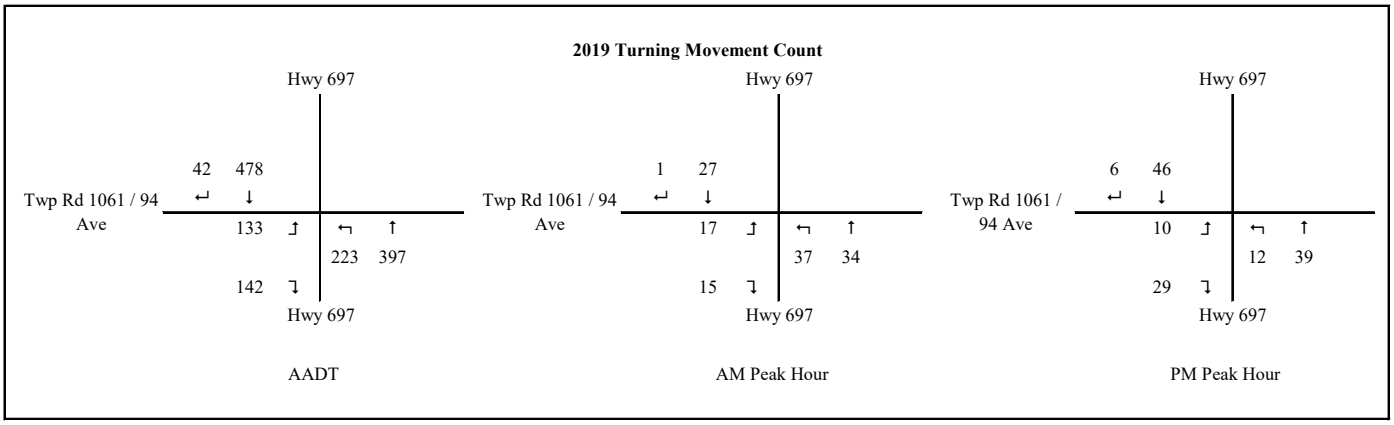


Figure 7-1
2019 Background Traffic Estimates for Hwy 697 and Twp Rd 1061 (94 Ave)

Traffic volumes at the intersection were projected to the current year of 2021 and the 20-year design horizon of 2041. Highway traffic was grown using the average growth rate of 2.65% growth rate until 2041. Traffic on the minor road was grown at a rate of 1.0%. The estimated AADT and peak hour turning movement volumes for Hwy 697 and Twp Rd 1061 (94 Ave) in the analysis horizons are shown in **Figure 7-2** through **Figure 7-4**.

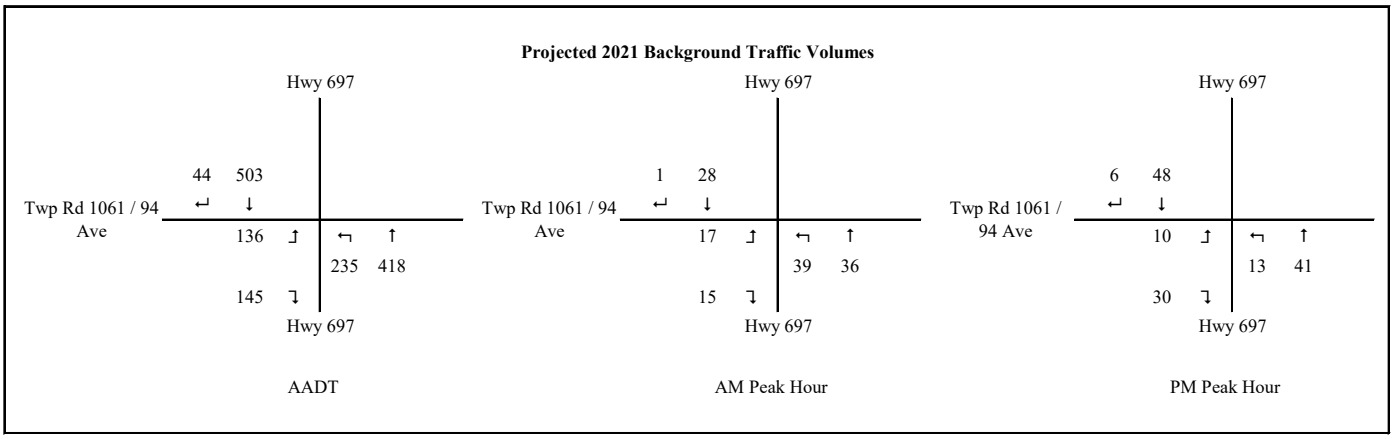


Figure 7-2
2021 Background Volumes for Hwy 697 and Twp Rd 1061 (94 Ave)

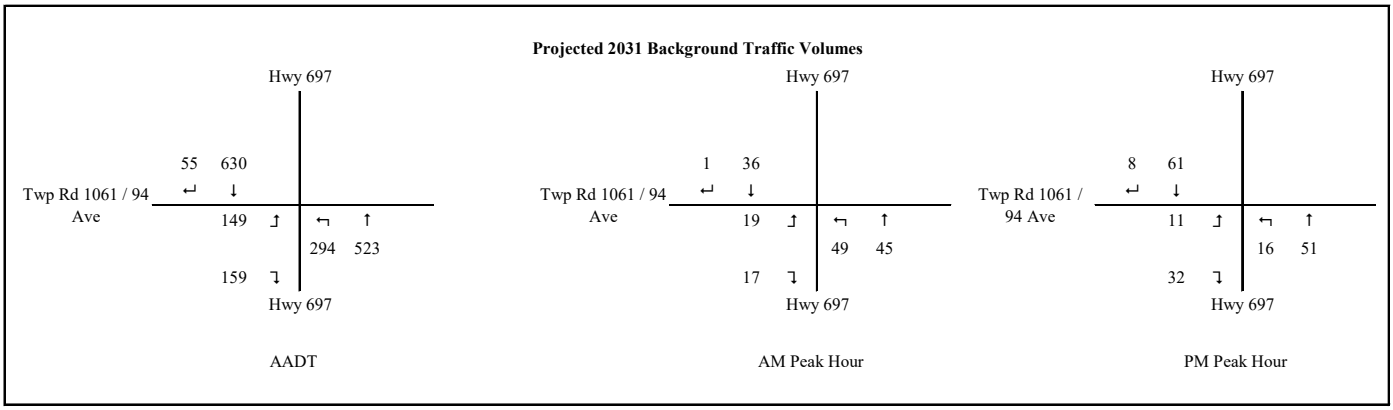


Figure 7-3
2031 Background Volumes for Hwy 697 and Twp Rd 1061 (94 Ave)

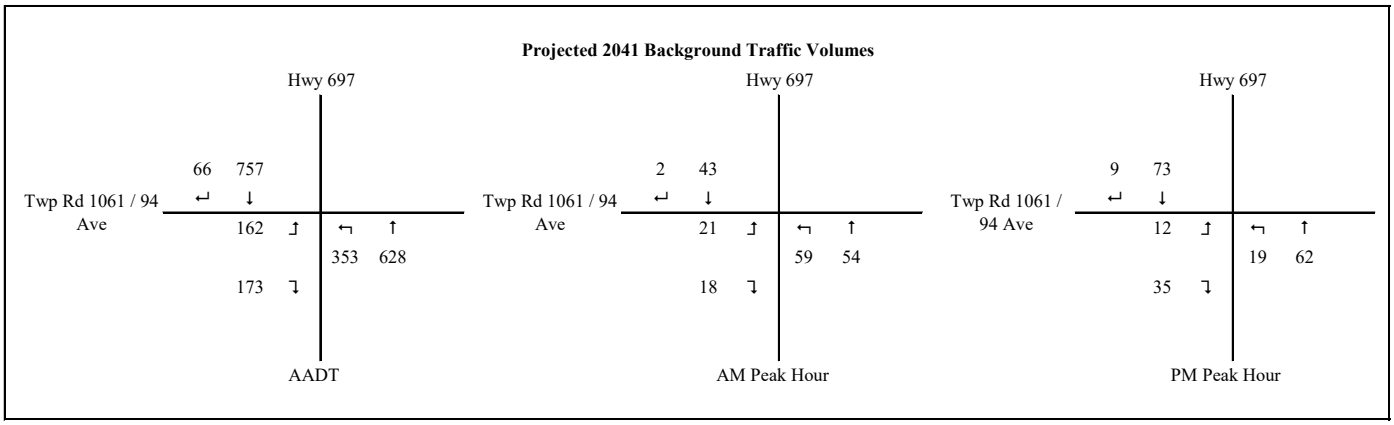


Figure 7-4
2041 Background Volumes for Hwy 697 and Twp Rd 1061 (94 Ave)

7.1.2 Development Traffic

The estimated development traffic volumes for the AM and PM peak at the Hwy 697 and Twp Rd 1061 (94 Ave) intersection using the design horizons and trip generation and assignment methods described in the previous section are shown for each horizon year in **Figure 7-5** through **Figure 7-8.**

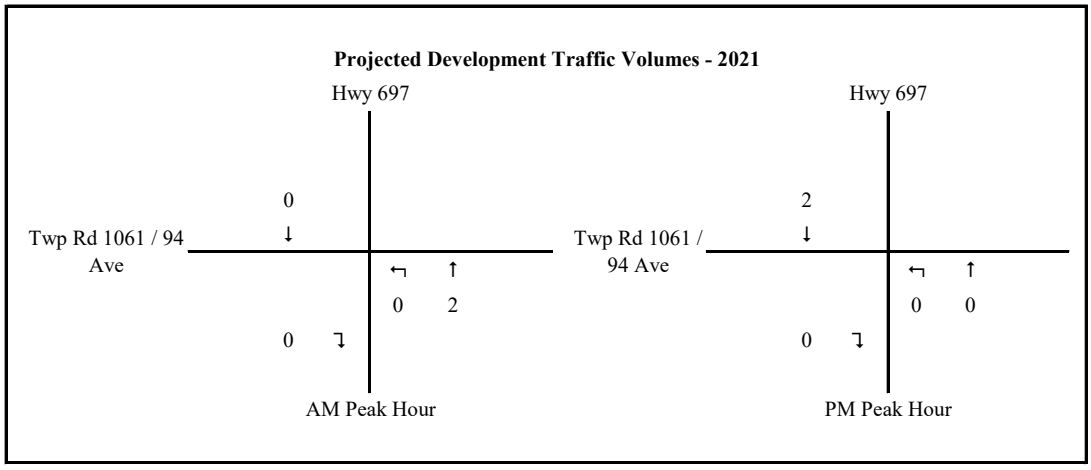


Figure 7-5
2021 Development Volumes for Hwy 697 and Twp Rd 1061 (94 Ave)

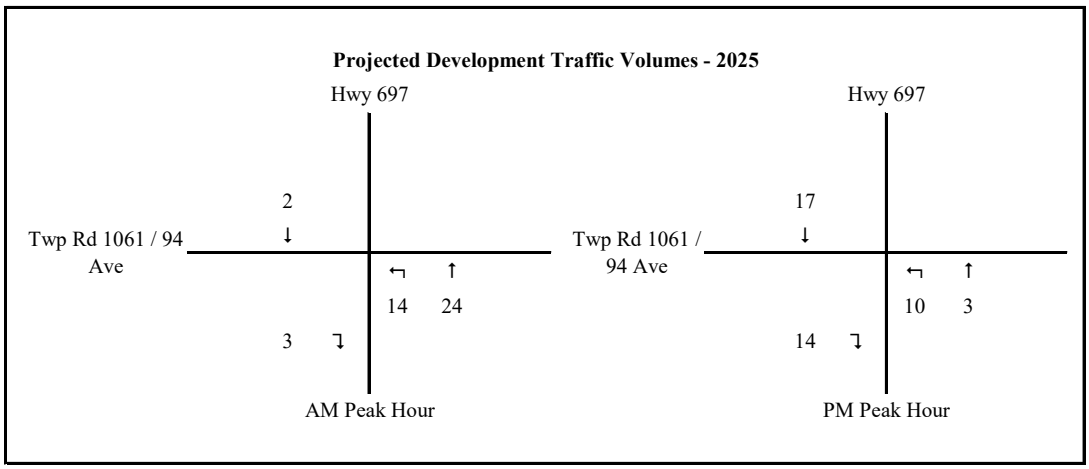


Figure 7-6
2025 Development Volumes for Hwy 697 and Twp Rd 1061 (94 Ave)

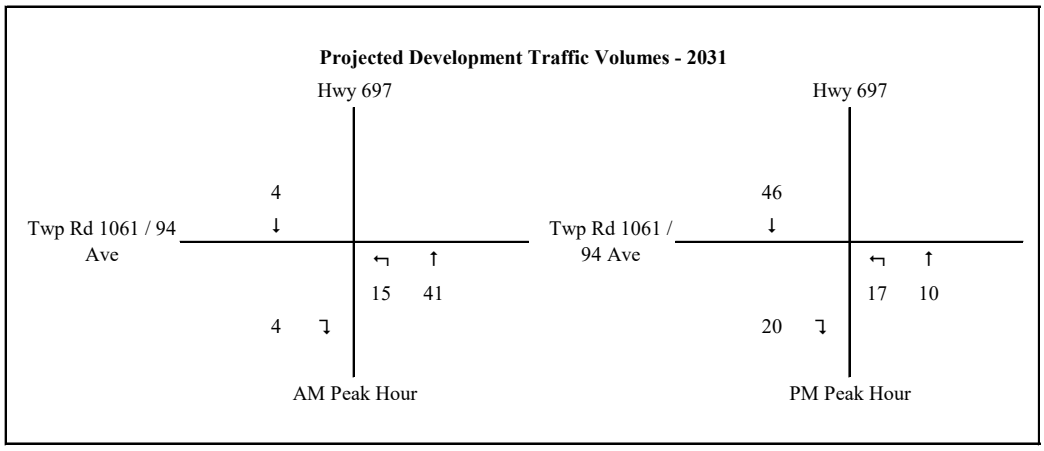


Figure 7-7
2031 Development Volumes for Hwy 697 and Twp Rd 1061 (94 Ave)

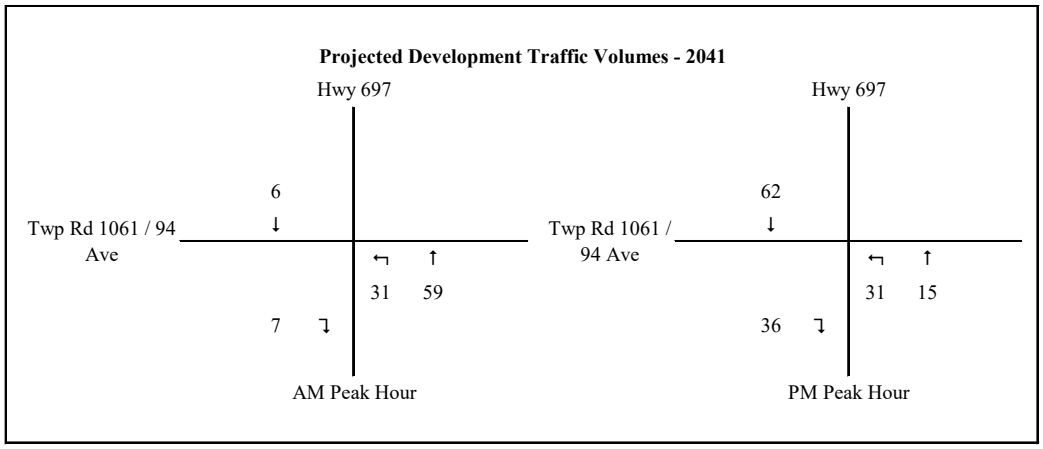


Figure 7-8
2041 Development Volumes for Hwy 697 and Twp Rd 1061 (94 Ave)

7.1.3 Combined Traffic

To determine the combined traffic volumes, the development traffic was added to the background volumes for each development horizon. These traffic volumes form the basis of the analysis for this study and are presented in Figure 7-9 to Figure 7-12.

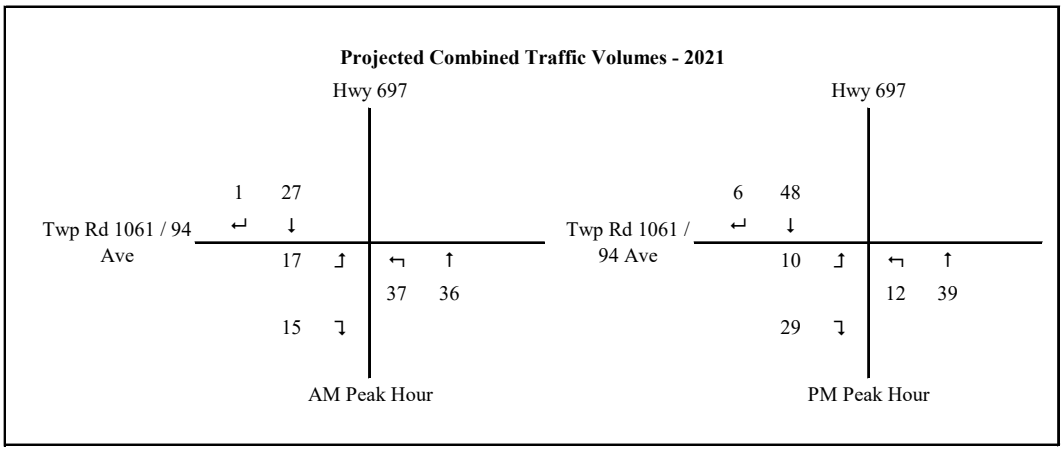


Figure 7-9
2021 Combined Volumes for Hwy 697 and Twp Rd 1061 (94 Ave)

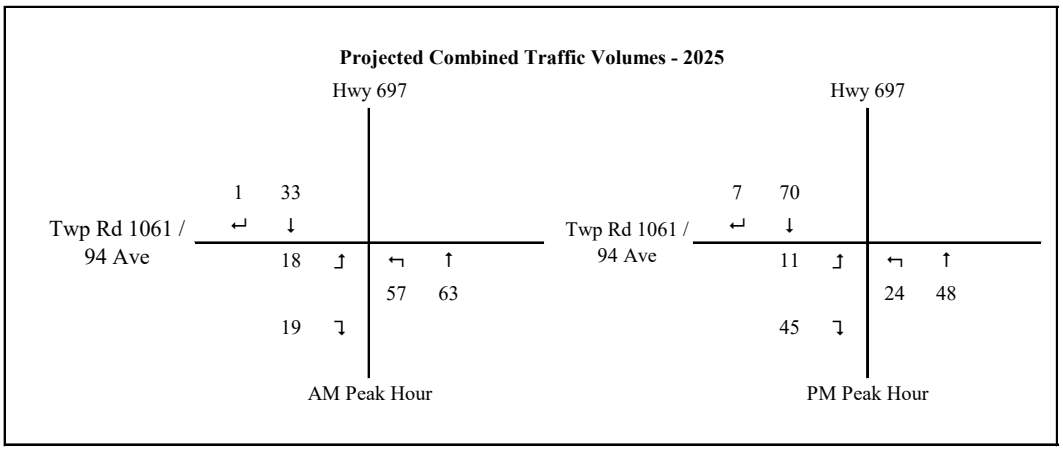


Figure 7-10
2025 Combined Volumes for Hwy 697 and Twp Rd 1061 (94 Ave)

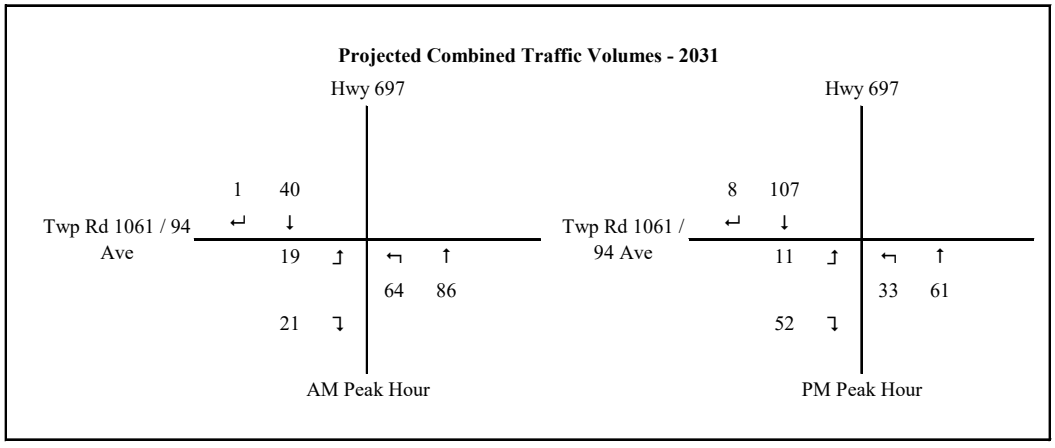


Figure 7-11
2031 Combined Volumes for Hwy 697 and Twp Rd 1061 (94 Ave)

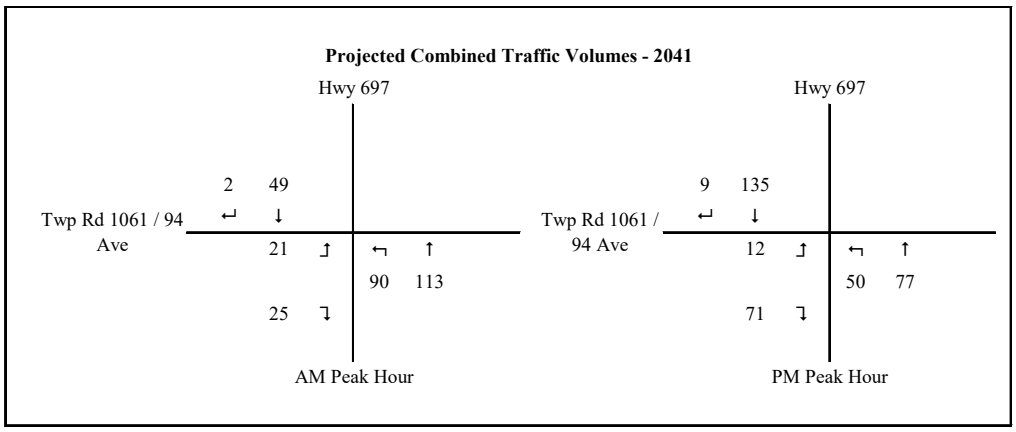


Figure 7-12
2041 Combined Volumes for Hwy 697 and Twp Rd 1061 (94 Ave)

7.2 Alberta Transportation Warrant Analysis

According to Figure D-7.4 (shown in **Appendix F**), this intersection warrants a Type II treatment using the estimated 2019 and 2021 volumes, a Type III treatment using the estimated 2025 volumes, and a detailed analysis using the estimated 2031 volumes. The detailed analysis was completed following the guidelines in the HGDG.

7.2.1 Left Turn Warrant

The left turn warrant analysis was completed as per Section D.7.6 of the HGDG using a design speed of 110 km/h. The detailed analysis was required for 2031 and 2041 volumes. Only the northbound left turn was evaluated as there is no possibility for a southbound left turn. The results of the analysis are shown in **Table 7-1 and Table 7-2**.

Table 7-1
2031 Left Turn Warrant Analysis for Hwy 697 and Twp Rd 1061 (94 Ave)

Hwy 697 & Twp Rd 1061	2031 AM – NB	2031 PM – NB
VL (Left-Turning Volume)	64	33
VA (Advancing Volume)	151	94
% Left Turns	43%	35%
VO (Opposing Volume)	41	115
Treatment Warranted	Type III	Type II

Table 7-2
2041 Left Turn Warrant Analysis for Hwy 697 and Twp Rd 1061 (94 Ave)

Hwy 697 & Twp Rd 1061	2041 AM – NB	2041 PM – NB
VL (Left-Turning Volume)	90	50
VA (Advancing Volume)	202	127
% Left Turns	44%	40%
VO (Opposing Volume)	51	144
Treatment Warranted	Type IV	Type III

7.2.2 Right Turn Warrant

The right turn warrant analysis was completed as per Section D.7.7 of the HGDG using a design speed of 110 km/h. The three conditions that would warrant a right turn were evaluated as follows:

- Main (or through) road AADT is greater than or equal to 1,800 – condition met by 2031
- Intersecting road AADT is greater than or equal to 900 – condition met by 2031
- The right turn daily traffic volume is greater than or equal to 360 for the movement in question – the southbound right turn reaches a maximum volume of 55 vehicles per day by 2041.

As the last condition is not met, an exclusive right turn lane is not warranted for the intersection of Hwy 697 and Twp Road 1061.

7.3 Conclusion

An Alberta Transportation Type IVa intersection treatment (for three-legged intersections) is warranted for the intersection of Hwy 697 and Twp Rd 1061 (94 Ave) based on the projected 2041 combined traffic, with an exclusive turn lane for the northbound left turn. Once further information about the Lake Side Subdivision development and the County identified parcels is known (i.e. building footprint areas and land use types), and/or additional development planned for the area, a subsequent TIA should be completed to confirm the appropriateness of the configuration with the additional traffic.

8 HWY 697 AND TWP RD 1060 (SOUTH ACCESS) INTERSECTION ASSESSMENT

The Hwy 697 and Twp Rd 1060 (South Access) intersection was analyzed using background traffic volumes and anticipated development traffic from the parcels identified in La Crête.

8.1 Traffic Volumes

8.1.1 Background Traffic

2019 volumes from Alberta Transportation's counts are shown in **Figure 8-1** for AADT and both peak hours for the intersection of Hwy 697 and Twp Rd 1060 (South Access).

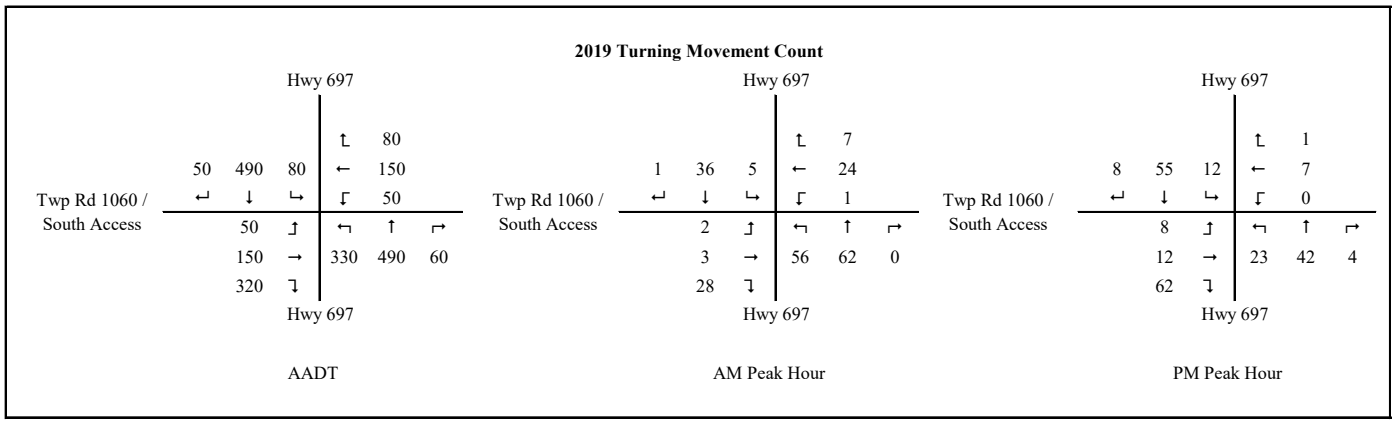


Figure 8-1
2019 Background Traffic Counts for Hwy 697 and Twp Rd 1060 (South Access)

Traffic volumes at the intersection were projected to the current year of 2021 and the 20-year design horizon of 2041. Highway traffic was grown using the average growth rate of 2.65%. Traffic on the minor road was grown at a rate of 1.0%. The estimated AADT and peak hour turning movement volumes for Hwy 697 and Twp Rd 1060 (South Access) for each horizon are shown in **Figure 8-2** to **Figure 8-5**.

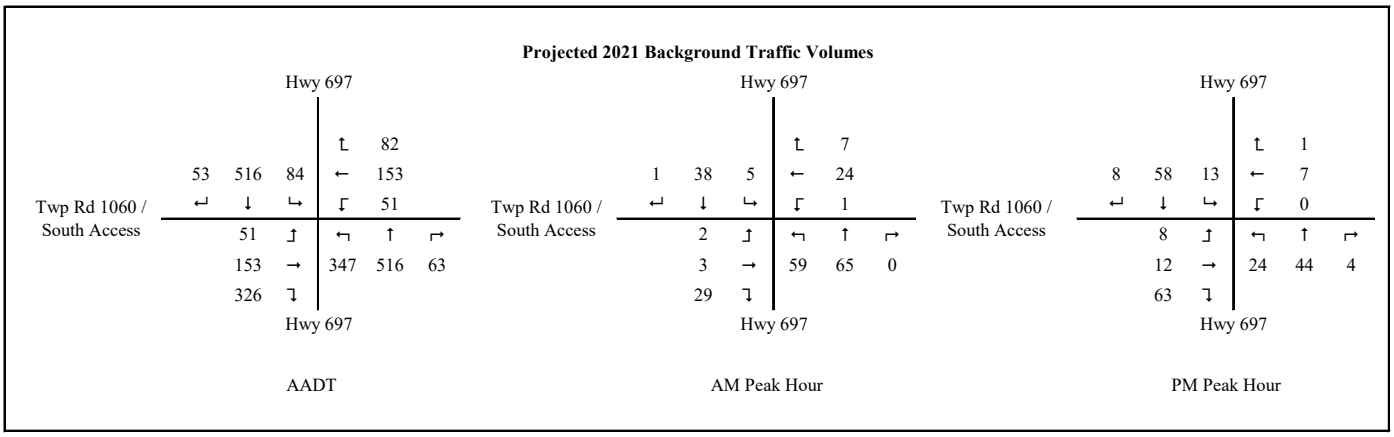


Figure 8-2
2021 Background Volumes for Hwy 697 and Twp Rd 1060 (South Access)

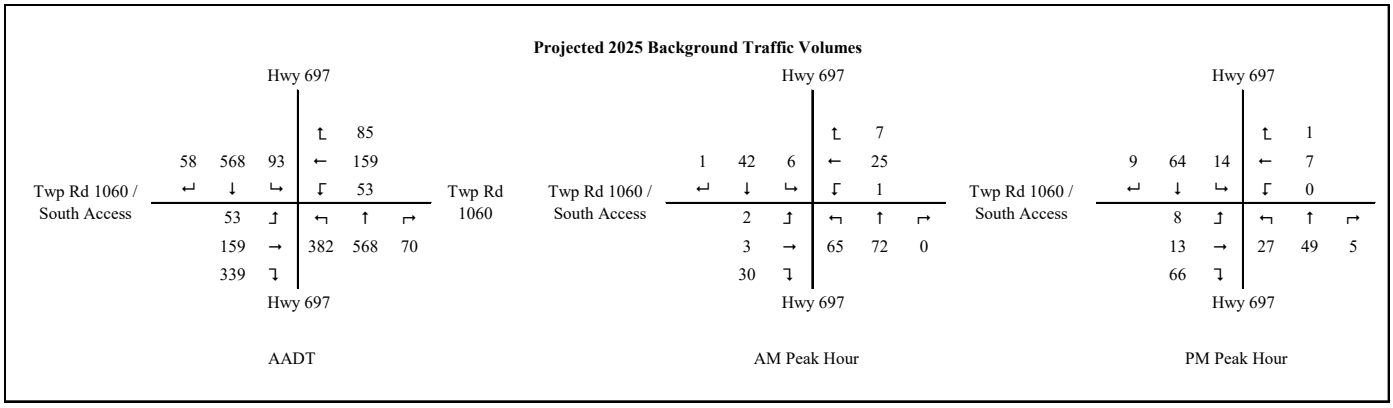


Figure 8-3
2025 Background Volumes for Hwy 697 and Twp Rd 1060 (South Access)

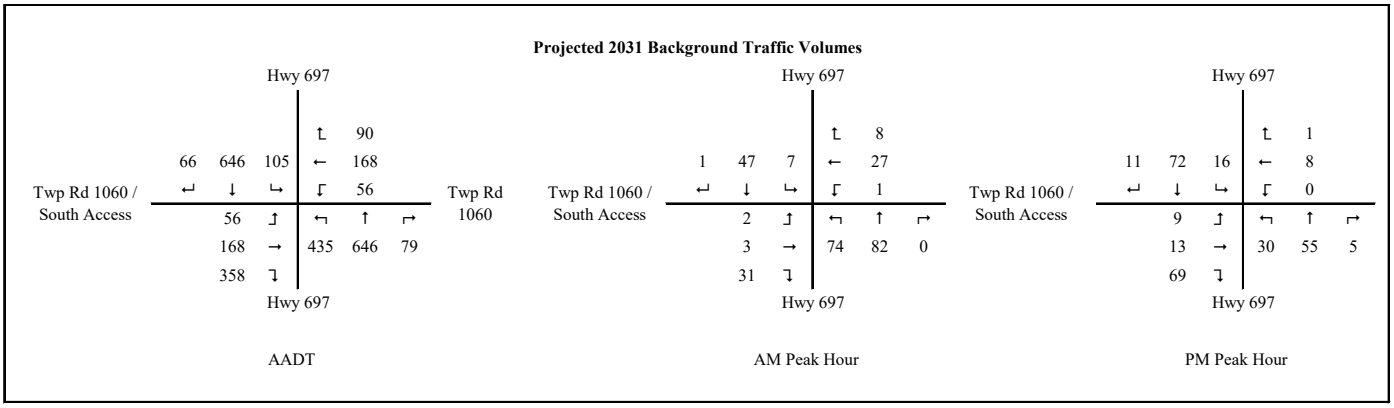


Figure 8-4
2031 Background Volumes for Hwy 697 and Twp Rd 1060 (South Access)

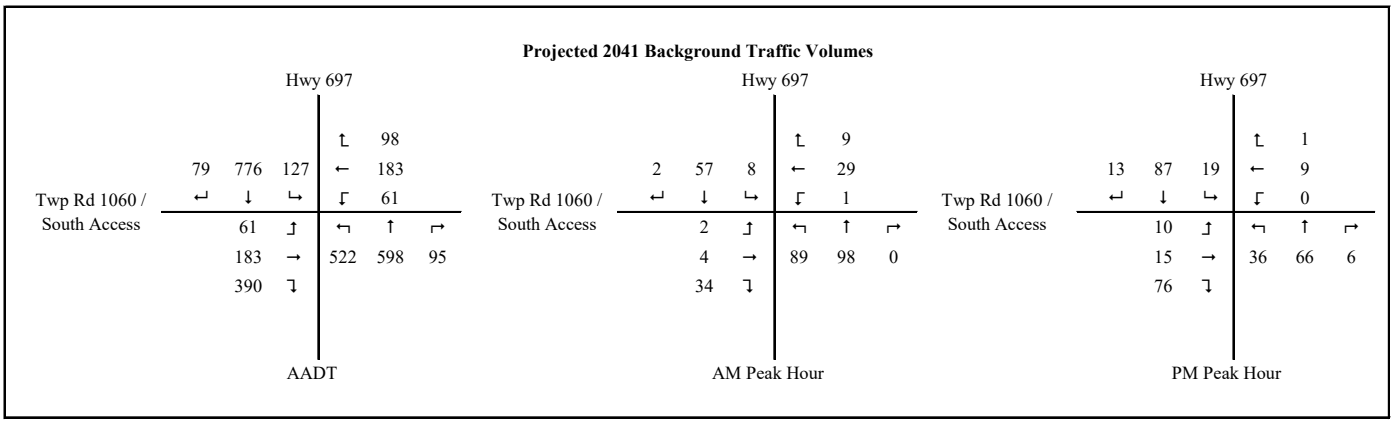


Figure 8-5
2041 Background Volumes for Hwy 697 and Twp Rd 1060 (South Access)

8.1.2 Development Traffic

The estimated development traffic volumes for the AM and PM peaks at the Hwy 697 and Twp Rd 1060 (South Access) intersection using the design horizons and trip generation and assignment methods described in the previous section are shown for each horizon year in **Figure 8-6** through **Figure 8-9.**

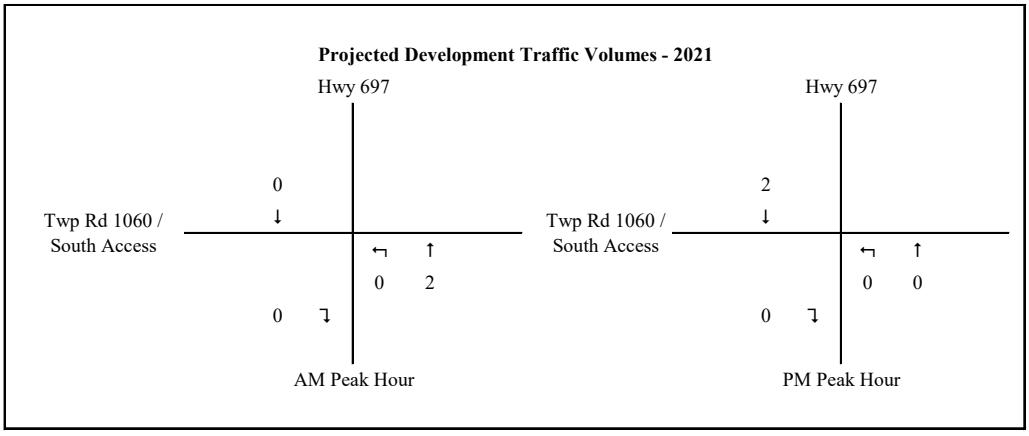


Figure 8-6
2021 Development Volumes for Hwy 697 and Twp Rd 1060 (South Access)

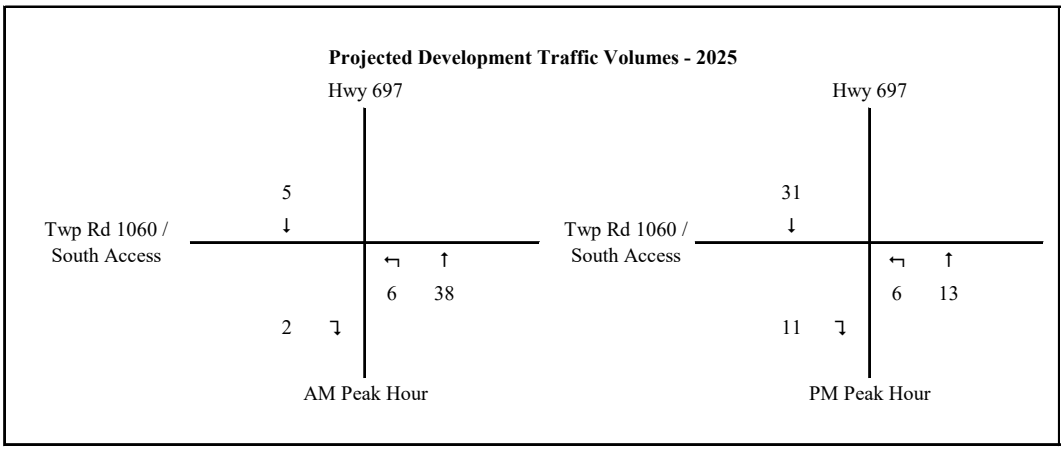


Figure 8-7
2025 Development Volumes for Hwy 697 and Twp Rd 1060 (South Access)

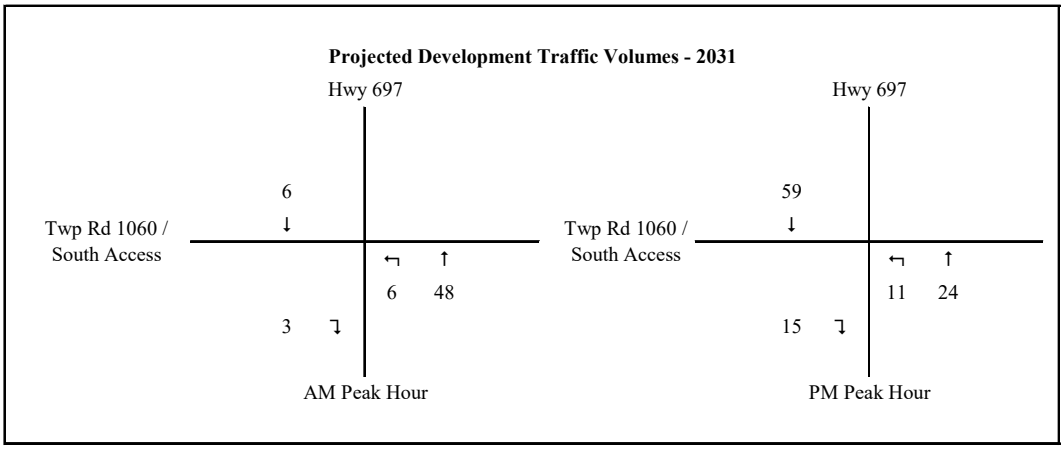


Figure 8-8
2031 Development Volumes for Hwy 697 and Twp Rd 1060 (South Access)

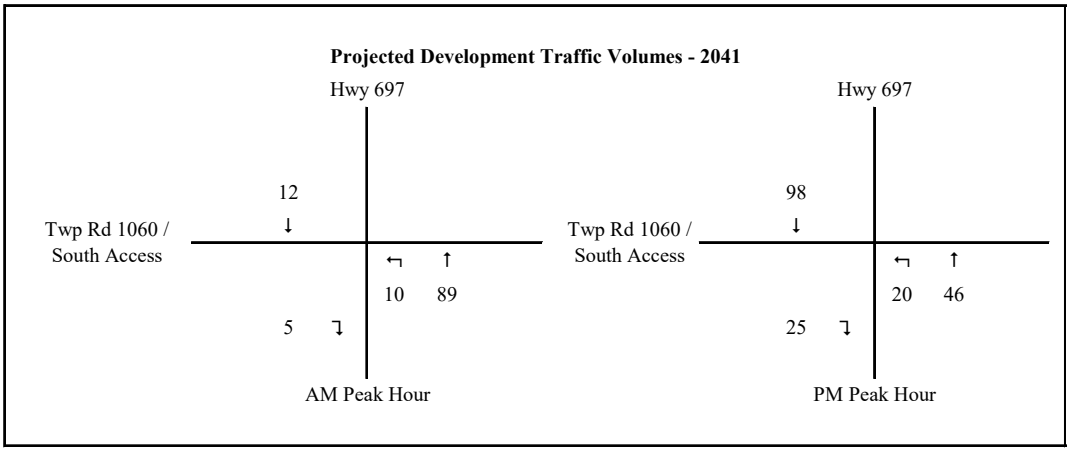


Figure 8-9
2041 Development Volumes for Hwy 697 and Twp Rd 1060 (South Access)

8.1.3 Combined Traffic

To determine the combined traffic volumes, the development traffic was added to the background volumes for each development horizon. These traffic volumes form the basis of the analysis for this study and are presented in Figure 8-10 to Figure 8-13.

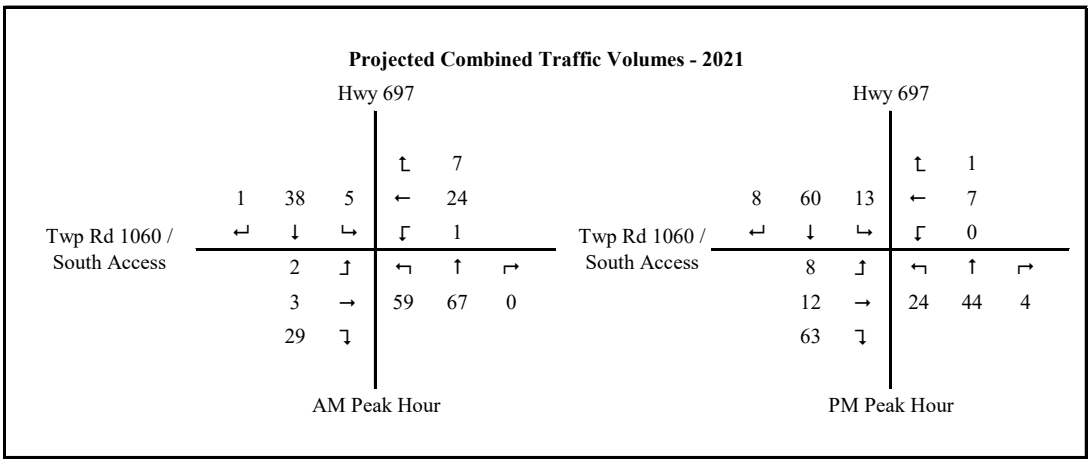


Figure 8-10
2021 Combined Volumes for Hwy 697 and Twp Rd 1060 (South Access)

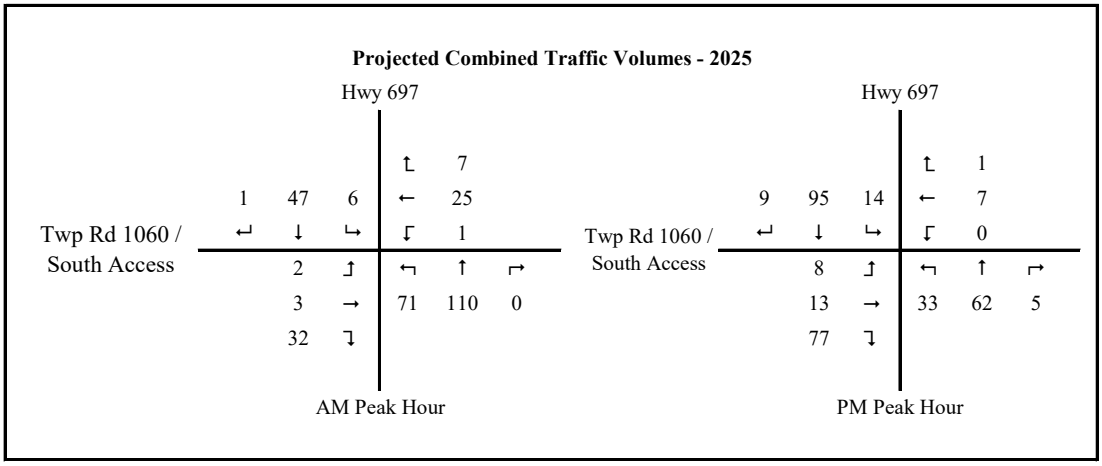


Figure 8-11
2025 Combined Volumes for Hwy 697 and Twp Rd 1060 (South Access)

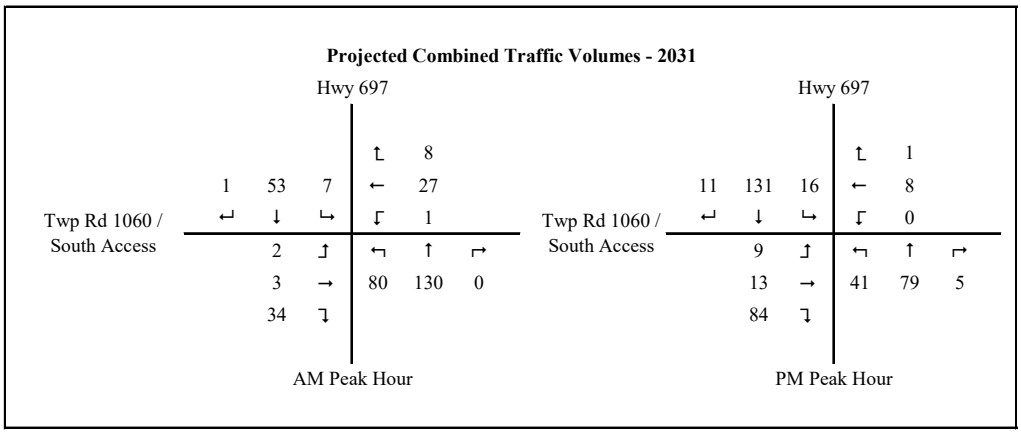


Figure 8-12
2031 Combined Volumes for Hwy 697 and Twp Rd 1060 (South Access)

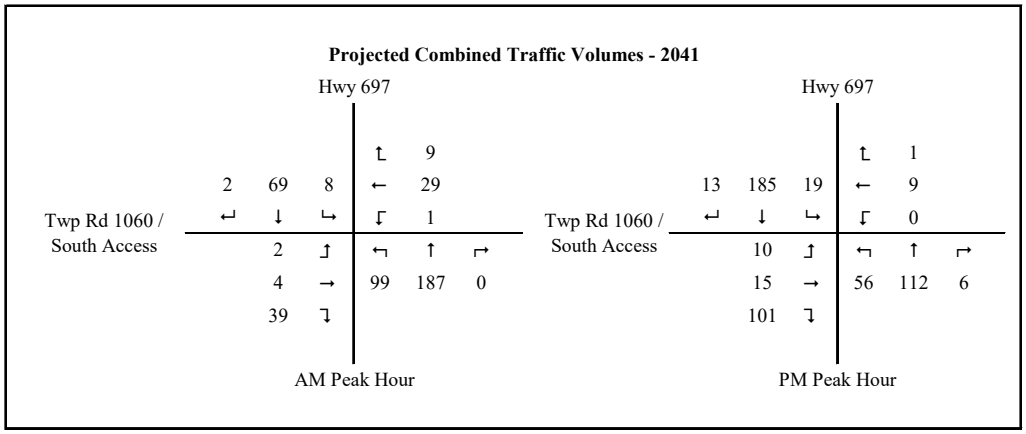


Figure 8-13
2041 Combined Volumes for Hwy 697 and Twp Rd 1060 (South Access)

8.2 Alberta Transportation Warrant Analysis

According to Figure D-7.4 (shown in **Appendix F**), this intersection warrants a Type II treatment using the 2019 volumes, and a detailed analysis using the projected 2021 volumes, as per the method in the HGDG.

8.2.1 Left Turn Warrant Analysis

The left turn warrant analysis was completed as per Section D.7.6 of the HGDG using a design speed of 110 km/h. **Table 8-1** though **Table 8-3** show the left turn warrant analyses for 2021, 2031 and 2041.

Table 8-1
2021 Left Turn Warrant Analysis for Hwy 697 and Twp Rd 1060 (South Access)

Hwy 697 & Twp Rd 1060	2021 AM – NB	2021 AM – SB	2021 PM – NB	2021 PM - SB
VL (Left-Turning Volume)	59	5	24	13
VA (Advancing Volume)	126	44	72	81
% Left Turns	47%	11%	33%	16%
VO (Opposing Volume)	44	126	81	72
Treatment Warranted	Type III	Type II	Type II	Type II

Table 8-2
2025 Left Turn Warrant Analysis for Hwy 697 and Twp Rd 1060 (South Access)

Hwy 697 & Twp Rd 1060	2025 AM – NB	2025 AM – SB	2025 PM – NB	2025 PM - SB
VL (Left-Turning Volume)	71	6	33	14
VA (Advancing Volume)	180	54	100	118
% Left Turns	39%	11%	33%	12%
VO (Opposing Volume)	54	180	118	100
Treatment Warranted	Type IV	Type II	Type II	Type II

Table 8-3
2031 Left Turn Warrant Analysis for Hwy 697 and Twp Rd 1060 (South Access)

Hwy 697 & Twp Rd 1060	2031 AM – NB	2031 AM – SB	2031 PM – NB	2031 PM - SB
VL (Left-Turning Volume)	80	7	41	16
VA (Advancing Volume)	209	61	125	158
% Left Turns	38%	11%	33%	10%
VO (Opposing Volume)	61	209	158	125
Treatment Warranted	Type IV	Type II	Type III	Type II

Table 8-4
2041 Left Turn Warrant Analysis for Hwy 697 and Twp Rd 1060 (South Access)

Hwy 697 & Twp Rd 1060	2041 AM – NB	2041 AM – SB	2041 PM – NB	2041 PM - SB
VL (Left-Turning Volume)	99	8	56	19
VA (Advancing Volume)	287	79	174	217
% Left Turns	35%	10%	32%	9%
VO (Opposing Volume)	79	287	217	174
Treatment Warranted	Type IV	Type II	Type IV	Type III

8.2.2 Right Turn Warrant

The right turn warrant analysis was completed as per Section D.7.7 of the HGDG using a design speed of 110 km/h. The three conditions that would warrant a right turn were evaluated as follows:

- Main (or through) road AADT is greater than or equal to 1,800 – condition met in 2021
- Intersecting road AADT is greater than or equal to 900 – condition met in 2021
- The right turn daily traffic volume is greater than or equal to 360 for the movement in question – this does not occur within the 2041 horizon.

Therefore, an exclusive right turn lane is not warranted for either the northbound or southbound movements at the intersection of Hwy 697 and Twp Rd 1060 (South Access).

8.3 Conclusion

Assuming a steady highway background traffic growth at 2.65% with the associated development traffic, the estimated 2041 traffic will require this intersection be upgraded to a Type IVc treatment with a dedicated northbound left turn. A dedicated southbound left turn is not warranted, nor are exclusive right turn lanes. Once further information about the Lake Side development and the County identified parcels is known (i.e. building footprint areas and land use types), and/or additional development planned for the area, a subsequent TIA should be completed to confirm the appropriateness of the configuration with the additional traffic.

9 HWY 697 AND TWP RD 1055 (SAWMILL ACCESS) INTERSECTION ASSESSMENT

The Hwy 697 and Twp Rd 1055 (Sawmill Access) intersection was analyzed using background traffic volumes on the highway. The additional development traffic passing through the highway intersections to the north (i.e. Twp Rd 1060, Twp Rd 1061, and Twp Rd 1062) was added as through traffic here. No additional traffic from the development on the minor road was expected at this intersection, as its primary access is to the Sawmill.

9.1 Traffic Volumes

9.1.1 Background Traffic

2019 volumes from Alberta Transportation's counts are shown in **Figure 9-1** for AADT and both peak hours for the intersection of Hwy 697 and Twp Rd 1055 (Sawmill Access).

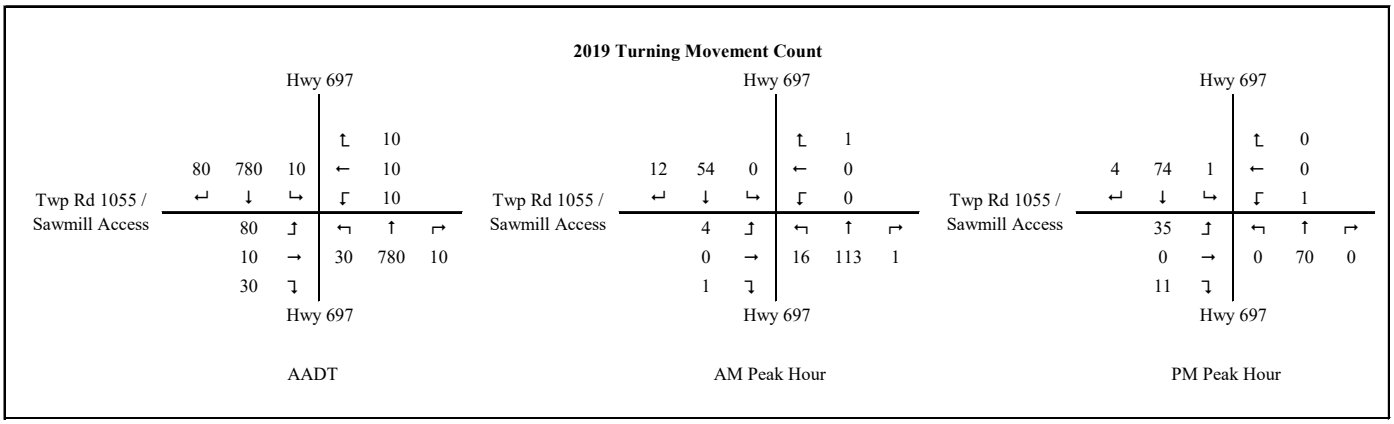


Figure 9-1
2019 Background Traffic Counts for Hwy 697 and Twp Rd 1055 (Sawmill Access)

Traffic volumes at the intersection were projected to the design horizons of 2021, 2025, 2031 and 2041. Highway traffic was grown using the average growth rate of 2.65%. Traffic on the minor road was grown at a rate of 1.0%. The estimated AADT and peak hour turning movement volumes for Hwy 697 and Twp Rd 1055 (Sawmill Access) in the analysis horizons are shown in **Figure 9-2** through **Figure 9-5**.

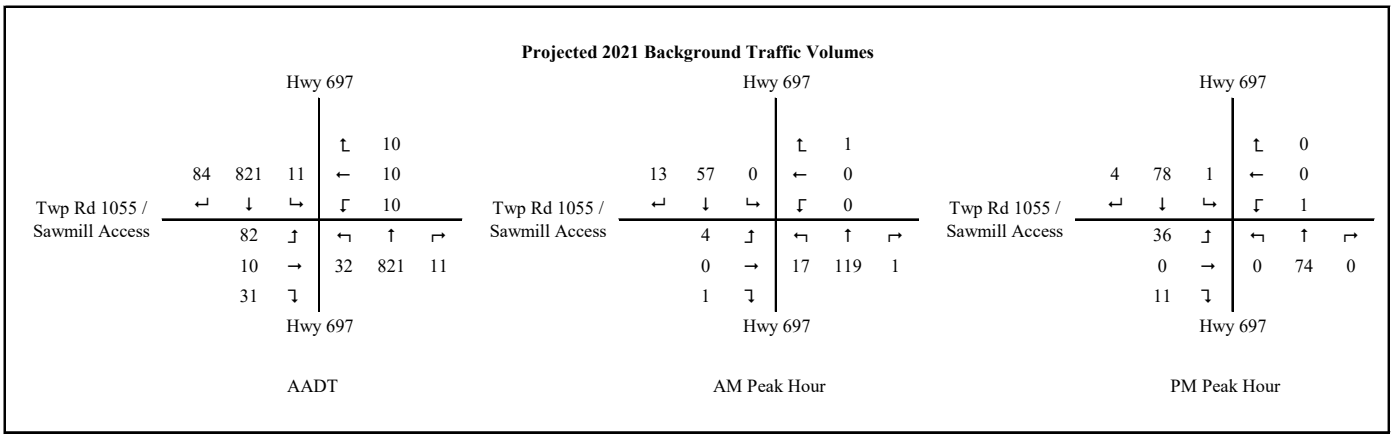


Figure 9-2
2021 Background Volumes for Hwy 697 and Twp Rd 1055 (Sawmill Access)

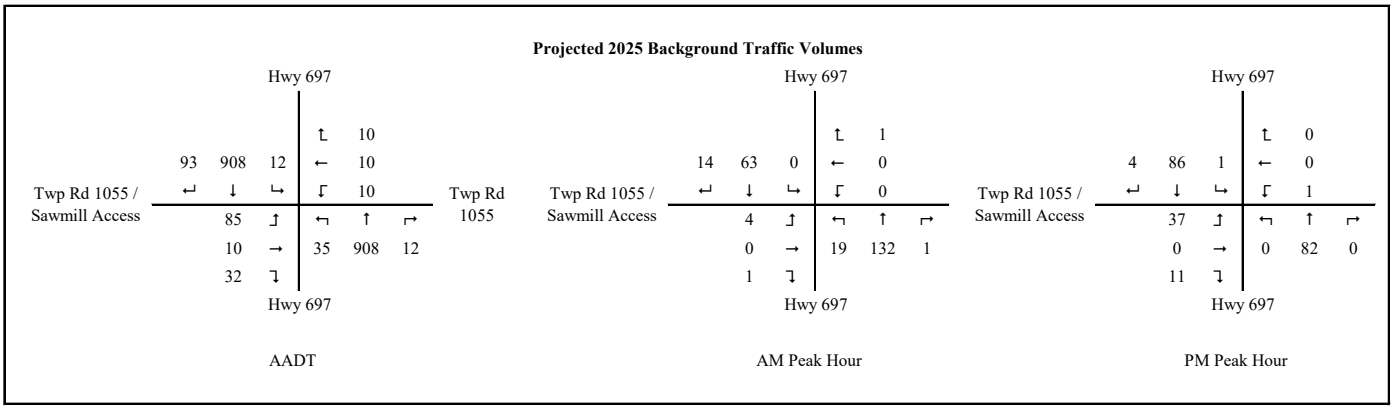


Figure 9-3
2025 Background Volumes for Hwy 697 and Twp Rd 1055 (Sawmill Access)

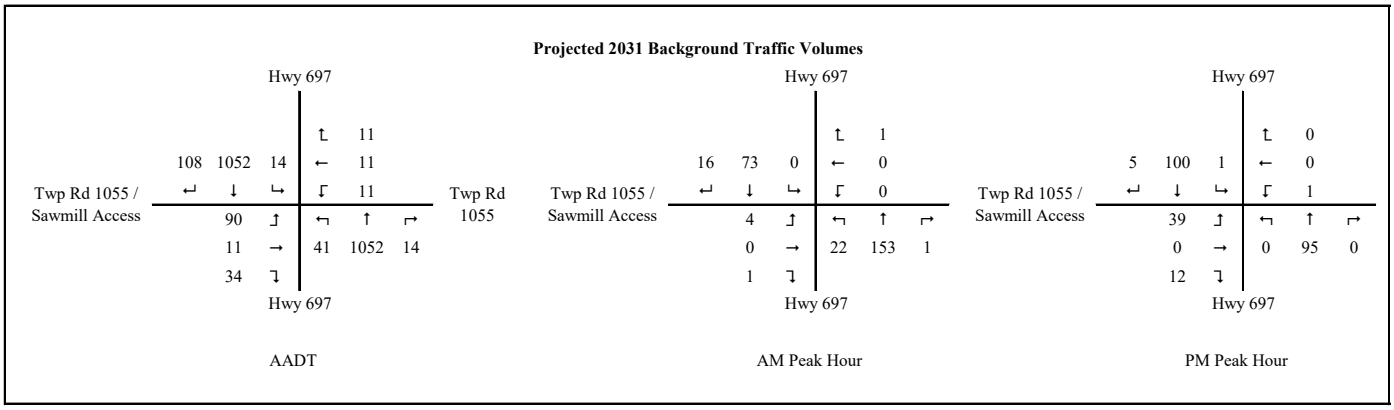


Figure 9-4
2031 Background Volumes for Hwy 697 and Twp Rd 1055 (Sawmill Access)

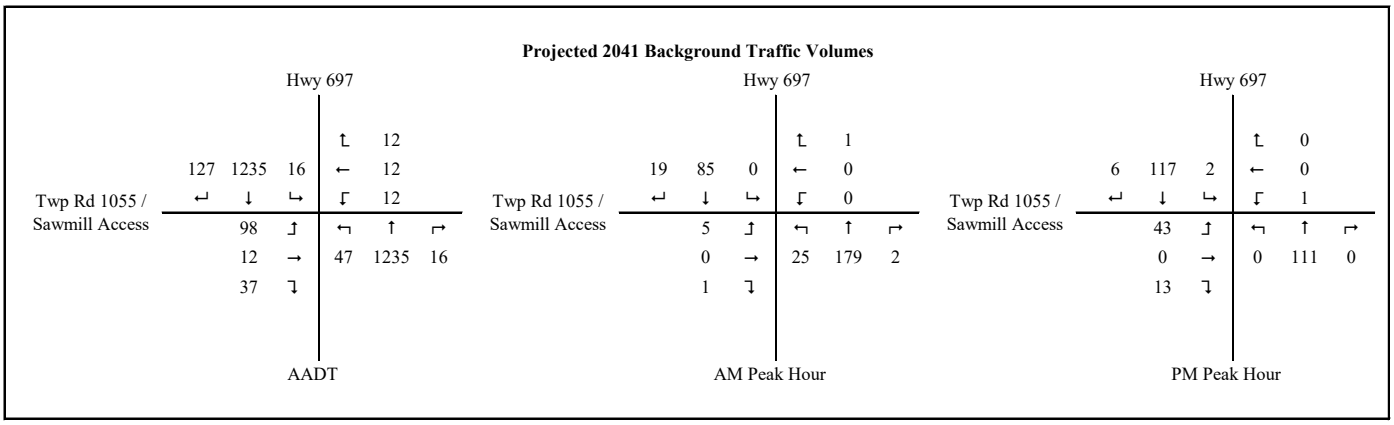


Figure 9-5
2041 Background Volumes for Hwy 697 and Twp Rd 1055 (Sawmill Access)

9.1.2 Combined Traffic

To determine the combined traffic volumes, the development traffic from the intersections to the north was added to the background volumes for each development horizon. These traffic volumes form the basis of the analysis for this study and are presented in Figure 9-6 to Figure 9-9.

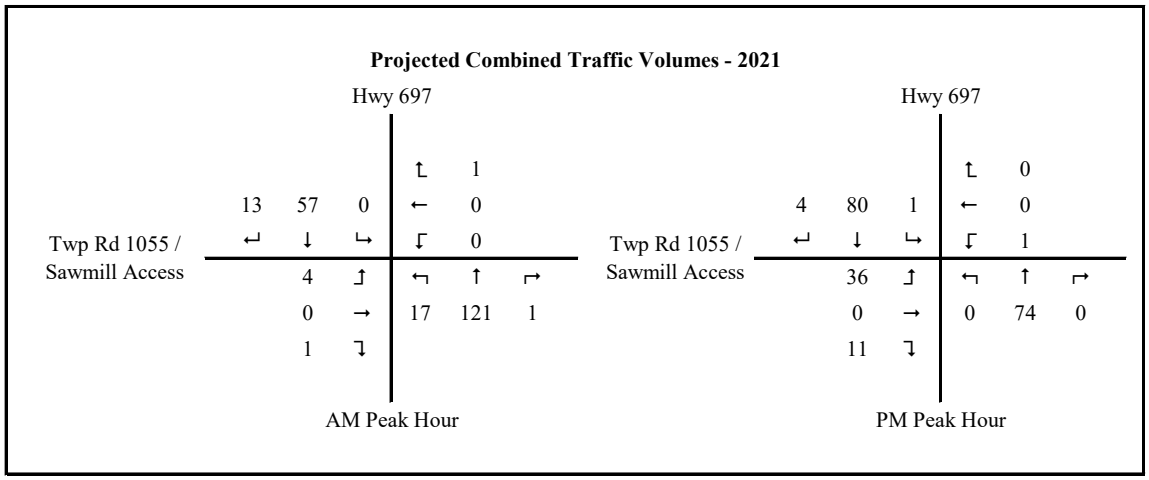


Figure 9-6
2021 Combined Volumes for Hwy 697 and Twp Rd 1055 (Sawmill Access)

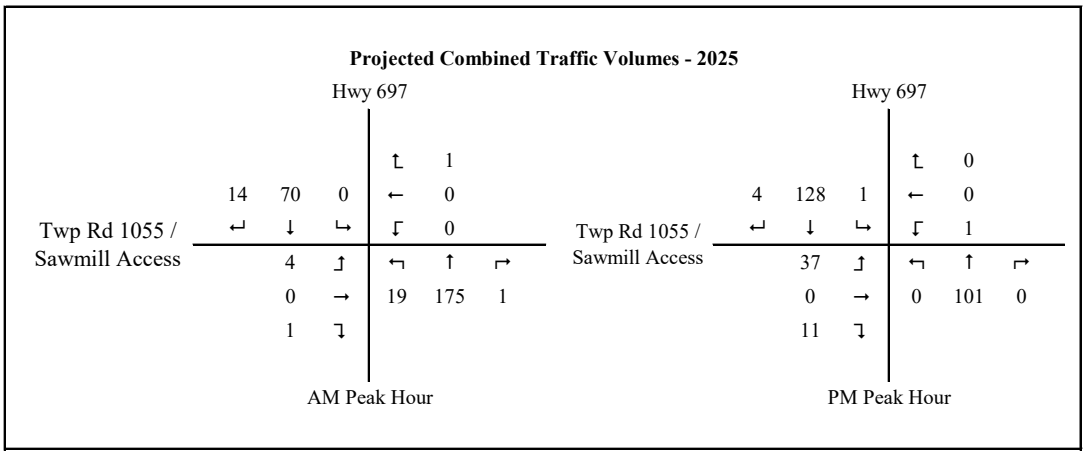


Figure 9-7
2025 Combined Volumes for Hwy 697 and Twp Rd 1055 (Sawmill Access)

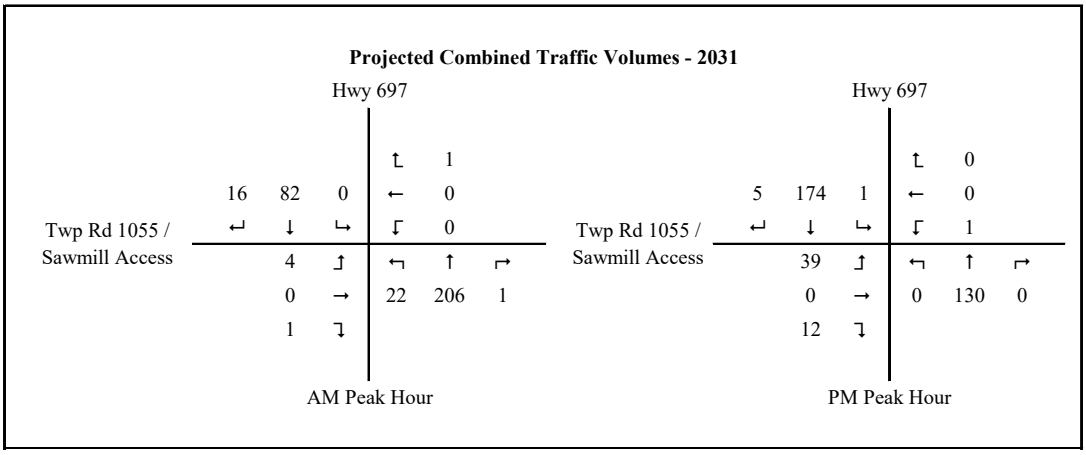


Figure 9-8
2031 Combined Volumes for Hwy 697 and Twp Rd 1055 (Sawmill Access)

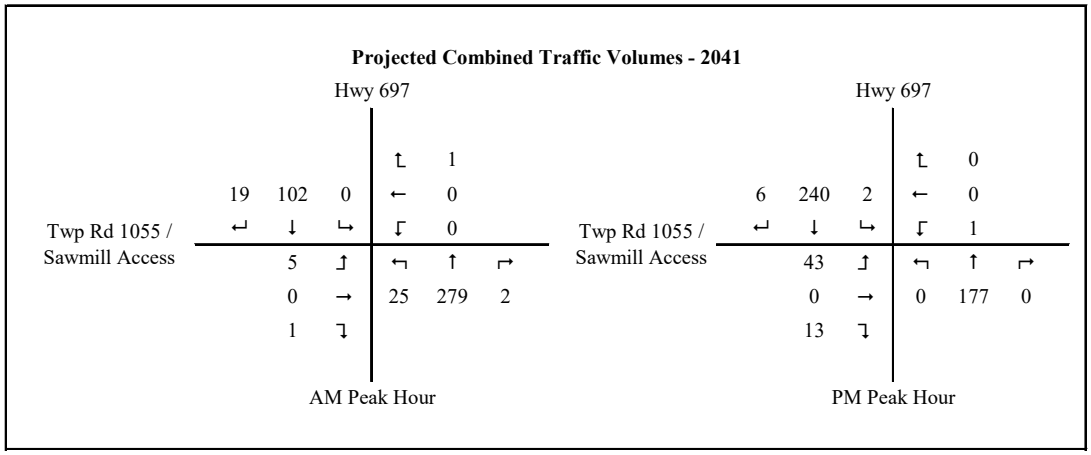


Figure 9-9
2041 Combined Volumes for Hwy 697 and Twp Rd 1055 (Sawmill Access)

9.2 Alberta Transportation Warrant Analysis

According to Figure D-7.4 (included in **Appendix F**), this intersection warrants a Type III treatment using the 2019 volumes, and a detailed analysis using the projected 2021 volumes, using the method in the HGDG.

9.2.1 Left Turn Warrant

The left turn warrant analysis was completed as per Section D.7.6 of the HGDG using a design speed of 110 km/h. **Table 9-1** through **Table 9-4** show the left turn warrant analyses for the analysis horizons. According to the count data, there were no southbound left turns in the AM peak and no northbound left turns in the PM peak.

Table 9-1
2021 Left Turn Warrant Analysis for Hwy 697 and Twp Rd 1055 (Sawmill Access)

Hwy 697 & Twp Rd 1055	2021 AM – NB	2021 PM - SB
VL (Left-Turning Volume)	17	1
VA (Advancing Volume)	139	85
% Left Turns	12%	1%
VO (Opposing Volume)	70	74
Treatment Warranted	Type II	Type II

Table 9-2
2025 Left Turn Warrant Analysis for Hwy 697 and Twp Rd 1055 (Sawmill Access)

Hwy 697 & Twp Rd 1055	2025 AM – NB	2025 PM - SB
VL (Left-Turning Volume)	19	1
VA (Advancing Volume)	195	133
% Left Turns	10%	1%
VO (Opposing Volume)	84	101
Treatment Warranted	Type III	Type II

Table 9-3
2031 Left Turn Warrant Analysis for Hwy 697 and Twp Rd 1055 (Sawmill Access)

Hwy 697 & Twp Rd 1055	2031 AM – NB	2031 PM - SB
VL (Left-Turning Volume)	22	1
VA (Advancing Volume)	229	180
% Left Turns	10%	1%
VO (Opposing Volume)	98	130
Treatment Warranted	Type III	Type II

Table 9-4
2041 Left Turn Warrant Analysis for Hwy 697 and Twp Rd 1055 (Sawmill Access)

Hwy 697 & Twp Rd 1055	2041 AM – NB	2041 PM - SB
VL (Left-Turning Volume)	25	2
VA (Advancing Volume)	306	248
% Left Turns	8%	1%
VO (Opposing Volume)	121	177
Treatment Warranted	Type IV	Type III

9.2.2 Right Turn Warrant

The right turn warrant analysis was completed as per Section D.7.7 of the HGDG using a design speed of 110 km/h. The three conditions that would warrant a right turn were evaluated as follows:

- Main (or through) road AADT is greater than or equal to 1,800 – condition is met in 2021
- Intersecting road AADT is greater than or equal to 900 – condition is not met as the intersecting road volume remains below 900 by 2041.
- The right turn daily traffic volume is greater than or equal to 360 for the movement in question – condition is not met as the right turning volume in both directions remains below 360 by 2041.

9.3 Conclusion

The warrant analyses show that a Type IV intersection treatment is warranted for the northbound left in 2041. An exclusive right turn lane is not warranted. Currently, this intersection does not have a bypass lane for through traffic to avoid northbound left-turning traffic but has a channelized turn to the east which allows logging trucks to complete the left turn by using Twp Rd 1055. According to the 2019 counts, only about 30 vehicles make the northbound left per day. It is assumed that the northbound left turns associated with the development traffic within La Crête would be completed at either Twp Rd 1060, Twp Rd 1061, or Twp Rd 1062 rather than at this access. Due to the allowance for left-turning logging trucks already in place, no improvements are recommended.

10 100 ST AND 94 AVE (TWP RD 1061) INTERSECTION SIGNAL WARRANT

As requested by the County, a signalization warrant using the TAC warrant was performed for the intersection of 100 St and 94 Ave (Twp Rd 1061) within La Crête. In order to complete the analysis, traffic counts were required. County staff performed a 12-hour count on November 19, 2020 at the intersection, based on instructions provided by AE. All vehicles were counted, including a differentiation between light vehicles and heavy trucks. Any pedestrians crossing at the two provided crosswalks (on the west and north legs) were also counted. The manual count data is provided along with the other traffic data in **Appendix A.**

Using the 12-hr counts broken down in 15-minute intervals, the two-hour AM, midday, and PM peaks were identified by finding the highest totals of the sum of all movements in a two-hour period. These values were inputted into the spreadsheet to determine the warrant score for 2020 (current conditions). The values were also forecast to 2040 using the historical growth rate within La Crête to determine the future warrant score for the 20-year design horizon, and the estimated future development traffic was also considered.

In an urban area, the intersection must receive a score of 100 to warrant signalization. Using the current volumes counted in 2020, the intersection received a warrant score of 27. Applying the historical growth rate to background volumes and projecting to 2040, the score becomes 79. Adding the anticipated development traffic to the anticipated background traffic in 2041, the intersection receives a score of 112 by 2041. Signals are not required at the current time, but may be required within 20 years depending on actual background traffic growth and development proceeding in the area. It is recommended that as development proceeds in the area over the next decade, the signal warrant be performed again once background traffic growth is more established and development traffic can be better estimated. The warrant score sheets are included in **Appendix H**.

11 SUMMARY

A background review of Mackenzie County's guiding documents was completed. County documents identify two typical cross-sections for roadways within La Crête: the Green Link and Town Centre cross-sections. Based on County feedback in terms of desiring more snow storage space, AE proposed updates to the two recommended cross-sections. AE also reviewed the County's recommended design standards for different road types. The ASP and Industrial Growth Strategy identify areas where future development is anticipated. The TMP and Industrial Growth Strategy have identified areas of the road network which are recommended to be prioritized for upgrading. The ASP and TMP proposed a long-term hierarchical road network that was used as a basis to develop the recommendations in this study. This study focussed on creating a sustainable long-term network of arterial and collector roadways, as local roads may be highly influenced by development type. To support the goals identified in several of the documents, this study provided a recommended long-term transportation network that ensures safe and efficient travel within La Crête while providing the means to support traffic associated with future development and growth.

Using the information on traffic volumes, population and planned development within La Crête, AE developed a proposed road network, a proposed truck route map, and a proposed trail map. Traffic volumes on Hwy 697 were reviewed and a growth rate of 2.65% was assigned as the most realistic projection of background traffic over the next few decades based on the historical growth average. This rate was used to complete intersection analyses for the four intersections accessing La Crête.

Many assumptions were made to complete the TIA portion of the highway intersection analyses, because the land use and building sizes for each land parcel, both within Lake Side Subdivision and County-identified Parcels 1-6, are currently unknown. It is recommended that a TIA supplement be completed when this information is known to confirm the appropriateness of the assumptions made in this report, prior to the construction of any intersection improvements if possible.

Intersection-specific recommendations based on the results of the analyses are described below.

<u>Hwy 697 and Twp Rd 1062 (109 Ave):</u>

- Background traffic volumes projected to 2051 (20 years from full build out of Lake Side development) result in the need to upgrade to a Type IV intersection. The addition of the development traffic results in the requirement for longer storage lengths for left turns and an exclusive eastbound right turn. A Type V configuration with 35 m of additional storage for the eastbound left turn and 15 m of additional storage for the westbound left turn is recommended. Also, channelization is recommended for the eastbound right turn.
- Channelization of the eastbound right will require more right-of way and may affect the northeast corner of the proposed Lake Side Subdivision plan.
- Results of the capacity analyses show that the intersection operation improves with the upgraded intersection configuration. In 2051, the overall intersection LOS is A but the individual northbound left movement is failing. If a connection is provided to the Lake Side Subdivision on its south side to Twp Road 1061 / 94 Ave, this would shift some of the traffic away from Twp Road 1062 and improve the operations at that intersection. It is recommended that the County maintain allowance for a future possible south access to the Lake Side Subdivision, and the access can be added as development needs dictate. 2051 is still 30 years in the future and significant changes to development in the area and background traffic patterns could occur.

- Illumination warrants show that lighting will be required in 2051 with the development, the increased traffic volumes, and the channelized right turn.
- Upgrading the intersection should address any faded or absent pavement markings and should include regrading of any deficient sideslopes.

Hwy 697 and Twp Rd 1061 (94 Ave):

- Assuming a steady highway background traffic growth at 2.65% with the associated development traffic, a Type IVa intersection treatment (for three-legged intersections) is warranted by 2041 for the intersection of Hwy 697 and Twp Rd 1061, with an exclusive turn lane for the northbound left turn.
- If any improvements are made to this intersection configuration, it is recommended that any steep sideslopes be regraded to the correct ratio.

Hwy 697 and Twp Rd 1060 (South Access):

- Assuming a steady highway background traffic growth at 2.65% with the associated development traffic, the estimated 2041 traffic will require this intersection be upgraded to a Type IVc treatment with a dedicated northbound left turn.
- If any improvements are made to this intersection configuration, it is recommended that any steep sideslopes be flattened to the correct ratio. Steep pavement sideslopes should also be addressed.

Hwy 697 and Twp Rd 1055 (Sawmill Access):

- The warrant analyses show that a Type IV intersection treatment is warranted for the northbound left in 2041. Due to the allowance for northbound left-turning logging trucks already in place, no improvements are recommended.
- If any improvements are made to this intersection configuration, the areas with ponding water should be reviewed to determine whether drainage accommodation is sufficient in this area. The damaged culvert can be repaired in the near future by notifying Alberta Transportation.

100 St and 109 Ave (Twp Rd 1062):

- Consideration should be given to installing rumble strips on the east approach, depending on proximity to residences, since the traffic coming from the east has been traveling at highway speed for a long time and is required to come to a complete stop here.
- As this is a main entrance into La Crête, the County may wish to review the collision history at this intersection and perform a signalization warrant analysis with updated turning movement counts.

100 St and 94 Ave (Twp Rd 1061):

- As a low-cost safety improvement, the correct lane markings should be painted at this intersection to clearly indicate lane assignments.
- The results of the signalization warrant analysis for this intersection showed that signals are not required based on current traffic, but may be required within 20 years depending on actual background traffic growth and development traffic.

12 NEXT STEPS

It is understood that the County is considering upgrading the intersection of Hwy 697 and Twp Rd 1062 (109 Ave) in the near future. Preliminary design would involve review of the traffic recommendations in this study and designing an upgrade based on the results of the warrant analysis. If more information about the upcoming developments that would affect volumes at this intersection is known, it should be incorporated into the warrant analysis prior to design. After preliminary and detailed design are completed, the project can proceed to tender and construction.

As part of preliminary design, a geotechnical investigation would be required, which would identify subsurface conditions using a drilling program. It would establish a recommended surfacing strategy for the upgrade, taking truck loads into account. It should be noted that Alberta Transportation may already have a recent surfacing strategy for this portion of highway, especially if the highway will be grade-widened in the summer of 2021.

Environmental permitting may be necessary during design. The northwest corner of the intersection is Crown land, for which a disposition under the *Public Lands Act* would be required if there are to be project components or construction activities on this land. There is potential for wetlands to occur in the forested area. If wetland area is confirmed and project cannot avoid permanent impacts to wetlands, an Approval under the *Water Act* would be required. Application for an Approval under the *Water Act* would need to be supplemented with field delineated wetland boundaries and a Wetland Assessment Impact Report. Approvals can take extended periods of time; this should be factored into the project schedule. Once the project proceeds to construction, there are several environmental compliance measures to follow, including preventing the spread of clubroot (potential for clubroot in canola fields), and clearing vegetation outside of migratory birds nesting period and wildlife sensitivity periods. As owners of the highway right-of-way, Alberta Transportation may require the project to follow their environmental process. This process includes the development of an Environmental Evaluation and/or an Environmental Risk Assessment and an Environmental Construction Operations Plan. The exact scope of environmental work can be clarified once the project proceeds to preliminary design.

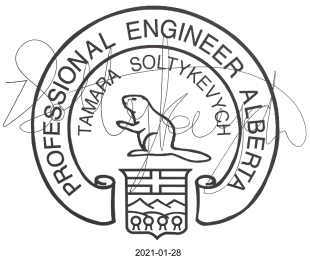
Should the County wish to apply for provincial funding for the intersection upgrade, they can do so through the Strategic Transportation Infrastructure Program. This requires completion of a report detailing the project information, rationale, benefits, demonstration of alignment with the government's priority areas, as well as a cost estimate. Full details of the program and application requirements are available on the AT website.

CLOSURE

This report was prepared for the Mackenzie County to provide a recommendation for a long-term transportation network within La Crête, and to complete analyses of the highway intersections providing access to La Crête.

The services provided by Associated Engineering Alberta Ltd. in the preparation of this report were conducted in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practicing under similar conditions. No other warranty expressed or implied is made.

Respectfully submitted,
Associated Engineering Alberta Ltd.



Tamara Soltykevych, P.Eng.
Transportation Engineer

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Vice President, Transportation

PERMIT TO PRACTICE
ASSOCIATED ENGINEERING ALBERTA LTD.
Signature _____
Michael W Paulsen
2021-01-29
PERMIT NUMBER: P 03979
The Association of Professional Engineers and Geoscientists of Alberta

APPENDIX A - TRAFFIC VOLUME DATA

Turning Movement Summary Diagram

Reference No.: 70000244

Intersection of:
697 & TWP RD 1062 (LA CRETE N ACC) 11-106-15-500000000

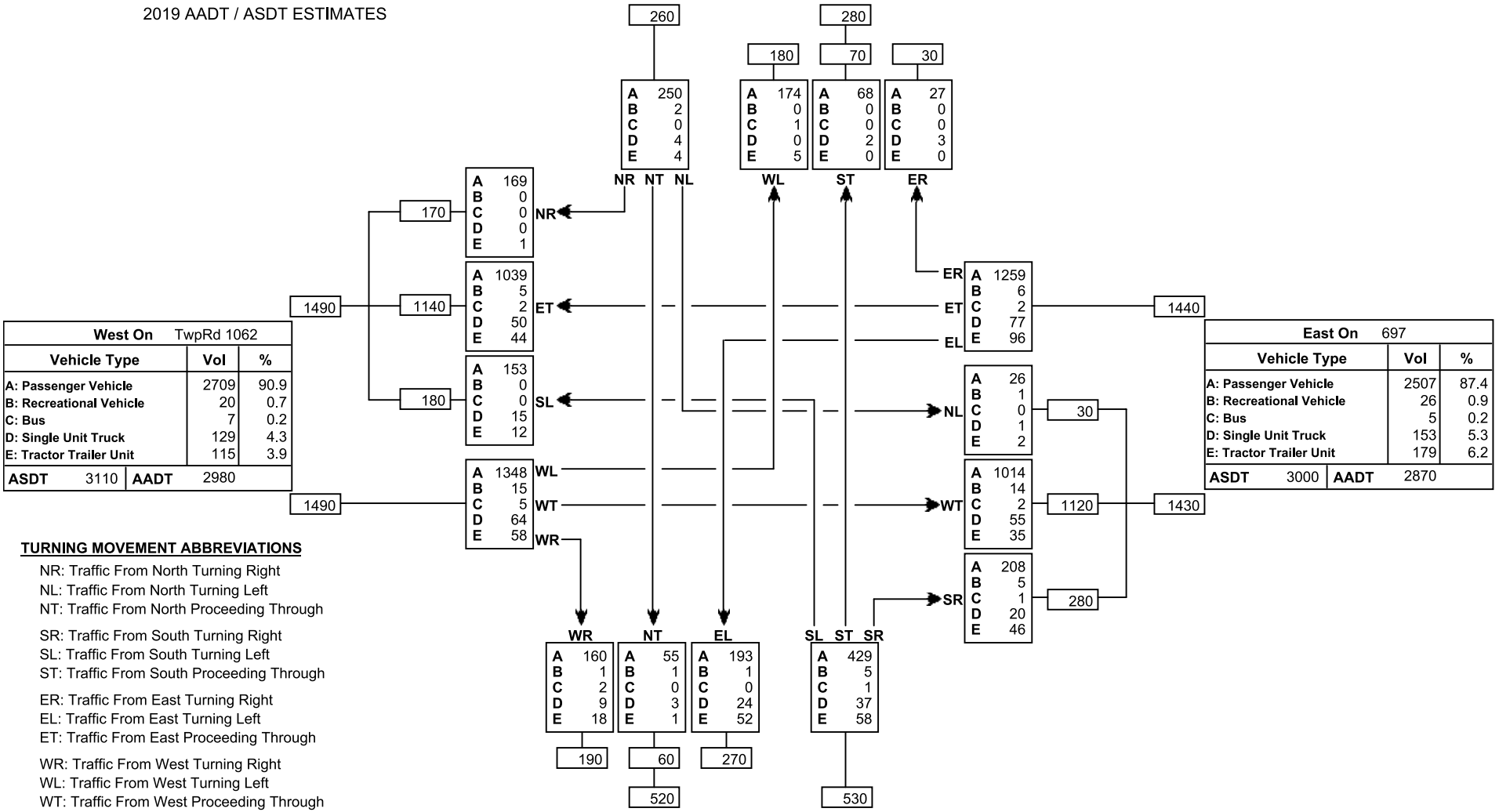
2019 AADT / ASDT ESTIMATES

North On Rge Rd 151		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	519	96.1
B: Recreational Vehicle	2	0.4
C: Bus	1	0.2
D: Single Unit Truck	9	1.7
E: Tractor Trailer Unit	9	1.7
ASDT 560	**AADT** 540	

West On TwpRd 1062		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	2709	90.9
B: Recreational Vehicle	20	0.7
C: Bus	7	0.2
D: Single Unit Truck	129	4.3
E: Tractor Trailer Unit	115	3.9
ASDT 3110	**AADT** 2980	

East On 697		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	2507	87.4
B: Recreational Vehicle	26	0.9
C: Bus	5	0.2
D: Single Unit Truck	153	5.3
E: Tractor Trailer Unit	179	6.2
ASDT 3000	**AADT** 2870	

South On 697		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	837	79.7
B: Recreational Vehicle	8	0.8
C: Bus	3	0.3
D: Single Unit Truck	73	7.0
E: Tractor Trailer Unit	129	12.3
ASDT 1150	**AADT** 1050	



TURNING MOVEMENT ABBREVIATIONS

NR: Traffic From North Turning Right
NL: Traffic From North Turning Left
NT: Traffic From North Proceeding Through

SR: Traffic From South Turning Right
SL: Traffic From South Turning Left
ST: Traffic From South Proceeding Through

ER: Traffic From East Turning Right
EL: Traffic From East Turning Left
ET: Traffic From East Proceeding Through

WR: Traffic From West Turning Right
WL: Traffic From West Turning Left
WT: Traffic From West Proceeding Through

TURNING MOVEMENT ABBREVIATIONS

AADT: Annual Average Daily Traffic
Average daily traffic expressed as vehicles per day fo
period of January 1 to December 31 (365 days)

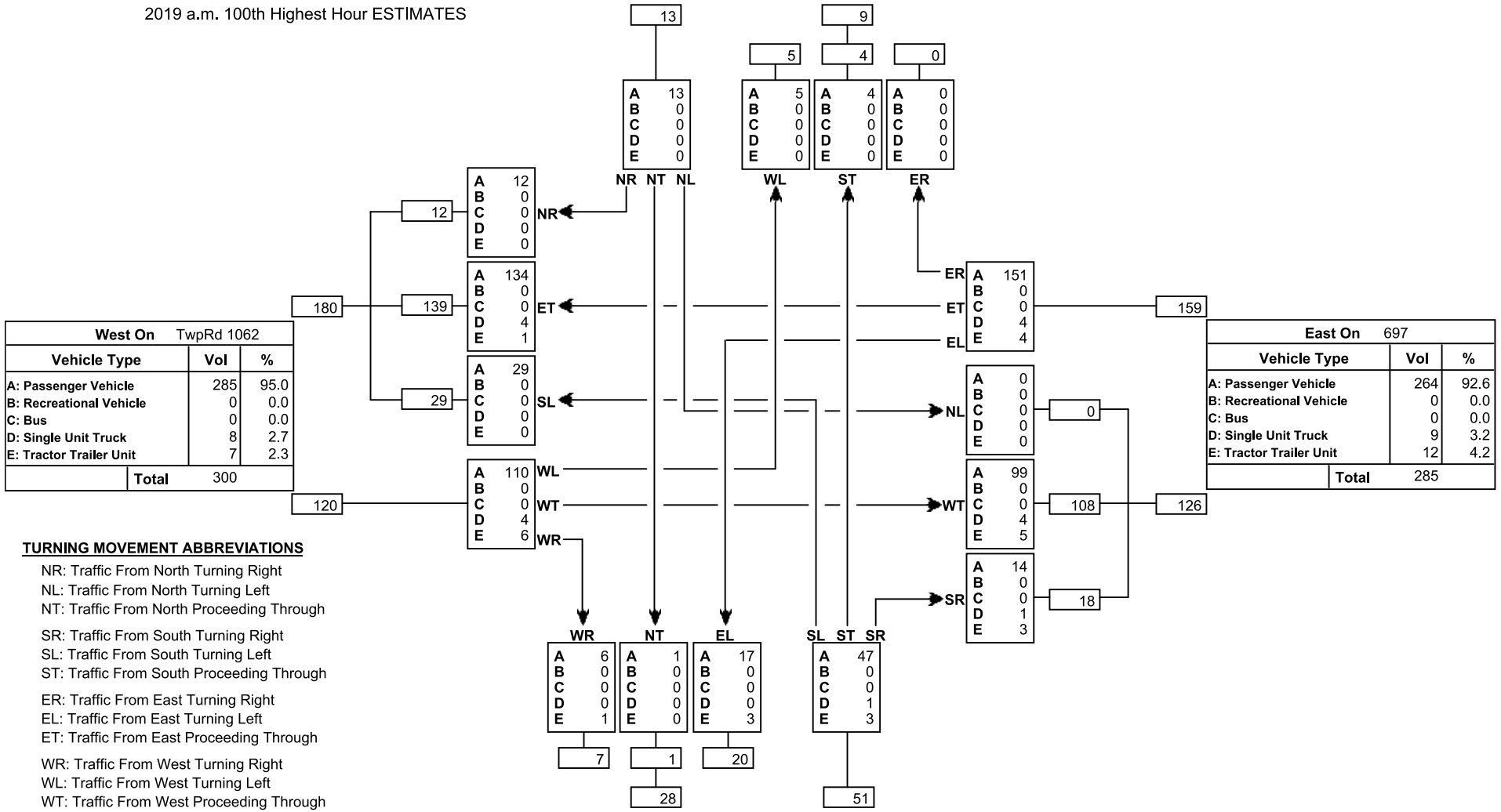
ASDT: Average Summer Daily Traffic
Average daily traffic expressed as vehicles per day fo
period of May 1 to September 30 (153 days)

Turning Movement Summary Diagram

Reference No.: 70000244

Intersection of:
697 & TWP RD 1062 (LA CRETE N ACC) 11-106-15-500000000

2019 a.m. 100th Highest Hour ESTIMATES



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Turning Movement Summary Diagram

Reference No.: 70000244

Intersection of:
697 & TWP RD 1062 (LA CRETE N ACC) 11-106-15-500000000

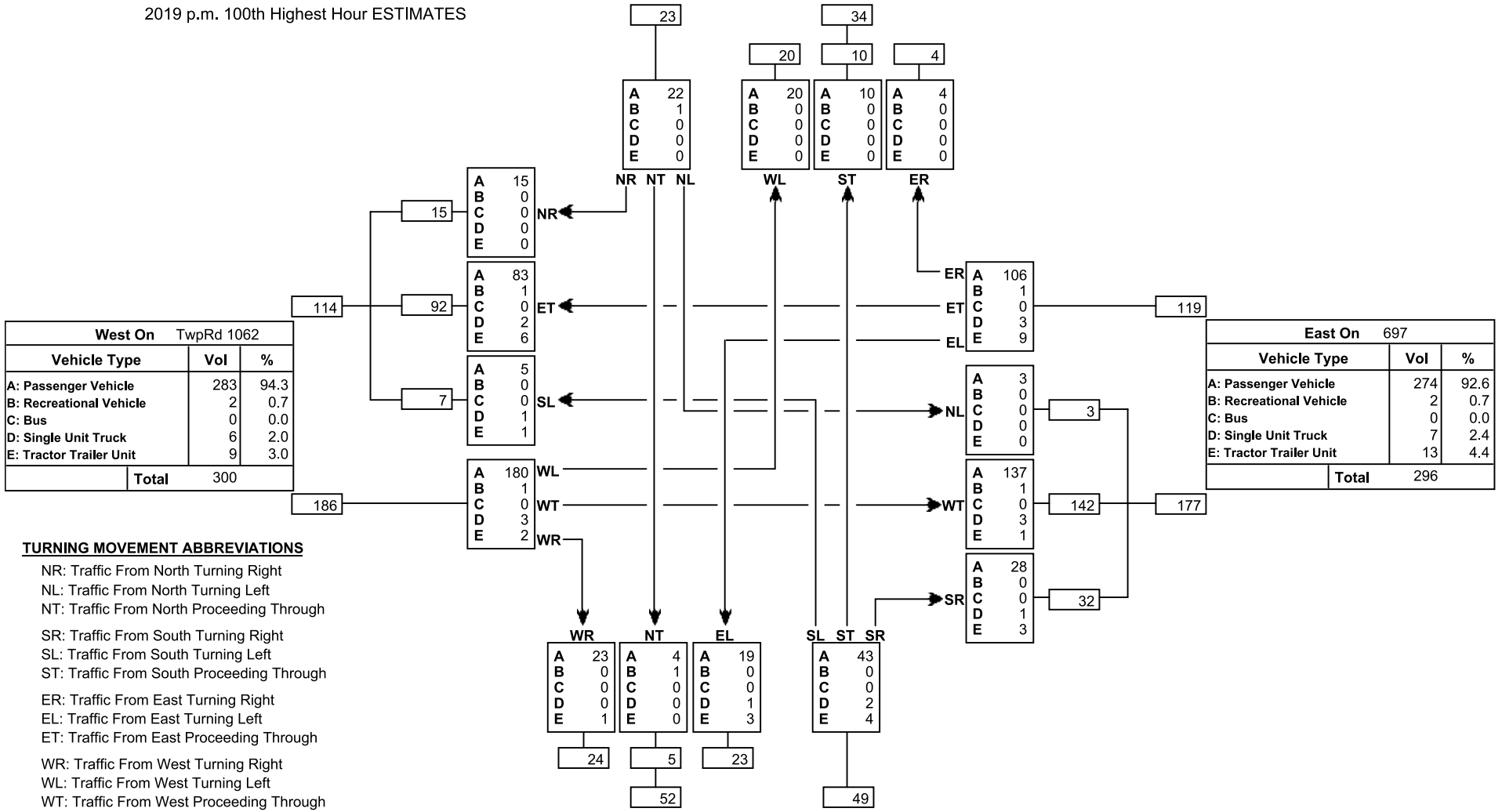
2019 p.m. 100th Highest Hour ESTIMATES

North On Rge Rd 151		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	56	98.2
B: Recreational Vehicle	1	1.8
C: Bus	0	0.0
D: Single Unit Truck	0	0.0
E: Tractor Trailer Unit	0	0.0
Total	57	

West On TwpRd 1062		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	283	94.3
B: Recreational Vehicle	2	0.7
C: Bus	0	0.0
D: Single Unit Truck	6	2.0
E: Tractor Trailer Unit	9	3.0
Total	300	

East On 697		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	274	92.6
B: Recreational Vehicle	2	0.7
C: Bus	0	0.0
D: Single Unit Truck	7	2.4
E: Tractor Trailer Unit	13	4.4
Total	296	

South On 697		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	89	88.1
B: Recreational Vehicle	1	1.0
C: Bus	0	0.0
D: Single Unit Truck	3	3.0
E: Tractor Trailer Unit	8	7.9
Total	101	



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EL: Traffic From East Turning Left
ET: Traffic From East Proceeding Through

WR: Traffic From West Turning Right
WL: Traffic From West Turning Left
WT: Traffic From West Proceeding Through

Turning Movement Summary Diagram

Reference No.: 38945

Intersection of:
697 & TWP RD 1060 35-105-15-500000000

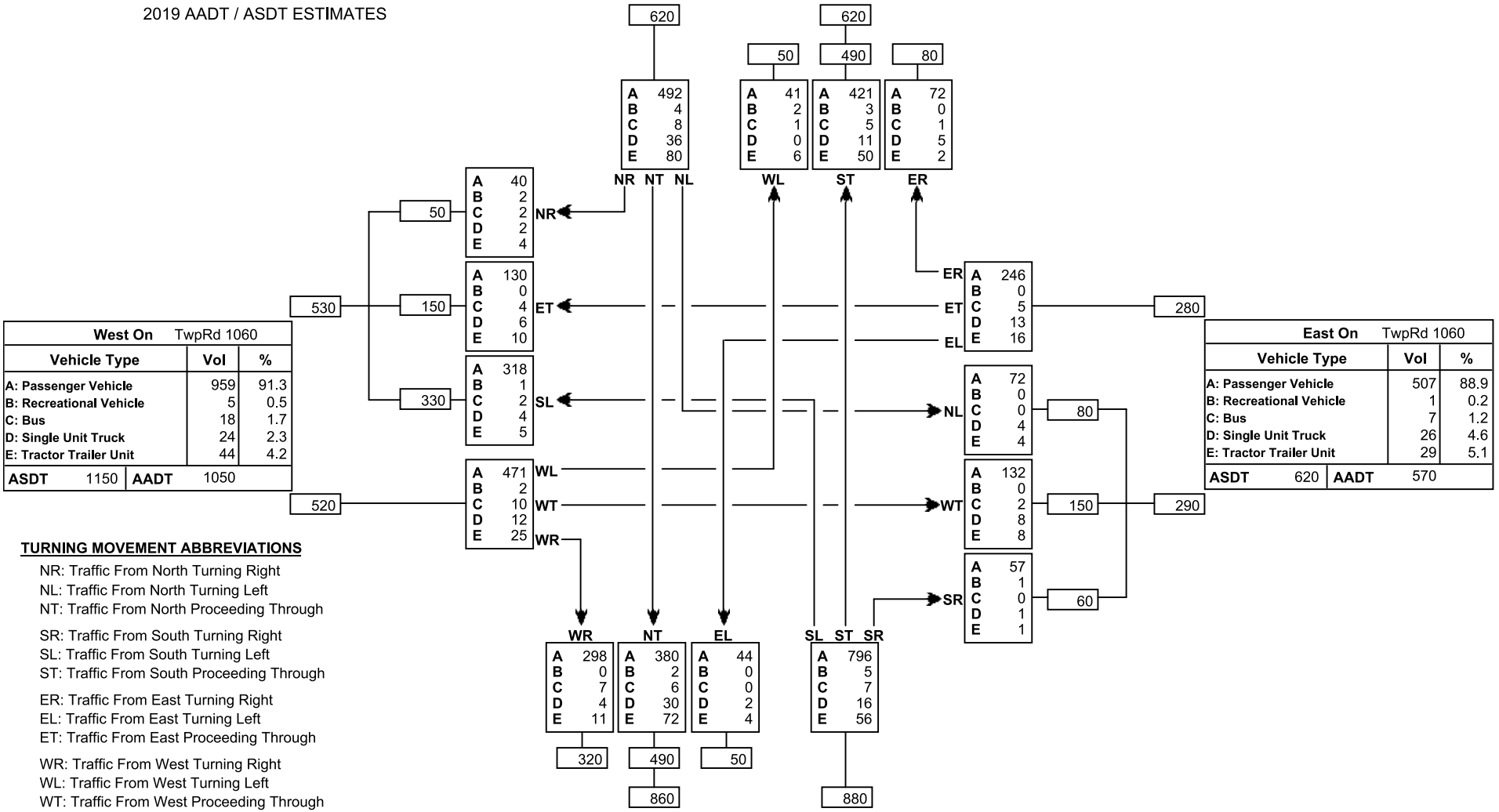
2019 AADT / ASDT ESTIMATES

North On 697		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	1026	82.7
B: Recreational Vehicle	9	0.7
C: Bus	15	1.2
D: Single Unit Truck	52	4.2
E: Tractor Trailer Unit	138	11.1
ASDT 1360	**AADT** 1240	

West On TwpRd 1060		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	959	91.3
B: Recreational Vehicle	5	0.5
C: Bus	18	1.7
D: Single Unit Truck	24	2.3
E: Tractor Trailer Unit	44	4.2
ASDT 1150	**AADT** 1050	

East On TwpRd 1060		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	507	88.9
B: Recreational Vehicle	1	0.2
C: Bus	7	1.2
D: Single Unit Truck	26	4.6
E: Tractor Trailer Unit	29	5.1
ASDT 620	**AADT** 570	

South On 697		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	1518	87.2
B: Recreational Vehicle	7	0.4
C: Bus	20	1.1
D: Single Unit Truck	52	3.0
E: Tractor Trailer Unit	143	8.2
ASDT 1900	**AADT** 1740	



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Average daily traffic expressed as vehicles per day fo
period of May 1 to September 30 (153 days)

Turning Movement Summary Diagram

Reference No.: 38945

Intersection of:
697 & TWP RD 1060 35-105-15-500000000

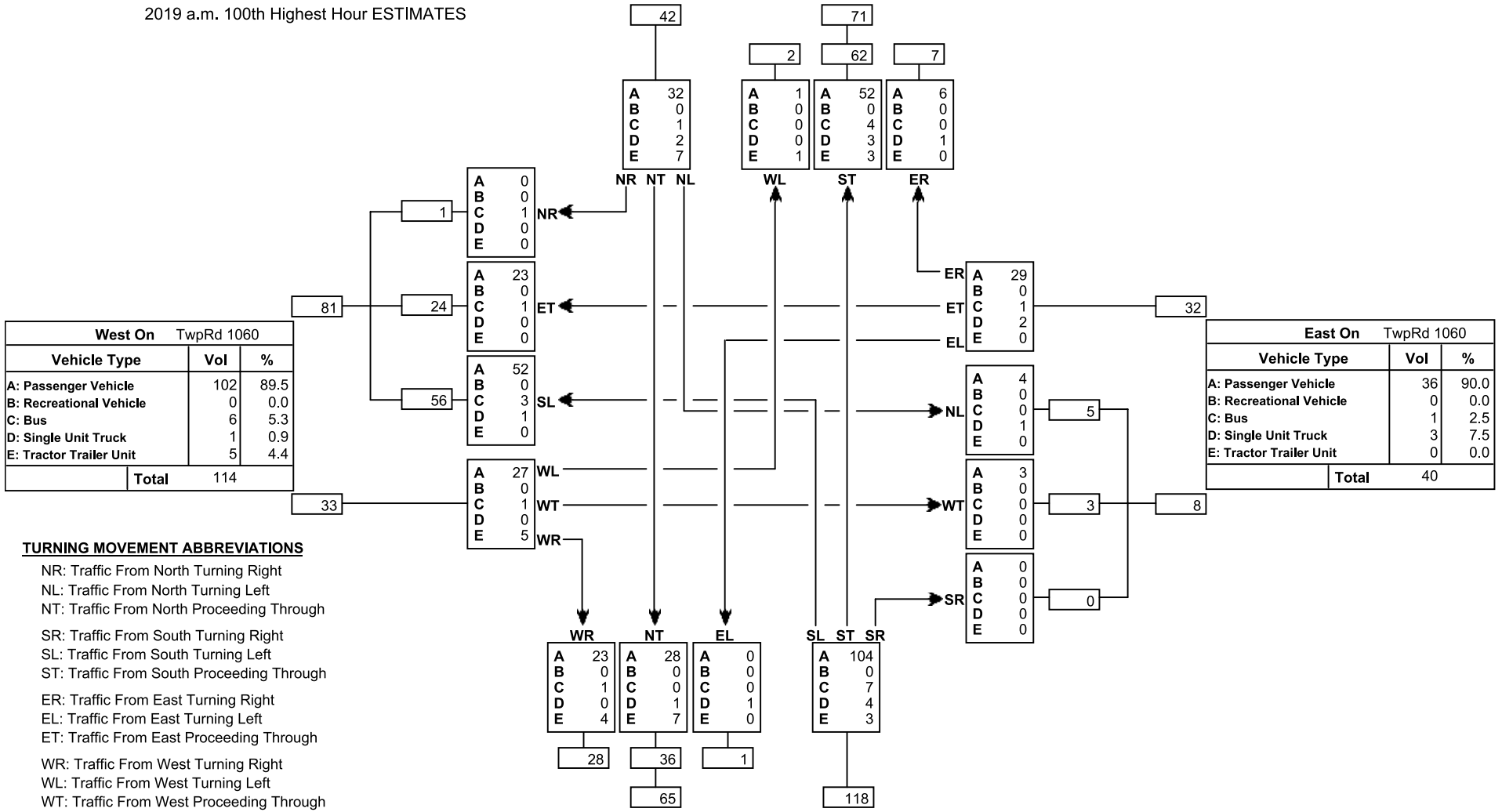
2019 a.m. 100th Highest Hour ESTIMATES

North On 697		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	91	80.5
B: Recreational Vehicle	0	0.0
C: Bus	5	4.4
D: Single Unit Truck	6	5.3
E: Tractor Trailer Unit	11	9.7
Total	113	

West On TwpRd 1060		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	102	89.5
B: Recreational Vehicle	0	0.0
C: Bus	6	5.3
D: Single Unit Truck	1	0.9
E: Tractor Trailer Unit	5	4.4
Total	114	

East On TwpRd 1060		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	36	90.0
B: Recreational Vehicle	0	0.0
C: Bus	1	2.5
D: Single Unit Truck	3	7.5
E: Tractor Trailer Unit	0	0.0
Total	40	

South On 697		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	155	84.7
B: Recreational Vehicle	0	0.0
C: Bus	8	4.4
D: Single Unit Truck	6	3.3
E: Tractor Trailer Unit	14	7.7
Total	183	



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WT: Traffic From West Proceeding Through

Turning Movement Summary Diagram

Reference No.: 38945

Intersection of:
697 & TWP RD 1060 35-105-15-500000000

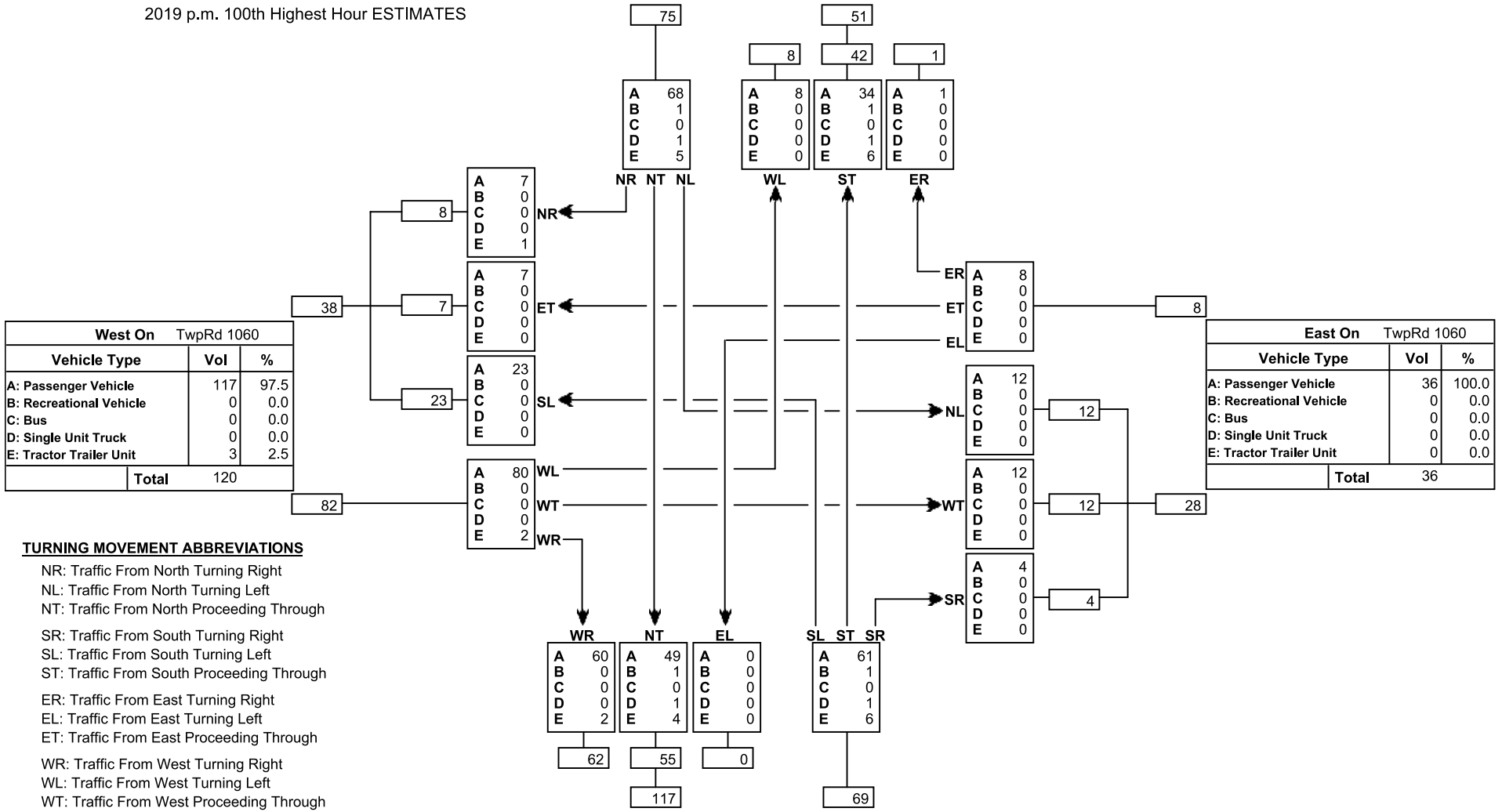
2019 p.m. 100th Highest Hour ESTIMATES

North On 697		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	111	88.1
B: Recreational Vehicle	2	1.6
C: Bus	0	0.0
D: Single Unit Truck	2	1.6
E: Tractor Trailer Unit	11	8.7
Total	126	

West On TwpRd 1060		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	117	97.5
B: Recreational Vehicle	0	0.0
C: Bus	0	0.0
D: Single Unit Truck	0	0.0
E: Tractor Trailer Unit	3	2.5
Total	120	

East On TwpRd 1060		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	36	100.0
B: Recreational Vehicle	0	0.0
C: Bus	0	0.0
D: Single Unit Truck	0	0.0
E: Tractor Trailer Unit	0	0.0
Total	36	

South On 697		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	170	91.4
B: Recreational Vehicle	2	1.1
C: Bus	0	0.0
D: Single Unit Truck	2	1.1
E: Tractor Trailer Unit	12	6.5
Total	186	



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ST: Traffic From South Proceeding Through

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EL: Traffic From East Turning Left
ET: Traffic From East Proceeding Through

WR: Traffic From West Turning Right
WL: Traffic From West Turning Left
WT: Traffic From West Proceeding Through

Turning Movement Summary Diagram

Reference No.: 37942

Intersection of:
697 & TWP RD 1055 26-105-15-500000000

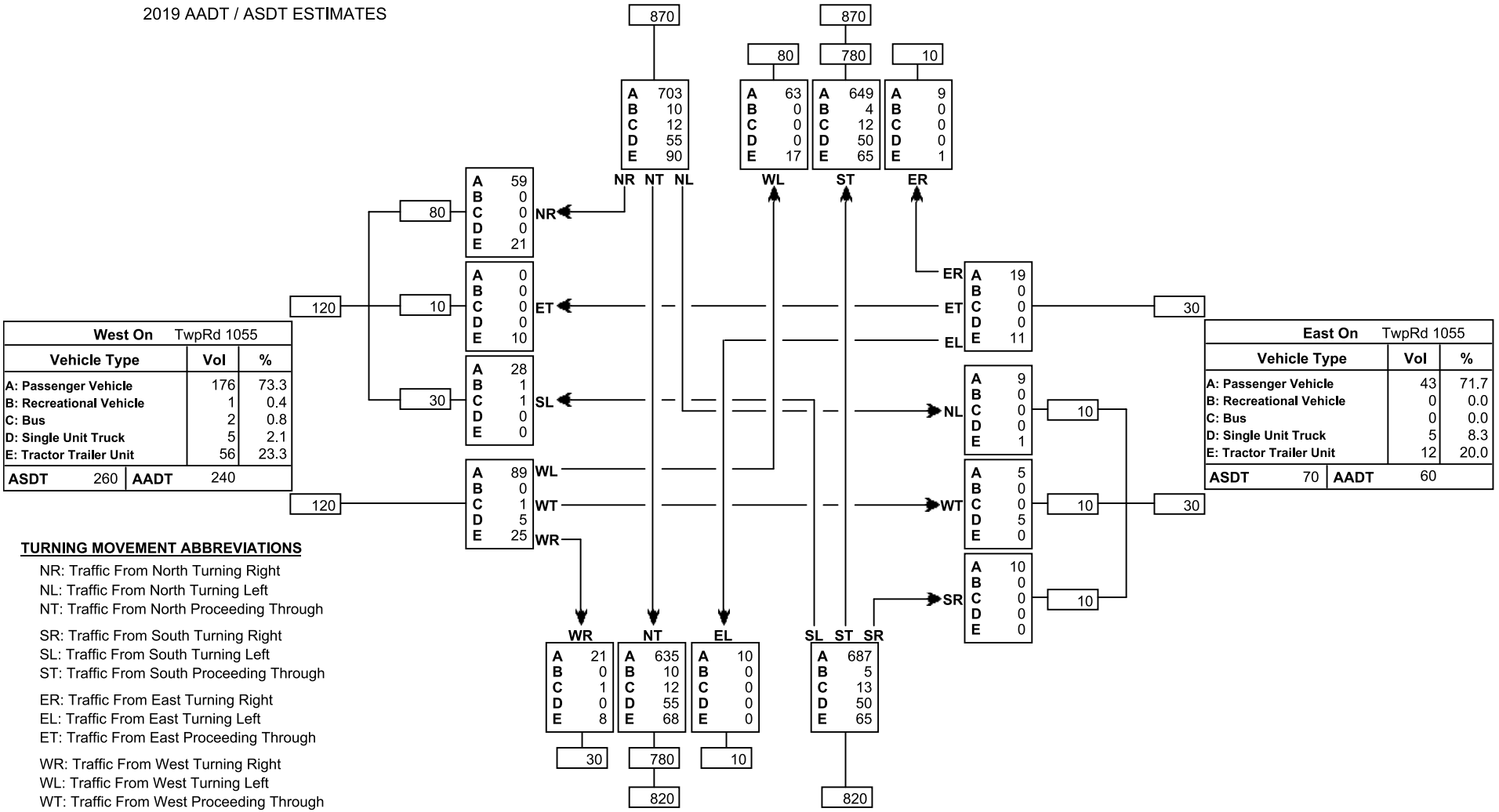
2019 AADT / ASDT ESTIMATES

North On 697		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	1424	81.8
B: Recreational Vehicle	14	0.8
C: Bus	24	1.4
D: Single Unit Truck	105	6.0
E: Tractor Trailer Unit	173	9.9
ASDT 1900	**AADT** 1740	

West On TwpRd 1055		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	176	73.3
B: Recreational Vehicle	1	0.4
C: Bus	2	0.8
D: Single Unit Truck	5	2.1
E: Tractor Trailer Unit	56	23.3
ASDT 260	**AADT** 240	

East On TwpRd 1055		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	43	71.7
B: Recreational Vehicle	0	0.0
C: Bus	0	0.0
D: Single Unit Truck	5	8.3
E: Tractor Trailer Unit	12	20.0
ASDT 70	**AADT** 60	

South On 697		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	1353	82.5
B: Recreational Vehicle	15	0.9
C: Bus	26	1.6
D: Single Unit Truck	105	6.4
E: Tractor Trailer Unit	141	8.6
ASDT 1790	**AADT** 1640	



TURNING MOVEMENT ABBREVIATIONS

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NL: Traffic From North Turning Left
NT: Traffic From North Proceeding Through

SR: Traffic From South Turning Right
SL: Traffic From South Turning Left
ST: Traffic From South Proceeding Through

ER: Traffic From East Turning Right
EL: Traffic From East Turning Left
ET: Traffic From East Proceeding Through

WR: Traffic From West Turning Right
WL: Traffic From West Turning Left
WT: Traffic From West Proceeding Through

TURNING MOVEMENT ABBREVIATIONS

AADT: Annual Average Daily Traffic
Average daily traffic expressed as vehicles per day fo
period of January 1 to December 31 (365 days)

ASDT: Average Summer Daily Traffic
Average daily traffic expressed as vehicles per day fo
period of May 1 to September 30 (153 days)

Turning Movement Summary Diagram

Reference No.: 37942

Intersection of:
697 & TWP RD 1055 26-105-15-500000000

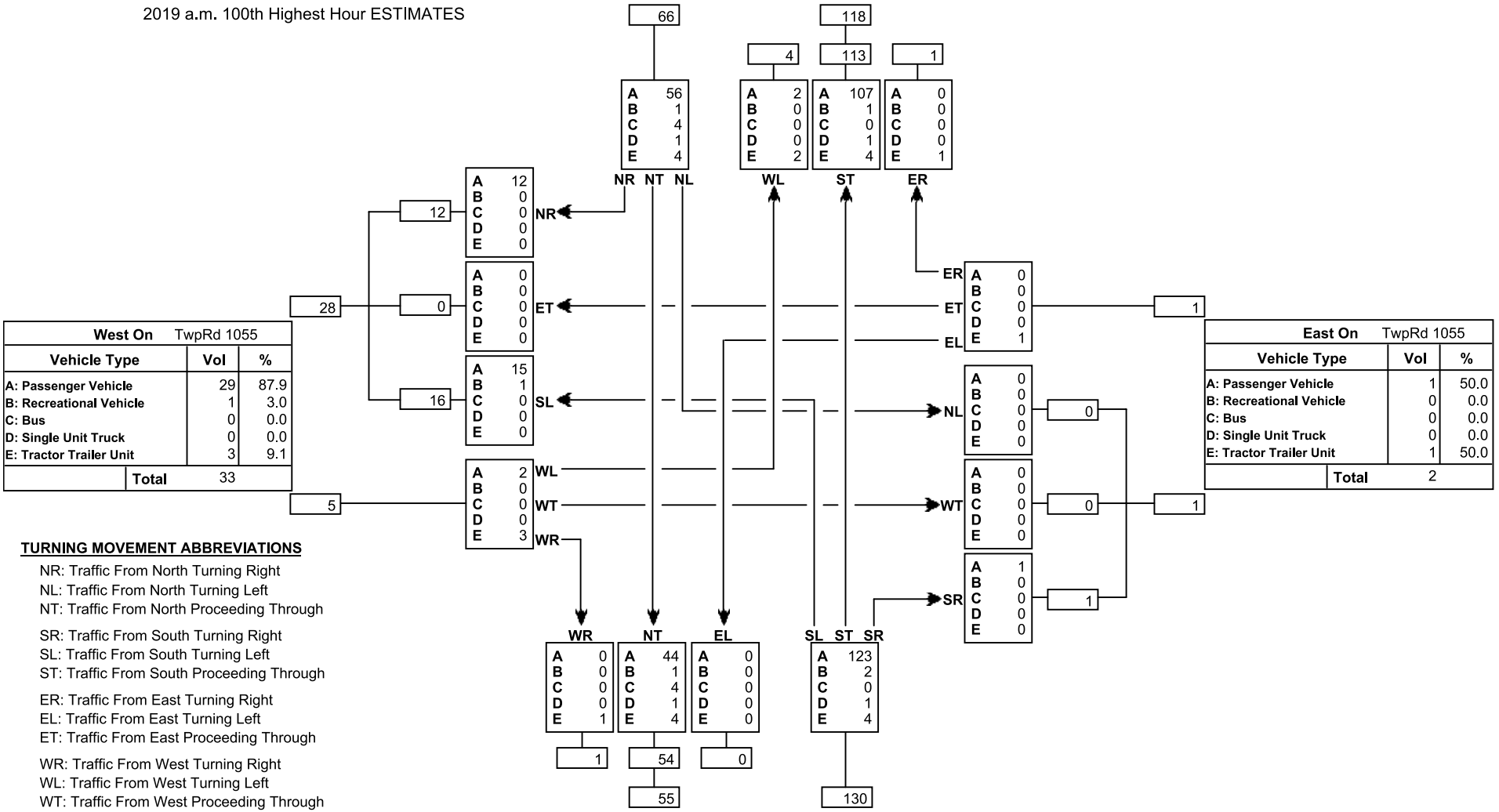
2019 a.m. 100th Highest Hour ESTIMATES

North On 697		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	165	89.7
B: Recreational Vehicle	2	1.1
C: Bus	4	2.2
D: Single Unit Truck	2	1.1
E: Tractor Trailer Unit	11	6.0
Total	184	

West On TwpRd 1055		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	29	87.9
B: Recreational Vehicle	1	3.0
C: Bus	0	0.0
D: Single Unit Truck	0	0.0
E: Tractor Trailer Unit	3	9.1
Total	33	

East On TwpRd 1055		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	1	50.0
B: Recreational Vehicle	0	0.0
C: Bus	0	0.0
D: Single Unit Truck	0	0.0
E: Tractor Trailer Unit	1	50.0
Total	2	

South On 697		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	167	90.3
B: Recreational Vehicle	3	1.6
C: Bus	4	2.2
D: Single Unit Truck	2	1.1
E: Tractor Trailer Unit	9	4.9
Total	185	



TURNING MOVEMENT ABBREVIATIONS

NR: Traffic From North Turning Right
NL: Traffic From North Turning Left
NT: Traffic From North Proceeding Through

SR: Traffic From South Turning Right
SL: Traffic From South Turning Left
ST: Traffic From South Proceeding Through

ER: Traffic From East Turning Right
EL: Traffic From East Turning Left
ET: Traffic From East Proceeding Through

WR: Traffic From West Turning Right
WL: Traffic From West Turning Left
WT: Traffic From West Proceeding Through

Turning Movement Summary Diagram

Reference No.: 37942

Intersection of:
697 & TWP RD 1055 26-105-15-500000000

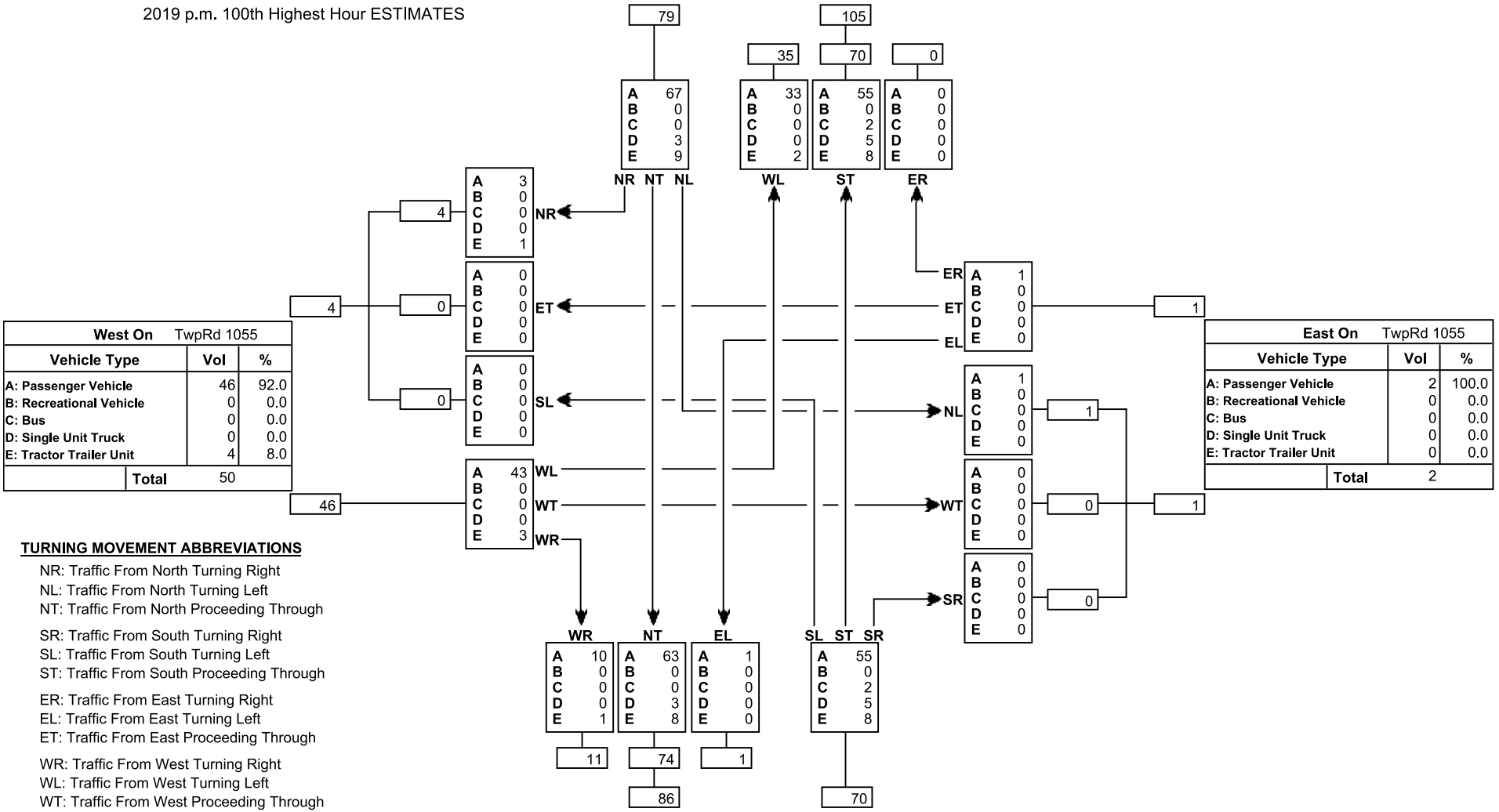
2019 p.m. 100th Highest Hour ESTIMATES

North On 697		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	155	84.2
B: Recreational Vehicle	0	0.0
C: Bus	2	1.1
D: Single Unit Truck	8	4.3
E: Tractor Trailer Unit	19	10.3
Total	184	

West On TwpRd 1055		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	46	92.0
B: Recreational Vehicle	0	0.0
C: Bus	0	0.0
D: Single Unit Truck	0	0.0
E: Tractor Trailer Unit	4	8.0
Total	50	

East On TwpRd 1055		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	2	100.0
B: Recreational Vehicle	0	0.0
C: Bus	0	0.0
D: Single Unit Truck	0	0.0
E: Tractor Trailer Unit	0	0.0
Total	2	

South On 697		
Vehicle Type	**Vol**	**%**
A: Passenger Vehicle	129	82.7
B: Recreational Vehicle	0	0.0
C: Bus	2	1.3
D: Single Unit Truck	8	5.1
E: Tractor Trailer Unit	17	10.9
Total	156	



TURNING MOVEMENT ABBREVIATIONS

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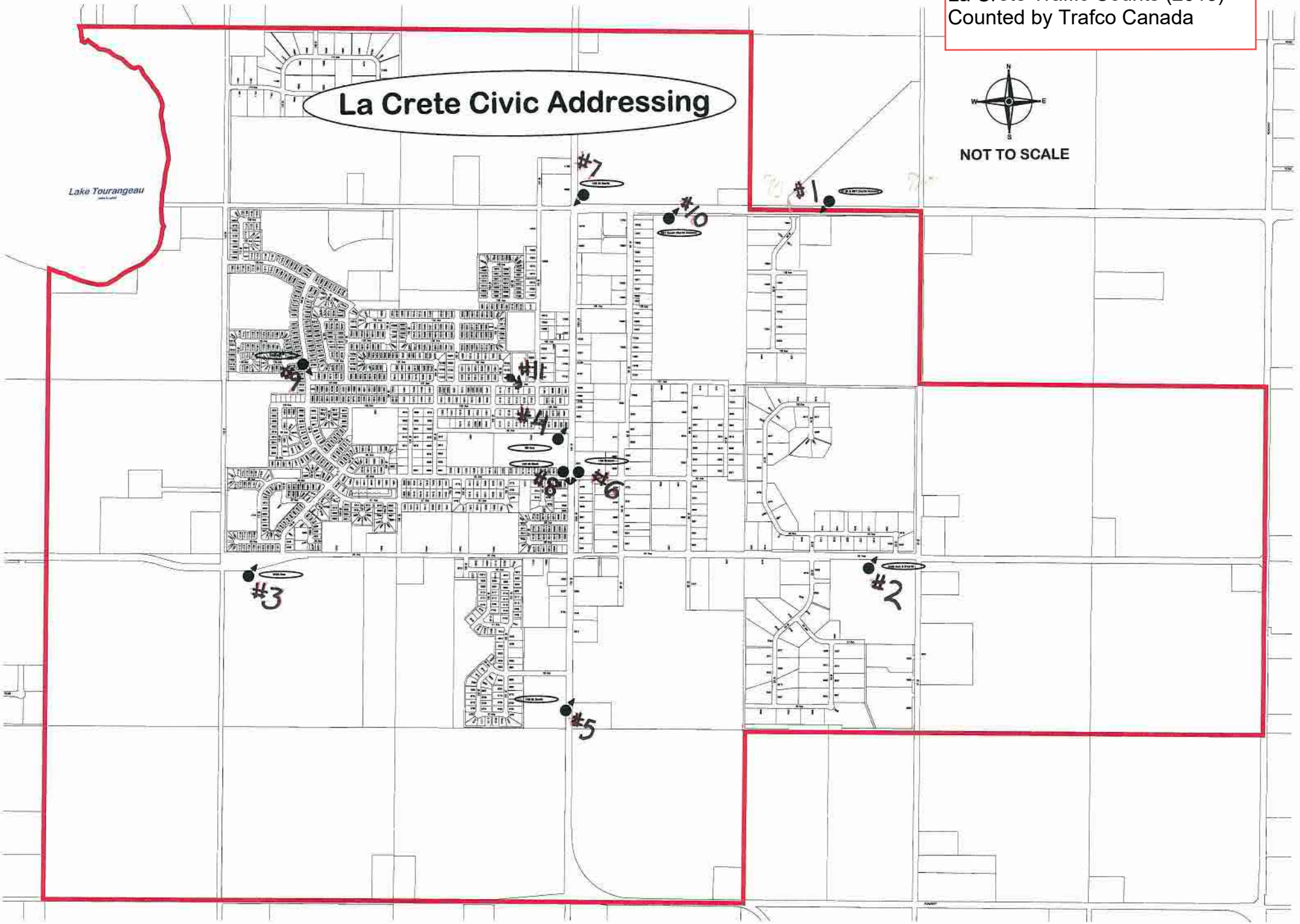
NL: Traffic From North Turning Left
NT: Traffic From North Proceeding Through

SR: Traffic From South Turning Right
SL: Traffic From South Turning Left
ST: Traffic From South Proceeding Through

ER: Traffic From East Turning Right
EL: Traffic From East Turning Left
ET: Traffic From East Proceeding Through

WR: Traffic From West Turning Right
WL: Traffic From West Turning Left
WT: Traffic From West Proceeding Through

La Crete Traffic Counts (2013)
Counted by Trafco Canada



Traffic report

powered by datacollect

Author

Institution	Trafco Canada
Department	Tech Support
Street	9015 14 Street NW
Postal code	T6P 0C9
City	Edmonton
Country	Canada
Contact	Brad Batdorf
Phone	+1-780-453-5280
Email	bradb@trafco.ca

Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:08:46

Site

Name	91 st +697.sdr
Dir. Oncoming (Eastbound)	
Dir. Outgoing (Westbound)	
Posted Speed Limit	100
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-11 09:00
End date	2013-06-14 08:59
Days	Tu, We, Th, Fr
Time Interval	60 minutes
Time / Day	00:00 - 23:59

#1 on Map

Length Classes [L in m]

Oncoming				
Time	Σ	0-6m	6-12m	>12m
00:00-06:00	78	58	16	4
06:00-12:00	1431	1181	188	62
12:00-18:00	1620	1294	236	90
18:00-23:59	928	781	112	35
00:00-24:00	4056	3313	552	191

Calculated speeds [V in km/h]

	Vmin	Vmax	Vavg	V15	V50	V85	V1	Vexc %
Oncoming	12	220	107	91	108	123	59	67.3

Descriptions

Vmin: Minimal velocity
Vmax: Maximal velocity
Vavg: Average velocity
V15: Critical velocity for the first 15% of vehicles
V50: Critical velocity for the first 50% of vehicles
V85: Critical velocity for the first 85% of vehicles
V1: Critical velocity for the first 1% of vehicles
Vexc %: Speeding in %

Traffic report

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Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:08:46

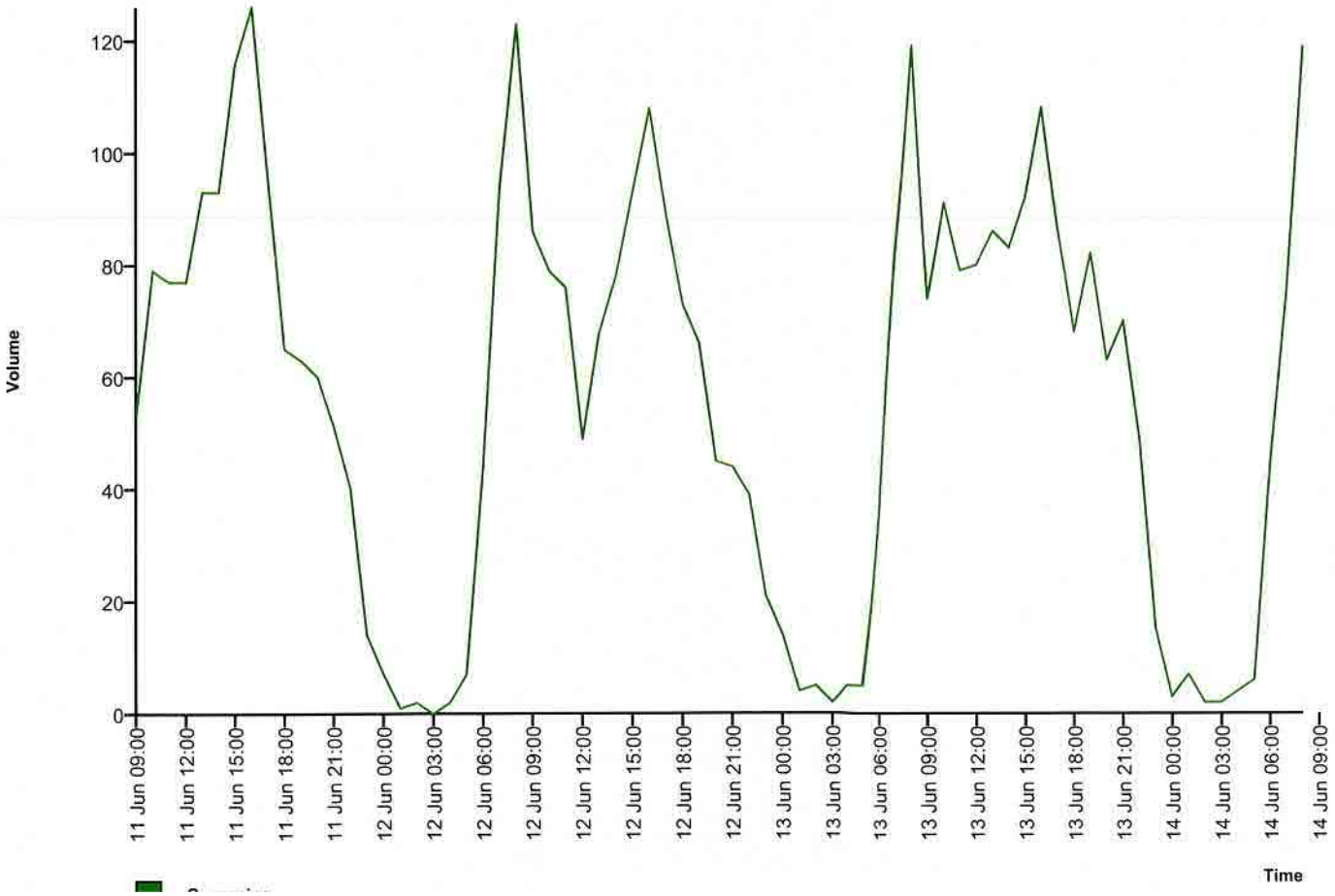
Site

Name	91 st +697.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	100
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-11 09:00
End date	2013-06-14 08:59
Days	Tu, We, Th, Fr
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Time / Volume graph



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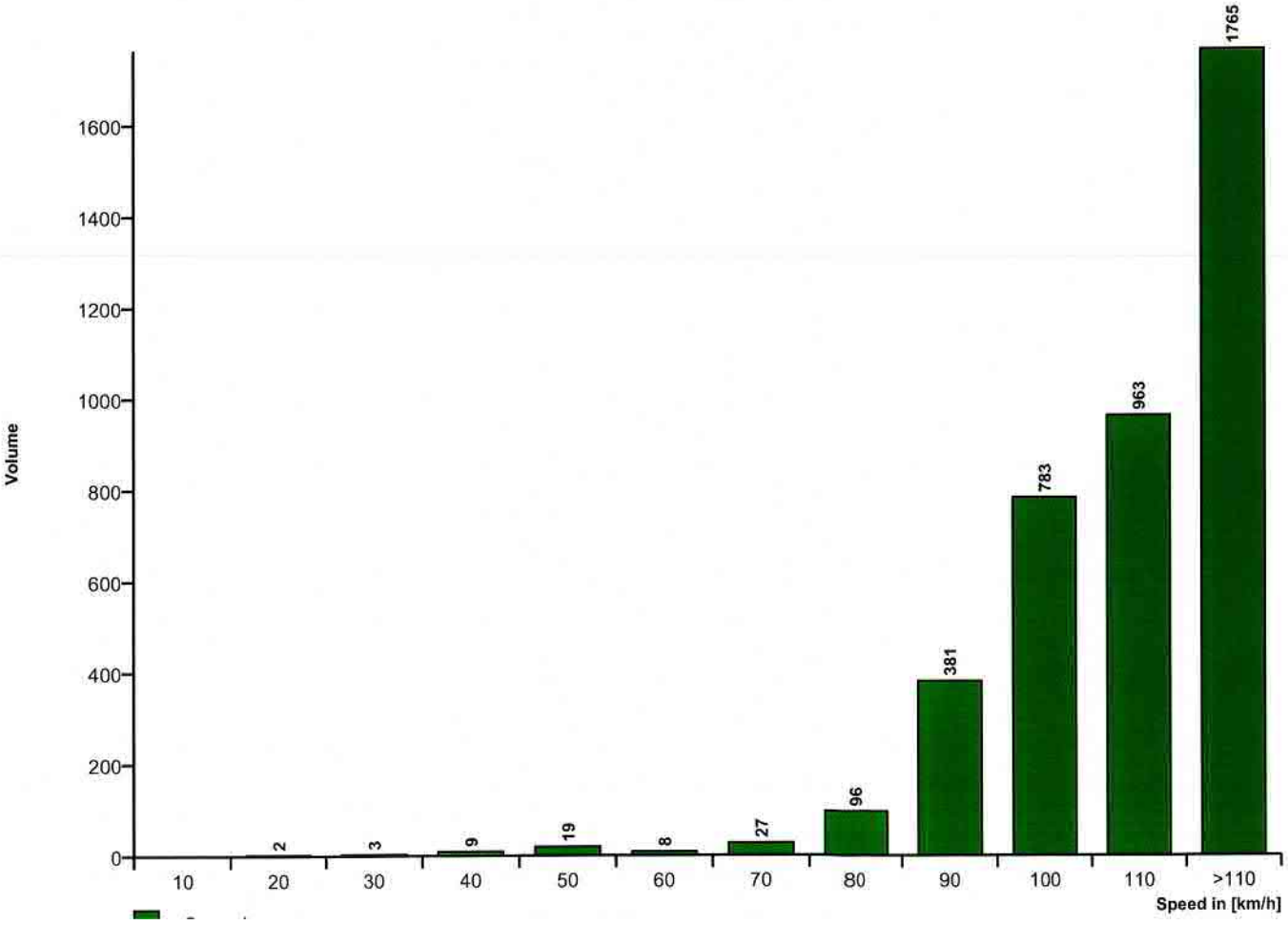
Site

Name	91 st +697.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	100
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-11 09:00
End date	2013-06-14 08:59
Days	Tu, We, Th, Fr
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Speed histogram



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Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:08:46

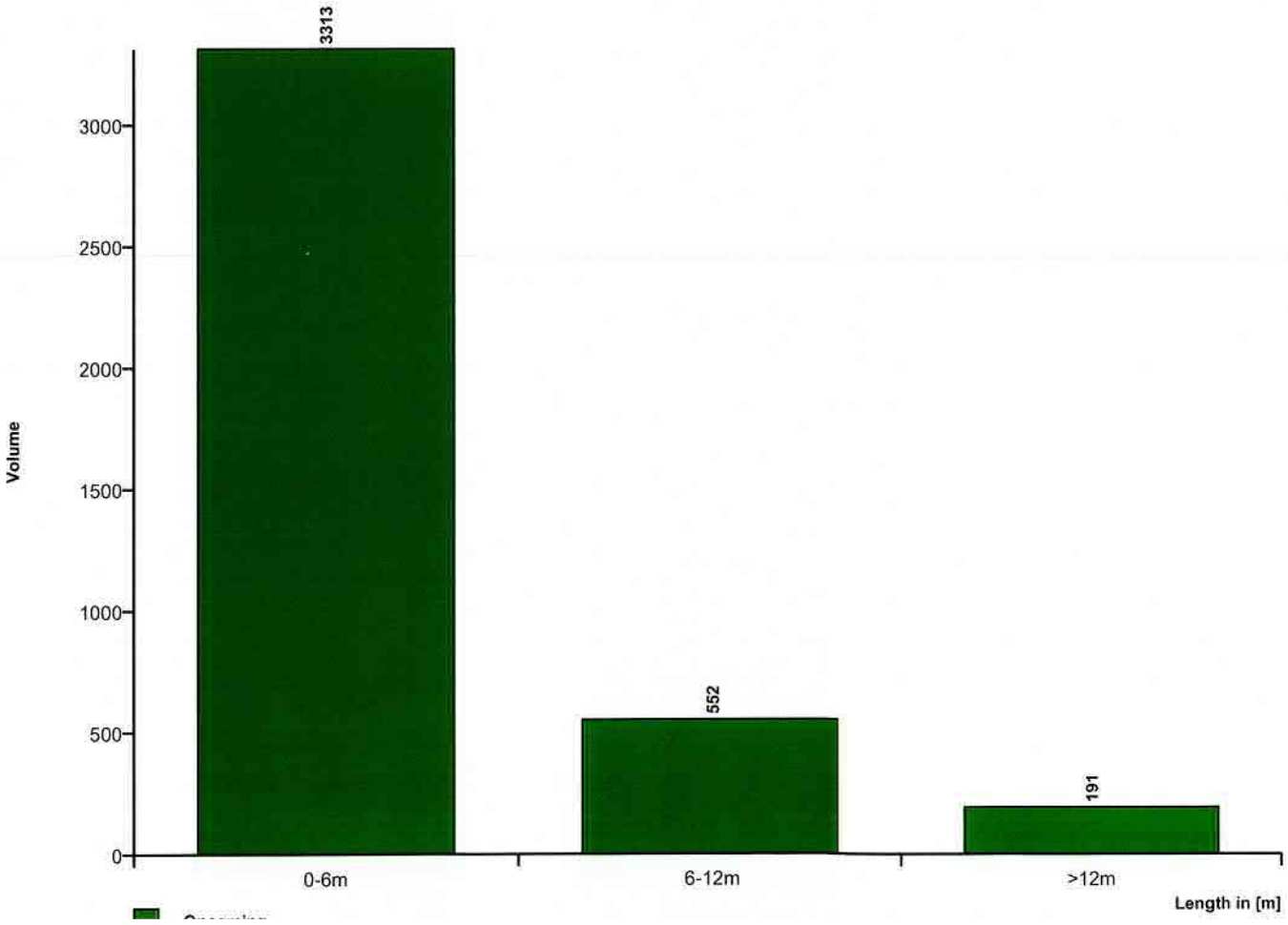
Site

Name	91 st +697.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	100
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-11 09:00
End date	2013-06-14 08:59
Days	Tu, We, Th, Fr
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Length histogram



Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-11 09:00	53	42	9	2	0	0	0	2	0	0	0	1	9	12	12	17	33	101	142	89	102	120	33
2013-06-11 10:00	79	60	14	5	0	0	0	1	1	0	3	0	11	14	19	30	38	103	150	84	105	119	38
2013-06-11 11:00	77	60	13	4	0	0	1	1	1	0	0	0	11	20	13	30	28	103	138	90	104	120	28
2013-06-11 12:00	77	57	15	5	0	0	0	0	0	0	1	3	10	16	22	25	69	104	136	89	103	122	69
2013-06-11 13:00	93	71	18	4	0	0	0	0	2	0	0	3	13	20	21	34	45	103	132	87	107	119	45
2013-06-11 14:00	93	71	14	8	0	0	0	0	1	1	1	3	13	24	20	30	46	103	156	88	104	120	46
2013-06-11 15:00	116	91	22	3	0	0	0	0	0	1	1	5	15	32	27	35	52	102	145	90	102	117	69
2013-06-11 16:00	126	97	17	12	0	2	1	2	2	0	3	12	29	27	27	21	12	93	138	79	96	112	14
2013-06-11 17:00	95	75	12	8	0	0	0	0	0	0	0	3	10	18	29	35	73	106	138	91	107	124	73
2013-06-11 18:00	65	57	6	2	0	0	0	0	0	1	0	3	6	10	19	26	51	106	140	90	107	122	51
2013-06-11 19:00	63	50	11	2	0	0	0	1	1	1	0	1	6	11	12	30	40	106	147	89	109	124	40
2013-06-11 20:00	60	45	8	7	0	0	0	0	1	0	0	0	5	7	13	34	50	110	145	94	111	126	50
2013-06-11 21:00	51	39	8	4	0	0	0	0	0	0	3	2	2	11	11	22	62	104	142	91	108	121	62
2013-06-11 22:00	40	31	7	2	0	0	0	0	0	0	0	0	1	7	10	22	84	111	138	100	113	124	84
2013-06-11 23:00	14	13	1	0	0	0	0	0	0	0	0	0	1	2	4	7	81	111	129	96	122	126	81

[Tue, 11 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
06:00-12:00	209	162	36	11	0	0	1	4	2	0	3	1	31	46	44	77	28	102	150	89	104	120	45
12:00-18:00	600	462	98	40	0	2	1	2	5	2	6	29	90	137	146	180	12	101	156	87	102	119	45
18:00-23:59	293	235	41	17	0	0	0	1	2	2	3	6	21	48	69	141	40	107	147	92	109	124	45
00:00-24:00	1102	859	175	68	0	2	2	7	9	4	12	36	142	231	259	398	12	103	156	88	104	120	45

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-12 00:00	7	4	1	2	0	0	0	0	0	0	0	0	0	1	1	5	99	117	144	105	115	132	99
2013-06-12 01:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	154	154	154	154	154	154	154
2013-06-12 02:00	2	1	1	0	0	0	0	0	0	0	0	0	0	1	0	1	91	107	124	91	124	124	91
2013-06-12 03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-12 04:00	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	138	139	141	138	141	141	138
2013-06-12 05:00	7	7	0	0	0	0	0	0	0	0	0	0	0	0	1	6	109	133	168	116	127	149	109
2013-06-12 06:00	44	30	10	4	0	0	0	0	0	0	0	0	2	7	8	27	87	112	144	98	113	128	87
2013-06-12 07:00	94	71	19	4	0	0	0	0	0	0	0	0	3	9	21	61	83	113	150	101	114	126	83
2013-06-12 08:00	123	108	11	4	0	0	0	0	1	0	0	1	13	30	30	48	47	106	145	92	105	123	79
2013-06-12 09:00	86	72	7	7	0	0	0	0	1	0	5	0	9	17	27	27	42	103	138	87	105	121	42
2013-06-12 10:00	79	70	3	6	0	0	0	0	0	1	1	3	11	17	18	28	51	103	142	88	104	118	51
2013-06-12 11:00	76	63	11	2	0	0	0	0	0	0	1	1	8	18	15	33	67	106	133	91	109	120	67
2013-06-12 12:00	49	39	6	4	0	0	0	0	0	0	0	1	4	12	11	21	73	108	145	96	106	125	73
2013-06-12 13:00	68	61	5	2	0	0	0	0	0	0	0	3	6	11	17	31	71	107	132	91	109	123	71
2013-06-12 14:00	78	64	11	3	0	0	0	0	0	0	0	1	12	21	18	26	76	104	146	90	103	119	76
2013-06-12 15:00	93	74	16	3	0	0	0	0	0	0	1	2	10	15	29	36	69	106	138	95	107	122	69
2013-06-12 16:00	108	85	16	7	0	0	0	0	0	0	2	1	13	19	29	44	65	106	159	91	107	123	66
2013-06-12 17:00	89	76	10	3	0	0	0	0	1	0	0	0	8	14	24	42	41	108	136	94	109	124	41
2013-06-12 18:00	73	62	9	2	0	0	0	0	0	0	0	0	9	9	19	36	81	108	138	92	110	125	81
2013-06-12 19:00	66	53	10	3	0	0	0	0	1	1	0	0	9	14	13	28	45	105	146	89	109	121	45
2013-06-12 20:00	45	35	9	1	0	0	0	0	0	0	0	4	5	10	9	17	74	103	129	84	104	116	74
2013-06-12 21:00	44	36	6	2	0	0	0	0	1	0	1	0	4	6	11	21	43	110	158	92	110	127	43
2013-06-12 22:00	39	31	6	2	0	0	0	0	0	0	0	0	2	9	5	23	87	115	192	95	115	128	87
2013-06-12 23:00	21	19	2	0	0	0	0	0	0	0	0	2	1	4	6	8	77	106	156	93	105	124	77

[Wed, 12 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	19	14	3	2	0	0	0	0	0	0	0	0	0	2	2	15	91	126	168	105	124	149	67
06:00-12:00	502	414	61	27	0	0	0	0	2	1	7	5	46	98	119	224	42	107	150	92	109	122	67
12:00-18:00	485	399	64	22	0	0	0	0	1	0	3	8	53	92	128	200	41	106	159	91	107	123	67
18:00-23:59	288	236	42	10	0	0	0	0	2	1	1	6	30	52	63	133	43	108	192	91	109	124	67
00:00-24:00	1294	1063	170	61	0	0	0	0	5	2	11	19	129	244	312	572	41	107	192	92	109	123	67

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-13 00:00	14	7	6	1	0	0	0	0	0	0	0	2	2	5	1	4	73	98	127	81	97	116	73
2013-06-13 01:00	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4	118	131	138	118	135	138	118
2013-06-13 02:00	5	1	4	0	0	0	0	0	0	0	0	0	0	0	1	4	105	117	124	105	119	124	105
2013-06-13 03:00	2	1	0	1	0	0	0	0	0	0	0	0	0	0	2	0	102	102	102	102	102	102	102
2013-06-13 04:00	5	4	1	0	0	0	0	0	0	0	1	0	0	0	0	4	62	118	146	62	123	146	62
2013-06-13 05:00	5	5	0	0	0	0	0	0	0	0	0	0	0	1	1	3	95	117	142	95	119	142	95
2013-06-13 06:00	35	28	5	2	0	0	0	0	0	0	0	1	2	2	10	20	79	115	166	101	115	127	79
2013-06-13 07:00	82	67	13	2	0	0	0	0	0	0	0	0	3	7	15	57	84	115	147	104	115	129	84
2013-06-13 08:00	119	95	23	1	0	0	0	0	0	0	0	2	6	25	28	58	78	108	140	96	110	123	80
2013-06-13 09:00	74	51	20	3	0	0	0	0	0	0	0	3	8	16	16	31	76	107	138	91	105	124	76
2013-06-13 10:00	91	78	8	5	0	0	0	1	0	0	0	2	9	27	20	32	36	104	156	91	103	118	36
2013-06-13 11:00	79	66	8	5	0	0	0	0	1	1	0	2	4	18	21	32	47	107	155	92	107	125	47
2013-06-13 12:00	80	68	5	7	0	0	0	0	0	0	0	2	6	23	16	33	75	107	153	93	105	124	75
2013-06-13 13:00	86	76	9	1	0	0	0	0	0	0	0	0	7	16	23	40	82	108	145	95	109	120	82
2013-06-13 14:00	83	60	20	3	0	0	0	0	3	0	0	2	8	12	18	40	41	105	134	90	110	120	41
2013-06-13 15:00	92	72	14	6	0	0	0	0	0	1	0	1	6	17	29	38	59	108	146	95	107	122	59
2013-06-13 16:00	108	81	17	10	0	0	0	0	0	0	2	8	3	23	26	46	62	106	138	92	108	122	64
2013-06-13 17:00	86	76	9	1	0	0	0	0	0	0	0	0	2	6	18	60	82	114	141	103	114	125	82
2013-06-13 18:00	68	62	6	0	0	0	0	0	0	0	0	2	4	9	22	31	76	110	147	95	109	124	76
2013-06-13 19:00	82	73	7	2	0	0	0	0	0	0	0	0	13	15	17	37	82	109	148	89	109	124	82
2013-06-13 20:00	63	55	5	3	0	0	0	1	0	0	0	1	5	15	16	25	39	106	138	94	107	120	39
2013-06-13 21:00	70	64	5	1	0	0	0	0	0	0	0	2	1	13	19	35	75	111	220	98	111	121	75
2013-06-13 22:00	49	44	3	2	0	0	1	0	0	0	0	2	5	9	9	23	24	106	145	90	109	123	24
2013-06-13 23:00	15	12	3	0	0	0	0	0	0	0	0	0	0	2	6	7	97	116	156	101	109	136	97

[Thu, 13 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	35	21	12	2	0	0	0	0	0	0	1	2	2	6	5	19	62	110	146	92	116	135	72
06:00-12:00	481	386	77	18	0	0	0	1	1	1	0	10	32	95	111	230	36	109	166	94	109	125	72
12:00-18:00	535	433	74	28	0	0	0	0	3	1	2	13	32	97	130	257	41	108	153	94	110	123	72
18:00-23:59	347	310	29	8	0	0	1	1	0	0	0	7	28	63	89	158	24	109	220	94	109	124	72
00:00-24:00	1397	1149	192	56	0	0	1	2	4	2	3	32	94	261	334	664	24	108	220	94	109	124	72

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-14 00:00	3	3	0	0	0	0	0	0	0	0	0	0	1	1	0	1	81	98	118	81	95	118	81
2013-06-14 01:00	7	7	0	0	0	0	0	0	0	0	0	0	0	1	3	3	98	109	121	102	109	118	98
2013-06-14 02:00	2	2	0	0	0	0	0	0	0	0	0	1	0	0	0	1	78	111	145	78	145	145	78
2013-06-14 03:00	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	146	148	150	146	150	150	146
2013-06-14 04:00	4	4	0	0	0	0	0	0	0	0	0	0	1	0	1	2	83	110	136	83	117	136	83
2013-06-14 05:00	6	5	1	0	0	0	0	0	0	0	0	0	0	0	1	5	107	119	132	107	120	132	107
2013-06-14 06:00	45	43	1	1	0	0	0	0	0	0	0	0	2	7	8	28	85	114	146	99	116	127	85
2013-06-14 07:00	75	69	3	3	0	0	0	0	0	0	0	0	2	13	21	39	84	111	136	100	111	124	84
2013-06-14 08:00	119	107	10	2	0	0	0	0	1	0	1	8	10	25	24	50	43	105	138	90	108	122	63

[Fri, 14 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	24	23	1	0	0	0	0	0	0	0	0	1	2	2	5	14	78	114	150	95	117	136	73
06:00-12:00	239	219	14	6	0	0	0	0	1	0	1	8	14	45	53	117	43	109	146	95	109	124	73
12:00-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73
18:00-23:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73
00:00-24:00	263	242	15	6	0	0	0	0	1	0	1	9	16	47	58	131	43	109	150	95	110	124	73

Traffic report

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Author

Institution	Trafco Canada
Department	Tech Support
Street	9015 14 Street NW
Postal code	T6P 0C9
City	Edmonton
Country	Canada
Contact	Brad Batdorf
Phone	+1-780-453-5280
Email	bradb@trafco.ca

Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:24:00

Site

Name	94 & 91st.sdr
Dir. Oncoming (Westbound)	
Dir. Outgoing (Eastbound)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-11 09:00
End date	2013-06-14 08:59
Days	Tu, We, Th, Fr
Time Interval	60 minutes
Time / Day	00:00 - 23:59

#2 on Map

Length Classes [L in m]

Oncoming				
Time	Σ	0-6m	6-12m	>12m
00:00-06:00	32	24	7	1
06:00-12:00	454	319	81	54
12:00-18:00	822	630	131	61
18:00-23:59	542	437	62	43
00:00-24:00	1850	1410	281	159

Outgoing				
Time	Σ	0-6m	6-12m	>12m
00:00-06:00	35	21	7	7
06:00-12:00	756	594	110	52
12:00-18:00	859	670	115	74
18:00-23:59	567	494	51	22
00:00-24:00	2217	1779	283	155

Calculated speeds [V in km/h]

	Vmin	Vmax	Vavg	V15	V50	V85	V1	Vexc %
Oncoming	10	134	72	59	73	86	19	**94.8**
Outgoing	14	136	72	59	72	85	43	**96.3**

Descriptions

Vmin: Minimal velocity
Vmax: Maximal velocity
Vavg: Average velocity
V15: Critical velocity for the first 15% of vehicles
V50: Critical velocity for the first 50% of vehicles
V85: Critical velocity for the first 85% of vehicles
V1: Critical velocity for the first 1% of vehicles
Vexc %: Speeding in %

Traffic report

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Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:24:00

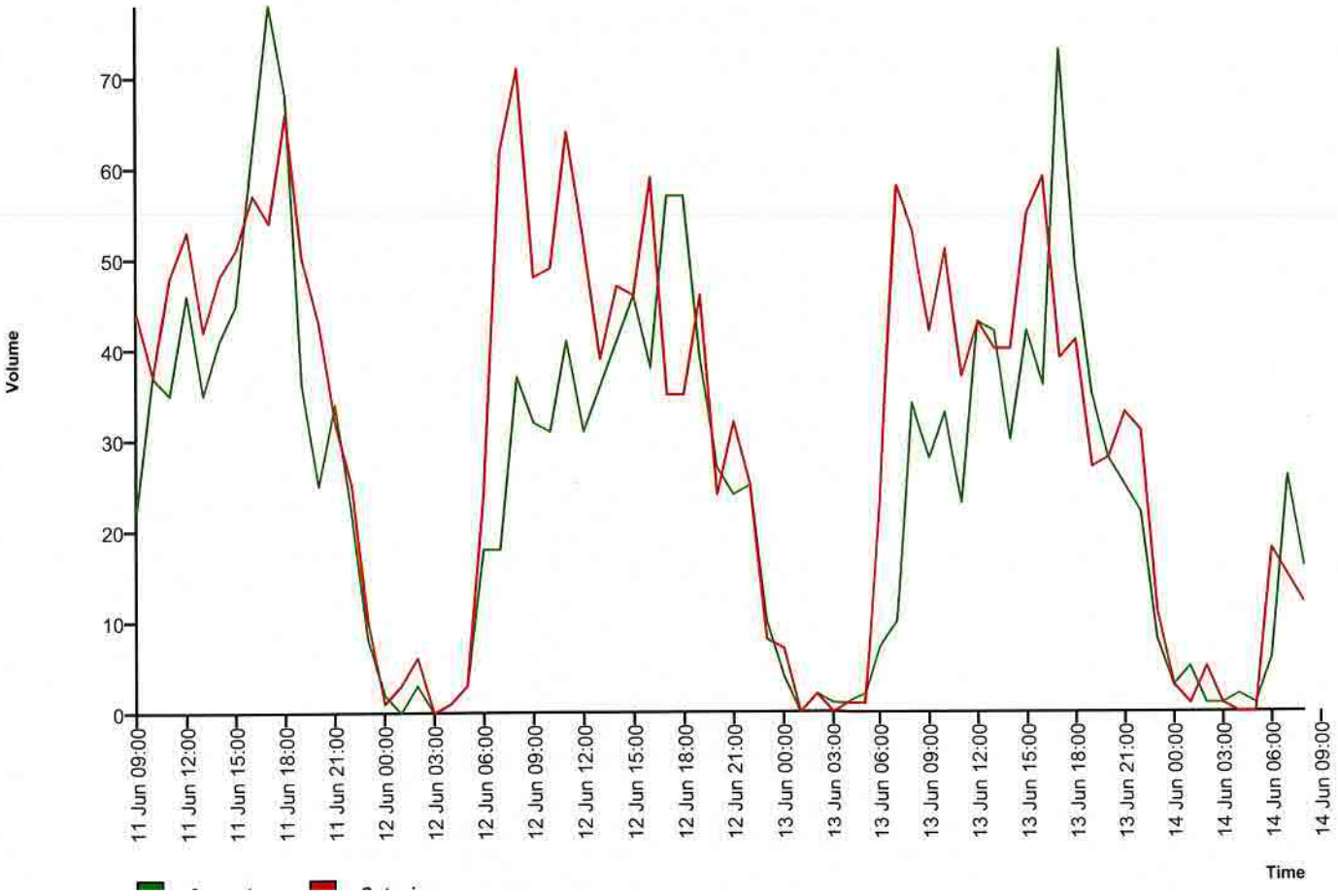
Site

Name	94 & 91st.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-11 09:00
End date	2013-06-14 08:59
Days	Tu, We, Th, Fr
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Time / Volume graph



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Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:24:00

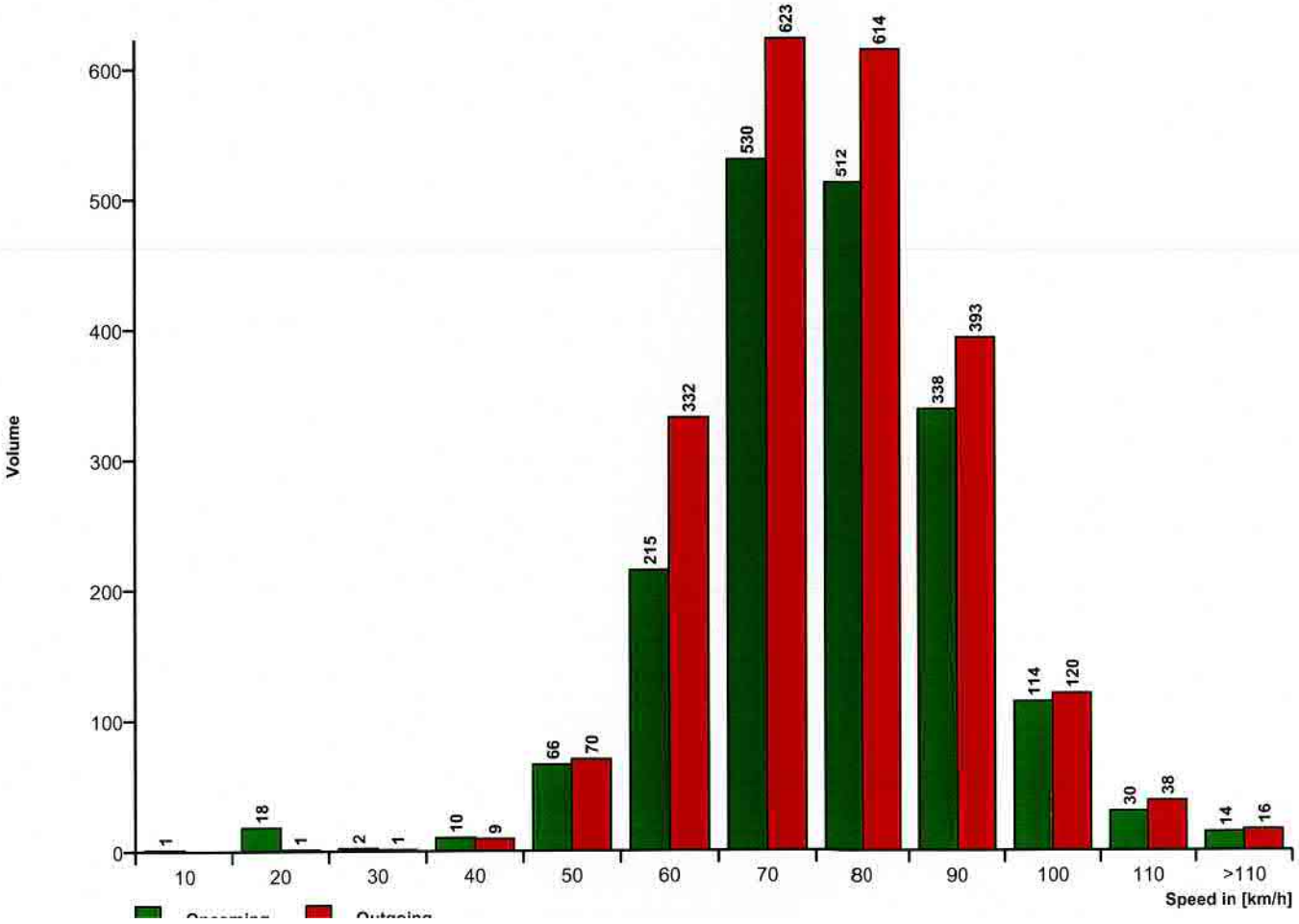
Site

Name	94 & 91st.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-11 09:00
End date	2013-06-14 08:59
Days	Tu, We, Th, Fr
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Speed histogram



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Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:24:00

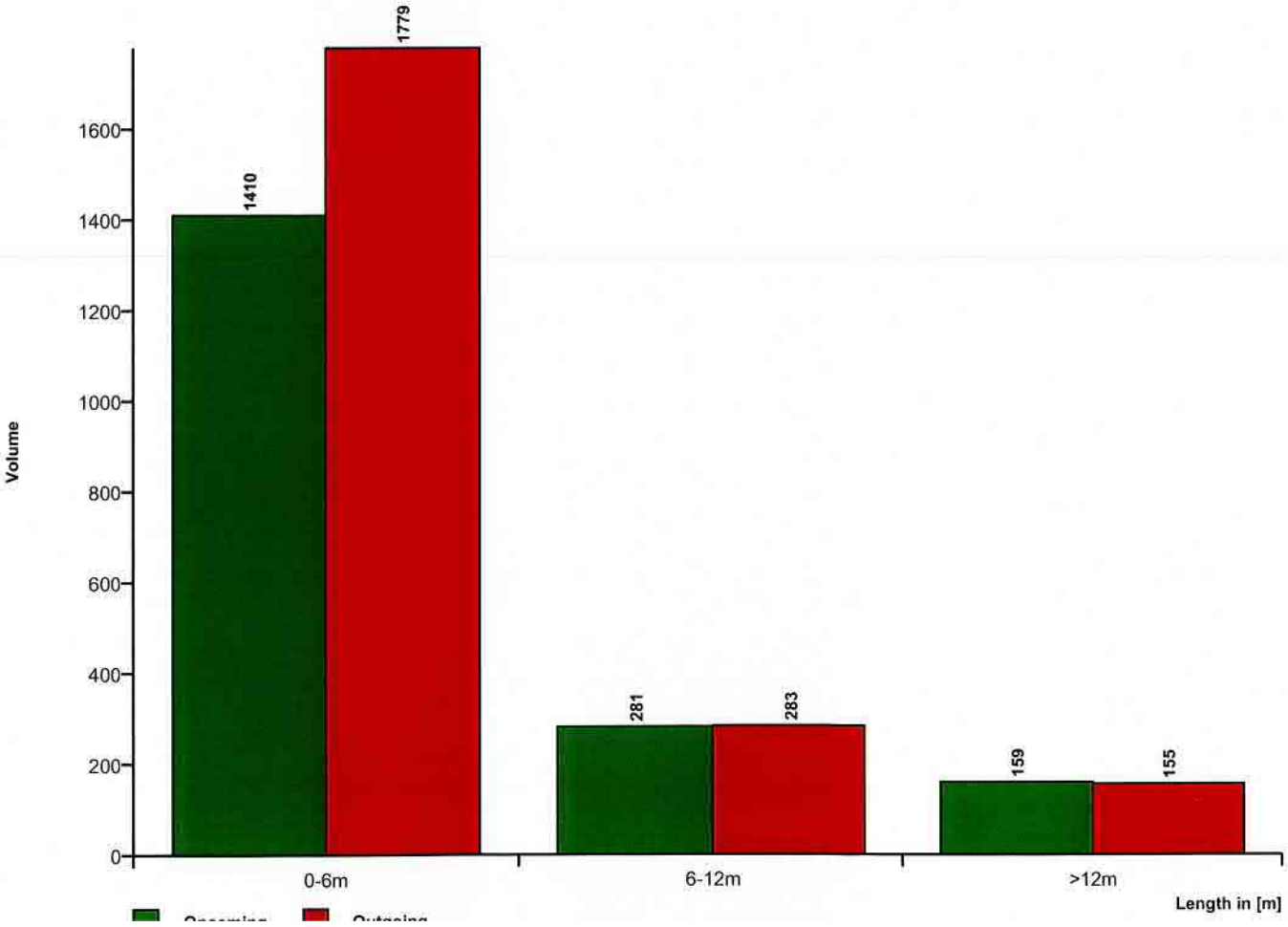
Site

Name	94 & 91st.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-11 09:00
End date	2013-06-14 08:59
Days	Tu, We, Th, Fr
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Length histogram



Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-11 09:00	66	49	10	7	0	0	1	0	3	12	13	24	11	1	1	0	27	69	108	55	72	82	27
2013-06-11 10:00	74	57	12	5	0	0	0	0	4	11	27	20	8	4	0	0	42	69	94	59	70	81	42
2013-06-11 11:00	83	59	14	10	0	0	0	0	0	19	19	20	17	5	2	1	52	72	112	58	73	87	52
2013-06-11 12:00	99	80	14	5	0	0	0	0	1	7	28	32	17	9	3	2	49	76	129	64	75	88	49
2013-06-11 13:00	77	50	15	12	0	0	0	0	2	8	26	27	9	4	0	1	48	72	131	61	72	82	48
2013-06-11 14:00	89	59	20	10	0	0	0	1	3	12	37	18	9	4	4	1	40	71	113	59	69	84	40
2013-06-11 15:00	96	64	20	12	0	1	0	0	5	18	22	29	14	6	1	0	14	70	104	57	71	84	14
2013-06-11 16:00	119	86	21	12	0	0	0	1	5	17	36	33	21	4	2	0	39	71	103	59	71	85	42
2013-06-11 17:00	132	104	17	11	0	0	0	0	4	11	35	38	38	6	0	0	46	74	100	62	76	86	47
2013-06-11 18:00	134	114	12	8	0	0	0	1	7	12	41	39	22	8	3	1	34	72	134	61	73	85	41
2013-06-11 19:00	86	72	12	2	0	0	0	1	3	9	26	21	17	5	2	2	39	73	118	60	73	87	39
2013-06-11 20:00	68	59	5	4	0	0	2	0	0	14	17	21	9	4	1	0	25	69	103	57	73	85	25
2013-06-11 21:00	66	53	7	6	0	0	0	0	2	8	18	23	10	4	1	0	46	72	104	60	74	82	46
2013-06-11 22:00	47	37	7	3	0	0	0	0	2	5	12	15	10	3	0	0	41	73	99	61	76	83	41
2013-06-11 23:00	18	18	0	0	0	0	0	0	0	3	5	2	3	4	1	0	52	76	101	60	77	93	52

[Tue, 11 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
06:00-12:00	223	165	36	22	0	0	1	0	7	42	59	64	36	10	3	1	27	70	112	58	71	84	42
12:00-18:00	612	443	107	62	0	1	0	2	20	73	184	177	108	33	10	4	14	72	131	60	72	85	42
18:00-23:59	419	353	43	23	0	0	2	2	14	51	119	121	71	28	8	3	25	72	134	59	73	86	42
00:00-24:00	1254	961	186	107	0	1	3	4	41	166	362	362	215	71	21	8	14	72	134	59	72	85	42

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-12 00:00	3	3	0	0	0	0	0	0	0	1	1	1	0	0	0	0	57	66	73	57	70	73	57
2013-06-12 01:00	3	2	0	1	0	0	0	0	2	0	0	1	0	0	0	0	48	56	73	48	49	73	48
2013-06-12 02:00	9	5	2	2	0	0	0	0	0	2	1	1	3	1	0	1	51	79	115	53	84	96	51
2013-06-12 03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-12 04:00	2	0	2	0	0	0	0	0	0	0	0	1	1	0	0	0	73	80	87	73	87	87	73
2013-06-12 05:00	6	3	3	0	0	0	0	0	0	1	1	1	1	1	0	1	54	83	123	54	83	123	54
2013-06-12 06:00	42	36	5	1	0	0	0	0	2	6	10	9	7	6	2	0	42	74	107	58	74	91	42
2013-06-12 07:00	80	71	6	3	0	0	0	0	1	7	28	21	14	5	3	1	50	74	116	63	72	89	50
2013-06-12 08:00	108	82	15	11	0	0	0	0	7	12	31	32	19	6	1	0	43	71	102	59	73	84	46
2013-06-12 09:00	80	51	16	13	0	0	0	1	0	17	17	24	16	3	2	0	38	71	104	58	72	86	38
2013-06-12 10:00	80	60	9	11	0	0	0	1	2	12	27	18	15	4	1	0	40	71	104	59	70	87	40
2013-06-12 11:00	105	73	17	15	0	0	0	0	2	16	36	28	17	5	1	0	44	71	107	59	70	84	49
2013-06-12 12:00	83	67	9	7	0	0	0	0	2	5	28	25	17	5	1	0	44	74	104	62	74	87	44
2013-06-12 13:00	75	56	10	9	0	0	0	0	1	11	23	24	13	2	1	0	50	71	102	59	71	82	50
2013-06-12 14:00	88	63	15	10	0	0	0	1	2	12	35	16	14	6	2	0	39	70	101	59	68	86	39
2013-06-12 15:00	92	70	16	6	0	0	0	1	6	19	22	27	14	2	1	0	40	68	108	53	70	81	40
2013-06-12 16:00	97	81	12	4	0	0	0	1	4	12	27	29	19	2	2	1	39	72	111	57	73	84	39
2013-06-12 17:00	92	72	12	8	0	0	0	0	3	13	28	22	23	0	2	1	44	72	118	59	71	83	44
2013-06-12 18:00	92	70	15	7	0	0	0	0	4	14	26	20	22	6	0	0	43	71	98	57	71	87	43
2013-06-12 19:00	85	74	5	6	0	0	0	2	3	8	27	23	16	6	0	0	31	71	99	59	73	85	31
2013-06-12 20:00	51	47	4	0	0	0	0	1	1	9	19	8	8	3	2	0	40	70	104	54	69	86	40
2013-06-12 21:00	56	47	6	3	0	0	0	0	3	8	15	15	11	2	2	0	43	72	107	58	73	83	43
2013-06-12 22:00	50	46	2	2	0	0	0	0	2	5	25	10	5	2	0	1	49	70	136	61	68	83	49
2013-06-12 23:00	18	12	5	1	0	0	0	0	0	2	7	2	6	1	0	0	55	72	100	61	73	86	55

[Wed, 12 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	23	13	7	3	0	0	0	0	2	4	3	5	5	2	0	2	48	76	123	53	73	96	43
06:00-12:00	495	373	68	54	0	0	0	2	14	70	149	132	88	29	10	1	38	72	116	59	71	86	43
12:00-18:00	527	409	74	44	0	0	0	3	18	72	163	143	100	17	9	2	39	71	118	59	71	84	43
18:00-23:59	352	296	37	19	0	0	0	3	13	46	119	78	68	20	4	1	31	71	136	59	70	85	43
00:00-24:00	1397	1091	186	120	0	0	0	8	47	192	434	358	261	68	23	6	31	71	136	59	71	85	43

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-13 00:00	11	7	3	1	0	0	0	0	1	2	3	3	2	0	0	0	44	68	90	53	69	83	44
2013-06-13 01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-13 02:00	4	4	0	0	0	0	0	0	0	1	1	0	1	0	1	0	54	77	101	54	90	101	54
2013-06-13 03:00	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	91	91	91	91	91	91	91
2013-06-13 04:00	2	1	1	0	0	0	0	0	0	0	0	0	1	0	0	1	85	101	118	85	118	118	85
2013-06-13 05:00	3	3	0	0	0	0	0	0	1	1	0	0	0	0	0	1	48	73	120	48	52	120	48
2013-06-13 06:00	30	26	3	1	0	0	0	0	2	3	3	5	9	6	1	1	42	79	114	57	83	96	42
2013-06-13 07:00	68	63	5	0	0	0	0	0	0	8	9	25	14	8	2	2	56	78	120	63	78	92	56
2013-06-13 08:00	87	63	20	4	0	0	0	1	2	8	24	25	17	8	1	1	36	75	114	63	76	89	36
2013-06-13 09:00	70	44	22	4	0	0	0	0	2	10	18	20	12	5	2	1	49	74	111	60	74	85	49
2013-06-13 10:00	84	58	18	8	0	0	0	0	3	14	23	26	10	4	2	2	42	72	115	58	72	84	42
2013-06-13 11:00	60	46	7	7	0	0	0	0	0	10	22	10	13	4	1	0	51	72	101	58	70	84	51
2013-06-13 12:00	86	72	10	4	0	0	0	0	1	10	28	25	18	3	1	0	45	72	109	62	72	84	45
2013-06-13 13:00	82	68	9	5	0	0	0	0	3	10	23	25	10	9	1	1	47	73	119	60	73	87	47
2013-06-13 14:00	70	52	13	5	0	0	0	0	1	7	22	24	10	5	1	0	44	73	107	64	72	83	44
2013-06-13 15:00	97	77	14	6	0	0	0	1	4	14	25	29	13	8	3	0	37	72	109	59	73	87	37
2013-06-13 16:00	95	84	6	5	0	0	0	1	3	10	23	40	14	4	0	0	31	71	98	61	73	82	31
2013-06-13 17:00	112	95	13	4	0	0	0	0	3	14	27	36	24	8	0	0	41	74	100	60	75	87	49
2013-06-13 18:00	90	75	12	3	0	0	0	0	2	8	26	24	24	5	1	0	42	74	104	62	76	85	42
2013-06-13 19:00	62	53	7	2	0	0	0	0	2	12	17	20	10	1	0	0	44	70	94	58	72	81	44
2013-06-13 20:00	56	43	5	8	0	0	0	1	3	8	15	16	11	1	1	0	34	71	104	59	72	84	34
2013-06-13 21:00	58	46	4	8	0	0	0	2	3	9	12	16	14	2	0	0	33	70	98	59	73	86	33
2013-06-13 22:00	53	51	2	0	0	0	0	0	4	9	10	12	11	3	3	1	47	74	129	54	76	90	47
2013-06-13 23:00	19	14	3	2	0	0	0	0	0	3	7	2	1	0	2	4	55	81	120	60	70	115	55

[Thu, 13 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	21	16	4	1	0	0	0	0	2	4	4	3	4	1	1	2	44	75	120	53	73	91	44
06:00-12:00	399	300	75	24	0	0	0	1	9	53	99	111	75	35	9	7	36	74	120	60	74	89	44
12:00-18:00	542	448	65	29	0	0	0	2	15	65	148	179	89	37	6	1	31	72	119	60	73	84	44
18:00-23:59	338	282	33	23	0	0	0	3	14	49	87	90	71	12	7	5	33	72	129	59	74	85	44
00:00-24:00	1300	1046	177	77	0	0	0	6	40	171	338	383	239	85	23	15	31	73	129	60	73	86	44

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-14 00:00	6	4	2	0	0	0	0	0	0	3	3	0	0	0	0	0	55	60	65	55	62	65	55
2013-06-14 01:00	6	5	0	1	0	0	0	0	0	2	0	0	3	1	0	0	57	78	94	57	88	94	57
2013-06-14 02:00	6	3	1	2	0	0	0	0	1	1	1	2	0	0	0	1	48	75	134	48	77	134	48
2013-06-14 03:00	2	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	64	70	77	64	77	77	64
2013-06-14 04:00	2	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	12	13	14	12	14	14	12
2013-06-14 05:00	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	48	48	48	48	48	48	48
2013-06-14 06:00	24	19	5	0	0	0	0	1	1	2	2	8	7	3	0	0	38	75	95	59	79	88	38
2013-06-14 07:00	41	34	4	3	1	16	0	0	1	6	3	5	5	3	1	0	10	49	109	16	57	85	10
2013-06-14 08:00	28	22	3	3	0	0	0	0	4	4	9	7	1	3	0	0	44	67	95	52	67	79	44

[Fri, 14 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	23	16	3	4	0	2	0	0	2	6	5	3	3	1	0	1	12	65	134	48	63	88	11
06:00-12:00	93	75	12	6	1	16	0	1	6	12	14	20	13	9	1	0	10	61	109	18	67	85	11
12:00-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
18:00-23:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
00:00-24:00	116	91	15	10	1	18	0	1	8	18	19	23	16	10	1	1	10	62	134	18	65	85	11

Traffic report

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Author

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Street	9015 14 Street NW
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Country	Canada
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Email	bradb@trafco.ca

Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:11:37

Site

Name	94 AVE.sdr
Dir. Oncoming (Eastbound)	
Dir. Outgoing (Westbound)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-11 08:00
End date	2013-06-14 08:59
Days	Tu, We, Th, Fr
Time Interval	60 minutes
Time / Day	00:00 - 23:59

#3 on Map

Length Classes [L in m]

Oncoming					Outgoing				
Time	Σ	0-6m	6-12m	>12m	Time	Σ	0-6m	6-12m	>12m
00:00-06:00	32	26	4	2	00:00-06:00	23	18	3	2
06:00-12:00	507	435	62	10	06:00-12:00	302	260	33	9
12:00-18:00	635	567	52	16	12:00-18:00	701	637	50	14
18:00-23:59	479	431	39	9	18:00-23:59	586	545	29	12
00:00-24:00	1653	1459	157	37	00:00-24:00	1611	1459	115	37

Calculated speeds [V in km/h]

	Vmin	Vmax	Vavg	V15	V50	V85	V1	Vexc %
Oncoming	9	132	65	50	63	82	31	**82.9**
Outgoing	9	131	68	55	67	84	20	**91.8**

Descriptions

Vmin: Minimal velocity
Vmax: Maximal velocity
Vavg: Average velocity
V15: Critical velocity for the first 15% of vehicles
V50: Critical velocity for the first 50% of vehicles
V85: Critical velocity for the first 85% of vehicles
V1: Critical velocity for the first 1% of vehicles
Vexc %: Speeding in %

Traffic report

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Author

Institution	Trafco Canada
Department	Tech Support
Street	9015 14 Street NW
Postal code	T6P 0C9
City	Edmonton
Country	Canada
Contact	Brad Batdorf
Phone	+1-780-453-5280
Email	bradb@trafco.ca

Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:11:37

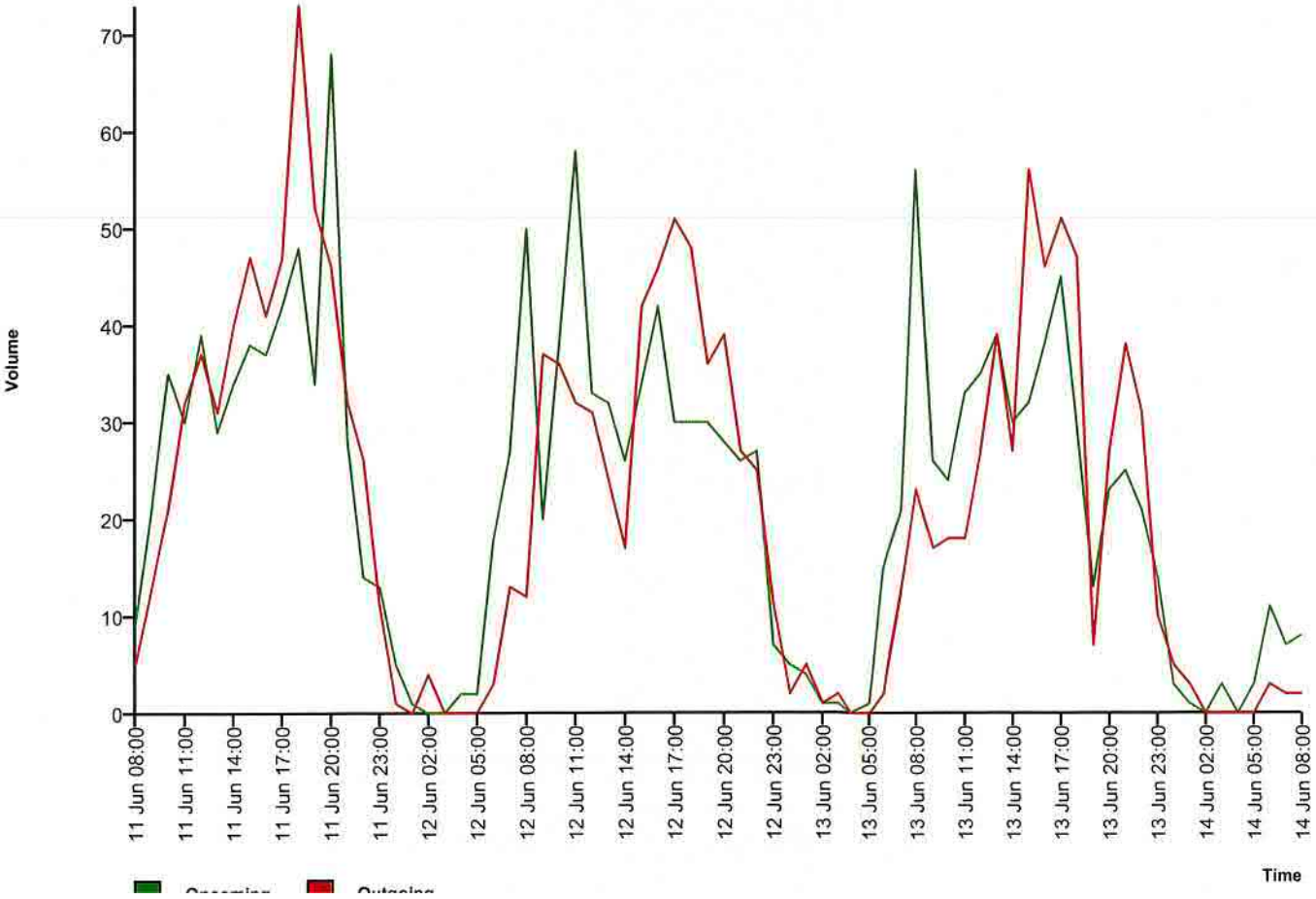
Site

Name	94 AVE.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-11 08:00
End date	2013-06-14 08:59
Days	Tu, We, Th, Fr
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Time / Volume graph



Traffic report

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Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:11:37

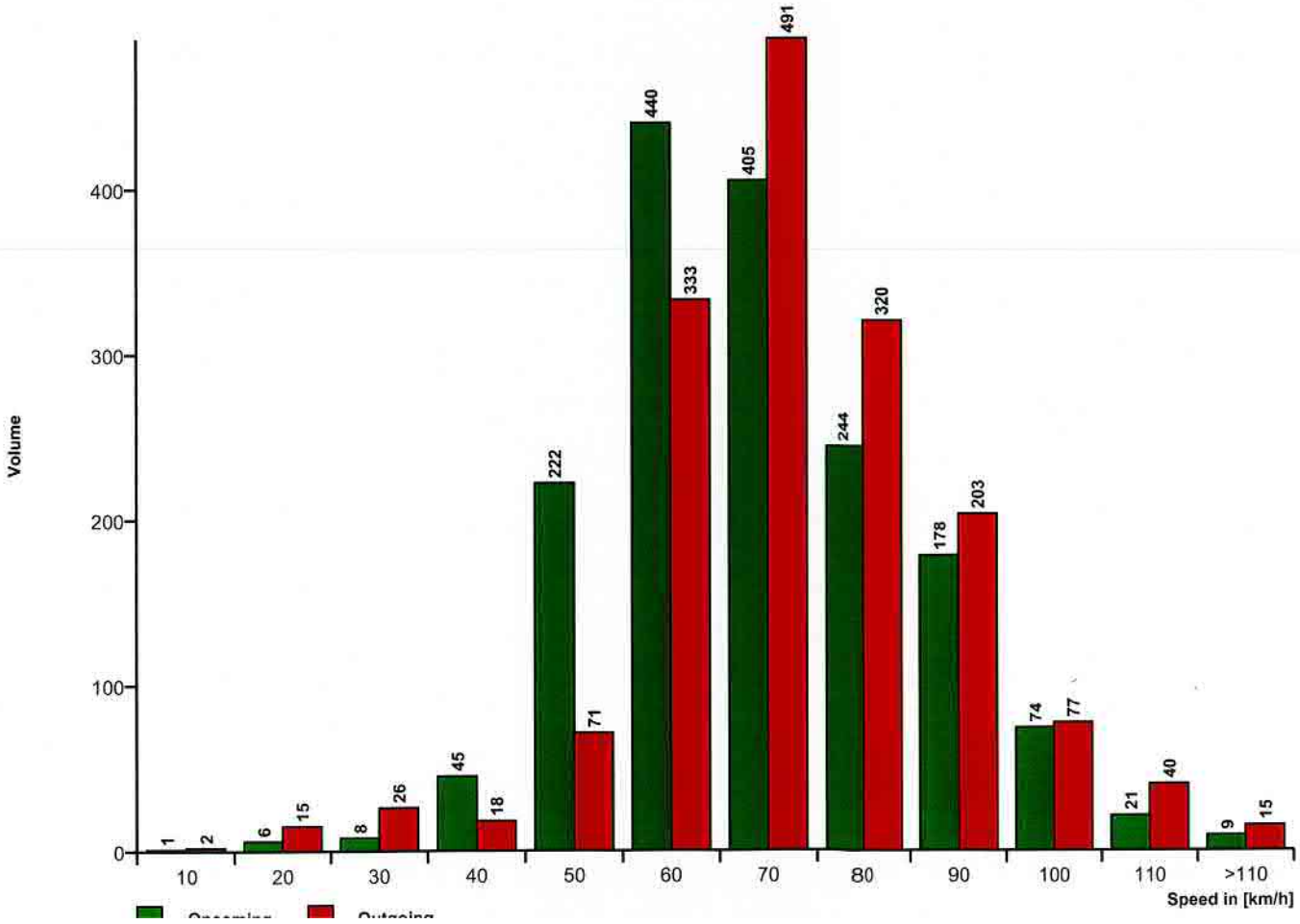
Site

Name	94 AVE.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-11 08:00
End date	2013-06-14 08:59
Days	Tu, We, Th, Fr
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Speed histogram



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Street	9015 14 Street NW
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Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:11:37

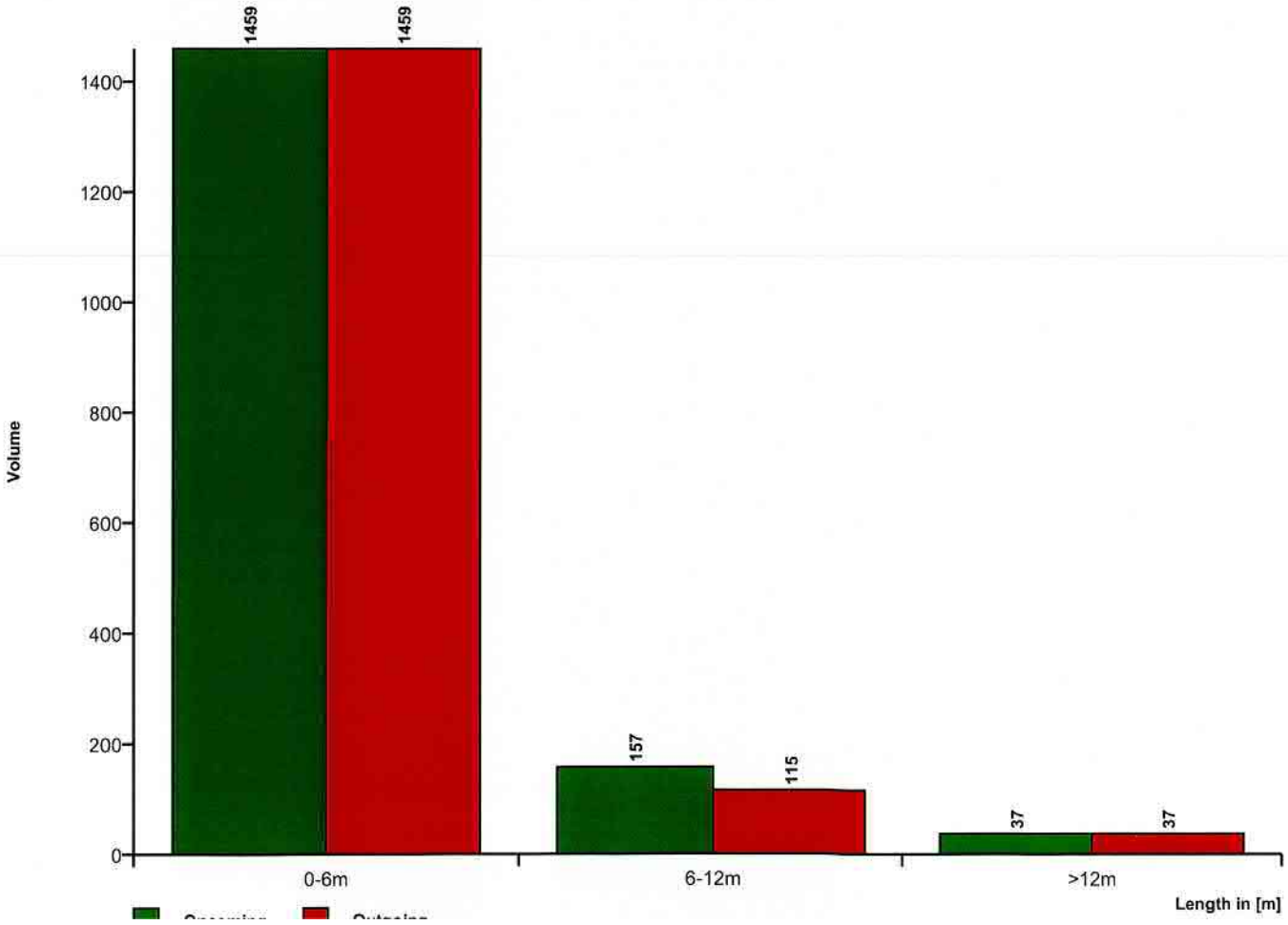
Site

Name	94 AVE.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-11 08:00
End date	2013-06-14 08:59
Days	Tu, We, Th, Fr
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Length histogram



Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-11 08:00	14	10	4	0	0	0	0	0	1	2	5	3	3	0	0	0	48	69	89	56	70	81	48
2013-06-11 09:00	34	26	8	0	0	0	0	2	3	7	8	8	5	1	0	0	38	65	96	52	67	81	38
2013-06-11 10:00	56	43	11	2	0	0	0	1	2	11	22	10	6	3	1	0	39	67	102	54	66	81	39
2013-06-11 11:00	62	50	8	4	0	2	0	2	5	9	19	14	6	3	2	0	12	66	108	51	66	82	12
2013-06-11 12:00	76	68	8	0	0	1	0	1	5	18	12	14	13	9	3	0	19	70	105	52	71	91	19
2013-06-11 13:00	60	54	3	3	0	2	1	1	1	17	19	6	9	3	1	0	12	65	107	53	65	86	12
2013-06-11 14:00	74	58	10	6	0	1	1	2	6	19	19	12	8	3	1	2	13	66	116	53	64	82	13
2013-06-11 15:00	85	66	16	3	0	1	4	1	5	20	28	15	9	1	1	0	13	63	109	51	66	77	13
2013-06-11 16:00	78	67	8	3	1	2	0	2	7	10	27	16	7	4	2	0	9	65	102	48	67	81	9
2013-06-11 17:00	89	80	9	0	0	1	2	1	7	21	22	14	13	6	2	0	17	67	107	53	66	88	17
2013-06-11 18:00	121	108	10	3	0	0	0	1	11	34	39	19	9	6	2	0	39	66	109	53	64	78	41
2013-06-11 19:00	86	74	10	2	0	0	0	1	6	25	30	10	6	3	1	4	38	66	124	53	65	81	38
2013-06-11 20:00	114	101	9	4	0	1	1	2	19	34	29	15	11	1	1	0	14	61	102	48	61	78	25
2013-06-11 21:00	60	57	3	0	0	0	1	0	4	16	13	13	12	1	0	0	22	67	91	54	69	83	22
2013-06-11 22:00	40	32	7	1	0	0	0	1	3	8	9	14	3	1	1	0	38	67	101	52	70	80	38
2013-06-11 23:00	24	20	2	2	0	0	0	1	2	9	3	5	4	0	0	0	39	64	89	54	61	81	39

[Tue, 11 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
06:00-12:00	166	129	31	6	0	2	0	5	11	29	54	35	20	7	3	0	12	67	108	52	66	82	19
12:00-18:00	462	393	54	15	1	8	8	8	31	105	127	77	59	26	10	2	9	66	116	52	66	84	19
18:00-23:59	445	392	41	12	0	1	2	6	45	126	123	76	45	12	5	4	14	65	124	52	64	80	19
00:00-24:00	1073	914	126	33	1	11	10	19	87	260	304	188	124	45	18	6	9	66	124	52	65	82	19

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-12 00:00	6	4	2	0	0	0	0	1	1	2	1	0	1	0	0	0	31	54	87	31	53	87	31
2013-06-12 01:00	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	47	47	47	47	47	47	47
2013-06-12 02:00	4	3	0	1	0	2	0	0	0	0	1	0	0	1	0	0	11	48	98	11	66	98	11
2013-06-12 03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-12 04:00	2	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	61	65	70	61	70	70	61
2013-06-12 05:00	2	1	1	0	0	0	0	0	0	0	1	0	0	0	0	1	64	89	115	64	115	115	64
2013-06-12 06:00	21	14	6	1	0	0	0	0	2	5	6	5	1	2	0	0	42	67	100	56	66	78	42
2013-06-12 07:00	40	30	8	2	0	0	1	1	3	10	8	6	5	3	2	1	29	69	111	54	66	91	29
2013-06-12 08:00	62	56	5	1	0	0	1	0	6	11	21	14	4	3	2	0	23	67	104	52	67	80	23
2013-06-12 09:00	57	52	5	0	0	0	3	0	5	19	15	3	10	1	0	1	21	63	116	51	61	84	21
2013-06-12 10:00	74	72	2	0	0	0	1	0	4	23	23	10	5	4	2	2	27	67	111	52	66	83	27
2013-06-12 11:00	90	83	6	1	0	0	0	3	30	27	11	10	6	2	1	0	37	58	106	47	55	75	37
2013-06-12 12:00	64	64	0	0	0	0	0	1	2	13	14	15	5	9	4	1	40	73	120	56	71	92	40
2013-06-12 13:00	56	50	4	2	0	0	0	3	4	13	11	13	7	3	0	2	31	68	129	52	68	82	31
2013-06-12 14:00	43	41	2	0	0	0	1	0	4	7	10	13	5	2	1	0	29	69	104	55	70	82	29
2013-06-12 15:00	76	71	4	1	0	0	1	4	4	16	21	16	10	3	1	0	23	66	103	53	68	83	23
2013-06-12 16:00	88	83	4	1	0	0	1	6	7	24	18	15	12	3	2	0	27	65	105	50	66	82	27
2013-06-12 17:00	81	79	2	0	0	0	1	0	4	17	24	17	11	5	2	0	30	69	104	56	68	83	30
2013-06-12 18:00	78	75	2	1	0	0	0	0	3	14	25	16	12	3	4	1	43	72	113	59	70	87	43
2013-06-12 19:00	66	62	2	2	1	0	0	4	5	12	14	15	8	5	2	0	10	67	104	50	70	87	10
2013-06-12 20:00	67	57	9	1	0	1	2	2	8	13	21	12	5	2	1	0	20	63	101	49	63	79	20
2013-06-12 21:00	53	49	4	0	0	0	0	0	7	13	9	13	8	0	3	0	41	67	109	51	65	82	41
2013-06-12 22:00	52	48	3	1	0	0	0	2	5	12	15	12	3	0	1	2	37	66	131	51	63	77	37
2013-06-12 23:00	18	17	0	1	0	0	1	0	3	2	5	6	1	0	0	0	30	63	81	47	69	78	30

[Wed, 12 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	15	10	3	2	0	2	0	1	2	2	5	0	1	1	0	1	11	58	115	31	61	87	29
06:00-12:00	344	307	32	5	0	0	6	4	50	95	84	48	31	15	7	4	21	64	116	50	62	82	29
12:00-18:00	409	389	16	4	0	0	4	14	25	91	98	89	50	25	10	3	23	68	129	54	68	84	29
18:00-23:59	334	308	20	6	1	1	3	8	31	66	89	74	37	10	11	3	10	67	131	51	66	82	29
00:00-24:00	1101	1013	71	17	1	3	13	27	108	253	276	211	119	51	28	11	10	66	131	51	66	83	29

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-13 00:00	7	7	0	0	0	1	0	1	2	2	0	0	0	1	0	0	14	49	93	37	48	59	14
2013-06-13 01:00	9	6	2	1	1	0	0	0	0	0	3	2	1	2	0	0	9	68	92	63	71	91	9
2013-06-13 02:00	2	2	0	0	0	0	0	0	1	1	0	0	0	0	0	0	46	50	54	46	54	54	46
2013-06-13 03:00	3	1	1	1	0	0	0	0	1	0	2	0	0	0	0	0	47	60	69	47	66	69	47
2013-06-13 04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-13 05:00	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	96	96	96	96	96	96	96
2013-06-13 06:00	17	14	2	1	0	0	0	0	3	5	4	1	1	1	2	0	41	67	104	50	65	100	41
2013-06-13 07:00	34	30	4	0	0	1	1	0	2	5	6	7	8	3	0	1	20	71	116	55	73	89	20
2013-06-13 08:00	79	70	9	0	0	0	0	4	5	13	23	13	17	3	1	0	31	69	103	53	67	88	31
2013-06-13 09:00	43	33	7	3	0	0	0	0	6	12	12	6	6	1	0	0	41	64	94	51	64	81	41
2013-06-13 10:00	42	37	3	2	0	0	0	0	3	10	12	7	7	2	1	0	46	68	101	56	66	85	46
2013-06-13 11:00	51	44	6	1	0	0	1	0	6	12	16	10	5	1	0	0	23	64	91	53	64	78	23
2013-06-13 12:00	62	58	4	0	0	0	0	1	3	12	28	5	9	3	1	0	40	68	109	56	66	83	40
2013-06-13 13:00	78	73	3	2	0	0	0	2	8	22	23	8	10	4	0	1	33	65	132	51	63	84	33
2013-06-13 14:00	57	51	5	1	0	0	0	1	5	16	16	10	6	3	0	0	38	65	98	53	66	81	38
2013-06-13 15:00	88	82	5	1	0	0	1	0	12	23	26	9	12	4	0	1	30	65	111	51	62	83	30
2013-06-13 16:00	84	70	11	3	0	0	1	0	6	16	25	22	13	1	0	0	30	67	97	57	67	82	30
2013-06-13 17:00	96	88	4	4	0	0	1	3	4	25	26	18	11	6	2	0	30	67	107	55	67	83	30
2013-06-13 18:00	77	76	1	0	0	2	0	2	4	13	17	17	8	9	4	1	14	70	111	52	71	93	14
2013-06-13 19:00	20	18	1	1	0	0	0	0	4	9	4	3	0	0	0	0	42	58	80	50	56	74	42
2013-06-13 20:00	50	48	1	1	0	0	0	0	6	13	16	5	7	1	1	1	44	67	118	52	63	82	44
2013-06-13 21:00	63	61	2	0	0	0	1	0	5	17	22	7	7	2	2	0	21	66	106	52	65	84	21
2013-06-13 22:00	52	51	1	0	0	0	1	1	6	16	14	7	4	3	0	0	23	63	94	50	62	80	23
2013-06-13 23:00	24	22	1	1	0	0	1	0	2	5	11	3	0	1	0	1	25	65	123	52	64	78	25

[Thu, 13 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	22	17	3	2	1	1	0	1	4	3	5	2	1	4	0	0	9	61	96	44	66	91	30
06:00-12:00	266	228	31	7	0	1	2	4	25	57	73	44	44	11	4	1	20	67	116	53	66	86	30
12:00-18:00	465	422	32	11	0	0	3	7	38	114	144	72	61	21	3	2	30	66	132	53	65	83	30
18:00-23:59	286	276	7	3	0	2	3	3	27	73	84	42	26	16	7	3	14	66	123	52	64	83	30
00:00-24:00	1039	943	73	23	1	4	8	15	94	247	306	160	132	52	14	6	9	66	132	52	65	84	30

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-14 00:00	8	7	1	0	0	0	0	0	0	2	3	0	2	0	1	0	55	73	110	59	69	83	55
2013-06-14 01:00	4	4	0	0	0	0	0	0	1	1	1	0	1	0	0	0	50	63	90	50	61	90	50
2013-06-14 02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-14 03:00	3	3	0	0	0	0	0	0	1	2	0	0	0	0	0	0	46	53	57	46	56	57	46
2013-06-14 04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-14 05:00	3	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	12	12	13	12	13	13	12
2013-06-14 06:00	14	14	0	0	0	0	2	0	0	2	4	2	1	2	0	1	25	69	111	56	70	91	25
2013-06-14 07:00	9	8	0	1	0	0	1	1	2	1	1	1	2	0	0	0	27	58	90	35	51	85	27
2013-06-14 08:00	10	9	1	0	0	0	0	1	0	5	1	2	0	1	0	0	36	61	91	53	58	71	36

[Fri, 14 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	18	17	1	0	0	3	0	0	2	5	4	0	3	0	1	0	12	57	110	13	59	83	12
06:00-12:00	33	31	1	1	0	0	3	2	2	8	6	5	3	3	0	1	25	64	111	36	65	90	12
12:00-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
18:00-23:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
00:00-24:00	51	48	2	1	0	3	3	2	4	13	10	5	6	3	1	1	12	61	111	36	61	85	12

Traffic report

powered by datacollect

Author

Institution	Trafco Canada
Department	Tech Support
Street	9015 14 Street NW
Postal code	T6P 0C9
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Country	Canada
Contact	Brad Batdorf
Phone	+1-780-453-5280
Email	bradb@trafco.ca

Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:25:27

Site

Name	99 ave.sdr
Dir. Oncoming (Westbound)	
Dir. Outgoing (Eastbound)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-14 11:00
End date	2013-06-17 16:59
Days	Mo, Fr, Sa, Su
Time Interval	60 minutes
Time / Day	00:00 - 23:59

#4 on Map

Length Classes [L in m]

Oncoming				
Time	Σ	0-6m	6-12m	>12m
00:00-06:00	6	2	4	0
06:00-12:00	215	151	59	5
12:00-18:00	434	350	81	3
18:00-23:59	253	193	56	4
00:00-24:00	908	696	200	12

Calculated speeds [V in km/h]

	Vmin	Vmax	Vavg	V15	V50	V85	V1	Vexc %
Oncoming	6	55	33	27	33	40	17	0.3

Descriptions

Vmin: Minimal velocity
Vmax: Maximal velocity
Vavg: Average velocity
V15: Critical velocity for the first 15% of vehicles
V50: Critical velocity for the first 50% of vehicles
V85: Critical velocity for the first 85% of vehicles
V1: Critical velocity for the first 1% of vehicles
Vexc %: Speeding in %

Traffic report

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Author

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Department	Tech Support
Street	9015 14 Street NW
Postal code	T6P 0C9
City	Edmonton
Country	Canada
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Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:25:27

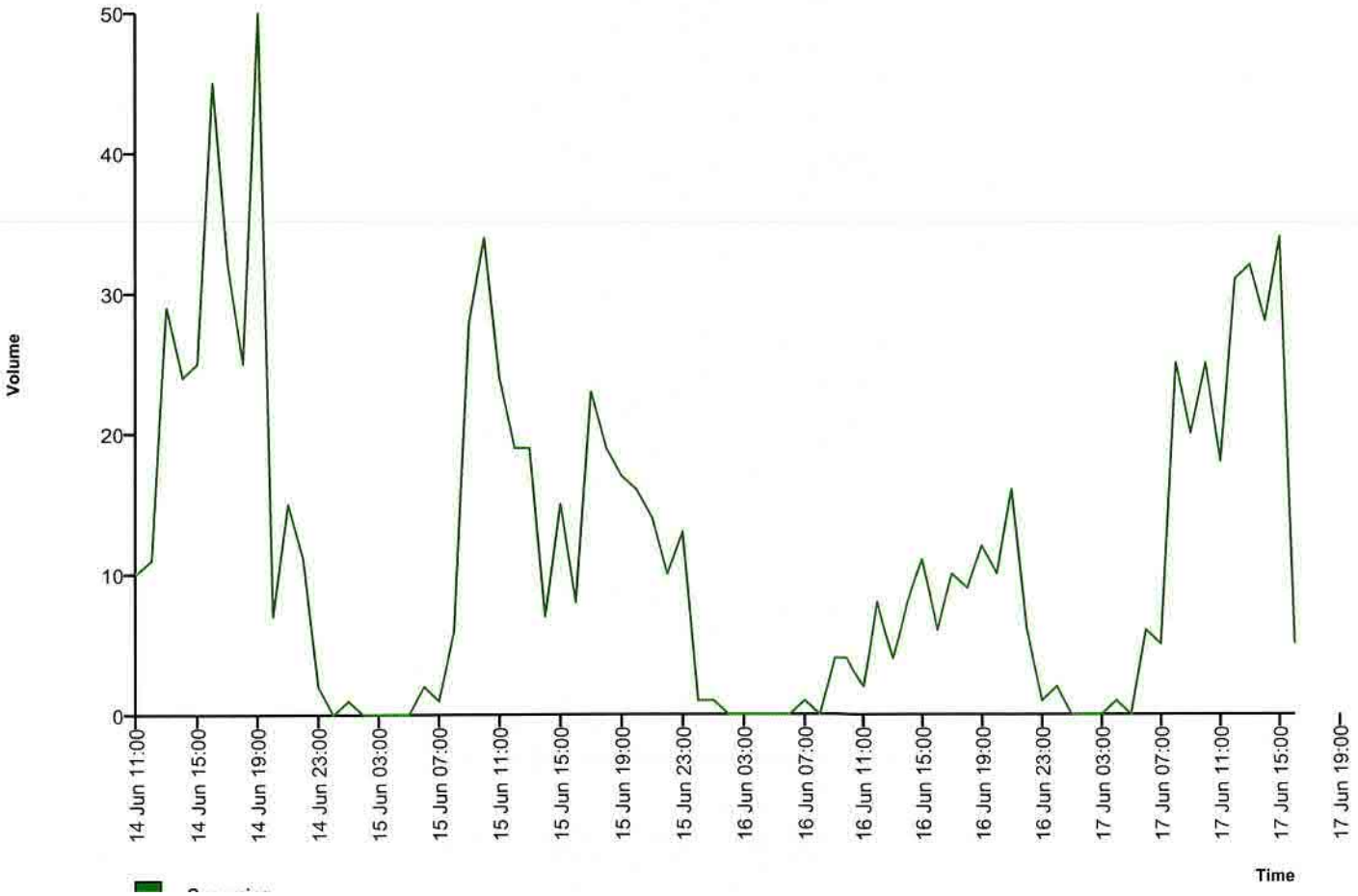
Site

Name	99 ave.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-14 11:00
End date	2013-06-17 16:59
Days	Mo, Fr, Sa, Su
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Time / Volume graph



Traffic report

powered by datacollect

Author

Institution	Trafco Canada
Department	Tech Support
Street	9015 14 Street NW
Postal code	T6P 0C9
City	Edmonton
Country	Canada
Contact	Brad Batdorf
Phone	+1-780-453-5280
Email	bradb@trafco.ca

Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:25:27

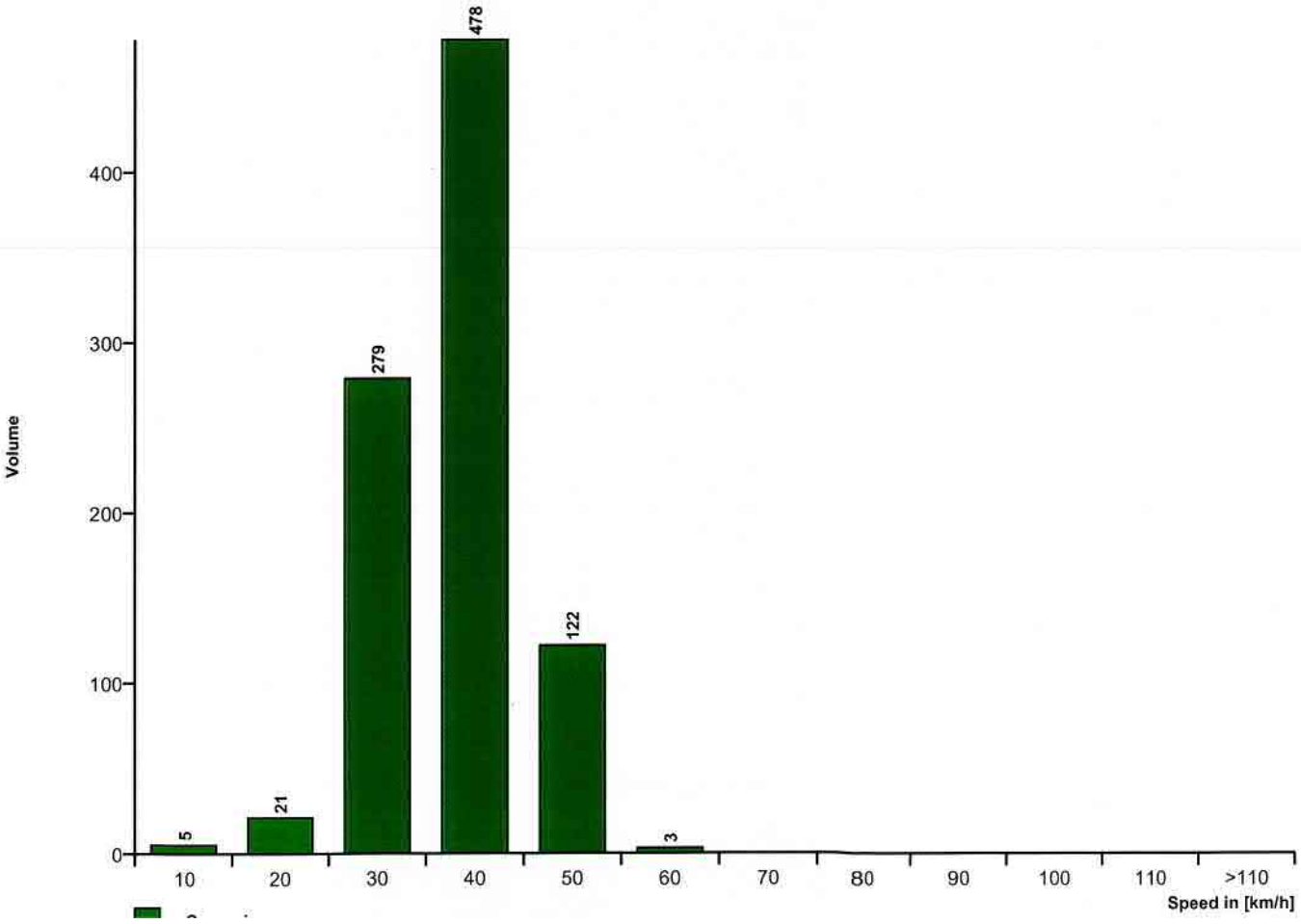
Site

Name	99 ave.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-14 11:00
End date	2013-06-17 16:59
Days	Mo, Fr, Sa, Su
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Speed histogram



Traffic report

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Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:25:27

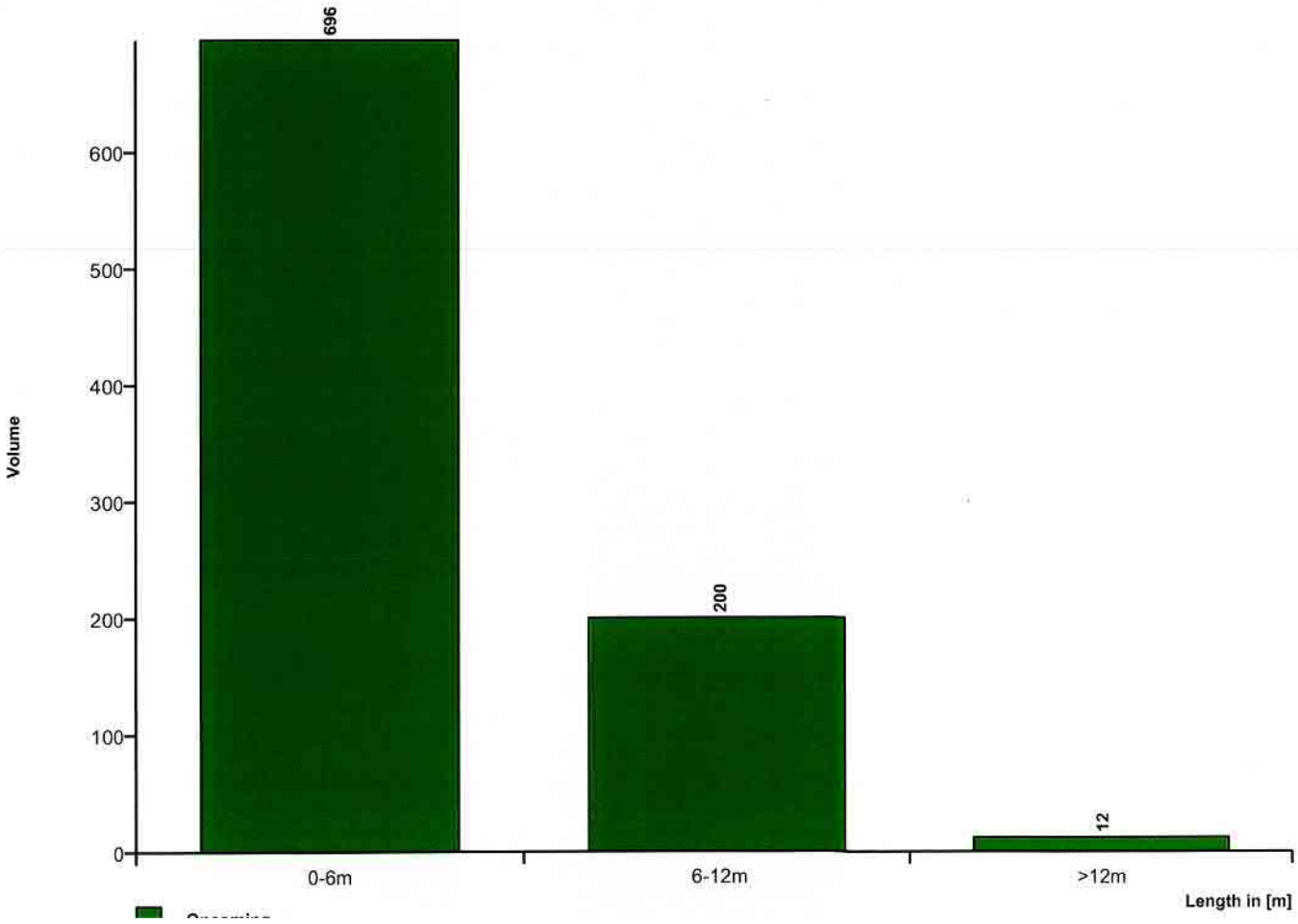
Site

Name	99 ave.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-14 11:00
End date	2013-06-17 16:59
Days	Mo, Fr, Sa, Su
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Length histogram



Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-14 11:00	10	9	1	0	0	0	7	3	0	0	0	0	0	0	0	0	22	29	36	23	30	36	22
2013-06-14 12:00	11	10	1	0	0	0	1	7	3	0	0	0	0	0	0	0	30	37	46	32	37	42	30
2013-06-14 13:00	29	27	2	0	0	0	15	13	1	0	0	0	0	0	0	0	22	30	43	25	30	37	22
2013-06-14 14:00	24	22	2	0	0	2	16	6	0	0	0	0	0	0	0	0	19	28	39	24	28	34	19
2013-06-14 15:00	25	22	3	0	0	0	11	11	3	0	0	0	0	0	0	0	25	32	42	28	32	40	25
2013-06-14 16:00	45	35	9	1	1	2	12	25	5	0	0	0	0	0	0	0	8	32	44	26	34	40	8
2013-06-14 17:00	32	26	6	0	0	0	9	19	4	0	0	0	0	0	0	0	24	33	45	28	32	40	24
2013-06-14 18:00	25	15	10	0	0	0	4	16	5	0	0	0	0	0	0	0	27	35	46	30	34	43	27
2013-06-14 19:00	50	42	4	4	0	11	23	15	1	0	0	0	0	0	0	0	15	25	41	20	24	34	15
2013-06-14 20:00	7	6	1	0	0	1	0	5	1	0	0	0	0	0	0	0	19	33	41	32	35	39	19
2013-06-14 21:00	15	15	0	0	0	0	3	7	4	1	0	0	0	0	0	0	26	36	55	30	34	44	26
2013-06-14 22:00	11	8	3	0	0	0	4	6	1	0	0	0	0	0	0	0	27	33	41	27	34	37	27
2013-06-14 23:00	2	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	34	36	39	34	39	39	34

[Fri, 14 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
06:00-12:00	10	9	1	0	0	0	7	3	0	0	0	0	0	0	0	0	22	29	36	23	30	36	16
12:00-18:00	166	142	23	1	1	4	64	81	16	0	0	0	0	0	0	0	8	32	46	26	32	39	16
18:00-23:59	110	87	19	4	0	12	34	51	12	1	0	0	0	0	0	0	15	30	55	22	32	39	16
00:00-24:00	286	238	43	5	1	16	105	135	28	1	0	0	0	0	0	0	8	31	55	24	32	39	16

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-15 00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-15 01:00	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	34	34	34	34	34	34	34
2013-06-15 02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-15 03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-15 04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-15 05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-15 06:00	2	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	30	30	31	30	31	31	30
2013-06-15 07:00	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	38	38	38	38	38	38	38
2013-06-15 08:00	6	4	2	0	0	0	1	5	0	0	0	0	0	0	0	0	29	33	37	29	36	37	29
2013-06-15 09:00	28	16	12	0	0	0	7	17	4	0	0	0	0	0	0	0	22	34	50	28	34	40	22
2013-06-15 10:00	34	23	10	1	0	0	10	19	5	0	0	0	0	0	0	0	22	33	48	27	34	40	22
2013-06-15 11:00	24	15	8	1	0	0	5	13	6	0	0	0	0	0	0	0	23	35	46	28	37	44	23
2013-06-15 12:00	19	12	7	0	0	0	6	9	4	0	0	0	0	0	0	0	26	34	45	28	34	42	26
2013-06-15 13:00	19	14	5	0	0	0	4	12	3	0	0	0	0	0	0	0	27	35	48	27	35	41	27
2013-06-15 14:00	7	7	0	0	0	0	0	3	4	0	0	0	0	0	0	0	36	41	47	38	42	43	36
2013-06-15 15:00	15	14	1	0	0	0	3	10	2	0	0	0	0	0	0	0	21	34	44	30	33	38	21
2013-06-15 16:00	8	7	1	0	0	0	0	6	2	0	0	0	0	0	0	0	33	36	42	33	34	42	33
2013-06-15 17:00	23	18	5	0	0	0	6	13	4	0	0	0	0	0	0	0	22	35	49	30	34	42	22
2013-06-15 18:00	19	12	7	0	1	0	7	8	3	0	0	0	0	0	0	0	8	32	44	24	33	41	8
2013-06-15 19:00	17	9	8	0	0	0	3	12	2	0	0	0	0	0	0	0	26	34	42	30	35	38	26
2013-06-15 20:00	16	12	4	0	0	0	5	10	1	0	0	0	0	0	0	0	25	33	44	29	33	40	25
2013-06-15 21:00	14	12	2	0	0	0	4	4	5	1	0	0	0	0	0	0	25	37	53	27	39	45	25
2013-06-15 22:00	10	8	2	0	0	0	3	6	1	0	0	0	0	0	0	0	24	33	43	30	33	39	24
2013-06-15 23:00	13	5	8	0	0	1	5	4	3	0	0	0	0	0	0	0	19	33	47	25	32	47	19

[Sat, 15 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	34	34	34	34	34	34	21
06:00-12:00	95	60	32	3	0	0	24	56	15	0	0	0	0	0	0	0	22	34	50	28	34	41	21
12:00-18:00	91	72	19	0	0	0	19	53	19	0	0	0	0	0	0	0	21	35	49	30	34	42	21
18:00-23:59	89	58	31	0	1	1	27	44	15	1	0	0	0	0	0	0	8	34	53	27	33	42	21
00:00-24:00	276	191	82	3	1	1	70	154	49	1	0	0	0	0	0	0	8	34	53	28	34	42	21

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-16 00:00	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	31	31	31	31	31	31	31
2013-06-16 01:00	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	33	33	33	33	33	33	33
2013-06-16 02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-16 03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-16 04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-16 05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-16 06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-16 07:00	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	40	40	40	40	40	40	40
2013-06-16 08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-16 09:00	4	3	1	0	0	0	1	2	1	0	0	0	0	0	0	0	26	36	42	26	38	42	26
2013-06-16 10:00	4	4	0	0	0	0	1	2	1	0	0	0	0	0	0	0	29	37	41	29	40	41	29
2013-06-16 11:00	2	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	29	33	38	29	38	38	29
2013-06-16 12:00	8	6	2	0	0	0	2	4	2	0	0	0	0	0	0	0	28	36	49	30	36	41	28
2013-06-16 13:00	4	3	1	0	0	0	3	1	0	0	0	0	0	0	0	0	25	30	38	25	30	38	25
2013-06-16 14:00	8	6	2	0	0	0	2	4	2	0	0	0	0	0	0	0	26	35	44	30	36	43	26
2013-06-16 15:00	11	6	5	0	0	0	3	2	5	1	0	0	0	0	0	0	25	37	52	25	41	44	25
2013-06-16 16:00	6	3	3	0	0	0	1	4	1	0	0	0	0	0	0	0	29	35	43	29	36	43	29
2013-06-16 17:00	10	8	2	0	0	1	2	6	1	0	0	0	0	0	0	0	17	32	45	23	34	39	17
2013-06-16 18:00	9	9	0	0	0	0	3	4	2	0	0	0	0	0	0	0	25	33	44	26	31	42	25
2013-06-16 19:00	12	10	2	0	0	0	4	7	1	0	0	0	0	0	0	0	26	32	43	28	31	38	26
2013-06-16 20:00	10	9	1	0	0	0	3	6	1	0	0	0	0	0	0	0	25	33	42	28	32	39	25
2013-06-16 21:00	16	14	2	0	0	0	10	6	0	0	0	0	0	0	0	0	24	29	37	26	30	36	24
2013-06-16 22:00	6	5	1	0	0	0	0	6	0	0	0	0	0	0	0	0	32	34	37	32	34	37	32
2013-06-16 23:00	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	39	39	39	39	39	39	39

[Sun, 16 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	2	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	31	32	33	31	33	33	23
06:00-12:00	11	8	3	0	0	0	3	6	2	0	0	0	0	0	0	0	26	36	42	29	38	41	23
12:00-18:00	47	32	15	0	0	1	13	21	11	1	0	0	0	0	0	0	17	35	52	27	36	43	23
18:00-23:59	54	48	6	0	0	0	20	30	4	0	0	0	0	0	0	0	24	32	44	26	31	38	23
00:00-24:00	114	88	26	0	0	1	36	59	17	1	0	0	0	0	0	0	17	33	52	27	33	41	23

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-17 00:00	2	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	33	34	36	33	36	36	33
2013-06-17 01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-17 02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-17 03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-17 04:00	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	35	35	35	35	35	35	35
2013-06-17 05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-17 06:00	6	3	3	0	0	0	2	2	2	0	0	0	0	0	0	0	23	35	47	23	35	47	23
2013-06-17 07:00	5	3	2	0	0	0	1	2	2	0	0	0	0	0	0	0	28	36	49	28	34	49	28
2013-06-17 08:00	25	19	6	0	0	1	7	17	0	0	0	0	0	0	0	0	14	31	40	25	33	38	14
2013-06-17 09:00	20	18	2	0	0	0	8	10	2	0	0	0	0	0	0	0	23	32	41	28	33	40	23
2013-06-17 10:00	25	19	5	1	0	1	5	15	4	0	0	0	0	0	0	0	17	34	46	29	34	41	17
2013-06-17 11:00	18	12	5	1	0	0	6	9	3	0	0	0	0	0	0	0	23	33	44	25	34	41	23
2013-06-17 12:00	31	25	6	0	0	1	9	13	8	0	0	0	0	0	0	0	20	34	47	26	35	42	20
2013-06-17 13:00	32	25	6	1	0	0	8	22	2	0	0	0	0	0	0	0	25	33	45	29	34	39	25
2013-06-17 14:00	28	22	5	1	1	0	10	16	1	0	0	0	0	0	0	0	6	31	41	28	34	37	6
2013-06-17 15:00	34	27	7	0	2	0	9	19	4	0	0	0	0	0	0	0	7	31	45	26	32	38	7
2013-06-17 16:00	5	5	0	0	0	0	3	2	0	0	0	0	0	0	0	0	24	28	35	24	26	35	24

[Mon, 17 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	3	1	2	0	0	0	0	3	0	0	0	0	0	0	0	0	33	34	36	33	35	36	8
06:00-12:00	99	74	23	2	0	2	29	55	13	0	0	0	0	0	0	0	14	33	49	26	33	40	8
12:00-18:00	130	104	24	2	3	1	39	72	15	0	0	0	0	0	0	0	6	32	47	27	33	39	8
18:00-23:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
00:00-24:00	232	179	49	4	3	3	68	130	28	0	0	0	0	0	0	0	6	32	49	27	33	40	8

Traffic report

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Author

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Postal code	T6P 0C9
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Country	Canada
Contact	Brad Batdorf
Phone	+1-780-453-5280
Email	bradb@trafco.ca

Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:27:17

Site

Name	100 & SOUTH.sdr
Dir. Oncoming (Northbound)	
Dir. Outgoing (Southbound)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-11 08:00
End date	2013-06-14 08:59
Days	Tu, We, Th, Fr
Time Interval	60 minutes
Time / Day	00:00 - 23:59

#5 on Map

Length Classes [L in m]

Oncoming					Outgoing				
Time	Σ	0-6m	6-12m	>12m	Time	Σ	0-6m	6-12m	>12m
00:00-06:00	45	39	6	0	00:00-06:00	36	31	4	1
06:00-12:00	667	537	94	36	06:00-12:00	764	677	61	26
12:00-18:00	1403	1204	145	54	12:00-18:00	978	879	67	32
18:00-23:59	827	728	80	19	18:00-23:59	557	500	45	12
00:00-24:00	2942	2508	325	109	00:00-24:00	2334	2086	177	71

Calculated speeds [V in km/h]

	Vmin	Vmax	Vavg	V15	V50	V85	V1	Vexc %
Oncoming	9	155	88	73	89	103	51	**99.0**
Outgoing	17	147	86	71	86	101	52	**99.4**

Descriptions

Vmin: Minimal velocity
Vmax: Maximal velocity
Vavg: Average velocity
V15: Critical velocity for the first 15% of vehicles
V50: Critical velocity for the first 50% of vehicles
V85: Critical velocity for the first 85% of vehicles
V1: Critical velocity for the first 1% of vehicles
Vexc %: Speeding in %

Traffic report

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Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:27:17

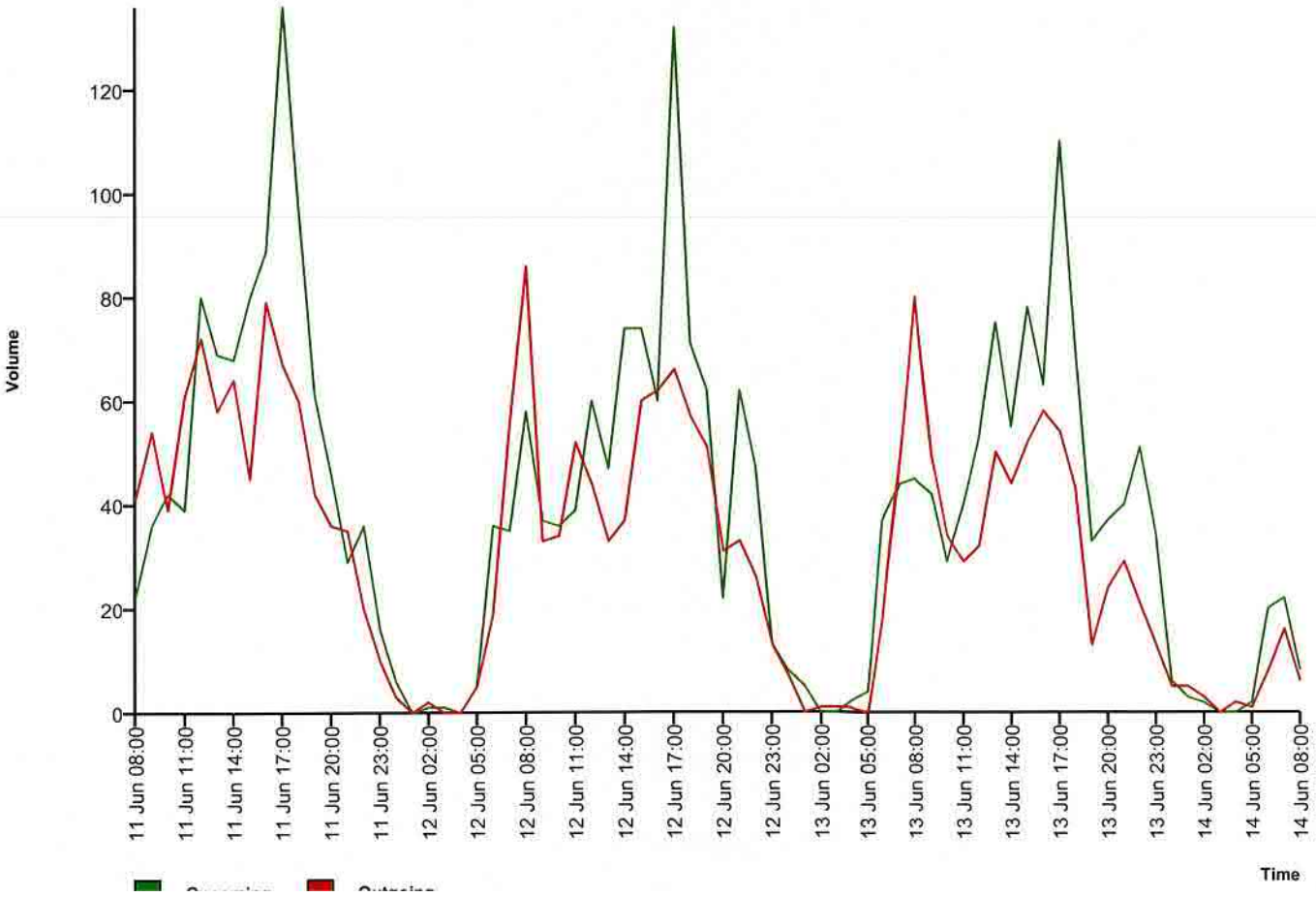
Site

Name	100 & SOUTH.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-11 08:00
End date	2013-06-14 08:59
Days	Tu, We, Th, Fr
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Time / Volume graph



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Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:27:17

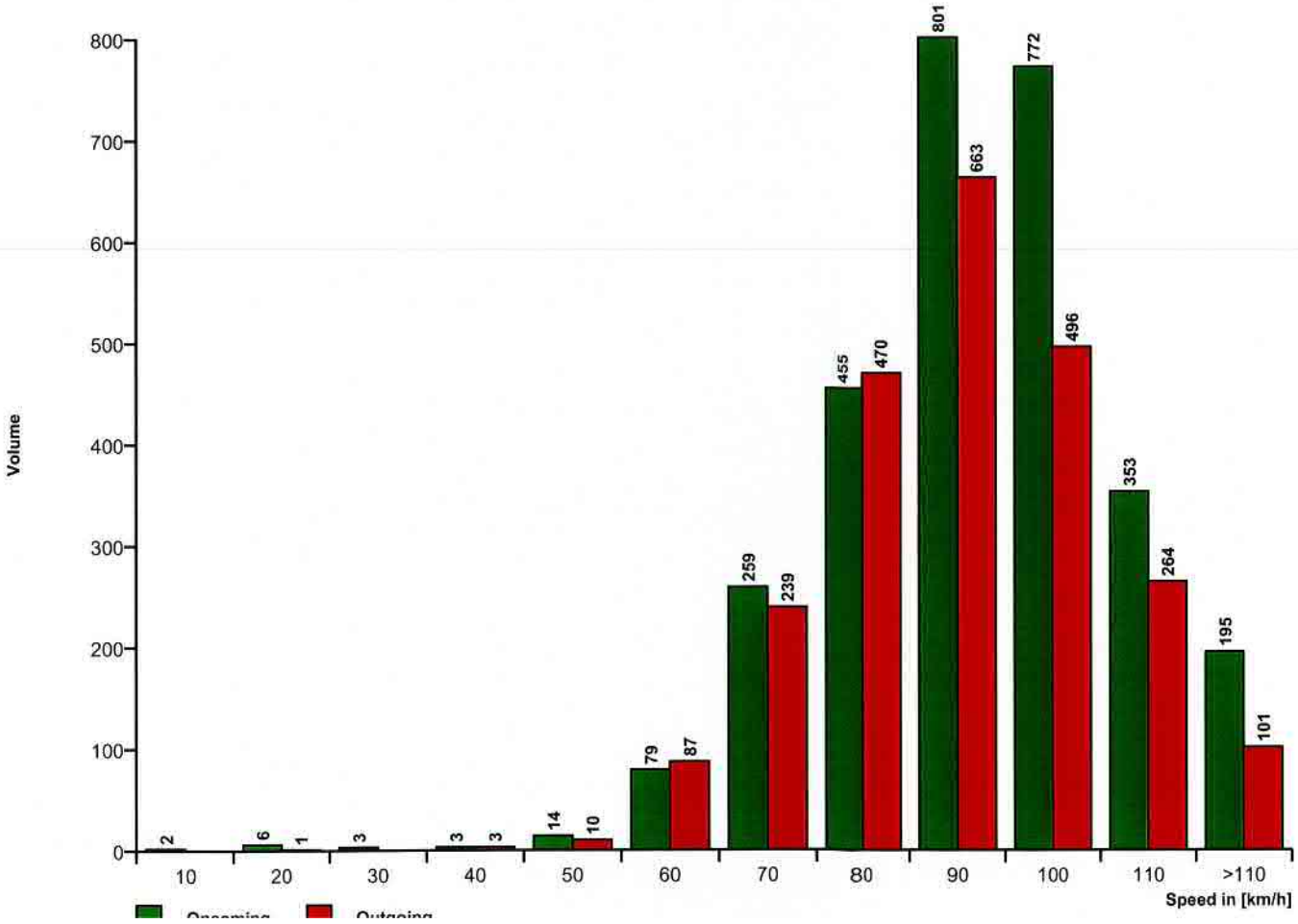
Site

Name	100 & SOUTH.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-11 08:00
End date	2013-06-14 08:59
Days	Tu, We, Th, Fr
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Speed histogram



Traffic report

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Author

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Department	Tech Support
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Postal code	T6P 0C9
City	Edmonton
Country	Canada
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Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:27:17

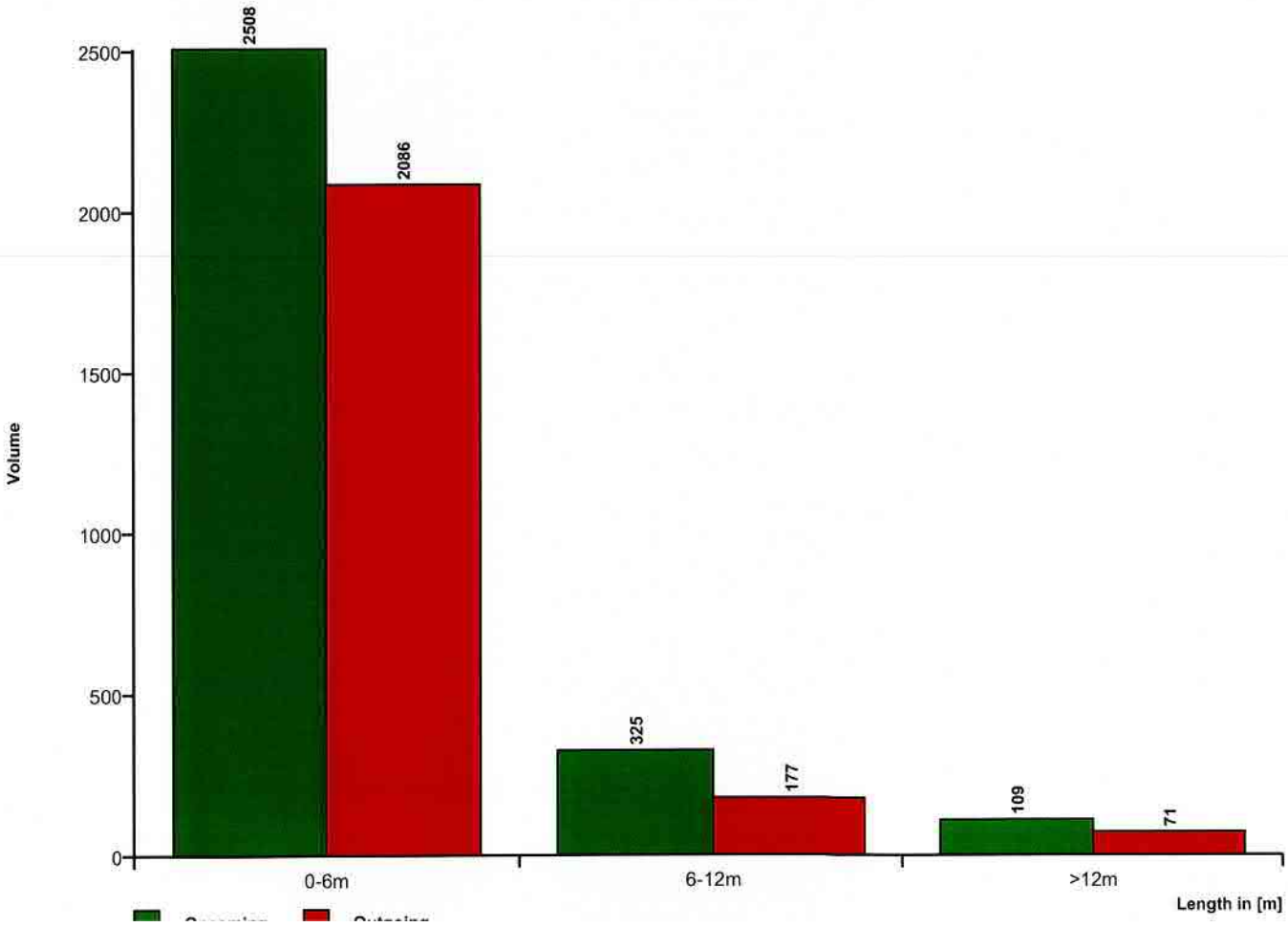
Site

Name	100 & SOUTH.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-11 08:00
End date	2013-06-14 08:59
Days	Tu, We, Th, Fr
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Length histogram



Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-11 08:00	63	50	8	5	0	0	0	0	0	3	6	15	20	14	4	1	51	82	111	71	83	96	51
2013-06-11 09:00	90	76	9	5	0	0	1	0	0	2	6	18	29	17	13	4	24	86	118	73	88	101	24
2013-06-11 10:00	81	68	12	1	0	0	0	0	0	1	7	12	21	20	9	11	59	91	138	77	90	108	59
2013-06-11 11:00	100	93	5	2	0	0	0	0	0	1	14	15	25	26	15	4	59	87	124	71	88	104	61
2013-06-11 12:00	152	134	15	3	0	0	0	0	0	2	13	24	49	47	13	4	59	87	139	75	88	98	60
2013-06-11 13:00	127	109	12	6	0	0	0	0	0	3	11	15	45	34	12	7	56	88	122	76	89	100	57
2013-06-11 14:00	132	106	20	6	0	0	0	0	0	3	10	26	43	32	9	9	53	87	145	75	86	100	56
2013-06-11 15:00	125	106	14	5	0	0	0	0	0	5	10	12	50	28	15	5	51	87	126	73	88	102	57
2013-06-11 16:00	168	137	22	9	0	0	0	0	1	9	17	29	54	39	12	7	50	84	125	70	85	98	51
2013-06-11 17:00	203	175	18	10	0	0	0	0	1	2	19	31	59	58	23	10	49	88	136	74	88	102	60
2013-06-11 18:00	157	136	16	5	0	0	0	0	0	3	9	27	55	33	22	8	59	88	118	77	88	104	60
2013-06-11 19:00	103	91	11	1	0	0	0	0	0	5	11	21	19	32	12	3	53	85	117	70	87	100	57
2013-06-11 20:00	82	76	5	1	0	1	0	1	1	3	10	10	17	18	16	5	12	87	152	70	89	103	12
2013-06-11 21:00	64	55	7	2	0	0	0	0	1	3	7	13	18	12	6	4	47	85	118	68	87	101	47
2013-06-11 22:00	56	48	6	2	0	0	0	0	0	2	7	9	18	15	5	0	55	84	110	66	87	100	55
2013-06-11 23:00	26	22	3	1	0	0	0	0	0	1	3	3	8	5	1	5	53	91	136	70	89	121	53

[Tue, 11 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54
06:00-12:00	334	287	34	13	0	0	1	0	0	7	33	60	95	77	41	20	24	87	138	73	88	102	54
12:00-18:00	907	767	101	39	0	0	0	0	2	24	80	137	300	238	84	42	49	87	145	74	87	100	54
18:00-23:59	488	428	48	12	0	1	0	1	2	17	47	83	135	115	62	25	12	87	152	71	88	102	54
00:00-24:00	1729	1482	183	64	0	1	1	1	4	48	160	280	530	430	187	87	12	87	152	73	87	101	54

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-12 00:00	9	7	2	0	0	0	0	0	0	1	0	1	2	1	2	2	53	96	138	79	93	118	53
2013-06-12 01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-12 02:00	3	3	0	0	0	0	0	0	0	0	0	1	1	0	1	0	76	88	101	76	87	101	76
2013-06-12 03:00	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	55	55	55	55	55	55	55
2013-06-12 04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-12 05:00	10	8	2	0	0	0	0	0	0	0	0	1	1	5	0	3	74	102	129	90	99	127	74
2013-06-12 06:00	55	50	5	0	0	0	0	0	1	2	4	7	13	17	5	6	49	89	120	76	91	107	49
2013-06-12 07:00	91	74	14	3	0	0	0	0	0	4	11	14	23	23	7	9	51	87	129	70	89	102	51
2013-06-12 08:00	144	104	32	8	0	0	0	0	0	8	13	32	44	23	16	8	51	85	123	71	84	101	52
2013-06-12 09:00	70	63	4	3	0	0	0	0	0	1	3	13	18	25	8	2	59	89	115	77	91	100	59
2013-06-12 10:00	70	60	5	5	0	0	0	0	0	6	12	22	12	13	4	1	58	80	112	68	80	97	58
2013-06-12 11:00	91	80	5	6	0	0	0	0	1	5	6	24	27	18	9	1	50	83	117	72	83	97	50
2013-06-12 12:00	104	92	8	4	0	0	0	0	0	4	12	28	22	23	9	6	57	85	132	70	84	100	58
2013-06-12 13:00	80	71	6	3	0	0	0	1	0	4	8	15	24	16	9	3	34	85	116	70	87	101	34
2013-06-12 14:00	111	99	10	2	0	0	0	0	1	5	8	19	38	23	12	5	50	86	121	73	87	101	51
2013-06-12 15:00	134	116	14	4	0	0	0	0	1	4	14	26	39	33	12	5	43	85	123	71	86	100	59
2013-06-12 16:00	122	112	7	3	0	1	0	1	3	5	10	31	25	30	9	7	17	83	134	69	83	100	39
2013-06-12 17:00	198	186	11	1	0	0	0	0	0	7	14	44	55	43	28	7	52	86	120	73	87	102	53
2013-06-12 18:00	128	112	14	2	0	0	0	0	0	3	14	23	35	23	23	7	55	87	124	72	87	104	57
2013-06-12 19:00	113	97	15	1	0	0	0	0	0	3	10	22	26	19	24	9	53	89	127	73	89	105	55
2013-06-12 20:00	53	42	10	1	0	0	0	0	0	1	3	6	15	15	9	4	60	91	127	74	93	105	60
2013-06-12 21:00	95	84	9	2	0	0	0	0	1	2	12	20	25	24	8	3	50	85	127	70	85	98	50
2013-06-12 22:00	73	63	8	2	0	0	0	0	1	1	6	11	20	22	9	3	47	88	147	72	89	104	47
2013-06-12 23:00	26	24	2	0	0	0	0	0	1	2	2	4	5	5	6	1	48	87	115	67	89	106	48

[Wed, 12 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	23	19	4	0	0	0	0	0	0	2	0	3	4	6	3	5	53	96	138	76	95	118	52
06:00-12:00	521	431	65	25	0	0	0	0	2	26	49	112	137	119	49	27	49	85	129	71	85	100	52
12:00-18:00	749	676	56	17	0	1	0	2	5	29	66	163	203	168	79	33	17	85	134	71	86	100	52
18:00-23:59	488	422	58	8	0	0	0	0	3	12	47	86	126	108	79	27	47	88	147	72	88	104	52
00:00-24:00	1781	1548	183	50	0	1	0	2	10	69	162	364	470	401	210	92	17	86	147	71	87	101	52

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-13 00:00	15	13	2	0	0	0	0	1	0	0	2	0	2	6	0	4	37	93	124	69	92	123	37
2013-06-13 01:00	5	5	0	0	0	0	0	0	0	0	0	0	1	0	0	4	88	115	135	88	120	135	88
2013-06-13 02:00	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	109	109	109	109	109	109	109
2013-06-13 03:00	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	90	90	90	90	90	90	90
2013-06-13 04:00	3	2	1	0	0	0	0	0	0	0	0	3	0	0	0	0	75	78	80	75	80	80	75
2013-06-13 05:00	4	3	1	0	0	0	0	0	0	0	0	0	1	1	0	2	88	102	116	88	115	116	88
2013-06-13 06:00	55	49	5	1	0	0	0	0	1	2	4	5	15	16	9	3	50	89	123	74	92	102	50
2013-06-13 07:00	93	81	8	4	0	0	0	0	0	2	9	13	22	25	14	8	56	90	139	72	91	105	56
2013-06-13 08:00	125	105	14	6	0	0	0	0	1	4	10	19	33	32	22	4	49	88	124	73	89	104	51
2013-06-13 09:00	91	76	9	6	0	0	0	0	0	3	11	19	22	22	7	7	54	86	131	70	87	102	54
2013-06-13 10:00	63	56	7	0	0	0	0	1	5	2	7	14	16	12	3	3	39	80	121	67	83	97	39
2013-06-13 11:00	69	60	5	4	0	0	0	0	1	0	11	10	16	15	9	7	45	87	123	69	88	107	45
2013-06-13 12:00	85	75	8	2	0	0	0	0	0	0	9	14	24	17	13	8	62	89	124	73	89	108	62
2013-06-13 13:00	125	107	13	5	0	0	1	1	1	2	16	22	33	31	11	7	28	86	145	69	87	100	38
2013-06-13 14:00	99	90	5	4	0	0	0	0	0	4	5	17	27	25	13	8	55	89	129	75	89	105	55
2013-06-13 15:00	130	110	14	6	0	0	0	0	0	4	17	28	25	35	16	5	54	86	150	70	88	102	54
2013-06-13 16:00	121	107	5	9	0	0	0	0	0	7	14	19	30	27	18	6	52	86	118	70	87	103	55
2013-06-13 17:00	164	150	10	4	0	0	0	0	0	3	15	26	46	49	17	8	51	88	132	74	89	102	55
2013-06-13 18:00	113	106	5	2	0	5	0	0	0	3	8	18	30	30	13	6	12	85	118	72	89	101	12
2013-06-13 19:00	46	45	1	0	0	0	0	0	0	2	4	7	20	9	3	1	54	84	117	73	85	95	54
2013-06-13 20:00	61	57	1	3	0	0	0	0	0	1	9	8	17	15	10	1	59	86	111	70	89	102	59
2013-06-13 21:00	69	63	5	1	0	0	0	0	0	3	6	10	15	22	9	4	55	90	155	74	92	104	55
2013-06-13 22:00	72	63	5	4	0	0	0	0	0	1	4	6	25	18	7	11	58	93	138	77	91	111	58
2013-06-13 23:00	47	44	2	1	1	0	1	0	0	3	6	10	8	8	7	3	9	83	124	66	84	103	9

[Thu, 13 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	29	25	4	0	0	0	0	1	0	0	2	3	5	7	1	10	37	97	135	80	92	123	48
06:00-12:00	496	427	48	21	0	0	0	1	8	13	52	80	124	122	64	32	39	87	139	71	88	103	48
12:00-18:00	725	640	55	30	0	0	1	1	1	20	76	126	185	185	88	42	28	87	150	71	88	102	48
18:00-23:59	408	378	19	11	1	5	1	0	0	13	37	59	115	102	49	26	9	87	155	72	89	103	48
00:00-24:00	1657	1469	126	62	1	5	2	3	9	46	167	268	429	415	202	110	9	87	155	71	89	103	48

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-14 00:00	11	9	2	0	0	0	0	0	0	0	2	1	2	4	0	2	67	90	117	68	91	116	67
2013-06-14 01:00	8	7	0	1	0	0	0	0	0	0	1	3	2	1	0	1	69	85	120	72	81	96	69
2013-06-14 02:00	5	5	0	0	0	0	0	0	0	0	0	1	2	1	0	1	73	97	147	73	89	147	73
2013-06-14 03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-14 04:00	2	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	84	85	87	84	87	87	84
2013-06-14 05:00	3	3	0	0	0	0	0	0	0	0	0	0	1	1	1	0	82	93	101	82	98	101	82
2013-06-14 06:00	28	25	2	1	0	0	0	0	0	1	2	1	12	2	8	2	58	90	112	82	89	104	58
2013-06-14 07:00	38	34	4	0	0	0	0	0	0	1	3	7	11	10	5	1	57	87	112	76	88	103	57
2013-06-14 08:00	14	10	2	2	1	0	0	0	1	1	1	0	3	3	4	0	9	79	104	51	92	101	9

[Fri, 14 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	29	26	2	1	0	0	0	0	0	0	3	5	9	7	1	4	67	90	147	73	87	101	48
06:00-12:00	80	69	8	3	1	0	0	0	1	3	6	8	26	15	17	3	9	87	112	74	88	104	48
12:00-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48
18:00-23:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48
00:00-24:00	109	95	10	4	1	0	0	0	1	3	9	13	35	22	18	7	9	88	147	73	87	104	48

Traffic report

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Author

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Trafco Canada an ATS company

Generated with DataCollect Webreporter version 1.0 at 2013-06-25 22:18:50

Site

Name	100 east.sdr
Dir. Oncoming (Northbound)	
Dir. Outgoing (Southbound)	
Posted Speed Limit	5
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-18 15:00
End date	2013-06-20 14:59
Days	Tu, We, Th
Time Interval	60 minutes
Time / Day	00:00 - 23:59

#6 on Map

Length Classes [L in m]

Oncoming				
Time	Σ	0-6m	6-12m	>12m
00:00-06:00	63	44	16	3
06:00-12:00	2113	1399	523	191
12:00-18:00	2697	1989	524	184
18:00-23:59	1824	1368	359	97
00:00-24:00	6697	4800	1422	475

Calculated speeds [V in km/h]

	Vmin	Vmax	Vavg	V15	V50	V85	V1	Vexc %
Oncoming	8	102	52	34	56	65	17	100.0

Descriptions

Vmin: Minimal velocity
Vmax: Maximal velocity
Vavg: Average velocity
V15: Critical velocity for the first 15% of vehicles
V50: Critical velocity for the first 50% of vehicles
V85: Critical velocity for the first 85% of vehicles
V1: Critical velocity for the first 1% of vehicles
Vexc %: Speeding in %

Traffic report

powered by datacollect

Author

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Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:18:50

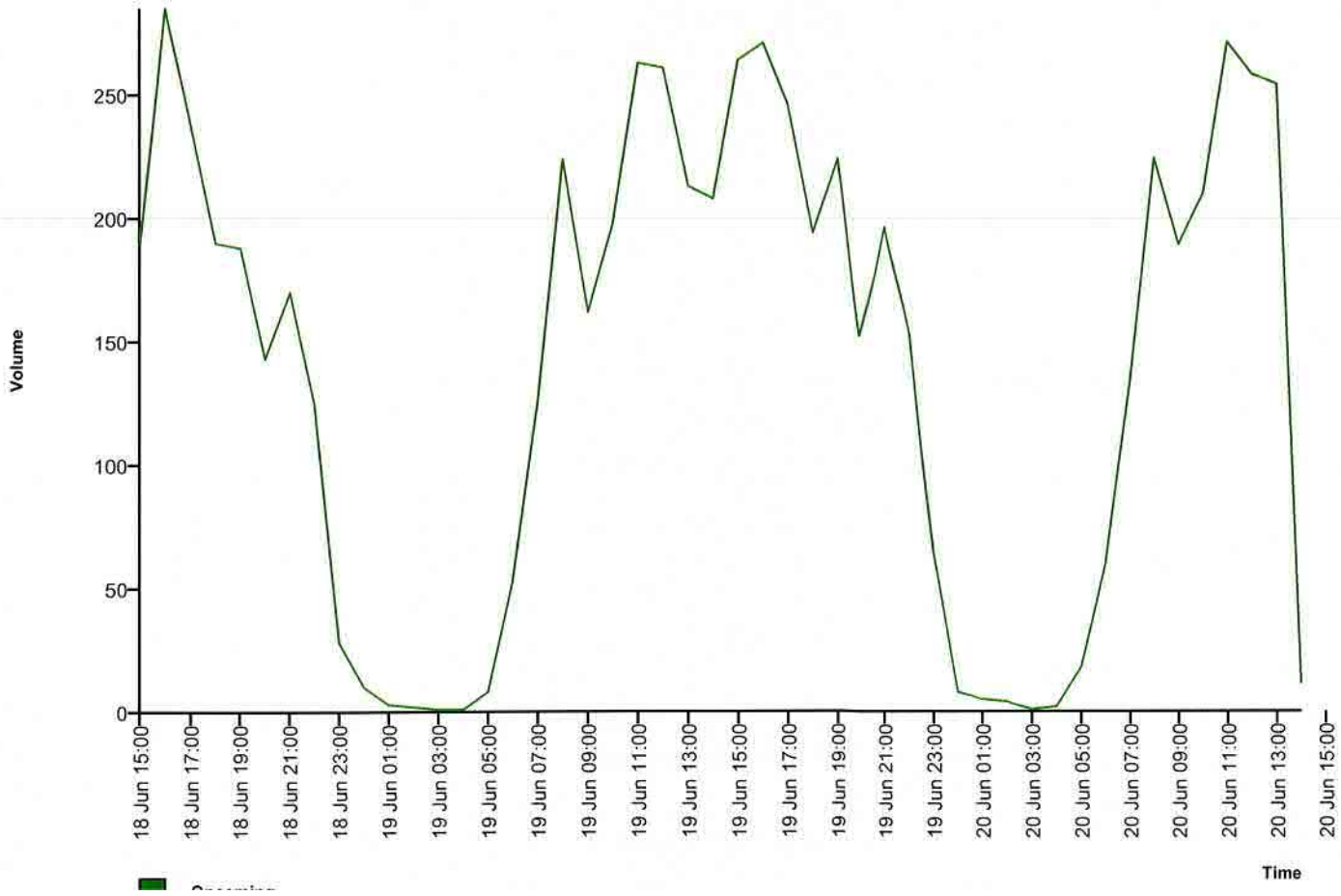
Site

Name	100 east.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	5
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-18 15:00
End date	2013-06-20 14:59
Days	Tu, We, Th
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Time / Volume graph



Traffic report

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Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:18:50

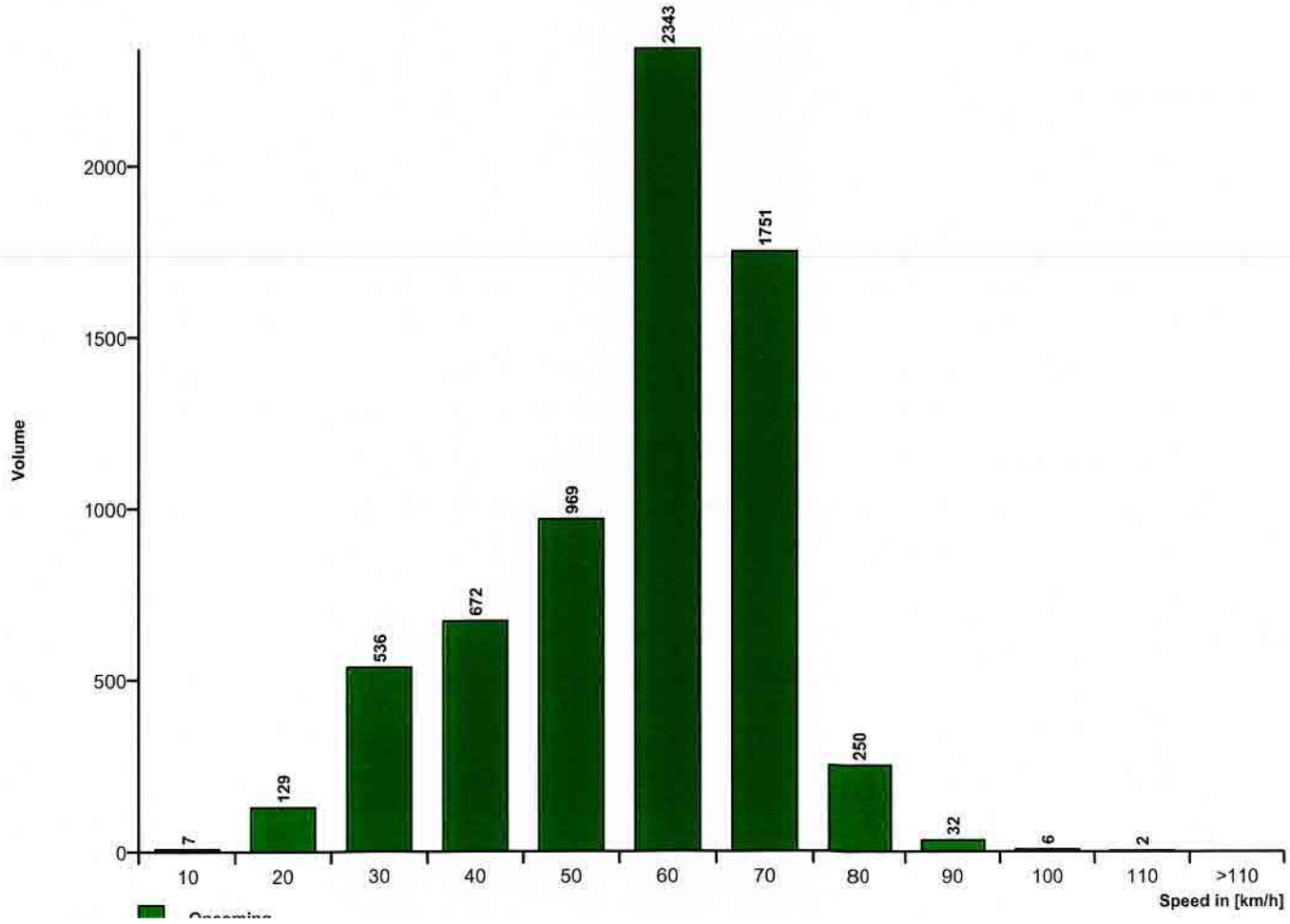
Site

Name	100 east.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	5
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-18 15:00
End date	2013-06-20 14:59
Days	Tu, We, Th
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Speed histogram



Traffic report

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Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:18:50

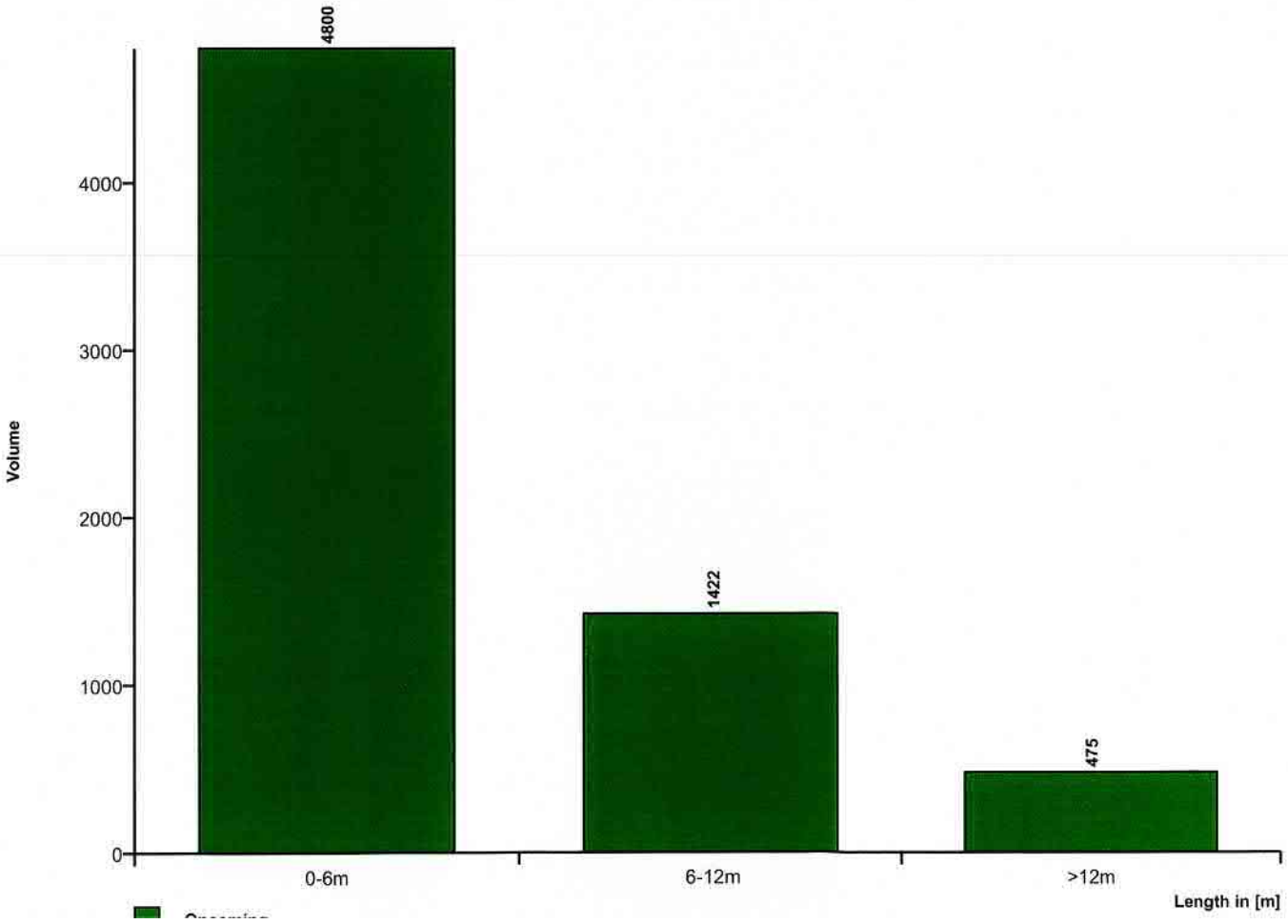
Site

Name	100 east.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	5
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-18 15:00
End date	2013-06-20 14:59
Days	Tu, We, Th
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Length histogram



Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-18 15:00	189	136	39	14	0	1	17	29	52	65	24	1	0	0	0	0	16	47	77	33	49	59	22
2013-06-18 16:00	285	211	60	14	0	13	19	24	44	127	52	6	0	0	0	0	11	50	78	34	55	62	12
2013-06-18 17:00	237	175	50	12	1	7	19	28	26	73	75	8	0	0	0	0	8	52	78	32	57	65	18
2013-06-18 18:00	190	136	40	14	0	2	11	18	6	54	84	14	1	0	0	0	12	57	83	35	61	69	19
2013-06-18 19:00	188	140	35	13	0	2	12	16	10	56	79	11	2	0	0	0	13	56	82	38	60	66	14
2013-06-18 20:00	143	110	26	7	0	2	7	16	10	49	49	9	0	0	1	0	19	55	102	38	59	67	20
2013-06-18 21:00	170	134	23	13	0	0	13	10	9	67	59	10	0	2	0	0	22	56	94	46	59	67	24
2013-06-18 22:00	124	81	40	3	0	0	13	10	3	40	54	4	0	0	0	0	25	55	72	37	59	66	26
2013-06-18 23:00	28	21	7	0	0	0	4	2	1	10	9	2	0	0	0	0	26	54	76	32	57	67	26

[Tue, 18 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
06:00-12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
12:00-18:00	711	522	149	40	1	21	55	81	122	265	151	15	0	0	0	0	8	50	78	33	54	63	18
18:00-23:59	843	622	171	50	0	6	60	72	39	276	334	50	3	2	1	0	12	56	102	38	60	67	18
00:00-24:00	1554	1144	320	90	1	27	115	153	161	541	485	65	3	2	1	0	8	53	102	34	57	65	18

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-19 00:00	10	8	2	0	0	0	1	0	2	1	2	2	2	0	0	0	30	59	81	41	62	81	30
2013-06-19 01:00	3	2	1	0	0	0	1	0	0	0	2	0	0	0	0	0	30	52	66	30	61	66	30
2013-06-19 02:00	2	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	60	60	61	60	61	61	60
2013-06-19 03:00	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	61	61	61	61	61	61	61
2013-06-19 04:00	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	26	26	26	26	26	26	26
2013-06-19 05:00	8	5	3	0	0	0	1	1	0	1	1	3	1	0	0	0	23	59	82	31	71	77	23
2013-06-19 06:00	53	22	24	7	0	0	11	0	1	6	21	11	3	0	0	0	22	58	89	27	66	75	22
2013-06-19 07:00	126	83	33	10	1	4	9	16	5	28	44	15	2	1	1	0	9	55	102	31	61	71	12
2013-06-19 08:00	224	149	58	17	1	7	20	20	44	77	49	5	1	0	0	0	10	50	83	33	54	63	14
2013-06-19 09:00	162	108	44	10	0	6	15	21	30	58	29	3	0	0	0	0	12	49	76	32	53	62	14
2013-06-19 10:00	198	127	48	23	0	4	28	22	32	68	37	7	0	0	0	0	15	49	76	30	53	63	17
2013-06-19 11:00	263	194	59	10	0	6	11	20	50	113	59	4	0	0	0	0	13	52	77	43	55	63	16
2013-06-19 12:00	261	191	50	20	0	4	14	38	65	99	35	4	2	0	0	0	13	49	86	37	52	61	17
2013-06-19 13:00	213	159	43	11	0	2	21	18	44	75	44	8	1	0	0	0	14	51	88	35	54	63	22
2013-06-19 14:00	208	156	31	21	0	4	20	24	23	76	55	5	1	0	0	0	14	51	82	33	55	65	19
2013-06-19 15:00	264	205	46	13	0	2	17	35	68	95	45	2	0	0	0	0	19	49	79	36	51	61	21
2013-06-19 16:00	271	208	45	18	0	9	19	21	29	102	84	7	0	0	0	0	15	52	77	35	56	65	16
2013-06-19 17:00	246	174	50	22	0	4	20	21	23	94	76	6	2	0	0	0	15	53	81	34	58	64	18
2013-06-19 18:00	194	154	25	15	1	2	18	6	19	68	67	11	2	0	0	0	10	55	90	44	58	67	12
2013-06-19 19:00	224	163	53	8	0	5	23	18	12	58	93	13	1	1	0	0	17	54	98	32	60	67	18
2013-06-19 20:00	152	121	24	7	0	1	9	13	12	46	50	18	2	1	0	0	20	57	94	39	60	70	23
2013-06-19 21:00	196	148	40	8	0	0	10	12	12	76	75	7	4	0	0	0	23	56	89	48	59	66	24
2013-06-19 22:00	152	121	24	7	0	0	9	9	10	52	55	15	2	0	0	0	22	58	88	48	60	69	24
2013-06-19 23:00	63	39	22	2	0	1	5	5	6	27	19	0	0	0	0	0	13	52	68	37	55	62	13

[Wed, 19 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	25	17	8	0	0	0	4	1	2	3	7	5	3	0	0	0	23	57	82	30	61	77	17
06:00-12:00	1026	683	266	77	2	27	94	99	162	350	239	45	6	1	1	0	9	51	102	32	55	65	17
12:00-18:00	1463	1093	265	105	0	25	111	157	252	541	339	32	6	0	0	0	13	51	88	35	54	63	17
18:00-23:59	981	746	188	47	1	9	74	63	71	327	359	64	11	2	0	0	10	56	98	41	59	67	17
00:00-24:00	3495	2539	727	229	3	61	283	320	487	1221	944	146	26	3	1	0	9	52	102	35	56	65	17

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-20 00:00	8	5	2	1	0	0	2	1	0	3	2	0	0	0	0	0	23	47	64	24	56	62	23
2013-06-20 01:00	5	4	1	0	0	0	1	2	1	0	1	0	0	0	0	0	26	42	63	26	39	63	26
2013-06-20 02:00	4	3	0	1	0	0	1	1	1	1	0	0	0	0	0	0	28	41	55	28	49	55	28
2013-06-20 03:00	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	59	59	59	59	59	59	59
2013-06-20 04:00	2	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	64	69	75	64	75	75	64
2013-06-20 05:00	18	14	3	1	0	1	2	1	0	5	4	2	2	1	0	0	16	58	96	30	61	82	16
2013-06-20 06:00	60	32	16	12	1	1	12	3	3	10	20	9	1	0	0	0	10	53	89	28	61	71	10
2013-06-20 07:00	133	81	37	15	1	4	12	12	5	45	43	11	0	0	0	0	10	53	80	32	59	67	11
2013-06-20 08:00	224	138	63	23	0	5	18	35	48	64	50	4	0	0	0	0	13	49	78	35	52	63	16
2013-06-20 09:00	189	124	39	26	0	7	23	26	28	67	36	2	0	0	0	0	13	48	73	30	53	62	16
2013-06-20 10:00	210	147	46	17	1	9	17	10	31	93	47	2	0	0	0	0	10	51	76	33	55	63	13
2013-06-20 11:00	271	194	56	21	0	6	16	40	61	113	31	4	0	0	0	0	11	49	78	35	51	60	19
2013-06-20 12:00	258	197	45	16	0	5	16	33	71	88	42	3	0	0	0	0	14	49	74	37	52	61	17
2013-06-20 13:00	254	168	63	23	0	3	18	34	67	87	44	1	0	0	0	0	14	49	73	35	51	61	18
2013-06-20 14:00	11	9	2	0	0	0	0	1	5	4	1	0	0	0	0	0	40	51	65	42	50	60	40

[Thu, 20 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	38	27	8	3	0	1	6	5	2	10	8	3	2	1	0	0	16	52	96	29	57	71	16
06:00-12:00	1087	716	257	114	3	32	98	126	176	392	227	32	1	0	0	0	10	50	89	33	54	63	16
12:00-18:00	523	374	110	39	0	8	34	68	143	179	87	4	0	0	0	0	14	49	74	36	51	61	16
18:00-23:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
00:00-24:00	1648	1117	375	156	3	41	138	199	321	581	322	39	3	1	0	0	10	50	96	34	53	63	16

Traffic report

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Author

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Department	Tech Support
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Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:30:42

Site

Name	100 st north.sdr
Dir. Oncoming (Southbound)	
Dir. Outgoing (Northbound)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-11 08:00
End date	2013-06-17 15:59
Days	Mo, Tu, We, Th, Fr, Sa, Su
Time Interval	60 minutes
Time / Day	00:00 - 23:59

#7 on Map

Length Classes [L in m]

Oncoming					Outgoing				
Time	Σ	0-6m	6-12m	>12m	Time	Σ	0-6m	6-12m	>12m
00:00-06:00	68	57	11	0	00:00-06:00	59	51	7	1
06:00-12:00	982	763	173	46	06:00-12:00	1129	978	109	42
12:00-18:00	2047	1730	252	65	12:00-18:00	1482	1292	145	45
18:00-23:59	1137	982	130	25	18:00-23:59	799	720	63	16
00:00-24:00	4234	3532	566	136	00:00-24:00	3468	3040	324	104

Calculated speeds [V in km/h]

	Vmin	Vmax	Vavg	V15	V50	V85	V1	Vexc %
Oncoming	8	155	76	44	81	100	23	**81.3**
Outgoing	12	147	73	42	77	98	21	**79.7**

Descriptions

Vmin: Minimal velocity
Vmax: Maximal velocity
Vavg: Average velocity
V15: Critical velocity for the first 15% of vehicles
V50: Critical velocity for the first 50% of vehicles
V85: Critical velocity for the first 85% of vehicles
V1: Critical velocity for the first 1% of vehicles
Vexc %: Speeding in %

Traffic report

powered by datacollect

Author

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Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:30:42

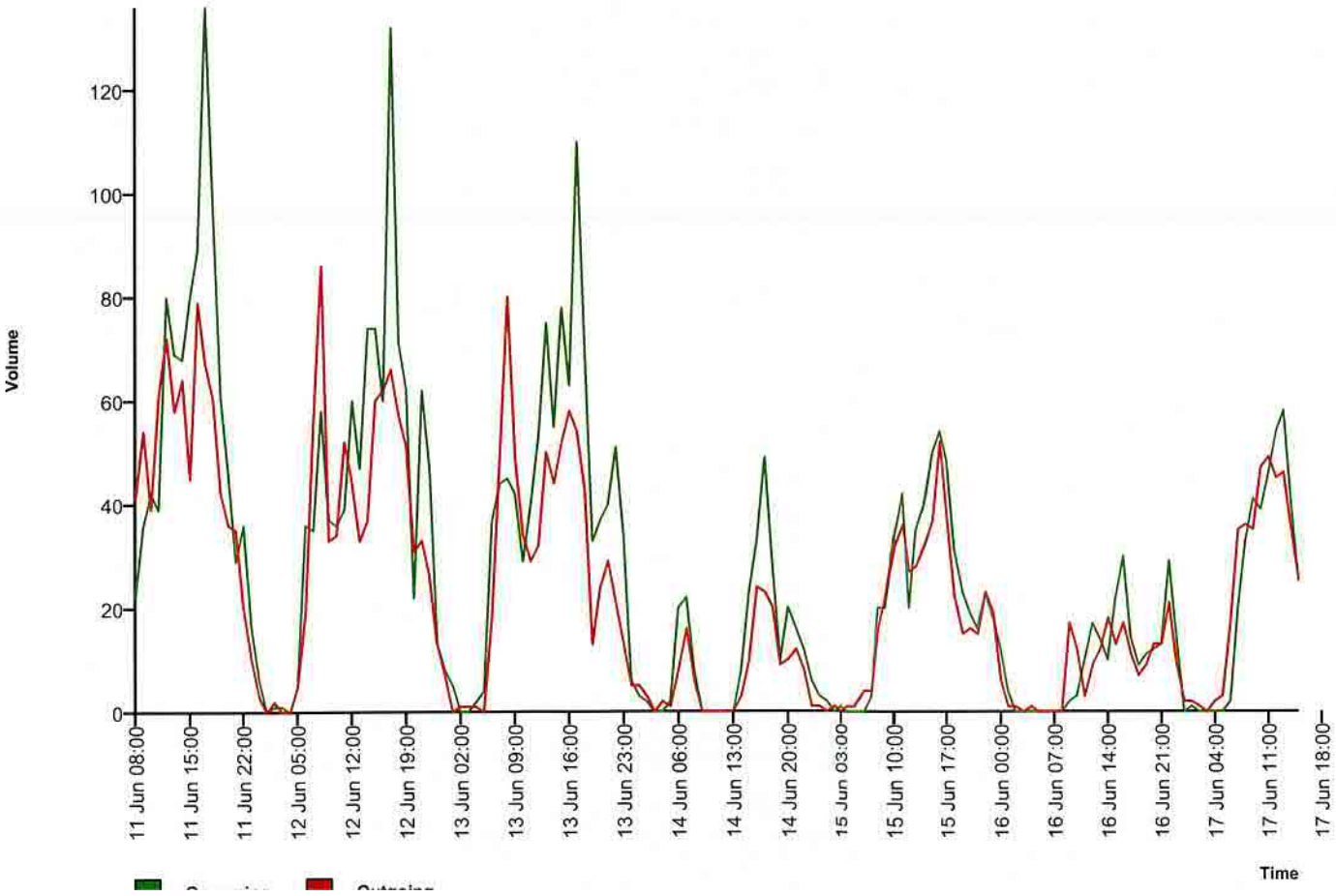
Site

Name	100 st north.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-11 08:00
End date	2013-06-17 15:59
Days	Mo, Tu, We, Th, Fr, Sa, Su
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Time / Volume graph



Traffic report

powered by datacollect

Author

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Trafco Canada — an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:30:42

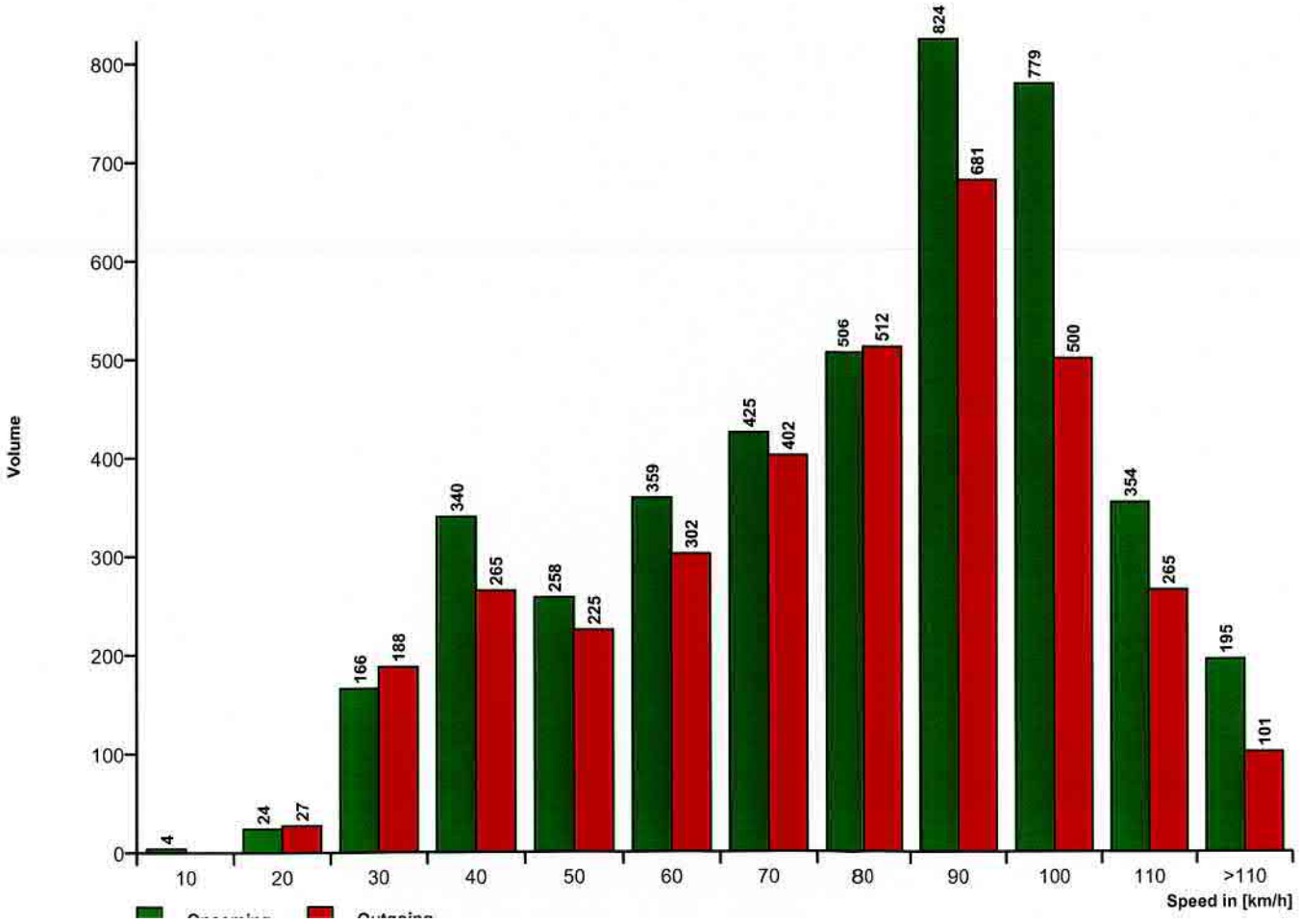
Site

Name	100 st north.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-11 08:00
End date	2013-06-17 15:59
Days	Mo, Tu, We, Th, Fr, Sa, Su
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Speed histogram



Traffic report

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Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:30:42

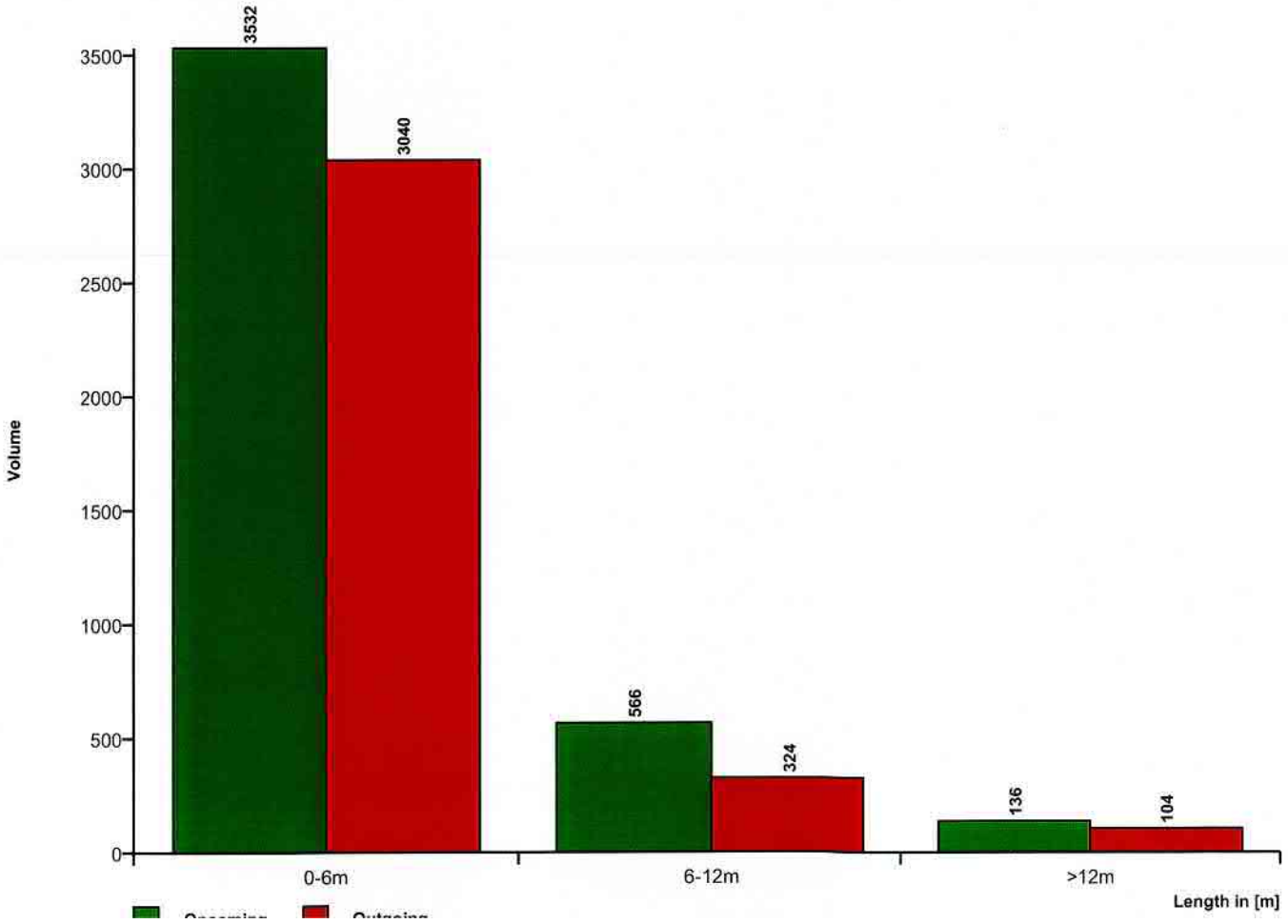
Site

Name	100 st north.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-11 08:00
End date	2013-06-17 15:59
Days	Mo, Tu, We, Th, Fr, Sa, Su
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Length histogram



Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-11 08:00	63	50	8	5	0	0	0	0	0	3	6	15	20	14	4	1	51	82	111	71	83	96	51
2013-06-11 09:00	90	76	9	5	0	0	1	0	0	2	6	18	29	17	13	4	24	86	118	73	88	101	24
2013-06-11 10:00	81	68	12	1	0	0	0	0	0	1	7	12	21	20	9	11	59	91	138	77	90	108	59
2013-06-11 11:00	100	93	5	2	0	0	0	0	0	1	14	15	25	26	15	4	59	87	124	71	88	104	61
2013-06-11 12:00	152	134	15	3	0	0	0	0	0	2	13	24	49	47	13	4	59	87	139	75	88	98	60
2013-06-11 13:00	127	109	12	6	0	0	0	0	0	3	11	15	45	34	12	7	56	88	122	76	89	100	57
2013-06-11 14:00	132	106	20	6	0	0	0	0	0	3	10	26	43	32	9	9	53	87	145	75	86	100	56
2013-06-11 15:00	125	106	14	5	0	0	0	0	0	5	10	12	50	28	15	5	51	87	126	73	88	102	57
2013-06-11 16:00	168	137	22	9	0	0	0	0	1	9	17	29	54	39	12	7	50	84	125	70	85	98	51
2013-06-11 17:00	203	175	18	10	0	0	0	0	1	2	19	31	59	58	23	10	49	88	136	74	88	102	60
2013-06-11 18:00	157	136	16	5	0	0	0	0	0	3	9	27	55	33	22	8	59	88	118	77	88	104	60
2013-06-11 19:00	103	91	11	1	0	0	0	0	0	5	11	21	19	32	12	3	53	85	117	70	87	100	57
2013-06-11 20:00	82	76	5	1	0	1	0	1	1	3	10	10	17	18	16	5	12	87	152	70	89	103	12
2013-06-11 21:00	64	55	7	2	0	0	0	0	1	3	7	13	18	12	6	4	47	85	118	68	87	101	47
2013-06-11 22:00	56	48	6	2	0	0	0	0	0	2	7	9	18	15	5	0	55	84	110	66	87	100	55
2013-06-11 23:00	26	22	3	1	0	0	0	0	0	1	3	3	8	5	1	5	53	91	136	70	89	121	53

[Tue, 11 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54
06:00-12:00	334	287	34	13	0	0	1	0	0	7	33	60	95	77	41	20	24	87	138	73	88	102	54
12:00-18:00	907	767	101	39	0	0	0	0	2	24	80	137	300	238	84	42	49	87	145	74	87	100	54
18:00-23:59	488	428	48	12	0	1	0	1	2	17	47	83	135	115	62	25	12	87	152	71	88	102	54
00:00-24:00	1729	1482	183	64	0	1	1	1	4	48	160	280	530	430	187	87	12	87	152	73	87	101	54

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-12 00:00	9	7	2	0	0	0	0	0	0	1	0	1	2	1	2	2	53	96	138	79	93	118	53
2013-06-12 01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-12 02:00	3	3	0	0	0	0	0	0	0	0	0	1	1	0	1	0	76	88	101	76	87	101	76
2013-06-12 03:00	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	55	55	55	55	55	55	55
2013-06-12 04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-12 05:00	10	8	2	0	0	0	0	0	0	0	0	1	1	5	0	3	74	102	129	90	99	127	74
2013-06-12 06:00	55	50	5	0	0	0	0	0	1	2	4	7	13	17	5	6	49	89	120	76	91	107	49
2013-06-12 07:00	91	74	14	3	0	0	0	0	0	4	11	14	23	23	7	9	51	87	129	70	89	102	51
2013-06-12 08:00	144	104	32	8	0	0	0	0	0	8	13	32	44	23	16	8	51	85	123	71	84	101	52
2013-06-12 09:00	70	63	4	3	0	0	0	0	0	1	3	13	18	25	8	2	59	89	115	77	91	100	59
2013-06-12 10:00	70	60	5	5	0	0	0	0	0	6	12	22	12	13	4	1	58	80	112	68	80	97	58
2013-06-12 11:00	91	80	5	6	0	0	0	0	1	5	6	24	27	18	9	1	50	83	117	72	83	97	50
2013-06-12 12:00	104	92	8	4	0	0	0	0	0	4	12	28	22	23	9	6	57	85	132	70	84	100	58
2013-06-12 13:00	80	71	6	3	0	0	0	1	0	4	8	15	24	16	9	3	34	85	116	70	87	101	34
2013-06-12 14:00	111	99	10	2	0	0	0	0	1	5	8	19	38	23	12	5	50	86	121	73	87	101	51
2013-06-12 15:00	134	116	14	4	0	0	0	0	1	4	14	26	39	33	12	5	43	85	123	71	86	100	59
2013-06-12 16:00	122	112	7	3	0	1	0	1	3	5	10	31	25	30	9	7	17	83	134	69	83	100	39
2013-06-12 17:00	198	186	11	1	0	0	0	0	0	7	14	44	55	43	28	7	52	86	120	73	87	102	53
2013-06-12 18:00	128	112	14	2	0	0	0	0	0	3	14	23	35	23	23	7	55	87	124	72	87	104	57
2013-06-12 19:00	113	97	15	1	0	0	0	0	0	3	10	22	26	19	24	9	53	89	127	73	89	105	55
2013-06-12 20:00	53	42	10	1	0	0	0	0	0	1	3	6	15	15	9	4	60	91	127	74	93	105	60
2013-06-12 21:00	95	84	9	2	0	0	0	0	1	2	12	20	25	24	8	3	50	85	127	70	85	98	50
2013-06-12 22:00	73	63	8	2	0	0	0	0	1	1	6	11	20	22	9	3	47	88	147	72	89	104	47
2013-06-12 23:00	26	24	2	0	0	0	0	0	1	2	2	4	5	5	6	1	48	87	115	67	89	106	48

[Wed, 12 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	23	19	4	0	0	0	0	0	0	2	0	3	4	6	3	5	53	96	138	76	95	118	52
06:00-12:00	521	431	65	25	0	0	0	0	2	26	49	112	137	119	49	27	49	85	129	71	85	100	52
12:00-18:00	749	676	56	17	0	1	0	2	5	29	66	163	203	168	79	33	17	85	134	71	86	100	52
18:00-23:59	488	422	58	8	0	0	0	0	3	12	47	86	126	108	79	27	47	88	147	72	88	104	52
00:00-24:00	1781	1548	183	50	0	1	0	2	10	69	162	364	470	401	210	92	17	86	147	71	87	101	52

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-13 00:00	15	13	2	0	0	0	0	1	0	0	2	0	2	6	0	4	37	93	124	69	92	123	37
2013-06-13 01:00	5	5	0	0	0	0	0	0	0	0	0	0	1	0	0	4	88	115	135	88	120	135	88
2013-06-13 02:00	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	109	109	109	109	109	109	109
2013-06-13 03:00	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	90	90	90	90	90	90	90
2013-06-13 04:00	3	2	1	0	0	0	0	0	0	0	0	3	0	0	0	0	75	78	80	75	80	80	75
2013-06-13 05:00	4	3	1	0	0	0	0	0	0	0	0	0	1	1	0	2	88	102	116	88	115	116	88
2013-06-13 06:00	55	49	5	1	0	0	0	0	1	2	4	5	15	16	9	3	50	89	123	74	92	102	50
2013-06-13 07:00	93	81	8	4	0	0	0	0	0	2	9	13	22	25	14	8	56	90	139	72	91	105	56
2013-06-13 08:00	125	105	14	6	0	0	0	0	1	4	10	19	33	32	22	4	49	88	124	73	89	104	51
2013-06-13 09:00	91	76	9	6	0	0	0	0	0	3	11	19	22	22	7	7	54	86	131	70	87	102	54
2013-06-13 10:00	63	56	7	0	0	0	0	1	5	2	7	14	16	12	3	3	39	80	121	67	83	97	39
2013-06-13 11:00	69	60	5	4	0	0	0	0	1	0	11	10	16	15	9	7	45	87	123	69	88	107	45
2013-06-13 12:00	85	75	8	2	0	0	0	0	0	0	9	14	24	17	13	8	62	89	124	73	89	108	62
2013-06-13 13:00	125	107	13	5	0	0	1	1	1	2	16	22	33	31	11	7	28	86	145	69	87	100	38
2013-06-13 14:00	99	90	5	4	0	0	0	0	0	4	5	17	27	25	13	8	55	89	129	75	89	105	55
2013-06-13 15:00	130	110	14	6	0	0	0	0	0	4	17	28	25	35	16	5	54	86	150	70	88	102	54
2013-06-13 16:00	121	107	5	9	0	0	0	0	0	7	14	19	30	27	18	6	52	86	118	70	87	103	55
2013-06-13 17:00	164	150	10	4	0	0	0	0	0	3	15	26	46	49	17	8	51	88	132	74	89	102	55
2013-06-13 18:00	113	106	5	2	0	5	0	0	0	3	8	18	30	30	13	6	12	85	118	72	89	101	12
2013-06-13 19:00	46	45	1	0	0	0	0	0	0	2	4	7	20	9	3	1	54	84	117	73	85	95	54
2013-06-13 20:00	61	57	1	3	0	0	0	0	0	1	9	8	17	15	10	1	59	86	111	70	89	102	59
2013-06-13 21:00	69	63	5	1	0	0	0	0	0	3	6	10	15	22	9	4	55	90	155	74	92	104	55
2013-06-13 22:00	72	63	5	4	0	0	0	0	0	1	4	6	25	18	7	11	58	93	138	77	91	111	58
2013-06-13 23:00	47	44	2	1	1	0	1	0	0	3	6	10	8	8	7	3	9	83	124	66	84	103	9

[Thu, 13 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	29	25	4	0	0	0	0	1	0	0	2	3	5	7	1	10	37	97	135	80	92	123	48
06:00-12:00	496	427	48	21	0	0	0	1	8	13	52	80	124	122	64	32	39	87	139	71	88	103	48
12:00-18:00	725	640	55	30	0	0	1	1	1	20	76	126	185	185	88	42	28	87	150	71	88	102	48
18:00-23:59	408	378	19	11	1	5	1	0	0	13	37	59	115	102	49	26	9	87	155	72	89	103	48
00:00-24:00	1657	1469	126	62	1	5	2	3	9	46	167	268	429	415	202	110	9	87	155	71	89	103	48

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-14 00:00	11	9	2	0	0	0	0	0	0	0	2	1	2	4	0	2	67	90	117	68	91	116	67
2013-06-14 01:00	8	7	0	1	0	0	0	0	0	0	1	3	2	1	0	1	69	85	120	72	81	96	69
2013-06-14 02:00	5	5	0	0	0	0	0	0	0	0	0	1	2	1	0	1	73	97	147	73	89	147	73
2013-06-14 03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-14 04:00	2	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	84	85	87	84	87	87	84
2013-06-14 05:00	3	3	0	0	0	0	0	0	0	0	0	0	1	1	1	0	82	93	101	82	98	101	82
2013-06-14 06:00	28	25	2	1	0	0	0	0	0	1	2	1	12	2	8	2	58	90	112	82	89	104	58
2013-06-14 07:00	38	34	4	0	0	0	0	0	0	1	3	7	11	10	5	1	57	87	112	76	88	103	57
2013-06-14 08:00	14	10	2	2	1	0	0	0	1	1	1	0	3	3	4	0	9	79	104	51	92	101	9
2013-06-14 09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-14 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-14 11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-14 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-14 13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-14 14:00	11	10	1	0	1	0	4	4	0	0	1	1	0	0	0	0	8	36	74	24	33	63	8
2013-06-14 15:00	33	28	4	1	0	3	6	14	5	1	2	2	0	0	0	0	15	37	77	24	35	53	15
2013-06-14 16:00	57	51	5	1	0	1	8	22	13	7	4	1	1	0	0	0	18	41	87	30	38	54	18
2013-06-14 17:00	72	66	6	0	0	0	14	16	17	17	4	2	1	1	0	0	21	44	100	29	44	58	21
2013-06-14 18:00	48	43	5	0	0	0	6	10	9	9	6	6	1	1	0	0	22	51	91	35	50	71	22
2013-06-14 19:00	19	16	2	1	0	0	2	2	5	9	0	1	0	0	0	0	27	49	76	36	51	57	27
2013-06-14 20:00	30	28	0	2	0	1	2	7	7	5	7	1	0	0	0	0	16	48	75	34	50	67	16
2013-06-14 21:00	28	26	1	1	0	0	2	4	8	6	5	2	1	0	0	0	25	51	81	35	51	67	25
2013-06-14 22:00	20	20	0	0	0	1	0	7	4	4	3	0	1	0	0	0	14	47	86	32	49	66	14
2013-06-14 23:00	7	5	2	0	0	1	1	1	1	0	1	2	0	0	0	0	19	49	78	28	43	71	19

[Fri, 14 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	29	26	2	1	0	0	0	0	0	0	3	5	9	7	1	4	67	90	147	73	87	101	16
06:00-12:00	80	69	8	3	1	0	0	0	1	3	6	8	26	15	17	3	9	87	112	74	88	104	16
12:00-18:00	173	155	16	2	1	4	32	56	35	25	11	6	2	1	0	0	8	42	100	27	38	58	16
18:00-23:59	152	138	10	4	0	3	13	31	34	33	22	12	3	1	0	0	14	49	91	33	50	67	16
00:00-24:00	434	388	36	10	2	7	45	87	70	61	42	31	40	24	18	7	8	56	147	32	51	86	16

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-15 00:00	4	3	1	0	0	0	1	1	0	0	1	1	0	0	0	0	27	51	77	27	66	77	27
2013-06-15 01:00	2	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	27	29	31	27	31	31	27
2013-06-15 02:00	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	62	62	62	62	62	62	62
2013-06-15 03:00	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	53	53	53	53	53	53	53
2013-06-15 04:00	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	36	36	36	36	36	36	36
2013-06-15 05:00	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	92	92	92	92	92	92	92
2013-06-15 06:00	4	4	0	0	0	0	1	1	1	1	0	0	0	0	0	0	26	39	57	26	42	57	26
2013-06-15 07:00	7	7	0	0	0	0	1	1	1	1	2	1	0	0	0	0	24	52	74	32	56	69	24
2013-06-15 08:00	36	29	6	1	0	1	4	16	5	4	6	0	0	0	0	0	18	42	69	31	38	61	18
2013-06-15 09:00	42	31	9	2	0	2	19	10	5	3	2	1	0	0	0	0	17	34	77	25	31	48	17
2013-06-15 10:00	66	53	12	1	0	1	15	19	13	11	7	0	0	0	0	0	20	41	70	28	40	57	20
2013-06-15 11:00	78	62	13	3	0	2	17	16	15	19	9	0	0	0	0	0	15	42	70	26	42	58	15
2013-06-15 12:00	47	40	5	2	0	2	6	14	14	8	2	1	0	0	0	0	20	41	72	29	43	54	20
2013-06-15 13:00	63	49	12	2	0	1	9	21	14	10	8	0	0	0	0	0	19	43	70	30	41	60	19
2013-06-15 14:00	72	53	16	3	0	2	14	21	11	13	6	5	0	0	0	0	19	43	77	28	40	61	19
2013-06-15 15:00	87	77	10	0	0	2	16	21	22	17	8	0	0	1	0	0	18	43	93	29	42	57	18
2013-06-15 16:00	106	86	18	2	0	1	18	34	26	11	13	2	1	0	0	0	20	42	81	30	41	61	22
2013-06-15 17:00	85	66	18	1	0	0	9	18	23	21	10	4	0	0	0	0	23	47	78	33	46	61	23
2013-06-15 18:00	53	40	13	0	0	1	5	10	13	10	11	2	1	0	0	0	19	48	87	33	48	66	19
2013-06-15 19:00	38	34	2	2	0	0	4	11	7	7	6	2	1	0	0	0	26	48	84	32	47	65	26
2013-06-15 20:00	35	30	5	0	0	0	6	8	4	9	6	0	1	1	0	0	26	48	91	28	48	63	26
2013-06-15 21:00	31	26	4	1	0	1	0	2	7	15	4	0	2	0	0	0	16	52	82	42	53	67	16
2013-06-15 22:00	46	37	9	0	0	0	8	6	11	8	7	2	1	2	1	0	22	50	101	29	48	70	22
2013-06-15 23:00	37	32	5	0	0	0	3	8	4	17	4	0	1	0	0	0	28	50	90	35	53	60	28

[Sat, 15 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	10	8	2	0	0	0	2	3	0	1	2	1	0	1	0	0	27	50	92	27	53	77	19
06:00-12:00	233	186	40	7	0	6	57	63	40	39	26	2	0	0	0	0	15	41	77	26	38	58	19
12:00-18:00	460	371	79	10	0	8	72	129	110	80	47	12	1	1	0	0	18	43	93	30	42	59	19
18:00-23:59	240	199	38	3	0	2	26	45	46	66	38	6	7	3	1	0	16	49	101	32	51	65	19
00:00-24:00	943	764	159	20	0	16	157	240	196	186	113	21	8	5	1	0	15	44	101	29	42	61	19

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-16 00:00	18	15	3	0	0	0	1	3	3	6	5	0	0	0	0	0	29	51	66	35	59	64	29
2013-06-16 01:00	5	5	0	0	0	0	3	0	1	1	0	0	0	0	0	0	29	37	51	29	30	51	29
2013-06-16 02:00	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	59	59	59	59	59	59	59
2013-06-16 03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-16 04:00	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	34	34	34	34	34	34	34
2013-06-16 05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-16 06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-16 07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-16 08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-16 09:00	19	19	0	0	0	0	2	4	2	1	4	4	1	1	0	0	26	56	96	32	62	78	26
2013-06-16 10:00	15	13	2	0	0	0	0	1	1	0	7	3	1	1	1	0	33	69	108	61	68	83	33
2013-06-16 11:00	13	11	2	0	0	0	2	0	2	5	3	1	0	0	0	0	22	52	73	30	55	62	22
2013-06-16 12:00	26	22	4	0	0	0	2	7	2	4	8	2	1	0	0	0	25	52	81	31	56	70	25
2013-06-16 13:00	26	24	2	0	0	0	1	6	0	6	5	5	1	2	0	0	28	58	96	34	61	78	28
2013-06-16 14:00	28	22	5	1	0	0	1	9	2	8	8	0	0	0	0	0	29	50	69	34	55	64	29
2013-06-16 15:00	35	31	4	0	0	0	2	9	11	7	5	0	1	0	0	0	25	47	85	37	42	61	25
2013-06-16 16:00	47	44	3	0	0	0	3	9	5	14	9	6	1	0	0	0	27	53	82	35	54	68	27
2013-06-16 17:00	25	23	2	0	0	0	0	5	2	5	9	1	3	0	0	0	31	59	89	40	61	78	31
2013-06-16 18:00	16	13	3	0	0	0	2	4	1	4	3	2	0	0	0	0	26	49	78	31	54	69	26
2013-06-16 19:00	20	18	1	1	0	0	2	2	5	7	4	0	0	0	0	0	28	50	68	37	52	61	28
2013-06-16 20:00	25	25	0	0	0	1	3	5	8	4	4	0	0	0	0	0	20	44	66	29	43	62	20
2013-06-16 21:00	26	25	1	0	0	0	1	6	6	8	2	3	0	0	0	0	30	50	77	34	51	67	30
2013-06-16 22:00	50	39	10	1	0	1	4	10	9	12	10	1	3	0	0	0	18	51	89	33	51	69	18
2013-06-16 23:00	23	17	5	1	0	1	1	5	4	6	5	0	1	0	0	0	20	49	86	32	51	62	20

[Sun, 16 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	25	22	3	0	0	0	4	4	4	8	5	0	0	0	0	0	29	48	66	30	51	63	25
06:00-12:00	47	43	4	0	0	0	4	5	5	6	14	8	2	2	1	0	22	59	108	34	62	78	25
12:00-18:00	187	166	20	1	0	0	9	45	22	44	44	14	7	2	0	0	25	53	96	35	54	69	25
18:00-23:59	160	137	20	3	0	3	13	32	33	41	28	6	4	0	0	0	18	49	89	32	50	65	25
00:00-24:00	419	368	47	4	0	3	30	86	64	99	91	28	13	4	1	0	18	52	108	34	53	68	25

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-17 00:00	2	2	0	0	0	0	1	0	0	0	0	1	0	0	0	0	23	47	71	23	71	71	23
2013-06-17 01:00	3	2	1	0	0	0	1	0	1	0	1	0	0	0	0	0	28	46	64	28	47	64	28
2013-06-17 02:00	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	31	31	31	31	31	31	31
2013-06-17 03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-17 04:00	2	2	0	0	0	0	0	0	0	0	1	0	1	0	0	0	67	74	81	67	81	81	67
2013-06-17 05:00	3	2	1	0	0	0	0	0	0	1	1	0	1	0	0	0	54	69	84	54	70	84	54
2013-06-17 06:00	19	15	4	0	0	0	1	3	3	3	4	1	4	0	0	0	28	58	88	36	59	82	28
2013-06-17 07:00	55	38	15	2	0	1	3	11	10	11	12	5	2	0	0	0	18	51	86	34	54	67	18
2013-06-17 08:00	69	48	14	7	0	1	14	16	9	14	12	2	1	0	0	0	19	45	87	29	45	61	19
2013-06-17 09:00	76	53	17	6	0	5	25	15	12	12	5	1	1	0	0	0	17	39	88	25	35	55	17
2013-06-17 10:00	86	68	16	2	1	6	26	17	12	17	6	1	0	0	0	0	10	38	74	25	36	57	10
2013-06-17 11:00	95	76	17	2	0	0	10	19	18	29	14	4	1	0	0	0	21	48	84	32	51	64	21
2013-06-17 12:00	99	79	18	2	0	1	9	24	18	26	13	4	4	0	0	0	18	48	84	33	49	63	18
2013-06-17 13:00	104	77	24	3	0	2	10	33	27	18	10	4	0	0	0	0	14	44	78	31	43	60	20
2013-06-17 14:00	75	50	22	3	0	2	11	26	10	16	8	2	0	0	0	0	15	43	74	29	40	59	15
2013-06-17 15:00	50	41	6	3	0	0	8	21	10	5	5	1	0	0	0	0	21	41	71	30	37	56	21

[Mon, 17 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	11	8	3	0	0	0	2	1	1	1	3	1	2	0	0	0	23	56	84	28	64	81	16
06:00-12:00	400	298	83	19	1	13	79	81	64	86	53	14	9	0	0	0	10	45	88	27	44	63	16
12:00-18:00	328	247	70	11	0	5	38	104	65	65	36	11	4	0	0	0	14	45	84	31	44	61	16
18:00-23:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
00:00-24:00	739	553	156	30	1	18	119	186	130	152	92	26	15	0	0	0	10	45	88	29	44	62	16

Traffic report

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Author

Institution	Trafco Canada
Department	Tech Support
Street	9015 14 Street NW
Postal code	T6P 0C9
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Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:20:28

Site

Name	100 west.sdr
Dir. Oncoming (Southbound)	
Dir. Outgoing (Northbound)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-18 15:00
End date	2013-06-20 14:59
Days	Tu, We, Th
Time Interval	60 minutes
Time / Day	00:00 - 23:59

#8 on Map

Length Classes [L in m]

Oncoming					Outgoing				
Time	Σ	0-6m	6-12m	>12m	Time	Σ	0-6m	6-12m	>12m
00:00-06:00	46	30	15	1	00:00-06:00	56	51	3	2
06:00-12:00	1954	1360	486	108	06:00-12:00	2051	1640	306	105
12:00-18:00	3123	2278	692	153	12:00-18:00	2642	2239	319	84
18:00-23:59	1973	1429	488	56	18:00-23:59	1777	1526	223	28
00:00-24:00	7095	5096	1681	318	00:00-24:00	6526	5456	851	219

Calculated speeds [V in km/h]

	Vmin	Vmax	Vavg	V15	V50	V85	V1	Vexc %
Oncoming	9	109	50	34	52	62	21	**54.1**
Outgoing	12	109	50	38	51	60	27	**52.5**

Descriptions

Vmin: Minimal velocity
Vmax: Maximal velocity
Vavg: Average velocity
V15: Critical velocity for the first 15% of vehicles
V50: Critical velocity for the first 50% of vehicles
V85: Critical velocity for the first 85% of vehicles
V1: Critical velocity for the first 1% of vehicles
Vexc %: Speeding in %

Traffic report

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Author

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Trafco Canada — an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:20:28

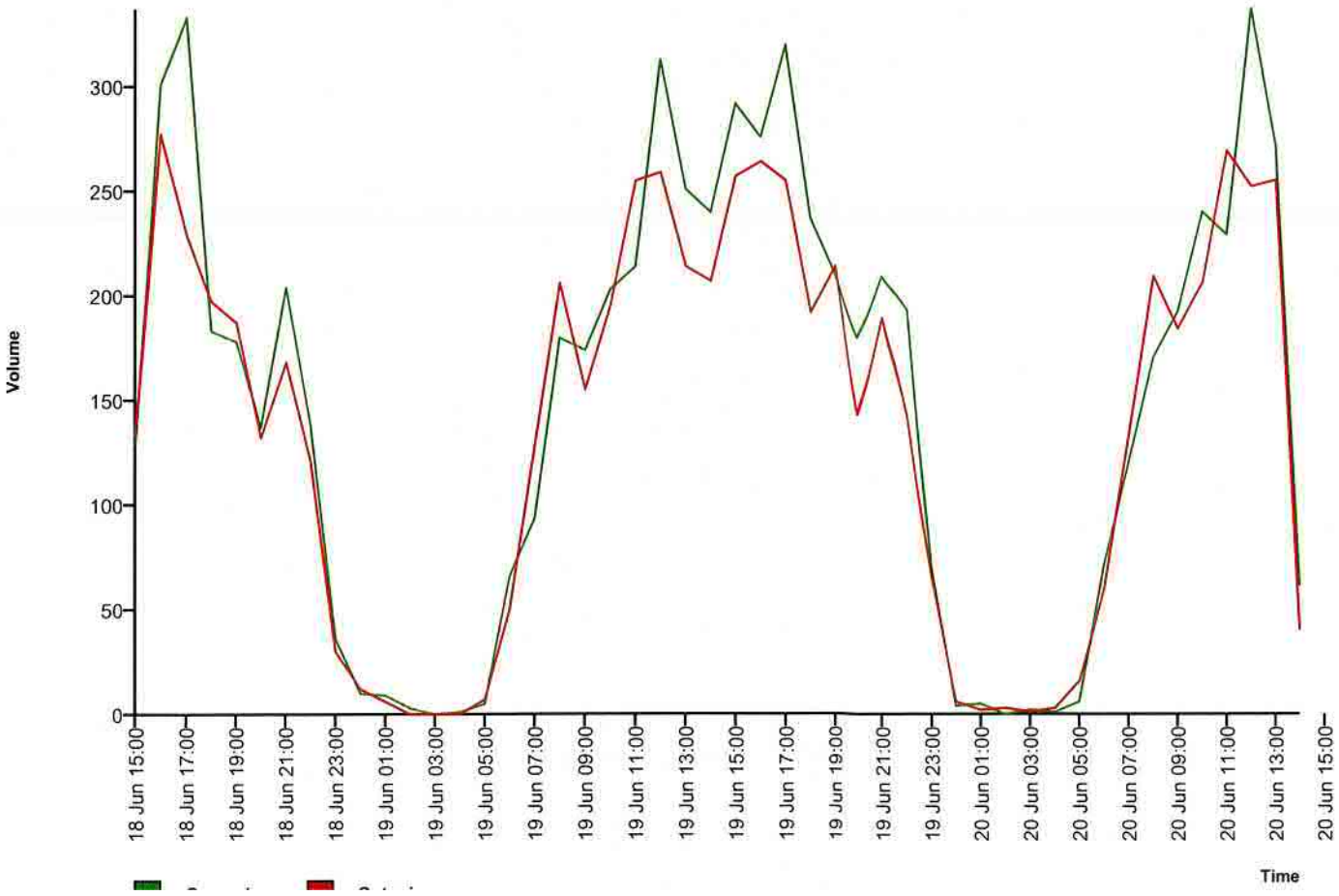
Site

Name	100 west.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-18 15:00
End date	2013-06-20 14:59
Days	Tu, We, Th
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Time / Volume graph



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Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:20:28

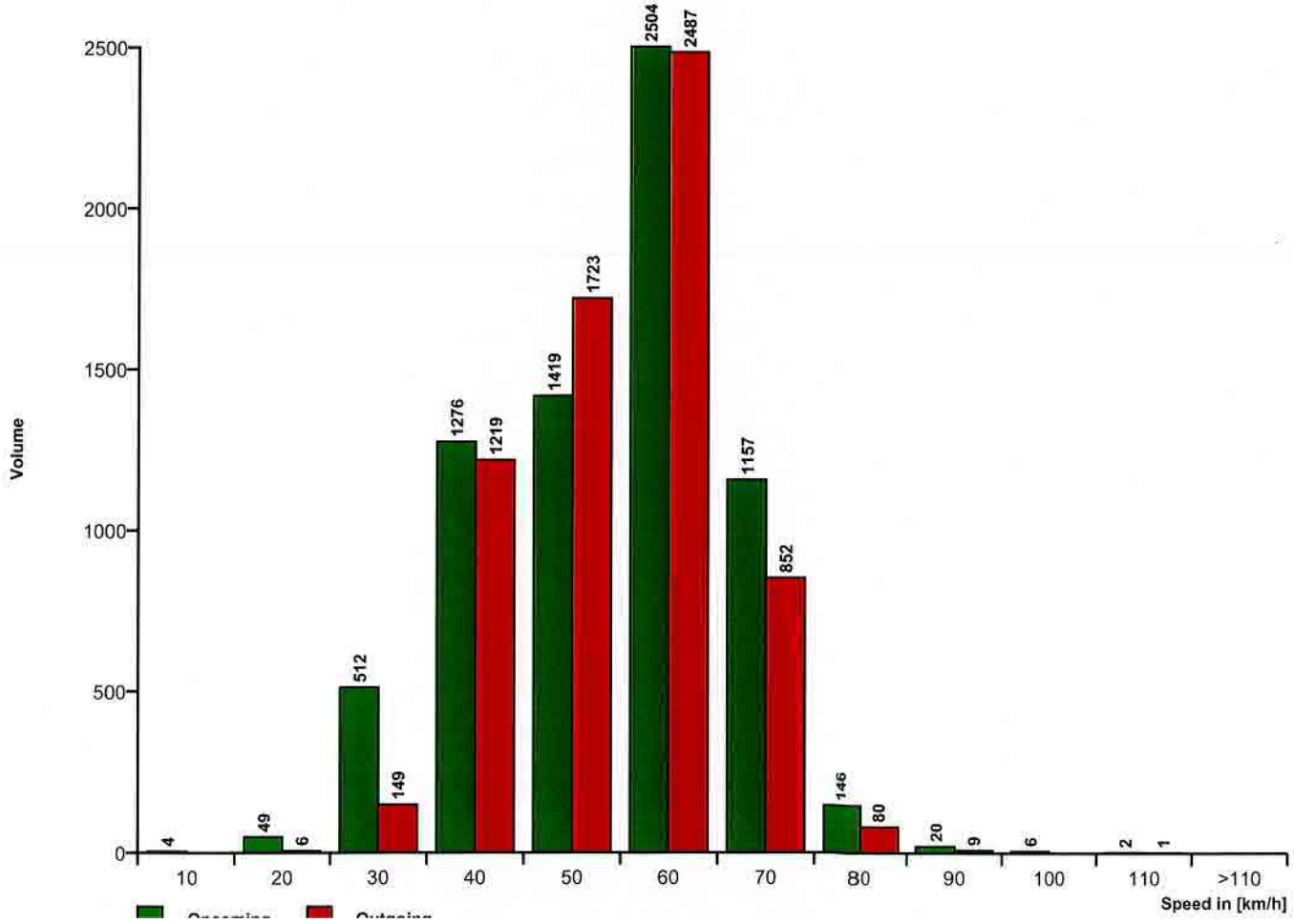
Site

Name	100 west.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-18 15:00
End date	2013-06-20 14:59
Days	Tu, We, Th
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Speed histogram



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Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:20:28

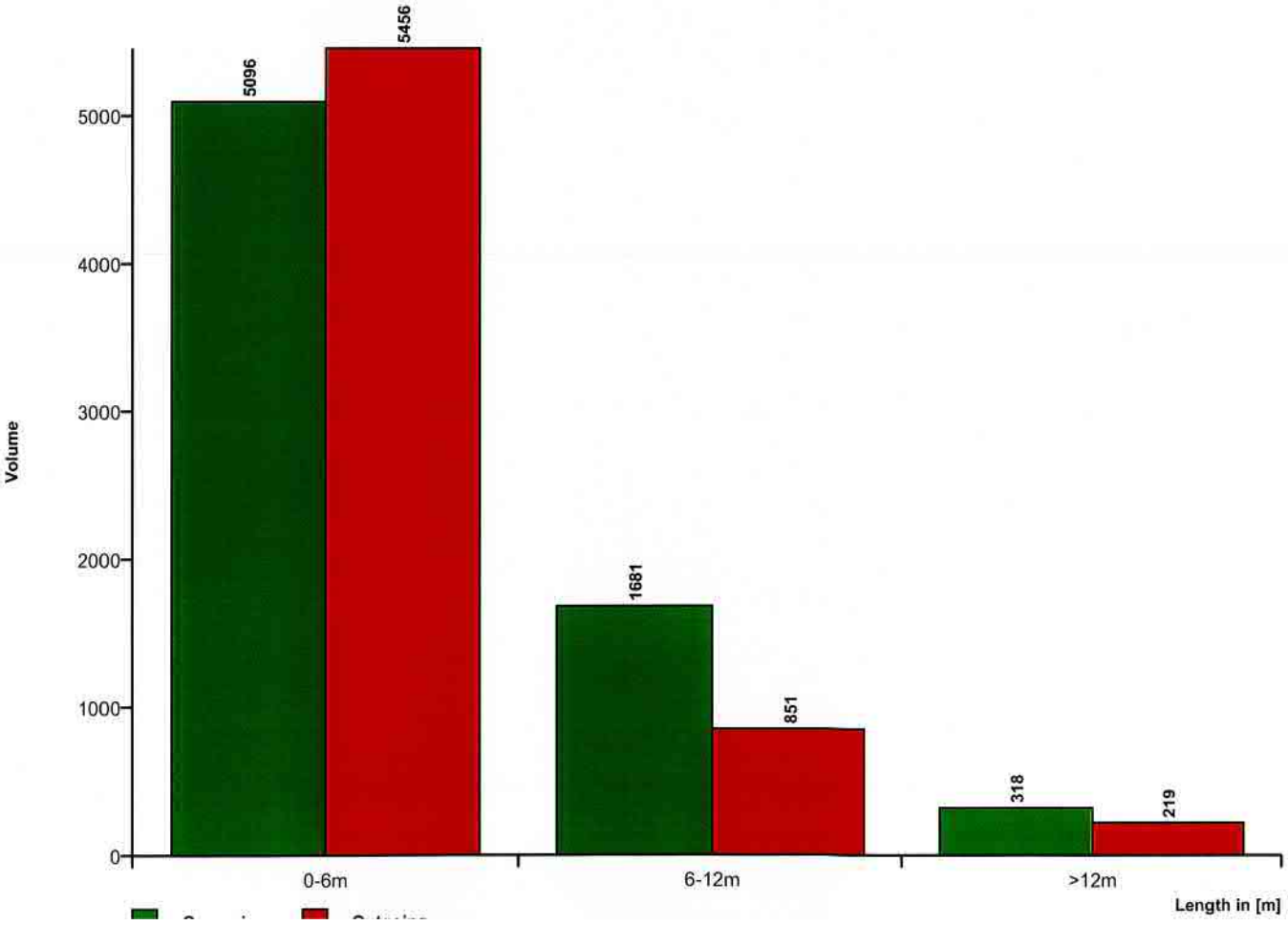
Site

Name	100 west.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-18 15:00
End date	2013-06-20 14:59
Days	Tu, We, Th
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Length histogram



Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-18 15:00	261	200	44	17	0	2	14	62	91	70	21	1	0	0	0	0	17	45	75	34	46	57	21
2013-06-18 16:00	578	436	118	24	0	6	23	100	144	231	72	2	0	0	0	0	13	49	75	37	51	60	20
2013-06-18 17:00	562	421	118	23	0	5	32	87	115	213	103	6	0	1	0	0	12	50	92	37	53	62	21
2013-06-18 18:00	380	284	87	9	0	0	10	42	49	149	111	16	3	0	0	0	21	55	84	42	57	65	28
2013-06-18 19:00	365	273	80	12	0	1	15	39	47	174	78	10	1	0	0	0	18	53	84	40	56	63	25
2013-06-18 20:00	269	202	59	8	1	0	6	28	38	124	63	8	1	0	0	0	9	54	81	42	57	64	27
2013-06-18 21:00	372	296	71	5	0	1	8	33	45	188	86	10	1	0	0	0	11	54	83	44	57	63	28
2013-06-18 22:00	257	202	50	5	0	0	6	30	30	129	61	1	0	0	0	0	28	54	73	42	57	63	29
2013-06-18 23:00	66	47	17	2	0	0	0	14	8	20	17	5	1	1	0	0	31	55	100	38	56	69	31

[Tue, 18 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
06:00-12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
12:00-18:00	1401	1057	280	64	0	13	69	249	350	514	196	9	0	1	0	0	12	49	92	36	51	60	24
18:00-23:59	1709	1304	364	41	1	2	45	186	217	784	416	50	7	1	0	0	9	54	100	42	57	64	24
00:00-24:00	3110	2361	644	105	1	15	114	435	567	1298	612	59	7	2	0	0	9	52	100	39	54	63	24

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-19 00:00	22	19	3	0	0	0	1	6	2	6	2	3	1	1	0	0	25	54	92	35	57	77	25
2013-06-19 01:00	15	14	1	0	0	0	0	4	0	6	3	1	1	0	0	0	36	56	87	38	57	70	36
2013-06-19 02:00	3	1	2	0	0	0	0	2	1	0	0	0	0	0	0	0	35	40	47	35	40	47	35
2013-06-19 03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-06-19 04:00	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	78	78	78	78	78	78	78
2013-06-19 05:00	12	8	4	0	0	0	1	0	2	1	7	1	0	0	0	0	28	58	73	43	64	67	28
2013-06-19 06:00	116	62	51	3	0	0	4	19	8	32	45	7	1	0	0	0	25	55	83	37	59	69	25
2013-06-19 07:00	223	177	39	7	0	1	8	37	29	79	54	11	2	1	1	0	18	53	109	37	55	65	23
2013-06-19 08:00	386	282	75	29	0	2	21	95	119	108	34	6	0	1	0	0	18	47	98	35	47	59	24
2013-06-19 09:00	329	251	67	11	0	1	19	69	91	117	30	2	0	0	0	0	19	47	76	35	49	59	25
2013-06-19 10:00	398	306	74	18	0	0	24	91	95	145	40	3	0	0	0	0	21	47	74	35	49	59	27
2013-06-19 11:00	469	390	68	11	0	0	28	81	151	173	31	5	0	0	0	0	22	47	78	36	49	57	24
2013-06-19 12:00	572	447	103	22	0	7	30	139	204	144	44	3	1	0	0	0	12	45	87	35	46	57	19
2013-06-19 13:00	465	358	93	14	0	1	39	98	141	131	46	8	1	0	0	0	19	47	82	35	48	59	23
2013-06-19 14:00	447	348	79	20	0	2	14	94	97	167	63	10	0	0	0	0	19	49	80	36	51	61	27
2013-06-19 15:00	549	451	73	25	0	0	30	138	198	144	36	2	1	0	0	0	22	45	82	35	46	57	23
2013-06-19 16:00	540	453	67	20	0	4	25	96	118	215	77	5	0	0	0	0	15	49	75	36	52	61	22
2013-06-19 17:00	575	453	103	19	0	2	27	99	101	231	108	7	0	0	0	0	12	50	79	36	53	62	26
2013-06-19 18:00	429	350	70	9	1	0	17	54	54	188	106	7	1	0	1	0	10	53	103	39	55	63	25
2013-06-19 19:00	424	344	72	8	0	1	19	54	48	192	101	8	1	0	0	0	17	53	90	38	56	63	27
2013-06-19 20:00	323	267	49	7	0	2	16	27	43	143	81	9	1	1	0	0	17	54	91	41	56	65	24
2013-06-19 21:00	398	327	64	7	0	0	15	30	53	198	89	10	3	0	0	0	21	54	83	43	56	63	27
2013-06-19 22:00	334	272	53	9	0	0	10	30	37	172	71	11	3	0	0	0	24	54	90	45	56	64	28
2013-06-19 23:00	133	91	39	3	0	0	4	19	38	50	20	2	0	0	0	0	24	51	78	39	53	61	27

[Wed, 19 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	53	43	10	0	0	0	2	12	5	13	12	6	2	1	0	0	25	55	92	37	57	75	25
06:00-12:00	1921	1468	374	79	0	4	104	392	493	654	234	34	3	2	1	0	18	48	109	36	50	60	25
12:00-18:00	3148	2510	518	120	0	16	165	664	859	1032	374	35	3	0	0	0	12	48	87	36	49	60	25
18:00-23:59	2041	1651	347	43	1	3	81	214	273	943	468	47	9	1	1	0	10	53	103	41	56	63	25
00:00-24:00	7163	5672	1249	242	1	23	352	1282	1630	2642	1088	122	17	4	2	0	10	49	109	36	52	61	25

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-20 00:00	10	8	0	2	0	0	2	1	2	4	0	0	0	0	1	0	25	52	109	30	52	60	25
2013-06-20 01:00	7	3	4	0	0	0	0	3	1	1	2	0	0	0	0	0	32	47	61	34	46	61	32
2013-06-20 02:00	3	2	0	1	0	0	1	1	1	0	0	0	0	0	0	0	27	36	47	27	35	47	27
2013-06-20 03:00	3	2	1	0	0	1	1	0	0	1	0	0	0	0	0	0	17	31	53	17	25	53	17
2013-06-20 04:00	4	4	0	0	0	0	2	0	0	1	1	0	0	0	0	0	28	46	70	28	60	70	28
2013-06-20 05:00	22	19	3	0	0	0	1	2	3	6	6	3	1	0	0	0	30	59	89	47	60	74	30
2013-06-20 06:00	131	83	44	4	0	2	4	25	14	36	39	8	3	0	0	0	20	53	82	36	57	66	20
2013-06-20 07:00	253	177	64	12	0	2	19	35	45	86	52	13	1	0	0	0	16	51	84	36	55	64	21
2013-06-20 08:00	379	263	87	29	0	2	17	118	121	88	29	4	0	0	0	0	18	45	74	35	45	57	25
2013-06-20 09:00	376	286	68	22	1	1	30	92	109	112	30	1	0	0	0	0	9	45	76	33	47	58	22
2013-06-20 10:00	446	335	82	29	0	1	18	80	97	205	42	3	0	0	0	0	20	49	76	37	52	59	25
2013-06-20 11:00	498	387	73	38	0	2	30	119	157	157	28	5	0	0	0	0	14	46	77	35	48	57	23
2013-06-20 12:00	589	467	105	17	0	4	36	146	204	157	39	3	0	0	0	0	14	45	78	35	46	57	22
2013-06-20 13:00	526	406	92	28	1	0	25	130	161	169	36	4	0	0	0	0	10	46	76	35	47	57	27
2013-06-20 14:00	101	77	16	8	0	2	9	26	30	28	5	1	0	0	0	0	15	44	71	33	45	55	15

[Thu, 20 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	49	38	8	3	0	1	7	7	7	13	9	3	1	0	1	0	17	51	109	30	53	67	22
06:00-12:00	2084	1532	418	134	1	10	118	469	544	684	220	34	4	0	0	0	9	48	84	35	49	59	22
12:00-18:00	1216	950	213	53	1	6	70	302	395	354	80	8	0	0	0	0	10	46	78	35	46	57	22
18:00-23:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
00:00-24:00	3348	2519	639	190	2	17	195	778	945	1051	309	45	5	0	1	0	9	47	109	35	48	59	22

Traffic report

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Author

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Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:22:11

Site

Name	109 ST.sdr
Dir. Oncoming (Northbound)	
Dir. Outgoing (Southbound)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-14 16:00
End date	2013-06-17 15:59
Days	Mo, Fr, Sa, Su
Time Interval	60 minutes
Time / Day	00:00 - 23:59

#9 on Map

Length Classes [L in m]

Oncoming					Outgoing				
Time	Σ	0-6m	6-12m	>12m	Time	Σ	0-6m	6-12m	>12m
00:00-06:00	77	65	9	3	00:00-06:00	84	58	26	0
06:00-12:00	282	250	28	4	06:00-12:00	440	344	93	3
12:00-18:00	793	721	68	4	12:00-18:00	702	562	135	5
18:00-23:59	811	734	72	5	18:00-23:59	760	625	129	6
00:00-24:00	1963	1770	177	16	00:00-24:00	1986	1589	383	14

Calculated speeds [V in km/h]

	Vmin	Vmax	Vavg	V15	V50	V85	V1	Vexc %
Oncoming	7	89	41	29	40	52	15	**18.6**
Outgoing	7	88	38	24	37	53	16	**20.0**

Descriptions

Vmin: Minimal velocity
Vmax: Maximal velocity
Vavg: Average velocity
V15: Critical velocity for the first 15% of vehicles
V50: Critical velocity for the first 50% of vehicles
V85: Critical velocity for the first 85% of vehicles
V1: Critical velocity for the first 1% of vehicles
Vexc %: Speeding in %

Traffic report

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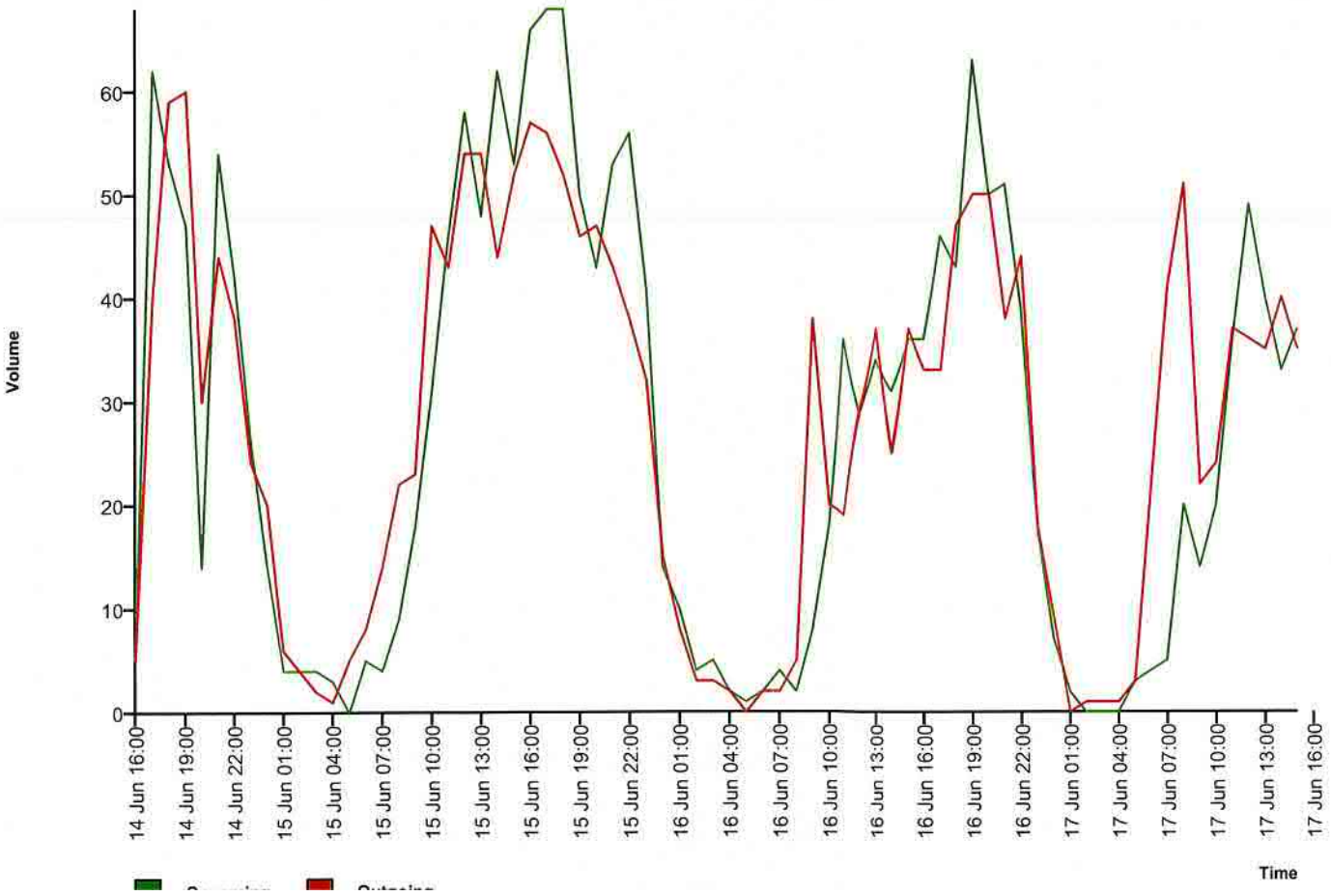
Site

Name	109 ST.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-14 16:00
End date	2013-06-17 15:59
Days	Mo, Fr, Sa, Su
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Time / Volume graph



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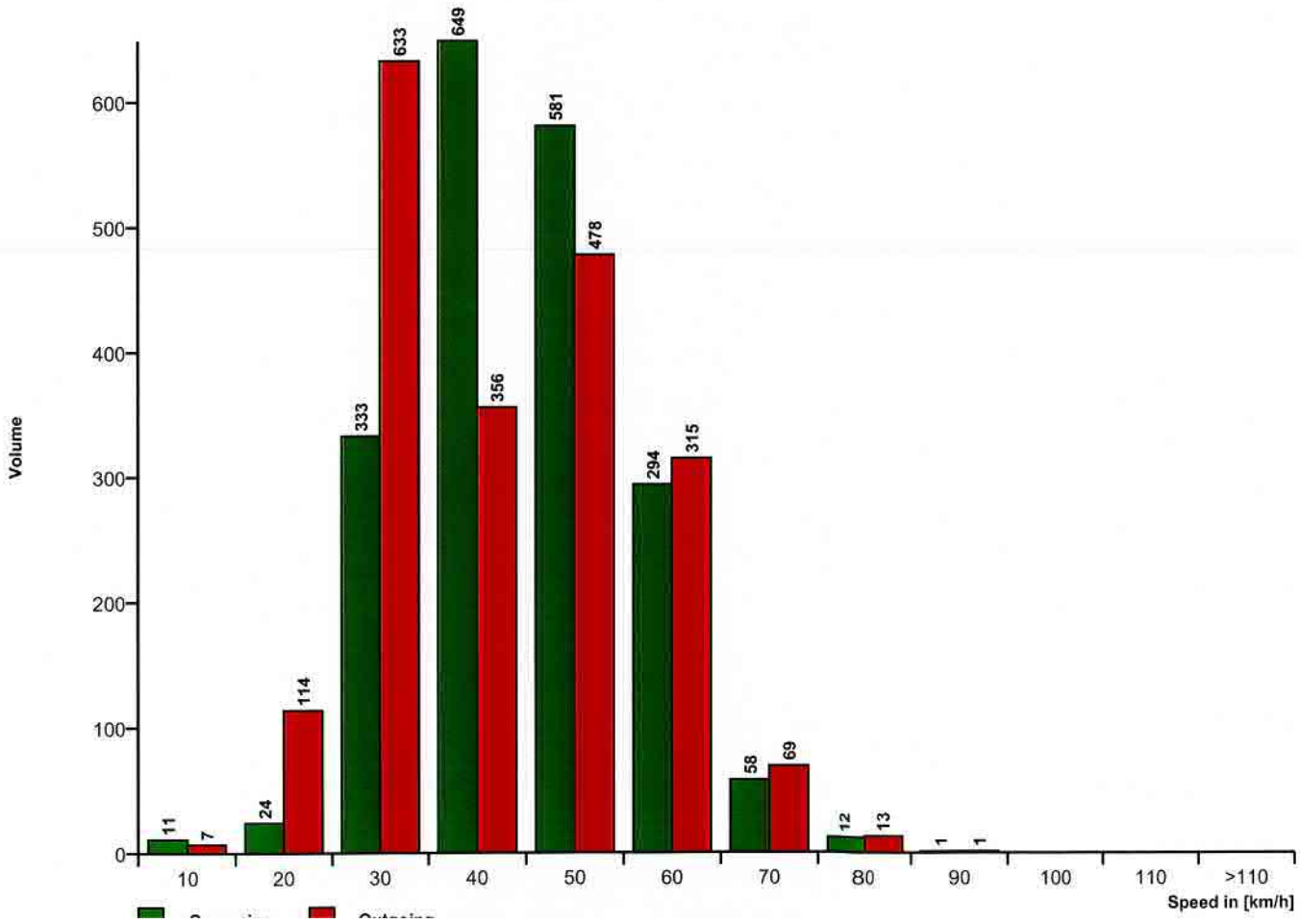
Site

Name	109 ST.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-14 16:00
End date	2013-06-17 15:59
Days	Mo, Fr, Sa, Su
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Speed histogram



Traffic report

powered by datacollect

Author

Institution	Trafco Canada
Department	Tech Support
Street	9015 14 Street NW
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City	Edmonton
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Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:22:11

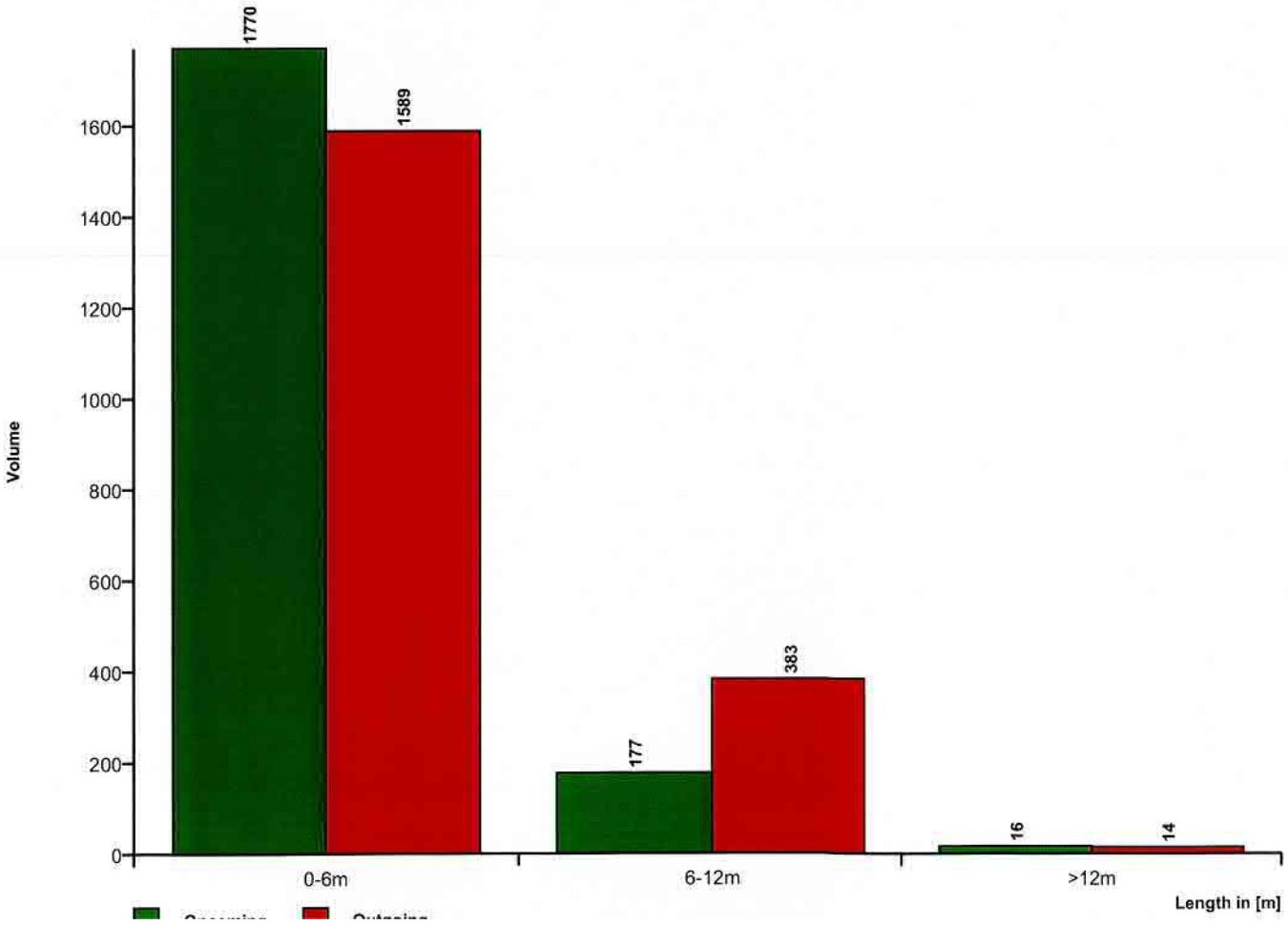
Site

Name	109 ST.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-14 16:00
End date	2013-06-17 15:59
Days	Mo, Fr, Sa, Su
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Length histogram



Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-14 16:00	10	10	0	0	0	0	3	2	2	2	1	0	0	0	0	0	22	41	65	25	43	56	22
2013-06-14 17:00	102	87	15	0	0	1	22	20	27	25	7	0	0	0	0	0	17	42	69	29	46	54	21
2013-06-14 18:00	112	100	12	0	0	2	24	18	30	30	8	0	0	0	0	0	16	43	69	29	47	57	17
2013-06-14 19:00	107	87	16	4	0	10	19	28	26	17	6	1	0	0	0	0	13	39	76	23	40	54	17
2013-06-14 20:00	44	43	1	0	0	1	11	9	17	4	2	0	0	0	0	0	20	39	70	25	41	50	20
2013-06-14 21:00	98	93	5	0	0	0	17	25	42	13	1	0	0	0	0	0	21	41	67	28	43	50	21
2013-06-14 22:00	80	68	11	1	0	3	17	18	24	14	4	0	0	0	0	0	17	39	67	27	41	52	17
2013-06-14 23:00	50	43	7	0	0	2	14	17	12	4	1	0	0	0	0	0	18	36	63	26	35	47	18

[Fri, 14 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
06:00-12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
12:00-18:00	112	97	15	0	0	1	25	22	29	27	8	0	0	0	0	0	17	42	69	29	45	55	17
18:00-23:59	491	434	52	5	0	18	102	115	151	82	22	1	0	0	0	0	13	40	76	27	41	54	17
00:00-24:00	603	531	67	5	0	19	127	137	180	109	30	1	0	0	0	0	13	41	76	27	42	54	17

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-15 00:00	34	29	5	0	0	5	8	9	4	4	3	1	0	0	0	0	17	37	72	23	34	54	17
2013-06-15 01:00	10	10	0	0	0	1	3	1	1	3	0	1	0	0	0	0	20	41	71	21	49	58	20
2013-06-15 02:00	8	6	1	1	0	1	0	5	2	0	0	0	0	0	0	0	19	34	43	31	35	42	19
2013-06-15 03:00	6	5	1	0	0	0	2	1	2	1	0	0	0	0	0	0	28	40	53	28	44	53	28
2013-06-15 04:00	4	4	0	0	2	0	1	1	0	0	0	0	0	0	0	0	9	20	33	9	28	33	9
2013-06-15 05:00	5	4	1	0	0	1	1	0	0	3	0	0	0	0	0	0	19	40	57	19	51	57	19
2013-06-15 06:00	13	11	2	0	1	2	2	4	3	0	1	0	0	0	0	0	9	32	61	20	32	46	9
2013-06-15 07:00	18	16	2	0	0	1	6	2	4	4	0	1	0	0	0	0	20	40	71	25	44	56	20
2013-06-15 08:00	31	27	3	1	0	1	7	5	10	8	0	0	0	0	0	0	18	40	59	25	42	52	18
2013-06-15 09:00	41	35	5	1	0	1	11	10	9	6	2	1	1	0	0	0	19	40	89	26	39	53	19
2013-06-15 10:00	78	59	19	0	0	2	24	17	18	14	2	1	0	0	0	0	17	38	74	24	38	54	17
2013-06-15 11:00	89	68	21	0	0	5	24	26	19	11	3	1	0	0	0	0	11	38	75	26	35	51	11
2013-06-15 12:00	112	94	18	0	0	3	31	24	30	22	2	0	0	0	0	0	16	39	63	27	40	52	20
2013-06-15 13:00	102	87	13	2	0	1	23	27	27	17	5	2	0	0	0	0	20	41	74	28	41	56	21
2013-06-15 14:00	106	96	10	0	1	2	22	27	36	14	3	1	0	0	0	0	9	39	74	27	42	51	12
2013-06-15 15:00	105	93	11	1	0	3	23	21	40	15	3	0	0	0	0	0	17	40	67	27	42	51	17
2013-06-15 16:00	123	100	23	0	0	3	33	30	29	22	6	0	0	0	0	0	14	39	66	26	39	54	19
2013-06-15 17:00	124	101	23	0	0	1	33	34	37	18	1	0	0	0	0	0	14	39	61	28	40	51	21
2013-06-15 18:00	120	101	18	1	0	2	21	38	27	26	5	1	0	0	0	0	17	41	74	28	40	54	18
2013-06-15 19:00	96	75	19	2	0	4	24	30	19	15	3	1	0	0	0	0	14	38	75	26	38	52	14
2013-06-15 20:00	90	76	14	0	1	7	22	27	19	12	1	1	0	0	0	0	9	37	74	26	36	51	9
2013-06-15 21:00	96	82	14	0	1	4	22	19	44	5	1	0	0	0	0	0	10	38	69	26	41	48	10
2013-06-15 22:00	94	80	14	0	1	1	21	29	25	13	3	1	0	0	0	0	9	39	75	27	39	52	9
2013-06-15 23:00	73	60	13	0	3	4	20	17	17	10	1	1	0	0	0	0	8	36	76	22	34	51	8

[Sat, 15 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	67	58	8	1	2	8	15	17	9	11	3	2	0	0	0	0	9	37	72	21	34	53	15
06:00-12:00	270	216	52	2	1	12	74	64	63	43	8	4	1	0	0	0	9	38	89	25	37	53	15
12:00-18:00	672	571	98	3	1	13	165	163	199	108	20	3	0	0	0	0	9	40	74	27	40	52	15
18:00-23:59	569	474	92	3	6	22	130	160	151	81	14	5	0	0	0	0	8	38	76	26	38	51	15
00:00-24:00	1578	1319	250	9	10	55	384	404	422	243	45	14	1	0	0	0	8	39	89	26	39	52	15

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-16 00:00	29	24	5	0	0	1	9	11	6	2	0	0	0	0	0	0	19	34	54	26	32	44	19
2013-06-16 01:00	18	14	4	0	0	1	4	5	5	3	0	0	0	0	0	0	19	38	57	27	39	51	19
2013-06-16 02:00	7	4	3	0	0	0	2	3	2	0	0	0	0	0	0	0	22	35	48	26	36	45	22
2013-06-16 03:00	8	2	4	2	0	0	1	3	4	0	0	0	0	0	0	0	23	38	50	31	44	48	23
2013-06-16 04:00	4	3	1	0	0	1	1	1	0	1	0	0	0	0	0	0	20	32	53	20	33	53	20
2013-06-16 05:00	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	39	39	39	39	39	39	39
2013-06-16 06:00	4	4	0	0	0	0	0	0	1	2	1	0	0	0	0	0	47	55	65	47	56	65	47
2013-06-16 07:00	6	1	1	4	0	1	2	2	0	1	0	0	0	0	0	0	16	30	52	16	31	52	16
2013-06-16 08:00	7	7	0	0	0	0	2	0	4	1	0	0	0	0	0	0	22	42	55	29	46	50	22
2013-06-16 09:00	46	39	7	0	0	3	11	8	12	8	4	0	0	0	0	0	15	40	65	25	42	56	15
2013-06-16 10:00	38	32	6	0	1	2	9	13	6	3	3	1	0	0	0	0	8	38	73	27	36	53	8
2013-06-16 11:00	55	43	12	0	0	3	9	18	16	7	2	0	0	0	0	0	19	39	64	27	39	51	19
2013-06-16 12:00	58	52	6	0	0	0	20	13	14	8	3	0	0	0	0	0	22	38	67	26	37	53	22
2013-06-16 13:00	71	65	6	0	1	2	13	14	18	15	6	2	0	0	0	0	7	43	75	28	43	57	7
2013-06-16 14:00	56	44	12	0	0	1	18	18	11	4	3	0	1	0	0	0	17	38	88	25	36	49	17
2013-06-16 15:00	73	68	5	0	0	2	12	20	20	19	0	0	0	0	0	0	17	40	60	28	42	53	17
2013-06-16 16:00	69	63	6	0	2	3	18	23	14	7	1	1	0	0	0	0	8	36	78	24	35	50	8
2013-06-16 17:00	79	69	10	0	0	5	19	26	18	6	5	0	0	0	0	0	16	37	70	25	37	50	16
2013-06-16 18:00	90	76	13	1	0	3	32	25	21	8	1	0	0	0	0	0	14	35	63	25	34	47	14
2013-06-16 19:00	113	106	7	0	0	9	30	37	24	10	2	1	0	0	0	0	12	35	73	23	35	47	14
2013-06-16 20:00	100	88	10	2	0	7	27	30	30	4	1	1	0	0	0	0	12	36	77	26	36	47	17
2013-06-16 21:00	89	82	7	0	2	4	21	29	20	10	2	1	0	0	0	0	7	36	76	24	36	50	7
2013-06-16 22:00	83	72	11	0	1	3	26	20	29	3	1	0	0	0	0	0	8	35	67	24	36	46	8
2013-06-16 23:00	36	27	9	0	1	1	12	10	8	4	0	0	0	0	0	0	9	35	58	24	36	50	9

[Sun, 16 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	67	47	18	2	0	3	17	24	17	6	0	0	0	0	0	0	19	36	57	26	34	49	14
06:00-12:00	156	126	26	4	1	9	33	41	39	22	10	1	0	0	0	0	8	39	73	26	39	53	14
12:00-18:00	406	361	45	0	3	13	100	114	95	59	18	3	1	0	0	0	7	39	88	26	38	53	14
18:00-23:59	511	451	57	3	4	27	148	151	132	39	7	3	0	0	0	0	7	35	77	24	36	47	14
00:00-24:00	1140	985	146	9	8	52	298	330	283	126	35	7	1	0	0	0	7	37	88	25	36	50	14

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-17 00:00	16	12	4	0	0	0	6	4	2	4	0	0	0	0	0	0	21	38	59	26	35	56	21
2013-06-17 01:00	2	2	0	0	0	0	0	1	0	1	0	0	0	0	0	0	32	42	52	32	52	52	32
2013-06-17 02:00	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	28	28	28	28	28	28	28
2013-06-17 03:00	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	29	29	29	29	29	29	29
2013-06-17 04:00	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	27	27	27	27	27	27	27
2013-06-17 05:00	6	4	2	0	0	0	4	0	2	0	0	0	0	0	0	0	21	30	47	21	27	47	21
2013-06-17 06:00	26	20	6	0	0	2	6	9	3	4	2	0	0	0	0	0	19	38	66	24	37	54	19
2013-06-17 07:00	46	39	7	0	0	0	12	7	10	15	2	0	0	0	0	0	21	42	70	26	45	55	21
2013-06-17 08:00	71	57	13	1	0	2	24	10	21	13	1	0	0	0	0	0	12	38	61	26	40	53	12
2013-06-17 09:00	36	33	3	0	0	0	9	5	7	13	2	0	0	0	0	0	21	43	70	26	45	57	21
2013-06-17 10:00	44	37	7	0	0	0	7	17	14	5	1	0	0	0	0	0	21	40	63	29	40	50	21
2013-06-17 11:00	73	66	7	0	0	1	14	20	26	11	0	1	0	0	0	0	19	40	73	26	41	51	19
2013-06-17 12:00	85	76	8	1	0	1	14	18	24	22	6	0	0	0	0	0	16	43	70	29	45	57	16
2013-06-17 13:00	75	58	16	1	0	4	19	13	27	9	1	2	0	0	0	0	15	39	78	27	41	51	15
2013-06-17 14:00	73	60	10	3	0	0	20	16	20	16	1	0	0	0	0	0	21	40	61	29	42	54	21
2013-06-17 15:00	72	60	11	1	0	2	19	14	18	18	1	0	0	0	0	0	17	40	62	26	43	54	17

[Mon, 17 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	27	18	9	0	0	0	13	5	4	5	0	0	0	0	0	0	21	35	59	24	31	52	19
06:00-12:00	296	252	43	1	0	5	72	68	81	61	8	1	0	0	0	0	12	40	73	26	41	54	19
12:00-18:00	305	254	45	6	0	7	72	61	89	65	9	2	0	0	0	0	15	41	78	27	42	54	19
18:00-23:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
00:00-24:00	628	524	97	7	0	12	157	134	174	131	17	3	0	0	0	0	12	40	78	27	42	54	19

Traffic report

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Author

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Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:34:15

Site

Name	697 south.sdr
Dir. Oncoming (Westbound)	
Dir. Outgoing (Eastbound)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-18 16:00
End date	2013-06-20 13:59
Days	Tu, We, Th
Time Interval	60 minutes
Time / Day	00:00 - 23:59

#10 on Map

Length Classes [L in m]

Oncoming					Outgoing				
Time	Σ	0-6m	6-12m	>12m	Time	Σ	0-6m	6-12m	>12m
00:00-06:00	37	25	6	6	00:00-06:00	47	37	3	7
06:00-12:00	985	793	113	79	06:00-12:00	1089	927	109	53
12:00-18:00	1236	1098	94	44	12:00-18:00	1053	906	105	42
18:00-23:59	858	786	47	25	18:00-23:59	777	690	42	45
00:00-24:00	3116	2702	260	154	00:00-24:00	2966	2560	259	147

Calculated speeds [V in km/h]

	Vmin	Vmax	Vavg	V15	V50	V85	V1	Vexc %
Oncoming	12	136	69	59	68	79	43	**96.1**
Outgoing	14	123	67	58	66	77	43	**96.0**

Descriptions

Vmin: Minimal velocity
Vmax: Maximal velocity
Vavg: Average velocity
V15: Critical velocity for the first 15% of vehicles
V50: Critical velocity for the first 50% of vehicles
V85: Critical velocity for the first 85% of vehicles
V1: Critical velocity for the first 1% of vehicles
Vexc %: Speeding in %

Traffic report

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Author

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Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:34:15

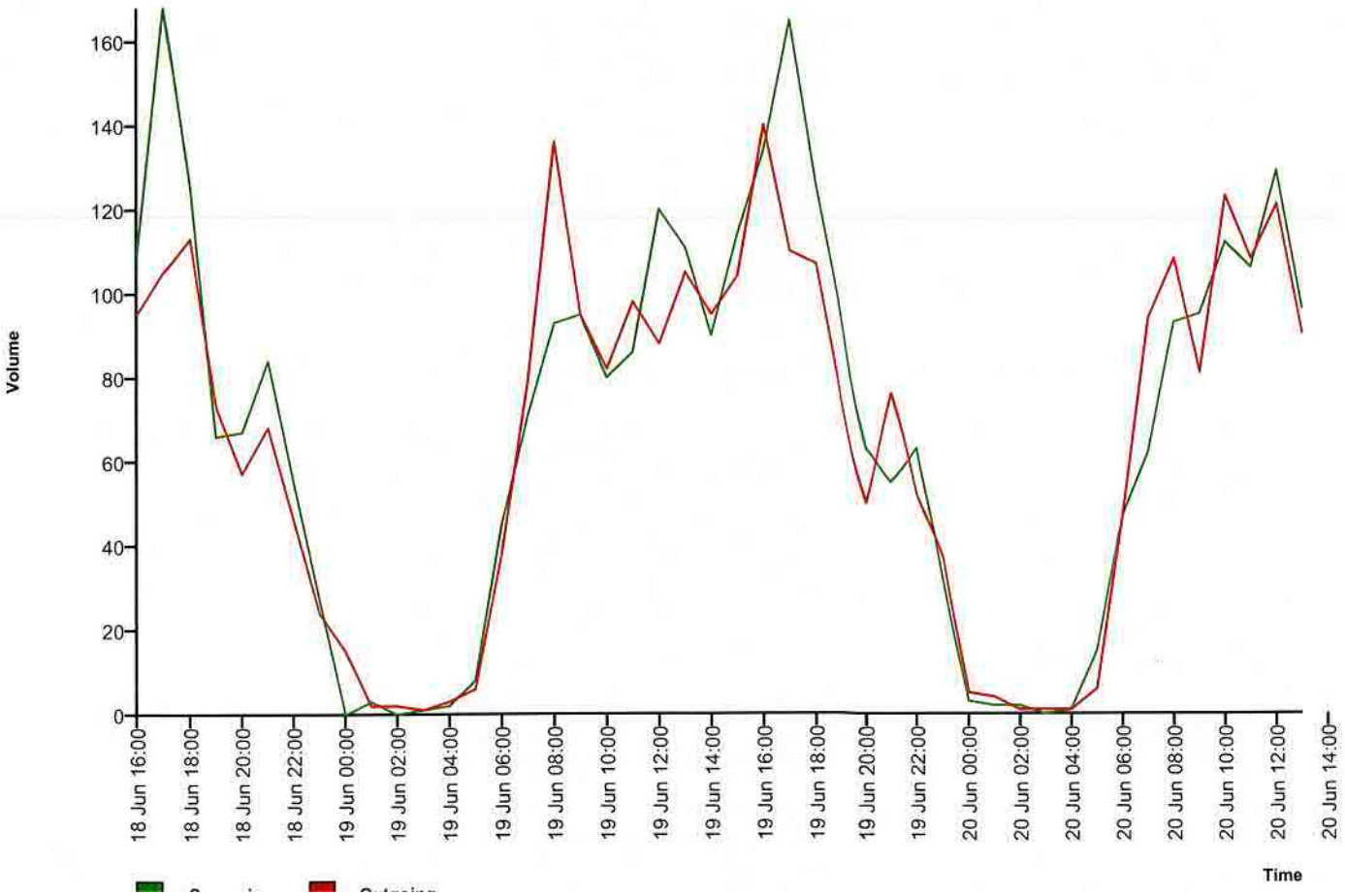
Site

Name	697 south.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-18 16:00
End date	2013-06-20 13:59
Days	Tu, We, Th
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Time / Volume graph



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Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:34:15

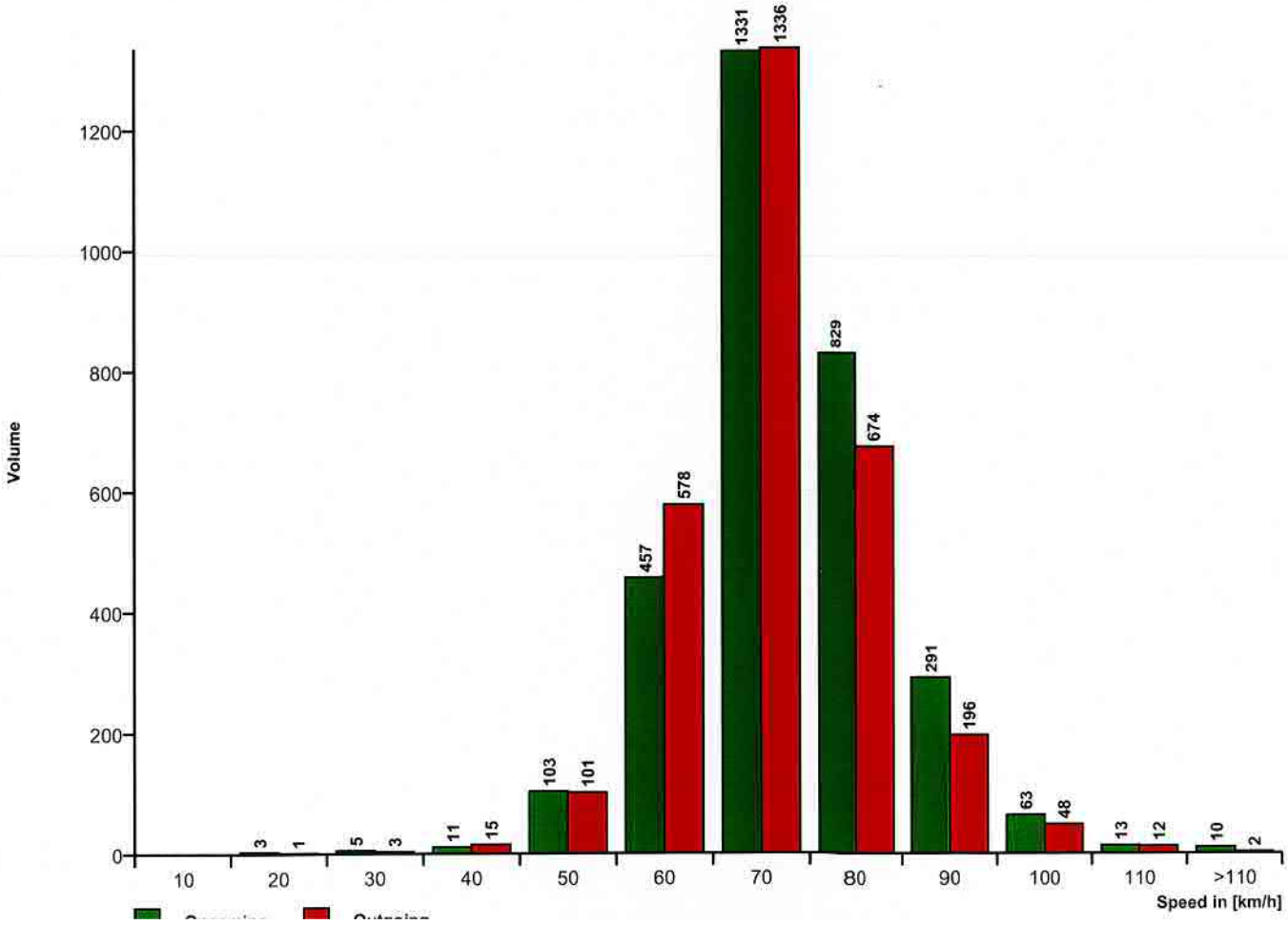
Site

Name	697 south.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-18 16:00
End date	2013-06-20 13:59
Days	Tu, We, Th
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Speed histogram



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Street	9015 14 Street NW
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Contact	Brad Batdorf
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Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:34:15

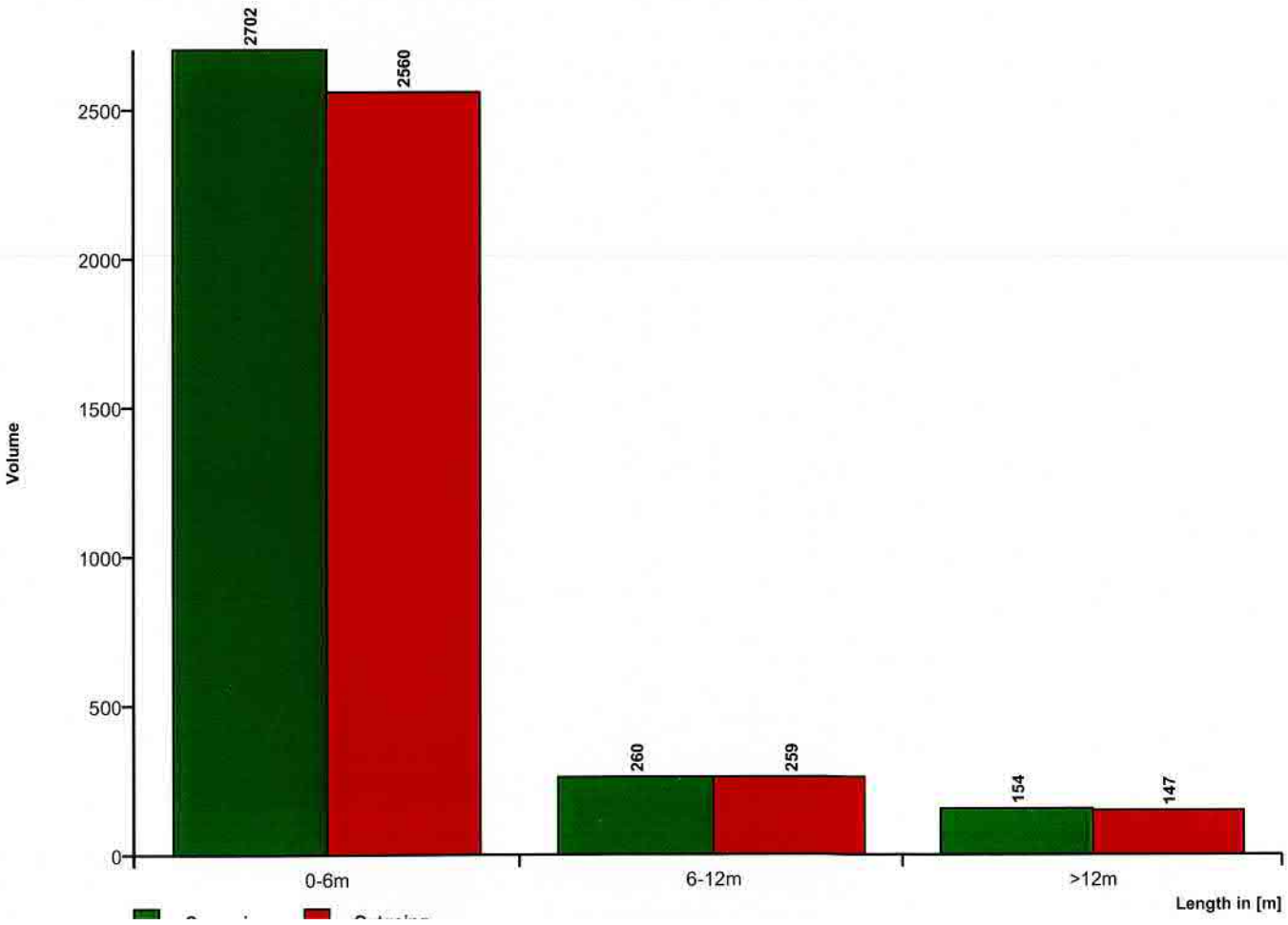
Site

Name	697 south.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-18 16:00
End date	2013-06-20 13:59
Days	Tu, We, Th
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Length histogram



Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-18 16:00	204	173	21	10	0	0	0	1	9	27	99	51	11	3	2	1	39	67	123	59	68	76	46
2013-06-18 17:00	273	234	30	9	0	0	0	0	7	37	115	85	21	7	0	1	44	69	118	60	70	78	46
2013-06-18 18:00	239	211	14	14	0	0	2	1	3	30	89	78	26	10	0	0	25	70	98	60	70	81	38
2013-06-18 19:00	139	119	13	7	0	0	0	2	0	15	44	47	28	2	1	0	36	72	108	62	72	82	38
2013-06-18 20:00	124	103	11	10	0	0	0	2	3	11	48	46	9	4	1	0	36	70	104	61	70	79	39
2013-06-18 21:00	152	140	8	4	0	0	1	0	4	13	61	54	15	1	1	2	28	70	136	61	70	80	47
2013-06-18 22:00	101	92	4	5	0	1	1	0	1	11	45	29	10	3	0	0	14	69	100	62	69	79	22
2013-06-18 23:00	51	49	0	2	0	1	0	0	0	7	15	16	7	2	3	0	18	73	109	60	71	85	18

[Tue, 18 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
06:00-12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
12:00-18:00	477	407	51	19	0	0	0	1	16	64	214	136	32	10	2	2	39	68	123	59	69	78	41
18:00-23:59	806	714	50	42	0	2	4	5	11	87	302	270	95	22	6	2	14	70	136	61	70	81	41
00:00-24:00	1283	1121	101	61	0	2	4	6	27	151	516	406	127	32	8	4	14	70	136	61	70	80	41

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-19 00:00	15	11	2	2	0	0	1	0	1	1	8	2	0	1	1	0	29	67	101	60	65	77	29
2013-06-19 01:00	5	4	0	1	0	0	0	0	0	1	3	0	0	1	0	0	59	71	92	59	70	92	59
2013-06-19 02:00	2	2	0	0	0	0	0	0	0	0	0	1	1	0	0	0	77	80	84	77	84	84	77
2013-06-19 03:00	2	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	54	63	72	54	72	72	54
2013-06-19 04:00	5	2	2	1	0	0	0	0	0	0	0	0	1	3	1	0	82	94	104	82	96	104	82
2013-06-19 05:00	14	12	2	0	0	0	0	0	0	1	2	6	4	0	0	1	58	78	115	69	77	87	58
2013-06-19 06:00	83	64	15	4	0	0	0	1	4	6	23	27	16	5	0	1	40	73	111	65	75	85	40
2013-06-19 07:00	150	121	18	11	0	0	0	0	2	8	61	55	20	3	0	1	46	72	120	63	72	81	49
2013-06-19 08:00	229	176	34	19	0	0	0	1	10	44	104	49	19	1	0	1	36	66	123	56	67	77	43
2013-06-19 09:00	190	150	19	21	0	0	0	0	9	36	70	50	21	2	1	1	46	68	116	57	67	79	46
2013-06-19 10:00	162	131	21	10	0	0	0	0	3	30	61	44	20	4	0	0	47	69	96	59	70	80	49
2013-06-19 11:00	184	158	19	7	0	2	0	0	14	39	76	39	13	1	0	0	12	65	93	55	65	77	14
2013-06-19 12:00	208	184	13	11	0	0	0	1	6	32	106	43	17	2	0	1	38	67	114	59	67	77	44
2013-06-19 13:00	216	184	20	12	0	0	0	4	7	43	116	36	6	3	1	0	37	65	105	57	65	73	39
2013-06-19 14:00	185	160	17	8	0	0	0	0	6	44	87	32	10	6	0	0	44	66	96	57	65	76	44
2013-06-19 15:00	218	198	14	6	0	0	0	2	6	46	111	39	13	1	0	0	39	65	93	58	66	75	42
2013-06-19 16:00	274	245	19	10	0	0	0	1	11	58	117	66	13	6	1	1	35	66	111	57	66	76	44
2013-06-19 17:00	275	244	22	9	0	0	0	2	13	50	122	65	19	3	1	0	39	66	109	57	66	77	43
2013-06-19 18:00	233	212	14	7	0	0	0	1	5	36	108	61	19	3	0	0	39	67	97	59	67	77	45
2013-06-19 19:00	168	156	6	6	0	0	0	1	7	25	65	47	17	5	1	0	38	69	103	59	69	79	41
2013-06-19 20:00	113	104	5	4	0	0	0	0	3	13	54	31	12	0	0	0	47	68	89	61	67	78	48
2013-06-19 21:00	131	121	6	4	0	0	1	0	2	23	68	25	10	2	0	0	21	67	92	59	67	74	41
2013-06-19 22:00	115	103	6	6	0	0	0	0	2	26	54	24	5	1	3	0	43	67	108	59	66	75	48
2013-06-19 23:00	69	66	2	1	0	0	0	0	2	11	37	14	2	3	0	0	46	66	99	57	65	77	46

[Wed, 19 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	43	32	6	5	0	0	1	0	1	4	13	10	6	5	2	1	29	75	115	61	72	95	43
06:00-12:00	998	800	126	72	0	2	0	2	42	163	395	264	109	16	1	4	12	68	123	59	68	79	43
12:00-18:00	1376	1215	105	56	0	0	0	10	49	273	659	281	78	21	3	2	35	66	114	58	66	76	43
18:00-23:59	829	762	39	28	0	0	1	2	21	134	386	202	65	14	4	0	21	67	108	59	67	77	43
00:00-24:00	3246	2809	276	161	0	2	2	14	113	574	1453	757	258	56	10	7	12	67	123	58	67	77	43

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-20 00:00	8	7	0	1	0	0	0	0	0	3	2	1	1	0	0	1	57	71	111	57	68	87	57
2013-06-20 01:00	6	4	1	1	0	0	0	0	0	2	2	0	1	1	0	0	54	71	98	54	66	98	54
2013-06-20 02:00	3	2	1	0	0	0	0	0	0	2	0	0	1	0	0	0	53	65	82	53	60	82	53
2013-06-20 03:00	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	48	48	48	48	48	48	48
2013-06-20 04:00	2	2	0	0	0	0	0	0	0	1	0	0	1	0	0	0	57	73	90	57	90	90	57
2013-06-20 05:00	21	15	1	5	0	0	0	0	1	5	8	3	2	1	1	0	46	69	104	56	69	85	46
2013-06-20 06:00	94	75	9	10	0	0	0	0	5	12	34	15	19	6	3	0	41	71	105	59	70	85	41
2013-06-20 07:00	156	130	20	6	0	0	0	0	10	27	73	35	9	1	1	0	44	66	109	58	66	76	44
2013-06-20 08:00	201	168	24	9	0	0	0	0	8	46	86	46	12	3	0	0	45	66	100	57	66	75	47
2013-06-20 09:00	176	147	18	11	0	0	0	1	9	39	78	38	10	0	1	0	31	65	102	57	65	75	44
2013-06-20 10:00	235	212	14	9	0	0	1	1	8	48	115	47	10	5	0	0	28	65	97	57	66	74	44
2013-06-20 11:00	214	188	11	15	0	0	0	0	6	52	98	41	15	2	0	0	42	66	95	57	65	76	45
2013-06-20 12:00	250	220	23	7	0	0	0	3	4	34	124	69	12	3	1	0	39	67	107	60	68	75	40
2013-06-20 13:00	186	162	20	4	0	0	1	1	12	39	78	45	9	1	0	0	23	64	92	55	65	75	38

[Thu, 20 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	41	30	3	8	0	0	0	0	2	13	12	4	6	2	1	1	46	69	111	56	66	86	44
06:00-12:00	1076	920	96	60	0	0	1	2	46	224	484	222	75	17	5	0	28	66	109	57	66	76	44
12:00-18:00	436	382	43	11	0	0	1	4	16	73	202	114	21	4	1	0	23	66	107	58	67	75	44
18:00-23:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44
00:00-24:00	1553	1332	142	79	0	0	2	6	64	310	698	340	102	23	7	1	23	66	111	57	66	76	44

Traffic report

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Author

Institution	Trafco Canada
Department	Tech Support
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Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:32:20

Site

Name	101 AVE.sdr
Dir. Oncoming (Westbound)	
Dir. Outgoing (Eastbound)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-14 14:00
End date	2013-06-17 16:59
Days	Mo, Fr, Sa, Su
Time Interval	60 minutes
Time / Day	00:00 - 23:59

#11 on Map

Length Classes [L in m]

Oncoming				
Time	Σ	0-6m	6-12m	>12m
00:00-06:00	145	140	5	0
06:00-12:00	587	566	10	11
12:00-18:00	1681	1647	26	8
18:00-23:59	1556	1531	16	9
00:00-24:00	3969	3884	57	28

Outgoing				
Time	Σ	0-6m	6-12m	>12m
00:00-06:00	123	120	2	1
06:00-12:00	981	924	46	11
12:00-18:00	1582	1512	50	20
18:00-23:59	1167	1125	31	11
00:00-24:00	3853	3681	129	43

Calculated speeds [V in km/h]

	Vmin	Vmax	Vavg	V15	V50	V85	V1	Vexc %
Oncoming	11	140	50	40	50	60	27	**49.2**
Outgoing	12	124	49	39	50	59	26	**46.6**

Descriptions

Vmin: Minimal velocity
Vmax: Maximal velocity
Vavg: Average velocity
V15: Critical velocity for the first 15% of vehicles
V50: Critical velocity for the first 50% of vehicles
V85: Critical velocity for the first 85% of vehicles
V1: Critical velocity for the first 1% of vehicles
Vexc %: Speeding in %

Traffic report

powered by datacollect

Author

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Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:32:20

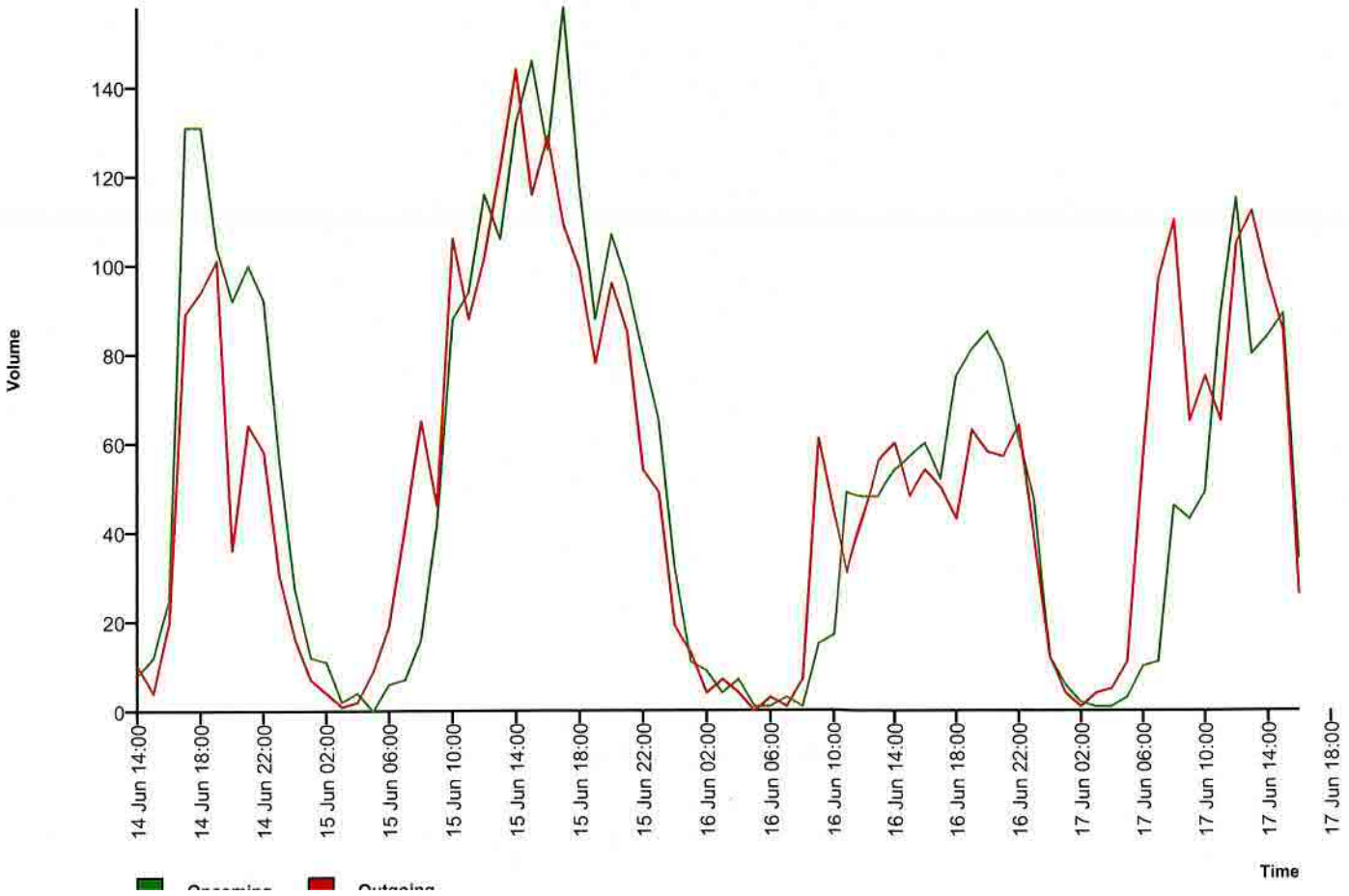
Site

Name	101 AVE.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-14 14:00
End date	2013-06-17 16:59
Days	Mo, Fr, Sa, Su
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Time / Volume graph



Traffic report

powered by datacollect

Author

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Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:32:20

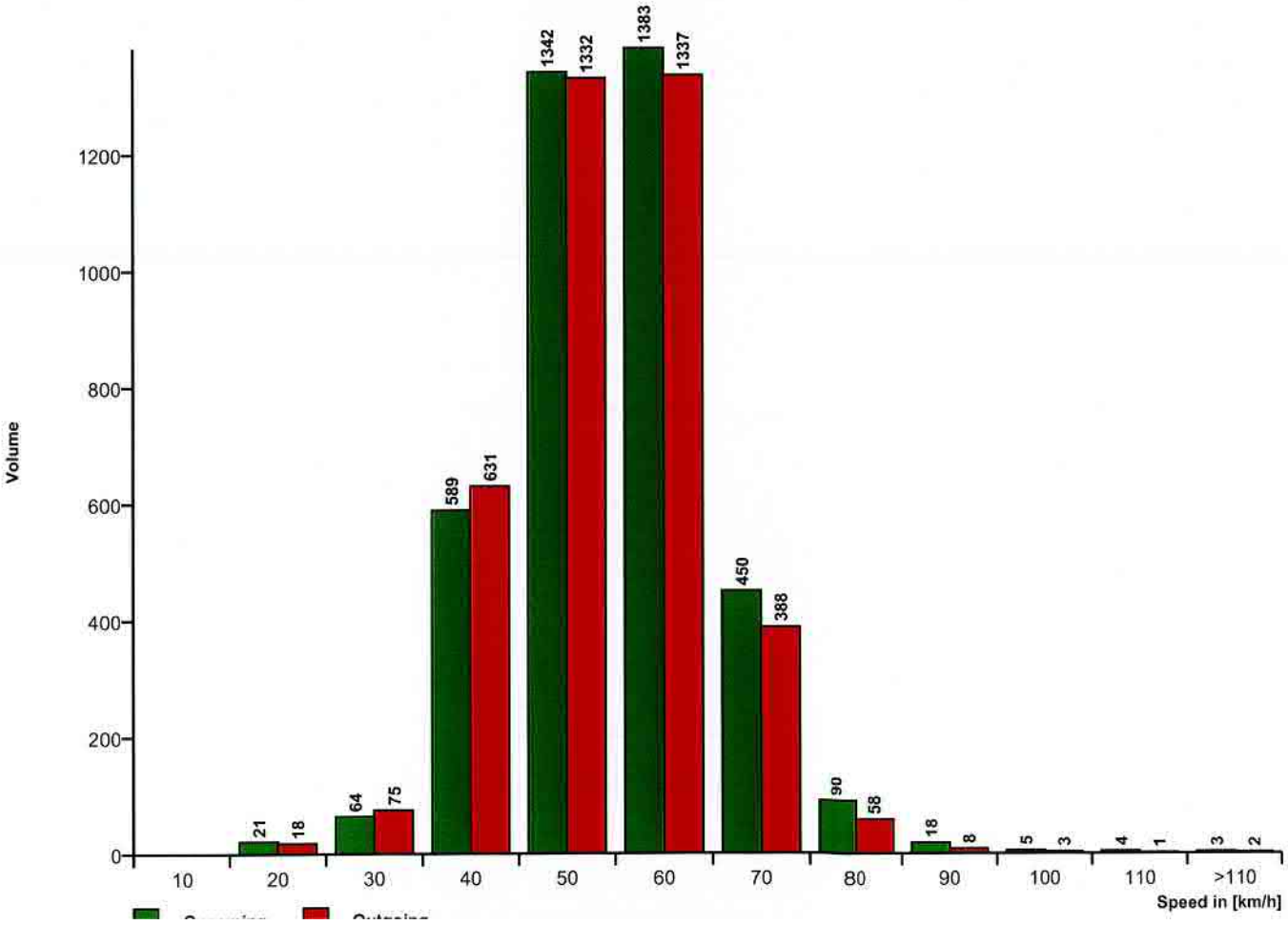
Site

Name	101 AVE.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-14 14:00
End date	2013-06-17 16:59
Days	Mo, Fr, Sa, Su
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Speed histogram



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Trafco Canada an ATS company

Generated with **DataCollect Webreporter** version 1.0 at 2013-06-25 22:32:20

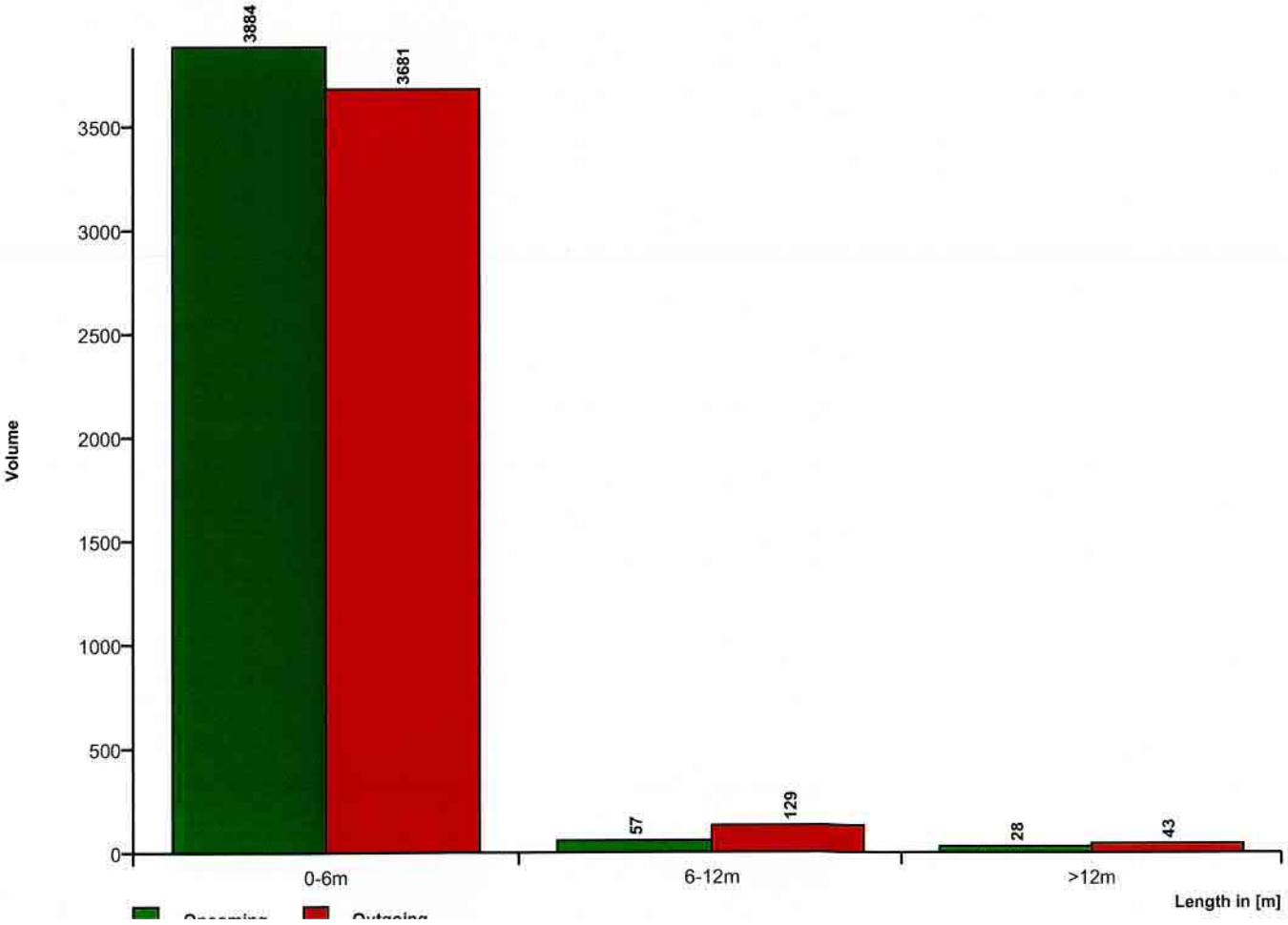
Site

Name	101 AVE.sdr
Dir. Oncoming (name)	
Dir. Outgoing (name)	
Posted Speed Limit	50
Comment	
Device type	**SDR**

Time Range

Start date	2013-06-14 14:00
End date	2013-06-17 16:59
Days	Mo, Fr, Sa, Su
Time Interval	60 minutes
Time / Day	00:00 - 23:59

Length histogram



Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-14 14:00	18	11	3	4	0	4	3	4	4	3	0	0	0	0	0	0	15	34	59	16	38	52	15
2013-06-14 15:00	16	13	3	0	0	0	0	8	8	0	0	0	0	0	0	0	34	41	50	38	41	47	34
2013-06-14 16:00	45	43	1	1	0	0	1	15	21	6	2	0	0	0	0	0	29	44	65	38	42	52	29
2013-06-14 17:00	220	212	3	5	0	0	3	32	74	78	30	3	0	0	0	0	27	50	77	40	51	61	30
2013-06-14 18:00	225	220	4	1	0	0	1	23	88	87	24	2	0	0	0	0	30	50	77	42	51	59	35
2013-06-14 19:00	205	193	5	7	0	7	3	36	64	73	18	4	0	0	0	0	12	48	78	38	49	58	16
2013-06-14 20:00	128	124	4	0	0	0	0	28	44	40	15	0	0	0	1	0	32	49	108	39	49	58	32
2013-06-14 21:00	164	162	2	0	0	0	1	21	63	62	14	2	0	1	0	0	23	50	93	41	50	59	31
2013-06-14 22:00	150	149	0	1	0	0	5	9	44	65	25	2	0	0	0	0	24	52	80	42	54	61	28
2013-06-14 23:00	86	86	0	0	0	0	1	4	31	37	10	2	0	1	0	0	30	53	100	44	53	61	30

[Fri, 14 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
06:00-12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
12:00-18:00	299	279	10	10	0	4	7	59	107	87	32	3	0	0	0	0	15	47	77	38	48	59	21
18:00-23:59	958	934	15	9	0	7	11	121	334	364	106	12	0	2	1	0	12	50	108	41	51	59	21
00:00-24:00	1257	1213	25	19	0	11	18	180	441	451	138	15	0	2	1	0	12	49	108	40	50	59	21

Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-15 00:00	43	43	0	0	0	0	0	2	13	18	5	4	0	0	1	0	39	55	105	44	55	66	39
2013-06-15 01:00	19	19	0	0	0	0	0	0	7	9	3	0	0	0	0	0	41	53	69	44	52	63	41
2013-06-15 02:00	15	14	1	0	0	0	0	0	3	4	4	2	2	0	0	0	43	63	87	48	61	77	43
2013-06-15 03:00	3	3	0	0	0	0	0	0	0	2	1	0	0	0	0	0	55	59	67	55	55	67	55
2013-06-15 04:00	6	6	0	0	0	0	0	1	3	0	1	1	0	0	0	0	40	54	80	40	47	80	40
2013-06-15 05:00	9	9	0	0	0	0	0	2	1	3	3	0	0	0	0	0	36	53	70	38	54	63	36
2013-06-15 06:00	25	23	1	1	0	0	2	1	5	11	4	1	1	0	0	0	26	54	89	46	56	65	26
2013-06-15 07:00	48	46	2	0	0	0	0	10	12	17	8	1	0	0	0	0	32	51	71	40	52	63	32
2013-06-15 08:00	81	79	2	0	0	0	0	13	18	40	10	0	0	0	0	0	31	50	69	40	52	60	31
2013-06-15 09:00	88	80	7	1	0	0	2	17	26	23	18	1	1	0	0	0	22	50	84	38	50	64	22
2013-06-15 10:00	194	185	6	3	0	0	3	37	62	73	18	1	0	0	0	0	22	48	73	39	50	58	26
2013-06-15 11:00	182	172	8	2	0	0	7	32	75	61	6	1	0	0	0	0	23	46	71	38	47	55	25
2013-06-15 12:00	218	213	4	1	0	0	6	28	83	79	19	3	0	0	0	0	26	49	78	40	50	59	27
2013-06-15 13:00	228	222	6	0	0	0	6	29	76	87	28	2	0	0	0	0	27	49	73	40	51	59	30
2013-06-15 14:00	276	261	13	2	0	0	5	48	111	79	28	5	0	0	0	0	27	49	79	39	48	59	29
2013-06-15 15:00	262	255	5	2	0	2	3	38	93	100	23	3	0	0	0	0	20	49	77	40	50	58	24
2013-06-15 16:00	255	247	7	1	0	0	2	35	102	89	27	0	0	0	0	0	23	49	70	41	49	59	31
2013-06-15 17:00	267	258	9	0	0	5	3	40	102	87	26	4	0	0	0	0	14	49	74	39	49	59	16
2013-06-15 18:00	217	212	5	0	0	1	6	23	92	66	22	7	0	0	0	0	20	49	73	41	49	60	27
2013-06-15 19:00	166	161	4	1	0	0	3	27	54	59	16	4	0	0	2	1	25	51	124	40	50	60	28
2013-06-15 20:00	203	201	1	1	0	1	2	30	84	60	21	2	3	0	0	0	20	49	85	40	49	58	28
2013-06-15 21:00	181	175	5	1	0	0	2	33	60	69	14	2	0	0	0	1	23	49	140	39	50	59	27
2013-06-15 22:00	134	130	4	0	0	1	0	8	44	58	21	2	0	0	0	0	18	52	79	44	54	61	34
2013-06-15 23:00	114	113	0	1	0	3	2	12	36	42	13	4	2	0	0	0	14	51	89	42	51	61	16

[Sat, 15 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	95	94	1	0	0	0	0	5	27	36	17	7	2	0	1	0	36	56	105	44	55	67	27
06:00-12:00	618	585	26	7	0	0	14	110	198	225	64	5	2	0	0	0	22	49	89	39	50	59	27
12:00-18:00	1506	1456	44	6	0	7	25	218	567	521	151	17	0	0	0	0	14	49	79	40	49	59	27
18:00-23:59	1015	992	19	4	0	6	15	133	370	354	107	21	5	0	2	2	14	50	140	40	50	59	27
00:00-24:00	3234	3127	90	17	0	13	54	466	1162	1136	339	50	9	0	3	2	14	49	140	40	50	59	27

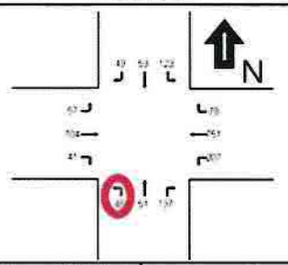
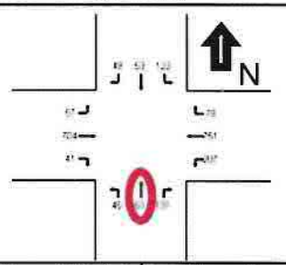
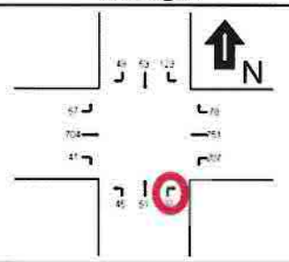
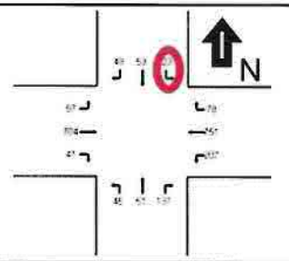
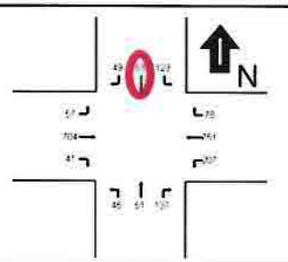
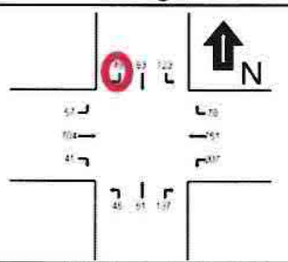
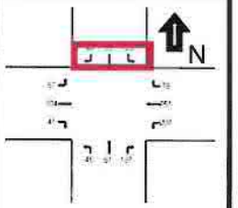
Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-16 00:00	51	50	1	0	0	0	0	1	15	19	10	4	0	0	0	2	31	58	124	48	56	69	31
2013-06-16 01:00	24	24	0	0	0	0	0	1	6	9	4	1	2	1	0	0	36	58	93	48	57	71	36
2013-06-16 02:00	13	12	1	0	0	0	0	3	2	4	2	1	1	0	0	0	38	56	89	39	52	79	38
2013-06-16 03:00	11	11	0	0	0	0	0	0	1	4	2	2	1	0	0	1	42	68	123	53	63	85	42
2013-06-16 04:00	11	11	0	0	0	0	0	2	3	4	1	0	1	0	0	0	35	52	82	36	55	64	35
2013-06-16 05:00	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	75	75	75	75	75	75	75
2013-06-16 06:00	4	4	0	0	0	0	0	0	1	1	0	2	0	0	0	0	50	63	73	50	71	73	50
2013-06-16 07:00	4	1	0	3	0	0	0	0	0	1	2	1	0	0	0	0	55	64	72	55	69	72	55
2013-06-16 08:00	8	8	0	0	0	0	1	1	1	3	0	2	0	0	0	0	22	52	76	36	58	71	22
2013-06-16 09:00	76	74	2	0	0	0	0	8	23	26	15	4	0	0	0	0	33	53	75	42	55	63	33
2013-06-16 10:00	61	61	0	0	0	0	1	4	7	30	13	6	0	0	0	0	29	56	74	47	57	65	29
2013-06-16 11:00	80	77	3	0	0	0	0	14	25	29	8	3	1	0	0	0	31	50	88	40	52	62	31
2013-06-16 12:00	92	92	0	0	0	0	1	11	21	40	14	4	1	0	0	0	28	53	87	43	54	63	28
2013-06-16 13:00	104	101	2	1	0	1	1	14	37	31	20	0	0	0	0	0	18	50	70	39	50	62	27
2013-06-16 14:00	114	112	2	0	0	0	2	19	40	40	10	3	0	0	0	0	25	49	76	40	49	59	27
2013-06-16 15:00	105	105	0	0	0	1	2	18	37	30	13	2	2	0	0	0	17	49	82	39	49	61	27
2013-06-16 16:00	114	113	1	0	0	0	3	16	37	39	18	1	0	0	0	0	25	49	74	40	51	61	30
2013-06-16 17:00	102	100	2	0	0	1	2	18	33	32	9	5	2	0	0	0	11	49	81	39	50	61	26
2013-06-16 18:00	118	110	4	4	0	1	2	23	36	37	18	1	0	0	0	0	17	49	71	37	50	61	30
2013-06-16 19:00	144	142	2	0	0	2	3	32	53	38	14	0	0	2	0	0	14	47	98	38	47	58	16
2013-06-16 20:00	143	138	3	2	0	1	5	22	43	59	9	3	1	0	0	0	18	49	90	38	51	59	25
2013-06-16 21:00	135	132	2	1	0	0	4	32	44	39	14	2	0	0	0	0	26	47	76	37	47	58	27
2013-06-16 22:00	125	124	1	0	0	3	1	16	31	53	13	7	1	0	0	0	17	51	83	40	52	61	18
2013-06-16 23:00	85	84	1	0	0	0	0	4	25	41	10	2	1	2	0	0	35	54	92	44	55	65	35

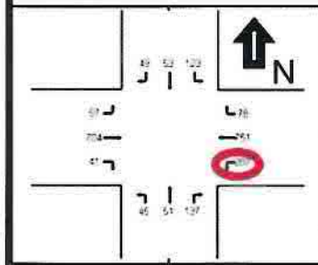
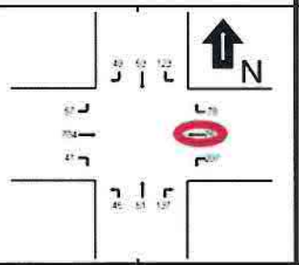
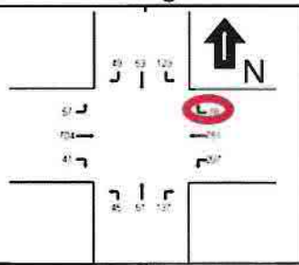
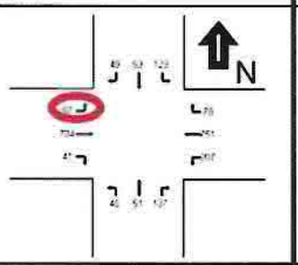
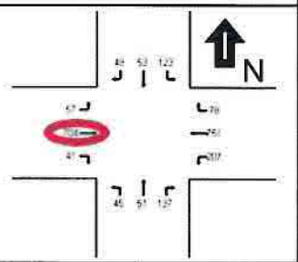
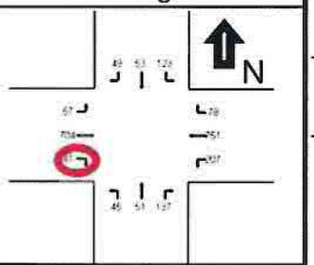
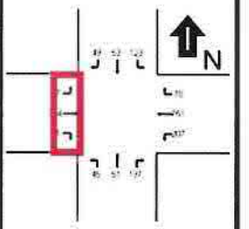
[Sun, 16 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	111	109	2	0	0	0	0	7	27	40	19	9	5	1	0	3	31	59	124	46	56	72	27
06:00-12:00	233	225	5	3	0	0	2	27	57	90	38	18	1	0	0	0	22	53	88	42	55	64	27
12:00-18:00	631	623	7	1	0	3	11	96	205	212	84	15	5	0	0	0	11	50	87	40	51	61	27
18:00-23:59	750	730	13	7	0	7	15	129	232	267	78	15	3	4	0	0	14	49	98	38	50	60	27
00:00-24:00	1725	1687	27	11	0	10	28	259	521	609	219	57	14	5	0	3	11	51	124	39	51	62	27

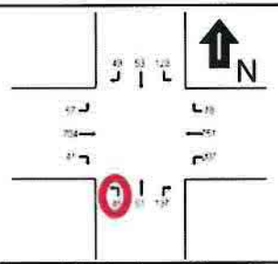
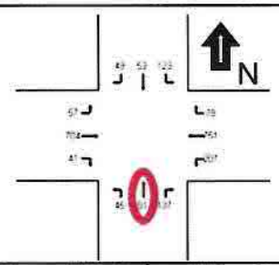
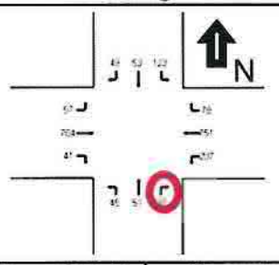
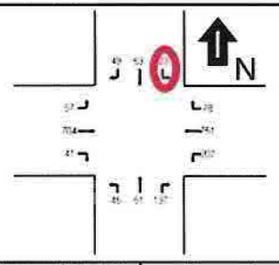
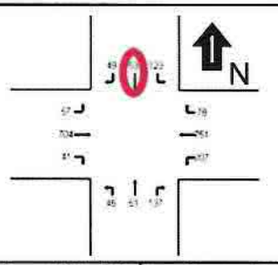
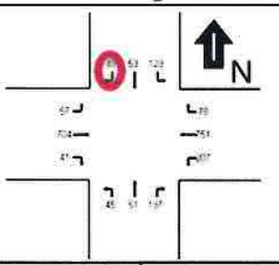
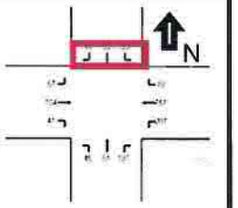
Time	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
2013-06-17 00:00	24	23	1	0	0	0	0	0	4	10	7	2	0	0	1	0	43	59	102	48	58	70	43
2013-06-17 01:00	10	10	0	0	0	0	0	1	1	4	4	0	0	0	0	0	39	56	70	45	57	65	39
2013-06-17 02:00	3	3	0	0	0	0	0	0	2	0	1	0	0	0	0	0	42	51	66	42	47	66	42
2013-06-17 03:00	5	5	0	0	0	0	0	1	0	1	1	1	0	1	0	0	40	66	97	40	66	97	40
2013-06-17 04:00	6	5	1	0	0	0	0	1	1	2	2	0	0	0	0	0	32	53	67	32	57	67	32
2013-06-17 05:00	14	11	2	1	0	0	1	0	4	6	2	1	0	0	0	0	30	54	72	49	53	69	30
2013-06-17 06:00	67	63	3	1	0	0	1	6	18	28	12	2	0	0	0	0	30	53	73	44	54	63	30
2013-06-17 07:00	108	98	8	2	0	0	2	5	26	52	16	5	2	0	0	0	28	54	81	44	55	62	28
2013-06-17 08:00	156	149	5	2	0	0	2	25	56	54	17	2	0	0	0	0	29	49	73	39	50	59	30
2013-06-17 09:00	108	106	2	0	0	0	6	31	33	34	4	0	0	0	0	0	23	45	70	35	44	56	27
2013-06-17 10:00	124	118	2	4	0	1	2	28	53	37	3	0	0	0	0	0	19	46	69	38	46	55	21
2013-06-17 11:00	154	146	5	3	0	1	1	36	51	48	14	3	0	0	0	0	18	48	80	37	48	58	26
2013-06-17 12:00	220	217	3	0	0	2	4	41	91	66	14	2	0	0	0	0	18	47	73	39	48	57	29
2013-06-17 13:00	192	186	4	2	0	0	8	39	72	62	9	2	0	0	0	0	24	47	74	37	48	57	26
2013-06-17 14:00	181	171	4	6	0	0	4	46	64	51	14	2	0	0	0	0	27	46	74	36	47	57	28
2013-06-17 15:00	174	170	2	2	0	0	5	32	56	54	22	4	1	0	0	0	26	49	90	37	50	61	27
2013-06-17 16:00	60	57	2	1	0	1	3	23	18	15	0	0	0	0	0	0	16	42	60	34	44	54	16

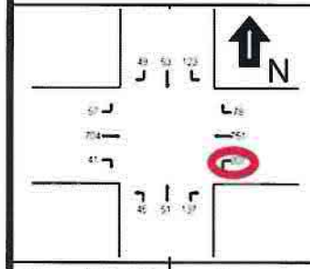
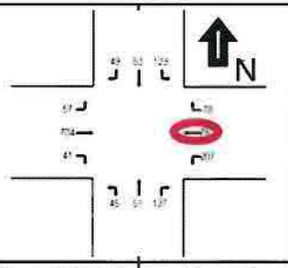
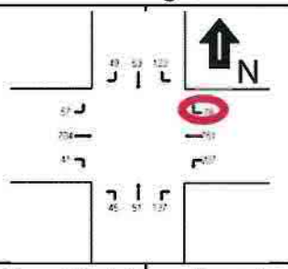
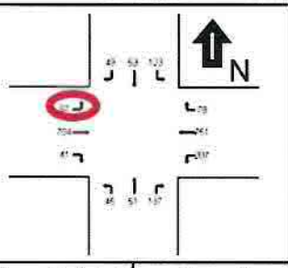
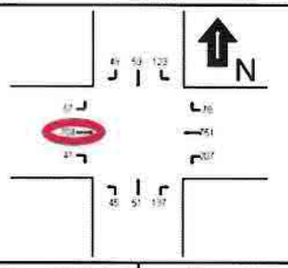
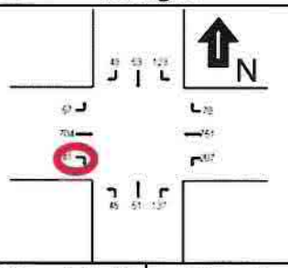
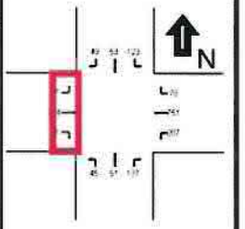
[Mon, 17 June]	Σ	0-6m	6-12m	>12m	10	20	30	40	50	60	70	80	90	100	110	>110	VMin	VAvg	VMax	V15	V50	V85	V1
00:00-06:00	62	57	4	1	0	0	1	3	12	23	17	4	0	1	1	0	30	57	102	45	55	69	27
06:00-12:00	717	680	25	12	0	2	14	131	237	253	66	12	2	0	0	0	18	49	81	38	49	59	27
12:00-18:00	827	801	15	11	0	3	24	181	301	248	59	10	1	0	0	0	16	47	90	37	48	57	27
18:00-23:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
00:00-24:00	1606	1538	44	24	0	5	39	315	550	524	142	26	3	1	1	0	16	48	102	37	49	59	27

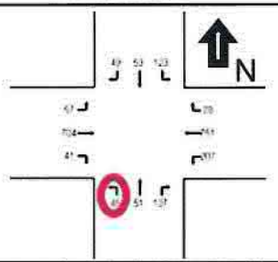
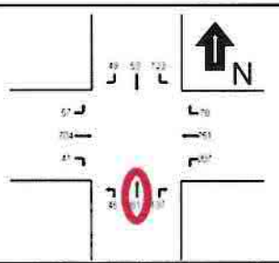
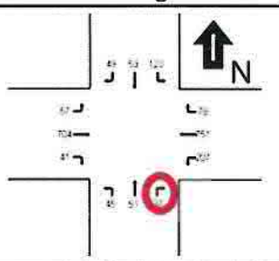
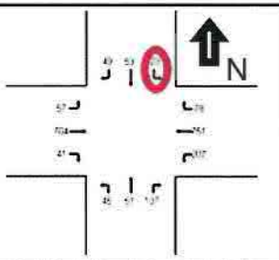
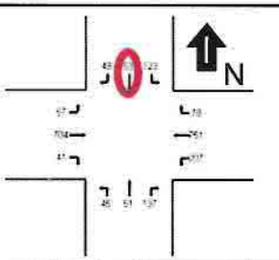
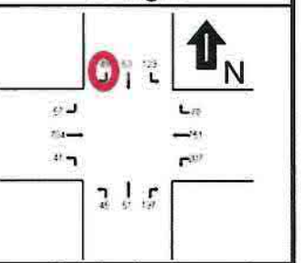
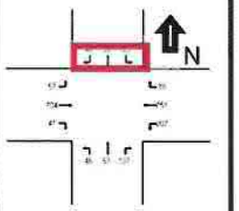
Date of Count: Thursday November 19, 2020

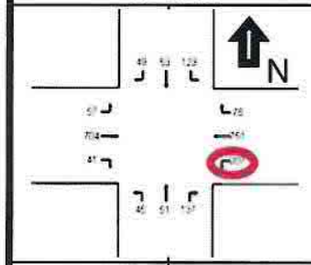
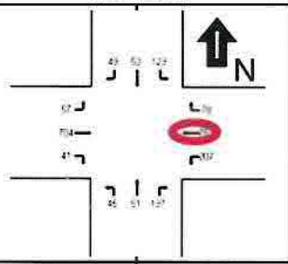
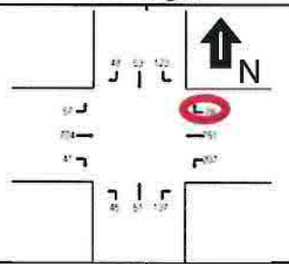
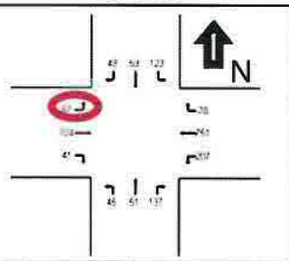
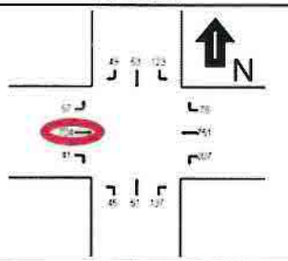
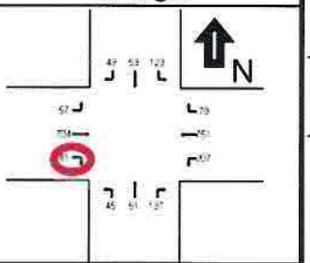
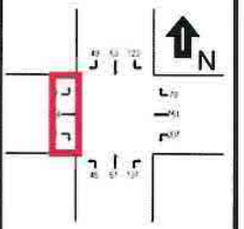
Time	100 Street - Northbound Vehicles						100 Street - Southbound Vehicles						
	NB Left		NB Thru		NB Right		SB Left		SB Thru		SB Right		
													
	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Pedestrians Crossing North Approach
6:00-6:15 am			5				3		1				
6:15-6:30 am			4				3		2				
6:30-6:45 am			4	1	2		1		5				
6:45-7:00 am			7		5	1	3		6		1		
7:00-7:15 am	1		6	2	1	1			3		3		
7:15-7:30 am	1		8		2			1	6				
7:30-7:45 am			7		2		4		7	3	4		
7:45-8:00 am			9		4		5	1	7	1	4		

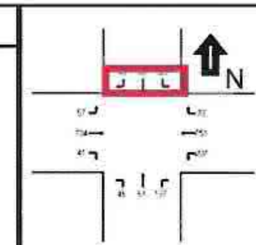
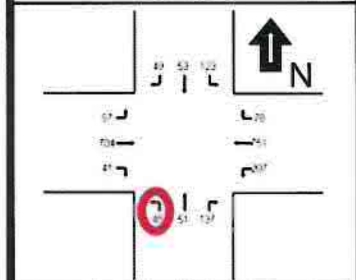
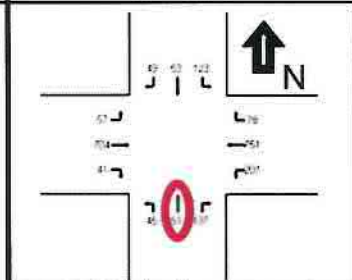
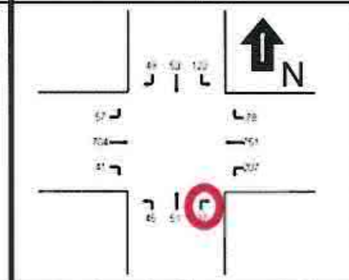
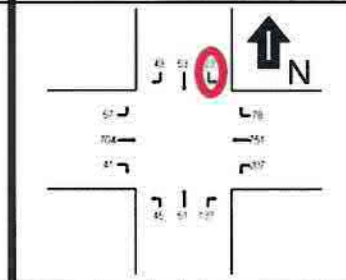
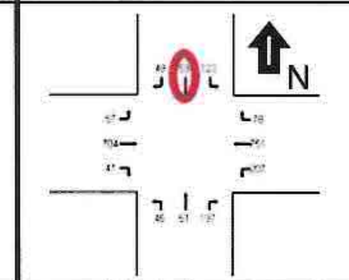
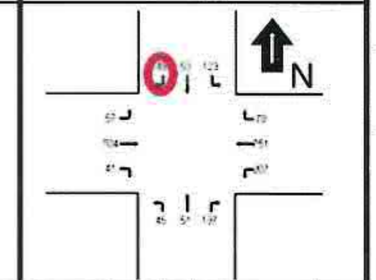
Time	94 Avenue - Westbound Vehicles						94 Avenue - Eastbound Vehicles						
	WB Left		WB Thru		WB Right		EB Left		EB Thru		EB Right		
													
	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Pedestrians Crossing West Approach
6:00-6:15 am	1		1		4		3						
6:15-6:30 am				1	4		1		1		2		
6:30-6:45 am			1		3		4		4		3		
6:45-7:00 am	1		1	1	5		1		5		2		
7:00-7:15 am	2			1	5				5		1		
7:15-7:30 am	2	1	3		4				4	1	1		
7:30-7:45 am			1		5		4		2		3		
7:45-8:00 am	3		1		6		3		5		4		

Time	100 Street - Northbound Vehicles						100 Street - Southbound Vehicles						
	NB Left		NB Thru		NB Right		SB Left		SB Thru		SB Right		
													
	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Pedestrians Crossing North Approach
8:00-8:15 am	11		1111 111		1111 11		1111		1111 1111		1111 111		
8:15-8:30 am	1111 1	11	1111 1111	11	111	1	1111 1111		1111 1111		1111 1111 111		
8:30-8:45 am	1	1	1111 1111 1111	1	1111 1		1111 1	1	1111 1111 1111		1111 1111	1111 111	
8:45-9:00 am	11		1111 1111 111 1111 1111		1111 111	1	1111 11		1111 1111 1111		1111 1111 111		
9:00-9:15 am	11		1111 1111 1111 1111		1111		1111	1	1111 1111 1111 11		11		
9:15-9:30 am	1111		1111 1111 1111 1111		11		1111 1		1111 1111 1111		1111 11		
9:30-9:45 am	11		1111 1111 1111		111		1111		1111 1111 1111		111 1111		
9:45-10:00 am	11		1111 1111 1111 1111		1111 1111		111		1111 1111 1111 1111		1111 11		
	11							1					

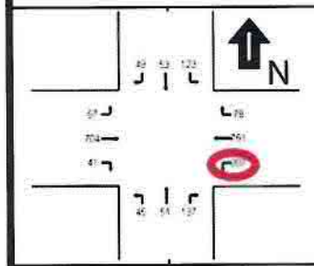
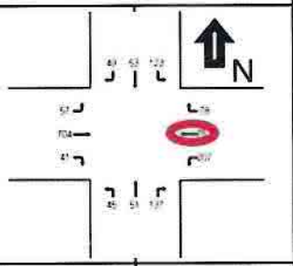
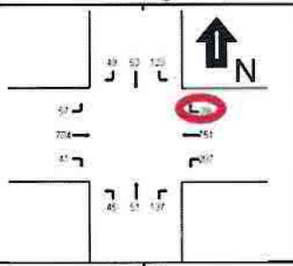
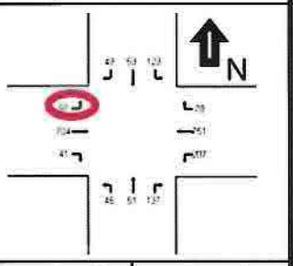
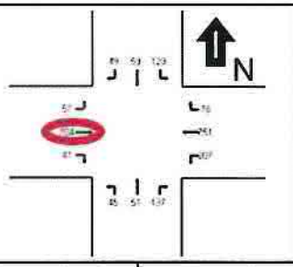
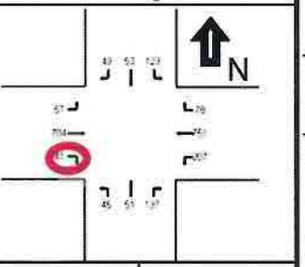
Time	94 Avenue - Westbound Vehicles						94 Avenue - Eastbound Vehicles						
	WB Left		WB Thru		WB Right		EB Left		EB Thru		EB Right		
													
	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Pedestrians Crossing West Approach
8:00-8:15 am	1	0	6	0	9	0	7	0	8	0	1	0	0
8:15-8:30 am	2	0	8	1	5		13	1	11	0	6	0	0
8:30-8:45 am	3	0	1	1	5	4	9	7	6	5	7	1	0
8:45-9:00 am	3	0	6	0	14	0	25	0	6	0	6	0	0
9:00-9:15 am	4	0	2	0	4	0	5	0	2	0	2	0	0
9:15-9:30 am	2	0	1	1	4	0	5	0	3	0	5	0	0
9:30-9:45 am	5	0	2	0	7	0	5	0	0	0	0	0	0
9:45-10:00 am													

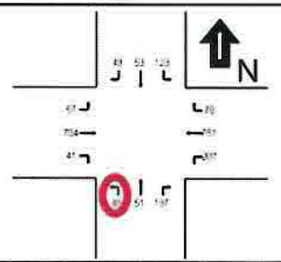
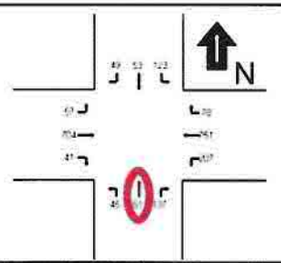
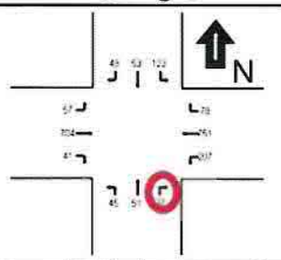
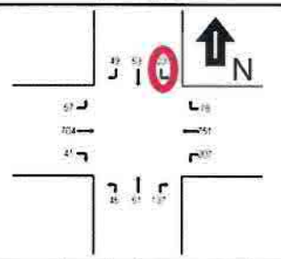
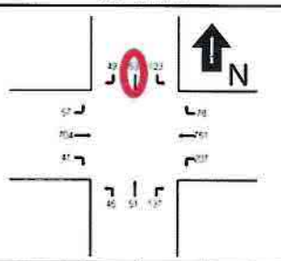
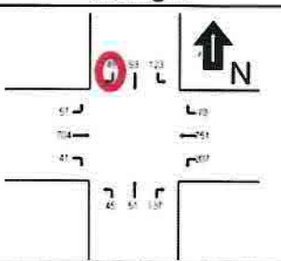
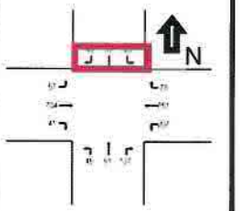
Time	100 Street - Northbound Vehicles						100 Street - Southbound Vehicles						
	NB Left		NB Thru		NB Right		SB Left		SB Thru		SB Right		
													
	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Pedestrians Crossing North Approach
10:00-10:15 am													
10:15-10:30 am													
10:30-10:45 am													
10:45-11:00 am													
11:00-11:15 am													
11:15-11:30 am													
11:30-11:45 am													
11:45-12:00 pm													

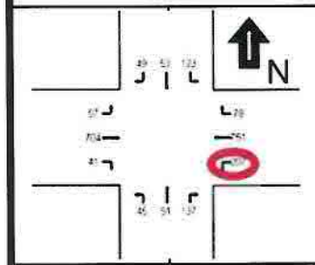
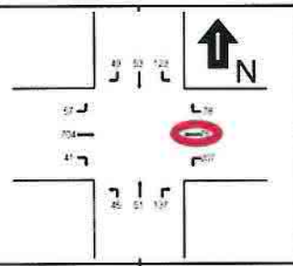
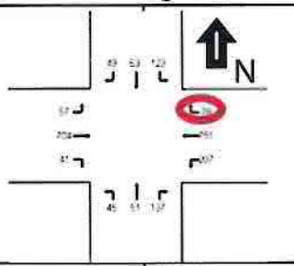
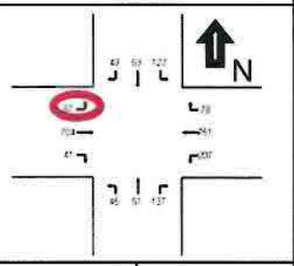
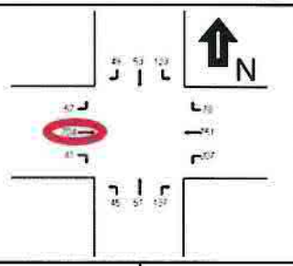
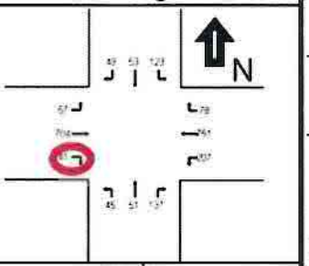
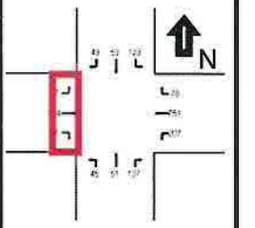
Time	94 Avenue - Westbound Vehicles						94 Avenue - Eastbound Vehicles						
	WB Left		WB Thru		WB Right		EB Left		EB Thru		EB Right		
													
	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Pedestrians Crossing West Approach
10:00-10:15 am	4	0	5	0	15	0	17	0	4	2	3	0	0
10:15-10:30 am	3	1	2	0	2	1	5	0	1	0	1	0	0
10:30-10:45 am	4	0	3	0	5	0	8	0	1	0	2	0	0
10:45-11:00 am	0	3	2	0	9	0	7	0	2	0	1	0	0
11:00-11:15 am	2	0	3	0	9	1	5	0	2	0	2	0	0
11:15-11:30 am	5	0	4	0	5	0	6	0	3	0	4	0	0
11:30-11:45 am	10	0	5	0	3	0	12	1	6	0	4	0	0
11:45-12:00 pm													

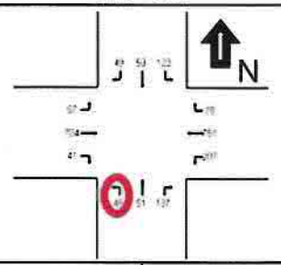
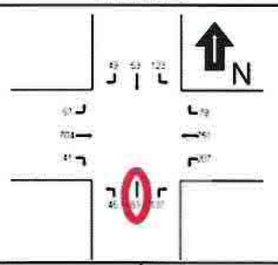
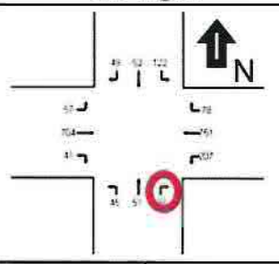
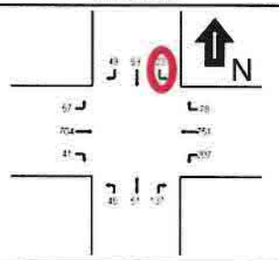
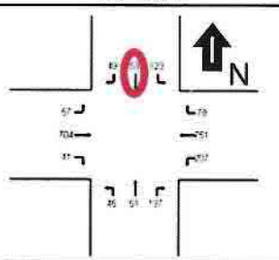
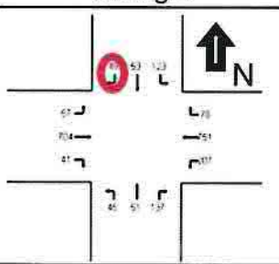
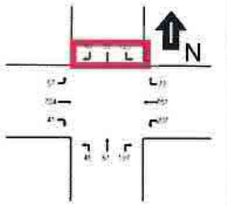
Time	100 Street - Northbound Vehicles						100 Street - Southbound Vehicles						
	NB Left		NB Thru		NB Right		SB Left		SB Thru		SB Right		
													
Time	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Pedestrians Crossing North Approach
12:00-12:15 pm	4		30		2		9		55		16		
12:15-12:30 pm	1		38		3		8		31		12		
12:30-12:45 pm	1		32		7		2		25		7		
12:45-1:00 pm	4		44		4		17		45	1	7		
1:00-1:15 pm	4		32	1	3	1	10		37		10		
1:15-1:30 pm	6		25		1		6		45	1	9	1	
1:30-1:45 pm	4	1	30	[illegible]	7	[illegible]	8		34	1	9	2	
1:45-2:00 pm	1	2	42		5		7		34		11	1	

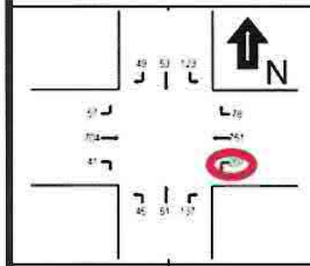
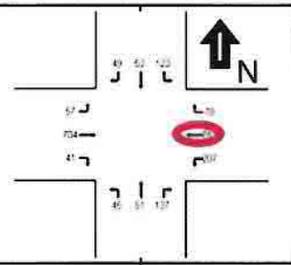
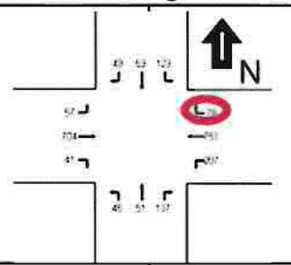
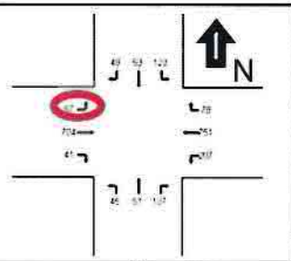
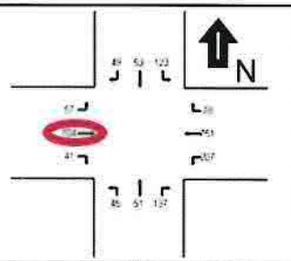
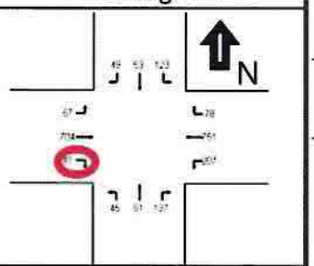
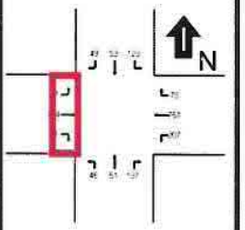
close stop sign

Time	94 Avenue - Westbound Vehicles						94 Avenue - Eastbound Vehicles						
	WB Left		WB Thru		WB Right		EB Left		EB Thru		EB Right		
													
	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Pedestrians Crossing West Approach
12:00-12:15 pm	8	0	9	1	26	1	9	0	1	0	2	0	
12:15-12:30 pm													
12:30-12:45 pm													
12:45-1:00 pm													
1:00-1:15 pm													
1:15-1:30 pm													
1:30-1:45 pm													
1:45-2:00 pm													

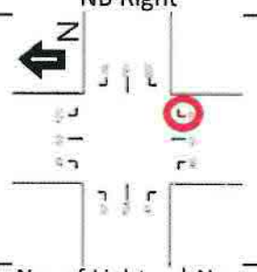
Time	100 Street - Northbound Vehicles						100 Street - Southbound Vehicles						
	NB Left		NB Thru		NB Right		SB Left		SB Thru		SB Right		
													
	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Pedestrians Crossing North Approach
2:00-2:15 pm													
2:15-2:30 pm													
2:30-2:45 pm													
2:45-3:00 pm													
3:00-3:15 pm													
3:15-3:30 pm													
3:30-3:45 pm													
3:45-4:00 pm													

Time	94 Avenue - Westbound Vehicles						94 Avenue - Eastbound Vehicles						
	WB Left		WB Thru		WB Right		EB Left		EB Thru		EB Right		
													
	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Pedestrians Crossing West Approach
2:00-2:15 pm													
2:15-2:30 pm													
2:30-2:45 pm													
2:45-3:00 pm													
3:00-3:15 pm													
3:15-3:30 pm													
3:30-3:45 pm													
3:45-4:00 pm													

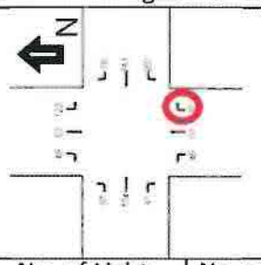
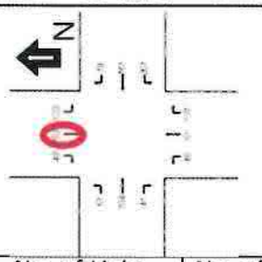
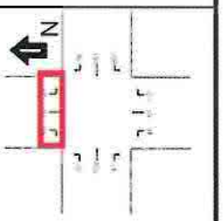
Time	100 Street - Northbound Vehicles						100 Street - Southbound Vehicles						
	NB Left		NB Thru		NB Right		SB Left		SB Thru		SB Right		
													
	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Pedestrians Crossing North Approach
4:00-4:15 pm													
4:15-4:30 pm													
4:30-4:45 pm													
4:45-5:00 pm													
5:00-5:15 pm													
5:15-5:30 pm													
5:30-5:45 pm													
5:45-6:00 pm													

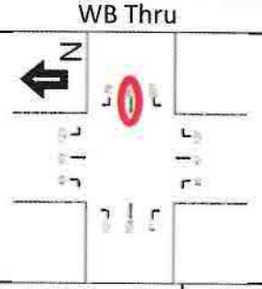
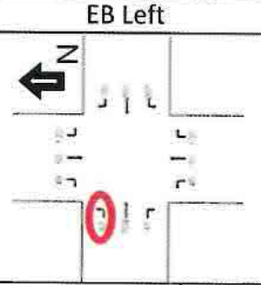
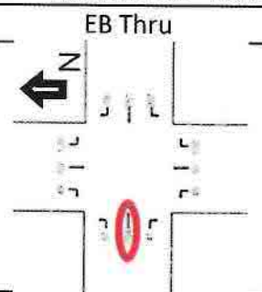
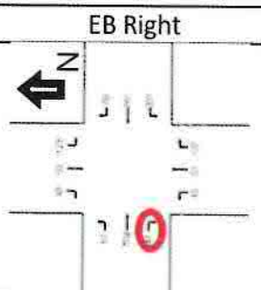
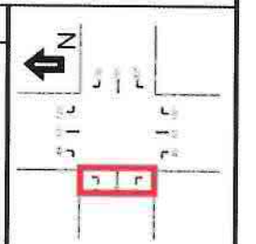
Time	94 Avenue - Westbound Vehicles						94 Avenue - Eastbound Vehicles						
	WB Left		WB Thru		WB Right		EB Left		EB Thru		EB Right		
													
	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Pedestrians Crossing West Approach
4:00-4:15 pm													
4:15-4:30 pm													
4:30-4:45 pm													
4:45-5:00 pm													
5:00-5:15 pm													
5:15-5:30 pm													
5:30-5:45 pm													
5:45-6:00 pm													

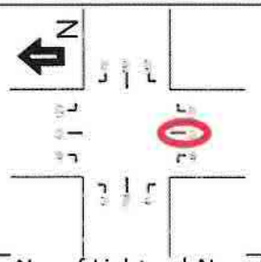
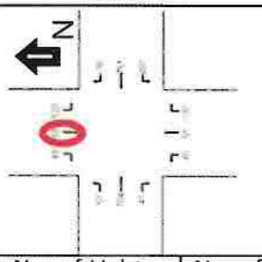
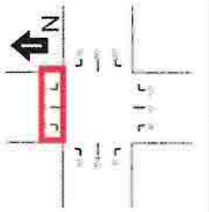
Date of Count: Dec 8 / 2020

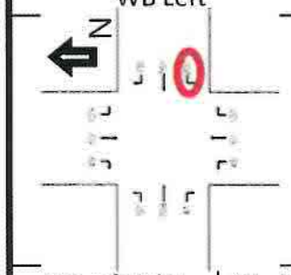
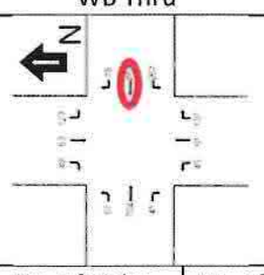
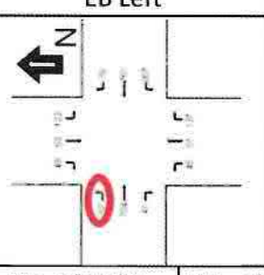
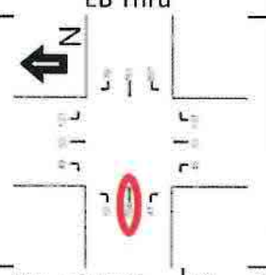
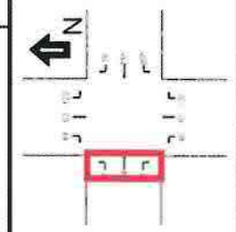
Time	100 Street - Northbound Vehicles						100 Street - Southbound Vehicles						
	NB Left 		NB Thru 		NB Right 		SB Left 		SB Thru 		SB Right 		
	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Pedestrians Crossing North Approach
6:00-6:15 am	0		1		2		3		0		0	1	0
6:15-6:30 am	0		0		8		0		1		0		0
6:30-6:45 am	0		0		4		1		2		0		0
6:45-7:00 am	1		2	1	4		0		3		1		0
7:00-7:15 am	0		1		14	1	1		2		1		0
7:15-7:30 am	0		0		12	2	2		6		0		0
7:30-7:45 am	0		4		13		2		6		0		0
7:45-8:00 am	0		3		21		8		16		1		0

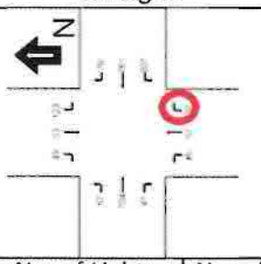
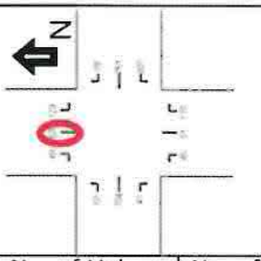
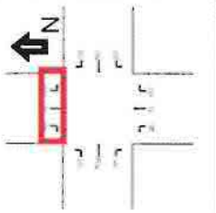
Time	109 Avenue - Westbound Vehicles						109 Avenue - Eastbound Vehicles						
	WB Left		WB Thru		WB Right		EB Left		EB Thru		EB Right		
	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Pedestrians Crossing West Approach
6:00-6:15 am	0		1 0	1	0		0		11 2	1	1 0	0	0
6:15-6:30 am	5	2	0	0	0		0		1 1		0	1	0
6:30-6:45 am	2	1	1 0		1 0		0		11 2		0		0
6:45-7:00 am	5		5		3		0		4		0		0
7:00-7:15 am	0		1 0		0		0		11 2		0		0
7:15-7:30 am	6		11 2		0		0		11 2		0		0
7:30-7:45 am			11	1							4		
7:45-8:00 am					11					1	11		
	20		7		2				10	1	4		

Time	100 Street - Northbound Vehicles						100 Street - Southbound Vehicles						
	NB Left		NB Thru		NB Right		SB Left		SB Thru		SB Right		
													
	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Pedestrians Crossing North Approach
8:00-8:15 am	0		2		14	2	0		9	1	0		0
8:15-8:30 am	1	1	8		11	1	5		13		1		0
8:30-8:45 am	1		5		19	3	3		5		0		0
8:45-9:00 am	0		3		21	1	3		9	1	0		0
9:00-9:15 am	1		3		11	1	0		5		0		0
9:15-9:30 am	5		3	1	12	2	1	1	8	1	1		0
9:30-9:45 am	2		3		15	1	3		3		0		0
9:45-10:00 am	3		4		9		3		7		3		

Time	109 Avenue - Westbound Vehicles						109 Avenue - Eastbound Vehicles						
	WB Left 		WB Thru 		WB Right 		EB Left 		EB Thru 		EB Right 		
	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Pedestrians Crossing West Approach
8:00-8:15 am	17		1		3	1			11	1	1		
8:15-8:30 am	14	2	3	Ø	3	Ø	Ø	Ø	6	Ø	4	Ø	Ø
8:30-8:45 am	13	Ø	Ø	Ø	7	1	Ø	Ø	1	Ø	3	Ø	Ø
8:45-9:00 am	16	Ø	3		3	Ø	1	Ø	4	3	2	Ø	Ø
9:00-9:15 am	15	2	2	1	1	Ø	1	Ø	2	1	Ø	Ø	Ø
9:15-9:30 am	13	4	5	1	2	Ø	Ø	Ø	5	1	Ø	Ø	Ø
9:30-9:45 am	13	Ø	1	Ø	1	Ø	Ø	Ø	2	Ø	3	Ø	Ø
9:45-10:00 am	17	Ø	2		2	Ø	Ø	Ø	3	1	5	Ø	Ø

Time	100 Street - Northbound Vehicles						100 Street - Southbound Vehicles						
	NB Left		NB Thru		NB Right		SB Left		SB Thru		SB Right		
													
	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Pedestrians Crossing North Approach
10:00-10:15 am	3		1		18		2		8		1		Someone stalled and got towed by a truck 10:08-10:13
10:15-10:30 am	1		5		10	1	0		5		0		0
10:30-10:45 am	4		7		14	1	2		9		0		0
10:45-11:00 am	2		2		22	1	0		8		0		0
11:00-11:15 am	4		7		14		3	1	3		1		0
11:15-11:30 am	2		6		13		1		9		1		0
11:30-11:45 am	2		1	1	18		1		8		1		0
11:45-12:00 pm	5		8		21	2	3		5		1		0

Time	109 Avenue - Westbound Vehicles						109 Avenue - Eastbound Vehicles						
	WB Left		WB Thru		WB Right		EB Left		EB Thru		EB Right		
													
	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Pedestrians Crossing West Approach
10:00-10:15 am	9	2	2	0	0	0	4	0	3	0	4	0	0
10:15-10:30 am	10	1	3	0	0	1	0	0	3	0	1	0	0
10:30-10:45 am	14	0	2	0	4	0	0	0	1	0	6	0	0
10:45-11:00 am	16	0	1	0	5	0	0	0	3	0	2	0	0
11:00-11:15 am	12	0	4	0	3	0	0	0	5	0	2	0	0
11:15-11:30 am	15	0	2	0	3	0	0	0	4	0	3	0	0
11:30-11:45 am	20	0	1	0	2	2	0	0	0	0	4	0	0
11:45-12:00 pm	14	2	6	1	3	0	0	0	6	2	5	0	0

Time	100 Street - Northbound Vehicles						100 Street - Southbound Vehicles						
	NB Left		NB Thru		NB Right		SB Left		SB Thru		SB Right		
													
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12:00-12:15 pm	7	0	13	0	26	1	2	0	14	0	1	0	0
12:15-12:30 pm	8	0	6	0	16	0	2	0	3	0	0	0	0
12:30-12:45 pm	1	0	3	0	23	0	3	0	1	0	0	0	0
12:45-1:00 pm	5	0	6	0	25	0	1	0	12	0	1	0	0
1:00-1:15 pm	3	0	17	0	25	0	3	1	8	0	2	0	0
1:15-1:30 pm	4	0	5	0	27	1	2	0	5	0	0	0	0
1:30-1:45 pm	7	0	3	0	21	0	4	1	11	0	0	0	0
1:45-2:00 pm	3	0	3	0	25	0	1	0	8	0	0	1	0

Time	109 Avenue - Westbound Vehicles						109 Avenue - Eastbound Vehicles						
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	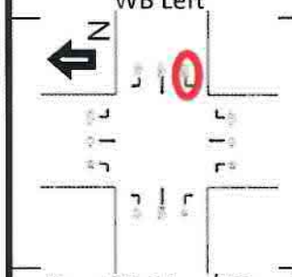		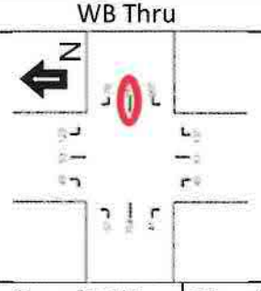		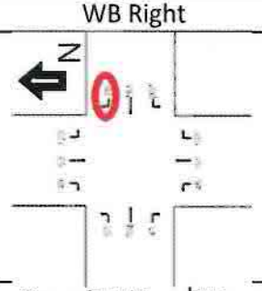				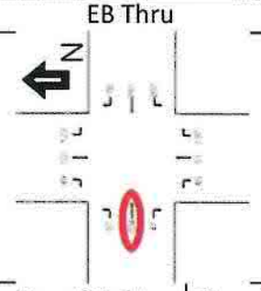				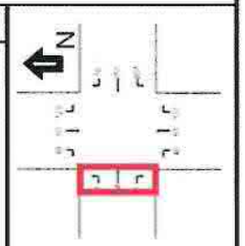
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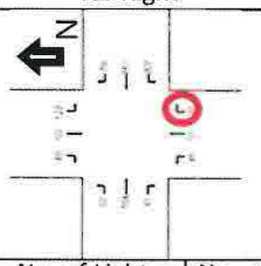
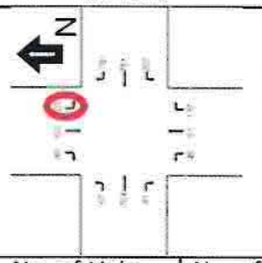
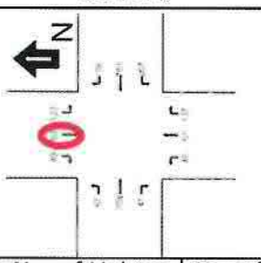
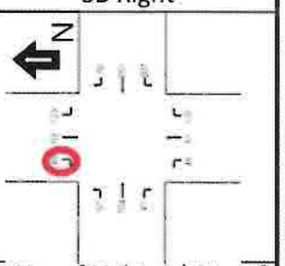
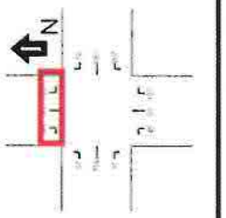
12:00-12:15 pm	33	1	15	0	1	0	0	0	3	0	3	0	0
12:15-12:30 pm	24	0	2	0	0	0	0	0	1	0	2	0	0
12:30-12:45 pm	19		7	1	2		2		6	1	2		0
12:45-1:00 pm	21		3	0	4	0	1	0	8	0	1	0	0
1:00-1:15 pm	19	3	4	0	4	3	1	0	10	0	5	0	0
1:15-1:30 pm	22	1	2	1	4	0	1	1	1	0	4	0	0
1:30-1:45 pm	25	0	3	0	5	0	1	0	4	0	2	0	0
1:45-2:00 pm	14	2	4	0	4	1	0	0	5	0	5	0	0

Time	100 Street - Northbound Vehicles						100 Street - Southbound Vehicles						
	NB Left		NB Thru		NB Right		SB Left		SB Thru		SB Right		
													
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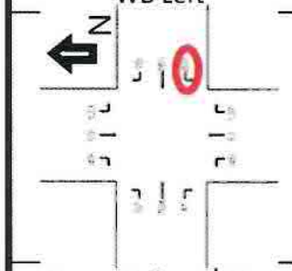
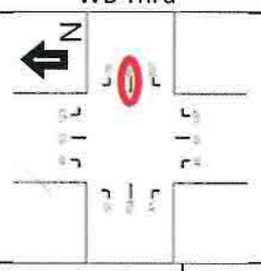
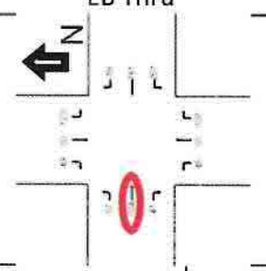
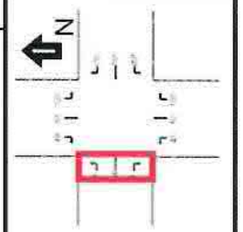
2:00-2:15 pm	6	1	7	0	27	2	1	1	11	2	0	0	0
2:15-2:30 pm	8	0	15	1	15	2	3	0	13	0	1	0	0
2:30-2:45 pm	2	0	10	0	25	1	1	0	10	0	1	0	0
2:45-3:00 pm	7	0	5	0	30	5	4	0	7	0	0	0	0
3:00-3:15 pm	7	0	5	0	19	0	3	0	12	0	0	0	0
3:15-3:30 pm	11	0	11	0	21	0	1	0	8	0	2	1	0
3:30-3:45 pm	5	0	9	0	21	0	2	0	8	0	1	0	0
3:45-4:00 pm	4	0	7	0	28	2	5	0	2	0	1	0	0

Time	109 Avenue - Westbound Vehicles						109 Avenue - Eastbound Vehicles						
	WB Left		WB Thru		WB Right		EB Left		EB Thru		EB Right		
													
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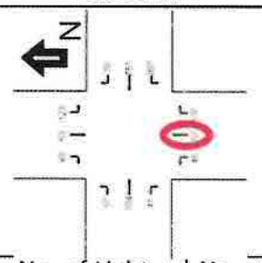
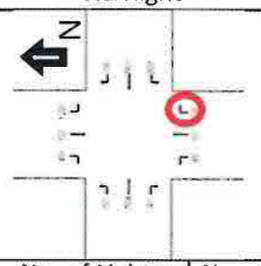
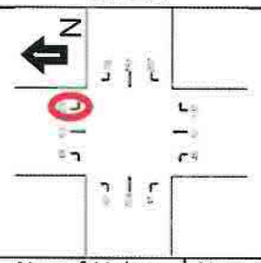
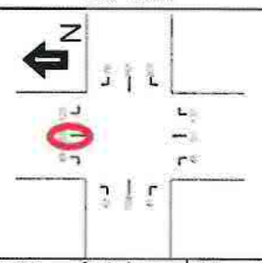
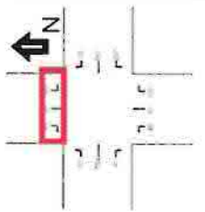
2:00-2:15 pm	(39)	(1)	(5)	(2)	(7)	∅	∅	∅	(4)	(1)	(6)	∅	∅
2:15-2:30 pm	(27)	(2)	(4)	(1)	(2)	∅	∅	∅	(3)		(5)	∅	∅
2:30-2:45 pm	(19)	∅	(3)	∅	(4)	∅	∅	∅	(3)		(5)	∅	∅
2:45-3:00 pm	(26)	∅	(4)	∅	(3)	∅	(2)	∅	(7)	∅	(3)	∅	∅
3:00-3:15 pm	(29)	∅	(8)	∅	(5)	∅	∅	∅	(4)	∅	(5)	∅	∅
3:15-3:30 pm	(21)	∅	(2)	(2)	(4)	∅	(2)		(5)	∅	(7)	∅	∅
3:30-3:45 pm	(16)	(1)	(6)	∅	(2)	∅	∅	∅	(1)	(1)	(3)	∅	∅
3:45-4:00 pm													

Time	100 Street - Northbound Vehicles						100 Street - Southbound Vehicles						
	NB Left		NB Thru		NB Right		SB Left		SB Thru		SB Right		
													
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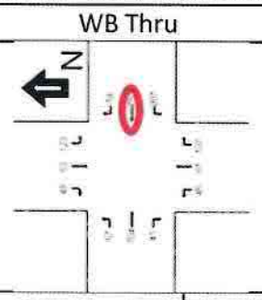
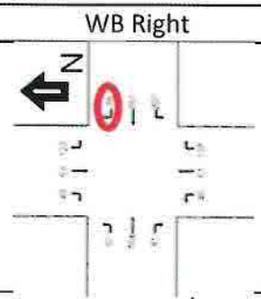
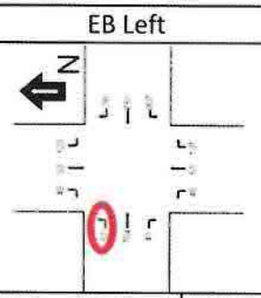
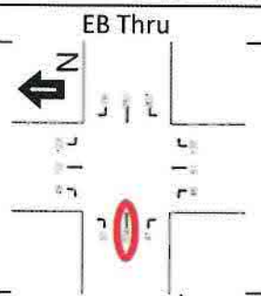
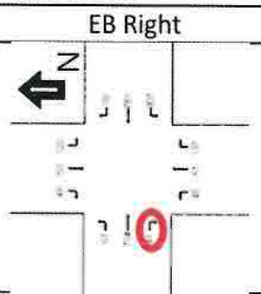
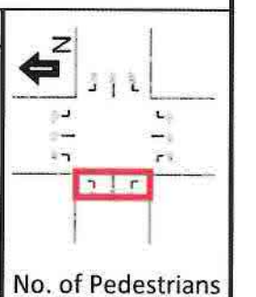
4:00-4:15 pm	8	0	10	0	26	0	3	1	9	0	0	0	0
4:15-4:30 pm	5	0	4		25	0	0	1	6	0	0	0	0
4:30-4:45 pm	4	0	10	2	27	0	3	2	10	0	0	0	0
4:45-5:00 pm	8	0	16	1	28	2	1	1	8	0	2	0	0
5:00-5:15 pm	9	0	17	0	28	3	2	0	8	1	0	1	0
5:15-5:30 pm	5	0	13	0	24	0	1	0	9	0	0	0	0
5:30-5:45 pm	4	0	10	0	29	0	0	0	11	0	2	0	0
5:45-6:00 pm	4	1	5	0	24	0	4	0	4	0	1	1	0

Time	109 Avenue - Westbound Vehicles						109 Avenue - Eastbound Vehicles						
	WB Left 		WB Thru 		WB Right 		EB Left 		EB Thru 		EB Right 		
	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Light Vehicles	No. of Trucks	No. of Pedestrians Crossing West Approach
4:00-4:15 pm	17	0	1	0	6	0	0	1	7	0	7	0	0
4:15-4:30 pm	29	1	7	0	0	2	2	0	7	2	3	0	0
4:30-4:45 pm	24	1	11	0	2	0	2	0	8	1	4	0	0
4:45-5:00 pm	20	5	10		3	1	0	0	4	0	4	0	0
5:00-5:15 pm	29	1	8	0	3	1	2	0	5	0	2	0	0
5:15-5:30 pm	8	0	8	0	6	0	1	0	4	0	11	0	0
5:30-5:45 pm	20	1	14	0	2	0	3	0	3	0	1	0	0
5:45-6:00 pm	16	0	11	0	2	0	1	0	2	0	5	0	0

APPENDIX B - COLLISION DATA

Date	Time	Type	Severity	Surface Condition	Environmental Condition
At the Twp Rd 1062 / North Access / 109 Ave intersection					
3-Jan-13	6:15 PM	Head On	PDO	Slush/Snow /Ice	Clear
15-May-15	5:30 PM	Run Off Road Right	PDO	N/A	N/A
8-Aug-14	9:40 PM	Overturn in Ditch Right	Minor Injury	Wet	Raining
26-Apr-14	4:45 PM	Right Angle	Minor Injury	Dry	Clear
24-Nov-14	6:30 PM	Fixed Object Left / Median Ditch	PDO	N/A	N/A
18-Dec-14	6:00 PM	Run Off Road Right	PDO	Slush/Snow /Ice	Fog/ Smoke /Smog /Dust
Between the Twp Rd 1062 / North Access / 109 Ave and Twp Rd 1061 / 94 Ave intersections					
10-Nov-16	7:10 PM	Struck Animal	PDO	Dry	Clear
8-Apr-16	9:30 PM	Struck Animal	PDO	Dry	Clear
1-Feb-16	7:32 PM	Opposite Direction Sideswipe Cross Center Line	PDO	Wet	Snow
4-Aug-13	6:30 PM	Overturn in Ditch Right	Major Injury	Dry	Clear
11-Jul-16	7:45 PM	Struck Animal	PDO	Dry	Clear
7-Oct-17	9:00 PM	Struck Animal	PDO	Dry	Clear
31-Dec-15	5:05 PM	Strike Non-Fixed Object on Roadway	PDO	N/A	N/A
2-Sep-13	9:15 PM	Struck Animal	PDO	N/A	N/A
2-Jun-15	11:00 AM	Struck Animal	PDO	Dry	Clear
9-Sep-13	2:00 PM	Passing - Left Turn	PDO	Dry	Clear
9-Aug-13	6:15 PM	Run Off Road Right	Minor Injury	Dry	Clear
8-Jun-13	10:15 PM	Struck Animal	PDO	N/A	N/A
26-Mar-16	10:30 PM	Struck Animal	PDO	Dry	Clear
28-Mar-11	5:30 PM	Struck Animal	PDO	N/A	N/A
9-Sep-13	5:00 AM	Struck Animal	PDO	N/A	N/A
27-Apr-14	10:35 PM	Struck Animal	PDO	N/A	N/A
At the Twp Rd 1061 / 94 Ave intersection					
17-Dec-13	6:45 PM	Right Angle	Major Injury	Slush/Snow/Ice	Snow
28-Jun-13	10:00 PM	Fixed Object Right Ditch	PDO	Dry	Clear

Date	Time	Type	Severity	Surface Condition	Environmental Condition
Between the Twp Rd 1061 / 94 Ave and Twp Rd 1061 / Airport Access intersections					
19-Sep-12	6:50 AM	Struck Animal	PDO	N/A	N/A
2-Sep-12	9:00 AM	Struck Animal	PDO	N/A	N/A
7-Apr-16	5:35 AM	Struck Animal	PDO	Slush/Snow/Ice	Clear
19-Oct-09	12:15 PM	Fixed Object Right Ditch	PDO	Slush/Snow/Ice	Snow
At the Twp Rd 1061 / Airport Access intersection					
21-Jun-11	10:45 AM	Left Turn Across Path	Minor Injury	Dry	Clear
18-Jan-10	6:17 PM	Rear End	Minor Injury	Slush/Snow/Ice	Snow
Between the Twp Rd 1060 / South Access and Twp Rd 1055 / Sawmill Access intersections					
1-Nov-09	12:35 AM	Overturn in Ditch Left / Median Side	Major Injury	Slush/Snow/Ice	Snow
10-Feb-09	7:00 AM	Struck Animal	PDO	N/A	N/A
22-Oct-10	1:00 AM	Struck Animal	PDO	N/A	N/A
25-Jun-08	3:30 AM	Struck Animal	PDO	N/A	N/A
22-Mar-09	9:00 PM	Struck Animal	PDO	N/A	N/A
20-Oct-10	7:50 AM	Struck Animal	PDO	N/A	N/A
24-Nov-10	7:30 AM	Struck Animal	PDO	N/A	N/A
At the Twp Rd 1055 / Sawmill Access intersection					
4-Apr-08	10:00 PM	Sideswiped Parked Vehicle	Minor Injury	Slush/Snow/Ice	High Wind
4-Apr-08	10:00 PM	Run Off Road Left	Minor Injury	Slush/Snow/Ice	High Wind
28-Sep-09	7:20 AM	Struck Animal	PDO	N/A	N/A

APPENDIX C - SITE PHOTOS

Hwy 697 and Twp Rd 1062 / North Access Intersection:

Figure 1 – Looking west along Twp Rd 1062

Figure 2 – Looking north at the intersection

Figure 3 – Looking northwest at the intersection

Figure 4 – Looking west from end of taper

Figure 5 – Stop condition at south leg

Figure 6 – Looking north from south leg

Figure 7 – Cattails in SE corner

Figure 8– Stop sign at south leg

Figure 9 – Pavement edge in NW corner

Figure 10 – Rumble strips in advance of stop

Figure 11 – Quad Trail in NE corner

Figure 12 – Ponding in NW corner

Hwy 697 and Twp Rd 1061 / 94 Ave Intersection:

Figure 1 – Looking west along Twp Rd 1061

Figure 2 – Looking NE at the intersection

Figure 3 – Looking north from intersection

Figure 4 – Looking northeast from end of taper

Figure 5 – Looking southwest from end of taper

Figure 6 – Looking north at field access

Figure 7 – Reeds in SE corner

Figure 8– Sideslope in NW corner

Hwy 697 and Twp Rd 1060 / South Access Intersection:

Figure 1 – Looking west along Twp Rd 1060

Figure 2 – Looking north at the intersection

Figure 3 – Looking SW from centre

Figure 4 – Looking north from centre

Figure 5 – Looking north at channelized turn

Figure 6 – Looking south from end of taper

Figure 7 – Pavement sideslope at SB right turn

Figure 8 – Stop condition on west leg

Hwy 697 and Twp Rd 1055 / Sawmill Access Intersection:

Figure 1 – Looking south at Sawmill Access

Figure 2 – Looking north

Figure 3 – Looking at west leg

Figure 4 – Looking SW at right turn

Figure 5 – Stop condition on west leg

Figure 6 – Looking south

Figure 7 – Channelized SB right turn

Figure 8 – NB off-ramp

Figure 9 – Looking at east leg

Figure 10 – Stop condition on east leg

Figure 11 – Smashed culvert in NE corner

Figure 12 – Reeds south of the intersection

100 St and 101 Ave Intersection:

Figure 1 – Looking at north leg

Figure 2 – Looking at south leg

Figure 3 – Looking at west leg

Figure 4 – Looking at east leg

Figure 5 – Crosswalk across north leg

Figure 6 – Crosswalk across west leg

Figure 7 – Trail along south side of west leg

Figure 8 – Manhole in SW corner

100 St and 94 Ave Intersection:

Figure 1 – Looking SE at intersection

Figure 2 – Crosswalk across west leg

Figure 3 – Looking at west leg

Figure 4 – Looking NE at intersection

Figure 5 – Looking NW at intersection

Figure 6 – Looking west at intersection

Figure 7 – Crosswalk across north leg

Figure 8 – Manhole in NW corner

Photos from around La Crete:

Figure 1 – Trail System

Figure 2 – School lot on 94 Avenue

Figure 3 – Trail System Along Range Road 154

Figure 4 – Newer Residential Road - Pioneer Drive

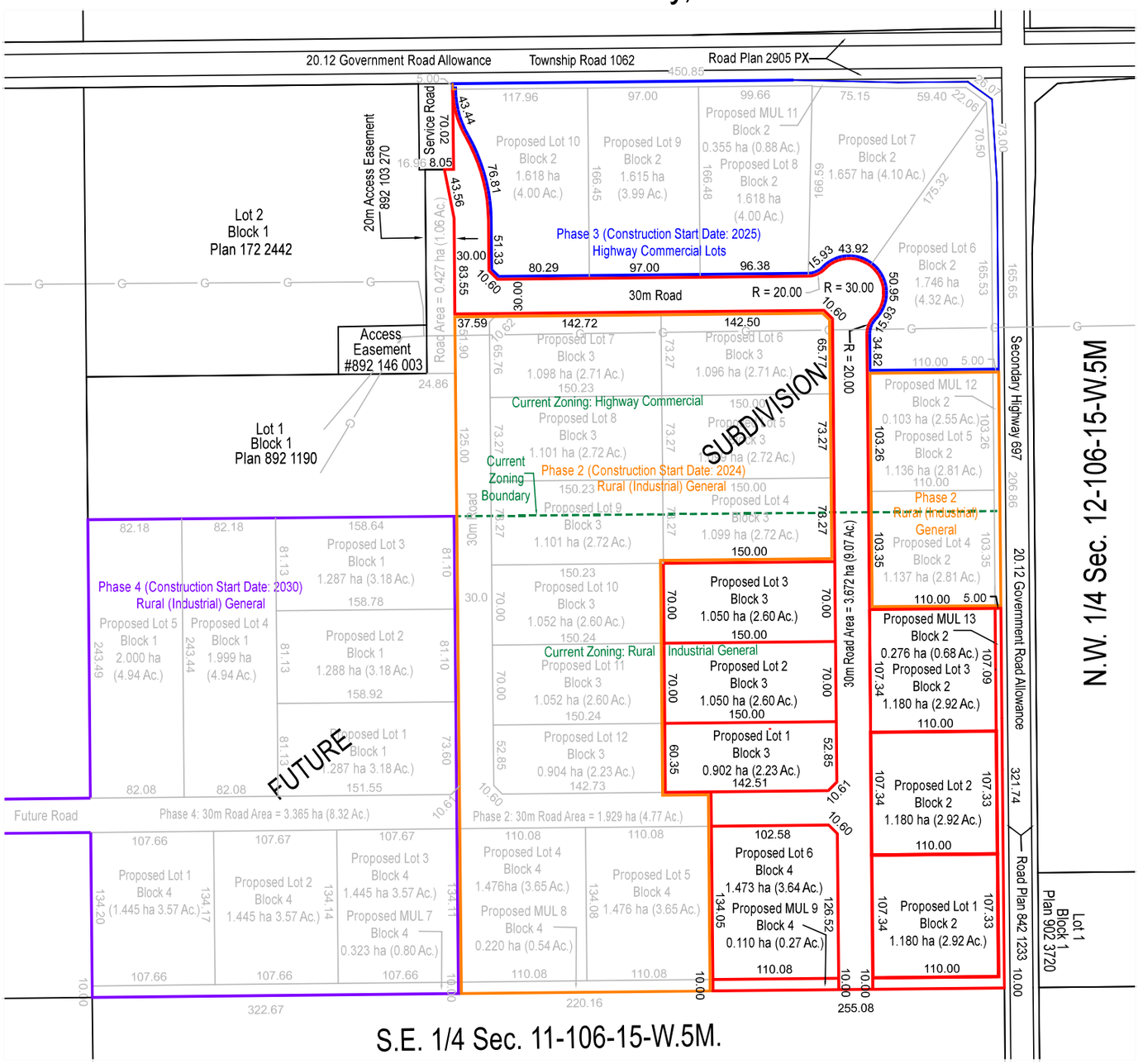
Figure 5 – Residential Area with Ditch Drainage

Figure 6 – Residential Road with Sidewalk

APPENDIX D - DEVELOPMENT PLANS

Tentative Plan Showing

Proposed Subdivision of
C. of T. 172 213 896
Within
NE. 1/4 Sec. 11, Twp. 106, Rge. 15, W.5M.
Within
Mackenzie County, Alberta



Scale: 1:5000

LANDOWNER(S):

N.E. 11-106-15-5:

Lake Side Real Estate Inc.
C. of T. 172 213 896

REGISTERED TITLE ENCUMBERANCES

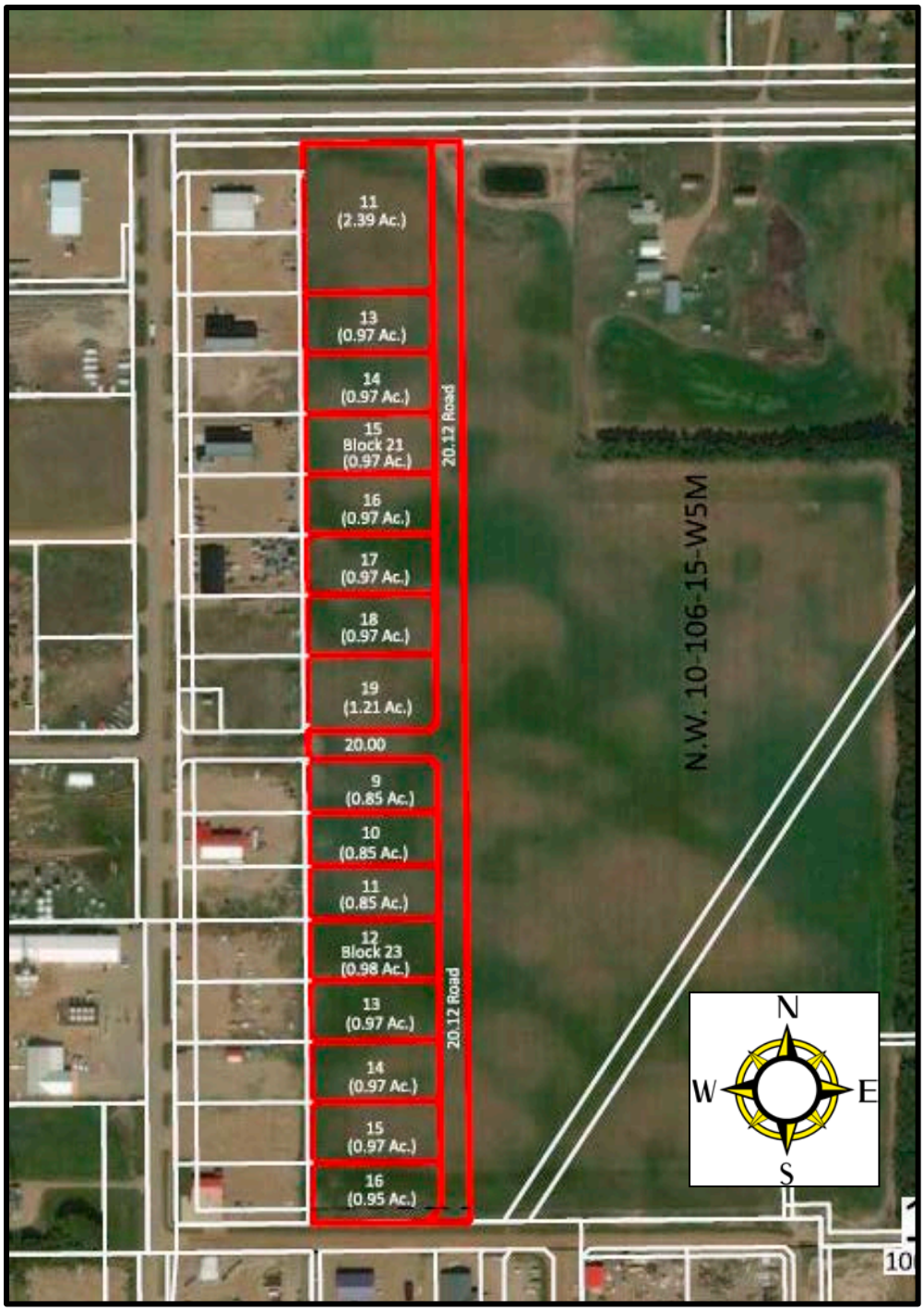
1. 792 273 077: U.R.W.
Nothern Lights Gas Coop
2. 892 103 270: Easement
(For the benefit of Lot 1 Block 1 Plan 892 1190)
3. 892 146 003: Easement
(For the benefit of Lot 1 Block 1 Plan 892 1190)

ALBERTA LAND SURVEYORS' ASSOCIATION
PERMIT NUMBER
P 298
BORDERLINE SURVEYS LTD.

BORDERLINE SURVEYS
11028 - 102nd Ave, Box 2661
Fairview, AB. 780 - 835 - 4618
www.borderlinesurveys.com

Date: April 2nd, 2010
Drawn by: SW
Job No. :190053 R4

SUBDIVISION APPLICATION - REVISION



File No. 47-SUB-19 REVISION

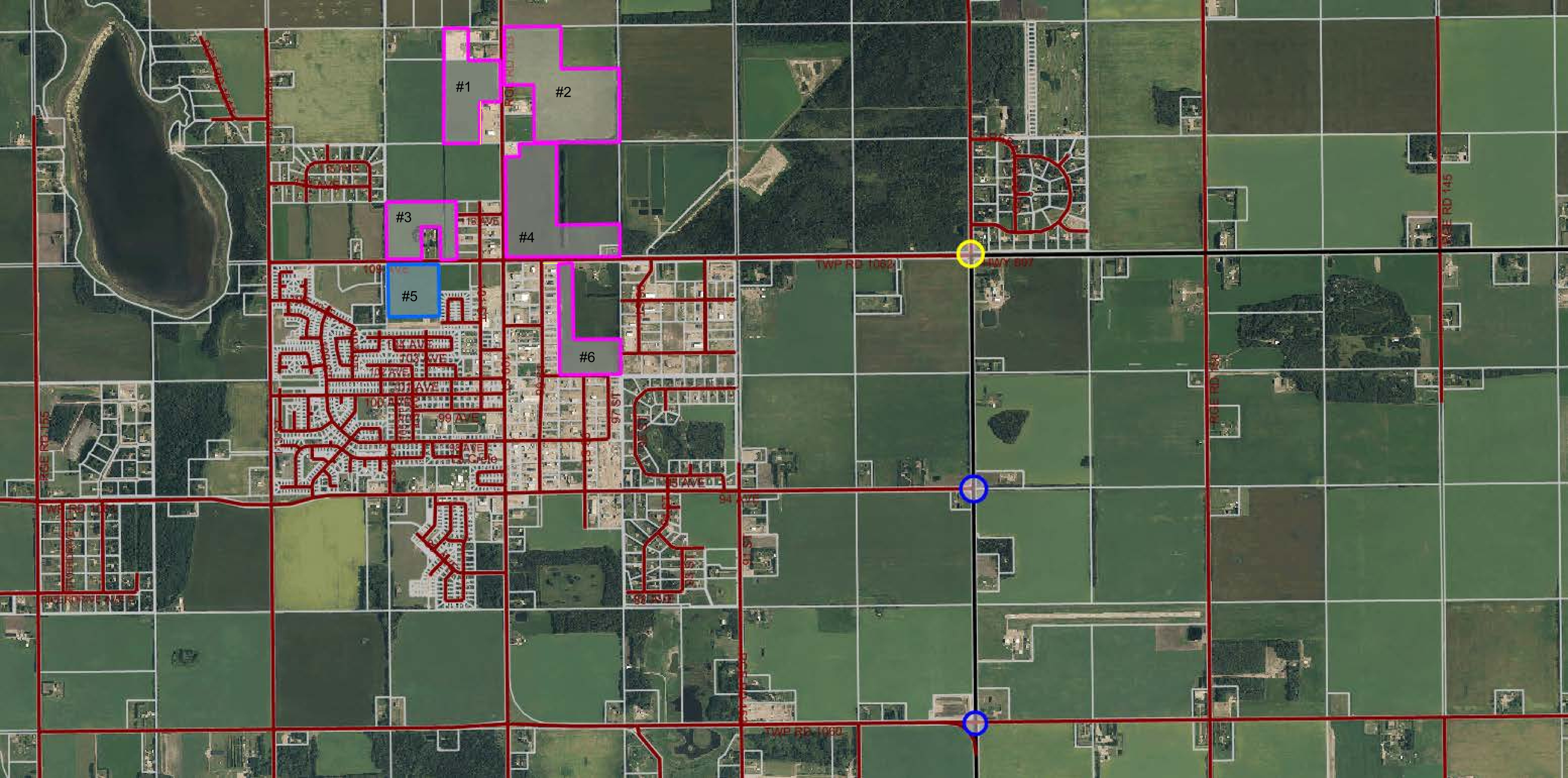
NOT TO SCALE

Disclaimer

Information on this map is provided solely for the user's information and, While thought to be accurate, is provided strictly "as is" and without warranty of any kind, either express or implied.

The County, its agents, employees or contractors will not be liable for any Damages, direct or indirect, or lost profits or data arising out of the use of information provided on this map.

Mackenzie County


#1
#2
#3
#4
#5
#6
TWP RD 1062
HWY 697
TWP RD 1060
RGE RD 145
RGE RD 155
94 AVE
97 ST
99 AVE
100 AVE
101 AVE
102 AVE
103 AVE

APPENDIX E - ITE LAND USE CODES

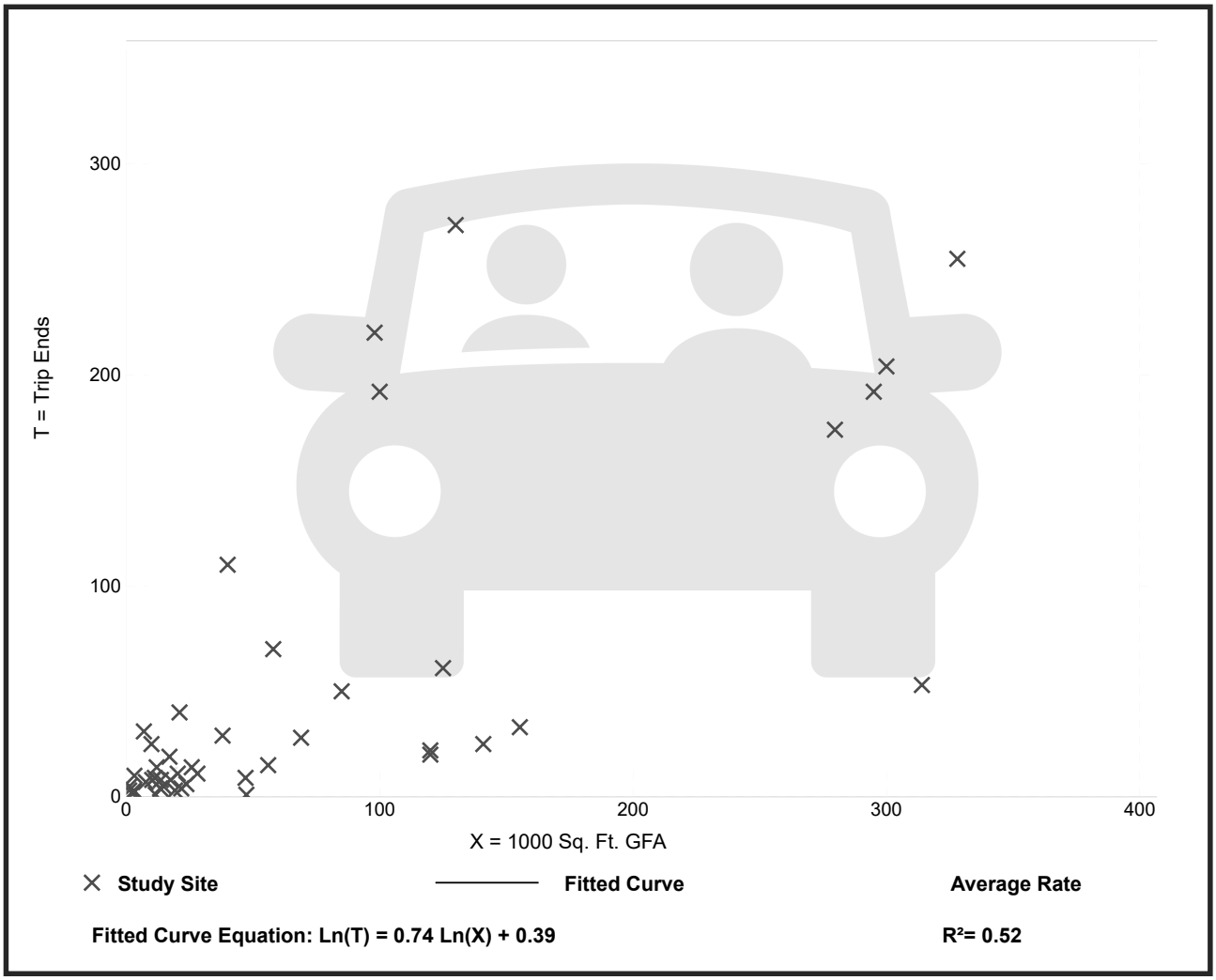
General Light Industrial
(110)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 45
Avg. 1000 Sq. Ft. GFA: 73
Directional Distribution: 88% entering, 12% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.70	0.02 - 4.46	0.65

Data Plot and Equation



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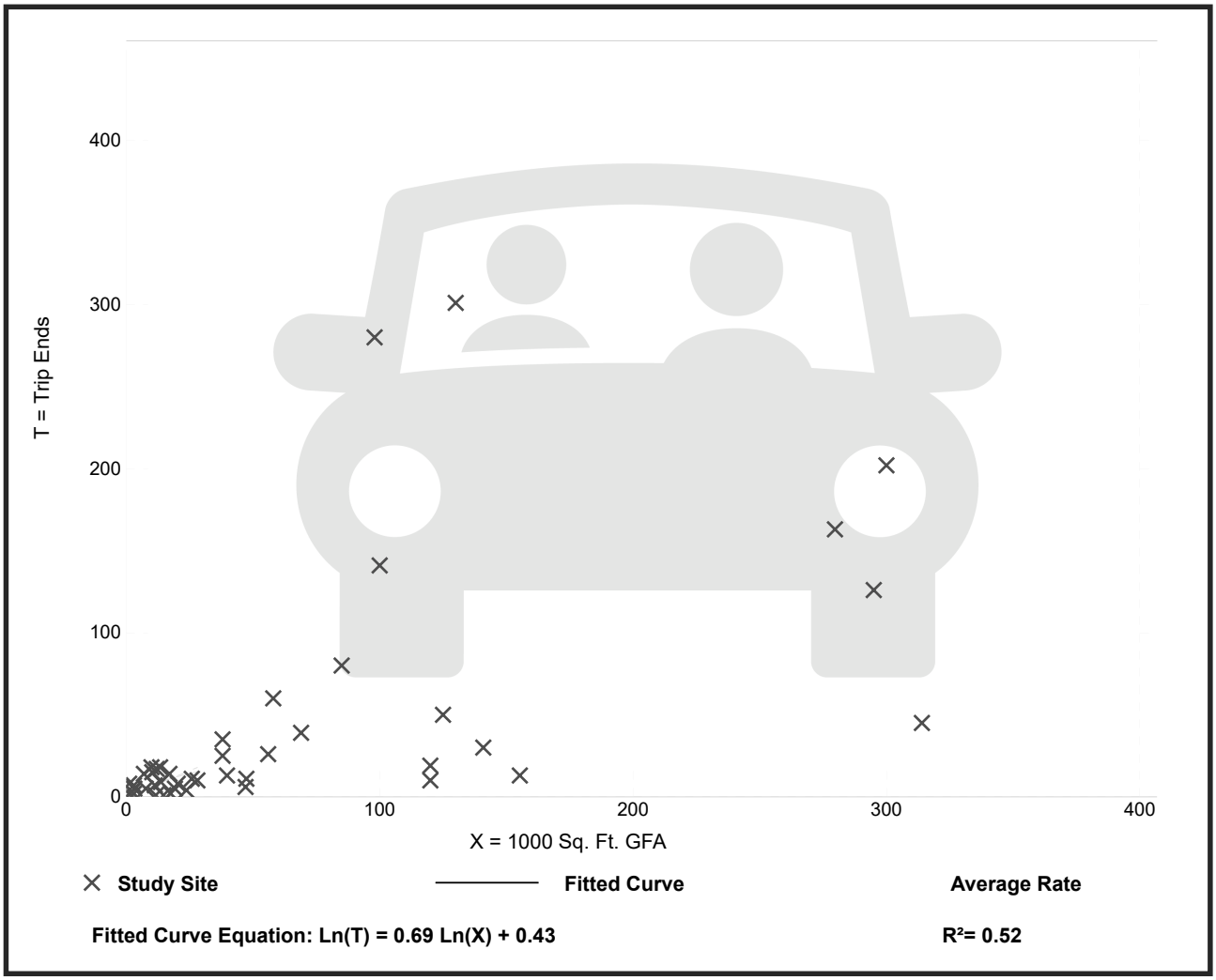
General Light Industrial
(110)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 44
Avg. 1000 Sq. Ft. GFA: 67
Directional Distribution: 13% entering, 87% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.63	0.07 - 7.02	0.68

Data Plot and Equation



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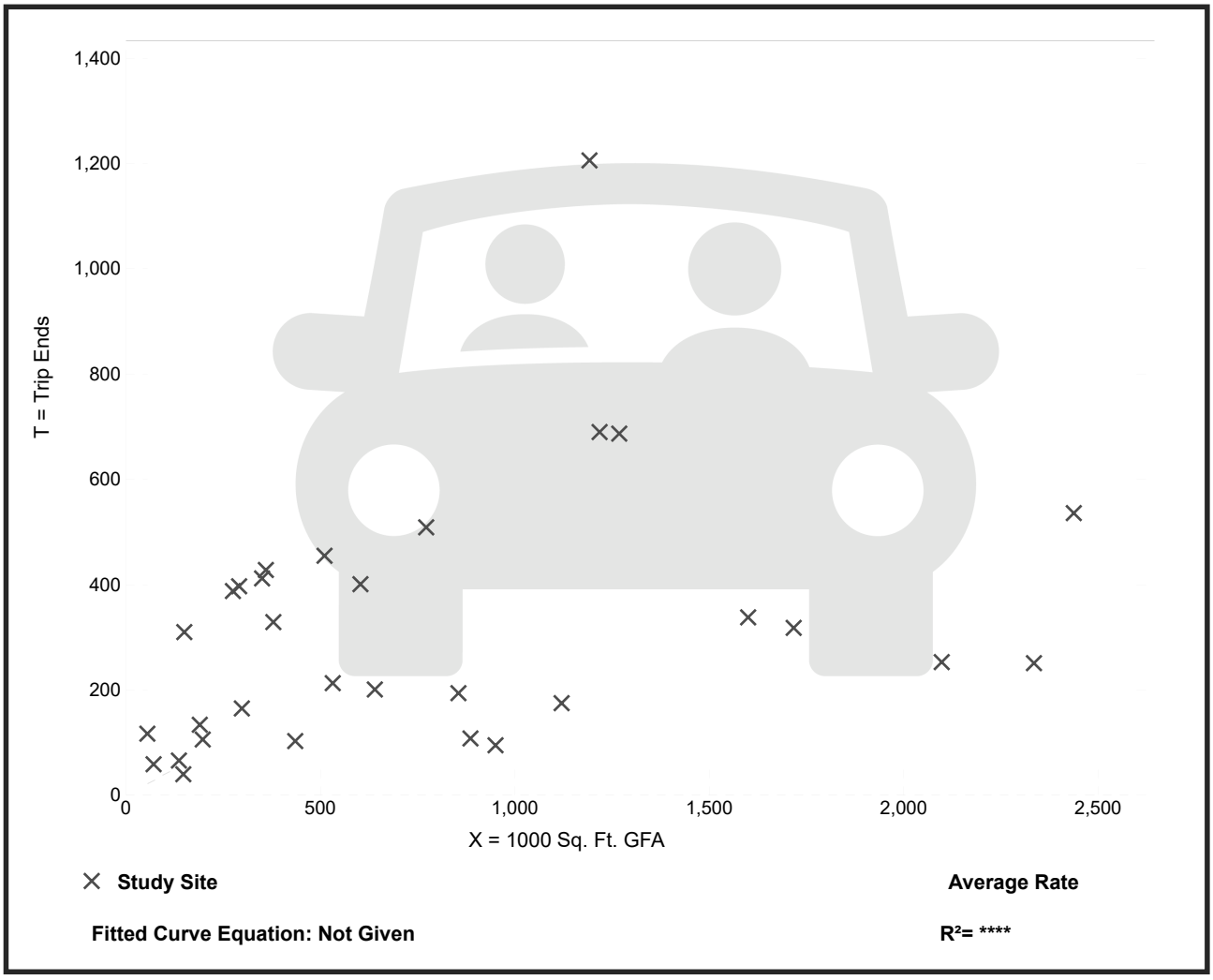
Industrial Park
(130)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 31
Avg. 1000 Sq. Ft. GFA: 776
Directional Distribution: 81% entering, 19% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.40	0.10 - 2.13	0.37

Data Plot and Equation



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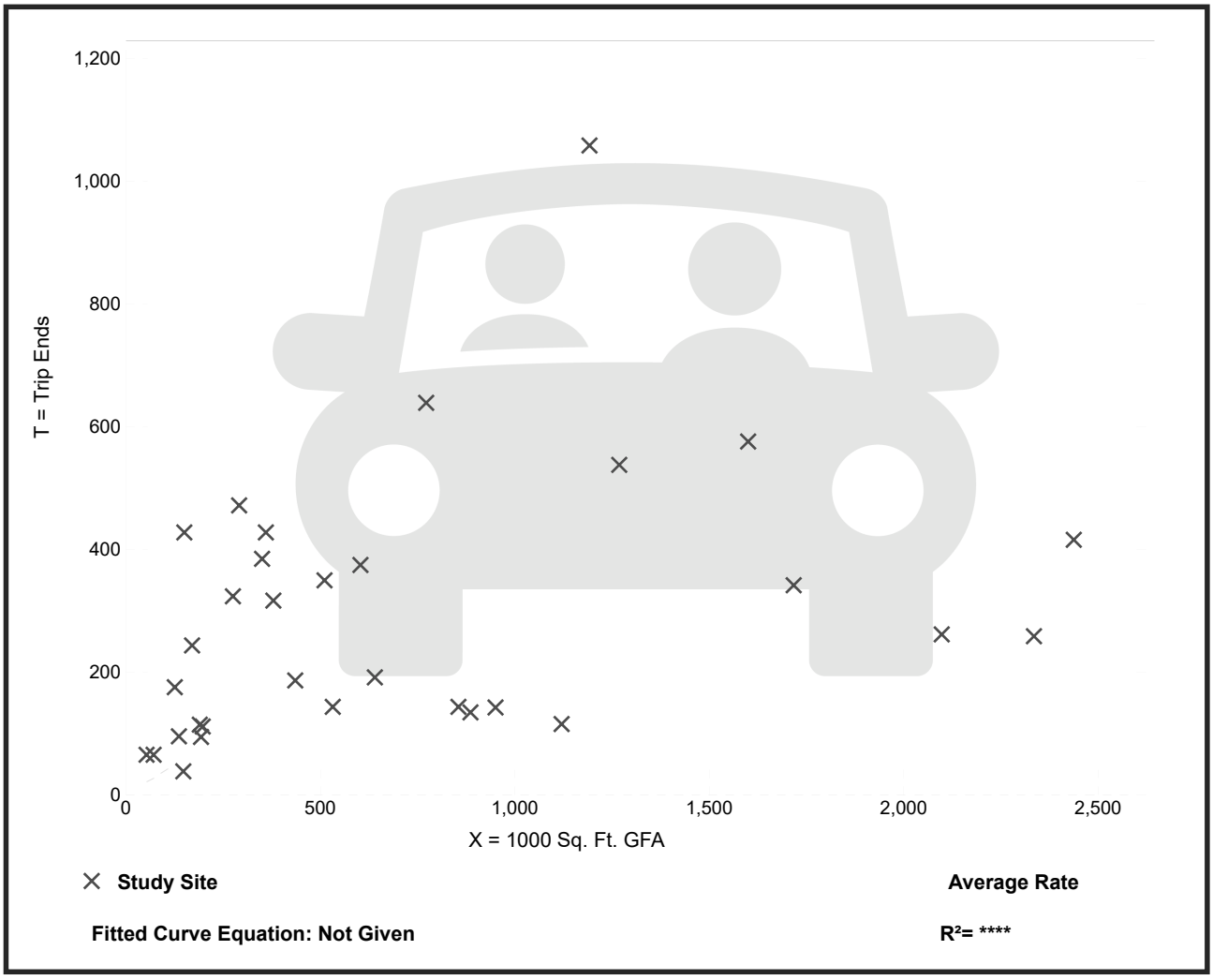
Industrial Park
(130)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 32
Avg. 1000 Sq. Ft. GFA: 720
Directional Distribution: 21% entering, 79% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.40	0.10 - 2.85	0.41

Data Plot and Equation



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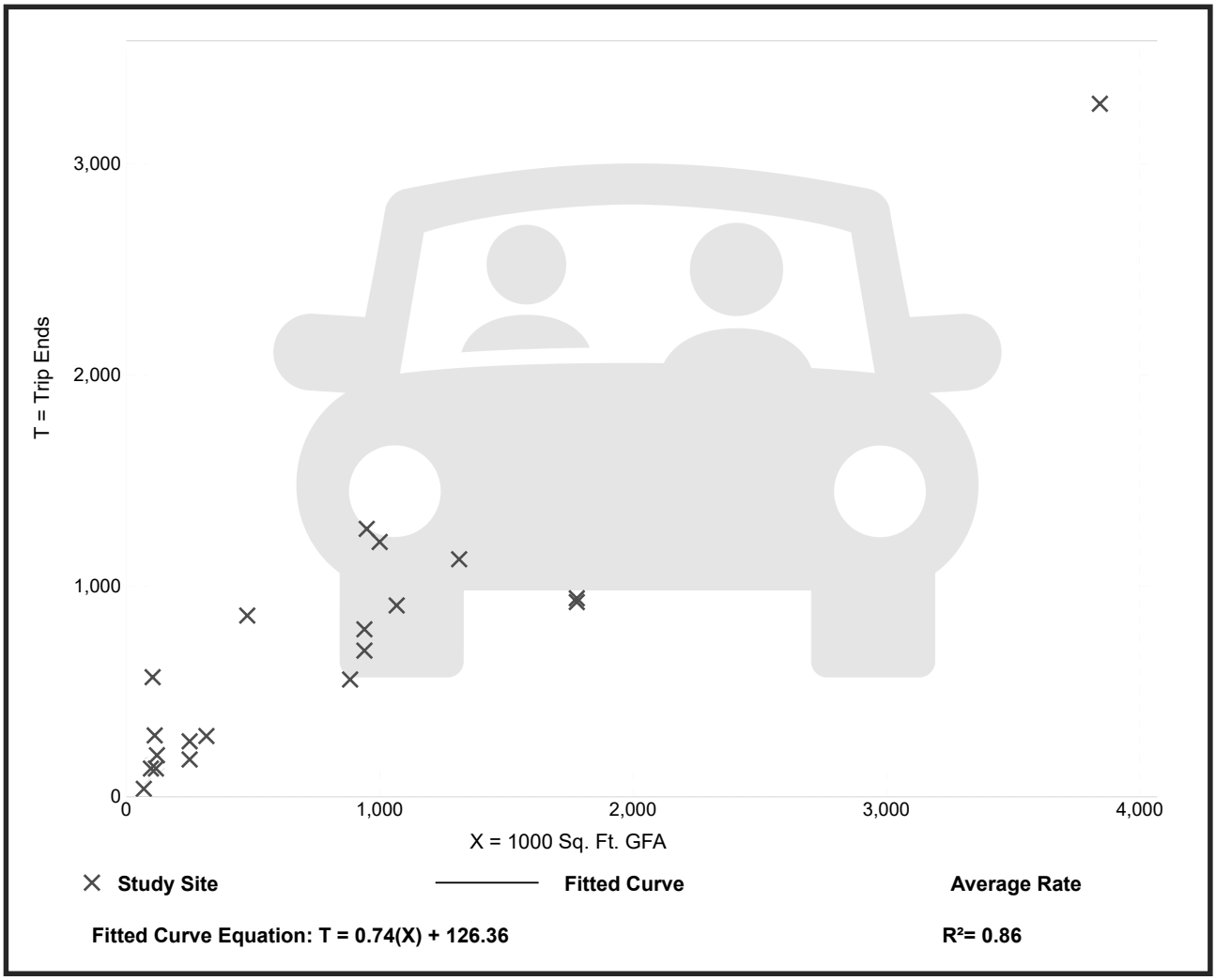
Hospital
(610)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 20
Avg. 1000 Sq. Ft. GFA: 820
Directional Distribution: 68% entering, 32% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.89	0.52 - 5.45	0.50

Data Plot and Equation



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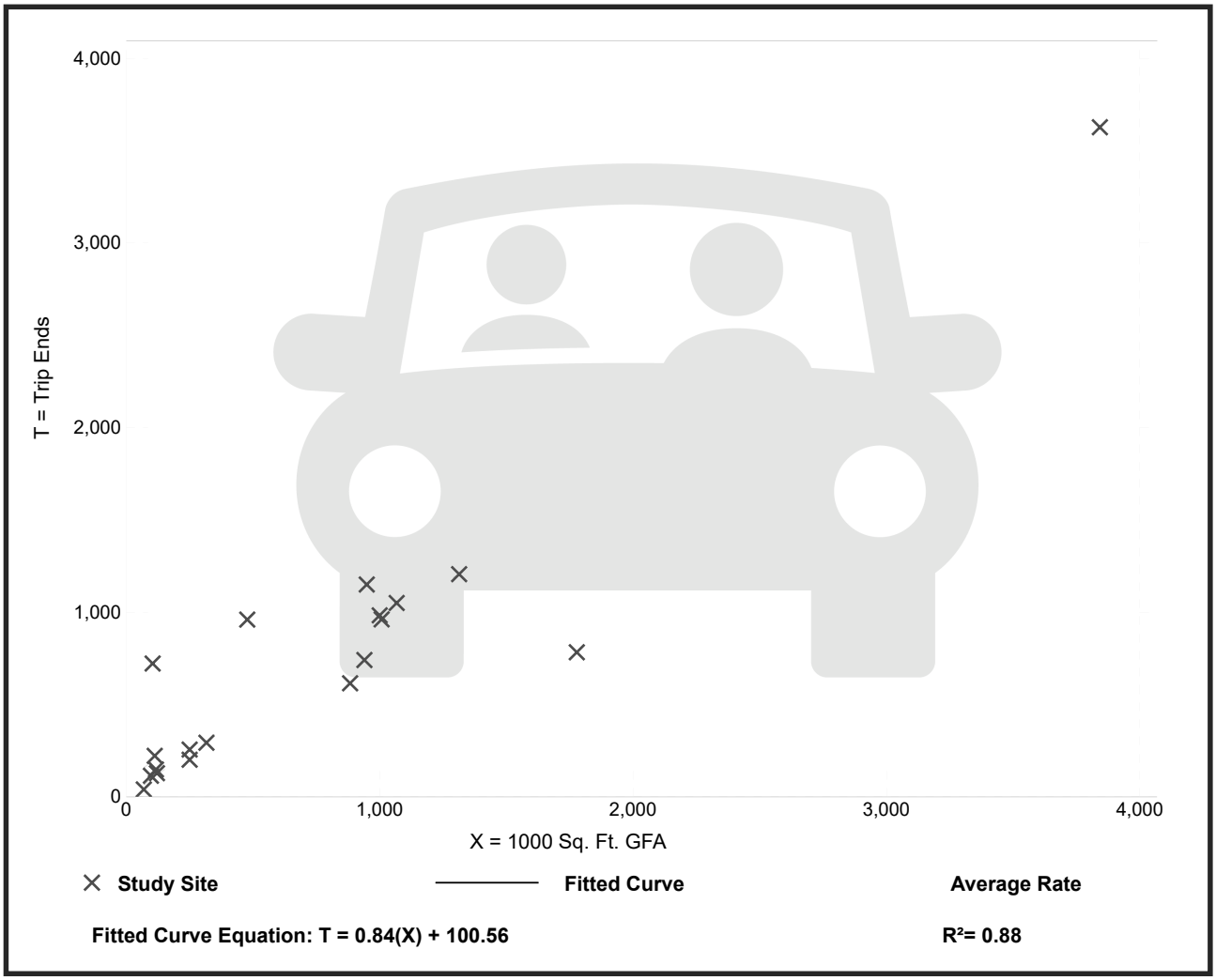
Hospital
(610)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 19
Avg. 1000 Sq. Ft. GFA: 773
Directional Distribution: 32% entering, 68% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.97	0.44 - 6.94	0.60

Data Plot and Equation



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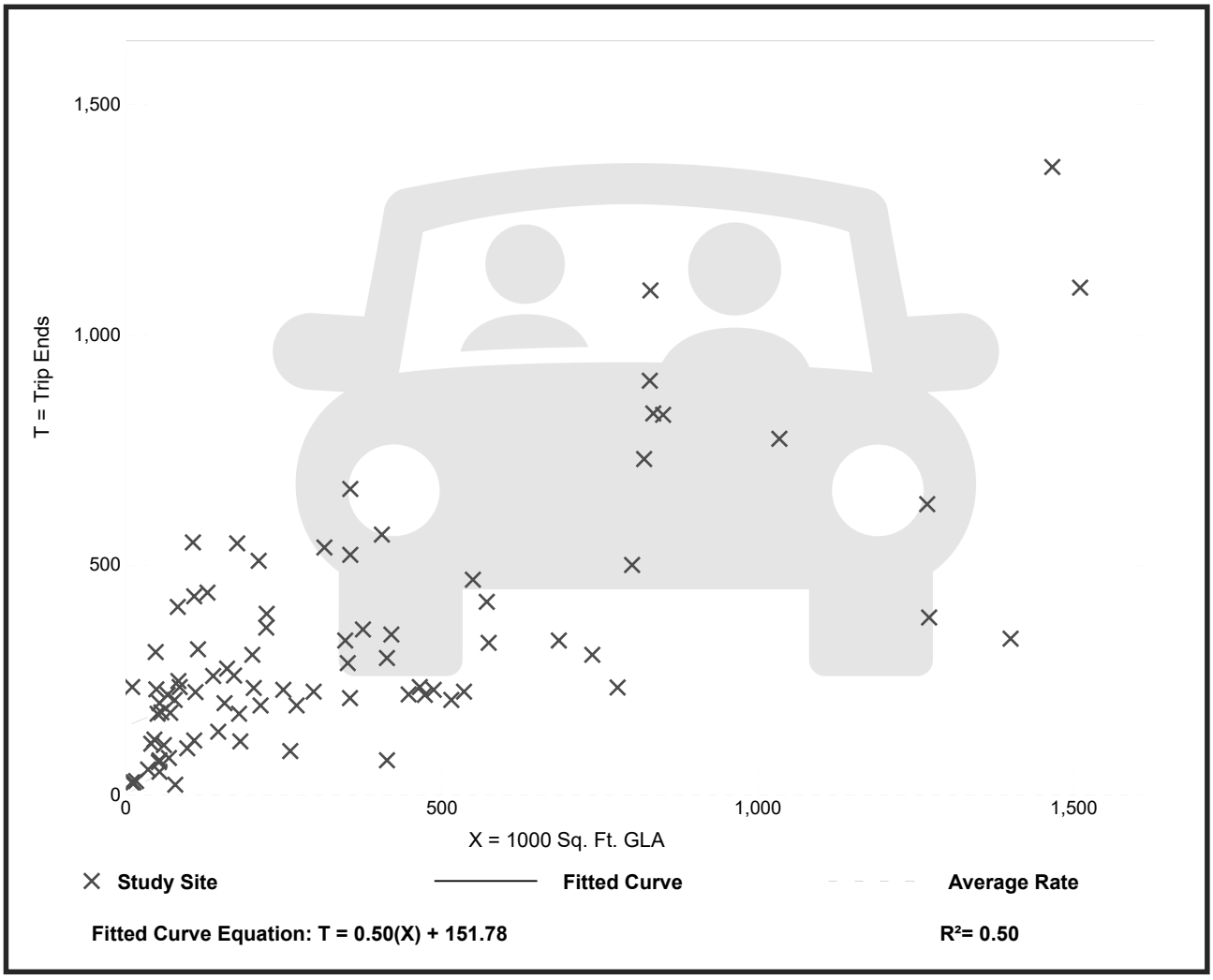
Shopping Center
(820)

Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 84
Avg. 1000 Sq. Ft. GLA: 351
Directional Distribution: 62% entering, 38% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
0.94	0.18 - 23.74	0.87

Data Plot and Equation



Trip Gen Manual, 10th Edition ● Institute of Transportation Engineers

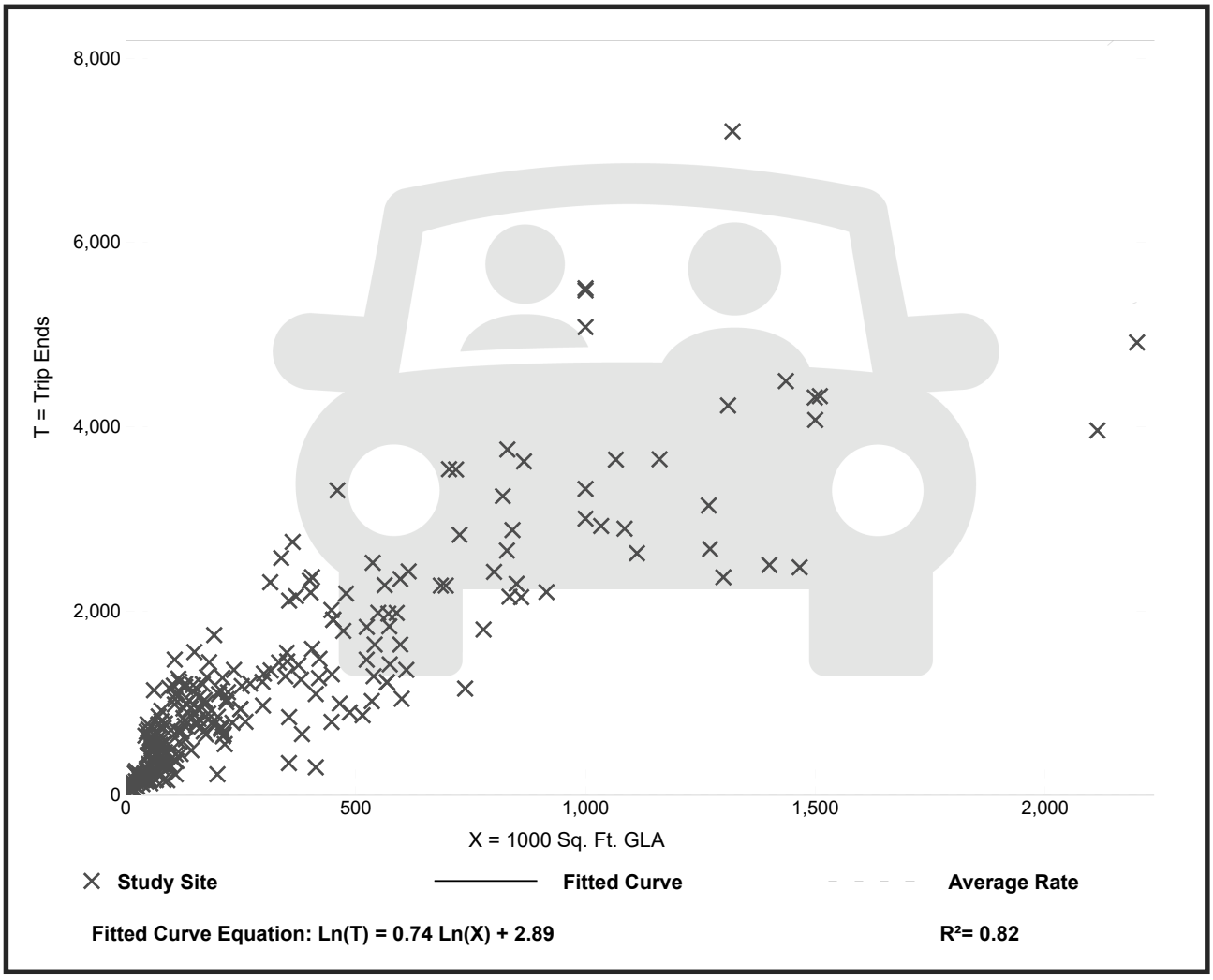
Shopping Center
(820)

Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 261
Avg. 1000 Sq. Ft. GLA: 327
Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
3.81	0.74 - 18.69	2.04

Data Plot and Equation



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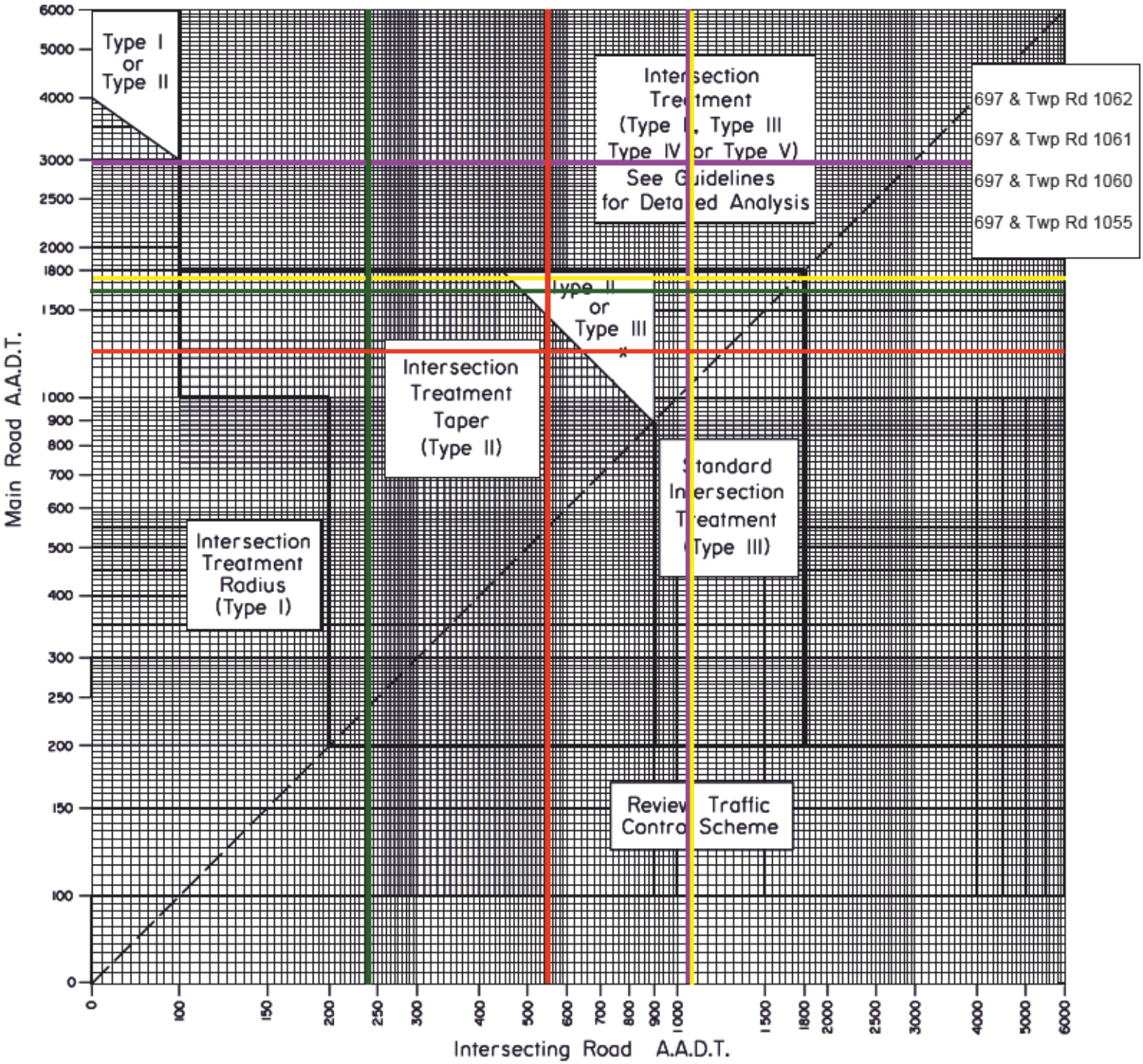
APPENDIX F - ALBERTA TRANSPORTATION WARRANTS

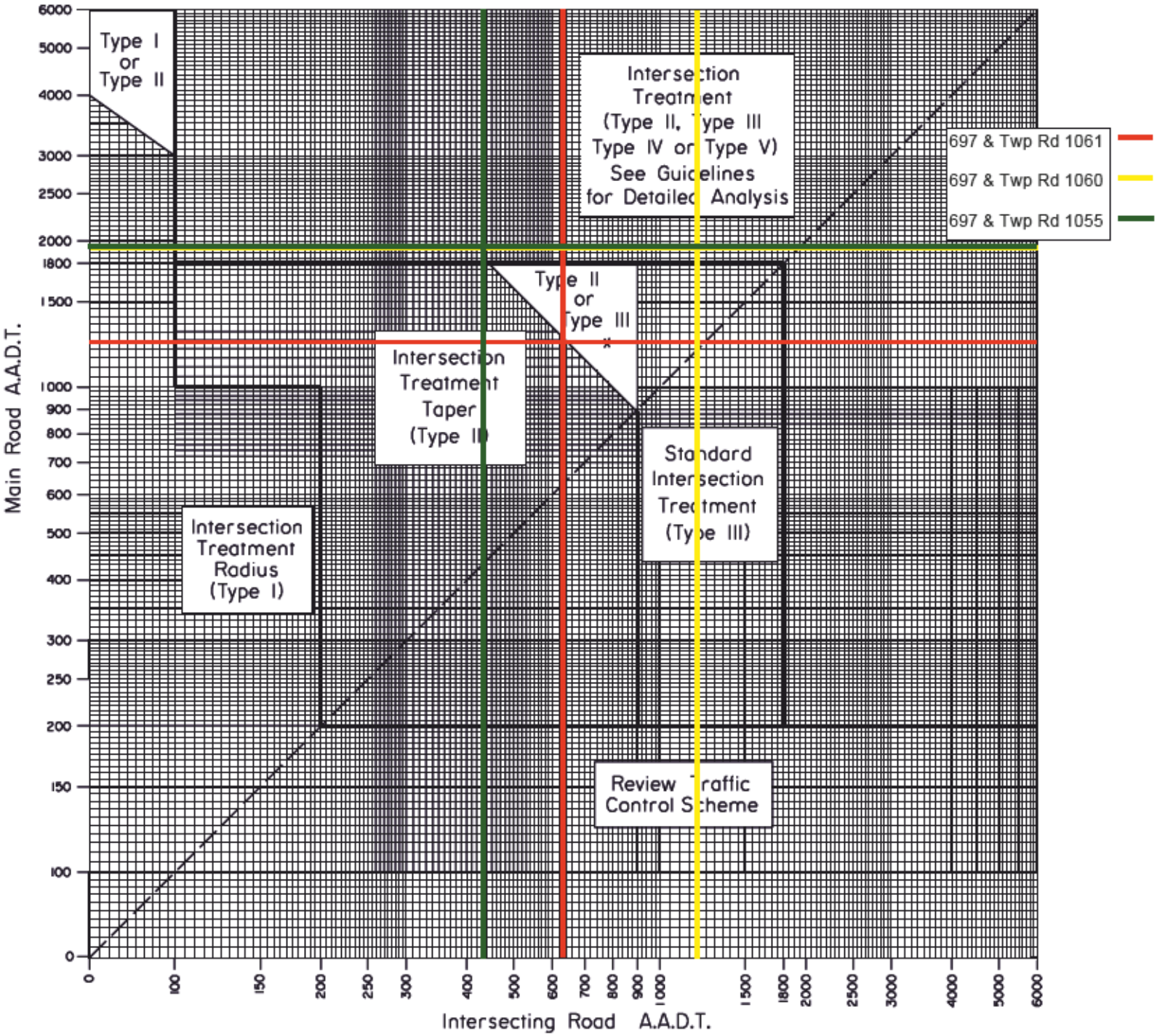
FIGURE D-7.4 TRAFFIC VOLUME WARRANT CHART FOR AT-GRADE INTERSECTION TREATMENT ON TWO-LANE RURAL HIGHWAYS (DESIGN SPEEDS 100, 110, 120 km/h)



Notes:

1. If main road, or intersecting road, is <100 AADT provide Type I Intersection Treatment (15m radius), except as shown for the higher volume main roads on this chart (Type I or II zone) where engineering judgement may be used to select the appropriate treatment.
2. If main road is >4000 AADT Review Access Management
   - — — If Intersecting Road AADT is > Main Road AADT: Review Traffic Control Scheme
3. Use projected traffic volumes for design
   Sloping line is defined by Main Road AADT x Intersecting Road AADT = 800,000

FIGURE D-7.4 TRAFFIC VOLUME WARRANT CHART FOR AT-GRADE INTERSECTION TREATMENT ON TWO-LANE RURAL HIGHWAYS (DESIGN SPEEDS 100, 110, 120 km/h)



Notes:

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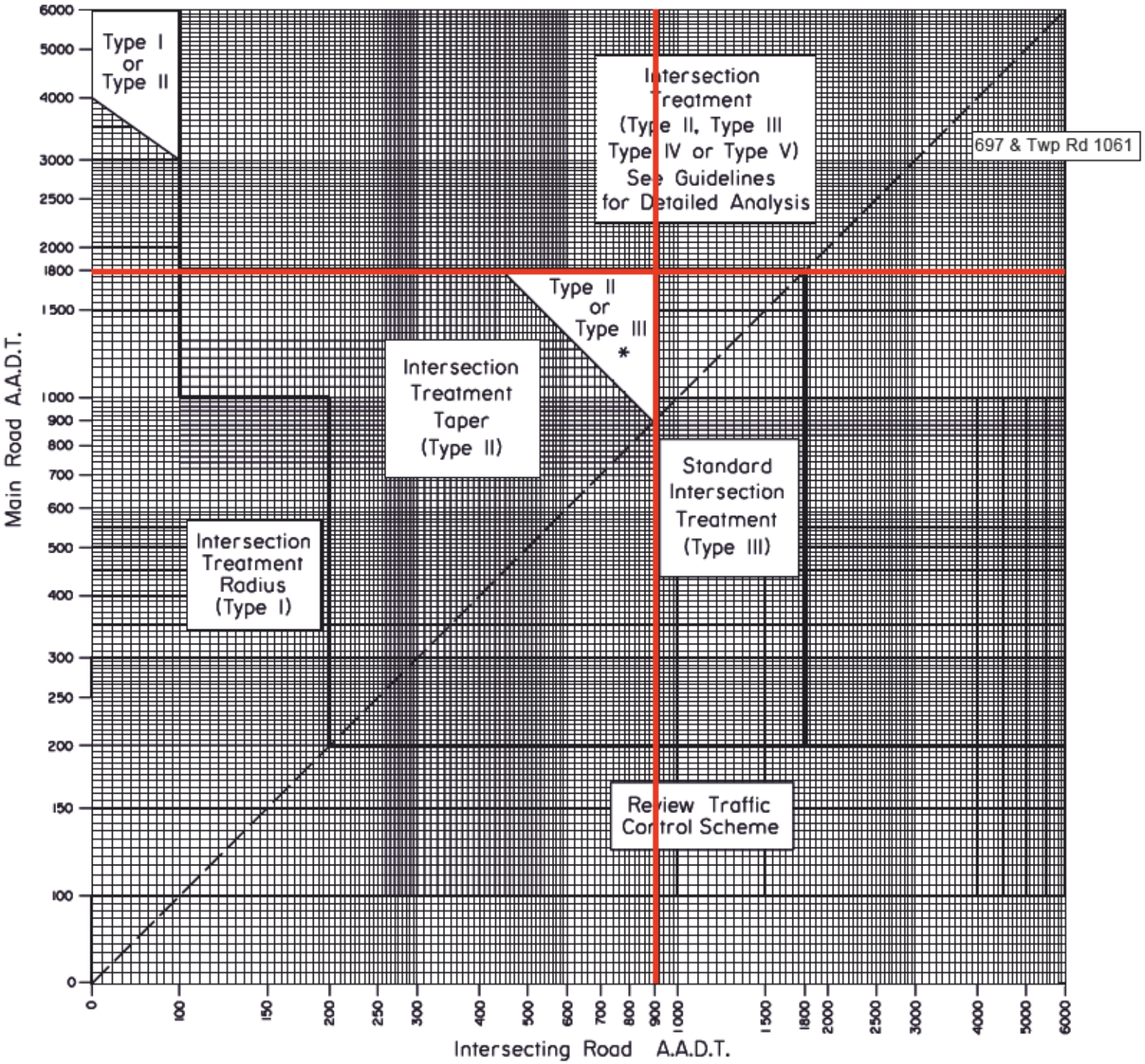
2. If main road is >4000 AADT Review Access Management
   - —— If Intersecting Road AADT is > Main Road AADT: Review Traffic Control Scheme
3. Use projected traffic volumes for design
   Sloping line is defined by Main Road AADT x Intersecting Road AADT = 800,000

FIGURE D-7.4 TRAFFIC VOLUME WARRANT CHART FOR AT-GRADE INTERSECTION TREATMENT ON TWO-LANE RURAL HIGHWAYS (DESIGN SPEEDS 100, 110, 120 km/h)



Notes:

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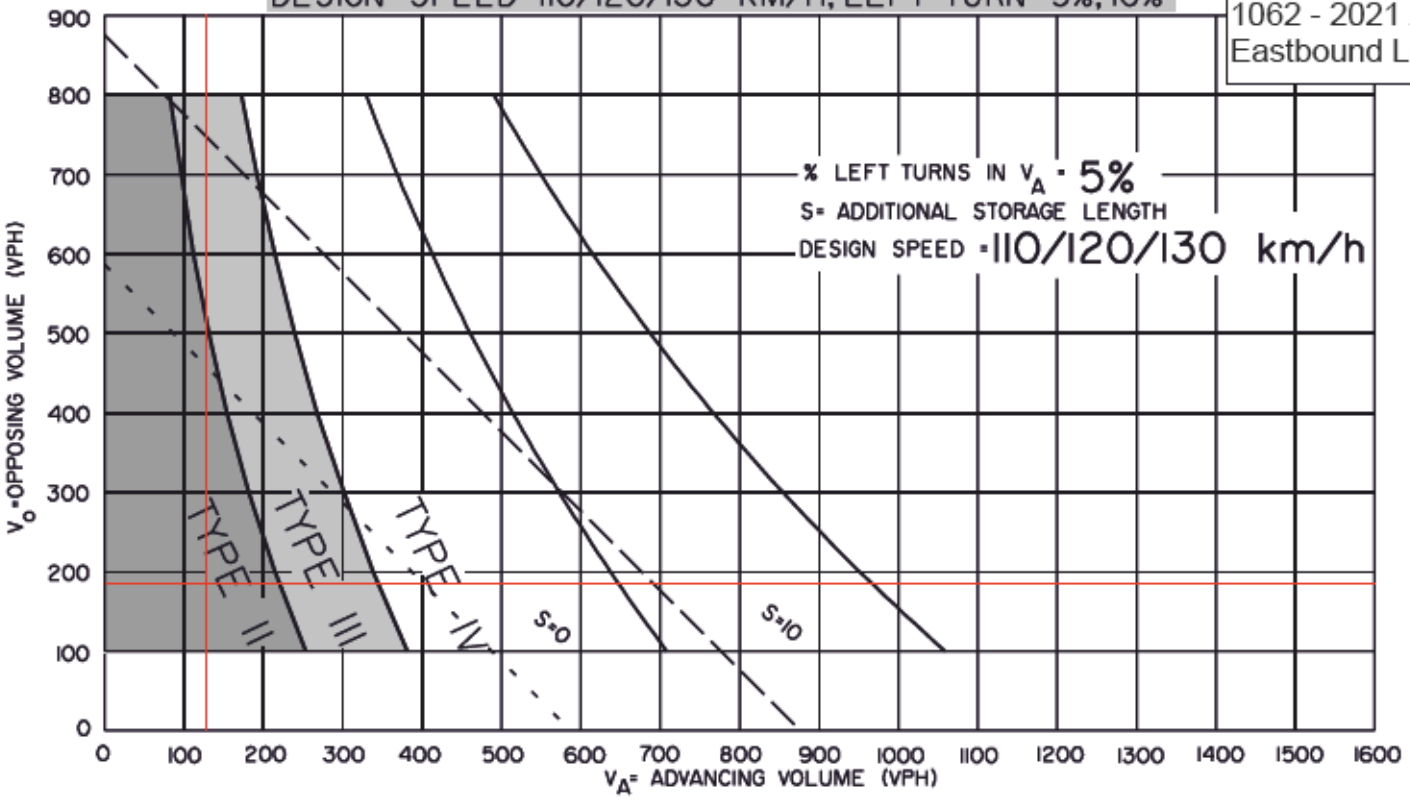
2. If main road is >4000 AADT Review Access Management
   - —— If Intersecting Road AADT is > Main Road AADT: Review Traffic Control Scheme
3. Use projected traffic volumes for design
   Sloping line is defined by Main Road AADT x Intersecting Road AADT = 800,000

FIGURE D-7.6-7a WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 5%, 10%

Hwy 697 & Twp Rd 1062 - 2021 AM Eastbound Left



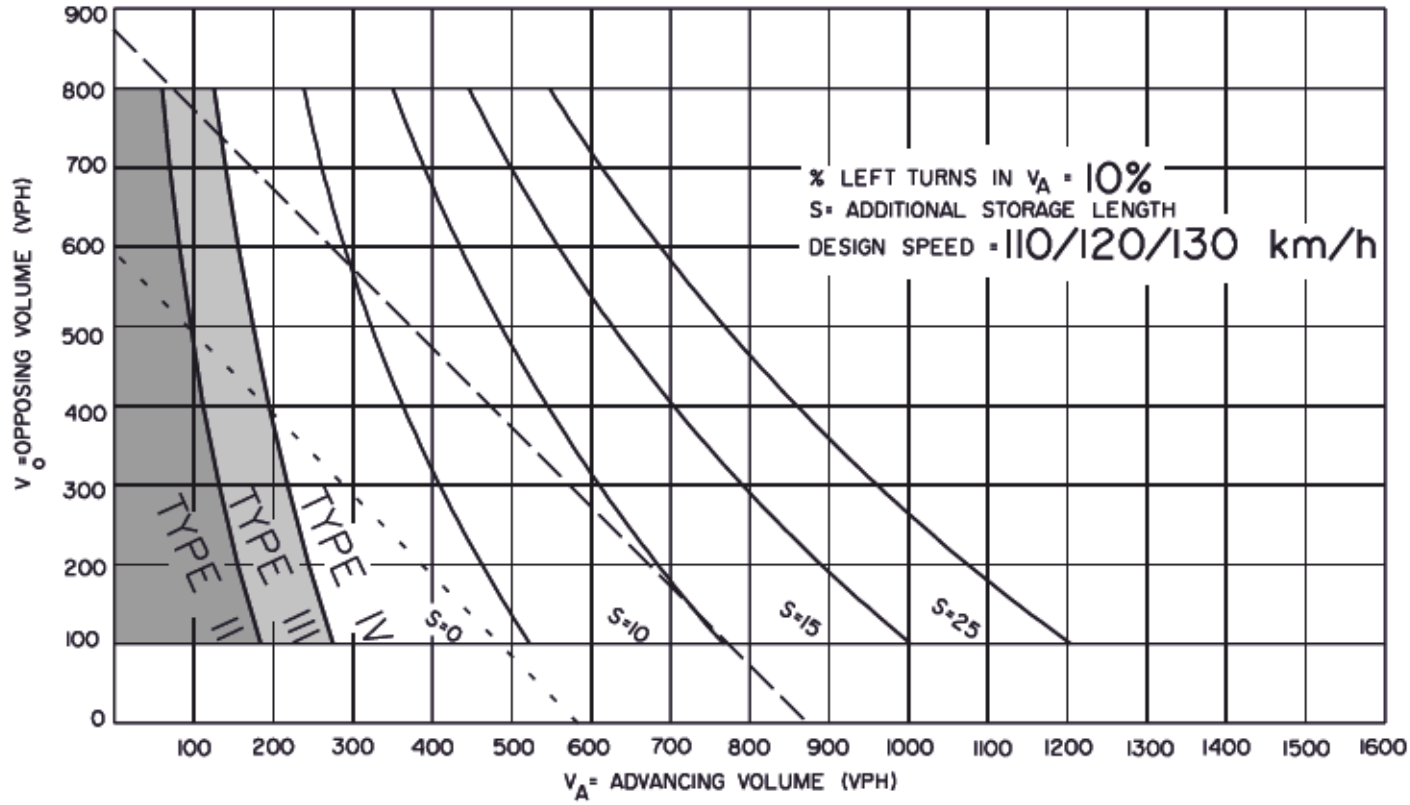
S = Additional storage length required, that is, in addition to what is shown on the appropriate Type IV standard drawing. Designers should check additional storage requirements for trucks, also see Table D.7.6a.

- - - - Traffic signals may be warranted in rural areas, or urban areas, with restricted flow.

——— Traffic signals may be warranted in "free flow" urban areas.

Notes:

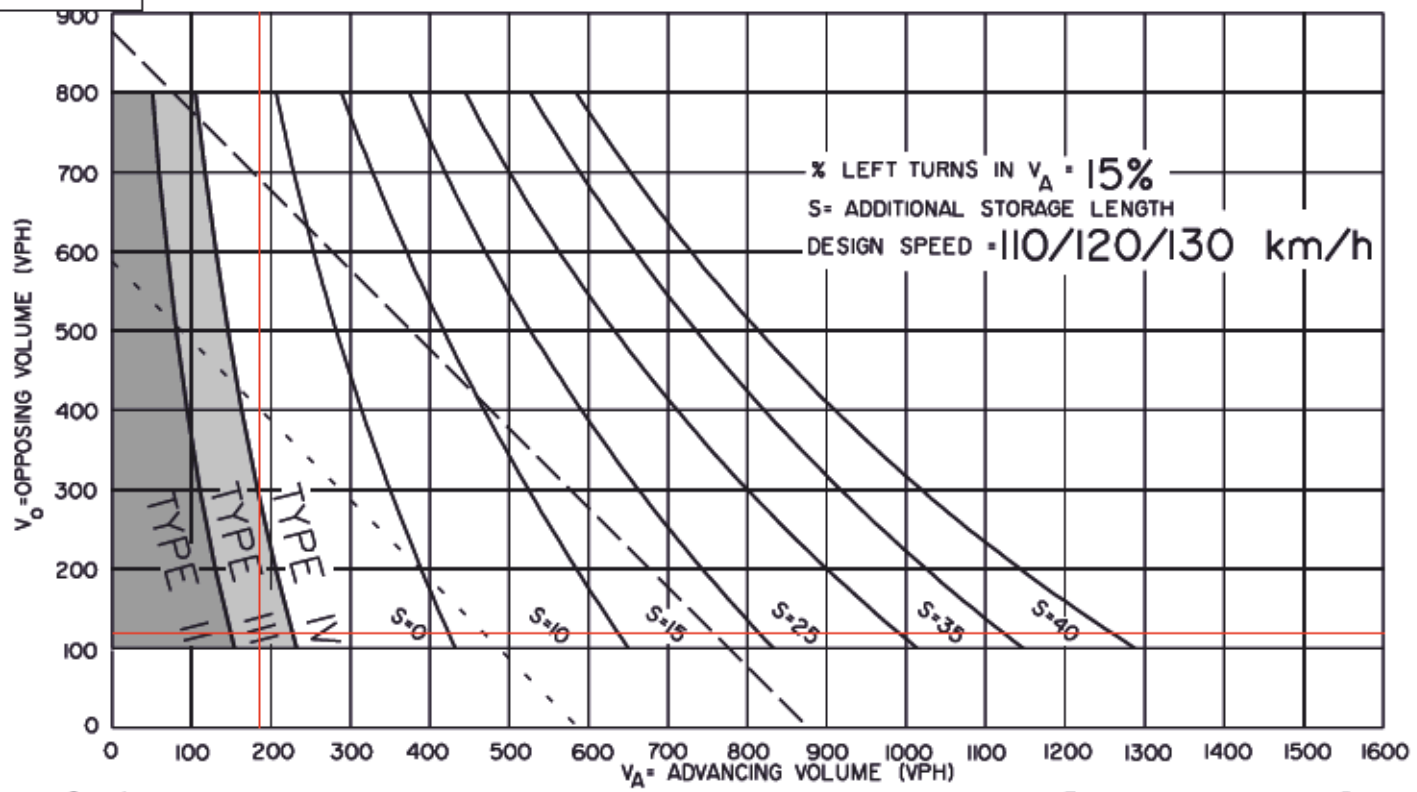
1. The traffic signal warrant lines are provided for reference only. For detailed analysis of the requirements for signals, contact Roadway Engineering Branch.
2. Warrant for Type I treatment is shown in Figure D-7.4.



GRAPHICS FILE: debd767a.mon

Hwy 697 & Twp Rd
1062 - 2021 AM
Westbound Left

FIGURE D-7.6-7b WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 15%, 20%



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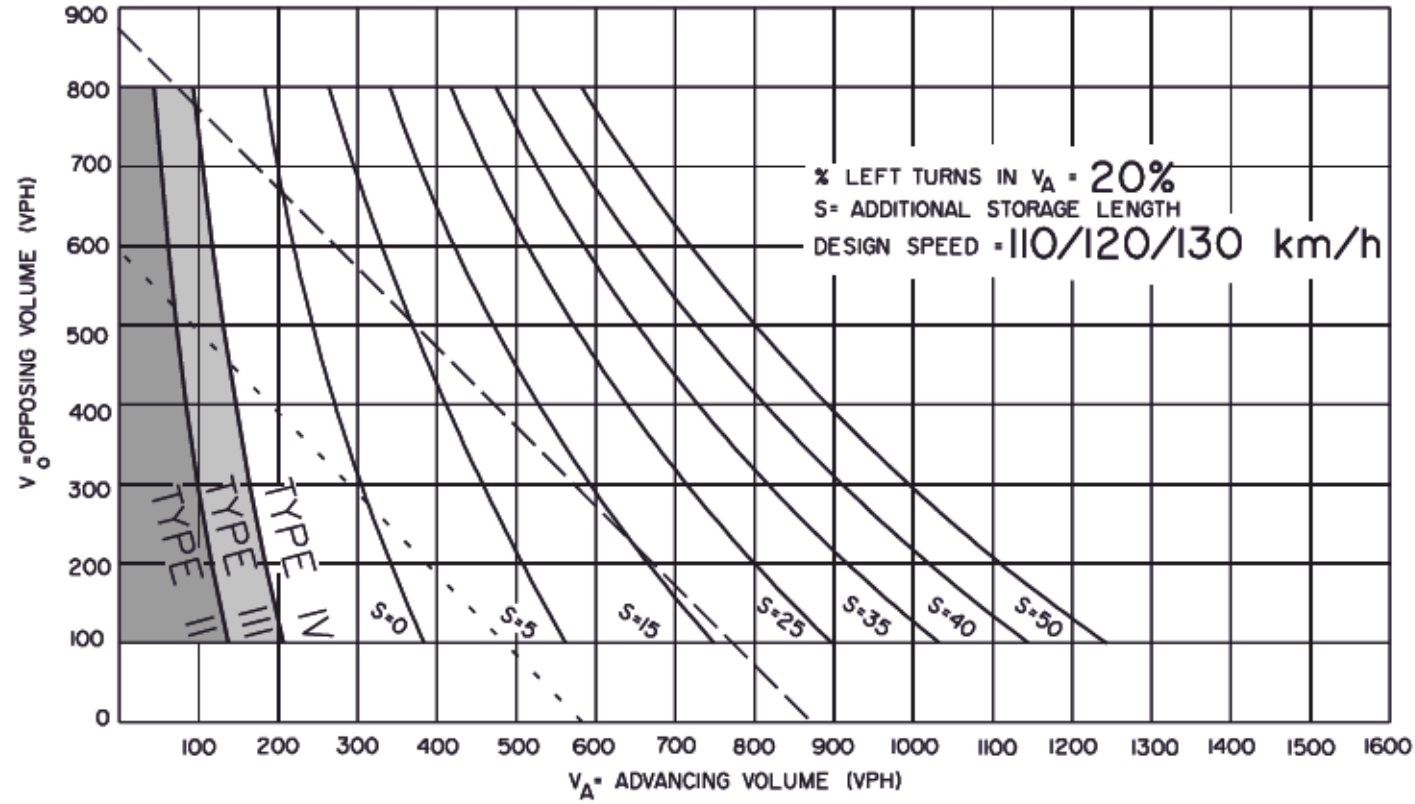
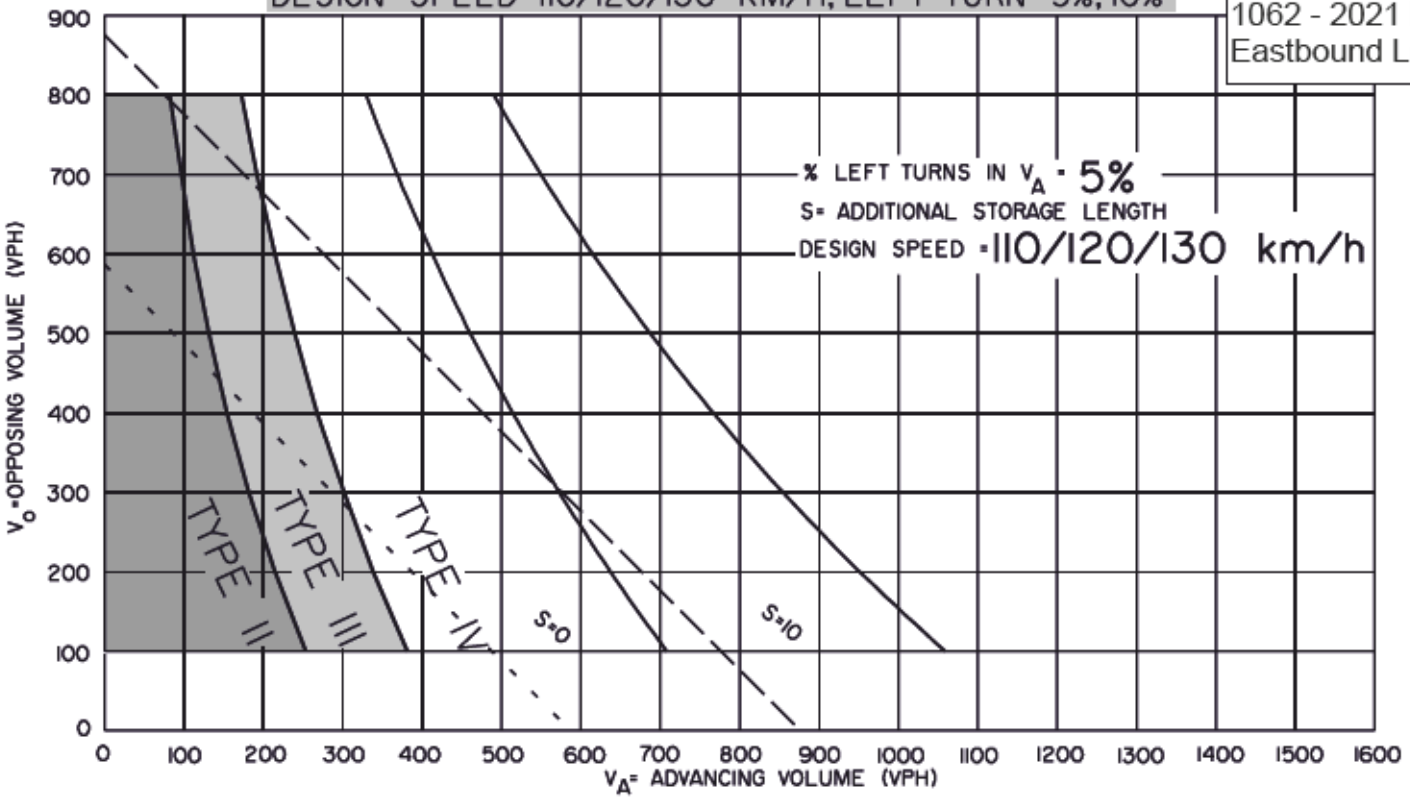


GRAPHICS FILE: debd767a.man

FIGURE D-7.6-7a WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 5%, 10%

Hwy 697 & Twp Rd 1062 - 2021 PM Eastbound Left



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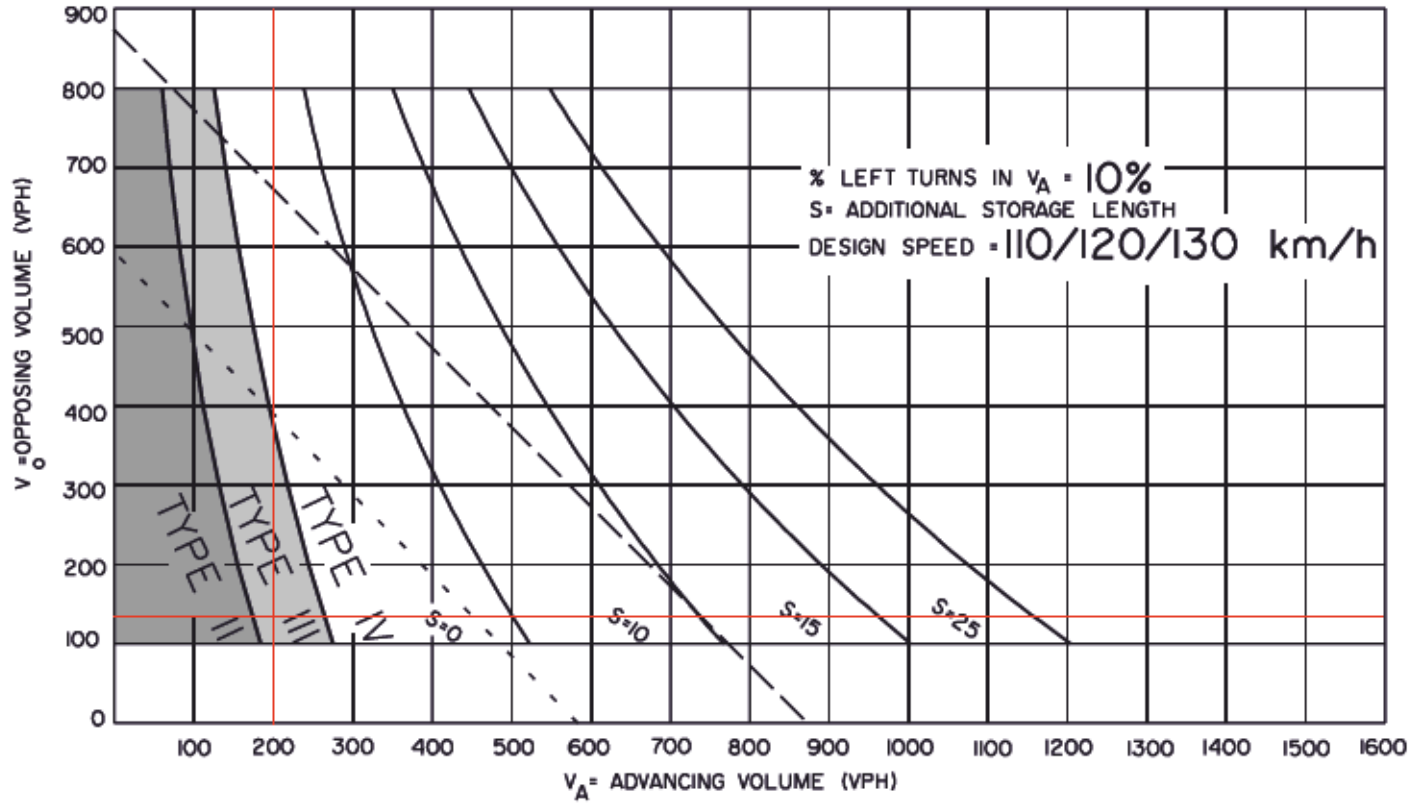
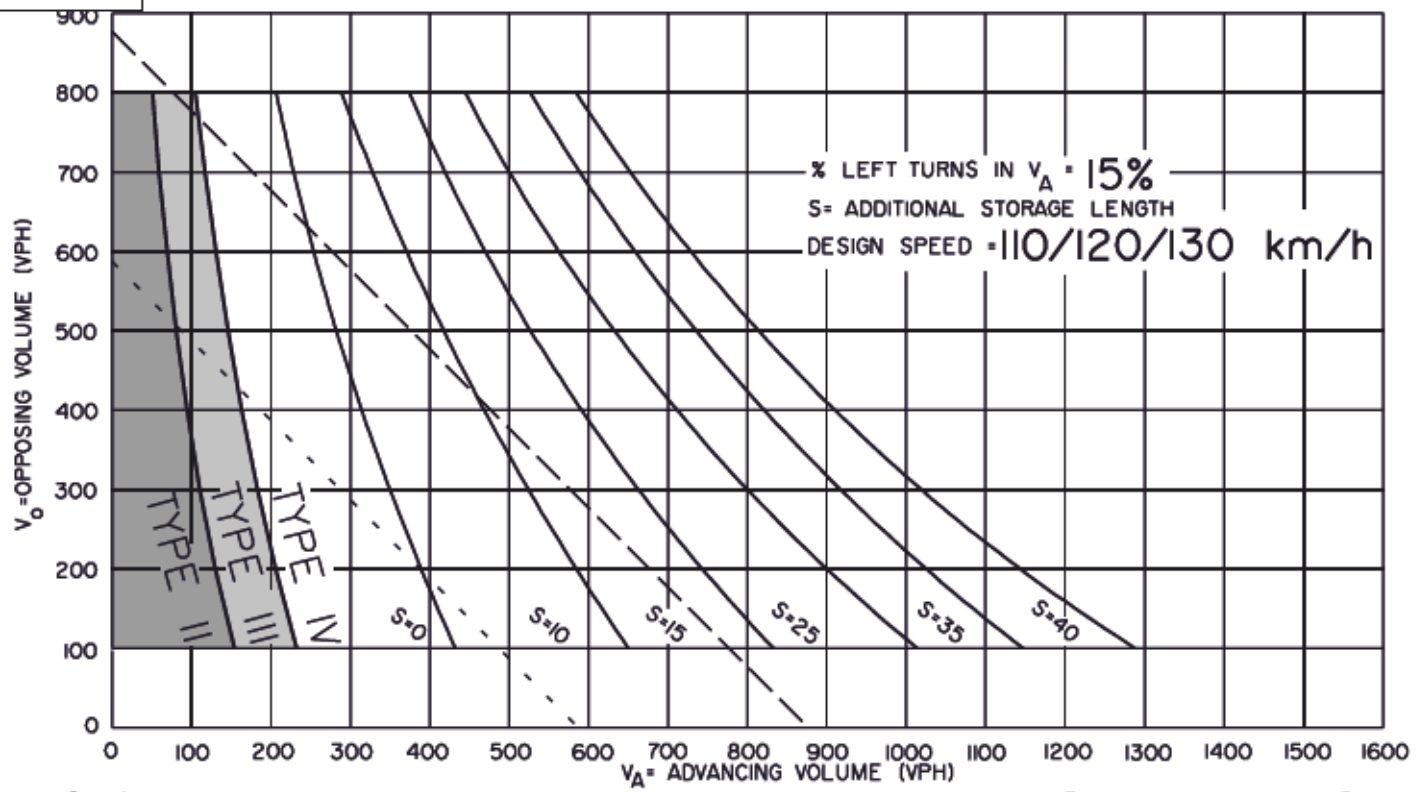


GRAPHICS FILE: debd767a.mon

Hwy 697 & Twp Rd
1062 - 2021 PM
Westbound Left

FIGURE D-7.6-7b WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 15%, 20%



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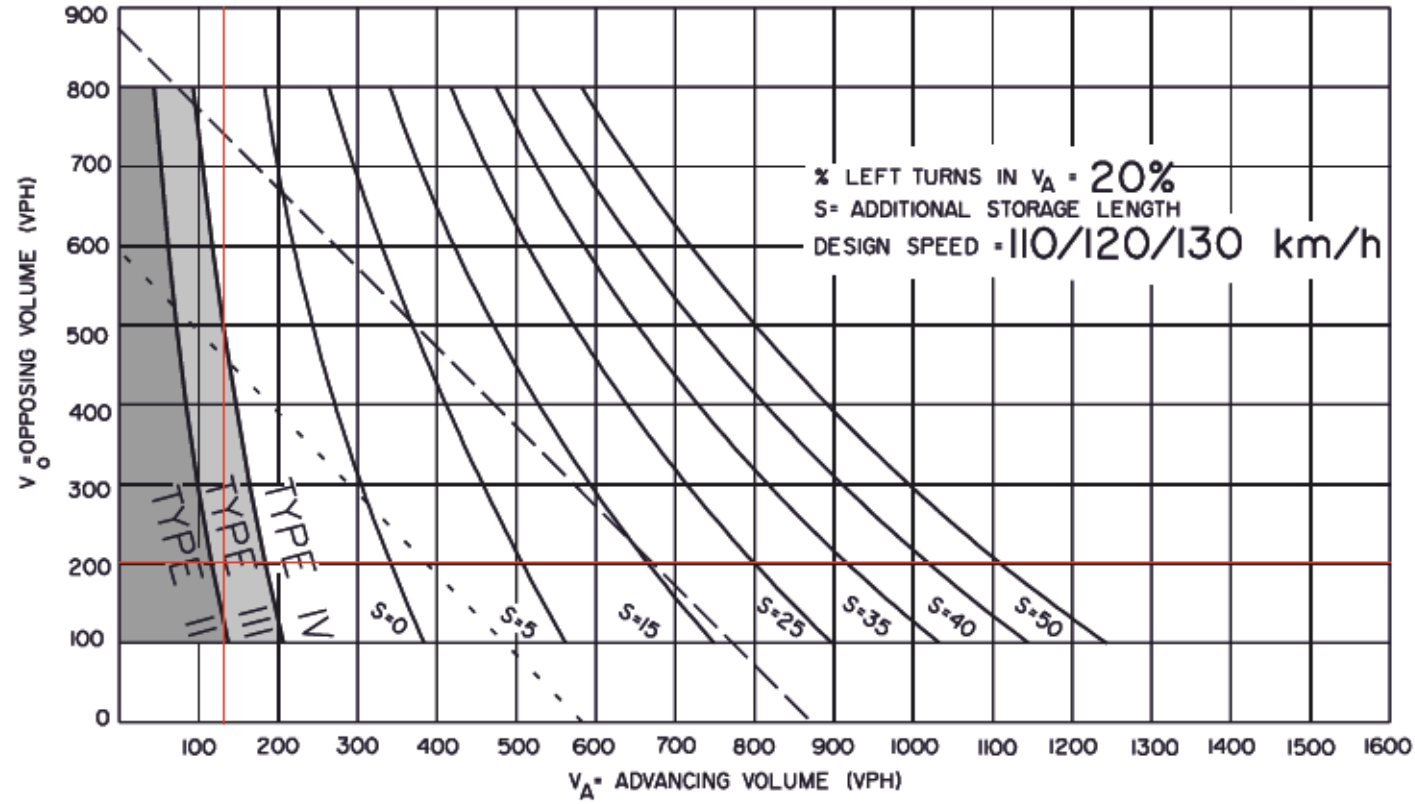
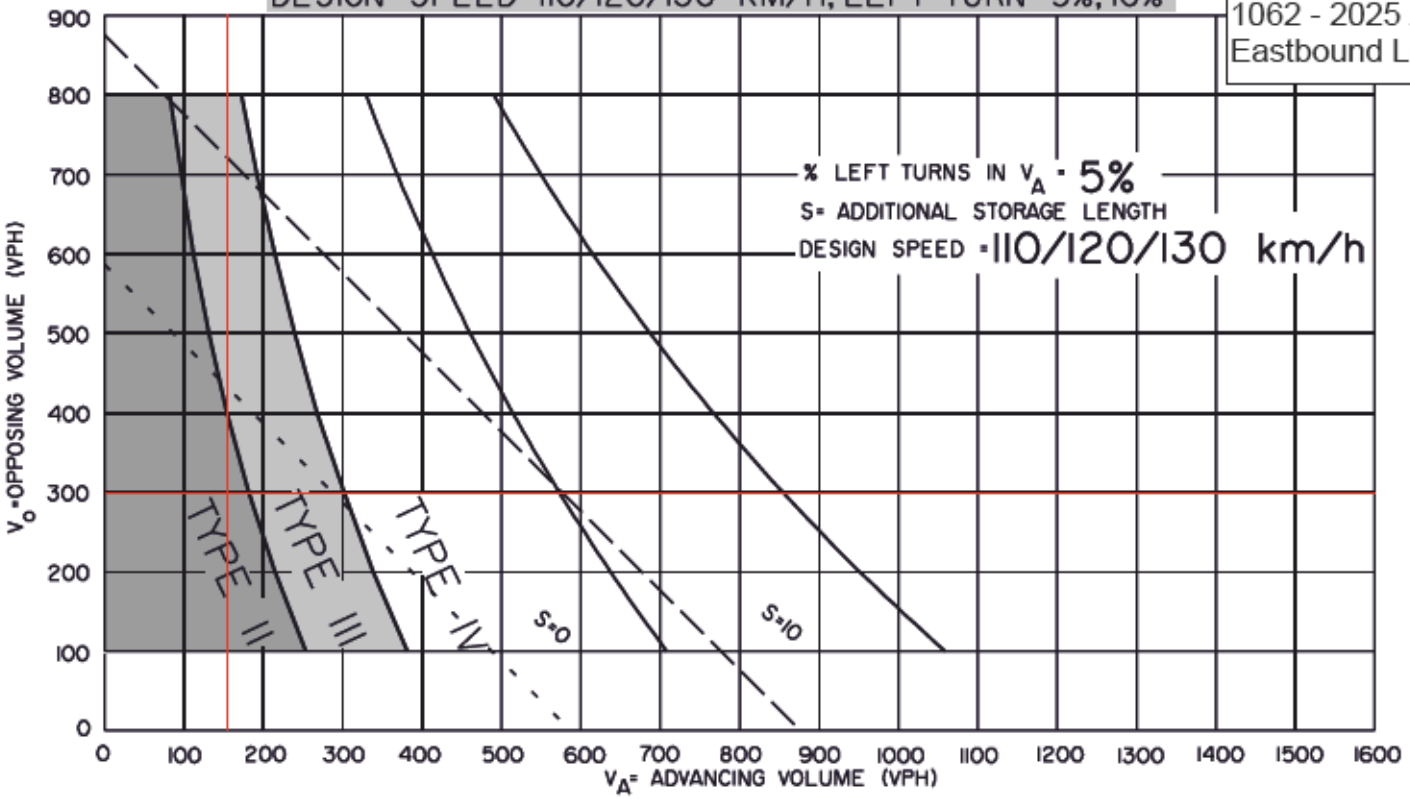


GRAPHICS FILE: debd767a.man

FIGURE D-7.6-7a WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 5%, 10%

Hwy 697 & Twp Rd 1062 - 2025 AM Eastbound Left



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Notes:

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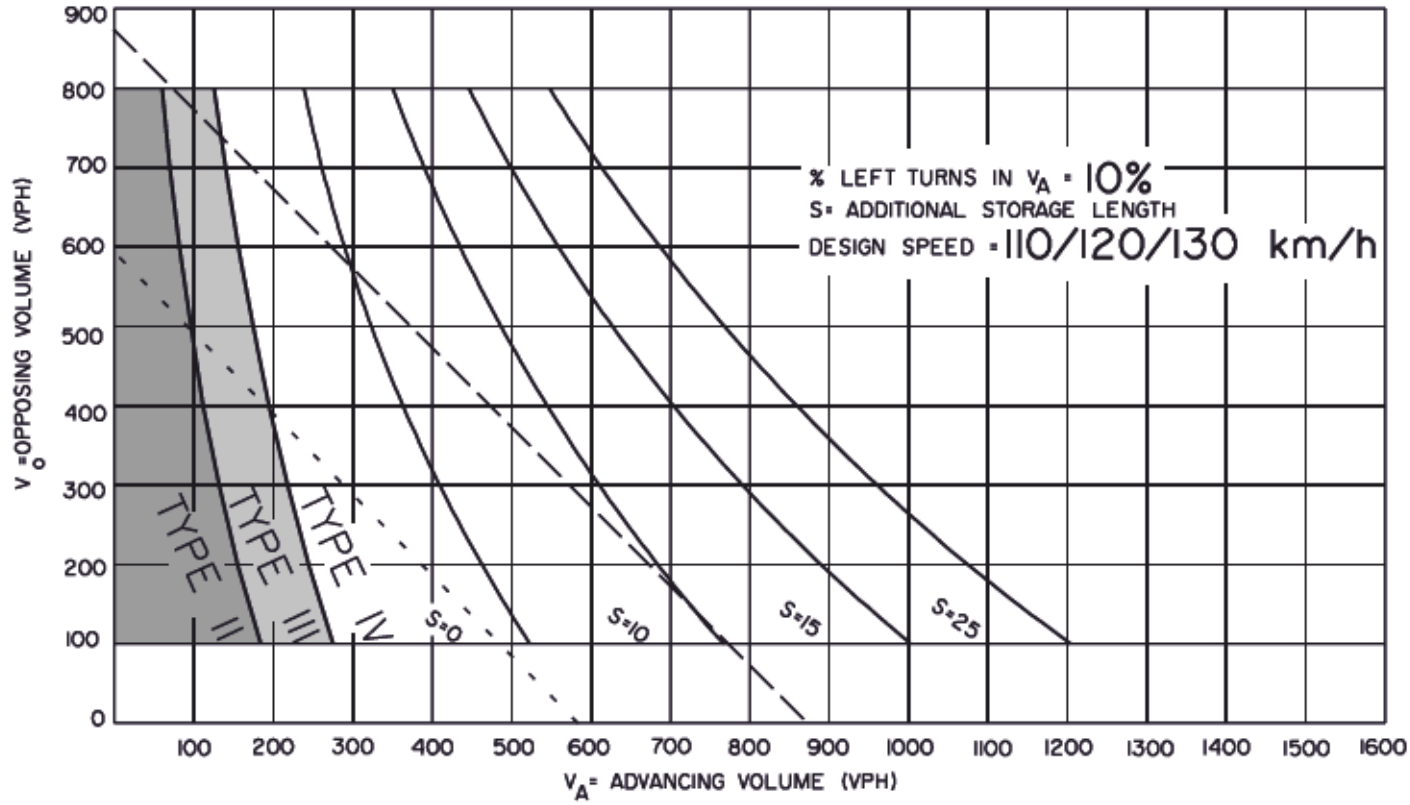
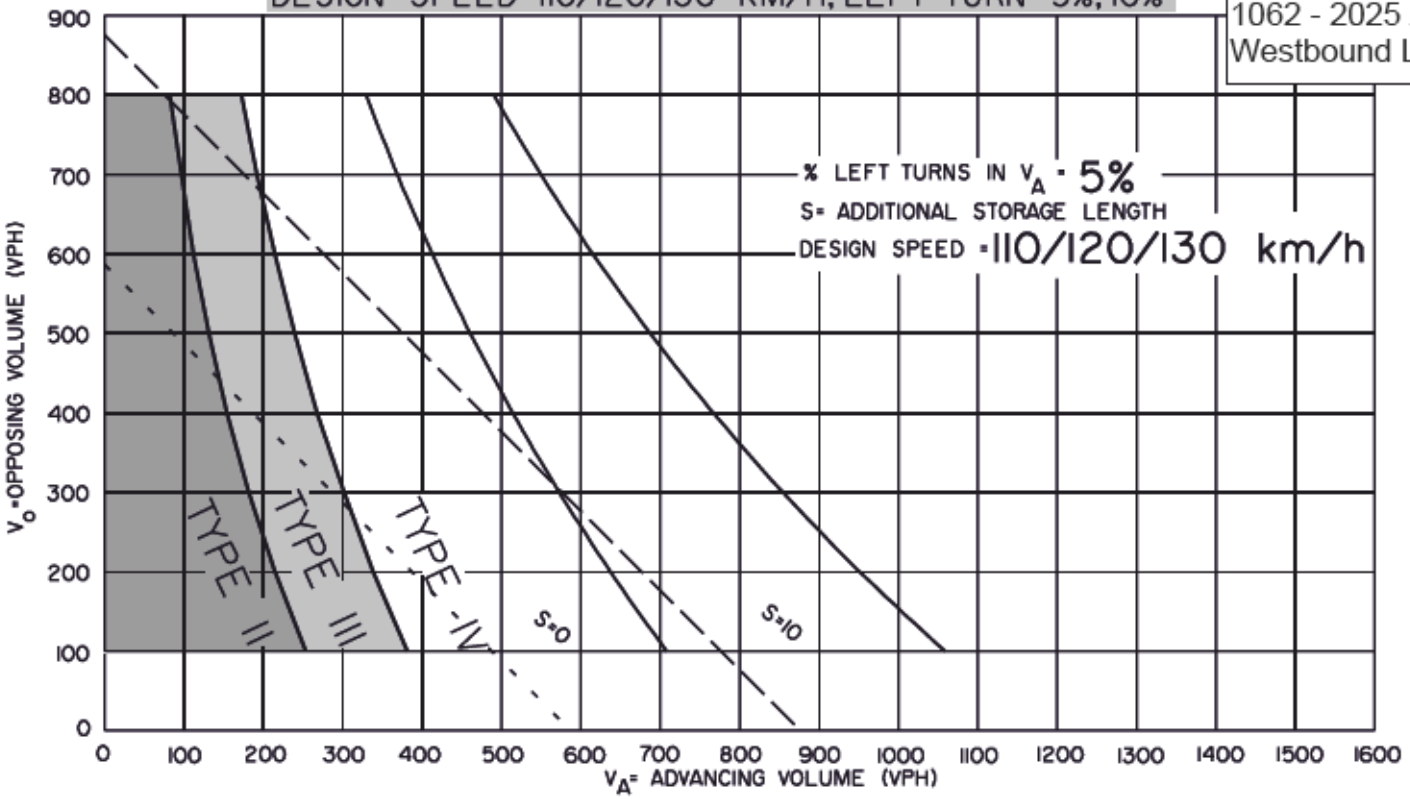
2. Warrant for Type I treatment is shown in Figure D-7.4.



GRAPHICS FILE: debd767a.mon

FIGURE D-7.6-7a WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 5%, 10%

Hwy 697 & Twp Rd 1062 - 2025 AM Westbound Left



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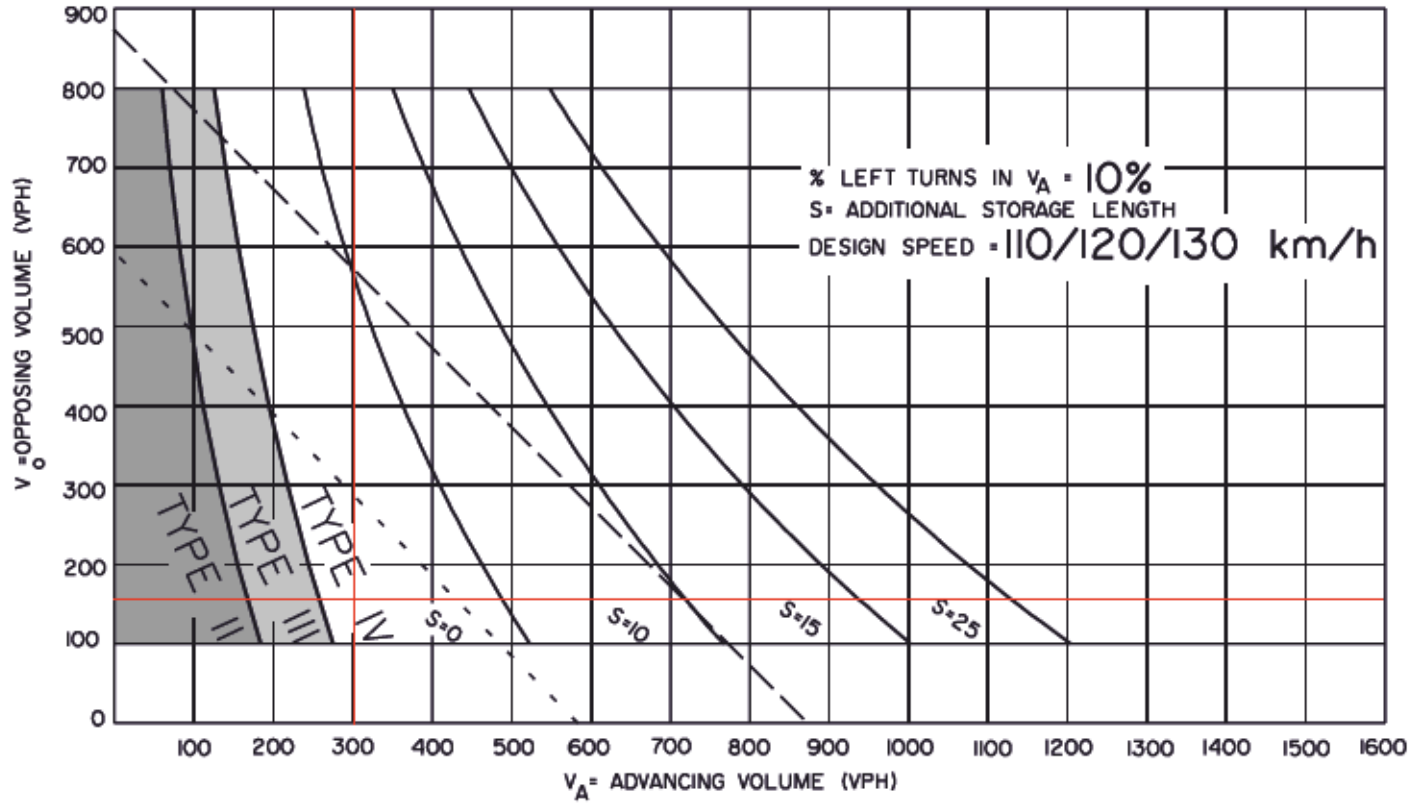
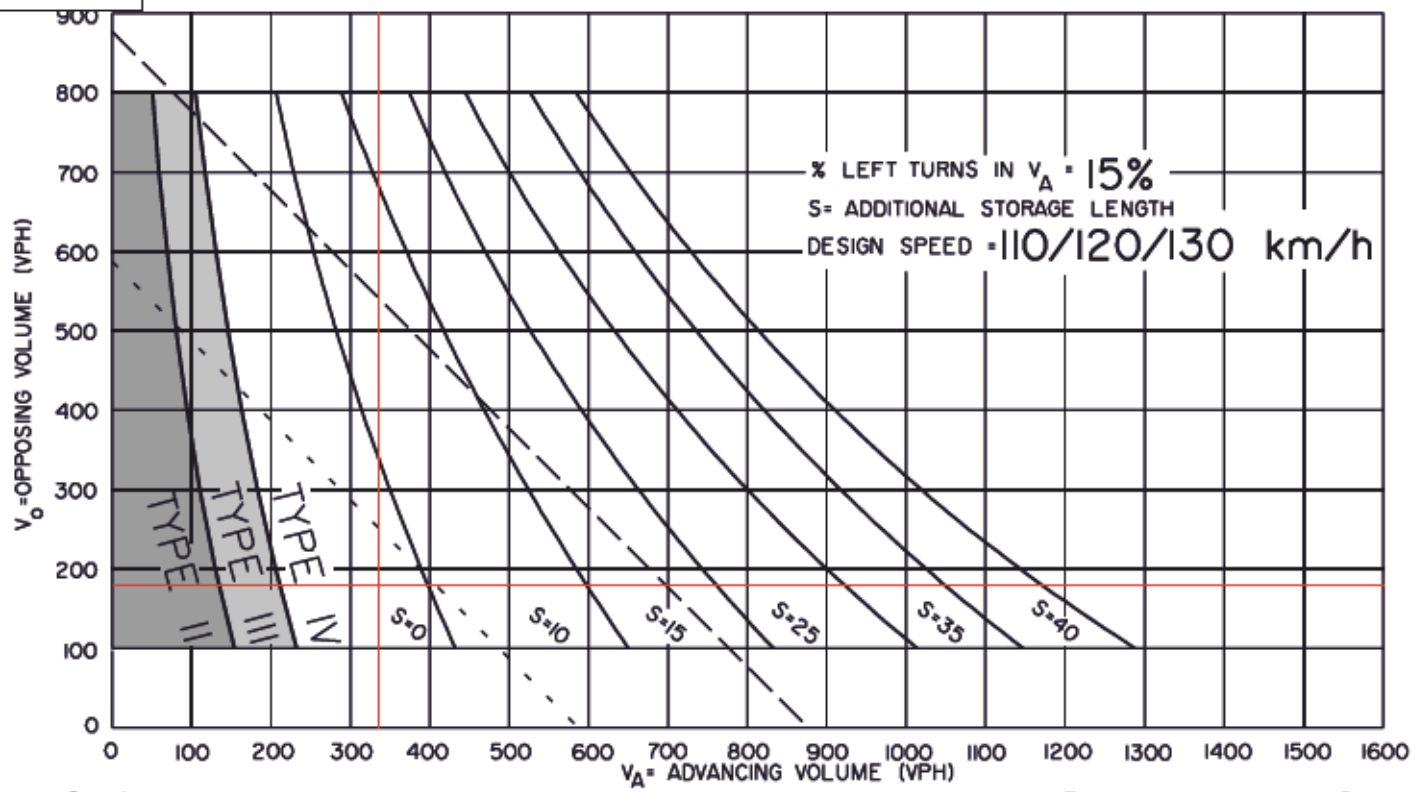


GRAPHICS FILE: debd767a.mon

Hwy 697 & Twp Rd
1062 - 2025 PM
Eastbound Left

FIGURE D-7.6-7b WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 15%, 20%



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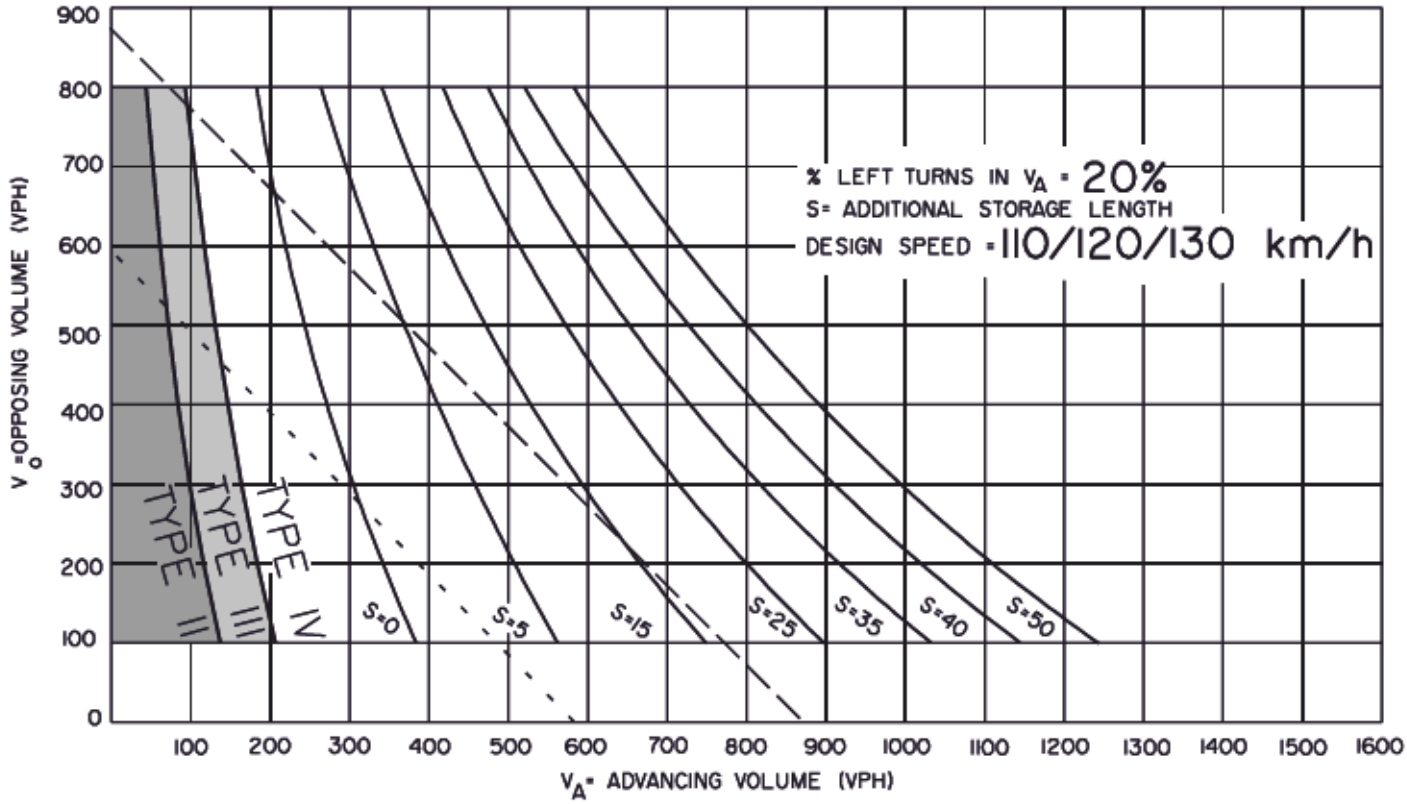
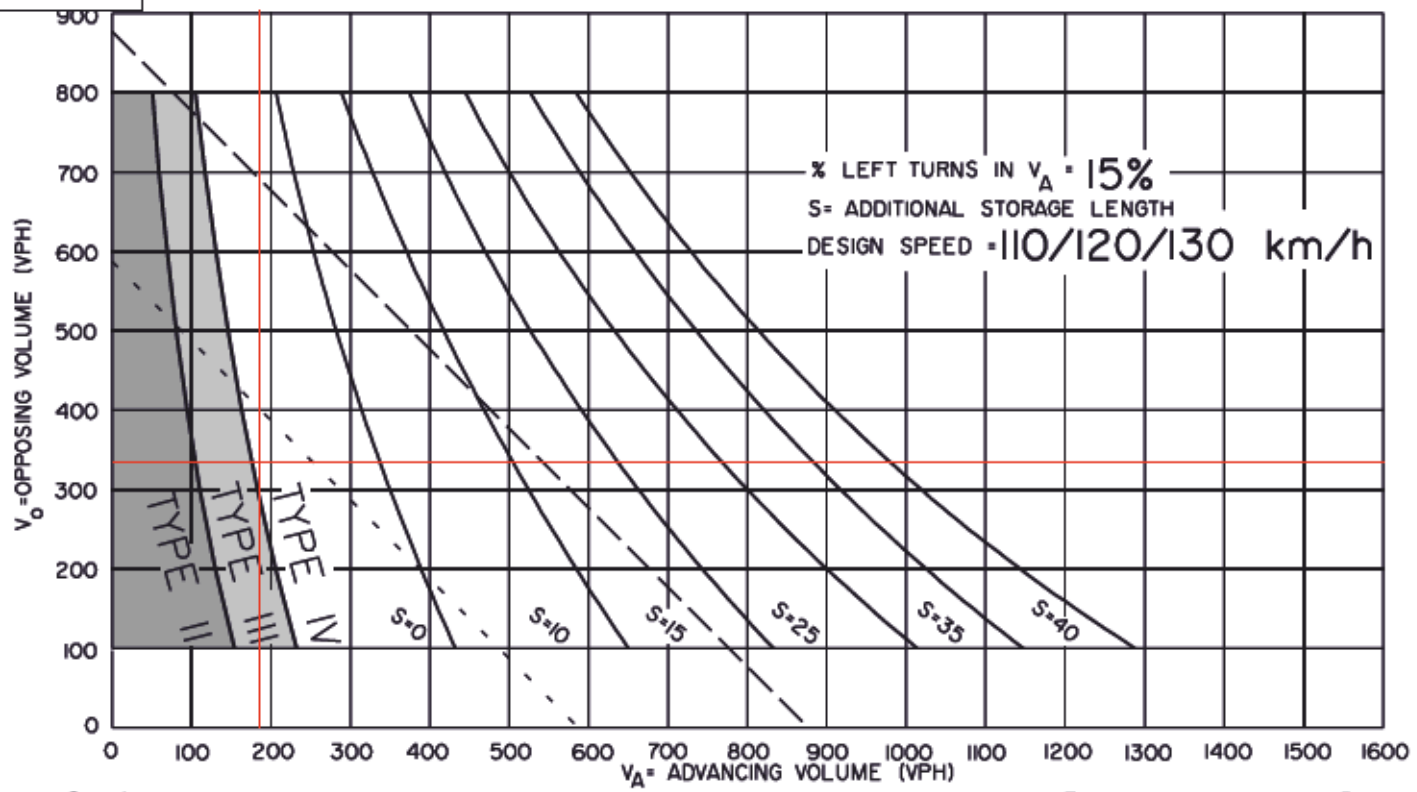


GRAPHICS FILE: debd767a.man

Hwy 697 & Twp Rd
1062 - 2025 PM
Westbound Left

FIGURE D-7.6-7b WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 15%, 20%



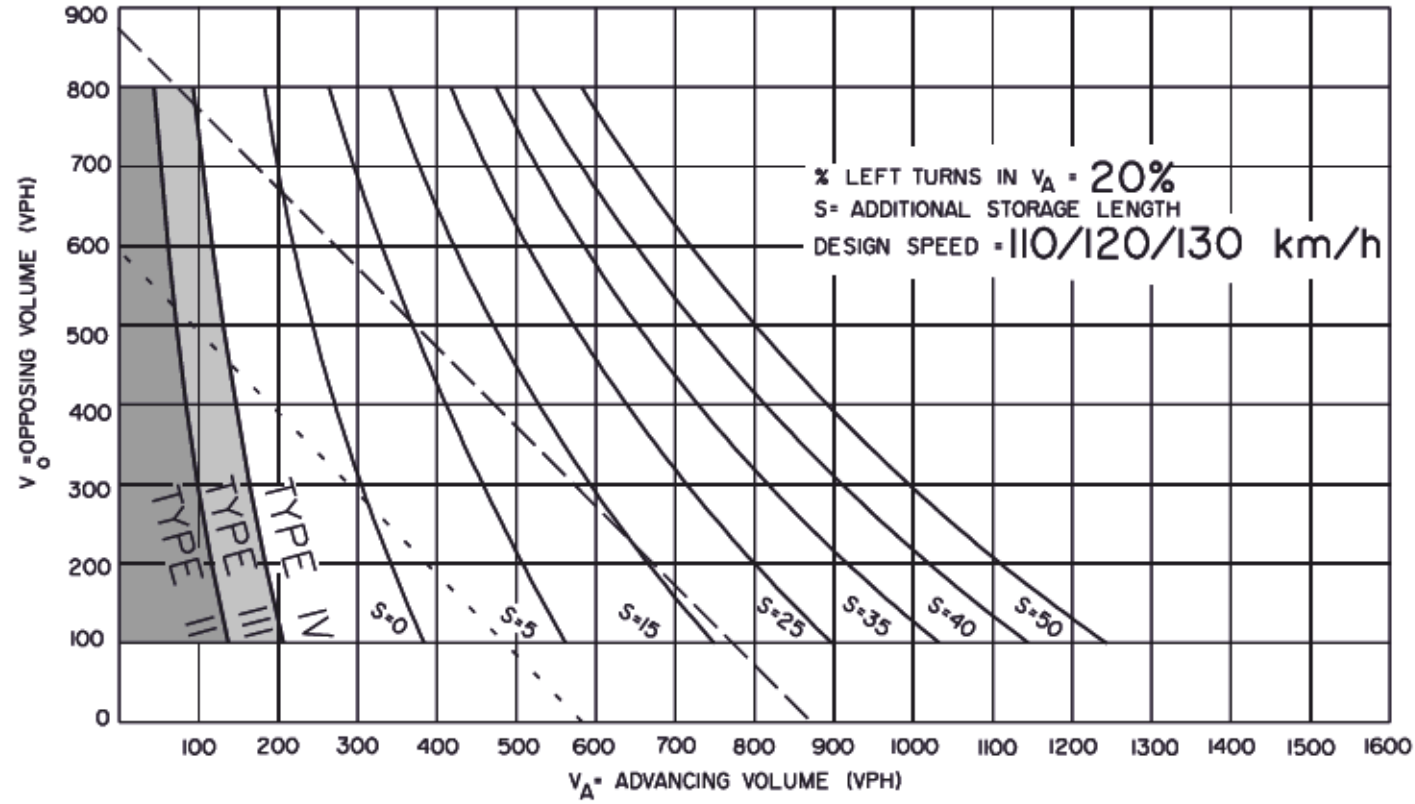
S = Additional storage length required, that is, in addition to what is shown on the appropriate Type IV standard drawing. Designers should check additional storage requirements for trucks, also see Table D.7.6a.

- - - - Traffic signals may be warranted in rural areas, or urban areas, with restricted flow.

—— —— Traffic signals may be warranted in "free flow" urban areas.

Notes:

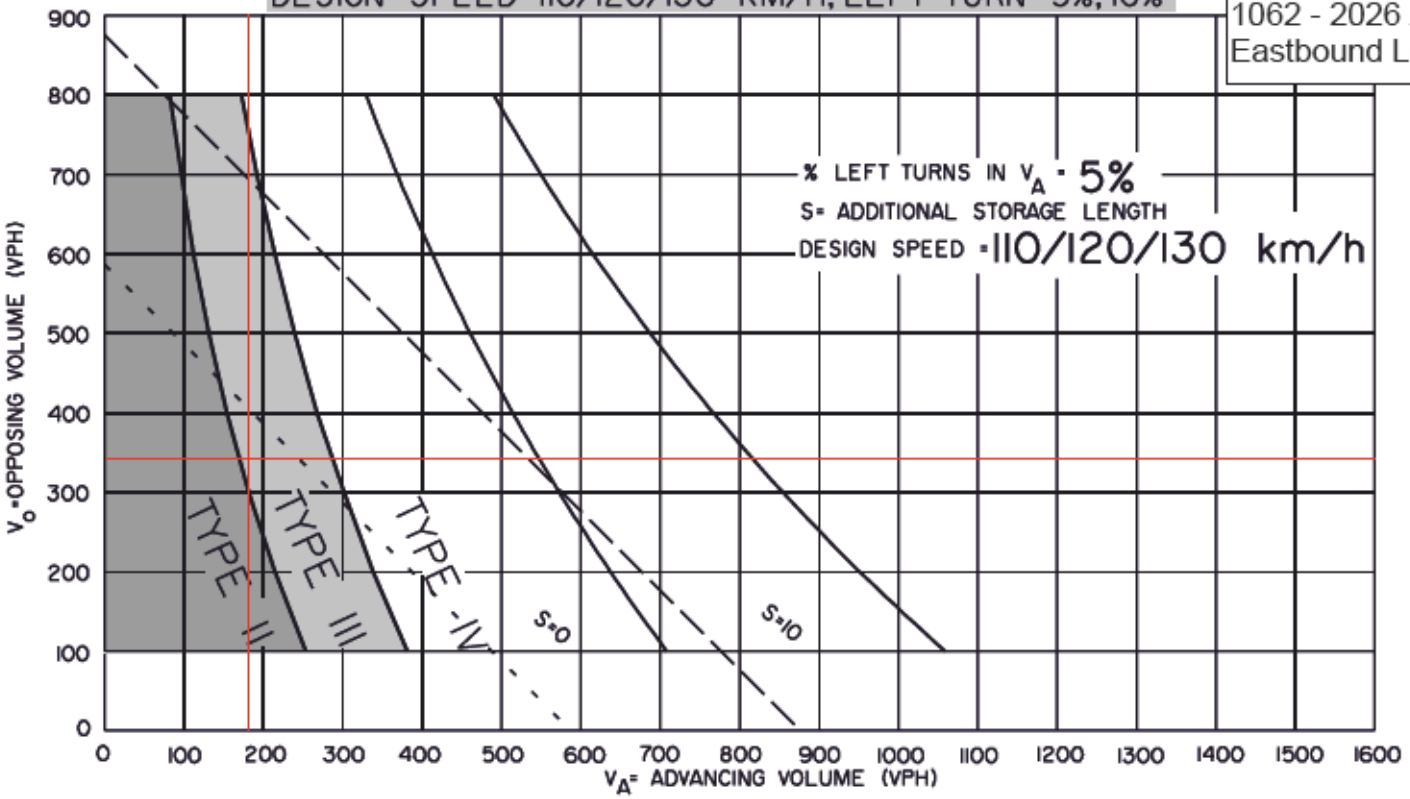
1. The traffic signal warrant lines are provided for reference only. For detailed analysis of the requirements for signals, contact Roadway Engineering Branch.
2. Warrant for Type I treatment is shown in Figure D-7.4.



GRAPHICS FILE: debd767a.man

FIGURE D-7.6-7a WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 5%, 10%

Hwy 697 & Twp Rd 1062 - 2026 AM Eastbound Left



S = Additional storage length required, that is, in addition to what is shown on the appropriate Type IV standard drawing. Designers should check additional storage requirements for trucks, also see Table D.7.6a.

- - - - Traffic signals may be warranted in rural areas, or urban areas, with restricted flow.

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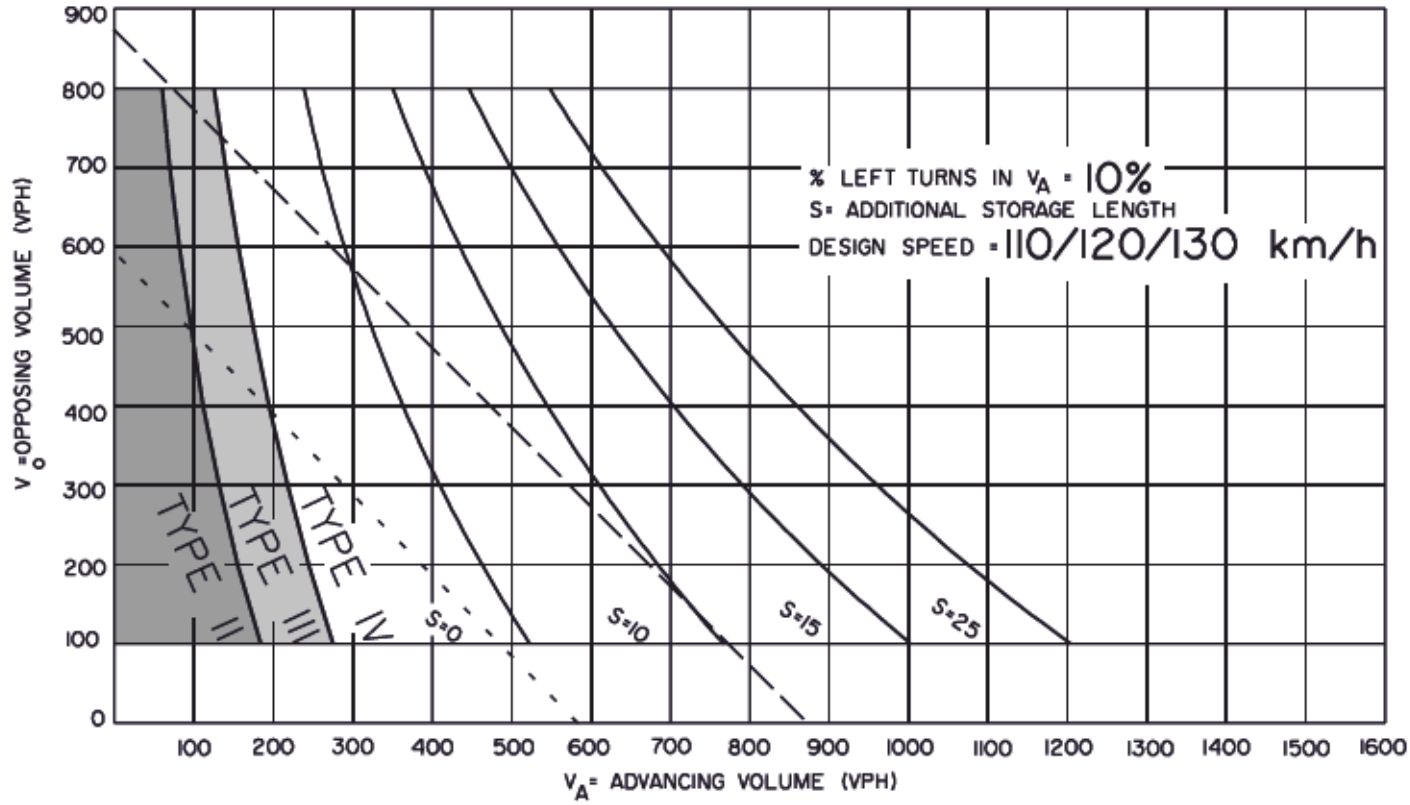
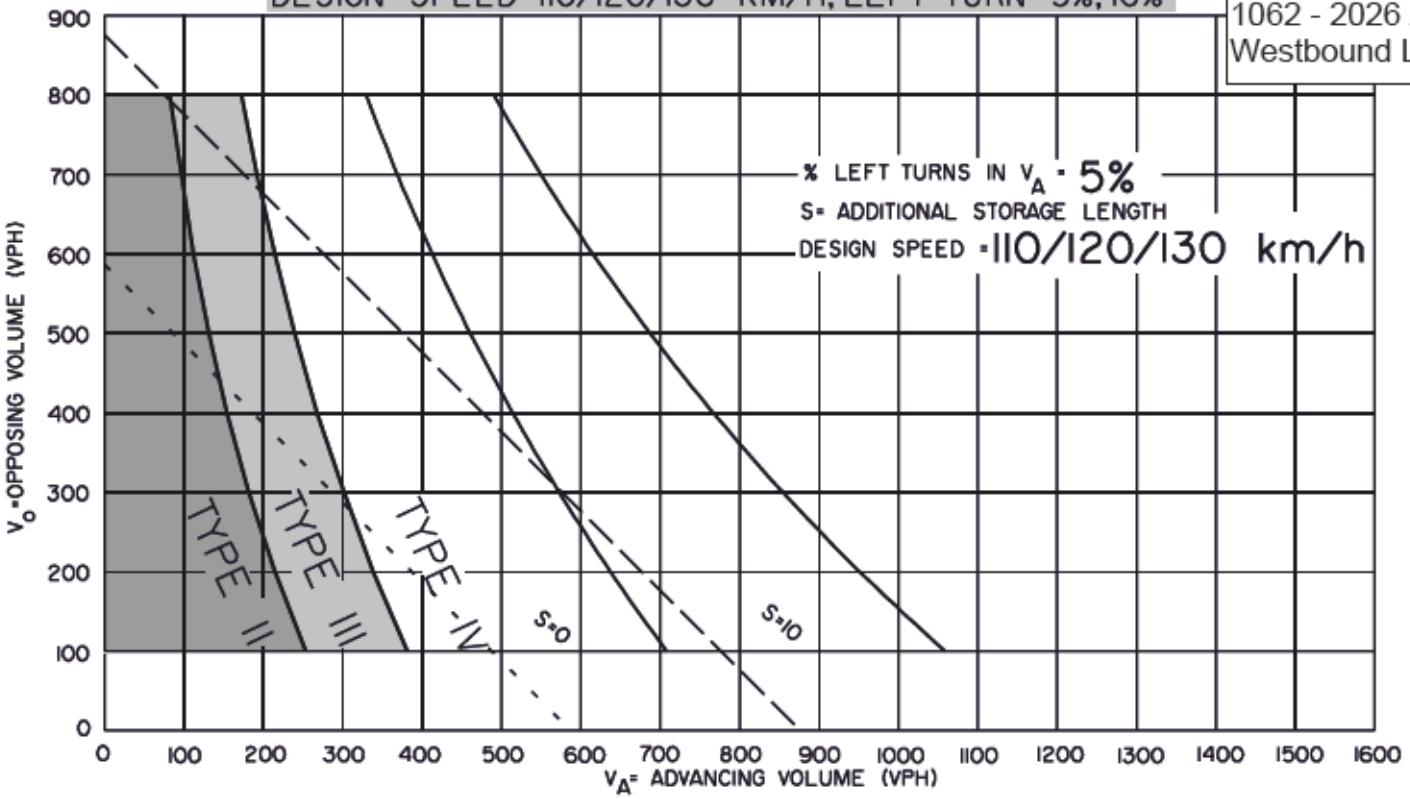


GRAPHICS FILE: debd767a.mon

FIGURE D-7.6-7a WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 5%, 10%

Hwy 697 & Twp Rd 1062 - 2026 AM Westbound Left



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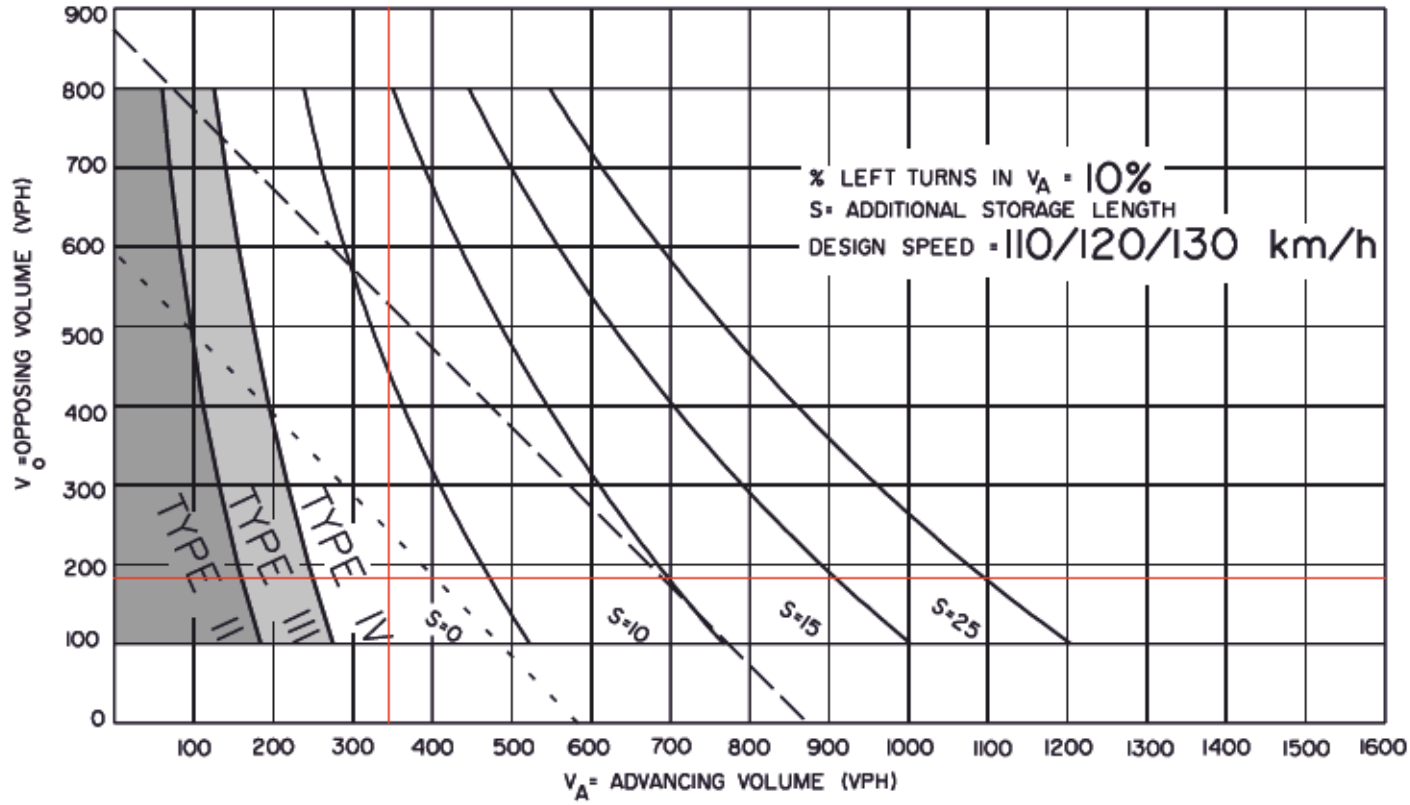
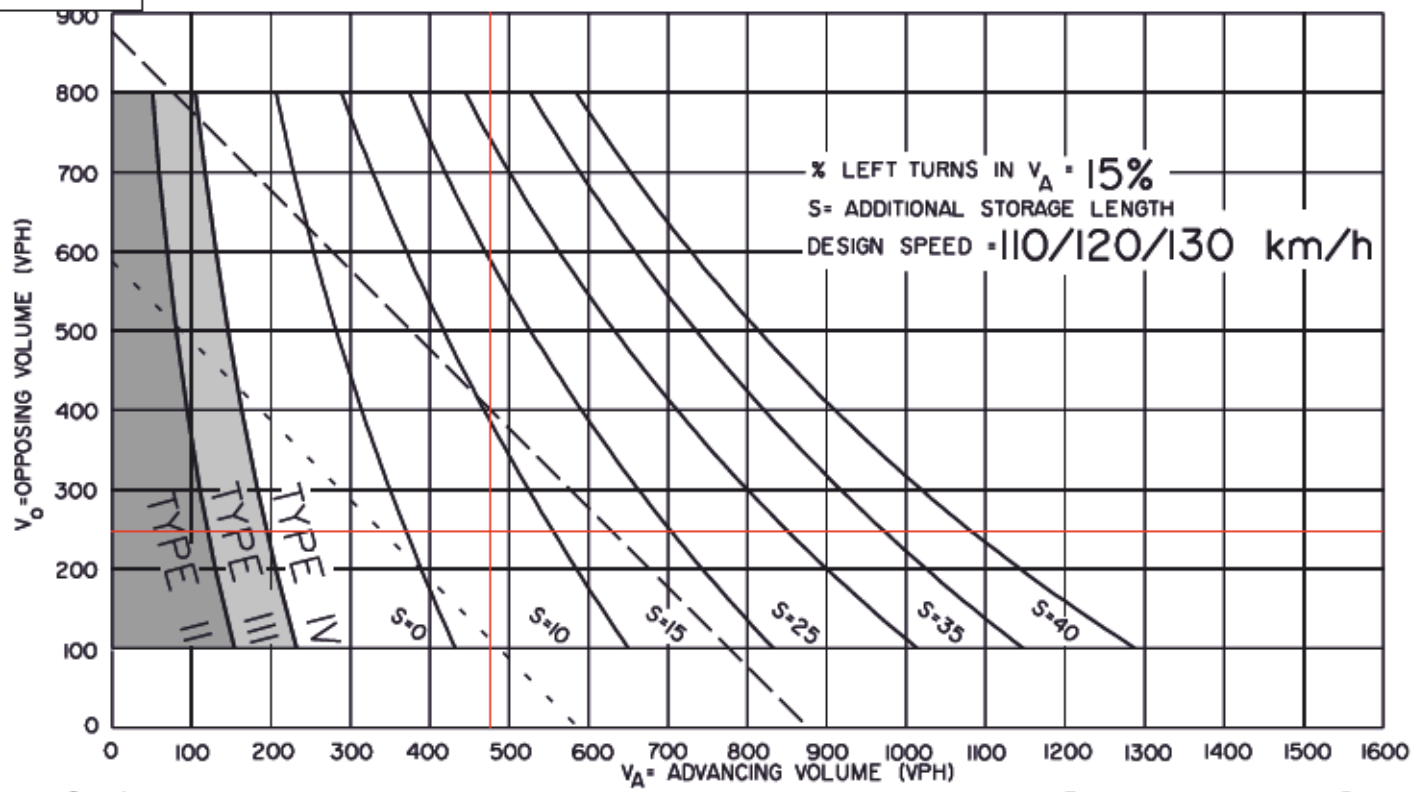


GRAPHICS FILE: debd767a.mon

Hwy 697 & Twp Rd
1062 - 2026 PM
Eastbound Left

FIGURE D-7.6-7b WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 15%, 20%



S = Additional storage length required, that is, in addition to what is shown on the appropriate Type IV standard drawing. Designers should check additional storage requirements for trucks, also see Table D.7.6a.

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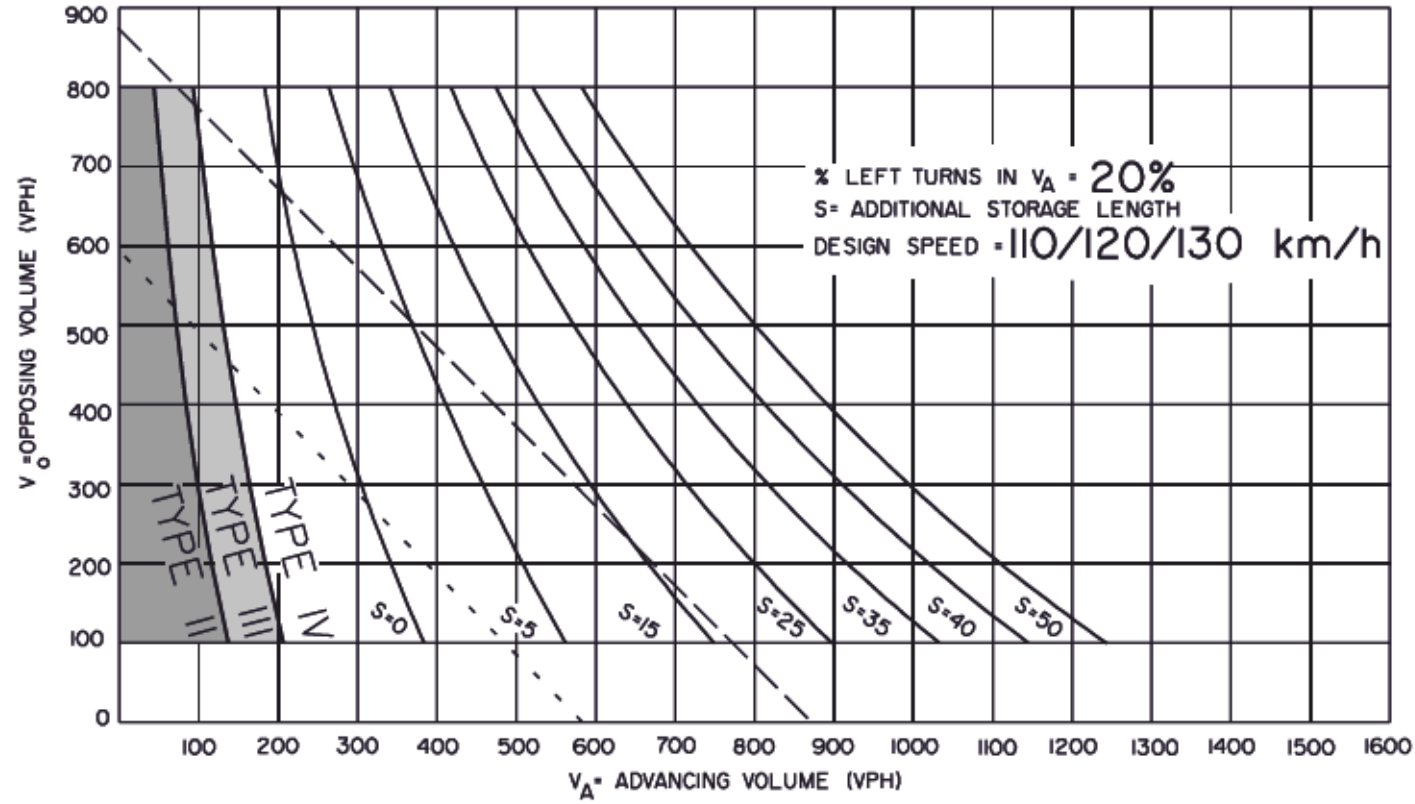
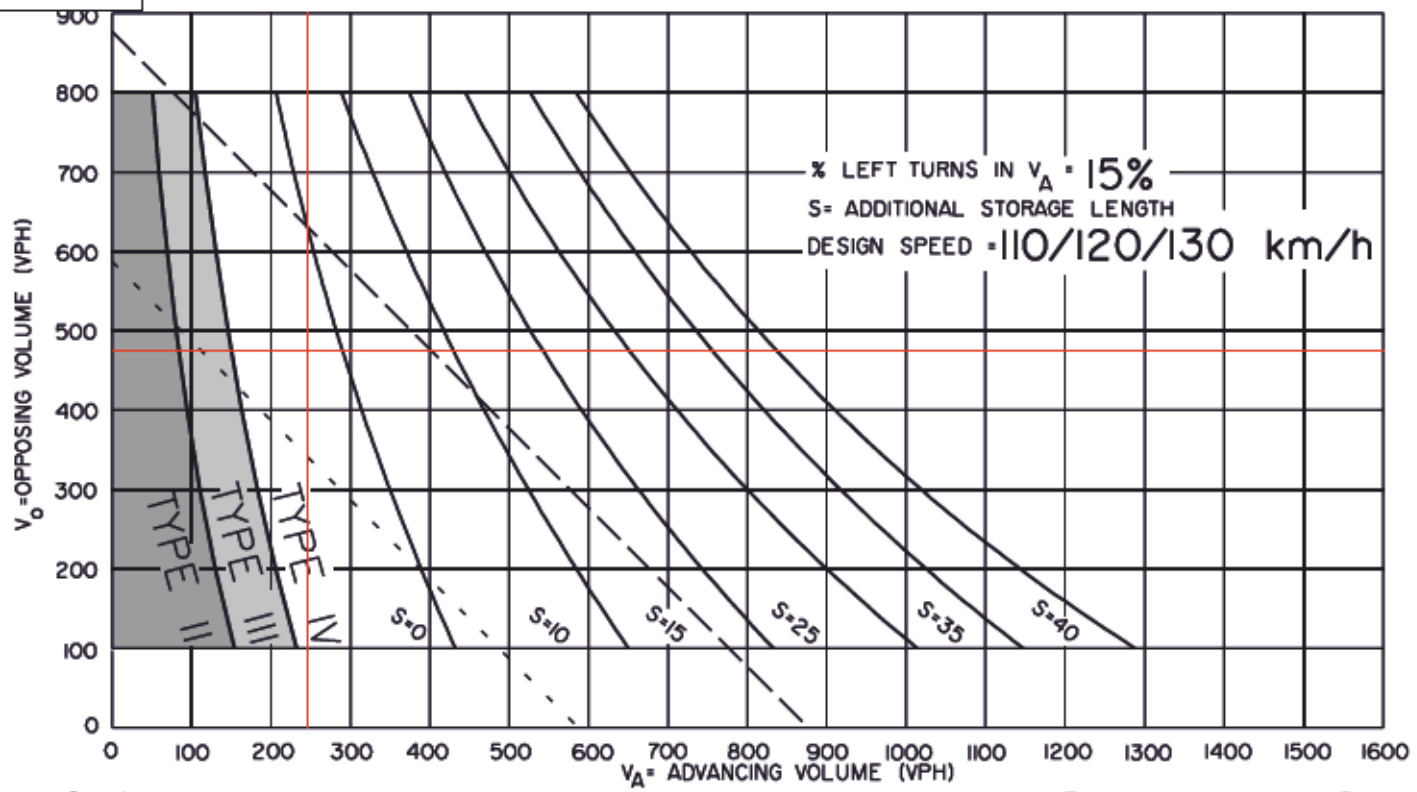


GRAPHICS FILE: debd767a.man

Hwy 697 & Twp Rd
1062 - 2026 PM
Westbound Left

FIGURE D-7.6-7b WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 15%, 20%



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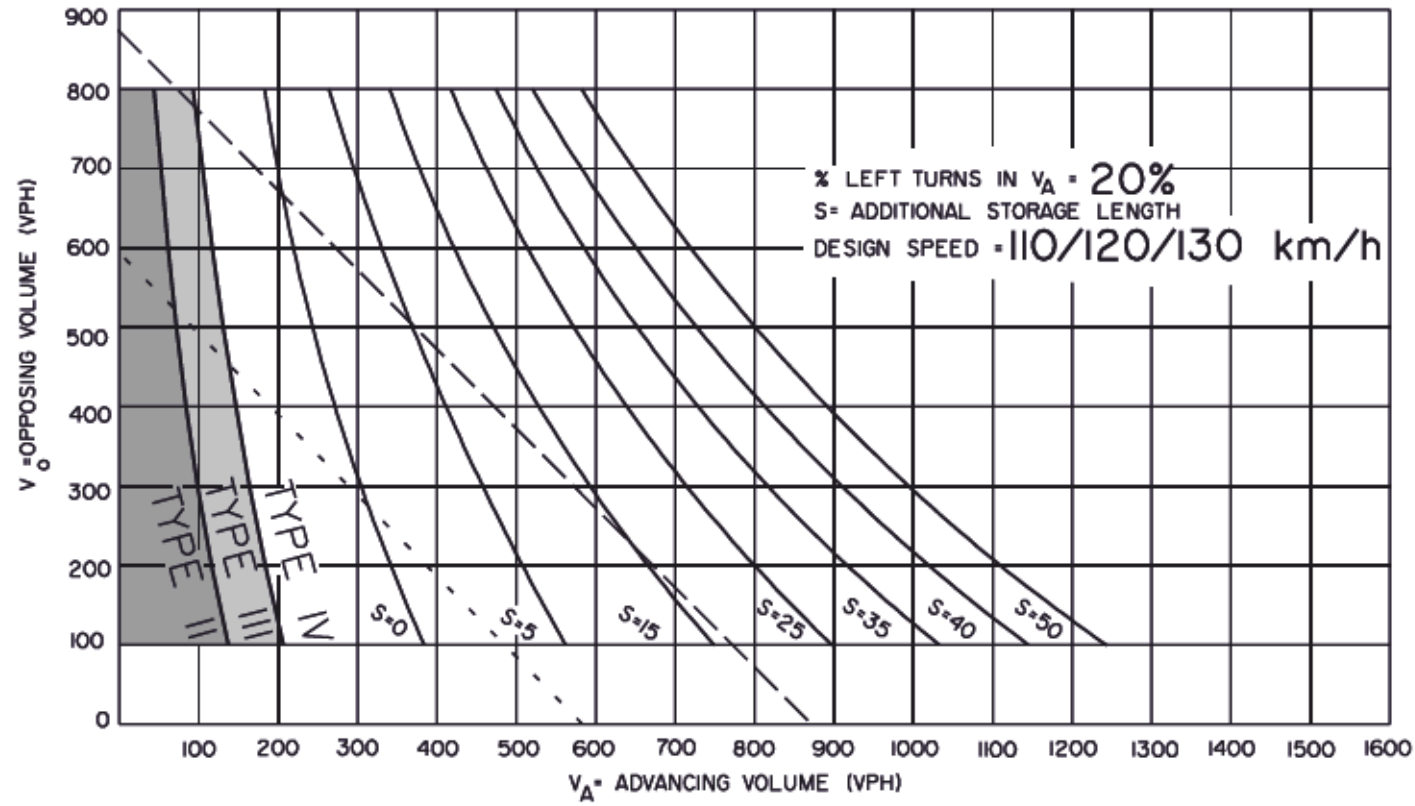
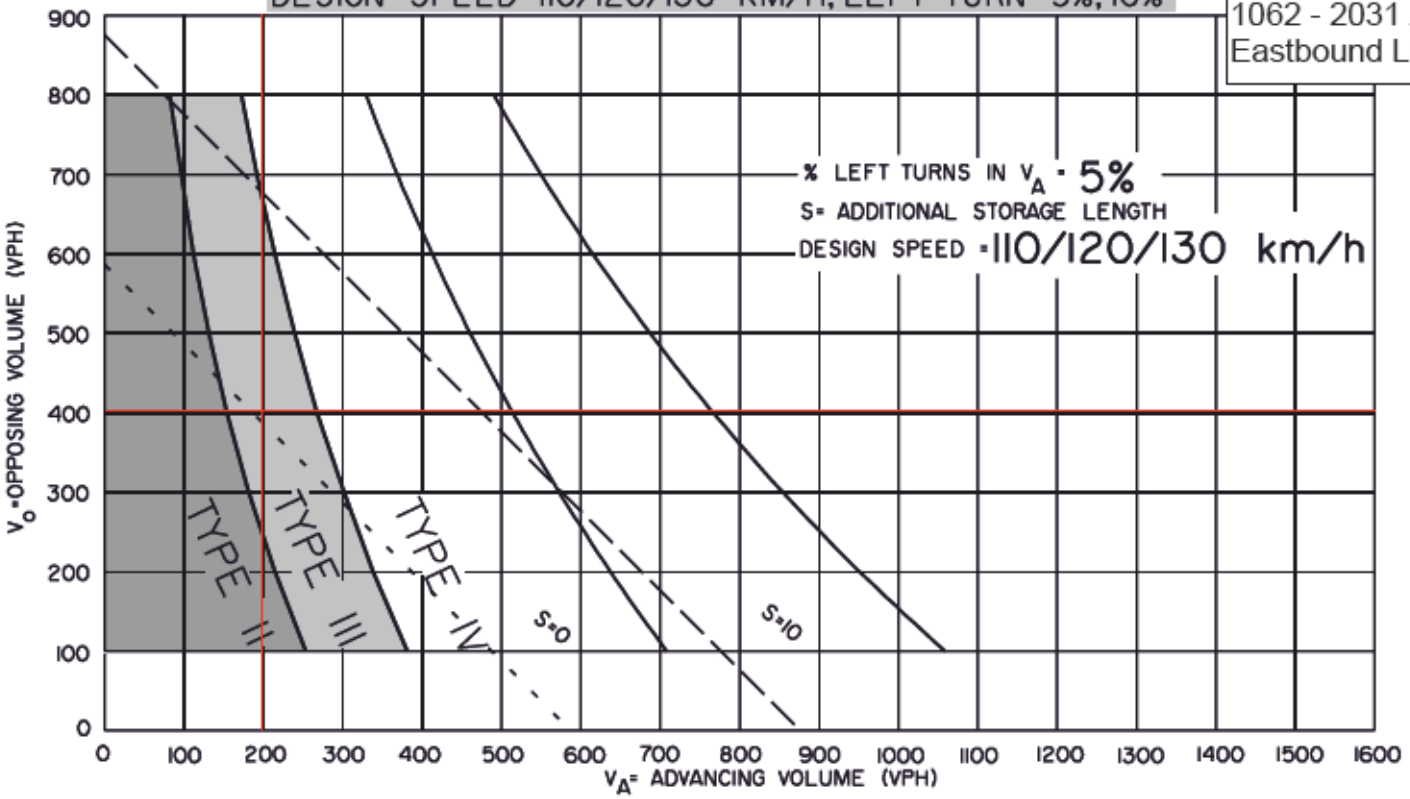


GRAPHICS FILE: debd767a.man

FIGURE D-7.6-7a WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 5%, 10%

Hwy 697 & Twp Rd 1062 - 2031 AM Eastbound Left



S = Additional storage length required, that is, in addition to what is shown on the appropriate Type IV standard drawing. Designers should check additional storage requirements for trucks, also see Table D.7.6a.

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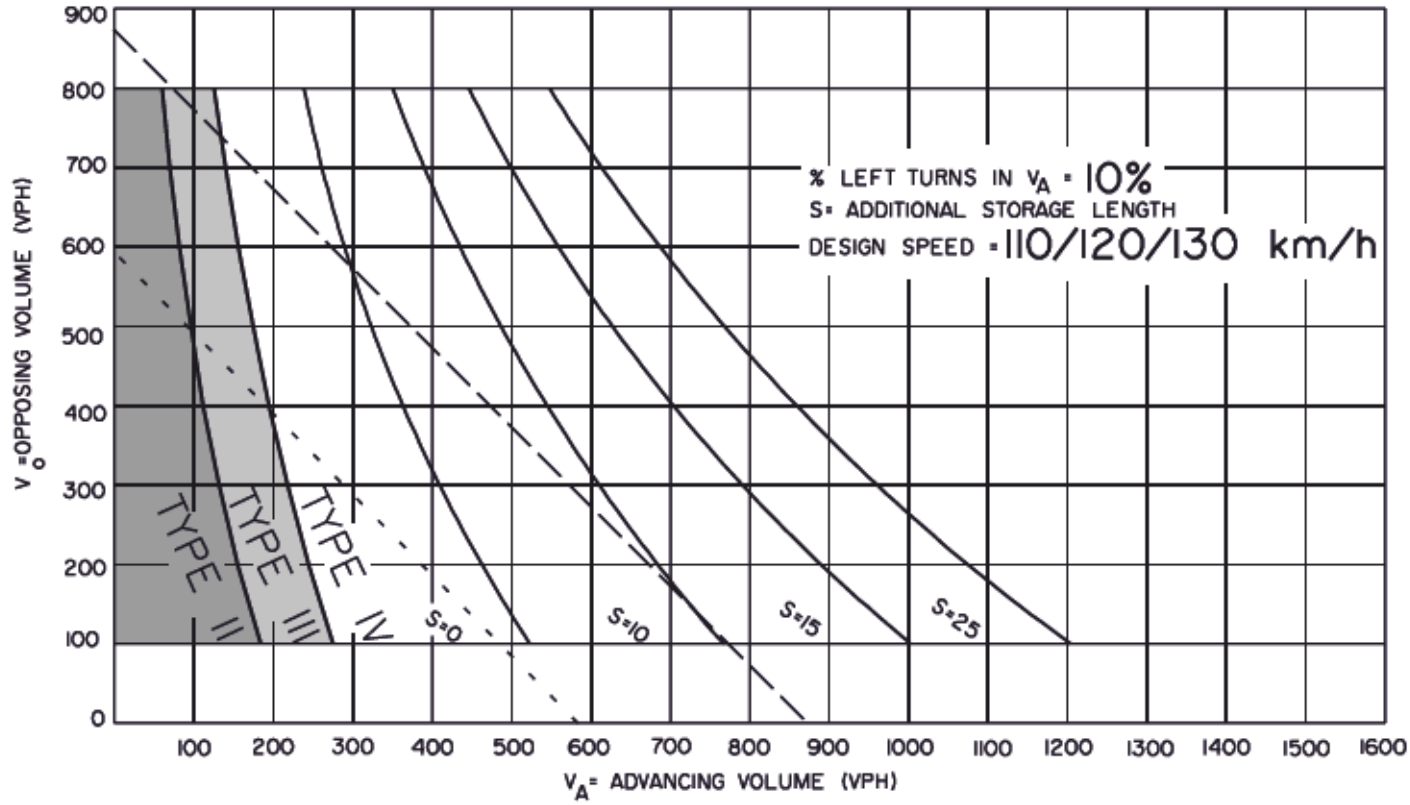
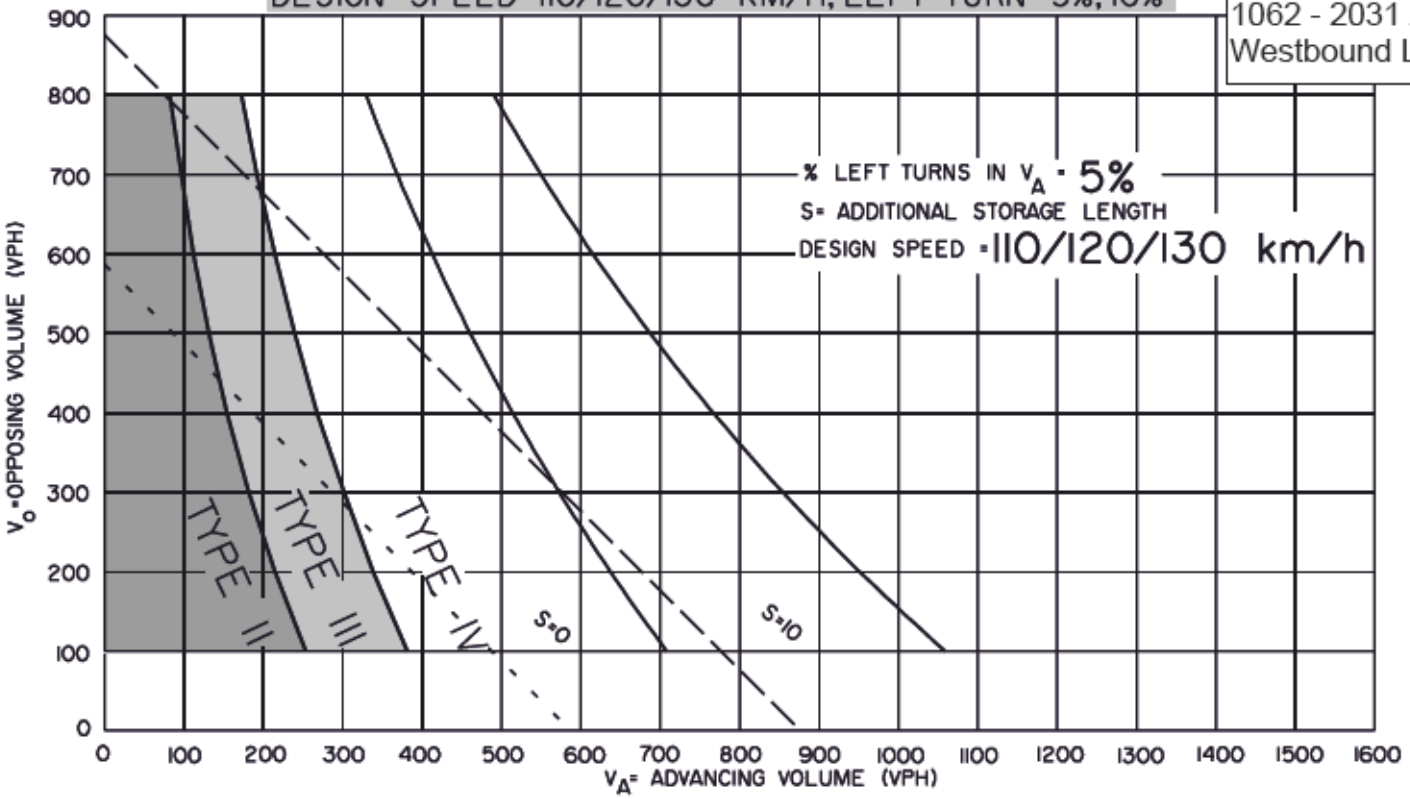


GRAPHICS FILE: debd767a.mon

FIGURE D-7.6-7a WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 5%, 10%

Hwy 697 & Twp Rd 1062 - 2031 AM Westbound Left



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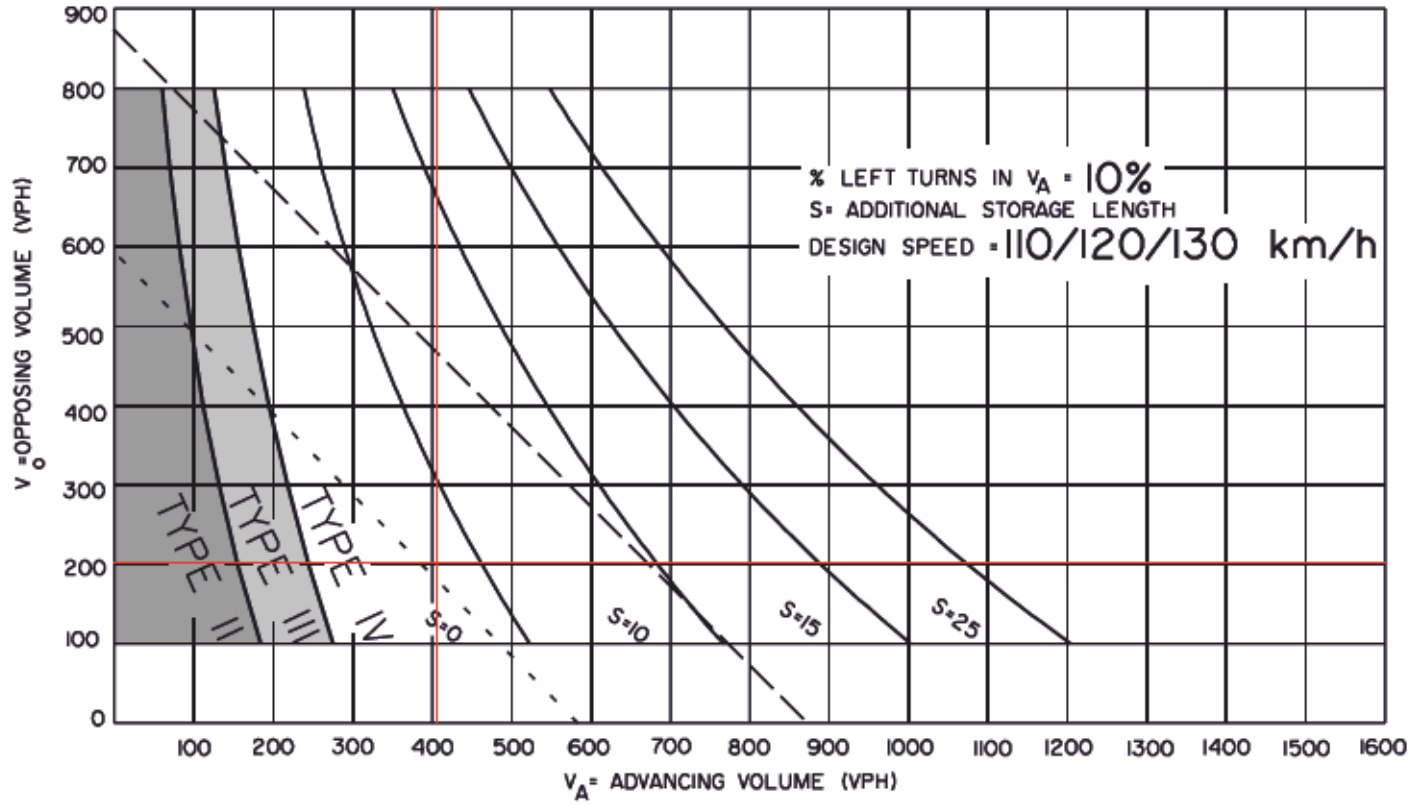
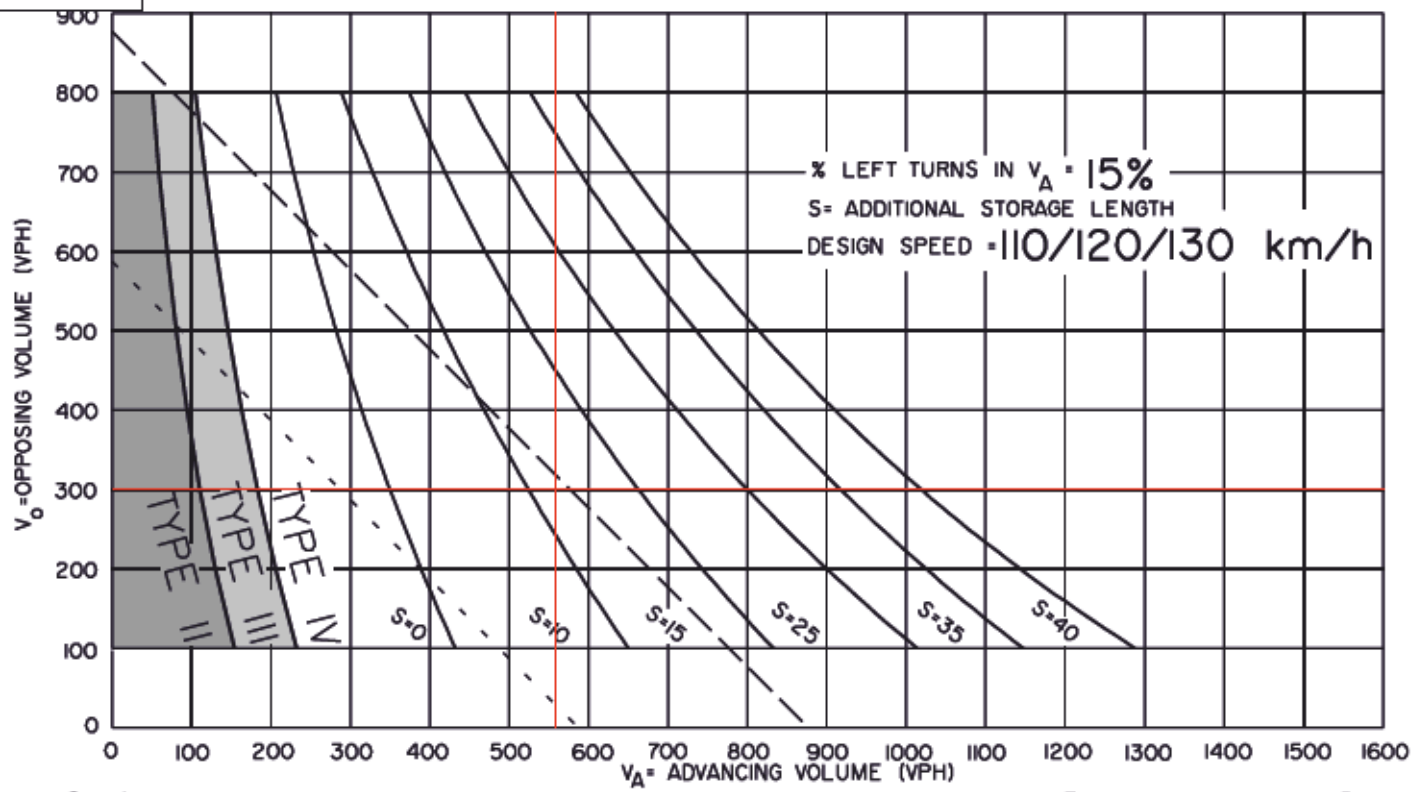


GRAPHICS FILE: debd767a.mon

Hwy 697 & Twp Rd
1062 - 2031 PM
Eastbound Left

FIGURE D-7.6-7b WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 15%, 20%



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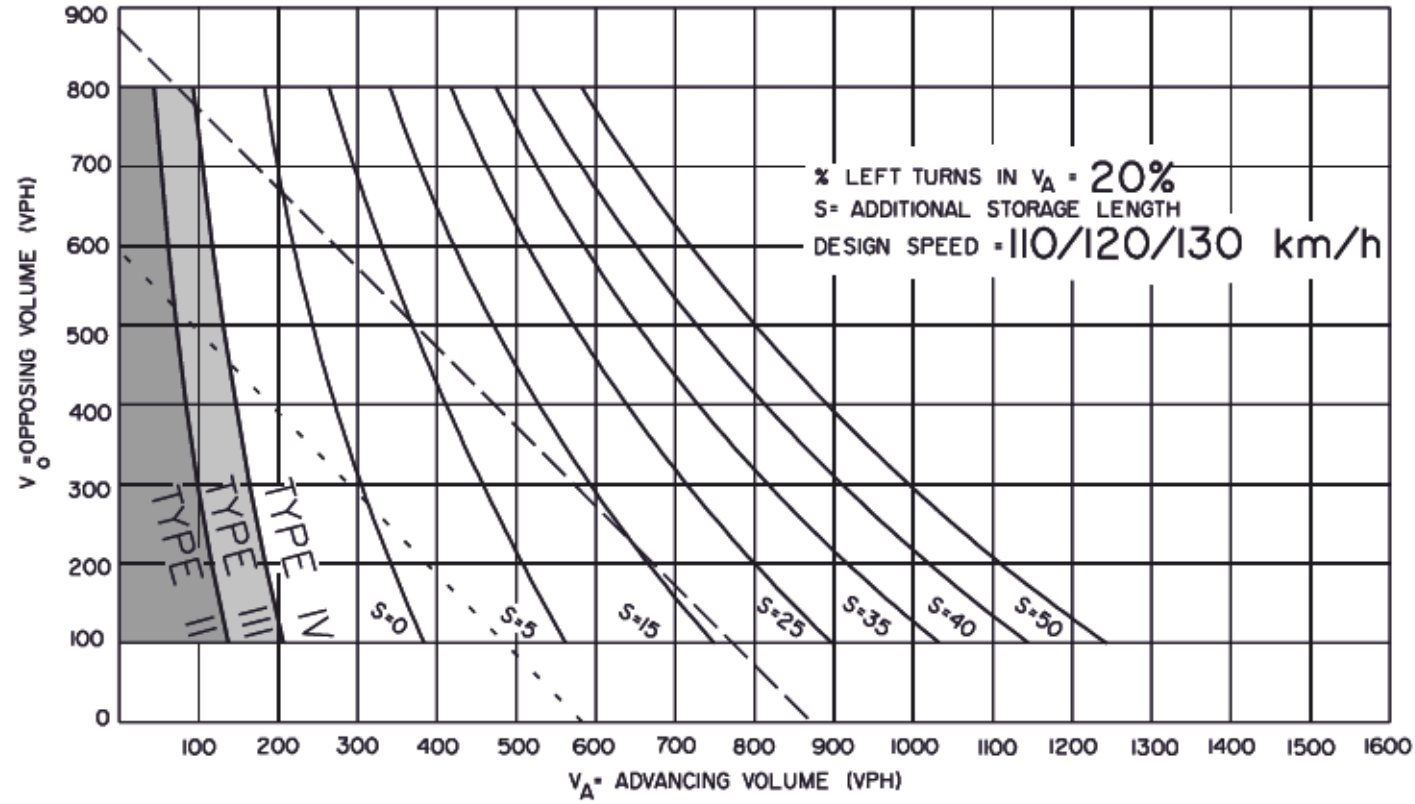
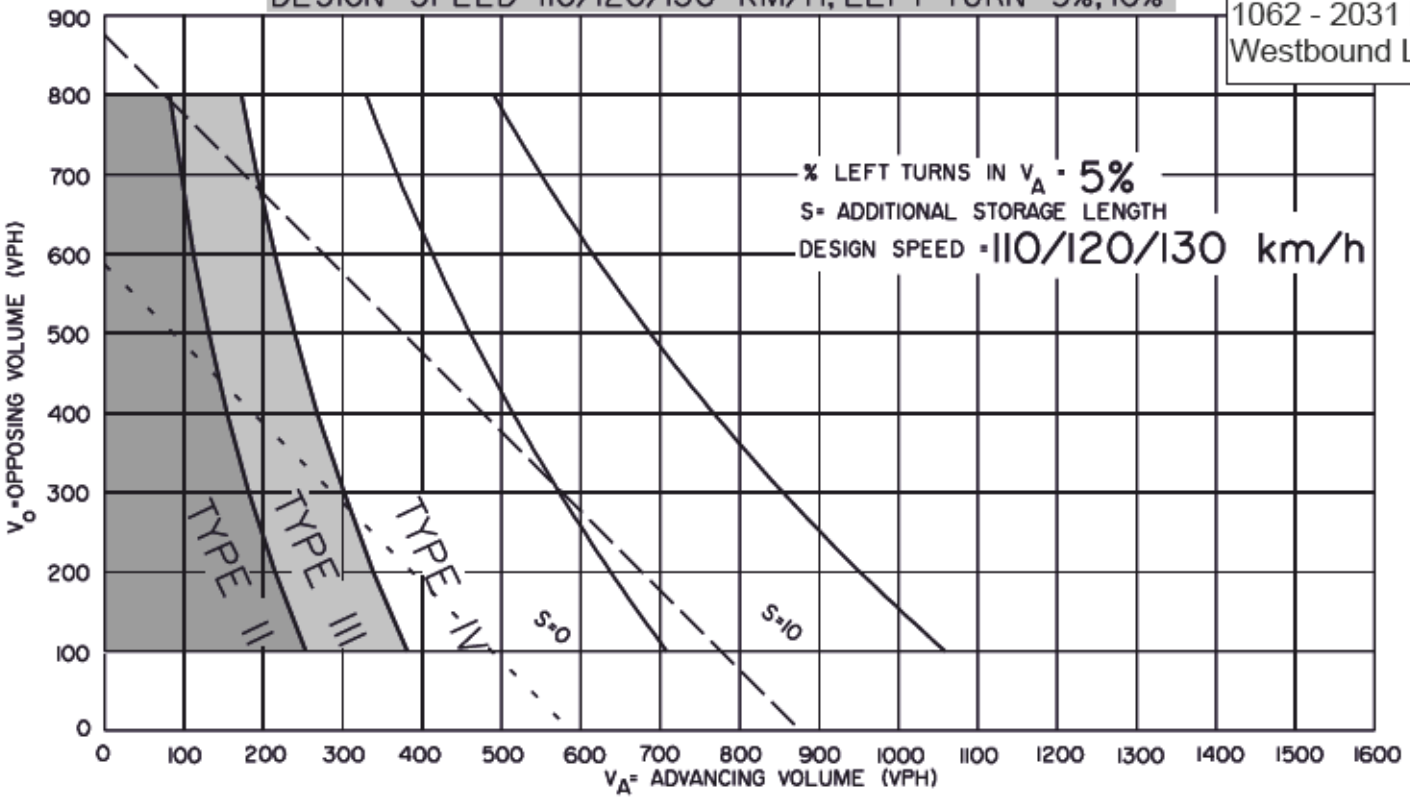


GRAPHICS FILE: debd767a.man

FIGURE D-7.6-7a WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 5%, 10%

Hwy 697 & Twp Rd 1062 - 2031 PM Westbound Left



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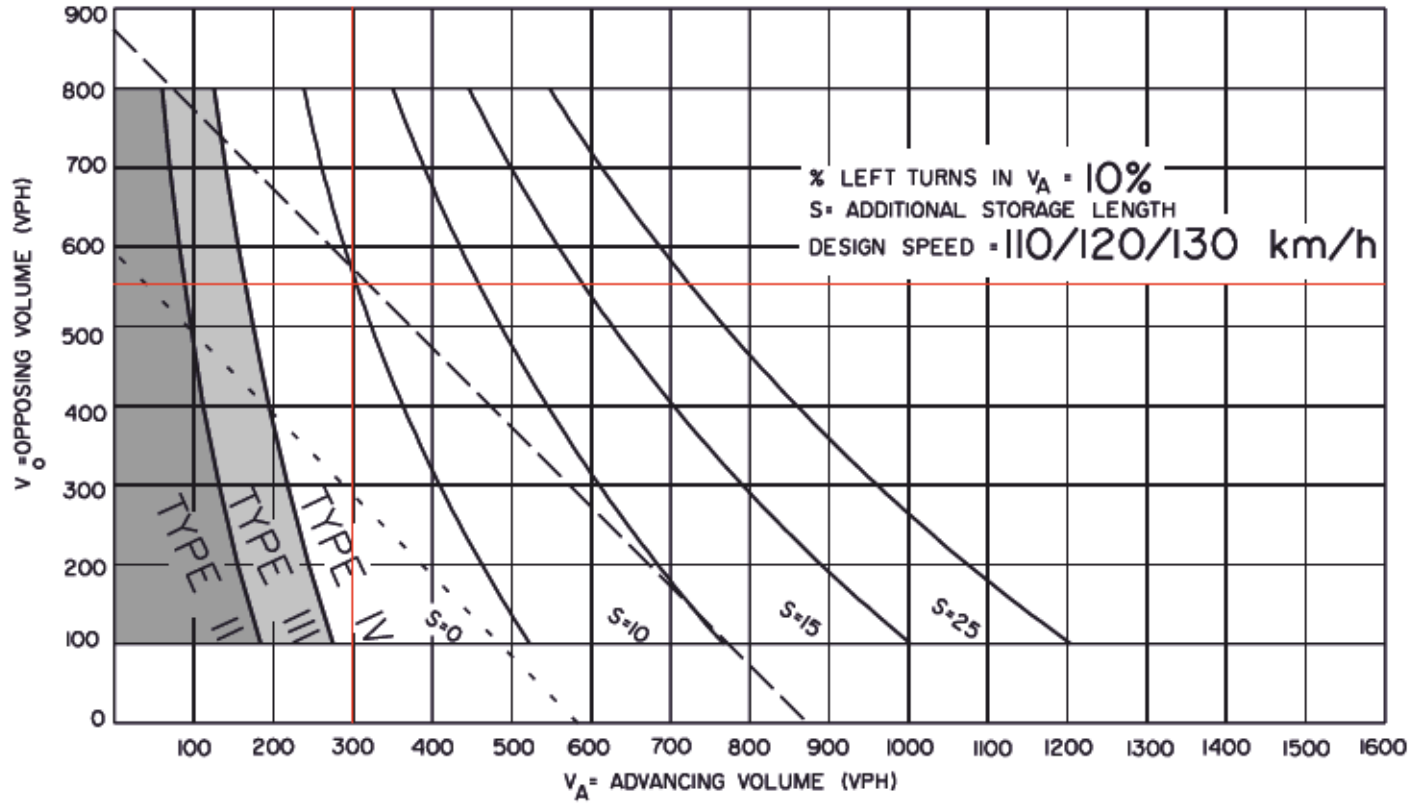
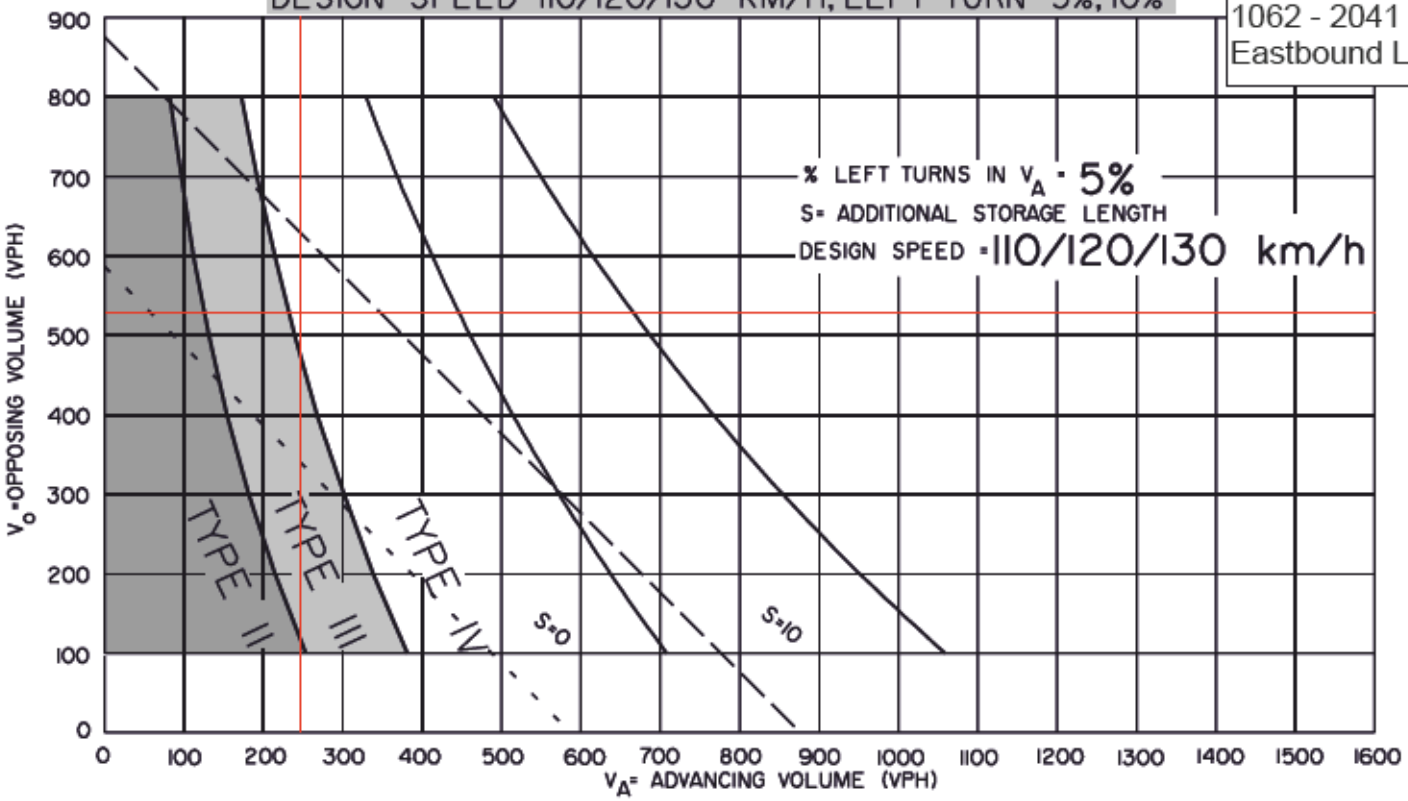


GRAPHICS FILE: debd767a.mon

FIGURE D-7.6-7a WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 5%, 10%

Hwy 697 & Twp Rd 1062 - 2041 AM Eastbound Left



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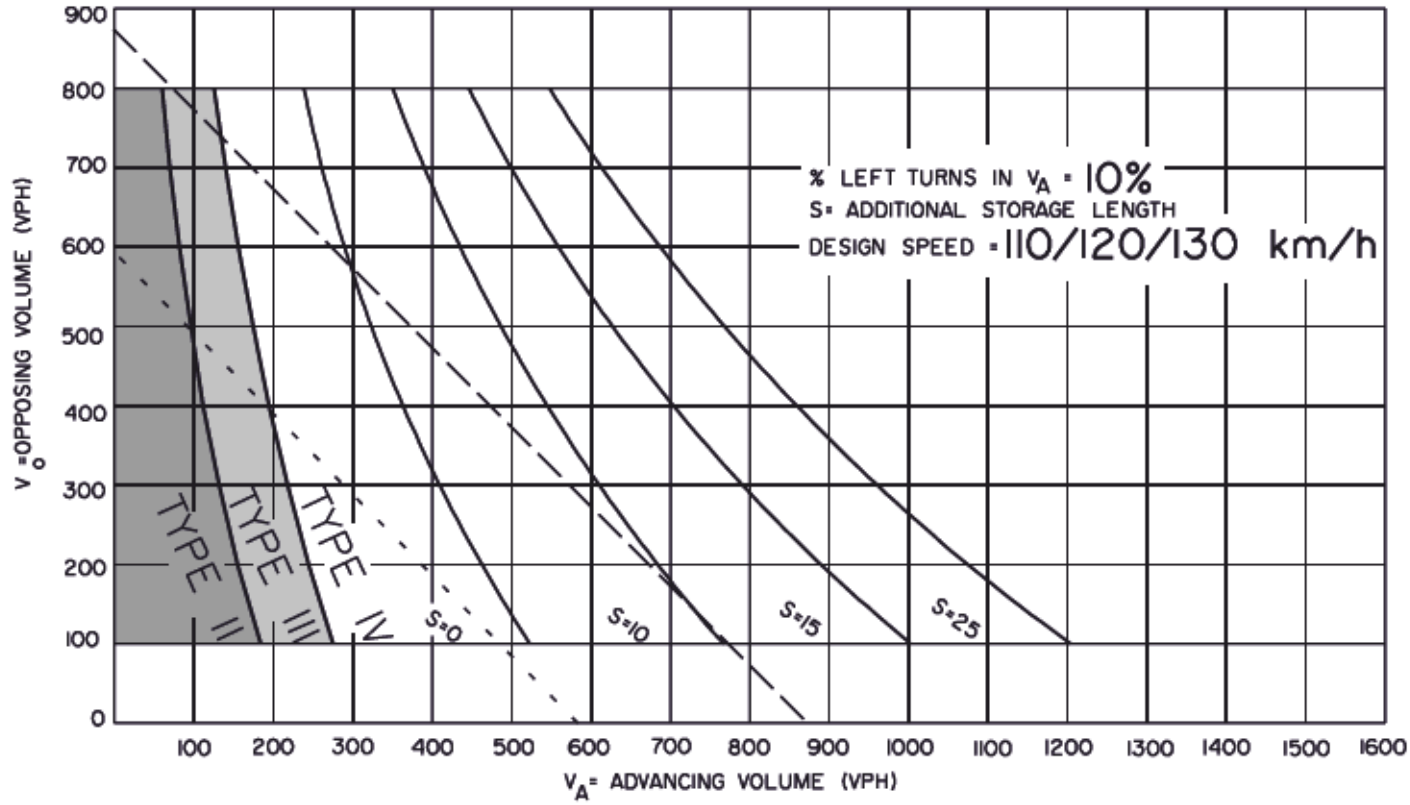
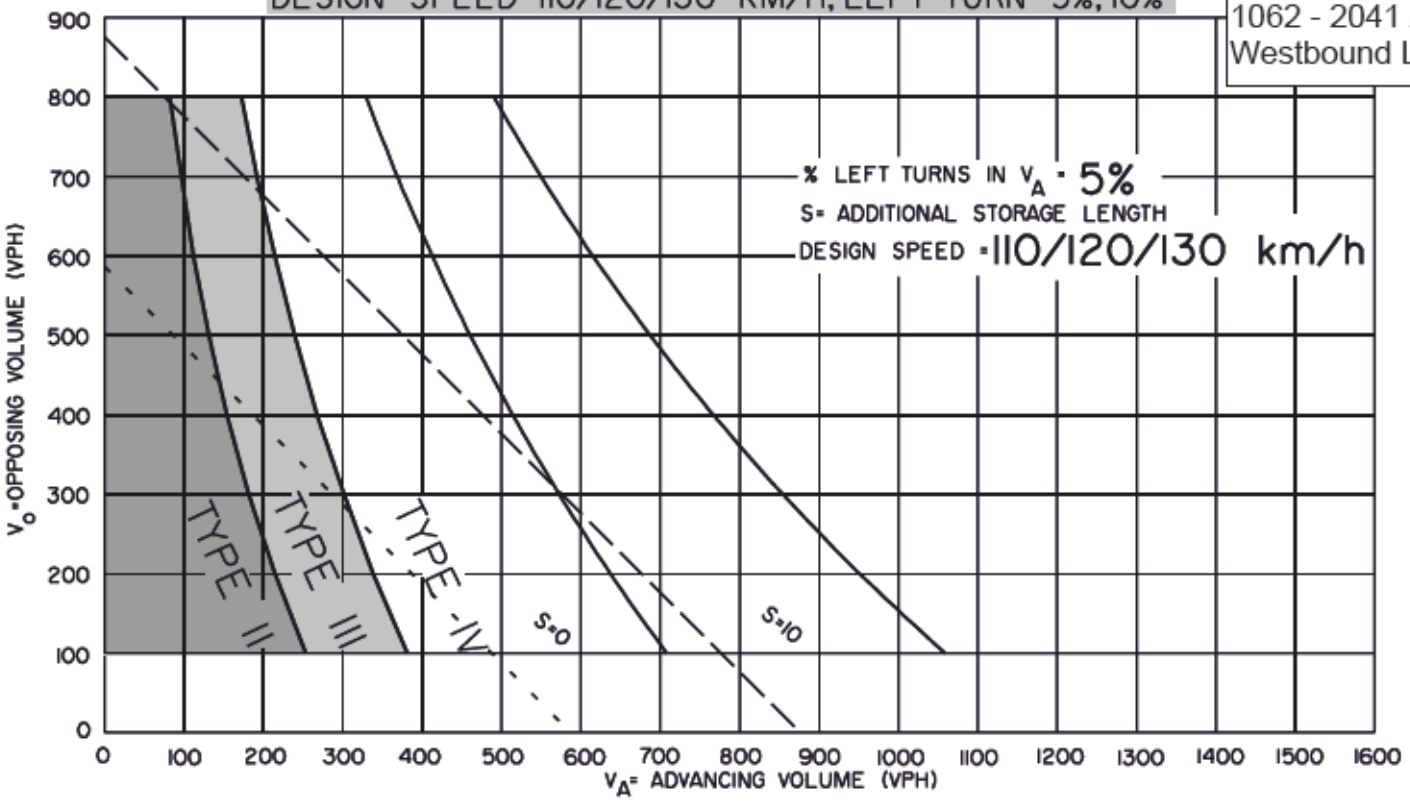


GRAPHICS FILE: debd767a.mon

FIGURE D-7.6-7a WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 5%, 10%

Hwy 697 & Twp Rd 1062 - 2041 AM Westbound Left



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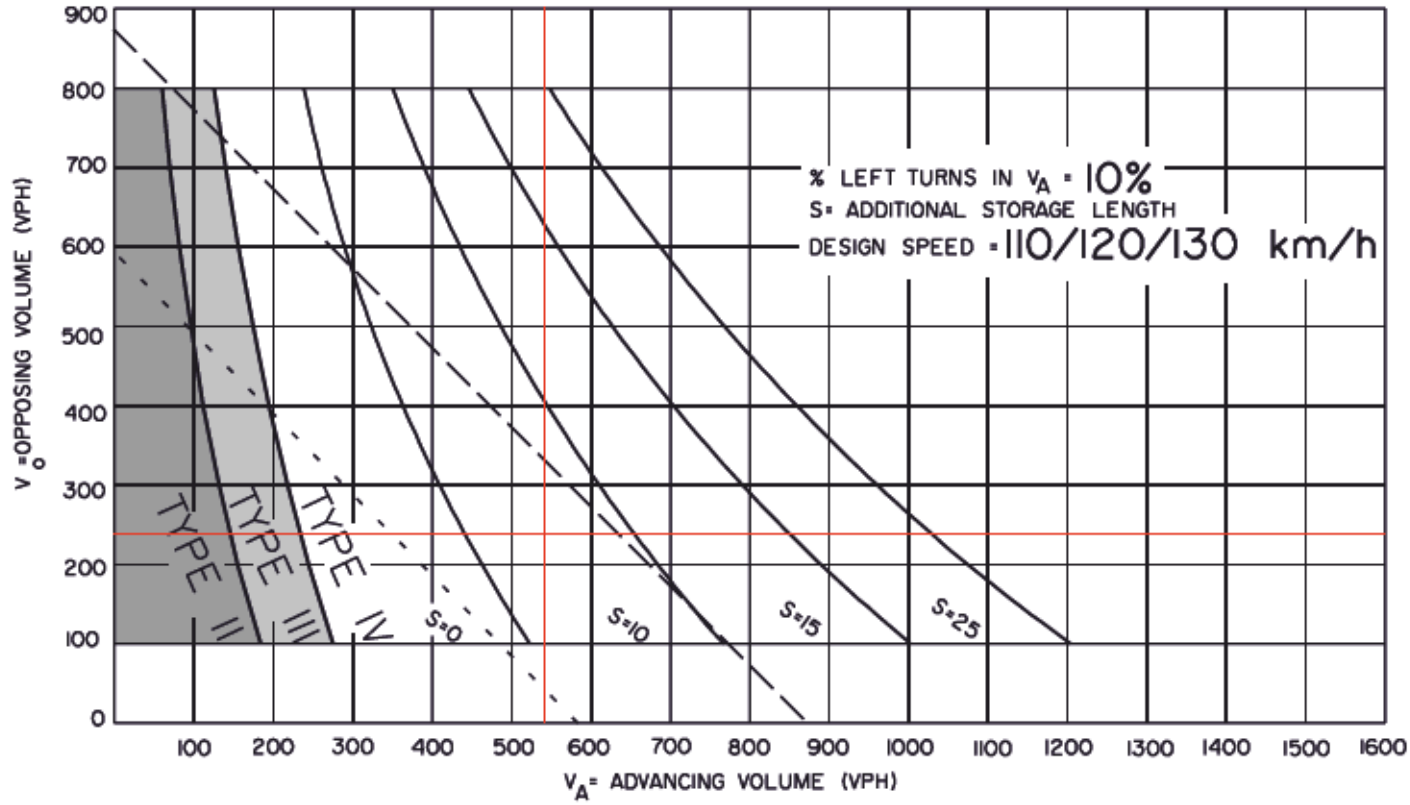
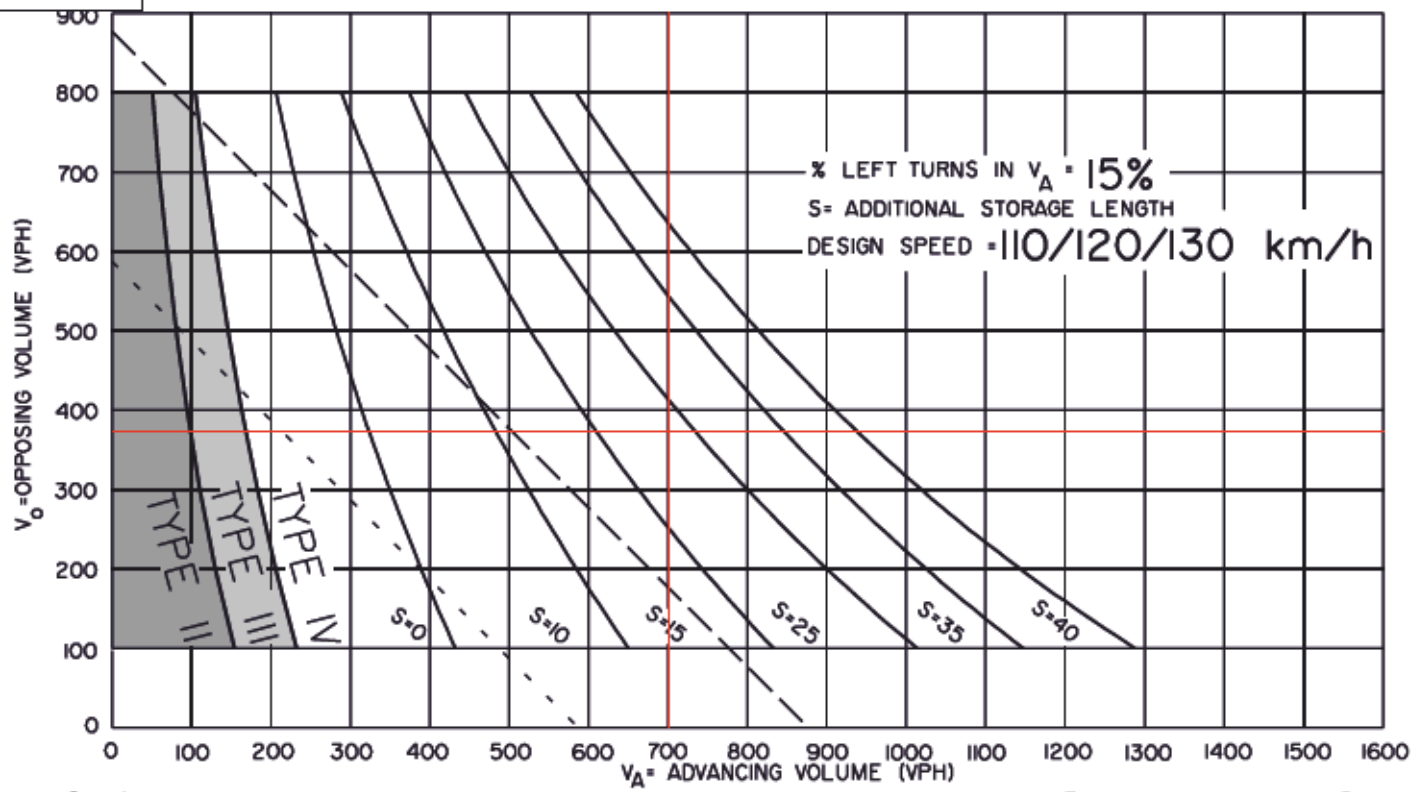


GRAPHICS FILE: debd767a.mon

Hwy 697 & Twp Rd
1062 - 2041 PM
Eastbound Left

FIGURE D-7.6-7b WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 15%, 20%



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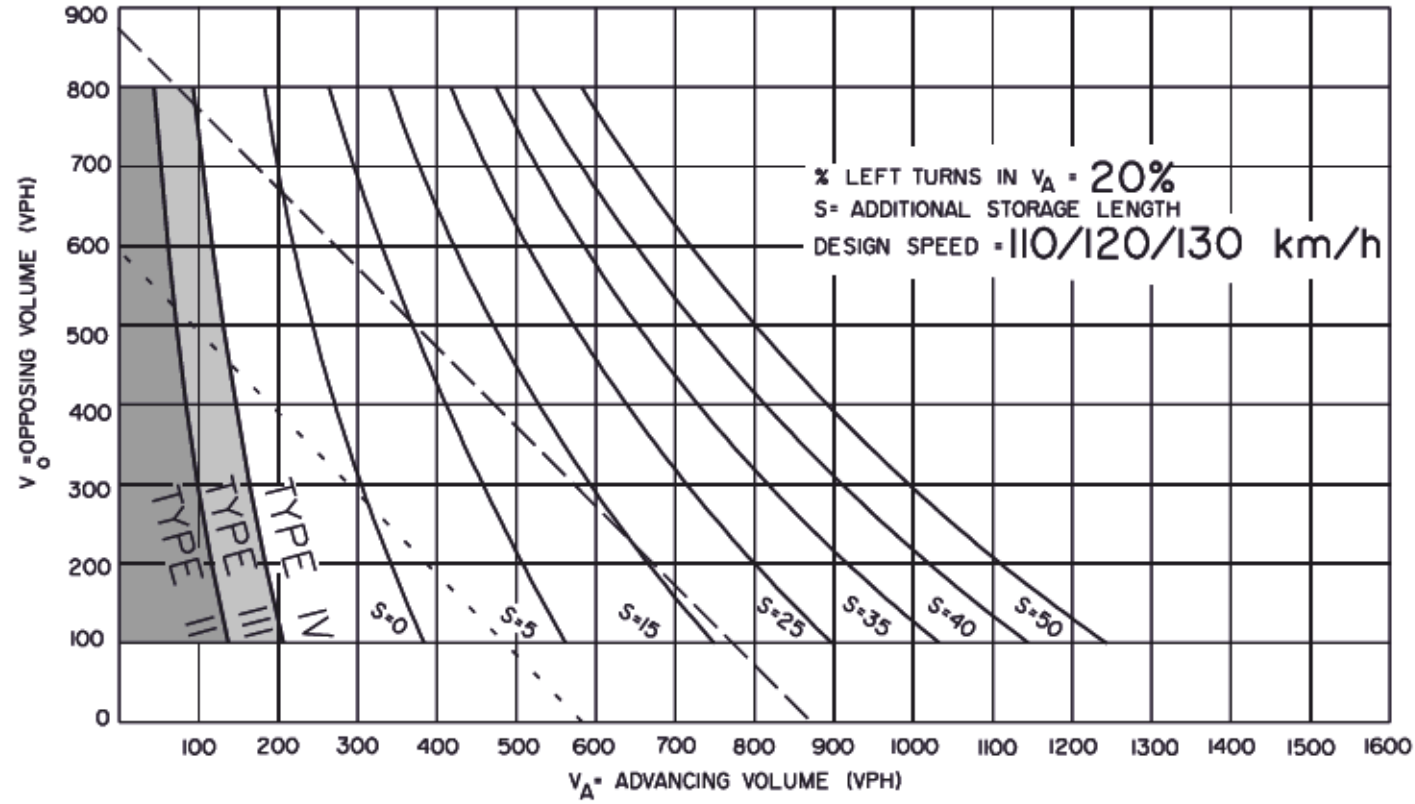
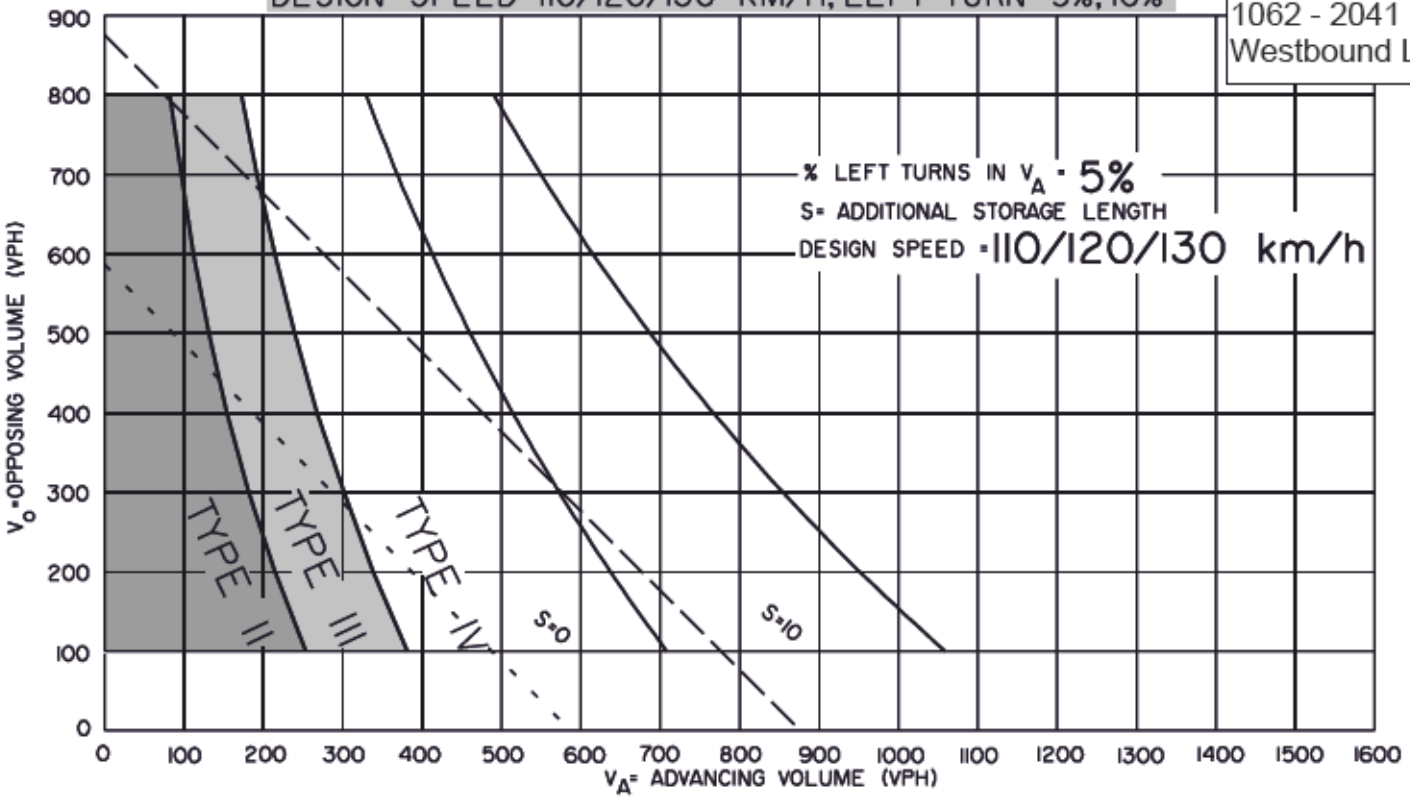


GRAPHICS FILE: debd767a.man

FIGURE D-7.6-7a WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 5%, 10%

Hwy 697 & Twp Rd 1062 - 2041 PM Westbound Left



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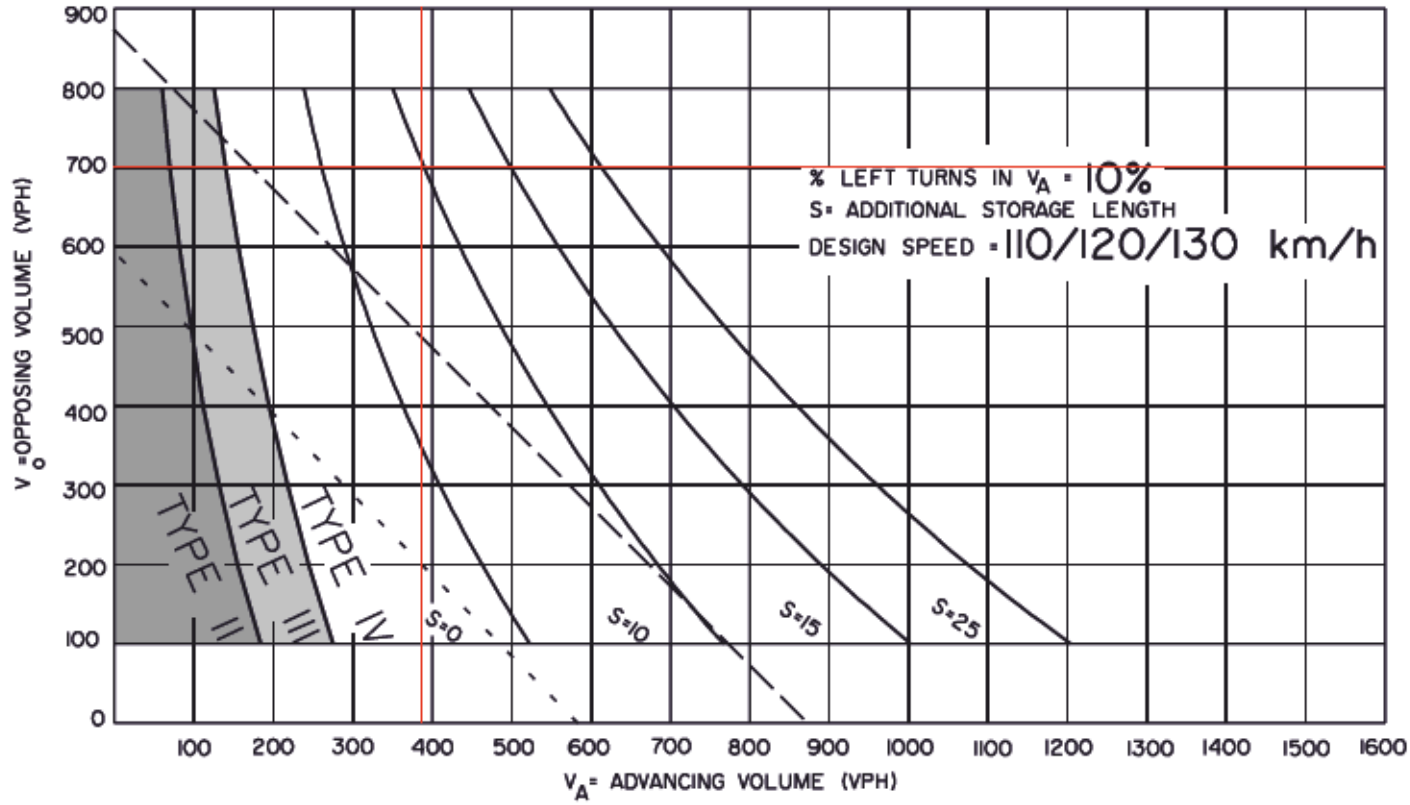
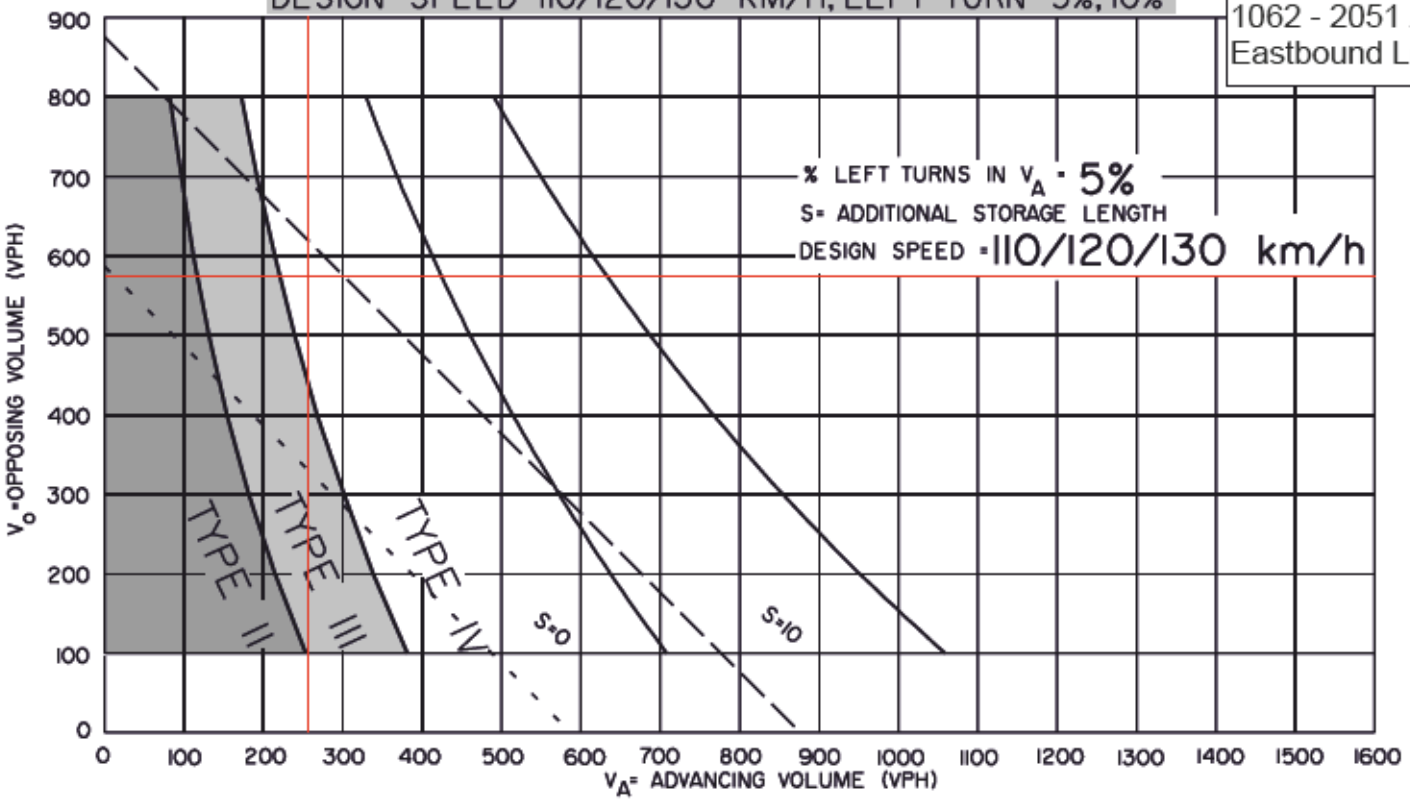


GRAPHICS FILE: debd767a.mon

FIGURE D-7.6-7a WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 5%, 10%

Hwy 697 & Twp Rd 1062 - 2051 AM Eastbound Left



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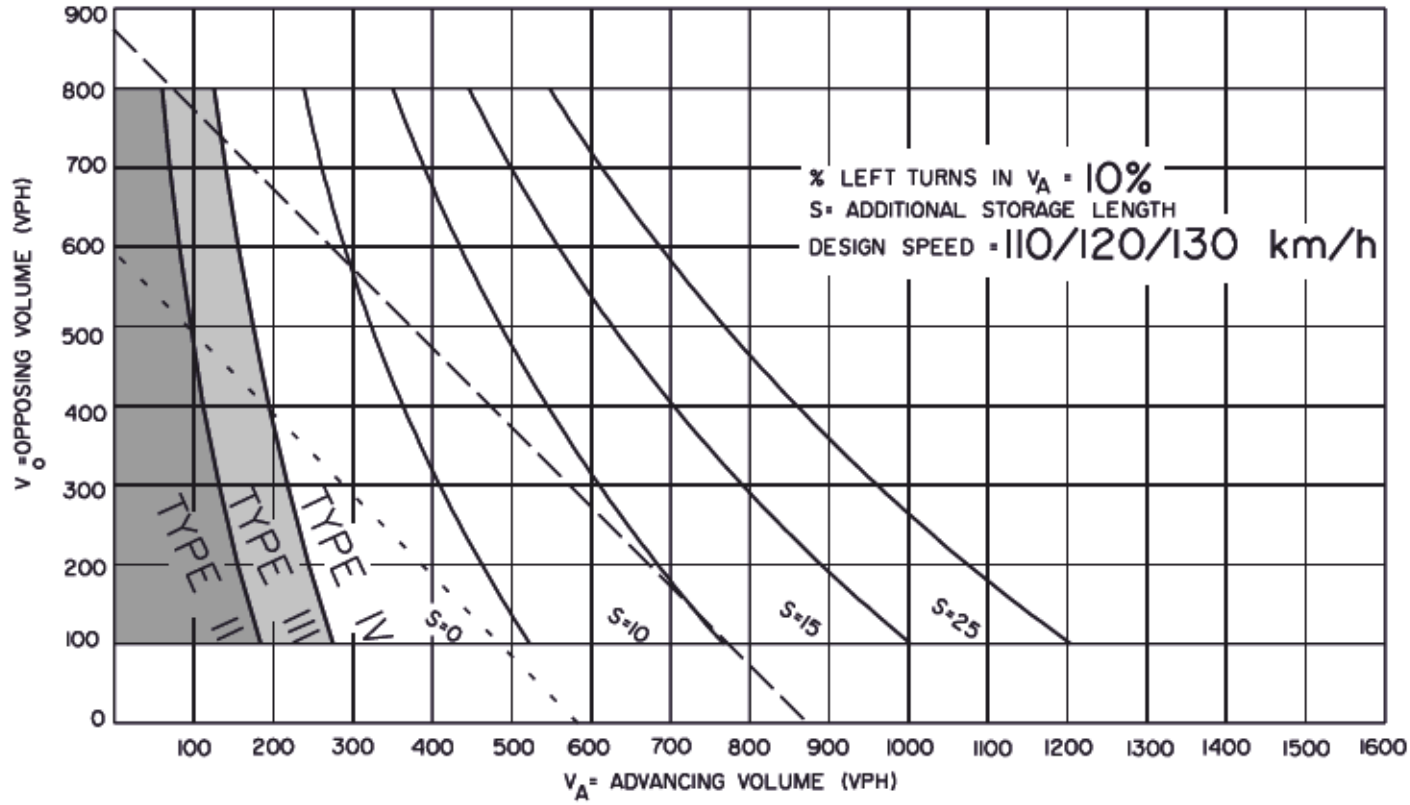
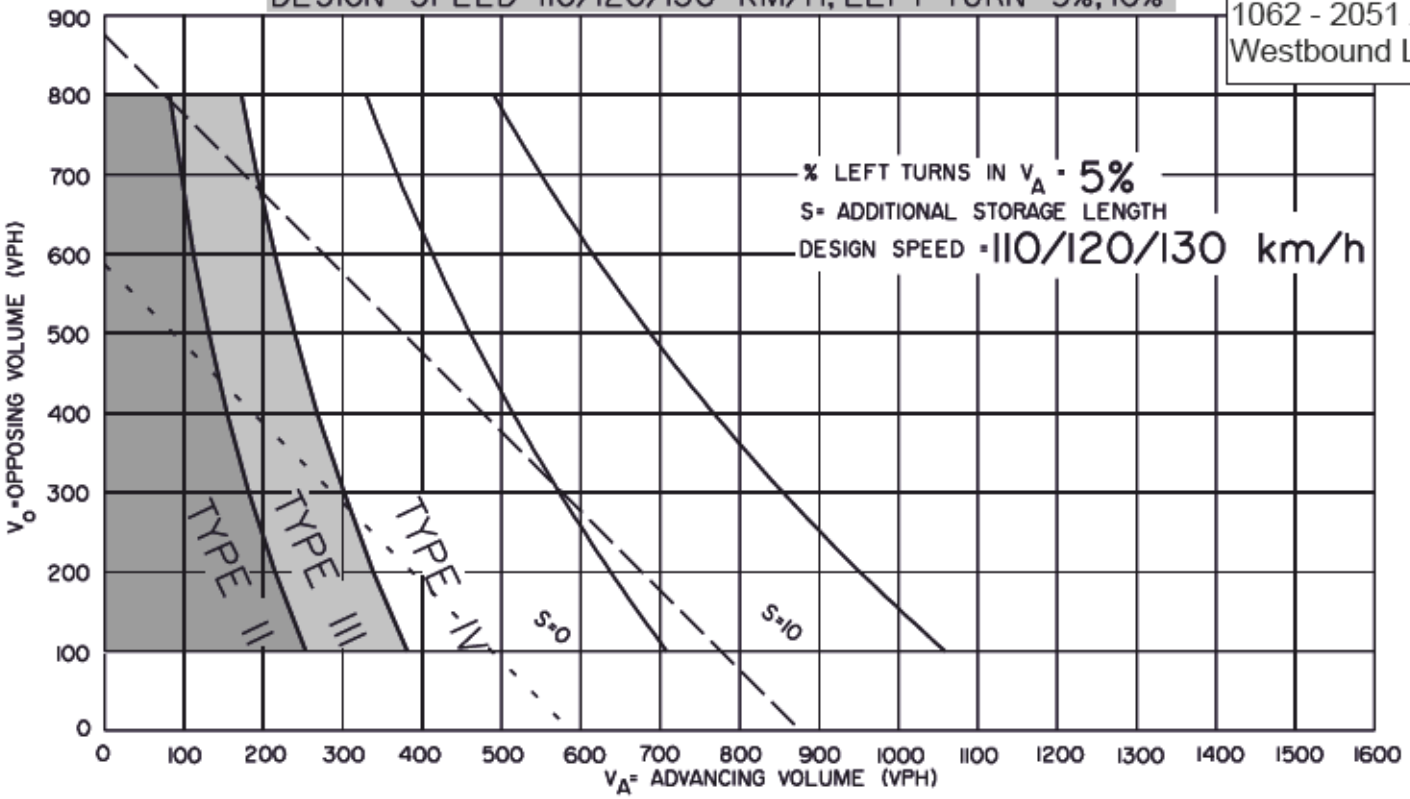


GRAPHICS FILE: debd767a.mon

FIGURE D-7.6-7a WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 5%, 10%

Hwy 697 & Twp Rd 1062 - 2051 AM Westbound Left



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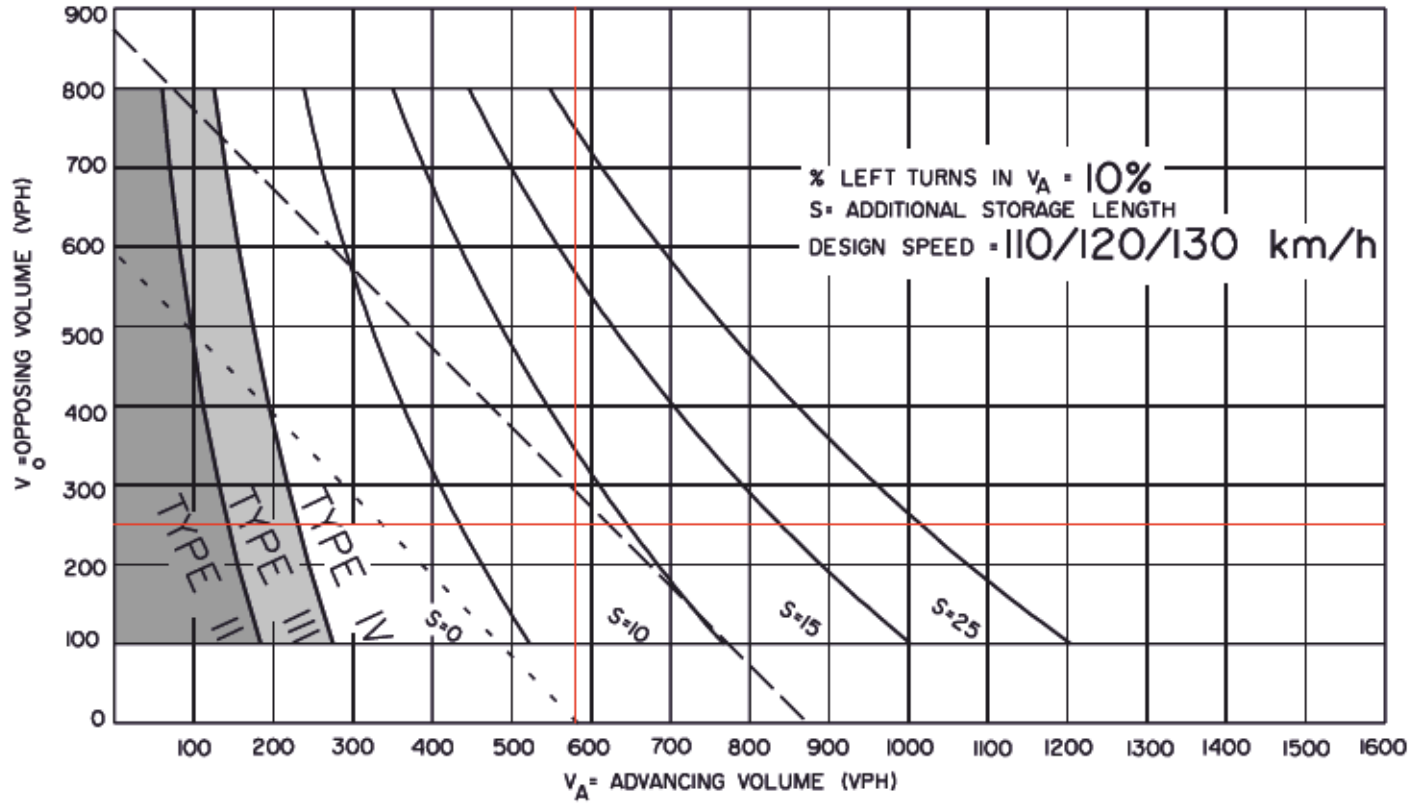
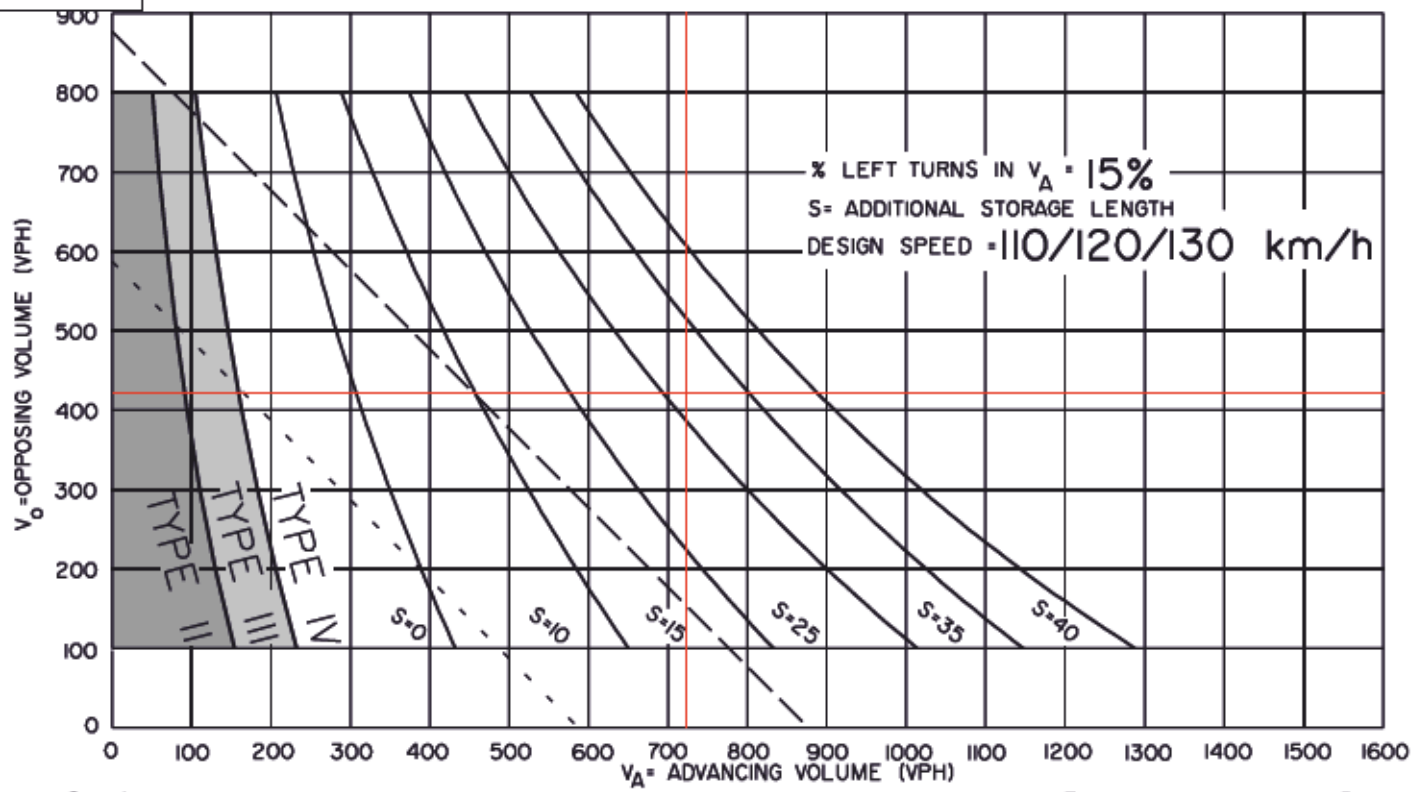


GRAPHICS FILE: debd767a.mon

Hwy 697 & Twp Rd
1062 - 2051 PM
Eastbound Left

FIGURE D-7.6-7b WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 15%, 20%



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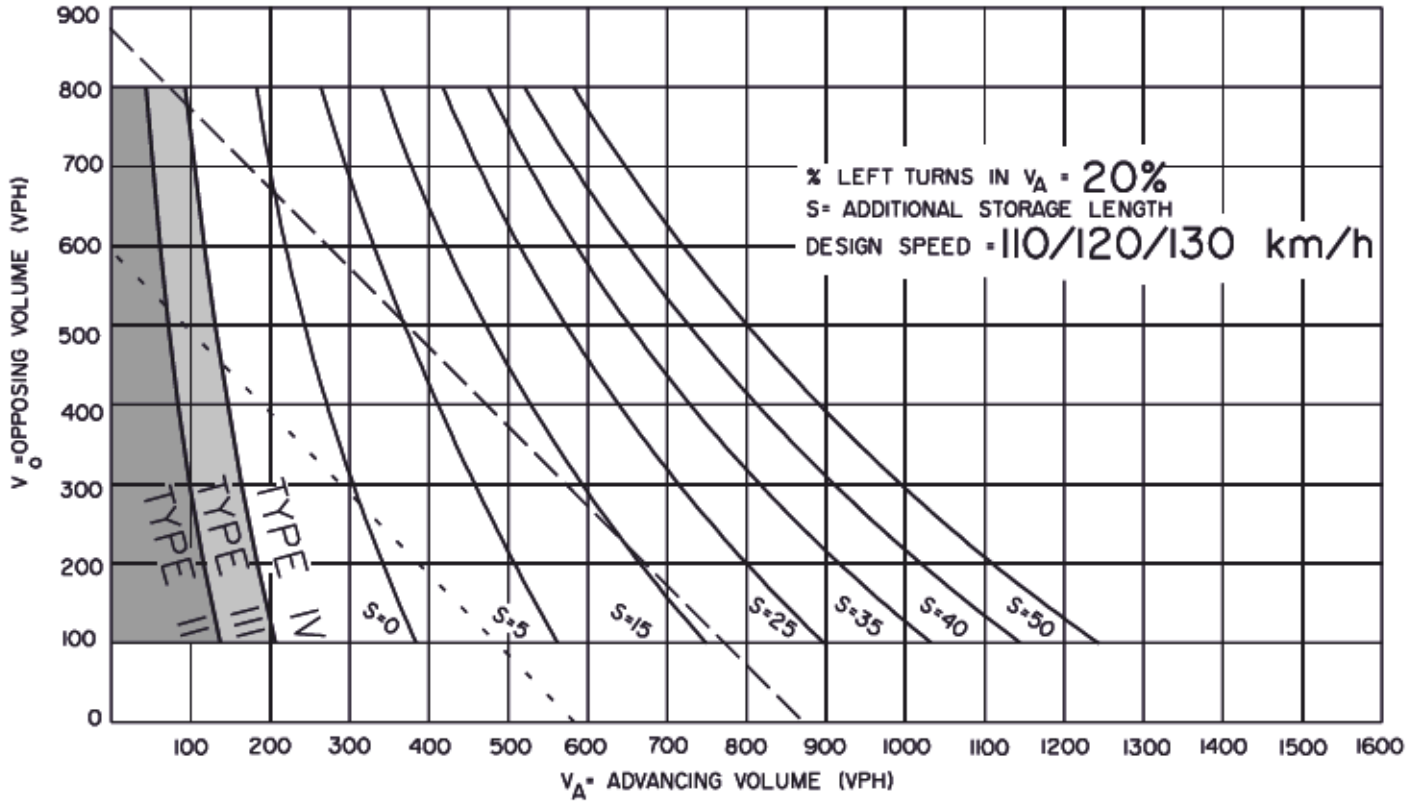
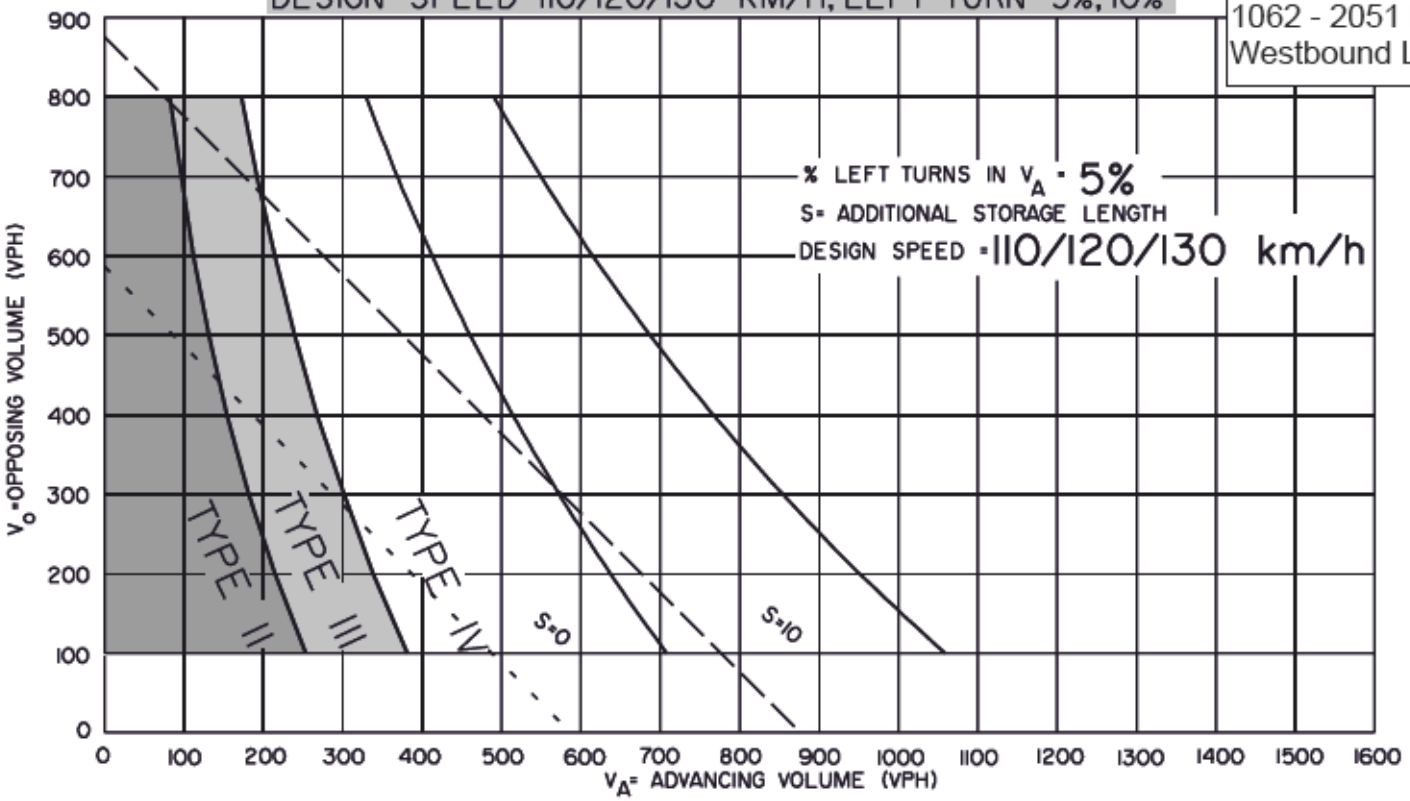


GRAPHICS FILE: debd767a.man

FIGURE D-7.6-7a WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 5%, 10%

Hwy 697 & Twp Rd 1062 - 2051 PM Westbound Left



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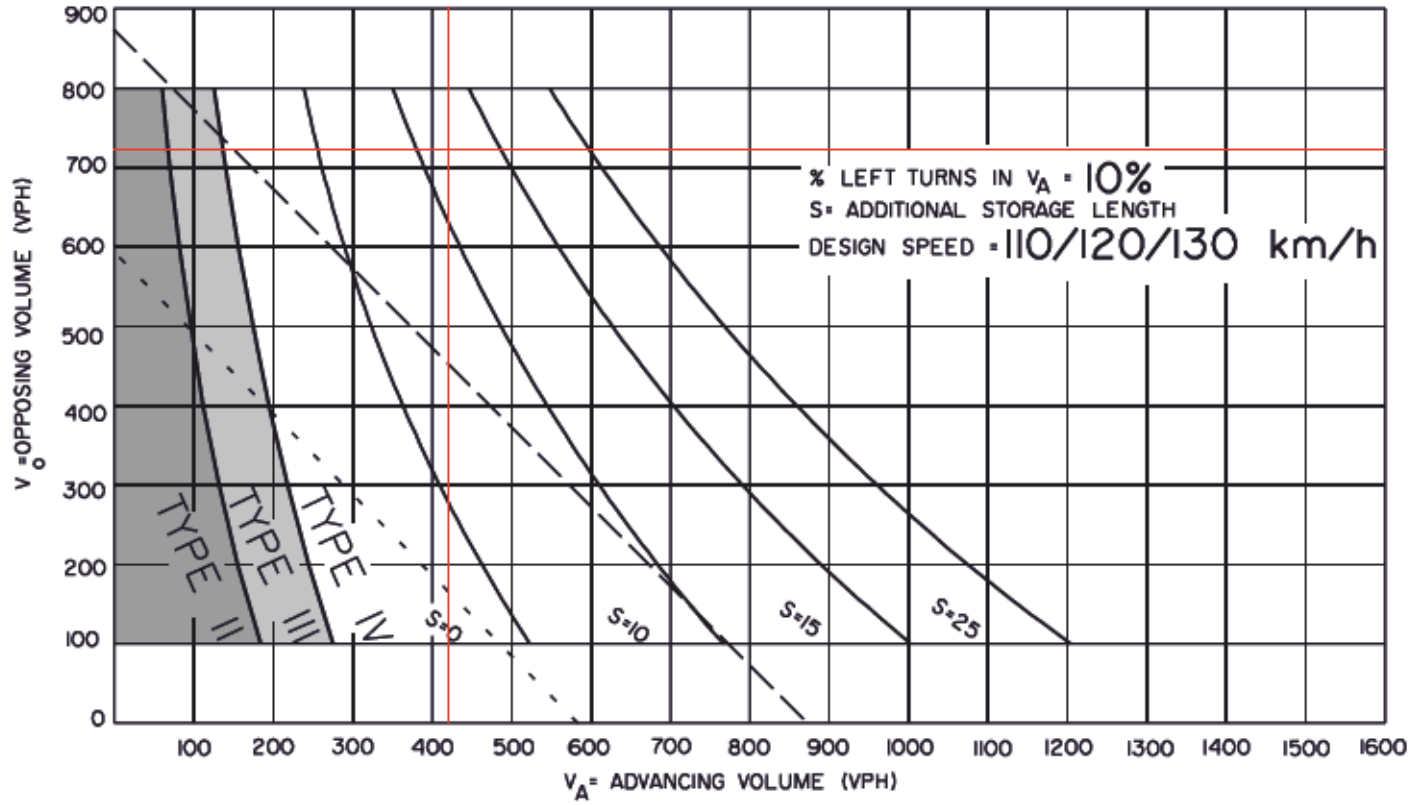
——— Traffic signals may be warranted in "free flow" urban areas.

Notes:

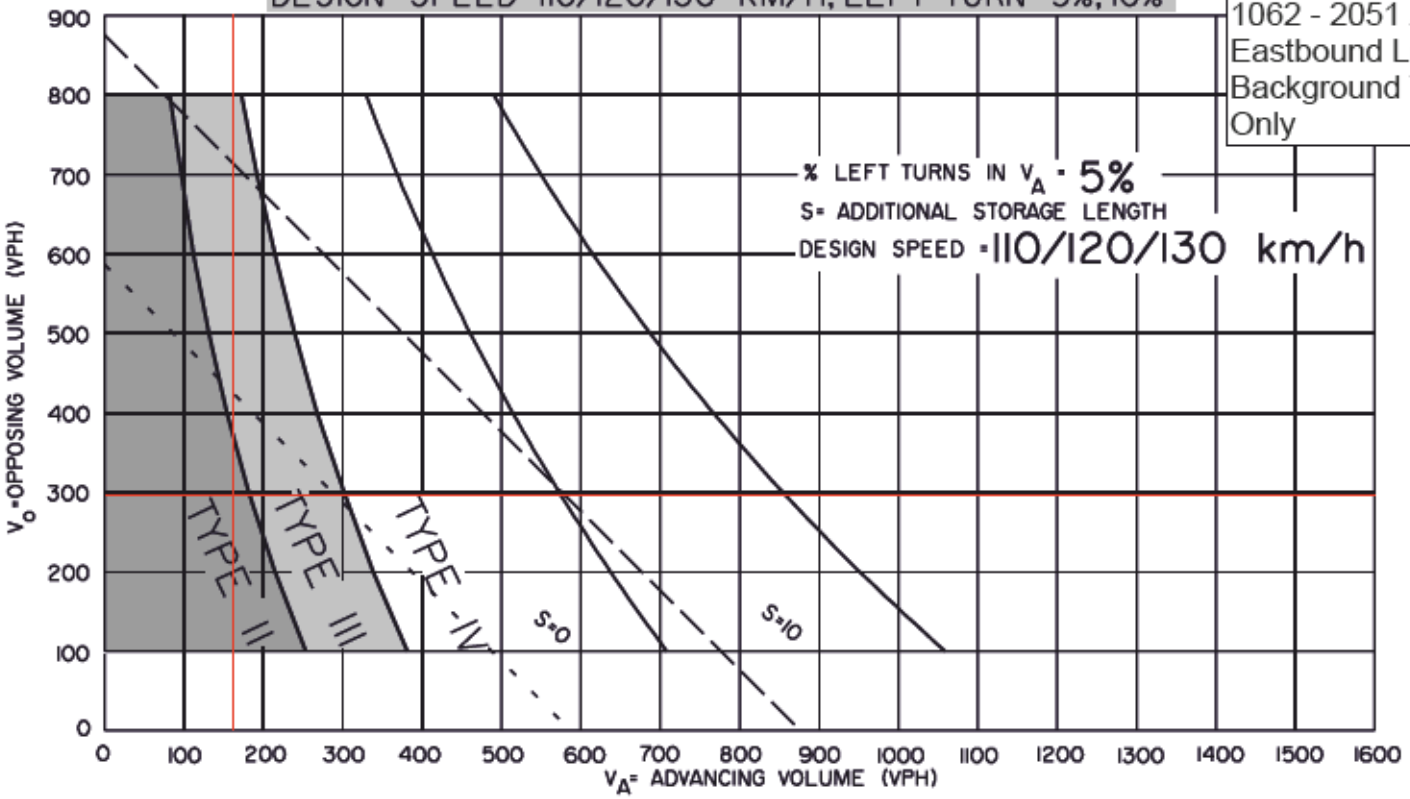
1. The traffic signal warrant lines are provided for reference only. For detailed analysis of the requirements for signals, contact Roadway Engineering Branch.
2. Warrant for Type I treatment is shown in Figure D-7.4.



GRAPHICS FILE: debd767a.mon

FIGURE D-7.6-7a WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 5%, 10%

Hwy 697 & Twp Rd 1062 - 2051 AM
Eastbound Left
Background Traffic Only



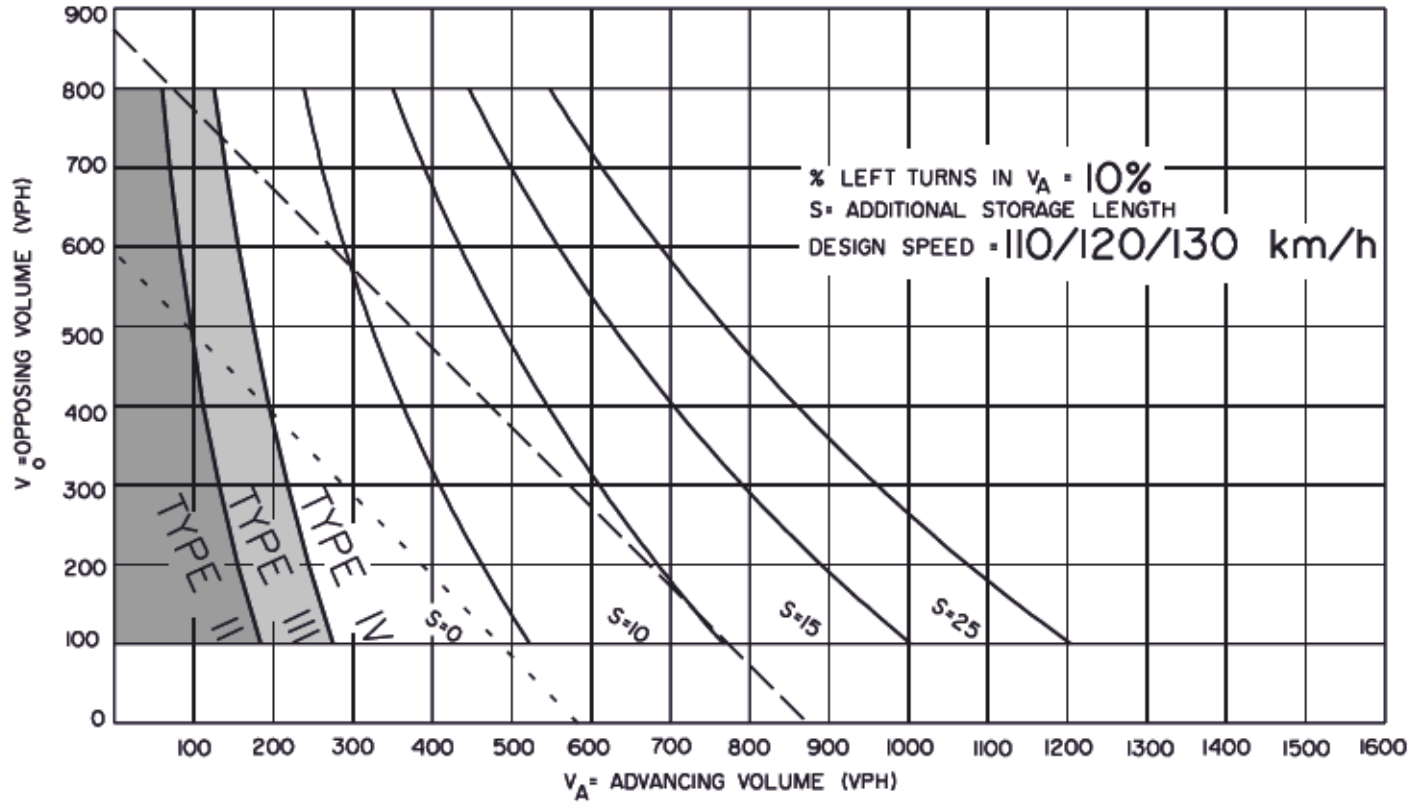
S = Additional storage length required, that is, in addition to what is shown on the appropriate Type IV standard drawing. Designers should check additional storage requirements for trucks, also see Table D.7.6a.

- - - - Traffic signals may be warranted in rural areas, or urban areas, with restricted flow.

——— Traffic signals may be warranted in "free flow" urban areas.

Notes:

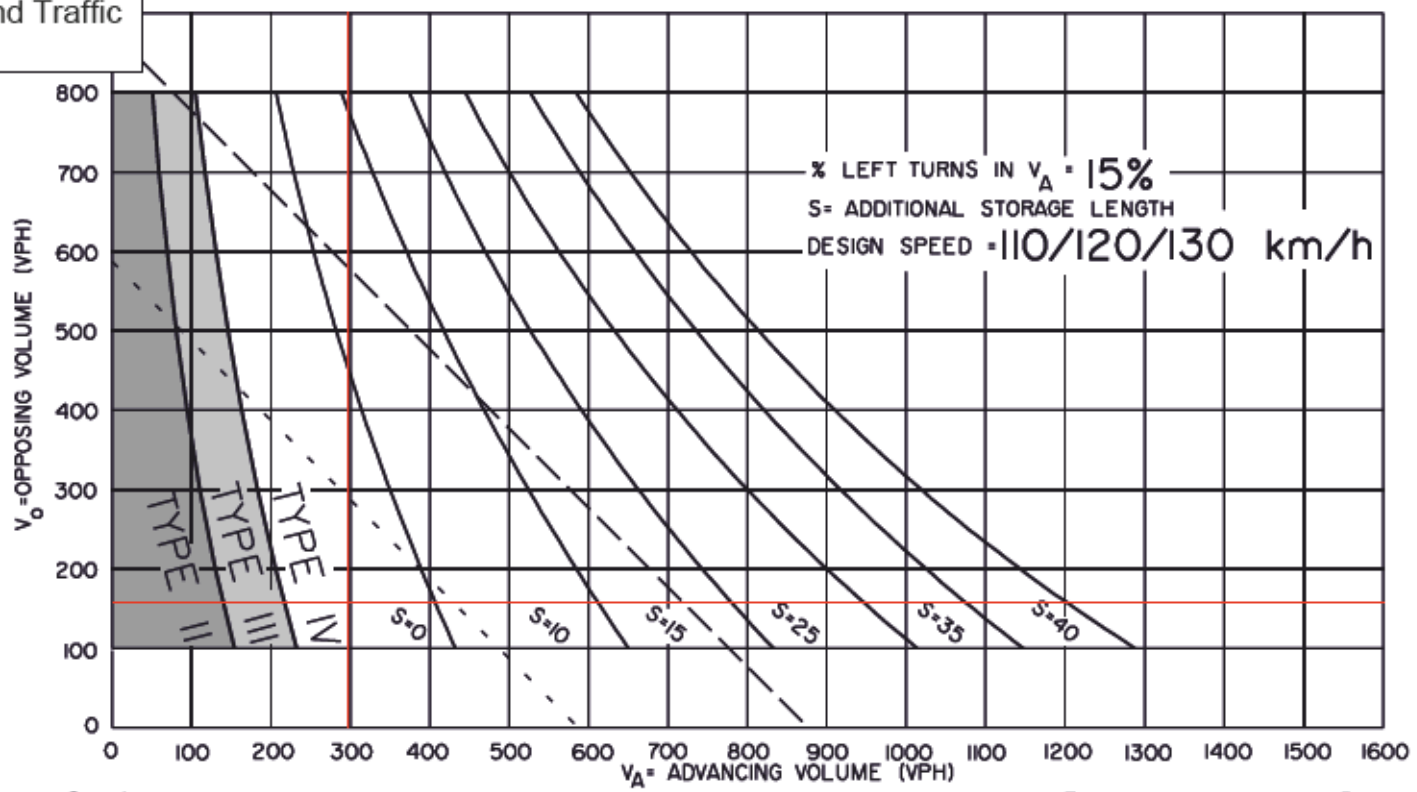
1. The traffic signal warrant lines are provided for reference only. For detailed analysis of the requirements for signals, contact Roadway Engineering Branch.
2. Warrant for Type I treatment is shown in Figure D-7.4.



GRAPHICS FILE: debd767a.mon

Hwy 697 & Twp Rd 1062 - 2051 AM Westbound Left Background Traffic Only

FIGURE D-7.6-7b WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 15%, 20%



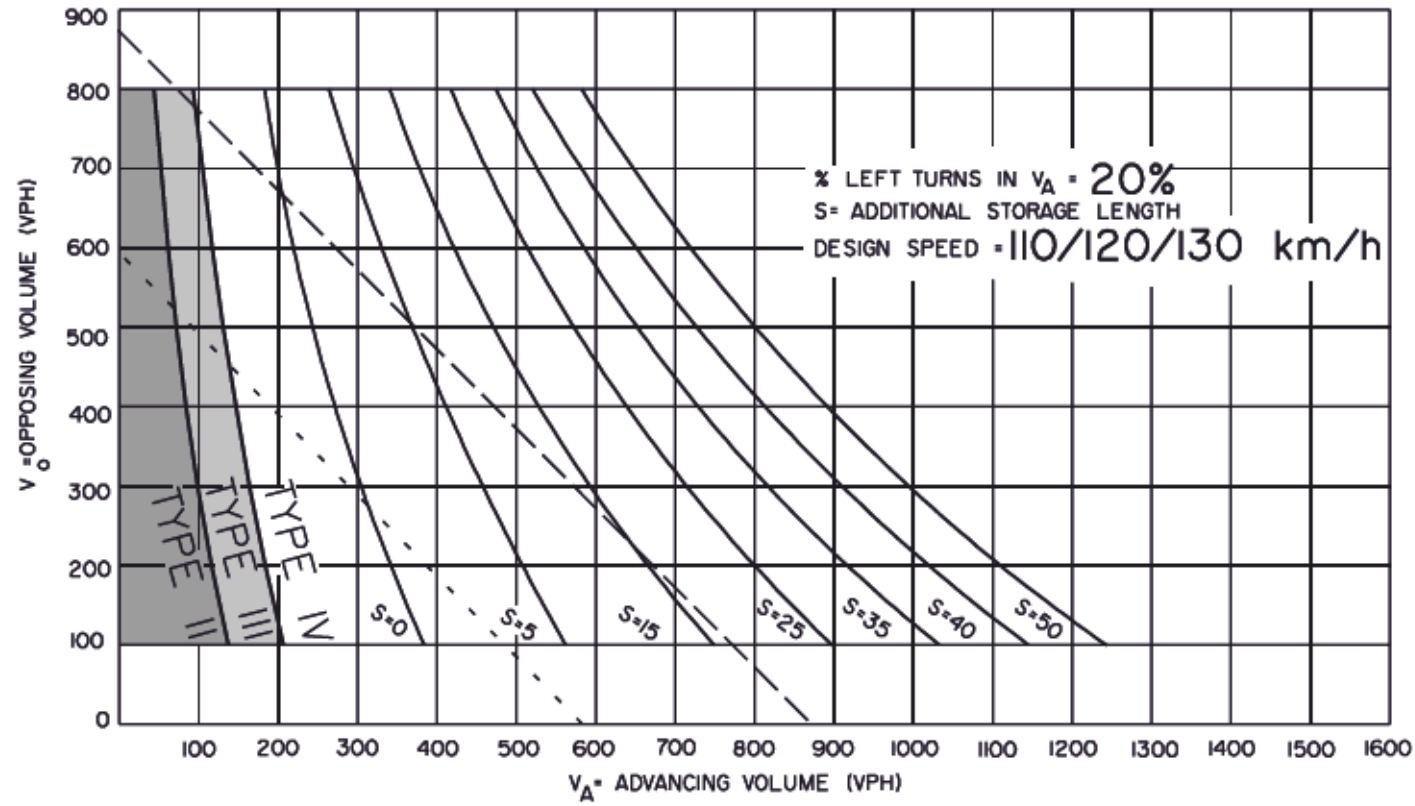
S = Additional storage length required, that is, in addition to what is shown on the appropriate Type IV standard drawing. Designers should check additional storage requirements for trucks, also see Table D.7.6a.

- - - - Traffic signals may be warranted in rural areas, or urban areas, with restricted flow.

—— —— Traffic signals may be warranted in "free flow" urban areas.

Notes:

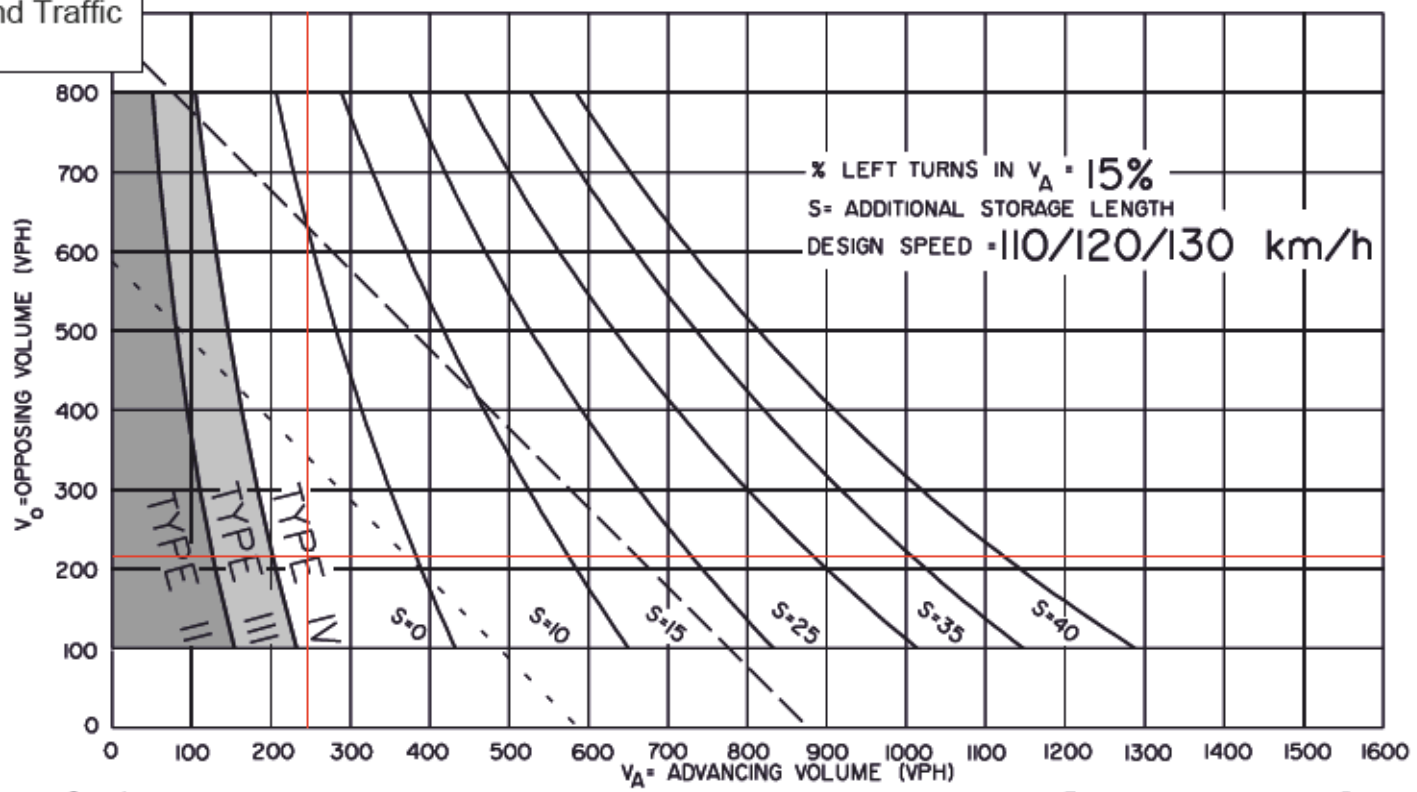
1. The traffic signal warrant lines are provided for reference only. For detailed analysis of the requirements for signals, contact Roadway Engineering Branch.
2. Warrant for Type I treatment is shown in Figure D-7.4.



GRAPHICS FILE: debd767a.man

Hwy 697 & Twp Rd 1062 - 2051 PM Eastbound Left Background Traffic Only

FIGURE D-7.6-7b WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 15%, 20%



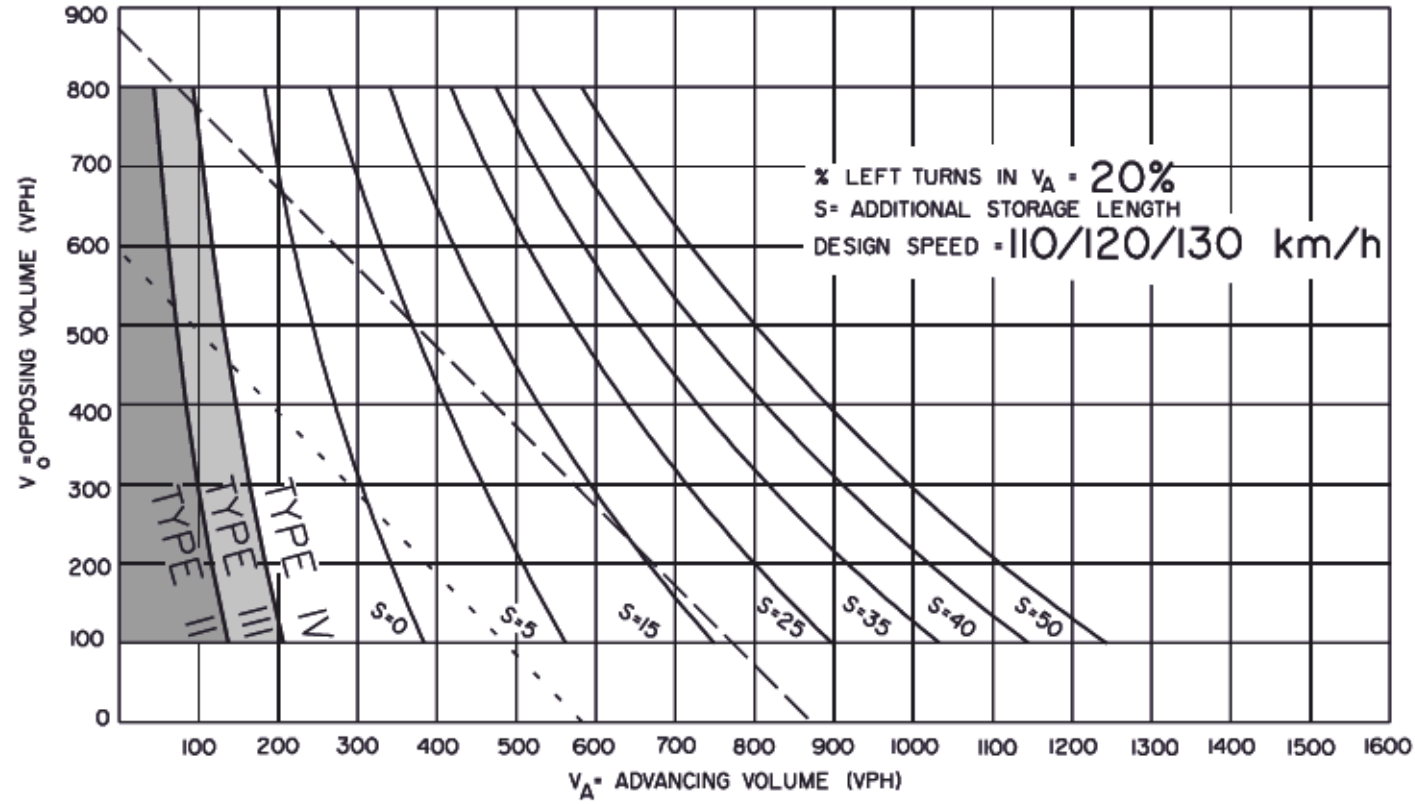
S = Additional storage length required, that is, in addition to what is shown on the appropriate Type IV standard drawing. Designers should check additional storage requirements for trucks, also see Table D.7.6a.

- - - - Traffic signals may be warranted in rural areas, or urban areas, with restricted flow.

—— —— Traffic signals may be warranted in "free flow" urban areas.

Notes:

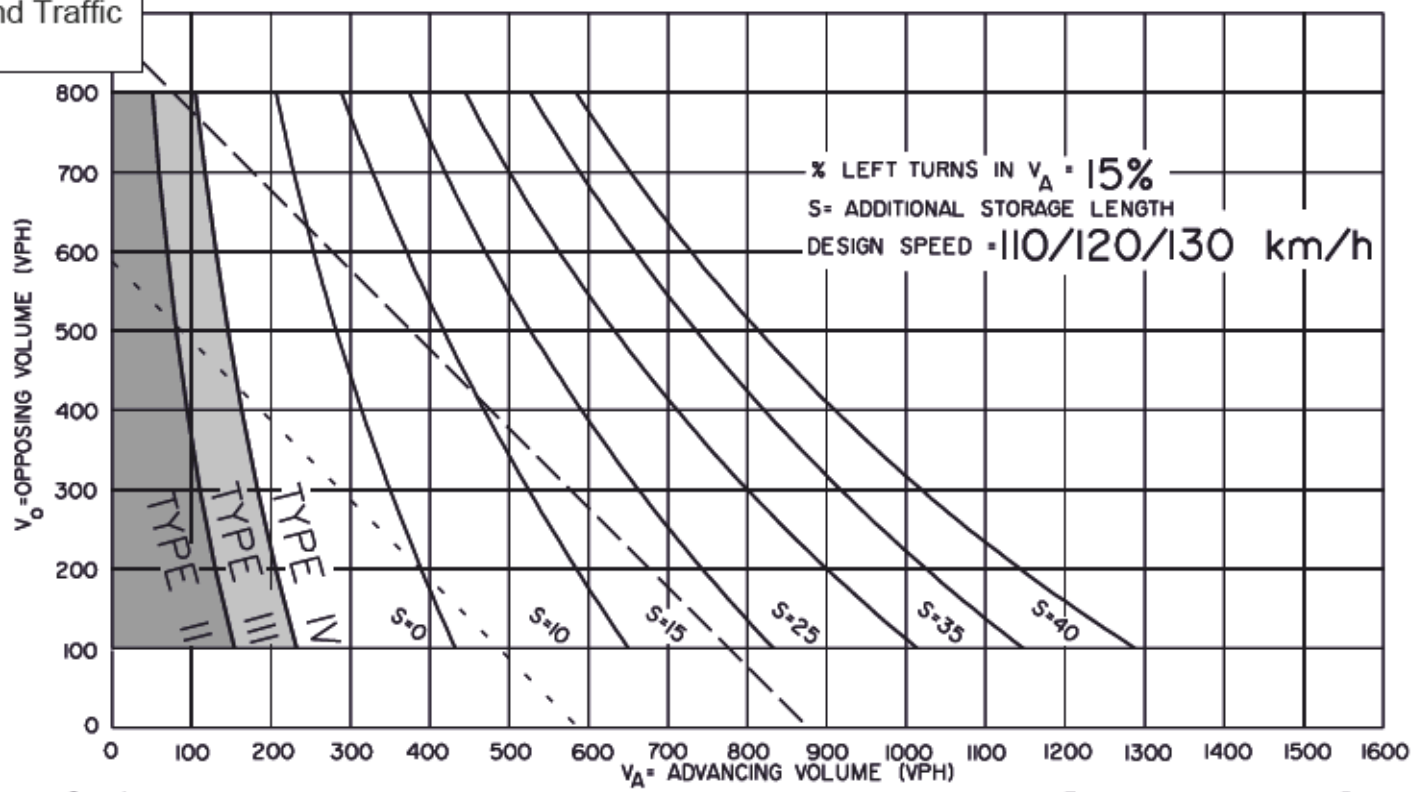
1. The traffic signal warrant lines are provided for reference only. For detailed analysis of the requirements for signals, contact Roadway Engineering Branch.
2. Warrant for Type I treatment is shown in Figure D-7.4.



GRAPHICS FILE: debd767a.man

Hwy 697 & Twp Rd 1062 - 2051 PM Westbound Left Background Traffic Only

FIGURE D-7.6-7b WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 15%, 20%



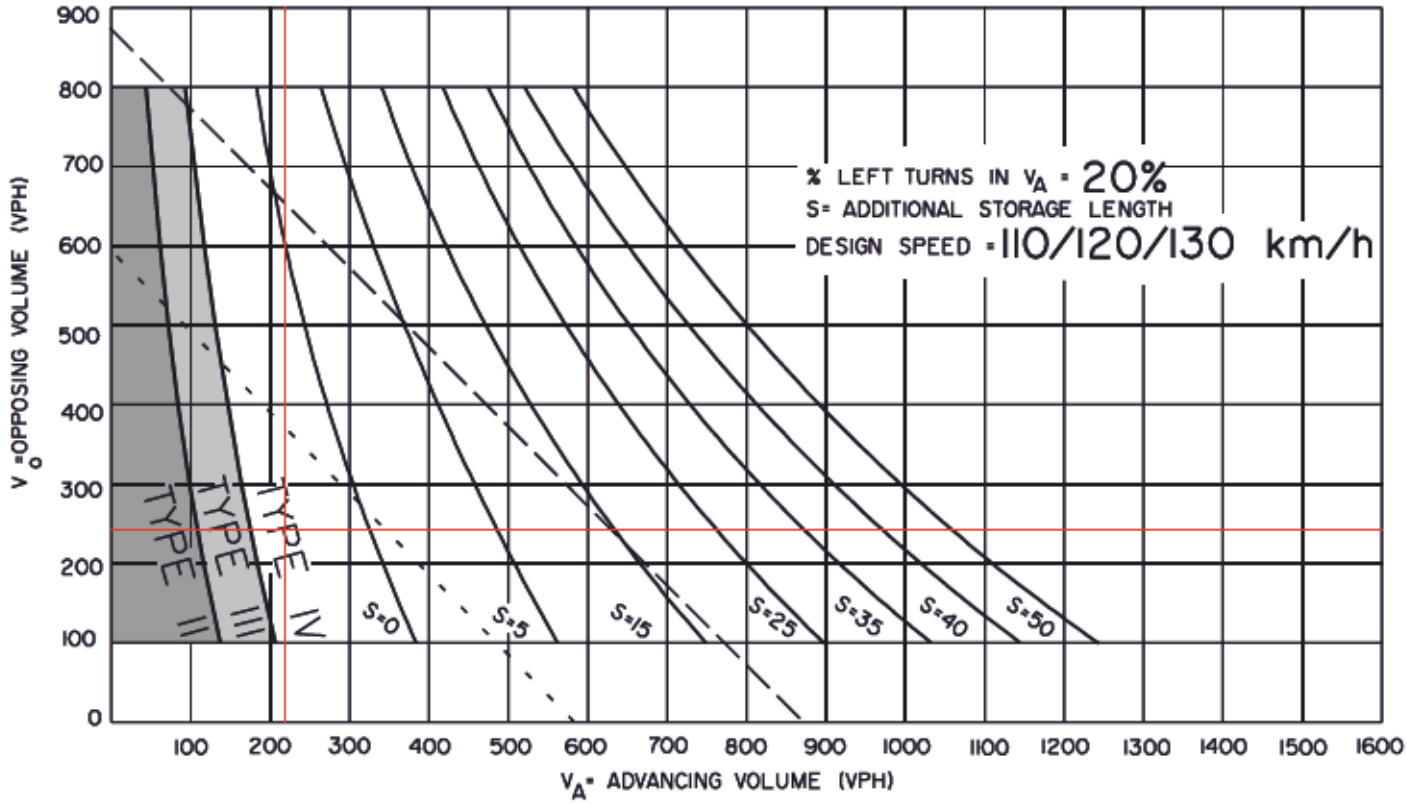
S = Additional storage length required, that is, in addition to what is shown on the appropriate Type IV standard drawing. Designers should check additional storage requirements for trucks, also see Table D.7.6a.

- - - - Traffic signals may be warranted in rural areas, or urban areas, with restricted flow.

—— —— Traffic signals may be warranted in "free flow" urban areas.

Notes:

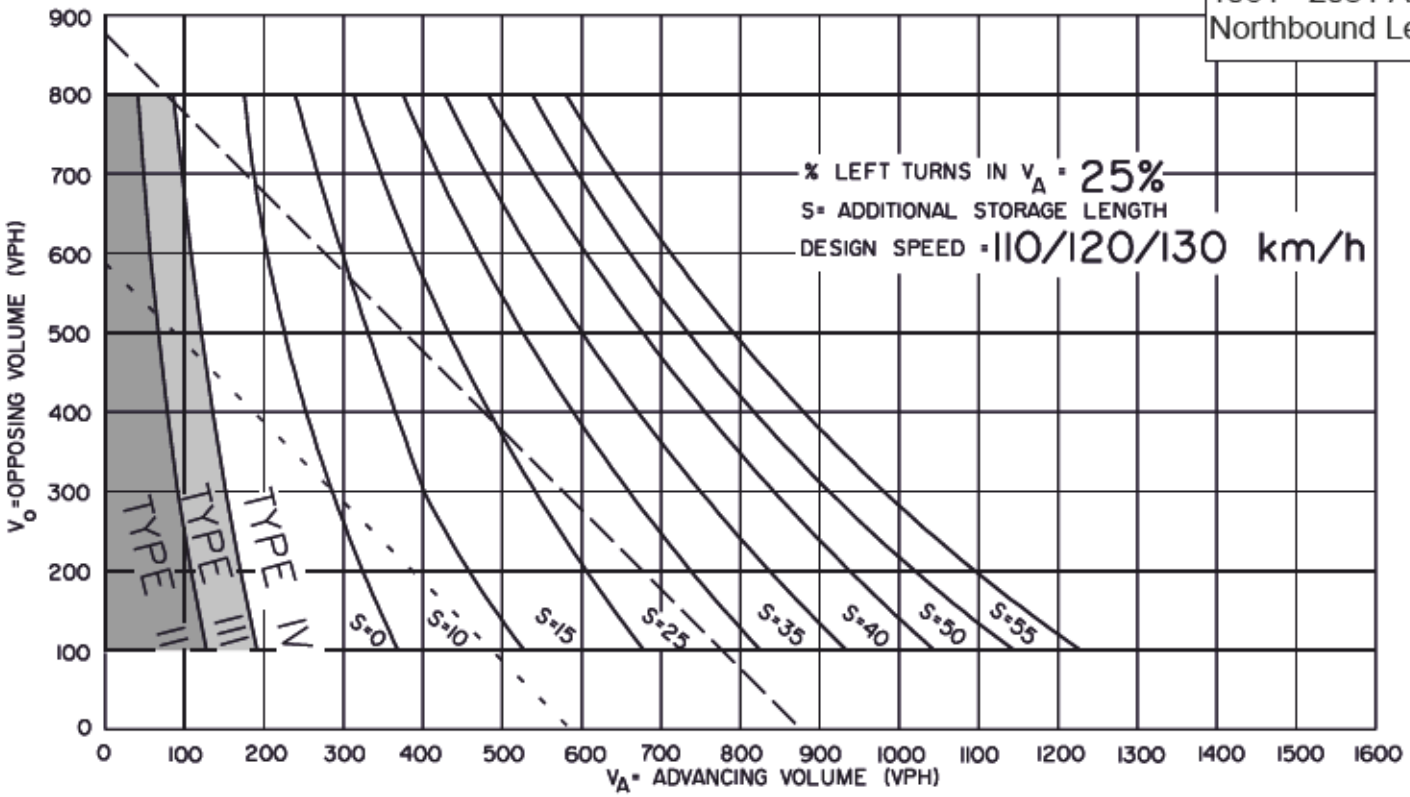
1. The traffic signal warrant lines are provided for reference only. For detailed analysis of the requirements for signals, contact Roadway Engineering Branch.
2. Warrant for Type I treatment is shown in Figure D-7.4.



GRAPHICS FILE: debd767a.man

FIGURE D-7.6-7c WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 25%, 30%

Hwy 697 & Twp Rd
1061 - 2031 AM
Northbound Left



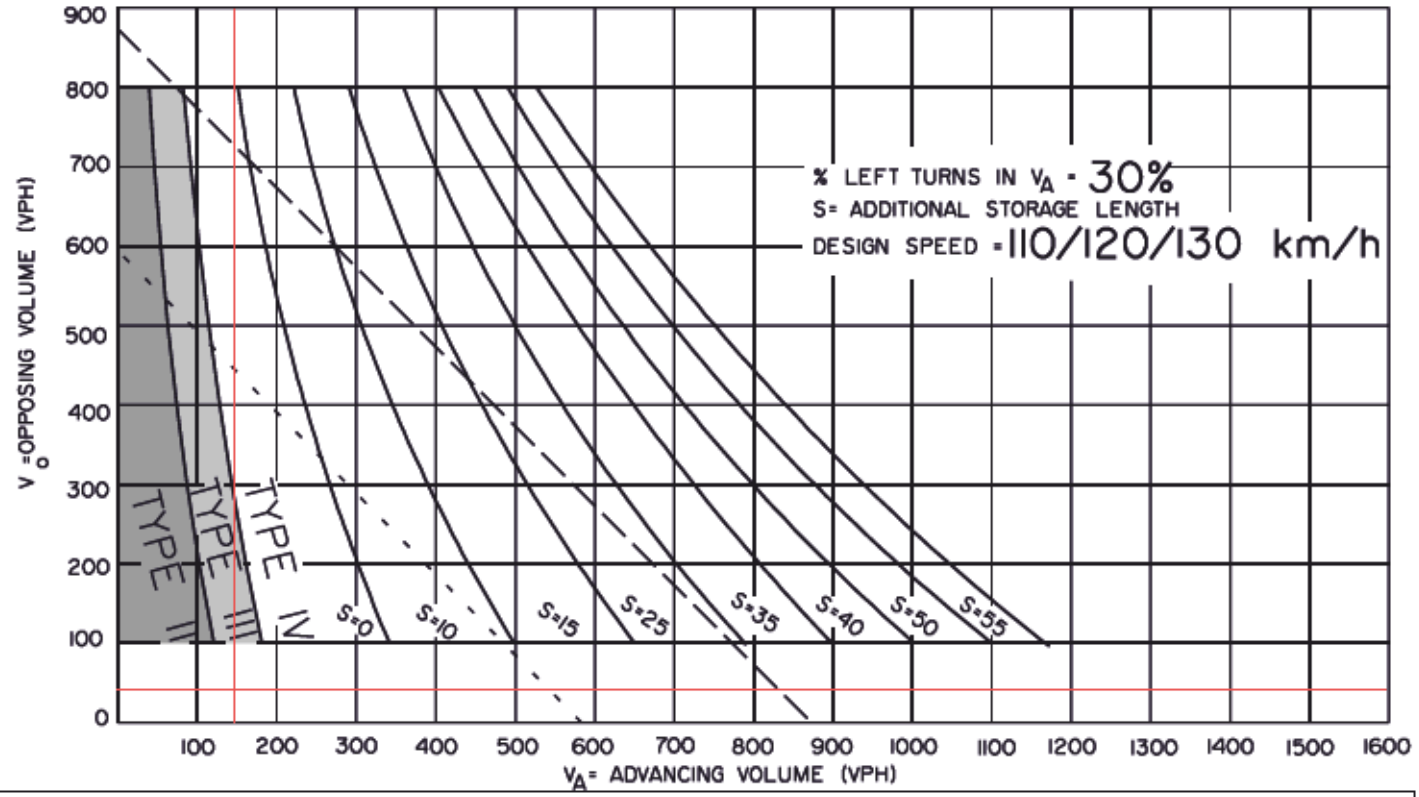
S = Additional storage length required, that is, in addition to what is shown on the appropriate Type IV standard drawing. Designers should check additional storage requirements for trucks, also see Table D.7.6a.

- - - - Traffic signals may be warranted in rural areas, or urban areas, with restricted flow.

— — — Traffic signals may be warranted in "free flow" urban areas.

Notes:

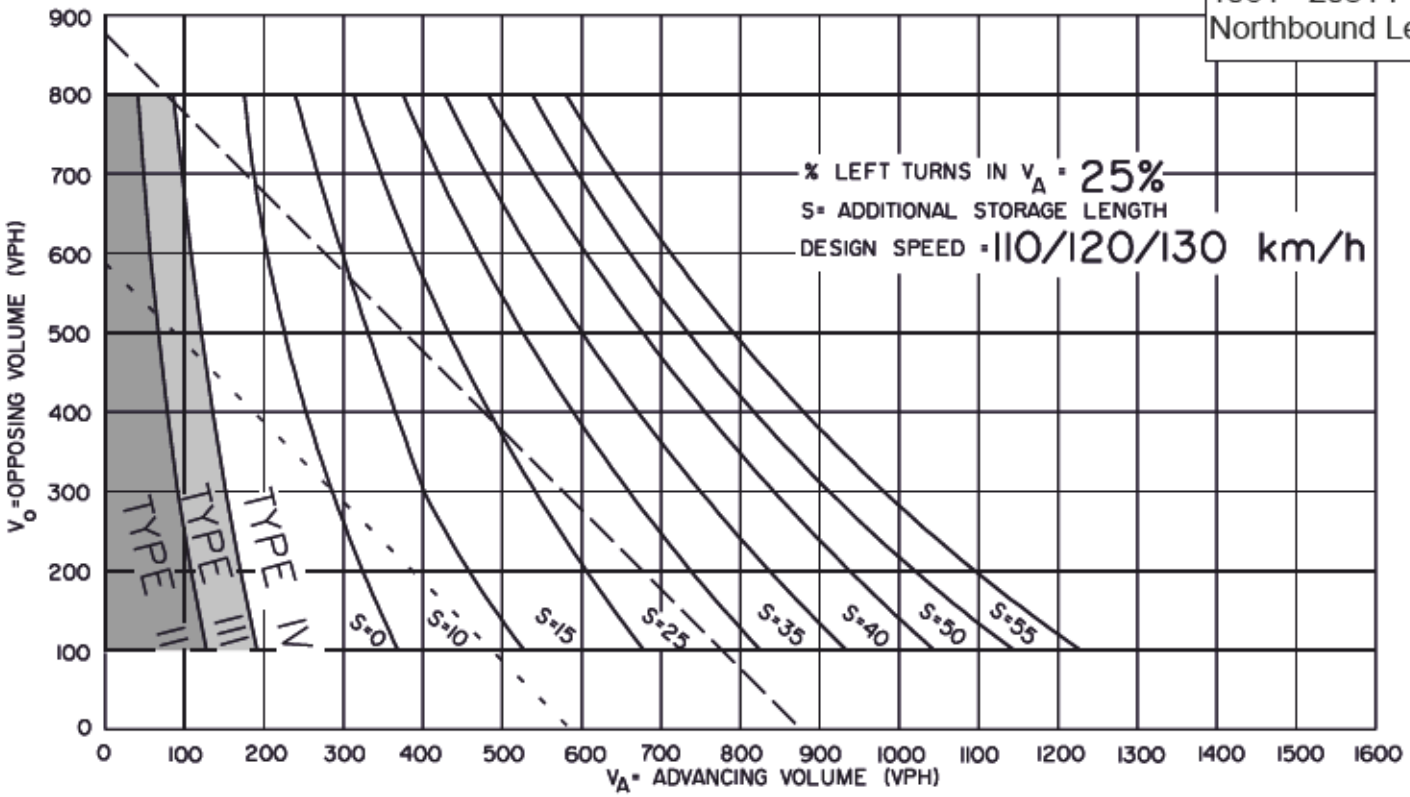
1. The traffic signal warrant lines are provided for reference only. For detailed analysis of the requirements for signals, contact Roadway Engineering Branch.
2. Warrant for Type I treatment is shown in Figure D-7.4.



GRAPHICS FILE: debd767a.mon

FIGURE D-7.6-7c WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 25%, 30%

Hwy 697 & Twp Rd
1061 - 2031 PM
Northbound Left



S = Additional storage length required, that is, in addition to what is shown on the appropriate Type IV standard drawing. Designers should check additional storage requirements for trucks, also see Table D.7.6a.

- - - - Traffic signals may be warranted in rural areas, or urban areas, with restricted flow.

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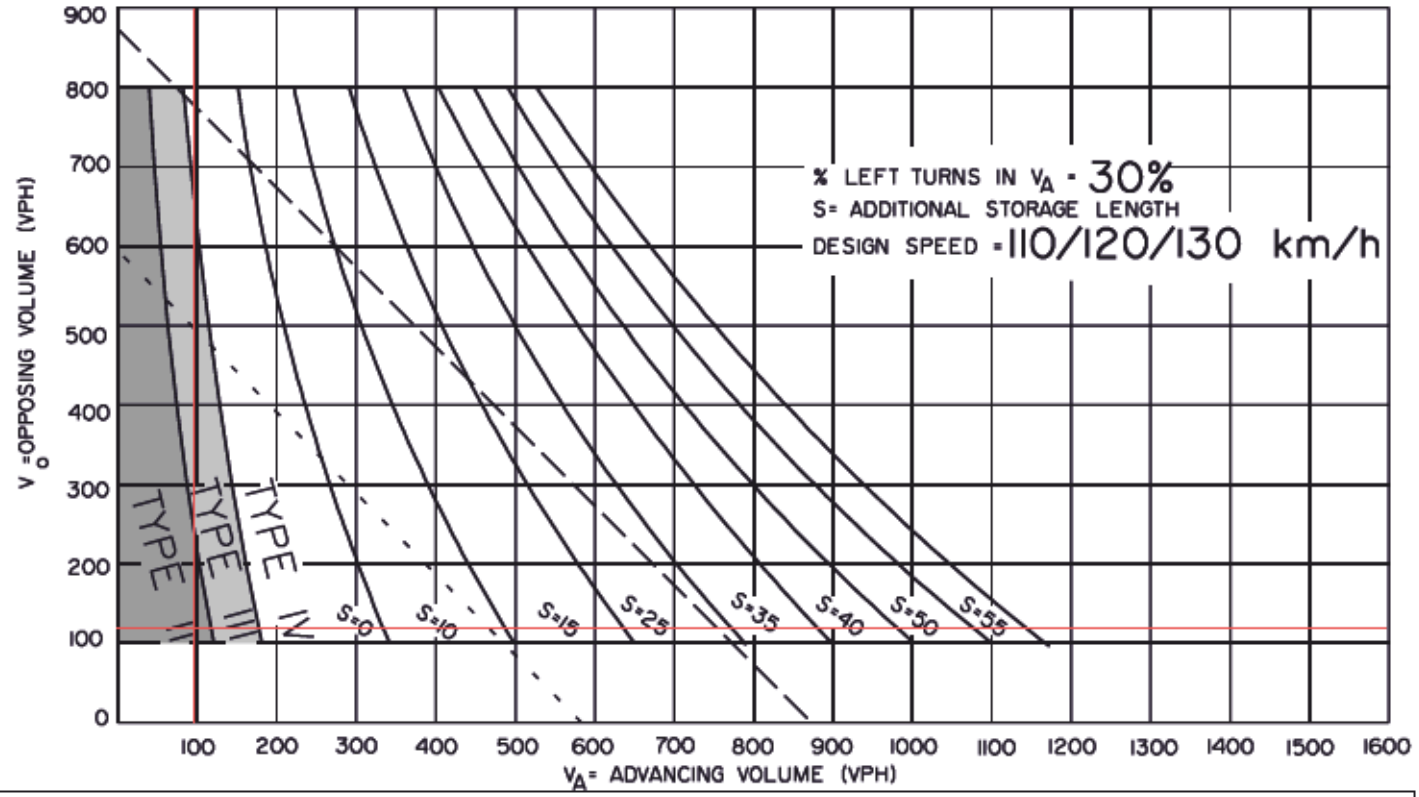
Notes:

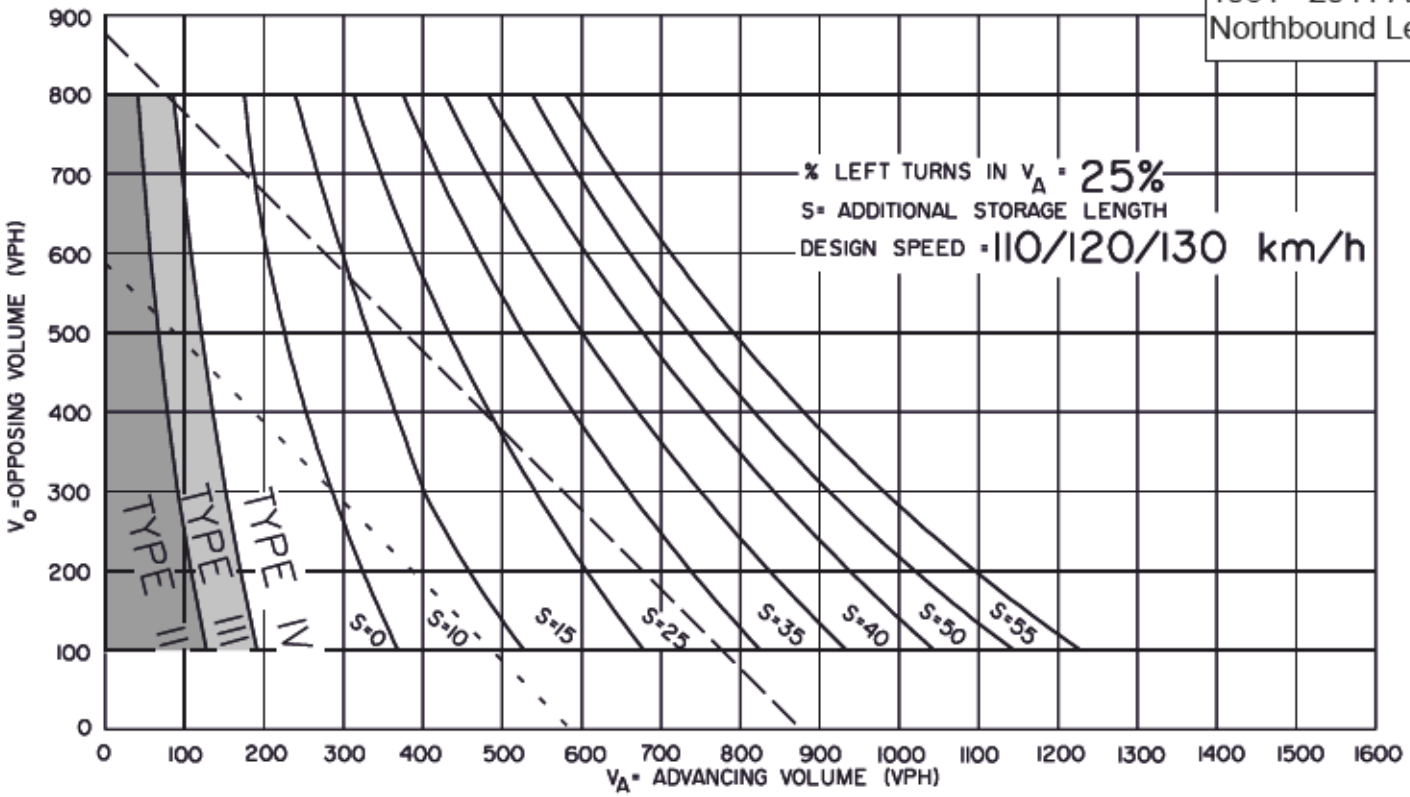
1. The traffic signal warrant lines are provided for reference only. For detailed analysis of the requirements for signals, contact Roadway Engineering Branch.
2. Warrant for Type I treatment is shown in Figure D-7.4.



GRAPHICS FILE: debd767a.mon

FIGURE D-7.6-7c WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 25%, 30%

Hwy 697 & Twp Rd
1061 - 2041 AM
Northbound Left



S = Additional storage length required, that is, in addition to what is shown on the appropriate Type IV standard drawing. Designers should check additional storage requirements for trucks, also see Table D.7.6a.

- - - - Traffic signals may be warranted in rural areas, or urban areas, with restricted flow.

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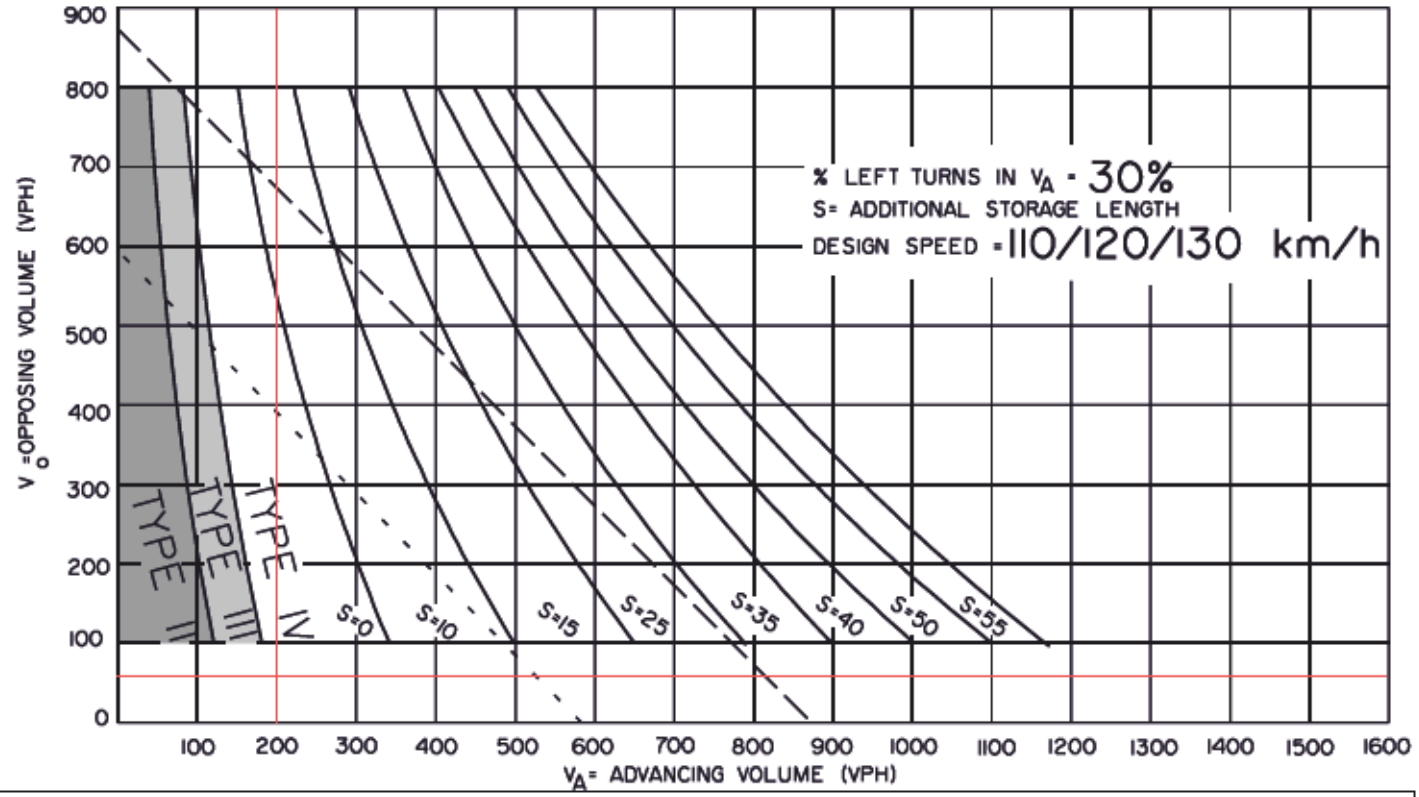
Notes:

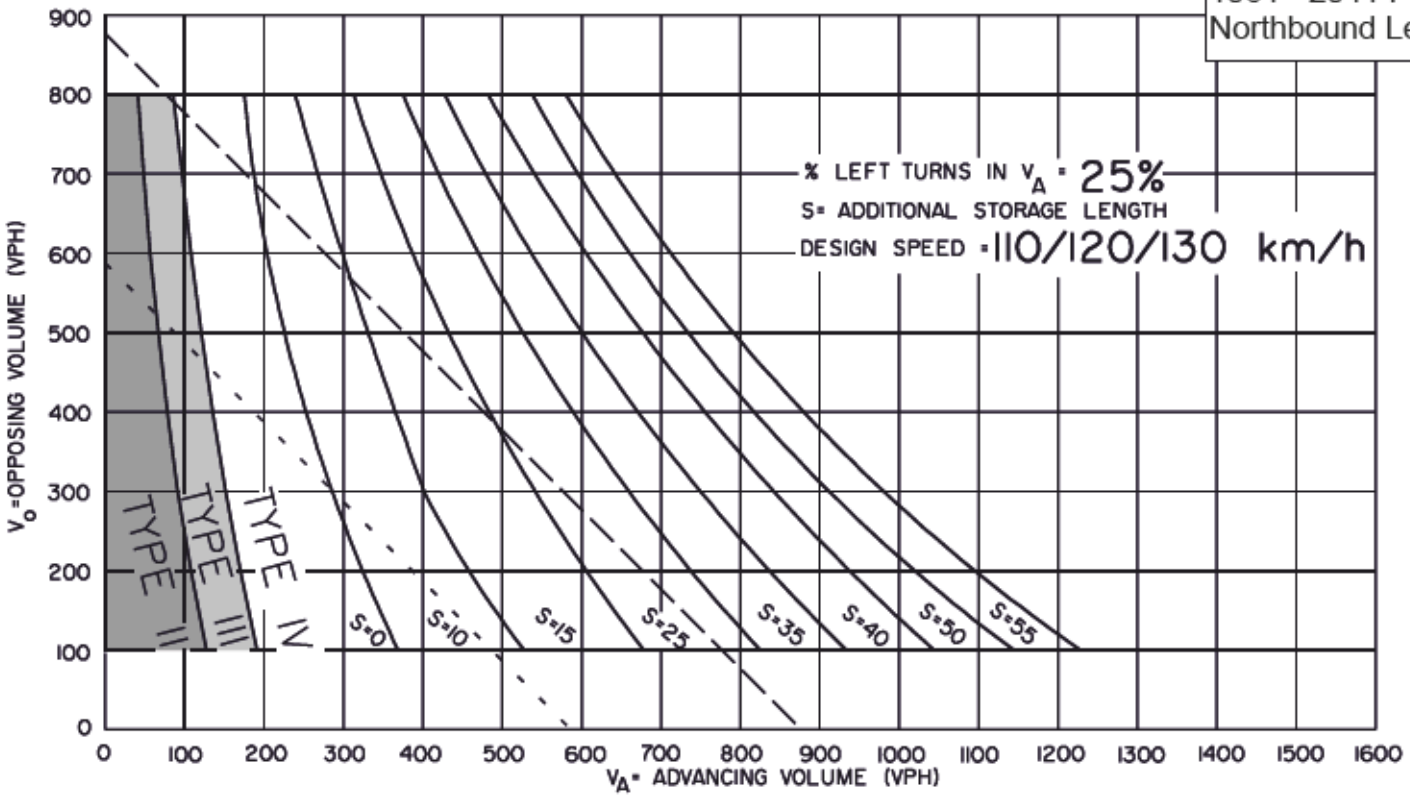
1. The traffic signal warrant lines are provided for reference only. For detailed analysis of the requirements for signals, contact Roadway Engineering Branch.
2. Warrant for Type I treatment is shown in Figure D-7.4.



GRAPHICS FILE: debd767a.mon

FIGURE D-7.6-7c WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 25%, 30%

Hwy 697 & Twp Rd
1061 - 2041 PM
Northbound Left



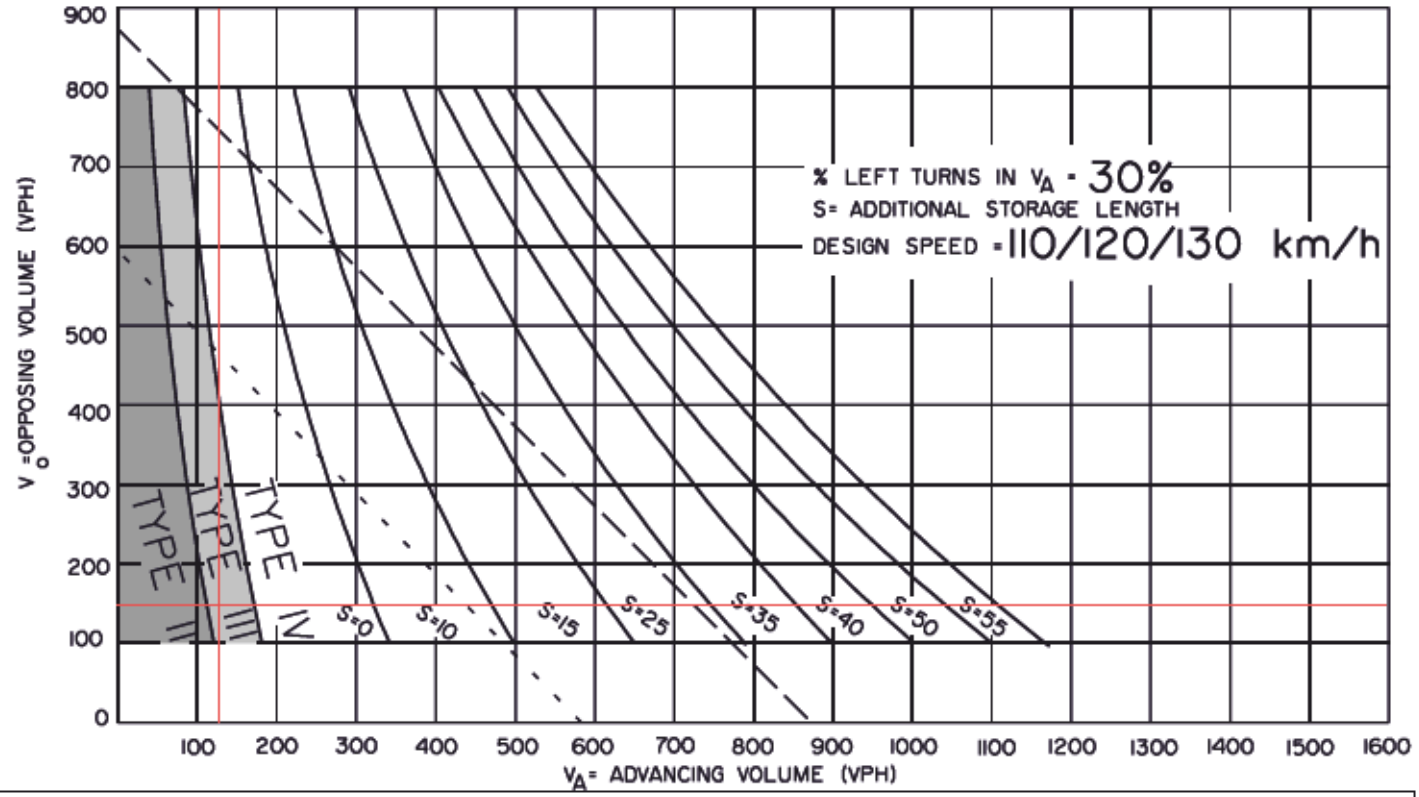
S = Additional storage length required, that is, in addition to what is shown on the appropriate Type IV standard drawing. Designers should check additional storage requirements for trucks, also see Table D.7.6a.

- - - - Traffic signals may be warranted in rural areas, or urban areas, with restricted flow.

— — — Traffic signals may be warranted in "free flow" urban areas.

Notes:

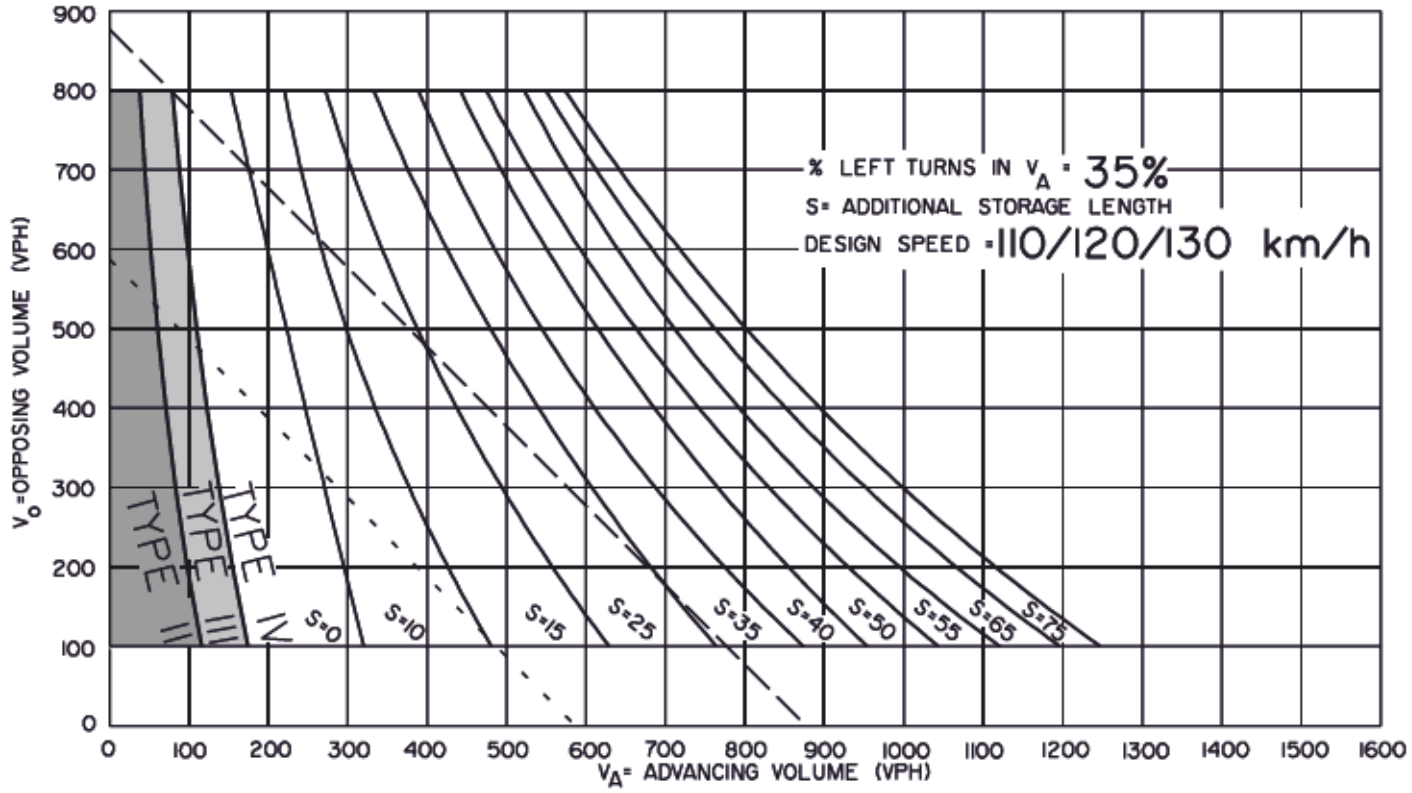
1. The traffic signal warrant lines are provided for reference only. For detailed analysis of the requirements for signals, contact Roadway Engineering Branch.
2. Warrant for Type I treatment is shown in Figure D-7.4.



GRAPHICS FILE: debd767a.mon

Hwy 697 & Twp Rd
1060 - 2021 AM
Northbound Left

FIGURE D-7.6-7d WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 35%, 40%



S = Additional storage length required, that is, in addition to what is shown on the appropriate Type IV standard drawing. Designers should check additional storage requirements for trucks, also see Table D.7.6a.

- - - - Traffic signals may be warranted in rural areas, or urban areas, with restricted flow.

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Notes:

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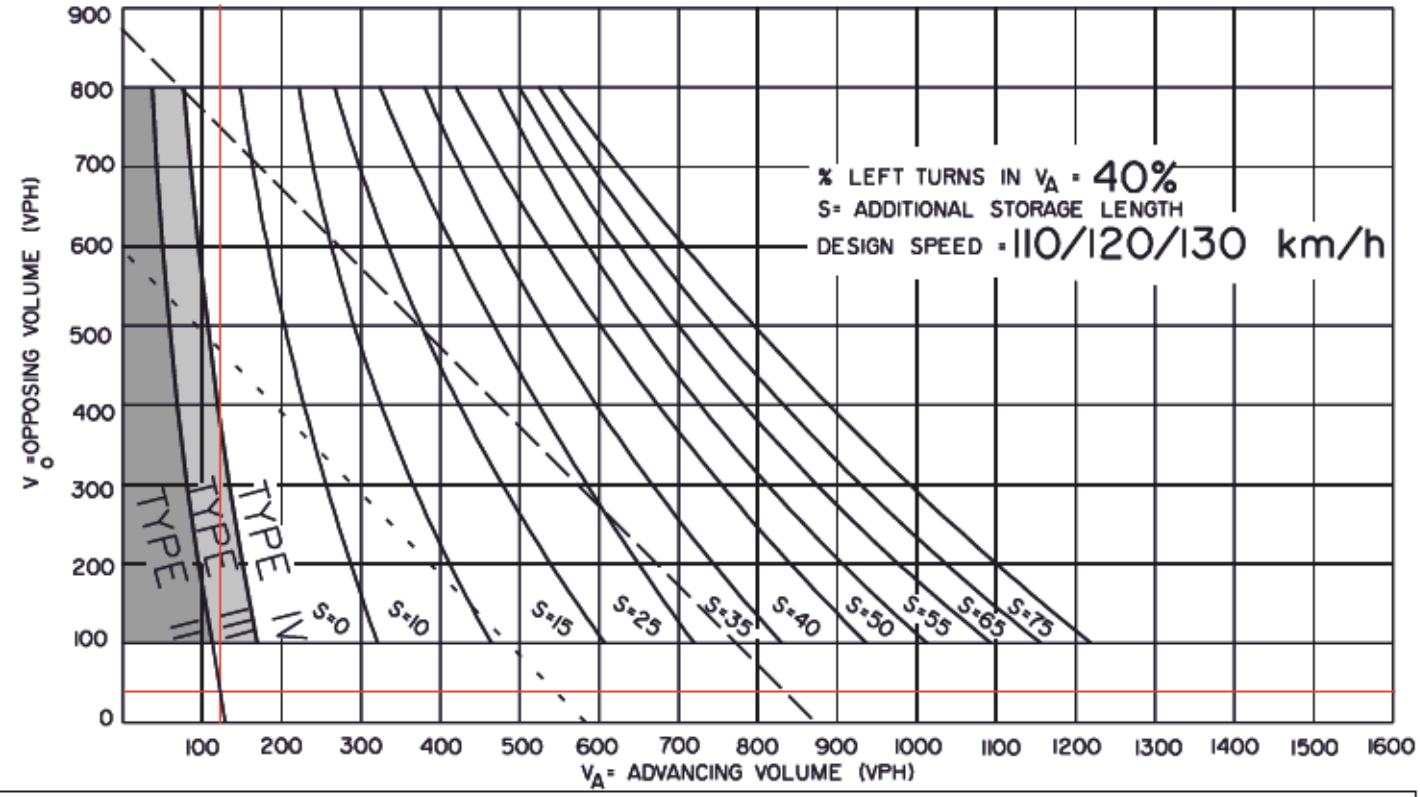
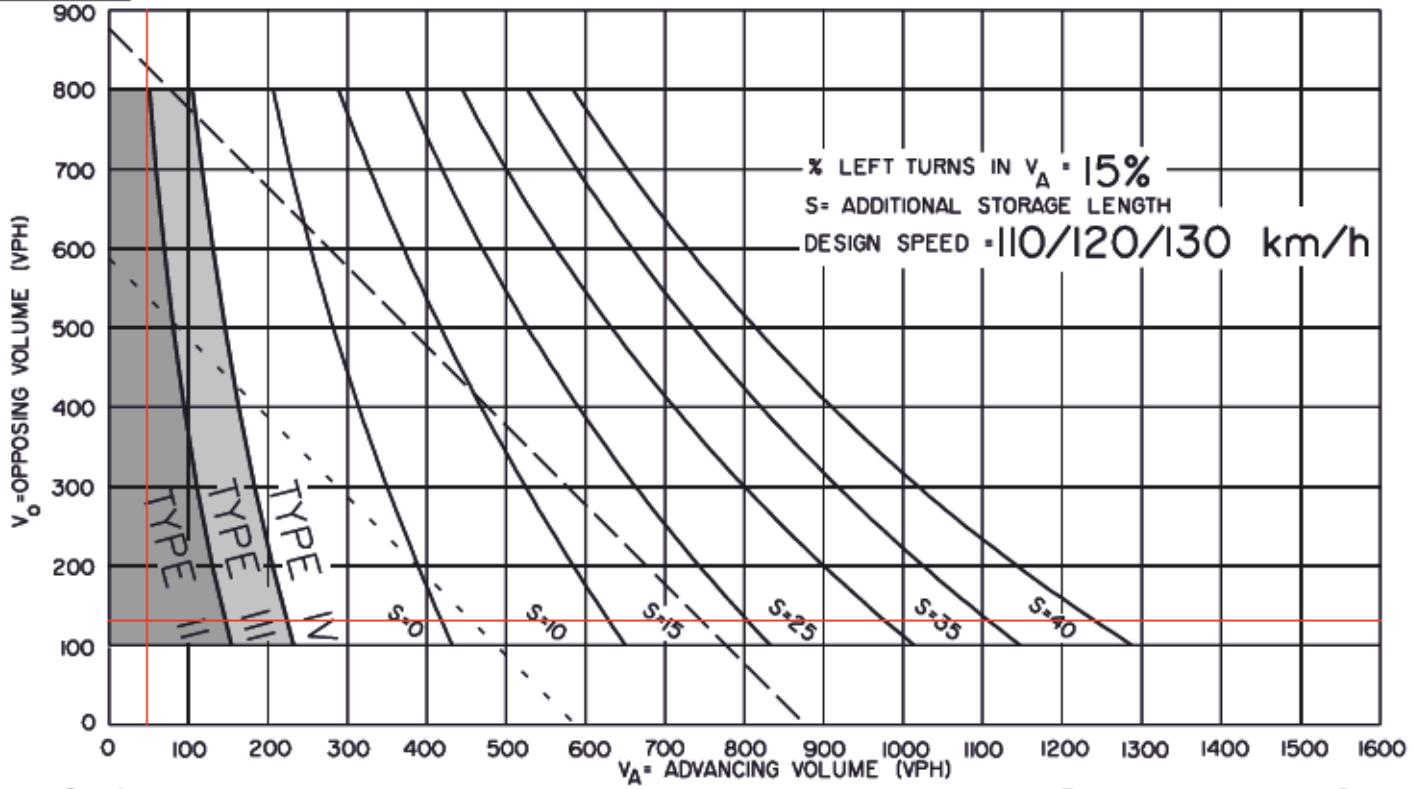
2. Warrant for Type I treatment is shown in Figure D-7.4.



GRAPHICS FILE: debd767a.man

Hwy 697 & Twp Rd
1060 - 2021 AM
Southbound Left

FIGURE D-7.6-7b WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 15%, 20%



S = Additional storage length required, that is, in addition to what is shown on the appropriate Type IV standard drawing. Designers should check additional storage requirements for trucks, also see Table D.7.6a.

- - - - Traffic signals may be warranted in rural areas, or urban areas, with restricted flow.

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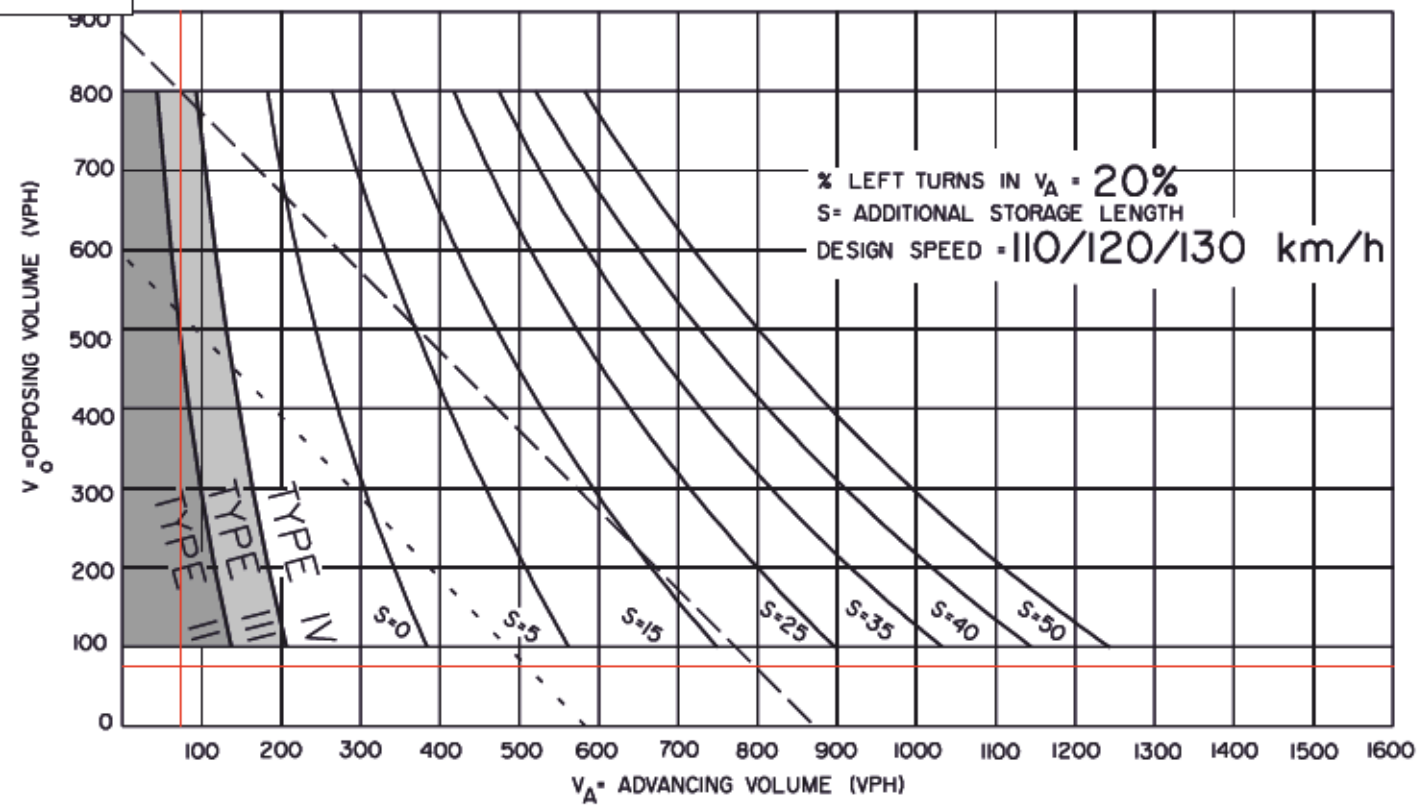
traffic signal warrant lines are provided for reference only. For detailed analysis of the requirements for signals, contact dway Engineering Branch.

rrant for Type I treatment is shown in Figure D-7.4.

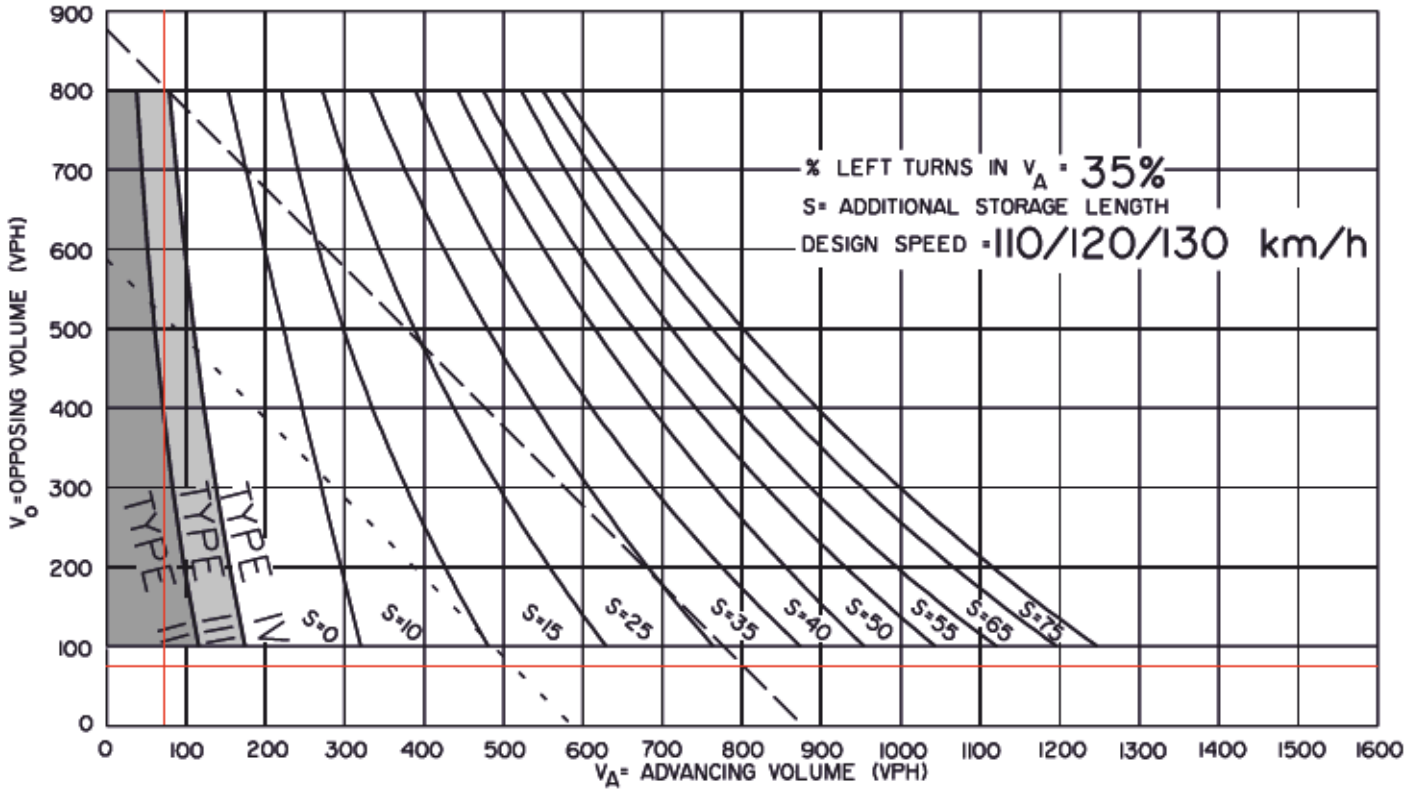
Hwy 697 & Twp Rd
1060 - 2021 PM
Southbound Left



GRAPHICS FILE: debd767a.man

Hwy 697 & Twp Rd
1060 - 2021 PM
Northbound Left

FIGURE D-7.6-7d WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 35%, 40%



S = Additional storage length required, that is, in addition to what is shown on the appropriate Type IV standard drawing. Designers should check additional storage requirements for trucks, also see Table D.7.6a.

- - - - Traffic signals may be warranted in rural areas, or urban areas, with restricted flow.

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Notes:

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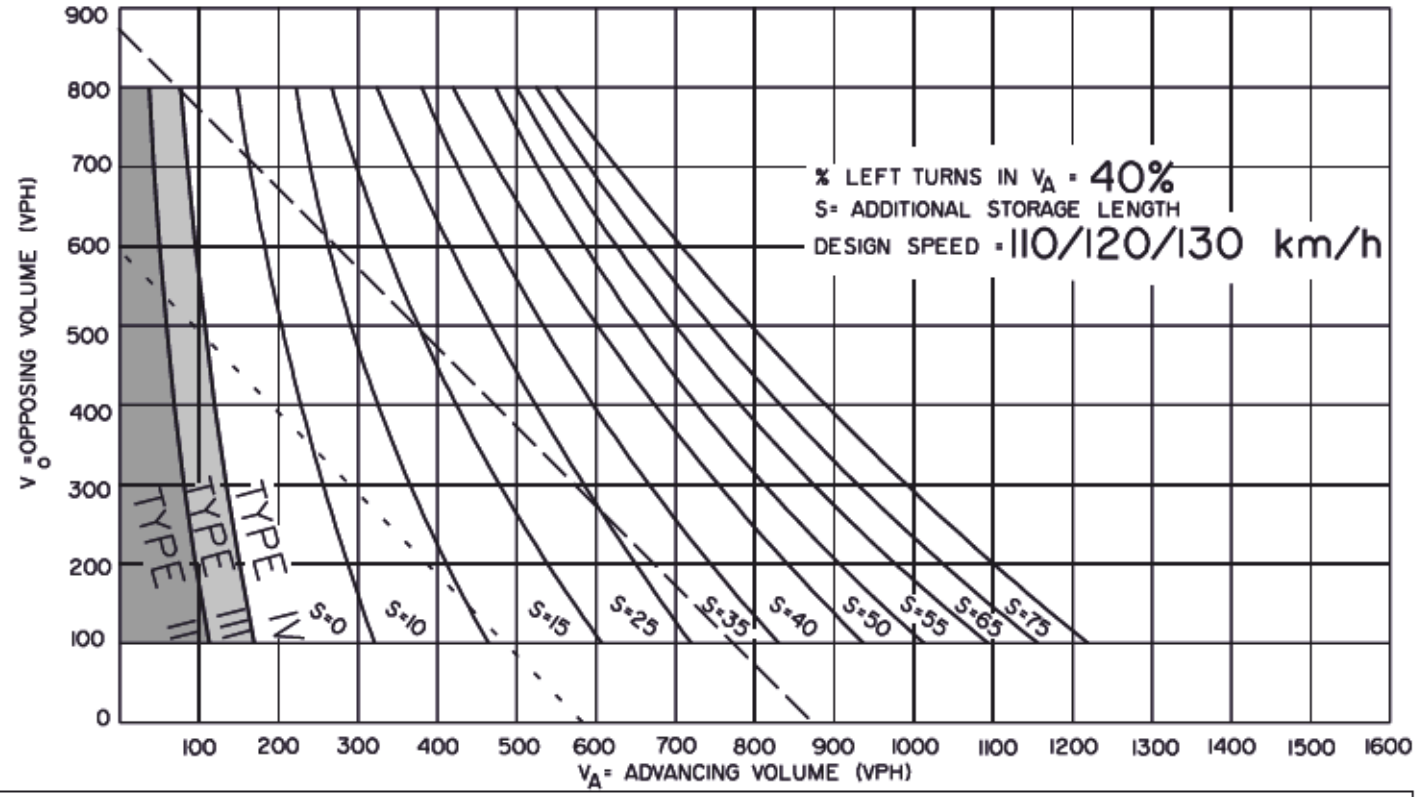
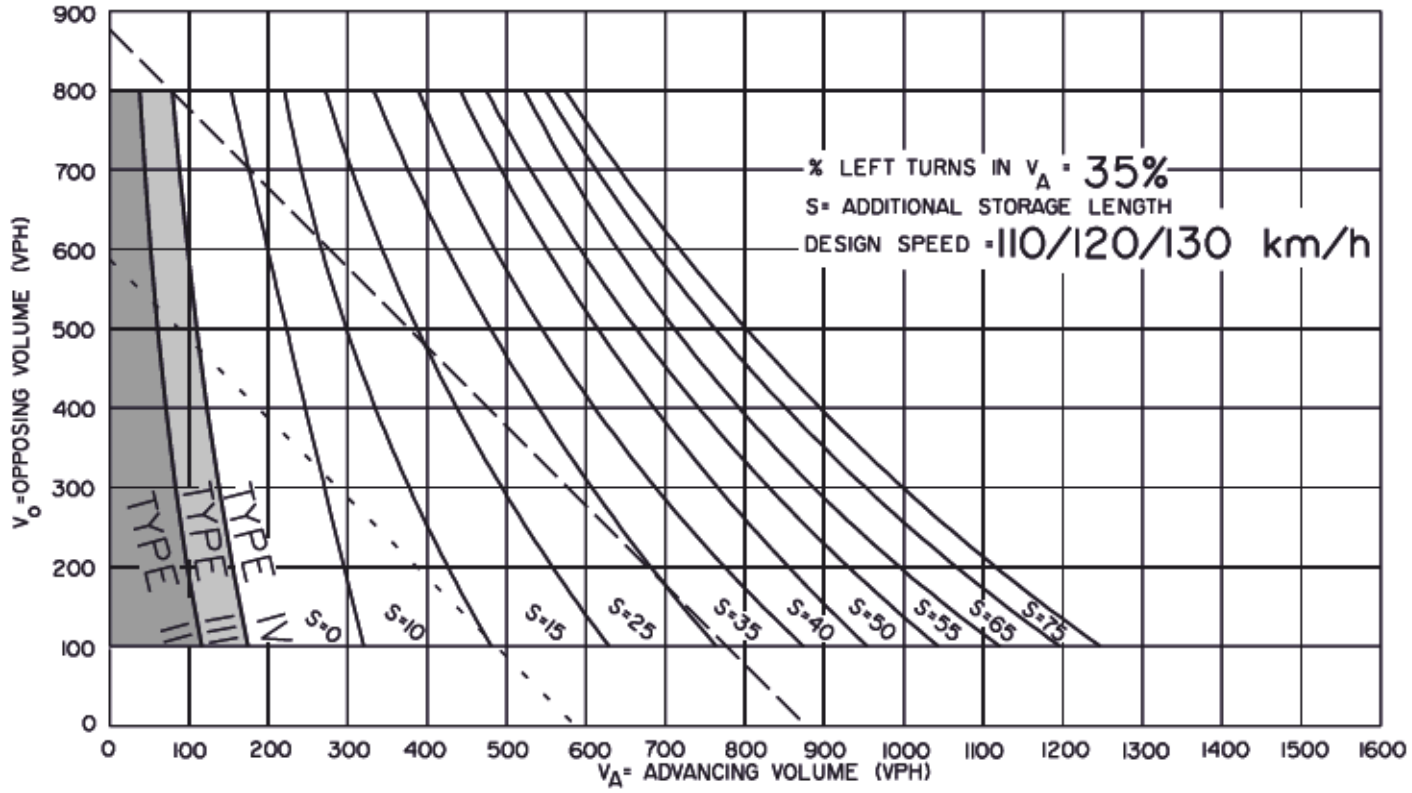
2. Warrant for Type I treatment is shown in Figure D-7.4.



GRAPHICS FILE: debd767a.man

Hwy 697 & Twp Rd
1060 - 2025 AM
Northbound Left

FIGURE D-7.6-7d WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 35%, 40%



S = Additional storage length required, that is, in addition to what is shown on the appropriate Type IV standard drawing. Designers should check additional storage requirements for trucks, also see Table D.7.6a.

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Notes:

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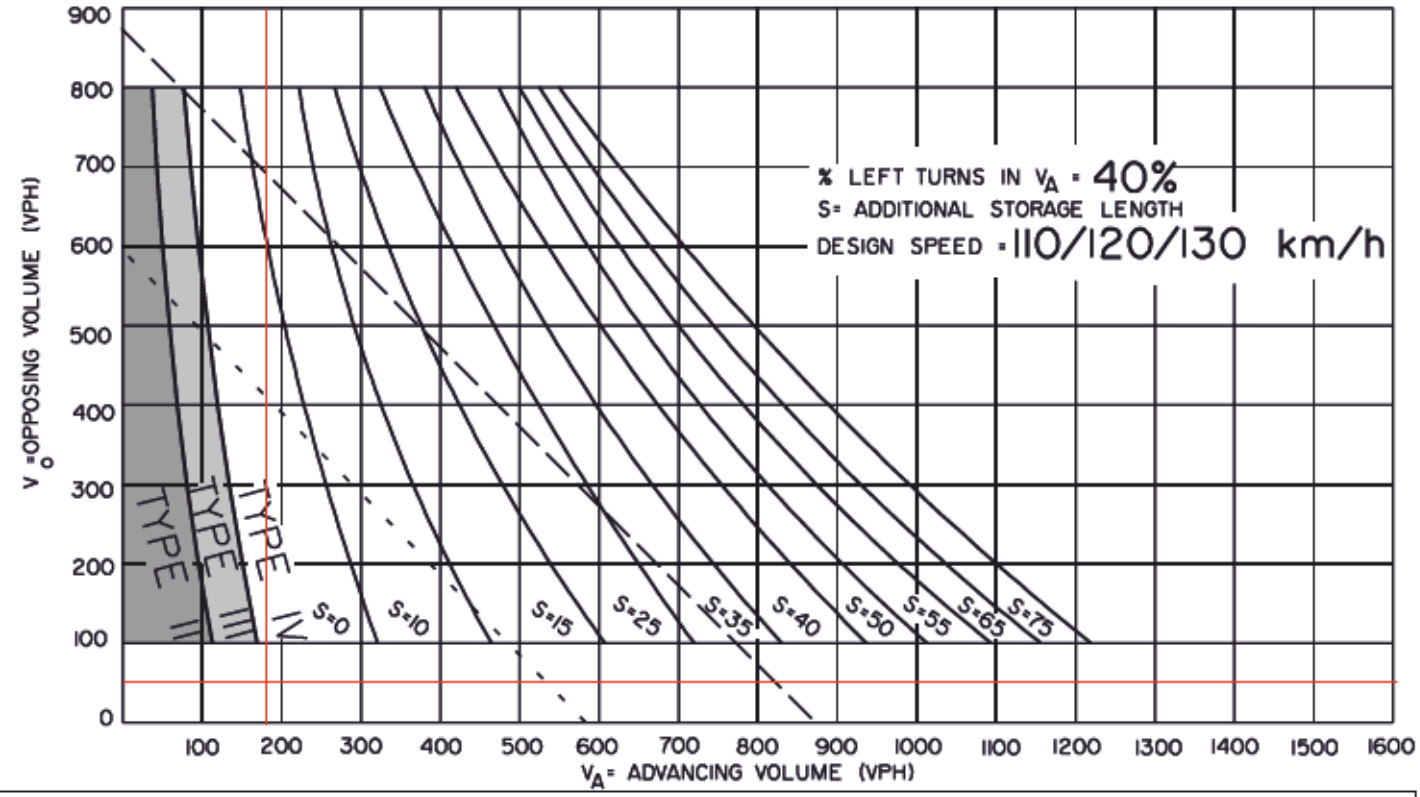
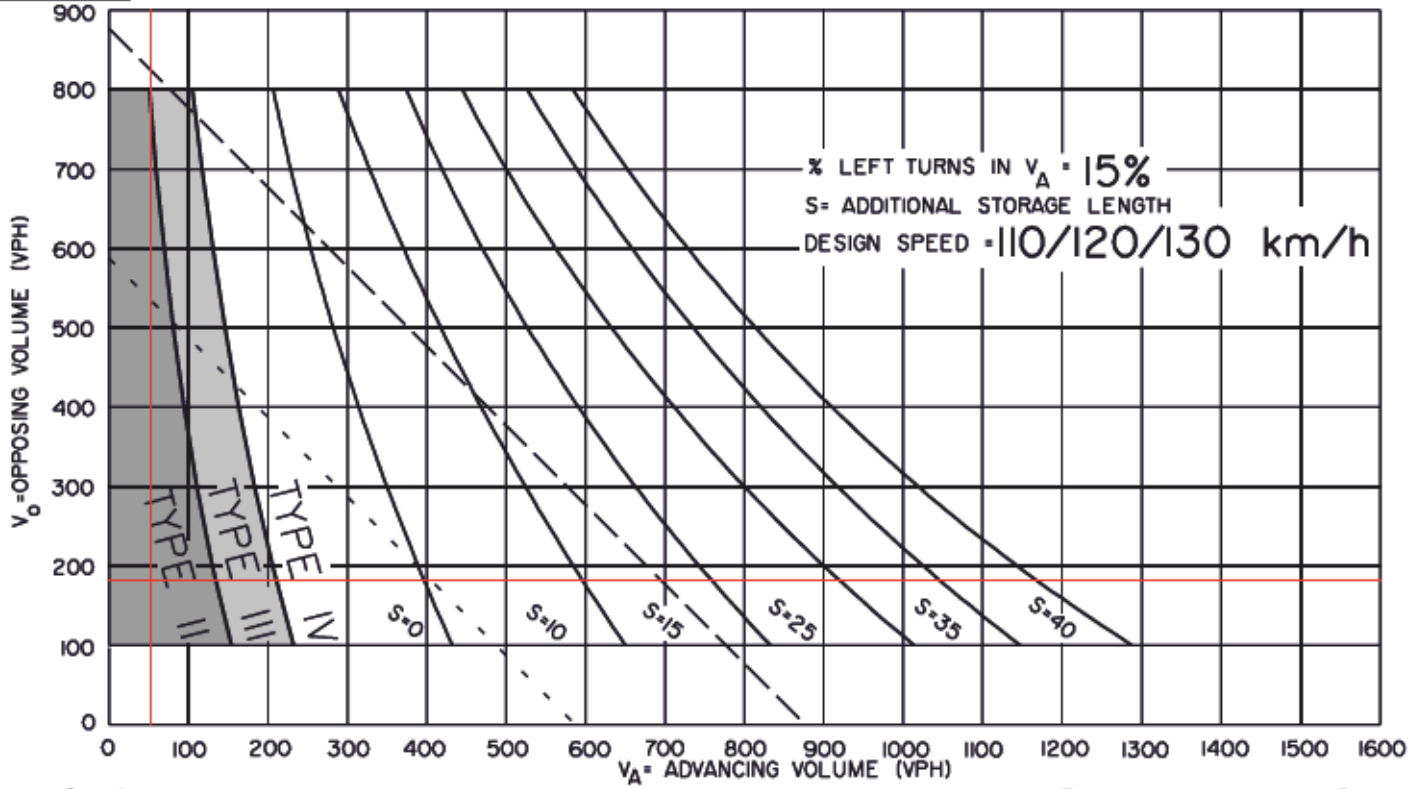


GRAPHICS FILE: debd767a.man

Hwy 697 & Twp Rd
1060 - 2025 AM
Southbound Left

FIGURE D-7.6-7b WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 15%, 20%



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Notes:

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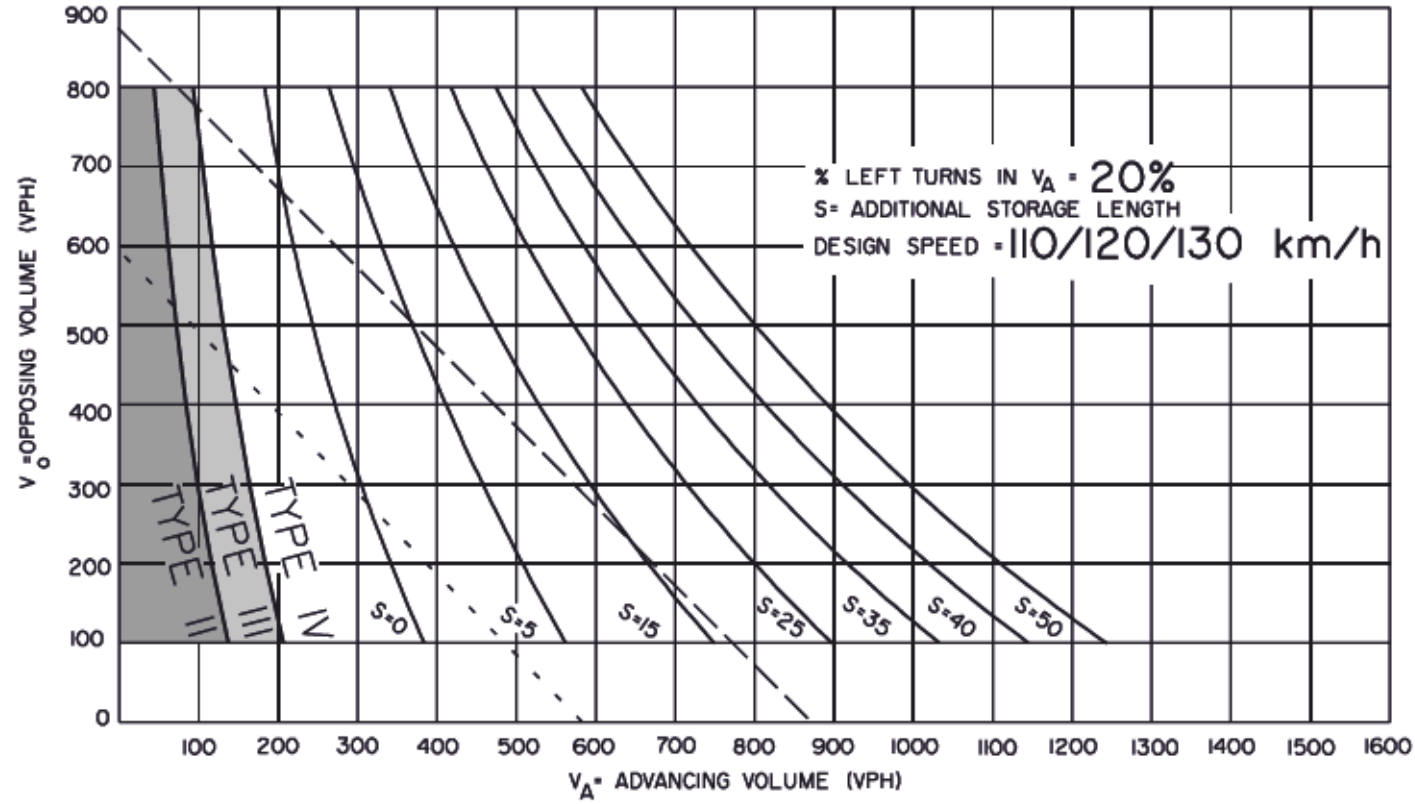
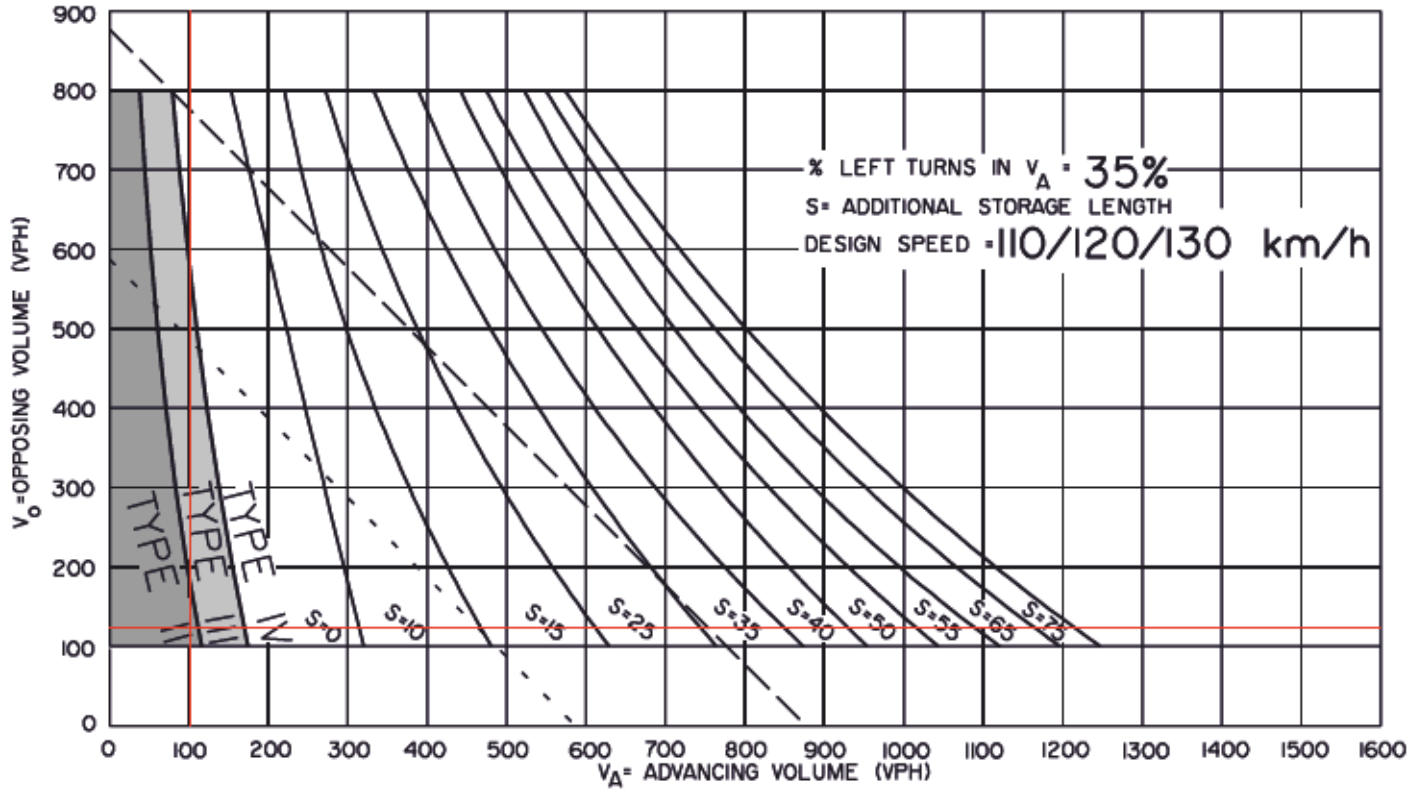
2. Warrant for Type I treatment is shown in Figure D-7.4.



GRAPHICS FILE: debd767a.man

Hwy 697 & Twp Rd
1060 - 2025 PM
Northbound Left

FIGURE D-7.6-7d WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 35%, 40%



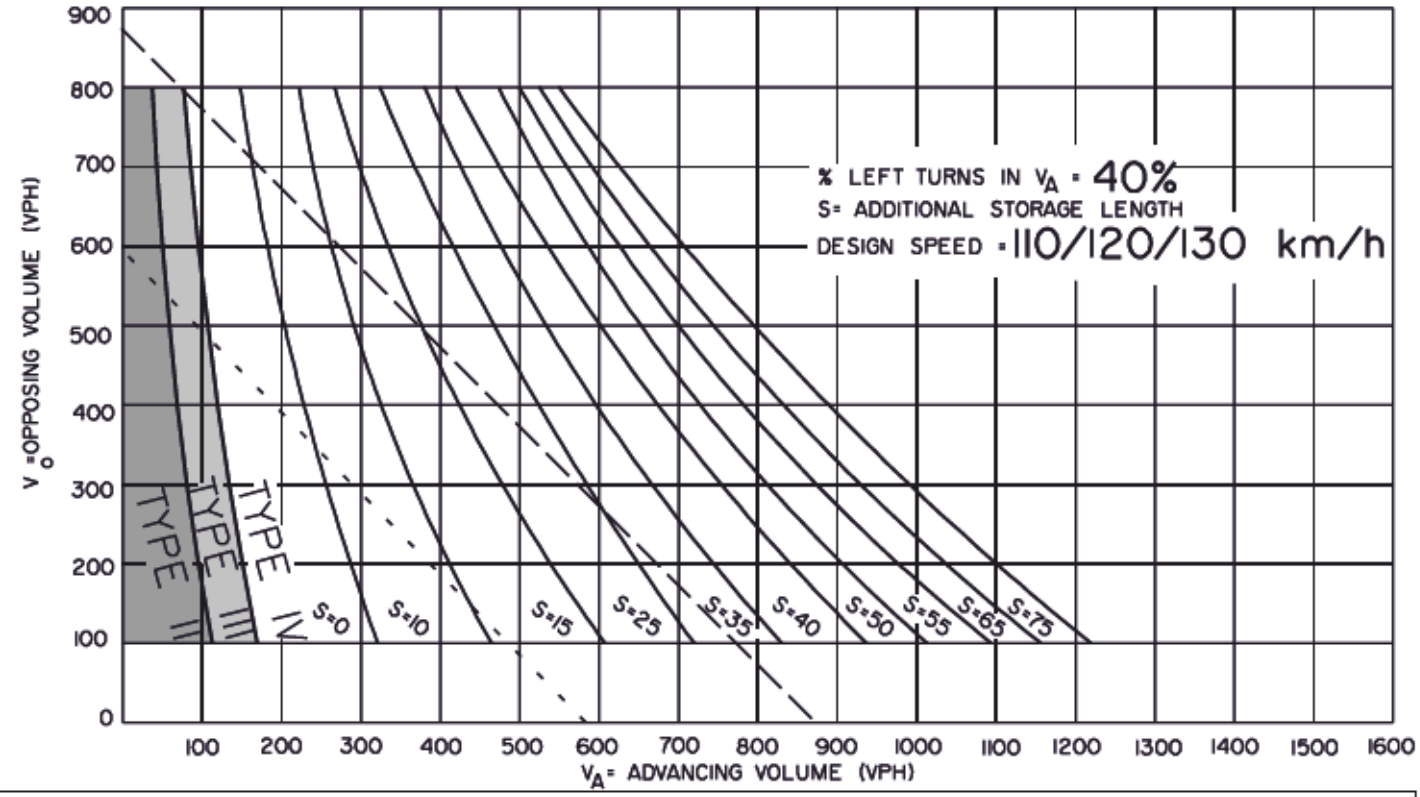
S = Additional storage length required, that is, in addition to what is shown on the appropriate Type IV standard drawing. Designers should check additional storage requirements for trucks, also see Table D.7.6a.

- - - - Traffic signals may be warranted in rural areas, or urban areas, with restricted flow.

— — — Traffic signals may be warranted in "free flow" urban areas.

Notes:

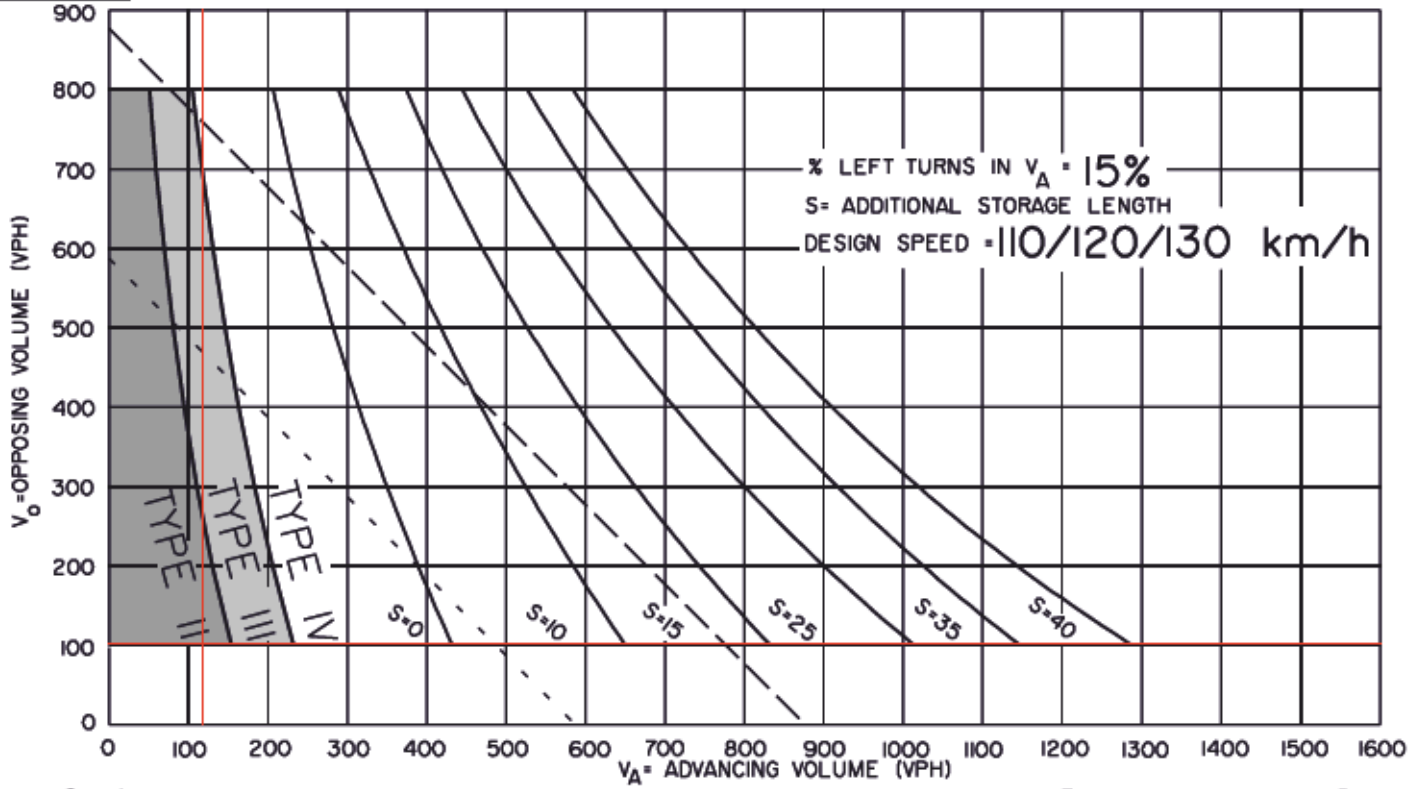
1. The traffic signal warrant lines are provided for reference only. For detailed analysis of the requirements for signals, contact Roadway Engineering Branch.
2. Warrant for Type I treatment is shown in Figure D-7.4.



GRAPHICS FILE: debd767a.man

Hwy 697 & Twp Rd
1060 - 2025 PM
Southbound Left

FIGURE D-7.6-7b WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 15%, 20%



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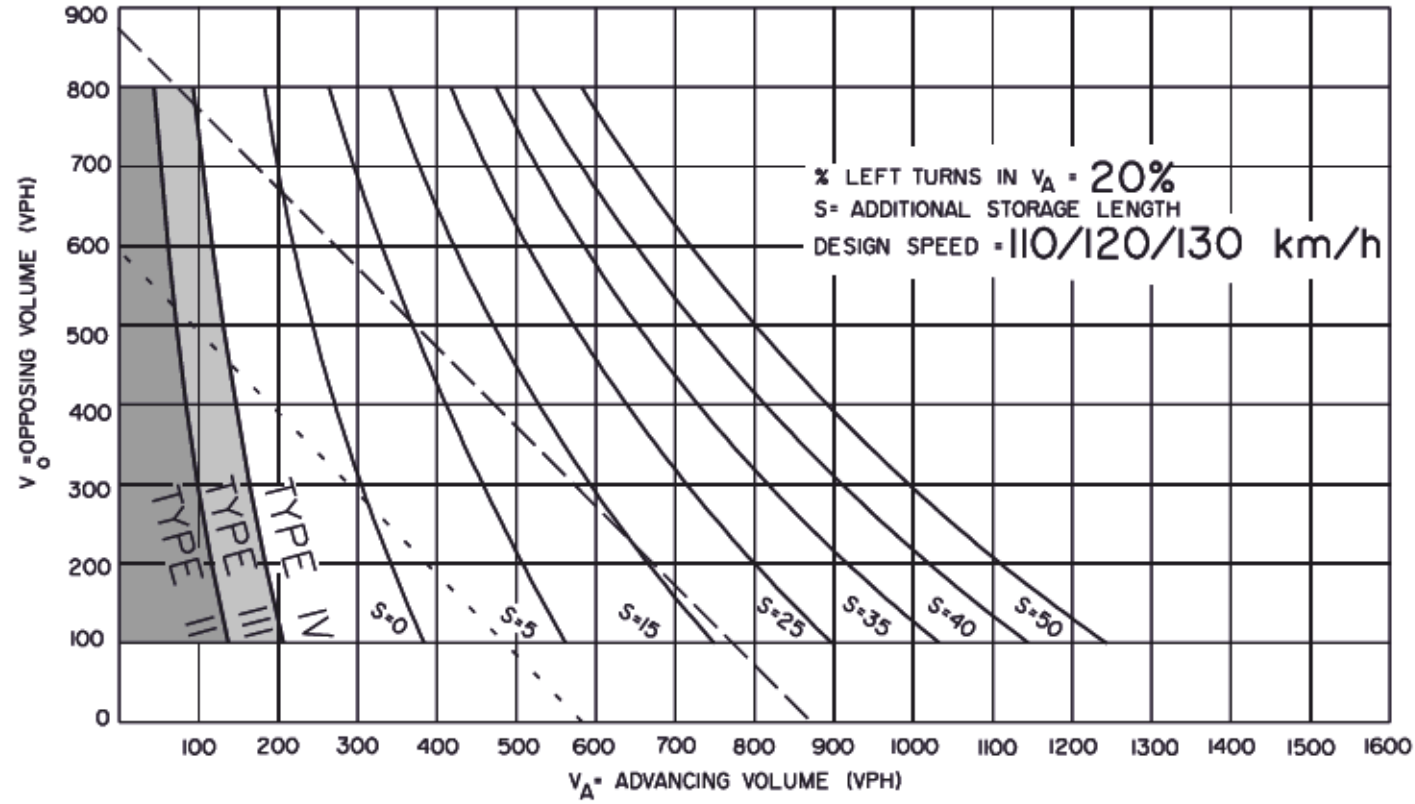
Notes:

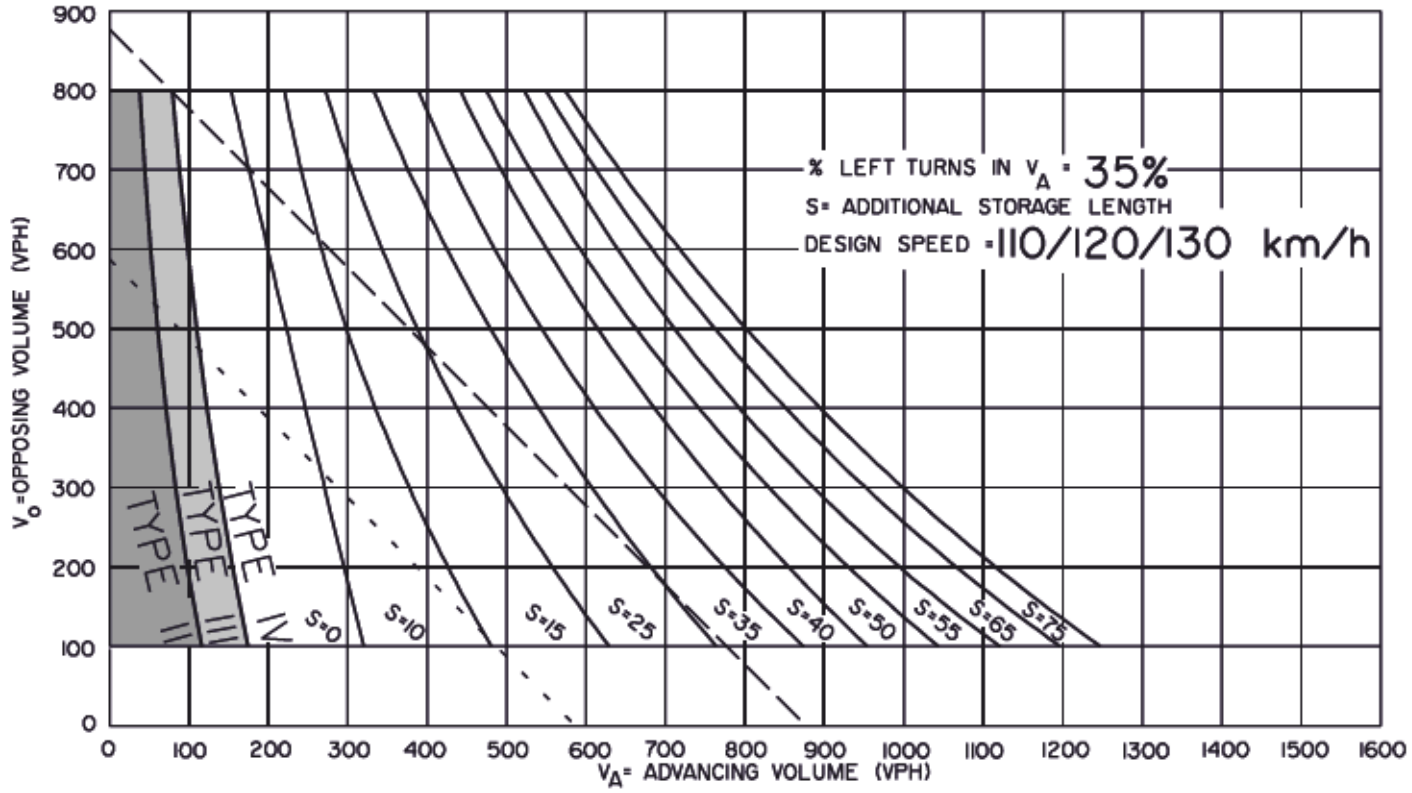
1. The traffic signal warrant lines are provided for reference only. For detailed analysis of the requirements for signals, contact Roadway Engineering Branch.
2. Warrant for Type I treatment is shown in Figure D-7.4.



GRAPHICS FILE: debd767a.man

Hwy 697 & Twp Rd
1060 - 2031 AM
Northbound Left

FIGURE D-7.6-7d WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 35%, 40%



S = Additional storage length required, that is, in addition to what is shown on the appropriate Type IV standard drawing. Designers should check additional storage requirements for trucks, also see Table D.7.6a.

- - - - Traffic signals may be warranted in rural areas, or urban areas, with restricted flow.

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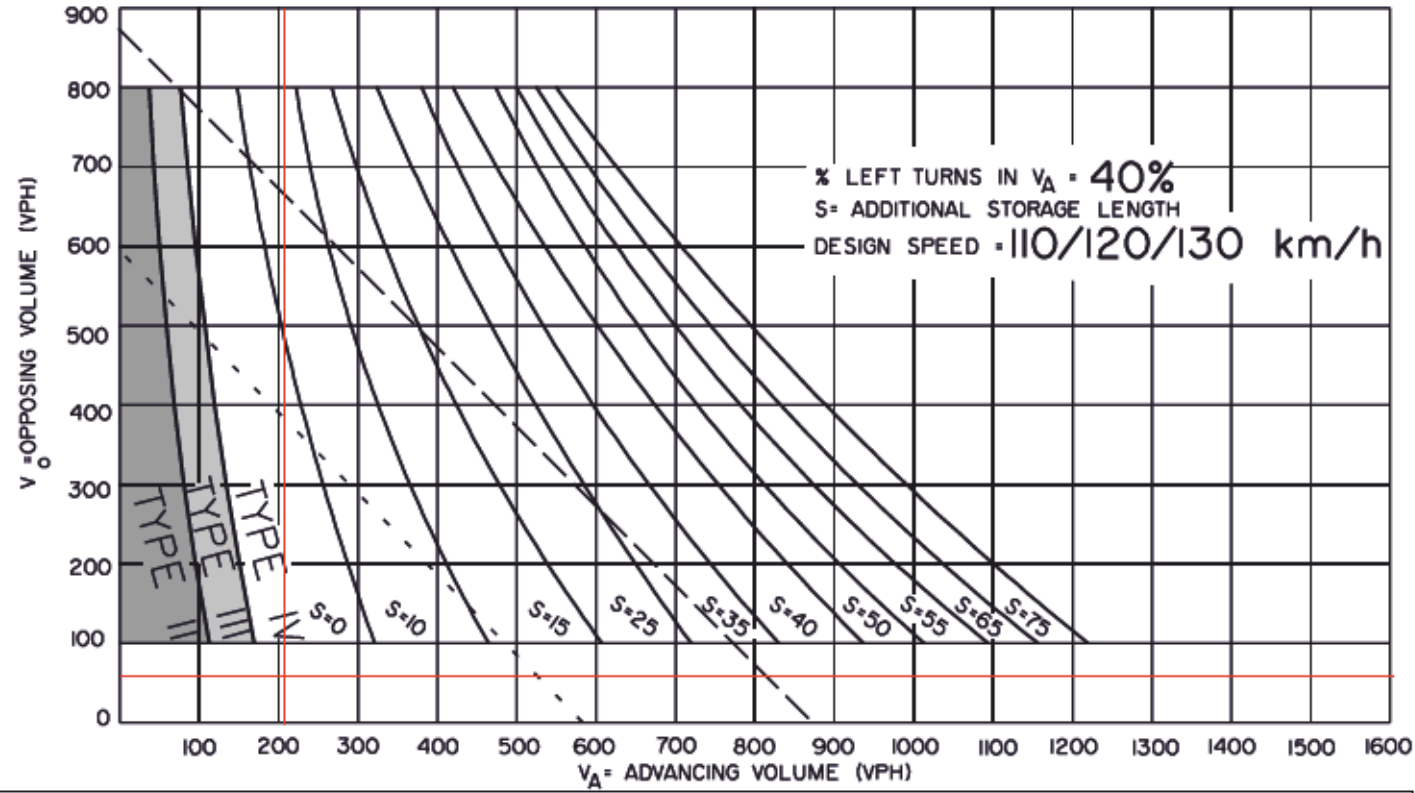
Notes:

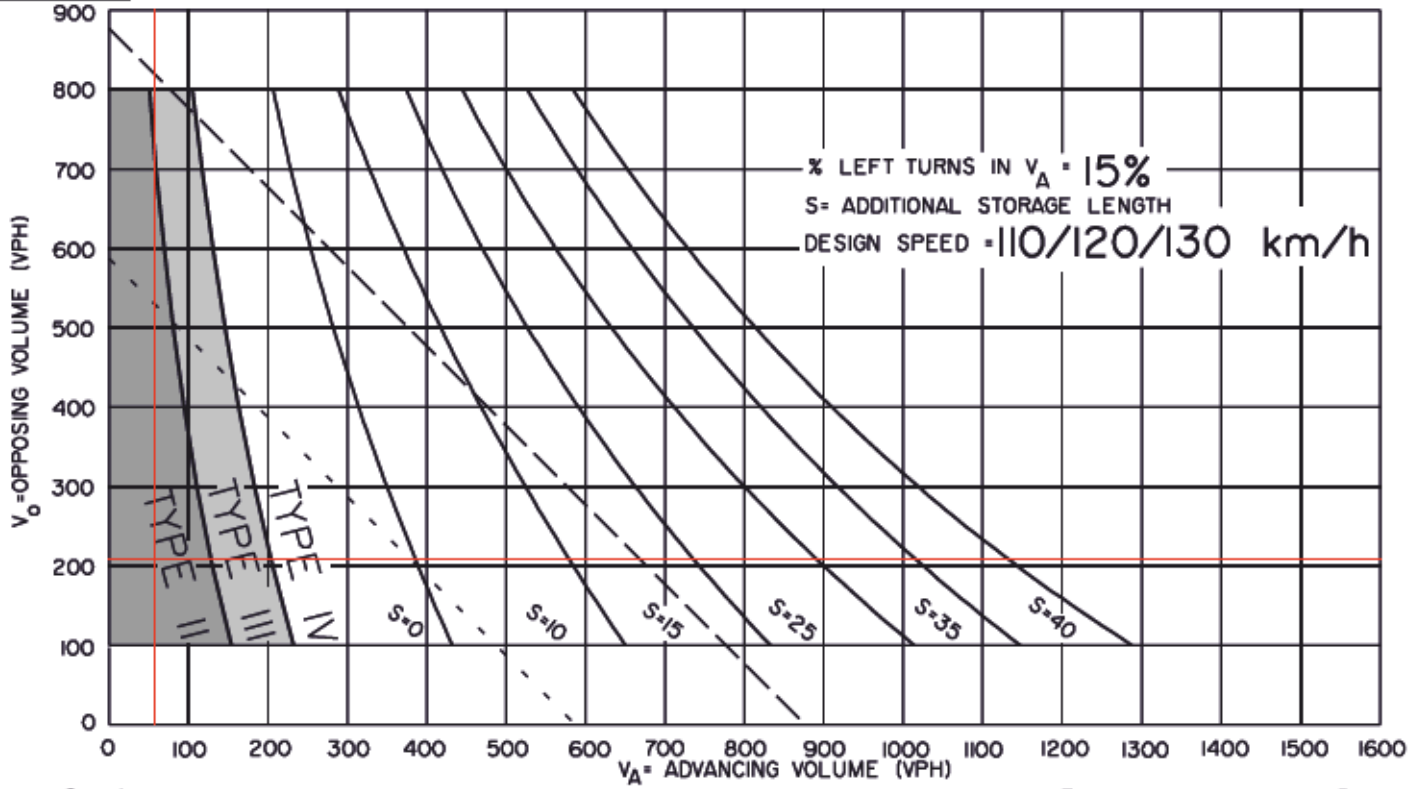
1. The traffic signal warrant lines are provided for reference only. For detailed analysis of the requirements for signals, contact Roadway Engineering Branch.
2. Warrant for Type I treatment is shown in Figure D-7.4.



GRAPHICS FILE: debd767a.man

Hwy 697 & Twp Rd
1060 - 2031 AM
Southbound Left

FIGURE D-7.6-7b WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 15%, 20%



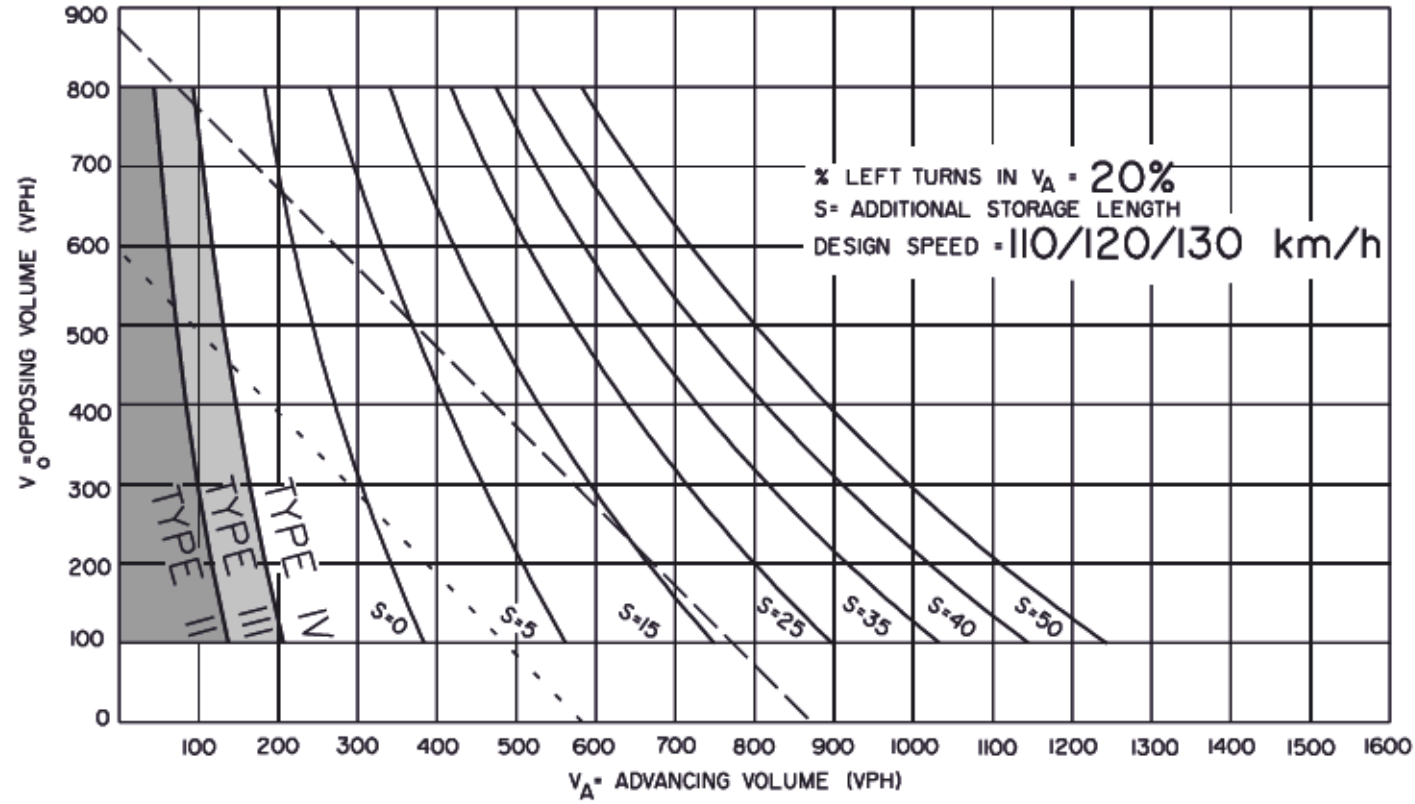
S = Additional storage length required, that is, in addition to what is shown on the appropriate Type IV standard drawing. Designers should check additional storage requirements for trucks, also see Table D.7.6a.

- - - - Traffic signals may be warranted in rural areas, or urban areas, with restricted flow.

—— —— Traffic signals may be warranted in "free flow" urban areas.

Notes:

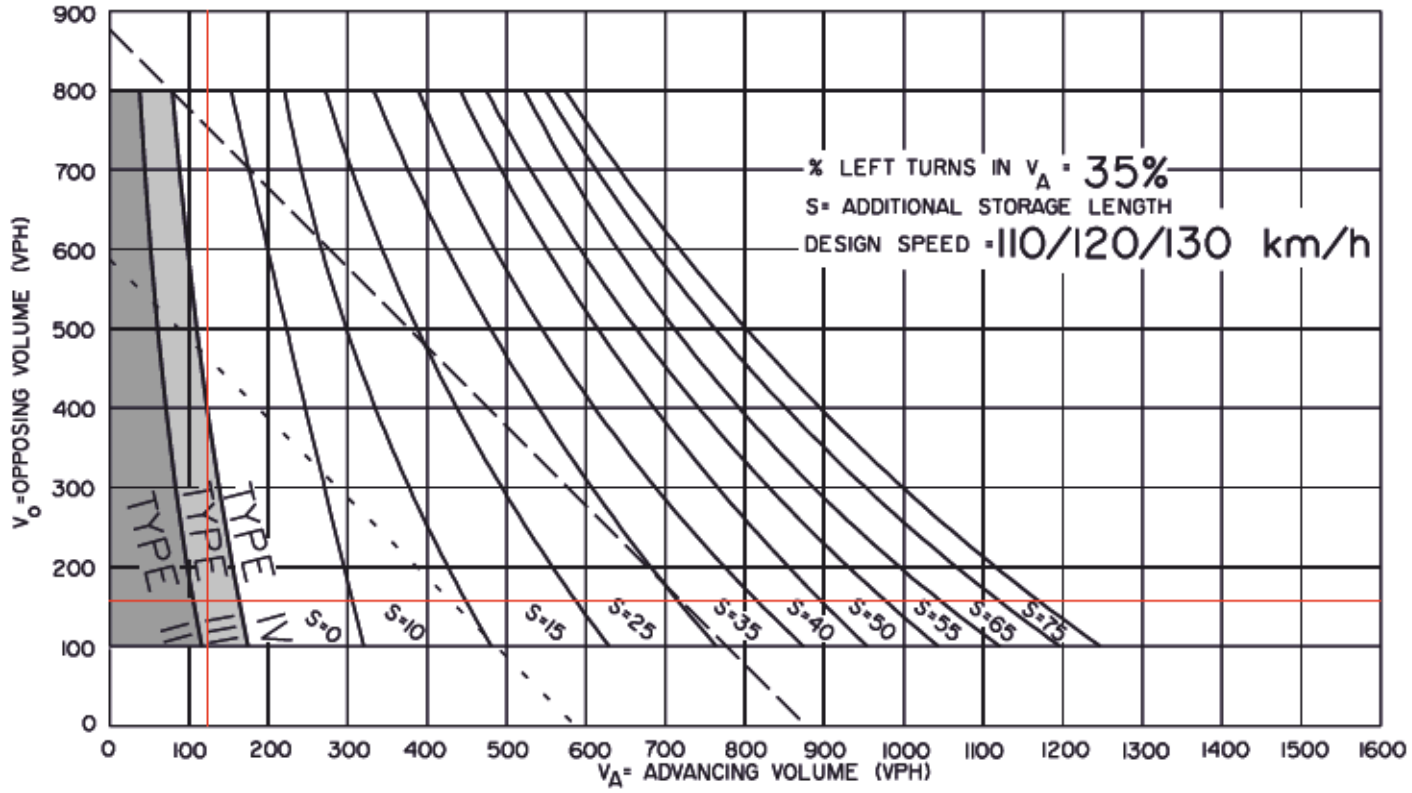
1. The traffic signal warrant lines are provided for reference only. For detailed analysis of the requirements for signals, contact Roadway Engineering Branch.
2. Warrant for Type I treatment is shown in Figure D-7.4.



GRAPHICS FILE: debd767a.man

Hwy 697 & Twp Rd
1060 - 2031 PM
Northbound Left

FIGURE D-7.6-7d WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 35%, 40%



S = Additional storage length required, that is, in addition to what is shown on the appropriate Type IV standard drawing. Designers should check additional storage requirements for trucks, also see Table D.7.6a.

- - - - Traffic signals may be warranted in rural areas, or urban areas, with restricted flow.

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Notes:

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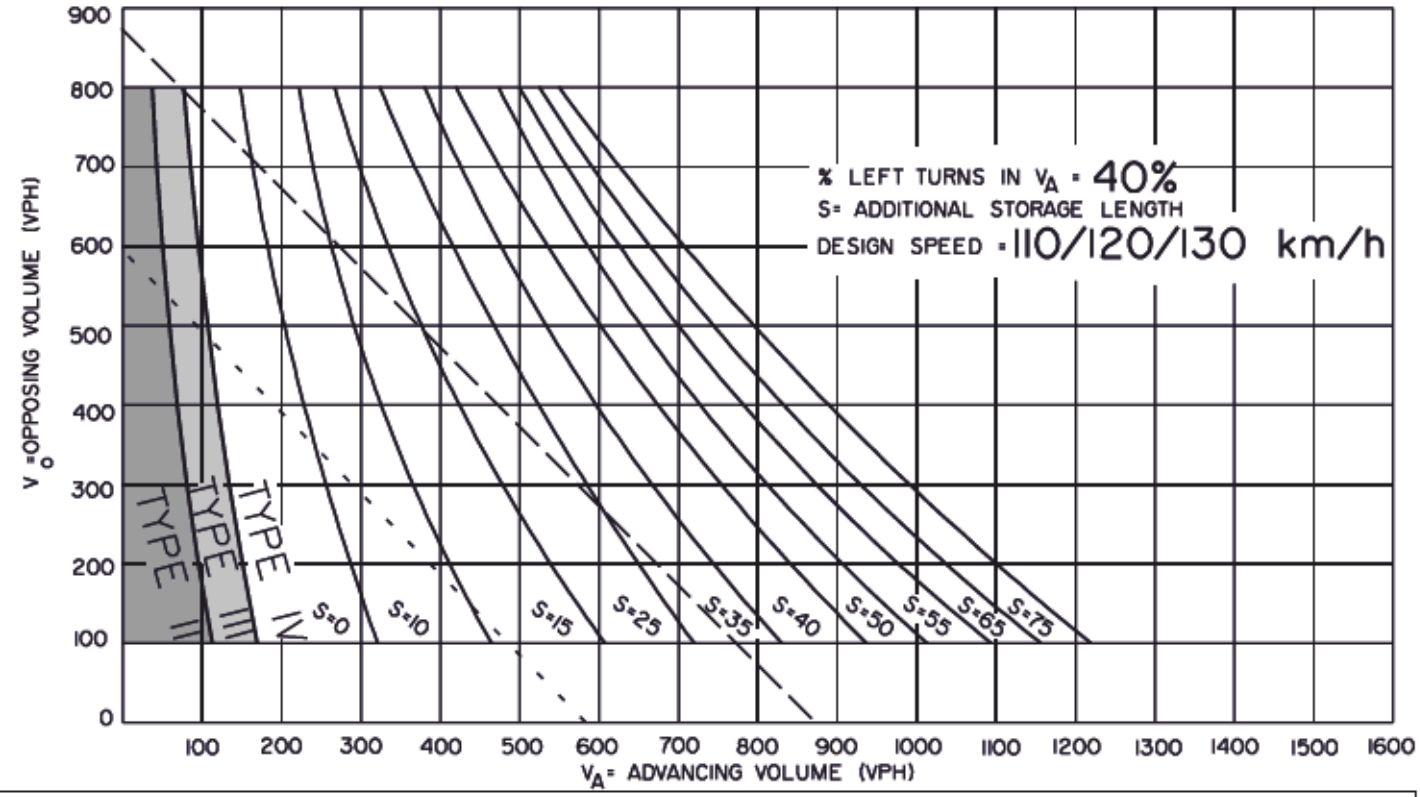
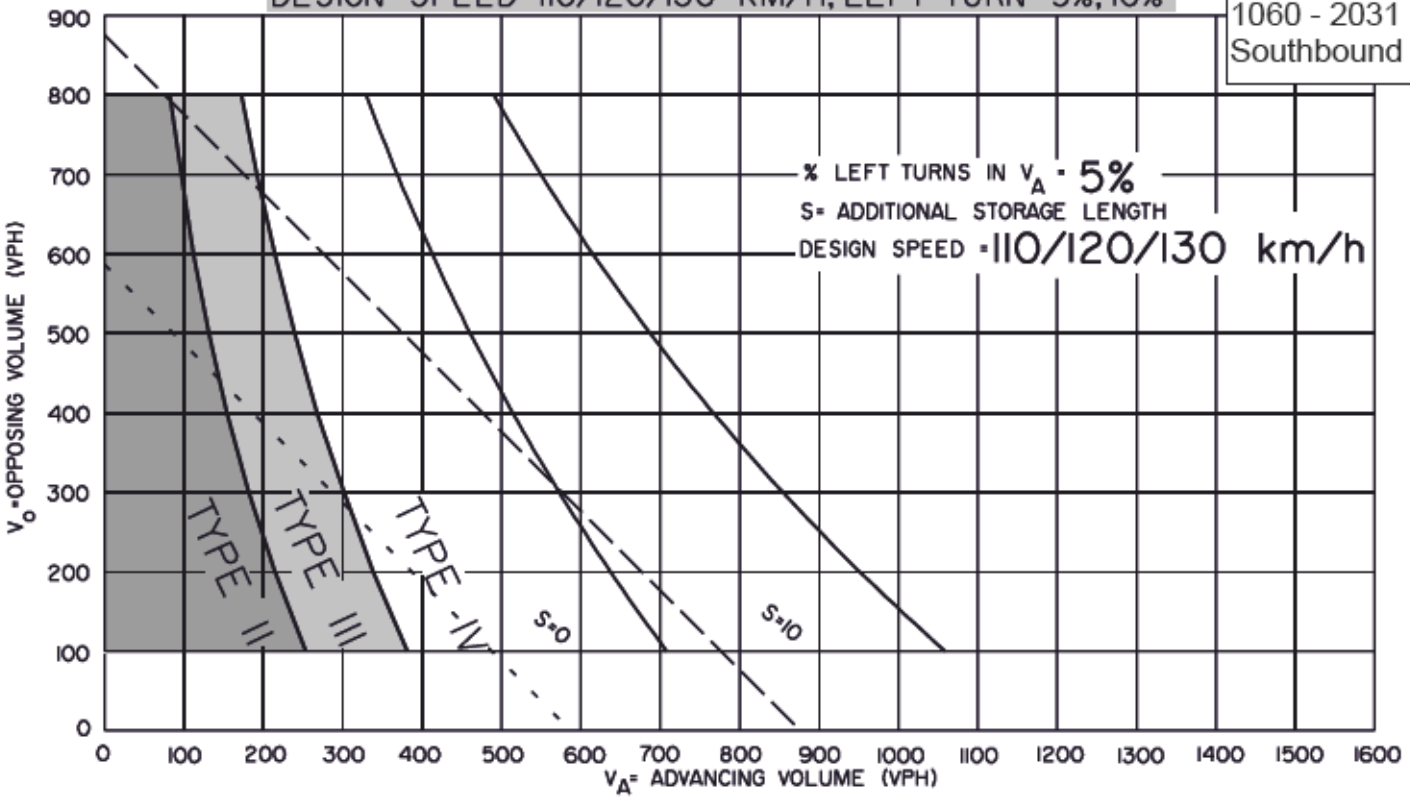
2. Warrant for Type I treatment is shown in Figure D-7.4.



GRAPHICS FILE: debd767a.man

FIGURE D-7.6-7a WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 5%, 10%

Hwy 697 & Twp Rd
1060 - 2031 PM
Southbound Left



S = Additional storage length required, that is, in addition to what is shown on the appropriate Type IV standard drawing. Designers should check additional storage requirements for trucks, also see Table D.7.6a.

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Notes:

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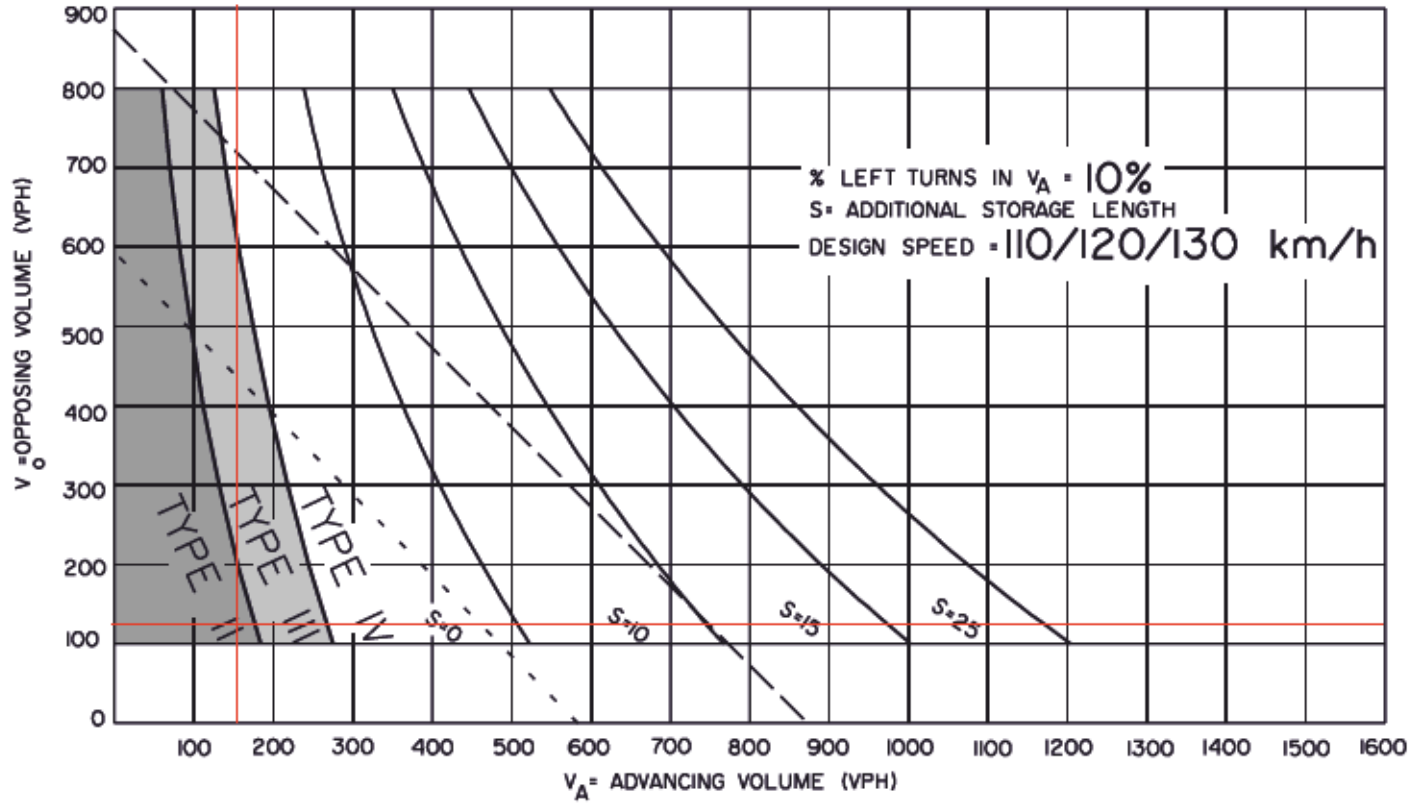
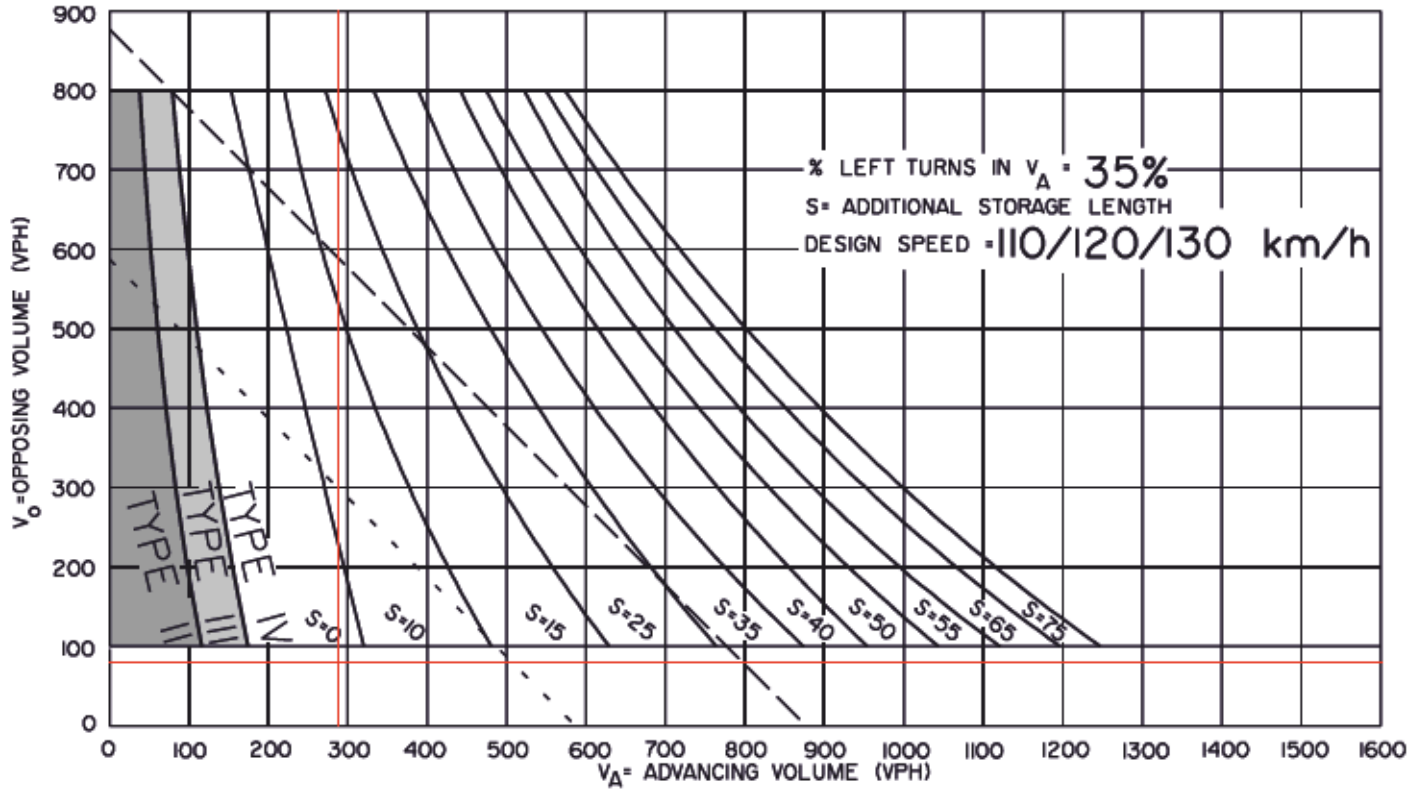
2. Warrant for Type I treatment is shown in Figure D-7.4.



GRAPHICS FILE: debd767a.mon

Hwy 697 & Twp Rd
1060 - 2041 AM
Northbound Left

FIGURE D-7.6-7d WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 35%, 40%



S = Additional storage length required, that is, in addition to what is shown on the appropriate Type IV standard drawing. Designers should check additional storage requirements for trucks, also see Table D.7.6a.

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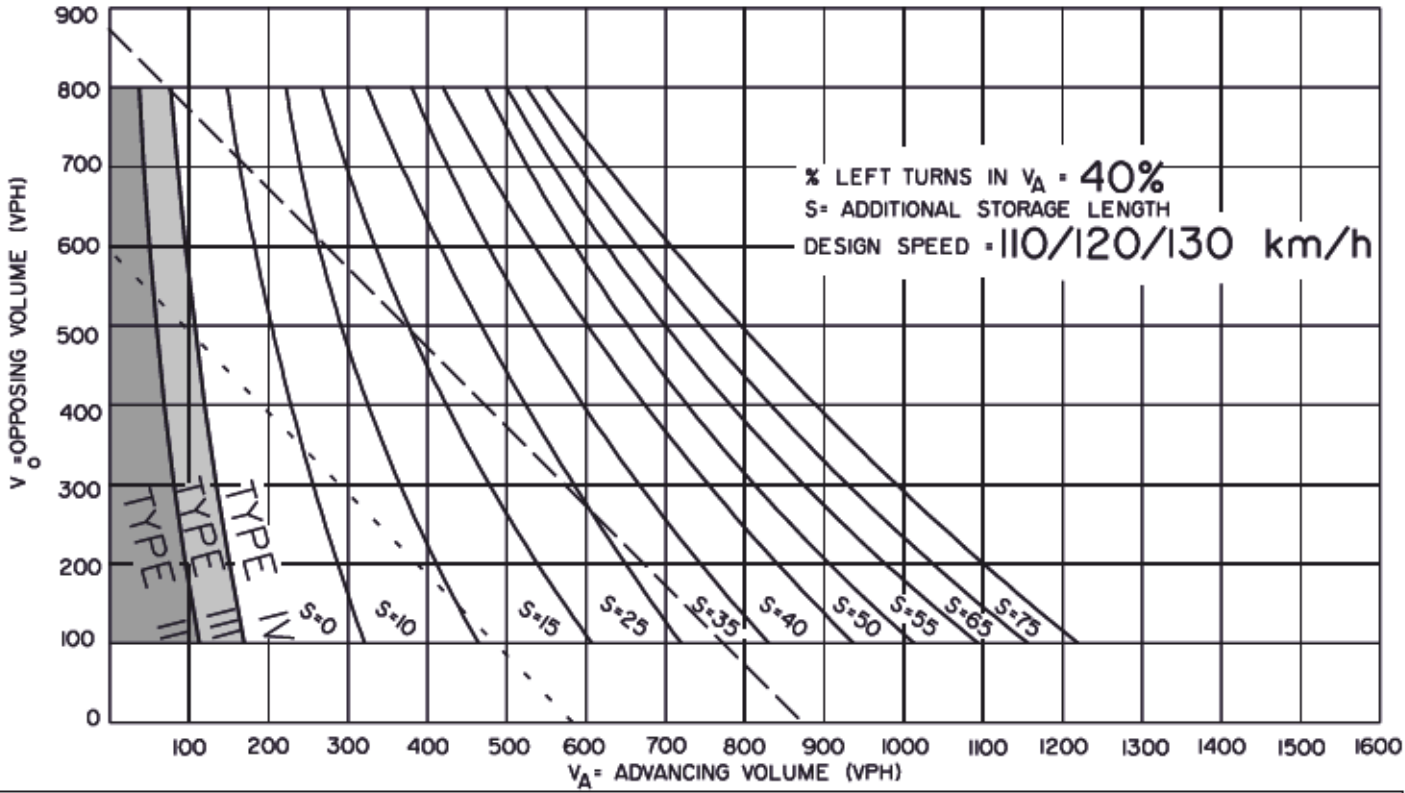
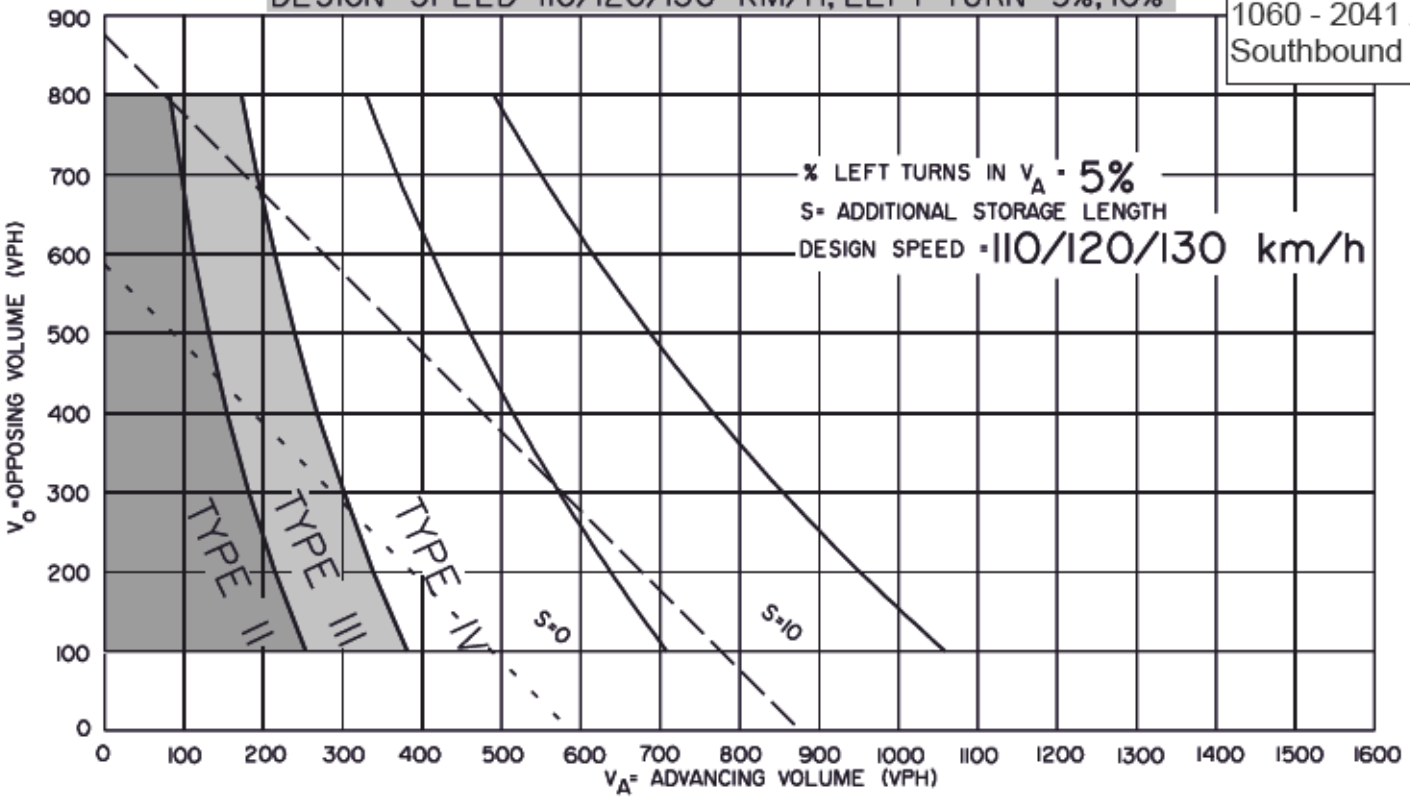
2. Warrant for Type I treatment is shown in Figure D-7.4.



GRAPHICS FILE: debd767a.man

FIGURE D-7.6-7a WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 5%, 10%

Hwy 697 & Twp Rd
1060 - 2041 AM
Southbound Left



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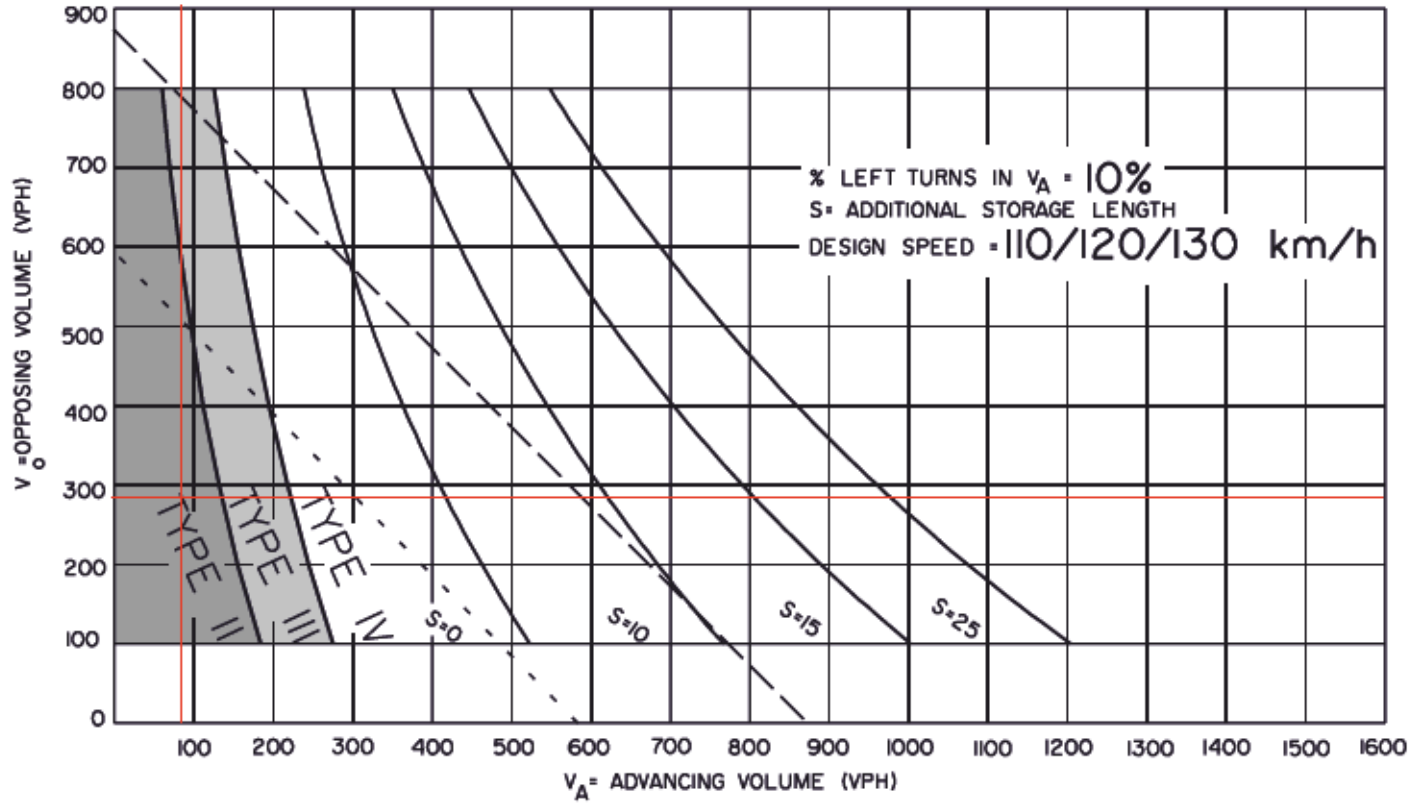
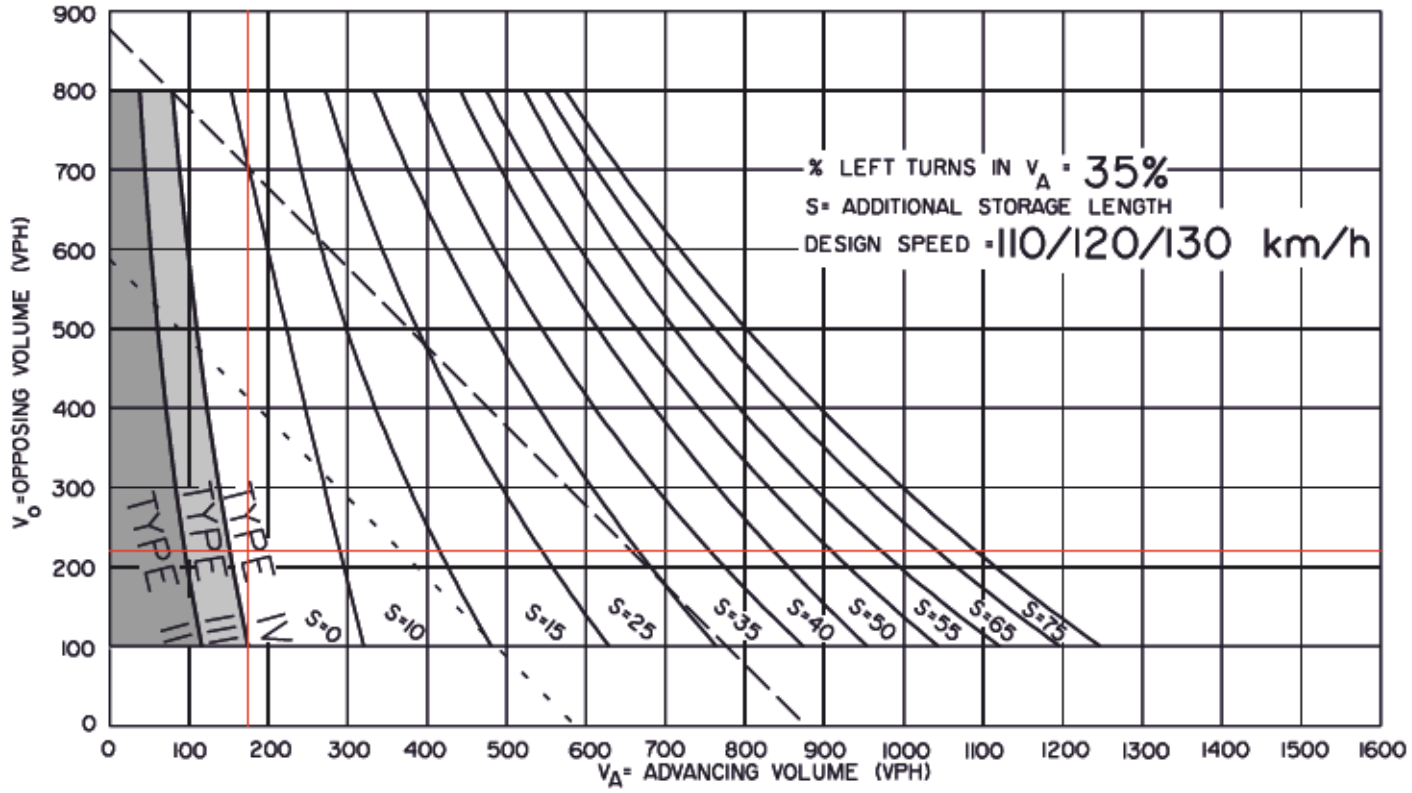


GRAPHICS FILE: debd767a.mon

Hwy 697 & Twp Rd
1060 - 2041 PM
Northbound Left

FIGURE D-7.6-7d WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 35%, 40%



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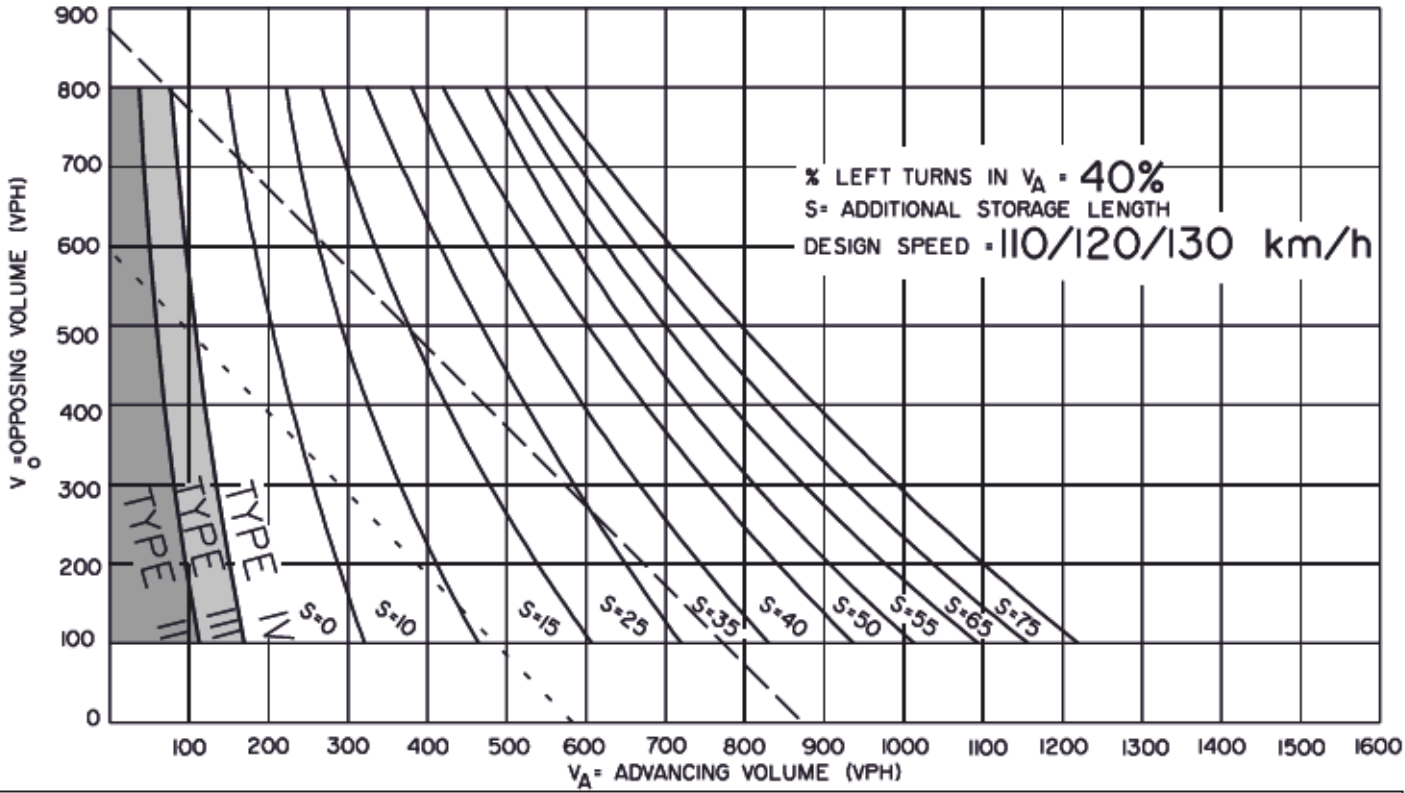
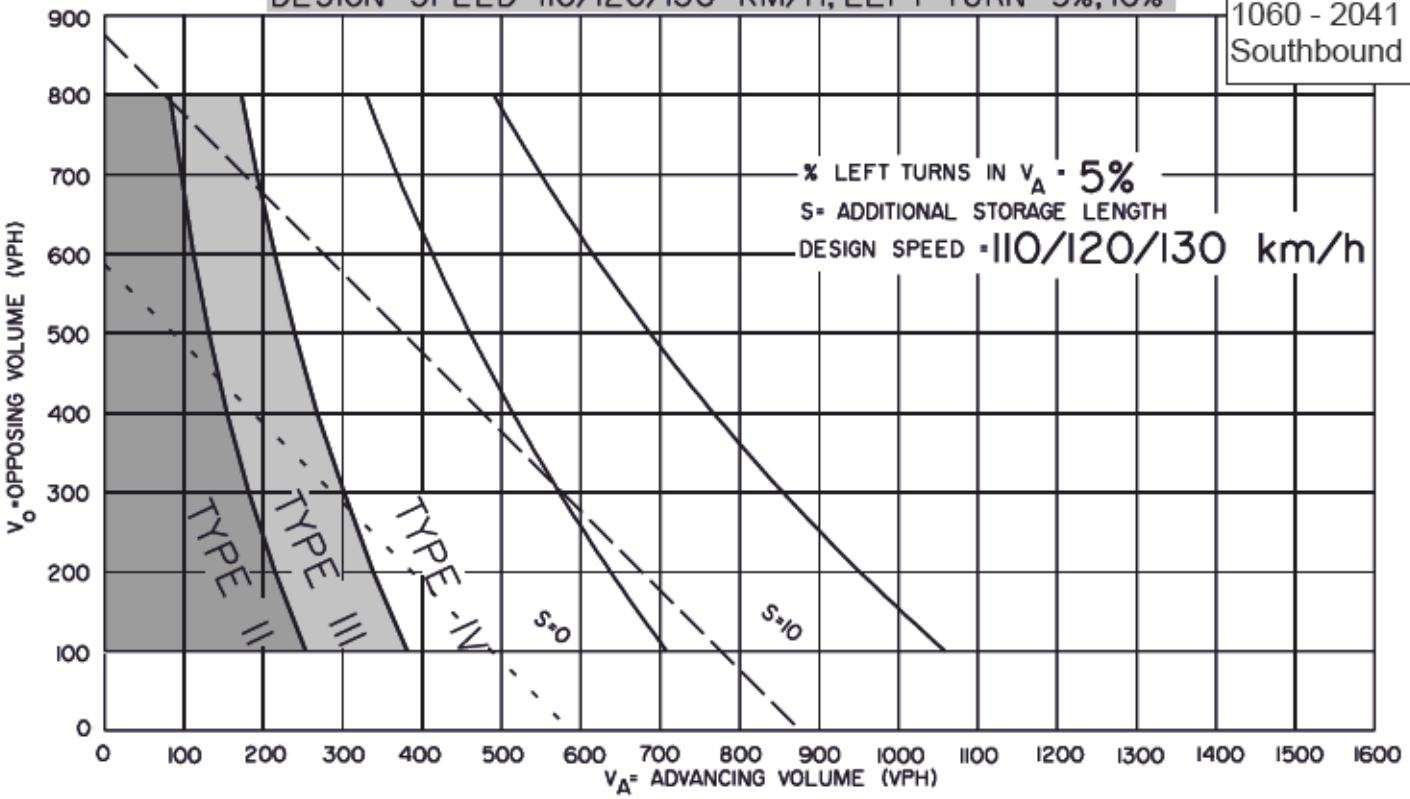


GRAPHICS FILE: debd767a.man

FIGURE D-7.6-7a WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 5%, 10%

Hwy 697 & Twp Rd
1060 - 2041 PM
Southbound Left



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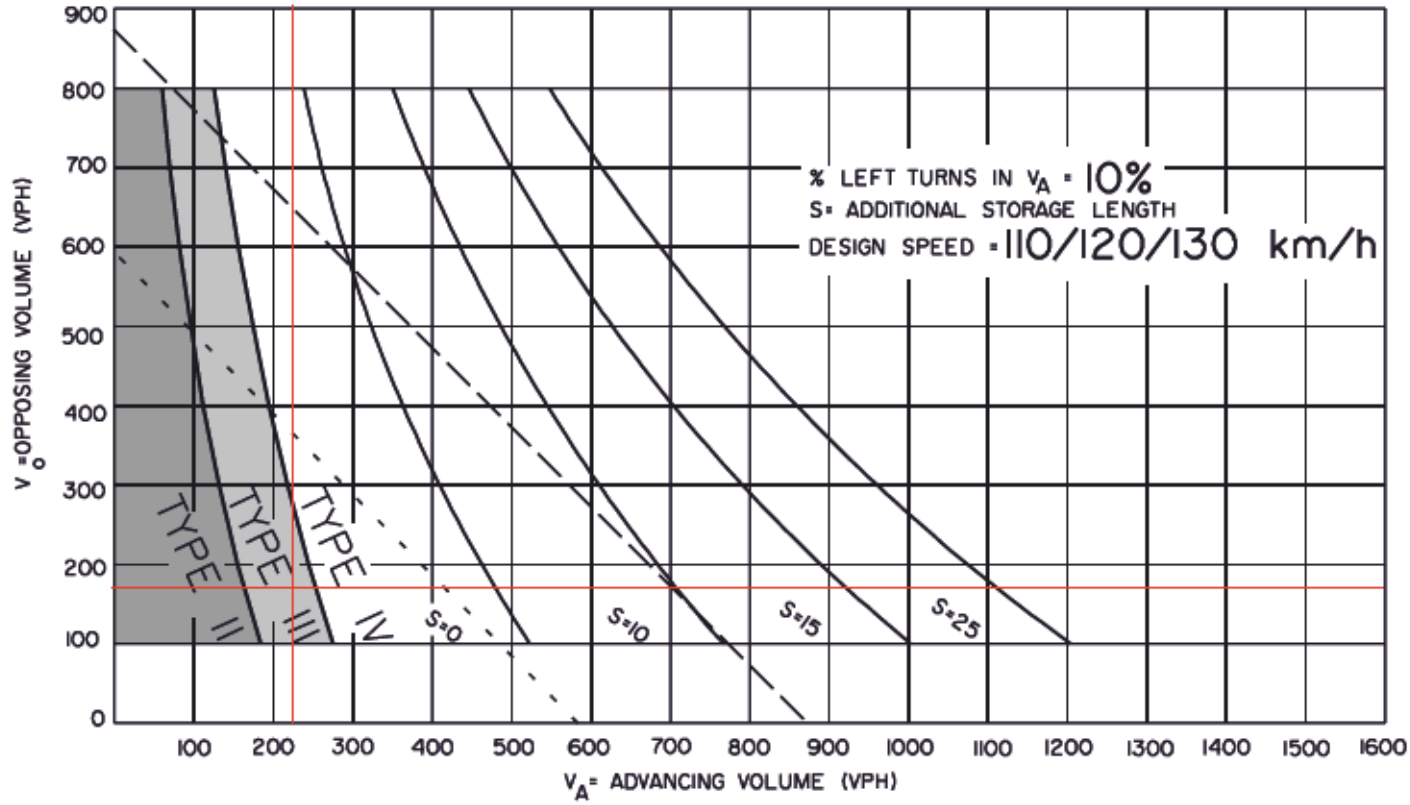
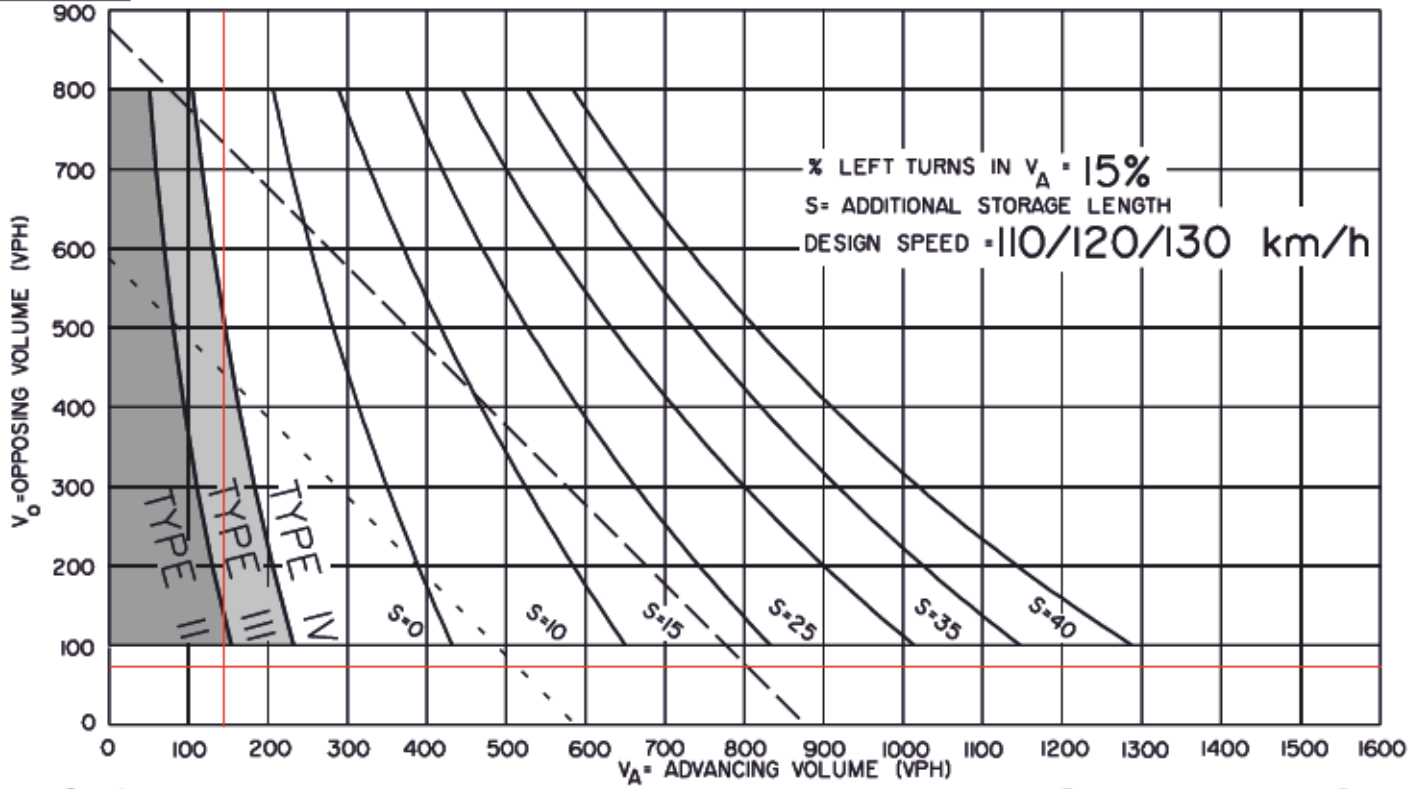


GRAPHICS FILE: debd767a.mon

Hwy 697 & Twp Rd
1055 - 2021 AM
Northbound Left

FIGURE D-7.6-7b WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 15%, 20%



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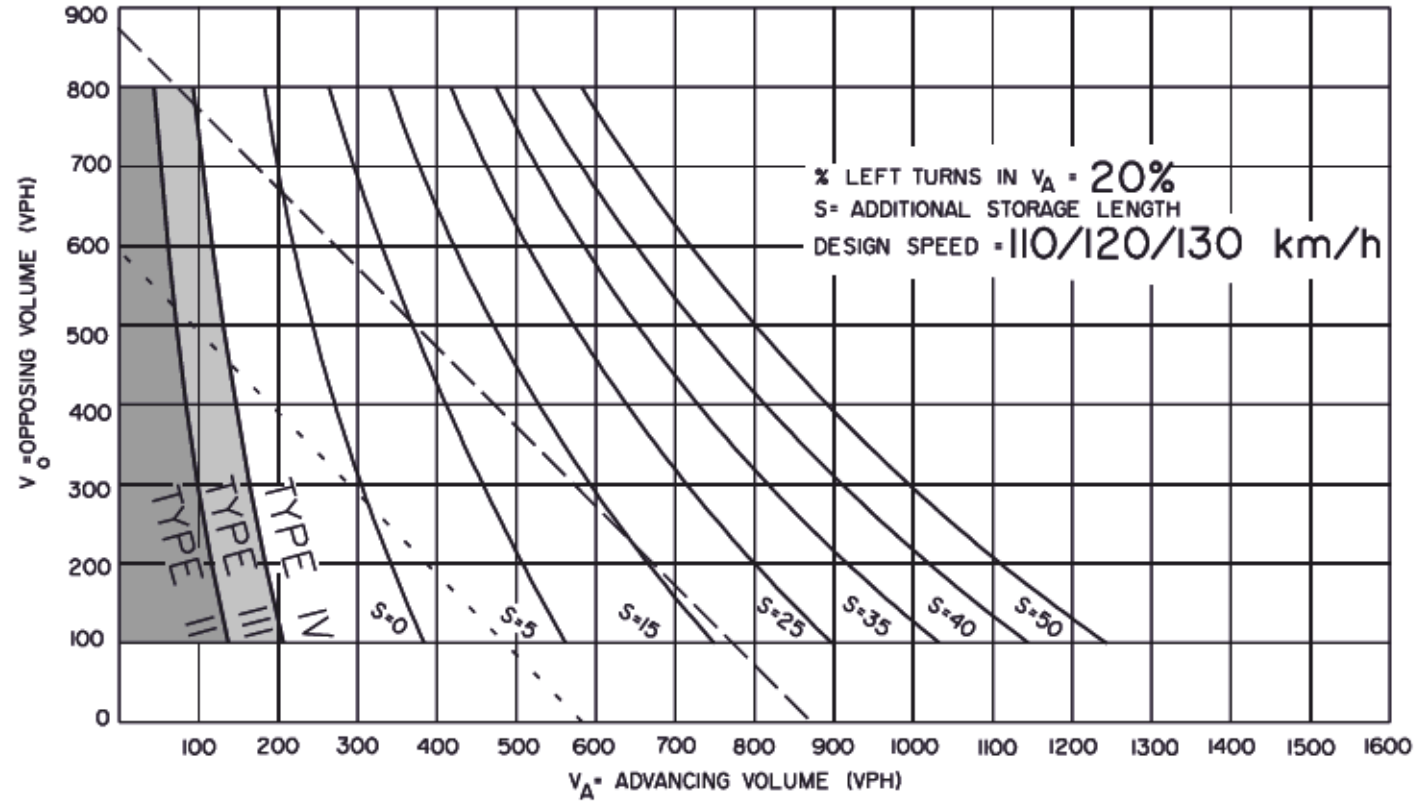
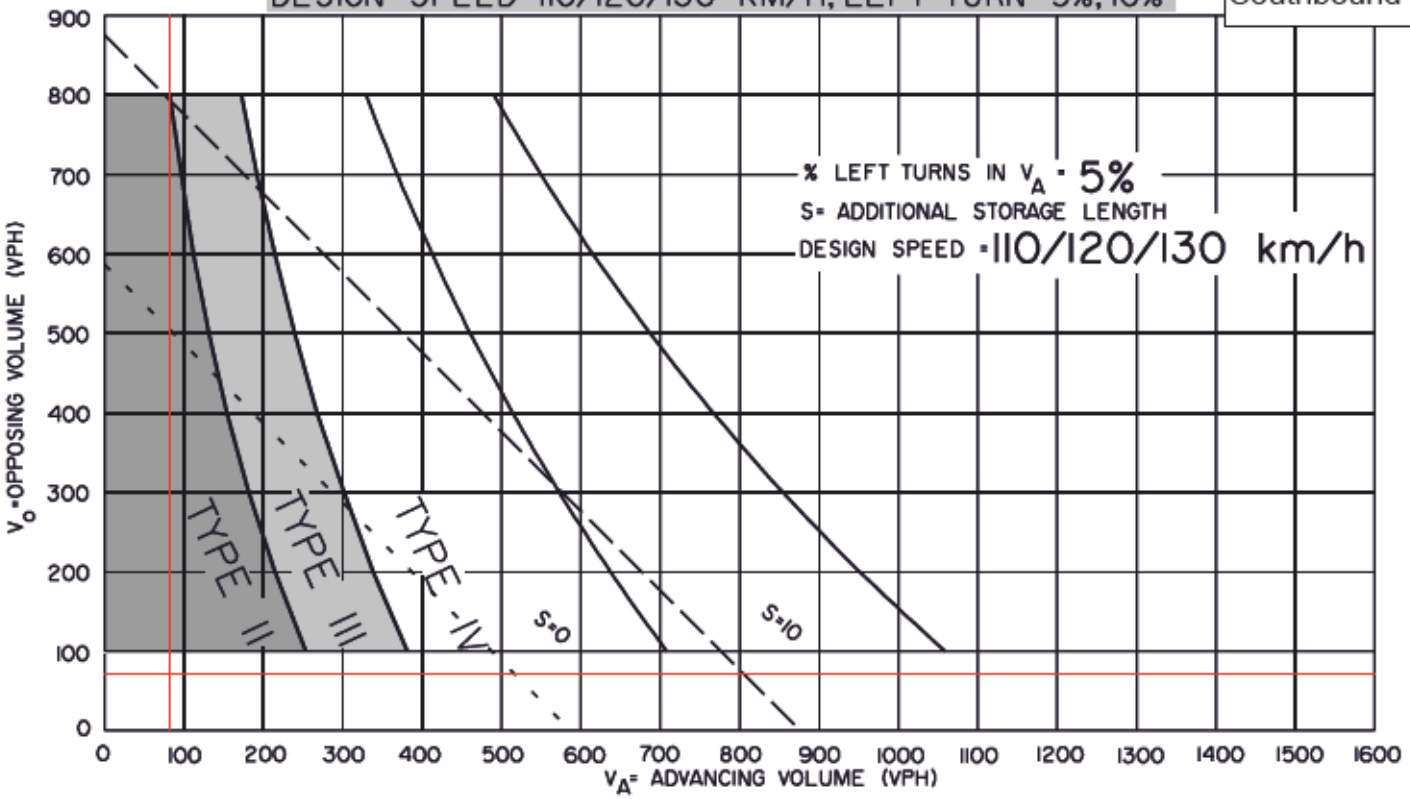


GRAPHICS FILE: debd767a.man

FIGURE D-7.6-7a WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 5%, 10%

Hwy 697 & Twp Rd 1055 - 2021 PM Southbound Left



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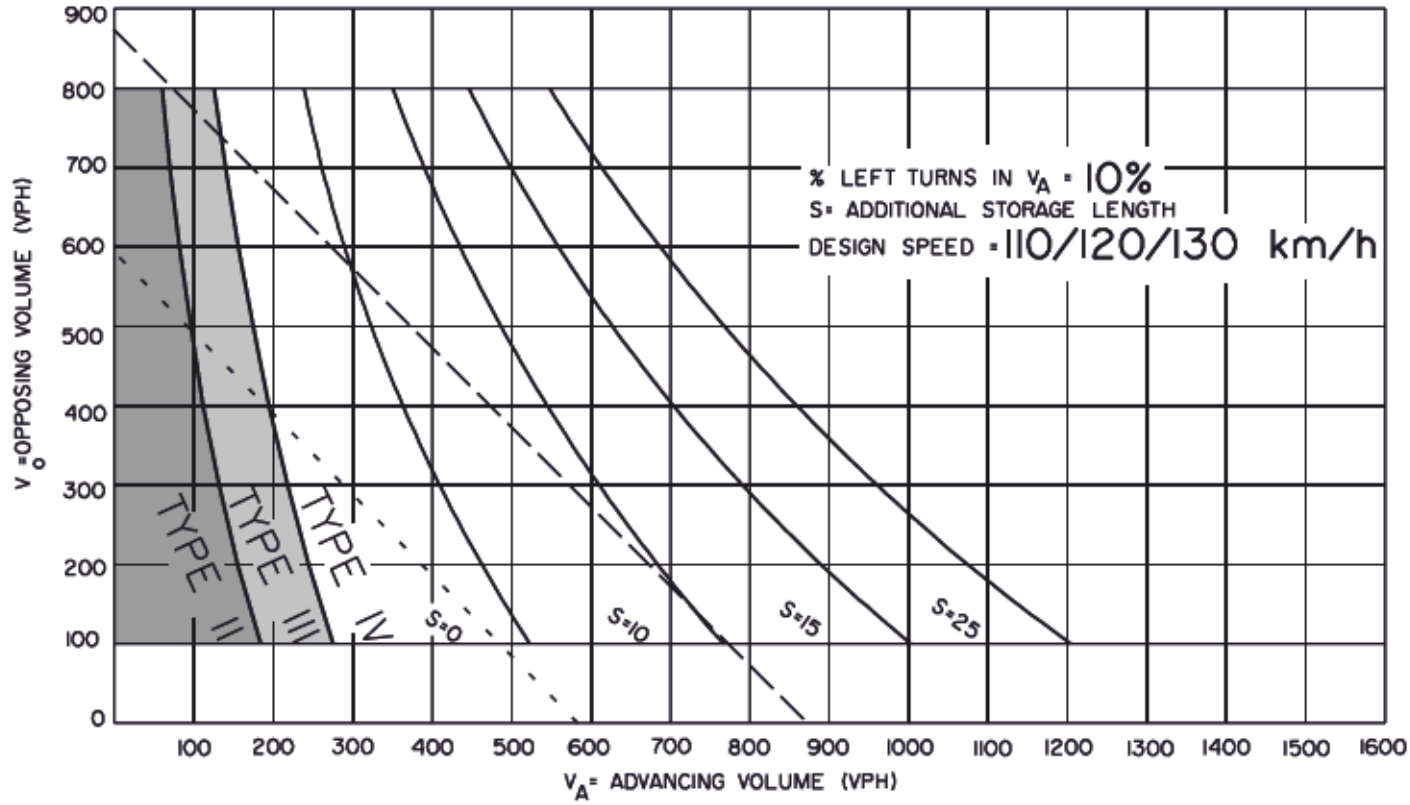
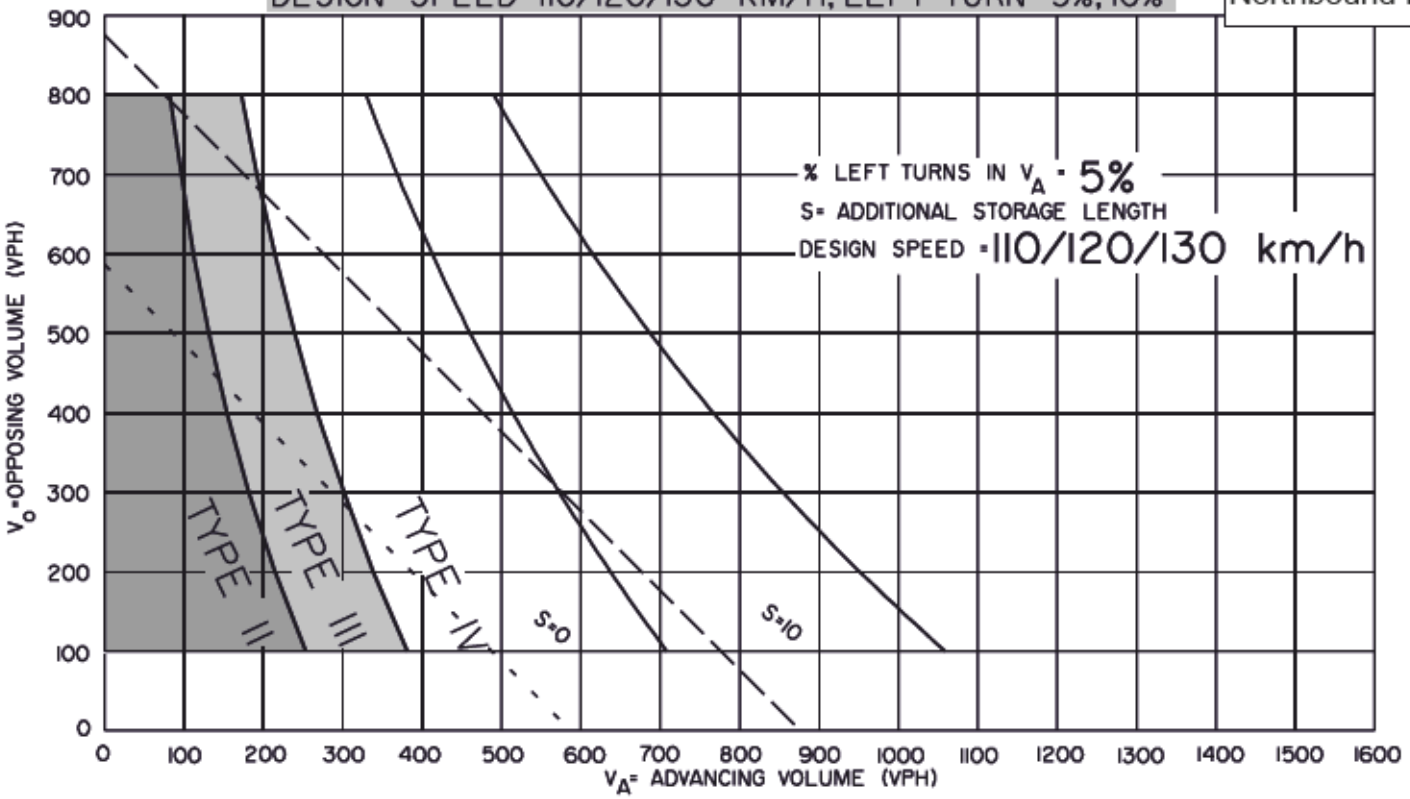


GRAPHICS FILE: debd767a.mon

FIGURE D-7.6-7a WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 5%, 10%

Hwy 697 & Twp Rd 1055 - 2025 AM Northbound Left



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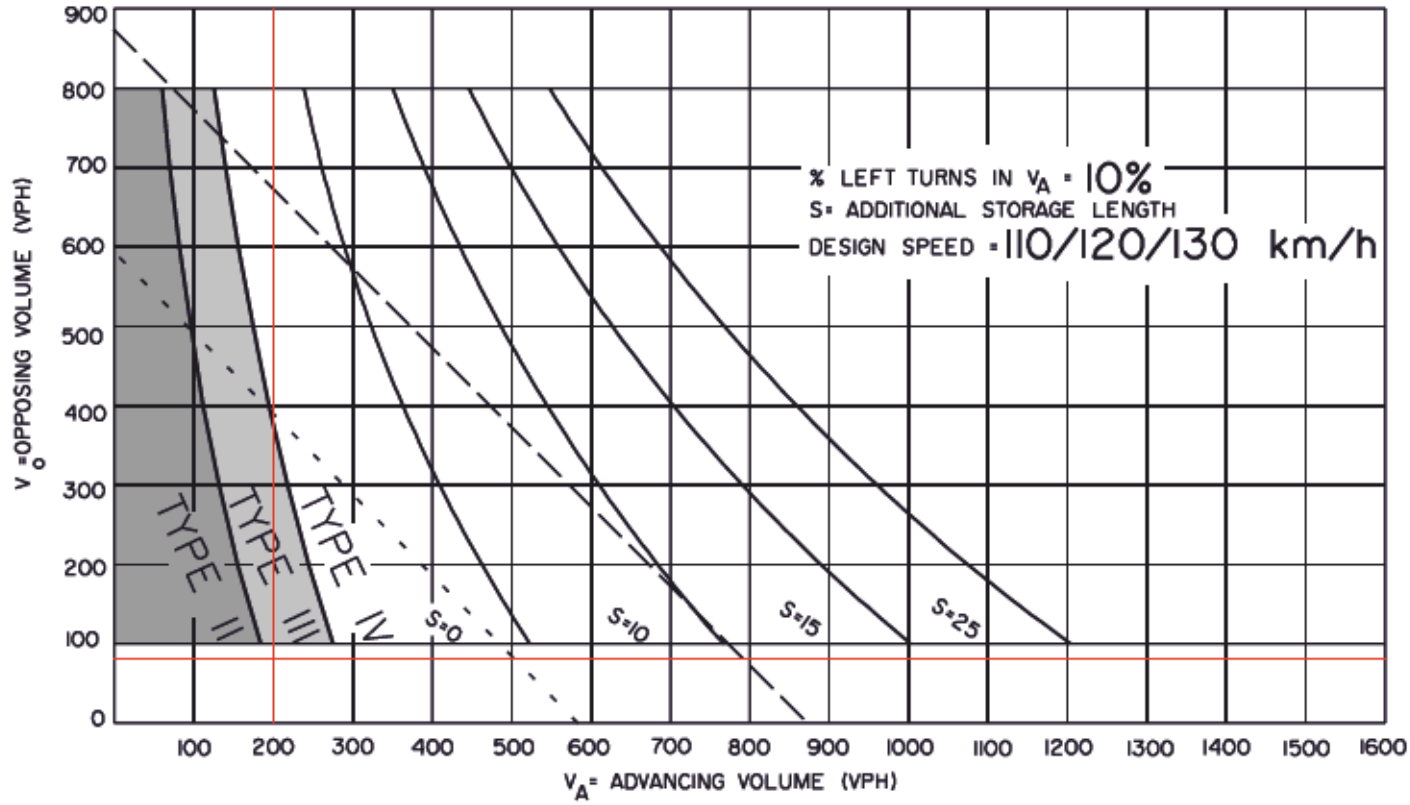
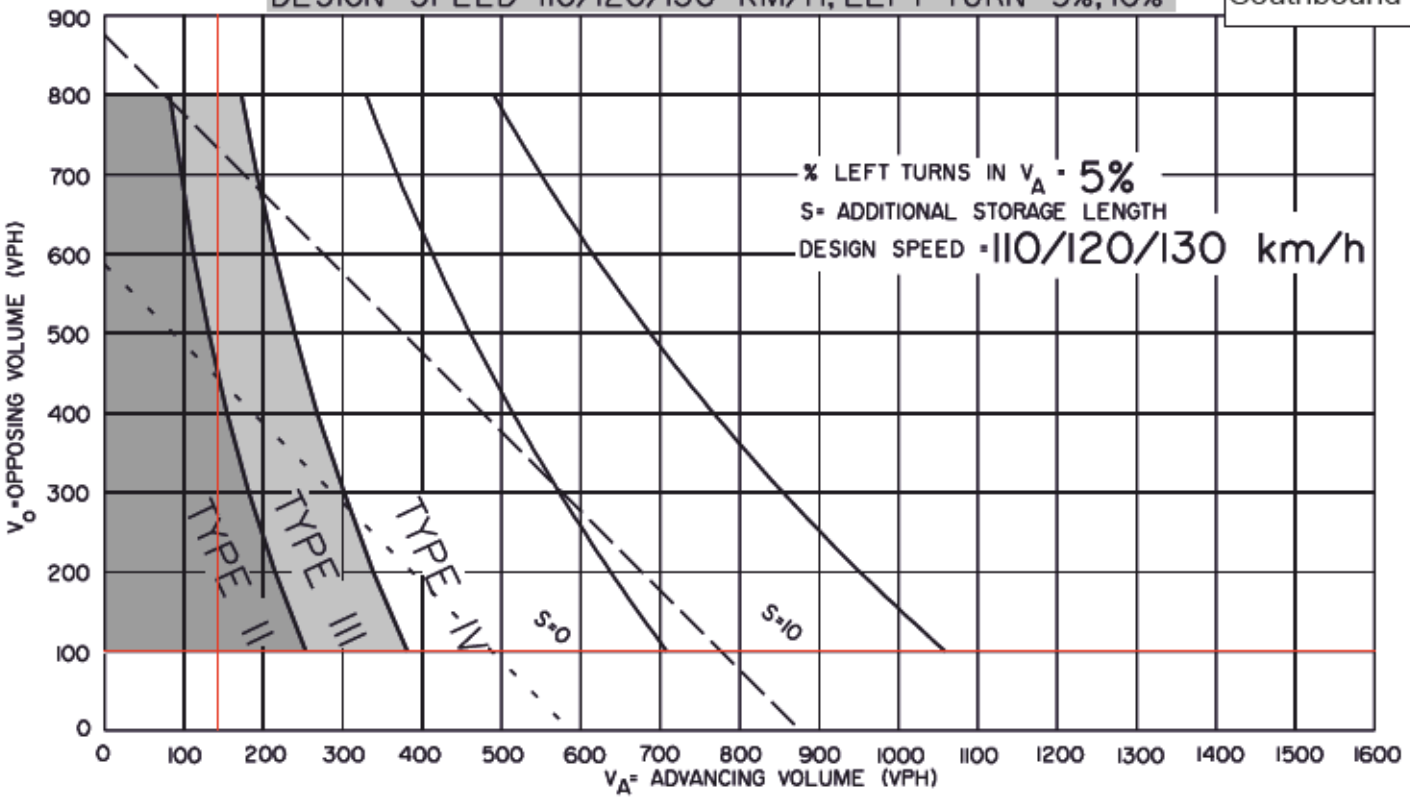


GRAPHICS FILE: debd767a.mon

FIGURE D-7.6-7a WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 5%, 10%

Hwy 697 & Twp Rd 1055 - 2025 PM Southbound Left



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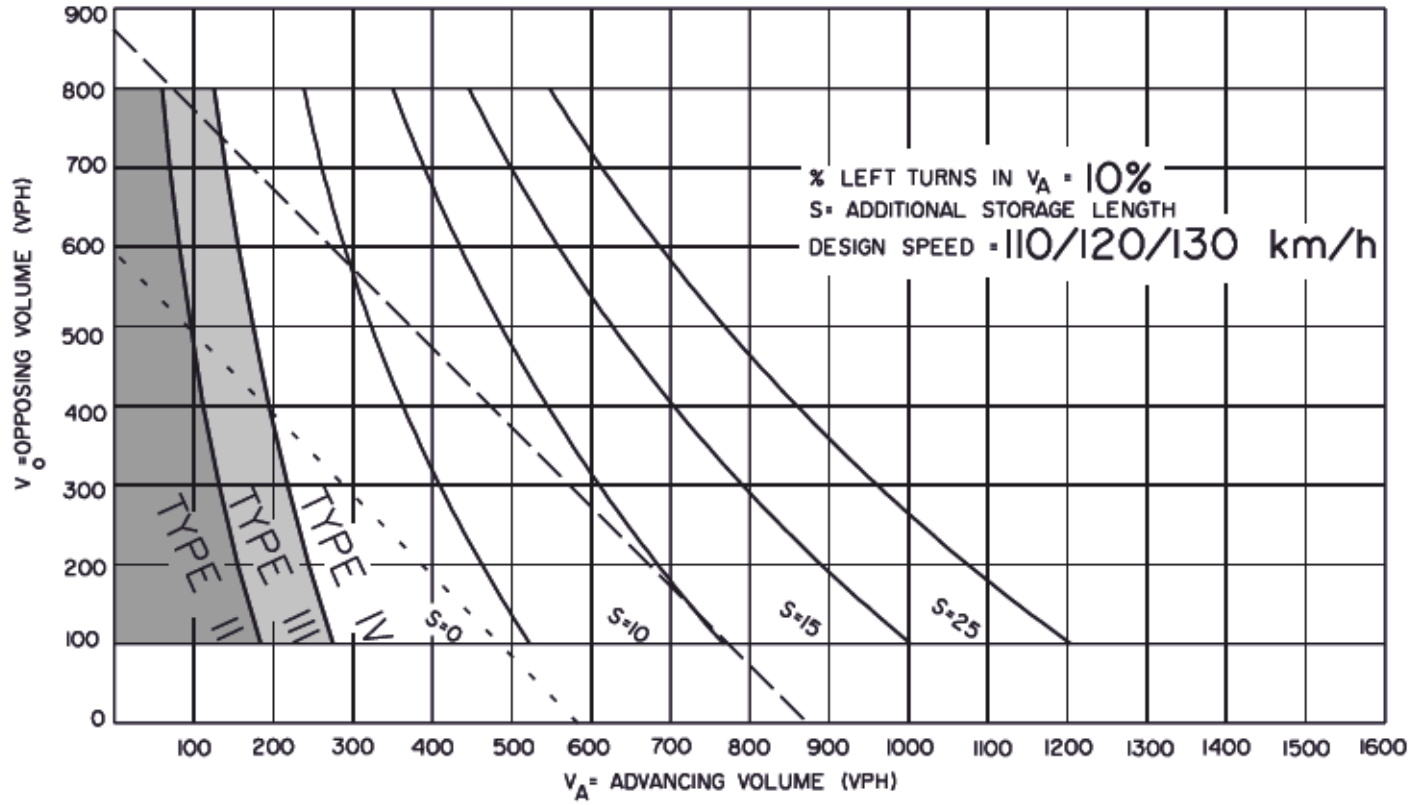
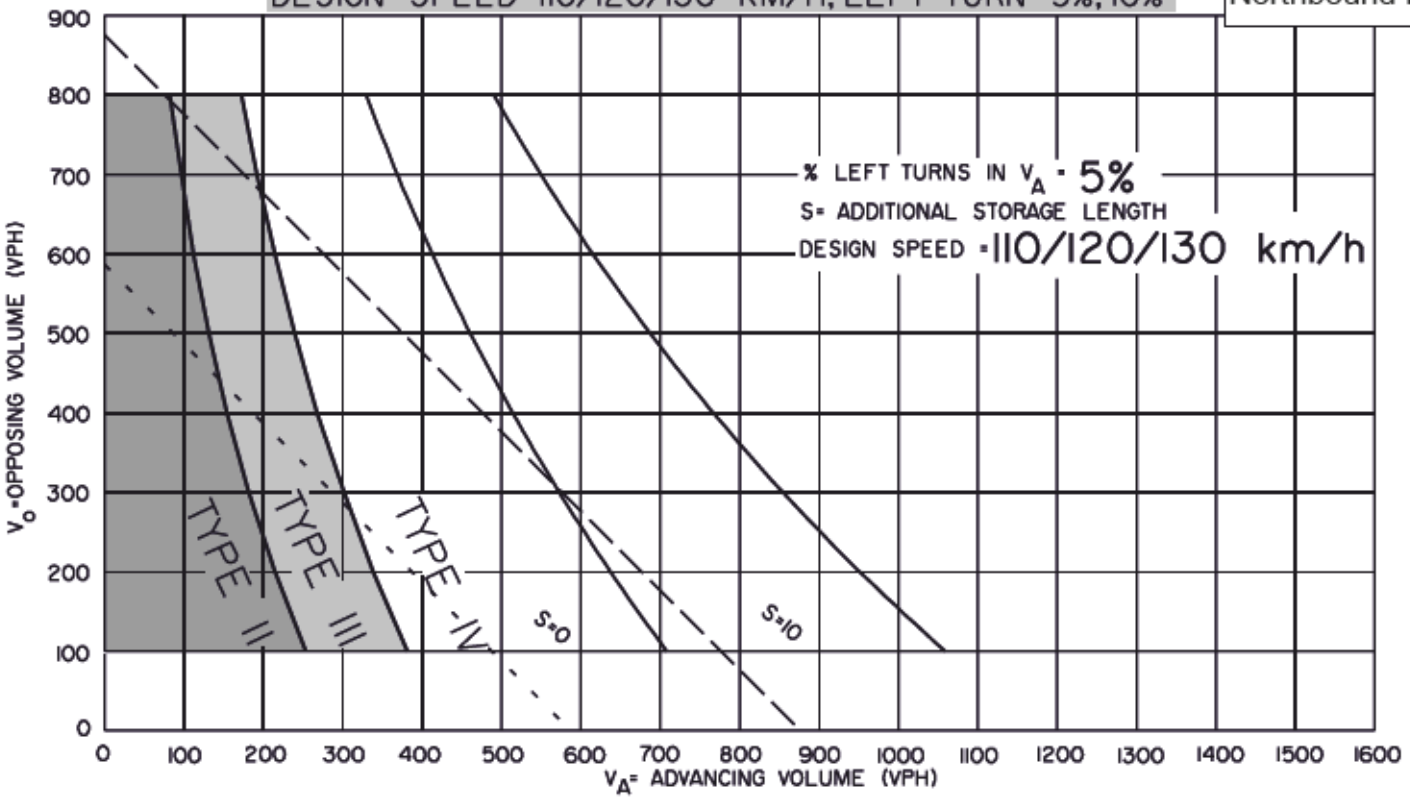


GRAPHICS FILE: debd767a.mon

FIGURE D-7.6-7a WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 5%, 10%

Hwy 697 & Twp Rd 1055 - 2031 AM Northbound Left



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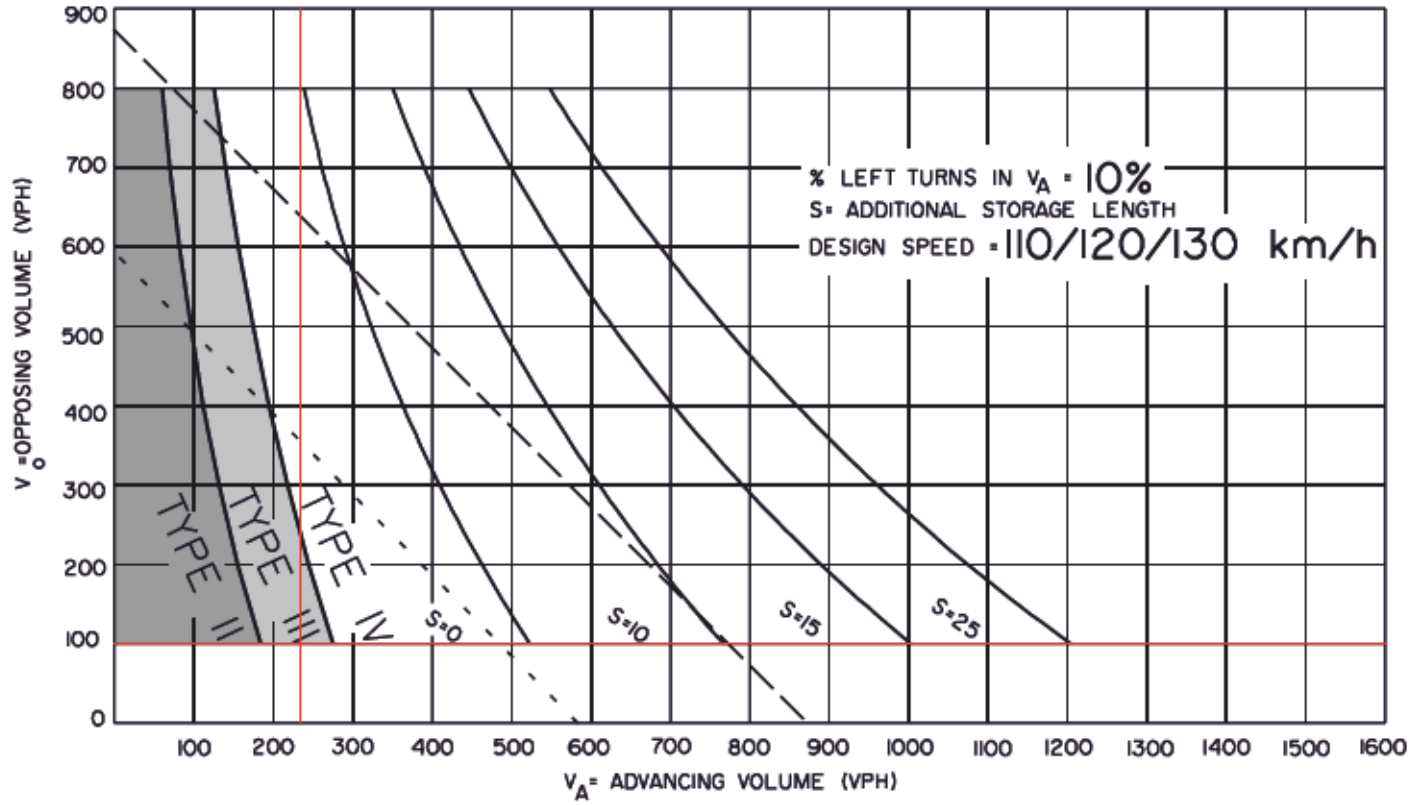
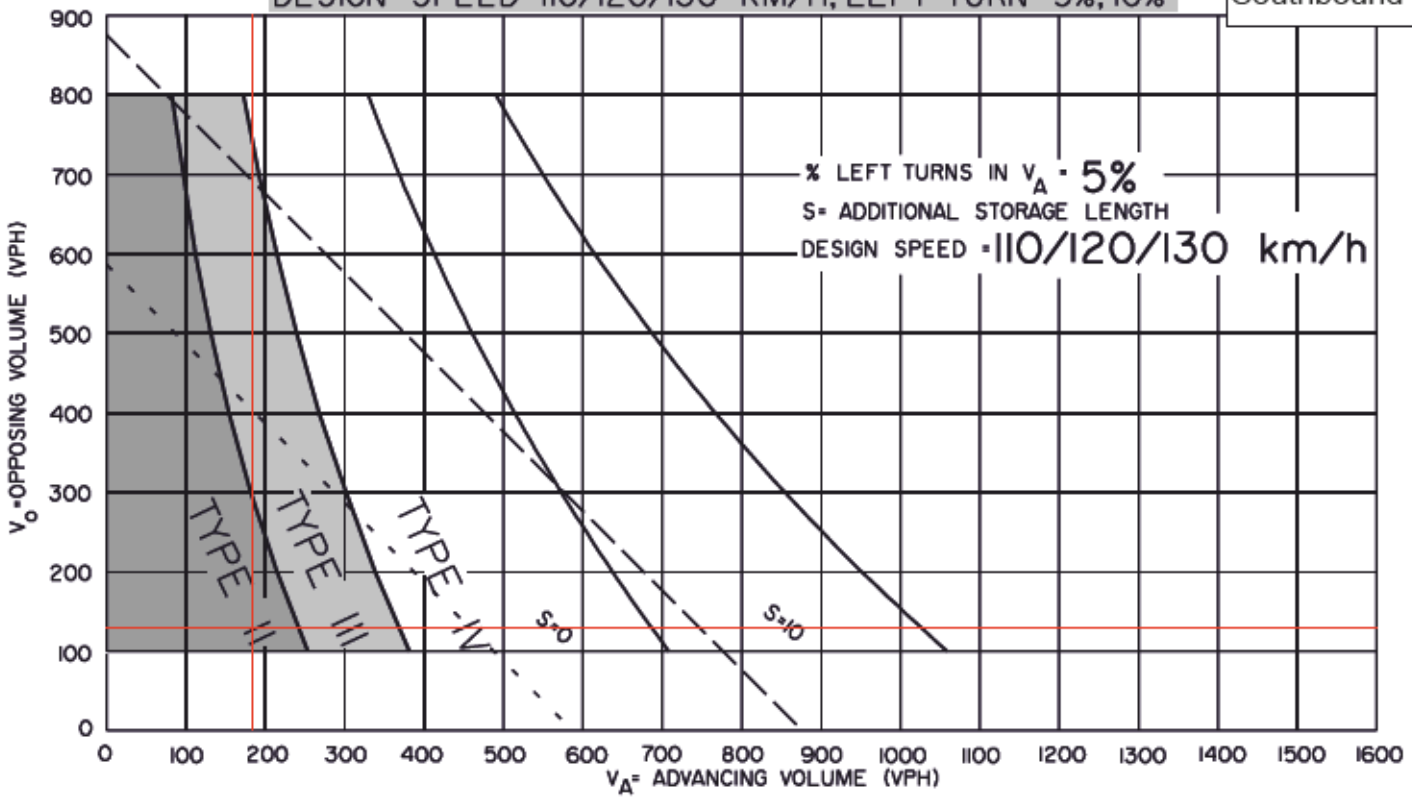


GRAPHICS FILE: debd767a.mon

FIGURE D-7.6-7a WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 5%, 10%

Hwy 697 & Twp Rd 1055 - 2031 PM Southbound Left



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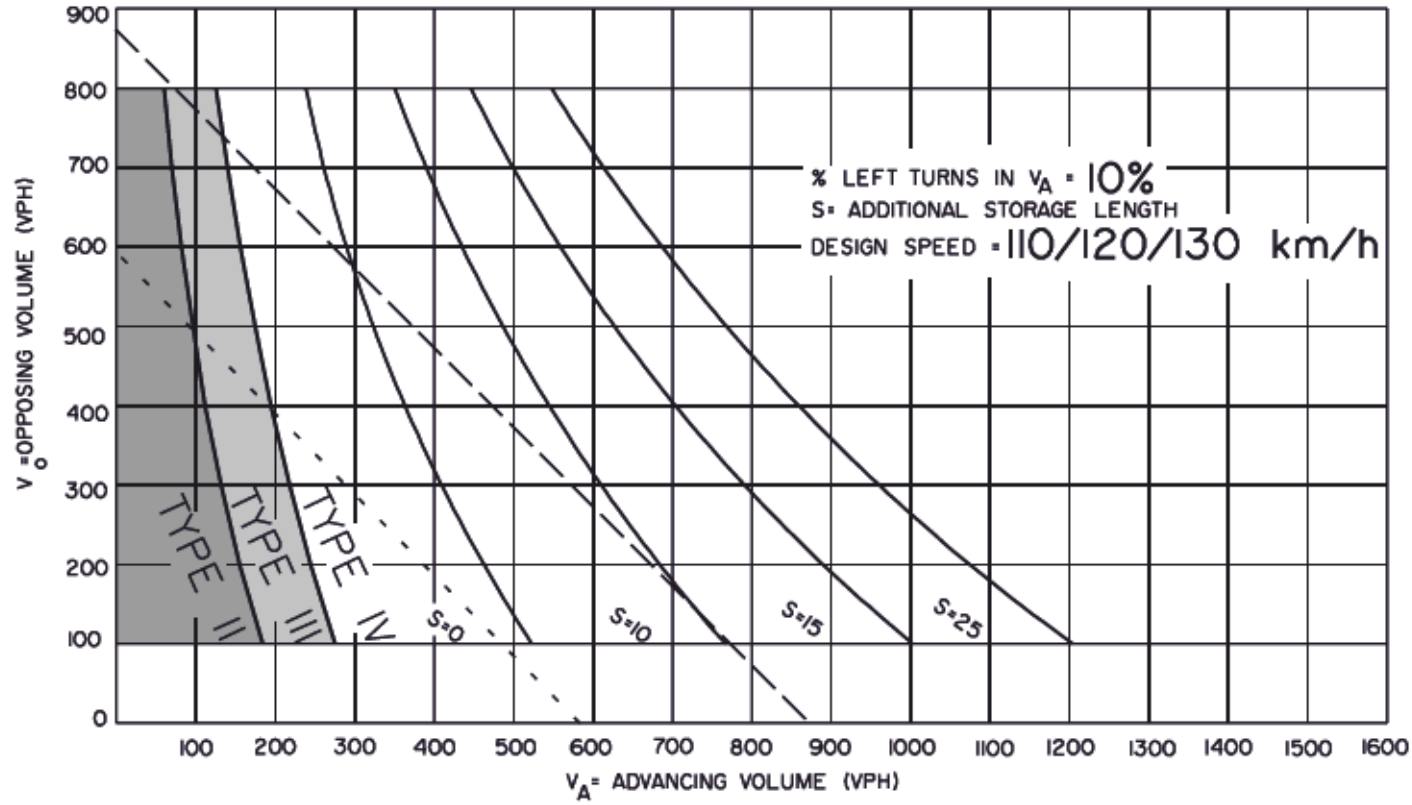
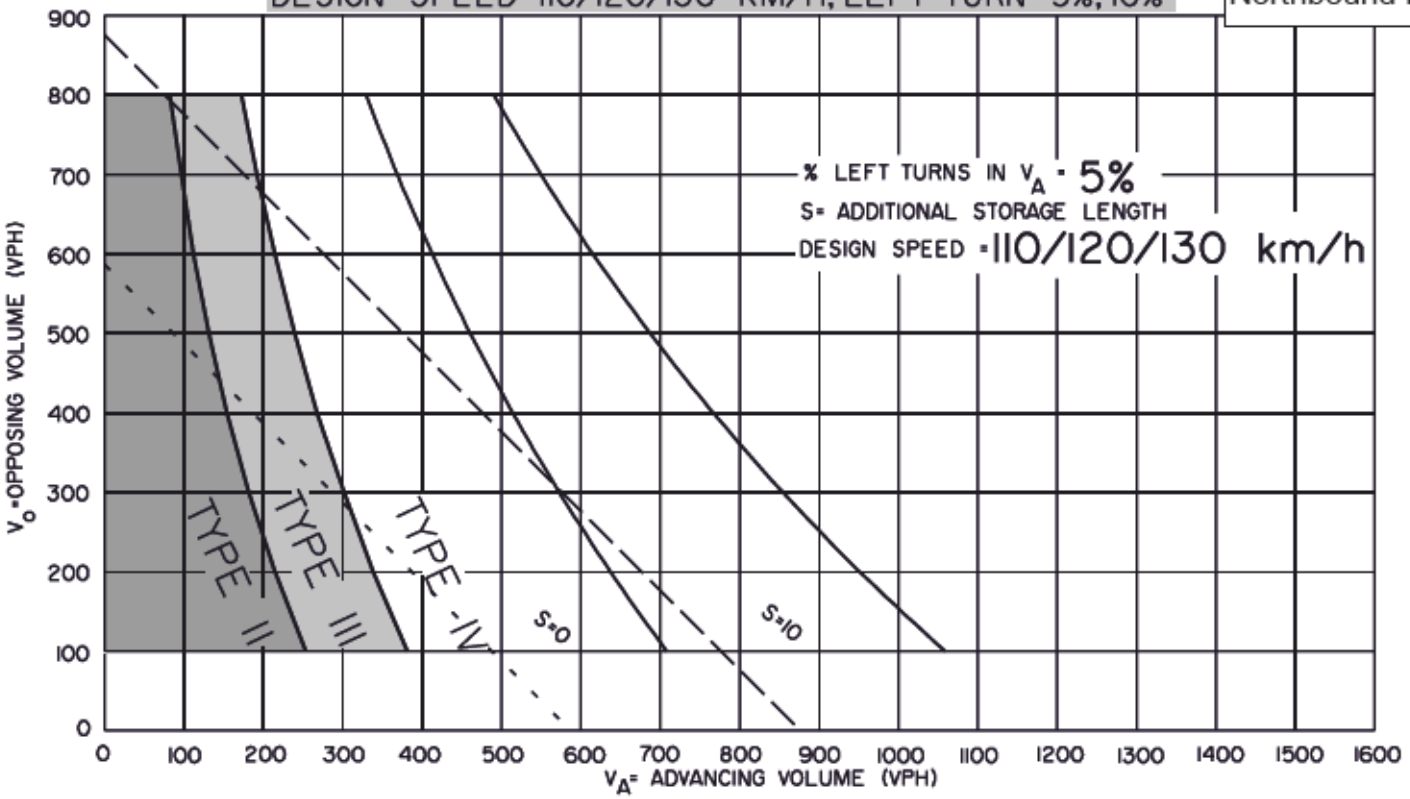


GRAPHICS FILE: debd767a.mon

FIGURE D-7.6-7a WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 5%, 10%

Hwy 697 & Twp Rd 1055 - 2041 AM Northbound Left



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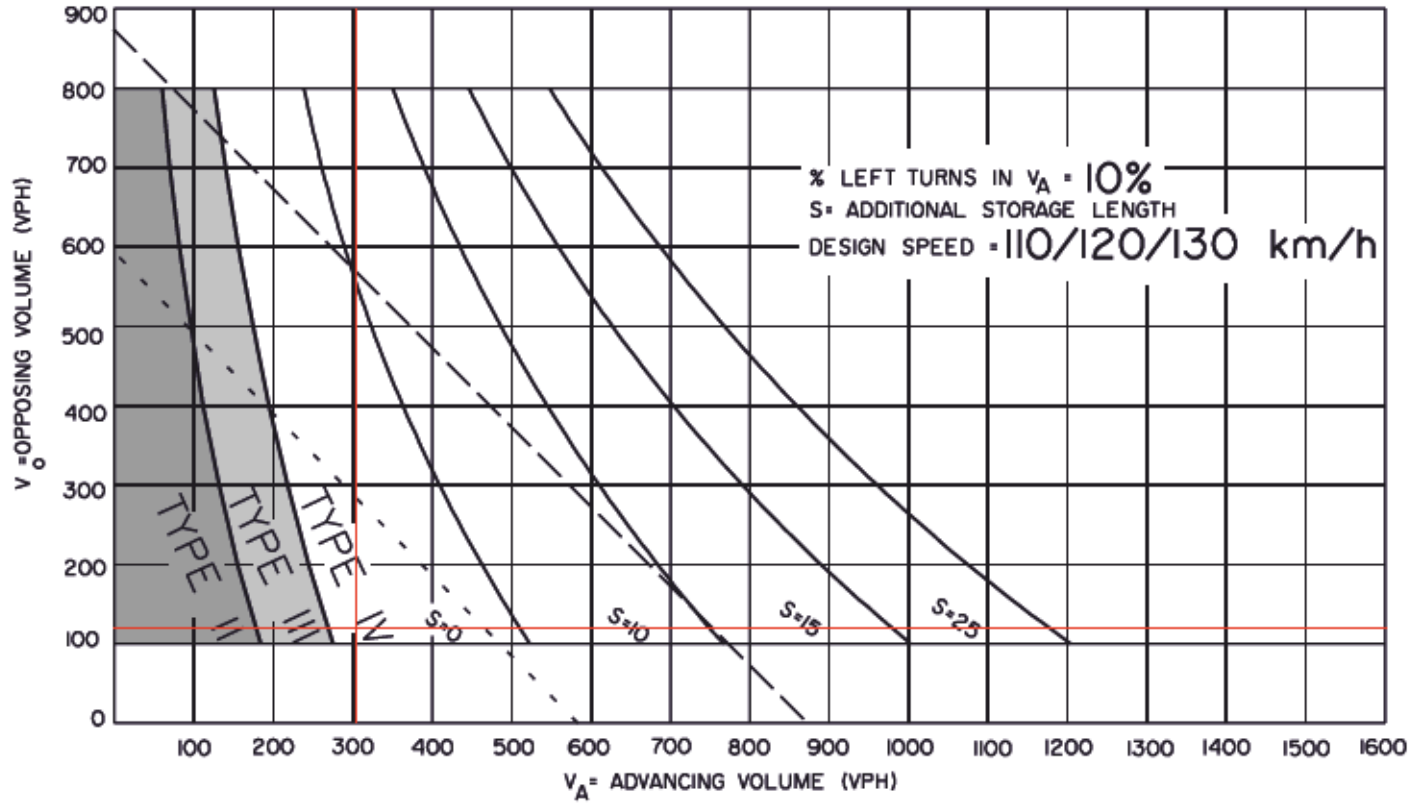
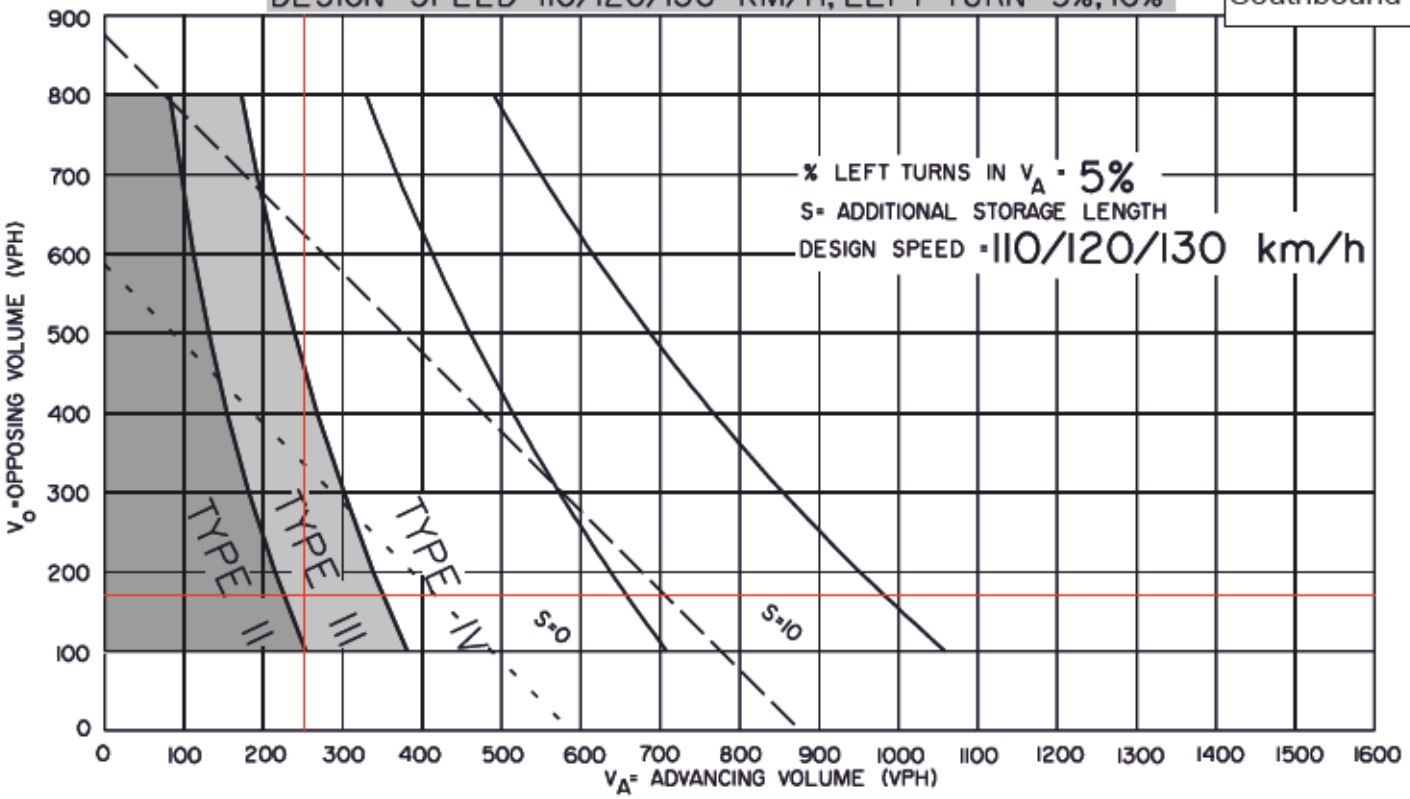


GRAPHICS FILE: debd767a.mon

FIGURE D-7.6-7a WARRANTS FOR LEFT TURN LANES AND STORAGE REQUIREMENTS FOR TWO-LANE HIGHWAYS DESIGN SPEED 110/120/130 KM/H, LEFT TURN 5%, 10%

Hwy 697 & Twp Rd 1055 - 2041 PM Southbound Left



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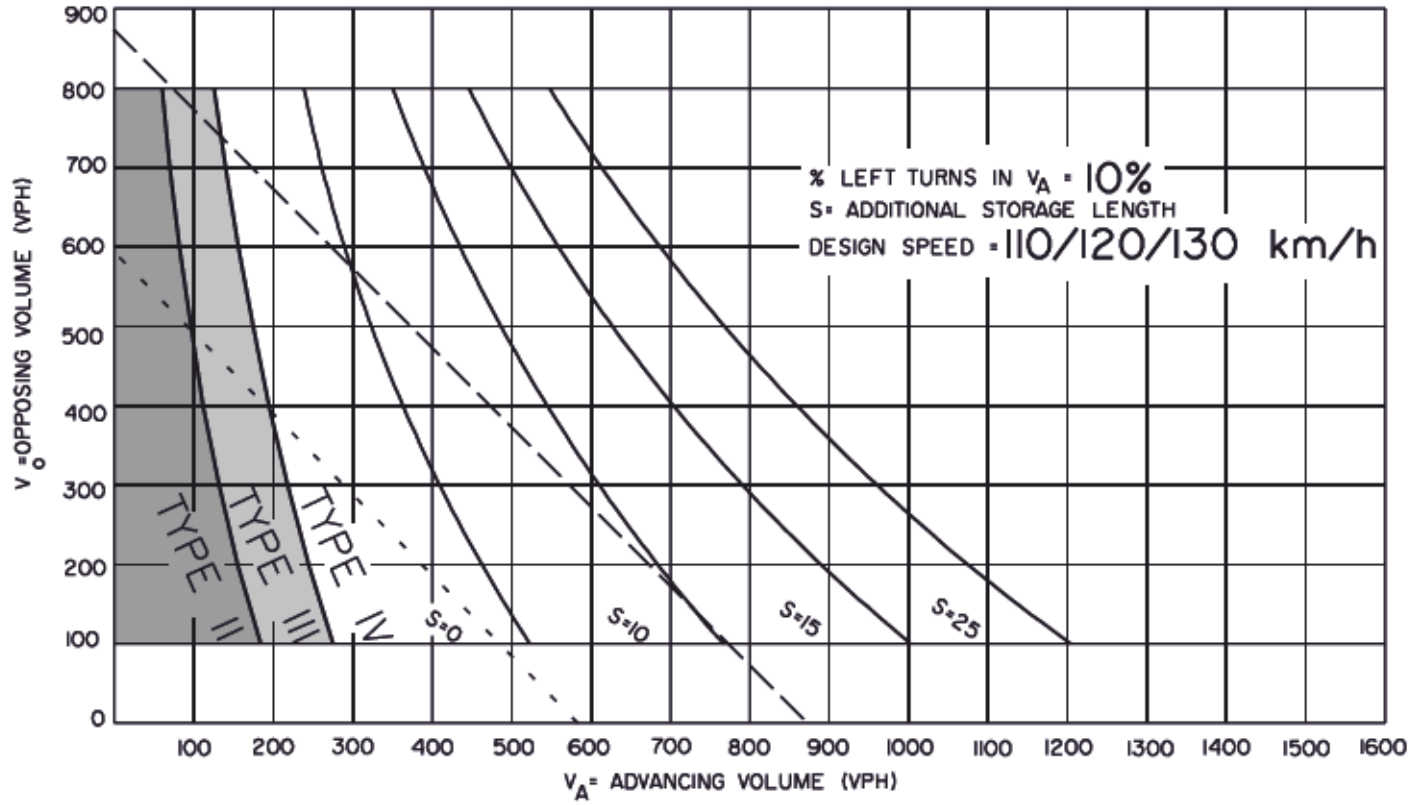
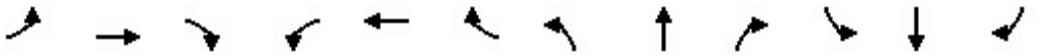


GRAPHICS FILE: debd767a.mon

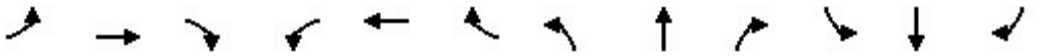
APPENDIX G - SYNCHRO RESULTS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	110	7	21	146	0	31	4	19	0	1	12
Future Volume (Veh/h)	5	110	7	21	146	0	31	4	19	0	1	12
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	5	120	8	23	159	0	34	4	21	0	1	13
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	159			128			348	335	120	358	343	159
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	159			128			348	335	120	358	343	159
tC, single (s)	4.1			4.2			7.2	6.6	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.1	3.4	3.5	4.0	3.3
p0 queue free %	100			98			94	99	98	100	100	99
cM capacity (veh/h)	1402			1428			573	561	910	575	571	892

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	125	8	182	0	59	14
Volume Left	5	0	23	0	34	0
Volume Right	0	8	0	0	21	13
cSH	1402	1700	1428	1700	659	857
Volume to Capacity	0.00	0.00	0.02	0.00	0.09	0.02
Queue Length 95th (m)	0.1	0.0	0.4	0.0	2.2	0.4
Control Delay (s)	0.3	0.0	1.1	0.0	11.0	9.3
Lane LOS	A		A		B	A
Approach Delay (s)	0.3		1.1		11.0	9.3
Approach LOS					B	A

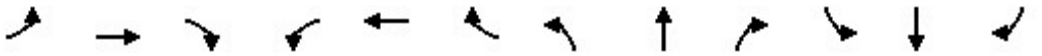
Intersection Summary				
Average Delay	2.6			
Intersection Capacity Utilization	31.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	145	24	24	97	4	7	11	34	3	5	15
Future Volume (Veh/h)	20	145	24	24	97	4	7	11	34	3	5	15
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	22	158	26	26	105	4	8	12	37	3	5	16
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	109			184			378	363	158	402	385	105
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	109			184			378	363	158	402	385	105
tC, single (s)	4.1			4.2			7.2	6.6	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.1	3.4	3.5	4.0	3.3
p0 queue free %	98			98			99	98	96	99	99	98
cM capacity (veh/h)	1463			1361			536	532	864	515	533	955

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	180	26	131	4	57	24
Volume Left	22	0	26	0	8	3
Volume Right	0	26	0	4	37	16
cSH	1463	1700	1361	1700	710	751
Volume to Capacity	0.02	0.02	0.02	0.00	0.08	0.03
Queue Length 95th (m)	0.3	0.0	0.4	0.0	2.0	0.8
Control Delay (s)	1.0	0.0	1.7	0.0	10.5	10.0
Lane LOS	A		A		B	A
Approach Delay (s)	0.9		1.6		10.5	10.0
Approach LOS					B	A

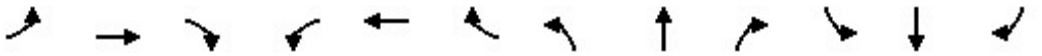
Intersection Summary				
Average Delay	2.9			
Intersection Capacity Utilization	29.3%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	143	9	37	257	0	54	7	33	0	1	16
Future Volume (Veh/h)	7	143	9	37	257	0	54	7	33	0	1	16
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	8	155	10	40	279	0	59	8	36	0	1	17
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	279			165			548	530	155	570	540	279
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	279			165			548	530	155	570	540	279
tC, single (s)	4.1			4.2			7.2	6.6	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.1	3.4	3.5	4.0	3.3
p0 queue free %	99			97			86	98	96	100	100	98
cM capacity (veh/h)	1267			1383			414	428	870	400	436	765

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	163	10	319	0	103	18
Volume Left	8	0	40	0	59	0
Volume Right	0	10	0	0	36	17
cSH	1267	1700	1383	1700	508	734
Volume to Capacity	0.01	0.01	0.03	0.00	0.20	0.02
Queue Length 95th (m)	0.1	0.0	0.7	0.0	5.7	0.6
Control Delay (s)	0.4	0.0	1.2	0.0	13.9	10.0
Lane LOS	A		A		B	B
Approach Delay (s)	0.4		1.2		13.9	10.0
Approach LOS					B	B

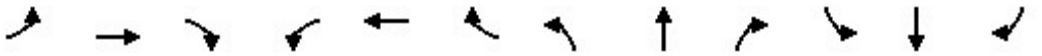
Intersection Summary				
Average Delay	3.4			
Intersection Capacity Utilization	45.5%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	187	32	43	170	7	13	18	59	4	7	20
Future Volume (Veh/h)	26	187	32	43	170	7	13	18	59	4	7	20
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	28	203	35	47	185	8	14	20	64	4	8	22
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	193			238			564	546	203	612	573	185
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	193			238			564	546	203	612	573	185
tC, single (s)	4.1			4.2			7.2	6.6	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.1	3.4	3.5	4.0	3.3
p0 queue free %	98			96			96	95	92	99	98	97
cM capacity (veh/h)	1362			1300			389	409	815	347	408	862

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	231	35	232	8	98	34
Volume Left	28	0	47	0	14	4
Volume Right	0	35	0	8	64	22
cSH	1362	1700	1300	1700	600	600
Volume to Capacity	0.02	0.02	0.04	0.00	0.16	0.06
Queue Length 95th (m)	0.5	0.0	0.9	0.0	4.4	1.4
Control Delay (s)	1.1	0.0	1.8	0.0	12.2	11.4
Lane LOS	A		A		B	B
Approach Delay (s)	0.9		1.8		12.2	11.4
Approach LOS					B	B

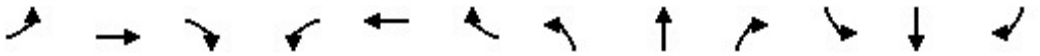
Intersection Summary				
Average Delay	3.5			
Intersection Capacity Utilization	39.9%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	112	7	21	157	0	33	4	19	0	1	13
Future Volume (Veh/h)	5	112	7	21	157	0	33	4	19	0	1	13
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	5	122	8	23	171	0	36	4	21	0	1	14
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	171			130			364	349	122	372	357	171
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	171			130			364	349	122	372	357	171
tC, single (s)	4.1			4.2			7.2	6.6	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.1	3.4	3.5	4.0	3.3
p0 queue free %	100			98			94	99	98	100	100	98
cM capacity (veh/h)	1388			1425			559	551	908	563	561	878

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	127	8	194	0	61	15
Volume Left	5	0	23	0	36	0
Volume Right	0	8	0	0	21	14
cSH	1388	1700	1425	1700	644	846
Volume to Capacity	0.00	0.00	0.02	0.00	0.09	0.02
Queue Length 95th (m)	0.1	0.0	0.4	0.0	2.4	0.4
Control Delay (s)	0.3	0.0	1.0	0.0	11.2	9.3
Lane LOS	A		A		B	A
Approach Delay (s)	0.3		1.0		11.2	9.3
Approach LOS					B	A

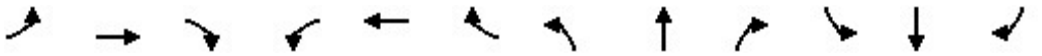
Intersection Summary				
Average Delay	2.6			
Intersection Capacity Utilization	32.6%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	156	26	24	99	4	7	11	34	3	5	15
Future Volume (Veh/h)	21	156	26	24	99	4	7	11	34	3	5	15
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	23	170	28	26	108	4	8	12	37	3	5	16
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	112			198			394	380	170	419	404	108
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	112			198			394	380	170	419	404	108
tC, single (s)	4.1			4.2			7.2	6.6	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.1	3.4	3.5	4.0	3.3
p0 queue free %	98			98			98	98	96	99	99	98
cM capacity (veh/h)	1459			1345			522	520	851	501	520	951

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	193	28	134	4	57	24
Volume Left	23	0	26	0	8	3
Volume Right	0	28	0	4	37	16
cSH	1459	1700	1345	1700	696	740
Volume to Capacity	0.02	0.02	0.02	0.00	0.08	0.03
Queue Length 95th (m)	0.4	0.0	0.4	0.0	2.0	0.8
Control Delay (s)	1.0	0.0	1.6	0.0	10.6	10.0
Lane LOS	A		A		B	B
Approach Delay (s)	0.9		1.6		10.6	10.0
Approach LOS					B	B

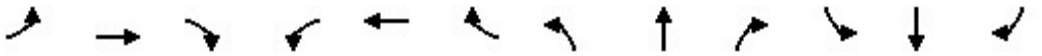
Intersection Summary				
Average Delay	2.9			
Intersection Capacity Utilization	30.0%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	181	12	26	381	0	79	5	24	0	1	31
Future Volume (Veh/h)	9	181	12	26	381	0	79	5	24	0	1	31
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	10	197	13	28	414	0	86	5	26	0	1	34
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	414			210			722	687	197	716	700	414
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	414			210			722	687	197	716	700	414
tC, single (s)	4.1			4.2			7.2	6.6	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.1	3.4	3.5	4.0	3.3
p0 queue free %	99			98			72	99	97	100	100	95
cM capacity (veh/h)	1129			1331			307	349	824	326	355	643

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	207	13	442	0	117	35
Volume Left	10	0	28	0	86	0
Volume Right	0	13	0	0	26	34
cSH	1129	1700	1331	1700	359	628
Volume to Capacity	0.01	0.01	0.02	0.00	0.33	0.06
Queue Length 95th (m)	0.2	0.0	0.5	0.0	10.5	1.3
Control Delay (s)	0.5	0.0	0.7	0.0	19.8	11.1
Lane LOS	A		A		C	B
Approach Delay (s)	0.4		0.7		19.8	11.1
Approach LOS					C	B

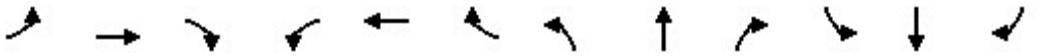
Intersection Summary				
Average Delay	3.8			
Intersection Capacity Utilization	54.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	428	73	30	262	5	19	13	42	3	6	39
Future Volume (Veh/h)	60	428	73	30	262	5	19	13	42	3	6	39
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	65	465	79	33	285	5	21	14	46	3	7	42
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	290			544			992	951	465	999	1025	285
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	290			544			992	951	465	999	1025	285
tC, single (s)	4.1			4.2			7.2	6.6	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.1	3.4	3.5	4.0	3.3
p0 queue free %	95			97			89	94	92	98	97	94
cM capacity (veh/h)	1255			1000			187	230	579	184	217	759

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	530	79	318	5	81	52
Volume Left	65	0	33	0	21	3
Volume Right	0	79	0	5	46	42
cSH	1255	1700	1000	1700	321	501
Volume to Capacity	0.05	0.05	0.03	0.00	0.25	0.10
Queue Length 95th (m)	1.2	0.0	0.8	0.0	7.5	2.6
Control Delay (s)	1.5	0.0	1.2	0.0	20.0	13.0
Lane LOS	A		A		C	B
Approach Delay (s)	1.3		1.2		20.0	13.0
Approach LOS					C	B

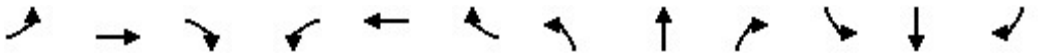
Intersection Summary				
Average Delay	3.3			
Intersection Capacity Utilization	61.8%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	227	15	37	539	0	113	7	33	0	1	42
Future Volume (Veh/h)	10	227	15	37	539	0	113	7	33	0	1	42
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	11	247	16	40	586	0	123	8	36	0	1	46
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	586			263			982	935	247	975	951	586
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	586			263			982	935	247	975	951	586
tC, single (s)	4.1			4.2			7.2	6.6	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.1	3.4	3.5	4.0	3.3
p0 queue free %	99			97			37	97	95	100	100	91
cM capacity (veh/h)	974			1273			194	246	773	209	251	514

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	258	16	626	0	167	47
Volume Left	11	0	40	0	123	0
Volume Right	0	16	0	0	36	46
cSH	974	1700	1273	1700	234	503
Volume to Capacity	0.01	0.01	0.03	0.00	0.71	0.09
Queue Length 95th (m)	0.3	0.0	0.7	0.0	36.2	2.3
Control Delay (s)	0.5	0.0	0.9	0.0	51.2	12.9
Lane LOS	A		A		F	B
Approach Delay (s)	0.5		0.9		51.2	12.9
Approach LOS					F	B

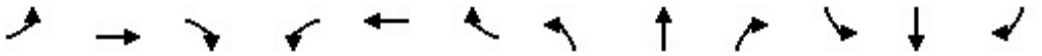
Intersection Summary				
Average Delay	8.8			
Intersection Capacity Utilization	68.2%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	549	94	43	370	7	28	18	59	4	7	52
Future Volume (Veh/h)	78	549	94	43	370	7	28	18	59	4	7	52
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	85	597	102	47	402	8	30	20	64	4	8	57
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	410			699			1324	1271	597	1337	1365	402
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	410			699			1324	1271	597	1337	1365	402
tC, single (s)	4.1			4.2			7.2	6.6	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.1	3.4	3.5	4.0	3.3
p0 queue free %	92			95			70	86	87	96	94	91
cM capacity (veh/h)	1133			875			100	141	487	92	130	653

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	682	102	449	8	114	69
Volume Left	85	0	47	0	30	4
Volume Right	0	102	0	8	64	57
cSH	1133	1700	875	1700	199	359
Volume to Capacity	0.08	0.06	0.05	0.00	0.57	0.19
Queue Length 95th (m)	1.8	0.0	1.3	0.0	23.6	5.3
Control Delay (s)	1.9	0.0	1.6	0.0	44.9	17.4
Lane LOS	A		A		E	C
Approach Delay (s)	1.7		1.5		44.9	17.4
Approach LOS					E	C

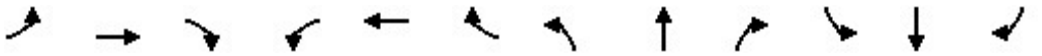
Intersection Summary				
Average Delay	5.8			
Intersection Capacity Utilization	77.8%	ICU Level of Service	D	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	110	7	21	146	0	31	4	19	0	1	12
Future Volume (Veh/h)	5	110	7	21	146	0	31	4	19	0	1	12
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	5	120	8	23	159	0	34	4	21	0	1	13
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	159			120			348	335	120	358	335	159
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	159			120			348	335	120	358	335	159
tC, single (s)	4.1			4.2			7.2	6.6	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.1	3.4	3.5	4.0	3.3
p0 queue free %	100			98			94	99	98	100	100	99
cM capacity (veh/h)	1402			1437			573	561	910	575	577	892

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	5	120	8	23	159	59	14
Volume Left	5	0	0	23	0	34	0
Volume Right	0	0	8	0	0	21	13
cSH	1402	1700	1700	1437	1700	659	858
Volume to Capacity	0.00	0.07	0.00	0.02	0.09	0.09	0.02
Queue Length 95th (m)	0.1	0.0	0.0	0.4	0.0	2.2	0.4
Control Delay (s)	7.6	0.0	0.0	7.5	0.0	11.0	9.3
Lane LOS	A			A		B	A
Approach Delay (s)	0.3			1.0		11.0	9.3
Approach LOS						B	A

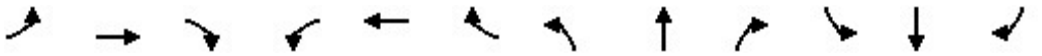
Intersection Summary				
Average Delay	2.6			
Intersection Capacity Utilization	24.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	145	24	24	97	4	7	11	34	3	5	15
Future Volume (Veh/h)	20	145	24	24	97	4	7	11	34	3	5	15
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	22	158	26	26	105	4	8	12	37	3	5	16
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	109			158			378	363	158	404	361	107
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	109			158			378	363	158	404	361	107
tC, single (s)	4.1			4.2			7.2	6.6	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.1	3.4	3.5	4.0	3.3
p0 queue free %	98			98			99	98	96	99	99	98
cM capacity (veh/h)	1463			1392			536	532	864	514	550	953

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	22	158	26	26	109	57	24
Volume Left	22	0	0	26	0	8	3
Volume Right	0	0	26	0	4	37	16
cSH	1463	1700	1700	1392	1700	710	757
Volume to Capacity	0.02	0.09	0.02	0.02	0.06	0.08	0.03
Queue Length 95th (m)	0.3	0.0	0.0	0.4	0.0	2.0	0.7
Control Delay (s)	7.5	0.0	0.0	7.6	0.0	10.5	9.9
Lane LOS	A			A		B	A
Approach Delay (s)	0.8			1.5		10.5	9.9
Approach LOS						B	A

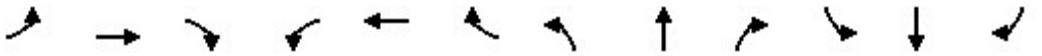
Intersection Summary				
Average Delay	2.8			
Intersection Capacity Utilization	25.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	112	7	21	157	0	33	4	19	0	1	13
Future Volume (Veh/h)	5	112	7	21	157	0	33	4	19	0	1	13
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	5	122	8	23	171	0	36	4	21	0	1	14
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	171			122			364	349	122	372	349	171
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	171			122			364	349	122	372	349	171
tC, single (s)	4.1			4.2			7.2	6.6	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.1	3.4	3.5	4.0	3.3
p0 queue free %	100			98			94	99	98	100	100	98
cM capacity (veh/h)	1388			1435			559	551	908	563	567	878

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	5	122	8	23	171	61	15
Volume Left	5	0	0	23	0	36	0
Volume Right	0	0	8	0	0	21	14
cSH	1388	1700	1700	1435	1700	644	847
Volume to Capacity	0.00	0.07	0.00	0.02	0.10	0.09	0.02
Queue Length 95th (m)	0.1	0.0	0.0	0.4	0.0	2.4	0.4
Control Delay (s)	7.6	0.0	0.0	7.5	0.0	11.2	9.3
Lane LOS	A			A		B	A
Approach Delay (s)	0.3			0.9		11.2	9.3
Approach LOS						B	A

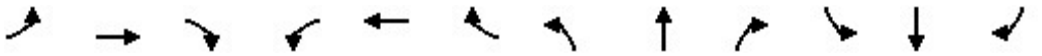
Intersection Summary				
Average Delay	2.6			
Intersection Capacity Utilization	24.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	156	26	24	99	4	7	11	34	3	5	15
Future Volume (Veh/h)	21	156	26	24	99	4	7	11	34	3	5	15
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	23	170	28	26	108	4	8	12	37	3	5	16
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	112			170			394	380	170	421	378	110
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	112			170			394	380	170	421	378	110
tC, single (s)	4.1			4.2			7.2	6.6	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.1	3.4	3.5	4.0	3.3
p0 queue free %	98			98			98	98	96	99	99	98
cM capacity (veh/h)	1459			1378			522	520	851	500	538	949

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	23	170	28	26	112	57	24
Volume Left	23	0	0	26	0	8	3
Volume Right	0	0	28	0	4	37	16
cSH	1459	1700	1700	1378	1700	696	746
Volume to Capacity	0.02	0.10	0.02	0.02	0.07	0.08	0.03
Queue Length 95th (m)	0.4	0.0	0.0	0.4	0.0	2.0	0.8
Control Delay (s)	7.5	0.0	0.0	7.7	0.0	10.6	10.0
Lane LOS	A			A		B	A
Approach Delay (s)	0.8			1.4		10.6	10.0
Approach LOS						B	A

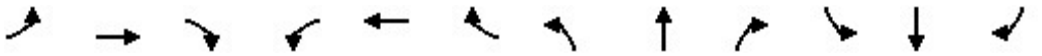
Intersection Summary				
Average Delay	2.8			
Intersection Capacity Utilization	25.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	181	12	26	381	0	79	5	24	0	1	31
Future Volume (Veh/h)	9	181	12	26	381	0	79	5	24	0	1	31
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	10	197	13	28	414	0	86	5	26	0	1	34
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	414			197			722	687	197	716	687	414
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	414			197			722	687	197	716	687	414
tC, single (s)	4.1			4.2			7.2	6.6	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.1	3.4	3.5	4.0	3.3
p0 queue free %	99			98			72	99	97	100	100	95
cM capacity (veh/h)	1129			1346			307	349	824	326	361	643

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	10	197	13	28	414	117	35
Volume Left	10	0	0	28	0	86	0
Volume Right	0	0	13	0	0	26	34
cSH	1129	1700	1700	1346	1700	359	629
Volume to Capacity	0.01	0.12	0.01	0.02	0.24	0.33	0.06
Queue Length 95th (m)	0.2	0.0	0.0	0.5	0.0	10.5	1.3
Control Delay (s)	8.2	0.0	0.0	7.7	0.0	19.8	11.1
Lane LOS	A			A		C	B
Approach Delay (s)	0.4			0.5		19.8	11.1
Approach LOS						C	B

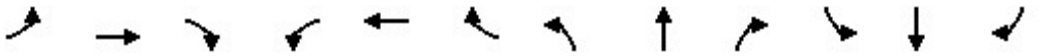
Intersection Summary				
Average Delay	3.7			
Intersection Capacity Utilization	41.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	428	73	30	262	5	19	13	42	3	6	39
Future Volume (Veh/h)	60	428	73	30	262	5	19	13	42	3	6	39
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	65	465	79	33	285	5	21	14	46	3	7	42
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	290			465			992	951	465	1002	948	288
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	290			465			992	951	465	1002	948	288
tC, single (s)	4.1			4.2			7.2	6.6	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.1	3.4	3.5	4.0	3.3
p0 queue free %	95			97			89	94	92	98	97	94
cM capacity (veh/h)	1255			1071			188	231	579	184	241	756

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	65	465	79	33	290	81	52
Volume Left	65	0	0	33	0	21	3
Volume Right	0	0	79	0	5	46	42
cSH	1255	1700	1700	1071	1700	321	516
Volume to Capacity	0.05	0.27	0.05	0.03	0.17	0.25	0.10
Queue Length 95th (m)	1.2	0.0	0.0	0.7	0.0	7.4	2.5
Control Delay (s)	8.0	0.0	0.0	8.5	0.0	19.9	12.8
Lane LOS	A			A		C	B
Approach Delay (s)	0.9			0.9		19.9	12.8
Approach LOS						C	B

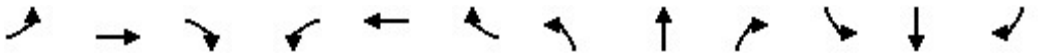
Intersection Summary				
Average Delay	2.9			
Intersection Capacity Utilization	46.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	187	32	43	170	7	13	18	59	4	7	20
Future Volume (Veh/h)	26	187	32	43	170	7	13	18	59	4	7	20
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	28	203	35	47	185	8	14	20	64	4	8	22
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	193			203			564	546	203	616	542	189
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	193			203			564	546	203	616	542	189
tC, single (s)	4.1			4.2			7.2	6.6	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.1	3.4	3.5	4.0	3.3
p0 queue free %	98			96			96	95	92	99	98	97
cM capacity (veh/h)	1362			1339			389	409	815	345	426	858

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	28	203	35	47	193	98	34
Volume Left	28	0	0	47	0	14	4
Volume Right	0	0	35	0	8	64	22
cSH	1362	1700	1700	1339	1700	600	607
Volume to Capacity	0.02	0.12	0.02	0.04	0.11	0.16	0.06
Queue Length 95th (m)	0.5	0.0	0.0	0.8	0.0	4.4	1.4
Control Delay (s)	7.7	0.0	0.0	7.8	0.0	12.2	11.3
Lane LOS	A			A		B	B
Approach Delay (s)	0.8			1.5		12.2	11.3
Approach LOS						B	B

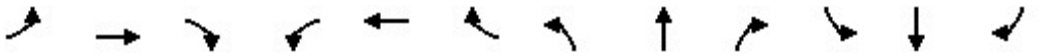
Intersection Summary				
Average Delay	3.4			
Intersection Capacity Utilization	30.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	187	32	43	170	7	13	18	59	4	7	20
Future Volume (Veh/h)	26	187	32	43	170	7	13	18	59	4	7	20
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	28	203	35	47	185	8	14	20	64	4	8	22
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	193			203			564	546	203	616	542	189
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	193			203			564	546	203	616	542	189
tC, single (s)	4.1			4.2			7.2	6.6	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.1	3.4	3.5	4.0	3.3
p0 queue free %	98			96			96	95	92	99	98	97
cM capacity (veh/h)	1362			1339			389	409	815	345	426	858

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	28	203	35	47	193	98	34
Volume Left	28	0	0	47	0	14	4
Volume Right	0	0	35	0	8	64	22
cSH	1362	1700	1700	1339	1700	600	607
Volume to Capacity	0.02	0.12	0.02	0.04	0.11	0.16	0.06
Queue Length 95th (m)	0.5	0.0	0.0	0.8	0.0	4.4	1.4
Control Delay (s)	7.7	0.0	0.0	7.8	0.0	12.2	11.3
Lane LOS	A			A		B	B
Approach Delay (s)	0.8			1.5		12.2	11.3
Approach LOS						B	B

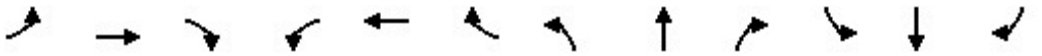
Intersection Summary				
Average Delay	3.4			
Intersection Capacity Utilization	30.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	227	15	37	539	0	113	7	33	0	1	42
Future Volume (Veh/h)	10	227	15	37	539	0	113	7	33	0	1	42
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	11	247	16	40	586	0	123	8	36	0	1	46
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	586			247			982	935	247	975	935	586
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	586			247			982	935	247	975	935	586
tC, single (s)	4.1			4.2			7.2	6.6	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.1	3.4	3.5	4.0	3.3
p0 queue free %	99			97			37	97	95	100	100	91
cM capacity (veh/h)	974			1290			194	247	773	209	256	514

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	11	247	16	40	586	167	47
Volume Left	11	0	0	40	0	123	0
Volume Right	0	0	16	0	0	36	46
cSH	974	1700	1700	1290	1700	234	503
Volume to Capacity	0.01	0.15	0.01	0.03	0.34	0.71	0.09
Queue Length 95th (m)	0.3	0.0	0.0	0.7	0.0	36.2	2.3
Control Delay (s)	8.7	0.0	0.0	7.9	0.0	51.2	12.9
Lane LOS	A			A		F	B
Approach Delay (s)	0.4			0.5		51.2	12.9
Approach LOS						F	B

Intersection Summary				
Average Delay	8.6			
Intersection Capacity Utilization	52.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	549	94	43	370	7	28	18	59	4	7	52
Future Volume (Veh/h)	78	549	94	43	370	7	28	18	59	4	7	52
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	85	597	102	47	402	8	30	20	64	4	8	57
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	410			597			1324	1271	597	1341	1267	406
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	410			597			1324	1271	597	1341	1267	406
tC, single (s)	4.1			4.2			7.2	6.6	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.1	3.4	3.5	4.0	3.3
p0 queue free %	92			95			70	86	87	96	95	91
cM capacity (veh/h)	1133			956			101	142	487	92	150	649

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	85	597	102	47	410	114	69
Volume Left	85	0	0	47	0	30	4
Volume Right	0	0	102	0	8	64	57
cSH	1133	1700	1700	956	1700	200	374
Volume to Capacity	0.08	0.35	0.06	0.05	0.24	0.57	0.18
Queue Length 95th (m)	1.8	0.0	0.0	1.2	0.0	23.4	5.1
Control Delay (s)	8.4	0.0	0.0	9.0	0.0	44.4	16.8
Lane LOS	A			A		E	C
Approach Delay (s)	0.9			0.9		44.4	16.8
Approach LOS						E	C

Intersection Summary				
Average Delay	5.2			
Intersection Capacity Utilization	55.0%	ICU Level of Service	B	
Analysis Period (min)	15			

APPENDIX H - TAC WARRANTS

Alberta Transportation - Traffic Signal & Pedestrian Signal Head Warrant Analysis

Main Street (name)	Hwy 697E / North Access	Direction (EW or NS)	EW	Road Authority:	Alberta Transportation
Side Street (name)	Hwy 697S / Rge Rd 151	Direction (EW or NS)	NS	City:	Near La Crete
Quadrant / Int #		Comments	Based on 2019 Traffic Counts	Analysis Date:	2020 Oct 28, Wed
CHECK SHEET				Count Date:	
for Warrant Calculation Results, please hit 'Page Down'				Date Entry Format:	(yyyy-mm-dd)

Lane Configuration		Excl LT	Th & LT	Through	Th+RT+LT	Th & RT	Excl RT	RT Channelization (y/n)	UpStream Signal (m)	# of Thru Lanes	LT Phase Type	RTOR Allowed (y/n)	Actuated Thru Phase
Hwy 697E / North Access	WB		1				1	n	3,000	1			
Hwy 697E / North Access	EB		1				1	n	3,000	1			
Hwy 697S / Rge Rd 151	NB				1			n	3,000	1			
Hwy 697S / Rge Rd 151	SB				1			n	3,000	1			

Saturation Flow Rates (if not default) (vphpl)		Default Saturation Flow Rates (vphpl)
Left Turn		1,650
Through		1,800
Right Turn		1,500

Is the Hwy 697S / Rge Rd 151 NB right turns significantly impeded by through movements? (y/n)		n
Is the Hwy 697S / Rge Rd 151 SB right turns significantly impeded by through movements? (y/n)		n
		n
		n

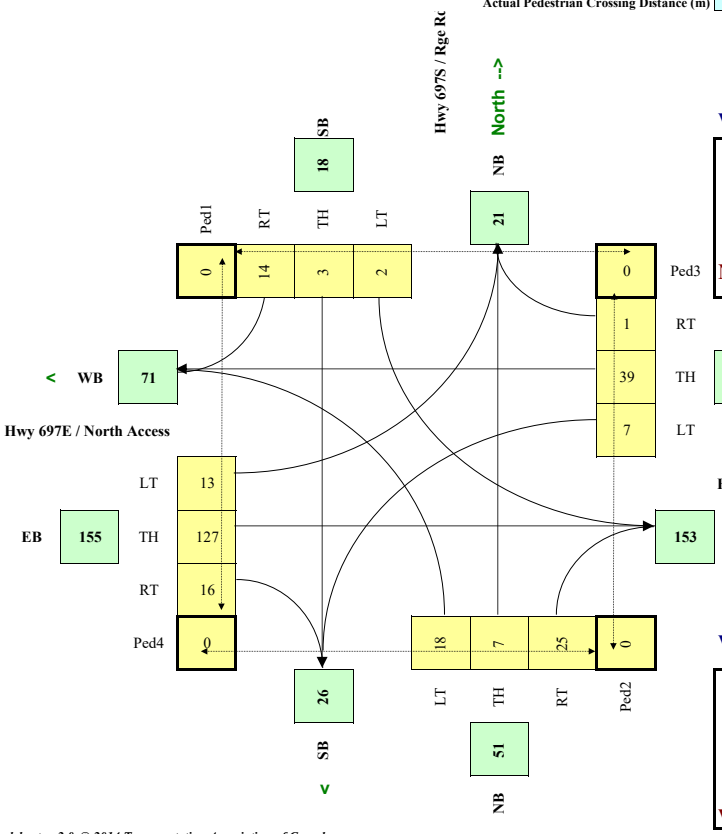
Demographics		
Elem. School/Mobility Challenged	(y/n)	n
Senior's Complex	(y/n)	n
Pathway to School	(y/n)	n
Metro Area Population	(#)	3,000
Central Business District	(y/n)	n

Other input		Speed (Km/h)	Truck %	Bus Rt (y/n)	Median (m)
Hwy 697E / North Access	EW	100	11.5%	y	0.0
Hwy 697S / Rge Rd 151	NS		19.3%	y	0.0

Set Peak Hours

Traffic Input	NB			SB			WB			EB			Ped1 NS	Ped2 NS	Ped3 EW	Ped4 EW
	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT	W Side	E Side	N Side	S Side
press 'Set Peak Hours' Button to set the peak hour periods	29	4	18	0	1	12	20	139	0	5	108	7	0	0	0	0
	27	4	17	0	1	11	0	0	0	5	102	7	0	0	0	0
	24	9	33	2	4	18	0	0	0	17	166	21	0	0	0	0
	17	7	23	1	3	13	0	0	0	12	116	14	0	0	0	0
	6	9	28	3	4	13	0	0	0	18	126	21	0	0	0	0
	7	10	32	3	5	15	23	92	4	20	142	24	0	0	0	0
Total (6-hour peak)	110	43	151	9	18	82	43	231	4	77	760	94	0	0	0	0
Average (6-hour peak)	18	7	25	2	3	14	7	39	1	13	127	16	0	0	0	0
													Actual Pedestrian Crossing Distance (m)			
													0.0	0.0	0.0	0.0

Average 6-hour Peak Turning Movements



$W_{SIG} = [C_{bt}(X_{v-v}) / K_1 + (F (X_{v-p}) L) / K_2] \times C_i$

W = 7 (Veh) 7 (Ped) 0

Not Warranted - Vs<75

RESET SHEET

$W_{PED} = [F ((Xped_m)d_m/K_2) + (Xped_s)d_s/K_3)]$

W = 0

Warranted - Complex Intersection

Alberta Transportation - Traffic Signal & Pedestrian Signal Head Warrant Analysis

Main Street (name)	Hwy 697E / North Access	Direction (EW or NS)	EW	Road Authority:	Alberta Transportation
Side Street (name)	Hwy 697S / Rge Rd 151	Direction (EW or NS)	NS	City:	Near La Crete
Quadrant / Int #		Comments	Based on Estimated 2051 Combined Traffic Volumes with All Development Traffic	Analysis Date:	2021 Jan 05, Tue
for Warrant Calculation Results, please hit 'Page Down'	CHECK SHEET			Count Date:	
				Date Entry Format:	(yyyy-mm-dd)

Lane Configuration		Excl LT	Th & LT	Through	Th+RT+LT	Th & RT	Excl RT	RT Channelization (y/n)	UpStream Signal (m)	# of Thru Lanes	LT Phase Type	RTOR Allowed (y/n)	Actuated Thru Phase
Hwy 697E / North Access	WB	1				1		n	3,000	1			
Hwy 697E / North Access	EB	1		1			1	y	3,000	1			
Hwy 697S / Rge Rd 151	NB				1			n	3,000	1			
Hwy 697S / Rge Rd 151	SB				1			n	3,000	1			

Saturation Flow Rates (if not default) (vphpl)		Default Saturation Flow Rates (vphpl)
Left Turn		1,650
Through		1,800
Right Turn		1,500

e the Hwy 697S / Rge Rd 151 NB right turns significantly impeded by through movements?	(y/n)	n
e the Hwy 697S / Rge Rd 151 SB right turns significantly impeded by through movements?	(y/n)	n
he Hwy 697E / North Access WB right turns significantly impeded by through movements?	(y/n)	n
		n

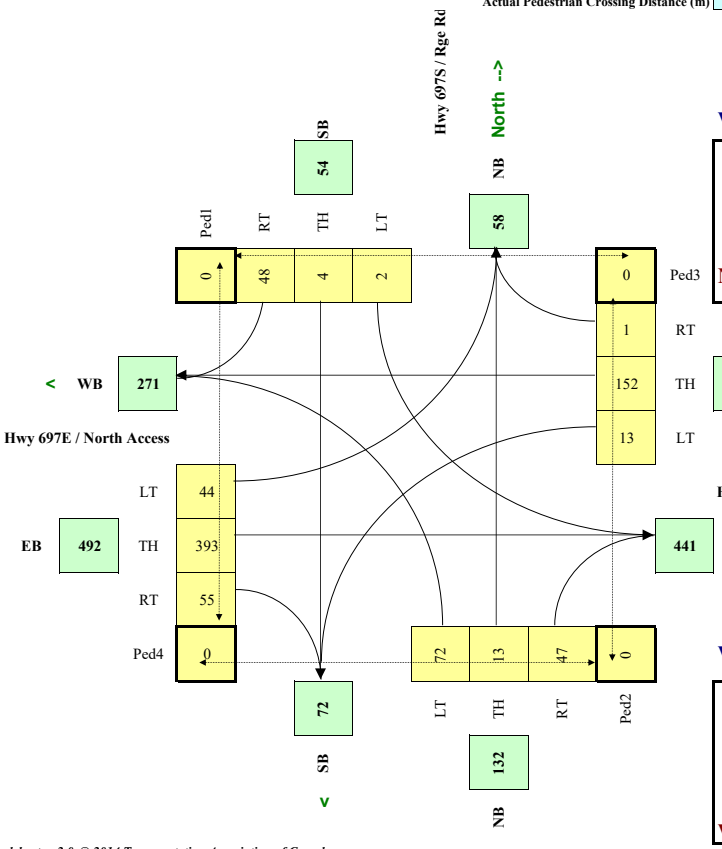
Demographics		
Elem. School/Mobility Challenged	(y/n)	n
Senior's Complex	(y/n)	n
Pathway to School	(y/n)	n
Metro Area Population	(#)	11,120
Central Business District	(y/n)	n

Other input		Speed (Km/h)	Truck %	Bus Rt (y/n)	Median (m)
Hwy 697E / North Access	EW	100	11.5%	y	0.0
Hwy 697S / Rge Rd 151	NS		19.3%	y	0.0

Set Peak Hours

Traffic Input	NB			SB			WB			EB			Ped1 NS	Ped2 NS	Ped3 EW	Ped4 EW
	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT	W Side	E Side	N Side	S Side
press 'Set Peak Hours' Button to set the peak hour periods	113	7	33	0	1	42	37	539	0	10	227	15	0	0	0	0
	106	7	31	0	1	39	0	0	0	9	213	14	0	0	0	0
	94	17	61	3	5	63	0	0	0	59	516	72	0	0	0	0
	66	12	43	2	4	44	0	0	0	41	361	51	0	0	0	0
	25	16	53	4	6	46	0	0	0	69	489	84	0	0	0	0
	28	18	59	4	7	52	43	370	7	78	549	94	0	0	0	0
Total (6-hour peak)	432	77	280	13	24	286	80	909	7	266	2,355	330	0	0	0	0
Average (6-hour peak)	72	13	47	2	4	48	13	152	1	44	393	55	0	0	0	0
													Actual Pedestrian Crossing Distance (m)			
													0.0	0.0	0.0	0.0

Average 6-hour Peak Turning Movements



$W_{SIG} = [C_{bt}(X_{v\text{-}v}) / K_1 + (F (X_{v\text{-}p}) L) / K_2] \times C_i$

W = 60 60 0

Veh *Ped*

NOT Warranted

RESET SHEET

$W_{PED} = [F ((Xped_m)d_m/K_2) + (Xped_s)d_s/K_3)]$

W = 0

Warranted - Complex Intersection

Alberta Transportation - Traffic Signal & Pedestrian Signal Head Warrant Analysis

Main Street (name)	100 St	Direction (EW or NS)	NS	Road Authority:	Alberta Transportation
Side Street (name)	94 Ave	Direction (EW or NS)	EW	City:	Near La Crete
Quadrant / Int #		Comments	Based on 2020 Manual Traffic Counts	Analysis Date:	2020 Nov 24, Tue
for Warrant Calculation Results, please hit 'Page Down'	CHECK SHEET			Count Date:	2020 Nov 19, Thu
				Date Entry Format:	(yyyy-mm-dd)

Lane Configuration		Excl LT	Th & LT	Through	Th+RT+LT	Th & RT	Excl RT	RT Channelization (y/n)	UpStream Signal (m)	# of Thru Lanes	LT Phase Type	RTOR Allowed (y/n)	Actuated Thru Phase
100 St	NB		1			1		n	3,000	2			
100 St	SB		1			1		n	700	2			
94 Ave	WB		1				1	n	3,000	1			
94 Ave	EB				1			n	3,000	1			

Saturation Flow Rates (if not default) (vphpl)		Default Saturation Flow Rates (vphpl)
Left Turn		1,650
Through		1,800
Right Turn		1,500

Are the 94 Ave EB right turns significantly impeded by through movements? (y/n)	n
Are the 100 St NB right turns significantly impeded by through movements? (y/n)	n
Are the 100 St SB right turns significantly impeded by through movements? (y/n)	n

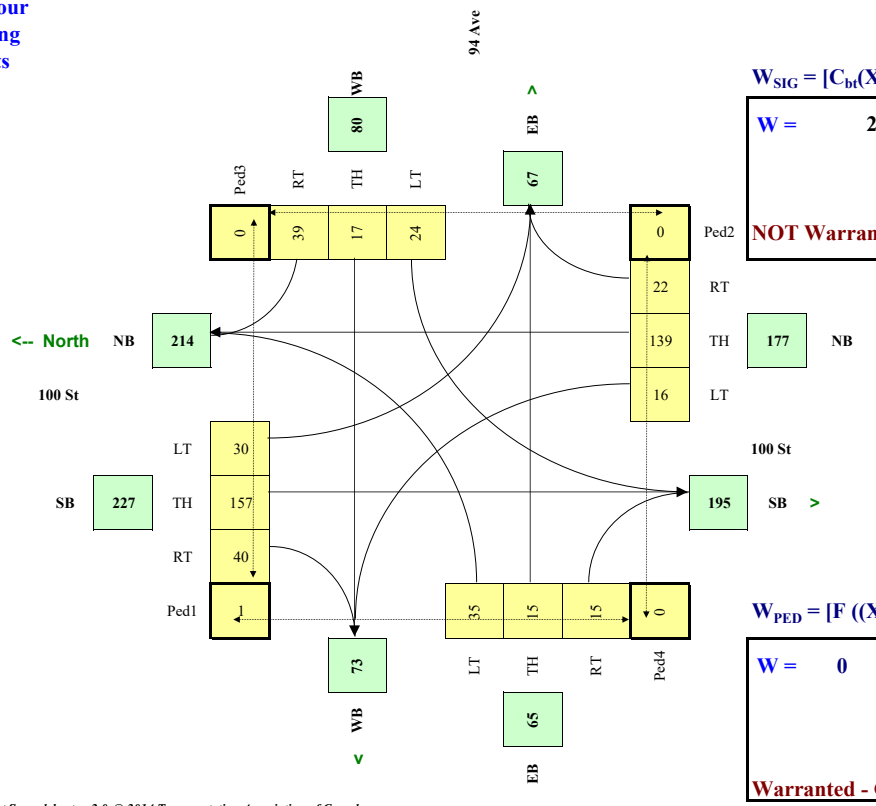
Demographics		
Elem. School/Mobility Challenged	(y/n)	n
Senior's Complex	(y/n)	n
Pathway to School	(y/n)	n
Metro Area Population	(#)	4,100
Central Business District	(y/n)	y

Other input		Speed (Km/h)	Truck %	Bus Rt (y/n)	Median (m)
100 St	NS	50	6.6%	y	0.0
94 Ave	EW		10.4%	y	0.0

Set Peak Hours

Traffic Input	NB			SB			WB			EB			Ped1 NS	Ped2 NS	Ped3 EW	Ped4 EW
	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT	W Side	E Side	N Side	S Side
Six hour peak at intersection	11	84	24	31	72	74	9	21	33	54	31	20	0	0	0	0
	10	108	18	19	91	24	17	9	24	22	7	13	0	0	0	0
	10	154	16	36	161	42	16	20	53	34	15	14	1	0	0	0
	15	145	16	31	151	39	21	15	32	41	17	15	1	0	0	0
	29	176	34	28	224	25	31	14	51	37	7	16	2	0	0	0
	23	169	22	36	242	36	47	23	42	22	13	10	2	0	0	0
Total (6-hour peak)	**98**	**836**	**130**	**181**	**941**	**240**	**141**	**102**	**235**	**210**	**90**	**88**	**6**	**0**	**0**	**0**
Average (6-hour peak)	**16**	**139**	**22**	**30**	**157**	**40**	**24**	**17**	**39**	**35**	**15**	**15**	**1**	**0**	**0**	**0**
													Actual Pedestrian Crossing Distance (m)			
													11.0	0.0	0.0	0.0

Average 6-hour Peak Turning Movements



$W_{SIG} = [C_{bt}(X_{v\text{-}v}) / K_1 + (F (X_{v\text{-}p}) L) / K_2] \times C_i$

W =	27	27	0
		Veh	*Ped*

NOT Warranted

RESET SHEET

$W_{PED} = [F ((Xped_m)d_m/K_2) + (Xped_s)d_s/K_3)]$

W = 0

Warranted - Complex Intersection

Alberta Transportation - Traffic Signal & Pedestrian Signal Head Warrant Analysis

Main Street (name)	100 St	Direction (EW or NS)	NS	Road Authority:	Alberta Transportation
Side Street (name)	94 Ave	Direction (EW or NS)	EW	City:	Near La Crete
Quadrant / Int #		Comments	2040 Forecasted Counts Based on 2020 Manual Counts	Analysis Date:	2020 Nov 25, Wed
for Warrant Calculation Results, please hit 'Page Down'	CHECK SHEET			Count Date:	2020 Nov 19, Thu
				Date Entry Format:	(yyyy-mm-dd)

Lane Configuration		Excl LT	Th & LT	Through	Thr+RT+LT	Th & RT	Excl RT	RT Channelization (y/n)	UpStream Signal (m)	# of Thru Lanes	LT Phase Type	RTOR Allowed (y/n)	Actuated Thru Phase
100 St	NB		1			1		n	3,000	2			
100 St	SB		1			1		n	700	2			
94 Ave	WB		1				1	n	3,000	1			
94 Ave	EB				1			n	3,000	1			

Saturation Flow Rates (if not default) (vphpl)		Default Saturation Flow Rates (vphpl)
Left Turn		1,650
Through		1,800
Right Turn		1,500

Are the 94 Ave EB right turns significantly impeded by through movements? (y/n)	n
Are the 100 St NB right turns significantly impeded by through movements? (y/n)	n
Are the 100 St SB right turns significantly impeded by through movements? (y/n)	n

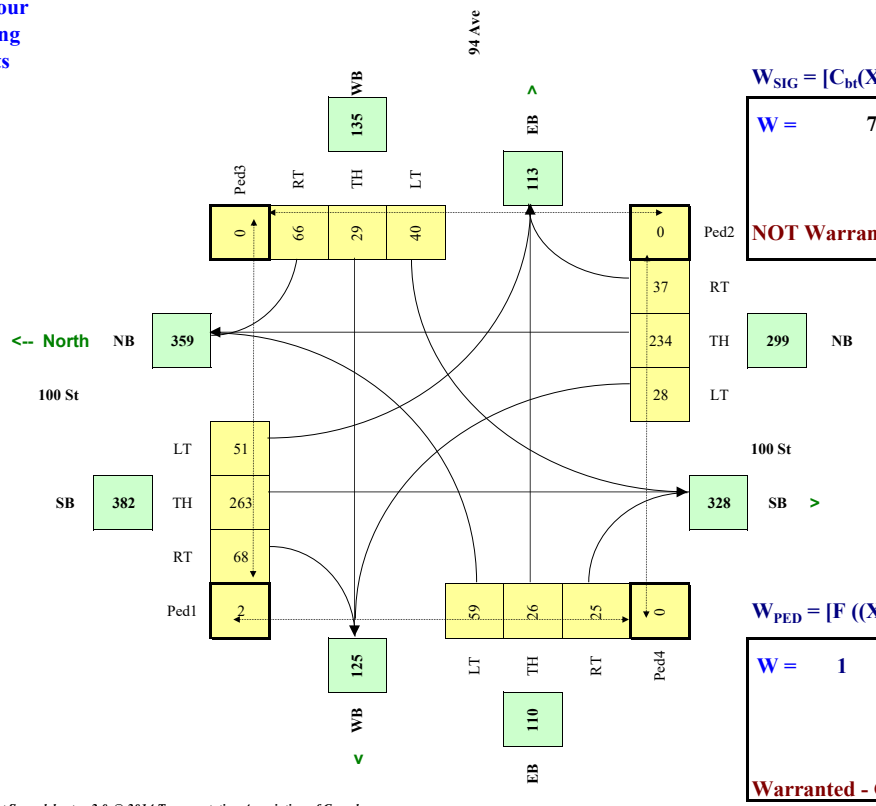
Demographics		
Elem. School/Mobility Challenged	(y/n)	n
Senior's Complex	(y/n)	n
Pathway to School	(y/n)	n
Metro Area Population	(#)	8,500
Central Business District	(y/n)	y

Other input		Speed (Km/h)	Truck %	Bus Rt (y/n)	Median (m)
100 St	NS	50	6.6%	y	0.0
94 Ave	EW		10.4%	y	0.0

Set Peak Hours

Traffic Input	NB			SB			WB			EB			Ped1 NS	Ped2 NS	Ped3 EW	Ped4 EW
	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT	W Side	E Side	N Side	S Side
Six hour peak at intersection	19	141	41	52	121	125	16	36	56	91	52	34	0	0	0	0
	17	182	31	32	153	41	29	16	41	37	12	22	0	0	0	0
	17	259	27	61	270	71	27	34	89	57	26	24	2	0	0	0
	26	244	27	52	254	66	36	26	54	69	29	26	2	0	0	0
	49	295	57	47	376	42	52	24	86	63	12	27	4	0	0	0
	39	284	37	61	406	61	79	39	71	37	22	17	4	0	0	0
Total (6-hour peak)	**167**	**1,405**	**220**	**305**	**1,580**	**406**	**239**	**175**	**397**	**354**	**153**	**150**	**12**	**0**	**0**	**0**
Average (6-hour peak)	**28**	**234**	**37**	**51**	**263**	**68**	**40**	**29**	**66**	**59**	**26**	**25**	**2**	**0**	**0**	**0**
													Actual Pedestrian Crossing Distance (m)			
													11.0	0.0	0.0	0.0

Average 6-hour Peak Turning Movements



$W_{SIG} = [C_{bt}(X_{v\text{-}v}) / K_1 + (F (X_{v\text{-}p}) L) / K_2] \times C_i$

W =	79	79	0
		Veh	*Ped*

NOT Warranted

RESET SHEET

$W_{PED} = [F ((Xped_m)d_m/K_2) + (Xped_s)d_s/K_3)]$

W = 1

Warranted - Complex Intersection

Alberta Transportation - Traffic Signal & Pedestrian Signal Head Warrant Analysis

Main Street (name)	100 St	Direction (EW or NS)	NS	Road Authority:	Alberta Transportation
Side Street (name)	94 Ave	Direction (EW or NS)	EW	City:	Near La Crete
Quadrant / Int #		Comments	2041 Forecasted Counts Based on 2020 Manual Counts with Development Traffic	Analysis Date:	2021 Jan 11, Mon
				Count Date:	2020 Nov 19, Thu
				Date Entry Format:	(yyyy-mm-dd)

CHECK SHEET

for Warrant Calculation Results, please hit 'Page Down'

Lane Configuration		Excl LT	Th & LT	Through	Th+RT+LT	Th & RT	Excl RT	RT Channelization (y/n)	UpStream Signal (m)	# of Thru Lanes	LT Phase Type	RTOR Allowed (y/n)	Actuated Thru Phase
100 St	NB		1			1		n	3,000	2			
100 St	SB		1			1		n	700	2			
94 Ave	WB		1				1	n	3,000	1			
94 Ave	EB				1			n	3,000	1			

Saturation Flow Rates (if not default) (vphpl)		Default Saturation Flow Rates (vphpl)
Left Turn		1,650
Through		1,800
Right Turn		1,500

Are the 94 Ave EB right turns significantly impeded by through movements? (y/n)	n	
Are the 100 St NB right turns significantly impeded by through movements? (y/n)	n	
Are the 100 St SB right turns significantly impeded by through movements? (y/n)	n	

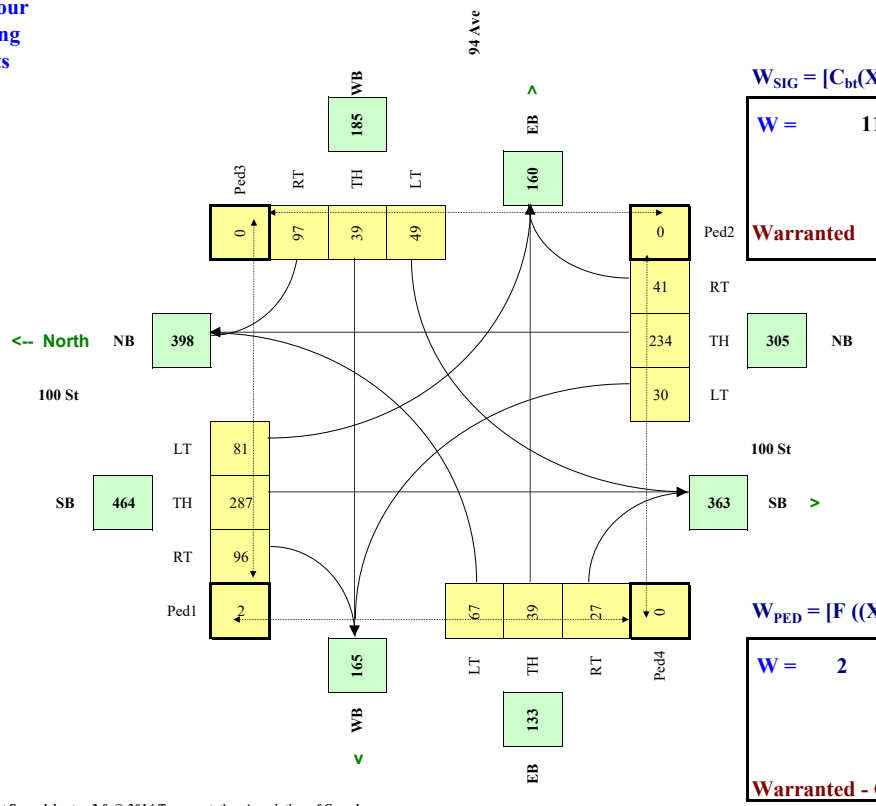
Demographics		
Elem. School/Mobility Challenged	(y/n)	n
Senior's Complex	(y/n)	n
Pathway to School	(y/n)	n
Metro Area Population	(#)	8,500
Central Business District	(y/n)	y

Other input		Speed (Km/h)	Truck %	Bus Rt (y/n)	Median (m)
100 St	NS	50	6.6%	y	0.0
94 Ave	EW		10.4%	y	0.0

Set Peak Hours

Traffic Input	NB			SB			WB			EB			Ped1 NS	Ped2 NS	Ped3 EW	Ped4 EW
	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT	W Side	E Side	N Side	S Side
Six hour peak at intersection	19	154	42	61	129	127	16	36	88	93	54	35	0	0	0	0
	18	145	39	57	121	119	15	34	83	87	51	33	0	0	0	0
	39	308	53	106	378	126	65	51	127	87	51	35	2	0	0	0
	27	215	37	74	264	88	45	35	89	61	36	25	2	0	0	0
	36	275	34	87	391	55	72	36	92	34	20	16	4	0	0	0
	40	309	38	98	439	62	81	40	103	38	23	18	4	0	0	0
Total (6-hour peak)	**179**	**1,406**	**243**	**483**	**1,722**	**577**	**294**	**232**	**582**	**400**	**235**	**162**	**12**	**0**	**0**	**0**
Average (6-hour peak)	**30**	**234**	**41**	**81**	**287**	**96**	**49**	**39**	**97**	**67**	**39**	**27**	**2**	**0**	**0**	**0**
													Actual Pedestrian Crossing Distance (m)	11.0	0.0	0.0	0.0

Average 6-hour Peak Turning Movements



$W_{SIG} = [C_{bt}(X_{v\text{-}v}) / K_1 + (F (X_{v\text{-}p}) L) / K_2] \times C_i$

W =	112	112	0
		Veh	*Ped*

Warranted

RESET SHEET

$W_{PED} = [F ((Xped_m)d_m/K_2) + (Xped_s)d_s/K_3)]$

W = 2

Warranted - Complex Intersection

Road Name: Highway 697 & Twp Rd 1062

City: Near La Crete
Warrant Undertaken by: Tamara Soltykevych
Company Name: Associated Engineering
Date: October 28, 2020

Warrant for Intersection Lighting (See Note 2)

Item No.	Classification Factor	Rating Factor 'R'					Weight Subcategory (If Applicable)	Weight 'W'	Enter 'R' Here	Score 'R' x 'W'		
		0	1	2	3	4						
	Geometric Factors (G)											
1	Channelization	None	Right and/or Left Turn Lanes on Minor Approach Only	Right Turn Lane(s) Only on Major Leg(s)	Left Turn Lane(s) on Major Leg(s)	Left and Right Turn Lanes on All Legs	Raised and Operating Speed Less than 70km/h on at Least One Channelized Approach; or Raised and Operating Speed at Least 70km/h or More on at Least One Channelized Approach; or Painted Only	15.00 20.00 5.00	0	0		Only ONE 'R' Value Is To Be Entered for These Three Rows!
2	Approach Sight Distance on the Most Constrained Approach (Relative to Recommended Minimum Intersection Sight Distance)	100% or More	75% - 99%	50% - 74%	25% - 49%	< 25%		10.00	0	0		
3	Horizontal Curvature (Radius) Horizontal curvature (radius) at or immediately before intersection on any leg for posted speed limit of:											
	110 km/hr:	Tangent	> 1800m	1150 to 1800m	750 to 1150m	< 750m		5.00	0	0		
	90 or 100 km/h	Tangent	> 1400m	950 to 1400m	600 to 950m	< 600m						
	70 or 80 km/h	Tangent	> 950m	550 to 950m	340 to 550m	< 340m						
	60 km/h	Tangent	> 575m	320 to 575m	190 to 320m	< 190m						
4	Angle of Intersection or Offset Intersection	90 Degree Angle	80 or 100 Degree Angle	----	70 or 110 Degree Angle	< 70 or > 110 Degree or Offset Intersection		5.00	0	0		
5	Downhill Approach Grades at or Immediately Before Intersection on Any Leg	< 3.0%	3.1 to 3.9% and Meets Design Guidelines for Type and Speed of Road	4.0 to 4.9% and Meets Design Guidelines for Type and Speed of Road	5.0 to 5.9% and Meets Design Guidelines for Type and Speed of Road	> 7.0% OR Exceeds Maximum Gradient for Type and Speed of Road		3.00	0	0		
6	Number of Legs	----	3	4	5	6 or More		3.00	2	6		
									Subtotal Geometric Factors	6	**G**	6
	Operational Factors (D)											
	If the Intersection is Signalized, Illumination is Warranted											
	If the Intersection is NOT Signalized, Points should be Calculated on the Basis of EITHER AADT Factor or the Signalization Warrant Factor											
7	Either AADT (2-Way) (See Note1): On Major Road and On Minor Road or	< 1000 < 500	1000 to 2000 500 to 1000	2000 to 3000 1000 to 1500	3000 to 5000 1500 to 2000	> 5000 > 2000		10.00 20.00				Only ONE 'R' Value Is To Be Entered for These Two Rows!
	Signalization Warrant (See Note 1)	Intersection Not Signalized and Volume Based Signal Warrant is Less than 20% Satisfied	Intersection Not Signalized and Volume-Based Warrant is 20% to 40% Satisfied	Intersection Not Signalized and Volume-Based Warrant is 40% to 60% Satisfied	Intersection Not Signalized and Volume-Based Warrant is 60% to 80% Satisfied	Intersection Not Signalized and Volume-Based Warrant is Over 80% Satisfied		30.00	0	0		
8	Regular Nighttime Hourly Pedestrian Volume (See Note 2)	No Pedestrians	Up to 10	10 to 30	30 to 50	Over 50		10.00	0	0		
9	Intersecting Roadway Classifications	No Primary Road Involved	Primary Rural Major, Primary Rural Minor, or Primary Designated Community Access	Primary/Secondary	Primary/Primary	Intersection Includes Divided Highway		5.00	1	5		
10	Operating Speed or Posted Speed Limit on Major Road (See Note 3)	50km/h or Less	60km/h	70km/h	80km/h	90km/h or Over		5.00	4	20		
11	Operating Speed or Posted Speed Limit on Minor Road (See Note 3)	50km/h or Less	60km/h	70km/h	80km/h	90km/h or Over		5.00	4	20		
									Subtotal Operational Factors	45	**O**	45
												1
	Environmental Factors (E)											
12	Lighted Development Within 150m Radius of Intersection	----	In One Quadrant	In Two Quadrants	In Three Quadrants	In Four Quadrants		5.00	1	5		
									Subtotal Environmental Factors	5	**E**	5
	Collision Factors (A)											
13	Average Annual Nighttime Collision Frequency (See Note 4) or Rate Over Last Three Years (Only Collisions Potentially Attributable to Inadequate Lighting)	0 Collision per Year	1 Collision per Year	----	3 or More Collisions Per Year OR At Least 1.5 Collisions per Million Entering Vehicles per Year and an Average Ratio of All Night-to-Day Collisions of at Least 1.5		1 or 2 Collisions per Year 3 or More Collisions per Year or Rate ≥ 1.5 Collisions/MEV	15.00 30.00	1	15		Only ONE 'R' Value Is To Be Entered for These Two Rows!
									Subtotal Environmental Factors	15	**A**	
									G + O + E + A = Total Warranting Points	71		71
									Warranting Condition	120		
									Difference ±	49	**D**	

Notes: **ILLUMINATION NOT WARRANTED**

1 If the Intersection is not signalized, the user should choose EITHER the AADT factor OR the signalization factor. The points from either factor, but not both factors, may be used for the warrant point calculations.
2 The number of certain types of vulnerable pedestrians should be factored to reflect their increased need for visibility.
The number of child pedestrians (ages 12 and under) should be multiplied by two, and the number of senior pedestrians (age 65 and over) should be multiplied by 1.5.
3 85th percentile nighttime speed should be used, if available. Otherwise, the posted speed may be used.
4 Reported collisions, rounded to the nearest whole number.

Road Name: Highway 697 & Twp Rd 1062

City: Near La Crete
Warrant Undertaken by: Tamara Soltykevych
Company Name: Associated Engineering
Date: January 5, 2021

Warrant for Intersection Lighting (See Note 2)

Item No.	Classification Factor	Rating Factor 'R'					Weight Subcategory (If Applicable)	Weight 'W'	Enter 'R' Here	Score 'R' x 'W'		
		0	1	2	3	4						
	Geometric Factors (G)											
1	Channelization	None	Right and/or Left Turn Lanes on Minor Approach Only	Right Turn Lane(s) Only on Major Leg(s)	Left Turn Lane(s) on Major Leg(s)	Left and Right Turn Lanes on All Legs	Raised and Operating Speed Less than 70km/h on at Least One Channelized Approach; or Raised and Operating Speed at Least 70km/h or More on at Least One Channelized Approach; or Painted Only	15.00 20.00 5.00	2	10		Only ONE 'R' Value Is To Be Entered for These Three Rows!
2	Approach Sight Distance on the Most Constrained Approach (Relative to Recommended Minimum Intersection Sight Distance)	100% or More	75% - 99%	50% - 74%	25% - 49%	< 25%		10.00	0	0		
3	Horizontal Curvature (Radius) Horizontal curvature (radius) at or immediately before intersection on any leg for posted speed limit of:											
	110 km/hr:	Tangent	> 1800m	1150 to 1800m	750 to 1150m	< 750m		5.00	0	0		
	90 or 100 km/h	Tangent	> 1400m	950 to 1400m	600 to 950m	< 600m						
	70 or 80 km/h	Tangent	> 950m	550 to 950m	340 to 550m	< 340m						
	60 km/h	Tangent	> 575m	320 to 575m	190 to 320m	< 190m						
4	Angle of Intersection or Offset Intersection	90 Degree Angle	80 or 100 Degree Angle	----	70 or 110 Degree Angle	< 70 or > 110 Degree or Offset Intersection		5.00	0	0		
5	Downhill Approach Grades at or Immediately Before Intersection on Any Leg	< 3.0%	3.1 to 3.9% and Meets Design Guidelines for Type and Speed of Road	4.0 to 4.9% and Meets Design Guidelines for Type and Speed of Road	5.0 to 5.9% and Meets Design Guidelines for Type and Speed of Road	> 7.0% OR Exceeds Maximum Gradient for Type and Speed of Road		3.00	0	0		
6	Number of Legs	----	3	4	5	6 or More		3.00	2	6		
									Subtotal Geometric Factors	16	**G**	16
	Operational Factors (D)											
	If the Intersection is Signalized, Illumination is Warranted											
	If the Intersection is NOT Signalized, Points should be Calculated on the Basis of EITHER AADT Factor or the Signalization Warrant Factor											
7	Either AADT (2-Way) (See Note1):											
	On Major Road and On Minor Road	< 1000	1000 to 2000	2000 to 3000	3000 to 5000	> 5000		10.00				Only ONE 'R' Value Is To Be Entered for These Two Rows!
	or	< 500	500 to 1000	1000 to 1500	1500 to 2000	> 2000		20.00				
	Signalization Warrant (See Note 1)	Intersection Not Signalized and Volume Based Signal Warrant is Less than 20% Satisfied	Intersection Not Signalized and Volume-Based Warrant is 20% to 40% Satisfied	Intersection Not Signalized and Volume-Based Warrant is 40% to 60% Satisfied	Intersection Not Signalized and Volume-Based Warrant is 60% to 80% Satisfied	Intersection Not Signalized and Volume-Based Warrant is Over 80% Satisfied		30.00	3	90		
8	Regular Nighttime Hourly Pedestrian Volume (See Note 2)	No Pedestrians	Up to 10	10 to 30	30 to 50	Over 50		10.00	0	0		
9	Intersecting Roadway Classifications	No Primary Road Involved	Primary Rural Major, Primary Rural Minor, or Primary Designated Community Access	Primary/Secondary	Primary/Primary	Intersection Includes Divided Highway		5.00	1	5		
10	Operating Speed or Posted Speed Limit on Major Road (See Note 3)	50km/h or Less	60km/h	70km/h	80km/h	90km/h or Over		5.00	4	20		
11	Operating Speed or Posted Speed Limit on Minor Road (See Note 3)	50km/h or Less	60km/h	70km/h	80km/h	90km/h or Over		5.00	4	20		
									Subtotal Operational Factors	135	**O**	135
												1
	Environmental Factors (E)											
12	Lighted Development Within 150m Radius of Intersection	----	In One Quadrant	In Two Quadrants	In Three Quadrants	In Four Quadrants		5.00	2	10		
									Subtotal Environmental Factors	10	**E**	10
	Collision Factors (A)											
13	Average Annual Nighttime Collision Frequency (See Note 4) or Rate Over Last Three Years (Only Collisions Potentially Attributable to Inadequate Lighting)	0 Collision per Year	1 Collision per Year	----	3 or More Collisions Per Year OR At Least 1.5 Collisions per Million Entering Vehicles per Year and an Average Ratio of All Night-to-Day Collisions of at Least 1.5		1 or 2 Collisions per Year 3 or More Collisions per Year or Rate ≥ 1.5 Collisions/MEV	15.00 30.00	1	15		Only ONE 'R' Value Is To Be Entered for These Two Rows!
									Subtotal Environmental Factors	15	**A**	
									G + O + E + A = Total Warranting Points	176		176
									Warranting Condition	120		
									Difference ±	-56	**D**	

Notes: **ILLUMINATION NOT WARRANTED**

1 If the Intersection is not signalized, the user should choose EITHER the AADT factor OR the signalization factor. The points from either factor, but not both factors, may be used for the warrant point calculations.
2 The number of certain types of vulnerable pedestrians should be factored to reflect their increased need for visibility.
The number of child pedestrians (ages 12 and under) should be multiplied by two, and the number of senior pedestrians (age 65 and over) should be multiplied by 1.5.
3 85th percentile nighttime speed should be used, if available. Otherwise, the posted speed may be used.
4 Reported collisions, rounded to the nearest whole number.