400 Jessie Chenevert Walk
Transportation Impact Assessment (TIA)

Extendicare Canada Inc.

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INTRODUCTION

EXP Services Inc. has been retained by Extendicare Canada Inc. to prepare a Transportation Impact Assessment (TIA) for the proposed development located at 400 Jessie Chenevert Walk in Ottawa, Ontario, hereafter referred to as the "Subject Site."

As shown in *Figure 1*, the subject site is currently vacant and will be occupied by the proposed development. Extendicare Canada has proposed the construction of a nursing home facility adjacent to the newly opened Limebank Station, which serves as the terminus of Line 2 of the Light Rail Transit (LRT) system.

Figure 1: Site Location

EXP is responsible for completing the transportation planning and engineering components of the study, including the preparation of a Transportation Impact Assessment (TIA) in accordance with the City of Ottawa's TIA Guidelines. The assessment will review existing and future traffic conditions, evaluate intersection performance, and identify any mitigation measures required to support the proposed development. The project is currently undergoing the Site Plan Approval (SPA) process, and the findings of this TIA will form a key part of the City's review to confirm that the surrounding transportation network can accommodate the forecasted site-generated traffic without adversely affecting overall operations.

1. SCREENING

A Transportation Impact Assessment (TIA) screening form was completed for the proposed development to determine the requirements for the assessment. The findings are summarized as follows:

Trip Generation Trigger	According to the Institute of Transportation Engineers (ITE) Trip Generation Manual, 12th Edition, the estimated trip generation during peak hours is 45 vehicles during the weekday AM peak period, 56 vehicles during the weekday PM peak period, and 92 trips during the weekend peak period. This development meets the City's TIA Trip Generation Trigger (≥ 60 peak-hour auto trips). Therefore, the trip generation–based trigger is satisfied.
Location Trigger	According to the City's Official Plan Schedule C7-A, the development is located within a designated priority area. Therefore, the location-based trigger is satisfied.
Safety Trigger	The proposed development's driveway is located within the area of influence of an adjacent traffic signal (within 150 meters of the intersection in a suburban context), which satisfies the safety-based trigger.

Based on the City's screening assessment, EXP has confirmed the need to conduct a full TIA for the proposed development. A copy of the completed screening form is included in ***Appendix A*** for reference.

2. SCOPING

2.1. Proposed Development

The proposed development is located at 400 Jessie Chenevert Walk in Ottawa, within the Riverside South community near Limebank Station, a key growth area identified in the City's Official Plan. The site covers approximately 1.63 hectares and is subject to a zoning amendment under Zoning By-law 2008-250. The project consists of a four-storey long-term care home facility with 256 beds, served by two vehicular access points on Portico Way and Jessie Chenevert Way.

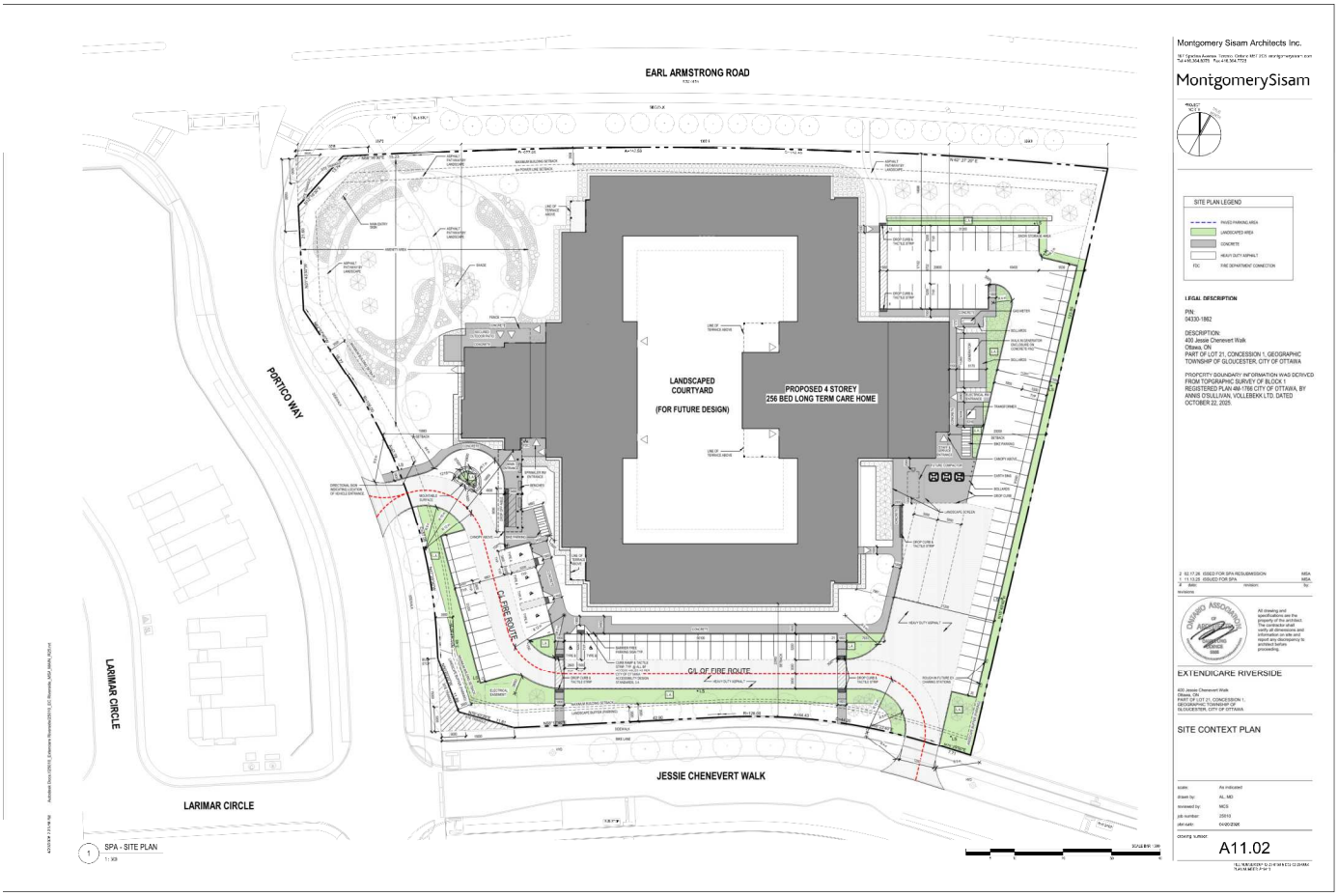


Figure 2: Site Plan

The proposed site design exceeds most minimum zoning and parking requirements. A total of 88 parking spaces are provided, excluding barrier-free spaces. Accessibility standards are met with 2 Type A and 4 Type B barrier-free spaces, and bicycle parking is well above the minimum, with 16 spaces provided versus 10 required. Loading facilities include one 20-meter space and one 5-meter space, compared to the requirement of two 5-meter spaces.

Construction is expected to proceed in a single phase, with occupancy targeted for 2027.

Detailed site plan is provided in ***Appendix B***.

2.2. Existing Conditions

2.2.1. Roadways

The following outlines the existing site characteristics of the roads and intersections in the vicinity of the subject site are described below.

- **Limebank Road** is a north–south arterial road runs from River Road near Manotick northward toward Hunt Club Road. Within the Riverside South study area, it is a four-lane arterial with auxiliary turn lanes at major intersections, sidewalks on both sides, and a posted speed limit of 80 km/h. It is designated as a truck route and accommodates heavy vehicle traffic. According to the City of Ottawa Official Plan, Limebank Road has a protected right-of-way of 37.5 m in this section.
- **Earl Armstrong Road** is an east–west arterial road, connects Limebank Road to River Road and continues toward Leitrim Road. In the study area, it is a four-lane divided arterial with sidewalks and cycling facilities on both sides and a posted speed limit of 80 km/h. It is also designated as a truck route and includes dedicated bus lanes as part of the City's transit priority network. The dedicated bus lanes on Earl Armstrong Road are only west of Riverview Station and Park & Ride. The protected right-of-way for Earl Armstrong Road is 37.5 m, consistent with arterial standards.
- **Portico Way** is a collector street within the Riverside South community. It typically features a two-lane urban cross-section with sidewalks on at least one side and a posted speed limit of 40 km/h.
- **Canyon Walk Drive** is a collector road in Riverside South. It generally has two lanes, sidewalks on both sides, and a posted speed limit of 40 km/h. It connects local streets to arterials such as Earl Armstrong Road and Limebank Road and supports transit routes and bicycle connectivity.
- **Blanca Street** runs through a new commercial and retail plaza near Earl Armstrong Road and Limebank Road.

The existing lane configuration and traffic controls for the study area are presented in *Figure 3.*

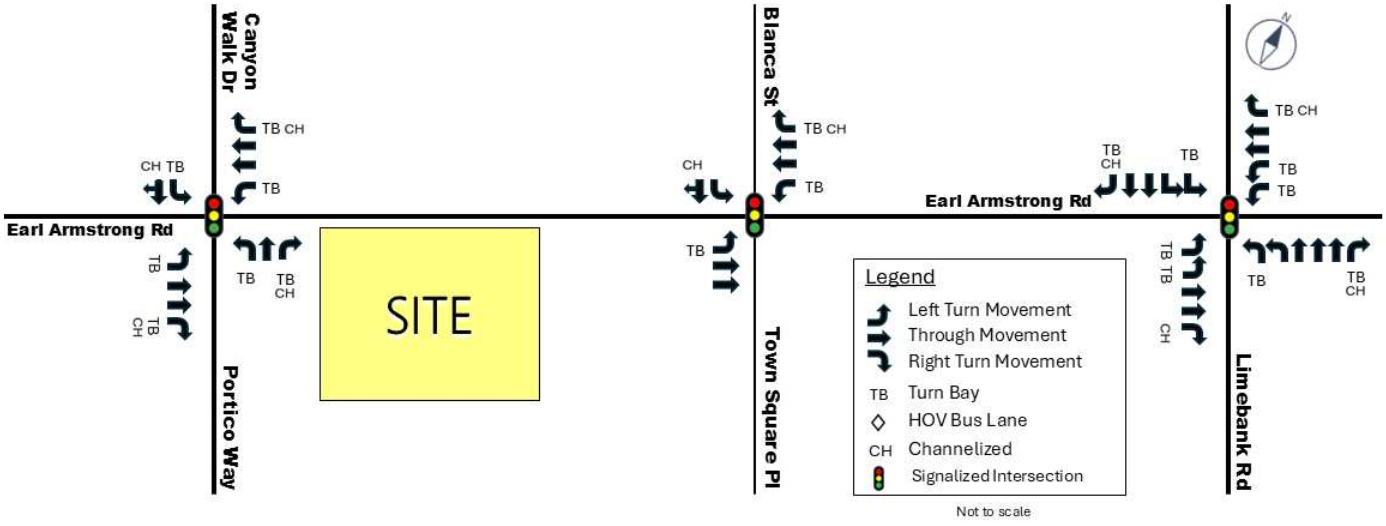
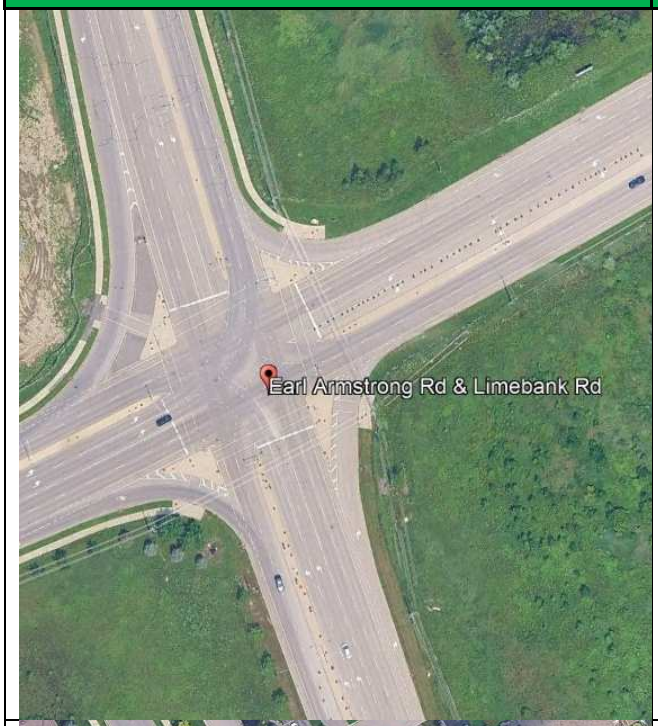
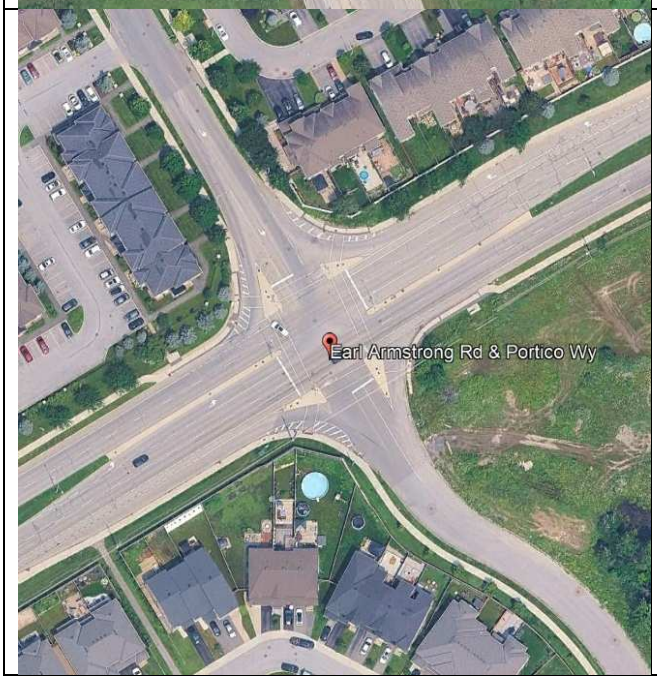
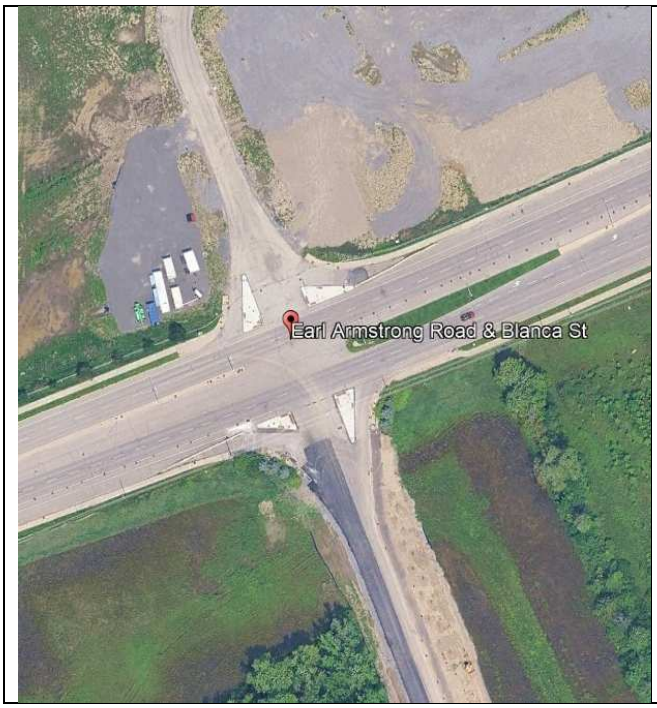


Figure 3: Existing Lane Configuration and Traffic Controls

2.2.2. Intersections

The key study intersections within proximity of the site have been summarized below:

Intersection	Description
	**Earl Armstrong Road and Limebank Road** It is a major signalized intersection in Ottawa's Riverside South community, adjacent to Limebank O-Train Station. Designed for high capacity to accommodate significant vehicle and transit movements. ○ Both east and west approach includes dual exclusive left-turn lane, 2 through lanes, and a channelized right-turn lane. ○ Both north and south approach also include dual left-turn lanes and 2 through lanes. ○ Raised medians on all approaches for channelization and safety. ○ Each leg of the intersection has a marked and signalized pedestrian crosswalk. ○ Sidewalks and multi-use pathways on North and West legs, ensuring pedestrian connectivity to surrounding developments and Limebank Station. ○ Pocket bike lanes are provided on all approaches.
	**Earl Armstrong Road and Portico Way/Canyon Walk Drive** It is a signalized intersection serving as a key access point to residential neighborhoods in Ottawa's Riverside South community. Intersection links collector streets to the arterial network and supports multimodal access within the Riverside South growth area. ○ Both east and west approaches (Earl Armstrong Road): 1 exclusive left-turn lane, 2 through lanes, channelized right-turn lane; raised medians for channelization and safety. ○ Both north and south approaches (Portico Way and Canyon Walk Drive): 1 exclusive left-turn lane, 1 through lane, 1 right-turn lane for local traffic movements. ○ Each leg of the intersection has a marked and signalized pedestrian crosswalk. ○ Sidewalks and on all approaches provide pedestrian connectivity. ○ Pocket bike lanes are provided on the east and west legs.



Earl Armstrong Road and Town Square Place/Blanca Street

It is a signalized three-legged intersection serving Riverside South Town Centre Plaza.

- East and west approaches (Earl Armstrong Road): 1 exclusive left-turn lane, 2 through lanes, channelized right-turn lane; raised medians for channelization and safety.
- North and south approaches (Blanca Street and Town Square Place/Limebank Station Access): 1 exclusive left-turn lane, 1 through lane, 1 right-turn lane for local traffic and station access.
- Sidewalks and multi-use pathways on all approaches, ensuring pedestrian and cycling connectivity to the station and surrounding developments.
- Pocket bike lanes are provided on the east and west legs.

2.2.3. Driveways

Figure 4 illustrates the existing driveways within 200 metres of the proposed site access, confirming that there are no existing driveways within this distance.

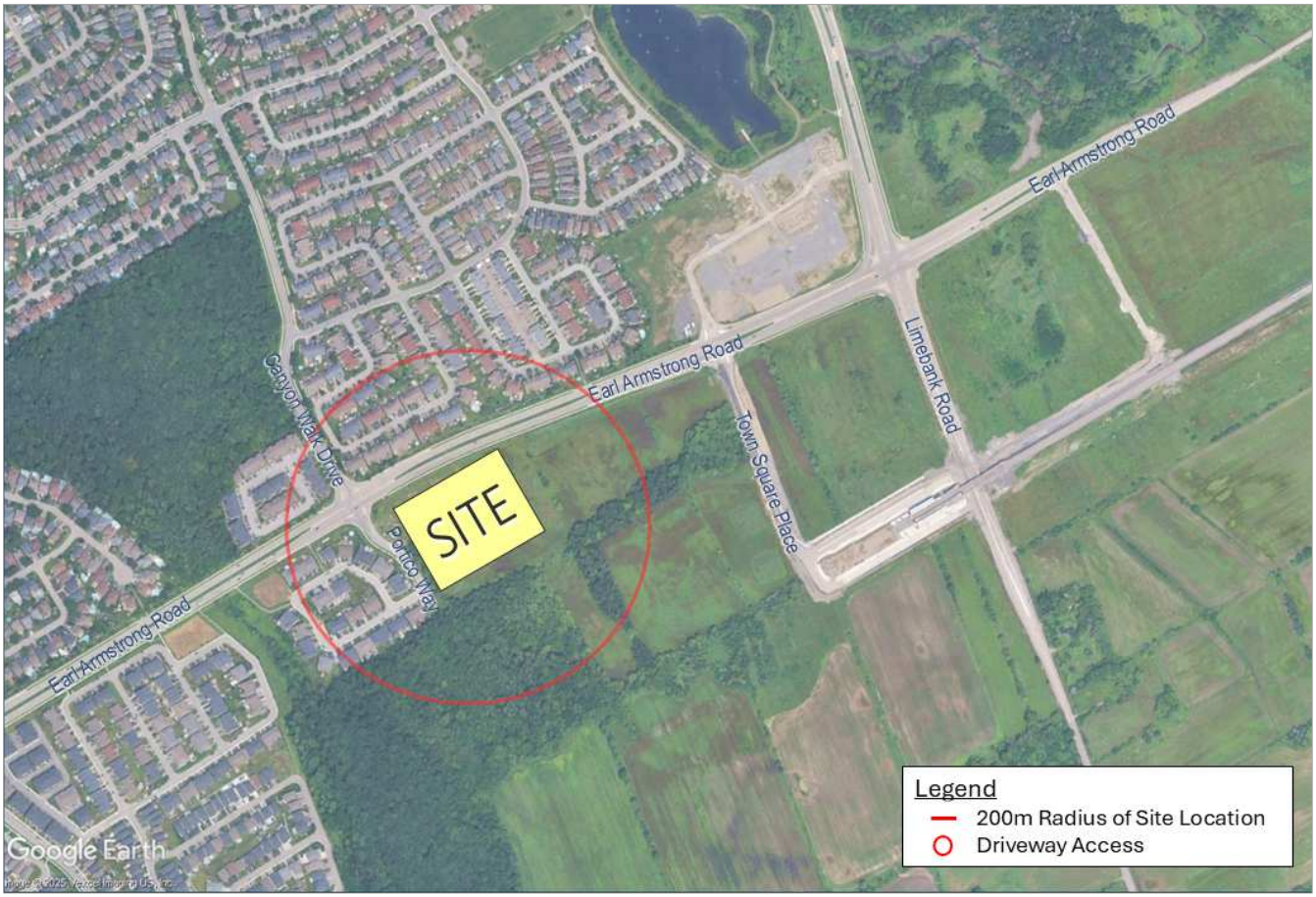


Figure 4: Existing Driveways within 200 meters

2.2.4. Pedestrian & Cycling Facilities

Figure 5 illustrates the active transportation conditions near the proposed site marked yellow, focusing on pedestrian infrastructure, and existing concrete sidewalks are well represented.

Figure 5: Active Transportation Map–GeoOttawa, Places of interest within a 5-minute walk of Limebank Station–OC Transpo

Pedestrian crosswalks are provided at all signalized intersections in the vicinity, ensuring safe and convenient crossing opportunities. The site is well-integrated into the surrounding active transportation network, with sidewalks and multi-use pathways that provide continuous pedestrian and cycling connectivity to adjacent developments, transit facilities, and Limebank Station. This established network ensures strong walkability and supports safe, convenient access for all users.

The cycling conditions near the proposed site, as shown in the Official Cycling Map for Ottawa–Gatineau, are well-developed and supportive of active transportation. According to the City of Ottawa's Ultimate Cycling Network, both Earl Armstrong Road and Limebank Road are classified as Crosstown Bikeway cycling routes. Painted bike lanes are provided on both sides of these roads, although they are not physically separated from traffic. In addition, a minimum 2-metre sidewalk is provided on both sides of each road, ensuring safe pedestrian connectivity.

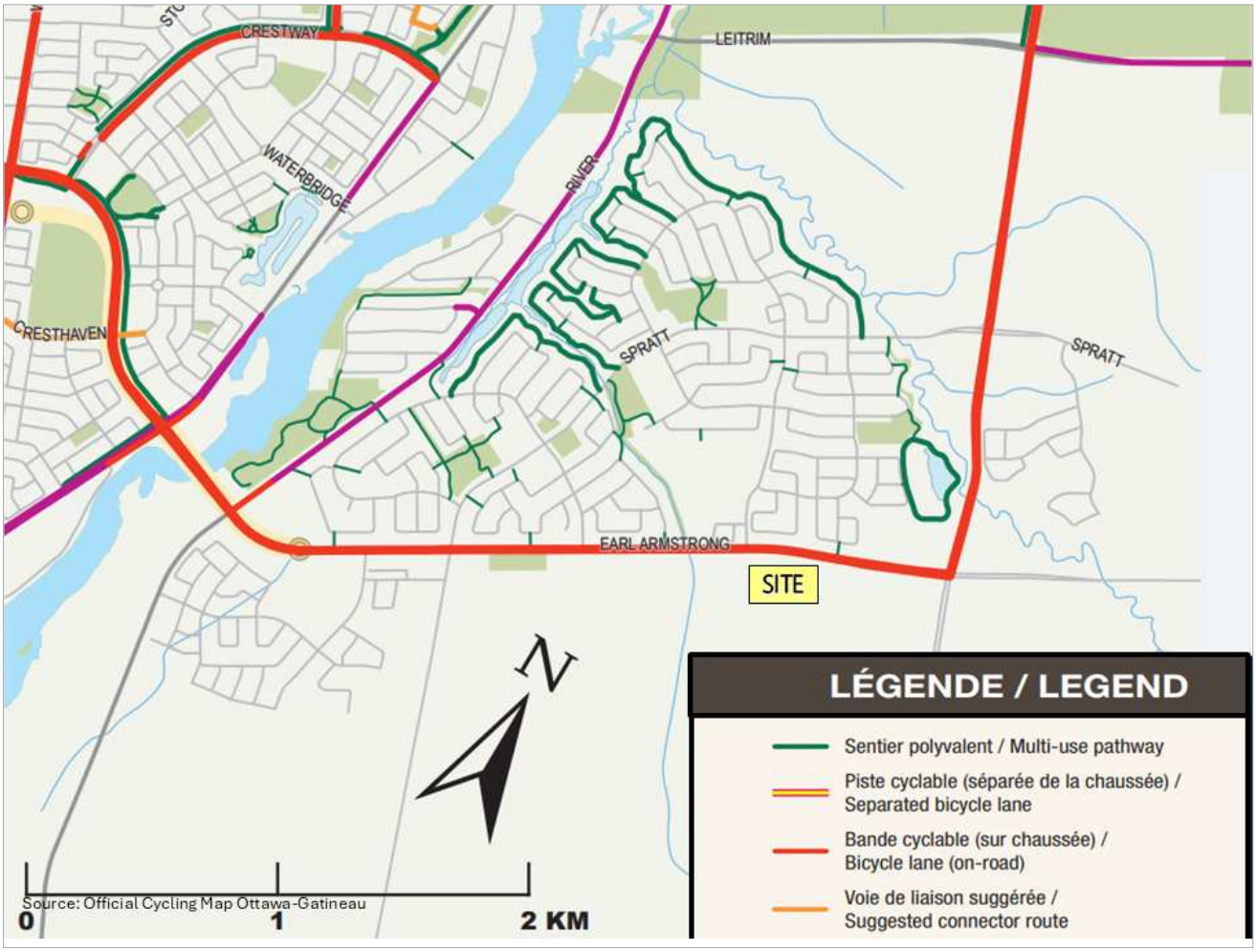


Figure 6: The Official Cycling Map (City of Ottawa-Gatineau)

2.2.5. Transit

Limebank Light Rail Transit (LRT) station is located approximately 650-metre to one-kilometre walking distance from the site. All transit information is from January 2025 and is included for general information purposes and context to the surrounding area. *Figure 7* illustrates the transit system map in the study area.

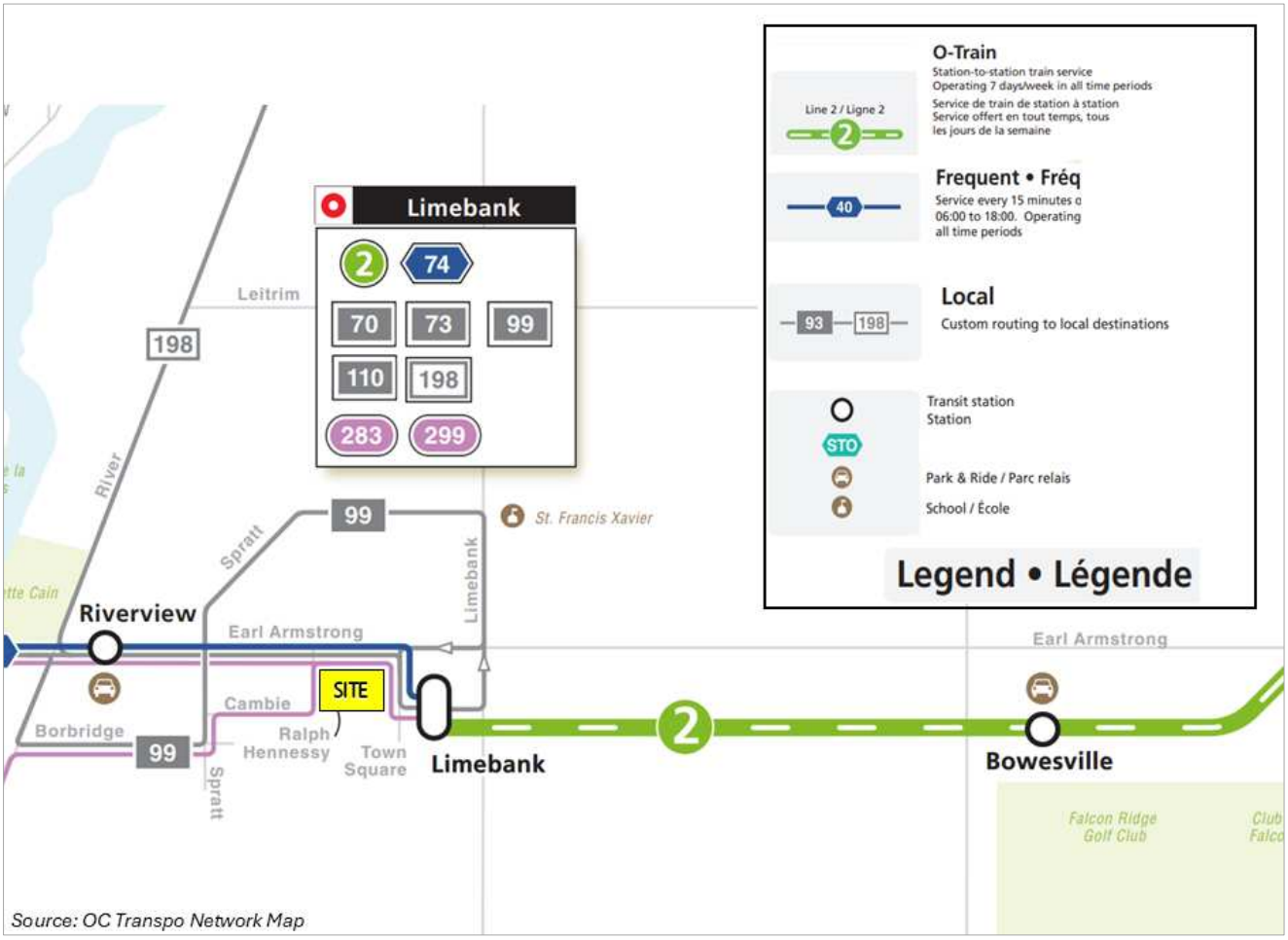


Figure 7: OC Transpo Network within the Study Area

The subject site benefits from excellent transit connectivity, anchored by Limebank Station, the southern terminus of O-Train Line 2, which provides rapid rail service every 12 minutes and links Riverside South to Bayview Station and the broader city network. Complementing the rail service, several frequent and local bus routes operate from Limebank Station. Route 74 offers frequent service to Tunney's Pasture via Barrhaven, while Route 99 connects Limebank to Riverview along the southeast Transitway. Local routes such as 110 and 198 provide neighbourhood circulation and connections to adjacent communities. This integrated transit network ensures strong multimodal accessibility for the proposed development.

The Transit Services at Limebank Station table reflects the most recent updates from OC Transpo's service changes and Stage 2 South Extension launch in early 2025. The site is highly accessible by transit, located near Limebank Station, the southern terminus of O-Train Line 2. The station provides frequent rail service every 12 minutes, seven days a week, ensuring reliable connectivity to Ottawa's core and other destinations. In addition to rail, the site is served by multiple OC Transpo bus routes.

Frequent routes include Route 74, operating every 10-15 minutes. Local routes such as 70, 73, 99, 110, 198, 283, and 299 provide additional coverage, with headways ranging from 30 to 60 minutes, and peak-only routes (283 and 299) offering service during commuter periods. Bicycle and pedestrian facilities complement these transit options, supporting multimodal access.

This comprehensive transit network positions the site as a well-connected location within Ottawa's Riverside South growth area. Descriptions of the foregoing transit routes are provided in the following *Table 1*.

Table 1: OC Transpo Route Information

Transit Route	Type	Headway	Terminals / Key Stops	Description	Location of Nearest Stop	Stop ID
O-Train Line 2	Rail	Every 12 min	Bayview ↔ Limebank (11 stations: Corso Italia, Dow's Lake, Carleton, South Keys, Greenboro, Leitrim, Bowesville)	7 days/week, all day	Limebank Lightrail Station	-
Route 74	Frequent Bus	Every 10–15 min	Limebank ↔ Tunney's Pasture via Riverview, Strandherd, Nepean Woods, Fallowfield, Baseline, Lincoln Fields	7 days/week, all day	West & East Legs of Earl Armstrong Road & Portico Way	4649 4648
Route 70	Local Bus	Every 30–60 min	Fallowfield ↔ Limebank via Barrhaven Centre, Strandherd, Riverview	Weekdays and Weekends	West & East Legs of Earl Armstrong Road & Portico Way	4649 4648
Route 73	Local Bus	Every 25–60 min	Limebank ↔ Fallowfield (peak extension to Tunney's Pasture) via Cresthaven, Longfields	Weekdays only	West & East Legs of Earl Armstrong Road & Portico Way	4649 4648
Route 99	Local Bus	Every 30 min	Limebank ↔ Barrhaven Centre via Spratt, Borbridge, Strandherd, Marketplace	Weekdays; 30 min weekends	Limebank Transit Station	3068
Route 110	Local Bus	Every 30 min	Innovation ↔ Limebank via Kanata North, Eagleson, Barrhaven, Citigate	Weekdays and Weekends	West & East Legs of Earl Armstrong Road & Portico Way	4649 4648
Route 198	Local Bus	Every 50 min	Limebank ↔ Greenboro via Earl Armstrong, River Road, Hunt Club	Weekdays only	West & East Legs of Earl Armstrong Road & Portico Way	4649 4648
Route 283	Local Bus	Every 30 min	Limebank ↔ Munster/Richmond via Prince of Wales, Perth, McBean	AM/PM peak periods (weekday only)	West & East Legs of Earl Armstrong Road & Portico Way	4649 4648
Route 299	Local Bus	Every 55 min	Manotick ↔ Limebank via River Road, Borbridge, Earl Armstrong	AM/PM peak periods (weekday only)	West & East Legs of Earl Armstrong Road & Portico Way	4649 4648

All O-Train stations and most OC Transpo buses are fully accessible, ensuring convenient travel for passengers with mobility needs. The listed routes primarily serve Riverside South and Barrhaven communities, providing connections to major hubs such as Greenboro, Limebank, and Tunney's Pasture. Among these, Routes 74 and 99 offer weekend service, while the others operate only on weekdays. Routes 283 and 299 are designed as peak-period commuter services with limited trips during morning and afternoon rush hours. Frequent routes like 74 provide shorter headways and extended service spans, making them suitable for all-day travel, whereas local routes such as 70, 73, 110, 198, 283, and 299 cater to specific neighborhoods and peak travel demands.

Detailed OC Transpo route maps are included in ***Appendix C***.

2.2.6. Area Traffic Management Measures

Both Earl Armstrong Road and Limebank Road are designated as full-load truck routes. No Area Traffic Management studies have been completed or are currently underway within the study area.

2.2.7. Existing Traffic Volumes

Existing traffic volumes at the study intersections were provided by the City of Ottawa's Transportation Data Department. The dates of the traffic counts collected are shown in *Table 2*.

Table 2: Available Turning Movement Counts

Intersections	Collected Date
Earl Armstrong Road & Limebank Road	2019-12-18 (Wednesday)
	2025-12-06 (Saturday)
Earl Armstrong Road & Canyon Walk Drive/Portico Way	2019-12-18 (Tuesday)
	2025-12-06 (Saturday)
Earl Armstrong Road & Town Square Place/Blanca Street	2025-09-03 (Wednesday)
	2025-12-06 (Saturday)

It should be noted that the turning movement counts at the Limebank Road intersection and at the Canyon Walk Drive/Portico Way intersection along Earl Armstrong Road were collected in 2019. These counts are now considered outdated (more than five years old). Furthermore, the Limebank LRT station was constructed after 2022, which may have altered existing traffic patterns within the study area.

To update the data, a compounded annual growth rate of 0.5 % has been applied to the 2019 volumes, which is based on the TRANS Regional Model projections for the 2022–2046 horizon (refer to Section 3.2.2). The model data provided by the City of Ottawa is included in ***Appendix D***.

Existing weekday morning and afternoon peak-hour traffic volumes at the study area intersections are shown in *Figure 8*.

Detailed turning movement count data is included in ***Appendix E***.

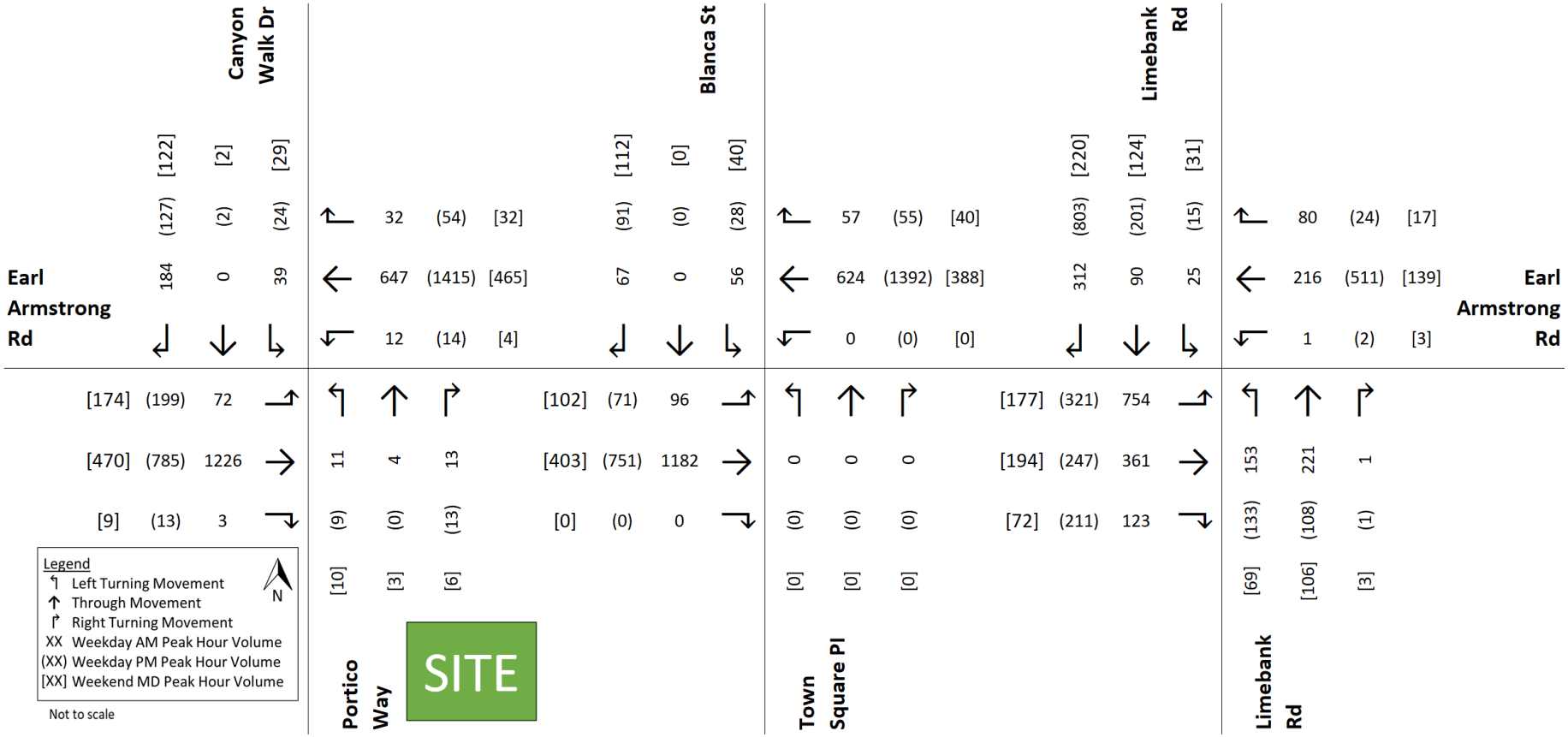


Figure 8: 2025 Existing Traffic Volumes (Balanced)

2.2.1. Existing Traffic Operations

For signalized intersections, overall intersection performance is classified using Level of Service (LOS) thresholds defined by the Highway Capacity Manual (HCM), providing a standardized evaluation of operational conditions during peak periods. The LOS score was determined based on the City's Evaluation Table in the Multimodal Level of Service Guidelines (updated May 2025) and is assessed using the volume-to-capacity (v/c) ratio for individual lane movements, as shown in Table 3.

Table 3: Existing Traffic Operations

Intersection	Lane	AM Peak Hour				PM Peak Hour				Weekend Peak Hour			
		LOS	Delay	v/c ratio	95th Queue (m)	LOS	Delay	v/c ratio	95th Queue (m)	LOS	Delay	v/c ratio	95th Queue (m)
Portico Way/Canyon Walk Dr & Earl Armstrong Rd	**Overall**	B	11.5	---	---	B	17.0	---	---	A	7.0	---	---
	EB-L	A	3.5	0.15	10.5	C	28.7	0.63	#77.1	A	6.5	0.35	34.2
	EB-T	A	7.7	0.54	131.0	A	5.9	0.34	70.9	A	4.5	0.23	31.0
	EB-R	A	4.2	0.00	0.0	A	4.2	0.01	0.0	A	3.7	0.01	0.0
	WB-L	A	5.6	0.07	2.8	A	8.0	0.04	3.2	A	3.7	0.01	1.7
	WB-T	A	7.0	0.32	56.4	B	17.8	0.72	177.9	A	4.5	0.23	30.7
	WB-R	A	5.3	0.02	0.0	A	9.0	0.04	3.3	A	3.7	0.02	3.1
	NB-L	D	45.2	0.11	7.6	D	50.4	0.08	6.6	C	21.4	0.05	3.8
	NB-T	D	44.5	0.03	3.8	D	49.8	0.01	1.7	C	21.2	0.01	1.8
	NB-R	D	44.3	0.01	0.0	D	49.8	0.01	0.0	C	21.2	0.00	0.0
	SB-L	D	47.0	0.32	18.4	D	51.6	0.21	13.2	C	22.0	0.16	7.7
	SB-T	D	44.3	0.01	1.7	D	49.9	0.01	2.7	C	21.2	0.01	1.4
	SB-R	D	45.2	0.13	19.1	D	50.5	0.09	16.3	C	21.6	0.09	9.7
Earl Armstrong Rd & Blanca St	**Overall**	E	55.6	---	---	A	7.1	---	---	B	17.0	---	---
	EB-L	C	29.8	0.57	#36.1	A	9.1	0.38	16.2	B	19.9	0.50	22.0
	EB-T	E	78.9	1.07	#188.3	A	3.8	0.31	35.9	B	18.8	0.53	31.2
	WB-T	C	26.9	0.59	74.6	A	5.6	0.57	87.5	B	18.7	0.51	30.1
	WB-R	C	21.0	0.04	8.3	A	2.8	0.04	3.1	B	16.0	0.03	5.5
	SB-L	B	12.7	0.07	12.3	D	45.6	0.19	14.2	A	6.2	0.05	6.9
	SB-R	B	12.5	0.05	6.5	D	48.0	0.43	26.7	A	6.4	0.08	6.9
Limebank Rd & Earl Armstrong Rd	**Overall**	D	44.6	---	---	F	144.7	---	---	C	29.9	---	---
	EB-L	E	63.6	0.95	#148.5	E	73.8	0.90	#62.7	D	43.5	0.59	32.4
	EB-T	B	14.2	0.21	44.9	C	21.7	0.19	32.1	B	14.1	0.13	26.5
	EB-R	B	13.3	0.09	7.9	C	21.5	0.15	15.7	B	13.5	0.05	0.0
	WB-L	E	63.1	0.08	1.1	E	58.7	0.07	1.5	D	47.8	0.09	1.8
	WB-T	C	33.0	0.24	40.0	D	35.4	0.52	75.6	B	18.8	0.12	21.0
	WB-R	C	31.0	0.06	0.0	C	28.5	0.02	0.0	B	17.9	0.01	0.0
	NB-L	E	62.5	0.69	#37.9	D	54.6	0.55	26.5	D	43.6	0.37	15.0
	NB-T	D	43.2	0.37	38.6	C	28.8	0.11	17.4	C	33.1	0.19	16.3
	NB-R	D	39.8	0.00	0.0	C	27.7	0.00	0.0	C	31.9	0.00	0.0
	SB-L	E	62.0	0.38	8.9	E	58.2	0.24	5.5	D	44.9	0.24	8.4
	SB-T	D	47.0	0.21	18.8	C	34.8	0.25	30.6	D	35.3	0.25	19.2
	SB-R	D	47.7	0.24	26.3	F	376.1	1.72	#300.0	C	34.8	0.15	17.8

Notes: Saturation flow rate of 1800 veh/h/lane, Peak Hour Factor = 0.90, m = metered queue, # = volume for the 95th percentile cycle exceeds capacity

The existing traffic operations at the three study intersections generally perform at acceptable levels during all peak periods, with overall intersection LOS values ranging from A to C in the AM and Weekend peaks, and localized PM peak constraints typical of a busy arterial corridor. At Portico Way/Canyon Walk Drive & Earl Armstrong Road, the intersection operates well with overall LOS B in both AM and PM peaks, with only minor delay experienced by the southbound left-turn movement due to opposing arterial traffic, while all other movements remain within good operating conditions and queues are well within available storage. Operations at Earl Armstrong Road & Blanca Street are highly efficient, with overall LOS A during all peak hours and minimal delay across all movements, indicating substantial reserve capacity and no operational issues. At Limebank Road & Earl Armstrong Road, higher delays occur during the PM peak, resulting in an overall LOS F driven by heavy arterial volumes on both corridors; however, these conditions are typical for a major intersection within a commuter corridor. Although several turning movements experience elevated PM delays and longer queues, v/c ratios remain below or near capacity, and operations do not indicate systemic oversaturation or spillback concerns. AM and Weekend peaks operate acceptably at LOS C overall, with significantly lower delay and queuing compared to the PM peak. Overall, the intersections function adequately under existing traffic demand.

Detailed Synchro worksheets are provided in **Appendix F**

2.2.2. Collision History

Collision data for the period from 2019 to 2024 on Earl Armstrong Road, Limebank Road was provided by the City of Ottawa. The data was reviewed to identify any collision patterns.

Table 4: Collision Data Summary

		Earl Armstrong Road @ Limebank Road	Earl Armstrong Road @ Town Square Place	Earl Armstrong Road @ Canyon Walk Drive/Portico Way
Collision Year	2019	7	-	2
	2020	2	-	1
	2021	4	-	2
	2022	6	-	4
	2024	10	-	2
Classification	Non-Fatal Injury	5	-	3
	Property Damage Only	24	-	7
	Non-Reportable	0	-	0
Collision Type	Rear End	22	-	2
	Sideswipe	0	-	0
	Turning Movement	3	-	0
	Angle	2	-	5
	SMV Other	2	-	0
Environment	Clear	26	-	3
	Rain	1	-	8
	Freezing Rain	0	-	0
	Snow	2	-	0
	Strong Wind	0	-	2
	Other	0	-	0
Light	Dawn	0	-	0
	Daylight	25	-	6
	Dusk	1	-	1
	Dark	3	-	3

The collision record indicates that rear-end crashes at the signalized Earl Armstrong/Limebank intersection dominate (≈76%), primarily under clear, daylight conditions, pointing to queueing and driver behavior rather than visibility or weather issues. At Earl Armstrong/Canyon Walk–Portico Way, collisions are more mixed, with angle crashes (≈38%) and a high share occurring in dark and wet/icy conditions, suggesting conspicuity, friction, and minor-street yield compliance challenges. Recommended measures include signal/marking conspicuity and operational tuning at Limebank, and lighting, sign conspicuity, approach speed management, and friction improvements at Canyon Walk, with control upgrades subject to warrants.

Copies of the collision summary report are included in ***Appendix G***.

2.3. Planned Conditions

2.3.1. Changes to the Study Area Transportation Network

2.3.1.1. Riverside South Secondary Plan

The subject development is located within the Riverside South area and is therefore subject to the planning policies outlined in the Riverside South Secondary Plan. From a transportation perspective the plans guiding principles include planning for fully connected urban streets with sustainable modes of transport, concentrating density and building heights around O-Train stations, ensuring high quality public facilities and infrastructure, and providing safe and direct access to transit, schools, parks, and local destinations for pedestrians and cyclists.

Overall, the secondary plan aims to develop a Town Center that will consist of multiple functions including downtown, commercial, parks, schools, and industrial area the Riverside South. The plan includes mobility policies to prioritize the safe movement of people for all modes of transportation with an emphasis on active transportation.

2.3.1.2. Transportation Master Plan Update (2025)

Upon reviewing the Map D3 (Ultimate Transit Network) of the Capital Infrastructure Plan for City of Ottawa's Transportation Master Plan update, multiple transit projects that can impact the proposed development were identified. Noticeably, the South Transitway project from Limebank station to Borrisokane Road will provide rapid bus transit for east-west transit access to destinations within Riverside South and Barhaven. Further transit projects include O-Train infrastructure modifications projects along line 2 near Walkley station to accommodate 10-minute headways on line 2 by 2046 in support development in Riverside South and anticipated ridership growth.

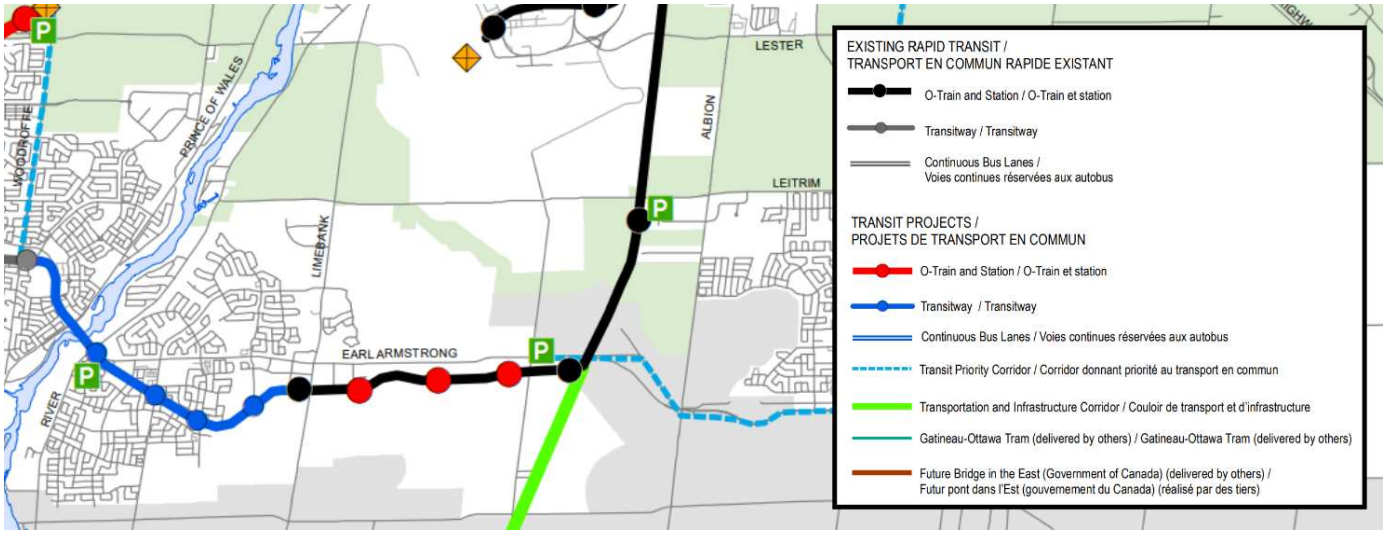


Figure 9: Transit Network Ultimate – City of Ottawa Transportation Master Plan Update – Phase 2 - Capital Infrastructure Plan

Upon reviewing the Map B2 (Road Network – Priority) of the Capital Infrastructure Plan for City of Ottawa's Transportation Master Plan update, two road projects along Earl Armstrong Road were identified. A road widening from Limebank Road to Bowesville Road from two to four lanes will provide capacity for growth in Riverside South. A new road extending Earl Armstrong Road from Bowesville Station to Bank Street will provide capacity and connectivity for growth in Riverside South and Findlay Creek. This extension is anticipated to alleviate congestion on Albion Road and support the movement of goods.

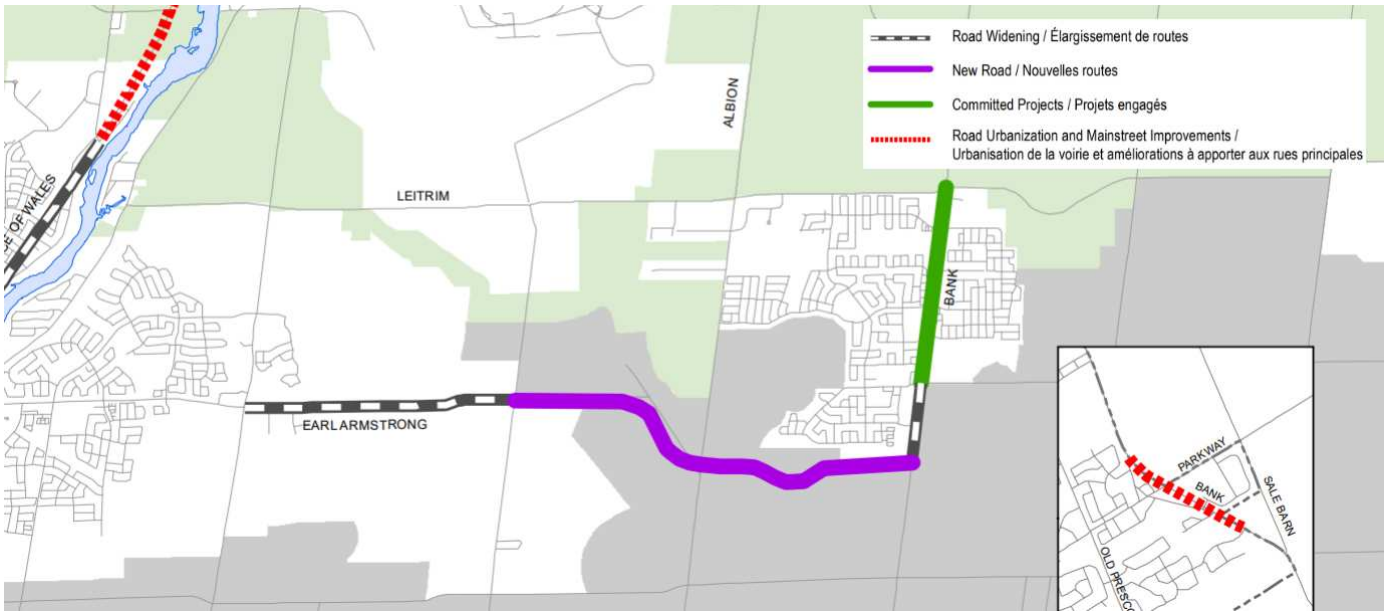


Figure 10: Road Network - Priority – City of Ottawa Transportation Master Plan Update – Phase 2 - Capital Infrastructure Plan

2.3.1.3. Crosstown Bikeway Network (2023)

According to the Ottawa Cycling Plan, Earl Armstrong Road west of Limebank Road within the study area is classified as a Crosstown bikeway. Crosstown bikeways typically feature enhanced infrastructure such as separated bike lanes, multi-use pathways, or paved shoulders, and are prioritized for upgrades and maintenance.

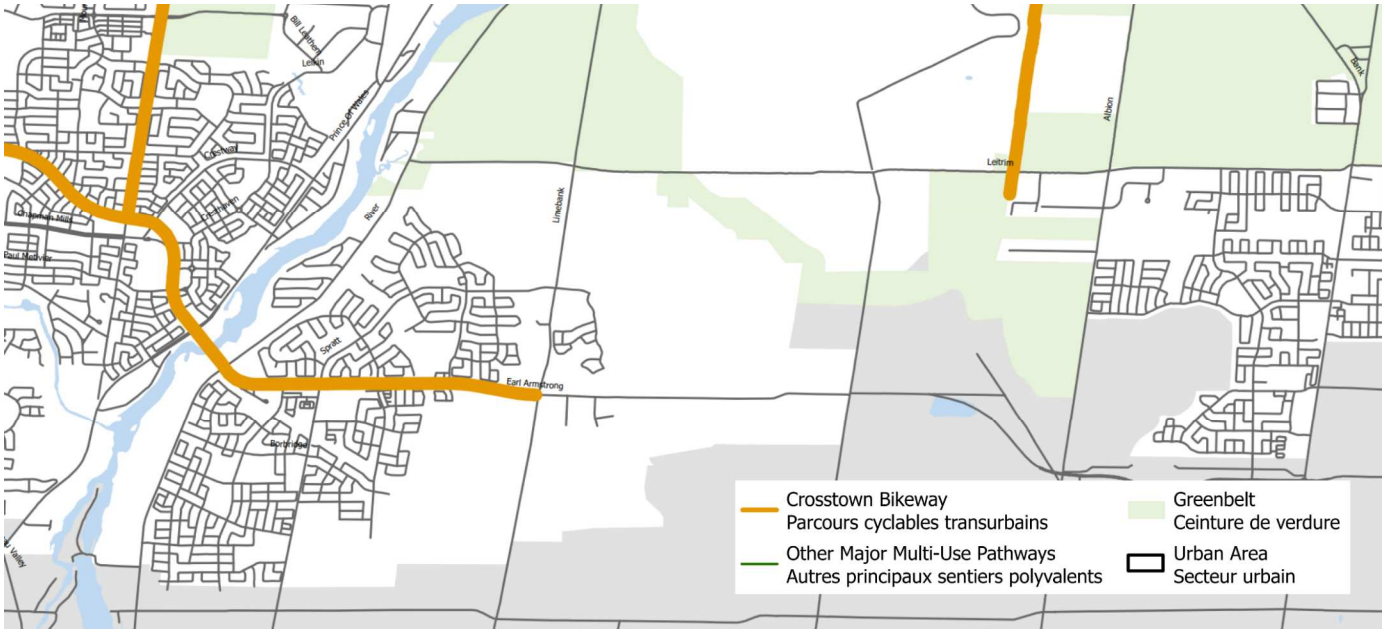


Figure 11: City of Ottawa's 2013 Transportation Master Plan, Map 1: Cycling Network

The site is located immediately south of Earl Armstrong Road and directly adjacent to a designated Crosstown bikeway, providing a continuous east–west cycling corridor within the Riverside South community. Both Earl Armstrong Road and Limebank Road are equipped with pocket bike lanes, enhancing cycling accessibility. Overall, the site is integrated into Ottawa's cycling infrastructure, with excellent access to commuter routes. Future planned cycling projects are outlined in Map C2 of the Capital infrastructure plan illustrated in Figure 12. The Limebank Station Pathway is proposed nearby the study area will further enhance Cycling connectivity in the area.

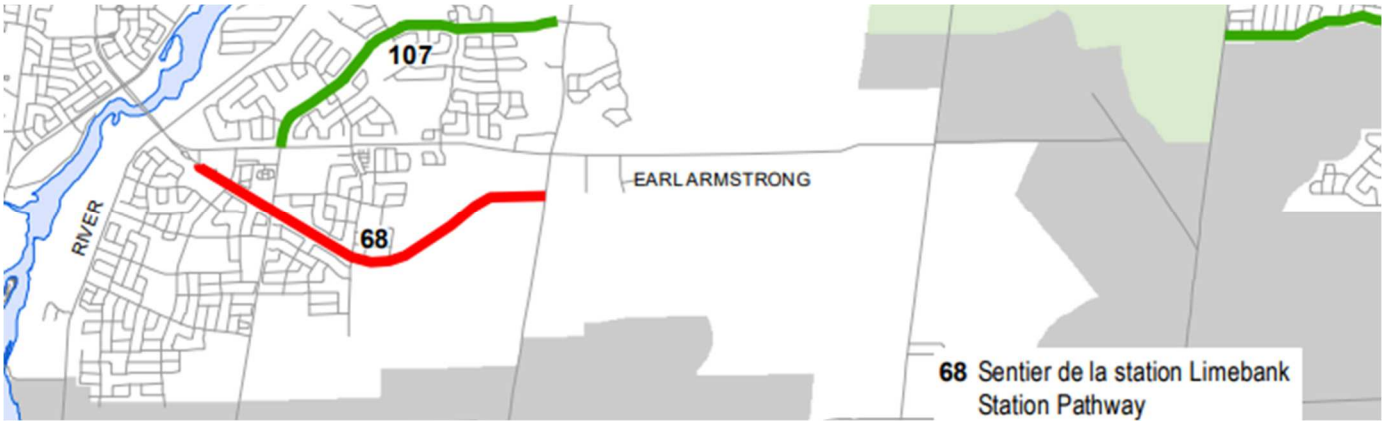


Figure 12: Map C2 (Cycling projects with Prioritization) – Capital Infrastructure Plan

2.3.1.4. Traffic Calming Measures

The traffic calming measures along Earl Armstrong Road from River Road to Limebank Road are planned and submitted on May 12, 2025. Feedback has been received since 2022 from pedestrians and road users requesting a reduction of the speed limit. The local school board trustee has also raised the matter. That the Public Works and Infrastructure Committee recommend that Council approve the reduction of the speed limit on Earl Armstrong Road from River Road to Limebank Road to 60 km/h.

2.3.1.5. Other Area Developments

The City of Ottawa's Development Applications website was reviewed to identify proposed developments within the study area. One proposed development identified near the study area is located at 980 Earl Armstrong Road and 4700 Limebank Road. The development area is bordered by Portico Way, Earl Armstrong Road, Limebank Road, and undeveloped land to the south and west. This development consists of a proposed shopping center addressed in the master site plan for the Town Square Commercial Center, issued in June 2022. The plan includes approximately 20 commercial units. The development at 980 Earl Armstrong Road is planned to construct eight two lane undivided urban streets. These streets are a combination of local and collector streets with target speeds ranging from 30 to 40 km/h. A detailed master site plan is provided in ***Appendix H***.

2.4. Study Area and Time Periods

2.4.1. Study Area

The proposed study area for this proposed development includes the following intersections:

- Earl Armstrong Road and Limebank Road
- Earl Armstrong Road and Town Square Place/Blanca Street
- Earl Armstrong Road and Canyon Walk Drive/Portico Way

2.4.2. Time Periods

Nursing homes attract significantly more trips during weekdays than weekends due to operational staff shifts and scheduled deliveries that contribute heavily to weekday traffic volumes. Although weekend visitor traffic may be relatively steady, the lack of operational and logistical flows means weekend traffic is generally lower.

The study provided an analysis of the weekday morning and afternoon peak hours of travel demand which was determined to represent the "worst-case" scenario in terms of weekday commuter traffic conditions.

2.4.3. Horizon Years

The proposed development, at the time of writing, is anticipated to be achieved by the end of 2027. The scope of the transportation assessment includes the following horizon years:

- 2025 Existing Conditions
- 2027 Future Background Conditions
- 2027 Future Total Conditions (full build-out year)
- 2032 Future Background Conditions
- 2032 Future Total Conditions (5 years after the build-out year)

2.5. Exemption Review

The Exemptions Review table from the City of Ottawa Transportation Impact Assessment Guidelines is summarized in *Table 5*.

Table 5: Exemptions Review

Module	Element	Exemption Considerations	Exempt ? (Yes/No)
4.1 Development Design	4.1.1 Design for Sustainable Modes	All	No
	4.1.2 Circulation and Access	All site plan and zoning by-law applications	No
	4.1.3 New Street Networks	Only required for plans for subdivision	Yes
4.2 Parking	4.2.1 Parking Supply	All site plan and zoning by-law applications	No
	4.2.2 Spillover Parking	Section removed from TIA	Yes
4.3 Boundary Street Design	N/A	All	No
4.5 Transportation Demand Management	4.5.1 Context for TDM	All	No
	4.5.2 Need and Opportunity	All	No
	4.5.3 TDM Program	All	No
4.6 Neighbourhood Traffic Calming	N/A	If the development meets all of the following criteria along the route(s) site generated traffic is expected to utilize between an arterial road and the site's access: 1. Access to Collector or Local; 2. "Significant sensitive land use presence" exists, where there is at least two of the following adjacent to the subject street segment: o School (within 250m walking distance); o Park; o Retirement / Older Adult Facility (i.e. long-term care and retirement homes); o Licenced Child Care Centre; o Community Centre; or o 50%, or greater, of adjacent property along the route(s) is occupied by residential lands and a minimum of 10 occupied residential units are present on the route; 3. Application is for Zoning By-Law Amendment or Draft Plan of Subdivision; 4. At least 75 site-generated auto trips; 5. Site Trip Infiltration is expected. Site traffic will increase peak hour vehicle volumes along the route by 50% or more.	Yes
4.7 Transit	4.7.1 Transit Route Capacity	> 75 site transit trips	Yes
	4.7.2 Transit Priority Requirements	> 75 site auto trips	Yes
4.8 Network Concept	N/A	When proposed development generates > 200 person-trips during the peak hour in excess of the equivalent volume permitted by established zoning.	Yes
4.9 Intersection Design	4.9.1 Intersection Controls (including site accesses)	> 75 site auto trips	No
	4.9.2 Intersection Design	> 75 site auto trips	No

3. FORECASTING

3.1. Development-generated Travel Demand

3.1.1. Trip Generation and Mode Shares

3.1.1.1. Base Trip Generation Rate

Trip generation estimates for the proposed development were derived using the ITE Trip Generation Manual, 12th Edition, under Land Use Code (LUC) 620 – Nursing Home. The trip generation is summarized in *Table 6*.

Table 6: Summary of Trip Generation

ITE Land Use	Size	Independent Variable	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend Peak Hour		
			In	Out	Total	In	Out	Total	In	Out	Total
Nursing Home (LUC 620)	256 Beds	Number of beds	32 (72%)	13 (28%)	45 (100%)	18 (33%)	38 (67%)	56 (100%)	46 (50%)	46 (50%)	92 (100%)

The proposed development is expected to generate a total of 45 two-way person trips during the AM peak period, 56 two-way person trips in the PM peak, and 92 trips during the Weekend peak period.

3.1.1.2. Person-Trips and Mode Shares

The ITE Trip Generation Manual recommends using a vehicle occupancy factor of 1.28 person-trips per vehicle trip to convert auto trips to person-trips. Based on this factor, the proposed development is expected to generate approximately 56 additional person-trips during the weekday AM peak hour, including 41 inbound and 17 outbound trips, and 72 additional person-trips during the weekday PM peak hour, including 23 inbound and 49 outbound trips.

Mode share estimates were derived from the 2020 TRANS Trip Generation Manual Summary Report for the South Gloucester/Leitrim district, based on data from the National Capital Region Origin-Destination (OD) Survey. The proposed development is a nursing home, mode shares for employment generators were used due to the regular nature of staff and service provider trips, which are typically tied to shift schedules.

While the TRANS report provides mode shares for trips to employment generators, these shares are generally applicable to outbound trips as well, given the tendency of employees to use the same mode for both directions. Therefore, AM peak mode shares were used to approximate PM peak travel behaviour. The typical mode share distribution for land uses in South Gloucester/Leitrim is presented in *Table 7*.

Table 7: 2020 TRANS Mode Shares – South Gloucester/Leitrim

Travel Mode	Employment Generator
Auto-Driver	89%
Auto-Passenger	7%
Transit	2%
Cycling	1%
Walking	1%
Total	100 %

Given the site's proximity (approximately 650 m to 1 km) to Limebank LRT Station, a major OC Transpo transit hub, a modest increase in transit and walking mode shares is considered achievable. The proposed mode share targets are summarized in *Table 8*.

Table 8: Proposed Development Mode Shares

Travel Mode	Employment Generator
Auto-Driver	80%
Auto-Passenger	7%
Transit	7%
Cycling	3%
Walking	3%
Total	100 %

Applying these mode share targets to the estimated peak hour person-trips, the projected person-trips by mode are summarized in *Table 9*.

Table 9: Trip Generation by Mode

Travel Mode	Modal Share		Weekday AM Peak Hour			Weekday PM Peak Hour		
			In	Out	Total	In	Out	Total
Nursing Home	**Auto Driver**	**80%**	**33**	**14**	**45**	**18**	**39**	**58**
	Auto Passenger	7%	3	1	4	2	3	5
	Transit	7%	3	1	4	2	3	5
	Cycling	3%	1	1	2	1	1	2
	Walking	3%	1	1	2	1	1	2

As shown, the proposed development is expected to generate 45 and 58 two-way auto trips during the weekday AM and PM peak hours, respectively.

3.1.2. Trip Distribution and Assignment

To understand the travel patterns associated with the proposed development, the Origin-Destination (OD) Survey for the South Gloucester/Leitrim district was reviewed. The survey provides insights into existing travel behaviour in the area, which were used to inform the directional distribution of site-generated trips. The following trip distribution has been assumed:

- 55% to/from the North
- 5% to/from the South
- 5% to/from the East
- 35% to/from the West

Based on the estimated number of new auto trips and the applied trip distribution, projected site-generated traffic volumes at each study area intersection are shown in *Figure 13*.

Figure 14 illustrates the corresponding assigned vehicle volumes for both the AM and PM weekday peak hours.

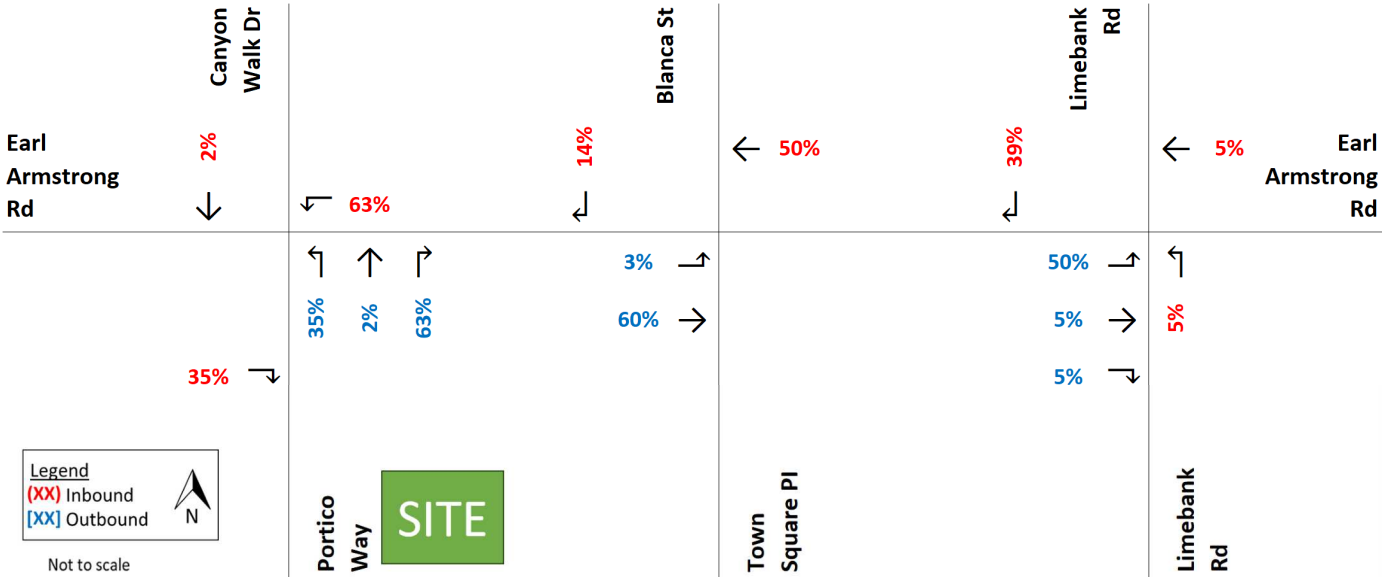


Figure 13: Proposed Development-Generated Trips Assignment (%)

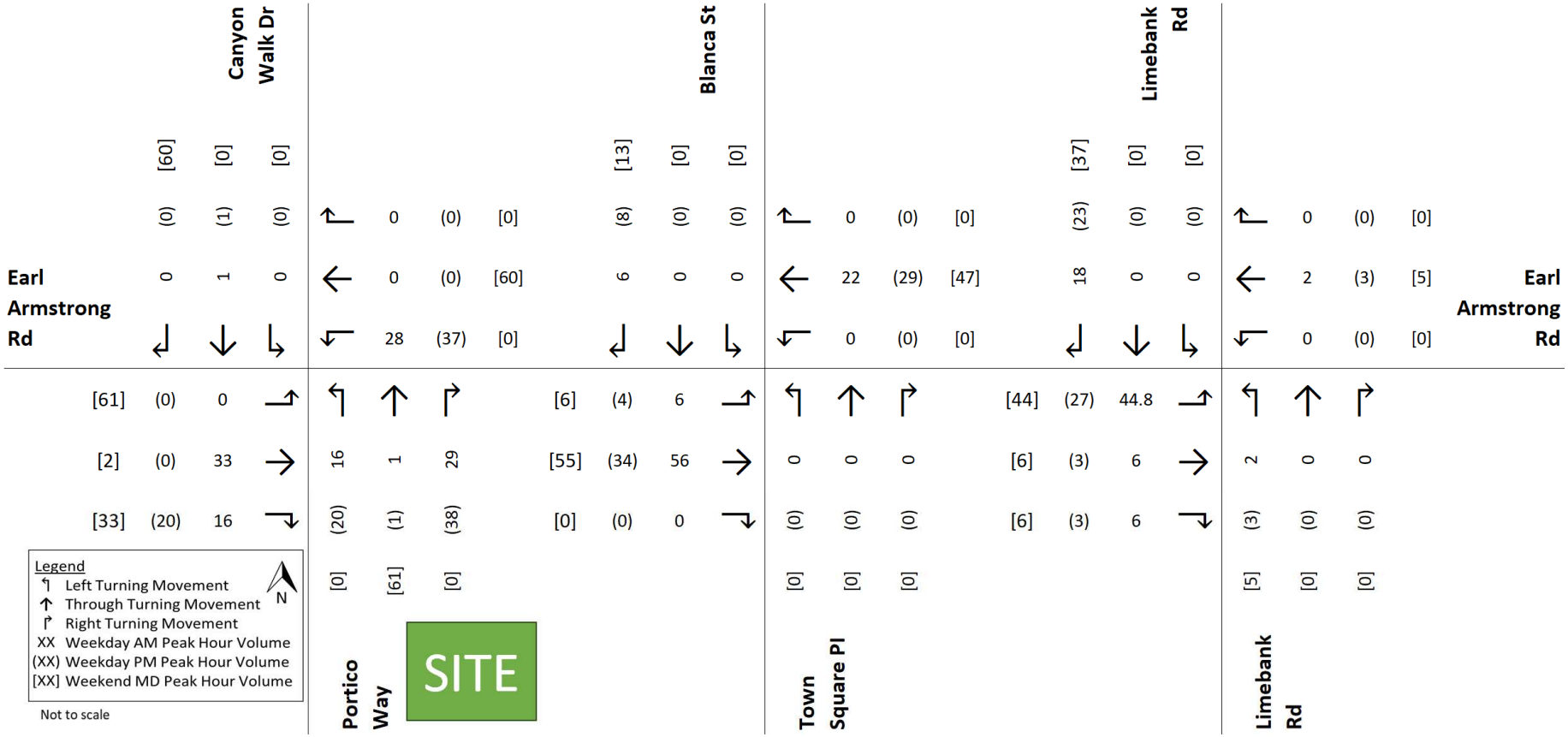


Figure 14: New Site Generated Trip Volumes

3.2. Background Network Travel Demands

3.2.1. Transportation Network Plans

As discussed in Section 2.3, no planned transportation infrastructure projects within the study horizon are expected to have a notable impact on traffic volumes or travel patterns in the study area.

3.2.2. Background Growth

A review of the TRANS Regional Model projections for the 2022 and 2046 horizons was conducted to determine background growth rates for key study area roadways. The directional growth rates are summarized in *Table 11*, and supporting model plots are provided in ***Appendix D***.

Table 10: Growth Rates - TRANS Regional Model Projections

Street Name	TRANS Rate			
	Eastbound	Westbound	Northbound	Southbound
Earl Armstrong Road	+1.80%	+5.30%	-	-
Limebank Road	-	-	+2.50%	+4.30%

Based on the TRANS Regional Model projections for the 2022–2046 horizon, directional growth rates vary by corridor: Earl Armstrong Road shows a total increase of +1.80% eastbound and +5.30% westbound, while Limebank Road indicates +2.50% northbound and +4.30% southbound. These percentages represent cumulative growth over 24 years, which equates to annual compounded rates of approximately 0.22% per year.

For planning purposes, an average annual growth rate of 0.50% will be applied to future horizon volumes to inform traffic demand estimates and assess the long-term impacts of the proposed development.

3.2.3. Other Adjacent Developments

All current adjacent development applications and future potential developments within the study area were previously identified in Section 2.3.1.5. These developments have been incorporated into the preparation of future background traffic volume projections. They represent specific areas of growth within the study area and are therefore considered in addition to the general background growth rate discussed earlier.

3.2.4. Future Background Traffic Volumes

Figure 15 illustrates the projected background traffic volumes for the 2027 horizon, while *Figure 16* presents volumes for the 2032 horizon.

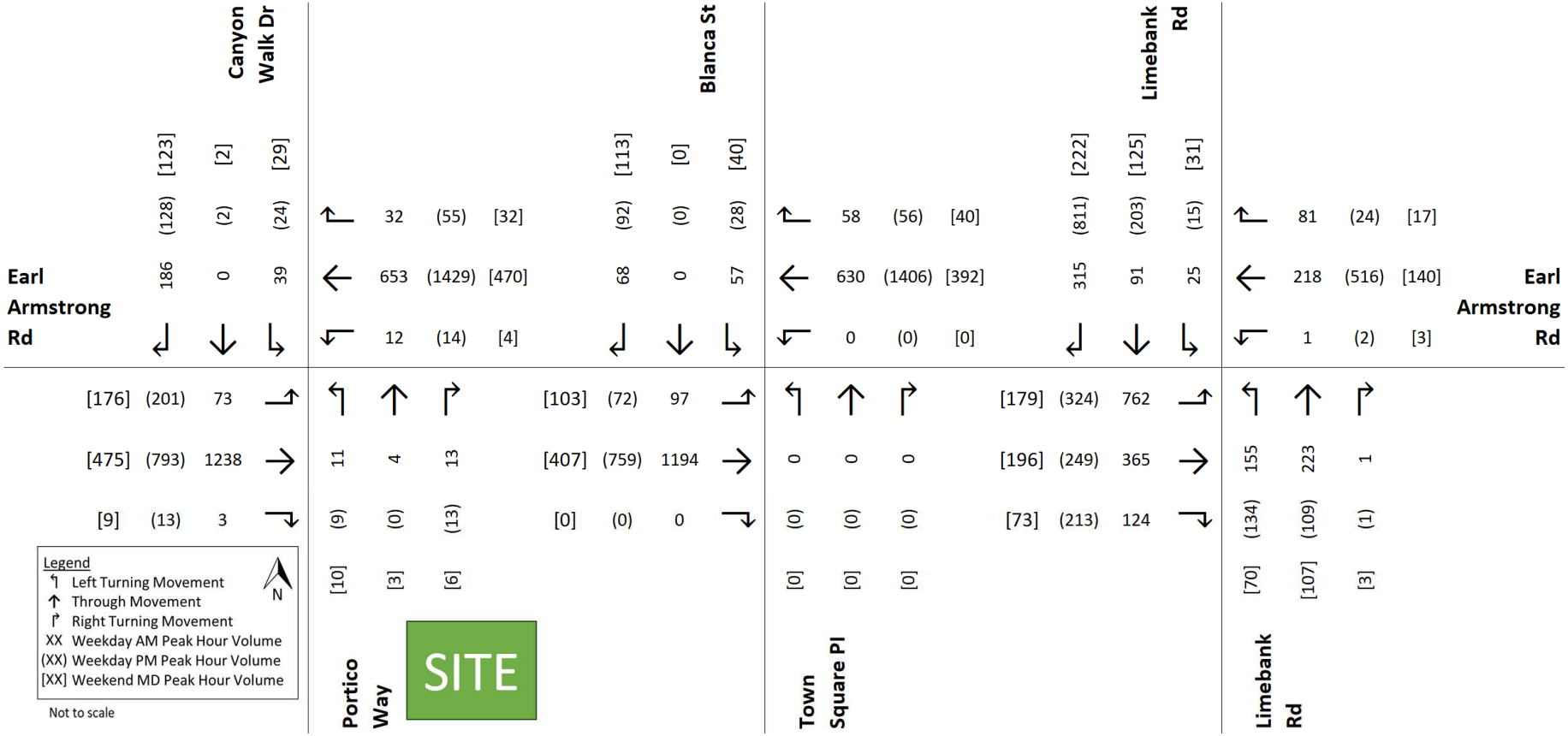


Figure 15: 2027 Background Traffic Volumes

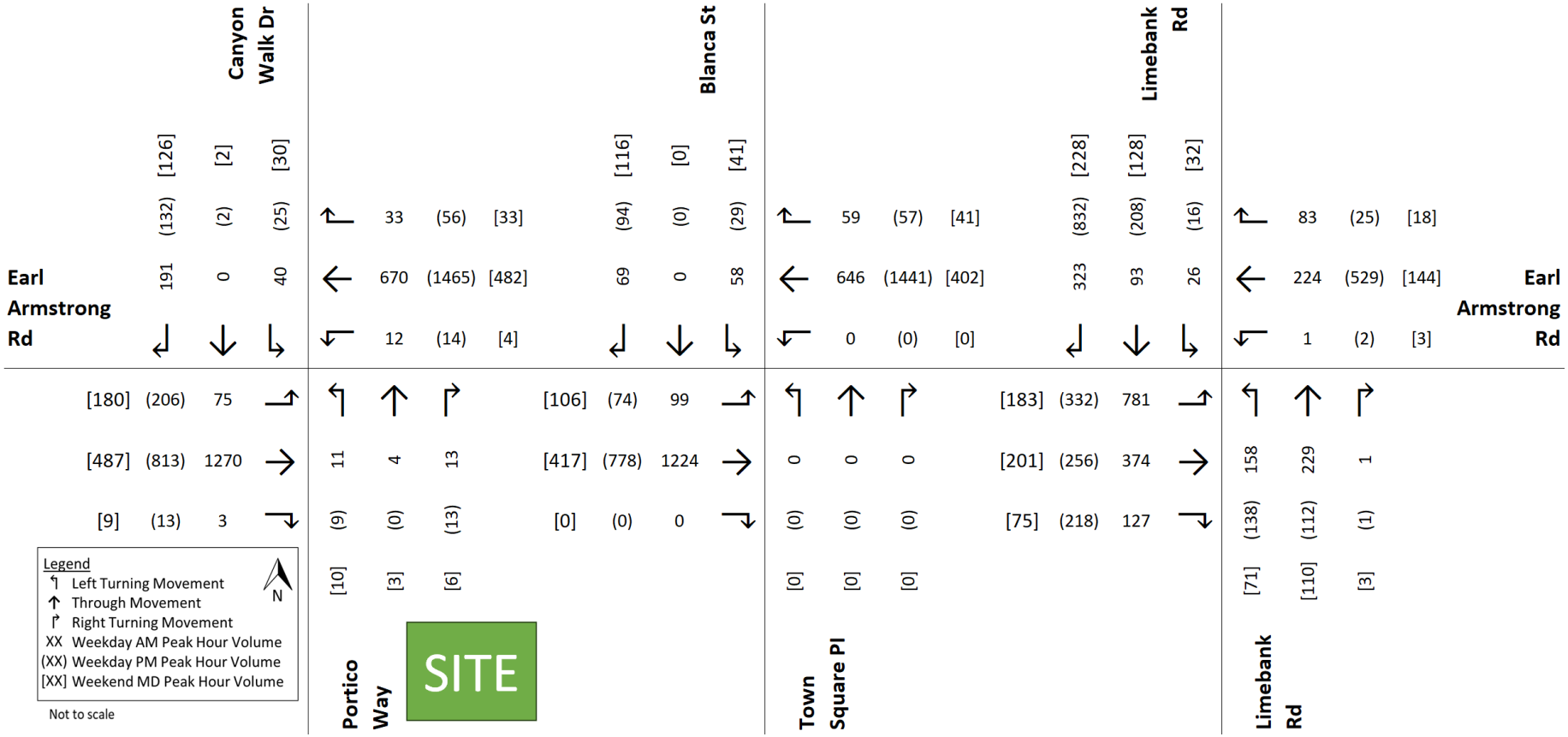


Figure 16: 2032 Background Traffic Volumes

3.2.5. Future Total Traffic Volumes

The total traffic volumes for 2027 and 2032 future horizons, which include both background and site-generated traffic, are illustrated in *Figure 17* and *Figure 18*, respectively.

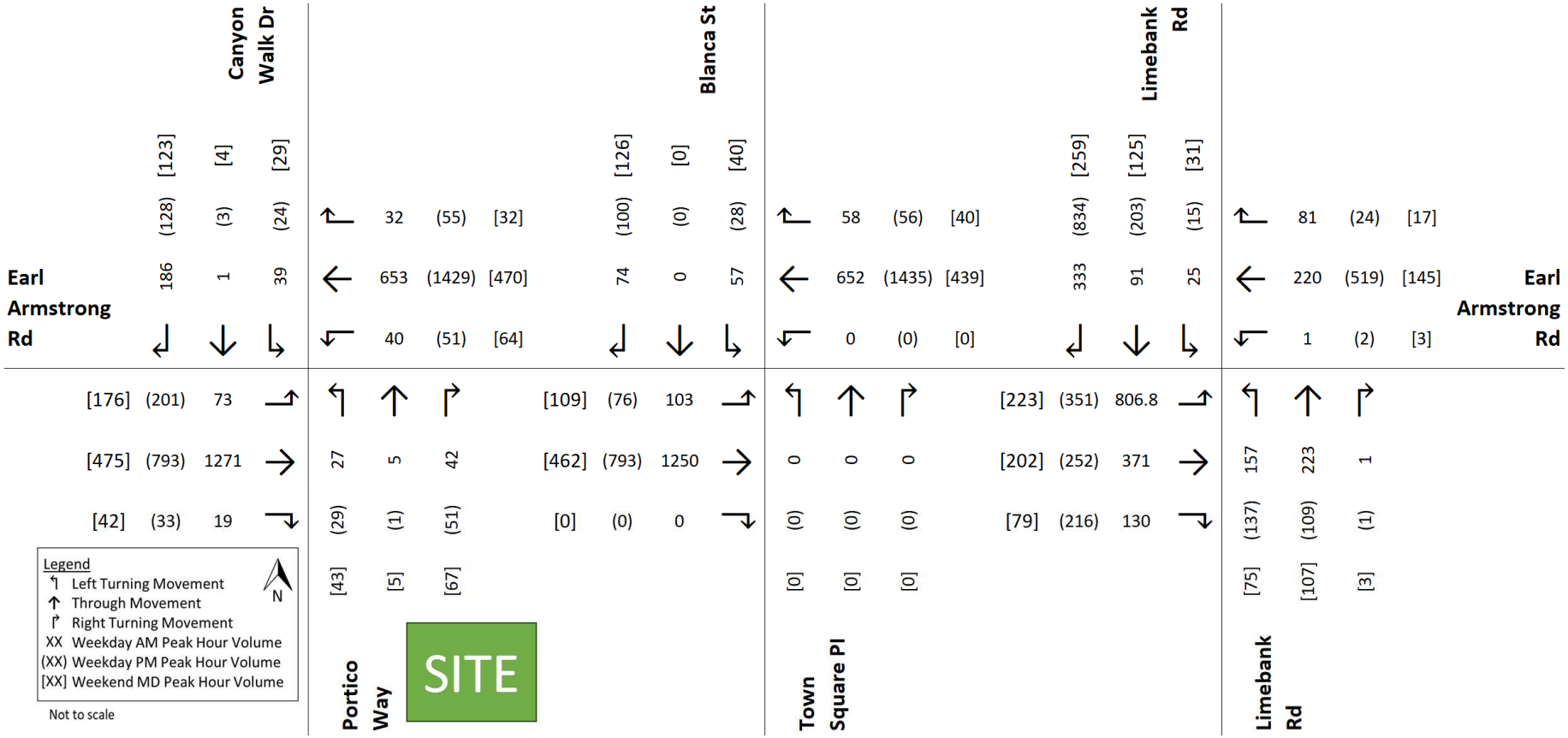


Figure 17: 2027 Total Traffic Volumes

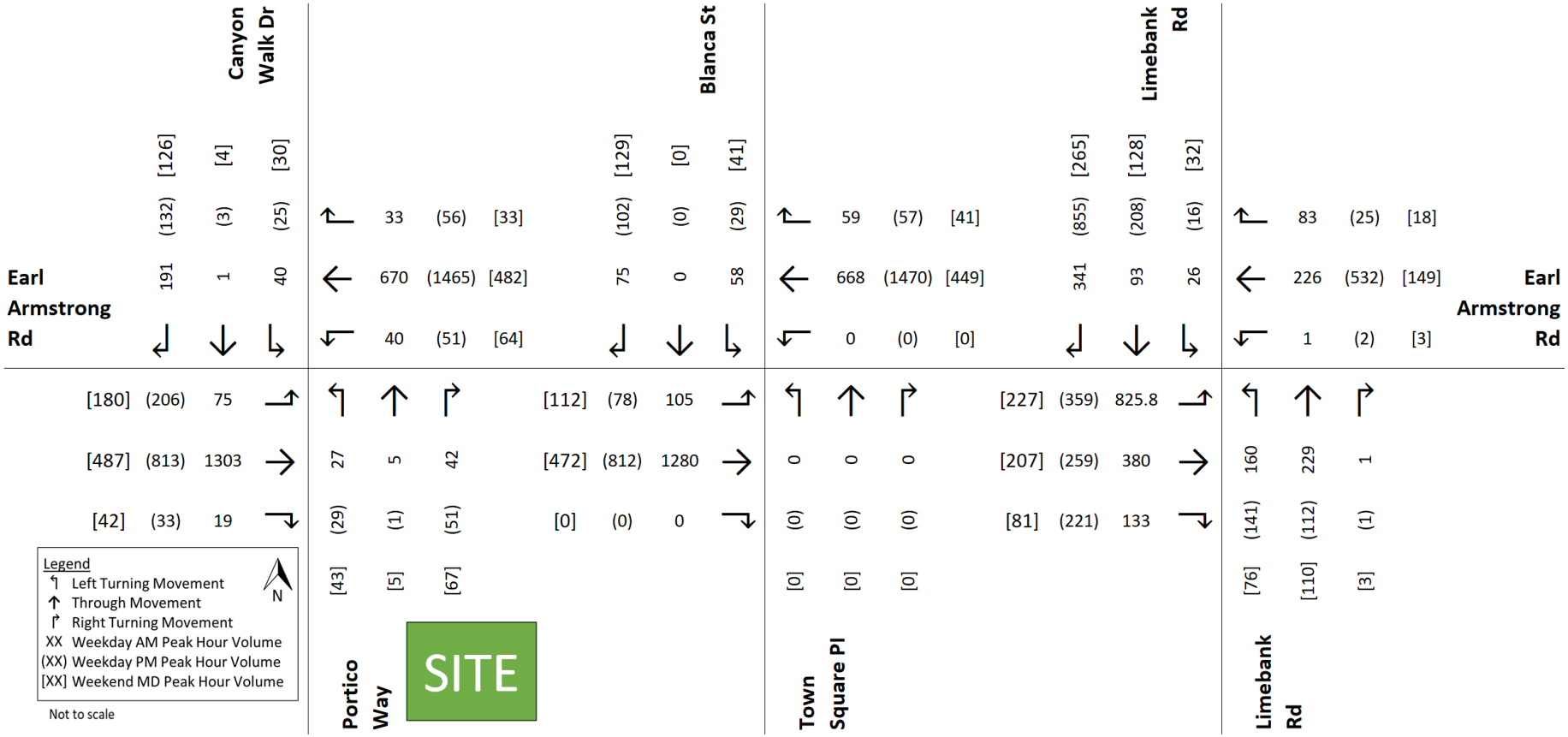


Figure 18: 2032 Total Traffic Volumes

3.3. Demand Rationalization

The existing traffic analysis for 2025 (refer to Section 2.2.9), combined with future background traffic projections for 2027 and 2032 (refer to Sections 3.2.3 and 3.2.4), identifies a capacity constraint for east-west traffic at signalized intersections along Earl Armstrong Road within the study area. This constraint is expected to persist into future horizon years, even in the absence of the proposed development.

Earl Armstrong Road functions as a major arterial corridor, connecting residential, commercial, and institutional land uses. As such, it experiences high traffic volumes during weekday peak hours, particularly in the east-west direction.

To address these challenges, a combination of operational improvements, infrastructure upgrades, and travel demand management strategies should be considered. Potential solutions include:

- Encouraging carpooling: Introduce incentives to reduce single-occupancy vehicle use.
- Expanding transit services: Improve frequency, reliability, and affordability to increase transit ridership.
- Promoting active transportation: Invest in safe and connected bike lanes and pedestrian pathways.
- Coordinating with local institutions: Work with businesses and schools to stagger start times and reduce peak-hour congestion.
- Supporting flexible work arrangements: Encourage remote work policies to reduce peak-period travel demand.

4. Analysis

4.1. Development Design

4.1.1. Design for Sustainable Modes

For consistency with the City of Ottawa's Urban Design Guidelines and transportation policies, new developments shall provide safe and efficient access for all users while creating an environment that encourages walking, cycling and transit use. In addition to being located within the Limebank LRT station, the site integrates well with the adjacent road network by providing convenient access to planned active transportation facilities.

Further, transit service is planned along Earl Armstrong Road within a 300-meter walking distance of the site. Concrete sidewalks are proposed within the site limits to facilitate safe and convenient access between buildings.

Figure 19: Transit Location Boundary Street Intersection

Bicycle stalls are located near the entrance of each building to further encourage non-auto modes of travel. Paved shoulders will be implemented for cyclists as part of the interim Bank Street design and converted to grade separated cycle tracks per the ultimate Bank Street design.

Vehicular loading operations and waste collection have been positioned to the rear or sides of the buildings within the proposed development to minimize potential conflicts with pedestrians and cyclists. The TDM-Supportive Development Design and Infrastructure Checklist was completed and is provided in ***Appendix I***. This checklist identifies measures that have been considered in the development's design to minimize vehicle demands of the site and encourage alternative modes of transportation.

4.1.1.1. Location of Transit Facilities

There are no existing transit facilities within the study area. Historically, there have been transit services within the study area, however it has been discontinued.

4.1.1.2. Pedestrian Facilities

The site plan incorporates continuous pedestrian sidewalks along the east, south, and west perimeter of the site allowing for uninterrupted pedestrian access between entrances and surrounding roads. The proposed development includes a pedestrian crosswalk across the internal laneway to improve pedestrian safety and access to Jessie Chenvert Way. The pedestrian facilities also improve accessibility to bike Racks by the East and West entrances.

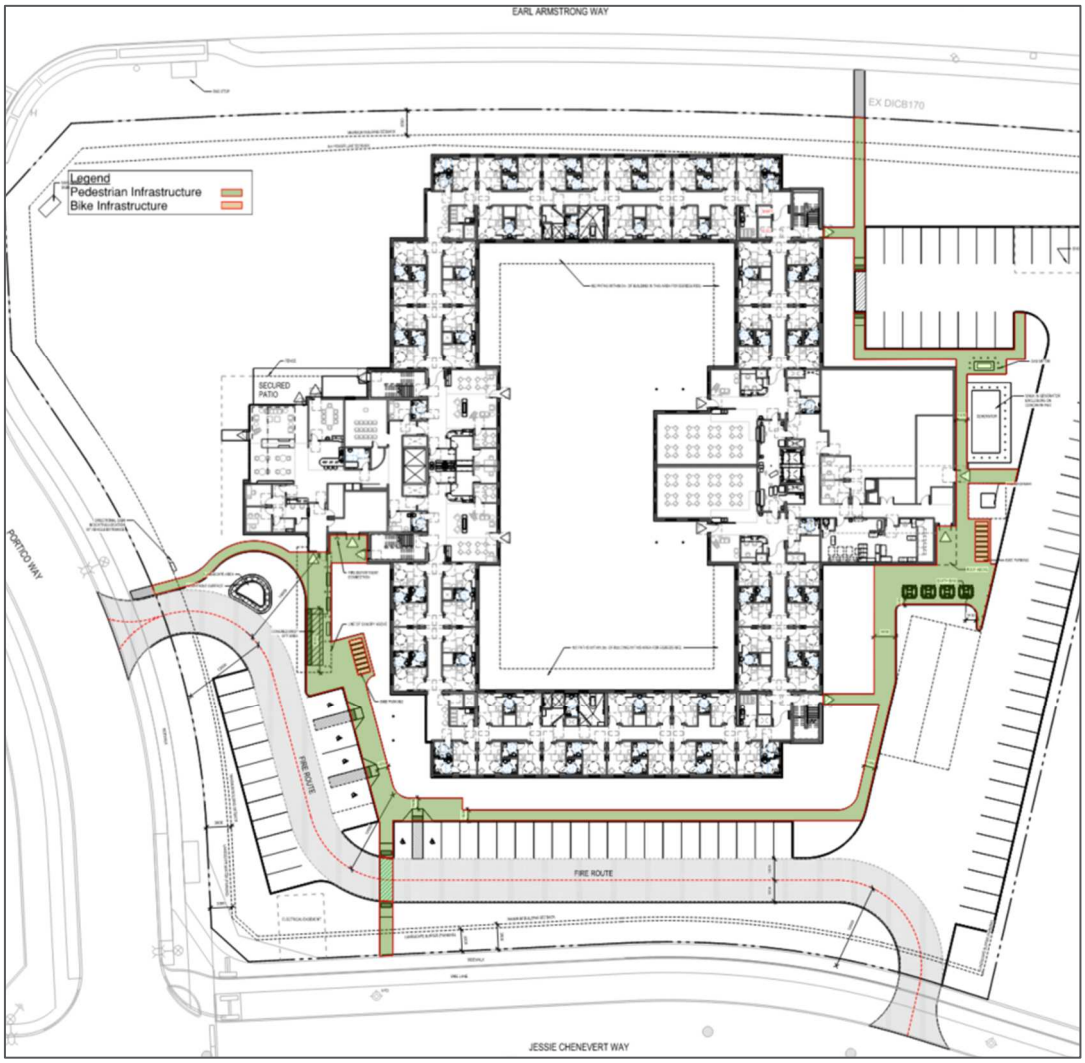


Figure 20: Proposed Pedestrian and Cycling Facilities

4.1.1.3. Bicycle Parking

16 bicycle parking spaces are equally distributed between the east and west accesses to the site, supporting active transportation options. This combination of dedicated, shared, and bicycle parking accommodates anticipated demand while promoting multimodal access.

4.1.1.4. Parking Areas

Parking spaces are distributed along the East, South, and West perimeter of the proposed development with direct connections to the development access. The accessible parking spaces are located near the main entrance by Portico Way to improve the accessibility for accessible parking demand. The By-Law stipulates a minimum parking rate of 0.25 spaces per unit and 1 space per 100 m² of gross floor area (GFA) that is used for health or personal services, which equates to 79 spaces for the proposed development. The site plan provides 88 dedicated parking spaces including 6 accessible parking spaces.

4.1.2. Circulation and Access

Figure 21 illustrates the site demonstrating the internal driveway circulation designed to optimize vehicle flow and minimize conflicts between vehicles, pedestrians, and cyclists. The proposed site layout provides a clear and efficient circulation pattern for both visiting, municipal, and emergency vehicles. Vehicles can enter the via Portico Way and Jessie Chenvert Way into an internal roadway that provides direct access to parking spaces along the perimeter of the proposed development. Emergency vehicles and municipal vehicles are expected to enter the site via the south access on Jessie Chenvert Way and continue through the site exiting via West connection on Portico Way. Municipal vehicles will access the proposed designated waste collection area before exiting the site. This circulation plan minimizes conflict points by separating vehicle paths based on general parking movements to minimize vehicle conflicts. Vehicle movements are physically separated from pedestrians and cyclists where possible. A pedestrian crosswalk provided approximately in the middle of the internal roadway to provide a safer crossing area for all transportation modes. Overall, the design supports safe and efficient operations for vehicles, pedestrians, and service access.

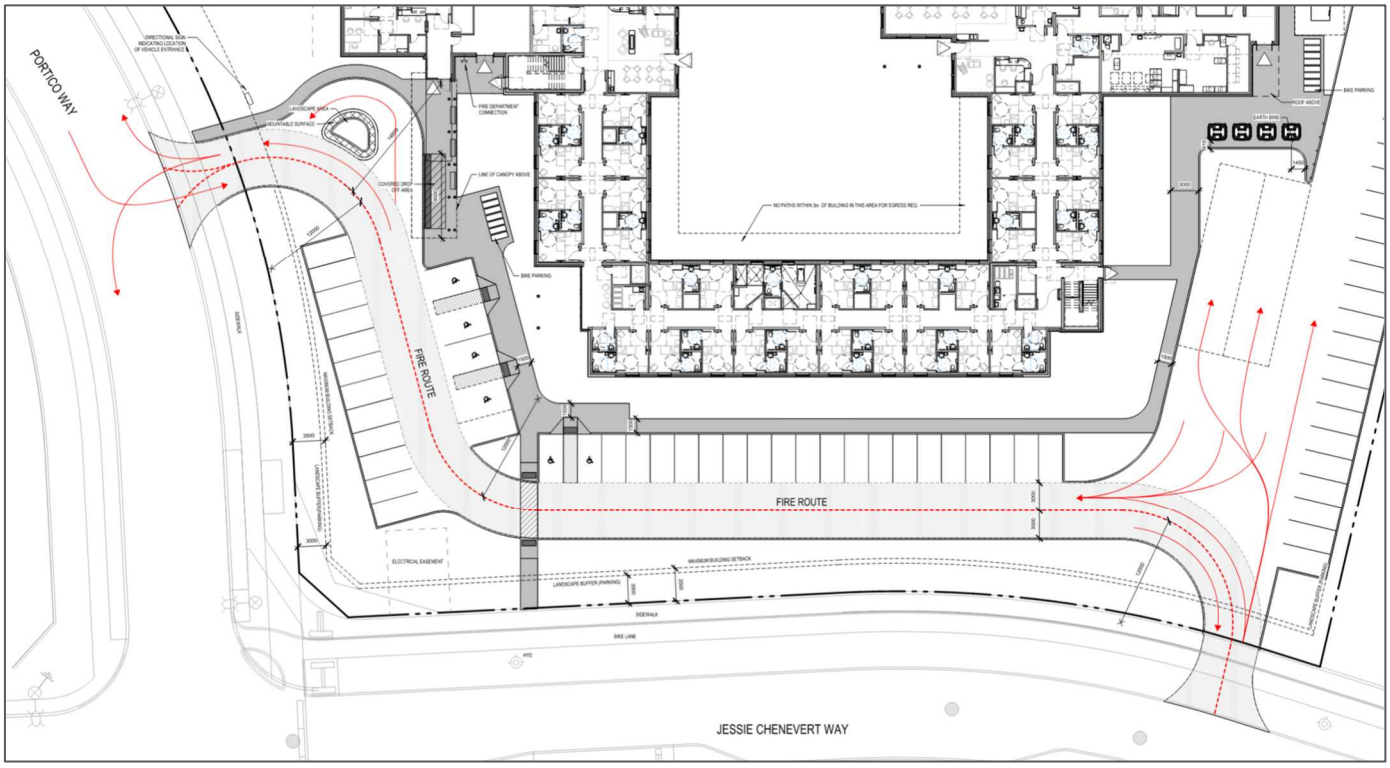


Figure 21: Internal Driveway Circulation

4.2. Parking

4.2.1. Parking Supply

The subject site is in Area C on Schedule 1 and Area Z on Schedule 1A of the City of Ottawa Zoning By-law. In accordance with the Zoning By-law, the minimum vehicle parking required is set out in Table 101 of Section 101. For this development, the applicable minimum vehicular parking and minimum bicycle parking rates are summarized in *Table 11.*

Table 11: Vehicle and Bicycle Parking Requirements Per Zoning By-Law

Land Use	Rate	Units/GFA	Requirement
Vehicle Parking			
Retirement Home	0.25 per dwelling unit or rooming unit + 1 per 100m^2 of gross floor area used for health or personal services	256 Beds + 100 m^2 of GFA (health/ personal Services)	79 Parking Space
		Total Maximum Vehicle Parking	79 Parking Spaces
Bicycle Parking			
Retirement Home	0.25 per dwelling unit or rooming unit	256 Beds	64 Bicycle Spaces
		Total Minimum Bicycle Parking Required	64 Bicycle Spaces

The proposed development will provide 88 on-site parking spaces, including 6 accessible spaces, in compliance with the parking requirements outlined in Zoning By-law 2008-250. In addition, a total of 16 bicycle parking spaces is proposed, meeting the minimum requirements for Site Plan approval under the same By-law.

4.3. Boundary Street Design

4.3.1. Existing and Future Conditions

The City of Ottawa has adopted a Complete Streets approach to transportation planning, prioritizing safety, comfort, and mobility for all users regardless of age, ability, or travel mode. This section reviews the boundary streets using Complete Streets principles. The 2025 iteration of the Multi-Modal Level of Service (MMLOS) guidelines builds upon the 2022 Official Plan, the 2023 Transportation Master Plan, and the 2015 MMLOS guidelines developed by IBI Group. These guidelines were applied to evaluate the level of service for each mode along the boundary roadways. Schedule B3 of the Official Plan identifies the entire study area road network as part of Mainstreet corridors within the Outer Urban Area. Table 14 summarizes the MMLOS analysis for the adjacent road segments, with detailed results provided in ***Appendix J***.

Table 12: Multi-Modal Level of Service – Boundary Street Segment

Road Segment	Pedestrian		Bicycle		Transit		Public Realm	
	P-LOS	Target	B-LOS	Target	T-LOS	Target	PR-LOS	Target
Earl Armstrong Road (Limebank Road to Portico Way/Canyon Walk Drive)	D	A	E	B	E	E	C	C

1 Not applicable as there is no transit for the segment

Pedestrian Level of Service (P-LOS) Under existing conditions, Earl Armstrong Road does not meet P-LOS targets. To achieve the target, the following improvements are recommended:

a. Reduce the posted speed on Earl Armstrong Road to 50 km/h
b. Reduce the maximum distance between pedestrian crossings to less than 200 m.
c. Increase the offset from motor vehicle travel lanes to be 1.5m or more

Bicycle Level of Service (B-LOS) Under existing conditions, Earl Armstrong Road does not meet B-LOS Targets. To achieve the target, it is recommended to provide a 1.5 m wide cycling facility with and a buffer 0.6m or wider.

Transit Level of Service (T-LOS) Under existing conditions all road segments meet T-LOS requirements.

Public Realm Level of Service (PR-LOS) Under existing conditions, all road segments meet PR-LOS requirements.

4.5. Transportation Demand Management

4.5.1. Context for TDM

The proposed development is expected to generate a combination of employees, visitors, and delivery trips, with peak activity during the weekday AM and PM peak hours. The site is located within a mixed-use commercial zone-II per the 2008-250 zoning bylaw and is expected to be classed as a Hub Zone in the 2026-50 New Zoning By-law Final Draft. Per the Riverside South Secondary Plan, the site location is designated within the Town Centre, under existing conditions the site is a greenfield location. Given its location within a designated hub zone and proximity to Limebank Station, a significant portion of trips during peak periods will interact with surrounding land uses, creating opportunities for integrated travel behavior.

4.5.1.1. Need and Opportunity

In alignment with the City's mode share targets outlined in the 2013 Transportation Master Plan, strategies that promote sustainable transportation are encouraged. These measures include improving access for active modes such as walking and cycling, providing secure bicycle parking, and designing pedestrian-friendly pathways. Implementing these strategies will help reduce reliance on single-occupant vehicles and support the City's Complete Streets and TOD objectives.

4.5.2. TDM Program

The following measures have been selected from the City of Ottawa's Transportation Demand Management (TDM) Measures Checklist, Version 1.0 (June 30, 2017) to support sustainable travel options for the proposed development:

- 1.1.1 Designate an internal coordinator or contract with an external coordinator.
- 1.2.1 Conduct periodic surveys to identify travel-related behaviors, attitudes, challenges, and solutions, and track progress.
- 3.1.1 Display relevant transit schedules and route maps at entrances.
- 3.1.2 Provide online links to OC Transpo and STO information.
- 4.1.1 Provide a dedicated ride-matching portal at OttawaRideMatch.com.
- 7.1.1 Provide a multimodal travel option information package for new or relocating employees and students.
- 8.3.1 Provide local business travel options that minimize the need for employees to bring a personal car to work.

The TDM infrastructure checklist and detailed measures are reviewed and included in ***Appendix I***.

4.6. Neighbourhood Traffic Calming

The proposed development will require a Neighborhood Traffic Calming measures module, as site access is provided via local roads (Portico way & Jessie Chenvert Way).

4.6.1. Adjacent Neighbourhoods

The proposed development will include an internal road connecting Portico Way and the future Jessie Chenvert way. The following vehicle volumes anticipated along Portico Way are included in **Table 13** below.

Table 13: Collector Road Anticipated Volumes

ITE Land Use	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend Peak Hour		
	2025	2027	2032	2025	2027	2032	2025	2027	2032
Portico Way (Background Conditions)	43	43	43	51	51	51	34	34	34
Portico Way (Total Conditions)	87	87	87	107	107	107	124	124	124

The maximum of 300 vehicles per peak hour criteria as outlined in the City of Ottawa TIA guidelines. Based on the Weekend peak hour volumes, the proposed development will not change the existing classification of Portico Way. The TIA will not require an NTM to mitigate the impact of developmental traffic.

4.7. Transit

4.7.1.1. Transit Route Capacity & Transit Priority

Transit Route Capacity requirements are exempt because the development is expected to generate fewer than 75 transit trips. Similarly, Transit Priority measures are exempt as the site is anticipated to generate fewer than 75 auto trips during the peak hour.

4.8. Review of Network Concept

The site is located within a mixed-use commercial zone-II per the 2008-250 zoning bylaw and is expected to be classed as a Hub Zone in the 2026-50 New Zoning By-law Final Draft. In accordance with Section 3.1.1, developments generating fewer than 200 peak-hour vehicle trips are exempt from the network adequacy review component of the Transportation Impact Assessment (TIA). Therefore, this requirement does not apply to the proposed development.

It is noted that the City of Ottawa is currently reviewing and approving a new Transportation Master Plan and Capital Infrastructure Plan, which may introduce changes or new concepts to the future transportation network.

4.9. Intersection Design

This section reviews the study area intersections using Complete Streets principles. The Multi-Modal Level of Service (MMLOS) worksheets provided by the City of Ottawa in May 2025 were used to evaluate the LOS for all intersections across each transportation mode. According to Schedule B6 of the Official Plan, the entire study area road network is designated as a hub and evolving neighborhood within the Suburban (Southwest Transect).The following sub-sections provide total traffic analysis (including a combination of background traffic and development-generated traffic), including the multi-modal level of service analysis and vehicle level of service analysis considered.

4.10. Intersection Design

The three signalized study area intersections Portico Way/Canyon Walk Dr & Earl Armstrong Rd, Earl Armstrong Rd & Blanca St, and Limebank Rd & Earl Armstrong Rd will remain to operate as signalized intersections. The weekday AM and PM scenarios are exempt from analysis as they have less than 75 peak hour auto trips generated as mentioned in section 3.1.1.

4.10.1. Intersection Design

4.10.1.1. Existing Intersection MMLOS Analysis

All study area intersections are located within 600 m of a rapid transit Station. *Table 14* summarizes the findings of the intersection MMLOS analysis.

Table 14: Multi-Modal Level of Service - Intersection

Intersection		LEVEL OF SERVICE BY MODES							
		Pedestrian		Bicycle		Transit		Auto Vehicle	
		PLOS	Target	BLOS	Target	TLOS	Target	AutoLOS	Target
Earl Armstrong Road & Limebank Road	North Leg	E	A	F	B	B	E (D for frequent transit routes)	C	E
	South Leg	E		F		C			
	East Leg	D		F		A			
	West Leg	C		F		A			
	Overall	**D**		**F**		**B**			
Earl Armstrong Road & Portico Way	North Leg	C	C	D	C	D	E (D for frequent transit routes)	B	E
	South Leg	C		D		D			
	East Leg	D		D		B			
	West Leg	D		D		C			
	Overall	**D**		**D**		**C**			
Earl Armstrong Road & Blanca Street	North Leg	C	A	E	B	B	E (D for frequent transit routes)	E	E
	South Leg	C		D		A			
	East Leg	D		F		C			
	West Leg	D		D		E			
	Overall	**D**		**E**		**C**			

Detailed intersection MMLOS calculations can be found in ***Appendix K***.

Pedestrian Level of Service (PLOS): PLOS targets are not met at any of the study area intersections due to factors such as the large number of travel lanes to cross, high right & left - turning vehicle volumes, and low effective walk times. Potential modifications tested within the MMLOS worksheets to improve PLOS include:

- Adjusting right-turn movements (e.g., RTOR restrictions, protected right turns)
- Implementing Leading Pedestrian Intervals (LPI)
- Applying alternative crosswalk treatments (e.g., textured or colored pavement, high-visibility zebra markings, raised crosswalks)
- Increasing effective walk time & reducing signal cycle length

Bicycle Level of Service (BLOS): BLOS targets are not met at any of the study area intersections, primarily due to the lack of dedicated cycling facilities and high vehicle turning volumes. Potential modifications tested within the MMLOS worksheets to improve BLOS include:

- Enhancing cycle facility at intersection legs (i.e. bike lanes, crossride)
- Adjusting cyclist left-turn operations at intersections (i.e protected corner, physical separation, one/two stage bike boxes, and/or no-left-turns)

Truck Level of Service (TkLOS): The TkLOS was met for all intersections in the study area.

Auto Level of Service (AutoLOS): The AutoLOS was met for all intersections in the study area.

4.10.2. Future Background Traffic Operation Analysis

Intersection capacity analysis has been completed for the 2027 & 2032 background traffic conditions. The intersection parameters used in the analysis are consistent with the TIA guidelines (Saturation Flow rate: 1800 vphpl, peak hour factors were calculated from turning movement count data). The signal timing splits have been optimized in Synchro, minimizing delays and maximizing traffic flow efficiency based on the given parameters and constraints for all intersections within the study area. In this analysis, a maximum cycle length for signalized intersections was established at 130 seconds to optimize traffic flow and accommodate the operational characteristics of the study area Table 15 summarizes the results of the Synchro analysis for the 2027 & 2032 background traffic conditions. Detailed synchro reports are included in ***Appendix F***.

Table 15: 2027 Background Intersection Operations

Intersection	Lane	AM Peak Hour				PM Peak Hour				Weekend Peak Hour			
		LOS	Delay	v/c ratio	95th Queue (m)	LOS	Delay	v/c ratio	95th Queue (m)	LOS	Delay	v/c ratio	95th Queue (m)
Portico Way/Canyon Walk Dr & Earl Armstrong Rd	**Overall**	**B**	**11.9**	---	---	**B**	**14.4**	---	---	**A**	**6.9**	---	---
	EB-L	A	5.3	0.15	10.9	B	19.0	0.65	#57.3	A	6.9	0.34	31.5
	EB-T	B	10.9	0.62	#131.2	A	6.7	0.34	64.2	A	5.1	0.23	29.1
	EB-R	A	6.1	0.00	0.0	A	4.9	0.01	0.0	A	4.2	0.01	0.0
	WB-L	A	7.5	0.08	3.1	A	7.8	0.04	3.3	A	4.2	0.01	1.8
	WB-T	A	9.4	0.36	53.7	B	15.7	0.70	#165.6	A	5.0	0.23	28.7
	WB-R	A	7.2	0.02	0.0	A	8.3	0.04	0.5	A	4.2	0.02	2.3
	NB-L	C	25.7	0.07	4.6	D	35.7	0.06	4.6	B	17.4	0.04	2.9
	NB-T	C	25.4	0.02	2.4	D	35.4	0.00	1.3	B	17.2	0.01	1.4
	NB-R	C	25.3	0.01	0.0	D	35.4	0.01	0.0	B	17.2	0.00	0.0
	SB-L	C	26.5	0.20	10.8	D	36.4	0.15	8.9	B	17.8	0.13	5.8
	SB-T	C	25.3	0.00	1.2	D	35.4	0.01	1.9	B	17.2	0.01	1.1
	SB-R	C	26.0	0.12	13.0	D	35.9	0.08	12.3	B	17.6	0.08	7.6
Earl Armstrong Rd & Blanca St	**Overall**	**C**	**22.8**	---	---	**A**	**6.9**	---	---	**B**	**17.0**	---	---
	EB-L	B	16.2	0.36	20.7	A	8.1	0.33	14.5	B	19.7	0.47	20.1
	EB-T	C	28.2	0.90	#112.7	A	4.3	0.31	34.1	B	18.9	0.52	28.7
	WB-T	B	16.6	0.50	45.5	A	6.1	0.56	79.3	B	18.8	0.50	27.7
	WB-R	B	13.4	0.04	6.1	A	3.2	0.04	3.6	B	16.3	0.03	5.5
	SB-L	B	12.5	0.08	10.5	C	31.6	0.15	9.6	A	5.8	0.04	6.0
	SB-R	B	12.2	0.04	6.3	C	33.7	0.40	19.5	A	5.9	0.07	6.1
Limebank Rd & Earl Armstrong Rd	**Overall**	**D**	**50.6**	---	---	**E**	**71.6**	---	---	**C**	**29.6**	---	---
	EB-L	F	81.5	1.02	#139.7	F	119.4	1.02	#71.7	D	48.6	0.69	#33.8
	EB-T	B	14.0	0.19	39.2	C	31.9	0.20	36.1	B	13.9	0.12	22.6
	EB-R	B	13.1	0.08	5.3	C	31.3	0.13	17.4	B	13.4	0.05	0.0
	WB-L	E	58.9	0.08	1.0	E	70.4	0.08	1.7	D	46.6	0.10	1.7
	WB-T	C	28.5	0.20	32.2	D	46.9	0.55	81.0	B	17.3	0.10	17.5
	WB-R	C	27.1	0.06	0.0	D	38.3	0.02	0.0	B	16.5	0.01	0.0
	NB-L	F	93.6	0.90	#39.7	F	121.1	0.93	#36.5	D	45.9	0.51	13.9
	NB-T	D	39.6	0.32	32.5	C	23.7	0.07	15.0	C	30.4	0.15	14.1
	NB-R	D	36.8	0.00	0.0	C	23.0	0.00	0.0	C	29.4	0.00	0.0
	SB-L	E	63.0	0.49	7.6	E	72.3	0.33	5.7	D	49.5	0.46	7.6
	SB-T	D	41.7	0.17	15.5	C	26.8	0.15	25.7	C	32.4	0.20	16.0
	SB-R	D	42.4	0.22	23.0	F	101.5	1.08	#271.0	C	32.1	0.14	16.0

Notes: Saturation flow rate of 1800 veh/h/lane, Peak Hour Factor = 0.90, m = metered queue, # = volume for the 95th percentile cycle exceeds capacity

The Synchro analysis for 2032 background conditions indicate operational capacity issues during the weekday AM and PM peak hours within the study area. During the weekend peak hour, all intersections operate at an acceptable LOS.

The AM and PM peak hour scenarios include critical movements at the Limebank Road & Earl Armstrong Road intersection. During the AM peak hour, the critical movements include the Northbound Left and the Eastbound Left.

During the PM peak hour, the critical movements include the southbound right-turn, Northbound, and Eastbound Left.

Detailed Synchro worksheets are provided in **Appendix F**.

Table 16: 2027 Background Intersection Operations

Intersection	Lane	AM Peak Hour				PM Peak Hour				Weekend Peak Hour			
		LOS	Delay	v/c ratio	95th Queue (m)	LOS	Delay	v/c ratio	95th Queue (m)	LOS	Delay	v/c ratio	95th Queue (m)
Portico Way/Canyon Walk Dr & Earl Armstrong Rd	**Overall**	**B**	**12.1**	---	---	**B**	**15.1**	---	---	**A**	**6.9**	---	---
	EB-L	A	4.8	0.15	11.2	C	23.3	0.68	#61.0	A	6.9	0.34	31.5
	EB-T	B	10.7	0.62	#136.9	A	6.8	0.35	66.3	A	5.1	0.23	29.1
	EB-R	A	5.9	0.00	0.0	A	4.9	0.01	0.0	A	4.2	0.01	0.0
	WB-L	A	7.8	0.08	3.1	A	7.9	0.04	3.3	A	4.2	0.01	1.8
	WB-T	A	10.0	0.38	55.4	B	16.4	0.72	#173.8	A	5.0	0.23	28.7
	WB-R	A	7.6	0.02	0.0	A	8.5	0.04	0.7	A	4.2	0.02	2.3
	NB-L	C	26.8	0.07	4.6	D	35.7	0.06	4.6	B	17.4	0.04	2.9
	NB-T	C	26.5	0.02	2.4	D	35.3	0.00	1.3	B	17.2	0.01	1.4
	NB-R	C	26.4	0.01	0.0	D	35.3	0.01	0.0	B	17.2	0.00	0.0
	SB-L	C	27.7	0.21	11.0	D	36.4	0.15	9.0	B	17.8	0.13	5.8
	SB-T	C	26.4	0.00	1.2	D	35.3	0.01	1.9	B	17.2	0.01	1.1
	SB-R	C	27.1	0.12	13.3	D	35.8	0.08	12.6	B	17.6	0.08	7.6
Earl Armstrong Rd & Blanca St	**Overall**	**C**	**23.9**	---	---	**A**	**7.1**	---	---	**B**	**17.0**	---	---
	EB-L	B	16.3	0.38	21.2	A	9.0	0.36	15.8	B	19.7	0.47	20.1
	EB-T	C	30.0	0.91	#117.3	A	4.4	0.32	35.2	B	18.9	0.52	28.7
	WB-T	B	16.6	0.51	46.8	A	6.4	0.58	82.6	B	18.8	0.50	27.7
	WB-R	B	13.3	0.04	6.2	A	3.3	0.04	3.6	B	16.3	0.03	5.5
	SB-L	B	12.6	0.08	10.7	C	31.5	0.15	9.9	A	5.8	0.04	6.0
	SB-R	B	12.3	0.04	6.3	C	33.7	0.42	20.4	A	5.9	0.07	6.1
Limebank Rd & Earl Armstrong Rd	**Overall**	**D**	**47.1**	---	---	**E**	**78.4**	---	---	**C**	**29.6**	---	---
	EB-L	E	71.9	0.99	#142.7	F	132.1	1.06	#74.8	D	48.6	0.69	#33.8
	EB-T	B	13.0	0.20	40.3	C	31.9	0.21	37.1	B	13.9	0.12	22.6
	EB-R	B	12.2	0.08	5.9	C	31.2	0.14	17.6	B	13.4	0.05	0.0
	WB-L	E	57.6	0.08	1.0	E	70.4	0.08	1.7	D	46.6	0.10	1.7
	WB-T	C	27.8	0.20	33.3	D	46.8	0.56	82.6	B	17.3	0.10	17.5
	WB-R	C	26.4	0.06	0.0	D	38.0	0.02	0.0	B	16.5	0.01	0.0
	NB-L	F	87.1	0.88	#40.4	F	128.5	0.96	#37.8	D	45.9	0.51	13.9
	NB-T	D	41.6	0.39	33.3	C	23.8	0.08	15.4	C	30.4	0.15	14.1
	NB-R	D	38.5	0.00	0.0	C	23.1	0.00	0.0	C	29.4	0.00	0.0
	SB-L	E	55.9	0.33	7.8	E	72.8	0.35	6.0	D	49.5	0.46	7.6
	SB-T	D	42.8	0.19	15.8	C	27.0	0.15	26.4	C	32.4	0.20	16.0
	SB-R	D	43.4	0.23	23.3	F	117.0	1.12	#285.0	C	32.1	0.14	16.0

Notes: Saturation flow rate of 1800 veh/h/lane, Peak Hour Factor = 0.90, m = metered queue, # = volume for the 95th percentile cycle exceeds capacity

The Synchro analysis for 2032 background conditions indicate operational capacity issues during the weekday AM and PM peak hours within the study area. During the weekend peak hour, all intersections operate at an acceptable LOS.

The AM and PM peak hour scenarios include critical movements at the Limebank Road & Earl Armstrong Road intersection. During the AM peak hour, the critical movements include the Northbound Left and the Eastbound Left.

During the PM peak hour, the critical movements include the southbound right-turn, Northbound, and Eastbound Left.

Detailed Synchro worksheets are provided in **Appendix F**.

4.10.3. Future Total Intersection Operations

Intersection capacity analysis has been completed for the 2027 & 2032 total traffic conditions. The intersection parameters used in the analysis are consistent with the TIA guidelines (Saturation Flow rate: 1800 vphpl, peak hour factors were calculated from turning movement count data). The signal timing splits have been optimized in Synchro, minimizing delays and maximizing traffic flow efficiency based on the given parameters and constraints for all intersections within the study area. In this analysis, a maximum cycle length for signalized intersections was established at 130 seconds to optimize traffic flow and accommodate the operational characteristics of the study area. Table 17 summarizes the results of the Synchro analysis for the 2027 & 2032 total traffic conditions.

Detailed synchro reports are included in ***Appendix F***.

Table 17: Total 2027 Intersection Operations

Intersection	Lane	AM Peak Hour				PM Peak Hour				Weekend Peak Hour			
		LOS	Delay	v/c ratio	95th Queue (m)	LOS	Delay	v/c ratio	95th Queue (m)	LOS	Delay	v/c ratio	95th Queue (m)
Portico Way/Canyon Walk Dr & Earl Armstrong Rd	**Overall**	**B**	**12.8**	---	---	**B**	**15.2**	---	---	**A**	**7.5**	---	---
	EB-L	A	5.8	0.16	10.9	B	19.3	0.65	#57.7	A	7.4	0.35	31.5
	EB-T	B	12.2	0.66	#137.1	A	7.9	0.36	64.3	A	5.4	0.24	29.1
	EB-R	A	6.7	0.02	0.0	A	5.9	0.02	0.0	A	4.5	0.03	3.6
	WB-L	A	8.4	0.26	7.1	A	7.1	0.11	8.0	A	5.2	0.12	11.8
	WB-T	A	9.5	0.37	53.7	B	15.9	0.71	#165.6	A	5.4	0.23	28.7
	WB-R	A	7.3	0.02	0.0	A	8.5	0.04	0.5	A	4.5	0.02	2.3
	NB-L	C	25.8	0.17	8.5	D	36.5	0.18	10.2	B	17.0	0.17	7.6
	NB-T	C	24.9	0.03	2.9	D	35.2	0.00	1.3	B	16.2	0.02	1.9
	NB-R	C	24.9	0.03	0.0	D	35.4	0.03	0.5	B	16.3	0.04	5.7
	SB-L	C	25.9	0.20	10.8	D	36.2	0.15	8.9	B	16.7	0.12	5.8
	SB-T	C	24.7	0.00	1.2	D	35.3	0.01	1.9	B	16.2	0.01	1.6
	SB-R	C	25.4	0.12	13.0	D	35.7	0.08	12.3	B	16.5	0.08	7.6
Earl Armstrong Rd & Blanca St	**Overall**	**C**	**24.9**	---	---	**A**	**7.2**	---	---	**B**	**17.0**	---	---
	EB-L	B	16.5	0.40	22.4	A	9.3	0.37	16.6	B	19.6	0.50	21.3
	EB-T	C	31.7	0.93	#121.3	A	4.5	0.33	36.0	B	18.9	0.55	32.0
	WB-T	B	16.6	0.51	47.4	A	6.4	0.58	82.1	B	18.6	0.53	30.5
	WB-R	B	13.3	0.04	6.1	A	3.3	0.04	3.6	B	15.8	0.03	5.4
	SB-L	B	12.7	0.08	10.5	C	31.3	0.15	9.6	A	6.1	0.04	6.1
	SB-R	B	12.4	0.05	6.6	C	33.9	0.45	21.6	A	6.4	0.08	6.6
Limebank Rd & Earl Armstrong Rd	Overall	**E**	**59.4**	---	---	**E**	**78.1**	---	---	**C**	**32.1**	---	---
	EB-L	F	104.7	1.09	#152.7	F	129.1	1.06	#77.9	E	58.8	0.82	#43.8
	EB-T	B	14.0	0.20	39.8	C	31.5	0.20	36.2	B	13.9	0.12	23.2
	EB-R	B	13.1	0.09	6.5	C	30.9	0.14	17.5	B	13.4	0.05	0.0
	WB-L	E	58.9	0.08	1.0	E	70.4	0.08	1.7	D	46.6	0.10	1.7
	WB-T	C	28.2	0.20	32.3	D	47.0	0.56	81.3	B	17.5	0.11	18.2
	WB-R	C	26.8	0.06	0.0	D	38.3	0.02	0.0	B	16.7	0.01	0.0
	NB-L	F	106.1	0.94	#41.1	F	126.9	0.95	#37.3	D	47.3	0.54	14.5
	NB-T	D	39.8	0.32	32.6	C	24.1	0.07	15.1	C	30.4	0.15	14.1
	NB-R	D	37.0	0.00	0.0	C	23.3	0.00	0.0	C	29.4	0.00	0.0
	SB-L	E	63.1	0.49	7.6	E	72.3	0.33	5.7	D	49.5	0.46	7.6
	SB-T	D	41.6	0.16	15.5	C	27.2	0.15	25.9	C	32.4	0.20	16.0
	SB-R	D	42.5	0.23	23.3	F	115.1	1.12	#281.7	C	32.3	0.16	17.1

Notes: Saturation flow rate of 1800 veh/h/lane, Peak Hour Factor = 0.90, m = metered queue, # = volume for the 95th percentile cycle exceeds capacity

The Synchro analysis for 2027 total conditions indicate operational capacity issues during the weekday AM and PM peak hours within the study area. During the weekend peak hour, all intersections operate at an acceptable LOS.

The AM and PM peak hour scenarios include critical movements at the Limebank Road & Earl Armstrong Road intersection. During the AM peak hour, the critical movements include the Northbound Left and the Eastbound Left.

During the PM peak hour, the critical movements include the southbound right-turn, Northbound Left, and Eastbound Left.

Detailed Synchro worksheets are provided in **Appendix F**.

Table 18: Total 2032 Intersection Operations

Intersection	Lane	AM Peak Hour				PM Peak Hour				Weekend Peak Hour			
		LOS	Delay	v/c ratio	95th Queue (m)	LOS	Delay	v/c ratio	95th Queue (m)	LOS	Delay	v/c ratio	95th Queue (m)
Portico Way/Canyon Walk Dr & Earl Armstrong Rd	**Overall**	B	13.1	---	---	B	15.8	---	---	A	7.6	---	---
	EB-L	A	5.2	0.16	11.2	C	23.4	0.68	#61.1	A	7.6	0.36	32.5
	EB-T	B	12.1	0.66	#142.6	A	8.0	0.37	66.4	A	5.4	0.24	29.8
	EB-R	A	6.5	0.00	0.0	A	5.8	0.01	0.0	A	4.5	0.03	3.6
	WB-L	A	8.7	0.26	7.1	A	7.2	0.12	8.0	A	5.3	0.13	11.8
	WB-T	B	10.2	0.38	55.4	B	16.5	0.73	#173.8	A	5.4	0.24	29.5
	WB-R	A	7.7	0.02	0.0	A	8.5	0.04	0.7	A	4.5	0.02	2.4
	NB-L	C	27.0	0.17	8.5	D	36.5	0.18	10.2	B	16.9	0.17	7.6
	NB-T	C	26.0	0.03	2.9	D	35.2	0.00	1.3	B	16.1	0.02	1.9
	NB-R	C	25.9	0.03	0.0	D	35.4	0.03	0.5	B	16.2	0.04	5.7
	SB-L	C	27.1	0.21	11.0	D	36.3	0.15	9.0	B	16.6	0.12	5.9
	SB-T	C	25.8	0.00	1.2	D	35.3	0.01	1.9	B	16.1	0.01	1.6
	SB-R	C	26.5	0.12	13.3	D	35.8	0.08	12.6	B	16.4	0.08	7.7
Earl Armstrong Rd & Blanca St	**Overall**	C	26.9	---	---	A	7.4	---	---	B	17.0	---	---
	EB-L	B	16.7	0.42	23.0	B	10.4	0.40	18.3	B	19.9	0.51	22.0
	EB-T	D	35.2	0.95	#126.0	A	4.6	0.33	37.1	B	18.8	0.55	32.7
	WB-T	B	16.8	0.52	48.7	A	6.6	0.59	85.6	B	18.5	0.53	31.2
	WB-R	B	13.3	0.04	6.2	A	3.4	0.04	3.6	B	15.7	0.03	5.5
	SB-L	B	12.7	0.08	10.7	C	31.2	0.15	9.9	A	6.3	0.04	6.3
	SB-R	B	12.5	0.05	6.6	C	33.9	0.47	22.1	A	6.5	0.08	6.7
Limebank Rd & Earl Armstrong Rd	**Overall**	**D**	**43.2**	**---**	**---**	**F**	**83.7**	**---**	**---**	**C**	**32.8**	**---**	**---**
	EB-L	E	58.3	0.92	#144.1	F	136.7	1.08	#80.4	E	62.5	0.84	#45.2
	EB-T	B	13.5	0.19	41.4	C	31.7	0.21	37.2	B	13.9	0.13	23.7
	EB-R	B	12.7	0.09	8.6	C	31.0	0.14	17.7	B	13.4	0.05	0.0
	WB-L	E	62.5	0.08	1.1	E	70.4	0.08	1.7	D	46.6	0.10	1.7
	WB-T	C	32.0	0.22	36.7	D	47.4	0.57	83.7	B	17.5	0.11	18.4
	WB-R	C	30.3	0.06	0.0	D	38.4	0.02	0.0	B	16.7	0.01	0.0
	NB-L	E	69.1	0.75	#39.4	F	134.8	0.98	#39.0	D	47.7	0.55	14.7
	NB-T	D	43.7	0.36	36.0	C	24.0	0.08	15.5	C	30.4	0.16	14.5
	NB-R	D	40.5	0.00	0.0	C	23.2	0.00	0.0	C	29.4	0.00	0.0
	SB-L	E	60.9	0.35	8.3	E	72.8	0.35	6.0	D	49.8	0.48	7.8
	SB-T	D	46.4	0.20	17.3	C	27.2	0.15	26.5	C	32.4	0.21	16.3
	SB-R	D	47.1	0.24	25.7	F	128.2	1.15	#293.9	C	32.3	0.17	17.2

Notes: Saturation flow rate of 1800 veh/h/lane, Peak Hour Factor = 0.90, m = metered queue, # = volume for the 95th percentile cycle exceeds capacity

The Synchro analysis for 2032 total conditions indicate operational capacity issues during the weekday AM and PM peak hours within the study area. During the weekend peak hour, all intersections operate at an acceptable LOS.

The AM and PM peak hour scenarios include critical movements at the Limebank Road & Earl Armstrong Road intersection. During the AM peak hour, the critical movements include the Eastbound Left.

During the PM peak hour, the critical movements include the southbound right-turn, Northbound Left, and Eastbound Left.

Detailed Synchro worksheets are provided in **Appendix F**.

5. Summary of Improvements Indicated and Modification Options

Based on the results summarized herein the following findings and recommendations are provided:

Existing Conditions

- Extendicare Canada Inc. is proposing to develop a nursing home facility located at 400 Jessie Chenevert Walk in Ottawa, Ontario. The site covers approximately 1.63 hectares and will consist of a four-storey long-term care home facility with 256 beds, served by two vehicular access points on Portico Way and Jessie Chenevert Way.
- The proposed development site currently vacant and located within the Riverside South Community. It is currently a mixed-use commercial zone-II and is expected to be classed as a Hub Zone in the 2026-50 New Zoning By-law Final Draft.
- The study area is well serviced by transit with proximity to Line 2 of the O-Train and OC Transpo Buses with bus stops located at Earl Armstrong and Portico Way.
- The existing traffic operations at the three study intersections perform at acceptable levels during all peak periods, with overall intersection LOS values ranging from A to C in the AM and Weekend peaks, and localized PM peak constraints typical of a busy arterial corridor.
- At Limebank Road & Earl Armstrong Road, higher delays occur during the PM peak, resulting in an overall LOS F driven by heavy arterial volumes on both corridors; however, these conditions are typical for a major intersection within a commuter corridor. Although several turning movements experience elevated PM delays and longer queues, v/c ratios remain below or near capacity, and operations do not indicate systemic oversaturation or spillback concerns.
- Earl Armstrong Road does not meet Pedestrian-LOS targets. Potential methods to improve the Pedestrian-LOS include:
    - Reduce the posted speed to 50 km/h
    - reduce the maximum distance between pedestrian crossings to less than 200 m.
    - Increase the offset from motor vehicle travel lanes to be 1.5m or more.
- Earl Armstrong Road does not meet Bicycle-LOS Targets. To achieve the target, it is recommended to provide a 1.5 m wide cycling facility with and a buffer 0.6m or wider.
- Transit-LOS and Public Realm-LOS requirements are met on all road segments within the study area

Proposed Development

- Construction is expected to proceed in a single phase, with occupancy targeted for 2027.
- The proposed development is expected to generate a total of 45 two-way person trips during the AM peak period, 56 two-way person trips in the PM peak, and 92 trips during the Weekend peak period.
- The proposed site design exceeds most minimum zoning and parking requirements. A total of 88 parking spaces is provided, excluding barrier-free spaces. Loading facilities include one 20-meter space and one 5-meter space.
- The site plan incorporates continuous pedestrian sidewalks along the east, south, and west perimeter of the site for uninterrupted pedestrian access between entrances and surrounding roads. A pedestrian crosswalk across the internal laneway to improves pedestrian safety and provides access to Jessie Chenvert Way.
- 16 bicycle parking spaces are equally distributed between the east and west accesses to the site and are connected to pedestrian facilities improving accessibility and supporting active transportation.

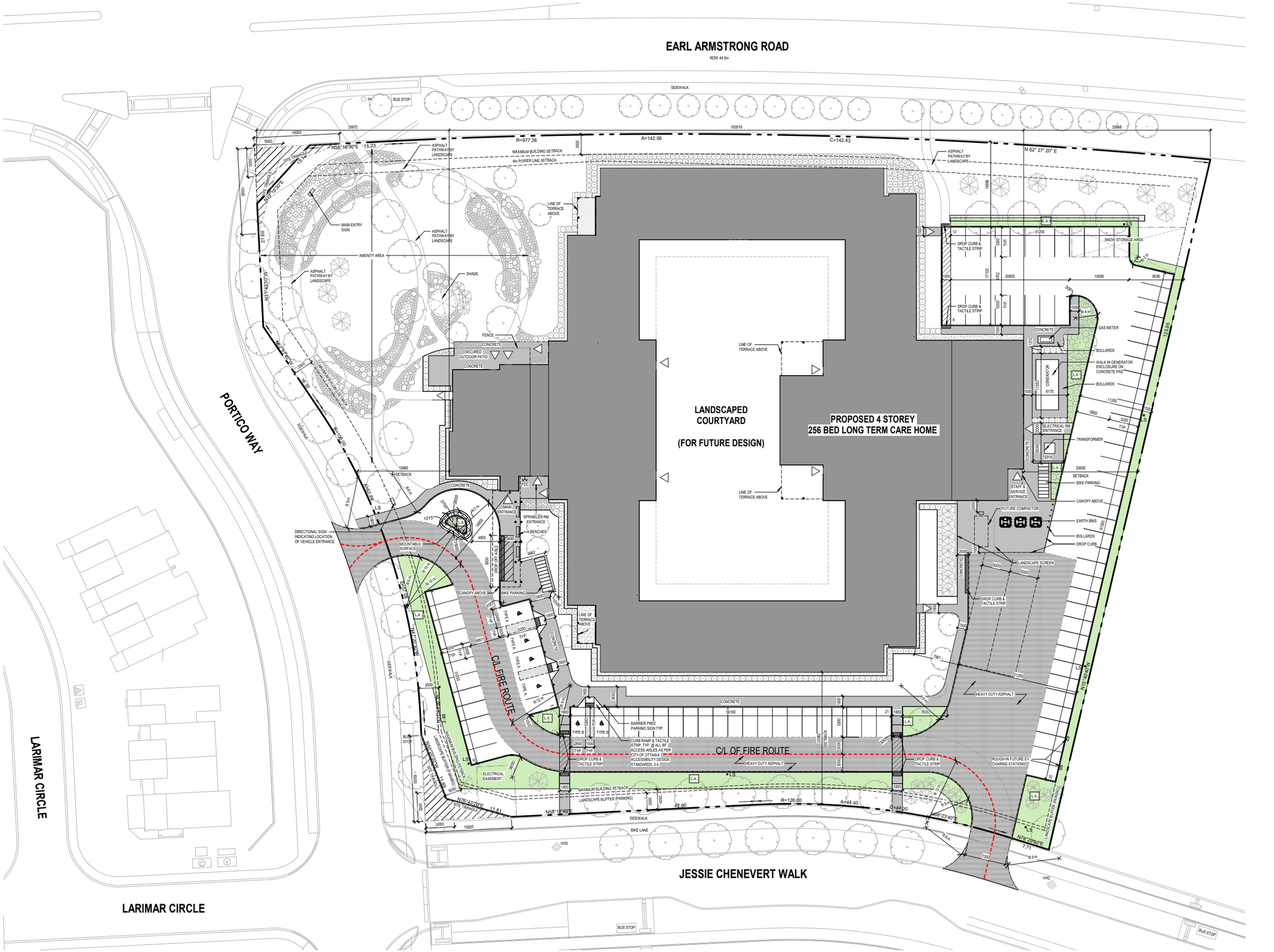
Future Conditions

- Under future horizon year conditions, all analyzed intersections are projected to operate at acceptable overall LOS. Limebank Road & Earl Armstrong Road are anticipated to experiencex higher delays during the PM peak driven by heavy arterial volumes on both corridors. These conditions are typical for a major intersection within a commuter corridor. Although several turning movements experience elevated PM delays and longer queues, v/c ratios remain below or near capacity, and operations do not indicate systemic oversaturation or spillback concerns.

Based on the preceding report, the proposed development located at 400 Jessie Chenevert Walk is recommended from a transportation perspective.

Appendix A: Site Plan

2650 Queensview Drive, Suite 100 | Ottawa, ON K2B 8H6 | CANADA
t: +1.613.688.1899 | f: +1.905.793.0641 | exp.com



1 SPA - SITE PLAN
1 : 300

SCALE BAR 1:300
5 10 20 30 40

4/20/2026 2:23:56 PM Autodesk Docs://25010_Extendicare Riverside/25010_EC Riverside_MSA_MAIN_R25.rvt

Montgomery Sisam Architects Inc.

197 Spadina Avenue, Toronto, Ontario M5T 2C8 montgomerysisam.com
Tel 416.364.8079 Fax 416.364.7723

MontgomerySisam

PROJECT NORTH / TRUE NORTH

SITE PLAN LEGEND

- PAVED PARKING AREA
- LANDSCAPED AREA
- CONCRETE
- HEAVY DUTY ASPHALT
- FDC FIRE DEPARTMENT CONNECTION

LEGAL DESCRIPTION

PIN:
04330-1862

DESCRIPTION:
400 Jessie Chenevert Walk
Ottawa, ON
PART OF LOT 21, CONCESSION 1, GEOGRAPHIC TOWNSHIP OF GLOUCESTER, CITY OF OTTAWA

PROPERTY BOUNDARY INFORMATION WAS DERIVED FROM TOPGRAPHIC SURVEY OF BLOCK 1 REGISTERED PLAN 4M-1766 CITY OF OTTAWA, BY ANNIS O'SULLIVAN, VOLLEBEKK LTD. DATED OCTOBER 22, 2025.

#	date:	revision:	by:
2	02.17.26	ISSED FOR SPA RESUBMISSION	MSA
1	11.13.25	ISSUED FOR SPA	MSA

revisions

ONTARIO ASSOCIATION OF ARCHITECTS — LICENCE 5886

All drawing and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.

EXTENDICARE RIVERSIDE

400 Jessie Chenevert Walk
Ottawa, ON
PART OF LOT 21, CONCESSION 1, GEOGRAPHIC TOWNSHIP OF GLOUCESTER, CITY OF OTTAWA

SITE CONTEXT PLAN

scale:	As indicated
drawn by:	AL, MD
reviewed by:	MCS
job number:	25010
plot date:	04/20/2026

drawing number:

A11.02

FILE NUMBER:D07-12-25-0150 & D02-02-25-0084
PLAN NUMBER :#19413

Appendix B: TIA Screening Form

Certification Form for TIA Study PM

TIA Plan Reports

On April 14, 2022, the Province's Bill 109 received Royal Assent providing legislative direction to implement the More Homes for Everyone Act, 2022 aiming to increase the supply of a range of housing options to make housing more affordable. Revisions have been made to the TIA guidelines to comply with Bill 109 and streamline the process for applicants and staff.

Individuals submitting TIA reports will be responsible for all aspects of development-related transportation assessment and reporting, and undertaking such work, in accordance and compliance with the City of Ottawa's Official Plan, the Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines.

By submitting the attached TIA report (and any associated documents) and signing this document, the individual acknowledges that they meet the four criteria listed below.

CERTIFICATION

- [x] I have reviewed and have a sound understanding of the objectives, needs and requirements of the City of Ottawa's Official Plan, Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines; (Update effective July 2023)
- [x] I have a sound knowledge of industry standard practice with respect to the preparation of transportation impact assessment reports, including multi modal level of service review;
- [x] I have substantial experience (more than 5 years) in undertaking and delivering transportation impact studies (analysis, reporting and geometric design) with strong background knowledge in transportation planning, engineering or traffic operations; and
- [x] I am either a licensed or registered[1] professional in good standing, whose field of expertise
  - [x] is either transportation engineering
  - [ ] or transportation planning.

[1] License of registration body that oversees the profession is required to have a code of conduct and ethics guidelines that will ensure appropriate conduct and representation for transportation planning and/or transportation engineering works.

City Of Ottawa
Planning, Real Estate and Economic Development
110 Laurier Avenue West, 4th fl.
Ottawa, ON
K1P 1J1
Tel. : 613-580-2424
Fax: 613-560-6006

Dated at Ottawa (City) this 20 day of October, 20 25.

Name : Rick Zarzosa

Professional title: Senior Traffic and Transit Engineer

Signature of individual certifier that s/he/they meet the above criteria

Office Contact Information (Please Print)	
Address:	2650 Queensview Dr Suite 100
City / Postal Code:	K2B 8H6
Telephone / Extension:	343-804-4894
Email Address:	Rick.Zarzosa@exp.com

Stamp

Revision Date: June 2023

City of Ottawa 2017 TIA Guidelines Screening Form

1. Description of Proposed Development

Municipal Address	980 Earl Armstrong Road, Gloucester, ON
Description of Location	S.E. corner of Earl Armstrong Road & Portico Way Intersection
Land Use Classification	Long Term Care Facility
Development Size (units)	256 beds
Development Size (m^2)	15,000 Approximately
Number of Accesses and Locations	1 Access on Portico Way & 1 Access on Jessie Chenevert Way
Phase of Development	Preliminary Concept Plan
Buildout Year	2026-2027

If available, please attach a sketch of the development or site plan to this form.

2. Trip Generation Trigger

Considering the Development's Land Use type and Size (as filled out in the previous section), please refer to the Trip Generation Trigger checks below.

Table notes:

1.Table 2, Table 3 & Table 4 TRANS Trip Generation Manual
2.Institute of Transportation Engineers (ITE) Trip Generation Manual ~~11.1~~ 12th Ed.

Land Use Type	Minimum Development Size
Single-family homes	60 units
Multi-Use Family (Low-Rise)[1]	90 units
Multi-Use Family (High-Rise)[1]	150 units **< 256 Units**
Office[2]	1,400 m^2
Industrial[2]	7,000 m^2
Fast-food restaurant or coffee shop[2]	110 m^2
Destination retail[2]	1,800 m^2
Gas station or convenience market[2]	90 m^2

If the proposed development size is greater than the sizes identified above, the Trip Generation Trigger is satisfied. **Trip generation trigger is satisfied.**

-Number of trip generation during weekday AM peak: 63
-Number of trip generated during weekday PM peak: 100

3. Location Triggers

	Yes	No
Does the development propose a new driveway to a boundary street that is designated as part of the City's Transit Priority Network, Rapid Transit network or Cross-Town Bikeways?		X
Is the development in a Hub, a Protected Major Transit Station Area (PMTSA), or a Design Priority Area (DPA)?[2]	X	

If any of the above questions were answered with 'Yes,' the Location Trigger is satisfied.

4. Safety Triggers

	Yes	No
Are posted speed limits on a boundary street 80 km/hr or greater?	X	
Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?		X
Is the proposed driveway within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 m of intersection in rural conditions, or within 150 m of intersection in urban/ suburban conditions)?	X	
Is the proposed driveway within auxiliary lanes of an intersection?		X
Does the proposed driveway make use of an existing median break that serves an existing site?		X
Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?	X	
Does the development include a drive-thru facility?		X

If any of the above questions were answered with 'Yes,' the Safety Trigger is satisfied.

5. Summary

	Yes	No
Does the development satisfy the results of screening?	X	
Does the development satisfy the Location Trigger?	X	
Does the development satisfy the Safety Trigger?	X	

[2] Hubs are identified in Schedules B1 to B8 of the City of Ottawa Official Plan. PMTSAs are identified in ScheduleC1 of the Official Plan. DPAs are identified in Schedule C7A and C7B of the Official. See Chapter 4 for a list of City of Ottawa Planning and Engineering documents that support the completion of TIA.

If none of the triggers are satisfied, the TIA Study is complete. If one or more of the triggers is satisfied, the TIA Study must continue into the next stage (Screening and Scoping).

Appendix C: OC Transpo Route

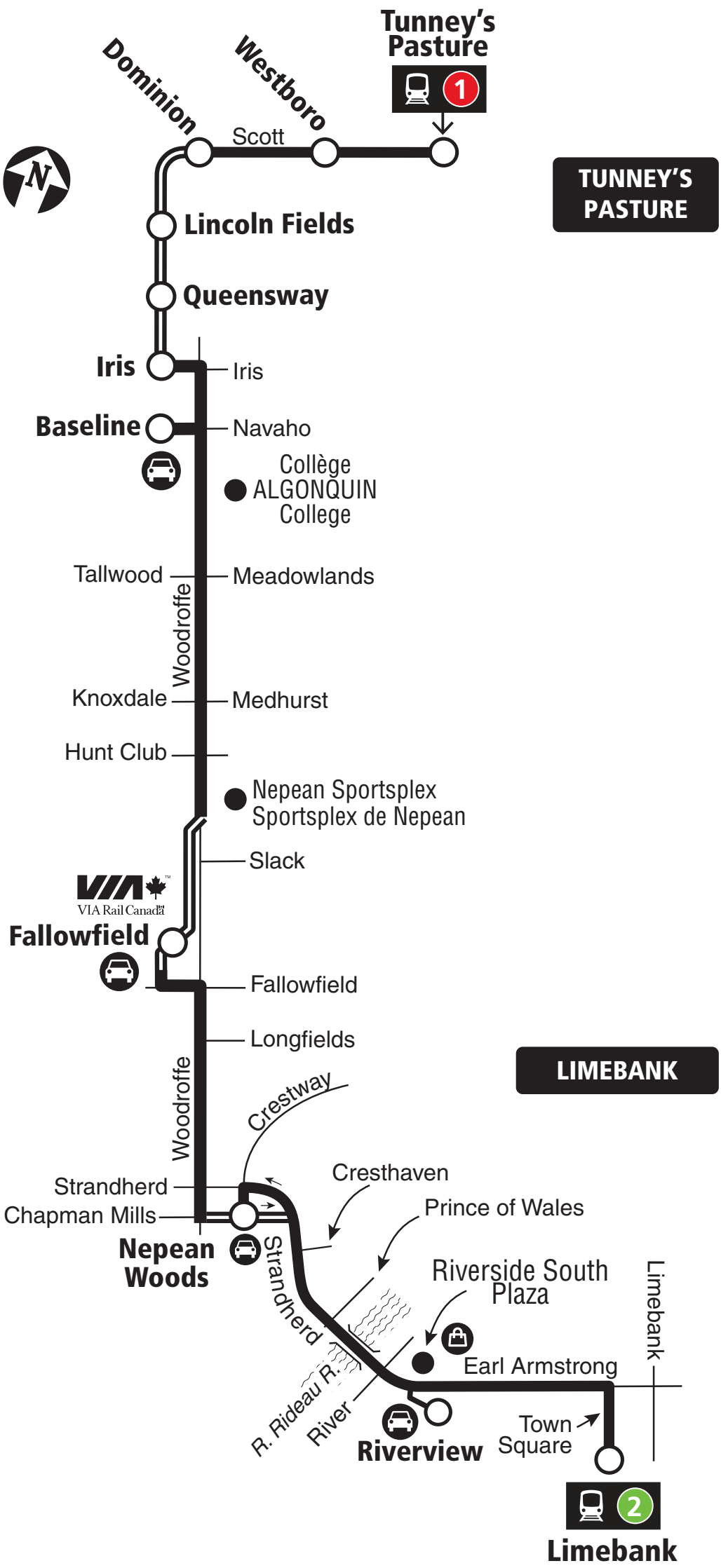
74

Fréquent

TUNNEY'S PASTURE
LIMEBANK

7 days a week / 7 jours par semaine

All day service
Service toute la journée



05.2025

Transitway & Station

Park & Ride / Parc relais

Shopping Centre / Centre commercial

2025.05

This route starts on April 27, 2025 when the New Ways to Bus network comes into effect.

Ce circuit sera mis en service le 27 avril 2025, lorsque le réseau L'autobus réinventé entrera en vigueur.

Customer Service / Service à la clientèle **613-560-5000**

Security / Sécurité **613-741-2478**

OC Transpo **octranspo.com**

110 LIMEBANK

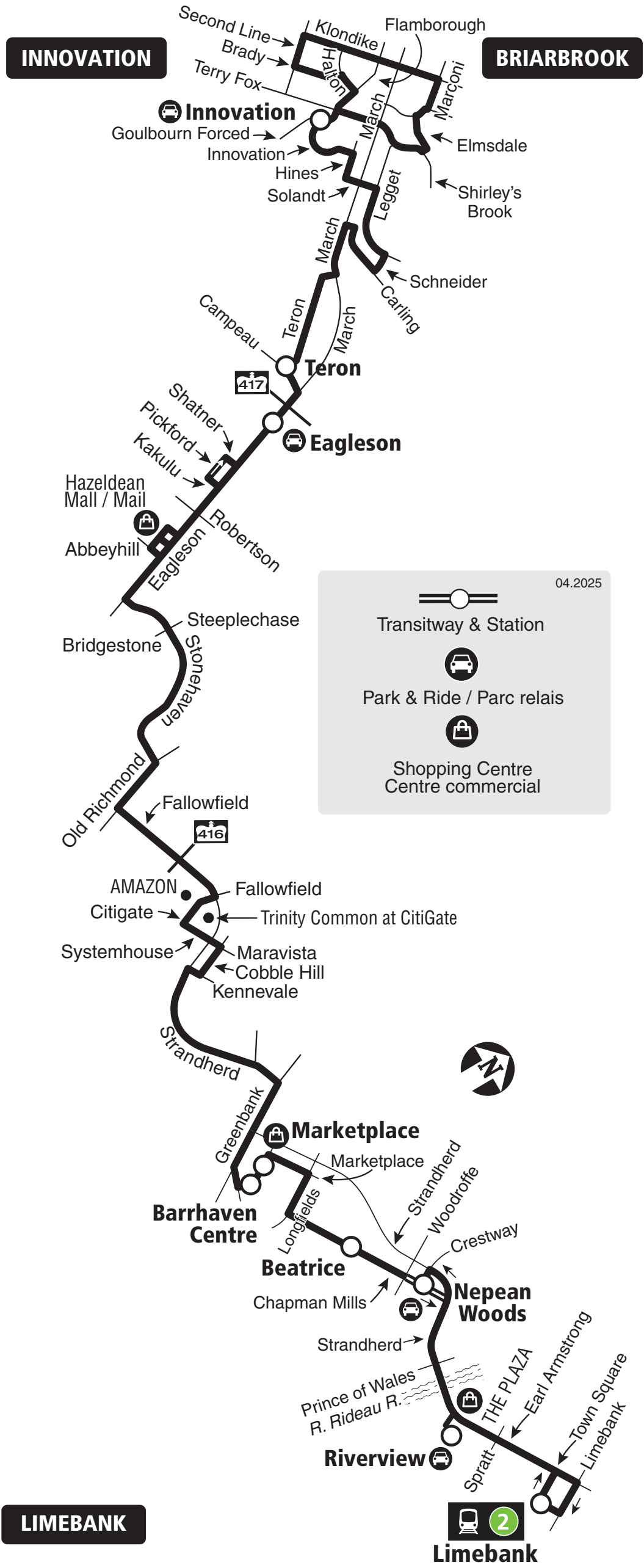
INNOVATION BRIARBROOK

Local

7 days a week / 7 jours par semaine

All day service

Service toute la journée



2025.05

This route starts on April 27, 2025 when the New Ways to Bus network comes into effect.

Ce circuit sera mis en service le 27 avril 2025, lorsque le réseau L'autobus réinventé entrera en vigueur.

Customer Service / Service à la clientèle **613-560-5000**

Security / Sécurité **613-741-2478**

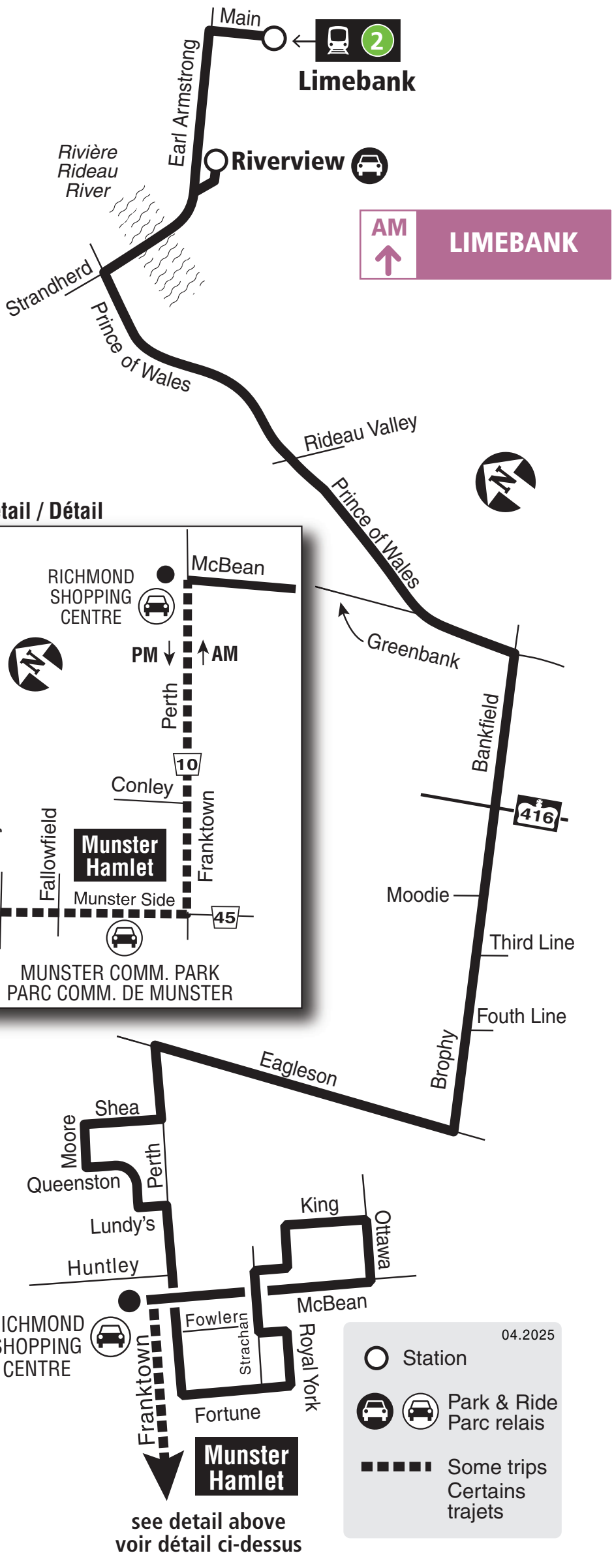
OC Transpo **octranspo.com**

283 Connexion

MUNSTER HAMLET
LIMEBANK

Monday to Friday / Lundi au vendredi

Peak periods only
Périodes de pointe seulement



PM **MUNSTER HAMLET**

2025.04

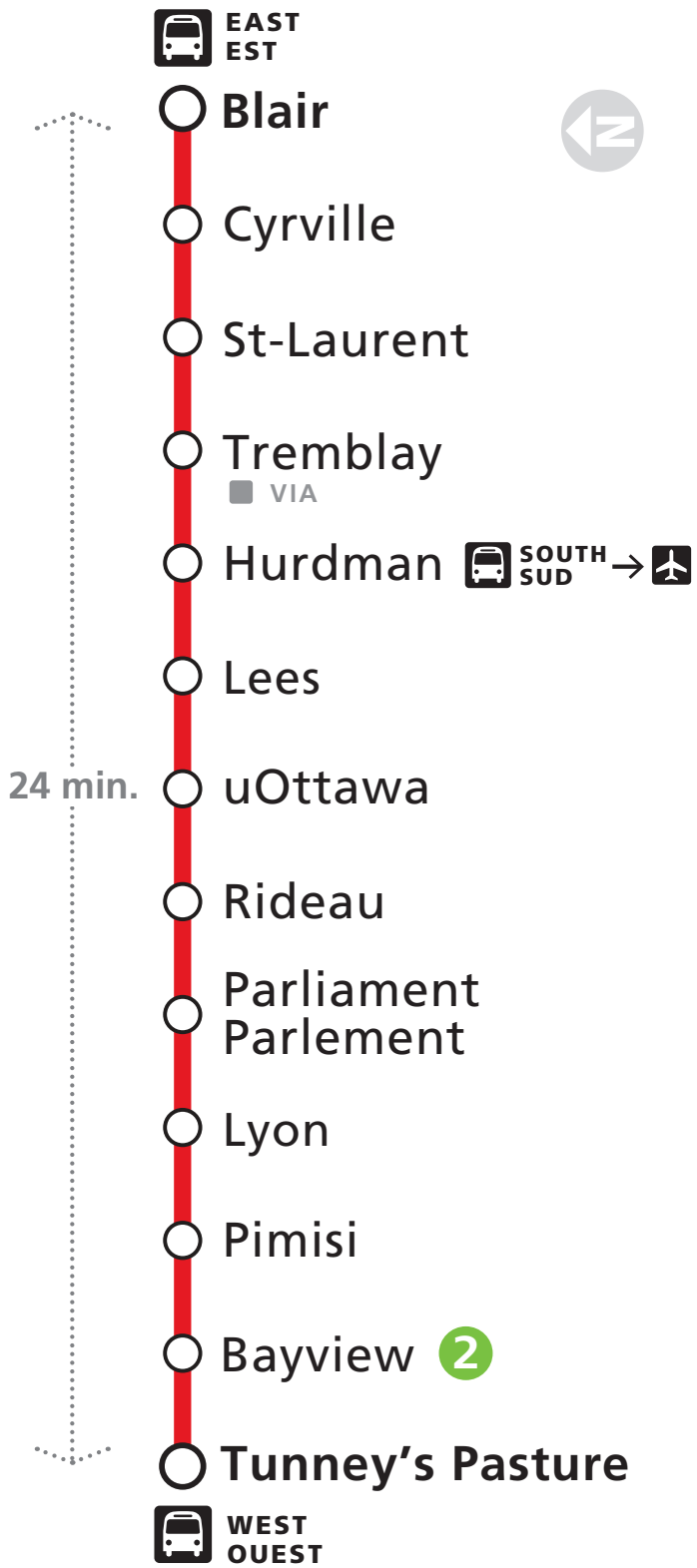
This route starts on April 27, 2025 when the New Ways to Bus network comes into effect.

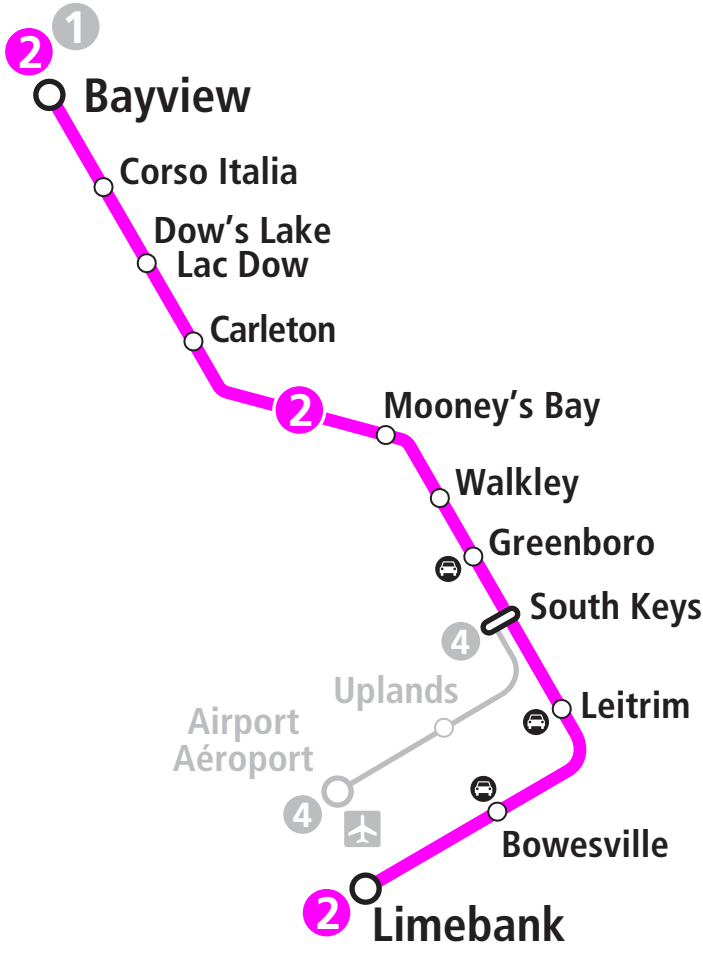
Ce circuit sera mis en service le 27 avril 2025, lorsque le réseau L'autobus réinventé entrera en vigueur.

Customer Service / Service à la clientèle **613-560-5000**

Security / Sécurité **613-741-2478**

OC Transpo **octranspo.com**


EAST
EST
Blair
Cyrville
St-Laurent
Tremblay
VIA
Hurdman
SOUTH
SUD
Lees
24 min.
uOttawa
Rideau
Parliament
Parlement
Lyon
Pimisi
Bayview
2
Tunney's Pasture
WEST
OUEST


2
1
Bayview
Corso Italia
Dow's Lake
Lac Dow
Carleton
2
Mooney's Bay
Walkley
Greenboro
South Keys
4
Uplands
Airport
Aéroport
Leitrim
4
Bowesville
2
Limebank

Appendix D: TRANS Regional Model 2022 & 2046

TRANS Regional Model

Version 1.01 - Assigned December, 2024

AM Peak Hour Total Traffic Volume

Earl Armstrong Road

2022 Model - Basecase

N/A

User Initials: PMA
Plot Prepared: Oct, 2025
EMME Scenario: 22002

Legend

AM Peak Hour Total Traffic Volume

1000 2000 3000 4000 5000

N

Distance (m)

200 400 600 800

The TRANS model is continuously refined & maintained, and all information is provided in good faith. However, model outputs are provided "as is", and no warranty or guarantee is provided as to the accuracy, reliability or reasonableness of the results. In using this data, you agree to accept any and all risks arising from any incorrect, incomplete, or misleading information.

Recipients are required to use caution and professional judgement in using and interpreting model outputs. In particular, caution should be used when focusing on a geographically limited area (such as a single road or intersection), as the model is primarily designed to simulate regional-scale phenomena and has been calibrated at a regional level.

As general good practice, it is recommended that the user confirm the network coding within the area of interest, and compare base year forecasts against traffic count data to assess the extent to which the model may be over- or under-estimating the travel demand.

Made with OpenPaths™ ©

TRANS Regional Model

Version 1.01 - Assigned December, 2024

AM Peak Hour Total Traffic Volume

Earl Armstrong Road

2046 Model - Priority Network

N/A

User Initials: PMA
Plot Prepared: Oct, 2025
EMME Scenario: 46011

Legend

AM Peak Hour Total Traffic Volume

1000 2000 3000 4000 5000

N

Distance (m)

200 400 600 800

The TRANS model is continuously refined & maintained, and all information is provided in good faith. However, model outputs are provided "as is", and no warranty or guarantee is provided as to the accuracy, reliability or reasonableness of the results. In using this data, you agree to accept any and all risks arising from any incorrect, incomplete, or misleading information.

Recipients are required to use caution and professional judgement in using and interpreting model outputs. In particular, caution should be used when focusing on a geographically limited area (such as a single road or intersection), as the model is primarily designed to simulate regional-scale phenomena and has been calibrated at a regional level.

As general good practice, it is recommended that the user confirm the network coding within the area of interest, and compare base year forecasts against traffic count data to assess the extent to which the model may be over- or under-estimating the travel demand.

Made with OpenPaths™ ©

Appendix E: City of Ottawa Turning Movement Counts

Transportation Services - Traffic Services

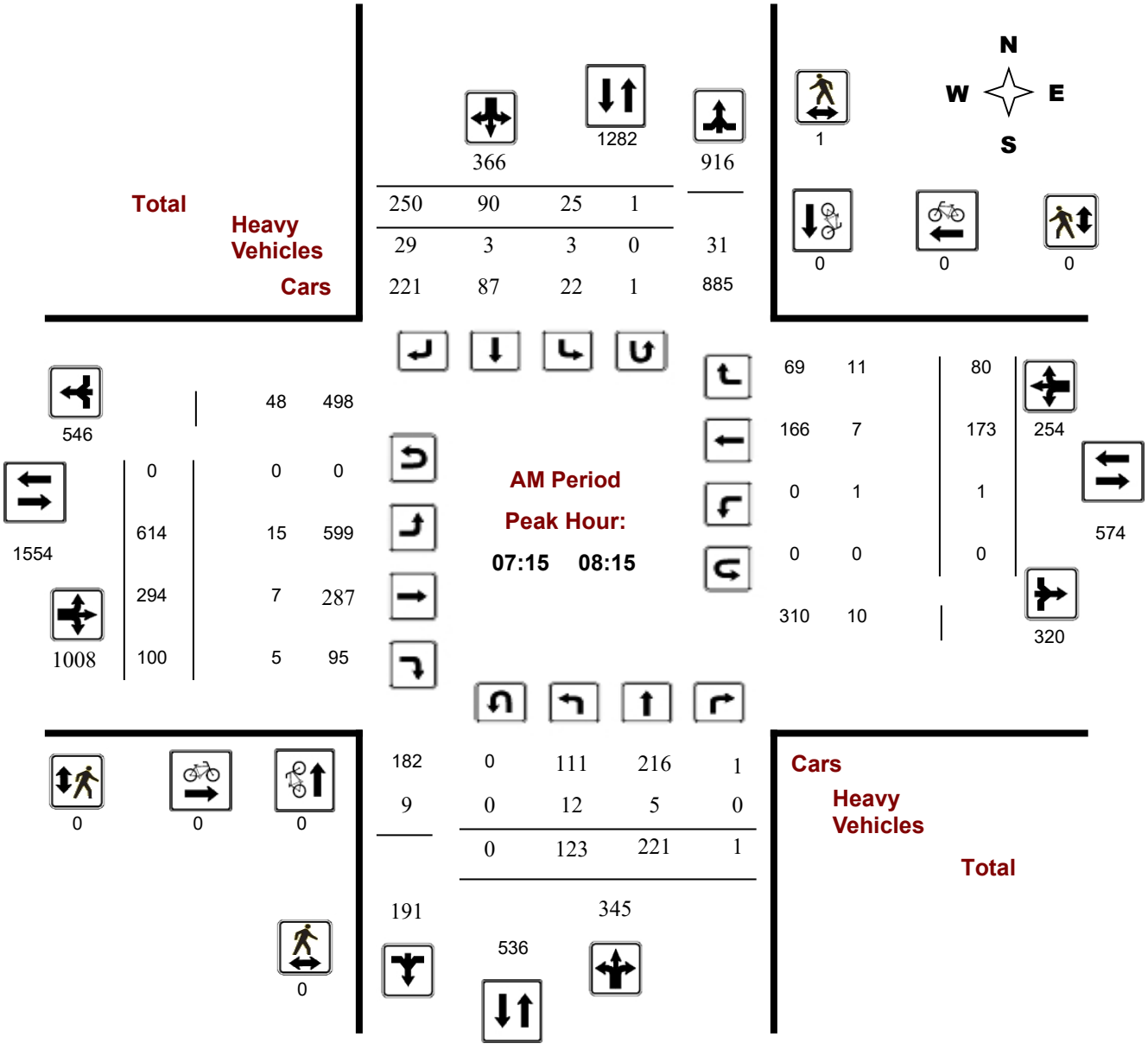
Turning Movement Count - Study Results

EARL ARMSTRONG RD @ LIMEBANK RD

Survey Date: Wednesday, December 18, 2019 **WO No:** 39237

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

AM Period Peak Hour Diagram



Transportation Services - Traffic Services

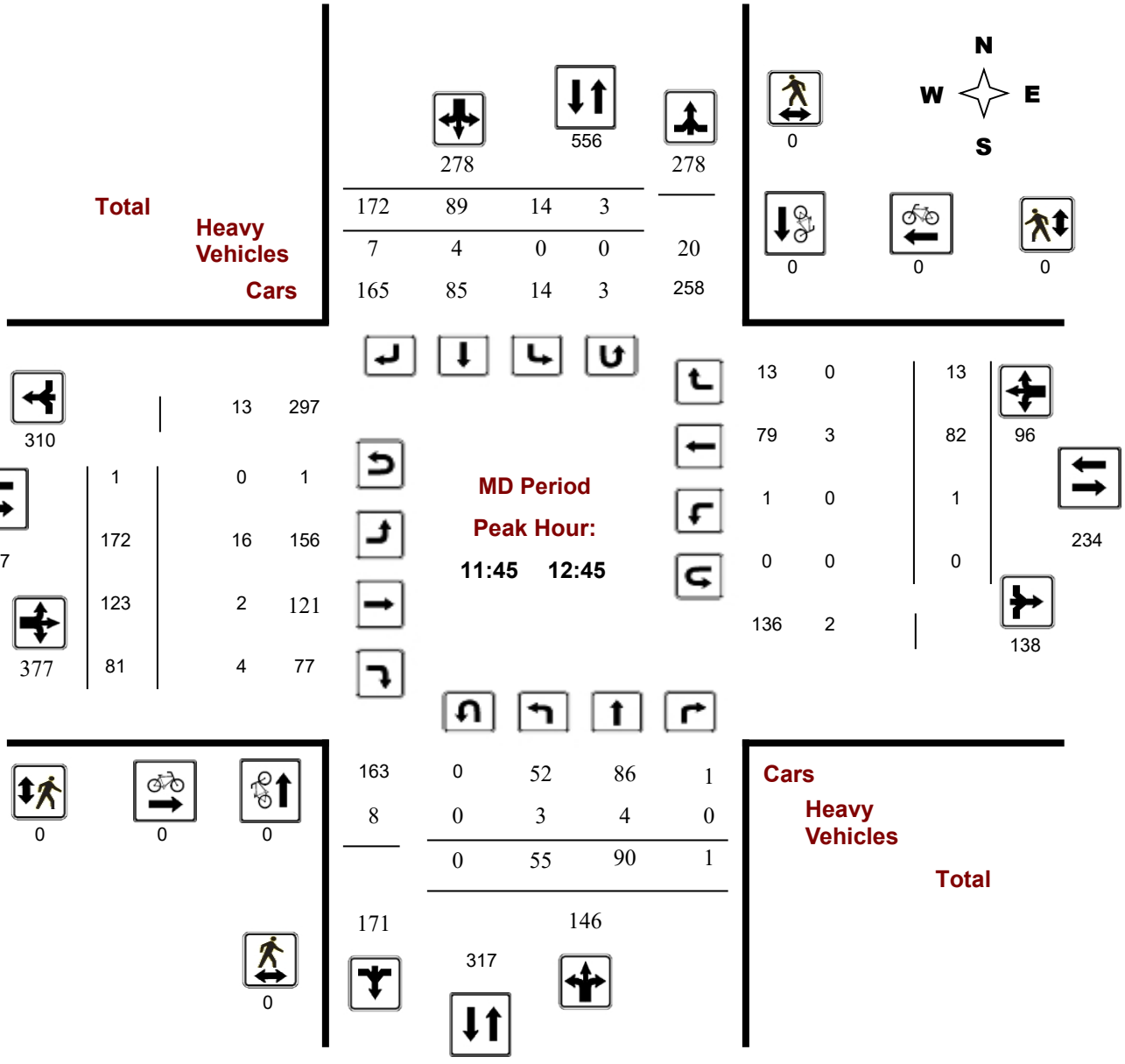
Turning Movement Count - Study Results

EARL ARMSTRONG RD @ LIMEBANK RD

Survey Date: Wednesday, December 18, 2019 **WO No:** 39237

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

MD Period Peak Hour Diagram



Transportation Services - Traffic Services

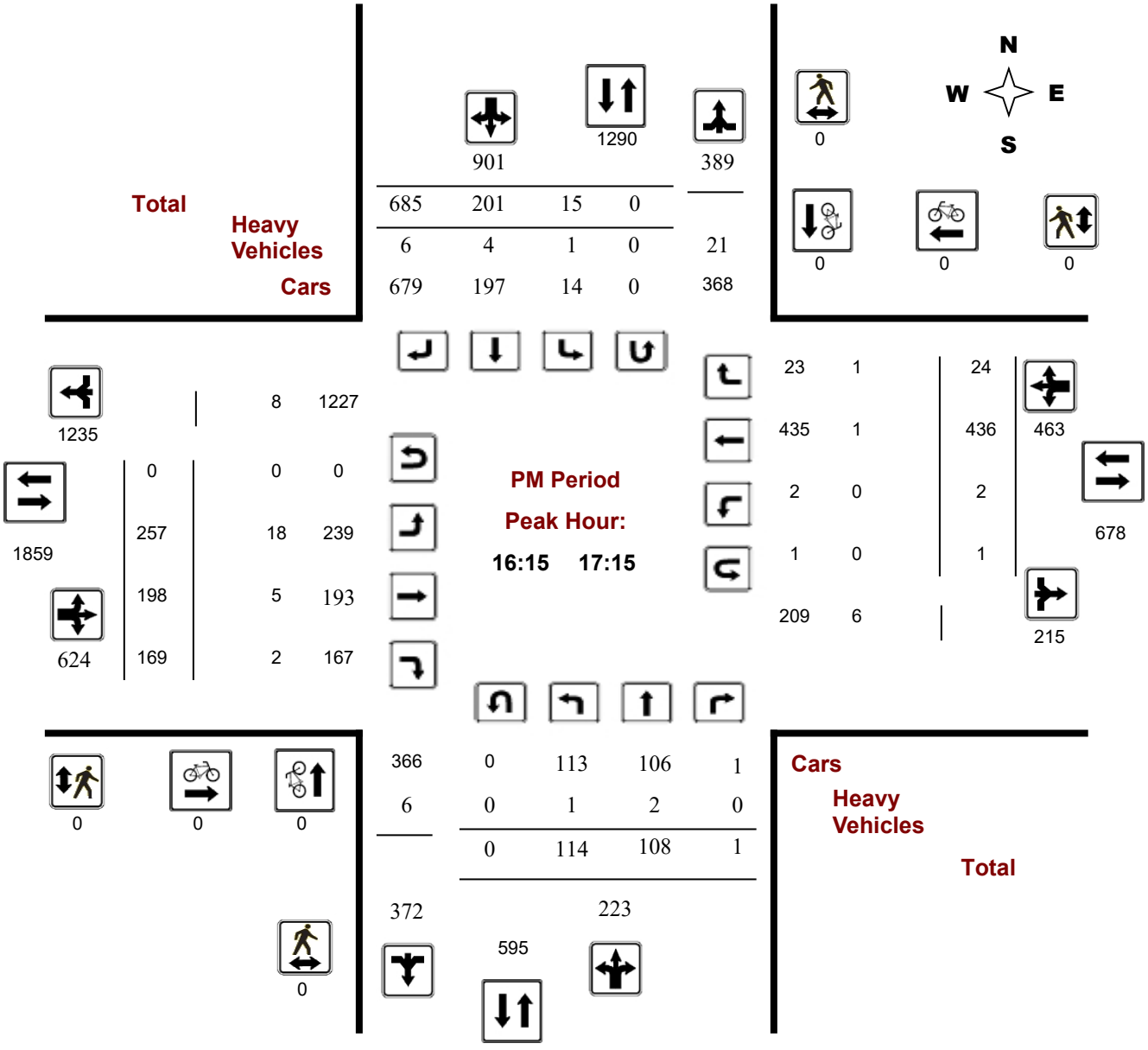
Turning Movement Count - Study Results

EARL ARMSTRONG RD @ LIMEBANK RD

Survey Date: Wednesday, December 18, 2019 **WO No:** 39237

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

PM Period Peak Hour Diagram



Transportation Services - Traffic Services

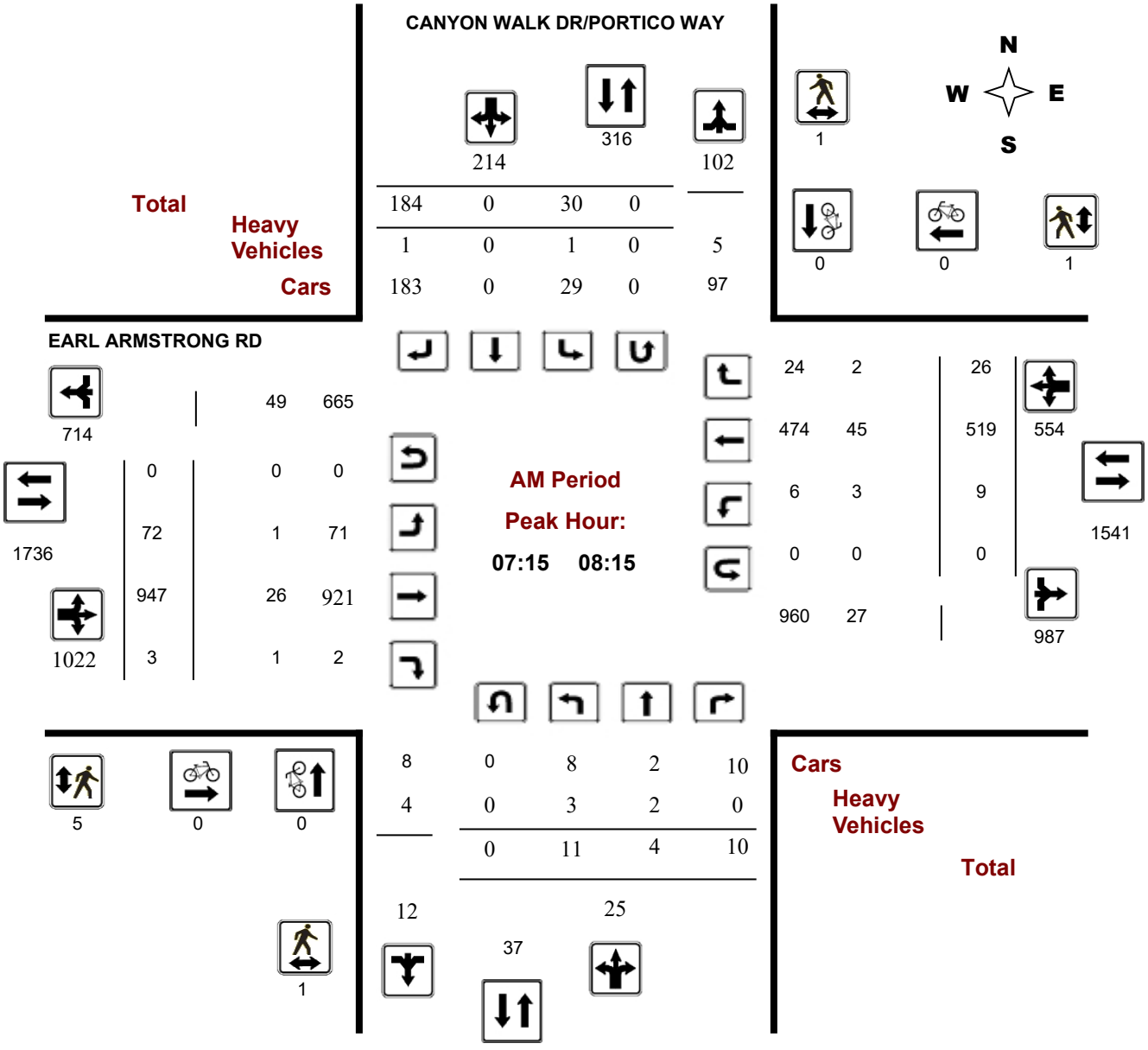
Turning Movement Count - Study Results

CANYON WALK DR/PORTICO WAY @ EARL ARMSTRONG RD

Survey Date: Wednesday, December 18, 2019 **WO No:** 39238

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

AM Period Peak Hour Diagram



Transportation Services - Traffic Services

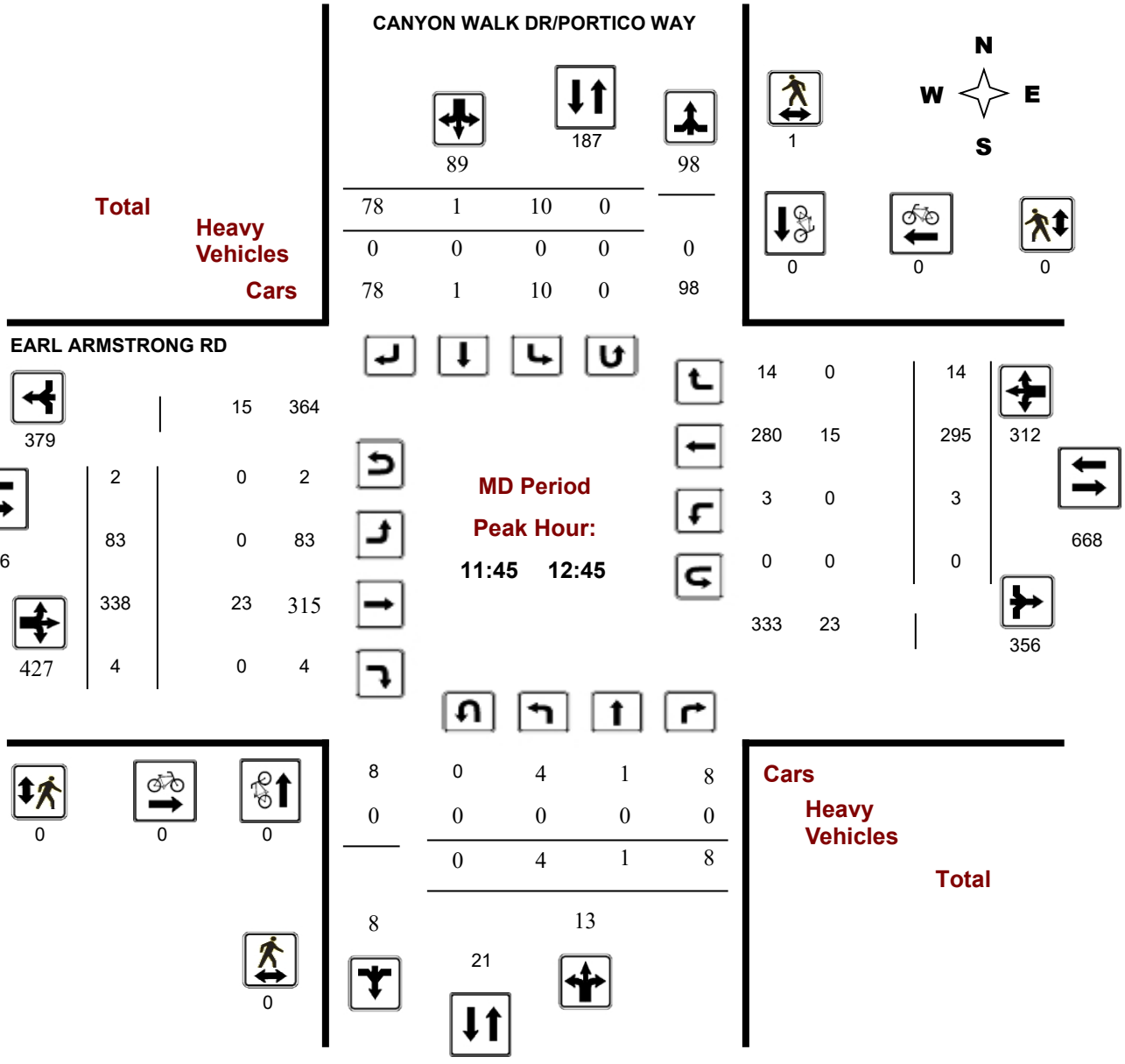
Turning Movement Count - Study Results

CANYON WALK DR/PORTICO WAY @ EARL ARMSTRONG RD

Survey Date: Wednesday, December 18, 2019 **WO No:** 39238

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

MD Period Peak Hour Diagram



Transportation Services - Traffic Services

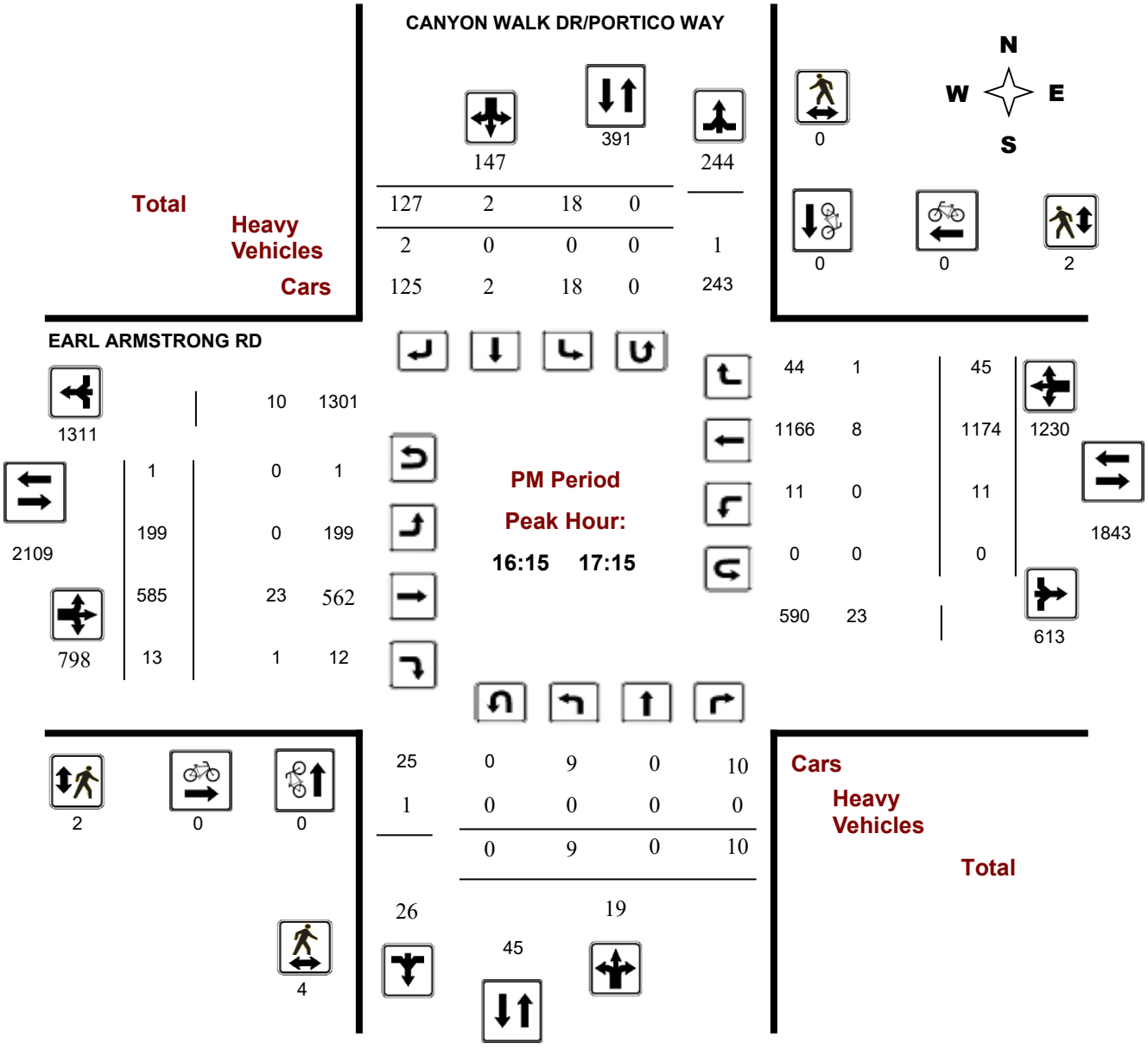
Turning Movement Count - Study Results

CANYON WALK DR/PORTICO WAY @ EARL ARMSTRONG RD

Survey Date: Wednesday, December 18, 2019 **WO No:** 39238

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

PM Period Peak Hour Diagram



Transportation Services - Traffic Services

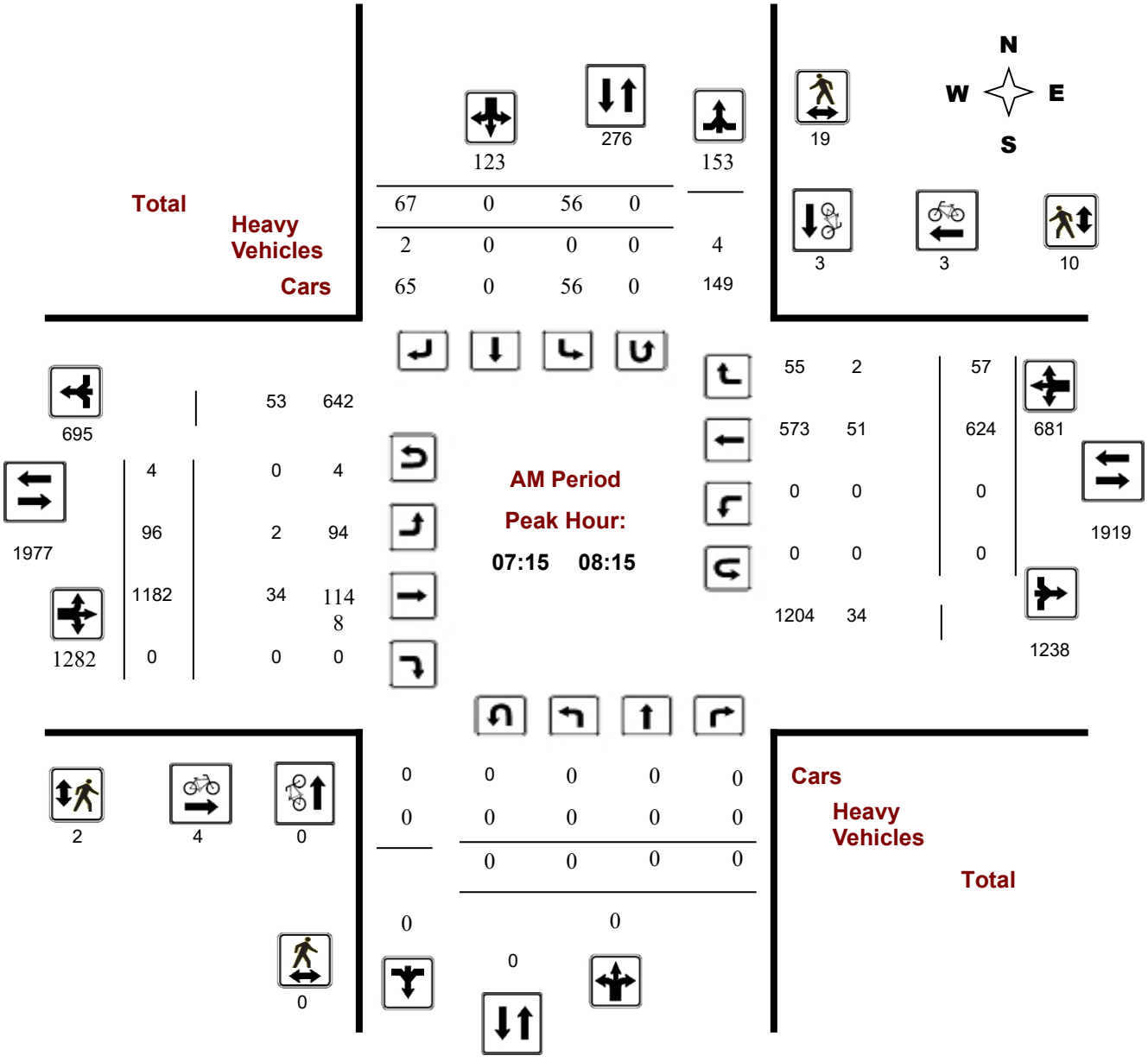
Turning Movement Count - Study Results

EARL ARMSTRONG RD @ Town Square Pl / Blanca St

urvey Date: Wednesday, September 03, 2025 **WO No:** 43082

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

AM Period Peak Hour Diagram



Transportation Services - Traffic Services

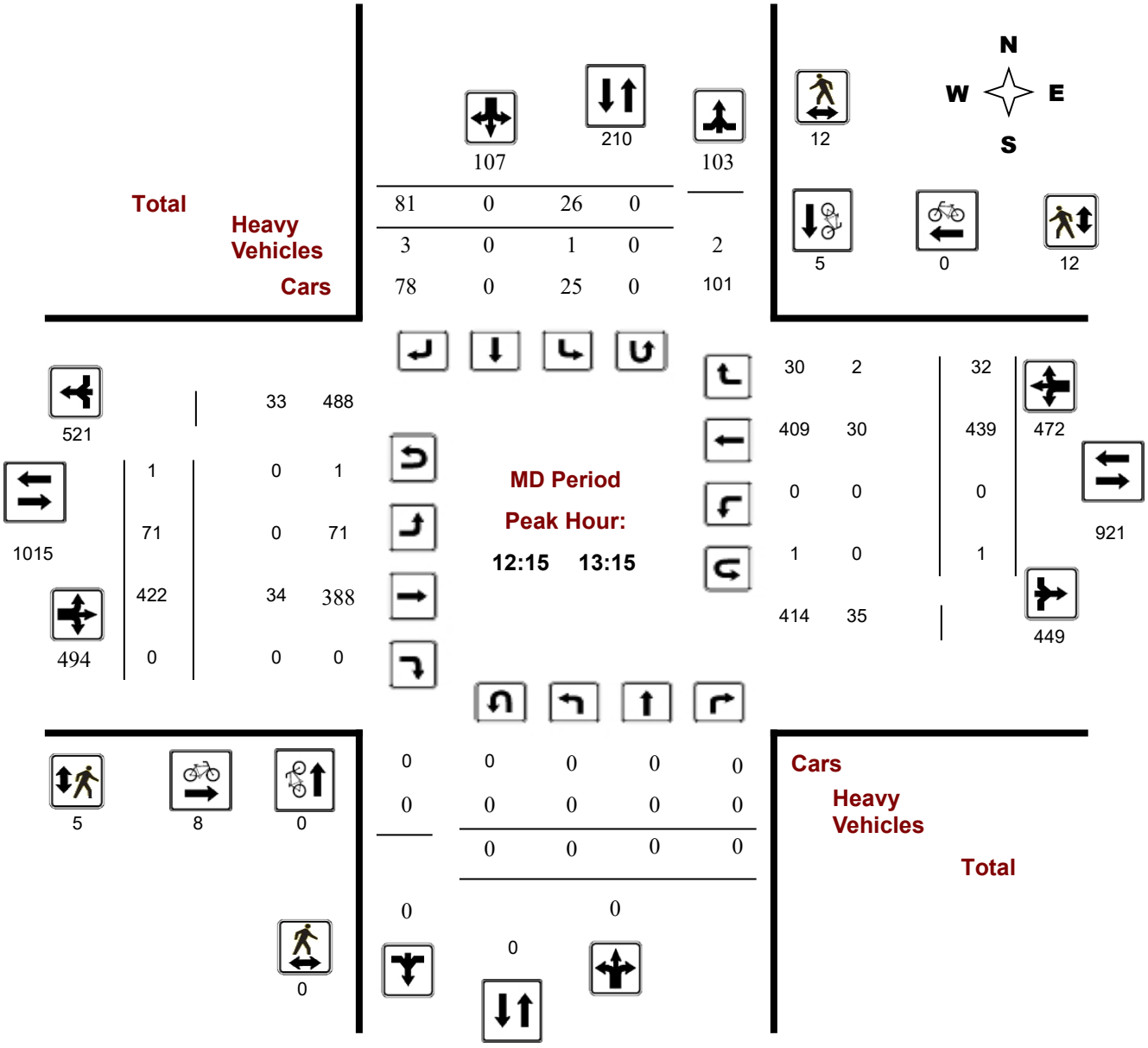
Turning Movement Count - Study Results

EARL ARMSTRONG RD @ Town Square Pl / Blanca St

Survey Date: Wednesday, September 03, 2025 **WO No:** 43082

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

MD Period Peak Hour Diagram



Transportation Services - Traffic Services

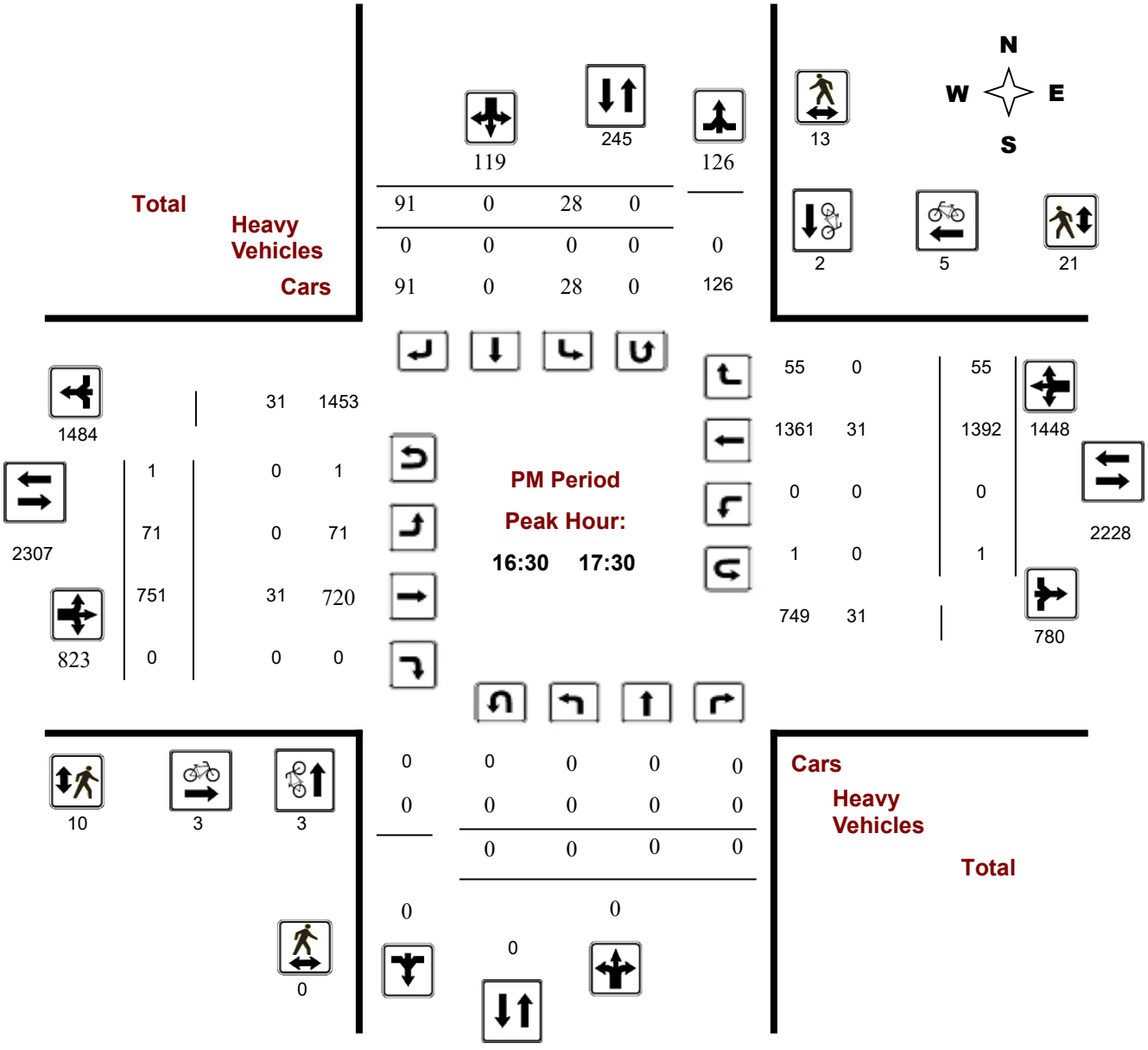
Turning Movement Count - Study Results

EARL ARMSTRONG RD @ Town Square Pl / Blanca St

Survey Date: Wednesday, September 03, 2025 **WO No:** 43082

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

PM Period Peak Hour Diagram



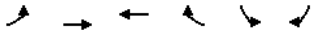
Appendix F: Detailed Synchro Report

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	80	1362	3	13	719	36	12	4	14	43	1	204
v/c Ratio	0.14	0.52	0.00	0.05	0.32	0.03	0.10	0.03	0.06	0.30	0.01	0.59
Control Delay	4.4	7.8	0.0	4.8	8.3	0.1	42.8	40.5	0.5	48.0	40.0	13.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.4	7.8	0.0	4.8	8.3	0.1	42.8	40.5	0.5	48.0	40.0	13.1
Queue Length 50th (m)	2.6	36.8	0.0	0.4	27.4	0.0	2.3	0.8	0.0	8.3	0.2	0.0
Queue Length 95th (m)	10.5	131.0	0.0	2.8	56.4	0.0	7.6	3.8	0.0	18.4	1.7	19.1
Internal Link Dist (m)		937.8			528.4			131.8			110.5	
Turn Bay Length (m)	60.0		100.0	60.0		100.0	30.0		25.0	60.0		25.0
Base Capacity (vph)	557	2627	930	240	2253	1044	278	311	458	342	466	546
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.52	0.00	0.05	0.32	0.03	0.04	0.01	0.03	0.13	0.00	0.37

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	1226	3	12	647	32	11	4	13	39	1	184
Future Volume (vph)	72	1226	3	12	647	32	11	4	13	39	1	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1767	3466	1201	1342	3275	1479	1405	1253	1597	1733	1879	1581
Flt Permitted	0.35	1.00	1.00	0.17	1.00	1.00	0.76	1.00	1.00	0.76	1.00	1.00
Satd. Flow (perm)	644	3466	1201	243	3275	1479	1120	1253	1597	1378	1879	1581
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	80	1362	3	13	719	36	12	4	14	43	1	204
RTOR Reduction (vph)	0	0	1	0	0	11	0	0	13	0	0	184
Lane Group Flow (vph)	80	1362	2	13	719	25	12	4	1	43	1	20
Heavy Vehicles (%)	1%	3%	33%	33%	9%	8%	27%	50%	0%	3%	0%	1%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	83.5	78.9	78.9	76.3	75.3	75.3	10.8	10.8	10.8	10.8	10.8	10.8
Effective Green, g (s)	83.5	78.9	78.9	76.3	75.3	75.3	10.8	10.8	10.8	10.8	10.8	10.8
Actuated g/C Ratio	0.77	0.72	0.72	0.70	0.69	0.69	0.10	0.10	0.10	0.10	0.10	0.10
Clearance Time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	540	2508	869	180	2262	1021	110	124	158	136	186	156
v/s Ratio Prot	c0.01	c0.39		0.00	0.22			0.00			0.00	
v/s Ratio Perm	0.11		0.00	0.05		0.02	0.01		0.00	c0.03		0.01
v/c Ratio	0.15	0.54	0.00	0.07	0.32	0.02	0.11	0.03	0.01	0.32	0.01	0.13
Uniform Delay, d1	3.4	6.8	4.2	5.5	6.7	5.3	44.7	44.4	44.3	45.7	44.3	44.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.8	0.0	0.2	0.4	0.0	0.4	0.1	0.0	1.3	0.0	0.4
Delay (s)	3.5	7.7	4.2	5.6	7.0	5.3	45.2	44.5	44.3	47.0	44.3	45.2
Level of Service	A	A	A	A	A	A	D	D	D	D	D	D
Approach Delay (s)		7.5			6.9			44.7			45.5	
Approach LOS		A			A			D			D	

Intersection Summary				
HCM 2000 Control Delay	11.5	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.52			
Actuated Cycle Length (s)	109.0	Sum of lost time (s)	18.3	
Intersection Capacity Utilization	62.1%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

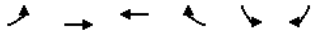


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	107	1313	693	63	62	74
v/c Ratio	0.57	1.07	0.59	0.11	0.07	0.09
Control Delay	39.9	79.0	28.7	6.2	12.9	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.9	79.0	28.7	6.2	12.9	3.4
Queue Length 50th (m)	16.4	~147.6	56.4	0.0	5.8	0.0
Queue Length 95th (m)	#36.1	#188.3	74.6	8.3	12.3	6.5
Internal Link Dist (m)		528.4	242.4		152.5	
Turn Bay Length (m)	160.0			120.0	60.0	30.0
Base Capacity (vph)	188	1226	1169	584	902	820
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.57	1.07	0.59	0.11	0.07	0.09

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	96	1182	624	57	56	67
Future Volume (vph)	96	1182	624	57	56	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3	7.3	6.6	6.6
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1750	3466	3305	1536	1785	1551
Flt Permitted	0.29	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	532	3466	3305	1536	1785	1551
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	107	1313	693	63	62	74
RTOR Reduction (vph)	0	0	0	41	0	37
Lane Group Flow (vph)	107	1313	693	22	62	37
Heavy Vehicles (%)	2%	3%	8%	4%	0%	3%
Turn Type	Perm	NA	NA	Perm	Perm	Perm
Protected Phases		2	6			
Permitted Phases	2			6	4	4
Actuated Green, G (s)	35.0	35.0	35.0	35.0	50.0	50.0
Effective Green, g (s)	35.0	35.0	35.0	35.0	50.0	50.0
Actuated g/C Ratio	0.35	0.35	0.35	0.35	0.51	0.51
Clearance Time (s)	7.3	7.3	7.3	7.3	6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	188	1226	1169	543	902	784
v/s Ratio Prot		c0.38	0.21			
v/s Ratio Perm	0.20			0.01	c0.03	0.02
v/c Ratio	0.57	1.07	0.59	0.04	0.07	0.05
Uniform Delay, d1	25.8	32.0	26.1	20.9	12.5	12.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.9	47.0	0.8	0.0	0.1	0.1
Delay (s)	29.8	78.9	26.9	21.0	12.7	12.5
Level of Service	C	E	C	C	B	B
Approach Delay (s)		75.2	26.4		12.6	
Approach LOS		E	C		B	

Intersection Summary				
HCM 2000 Control Delay	55.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	98.9	Sum of lost time (s)	13.9
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	838	401	137	1	240	89	170	246	1	28	100	347
v/c Ratio	0.87	0.19	0.14	0.01	0.26	0.17	0.64	0.34	0.00	0.20	0.24	0.73
Control Delay	50.5	12.7	2.4	58.0	35.8	0.7	63.4	41.5	0.0	59.9	46.7	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.5	12.7	2.4	58.0	35.8	0.7	63.4	41.5	0.0	59.9	46.7	14.2
Queue Length 50th (m)	86.9	17.4	0.0	0.1	21.8	0.0	18.8	26.8	0.0	3.1	11.0	0.0
Queue Length 95th (m)	#148.5	44.9	8.8	1.1	40.0	0.0	#37.9	38.6	0.0	8.9	18.8	26.3
Internal Link Dist (m)		242.4			816.4			544.0			601.0	
Turn Bay Length (m)	140.0		60.0	120.0		200.0	120.0		100.0	120.0		100.0
Base Capacity (vph)	1053	2075	964	76	912	528	279	1085	642	137	921	633
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.19	0.14	0.01	0.26	0.17	0.61	0.23	0.00	0.20	0.11	0.55

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	754	361	123	1	216	80	153	221	1	25	90	312
Future Volume (vph)	754	361	123	1	216	80	153	221	1	25	90	312
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3395	3500	1521	1731	3433	1401	3148	3500	1597	3092	3466	1426
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3395	3500	1521	1731	3433	1401	3148	3500	1597	3092	3466	1426
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	838	401	137	1	240	89	170	246	1	28	100	347
RTOR Reduction (vph)	0	0	62	0	0	63	0	0	1	0	0	300
Lane Group Flow (vph)	838	401	75	1	240	26	170	246	0	28	100	47
Heavy Vehicles (%)	2%	2%	5%	100%	4%	14%	10%	2%	0%	12%	3%	12%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	32.1	67.5	67.5	0.9	36.3	36.3	9.7	23.5	23.5	2.9	16.7	16.7
Effective Green, g (s)	32.1	67.5	67.5	0.9	36.3	36.3	9.7	23.5	23.5	2.9	16.7	16.7
Actuated g/C Ratio	0.26	0.55	0.55	0.01	0.30	0.30	0.08	0.19	0.19	0.02	0.14	0.14
Clearance Time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	888	1926	837	12	1016	414	249	670	306	73	472	194
v/s Ratio Prot	c0.25	0.11		0.00	c0.07		c0.05	c0.07		0.01	0.03	
v/s Ratio Perm			0.05			0.02			0.00			0.03
v/c Ratio	0.94	0.21	0.09	0.08	0.24	0.06	0.68	0.37	0.00	0.38	0.21	0.24
Uniform Delay, d1	44.4	14.0	13.0	60.4	32.7	31.0	55.0	43.1	40.1	59.0	47.1	47.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	18.0	0.2	0.2	3.0	0.5	0.3	7.5	0.3	0.0	3.3	0.2	0.7
Delay (s)	62.3	14.2	13.2	63.4	33.2	31.3	62.5	43.4	40.1	62.3	47.3	48.0
Level of Service	E	B	B	E	C	C	E	D	D	E	D	D
Approach Delay (s)		43.4			32.8			51.2			48.7	
Approach LOS		D			C			D			D	

Intersection Summary				
HCM 2000 Control Delay	44.3	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.55			
Actuated Cycle Length (s)	122.6	Sum of lost time (s)	27.8	
Intersection Capacity Utilization	55.8%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

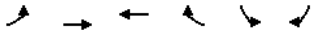
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	221	872	14	16	1572	60	10	1	14	27	2	141
v/c Ratio	0.63	0.33	0.01	0.03	0.72	0.06	0.08	0.01	0.06	0.21	0.01	0.53
Control Delay	27.7	6.5	0.0	4.9	18.7	1.3	46.4	43.0	0.5	51.0	43.5	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.7	6.5	0.0	4.9	18.7	1.3	46.4	43.0	0.5	51.0	43.5	14.5
Queue Length 50th (m)	20.4	18.0	0.0	0.5	119.7	0.0	2.3	0.2	0.0	6.2	0.5	0.0
Queue Length 95th (m)	#77.1	70.9	0.0	3.2	177.9	3.3	6.6	1.7	0.0	13.2	2.7	16.3
Internal Link Dist (m)		937.8			528.4			131.8			110.5	
Turn Bay Length (m)	60.0		100.0	60.0		100.0	30.0		25.0	60.0		25.0
Base Capacity (vph)	352	2638	1156	509	2186	1001	304	402	406	304	402	446
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.33	0.01	0.03	0.72	0.06	0.03	0.00	0.03	0.09	0.00	0.32

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

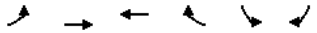
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	199	785	13	14	1415	54	9	1	13	24	2	127
Future Volume (vph)	199	785	13	14	1415	54	9	1	13	24	2	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1785	3433	1479	1785	3535	1566	1785	1879	1597	1785	1879	1566
Flt Permitted	0.08	1.00	1.00	0.33	1.00	1.00	0.76	1.00	1.00	0.76	1.00	1.00
Satd. Flow (perm)	155	3433	1479	611	3535	1566	1421	1879	1597	1423	1879	1566
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	221	872	14	16	1572	60	10	1	14	27	2	141
RTOR Reduction (vph)	0	0	4	0	0	23	0	0	13	0	0	128
Lane Group Flow (vph)	221	872	10	16	1572	37	10	1	1	27	2	13
Heavy Vehicles (%)	0%	4%	8%	0%	1%	2%	0%	0%	0%	0%	0%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	97.1	88.6	88.6	76.6	74.2	74.2	10.7	10.7	10.7	10.7	10.7	10.7
Effective Green, g (s)	97.1	88.6	88.6	76.6	74.2	74.2	10.7	10.7	10.7	10.7	10.7	10.7
Actuated g/C Ratio	0.81	0.74	0.74	0.64	0.62	0.62	0.09	0.09	0.09	0.09	0.09	0.09
Clearance Time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	353	2534	1091	413	2185	968	126	167	142	126	167	139
v/s Ratio Prot	c0.09	0.25		0.00	c0.44			0.00			0.00	
v/s Ratio Perm	0.42		0.01	0.02		0.02	0.01		0.00	c0.02		0.01
v/c Ratio	0.63	0.34	0.01	0.04	0.72	0.04	0.08	0.01	0.01	0.21	0.01	0.09
Uniform Delay, d1	25.3	5.5	4.1	7.9	15.7	9.0	50.1	49.8	49.8	50.7	49.8	50.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.4	0.4	0.0	0.0	2.1	0.1	0.3	0.0	0.0	0.9	0.0	0.3
Delay (s)	28.7	5.9	4.2	8.0	17.8	9.0	50.4	49.8	49.8	51.6	49.9	50.5
Level of Service	C	A	A	A	B	A	D	D	D	D	D	D
Approach Delay (s)		10.4			17.4			50.1			50.6	
Approach LOS		B			B			D			D	

Intersection Summary				
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.65			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.3	
Intersection Capacity Utilization	73.4%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	79	834	1547	61	31	101
v/c Ratio	0.38	0.31	0.57	0.05	0.19	0.55
Control Delay	11.1	4.1	6.1	1.1	44.8	38.3
Queue Delay	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	11.1	4.1	6.2	1.1	44.8	38.3
Queue Length 50th (m)	4.1	21.1	53.0	0.0	6.0	11.6
Queue Length 95th (m)	16.2	35.9	87.5	3.1	14.2	26.7
Internal Link Dist (m)		528.4	242.4		152.5	
Turn Bay Length (m)	160.0			120.0	60.0	30.0
Base Capacity (vph)	206	2673	2726	1257	490	469
Starvation Cap Reductn	0	0	287	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.31	0.63	0.05	0.06	0.22

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	71	751	1392	55	28	91
Future Volume (vph)	71	751	1392	55	28	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3	7.3	6.6	6.6
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1785	3433	3500	1597	1785	1597
Flt Permitted	0.14	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	265	3433	3500	1597	1785	1597
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	79	834	1547	61	31	101
RTOR Reduction (vph)	0	0	0	13	0	38
Lane Group Flow (vph)	79	834	1547	48	31	63
Heavy Vehicles (%)	0%	4%	2%	0%	0%	0%
Turn Type	Perm	NA	NA	Perm	Perm	Perm
Protected Phases		2	6			
Permitted Phases	2			6	4	4
Actuated Green, G (s)	83.4	83.4	83.4	83.4	9.8	9.8
Effective Green, g (s)	83.4	83.4	83.4	83.4	9.8	9.8
Actuated g/C Ratio	0.78	0.78	0.78	0.78	0.09	0.09
Clearance Time (s)	7.3	7.3	7.3	7.3	6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	206	2673	2725	1243	163	146
v/s Ratio Prot		0.24	c0.44			
v/s Ratio Perm	0.30			0.03	0.02	c0.04
v/c Ratio	0.38	0.31	0.57	0.04	0.19	0.43
Uniform Delay, d1	3.7	3.5	4.7	2.7	45.0	46.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.3	0.3	0.9	0.1	0.6	2.0
Delay (s)	9.1	3.8	5.6	2.8	45.6	48.0
Level of Service	A	A	A	A	D	D
Approach Delay (s)		4.2	5.5		47.5	
Approach LOS		A	A		D	

Intersection Summary				
HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	107.1	Sum of lost time (s)	13.9
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	357	274	234	2	568	27	148	120	1	17	223	892
v/c Ratio	0.82	0.17	0.27	0.01	0.57	0.04	0.51	0.10	0.00	0.09	0.26	1.53
Control Delay	62.0	18.8	3.8	50.5	36.3	0.1	53.8	26.5	0.0	50.1	34.1	270.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.0	18.8	3.8	50.5	36.3	0.1	53.8	26.5	0.0	50.1	34.1	270.1
Queue Length 50th (m)	37.9	16.4	0.0	0.2	53.9	0.0	15.4	8.2	0.0	1.8	20.3	~222.5
Queue Length 95th (m)	#62.7	32.1	15.7	1.5	75.6	0.0	26.5	17.4	0.0	5.5	30.6	#300.0
Internal Link Dist (m)		242.4			816.4			544.0			601.0	
Turn Bay Length (m)	140.0		60.0	120.0		200.0	120.0		100.0	120.0		100.0
Base Capacity (vph)	452	1589	851	161	997	620	319	1196	720	301	846	583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.17	0.27	0.01	0.57	0.04	0.46	0.10	0.00	0.06	0.26	1.53

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	321	247	211	2	511	24	133	108	1	15	201	803
Future Volume (vph)	321	247	211	2	511	24	133	108	1	15	201	803
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3236	3466	1581	3463	3570	1536	3429	3500	1597	3236	3500	1581
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3236	3466	1581	3463	3570	1536	3429	3500	1597	3236	3500	1581
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	357	274	234	2	568	27	148	120	1	17	223	892
RTOR Reduction (vph)	0	0	136	0	0	19	0	0	1	0	0	197
Lane Group Flow (vph)	357	274	98	2	568	8	148	120	0	17	223	695
Heavy Vehicles (%)	7%	3%	1%	0%	0%	4%	1%	2%	0%	7%	2%	1%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	14.4	49.3	49.3	1.0	35.9	35.9	9.2	36.7	36.7	2.6	30.1	30.1
Effective Green, g (s)	14.4	49.3	49.3	1.0	35.9	35.9	9.2	36.7	36.7	2.6	30.1	30.1
Actuated g/C Ratio	0.12	0.42	0.42	0.01	0.31	0.31	0.08	0.31	0.31	0.02	0.26	0.26
Clearance Time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	396	1455	663	29	1091	469	268	1094	499	71	897	405
v/s Ratio Prot	c0.11	0.08		0.00	c0.16		c0.04	c0.03		0.01	0.06	
v/s Ratio Perm			0.06			0.01			0.00			c0.44
v/c Ratio	0.90	0.19	0.15	0.07	0.52	0.02	0.55	0.11	0.00	0.24	0.25	1.72
Uniform Delay, d1	50.8	21.4	21.1	57.7	33.6	28.4	52.1	28.7	27.7	56.4	34.7	43.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	23.0	0.3	0.5	1.0	1.8	0.1	2.5	0.0	0.0	1.7	0.1	332.5
Delay (s)	73.8	21.7	21.5	58.7	35.4	28.5	54.6	28.8	27.7	58.2	34.8	376.1
Level of Service	E	C	C	E	D	C	D	C	C	E	C	F
Approach Delay (s)		43.2			35.2			43.0			304.1	
Approach LOS		D			D			D			F	

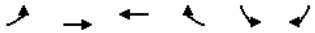
Intersection Summary				
HCM 2000 Control Delay	144.7	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	0.98			
Actuated Cycle Length (s)	117.4	Sum of lost time (s)	27.8	
Intersection Capacity Utilization	85.3%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	193	522	10	4	517	36	11	3	7	32	2	136
v/c Ratio	0.33	0.22	0.01	0.01	0.21	0.03	0.05	0.01	0.02	0.14	0.01	0.36
Control Delay	9.8	6.2	0.0	7.5	6.2	2.3	17.2	16.3	0.2	18.9	16.0	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.8	6.2	0.0	7.5	6.2	2.3	17.2	16.3	0.2	18.9	16.0	6.7
Queue Length 50th (m)	6.8	8.6	0.0	0.2	8.5	0.0	0.9	0.3	0.0	2.7	0.2	0.0
Queue Length 95th (m)	34.2	31.0	0.0	1.7	30.7	3.1	3.8	1.8	0.0	7.7	1.4	9.7
Internal Link Dist (m)		937.8			528.4			131.8			110.5	
Turn Bay Length (m)	60.0		100.0	60.0		100.0	30.0		25.0	60.0		25.0
Base Capacity (vph)	578	2406	1103	586	2406	1103	655	866	760	654	866	795
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.22	0.01	0.01	0.21	0.03	0.02	0.00	0.01	0.05	0.00	0.17

Intersection Summary

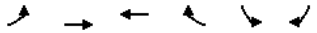
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	174	470	9	4	465	32	10	3	6	29	2	122
Future Volume (vph)	174	470	9	4	465	32	10	3	6	29	2	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.9	5.9	5.9	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1750	3535	1597	1785	3535	1597	1785	1879	1597	1785	1879	1566
Flt Permitted	0.46	1.00	1.00	0.46	1.00	1.00	0.76	1.00	1.00	0.76	1.00	1.00
Satd. Flow (perm)	849	3535	1597	862	3535	1597	1421	1879	1597	1420	1879	1566
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	193	522	10	4	517	36	11	3	7	32	2	136
RTOR Reduction (vph)	0	0	4	0	0	13	0	0	6	0	0	116
Lane Group Flow (vph)	193	522	6	4	517	23	11	3	1	32	2	20
Heavy Vehicles (%)	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	2%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	37.2	37.2	37.2	37.2	37.2	37.2	8.3	8.3	8.3	8.3	8.3	8.3
Effective Green, g (s)	37.2	37.2	37.2	37.2	37.2	37.2	8.3	8.3	8.3	8.3	8.3	8.3
Actuated g/C Ratio	0.64	0.64	0.64	0.64	0.64	0.64	0.14	0.14	0.14	0.14	0.14	0.14
Clearance Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	547	2279	1029	555	2279	1029	204	270	229	204	270	225
v/s Ratio Prot		0.15			0.15			0.00			0.00	
v/s Ratio Perm	c0.23		0.00	0.00		0.01	0.01		0.00	c0.02		0.01
v/c Ratio	0.35	0.23	0.01	0.01	0.23	0.02	0.05	0.01	0.00	0.16	0.01	0.09
Uniform Delay, d1	4.7	4.3	3.7	3.7	4.3	3.7	21.3	21.2	21.2	21.6	21.2	21.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.8	0.2	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.4	0.0	0.2
Delay (s)	6.5	4.5	3.7	3.7	4.5	3.7	21.4	21.2	21.2	22.0	21.2	21.6
Level of Service	A	A	A	A	A	A	C	C	C	C	C	C
Approach Delay (s)		5.0			4.4			21.3			21.7	
Approach LOS		A			A			C			C	

Intersection Summary					
HCM 2000 Control Delay	7.0	HCM 2000 Level of Service	A		
HCM 2000 Volume to Capacity ratio	0.32				
Actuated Cycle Length (s)	57.7	Sum of lost time (s)	12.2		
Intersection Capacity Utilization	45.9%	ICU Level of Service	A		
Analysis Period (min)	15				
c Critical Lane Group					



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	113	448	431	44	44	124
v/c Ratio	0.51	0.53	0.51	0.11	0.05	0.14
Control Delay	26.3	20.3	20.1	6.3	7.7	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.3	20.3	20.1	6.3	7.7	2.5
Queue Length 50th (m)	9.7	20.4	19.6	0.0	1.9	0.0
Queue Length 95th (m)	22.0	31.2	30.1	5.5	6.9	6.9
Internal Link Dist (m)		528.4	242.4		152.5	
Turn Bay Length (m)	160.0			120.0	60.0	30.0
Base Capacity (vph)	472	1789	1772	838	954	911
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.25	0.24	0.05	0.05	0.14

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	102	403	388	40	40	112
Future Volume (vph)	102	403	388	40	40	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	5.8	5.8	5.8	6.5	6.5
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1785	3500	3466	1597	1785	1597
Flt Permitted	0.49	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	925	3500	3466	1597	1785	1597
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	113	448	431	44	44	124
RTOR Reduction (vph)	0	0	0	33	0	58
Lane Group Flow (vph)	113	448	431	11	44	66
Heavy Vehicles (%)	0%	2%	3%	0%	0%	0%
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2			6		4
Actuated Green, G (s)	13.4	13.4	13.4	13.4	29.6	29.6
Effective Green, g (s)	13.4	13.4	13.4	13.4	29.6	29.6
Actuated g/C Ratio	0.24	0.24	0.24	0.24	0.54	0.54
Clearance Time (s)	5.8	5.8	5.8	5.8	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	224	848	839	386	955	854
v/s Ratio Prot		c0.13	0.12		0.02	
v/s Ratio Perm	0.12			0.01		c0.04
v/c Ratio	0.50	0.53	0.51	0.03	0.05	0.08
Uniform Delay, d1	18.1	18.2	18.1	16.0	6.1	6.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.8	0.6	0.5	0.0	0.1	0.2
Delay (s)	19.9	18.8	18.7	16.0	6.2	6.4
Level of Service	B	B	B	B	A	A
Approach Delay (s)		19.0	18.4		6.4	
Approach LOS		B	B		A	

Intersection Summary				
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	55.3	Sum of lost time (s)	12.3
Intersection Capacity Utilization	35.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	197	216	80	3	154	19	77	118	3	34	138	244
v/c Ratio	0.53	0.12	0.09	0.01	0.13	0.03	0.27	0.17	0.01	0.13	0.25	0.54
Control Delay	44.4	14.7	0.2	44.0	22.3	0.1	42.4	30.3	0.0	42.5	33.7	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.4	14.7	0.2	44.0	22.3	0.1	42.4	30.3	0.0	42.5	33.7	9.1
Queue Length 50th (m)	15.7	8.2	0.0	0.2	8.7	0.0	6.1	9.2	0.0	2.7	11.0	0.0
Queue Length 95th (m)	32.4	26.5	0.0	1.8	21.0	0.0	15.0	16.3	0.0	8.4	19.2	17.8
Internal Link Dist (m)		242.4			816.4			544.0			601.0	
Turn Bay Length (m)	140.0		60.0	120.0		200.0	120.0		100.0	120.0		100.0
Base Capacity (vph)	406	1816	895	410	1221	658	387	1259	553	410	1245	725
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.12	0.09	0.01	0.13	0.03	0.20	0.09	0.01	0.08	0.11	0.34

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	177	194	72	3	139	17	69	106	3	31	124	220
Future Volume (vph)	177	194	72	3	139	17	69	106	3	31	124	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3429	3466	1536	3463	3433	1507	3267	3500	1201	3463	3500	1597
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3429	3466	1536	3463	3433	1507	3267	3500	1201	3463	3500	1597
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	197	216	80	3	154	19	77	118	3	34	138	244
RTOR Reduction (vph)	0	0	42	0	0	12	0	0	2	0	0	206
Lane Group Flow (vph)	197	216	38	3	154	7	77	118	1	34	138	38
Heavy Vehicles (%)	1%	3%	4%	0%	4%	6%	6%	2%	33%	0%	2%	0%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	9.3	45.1	45.1	0.9	36.7	36.7	6.1	17.1	17.1	3.9	14.9	14.9
Effective Green, g (s)	9.3	45.1	45.1	0.9	36.7	36.7	6.1	17.1	17.1	3.9	14.9	14.9
Actuated g/C Ratio	0.10	0.48	0.48	0.01	0.39	0.39	0.06	0.18	0.18	0.04	0.16	0.16
Clearance Time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	336	1648	730	32	1329	583	210	631	216	142	550	251
v/s Ratio Prot	c0.06	c0.06		0.00	0.04		c0.02	0.03		0.01	c0.04	
v/s Ratio Perm			0.02			0.00			0.00			0.02
v/c Ratio	0.59	0.13	0.05	0.09	0.12	0.01	0.37	0.19	0.00	0.24	0.25	0.15
Uniform Delay, d1	40.9	13.9	13.4	46.5	18.6	17.9	42.5	33.0	31.9	44.0	35.1	34.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.6	0.2	0.1	1.3	0.2	0.0	1.1	0.1	0.0	0.9	0.2	0.3
Delay (s)	43.5	14.1	13.5	47.8	18.8	17.9	43.6	33.1	31.9	44.9	35.3	34.8
Level of Service	D	B	B	D	B	B	D	C	C	D	D	C
Approach Delay (s)		25.7			19.2			37.2			35.8	
Approach LOS		C			B			D			D	

Intersection Summary				
HCM 2000 Control Delay	29.9	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.25			
Actuated Cycle Length (s)	94.8	Sum of lost time (s)	27.8	
Intersection Capacity Utilization	45.0%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	1238	3	12	653	32	11	4	13	39	1	186
Future Volume (vph)	73	1238	3	12	653	32	11	4	13	39	1	186
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0		100.0	60.0		100.0	30.0		25.0	60.0		25.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1767	3466	1201	1342	3275	1479	1405	1253	1597	1733	1879	1581
Flt Permitted	0.367			0.176			0.757			0.755		
Satd. Flow (perm)	683	3466	1201	249	3275	1479	1120	1253	1597	1377	1879	1581
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			128			128			123			186
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		961.8			552.4			155.8			134.5	
Travel Time (s)		57.7			33.1			11.2			9.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	3%	33%	33%	9%	8%	27%	50%	0%	3%	0%	1%
Adj. Flow (vph)	73	1238	3	12	653	32	11	4	13	39	1	186
Shared Lane Traffic (%)												
Lane Group Flow (vph)	73	1238	3	12	653	32	11	4	13	39	1	186
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	

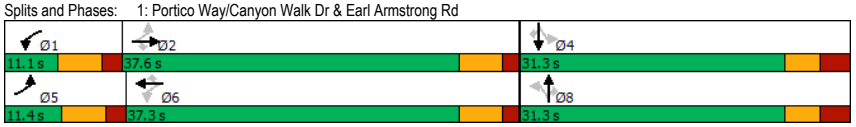
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.1	24.9	24.9	11.1	24.9	24.9	31.3	31.3	31.3	31.3	31.3	31.3
Total Split (s)	11.4	37.6	37.6	11.1	37.3	37.3	31.3	31.3	31.3	31.3	31.3	31.3
Total Split (%)	14.3%	47.0%	47.0%	13.9%	46.6%	46.6%	39.1%	39.1%	39.1%	39.1%	39.1%	39.1%
Maximum Green (s)	5.3	31.7	31.7	5.0	31.4	31.4	25.0	25.0	25.0	25.0	25.0	25.0
Yellow Time (s)	4.2	4.2	4.2	4.2	4.2	4.2	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.9	1.7	1.7	1.9	1.7	1.7	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		10.0	10.0		10.0	10.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		9.0	9.0		9.0	9.0	18.0	18.0	18.0	18.0	18.0	18.0
Pedestrian Calls (#/hr)		5	5		5	5	5	5	5	5	5	5
Act Effct Green (s)	40.5	39.9	39.9	37.8	35.2	35.2	9.8	9.8	9.8	9.8	9.8	9.8
Actuated g/C Ratio	0.63	0.62	0.62	0.59	0.55	0.55	0.15	0.15	0.15	0.15	0.15	0.15
v/c Ratio	0.14	0.57	0.00	0.05	0.36	0.04	0.06	0.02	0.04	0.19	0.00	0.47
Control Delay	6.5	11.6	0.0	7.1	11.4	0.1	22.6	21.5	0.2	24.6	21.0	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.5	11.6	0.0	7.1	11.4	0.1	22.6	21.5	0.2	24.6	21.0	8.0
LOS	A	B	A	A	B	A	C	C	A	C	C	A
Approach Delay		11.3			10.8			12.1			10.9	
Approach LOS		B			B			B			B	
Queue Length 50th (m)	2.2	28.5	0.0	0.3	22.3	0.0	1.2	0.4	0.0	4.2	0.1	0.0
Queue Length 95th (m)	10.9	#131.2	0.0	3.1	53.7	0.0	4.6	2.4	0.0	10.8	1.2	13.0
Internal Link Dist (m)		937.8			528.4			131.8			110.5	
Turn Bay Length (m)	60.0		100.0	60.0		100.0	30.0		25.0	60.0		25.0
Base Capacity (vph)	525	2163	797	234	1803	872	447	500	712	550	751	743
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.57	0.00	0.05	0.36	0.04	0.02	0.01	0.02	0.07	0.00	0.25

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 63.9			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.57			
Intersection Signal Delay: 11.1		Intersection LOS: B	
Intersection Capacity Utilization 62.5%		ICU Level of Service B	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.

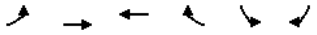
Queue shown is maximum after two cycles.

Splits and Phases: 1: Portico Way/Canyon Walk Dr & Earl Armstrong Rd

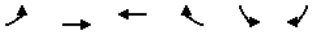


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	1238	3	12	653	32	11	4	13	39	1	186
Future Volume (vph)	73	1238	3	12	653	32	11	4	13	39	1	186
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1767	3466	1201	1342	3275	1479	1405	1253	1597	1733	1879	1581
Flt Permitted	0.37	1.00	1.00	0.18	1.00	1.00	0.76	1.00	1.00	0.76	1.00	1.00
Satd. Flow (perm)	682	3466	1201	249	3275	1479	1120	1253	1597	1378	1879	1581
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	73	1238	3	12	653	32	11	4	13	39	1	186
RTOR Reduction (vph)	0	0	1	0	0	14	0	0	11	0	0	160
Lane Group Flow (vph)	73	1238	2	12	653	18	11	4	2	39	1	26
Heavy Vehicles (%)	1%	3%	33%	33%	9%	8%	27%	50%	0%	3%	0%	1%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	42.9	39.9	39.9	38.5	37.7	37.7	9.8	9.8	9.8	9.8	9.8	9.8
Effective Green, g (s)	42.9	39.9	39.9	38.5	37.7	37.7	9.8	9.8	9.8	9.8	9.8	9.8
Actuated g/C Ratio	0.62	0.58	0.58	0.56	0.55	0.55	0.14	0.14	0.14	0.14	0.14	0.14
Clearance Time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	472	2010	696	152	1794	810	159	178	227	196	267	225
v/s Ratio Prot	c0.01	c0.36		0.00	0.20			0.00			0.00	
v/s Ratio Perm	0.09		0.00	0.04		0.01	0.01		0.00	c0.03		0.02
v/c Ratio	0.15	0.62	0.00	0.08	0.36	0.02	0.07	0.02	0.01	0.20	0.00	0.12
Uniform Delay, d1	5.2	9.4	6.1	7.3	8.8	7.1	25.5	25.4	25.3	26.0	25.3	25.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	1.4	0.0	0.2	0.6	0.0	0.2	0.1	0.0	0.5	0.0	0.2
Delay (s)	5.3	10.9	6.1	7.5	9.4	7.2	25.7	25.4	25.3	26.5	25.3	26.0
Level of Service	A	B	A	A	A	A	C	C	C	C	C	C
Approach Delay (s)		10.5			9.2			25.5			26.1	
Approach LOS		B			A			C			C	

Intersection Summary				
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.53			
Actuated Cycle Length (s)	68.8	Sum of lost time (s)	18.3	
Intersection Capacity Utilization	62.5%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø8
Lane Configurations							
Traffic Volume (vph)	97	1194	630	58	57	68	
Future Volume (vph)	97	1194	630	58	57	68	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (m)	160.0			120.0	60.0	30.0	
Storage Lanes	1			1	1	0	
Taper Length (m)	2.5				2.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1750	3466	3305	1536	1785	1551	
Flt Permitted	0.376				0.950		
Satd. Flow (perm)	693	3466	3305	1536	1785	1551	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				58		68	
Link Speed (k/h)		60	60		50		
Link Distance (m)		552.4	266.4		176.5		
Travel Time (s)		33.1	16.0		12.7		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehicles (%)	2%	3%	8%	4%	0%	3%	
Adj. Flow (vph)	97	1194	630	58	57	68	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	97	1194	630	58	57	68	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(m)		7.0	7.0		3.5		
Link Offset(m)		0.0	0.0		0.0		
Crosswalk Width(m)		1.6	1.6		1.6		
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	
Turning Speed (k/h)	24			14	24	14	
Number of Detectors	1	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (m)	6.1	30.5	30.5	6.1	6.1	6.1	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8	1.8	6.1	6.1	6.1	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7	28.7				
Detector 2 Size(m)		1.8	1.8				
Detector 2 Type		Cl+Ex	Cl+Ex				
Detector 2 Channel							
Detector 2 Extend (s)		0.0	0.0				
Turn Type	Perm	NA	NA	Perm	Perm	Perm	
Protected Phases		2	6				8



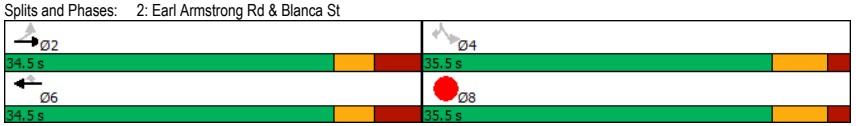
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø8
Permitted Phases	2			6	4	4	
Detector Phase	2	2	6	6	4	4	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	31.3	31.3	31.3	31.3	35.5	35.5	35.5
Total Split (s)	34.5	34.5	34.5	34.5	35.5	35.5	35.5
Total Split (%)	49.3%	49.3%	49.3%	49.3%	50.7%	50.7%	51%
Maximum Green (s)	27.2	27.2	27.2	27.2	28.9	28.9	28.9
Yellow Time (s)	3.3	3.3	3.3	3.3	4.6	4.6	4.6
All-Red Time (s)	4.0	4.0	4.0	4.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.3	7.3	7.3	7.3	6.6	6.6	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	17.0	17.0	17.0	17.0	8.0	8.0	8.0
Pedestrian Calls (#/hr)	5	5	5	5	5	5	5
Act Effct Green (s)	26.8	26.8	26.8	26.8	28.9	28.9	
Actuated g/C Ratio	0.39	0.39	0.39	0.39	0.42	0.42	
v/c Ratio	0.36	0.90	0.50	0.09	0.08	0.10	
Control Delay	20.2	30.8	17.9	4.8	12.9	4.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	20.2	30.8	17.9	4.8	12.9	4.2	
LOS	C	C	B	A	B	A	
Approach Delay		30.0	16.8		8.2		
Approach LOS		C	B		A		
Queue Length 50th (m)	8.8	74.4	31.7	0.0	4.4	0.0	
Queue Length 95th (m)	20.7	#112.7	45.5	6.1	10.5	6.3	
Internal Link Dist (m)		528.4	242.4		152.5		
Turn Bay Length (m)	160.0			120.0	60.0	30.0	
Base Capacity (vph)	271	1354	1292	636	741	684	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.36	0.88	0.49	0.09	0.08	0.10	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 69.6			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 24.4		Intersection LOS: C	
Intersection Capacity Utilization 48.8%		ICU Level of Service A	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Earl Armstrong Rd & Blanca St



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	97	1194	630	58	57	68
Future Volume (vph)	97	1194	630	58	57	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3	7.3	6.6	6.6
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1750	3466	3305	1536	1785	1551
Flt Permitted	0.38	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	693	3466	3305	1536	1785	1551
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	97	1194	630	58	57	68
RTOR Reduction (vph)	0	0	0	36	0	40
Lane Group Flow (vph)	97	1194	630	22	57	28
Heavy Vehicles (%)	2%	3%	8%	4%	0%	3%
Turn Type	Perm	NA	NA	Perm	Perm	Perm
Protected Phases		2	6			
Permitted Phases	2			6	4	4
Actuated Green, G (s)	26.8	26.8	26.8	26.8	28.9	28.9
Effective Green, g (s)	26.8	26.8	26.8	26.8	28.9	28.9
Actuated g/C Ratio	0.39	0.39	0.39	0.39	0.42	0.42
Clearance Time (s)	7.3	7.3	7.3	7.3	6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	266	1334	1272	591	741	644
v/s Ratio Prot		c0.34	0.19			
v/s Ratio Perm	0.14			0.01	c0.03	0.02
v/c Ratio	0.36	0.90	0.50	0.04	0.08	0.04
Uniform Delay, d1	15.3	20.1	16.3	13.4	12.3	12.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.9	8.1	0.3	0.0	0.2	0.1
Delay (s)	16.2	28.2	16.6	13.4	12.5	12.2
Level of Service	B	C	B	B	B	B
Approach Delay (s)		27.3	16.3		12.4	
Approach LOS		C	B		B	

Intersection Summary				
HCM 2000 Control Delay	22.8	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.47			
Actuated Cycle Length (s)	69.6	Sum of lost time (s)	13.9	
Intersection Capacity Utilization	48.8%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	762	365	124	1	218	81	155	223	1	25	91	315
Future Volume (vph)	762	365	124	1	218	81	155	223	1	25	91	315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	140.0		60.0	120.0		200.0	120.0		100.0	120.0		100.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3395	3500	1521	1731	3433	1401	3148	3500	1597	3092	3466	1426
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3395	3500	1521	1731	3433	1401	3148	3500	1597	3092	3466	1426
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			163			227			227			315
Link Speed (k/h)		60			80			80			80	
Link Distance (m)		266.4			840.4			568.0			625.0	
Travel Time (s)		16.0			37.8			25.6			28.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	5%	100%	4%	14%	10%	2%	0%	12%	3%	12%
Adj. Flow (vph)	762	365	124	1	218	81	155	223	1	25	91	315
Shared Lane Traffic (%)												
Lane Group Flow (vph)	762	365	124	1	218	81	155	223	1	25	91	315
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			7.0			7.0			7.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	12.1	36.9	36.9	12.1	36.9	36.9	11.9	36.9	36.9	11.9	36.9	36.9
Total Split (s)	32.3	57.8	57.8	12.1	37.6	37.6	13.2	38.2	38.2	11.9	36.9	36.9
Total Split (%)	26.9%	48.2%	48.2%	10.1%	31.3%	31.3%	11.0%	31.8%	31.8%	9.9%	30.8%	30.8%
Maximum Green (s)	25.2	50.9	50.9	5.0	30.7	30.7	6.3	31.3	31.3	5.0	30.0	30.0
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.5	2.3	2.3	2.5	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	Min	Min	None	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		5	5		5	5		5	5		5	5
Act Effct Green (s)	25.3	61.2	61.2	5.0	30.8	30.8	6.3	22.6	22.6	5.0	13.9	13.9
Actuated g/C Ratio	0.24	0.59	0.59	0.05	0.30	0.30	0.06	0.22	0.22	0.05	0.13	0.13
v/c Ratio	0.92	0.18	0.13	0.01	0.21	0.14	0.81	0.29	0.00	0.17	0.20	0.68
Control Delay	57.4	12.2	1.6	52.0	29.6	0.5	80.1	36.2	0.0	53.0	40.2	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.4	12.2	1.6	52.0	29.6	0.5	80.1	36.2	0.0	53.0	40.2	12.4
LOS	E	B	A	D	C	A	F	D	A	D	D	B
Approach Delay		38.7			21.8			54.1			20.6	
Approach LOS		D			C			D			C	
Queue Length 50th (m)	73.6	14.0	0.0	0.1	16.3	0.0	15.5	18.7	0.0	2.4	8.7	0.0
Queue Length 95th (m)	#139.7	39.2	5.3	1.0	32.2	0.0	#39.7	32.5	0.0	7.6	15.5	23.0
Internal Link Dist (m)		242.4			816.4			544.0			601.0	
Turn Bay Length (m)	140.0		60.0	120.0		200.0	120.0		100.0	120.0		100.0
Base Capacity (vph)	824	2053	959	83	1015	574	191	1055	639	148	1001	636
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.18	0.13	0.01	0.21	0.14	0.81	0.21	0.00	0.17	0.09	0.50

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 104.3			
Natural Cycle: 120			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 35.7		Intersection LOS: D	
Intersection Capacity Utilization 56.1%		ICU Level of Service B	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Limebank Rd & Earl Armstrong Rd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	762	365	124	1	218	81	155	223	1	25	91	315
Future Volume (vph)	762	365	124	1	218	81	155	223	1	25	91	315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3395	3500	1521	1731	3433	1401	3148	3500	1597	3092	3466	1426
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3395	3500	1521	1731	3433	1401	3148	3500	1597	3092	3466	1426
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	762	365	124	1	218	81	155	223	1	25	91	315
RTOR Reduction (vph)	0	0	58	0	0	55	0	0	1	0	0	265
Lane Group Flow (vph)	762	365	66	1	218	26	155	223	0	25	91	50
Heavy Vehicles (%)	2%	2%	5%	100%	4%	14%	10%	2%	0%	12%	3%	12%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	25.3	61.2	61.2	0.9	36.8	36.8	6.3	22.6	22.6	1.9	18.2	18.2
Effective Green, g (s)	25.3	61.2	61.2	0.9	36.8	36.8	6.3	22.6	22.6	1.9	18.2	18.2
Actuated g/C Ratio	0.22	0.53	0.53	0.01	0.32	0.32	0.06	0.20	0.20	0.02	0.16	0.16
Clearance Time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	750	1872	813	13	1104	450	173	691	315	51	551	226
v/s Ratio Prot	c0.22	c0.10		0.00	0.06		c0.05	c0.06		0.01	0.03	
v/s Ratio Perm			0.04			0.02			0.00			0.04
v/c Ratio	1.02	0.19	0.08	0.08	0.20	0.06	0.90	0.32	0.00	0.49	0.17	0.22
Uniform Delay, d1	44.6	13.8	12.9	56.3	28.1	26.8	53.7	39.3	36.8	55.8	41.5	41.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	36.9	0.2	0.2	2.5	0.4	0.2	39.9	0.3	0.0	7.2	0.1	0.5
Delay (s)	81.5	14.0	13.1	58.9	28.5	27.1	93.6	39.6	36.8	63.0	41.7	42.4
Level of Service	F	B	B	E	C	C	F	D	D	E	D	D
Approach Delay (s)		55.0			28.2			61.7			43.5	
Approach LOS		E			C			E			D	

Intersection Summary				
HCM 2000 Control Delay	50.6	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.53			
Actuated Cycle Length (s)	114.4	Sum of lost time (s)	27.8	
Intersection Capacity Utilization	56.1%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

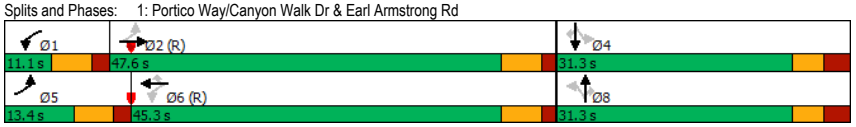
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	201	793	13	14	1429	55	9	1	13	24	2	128
Future Volume (vph)	201	793	13	14	1429	55	9	1	13	24	2	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0		100.0	60.0		100.0	30.0		25.0	60.0		25.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1785	3433	1479	1785	3535	1566	1785	1879	1597	1785	1879	1566
Flt Permitted	0.097			0.352			0.757			0.757		
Satd. Flow (perm)	182	3433	1479	661	3535	1566	1422	1879	1597	1422	1879	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			114			114			109			128
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		961.8			552.4			155.8			134.5	
Travel Time (s)		57.7			33.1			11.2			9.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	4%	8%	0%	1%	2%	0%	0%	0%	0%	0%	2%
Adj. Flow (vph)	201	793	13	14	1429	55	9	1	13	24	2	128
Shared Lane Traffic (%)												
Lane Group Flow (vph)	201	793	13	14	1429	55	9	1	13	24	2	128
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.1	24.9	24.9	11.1	24.9	24.9	31.3	31.3	31.3	31.3	31.3	31.3
Total Split (s)	13.4	47.6	47.6	11.1	45.3	45.3	31.3	31.3	31.3	31.3	31.3	31.3
Total Split (%)	14.9%	52.9%	52.9%	12.3%	50.3%	50.3%	34.8%	34.8%	34.8%	34.8%	34.8%	34.8%
Maximum Green (s)	7.3	41.7	41.7	5.0	39.4	39.4	25.0	25.0	25.0	25.0	25.0	25.0
Yellow Time (s)	4.2	4.2	4.2	4.2	4.2	4.2	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.9	1.7	1.7	1.9	1.7	1.7	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		10.0	10.0		10.0	10.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		9.0	9.0		9.0	9.0	18.0	18.0	18.0	18.0	18.0	18.0
Pedestrian Calls (#/hr)		5	5		5	5	5	5	5	5	5	5
Act Effct Green (s)	66.6	65.3	65.3	57.0	51.7	51.7	10.2	10.2	10.2	10.2	10.2	10.2
Actuated g/C Ratio	0.74	0.73	0.73	0.63	0.57	0.57	0.11	0.11	0.11	0.11	0.11	0.11
v/c Ratio	0.65	0.32	0.01	0.03	0.70	0.06	0.06	0.00	0.05	0.15	0.01	0.44
Control Delay	24.3	7.0	0.0	5.9	17.9	0.2	31.1	29.0	0.3	34.0	29.5	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.3	7.0	0.0	5.9	17.9	0.2	31.1	29.0	0.3	34.0	29.5	10.6
LOS	C	A	A	A	B	A	C	C	A	C	C	B
Approach Delay		10.3			17.2			13.6			14.5	
Approach LOS		B			B			B			B	
Queue Length 50th (m)	9.1	15.0	0.0	0.4	80.1	0.0	1.5	0.2	0.0	4.0	0.4	0.0
Queue Length 95th (m)	#57.3	64.2	0.0	3.3	#165.6	0.5	4.6	1.3	0.0	8.9	1.9	12.3
Internal Link Dist (m)		937.8			528.4			131.8			110.5	
Turn Bay Length (m)	60.0		100.0	60.0		100.0	30.0		25.0	60.0		25.0
Base Capacity (vph)	308	2492	1105	487	2031	948	395	521	522	395	521	527
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.32	0.01	0.03	0.70	0.06	0.02	0.00	0.02	0.06	0.00	0.24

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 14.4		Intersection LOS: B	
Intersection Capacity Utilization 73.9%		ICU Level of Service D	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Portico Way/Canyon Walk Dr & Earl Armstrong Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	201	793	13	14	1429	55	9	1	13	24	2	128
Future Volume (vph)	201	793	13	14	1429	55	9	1	13	24	2	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1785	3433	1479	1785	3535	1566	1785	1879	1597	1785	1879	1566
Flt Permitted	0.10	1.00	1.00	0.35	1.00	1.00	0.76	1.00	1.00	0.76	1.00	1.00
Satd. Flow (perm)	183	3433	1479	661	3535	1566	1421	1879	1597	1423	1879	1566
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	201	793	13	14	1429	55	9	1	13	24	2	128
RTOR Reduction (vph)	0	0	4	0	0	23	0	0	12	0	0	113
Lane Group Flow (vph)	201	793	9	14	1429	32	9	1	1	24	2	15
Heavy Vehicles (%)	0%	4%	8%	0%	1%	2%	0%	0%	0%	0%	0%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	67.6	60.5	60.5	52.8	51.8	51.8	10.2	10.2	10.2	10.2	10.2	10.2
Effective Green, g (s)	67.6	60.5	60.5	52.8	51.8	51.8	10.2	10.2	10.2	10.2	10.2	10.2
Actuated g/C Ratio	0.75	0.67	0.67	0.59	0.58	0.58	0.11	0.11	0.11	0.11	0.11	0.11
Clearance Time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	310	2307	994	400	2034	901	161	212	180	161	212	177
v/s Ratio Prot	c0.07	0.23		0.00	c0.40			0.00			0.00	
v/s Ratio Perm	0.42		0.01	0.02		0.02	0.01		0.00	c0.02		0.01
v/c Ratio	0.65	0.34	0.01	0.04	0.70	0.04	0.06	0.00	0.01	0.15	0.01	0.08
Uniform Delay, d1	14.4	6.3	4.9	7.7	13.6	8.3	35.6	35.4	35.4	36.0	35.4	35.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.6	0.4	0.0	0.0	2.1	0.1	0.1	0.0	0.0	0.4	0.0	0.2
Delay (s)	19.0	6.7	4.9	7.8	15.7	8.3	35.7	35.4	35.4	36.4	35.4	35.9
Level of Service	B	A	A	A	B	A	D	D	D	D	D	D
Approach Delay (s)		9.1			15.3			35.6			36.0	
Approach LOS		A			B			D			D	

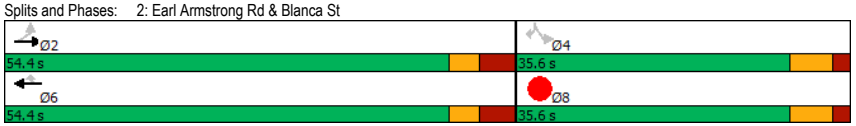
Intersection Summary				
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.62			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.3	
Intersection Capacity Utilization	73.9%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø8
Lane Configurations							
Traffic Volume (vph)	72	759	1406	56	28	92	
Future Volume (vph)	72	759	1406	56	28	92	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (m)	160.0			120.0	60.0	30.0	
Storage Lanes	1			1	1	0	
Taper Length (m)	2.5				2.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1785	3433	3500	1597	1785	1597	
Flt Permitted	0.163				0.950		
Satd. Flow (perm)	306	3433	3500	1597	1785	1597	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				56		29	
Link Speed (k/h)		60	60		50		
Link Distance (m)		552.4	266.4		176.5		
Travel Time (s)		33.1	16.0		12.7		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehicles (%)	0%	4%	2%	0%	0%	0%	
Adj. Flow (vph)	72	759	1406	56	28	92	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	72	759	1406	56	28	92	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(m)		7.0	7.0		3.5		
Link Offset(m)		0.0	0.0		0.0		
Crosswalk Width(m)		1.6	1.6		1.6		
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	
Turning Speed (k/h)	24			14	24	14	
Number of Detectors	1	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (m)	6.1	30.5	30.5	6.1	6.1	6.1	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8	1.8	6.1	6.1	6.1	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7	28.7				
Detector 2 Size(m)		1.8	1.8				
Detector 2 Type		Cl+Ex	Cl+Ex				
Detector 2 Channel							
Detector 2 Extend (s)		0.0	0.0				
Turn Type	Perm	NA	NA	Perm	Perm	Perm	
Protected Phases		2	6				8

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø8
Permitted Phases	2			6	4	4	
Detector Phase	2	2	6	6	4	4	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	31.3	31.3	31.3	31.3	35.5	35.5	35.5
Total Split (s)	54.4	54.4	54.4	54.4	35.6	35.6	35.6
Total Split (%)	60.4%	60.4%	60.4%	60.4%	39.6%	39.6%	40%
Maximum Green (s)	47.1	47.1	47.1	47.1	29.0	29.0	29.0
Yellow Time (s)	3.3	3.3	3.3	3.3	4.6	4.6	4.6
All-Red Time (s)	4.0	4.0	4.0	4.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.3	7.3	7.3	7.3	6.6	6.6	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	17.0	17.0	17.0	17.0	8.0	8.0	8.0
Pedestrian Calls (#/hr)	5	5	5	5	5	5	5
Act Effct Green (s)	56.2	56.2	56.2	56.2	9.1	9.1	
Actuated g/C Ratio	0.75	0.75	0.75	0.75	0.12	0.12	
v/c Ratio	0.31	0.30	0.54	0.05	0.13	0.42	
Control Delay	10.7	4.9	6.9	1.8	28.8	27.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	10.7	4.9	6.9	1.8	28.8	27.3	
LOS	B	A	A	A	C	C	
Approach Delay		5.4	6.7		27.6		
Approach LOS		A	A		C		
Queue Length 50th (m)	3.3	17.6	42.7	0.0	3.7	8.6	
Queue Length 95th (m)	14.5	34.1	79.3	3.6	9.6	19.5	
Internal Link Dist (m)		528.4	242.4		152.5		
Turn Bay Length (m)	160.0			120.0	60.0	30.0	
Base Capacity (vph)	229	2571	2621	1210	691	636	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.31	0.30	0.54	0.05	0.04	0.14	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 75.1			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 7.3		Intersection LOS: A	
Intersection Capacity Utilization 64.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Earl Armstrong Rd & Blanca St



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	72	759	1406	56	28	92
Future Volume (vph)	72	759	1406	56	28	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3	7.3	6.6	6.6
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1785	3433	3500	1597	1785	1597
Flt Permitted	0.16	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	306	3433	3500	1597	1785	1597
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	72	759	1406	56	28	92
RTOR Reduction (vph)	0	0	0	16	0	26
Lane Group Flow (vph)	72	759	1406	40	28	66
Heavy Vehicles (%)	0%	4%	2%	0%	0%	0%
Turn Type	Perm	NA	NA	Perm	Perm	Perm
Protected Phases		2	6			
Permitted Phases	2			6	4	4
Actuated Green, G (s)	54.7	54.7	54.7	54.7	7.9	7.9
Effective Green, g (s)	54.7	54.7	54.7	54.7	7.9	7.9
Actuated g/C Ratio	0.72	0.72	0.72	0.72	0.10	0.10
Clearance Time (s)	7.3	7.3	7.3	7.3	6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	218	2454	2502	1141	184	164
v/s Ratio Prot		0.22	c0.40			
v/s Ratio Perm	0.23			0.03	0.02	c0.04
v/c Ratio	0.33	0.31	0.56	0.04	0.15	0.40
Uniform Delay, d1	4.1	4.0	5.2	3.2	31.2	32.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.0	0.3	0.9	0.1	0.4	1.6
Delay (s)	8.1	4.3	6.1	3.2	31.6	33.7
Level of Service	A	A	A	A	C	C
Approach Delay (s)		4.6	6.0		33.2	
Approach LOS		A	A		C	

Intersection Summary				
HCM 2000 Control Delay	6.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	76.5	Sum of lost time (s)	13.9
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	324	249	213	2	516	24	134	109	1	15	203	811
Future Volume (vph)	324	249	213	2	516	24	134	109	1	15	203	811
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	140.0		60.0	120.0		200.0	120.0		100.0	120.0		100.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3236	3466	1581	3463	3570	1536	3429	3500	1597	3236	3500	1581
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3236	3466	1581	3463	3570	1536	3429	3500	1597	3236	3500	1581
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			213			210			210			215
Link Speed (k/h)		60			80			80			80	
Link Distance (m)		266.4			840.4			568.0			625.0	
Travel Time (s)		16.0			37.8			25.6			28.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	7%	3%	1%	0%	0%	4%	1%	2%	0%	7%	2%	1%
Adj. Flow (vph)	324	249	213	2	516	24	134	109	1	15	203	811
Shared Lane Traffic (%)												
Lane Group Flow (vph)	324	249	213	2	516	24	134	109	1	15	203	811
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			7.0			7.0			7.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	12.1	36.9	36.9	12.1	36.9	36.9	11.9	36.9	36.9	11.9	36.9	36.9
Total Split (s)	20.8	46.5	46.5	12.1	37.8	37.8	12.8	59.5	59.5	11.9	58.6	58.6
Total Split (%)	16.0%	35.8%	35.8%	9.3%	29.1%	29.1%	9.8%	45.8%	45.8%	9.2%	45.1%	45.1%
Maximum Green (s)	13.7	39.6	39.6	5.0	30.9	30.9	5.9	52.6	52.6	5.0	51.7	51.7
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.5	2.3	2.3	2.5	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	Min	Min	None	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		5	5		5	5		5	5		5	5
Act Effct Green (s)	13.7	49.3	49.3	5.0	30.9	30.9	5.9	59.7	59.7	5.0	51.7	51.7
Actuated g/C Ratio	0.11	0.38	0.38	0.04	0.24	0.24	0.05	0.46	0.46	0.04	0.40	0.40
v/c Ratio	0.95	0.19	0.29	0.02	0.61	0.05	0.86	0.07	0.00	0.12	0.15	1.07
Control Delay	95.2	28.4	5.0	60.5	47.7	0.2	104.7	21.2	0.0	62.7	25.4	81.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	95.2	28.4	5.0	60.5	47.7	0.2	104.7	21.2	0.0	62.7	25.4	81.3
LOS	F	C	A	E	D	A	F	C	A	E	C	F
Approach Delay		49.6			45.7			67.0			70.0	
Approach LOS		D			D			E			E	
Queue Length 50th (m)	43.1	21.5	0.0	0.2	62.4	0.0	17.9	7.4	0.0	1.9	17.3	~194.8
Queue Length 95th (m)	#71.7	36.1	17.4	1.7	81.0	0.0	#36.5	15.0	0.0	5.7	25.7	#271.0
Internal Link Dist (m)		242.4			816.4			544.0			601.0	
Turn Bay Length (m)	140.0		60.0	120.0		200.0	120.0		100.0	120.0		100.0
Base Capacity (vph)	341	1313	731	133	848	525	155	1608	847	124	1391	758
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.19	0.29	0.02	0.61	0.05	0.86	0.07	0.00	0.12	0.15	1.07

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Natural Cycle: 130			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay: 58.5		Intersection LOS: E	
Intersection Capacity Utilization 85.9%		ICU Level of Service E	
Analysis Period (min) 15			

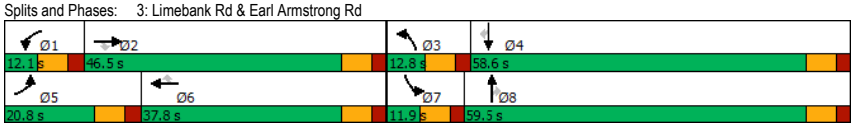
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Limebank Rd & Earl Armstrong Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	324	249	213	2	516	24	134	109	1	15	203	811
Future Volume (vph)	324	249	213	2	516	24	134	109	1	15	203	811
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3236	3466	1581	3463	3570	1536	3429	3500	1597	3236	3500	1581
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3236	3466	1581	3463	3570	1536	3429	3500	1597	3236	3500	1581
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	324	249	213	2	516	24	134	109	1	15	203	811
RTOR Reduction (vph)	0	0	138	0	0	18	0	0	1	0	0	129
Lane Group Flow (vph)	324	249	75	2	516	6	134	109	0	15	203	682
Heavy Vehicles (%)	7%	3%	1%	0%	0%	4%	1%	2%	0%	7%	2%	1%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	13.7	49.3	49.3	1.0	36.6	36.6	5.9	59.7	59.7	2.0	55.8	55.8
Effective Green, g (s)	13.7	49.3	49.3	1.0	36.6	36.6	5.9	59.7	59.7	2.0	55.8	55.8
Actuated g/C Ratio	0.10	0.35	0.35	0.01	0.26	0.26	0.04	0.43	0.43	0.01	0.40	0.40
Clearance Time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	317	1222	557	24	934	402	144	1494	681	46	1396	631
v/s Ratio Prot	c0.10	0.07		0.00	c0.14		c0.04	c0.03		0.00	0.06	
v/s Ratio Perm			0.05			0.00			0.00			c0.43
v/c Ratio	1.02	0.20	0.13	0.08	0.55	0.02	0.93	0.07	0.00	0.33	0.15	1.08
Uniform Delay, d1	63.1	31.6	30.8	68.9	44.5	38.2	66.7	23.7	23.0	68.2	26.8	42.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	56.3	0.4	0.5	1.5	2.4	0.1	54.3	0.0	0.0	4.1	0.0	59.5
Delay (s)	119.4	31.9	31.3	70.4	46.9	38.3	121.1	23.7	23.0	72.3	26.8	101.5
Level of Service	F	C	C	E	D	D	F	C	C	E	C	F
Approach Delay (s)		67.8			46.6			77.2			86.4	
Approach LOS		E			D			E			F	

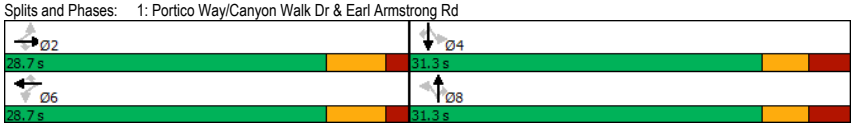
Intersection Summary				
HCM 2000 Control Delay	71.6	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.89			
Actuated Cycle Length (s)	139.8	Sum of lost time (s)	27.8	
Intersection Capacity Utilization	85.9%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	475	9	4	470	32	10	3	6	29	2	123
Future Volume (vph)	176	475	9	4	470	32	10	3	6	29	2	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0		100.0	60.0		100.0	30.0		25.0	60.0		25.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1750	3535	1597	1785	3535	1597	1785	1879	1597	1785	1879	1566
Flt Permitted	0.483			0.480			0.757			0.756		
Satd. Flow (perm)	890	3535	1597	902	3535	1597	1422	1879	1597	1420	1879	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			60			60			53			123
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		961.8			552.4			155.8			134.5	
Travel Time (s)		57.7			33.1			11.2			9.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	2%
Adj. Flow (vph)	176	475	9	4	470	32	10	3	6	29	2	123
Shared Lane Traffic (%)												
Lane Group Flow (vph)	176	475	9	4	470	32	10	3	6	29	2	123
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			6			8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	2	2	2	6	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.9	24.9	24.9	24.9	24.9	24.9	31.3	31.3	31.3	31.3	31.3	31.3
Total Split (s)	28.7	28.7	28.7	28.7	28.7	28.7	31.3	31.3	31.3	31.3	31.3	31.3
Total Split (%)	47.8%	47.8%	47.8%	47.8%	47.8%	47.8%	52.2%	52.2%	52.2%	52.2%	52.2%	52.2%
Maximum Green (s)	22.8	22.8	22.8	22.8	22.8	22.8	25.0	25.0	25.0	25.0	25.0	25.0
Yellow Time (s)	4.2	4.2	4.2	4.2	4.2	4.2	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.7	1.7	1.7	1.7	1.7	1.7	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max	Max	Max	None	None	None	None	None	None
Walk Time (s)	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	9.0	9.0	9.0	9.0	9.0	9.0	18.0	18.0	18.0	18.0	18.0	18.0
Pedestrian Calls (#/hr)	5	5	5	5	5	5	5	5	5	5	5	5
Act Effct Green (s)	30.2	30.2	30.2	30.2	30.2	30.2	9.2	9.2	9.2	9.2	9.2	9.2
Actuated g/C Ratio	0.63	0.63	0.63	0.63	0.63	0.63	0.19	0.19	0.19	0.19	0.19	0.19
v/c Ratio	0.31	0.21	0.01	0.01	0.21	0.03	0.04	0.01	0.02	0.11	0.01	0.31
Control Delay	10.9	7.2	0.0	8.5	7.2	1.8	12.8	12.3	0.2	14.1	12.0	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.9	7.2	0.0	8.5	7.2	1.8	12.8	12.3	0.2	14.1	12.0	5.3
LOS	B	A	A	A	A	A	B	B	A	B	B	A
Approach Delay		8.1			6.9			8.7			7.1	
Approach LOS		A			A			A			A	
Queue Length 50th (m)	5.7	7.5	0.0	0.2	7.5	0.0	0.6	0.2	0.0	1.8	0.1	0.0
Queue Length 95th (m)	31.5	29.1	0.0	1.8	28.7	2.3	2.9	1.4	0.0	5.8	1.1	7.6
Internal Link Dist (m)		937.8			528.4			131.8			110.5	
Turn Bay Length (m)	60.0		100.0	60.0		100.0	30.0		25.0	60.0		25.0
Base Capacity (vph)	559	2221	1026	567	2221	1026	757	1000	875	756	1000	891
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.21	0.01	0.01	0.21	0.03	0.01	0.00	0.01	0.04	0.00	0.14

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 48			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.31			
Intersection Signal Delay: 7.5		Intersection LOS: A	
Intersection Capacity Utilization 46.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Portico Way/Canyon Walk Dr & Earl Armstrong Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	475	9	4	470	32	10	3	6	29	2	123
Future Volume (vph)	176	475	9	4	470	32	10	3	6	29	2	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.9	5.9	5.9	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1750	3535	1597	1785	3535	1597	1785	1879	1597	1785	1879	1566
Flt Permitted	0.48	1.00	1.00	0.48	1.00	1.00	0.76	1.00	1.00	0.76	1.00	1.00
Satd. Flow (perm)	889	3535	1597	902	3535	1597	1421	1879	1597	1420	1879	1566
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	176	475	9	4	470	32	10	3	6	29	2	123
RTOR Reduction (vph)	0	0	4	0	0	13	0	0	5	0	0	103
Lane Group Flow (vph)	176	475	5	4	470	19	10	3	1	29	2	20
Heavy Vehicles (%)	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	2%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	28.9	28.9	28.9	28.9	28.9	28.9	8.0	8.0	8.0	8.0	8.0	8.0
Effective Green, g (s)	28.9	28.9	28.9	28.9	28.9	28.9	8.0	8.0	8.0	8.0	8.0	8.0
Actuated g/C Ratio	0.59	0.59	0.59	0.59	0.59	0.59	0.16	0.16	0.16	0.16	0.16	0.16
Clearance Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	523	2080	939	530	2080	939	231	306	260	231	306	255
v/s Ratio Prot		0.13			0.13			0.00			0.00	
v/s Ratio Perm	c0.20		0.00	0.00		0.01	0.01		0.00	c0.02		0.01
v/c Ratio	0.34	0.23	0.01	0.01	0.23	0.02	0.04	0.01	0.00	0.13	0.01	0.08
Uniform Delay, d1	5.2	4.8	4.2	4.2	4.8	4.2	17.3	17.2	17.2	17.6	17.2	17.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.7	0.3	0.0	0.0	0.3	0.0	0.1	0.0	0.0	0.2	0.0	0.1
Delay (s)	6.9	5.1	4.2	4.2	5.0	4.2	17.4	17.2	17.2	17.8	17.2	17.6
Level of Service	A	A	A	A	A	A	B	B	B	B	B	B
Approach Delay (s)		5.5			5.0			17.3			17.6	
Approach LOS		A			A			B			B	

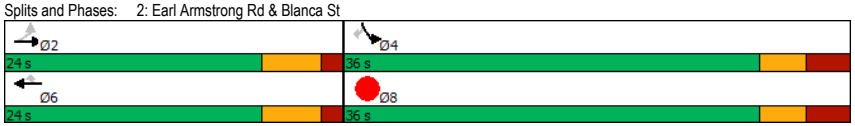
Intersection Summary				
HCM 2000 Control Delay	6.9	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.29			
Actuated Cycle Length (s)	49.1	Sum of lost time (s)	12.2	
Intersection Capacity Utilization	46.1%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø8
Lane Configurations							
Traffic Volume (vph)	103	407	392	40	40	113	
Future Volume (vph)	103	407	392	40	40	113	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (m)	160.0			120.0	60.0	30.0	
Storage Lanes	1			1	1	0	
Taper Length (m)	2.5				2.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1785	3500	3466	1597	1785	1597	
Flt Permitted	0.520				0.950		
Satd. Flow (perm)	977	3500	3466	1597	1785	1597	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				40		113	
Link Speed (k/h)		60	60		50		
Link Distance (m)		552.4	266.4		176.5		
Travel Time (s)		33.1	16.0		12.7		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehicles (%)	0%	2%	3%	0%	0%	0%	
Adj. Flow (vph)	103	407	392	40	40	113	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	103	407	392	40	40	113	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(m)		7.0	7.0		3.5		
Link Offset(m)		0.0	0.0		0.0		
Crosswalk Width(m)		1.6	1.6		1.6		
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	
Turning Speed (k/h)	24			14	24	14	
Number of Detectors	1	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (m)	6.1	30.5	30.5	6.1	6.1	6.1	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8	1.8	6.1	6.1	6.1	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7	28.7				
Detector 2 Size(m)		1.8	1.8				
Detector 2 Type		Cl+Ex	Cl+Ex				
Detector 2 Channel							
Detector 2 Extend (s)		0.0	0.0				
Turn Type	Perm	NA	NA	Perm	Prot	Perm	
Protected Phases		2	6		4		8

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø8
Permitted Phases	2			6		4	
Detector Phase	2	2	6	6	4	4	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.8	21.8	21.8	21.8	35.5	35.5	35.5
Total Split (s)	24.0	24.0	24.0	24.0	36.0	36.0	36.0
Total Split (%)	40.0%	40.0%	40.0%	40.0%	60.0%	60.0%	60%
Maximum Green (s)	18.2	18.2	18.2	18.2	29.5	29.5	29.5
Yellow Time (s)	4.2	4.2	4.2	4.2	3.3	3.3	3.3
All-Red Time (s)	1.6	1.6	1.6	1.6	3.2	3.2	3.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.8	5.8	5.8	5.8	6.5	6.5	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	9.0	9.0	9.0	9.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	5	5	5	5	5	5	5
Act Effct Green (s)	12.2	12.2	12.2	12.2	29.6	29.6	
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.55	0.55	
v/c Ratio	0.47	0.52	0.50	0.10	0.04	0.12	
Control Delay	25.4	20.6	20.4	6.8	7.1	2.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	25.4	20.6	20.4	6.8	7.1	2.4	
LOS	C	C	C	A	A	A	
Approach Delay		21.6	19.1		3.6		
Approach LOS		C	B		A		
Queue Length 50th (m)	8.7	18.3	17.6	0.0	1.5	0.0	
Queue Length 95th (m)	20.1	28.7	27.7	5.5	6.0	6.1	
Internal Link Dist (m)		528.4	242.4		152.5		
Turn Bay Length (m)	160.0			120.0	60.0	30.0	
Base Capacity (vph)	329	1180	1169	565	976	924	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.31	0.34	0.34	0.07	0.04	0.12	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 54.2			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.52			
Intersection Signal Delay: 18.1		Intersection LOS: B	
Intersection Capacity Utilization 35.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: Earl Armstrong Rd & Blanca St



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	103	407	392	40	40	113
Future Volume (vph)	103	407	392	40	40	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	5.8	5.8	5.8	6.5	6.5
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1785	3500	3466	1597	1785	1597
Flt Permitted	0.52	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	978	3500	3466	1597	1785	1597
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	103	407	392	40	40	113
RTOR Reduction (vph)	0	0	0	31	0	51
Lane Group Flow (vph)	103	407	392	9	40	62
Heavy Vehicles (%)	0%	2%	3%	0%	0%	0%
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2			6		4
Actuated Green, G (s)	12.2	12.2	12.2	12.2	29.6	29.6
Effective Green, g (s)	12.2	12.2	12.2	12.2	29.6	29.6
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.55	0.55
Clearance Time (s)	5.8	5.8	5.8	5.8	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	220	789	781	360	976	873
v/s Ratio Prot		c0.12	0.11		0.02	
v/s Ratio Perm	0.11			0.01		c0.04
v/c Ratio	0.47	0.52	0.50	0.03	0.04	0.07
Uniform Delay, d1	18.1	18.4	18.3	16.3	5.7	5.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.6	0.6	0.5	0.0	0.1	0.2
Delay (s)	19.7	18.9	18.8	16.3	5.8	5.9
Level of Service	B	B	B	B	A	A
Approach Delay (s)		19.1	18.6		5.9	
Approach LOS		B	B		A	

Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.20		
Actuated Cycle Length (s)	54.1	Sum of lost time (s)	12.3
Intersection Capacity Utilization	35.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	179	196	73	3	140	17	70	107	3	31	125	222
Future Volume (vph)	179	196	73	3	140	17	70	107	3	31	125	222
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	140.0		60.0	120.0		200.0	120.0		100.0	120.0		100.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3429	3466	1536	3463	3433	1507	3267	3500	1201	3463	3500	1597
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3429	3466	1536	3463	3433	1507	3267	3500	1201	3463	3500	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			195			195			195			222
Link Speed (k/h)		60			80			80			80	
Link Distance (m)		266.4			840.4			568.0			625.0	
Travel Time (s)		16.0			37.8			25.6			28.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	3%	4%	0%	4%	6%	6%	2%	33%	0%	2%	0%
Adj. Flow (vph)	179	196	73	3	140	17	70	107	3	31	125	222
Shared Lane Traffic (%)												
Lane Group Flow (vph)	179	196	73	3	140	17	70	107	3	31	125	222
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			7.0			7.0			7.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	

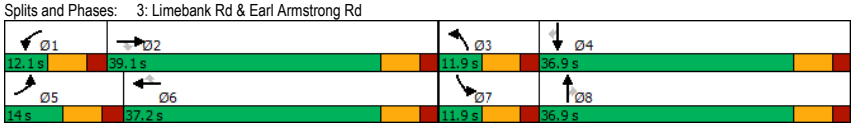
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	12.1	36.9	36.9	12.1	36.9	36.9	11.9	36.9	36.9	11.9	36.9	36.9
Total Split (s)	14.0	39.1	39.1	12.1	37.2	37.2	11.9	36.9	36.9	11.9	36.9	36.9
Total Split (%)	14.0%	39.1%	39.1%	12.1%	37.2%	37.2%	11.9%	36.9%	36.9%	11.9%	36.9%	36.9%
Maximum Green (s)	6.9	32.2	32.2	5.0	30.3	30.3	5.0	30.0	30.0	5.0	30.0	30.0
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.5	2.3	2.3	2.5	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	Min	Min	None	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		5	5		5	5		5	5		5	5
Act Effct Green (s)	7.0	43.0	43.0	5.1	30.7	30.7	5.1	18.3	18.3	5.1	13.4	13.4
Actuated g/C Ratio	0.09	0.53	0.53	0.06	0.38	0.38	0.06	0.22	0.22	0.06	0.16	0.16
v/c Ratio	0.61	0.11	0.08	0.01	0.11	0.02	0.34	0.14	0.01	0.14	0.22	0.50
Control Delay	48.3	13.6	0.2	41.0	19.4	0.1	44.9	26.4	0.0	41.6	30.4	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.3	13.6	0.2	41.0	19.4	0.1	44.9	26.4	0.0	41.6	30.4	8.3
LOS	D	B	A	D	B	A	D	C	A	D	C	A
Approach Delay		25.3			17.8			33.2			18.3	
Approach LOS		C			B			C			B	
Queue Length 50th (m)	13.8	6.8	0.0	0.2	7.1	0.0	5.3	6.4	0.0	2.3	9.2	0.0
Queue Length 95th (m)	#33.8	22.6	0.0	1.7	17.5	0.0	13.9	14.1	0.0	7.6	16.0	16.0
Internal Link Dist (m)		242.4			816.4			544.0			601.0	
Turn Bay Length (m)	140.0		60.0	120.0		200.0	120.0		100.0	120.0		100.0
Base Capacity (vph)	294	1825	901	215	1293	689	203	1305	570	215	1305	734
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.11	0.08	0.01	0.11	0.02	0.34	0.08	0.01	0.14	0.10	0.30

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 81.6			
Natural Cycle: 100			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 23.2		Intersection LOS: C	
Intersection Capacity Utilization 45.1%		ICU Level of Service A	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Limebank Rd & Earl Armstrong Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	179	196	73	3	140	17	70	107	3	31	125	222
Future Volume (vph)	179	196	73	3	140	17	70	107	3	31	125	222
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3429	3466	1536	3463	3433	1507	3267	3500	1201	3463	3500	1597
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3429	3466	1536	3463	3433	1507	3267	3500	1201	3463	3500	1597
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	179	196	73	3	140	17	70	107	3	31	125	222
RTOR Reduction (vph)	0	0	39	0	0	10	0	0	2	0	0	183
Lane Group Flow (vph)	179	196	34	3	140	7	70	107	1	31	125	39
Heavy Vehicles (%)	1%	3%	4%	0%	4%	6%	6%	2%	33%	0%	2%	0%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	7.0	43.0	43.0	0.8	36.8	36.8	3.9	18.3	18.3	1.8	16.2	16.2
Effective Green, g (s)	7.0	43.0	43.0	0.8	36.8	36.8	3.9	18.3	18.3	1.8	16.2	16.2
Actuated g/C Ratio	0.08	0.47	0.47	0.01	0.40	0.40	0.04	0.20	0.20	0.02	0.18	0.18
Clearance Time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	261	1625	720	30	1377	604	138	698	239	67	618	282
v/s Ratio Prot	c0.05	c0.06		0.00	0.04		c0.02	0.03		0.01	c0.04	
v/s Ratio Perm			0.02			0.00			0.00			0.02
v/c Ratio	0.69	0.12	0.05	0.10	0.10	0.01	0.51	0.15	0.00	0.46	0.20	0.14
Uniform Delay, d1	41.3	13.7	13.2	45.1	17.1	16.5	43.0	30.3	29.4	44.5	32.2	31.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.3	0.2	0.1	1.5	0.1	0.0	2.9	0.1	0.0	5.0	0.2	0.2
Delay (s)	48.6	13.9	13.4	46.6	17.3	16.5	45.9	30.4	29.4	49.5	32.4	32.1
Level of Service	D	B	B	D	B	B	D	C	C	D	C	C
Approach Delay (s)		27.6			17.8			36.4			33.6	
Approach LOS		C			B			D			C	

Intersection Summary				
HCM 2000 Control Delay	29.6	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.22			
Actuated Cycle Length (s)	91.7	Sum of lost time (s)	27.8	
Intersection Capacity Utilization	45.1%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	1270	3	12	670	33	11	4	13	40	1	191
Future Volume (vph)	75	1270	3	12	670	33	11	4	13	40	1	191
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0		100.0	60.0		100.0	30.0		25.0	60.0		25.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1767	3466	1201	1342	3275	1479	1405	1253	1597	1733	1879	1581
Flt Permitted	0.344			0.176			0.757			0.755		
Satd. Flow (perm)	640	3466	1201	249	3275	1479	1120	1253	1597	1377	1879	1581
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			128			128			123			191
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		961.8			552.4			155.8			134.5	
Travel Time (s)		57.7			33.1			11.2			9.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	3%	33%	33%	9%	8%	27%	50%	0%	3%	0%	1%
Adj. Flow (vph)	75	1270	3	12	670	33	11	4	13	40	1	191
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	1270	3	12	670	33	11	4	13	40	1	191
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	

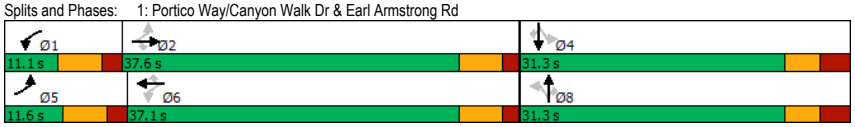
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.1	24.9	24.9	11.1	24.9	24.9	31.3	31.3	31.3	31.3	31.3	31.3
Total Split (s)	11.6	37.6	37.6	11.1	37.1	37.1	31.3	31.3	31.3	31.3	31.3	31.3
Total Split (%)	14.5%	47.0%	47.0%	13.9%	46.4%	46.4%	39.1%	39.1%	39.1%	39.1%	39.1%	39.1%
Maximum Green (s)	5.5	31.7	31.7	5.0	31.2	31.2	25.0	25.0	25.0	25.0	25.0	25.0
Yellow Time (s)	4.2	4.2	4.2	4.2	4.2	4.2	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.9	1.7	1.7	1.9	1.7	1.7	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		10.0	10.0		10.0	10.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		9.0	9.0		9.0	9.0	18.0	18.0	18.0	18.0	18.0	18.0
Pedestrian Calls (#/hr)		5	5		5	5	5	5	5	5	5	5
Act Effct Green (s)	42.9	42.2	42.2	38.5	34.7	34.7	9.9	9.9	9.9	9.9	9.9	9.9
Actuated g/C Ratio	0.65	0.64	0.64	0.58	0.52	0.52	0.15	0.15	0.15	0.15	0.15	0.15
v/c Ratio	0.15	0.58	0.00	0.05	0.39	0.04	0.07	0.02	0.04	0.20	0.00	0.48
Control Delay	6.5	11.7	0.0	7.1	12.4	0.1	22.6	21.5	0.2	25.1	21.0	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.5	11.7	0.0	7.1	12.4	0.1	22.6	21.5	0.2	25.1	21.0	8.2
LOS	A	B	A	A	B	A	C	C	A	C	C	A
Approach Delay		11.4			11.8			12.1			11.2	
Approach LOS		B			B			B			B	
Queue Length 50th (m)	2.3	29.8	0.0	0.4	23.4	0.0	1.2	0.4	0.0	4.3	0.1	0.0
Queue Length 95th (m)	11.2	#136.9	0.0	3.1	55.4	0.0	4.6	2.4	0.0	11.0	1.2	13.3
Internal Link Dist (m)		937.8			528.4			131.8			110.5	
Turn Bay Length (m)	60.0		100.0	60.0		100.0	30.0		25.0	60.0		25.0
Base Capacity (vph)	509	2208	811	228	1716	835	427	477	685	525	716	720
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.58	0.00	0.05	0.39	0.04	0.03	0.01	0.02	0.08	0.00	0.27

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 66.2			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 11.5		Intersection LOS: B	
Intersection Capacity Utilization 63.4%		ICU Level of Service B	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Portico Way/Canyon Walk Dr & Earl Armstrong Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	1270	3	12	670	33	11	4	13	40	1	191
Future Volume (vph)	75	1270	3	12	670	33	11	4	13	40	1	191
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1767	3466	1201	1342	3275	1479	1405	1253	1597	1733	1879	1581
Flt Permitted	0.34	1.00	1.00	0.18	1.00	1.00	0.76	1.00	1.00	0.76	1.00	1.00
Satd. Flow (perm)	640	3466	1201	248	3275	1479	1120	1253	1597	1378	1879	1581
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	75	1270	3	12	670	33	11	4	13	40	1	191
RTOR Reduction (vph)	0	0	1	0	0	15	0	0	11	0	0	164
Lane Group Flow (vph)	75	1270	2	12	670	18	11	4	2	40	1	27
Heavy Vehicles (%)	1%	3%	33%	33%	9%	8%	27%	50%	0%	3%	0%	1%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	46.6	42.2	42.2	39.4	38.6	38.6	9.9	9.9	9.9	9.9	9.9	9.9
Effective Green, g (s)	46.6	42.2	42.2	39.4	38.6	38.6	9.9	9.9	9.9	9.9	9.9	9.9
Actuated g/C Ratio	0.65	0.59	0.59	0.55	0.54	0.54	0.14	0.14	0.14	0.14	0.14	0.14
Clearance Time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	488	2054	711	149	1775	801	155	174	222	191	261	219
v/s Ratio Prot	c0.01	c0.37		0.00	0.20			0.00			0.00	
v/s Ratio Perm	0.09		0.00	0.04		0.01	0.01		0.00	c0.03		0.02
v/c Ratio	0.15	0.62	0.00	0.08	0.38	0.02	0.07	0.02	0.01	0.21	0.00	0.12
Uniform Delay, d1	4.7	9.3	5.9	7.6	9.4	7.6	26.7	26.5	26.4	27.2	26.4	26.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	1.4	0.0	0.2	0.6	0.1	0.2	0.1	0.0	0.5	0.0	0.2
Delay (s)	4.8	10.7	5.9	7.8	10.0	7.6	26.8	26.5	26.4	27.7	26.4	27.1
Level of Service	A	B	A	A	A	A	C	C	C	C	C	C
Approach Delay (s)		10.4			9.9			26.6			27.2	
Approach LOS		B			A			C			C	

Intersection Summary				
HCM 2000 Control Delay	12.1	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.55			
Actuated Cycle Length (s)	71.2	Sum of lost time (s)	18.3	
Intersection Capacity Utilization	63.4%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø8
Lane Configurations							
Traffic Volume (vph)	99	1224	646	59	58	69	
Future Volume (vph)	99	1224	646	59	58	69	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (m)	160.0			120.0	60.0	30.0	
Storage Lanes	1			1	1	0	
Taper Length (m)	2.5				2.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1750	3466	3305	1536	1785	1551	
Flt Permitted	0.366				0.950		
Satd. Flow (perm)	674	3466	3305	1536	1785	1551	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				59		69	
Link Speed (k/h)		60	60		50		
Link Distance (m)		552.4	266.4		176.5		
Travel Time (s)		33.1	16.0		12.7		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehicles (%)	2%	3%	8%	4%	0%	3%	
Adj. Flow (vph)	99	1224	646	59	58	69	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	99	1224	646	59	58	69	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(m)		7.0	7.0		3.5		
Link Offset(m)		0.0	0.0		0.0		
Crosswalk Width(m)		1.6	1.6		1.6		
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	
Turning Speed (k/h)	24			14	24	14	
Number of Detectors	1	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (m)	6.1	30.5	30.5	6.1	6.1	6.1	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8	1.8	6.1	6.1	6.1	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7	28.7				
Detector 2 Size(m)		1.8	1.8				
Detector 2 Type		Cl+Ex	Cl+Ex				
Detector 2 Channel							
Detector 2 Extend (s)		0.0	0.0				
Turn Type	Perm	NA	NA	Perm	Perm	Perm	
Protected Phases		2	6				8

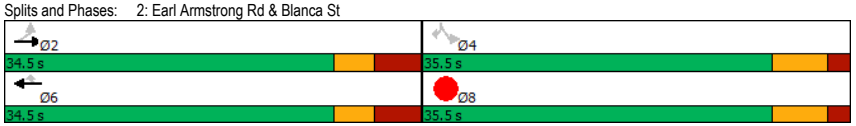
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø8
Permitted Phases	2			6	4	4	
Detector Phase	2	2	6	6	4	4	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	31.3	31.3	31.3	31.3	35.5	35.5	35.5
Total Split (s)	34.5	34.5	34.5	34.5	35.5	35.5	35.5
Total Split (%)	49.3%	49.3%	49.3%	49.3%	50.7%	50.7%	51%
Maximum Green (s)	27.2	27.2	27.2	27.2	28.9	28.9	28.9
Yellow Time (s)	3.3	3.3	3.3	3.3	4.6	4.6	4.6
All-Red Time (s)	4.0	4.0	4.0	4.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.3	7.3	7.3	7.3	6.6	6.6	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	17.0	17.0	17.0	17.0	8.0	8.0	8.0
Pedestrian Calls (#/hr)	5	5	5	5	5	5	5
Act Effct Green (s)	27.0	27.0	27.0	27.0	28.9	28.9	
Actuated g/C Ratio	0.39	0.39	0.39	0.39	0.41	0.41	
v/c Ratio	0.38	0.91	0.51	0.09	0.08	0.10	
Control Delay	20.8	32.5	18.0	4.7	12.9	4.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	20.8	32.5	18.0	4.7	12.9	4.1	
LOS	C	C	B	A	B	A	
Approach Delay		31.7	16.9		8.1		
Approach LOS		C	B		A		
Queue Length 50th (m)	9.0	77.4	32.8	0.0	4.5	0.0	
Queue Length 95th (m)	21.2	#117.3	46.8	6.2	10.7	6.3	
Internal Link Dist (m)		528.4	242.4		152.5		
Turn Bay Length (m)	160.0			120.0	60.0	30.0	
Base Capacity (vph)	262	1350	1287	634	738	682	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.38	0.91	0.50	0.09	0.08	0.10	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 69.8			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 25.4		Intersection LOS: C	
Intersection Capacity Utilization 49.6%		ICU Level of Service A	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Earl Armstrong Rd & Blanca St



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	99	1224	646	59	58	69
Future Volume (vph)	99	1224	646	59	58	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3	7.3	6.6	6.6
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1750	3466	3305	1536	1785	1551
Flt Permitted	0.37	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	675	3466	3305	1536	1785	1551
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	99	1224	646	59	58	69
RTOR Reduction (vph)	0	0	0	36	0	40
Lane Group Flow (vph)	99	1224	646	23	58	29
Heavy Vehicles (%)	2%	3%	8%	4%	0%	3%
Turn Type	Perm	NA	NA	Perm	Perm	Perm
Protected Phases		2	6			
Permitted Phases	2			6	4	4
Actuated Green, G (s)	27.0	27.0	27.0	27.0	28.9	28.9
Effective Green, g (s)	27.0	27.0	27.0	27.0	28.9	28.9
Actuated g/C Ratio	0.39	0.39	0.39	0.39	0.41	0.41
Clearance Time (s)	7.3	7.3	7.3	7.3	6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	261	1340	1278	594	739	642
v/s Ratio Prot		c0.35	0.20			
v/s Ratio Perm	0.15			0.01	c0.03	0.02
v/c Ratio	0.38	0.91	0.51	0.04	0.08	0.04
Uniform Delay, d1	15.4	20.3	16.3	13.3	12.4	12.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.9	9.7	0.3	0.0	0.2	0.1
Delay (s)	16.3	30.0	16.6	13.3	12.6	12.3
Level of Service	B	C	B	B	B	B
Approach Delay (s)		29.0	16.4		12.5	
Approach LOS		C	B		B	

Intersection Summary			
HCM 2000 Control Delay	23.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	69.8	Sum of lost time (s)	13.9
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	781	374	127	1	224	83	158	229	1	26	93	323
Future Volume (vph)	781	374	127	1	224	83	158	229	1	26	93	323
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	140.0		60.0	120.0		200.0	120.0		100.0	120.0		100.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3395	3500	1521	1731	3433	1401	3148	3500	1597	3092	3466	1426
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3395	3500	1521	1731	3433	1401	3148	3500	1597	3092	3466	1426
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			163			227			227			323
Link Speed (k/h)		60			80			80			80	
Link Distance (m)		266.4			840.4			568.0			625.0	
Travel Time (s)		16.0			37.8			25.6			28.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	5%	100%	4%	14%	10%	2%	0%	12%	3%	12%
Adj. Flow (vph)	781	374	127	1	224	83	158	229	1	26	93	323
Shared Lane Traffic (%)												
Lane Group Flow (vph)	781	374	127	1	224	83	158	229	1	26	93	323
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			7.0			7.0			7.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	12.1	36.9	36.9	12.1	36.9	36.9	11.9	36.9	36.9	11.9	36.9	36.9
Total Split (s)	32.9	57.7	57.7	12.1	36.9	36.9	13.3	38.3	38.3	11.9	36.9	36.9
Total Split (%)	27.4%	48.1%	48.1%	10.1%	30.8%	30.8%	11.1%	31.9%	31.9%	9.9%	30.8%	30.8%
Maximum Green (s)	25.8	50.8	50.8	5.0	30.0	30.0	6.4	31.4	31.4	5.0	30.0	30.0
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.5	2.3	2.3	2.5	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		5	5		5	5		5	5		5	5
Act Effct Green (s)	26.0	61.2	61.2	5.0	30.2	30.2	6.4	19.0	19.0	5.0	12.5	12.5
Actuated g/C Ratio	0.25	0.59	0.59	0.05	0.29	0.29	0.06	0.18	0.18	0.05	0.12	0.12
v/c Ratio	0.91	0.18	0.13	0.01	0.22	0.15	0.81	0.36	0.00	0.17	0.22	0.71
Control Delay	54.6	12.0	1.7	52.0	29.8	0.5	78.4	39.1	0.0	53.0	40.6	13.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.6	12.0	1.7	52.0	29.8	0.5	78.4	39.1	0.0	53.0	40.6	13.4
LOS	D	B	A	D	C	A	E	D	A	D	D	B
Approach Delay		37.0			22.0			55.0			21.5	
Approach LOS		D			C			D			C	
Queue Length 50th (m)	75.6	14.6	0.0	0.1	17.1	0.0	15.9	22.5	0.0	2.5	8.8	0.0
Queue Length 95th (m)	#142.7	40.3	5.9	1.0	33.3	0.0	#40.4	33.3	0.0	7.8	15.8	23.3
Internal Link Dist (m)		242.4			816.4			544.0			601.0	
Turn Bay Length (m)	140.0		60.0	120.0		200.0	120.0		100.0	120.0		100.0
Base Capacity (vph)	855	2078	969	84	1005	570	196	1072	646	150	1014	646
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.18	0.13	0.01	0.22	0.15	0.81	0.21	0.00	0.17	0.09	0.50

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 103.1			
Natural Cycle: 120			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 35.1		Intersection LOS: D	
Intersection Capacity Utilization 56.9%		ICU Level of Service B	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Limebank Rd & Earl Armstrong Rd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	781	374	127	1	224	83	158	229	1	26	93	323
Future Volume (vph)	781	374	127	1	224	83	158	229	1	26	93	323
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3395	3500	1521	1731	3433	1401	3148	3500	1597	3092	3466	1426
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3395	3500	1521	1731	3433	1401	3148	3500	1597	3092	3466	1426
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	781	374	127	1	224	83	158	229	1	26	93	323
RTOR Reduction (vph)	0	0	57	0	0	56	0	0	1	0	0	278
Lane Group Flow (vph)	781	374	70	1	224	27	158	229	0	26	93	45
Heavy Vehicles (%)	2%	2%	5%	100%	4%	14%	10%	2%	0%	12%	3%	12%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	26.0	61.2	61.2	0.9	36.1	36.1	6.4	19.0	19.0	2.9	15.5	15.5
Effective Green, g (s)	26.0	61.2	61.2	0.9	36.1	36.1	6.4	19.0	19.0	2.9	15.5	15.5
Actuated g/C Ratio	0.23	0.55	0.55	0.01	0.32	0.32	0.06	0.17	0.17	0.03	0.14	0.14
Clearance Time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	789	1915	832	13	1108	452	180	594	271	80	480	197
v/s Ratio Prot	c0.23	c0.11		0.00	0.07		c0.05	c0.07		0.01	0.03	
v/s Ratio Perm			0.05			0.02			0.00			0.03
v/c Ratio	0.99	0.20	0.08	0.08	0.20	0.06	0.88	0.39	0.00	0.33	0.19	0.23
Uniform Delay, d1	42.8	12.8	12.0	55.0	27.4	26.1	52.3	41.2	38.5	53.5	42.6	42.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	29.2	0.2	0.2	2.5	0.4	0.3	34.8	0.4	0.0	2.4	0.2	0.6
Delay (s)	71.9	13.0	12.2	57.6	27.8	26.4	87.1	41.6	38.5	55.9	42.8	43.4
Level of Service	E	B	B	E	C	C	F	D	D	E	D	D
Approach Delay (s)		48.8			27.5			60.2			44.0	
Approach LOS		D			C			E			D	

Intersection Summary				
HCM 2000 Control Delay	47.1	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.55			
Actuated Cycle Length (s)	111.8	Sum of lost time (s)	27.8	
Intersection Capacity Utilization	56.9%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

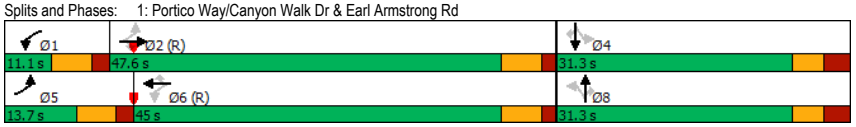
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	206	813	13	14	1465	56	9	1	13	25	2	132
Future Volume (vph)	206	813	13	14	1465	56	9	1	13	25	2	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0		100.0	60.0		100.0	30.0		25.0	60.0		25.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1785	3433	1479	1785	3535	1566	1785	1879	1597	1785	1879	1566
Flt Permitted	0.089			0.345			0.757			0.757		
Satd. Flow (perm)	167	3433	1479	648	3535	1566	1422	1879	1597	1422	1879	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			114			114			109			132
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		961.8			552.4			155.8			134.5	
Travel Time (s)		57.7			33.1			11.2			9.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	4%	8%	0%	1%	2%	0%	0%	0%	0%	0%	2%
Adj. Flow (vph)	206	813	13	14	1465	56	9	1	13	25	2	132
Shared Lane Traffic (%)												
Lane Group Flow (vph)	206	813	13	14	1465	56	9	1	13	25	2	132
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.1	24.9	24.9	11.1	24.9	24.9	31.3	31.3	31.3	31.3	31.3	31.3
Total Split (s)	13.7	47.6	47.6	11.1	45.0	45.0	31.3	31.3	31.3	31.3	31.3	31.3
Total Split (%)	15.2%	52.9%	52.9%	12.3%	50.0%	50.0%	34.8%	34.8%	34.8%	34.8%	34.8%	34.8%
Maximum Green (s)	7.6	41.7	41.7	5.0	39.1	39.1	25.0	25.0	25.0	25.0	25.0	25.0
Yellow Time (s)	4.2	4.2	4.2	4.2	4.2	4.2	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.9	1.7	1.7	1.9	1.7	1.7	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		10.0	10.0		10.0	10.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		9.0	9.0		9.0	9.0	18.0	18.0	18.0	18.0	18.0	18.0
Pedestrian Calls (#/hr)		5	5		5	5	5	5	5	5	5	5
Act Effct Green (s)	66.6	65.3	65.3	56.8	51.5	51.5	10.3	10.3	10.3	10.3	10.3	10.3
Actuated g/C Ratio	0.74	0.73	0.73	0.63	0.57	0.57	0.11	0.11	0.11	0.11	0.11	0.11
v/c Ratio	0.68	0.33	0.01	0.03	0.72	0.06	0.06	0.00	0.05	0.15	0.01	0.45
Control Delay	27.7	7.1	0.0	5.9	18.7	0.3	31.1	29.0	0.3	34.1	29.5	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.7	7.1	0.0	5.9	18.7	0.3	31.1	29.0	0.3	34.1	29.5	10.6
LOS	C	A	A	A	B	A	C	C	A	C	C	B
Approach Delay		11.1			17.9			13.6			14.5	
Approach LOS		B			B			B			B	
Queue Length 50th (m)	12.1	15.6	0.0	0.4	84.2	0.0	1.5	0.2	0.0	4.1	0.4	0.0
Queue Length 95th (m)	#61.0	66.3	0.0	3.3	#173.8	0.7	4.6	1.3	0.0	9.0	1.9	12.6
Internal Link Dist (m)		937.8			528.4			131.8			110.5	
Turn Bay Length (m)	60.0		100.0	60.0		100.0	30.0		25.0	60.0		25.0
Base Capacity (vph)	301	2490	1104	478	2022	944	395	521	522	395	521	530
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.33	0.01	0.03	0.72	0.06	0.02	0.00	0.02	0.06	0.00	0.25

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 15.1		Intersection LOS: B	
Intersection Capacity Utilization 75.2%		ICU Level of Service D	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Portico Way/Canyon Walk Dr & Earl Armstrong Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	206	813	13	14	1465	56	9	1	13	25	2	132
Future Volume (vph)	206	813	13	14	1465	56	9	1	13	25	2	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1785	3433	1479	1785	3535	1566	1785	1879	1597	1785	1879	1566
Flt Permitted	0.09	1.00	1.00	0.34	1.00	1.00	0.76	1.00	1.00	0.76	1.00	1.00
Satd. Flow (perm)	167	3433	1479	648	3535	1566	1421	1879	1597	1423	1879	1566
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	206	813	13	14	1465	56	9	1	13	25	2	132
RTOR Reduction (vph)	0	0	4	0	0	24	0	0	12	0	0	117
Lane Group Flow (vph)	206	813	9	14	1465	32	9	1	1	25	2	15
Heavy Vehicles (%)	0%	4%	8%	0%	1%	2%	0%	0%	0%	0%	0%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	67.5	60.4	60.4	52.5	51.5	51.5	10.3	10.3	10.3	10.3	10.3	10.3
Effective Green, g (s)	67.5	60.4	60.4	52.5	51.5	51.5	10.3	10.3	10.3	10.3	10.3	10.3
Actuated g/C Ratio	0.75	0.67	0.67	0.58	0.57	0.57	0.11	0.11	0.11	0.11	0.11	0.11
Clearance Time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	303	2303	992	390	2022	896	162	215	182	162	215	179
v/s Ratio Prot	c0.07	0.24		0.00	c0.41			0.00			0.00	
v/s Ratio Perm	0.43		0.01	0.02		0.02	0.01		0.00	c0.02		0.01
v/c Ratio	0.68	0.35	0.01	0.04	0.72	0.04	0.06	0.00	0.01	0.15	0.01	0.08
Uniform Delay, d1	17.3	6.4	4.9	7.9	14.1	8.4	35.5	35.3	35.3	35.9	35.3	35.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.0	0.4	0.0	0.0	2.3	0.1	0.1	0.0	0.0	0.4	0.0	0.2
Delay (s)	23.3	6.8	4.9	7.9	16.4	8.5	35.7	35.3	35.3	36.4	35.3	35.8
Level of Service	C	A	A	A	B	A	D	D	D	D	D	D
Approach Delay (s)		10.1			16.0			35.5			35.9	
Approach LOS		B			B			D			D	

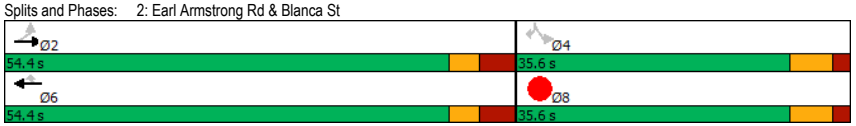
Intersection Summary				
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.64			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.3	
Intersection Capacity Utilization	75.2%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø8
Lane Configurations							
Traffic Volume (vph)	74	778	1441	57	29	94	
Future Volume (vph)	74	778	1441	57	29	94	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (m)	160.0			120.0	60.0	30.0	
Storage Lanes	1			1	1	0	
Taper Length (m)	2.5				2.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1785	3433	3500	1597	1785	1597	
Flt Permitted	0.155				0.950		
Satd. Flow (perm)	291	3433	3500	1597	1785	1597	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				57		26	
Link Speed (k/h)		60	60		50		
Link Distance (m)		552.4	266.4		176.5		
Travel Time (s)		33.1	16.0		12.7		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehicles (%)	0%	4%	2%	0%	0%	0%	
Adj. Flow (vph)	74	778	1441	57	29	94	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	74	778	1441	57	29	94	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(m)		7.0	7.0		3.5		
Link Offset(m)		0.0	0.0		0.0		
Crosswalk Width(m)		1.6	1.6		1.6		
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	
Turning Speed (k/h)	24			14	24	14	
Number of Detectors	1	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (m)	6.1	30.5	30.5	6.1	6.1	6.1	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8	1.8	6.1	6.1	6.1	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7	28.7				
Detector 2 Size(m)		1.8	1.8				
Detector 2 Type		Cl+Ex	Cl+Ex				
Detector 2 Channel							
Detector 2 Extend (s)		0.0	0.0				
Turn Type	Perm	NA	NA	Perm	Perm	Perm	
Protected Phases		2	6				8

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø8
Permitted Phases	2			6	4	4	
Detector Phase	2	2	6	6	4	4	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	31.3	31.3	31.3	31.3	35.5	35.5	35.5
Total Split (s)	54.4	54.4	54.4	54.4	35.6	35.6	35.6
Total Split (%)	60.4%	60.4%	60.4%	60.4%	39.6%	39.6%	40%
Maximum Green (s)	47.1	47.1	47.1	47.1	29.0	29.0	29.0
Yellow Time (s)	3.3	3.3	3.3	3.3	4.6	4.6	4.6
All-Red Time (s)	4.0	4.0	4.0	4.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.3	7.3	7.3	7.3	6.6	6.6	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	17.0	17.0	17.0	17.0	8.0	8.0	8.0
Pedestrian Calls (#/hr)	5	5	5	5	5	5	5
Act Effct Green (s)	56.1	56.1	56.1	56.1	9.2	9.2	
Actuated g/C Ratio	0.75	0.75	0.75	0.75	0.12	0.12	
v/c Ratio	0.34	0.30	0.55	0.05	0.13	0.43	
Control Delay	11.8	5.0	7.1	1.8	28.7	28.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	11.8	5.0	7.1	1.8	28.7	28.4	
LOS	B	A	A	A	C	C	
Approach Delay		5.6	6.9		28.4		
Approach LOS		A	A		C		
Queue Length 50th (m)	3.5	18.4	44.8	0.0	3.8	9.2	
Queue Length 95th (m)	15.8	35.2	82.6	3.6	9.9	20.4	
Internal Link Dist (m)		528.4	242.4		152.5		
Turn Bay Length (m)	160.0			120.0	60.0	30.0	
Base Capacity (vph)	217	2564	2614	1207	692	634	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.34	0.30	0.55	0.05	0.04	0.15	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 75.1			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 7.5		Intersection LOS: A	
Intersection Capacity Utilization 65.8%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Earl Armstrong Rd & Blanca St



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	74	778	1441	57	29	94
Future Volume (vph)	74	778	1441	57	29	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3	7.3	6.6	6.6
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1785	3433	3500	1597	1785	1597
Flt Permitted	0.15	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	291	3433	3500	1597	1785	1597
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	74	778	1441	57	29	94
RTOR Reduction (vph)	0	0	0	16	0	23
Lane Group Flow (vph)	74	778	1441	41	29	71
Heavy Vehicles (%)	0%	4%	2%	0%	0%	0%
Turn Type	Perm	NA	NA	Perm	Perm	Perm
Protected Phases		2	6			
Permitted Phases	2			6	4	4
Actuated Green, G (s)	54.5	54.5	54.5	54.5	8.1	8.1
Effective Green, g (s)	54.5	54.5	54.5	54.5	8.1	8.1
Actuated g/C Ratio	0.71	0.71	0.71	0.71	0.11	0.11
Clearance Time (s)	7.3	7.3	7.3	7.3	6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	207	2445	2493	1137	189	169
v/s Ratio Prot		0.23	c0.41			
v/s Ratio Perm	0.25			0.03	0.02	c0.04
v/c Ratio	0.36	0.32	0.58	0.04	0.15	0.42
Uniform Delay, d1	4.2	4.1	5.4	3.2	31.1	32.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.8	0.3	1.0	0.1	0.4	1.7
Delay (s)	9.0	4.4	6.4	3.3	31.5	33.7
Level of Service	A	A	A	A	C	C
Approach Delay (s)		4.8	6.2		33.2	
Approach LOS		A	A		C	

Intersection Summary				
HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	76.5	Sum of lost time (s)	13.9
Intersection Capacity Utilization	65.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	332	256	218	2	529	25	138	112	1	16	208	832
Future Volume (vph)	332	256	218	2	529	25	138	112	1	16	208	832
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	140.0		60.0	120.0		200.0	120.0		100.0	120.0		100.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3236	3466	1581	3463	3570	1536	3429	3500	1597	3236	3500	1581
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3236	3466	1581	3463	3570	1536	3429	3500	1597	3236	3500	1581
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			218			210			210			210
Link Speed (k/h)		60			80			80			80	
Link Distance (m)		266.4			840.4			568.0			625.0	
Travel Time (s)		16.0			37.8			25.6			28.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	7%	3%	1%	0%	0%	4%	1%	2%	0%	7%	2%	1%
Adj. Flow (vph)	332	256	218	2	529	25	138	112	1	16	208	832
Shared Lane Traffic (%)												
Lane Group Flow (vph)	332	256	218	2	529	25	138	112	1	16	208	832
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			7.0			7.0			7.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	12.1	36.9	36.9	12.1	36.9	36.9	11.9	36.9	36.9	11.9	36.9	36.9
Total Split (s)	20.6	46.7	46.7	12.1	38.2	38.2	12.8	59.3	59.3	11.9	58.4	58.4
Total Split (%)	15.8%	35.9%	35.9%	9.3%	29.4%	29.4%	9.8%	45.6%	45.6%	9.2%	44.9%	44.9%
Maximum Green (s)	13.5	39.8	39.8	5.0	31.3	31.3	5.9	52.4	52.4	5.0	51.5	51.5
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.5	2.3	2.3	2.5	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	Min	Min	None	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		5	5		5	5		5	5		5	5
Act Effct Green (s)	13.5	49.5	49.5	5.0	31.3	31.3	5.9	59.5	59.5	5.0	51.5	51.5
Actuated g/C Ratio	0.10	0.38	0.38	0.04	0.24	0.24	0.05	0.46	0.46	0.04	0.40	0.40
v/c Ratio	0.99	0.19	0.30	0.02	0.62	0.05	0.89	0.07	0.00	0.13	0.15	1.10
Control Delay	104.1	28.3	5.0	60.5	47.6	0.2	109.3	21.3	0.0	62.8	25.6	93.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	104.1	28.3	5.0	60.5	47.6	0.2	109.3	21.3	0.0	62.8	25.6	93.8
LOS	F	C	A	E	D	A	F	C	A	E	C	F
Approach Delay		53.2			45.5			69.6			79.9	
Approach LOS		D			D			E			E	
Queue Length 50th (m)	44.4	22.1	0.0	0.2	64.0	0.0	18.5	7.6	0.0	2.1	17.7	~208.3
Queue Length 95th (m)	#74.8	37.1	17.6	1.7	82.6	0.0	#37.8	15.4	0.0	6.0	26.4	#285.0
Internal Link Dist (m)		242.4			816.4			544.0			601.0	
Turn Bay Length (m)	140.0		60.0	120.0		200.0	120.0		100.0	120.0		100.0
Base Capacity (vph)	336	1319	737	133	859	529	155	1603	845	124	1386	753
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.19	0.30	0.02	0.62	0.05	0.89	0.07	0.00	0.13	0.15	1.10

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Natural Cycle: 130			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.10			
Intersection Signal Delay: 63.7		Intersection LOS: E	
Intersection Capacity Utilization 87.6%		ICU Level of Service E	
Analysis Period (min) 15			

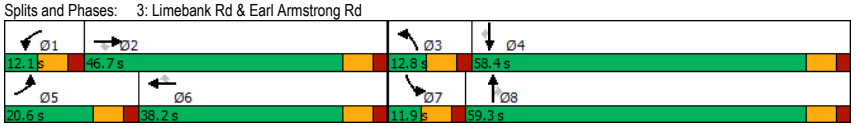
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Limebank Rd & Earl Armstrong Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	332	256	218	2	529	25	138	112	1	16	208	832
Future Volume (vph)	332	256	218	2	529	25	138	112	1	16	208	832
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3236	3466	1581	3463	3570	1536	3429	3500	1597	3236	3500	1581
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3236	3466	1581	3463	3570	1536	3429	3500	1597	3236	3500	1581
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	332	256	218	2	529	25	138	112	1	16	208	832
RTOR Reduction (vph)	0	0	141	0	0	18	0	0	1	0	0	126
Lane Group Flow (vph)	332	256	77	2	529	7	138	112	0	16	208	706
Heavy Vehicles (%)	7%	3%	1%	0%	0%	4%	1%	2%	0%	7%	2%	1%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	13.5	49.5	49.5	1.0	37.0	37.0	5.9	59.5	59.5	2.0	55.6	55.6
Effective Green, g (s)	13.5	49.5	49.5	1.0	37.0	37.0	5.9	59.5	59.5	2.0	55.6	55.6
Actuated g/C Ratio	0.10	0.35	0.35	0.01	0.26	0.26	0.04	0.43	0.43	0.01	0.40	0.40
Clearance Time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	312	1227	559	24	944	406	144	1489	679	46	1391	628
v/s Ratio Prot	c0.10	0.07		0.00	c0.15		c0.04	c0.03		0.00	0.06	
v/s Ratio Perm			0.05			0.00			0.00			c0.45
v/c Ratio	1.06	0.21	0.14	0.08	0.56	0.02	0.96	0.08	0.00	0.35	0.15	1.12
Uniform Delay, d1	63.2	31.5	30.7	68.9	44.4	38.0	66.8	23.8	23.1	68.3	27.0	42.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	68.9	0.4	0.5	1.5	2.4	0.1	61.7	0.0	0.0	4.5	0.1	74.9
Delay (s)	132.1	31.9	31.2	70.4	46.8	38.0	128.5	23.8	23.1	72.8	27.0	117.0
Level of Service	F	C	C	E	D	D	F	C	C	E	C	F
Approach Delay (s)		73.0			46.5			81.4			98.6	
Approach LOS		E			D			F			F	

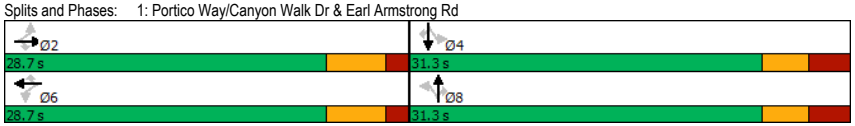
Intersection Summary				
HCM 2000 Control Delay	78.4	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.92			
Actuated Cycle Length (s)	139.8	Sum of lost time (s)	27.8	
Intersection Capacity Utilization	87.6%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	487	9	4	482	33	10	3	6	30	2	126
Future Volume (vph)	180	487	9	4	482	33	10	3	6	30	2	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0		100.0	60.0		100.0	30.0		25.0	60.0		25.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1750	3535	1597	1785	3535	1597	1785	1879	1597	1785	1879	1566
Flt Permitted	0.477			0.475			0.757			0.756		
Satd. Flow (perm)	879	3535	1597	892	3535	1597	1422	1879	1597	1420	1879	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			60			60			53			126
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		961.8			552.4			155.8			134.5	
Travel Time (s)		57.7			33.1			11.2			9.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	2%
Adj. Flow (vph)	180	487	9	4	482	33	10	3	6	30	2	126
Shared Lane Traffic (%)												
Lane Group Flow (vph)	180	487	9	4	482	33	10	3	6	30	2	126
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			6			8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	2	2	2	6	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.9	24.9	24.9	24.9	24.9	24.9	31.3	31.3	31.3	31.3	31.3	31.3
Total Split (s)	28.7	28.7	28.7	28.7	28.7	28.7	31.3	31.3	31.3	31.3	31.3	31.3
Total Split (%)	47.8%	47.8%	47.8%	47.8%	47.8%	47.8%	52.2%	52.2%	52.2%	52.2%	52.2%	52.2%
Maximum Green (s)	22.8	22.8	22.8	22.8	22.8	22.8	25.0	25.0	25.0	25.0	25.0	25.0
Yellow Time (s)	4.2	4.2	4.2	4.2	4.2	4.2	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.7	1.7	1.7	1.7	1.7	1.7	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max	Max	Max	None	None	None	None	None	None
Walk Time (s)	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	9.0	9.0	9.0	9.0	9.0	9.0	18.0	18.0	18.0	18.0	18.0	18.0
Pedestrian Calls (#/hr)	5	5	5	5	5	5	5	5	5	5	5	5
Act Effct Green (s)	30.0	30.0	30.0	30.0	30.0	30.0	9.3	9.3	9.3	9.3	9.3	9.3
Actuated g/C Ratio	0.63	0.63	0.63	0.63	0.63	0.63	0.19	0.19	0.19	0.19	0.19	0.19
v/c Ratio	0.33	0.22	0.01	0.01	0.22	0.03	0.04	0.01	0.02	0.11	0.01	0.31
Control Delay	11.1	7.3	0.0	8.8	7.3	1.9	12.8	12.0	0.2	14.1	12.0	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.1	7.3	0.0	8.8	7.3	1.9	12.8	12.0	0.2	14.1	12.0	5.3
LOS	B	A	A	A	A	A	B	B	A	B	B	A
Approach Delay		8.2			6.9			8.7			7.1	
Approach LOS		A			A			A			A	
Queue Length 50th (m)	6.0	7.8	0.0	0.2	7.7	0.0	0.6	0.2	0.0	1.9	0.1	0.0
Queue Length 95th (m)	32.5	29.8	0.0	1.8	29.5	2.4	2.9	1.4	0.0	5.9	1.1	7.7
Internal Link Dist (m)		937.8			528.4			131.8			110.5	
Turn Bay Length (m)	60.0		100.0	60.0		100.0	30.0		25.0	60.0		25.0
Base Capacity (vph)	551	2215	1023	559	2215	1023	759	1003	877	758	1003	894
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.22	0.01	0.01	0.22	0.03	0.01	0.00	0.01	0.04	0.00	0.14

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 47.8			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.33			
Intersection Signal Delay: 7.6		Intersection LOS: A	
Intersection Capacity Utilization 46.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Portico Way/Canyon Walk Dr & Earl Armstrong Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	487	9	4	482	33	10	3	6	30	2	126
Future Volume (vph)	180	487	9	4	482	33	10	3	6	30	2	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.9	5.9	5.9	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1750	3535	1597	1785	3535	1597	1785	1879	1597	1785	1879	1566
Flt Permitted	0.48	1.00	1.00	0.47	1.00	1.00	0.76	1.00	1.00	0.76	1.00	1.00
Satd. Flow (perm)	878	3535	1597	892	3535	1597	1421	1879	1597	1420	1879	1566
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	180	487	9	4	482	33	10	3	6	30	2	126
RTOR Reduction (vph)	0	0	4	0	0	14	0	0	5	0	0	105
Lane Group Flow (vph)	180	487	5	4	482	19	10	3	1	30	2	21
Heavy Vehicles (%)	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	2%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	28.7	28.7	28.7	28.7	28.7	28.7	8.1	8.1	8.1	8.1	8.1	8.1
Effective Green, g (s)	28.7	28.7	28.7	28.7	28.7	28.7	8.1	8.1	8.1	8.1	8.1	8.1
Actuated g/C Ratio	0.59	0.59	0.59	0.59	0.59	0.59	0.17	0.17	0.17	0.17	0.17	0.17
Clearance Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	514	2070	935	522	2070	935	234	310	263	234	310	258
v/s Ratio Prot		0.14			0.14			0.00			0.00	
v/s Ratio Perm	c0.20		0.00	0.00		0.01	0.01		0.00	c0.02		0.01
v/c Ratio	0.35	0.24	0.01	0.01	0.23	0.02	0.04	0.01	0.00	0.13	0.01	0.08
Uniform Delay, d1	5.3	4.9	4.2	4.2	4.9	4.3	17.2	17.1	17.1	17.4	17.1	17.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.9	0.3	0.0	0.0	0.3	0.0	0.1	0.0	0.0	0.2	0.0	0.1
Delay (s)	7.2	5.1	4.2	4.3	5.1	4.3	17.3	17.1	17.1	17.7	17.1	17.4
Level of Service	A	A	A	A	A	A	B	B	B	B	B	B
Approach Delay (s)		5.7			5.1			17.2			17.5	
Approach LOS		A			A			B			B	

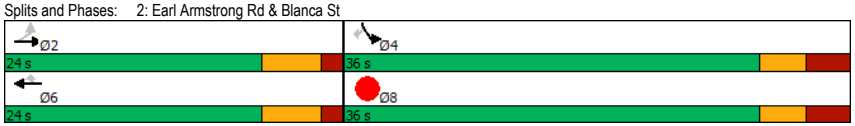
Intersection Summary				
HCM 2000 Control Delay	7.0	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.30			
Actuated Cycle Length (s)	49.0	Sum of lost time (s)	12.2	
Intersection Capacity Utilization	46.7%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø8
Lane Configurations							
Traffic Volume (vph)	106	417	402	41	41	116	
Future Volume (vph)	106	417	402	41	41	116	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (m)	160.0			120.0	60.0	30.0	
Storage Lanes	1			1	1	0	
Taper Length (m)	2.5				2.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1785	3500	3466	1597	1785	1597	
Flt Permitted	0.515				0.950		
Satd. Flow (perm)	968	3500	3466	1597	1785	1597	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				41		116	
Link Speed (k/h)		60	60		50		
Link Distance (m)		552.4	266.4		176.5		
Travel Time (s)		33.1	16.0		12.7		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehicles (%)	0%	2%	3%	0%	0%	0%	
Adj. Flow (vph)	106	417	402	41	41	116	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	106	417	402	41	41	116	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(m)		7.0	7.0		3.5		
Link Offset(m)		0.0	0.0		0.0		
Crosswalk Width(m)		1.6	1.6		1.6		
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	
Turning Speed (k/h)	24			14	24	14	
Number of Detectors	1	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (m)	6.1	30.5	30.5	6.1	6.1	6.1	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8	1.8	6.1	6.1	6.1	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7	28.7				
Detector 2 Size(m)		1.8	1.8				
Detector 2 Type		Cl+Ex	Cl+Ex				
Detector 2 Channel							
Detector 2 Extend (s)		0.0	0.0				
Turn Type	Perm	NA	NA	Perm	Prot	Perm	
Protected Phases		2	6		4		8

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø8
Permitted Phases	2			6		4	
Detector Phase	2	2	6	6	4	4	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.8	21.8	21.8	21.8	35.5	35.5	35.5
Total Split (s)	24.0	24.0	24.0	24.0	36.0	36.0	36.0
Total Split (%)	40.0%	40.0%	40.0%	40.0%	60.0%	60.0%	60%
Maximum Green (s)	18.2	18.2	18.2	18.2	29.5	29.5	29.5
Yellow Time (s)	4.2	4.2	4.2	4.2	3.3	3.3	3.3
All-Red Time (s)	1.6	1.6	1.6	1.6	3.2	3.2	3.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.8	5.8	5.8	5.8	6.5	6.5	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	9.0	9.0	9.0	9.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	5	5	5	5	5	5	5
Act Effct Green (s)	12.5	12.5	12.5	12.5	29.6	29.6	
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.54	0.54	
v/c Ratio	0.48	0.52	0.51	0.10	0.04	0.13	
Control Delay	25.5	20.5	20.3	6.7	7.2	2.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	25.5	20.5	20.3	6.7	7.2	2.4	
LOS	C	C	C	A	A	A	
Approach Delay		21.5	19.1		3.6		
Approach LOS		C	B		A		
Queue Length 50th (m)	9.0	18.8	18.0	0.0	1.7	0.0	
Queue Length 95th (m)	20.6	29.3	28.3	5.5	6.1	6.2	
Internal Link Dist (m)		528.4	242.4		152.5		
Turn Bay Length (m)	160.0			120.0	60.0	30.0	
Base Capacity (vph)	324	1173	1162	562	970	921	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.33	0.36	0.35	0.07	0.04	0.13	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 54.5			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.52			
Intersection Signal Delay: 18.1		Intersection LOS: B	
Intersection Capacity Utilization 36.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: Earl Armstrong Rd & Blanca St



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	106	417	402	41	41	116
Future Volume (vph)	106	417	402	41	41	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	5.8	5.8	5.8	6.5	6.5
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1785	3500	3466	1597	1785	1597
Flt Permitted	0.52	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	968	3500	3466	1597	1785	1597
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	106	417	402	41	41	116
RTOR Reduction (vph)	0	0	0	32	0	53
Lane Group Flow (vph)	106	417	402	9	41	63
Heavy Vehicles (%)	0%	2%	3%	0%	0%	0%
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2			6		4
Actuated Green, G (s)	12.5	12.5	12.5	12.5	29.6	29.6
Effective Green, g (s)	12.5	12.5	12.5	12.5	29.6	29.6
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.54	0.54
Clearance Time (s)	5.8	5.8	5.8	5.8	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	222	804	796	366	971	868
v/s Ratio Prot		c0.12	0.12		0.02	
v/s Ratio Perm	0.11			0.01		c0.04
v/c Ratio	0.48	0.52	0.51	0.03	0.04	0.07
Uniform Delay, d1	18.1	18.3	18.3	16.2	5.8	5.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.6	0.6	0.5	0.0	0.1	0.2
Delay (s)	19.7	18.9	18.8	16.3	5.9	6.0
Level of Service	B	B	B	B	A	A
Approach Delay (s)		19.1	18.5		6.0	
Approach LOS		B	B		A	

Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	54.4	Sum of lost time (s)	12.3
Intersection Capacity Utilization	36.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	183	201	75	3	144	18	71	110	3	32	128	228
Future Volume (vph)	183	201	75	3	144	18	71	110	3	32	128	228
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	140.0		60.0	120.0		200.0	120.0		100.0	120.0		100.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3429	3466	1536	3463	3433	1507	3267	3500	1201	3463	3500	1597
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3429	3466	1536	3463	3433	1507	3267	3500	1201	3463	3500	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			195			195			195			228
Link Speed (k/h)		60			80			80			80	
Link Distance (m)		266.4			840.4			568.0			625.0	
Travel Time (s)		16.0			37.8			25.6			28.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	3%	4%	0%	4%	6%	6%	2%	33%	0%	2%	0%
Adj. Flow (vph)	183	201	75	3	144	18	71	110	3	32	128	228
Shared Lane Traffic (%)												
Lane Group Flow (vph)	183	201	75	3	144	18	71	110	3	32	128	228
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			7.0			7.0			7.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	

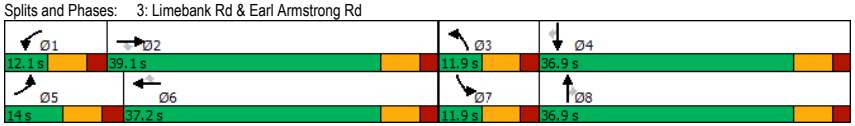
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	12.1	36.9	36.9	12.1	36.9	36.9	11.9	36.9	36.9	11.9	36.9	36.9
Total Split (s)	14.0	39.1	39.1	12.1	37.2	37.2	11.9	36.9	36.9	11.9	36.9	36.9
Total Split (%)	14.0%	39.1%	39.1%	12.1%	37.2%	37.2%	11.9%	36.9%	36.9%	11.9%	36.9%	36.9%
Maximum Green (s)	6.9	32.2	32.2	5.0	30.3	30.3	5.0	30.0	30.0	5.0	30.0	30.0
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.5	2.3	2.3	2.5	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	Min	Min	None	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		5	5		5	5		5	5		5	5
Act Effct Green (s)	7.0	43.0	43.0	5.1	30.7	30.7	5.1	18.3	18.3	5.1	13.4	13.4
Actuated g/C Ratio	0.09	0.53	0.53	0.06	0.38	0.38	0.06	0.22	0.22	0.06	0.16	0.16
v/c Ratio	0.62	0.11	0.08	0.01	0.11	0.03	0.35	0.14	0.01	0.15	0.22	0.50
Control Delay	48.8	13.6	0.2	41.0	19.4	0.1	45.0	26.5	0.0	41.7	30.5	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	13.6	0.2	41.0	19.4	0.1	45.0	26.5	0.0	41.7	30.5	8.3
LOS	D	B	A	D	B	A	D	C	A	D	C	A
Approach Delay		25.4			17.7			33.2			18.4	
Approach LOS		C			B			C			B	
Queue Length 50th (m)	14.1	7.0	0.0	0.2	7.3	0.0	5.4	6.5	0.0	2.4	9.4	0.0
Queue Length 95th (m)	#34.8	23.1	0.0	1.7	17.9	0.0	14.0	14.5	0.0	7.8	16.3	16.1
Internal Link Dist (m)		242.4			816.4			544.0			601.0	
Turn Bay Length (m)	140.0		60.0	120.0		200.0	120.0		100.0	120.0		100.0
Base Capacity (vph)	294	1825	901	215	1293	689	203	1305	570	215	1305	738
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.11	0.08	0.01	0.11	0.03	0.35	0.08	0.01	0.15	0.10	0.31

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 81.6			
Natural Cycle: 100			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 23.3		Intersection LOS: C	
Intersection Capacity Utilization 45.2%		ICU Level of Service A	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Limebank Rd & Earl Armstrong Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	183	201	75	3	144	18	71	110	3	32	128	228
Future Volume (vph)	183	201	75	3	144	18	71	110	3	32	128	228
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3429	3466	1536	3463	3433	1507	3267	3500	1201	3463	3500	1597
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3429	3466	1536	3463	3433	1507	3267	3500	1201	3463	3500	1597
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	183	201	75	3	144	18	71	110	3	32	128	228
RTOR Reduction (vph)	0	0	40	0	0	11	0	0	2	0	0	188
Lane Group Flow (vph)	183	201	35	3	144	7	71	110	1	32	128	40
Heavy Vehicles (%)	1%	3%	4%	0%	4%	6%	6%	2%	33%	0%	2%	0%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	7.0	43.0	43.0	0.8	36.8	36.8	3.9	18.3	18.3	1.8	16.2	16.2
Effective Green, g (s)	7.0	43.0	43.0	0.8	36.8	36.8	3.9	18.3	18.3	1.8	16.2	16.2
Actuated g/C Ratio	0.08	0.47	0.47	0.01	0.40	0.40	0.04	0.20	0.20	0.02	0.18	0.18
Clearance Time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	261	1625	720	30	1377	604	138	698	239	67	618	282
v/s Ratio Prot	c0.05	c0.06		0.00	0.04		c0.02	0.03		0.01	c0.04	
v/s Ratio Perm			0.02			0.00			0.00			0.03
v/c Ratio	0.70	0.12	0.05	0.10	0.10	0.01	0.51	0.16	0.00	0.48	0.21	0.14
Uniform Delay, d1	41.3	13.7	13.2	45.1	17.2	16.5	43.0	30.3	29.4	44.5	32.3	31.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.2	0.2	0.1	1.5	0.2	0.0	3.2	0.1	0.0	5.3	0.2	0.2
Delay (s)	49.6	13.9	13.4	46.6	17.3	16.5	46.2	30.4	29.4	49.8	32.4	32.1
Level of Service	D	B	B	D	B	B	D	C	C	D	C	C
Approach Delay (s)		28.0			17.8			36.5			33.7	
Approach LOS		C			B			D			C	

Intersection Summary				
HCM 2000 Control Delay	29.7	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.23			
Actuated Cycle Length (s)	91.7	Sum of lost time (s)	27.8	
Intersection Capacity Utilization	45.2%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	1303	3	40	670	33	27	5	42	40	1	191
Future Volume (vph)	75	1303	3	40	670	33	27	5	42	40	1	191
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0		100.0	60.0		100.0	30.0		25.0	60.0		25.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1767	3466	1201	1342	3275	1479	1405	1253	1597	1733	1879	1581
Flt Permitted	0.352			0.154			0.757			0.754		
Satd. Flow (perm)	655	3466	1201	218	3275	1479	1120	1253	1597	1375	1879	1581
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			128			128			123			191
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		961.8			552.4			155.8			134.5	
Travel Time (s)		57.7			33.1			11.2			9.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	3%	33%	33%	9%	8%	27%	50%	0%	3%	0%	1%
Adj. Flow (vph)	75	1303	3	40	670	33	27	5	42	40	1	191
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	1303	3	40	670	33	27	5	42	40	1	191
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	

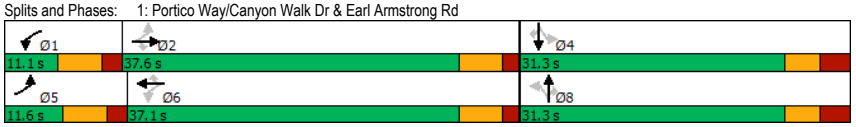
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.1	24.9	24.9	11.1	24.9	24.9	31.3	31.3	31.3	31.3	31.3	31.3
Total Split (s)	11.6	37.6	37.6	11.1	37.1	37.1	31.3	31.3	31.3	31.3	31.3	31.3
Total Split (%)	14.5%	47.0%	47.0%	13.9%	46.4%	46.4%	39.1%	39.1%	39.1%	39.1%	39.1%	39.1%
Maximum Green (s)	5.5	31.7	31.7	5.0	31.2	31.2	25.0	25.0	25.0	25.0	25.0	25.0
Yellow Time (s)	4.2	4.2	4.2	4.2	4.2	4.2	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.9	1.7	1.7	1.9	1.7	1.7	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		10.0	10.0		10.0	10.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		9.0	9.0		9.0	9.0	18.0	18.0	18.0	18.0	18.0	18.0
Pedestrian Calls (#/hr)		5	5		5	5	5	5	5	5	5	5
Act Effct Green (s)	41.7	39.9	39.9	38.5	34.7	34.7	9.9	9.9	9.9	9.9	9.9	9.9
Actuated g/C Ratio	0.63	0.60	0.60	0.58	0.52	0.52	0.15	0.15	0.15	0.15	0.15	0.15
v/c Ratio	0.15	0.62	0.00	0.19	0.39	0.04	0.16	0.03	0.12	0.20	0.00	0.48
Control Delay	6.6	14.0	0.0	8.4	12.4	0.1	24.8	21.8	0.7	25.1	21.0	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.6	14.0	0.0	8.4	12.4	0.1	24.8	21.8	0.7	25.1	21.0	8.2
LOS	A	B	A	A	B	A	C	C	A	C	C	A
Approach Delay		13.5			11.7			10.9			11.2	
Approach LOS		B			B			B			B	
Queue Length 50th (m)	2.3	31.0	0.0	1.2	23.4	0.0	2.9	0.5	0.0	4.3	0.1	0.0
Queue Length 95th (m)	11.2	#142.6	0.0	7.1	55.4	0.0	8.5	2.9	0.0	11.0	1.2	13.3
Internal Link Dist (m)		937.8			528.4			131.8			110.5	
Turn Bay Length (m)	60.0		100.0	60.0		100.0	30.0		25.0	60.0		25.0
Base Capacity (vph)	505	2086	774	212	1716	835	427	477	685	524	716	720
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.62	0.00	0.19	0.39	0.04	0.06	0.01	0.06	0.08	0.00	0.27

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 66.2			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 12.7		Intersection LOS: B	
Intersection Capacity Utilization 64.3%		ICU Level of Service C	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.

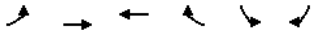
Queue shown is maximum after two cycles.

Splits and Phases: 1: Portico Way/Canyon Walk Dr & Earl Armstrong Rd

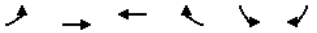


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	1303	3	40	670	33	27	5	42	40	1	191
Future Volume (vph)	75	1303	3	40	670	33	27	5	42	40	1	191
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1767	3466	1201	1342	3275	1479	1405	1253	1597	1733	1879	1581
Flt Permitted	0.35	1.00	1.00	0.15	1.00	1.00	0.76	1.00	1.00	0.75	1.00	1.00
Satd. Flow (perm)	654	3466	1201	218	3275	1479	1120	1253	1597	1376	1879	1581
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	75	1303	3	40	670	33	27	5	42	40	1	191
RTOR Reduction (vph)	0	0	1	0	0	15	0	0	36	0	0	164
Lane Group Flow (vph)	75	1303	2	40	670	18	27	5	6	40	1	27
Heavy Vehicles (%)	1%	3%	33%	33%	9%	8%	27%	50%	0%	3%	0%	1%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	44.3	39.9	39.9	39.3	37.4	37.4	9.9	9.9	9.9	9.9	9.9	9.9
Effective Green, g (s)	44.3	39.9	39.9	39.3	37.4	37.4	9.9	9.9	9.9	9.9	9.9	9.9
Actuated g/C Ratio	0.63	0.57	0.57	0.56	0.53	0.53	0.14	0.14	0.14	0.14	0.14	0.14
Clearance Time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	483	1975	684	152	1749	790	158	177	225	194	265	223
v/s Ratio Prot	c0.01	c0.38		0.01	0.20			0.00			0.00	
v/s Ratio Perm	0.09		0.00	0.14		0.01	0.02		0.00	c0.03		0.02
v/c Ratio	0.16	0.66	0.00	0.26	0.38	0.02	0.17	0.03	0.03	0.21	0.00	0.12
Uniform Delay, d1	5.1	10.4	6.5	7.8	9.5	7.7	26.4	25.9	25.9	26.6	25.8	26.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	1.7	0.0	0.9	0.6	0.1	0.5	0.1	0.0	0.5	0.0	0.2
Delay (s)	5.2	12.1	6.5	8.7	10.2	7.7	27.0	26.0	25.9	27.1	25.8	26.5
Level of Service	A	B	A	A	B	A	C	C	C	C	C	C
Approach Delay (s)		11.7			10.0			26.3			26.6	
Approach LOS		B			A			C			C	

Intersection Summary				
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.56			
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	18.3	
Intersection Capacity Utilization	64.3%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø8
Lane Configurations							
Traffic Volume (vph)	105	1280	668	59	58	75	
Future Volume (vph)	105	1280	668	59	58	75	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (m)	160.0			120.0	60.0	30.0	
Storage Lanes	1			1	1	0	
Taper Length (m)	2.5				2.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1750	3466	3305	1536	1785	1551	
Flt Permitted	0.353				0.950		
Satd. Flow (perm)	650	3466	3305	1536	1785	1551	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				59		75	
Link Speed (k/h)		60	60		50		
Link Distance (m)		552.4	266.4		176.5		
Travel Time (s)		33.1	16.0		12.7		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehicles (%)	2%	3%	8%	4%	0%	3%	
Adj. Flow (vph)	105	1280	668	59	58	75	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	105	1280	668	59	58	75	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(m)		7.0	7.0		3.5		
Link Offset(m)		0.0	0.0		0.0		
Crosswalk Width(m)		1.6	1.6		1.6		
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	
Turning Speed (k/h)	24			14	24	14	
Number of Detectors	1	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (m)	6.1	30.5	30.5	6.1	6.1	6.1	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8	1.8	6.1	6.1	6.1	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7	28.7				
Detector 2 Size(m)		1.8	1.8				
Detector 2 Type		Cl+Ex	Cl+Ex				
Detector 2 Channel							
Detector 2 Extend (s)		0.0	0.0				
Turn Type	Perm	NA	NA	Perm	Perm	Perm	
Protected Phases		2	6				8



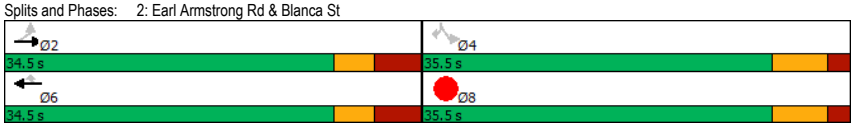
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø8
Permitted Phases	2			6	4	4	
Detector Phase	2	2	6	6	4	4	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	31.3	31.3	31.3	31.3	35.5	35.5	35.5
Total Split (s)	34.5	34.5	34.5	34.5	35.5	35.5	35.5
Total Split (%)	49.3%	49.3%	49.3%	49.3%	50.7%	50.7%	51%
Maximum Green (s)	27.2	27.2	27.2	27.2	28.9	28.9	28.9
Yellow Time (s)	3.3	3.3	3.3	3.3	4.6	4.6	4.6
All-Red Time (s)	4.0	4.0	4.0	4.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.3	7.3	7.3	7.3	6.6	6.6	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	17.0	17.0	17.0	17.0	8.0	8.0	8.0
Pedestrian Calls (#/hr)	5	5	5	5	5	5	5
Act Effct Green (s)	27.2	27.2	27.2	27.2	28.9	28.9	
Actuated g/C Ratio	0.39	0.39	0.39	0.39	0.41	0.41	
v/c Ratio	0.42	0.95	0.52	0.09	0.08	0.11	
Control Delay	22.0	37.7	18.2	4.7	12.9	4.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	22.0	37.7	18.2	4.7	12.9	4.1	
LOS	C	D	B	A	B	A	
Approach Delay		36.5	17.1		7.9		
Approach LOS		D	B		A		
Queue Length 50th (m)	9.7	83.0	34.2	0.0	4.5	0.0	
Queue Length 95th (m)	23.0	#126.0	48.7	6.2	10.7	6.6	
Internal Link Dist (m)		528.4	242.4		152.5		
Turn Bay Length (m)	160.0			120.0	60.0	30.0	
Base Capacity (vph)	252	1346	1284	632	736	684	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.42	0.95	0.52	0.09	0.08	0.11	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 28.5		Intersection LOS: C	
Intersection Capacity Utilization 51.1%		ICU Level of Service A	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Earl Armstrong Rd & Blanca St



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	105	1280	668	59	58	75
Future Volume (vph)	105	1280	668	59	58	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3	7.3	6.6	6.6
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1750	3466	3305	1536	1785	1551
Flt Permitted	0.35	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	649	3466	3305	1536	1785	1551
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	105	1280	668	59	58	75
RTOR Reduction (vph)	0	0	0	36	0	44
Lane Group Flow (vph)	105	1280	668	23	58	31
Heavy Vehicles (%)	2%	3%	8%	4%	0%	3%
Turn Type	Perm	NA	NA	Perm	Perm	Perm
Protected Phases		2	6			
Permitted Phases	2			6	4	4
Actuated Green, G (s)	27.2	27.2	27.2	27.2	28.9	28.9
Effective Green, g (s)	27.2	27.2	27.2	27.2	28.9	28.9
Actuated g/C Ratio	0.39	0.39	0.39	0.39	0.41	0.41
Clearance Time (s)	7.3	7.3	7.3	7.3	6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	252	1346	1284	596	736	640
v/s Ratio Prot		c0.37	0.20			
v/s Ratio Perm	0.16			0.01	c0.03	0.02
v/c Ratio	0.42	0.95	0.52	0.04	0.08	0.05
Uniform Delay, d1	15.6	20.8	16.4	13.3	12.5	12.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	14.4	0.4	0.0	0.2	0.1
Delay (s)	16.7	35.2	16.8	13.3	12.7	12.5
Level of Service	B	D	B	B	B	B
Approach Delay (s)		33.8	16.5		12.6	
Approach LOS		C	B		B	

Intersection Summary				
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	13.9
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	826	380	133	1	226	83	160	229	1	26	93	341
Future Volume (vph)	826	380	133	1	226	83	160	229	1	26	93	341
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	140.0		60.0	120.0		200.0	120.0		100.0	120.0		100.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3395	3500	1521	1731	3433	1401	3148	3500	1597	3092	3466	1426
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3395	3500	1521	1731	3433	1401	3148	3500	1597	3092	3466	1426
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			150			210			210			341
Link Speed (k/h)		60			80			80			80	
Link Distance (m)		266.4			840.4			568.0			625.0	
Travel Time (s)		16.0			37.8			25.6			28.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	5%	100%	4%	14%	10%	2%	0%	12%	3%	12%
Adj. Flow (vph)	826	380	133	1	226	83	160	229	1	26	93	341
Shared Lane Traffic (%)												
Lane Group Flow (vph)	826	380	133	1	226	83	160	229	1	26	93	341
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			7.0			7.0			7.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	12.1	36.9	36.9	12.1	36.9	36.9	11.9	36.9	36.9	11.9	36.9	36.9
Total Split (s)	41.0	66.0	66.0	12.1	37.1	37.1	15.0	40.0	40.0	11.9	36.9	36.9
Total Split (%)	31.5%	50.8%	50.8%	9.3%	28.5%	28.5%	11.5%	30.8%	30.8%	9.2%	28.4%	28.4%
Maximum Green (s)	33.9	59.1	59.1	5.0	30.2	30.2	8.1	33.1	33.1	5.0	30.0	30.0
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.5	2.3	2.3	2.5	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	Min	Min	None	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		5	5		5	5		5	5		5	5
Act Effct Green (s)	31.8	67.3	67.3	5.0	30.4	30.4	8.2	21.9	21.9	5.0	13.7	13.7
Actuated g/C Ratio	0.28	0.60	0.60	0.04	0.27	0.27	0.07	0.20	0.20	0.04	0.12	0.12
v/c Ratio	0.86	0.18	0.14	0.01	0.24	0.16	0.70	0.34	0.00	0.19	0.22	0.72
Control Delay	48.5	12.1	2.4	57.0	34.3	0.6	69.0	41.8	0.0	58.3	45.2	13.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.5	12.1	2.4	57.0	34.3	0.6	69.0	41.8	0.0	58.3	45.2	13.9
LOS	D	B	A	E	C	A	E	D	A	E	D	B
Approach Delay		33.5			25.4			52.8			22.8	
Approach LOS		C			C			D			C	
Queue Length 50th (m)	83.2	15.5	0.0	0.1	19.8	0.0	17.5	24.7	0.0	2.8	10.0	0.0
Queue Length 95th (m)	#144.1	41.4	8.6	1.1	36.7	0.0	#39.4	36.0	0.0	8.3	17.3	25.7
Internal Link Dist (m)		242.4			816.4			544.0			601.0	
Turn Bay Length (m)	140.0		60.0	120.0		200.0	120.0		100.0	120.0		100.0
Base Capacity (vph)	1034	2102	973	77	931	533	229	1041	622	138	934	633
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.18	0.14	0.01	0.24	0.16	0.70	0.22	0.00	0.19	0.10	0.54

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 112			
Natural Cycle: 120			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 33.6		Intersection LOS: C	
Intersection Capacity Utilization 58.3%		ICU Level of Service B	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Limebank Rd & Earl Armstrong Rd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	826	380	133	1	226	83	160	229	1	26	93	341
Future Volume (vph)	826	380	133	1	226	83	160	229	1	26	93	341
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3395	3500	1521	1731	3433	1401	3148	3500	1597	3092	3466	1426
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3395	3500	1521	1731	3433	1401	3148	3500	1597	3092	3466	1426
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	826	380	133	1	226	83	160	229	1	26	93	341
RTOR Reduction (vph)	0	0	59	0	0	58	0	0	1	0	0	294
Lane Group Flow (vph)	826	380	74	1	226	25	160	229	0	26	93	47
Heavy Vehicles (%)	2%	2%	5%	100%	4%	14%	10%	2%	0%	12%	3%	12%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	31.8	67.3	67.3	0.9	36.4	36.4	8.2	21.9	21.9	2.9	16.6	16.6
Effective Green, g (s)	31.8	67.3	67.3	0.9	36.4	36.4	8.2	21.9	21.9	2.9	16.6	16.6
Actuated g/C Ratio	0.26	0.56	0.56	0.01	0.30	0.30	0.07	0.18	0.18	0.02	0.14	0.14
Clearance Time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	893	1949	847	12	1034	422	213	634	289	74	476	195
v/s Ratio Prot	c0.24	0.11		0.00	c0.07		c0.05	c0.07		0.01	0.03	
v/s Ratio Perm			0.05			0.02			0.00			0.03
v/c Ratio	0.92	0.19	0.09	0.08	0.22	0.06	0.75	0.36	0.00	0.35	0.20	0.24
Uniform Delay, d1	43.3	13.3	12.5	59.5	31.6	30.0	55.3	43.3	40.5	58.0	46.2	46.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	15.0	0.2	0.2	3.0	0.5	0.3	13.8	0.4	0.0	2.9	0.2	0.6
Delay (s)	58.3	13.5	12.7	62.5	32.0	30.3	69.1	43.7	40.5	60.9	46.4	47.1
Level of Service	E	B	B	E	C	C	E	D	D	E	D	D
Approach Delay (s)		41.1			31.7			54.1			47.7	
Approach LOS		D			C			D			D	

Intersection Summary				
HCM 2000 Control Delay	43.2	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.55			
Actuated Cycle Length (s)	120.8	Sum of lost time (s)	27.8	
Intersection Capacity Utilization	58.3%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	1271	19	40	653	32	27	5	42	39	1	186
Future Volume (vph)	73	1271	19	40	653	32	27	5	42	39	1	186
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0		100.0	60.0		100.0	30.0		25.0	60.0		25.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1767	3466	1201	1342	3275	1479	1405	1253	1597	1733	1879	1581
Flt Permitted	0.375			0.155			0.757			0.754		
Satd. Flow (perm)	698	3466	1201	219	3275	1479	1120	1253	1597	1375	1879	1581
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			128			128			123			186
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		961.8			552.4			155.8			134.5	
Travel Time (s)		57.7			33.1			11.2			9.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	3%	33%	33%	9%	8%	27%	50%	0%	3%	0%	1%
Adj. Flow (vph)	73	1271	19	40	653	32	27	5	42	39	1	186
Shared Lane Traffic (%)												
Lane Group Flow (vph)	73	1271	19	40	653	32	27	5	42	39	1	186
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	

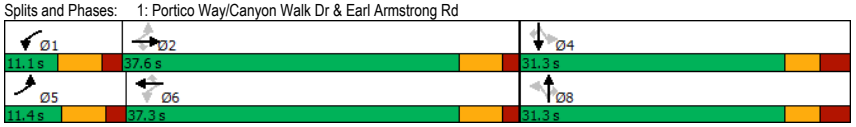
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.1	24.9	24.9	11.1	24.9	24.9	31.3	31.3	31.3	31.3	31.3	31.3
Total Split (s)	11.4	37.6	37.6	11.1	37.3	37.3	31.3	31.3	31.3	31.3	31.3	31.3
Total Split (%)	14.3%	47.0%	47.0%	13.9%	46.6%	46.6%	39.1%	39.1%	39.1%	39.1%	39.1%	39.1%
Maximum Green (s)	5.3	31.7	31.7	5.0	31.4	31.4	25.0	25.0	25.0	25.0	25.0	25.0
Yellow Time (s)	4.2	4.2	4.2	4.2	4.2	4.2	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.9	1.7	1.7	1.9	1.7	1.7	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		10.0	10.0		10.0	10.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		9.0	9.0		9.0	9.0	18.0	18.0	18.0	18.0	18.0	18.0
Pedestrian Calls (#/hr)		5	5		5	5	5	5	5	5	5	5
Act Effct Green (s)	39.4	37.6	37.6	37.8	35.2	35.2	9.8	9.8	9.8	9.8	9.8	9.8
Actuated g/C Ratio	0.62	0.59	0.59	0.59	0.55	0.55	0.15	0.15	0.15	0.15	0.15	0.15
v/c Ratio	0.14	0.62	0.03	0.18	0.36	0.04	0.16	0.03	0.12	0.19	0.00	0.47
Control Delay	6.6	13.9	0.1	8.3	11.4	0.1	24.5	21.8	0.7	24.6	21.0	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.6	13.9	0.1	8.3	11.4	0.1	24.5	21.8	0.7	24.6	21.0	8.0
LOS	A	B	A	A	B	A	C	C	A	C	C	A
Approach Delay		13.3			10.7			10.8			10.9	
Approach LOS		B			B			B			B	
Queue Length 50th (m)	2.2	29.7	0.0	1.2	22.3	0.0	2.9	0.5	0.0	4.2	0.1	0.0
Queue Length 95th (m)	10.9	#137.1	0.0	7.1	53.7	0.0	8.5	2.9	0.0	10.8	1.2	13.0
Internal Link Dist (m)		937.8			528.4			131.8			110.5	
Turn Bay Length (m)	60.0		100.0	60.0		100.0	30.0		25.0	60.0		25.0
Base Capacity (vph)	520	2042	760	219	1803	872	447	500	712	549	751	743
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.62	0.03	0.18	0.36	0.04	0.06	0.01	0.06	0.07	0.00	0.25

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 63.9			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 12.2		Intersection LOS: B	
Intersection Capacity Utilization 63.4%		ICU Level of Service B	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.

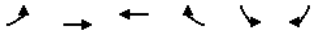
Queue shown is maximum after two cycles.

Splits and Phases: 1: Portico Way/Canyon Walk Dr & Earl Armstrong Rd

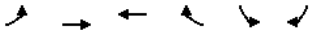


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	1271	19	40	653	32	27	5	42	39	1	186
Future Volume (vph)	73	1271	19	40	653	32	27	5	42	39	1	186
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1767	3466	1201	1342	3275	1479	1405	1253	1597	1733	1879	1581
Flt Permitted	0.38	1.00	1.00	0.16	1.00	1.00	0.76	1.00	1.00	0.75	1.00	1.00
Satd. Flow (perm)	698	3466	1201	219	3275	1479	1120	1253	1597	1376	1879	1581
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	73	1271	19	40	653	32	27	5	42	39	1	186
RTOR Reduction (vph)	0	0	8	0	0	15	0	0	36	0	0	159
Lane Group Flow (vph)	73	1271	11	40	653	17	27	5	6	39	1	27
Heavy Vehicles (%)	1%	3%	33%	33%	9%	8%	27%	50%	0%	3%	0%	1%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	40.7	37.7	37.7	38.3	36.5	36.5	9.8	9.8	9.8	9.8	9.8	9.8
Effective Green, g (s)	40.7	37.7	37.7	38.3	36.5	36.5	9.8	9.8	9.8	9.8	9.8	9.8
Actuated g/C Ratio	0.60	0.56	0.56	0.57	0.54	0.54	0.14	0.14	0.14	0.14	0.14	0.14
Clearance Time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	467	1932	669	153	1768	798	162	181	231	199	272	229
v/s Ratio Prot	c0.01	c0.37		0.01	0.20			0.00			0.00	
v/s Ratio Perm	0.09		0.01	0.14		0.01	0.02		0.00	c0.03		0.02
v/c Ratio	0.16	0.66	0.02	0.26	0.37	0.02	0.17	0.03	0.03	0.20	0.00	0.12
Uniform Delay, d1	5.6	10.4	6.7	7.5	8.9	7.2	25.3	24.8	24.8	25.4	24.7	25.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	1.8	0.0	0.9	0.6	0.0	0.5	0.1	0.0	0.5	0.0	0.2
Delay (s)	5.8	12.2	6.7	8.4	9.5	7.3	25.8	24.9	24.9	25.9	24.7	25.4
Level of Service	A	B	A	A	A	A	C	C	C	C	C	C
Approach Delay (s)		11.8			9.4			25.2			25.5	
Approach LOS		B			A			C			C	

Intersection Summary				
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.55			
Actuated Cycle Length (s)	67.6	Sum of lost time (s)	18.3	
Intersection Capacity Utilization	63.4%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø8
Lane Configurations							
Traffic Volume (vph)	103	1250	652	58	57	74	
Future Volume (vph)	103	1250	652	58	57	74	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (m)	160.0			120.0	60.0	30.0	
Storage Lanes	1			1	1	0	
Taper Length (m)	2.5				2.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1750	3466	3305	1536	1785	1551	
Flt Permitted	0.363				0.950		
Satd. Flow (perm)	669	3466	3305	1536	1785	1551	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				58		74	
Link Speed (k/h)		60	60		50		
Link Distance (m)		552.4	266.4		176.5		
Travel Time (s)		33.1	16.0		12.7		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehicles (%)	2%	3%	8%	4%	0%	3%	
Adj. Flow (vph)	103	1250	652	58	57	74	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	103	1250	652	58	57	74	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(m)		7.0	7.0		3.5		
Link Offset(m)		0.0	0.0		0.0		
Crosswalk Width(m)		1.6	1.6		1.6		
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	
Turning Speed (k/h)	24			14	24	14	
Number of Detectors	1	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (m)	6.1	30.5	30.5	6.1	6.1	6.1	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8	1.8	6.1	6.1	6.1	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7	28.7				
Detector 2 Size(m)		1.8	1.8				
Detector 2 Type		Cl+Ex	Cl+Ex				
Detector 2 Channel							
Detector 2 Extend (s)		0.0	0.0				
Turn Type	Perm	NA	NA	Perm	Perm	Perm	
Protected Phases		2	6				8



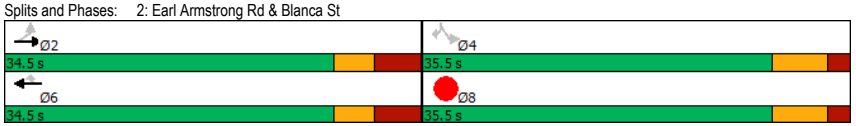
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø8
Permitted Phases	2			6	4	4	
Detector Phase	2	2	6	6	4	4	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	31.3	31.3	31.3	31.3	35.5	35.5	35.5
Total Split (s)	34.5	34.5	34.5	34.5	35.5	35.5	35.5
Total Split (%)	49.3%	49.3%	49.3%	49.3%	50.7%	50.7%	51%
Maximum Green (s)	27.2	27.2	27.2	27.2	28.9	28.9	28.9
Yellow Time (s)	3.3	3.3	3.3	3.3	4.6	4.6	4.6
All-Red Time (s)	4.0	4.0	4.0	4.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.3	7.3	7.3	7.3	6.6	6.6	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	17.0	17.0	17.0	17.0	8.0	8.0	8.0
Pedestrian Calls (#/hr)	5	5	5	5	5	5	5
Act Effct Green (s)	27.2	27.2	27.2	27.2	28.9	28.9	
Actuated g/C Ratio	0.39	0.39	0.39	0.39	0.41	0.41	
v/c Ratio	0.40	0.93	0.51	0.09	0.08	0.11	
Control Delay	21.3	34.5	18.0	4.8	12.9	4.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	21.3	34.5	18.0	4.8	12.9	4.1	
LOS	C	C	B	A	B	A	
Approach Delay		33.5	16.9		7.9		
Approach LOS		C	B		A		
Queue Length 50th (m)	9.5	80.0	33.2	0.0	4.4	0.0	
Queue Length 95th (m)	22.4	#121.3	47.4	6.1	10.5	6.6	
Internal Link Dist (m)		528.4	242.4		152.5		
Turn Bay Length (m)	160.0			120.0	60.0	30.0	
Base Capacity (vph)	259	1346	1284	632	736	683	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.40	0.93	0.51	0.09	0.08	0.11	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 26.6		Intersection LOS: C	
Intersection Capacity Utilization 50.3%		ICU Level of Service A	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Earl Armstrong Rd & Blanca St



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	103	1250	652	58	57	74
Future Volume (vph)	103	1250	652	58	57	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3	7.3	6.6	6.6
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1750	3466	3305	1536	1785	1551
Flt Permitted	0.36	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	668	3466	3305	1536	1785	1551
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	103	1250	652	58	57	74
RTOR Reduction (vph)	0	0	0	35	0	43
Lane Group Flow (vph)	103	1250	652	23	57	31
Heavy Vehicles (%)	2%	3%	8%	4%	0%	3%
Turn Type	Perm	NA	NA	Perm	Perm	Perm
Protected Phases		2	6			
Permitted Phases	2			6	4	4
Actuated Green, G (s)	27.2	27.2	27.2	27.2	28.9	28.9
Effective Green, g (s)	27.2	27.2	27.2	27.2	28.9	28.9
Actuated g/C Ratio	0.39	0.39	0.39	0.39	0.41	0.41
Clearance Time (s)	7.3	7.3	7.3	7.3	6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	259	1346	1284	596	736	640
v/s Ratio Prot		c0.36	0.20			
v/s Ratio Perm	0.15			0.01	c0.03	0.02
v/c Ratio	0.40	0.93	0.51	0.04	0.08	0.05
Uniform Delay, d1	15.5	20.5	16.3	13.3	12.5	12.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	11.2	0.3	0.0	0.2	0.1
Delay (s)	16.5	31.7	16.6	13.3	12.7	12.4
Level of Service	B	C	B	B	B	B
Approach Delay (s)		30.6	16.3		12.5	
Approach LOS		C	B		B	

Intersection Summary			
HCM 2000 Control Delay	24.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	13.9
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	807	371	130	1	220	81	157	223	1	25	91	333
Future Volume (vph)	807	371	130	1	220	81	157	223	1	25	91	333
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	140.0		60.0	120.0		200.0	120.0		100.0	120.0		100.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3395	3500	1521	1731	3433	1401	3148	3500	1597	3092	3466	1426
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3395	3500	1521	1731	3433	1401	3148	3500	1597	3092	3466	1426
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			163			227			227			333
Link Speed (k/h)		60			80			80			80	
Link Distance (m)		266.4			840.4			568.0			625.0	
Travel Time (s)		16.0			37.8			25.6			28.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	2%	5%	100%	4%	14%	10%	2%	0%	12%	3%	12%
Adj. Flow (vph)	807	371	130	1	220	81	157	223	1	25	91	333
Shared Lane Traffic (%)												
Lane Group Flow (vph)	807	371	130	1	220	81	157	223	1	25	91	333
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			7.0			7.0			7.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	12.1	36.9	36.9	12.1	36.9	36.9	11.9	36.9	36.9	11.9	36.9	36.9
Total Split (s)	32.0	58.0	58.0	12.1	38.1	38.1	13.0	38.0	38.0	11.9	36.9	36.9
Total Split (%)	26.7%	48.3%	48.3%	10.1%	31.8%	31.8%	10.8%	31.7%	31.7%	9.9%	30.8%	30.8%
Maximum Green (s)	24.9	51.1	51.1	5.0	31.2	31.2	6.1	31.1	31.1	5.0	30.0	30.0
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.5	2.3	2.3	2.5	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	Min	Min	None	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		5	5		5	5		5	5		5	5
Act Effct Green (s)	25.0	61.4	61.4	5.0	31.4	31.4	6.1	22.5	22.5	5.0	13.9	13.9
Actuated g/C Ratio	0.24	0.59	0.59	0.05	0.30	0.30	0.06	0.22	0.22	0.05	0.13	0.13
v/c Ratio	0.99	0.18	0.14	0.01	0.21	0.14	0.85	0.30	0.00	0.17	0.20	0.70
Control Delay	70.3	12.2	1.8	52.0	29.2	0.5	86.3	36.4	0.0	53.0	40.1	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.3	12.2	1.8	52.0	29.2	0.5	86.3	36.4	0.0	53.0	40.1	12.5
LOS	E	B	A	D	C	A	F	D	A	D	D	B
Approach Delay		47.0			21.6			56.8			20.4	
Approach LOS		D			C			E			C	
Queue Length 50th (m)	79.5	14.2	0.0	0.1	16.4	0.0	15.8	18.7	0.0	2.4	8.7	0.0
Queue Length 95th (m)	#152.7	39.8	6.5	1.0	32.3	0.0	#41.1	32.6	0.0	7.6	15.5	23.3
Internal Link Dist (m)		242.4			816.4			544.0			601.0	
Turn Bay Length (m)	140.0		60.0	120.0		200.0	120.0		100.0	120.0		100.0
Base Capacity (vph)	814	2059	962	83	1031	579	185	1048	637	148	1001	648
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.18	0.14	0.01	0.21	0.14	0.85	0.21	0.00	0.17	0.09	0.51

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 104.4			
Natural Cycle: 120			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay: 40.5		Intersection LOS: D	
Intersection Capacity Utilization 57.5%		ICU Level of Service B	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Limebank Rd & Earl Armstrong Rd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	807	371	130	1	220	81	157	223	1	25	91	333
Future Volume (vph)	807	371	130	1	220	81	157	223	1	25	91	333
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3395	3500	1521	1731	3433	1401	3148	3500	1597	3092	3466	1426
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3395	3500	1521	1731	3433	1401	3148	3500	1597	3092	3466	1426
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	807	371	130	1	220	81	157	223	1	25	91	333
RTOR Reduction (vph)	0	0	60	0	0	55	0	0	1	0	0	280
Lane Group Flow (vph)	807	371	70	1	220	26	157	223	0	25	91	53
Heavy Vehicles (%)	2%	2%	5%	100%	4%	14%	10%	2%	0%	12%	3%	12%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	25.0	61.4	61.4	0.9	37.3	37.3	6.1	22.5	22.5	1.9	18.3	18.3
Effective Green, g (s)	25.0	61.4	61.4	0.9	37.3	37.3	6.1	22.5	22.5	1.9	18.3	18.3
Actuated g/C Ratio	0.22	0.54	0.54	0.01	0.33	0.33	0.05	0.20	0.20	0.02	0.16	0.16
Clearance Time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	741	1876	815	13	1118	456	167	687	313	51	553	227
v/s Ratio Prot	c0.24	c0.11		0.00	0.06		c0.05	c0.06		0.01	0.03	
v/s Ratio Perm			0.05			0.02			0.00			0.04
v/c Ratio	1.09	0.20	0.09	0.08	0.20	0.06	0.94	0.32	0.00	0.49	0.16	0.23
Uniform Delay, d1	44.8	13.8	12.9	56.4	27.8	26.5	54.0	39.5	37.0	55.8	41.5	42.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	59.9	0.2	0.2	2.5	0.4	0.2	52.1	0.3	0.0	7.2	0.1	0.5
Delay (s)	104.7	14.0	13.1	58.9	28.2	26.8	106.1	39.8	37.0	63.1	41.6	42.5
Level of Service	F	B	B	E	C	C	F	D	D	E	D	D
Approach Delay (s)		69.9			27.9			67.1			43.5	
Approach LOS		E			C			E			D	

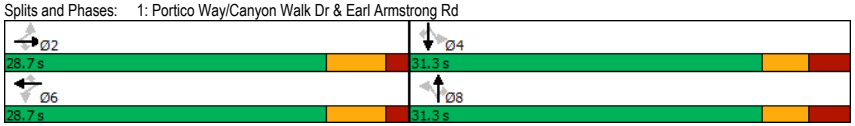
Intersection Summary				
HCM 2000 Control Delay	59.4	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.55			
Actuated Cycle Length (s)	114.5	Sum of lost time (s)	27.8	
Intersection Capacity Utilization	57.5%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	487	42	64	482	33	43	5	67	30	4	126
Future Volume (vph)	180	487	42	64	482	33	43	5	67	30	4	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0		100.0	60.0		100.0	30.0		25.0	60.0		25.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1750	3535	1597	1785	3535	1597	1785	1879	1597	1785	1879	1566
Flt Permitted	0.477			0.475			0.755			0.754		
Satd. Flow (perm)	879	3535	1597	892	3535	1597	1419	1879	1597	1417	1879	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			60			60			67			126
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		961.8			552.4			155.8			134.5	
Travel Time (s)		57.7			33.1			11.2			9.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	2%
Adj. Flow (vph)	180	487	42	64	482	33	43	5	67	30	4	126
Shared Lane Traffic (%)												
Lane Group Flow (vph)	180	487	42	64	482	33	43	5	67	30	4	126
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			6			8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	2	2	2	6	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.9	24.9	24.9	24.9	24.9	24.9	31.3	31.3	31.3	31.3	31.3	31.3
Total Split (s)	28.7	28.7	28.7	28.7	28.7	28.7	31.3	31.3	31.3	31.3	31.3	31.3
Total Split (%)	47.8%	47.8%	47.8%	47.8%	47.8%	47.8%	52.2%	52.2%	52.2%	52.2%	52.2%	52.2%
Maximum Green (s)	22.8	22.8	22.8	22.8	22.8	22.8	25.0	25.0	25.0	25.0	25.0	25.0
Yellow Time (s)	4.2	4.2	4.2	4.2	4.2	4.2	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.7	1.7	1.7	1.7	1.7	1.7	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max	Max	Max	None	None	None	None	None	None
Walk Time (s)	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	9.0	9.0	9.0	9.0	9.0	9.0	18.0	18.0	18.0	18.0	18.0	18.0
Pedestrian Calls (#/hr)	5	5	5	5	5	5	5	5	5	5	5	5
Act Effct Green (s)	27.9	27.9	27.9	27.9	27.9	27.9	9.3	9.3	9.3	9.3	9.3	9.3
Actuated g/C Ratio	0.61	0.61	0.61	0.61	0.61	0.61	0.20	0.20	0.20	0.20	0.20	0.20
v/c Ratio	0.34	0.23	0.04	0.12	0.22	0.03	0.15	0.01	0.18	0.10	0.01	0.30
Control Delay	11.5	7.5	2.7	9.0	7.5	1.9	14.4	12.2	5.2	13.7	12.2	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.5	7.5	2.7	9.0	7.5	1.9	14.4	12.2	5.2	13.7	12.2	5.2
LOS	B	A	A	A	A	A	B	B	A	B	B	A
Approach Delay		8.2			7.4			9.0			6.9	
Approach LOS		A			A			A			A	
Queue Length 50th (m)	6.1	8.1	0.0	1.9	7.9	0.0	2.7	0.4	0.0	1.9	0.3	0.0
Queue Length 95th (m)	32.5	29.8	3.6	11.8	29.5	2.4	7.6	1.9	5.7	5.9	1.6	7.7
Internal Link Dist (m)		937.8			528.4			131.8			110.5	
Turn Bay Length (m)	60.0		100.0	60.0		100.0	30.0		25.0	60.0		25.0
Base Capacity (vph)	533	2147	993	541	2147	993	786	1041	915	785	1041	924
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.23	0.04	0.12	0.22	0.03	0.05	0.00	0.07	0.04	0.00	0.14

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 46			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.34			
Intersection Signal Delay: 7.8		Intersection LOS: A	
Intersection Capacity Utilization 47.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Portico Way/Canyon Walk Dr & Earl Armstrong Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	487	42	64	482	33	43	5	67	30	4	126
Future Volume (vph)	180	487	42	64	482	33	43	5	67	30	4	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.9	5.9	5.9	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1750	3535	1597	1785	3535	1597	1785	1879	1597	1785	1879	1566
Flt Permitted	0.48	1.00	1.00	0.47	1.00	1.00	0.76	1.00	1.00	0.75	1.00	1.00
Satd. Flow (perm)	878	3535	1597	892	3535	1597	1419	1879	1597	1418	1879	1566
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	180	487	42	64	482	33	43	5	67	30	4	126
RTOR Reduction (vph)	0	0	18	0	0	14	0	0	55	0	0	104
Lane Group Flow (vph)	180	487	24	64	482	19	43	5	12	30	4	22
Heavy Vehicles (%)	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	2%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	26.7	26.7	26.7	26.7	26.7	26.7	8.2	8.2	8.2	8.2	8.2	8.2
Effective Green, g (s)	26.7	26.7	26.7	26.7	26.7	26.7	8.2	8.2	8.2	8.2	8.2	8.2
Actuated g/C Ratio	0.57	0.57	0.57	0.57	0.57	0.57	0.17	0.17	0.17	0.17	0.17	0.17
Clearance Time (s)	5.9	5.9	5.9	5.9	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	497	2003	905	505	2003	905	247	327	278	246	327	272
v/s Ratio Prot		0.14			0.14			0.00			0.00	
v/s Ratio Perm	c0.20		0.01	0.07		0.01	c0.03		0.01	0.02		0.01
v/c Ratio	0.36	0.24	0.03	0.13	0.24	0.02	0.17	0.02	0.04	0.12	0.01	0.08
Uniform Delay, d1	5.6	5.1	4.5	4.8	5.1	4.5	16.6	16.1	16.2	16.4	16.1	16.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.0	0.3	0.1	0.5	0.3	0.0	0.3	0.0	0.1	0.2	0.0	0.1
Delay (s)	7.6	5.4	4.5	5.3	5.4	4.5	16.9	16.1	16.2	16.6	16.1	16.4
Level of Service	A	A	A	A	A	A	B	B	B	B	B	B
Approach Delay (s)		5.9			5.3			16.5			16.5	
Approach LOS		A			A			B			B	

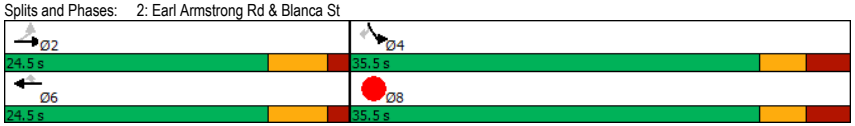
Intersection Summary				
HCM 2000 Control Delay	7.6	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.32			
Actuated Cycle Length (s)	47.1	Sum of lost time (s)	12.2	
Intersection Capacity Utilization	47.4%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø8
Lane Configurations							
Traffic Volume (vph)	112	472	449	41	41	129	
Future Volume (vph)	112	472	449	41	41	129	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (m)	160.0			120.0	60.0	30.0	
Storage Lanes	1			1	1	0	
Taper Length (m)	2.5				2.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1785	3500	3466	1597	1785	1597	
Flt Permitted	0.476				0.950		
Satd. Flow (perm)	894	3500	3466	1597	1785	1597	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				41		129	
Link Speed (k/h)		60	60		50		
Link Distance (m)		552.4	266.4		176.5		
Travel Time (s)		33.1	16.0		12.7		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehicles (%)	0%	2%	3%	0%	0%	0%	
Adj. Flow (vph)	112	472	449	41	41	129	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	112	472	449	41	41	129	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(m)		7.0	7.0		3.5		
Link Offset(m)		0.0	0.0		0.0		
Crosswalk Width(m)		1.6	1.6		1.6		
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	
Turning Speed (k/h)	24			14	24	14	
Number of Detectors	1	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (m)	6.1	30.5	30.5	6.1	6.1	6.1	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8	1.8	6.1	6.1	6.1	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7	28.7				
Detector 2 Size(m)		1.8	1.8				
Detector 2 Type		Cl+Ex	Cl+Ex				
Detector 2 Channel							
Detector 2 Extend (s)		0.0	0.0				
Turn Type	Perm	NA	NA	Perm	Prot	Perm	
Protected Phases		2	6		4		8

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø8
Permitted Phases	2			6		4	
Detector Phase	2	2	6	6	4	4	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.8	21.8	21.8	21.8	35.5	35.5	35.5
Total Split (s)	24.5	24.5	24.5	24.5	35.5	35.5	35.5
Total Split (%)	40.8%	40.8%	40.8%	40.8%	59.2%	59.2%	59%
Maximum Green (s)	18.7	18.7	18.7	18.7	29.0	29.0	29.0
Yellow Time (s)	4.2	4.2	4.2	4.2	3.3	3.3	3.3
All-Red Time (s)	1.6	1.6	1.6	1.6	3.2	3.2	3.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.8	5.8	5.8	5.8	6.5	6.5	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	9.0	9.0	9.0	9.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	5	5	5	5	5	5	5
Act Effct Green (s)	13.5	13.5	13.5	13.5	29.1	29.1	
Actuated g/C Ratio	0.25	0.25	0.25	0.25	0.53	0.53	
v/c Ratio	0.51	0.55	0.53	0.10	0.04	0.14	
Control Delay	26.5	20.4	20.1	6.4	7.7	2.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	26.5	20.4	20.1	6.4	7.7	2.4	
LOS	C	C	C	A	A	A	
Approach Delay		21.6	19.0		3.7		
Approach LOS		C	B		A		
Queue Length 50th (m)	9.6	21.4	20.2	0.0	1.8	0.0	
Queue Length 95th (m)	22.0	32.7	31.2	5.5	6.3	6.7	
Internal Link Dist (m)		528.4	242.4		152.5		
Turn Bay Length (m)	160.0			120.0	60.0	30.0	
Base Capacity (vph)	305	1196	1185	572	946	907	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.37	0.39	0.38	0.07	0.04	0.14	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 54.9			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 18.1		Intersection LOS: B	
Intersection Capacity Utilization 37.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: Earl Armstrong Rd & Blanca St



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	112	472	449	41	41	129
Future Volume (vph)	112	472	449	41	41	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	5.8	5.8	5.8	6.5	6.5
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1785	3500	3466	1597	1785	1597
Flt Permitted	0.48	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	894	3500	3466	1597	1785	1597
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	112	472	449	41	41	129
RTOR Reduction (vph)	0	0	0	31	0	61
Lane Group Flow (vph)	112	472	449	10	41	68
Heavy Vehicles (%)	0%	2%	3%	0%	0%	0%
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2			6		4
Actuated Green, G (s)	13.5	13.5	13.5	13.5	29.1	29.1
Effective Green, g (s)	13.5	13.5	13.5	13.5	29.1	29.1
Actuated g/C Ratio	0.25	0.25	0.25	0.25	0.53	0.53
Clearance Time (s)	5.8	5.8	5.8	5.8	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	219	860	852	392	946	846
v/s Ratio Prot		c0.13	0.13		0.02	
v/s Ratio Perm	0.13			0.01		c0.04
v/c Ratio	0.51	0.55	0.53	0.03	0.04	0.08
Uniform Delay, d1	17.9	18.0	17.9	15.7	6.2	6.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.0	0.7	0.6	0.0	0.1	0.2
Delay (s)	19.9	18.8	18.5	15.7	6.3	6.5
Level of Service	B	B	B	B	A	A
Approach Delay (s)		19.0	18.3		6.5	
Approach LOS		B	B		A	

Intersection Summary				
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	54.9	Sum of lost time (s)	12.3
Intersection Capacity Utilization	37.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	227	207	81	3	149	18	76	110	3	32	128	265
Future Volume (vph)	227	207	81	3	149	18	76	110	3	32	128	265
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	140.0		60.0	120.0		200.0	120.0		100.0	120.0		100.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3429	3466	1536	3463	3433	1507	3267	3500	1201	3463	3500	1597
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3429	3466	1536	3463	3433	1507	3267	3500	1201	3463	3500	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			195			195			195			265
Link Speed (k/h)		60			80			80			80	
Link Distance (m)		266.4			840.4			568.0			625.0	
Travel Time (s)		16.0			37.8			25.6			28.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	3%	4%	0%	4%	6%	6%	2%	33%	0%	2%	0%
Adj. Flow (vph)	227	207	81	3	149	18	76	110	3	32	128	265
Shared Lane Traffic (%)												
Lane Group Flow (vph)	227	207	81	3	149	18	76	110	3	32	128	265
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			7.0			7.0			7.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	

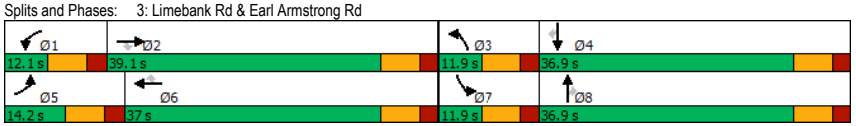
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	12.1	36.9	36.9	12.1	36.9	36.9	11.9	36.9	36.9	11.9	36.9	36.9
Total Split (s)	14.2	39.1	39.1	12.1	37.0	37.0	11.9	36.9	36.9	11.9	36.9	36.9
Total Split (%)	14.2%	39.1%	39.1%	12.1%	37.0%	37.0%	11.9%	36.9%	36.9%	11.9%	36.9%	36.9%
Maximum Green (s)	7.1	32.2	32.2	5.0	30.1	30.1	5.0	30.0	30.0	5.0	30.0	30.0
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.5	2.3	2.3	2.5	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	Min	Min	None	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		5	5		5	5		5	5		5	5
Act Effct Green (s)	7.2	43.0	43.0	5.1	30.5	30.5	5.1	18.3	18.3	5.1	13.4	13.4
Actuated g/C Ratio	0.09	0.53	0.53	0.06	0.37	0.37	0.06	0.22	0.22	0.06	0.16	0.16
v/c Ratio	0.75	0.11	0.09	0.01	0.12	0.03	0.37	0.14	0.01	0.15	0.22	0.55
Control Delay	55.3	13.6	0.2	41.0	19.6	0.1	45.6	26.5	0.0	41.7	30.5	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.3	13.6	0.2	41.0	19.6	0.1	45.6	26.5	0.0	41.7	30.5	8.4
LOS	E	B	A	D	B	A	D	C	A	D	C	A
Approach Delay		29.9			17.9			33.7			17.6	
Approach LOS		C			B			C			B	
Queue Length 50th (m)	17.6	7.2	0.0	0.2	7.5	0.0	5.8	6.5	0.0	2.4	9.4	0.0
Queue Length 95th (m)	#45.2	23.7	0.0	1.7	18.4	0.0	14.7	14.5	0.0	7.8	16.3	17.2
Internal Link Dist (m)		242.4			816.4			544.0			601.0	
Turn Bay Length (m)	140.0		60.0	120.0		200.0	120.0		100.0	120.0		100.0
Base Capacity (vph)	302	1825	901	215	1285	685	203	1305	570	215	1305	761
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.11	0.09	0.01	0.12	0.03	0.37	0.08	0.01	0.15	0.10	0.35

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 81.6			
Natural Cycle: 100			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 24.8		Intersection LOS: C	
Intersection Capacity Utilization 46.1%		ICU Level of Service A	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Limebank Rd & Earl Armstrong Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	227	207	81	3	149	18	76	110	3	32	128	265
Future Volume (vph)	227	207	81	3	149	18	76	110	3	32	128	265
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3429	3466	1536	3463	3433	1507	3267	3500	1201	3463	3500	1597
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3429	3466	1536	3463	3433	1507	3267	3500	1201	3463	3500	1597
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	227	207	81	3	149	18	76	110	3	32	128	265
RTOR Reduction (vph)	0	0	43	0	0	11	0	0	2	0	0	218
Lane Group Flow (vph)	227	207	38	3	149	7	76	110	1	32	128	47
Heavy Vehicles (%)	1%	3%	4%	0%	4%	6%	6%	2%	33%	0%	2%	0%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	7.2	43.0	43.0	0.8	36.6	36.6	3.9	18.3	18.3	1.8	16.2	16.2
Effective Green, g (s)	7.2	43.0	43.0	0.8	36.6	36.6	3.9	18.3	18.3	1.8	16.2	16.2
Actuated g/C Ratio	0.08	0.47	0.47	0.01	0.40	0.40	0.04	0.20	0.20	0.02	0.18	0.18
Clearance Time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	269	1625	720	30	1370	601	138	698	239	67	618	282
v/s Ratio Prot	c0.07	c0.06		0.00	0.04		c0.02	0.03		0.01	c0.04	
v/s Ratio Perm			0.02			0.00			0.00			0.03
v/c Ratio	0.84	0.13	0.05	0.10	0.11	0.01	0.55	0.16	0.00	0.48	0.21	0.17
Uniform Delay, d1	41.7	13.8	13.3	45.1	17.3	16.6	43.0	30.3	29.4	44.5	32.3	32.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	20.8	0.2	0.1	1.5	0.2	0.0	4.7	0.1	0.0	5.3	0.2	0.3
Delay (s)	62.5	13.9	13.4	46.6	17.5	16.7	47.7	30.4	29.4	49.8	32.4	32.3
Level of Service	E	B	B	D	B	B	D	C	C	D	C	C
Approach Delay (s)		35.2			17.9			37.4			33.7	
Approach LOS		D			B			D			C	

Intersection Summary				
HCM 2000 Control Delay	32.8	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.24			
Actuated Cycle Length (s)	91.7	Sum of lost time (s)	27.8	
Intersection Capacity Utilization	46.1%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

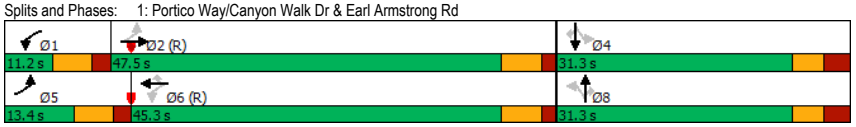
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	201	793	33	51	1429	55	29	1	51	24	2	128
Future Volume (vph)	201	793	33	51	1429	55	29	1	51	24	2	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0		100.0	60.0		100.0	30.0		25.0	60.0		25.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1785	3433	1479	1785	3535	1566	1785	1879	1597	1785	1879	1566
Flt Permitted	0.096			0.352			0.757			0.757		
Satd. Flow (perm)	180	3433	1479	661	3535	1566	1422	1879	1597	1422	1879	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			114			114			109			128
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		961.8			552.4			155.8			134.5	
Travel Time (s)		57.7			33.1			11.2			9.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	4%	8%	0%	1%	2%	0%	0%	0%	0%	0%	2%
Adj. Flow (vph)	201	793	33	51	1429	55	29	1	51	24	2	128
Shared Lane Traffic (%)												
Lane Group Flow (vph)	201	793	33	51	1429	55	29	1	51	24	2	128
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.1	24.9	24.9	11.1	24.9	24.9	31.3	31.3	31.3	31.3	31.3	31.3
Total Split (s)	13.4	47.5	47.5	11.2	45.3	45.3	31.3	31.3	31.3	31.3	31.3	31.3
Total Split (%)	14.9%	52.8%	52.8%	12.4%	50.3%	50.3%	34.8%	34.8%	34.8%	34.8%	34.8%	34.8%
Maximum Green (s)	7.3	41.6	41.6	5.1	39.4	39.4	25.0	25.0	25.0	25.0	25.0	25.0
Yellow Time (s)	4.2	4.2	4.2	4.2	4.2	4.2	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.9	1.7	1.7	1.9	1.7	1.7	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		10.0	10.0		10.0	10.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		9.0	9.0		9.0	9.0	18.0	18.0	18.0	18.0	18.0	18.0
Pedestrian Calls (#/hr)		5	5		5	5	5	5	5	5	5	5
Act Effct Green (s)	66.2	60.2	60.2	57.0	51.5	51.5	10.4	10.4	10.4	10.4	10.4	10.4
Actuated g/C Ratio	0.74	0.67	0.67	0.63	0.57	0.57	0.12	0.12	0.12	0.12	0.12	0.12
v/c Ratio	0.66	0.35	0.03	0.10	0.71	0.06	0.18	0.00	0.18	0.15	0.01	0.44
Control Delay	24.9	9.1	0.1	5.9	18.1	0.2	34.6	29.0	1.4	33.8	29.5	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.9	9.1	0.1	5.9	18.1	0.2	34.6	29.0	1.4	33.8	29.5	10.5
LOS	C	A	A	A	B	A	C	C	A	C	C	B
Approach Delay		11.9			17.1			13.6			14.4	
Approach LOS		B			B			B			B	
Queue Length 50th (m)	10.0	29.2	0.0	1.5	81.0	0.0	4.8	0.2	0.0	4.0	0.3	0.0
Queue Length 95th (m)	#57.7	64.3	0.0	8.0	#165.6	0.5	10.2	1.3	0.5	8.9	1.9	12.3
Internal Link Dist (m)		937.8			528.4			131.8			110.5	
Turn Bay Length (m)	60.0		100.0	60.0		100.0	30.0		25.0	60.0		25.0
Base Capacity (vph)	306	2296	1027	490	2022	944	395	521	522	395	521	527
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.35	0.03	0.10	0.71	0.06	0.07	0.00	0.10	0.06	0.00	0.24

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 14.9		Intersection LOS: B	
Intersection Capacity Utilization 74.2%		ICU Level of Service D	
Analysis Period (min) 15			

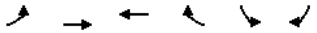
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Portico Way/Canyon Walk Dr & Earl Armstrong Rd

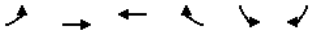


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	201	793	33	51	1429	55	29	1	51	24	2	128
Future Volume (vph)	201	793	33	51	1429	55	29	1	51	24	2	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1785	3433	1479	1785	3535	1566	1785	1879	1597	1785	1879	1566
Flt Permitted	0.10	1.00	1.00	0.35	1.00	1.00	0.76	1.00	1.00	0.76	1.00	1.00
Satd. Flow (perm)	181	3433	1479	661	3535	1566	1421	1879	1597	1423	1879	1566
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	201	793	33	51	1429	55	29	1	51	24	2	128
RTOR Reduction (vph)	0	0	12	0	0	24	0	0	45	0	0	113
Lane Group Flow (vph)	201	793	21	51	1429	31	29	1	6	24	2	15
Heavy Vehicles (%)	0%	4%	8%	0%	1%	2%	0%	0%	0%	0%	0%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	67.4	57.8	57.8	55.0	51.5	51.5	10.4	10.4	10.4	10.4	10.4	10.4
Effective Green, g (s)	67.4	57.8	57.8	55.0	51.5	51.5	10.4	10.4	10.4	10.4	10.4	10.4
Actuated g/C Ratio	0.75	0.64	0.64	0.61	0.57	0.57	0.12	0.12	0.12	0.12	0.12	0.12
Clearance Time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	310	2204	949	447	2022	896	164	217	184	164	217	180
v/s Ratio Prot	c0.07	0.23		0.00	c0.40			0.00			0.00	
v/s Ratio Perm	0.41		0.01	0.07		0.02	c0.02		0.00	0.02		0.01
v/c Ratio	0.65	0.36	0.02	0.11	0.71	0.04	0.18	0.00	0.03	0.15	0.01	0.08
Uniform Delay, d1	14.7	7.5	5.8	7.0	13.8	8.4	35.9	35.2	35.3	35.8	35.2	35.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.6	0.5	0.0	0.1	2.1	0.1	0.5	0.0	0.1	0.4	0.0	0.2
Delay (s)	19.3	7.9	5.9	7.1	15.9	8.5	36.5	35.2	35.4	36.2	35.3	35.7
Level of Service	B	A	A	A	B	A	D	D	D	D	D	D
Approach Delay (s)		10.1			15.4			35.8			35.8	
Approach LOS		B			B			D			D	

Intersection Summary				
HCM 2000 Control Delay	15.2	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.62			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.3	
Intersection Capacity Utilization	74.2%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø8
Lane Configurations							
Traffic Volume (vph)	76	793	1435	56	28	100	
Future Volume (vph)	76	793	1435	56	28	100	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (m)	160.0			120.0	60.0	30.0	
Storage Lanes	1			1	1	0	
Taper Length (m)	2.5				2.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1785	3433	3500	1597	1785	1597	
Flt Permitted	0.156				0.950		
Satd. Flow (perm)	293	3433	3500	1597	1785	1597	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				56		26	
Link Speed (k/h)		60	60		50		
Link Distance (m)		552.4	266.4		176.5		
Travel Time (s)		33.1	16.0		12.7		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehicles (%)	0%	4%	2%	0%	0%	0%	
Adj. Flow (vph)	76	793	1435	56	28	100	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	76	793	1435	56	28	100	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(m)		7.0	7.0		3.5		
Link Offset(m)		0.0	0.0		0.0		
Crosswalk Width(m)		1.6	1.6		1.6		
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	
Turning Speed (k/h)	24			14	24	14	
Number of Detectors	1	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (m)	6.1	30.5	30.5	6.1	6.1	6.1	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8	1.8	6.1	6.1	6.1	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7	28.7				
Detector 2 Size(m)		1.8	1.8				
Detector 2 Type		Cl+Ex	Cl+Ex				
Detector 2 Channel							
Detector 2 Extend (s)		0.0	0.0				
Turn Type	Perm	NA	NA	Perm	Perm	Perm	
Protected Phases		2	6				8



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø8
Permitted Phases	2			6	4	4	
Detector Phase	2	2	6	6	4	4	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	31.3	31.3	31.3	31.3	35.5	35.5	35.5
Total Split (s)	54.4	54.4	54.4	54.4	35.6	35.6	35.6
Total Split (%)	60.4%	60.4%	60.4%	60.4%	39.6%	39.6%	40%
Maximum Green (s)	47.1	47.1	47.1	47.1	29.0	29.0	29.0
Yellow Time (s)	3.3	3.3	3.3	3.3	4.6	4.6	4.6
All-Red Time (s)	4.0	4.0	4.0	4.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.3	7.3	7.3	7.3	6.6	6.6	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	17.0	17.0	17.0	17.0	8.0	8.0	8.0
Pedestrian Calls (#/hr)	5	5	5	5	5	5	5
Act Effct Green (s)	55.9	55.9	55.9	55.9	9.4	9.4	
Actuated g/C Ratio	0.74	0.74	0.74	0.74	0.13	0.13	
v/c Ratio	0.35	0.31	0.55	0.05	0.12	0.45	
Control Delay	12.1	5.1	7.2	1.8	28.4	28.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	12.1	5.1	7.2	1.8	28.4	28.9	
LOS	B	A	A	A	C	C	
Approach Delay		5.7	7.0		28.8		
Approach LOS		A	A		C		
Queue Length 50th (m)	3.6	19.2	45.5	0.0	3.6	9.9	
Queue Length 95th (m)	16.6	36.0	82.1	3.6	9.6	21.6	
Internal Link Dist (m)		528.4	242.4		152.5		
Turn Bay Length (m)	160.0			120.0	60.0	30.0	
Base Capacity (vph)	218	2555	2605	1203	692	635	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.35	0.31	0.55	0.05	0.04	0.16	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 75.1			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 7.7		Intersection LOS: A	
Intersection Capacity Utilization 65.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Earl Armstrong Rd & Blanca St

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	76	793	1435	56	28	100
Future Volume (vph)	76	793	1435	56	28	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3	7.3	6.6	6.6
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1785	3433	3500	1597	1785	1597
Flt Permitted	0.16	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	292	3433	3500	1597	1785	1597
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	76	793	1435	56	28	100
RTOR Reduction (vph)	0	0	0	16	0	23
Lane Group Flow (vph)	76	793	1435	40	28	77
Heavy Vehicles (%)	0%	4%	2%	0%	0%	0%
Turn Type	Perm	NA	NA	Perm	Perm	Perm
Protected Phases		2	6			
Permitted Phases	2			6	4	4
Actuated Green, G (s)	54.3	54.3	54.3	54.3	8.2	8.2
Effective Green, g (s)	54.3	54.3	54.3	54.3	8.2	8.2
Actuated g/C Ratio	0.71	0.71	0.71	0.71	0.11	0.11
Clearance Time (s)	7.3	7.3	7.3	7.3	6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	207	2439	2487	1135	191	171
v/s Ratio Prot		0.23	c0.41			
v/s Ratio Perm	0.26			0.02	0.02	c0.05
v/c Ratio	0.37	0.33	0.58	0.04	0.15	0.45
Uniform Delay, d1	4.3	4.2	5.4	3.3	30.9	32.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.0	0.4	1.0	0.1	0.4	1.9
Delay (s)	9.3	4.5	6.4	3.3	31.3	33.9
Level of Service	A	A	A	A	C	C
Approach Delay (s)		4.9	6.3		33.3	
Approach LOS		A	A		C	

Intersection Summary				
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	76.4	Sum of lost time (s)	13.9
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	351	252	216	2	519	24	137	109	1	15	203	834
Future Volume (vph)	351	252	216	2	519	24	137	109	1	15	203	834
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	140.0		60.0	120.0		200.0	120.0		100.0	120.0		100.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3236	3466	1581	3463	3570	1536	3429	3500	1597	3236	3500	1581
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3236	3466	1581	3463	3570	1536	3429	3500	1597	3236	3500	1581
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			216			210			210			226
Link Speed (k/h)		60			80			80			80	
Link Distance (m)		266.4			840.4			568.0			625.0	
Travel Time (s)		16.0			37.8			25.6			28.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	7%	3%	1%	0%	0%	4%	1%	2%	0%	7%	2%	1%
Adj. Flow (vph)	351	252	216	2	519	24	137	109	1	15	203	834
Shared Lane Traffic (%)												
Lane Group Flow (vph)	351	252	216	2	519	24	137	109	1	15	203	834
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			7.0			7.0			7.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	12.1	36.9	36.9	12.1	36.9	36.9	11.9	36.9	36.9	11.9	36.9	36.9
Total Split (s)	21.4	47.1	47.1	12.1	37.8	37.8	12.8	58.9	58.9	11.9	58.0	58.0
Total Split (%)	16.5%	36.2%	36.2%	9.3%	29.1%	29.1%	9.8%	45.3%	45.3%	9.2%	44.6%	44.6%
Maximum Green (s)	14.3	40.2	40.2	5.0	30.9	30.9	5.9	52.0	52.0	5.0	51.1	51.1
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.5	2.3	2.3	2.5	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	Min	Min	None	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		5	5		5	5		5	5		5	5
Act Effct Green (s)	14.3	49.9	49.9	5.0	30.9	30.9	5.9	59.1	59.1	5.0	51.1	51.1
Actuated g/C Ratio	0.11	0.38	0.38	0.04	0.24	0.24	0.05	0.45	0.45	0.04	0.39	0.39
v/c Ratio	0.99	0.19	0.29	0.02	0.61	0.05	0.88	0.07	0.00	0.12	0.15	1.10
Control Delay	102.5	28.0	5.0	60.5	47.8	0.2	108.1	21.6	0.0	62.7	25.8	91.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	102.5	28.0	5.0	60.5	47.8	0.2	108.1	21.6	0.0	62.7	25.8	91.5
LOS	F	C	A	E	D	A	F	C	A	E	C	F
Approach Delay		53.9			45.8			69.5			78.4	
Approach LOS		D			D			E			E	
Queue Length 50th (m)	47.0	21.6	0.0	0.2	62.8	0.0	18.3	7.5	0.0	1.9	17.4	~205.0
Queue Length 95th (m)	#77.9	36.2	17.5	1.7	81.3	0.0	#37.3	15.1	0.0	5.7	25.9	#281.7
Internal Link Dist (m)		242.4			816.4			544.0			601.0	
Turn Bay Length (m)	140.0		60.0	120.0		200.0	120.0		100.0	120.0		100.0
Base Capacity (vph)	355	1329	740	133	848	525	155	1592	840	124	1375	758
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.19	0.29	0.02	0.61	0.05	0.88	0.07	0.00	0.12	0.15	1.10

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Natural Cycle: 130			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.10			
Intersection Signal Delay: 63.4		Intersection LOS: E	
Intersection Capacity Utilization 87.4%		ICU Level of Service E	
Analysis Period (min) 15			

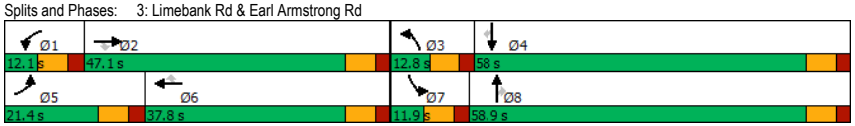
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Limebank Rd & Earl Armstrong Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	351	252	216	2	519	24	137	109	1	15	203	834
Future Volume (vph)	351	252	216	2	519	24	137	109	1	15	203	834
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3236	3466	1581	3463	3570	1536	3429	3500	1597	3236	3500	1581
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3236	3466	1581	3463	3570	1536	3429	3500	1597	3236	3500	1581
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	351	252	216	2	519	24	137	109	1	15	203	834
RTOR Reduction (vph)	0	0	139	0	0	18	0	0	1	0	0	137
Lane Group Flow (vph)	351	252	77	2	519	6	137	109	0	15	203	697
Heavy Vehicles (%)	7%	3%	1%	0%	0%	4%	1%	2%	0%	7%	2%	1%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	14.3	49.9	49.9	1.0	36.6	36.6	5.9	59.1	59.1	2.0	55.2	55.2
Effective Green, g (s)	14.3	49.9	49.9	1.0	36.6	36.6	5.9	59.1	59.1	2.0	55.2	55.2
Actuated g/C Ratio	0.10	0.36	0.36	0.01	0.26	0.26	0.04	0.42	0.42	0.01	0.39	0.39
Clearance Time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	331	1237	564	24	934	402	144	1479	675	46	1381	624
v/s Ratio Prot	c0.11	0.07		0.00	c0.15		c0.04	c0.03		0.00	0.06	
v/s Ratio Perm			0.05			0.00			0.00			c0.44
v/c Ratio	1.06	0.20	0.14	0.08	0.56	0.02	0.95	0.07	0.00	0.33	0.15	1.12
Uniform Delay, d1	62.8	31.2	30.4	68.9	44.6	38.2	66.8	24.0	23.3	68.2	27.2	42.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	66.3	0.4	0.5	1.5	2.4	0.1	60.1	0.0	0.0	4.1	0.0	72.8
Delay (s)	129.1	31.5	30.9	70.4	47.0	38.3	126.9	24.1	23.3	72.3	27.2	115.1
Level of Service	F	C	C	E	D	D	F	C	C	E	C	F
Approach Delay (s)		73.2			46.7			81.1			97.5	
Approach LOS		E			D			F			F	

Intersection Summary				
HCM 2000 Control Delay	78.1	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.92			
Actuated Cycle Length (s)	139.8	Sum of lost time (s)	27.8	
Intersection Capacity Utilization	87.4%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	206	813	13	51	1465	56	29	1	51	25	2	132
Future Volume (vph)	206	813	13	51	1465	56	29	1	51	25	2	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0		100.0	60.0		100.0	30.0		25.0	60.0		25.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1785	3433	1479	1785	3535	1566	1785	1879	1597	1785	1879	1566
Flt Permitted	0.089			0.345			0.757			0.757		
Satd. Flow (perm)	167	3433	1479	648	3535	1566	1422	1879	1597	1422	1879	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			114			114			109			132
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		961.8			552.4			155.8			134.5	
Travel Time (s)		57.7			33.1			11.2			9.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	4%	8%	0%	1%	2%	0%	0%	0%	0%	0%	2%
Adj. Flow (vph)	206	813	13	51	1465	56	29	1	51	25	2	132
Shared Lane Traffic (%)												
Lane Group Flow (vph)	206	813	13	51	1465	56	29	1	51	25	2	132
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	

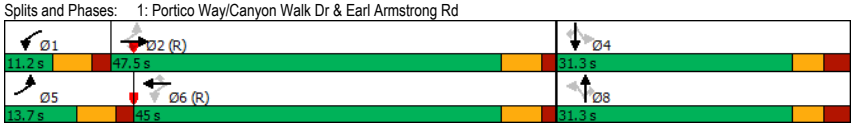
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.1	24.9	24.9	11.1	24.9	24.9	31.3	31.3	31.3	31.3	31.3	31.3
Total Split (s)	13.7	47.5	47.5	11.2	45.0	45.0	31.3	31.3	31.3	31.3	31.3	31.3
Total Split (%)	15.2%	52.8%	52.8%	12.4%	50.0%	50.0%	34.8%	34.8%	34.8%	34.8%	34.8%	34.8%
Maximum Green (s)	7.6	41.6	41.6	5.1	39.1	39.1	25.0	25.0	25.0	25.0	25.0	25.0
Yellow Time (s)	4.2	4.2	4.2	4.2	4.2	4.2	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.9	1.7	1.7	1.9	1.7	1.7	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		10.0	10.0		10.0	10.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		9.0	9.0		9.0	9.0	18.0	18.0	18.0	18.0	18.0	18.0
Pedestrian Calls (#/hr)		5	5		5	5	5	5	5	5	5	5
Act Effct Green (s)	66.3	60.2	60.2	56.9	51.3	51.3	10.4	10.4	10.4	10.4	10.4	10.4
Actuated g/C Ratio	0.74	0.67	0.67	0.63	0.57	0.57	0.12	0.12	0.12	0.12	0.12	0.12
v/c Ratio	0.68	0.35	0.01	0.11	0.73	0.06	0.18	0.00	0.18	0.15	0.01	0.44
Control Delay	27.9	9.2	0.0	5.9	18.8	0.3	34.6	29.0	1.4	33.9	29.5	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.9	9.2	0.0	5.9	18.8	0.3	34.6	29.0	1.4	33.9	29.5	10.5
LOS	C	A	A	A	B	A	C	C	A	C	C	B
Approach Delay		12.8			17.7			13.6			14.4	
Approach LOS		B			B			B			B	
Queue Length 50th (m)	12.6	30.2	0.0	1.5	85.2	0.0	4.8	0.2	0.0	4.1	0.3	0.0
Queue Length 95th (m)	#61.1	66.4	0.0	8.0	#173.8	0.7	10.2	1.3	0.5	9.0	1.9	12.6
Internal Link Dist (m)		937.8			528.4			131.8			110.5	
Turn Bay Length (m)	60.0		100.0	60.0		100.0	30.0		25.0	60.0		25.0
Base Capacity (vph)	301	2296	1027	482	2016	942	395	521	522	395	521	530
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.35	0.01	0.11	0.73	0.06	0.07	0.00	0.10	0.06	0.00	0.25

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 15.7 Intersection LOS: B
Intersection Capacity Utilization 75.4% ICU Level of Service D
Analysis Period (min) 15

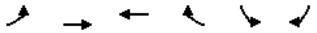
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Portico Way/Canyon Walk Dr & Earl Armstrong Rd

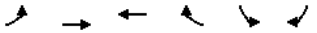


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	206	813	13	51	1465	56	29	1	51	25	2	132
Future Volume (vph)	206	813	13	51	1465	56	29	1	51	25	2	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1785	3433	1479	1785	3535	1566	1785	1879	1597	1785	1879	1566
Flt Permitted	0.09	1.00	1.00	0.34	1.00	1.00	0.76	1.00	1.00	0.76	1.00	1.00
Satd. Flow (perm)	167	3433	1479	648	3535	1566	1421	1879	1597	1423	1879	1566
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	206	813	13	51	1465	56	29	1	51	25	2	132
RTOR Reduction (vph)	0	0	5	0	0	24	0	0	45	0	0	117
Lane Group Flow (vph)	206	813	8	51	1465	32	29	1	6	25	2	15
Heavy Vehicles (%)	0%	4%	8%	0%	1%	2%	0%	0%	0%	0%	0%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	67.4	57.8	57.8	54.9	51.4	51.4	10.4	10.4	10.4	10.4	10.4	10.4
Effective Green, g (s)	67.4	57.8	57.8	54.9	51.4	51.4	10.4	10.4	10.4	10.4	10.4	10.4
Actuated g/C Ratio	0.75	0.64	0.64	0.61	0.57	0.57	0.12	0.12	0.12	0.12	0.12	0.12
Clearance Time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	303	2204	949	439	2018	894	164	217	184	164	217	180
v/s Ratio Prot	c0.07	0.24		0.00	c0.41			0.00			0.00	
v/s Ratio Perm	0.44		0.01	0.07		0.02	c0.02		0.00	0.02		0.01
v/c Ratio	0.68	0.37	0.01	0.12	0.73	0.04	0.18	0.00	0.03	0.15	0.01	0.08
Uniform Delay, d1	17.5	7.5	5.8	7.0	14.1	8.5	35.9	35.2	35.3	35.8	35.2	35.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.0	0.5	0.0	0.1	2.3	0.1	0.5	0.0	0.1	0.4	0.0	0.2
Delay (s)	23.4	8.0	5.8	7.2	16.5	8.5	36.5	35.2	35.4	36.3	35.3	35.8
Level of Service	C	A	A	A	B	A	D	D	D	D	D	D
Approach Delay (s)		11.1			15.9			35.8			35.8	
Approach LOS		B			B			D			D	

Intersection Summary				
HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.64			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.3	
Intersection Capacity Utilization	75.4%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				



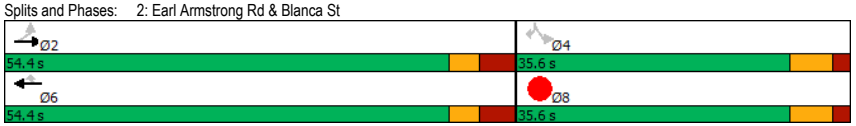
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø8
Lane Configurations							
Traffic Volume (vph)	78	812	1470	57	29	102	
Future Volume (vph)	78	812	1470	57	29	102	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (m)	160.0			120.0	60.0	30.0	
Storage Lanes	1			1	1	0	
Taper Length (m)	2.5				2.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1785	3433	3500	1597	1785	1597	
Flt Permitted	0.148				0.950		
Satd. Flow (perm)	278	3433	3500	1597	1785	1597	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				57		24	
Link Speed (k/h)		60	60		50		
Link Distance (m)		552.4	266.4		176.5		
Travel Time (s)		33.1	16.0		12.7		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehicles (%)	0%	4%	2%	0%	0%	0%	
Adj. Flow (vph)	78	812	1470	57	29	102	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	78	812	1470	57	29	102	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(m)		7.0	7.0		3.5		
Link Offset(m)		0.0	0.0		0.0		
Crosswalk Width(m)		1.6	1.6		1.6		
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	
Turning Speed (k/h)	24			14	24	14	
Number of Detectors	1	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (m)	6.1	30.5	30.5	6.1	6.1	6.1	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8	1.8	6.1	6.1	6.1	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7	28.7				
Detector 2 Size(m)		1.8	1.8				
Detector 2 Type		Cl+Ex	Cl+Ex				
Detector 2 Channel							
Detector 2 Extend (s)		0.0	0.0				
Turn Type	Perm	NA	NA	Perm	Perm	Perm	
Protected Phases		2	6				8



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø8
Permitted Phases	2			6	4	4	
Detector Phase	2	2	6	6	4	4	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	31.3	31.3	31.3	31.3	35.5	35.5	35.5
Total Split (s)	54.4	54.4	54.4	54.4	35.6	35.6	35.6
Total Split (%)	60.4%	60.4%	60.4%	60.4%	39.6%	39.6%	40%
Maximum Green (s)	47.1	47.1	47.1	47.1	29.0	29.0	29.0
Yellow Time (s)	3.3	3.3	3.3	3.3	4.6	4.6	4.6
All-Red Time (s)	4.0	4.0	4.0	4.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.3	7.3	7.3	7.3	6.6	6.6	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	17.0	17.0	17.0	17.0	8.0	8.0	8.0
Pedestrian Calls (#/hr)	5	5	5	5	5	5	5
Act Effct Green (s)	55.8	55.8	55.8	55.8	9.5	9.5	
Actuated g/C Ratio	0.74	0.74	0.74	0.74	0.13	0.13	
v/c Ratio	0.38	0.32	0.57	0.05	0.13	0.46	
Control Delay	13.5	5.2	7.4	1.8	28.3	29.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	13.5	5.2	7.4	1.8	28.3	29.7	
LOS	B	A	A	A	C	C	
Approach Delay		5.9	7.2		29.4		
Approach LOS		A	A		C		
Queue Length 50th (m)	3.9	20.0	47.6	0.0	3.7	10.4	
Queue Length 95th (m)	18.3	37.1	85.6	3.6	9.9	22.1	
Internal Link Dist (m)		528.4	242.4		152.5		
Turn Bay Length (m)	160.0			120.0	60.0	30.0	
Base Capacity (vph)	206	2551	2601	1201	692	634	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.38	0.32	0.57	0.05	0.04	0.16	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 75.1			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.57			
Intersection Signal Delay: 7.9		Intersection LOS: A	
Intersection Capacity Utilization 66.8%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Earl Armstrong Rd & Blanca St



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	78	812	1470	57	29	102
Future Volume (vph)	78	812	1470	57	29	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3	7.3	6.6	6.6
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1785	3433	3500	1597	1785	1597
Flt Permitted	0.15	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	277	3433	3500	1597	1785	1597
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	78	812	1470	57	29	102
RTOR Reduction (vph)	0	0	0	17	0	21
Lane Group Flow (vph)	78	812	1470	40	29	81
Heavy Vehicles (%)	0%	4%	2%	0%	0%	0%
Turn Type	Perm	NA	NA	Perm	Perm	Perm
Protected Phases		2	6			
Permitted Phases	2			6	4	4
Actuated Green, G (s)	54.2	54.2	54.2	54.2	8.3	8.3
Effective Green, g (s)	54.2	54.2	54.2	54.2	8.3	8.3
Actuated g/C Ratio	0.71	0.71	0.71	0.71	0.11	0.11
Clearance Time (s)	7.3	7.3	7.3	7.3	6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	196	2435	2482	1132	193	173
v/s Ratio Prot		0.24	c0.42			
v/s Ratio Perm	0.28			0.03	0.02	c0.05
v/c Ratio	0.40	0.33	0.59	0.04	0.15	0.47
Uniform Delay, d1	4.5	4.2	5.6	3.3	30.9	32.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.9	0.4	1.0	0.1	0.4	2.0
Delay (s)	10.4	4.6	6.6	3.4	31.2	33.9
Level of Service	B	A	A	A	C	C
Approach Delay (s)		5.1	6.5		33.3	
Approach LOS		A	A		C	

Intersection Summary				
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	76.4	Sum of lost time (s)	13.9
Intersection Capacity Utilization	66.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	359	259	221	2	532	25	141	112	1	16	208	855
Future Volume (vph)	359	259	221	2	532	25	141	112	1	16	208	855
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	140.0		60.0	120.0		200.0	120.0		100.0	120.0		100.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3236	3466	1581	3463	3570	1536	3429	3500	1597	3236	3500	1581
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3236	3466	1581	3463	3570	1536	3429	3500	1597	3236	3500	1581
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			221			210			210			223
Link Speed (k/h)		60			80			80			80	
Link Distance (m)		266.4			840.4			568.0			625.0	
Travel Time (s)		16.0			37.8			25.6			28.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	7%	3%	1%	0%	0%	4%	1%	2%	0%	7%	2%	1%
Adj. Flow (vph)	359	259	221	2	532	25	141	112	1	16	208	855
Shared Lane Traffic (%)												
Lane Group Flow (vph)	359	259	221	2	532	25	141	112	1	16	208	855
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			7.0			7.0			7.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	12.1	36.9	36.9	12.1	36.9	36.9	11.9	36.9	36.9	11.9	36.9	36.9
Total Split (s)	21.4	47.0	47.0	12.1	37.7	37.7	12.8	59.0	59.0	11.9	58.1	58.1
Total Split (%)	16.5%	36.2%	36.2%	9.3%	29.0%	29.0%	9.8%	45.4%	45.4%	9.2%	44.7%	44.7%
Maximum Green (s)	14.3	40.1	40.1	5.0	30.8	30.8	5.9	52.1	52.1	5.0	51.2	51.2
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.5	2.3	2.3	2.5	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	Min	Min	None	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		5	5		5	5		5	5		5	5
Act Effct Green (s)	14.3	49.8	49.8	5.0	30.8	30.8	5.9	59.2	59.2	5.0	51.2	51.2
Actuated g/C Ratio	0.11	0.38	0.38	0.04	0.24	0.24	0.05	0.46	0.46	0.04	0.39	0.39
v/c Ratio	1.01	0.20	0.30	0.02	0.63	0.05	0.91	0.07	0.00	0.13	0.15	1.13
Control Delay	107.6	28.1	5.0	60.5	48.4	0.2	113.0	21.5	0.0	62.8	25.8	102.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	107.6	28.1	5.0	60.5	48.4	0.2	113.0	21.5	0.0	62.8	25.8	102.4
LOS	F	C	A	E	D	A	F	C	A	E	C	F
Approach Delay		56.0			46.2			72.2			87.0	
Approach LOS		E			D			E			F	
Queue Length 50th (m)	~48.6	22.3	0.0	0.2	64.7	0.0	18.9	7.7	0.0	2.1	17.8	~217.1
Queue Length 95th (m)	#80.4	37.2	17.7	1.7	83.7	0.0	#39.0	15.5	0.0	6.0	26.5	#293.9
Internal Link Dist (m)		242.4			816.4			544.0			601.0	
Turn Bay Length (m)	140.0		60.0	120.0		200.0	120.0		100.0	120.0		100.0
Base Capacity (vph)	355	1327	742	133	845	524	155	1595	841	124	1378	757
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.01	0.20	0.30	0.02	0.63	0.05	0.91	0.07	0.00	0.13	0.15	1.13

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Natural Cycle: 130			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.13			
Intersection Signal Delay: 67.8		Intersection LOS: E	
Intersection Capacity Utilization 89.1%		ICU Level of Service E	
Analysis Period (min) 15			

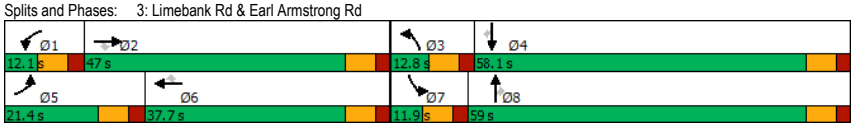
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Limebank Rd & Earl Armstrong Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	359	259	221	2	532	25	141	112	1	16	208	855
Future Volume (vph)	359	259	221	2	532	25	141	112	1	16	208	855
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3236	3466	1581	3463	3570	1536	3429	3500	1597	3236	3500	1581
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3236	3466	1581	3463	3570	1536	3429	3500	1597	3236	3500	1581
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	359	259	221	2	532	25	141	112	1	16	208	855
RTOR Reduction (vph)	0	0	142	0	0	18	0	0	1	0	0	135
Lane Group Flow (vph)	359	259	79	2	532	7	141	112	0	16	208	720
Heavy Vehicles (%)	7%	3%	1%	0%	0%	4%	1%	2%	0%	7%	2%	1%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	14.3	49.8	49.8	1.0	36.5	36.5	5.9	59.2	59.2	2.0	55.3	55.3
Effective Green, g (s)	14.3	49.8	49.8	1.0	36.5	36.5	5.9	59.2	59.2	2.0	55.3	55.3
Actuated g/C Ratio	0.10	0.36	0.36	0.01	0.26	0.26	0.04	0.42	0.42	0.01	0.40	0.40
Clearance Time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	331	1234	563	24	932	401	144	1482	676	46	1384	625
v/s Ratio Prot	c0.11	0.07		0.00	c0.15		c0.04	c0.03		0.00	0.06	
v/s Ratio Perm			0.05			0.00			0.00			c0.46
v/c Ratio	1.08	0.21	0.14	0.08	0.57	0.02	0.98	0.08	0.00	0.35	0.15	1.15
Uniform Delay, d1	62.8	31.3	30.5	68.9	44.8	38.3	66.9	24.0	23.2	68.3	27.2	42.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	74.0	0.4	0.5	1.5	2.5	0.1	67.9	0.0	0.0	4.5	0.1	85.9
Delay (s)	136.7	31.7	31.0	70.4	47.4	38.4	134.8	24.0	23.2	72.8	27.2	128.2
Level of Service	F	C	C	E	D	D	F	C	C	E	C	F
Approach Delay (s)		76.4			47.1			85.5			107.9	
Approach LOS		E			D			F			F	

Intersection Summary				
HCM 2000 Control Delay	83.7	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	0.95			
Actuated Cycle Length (s)	139.8	Sum of lost time (s)	27.8	
Intersection Capacity Utilization	89.1%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

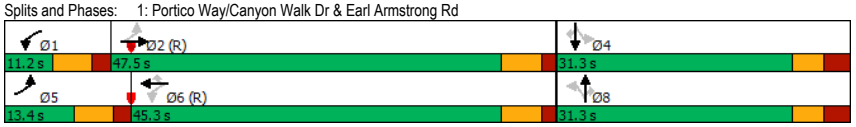
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	201	793	33	51	1429	55	29	1	51	24	2	128
Future Volume (vph)	201	793	33	51	1429	55	29	1	51	24	2	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0		100.0	60.0		100.0	30.0		25.0	60.0		25.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1785	3433	1479	1785	3535	1566	1785	1879	1597	1785	1879	1566
Flt Permitted	0.096			0.352			0.757			0.757		
Satd. Flow (perm)	180	3433	1479	661	3535	1566	1422	1879	1597	1422	1879	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			114			114			109			128
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		961.8			552.4			155.8			134.5	
Travel Time (s)		57.7			33.1			11.2			9.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	4%	8%	0%	1%	2%	0%	0%	0%	0%	0%	2%
Adj. Flow (vph)	201	793	33	51	1429	55	29	1	51	24	2	128
Shared Lane Traffic (%)												
Lane Group Flow (vph)	201	793	33	51	1429	55	29	1	51	24	2	128
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.1	24.9	24.9	11.1	24.9	24.9	31.3	31.3	31.3	31.3	31.3	31.3
Total Split (s)	13.4	47.5	47.5	11.2	45.3	45.3	31.3	31.3	31.3	31.3	31.3	31.3
Total Split (%)	14.9%	52.8%	52.8%	12.4%	50.3%	50.3%	34.8%	34.8%	34.8%	34.8%	34.8%	34.8%
Maximum Green (s)	7.3	41.6	41.6	5.1	39.4	39.4	25.0	25.0	25.0	25.0	25.0	25.0
Yellow Time (s)	4.2	4.2	4.2	4.2	4.2	4.2	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.9	1.7	1.7	1.9	1.7	1.7	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		10.0	10.0		10.0	10.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		9.0	9.0		9.0	9.0	18.0	18.0	18.0	18.0	18.0	18.0
Pedestrian Calls (#/hr)		5	5		5	5	5	5	5	5	5	5
Act Effct Green (s)	66.2	60.2	60.2	57.0	51.5	51.5	10.4	10.4	10.4	10.4	10.4	10.4
Actuated g/C Ratio	0.74	0.67	0.67	0.63	0.57	0.57	0.12	0.12	0.12	0.12	0.12	0.12
v/c Ratio	0.66	0.35	0.03	0.10	0.71	0.06	0.18	0.00	0.18	0.15	0.01	0.44
Control Delay	24.9	9.1	0.1	5.9	18.1	0.2	34.6	29.0	1.4	33.8	29.5	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.9	9.1	0.1	5.9	18.1	0.2	34.6	29.0	1.4	33.8	29.5	10.5
LOS	C	A	A	A	B	A	C	C	A	C	C	B
Approach Delay		11.9			17.1			13.6			14.4	
Approach LOS		B			B			B			B	
Queue Length 50th (m)	10.0	29.2	0.0	1.5	81.0	0.0	4.8	0.2	0.0	4.0	0.3	0.0
Queue Length 95th (m)	#57.7	64.3	0.0	8.0	#165.6	0.5	10.2	1.3	0.5	8.9	1.9	12.3
Internal Link Dist (m)		937.8			528.4			131.8			110.5	
Turn Bay Length (m)	60.0		100.0	60.0		100.0	30.0		25.0	60.0		25.0
Base Capacity (vph)	306	2296	1027	490	2022	944	395	521	522	395	521	527
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.35	0.03	0.10	0.71	0.06	0.07	0.00	0.10	0.06	0.00	0.24

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 14.9		Intersection LOS: B	
Intersection Capacity Utilization 74.2%		ICU Level of Service D	
Analysis Period (min) 15			

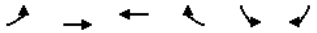
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Portico Way/Canyon Walk Dr & Earl Armstrong Rd

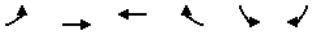


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	201	793	33	51	1429	55	29	1	51	24	2	128
Future Volume (vph)	201	793	33	51	1429	55	29	1	51	24	2	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1785	3433	1479	1785	3535	1566	1785	1879	1597	1785	1879	1566
Flt Permitted	0.10	1.00	1.00	0.35	1.00	1.00	0.76	1.00	1.00	0.76	1.00	1.00
Satd. Flow (perm)	181	3433	1479	661	3535	1566	1421	1879	1597	1423	1879	1566
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	201	793	33	51	1429	55	29	1	51	24	2	128
RTOR Reduction (vph)	0	0	12	0	0	24	0	0	45	0	0	113
Lane Group Flow (vph)	201	793	21	51	1429	31	29	1	6	24	2	15
Heavy Vehicles (%)	0%	4%	8%	0%	1%	2%	0%	0%	0%	0%	0%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	67.4	57.8	57.8	55.0	51.5	51.5	10.4	10.4	10.4	10.4	10.4	10.4
Effective Green, g (s)	67.4	57.8	57.8	55.0	51.5	51.5	10.4	10.4	10.4	10.4	10.4	10.4
Actuated g/C Ratio	0.75	0.64	0.64	0.61	0.57	0.57	0.12	0.12	0.12	0.12	0.12	0.12
Clearance Time (s)	6.1	5.9	5.9	6.1	5.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	310	2204	949	447	2022	896	164	217	184	164	217	180
v/s Ratio Prot	c0.07	0.23		0.00	c0.40			0.00			0.00	
v/s Ratio Perm	0.41		0.01	0.07		0.02	c0.02		0.00	0.02		0.01
v/c Ratio	0.65	0.36	0.02	0.11	0.71	0.04	0.18	0.00	0.03	0.15	0.01	0.08
Uniform Delay, d1	14.7	7.5	5.8	7.0	13.8	8.4	35.9	35.2	35.3	35.8	35.2	35.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.6	0.5	0.0	0.1	2.1	0.1	0.5	0.0	0.1	0.4	0.0	0.2
Delay (s)	19.3	7.9	5.9	7.1	15.9	8.5	36.5	35.2	35.4	36.2	35.3	35.7
Level of Service	B	A	A	A	B	A	D	D	D	D	D	D
Approach Delay (s)		10.1			15.4			35.8			35.8	
Approach LOS		B			B			D			D	

Intersection Summary				
HCM 2000 Control Delay	15.2	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.62			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.3	
Intersection Capacity Utilization	74.2%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				



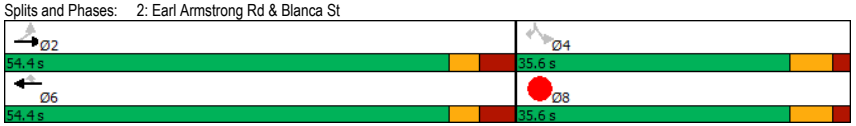
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø8
Lane Configurations							
Traffic Volume (vph)	76	793	1435	56	28	100	
Future Volume (vph)	76	793	1435	56	28	100	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (m)	160.0			120.0	60.0	30.0	
Storage Lanes	1			1	1	0	
Taper Length (m)	2.5				2.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1785	3433	3500	1597	1785	1597	
Flt Permitted	0.156				0.950		
Satd. Flow (perm)	293	3433	3500	1597	1785	1597	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				56		26	
Link Speed (k/h)		60	60		50		
Link Distance (m)		552.4	266.4		176.5		
Travel Time (s)		33.1	16.0		12.7		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehicles (%)	0%	4%	2%	0%	0%	0%	
Adj. Flow (vph)	76	793	1435	56	28	100	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	76	793	1435	56	28	100	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(m)		7.0	7.0		3.5		
Link Offset(m)		0.0	0.0		0.0		
Crosswalk Width(m)		1.6	1.6		1.6		
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	
Turning Speed (k/h)	24			14	24	14	
Number of Detectors	1	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (m)	6.1	30.5	30.5	6.1	6.1	6.1	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8	1.8	6.1	6.1	6.1	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7	28.7				
Detector 2 Size(m)		1.8	1.8				
Detector 2 Type		Cl+Ex	Cl+Ex				
Detector 2 Channel							
Detector 2 Extend (s)		0.0	0.0				
Turn Type	Perm	NA	NA	Perm	Perm	Perm	
Protected Phases		2	6				8



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø8
Permitted Phases	2			6	4	4	
Detector Phase	2	2	6	6	4	4	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	31.3	31.3	31.3	31.3	35.5	35.5	35.5
Total Split (s)	54.4	54.4	54.4	54.4	35.6	35.6	35.6
Total Split (%)	60.4%	60.4%	60.4%	60.4%	39.6%	39.6%	40%
Maximum Green (s)	47.1	47.1	47.1	47.1	29.0	29.0	29.0
Yellow Time (s)	3.3	3.3	3.3	3.3	4.6	4.6	4.6
All-Red Time (s)	4.0	4.0	4.0	4.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.3	7.3	7.3	7.3	6.6	6.6	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	17.0	17.0	17.0	17.0	8.0	8.0	8.0
Pedestrian Calls (#/hr)	5	5	5	5	5	5	5
Act Effct Green (s)	55.9	55.9	55.9	55.9	9.4	9.4	
Actuated g/C Ratio	0.74	0.74	0.74	0.74	0.13	0.13	
v/c Ratio	0.35	0.31	0.55	0.05	0.12	0.45	
Control Delay	12.1	5.1	7.2	1.8	28.4	28.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	12.1	5.1	7.2	1.8	28.4	28.9	
LOS	B	A	A	A	C	C	
Approach Delay		5.7	7.0		28.8		
Approach LOS		A	A		C		
Queue Length 50th (m)	3.6	19.2	45.5	0.0	3.6	9.9	
Queue Length 95th (m)	16.6	36.0	82.1	3.6	9.6	21.6	
Internal Link Dist (m)		528.4	242.4		152.5		
Turn Bay Length (m)	160.0			120.0	60.0	30.0	
Base Capacity (vph)	218	2555	2605	1203	692	635	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.35	0.31	0.55	0.05	0.04	0.16	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 75.1			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 7.7		Intersection LOS: A	
Intersection Capacity Utilization 65.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Earl Armstrong Rd & Blanca St



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	76	793	1435	56	28	100
Future Volume (vph)	76	793	1435	56	28	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3	7.3	6.6	6.6
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1785	3433	3500	1597	1785	1597
Flt Permitted	0.16	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	292	3433	3500	1597	1785	1597
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	76	793	1435	56	28	100
RTOR Reduction (vph)	0	0	0	16	0	23
Lane Group Flow (vph)	76	793	1435	40	28	77
Heavy Vehicles (%)	0%	4%	2%	0%	0%	0%
Turn Type	Perm	NA	NA	Perm	Perm	Perm
Protected Phases		2	6			
Permitted Phases	2			6	4	4
Actuated Green, G (s)	54.3	54.3	54.3	54.3	8.2	8.2
Effective Green, g (s)	54.3	54.3	54.3	54.3	8.2	8.2
Actuated g/C Ratio	0.71	0.71	0.71	0.71	0.11	0.11
Clearance Time (s)	7.3	7.3	7.3	7.3	6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	207	2439	2487	1135	191	171
v/s Ratio Prot		0.23	c0.41			
v/s Ratio Perm	0.26			0.02	0.02	c0.05
v/c Ratio	0.37	0.33	0.58	0.04	0.15	0.45
Uniform Delay, d1	4.3	4.2	5.4	3.3	30.9	32.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.0	0.4	1.0	0.1	0.4	1.9
Delay (s)	9.3	4.5	6.4	3.3	31.3	33.9
Level of Service	A	A	A	A	C	C
Approach Delay (s)		4.9	6.3		33.3	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	76.4	Sum of lost time (s)	13.9
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	351	252	216	2	519	24	137	109	1	15	203	834
Future Volume (vph)	351	252	216	2	519	24	137	109	1	15	203	834
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	140.0		60.0	120.0		200.0	120.0		100.0	120.0		100.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3236	3466	1581	3463	3570	1536	3429	3500	1597	3236	3500	1581
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3236	3466	1581	3463	3570	1536	3429	3500	1597	3236	3500	1581
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			216			210			210			226
Link Speed (k/h)		60			80			80			80	
Link Distance (m)		266.4			840.4			568.0			625.0	
Travel Time (s)		16.0			37.8			25.6			28.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	7%	3%	1%	0%	0%	4%	1%	2%	0%	7%	2%	1%
Adj. Flow (vph)	351	252	216	2	519	24	137	109	1	15	203	834
Shared Lane Traffic (%)												
Lane Group Flow (vph)	351	252	216	2	519	24	137	109	1	15	203	834
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			7.0			7.0			7.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	12.1	36.9	36.9	12.1	36.9	36.9	11.9	36.9	36.9	11.9	36.9	36.9
Total Split (s)	21.4	47.1	47.1	12.1	37.8	37.8	12.8	58.9	58.9	11.9	58.0	58.0
Total Split (%)	16.5%	36.2%	36.2%	9.3%	29.1%	29.1%	9.8%	45.3%	45.3%	9.2%	44.6%	44.6%
Maximum Green (s)	14.3	40.2	40.2	5.0	30.9	30.9	5.9	52.0	52.0	5.0	51.1	51.1
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.5	2.3	2.3	2.5	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	Min	Min	None	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		5	5		5	5		5	5		5	5
Act Effct Green (s)	14.3	49.9	49.9	5.0	30.9	30.9	5.9	59.1	59.1	5.0	51.1	51.1
Actuated g/C Ratio	0.11	0.38	0.38	0.04	0.24	0.24	0.05	0.45	0.45	0.04	0.39	0.39
v/c Ratio	0.99	0.19	0.29	0.02	0.61	0.05	0.88	0.07	0.00	0.12	0.15	1.10
Control Delay	102.5	28.0	5.0	60.5	47.8	0.2	108.1	21.6	0.0	62.7	25.8	91.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	102.5	28.0	5.0	60.5	47.8	0.2	108.1	21.6	0.0	62.7	25.8	91.5
LOS	F	C	A	E	D	A	F	C	A	E	C	F
Approach Delay		53.9			45.8			69.5			78.4	
Approach LOS		D			D			E			E	
Queue Length 50th (m)	47.0	21.6	0.0	0.2	62.8	0.0	18.3	7.5	0.0	1.9	17.4	~205.0
Queue Length 95th (m)	#77.9	36.2	17.5	1.7	81.3	0.0	#37.3	15.1	0.0	5.7	25.9	#281.7
Internal Link Dist (m)		242.4			816.4			544.0			601.0	
Turn Bay Length (m)	140.0		60.0	120.0		200.0	120.0		100.0	120.0		100.0
Base Capacity (vph)	355	1329	740	133	848	525	155	1592	840	124	1375	758
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.19	0.29	0.02	0.61	0.05	0.88	0.07	0.00	0.12	0.15	1.10

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Natural Cycle: 130			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.10			
Intersection Signal Delay: 63.4		Intersection LOS: E	
Intersection Capacity Utilization 87.4%		ICU Level of Service E	
Analysis Period (min) 15			

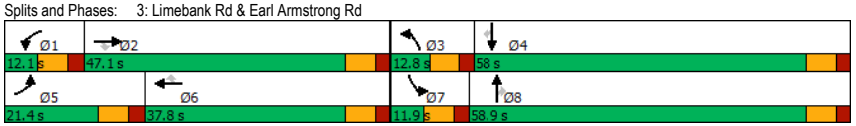
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Limebank Rd & Earl Armstrong Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	351	252	216	2	519	24	137	109	1	15	203	834
Future Volume (vph)	351	252	216	2	519	24	137	109	1	15	203	834
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3236	3466	1581	3463	3570	1536	3429	3500	1597	3236	3500	1581
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3236	3466	1581	3463	3570	1536	3429	3500	1597	3236	3500	1581
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	351	252	216	2	519	24	137	109	1	15	203	834
RTOR Reduction (vph)	0	0	139	0	0	18	0	0	1	0	0	137
Lane Group Flow (vph)	351	252	77	2	519	6	137	109	0	15	203	697
Heavy Vehicles (%)	7%	3%	1%	0%	0%	4%	1%	2%	0%	7%	2%	1%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	14.3	49.9	49.9	1.0	36.6	36.6	5.9	59.1	59.1	2.0	55.2	55.2
Effective Green, g (s)	14.3	49.9	49.9	1.0	36.6	36.6	5.9	59.1	59.1	2.0	55.2	55.2
Actuated g/C Ratio	0.10	0.36	0.36	0.01	0.26	0.26	0.04	0.42	0.42	0.01	0.39	0.39
Clearance Time (s)	7.1	6.9	6.9	7.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	331	1237	564	24	934	402	144	1479	675	46	1381	624
v/s Ratio Prot	c0.11	0.07		0.00	c0.15		c0.04	c0.03		0.00	0.06	
v/s Ratio Perm			0.05			0.00			0.00			c0.44
v/c Ratio	1.06	0.20	0.14	0.08	0.56	0.02	0.95	0.07	0.00	0.33	0.15	1.12
Uniform Delay, d1	62.8	31.2	30.4	68.9	44.6	38.2	66.8	24.0	23.3	68.2	27.2	42.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	66.3	0.4	0.5	1.5	2.4	0.1	60.1	0.0	0.0	4.1	0.0	72.8
Delay (s)	129.1	31.5	30.9	70.4	47.0	38.3	126.9	24.1	23.3	72.3	27.2	115.1
Level of Service	F	C	C	E	D	D	F	C	C	E	C	F
Approach Delay (s)		73.2			46.7			81.1			97.5	
Approach LOS		E			D			F			F	

Intersection Summary				
HCM 2000 Control Delay	78.1	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.92			
Actuated Cycle Length (s)	139.8	Sum of lost time (s)	27.8	
Intersection Capacity Utilization	87.4%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Appendix G: City of Ottawa Collision Data

Appendix H: Master Site Plan

DRAFT PLAN OF SUBDIVISION OF

PART OF LOTS 21 and 22

CONCESSION 1 (RIDEAU FRONT)

Geographic Township of Gloucester

CITY OF OTTAWA

Prepared by Annis , O'Sullivan , Vollebekk Ltd.

Scale 1 : 1500

60 45 30 15 0 30 60 Metres

Metric

DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

SURVEYOR'S CERTIFICATE

I CERTIFY THAT :
The boundaries of the lands to be subdivided and their relationship to adjoining lands have been accurately and correctly shown.

Nov 20, 2024
Date

T. Hartwick
ONTARIO LAND SURVEYOR

ADDITIONAL INFORMATION REQUIRED UNDER SECTION 51-17 OF THE PLANNING ACT

(a) see plan
(b) see plan
(c) see plan
(d) multi-family residential housing, park land, commercial, institutional
(e) see plan
(f) see plan
(g) see plan
(h) City of Ottawa
(i) see soils report
(j) see plan
(k) sanitary, storm sewers, municipal water, bell, hydro, cable and gas to be available
(l) none known

OWNER'S CERTIFICATE

This is to certify that I am the owner / agent of the lands to be subdivided and that this plan was prepared in accordance with my instructions.

December 12, 2024
Date

Vincent Denomme
Manager - Planning and Development
I have authority to bind the corporation

SUBJECT TO THE CONDITIONS, IF ANY, SET FORTH IN OUR LETTER DATED November 19, 2024 , THIS DRAFT PLAN IS APPROVED BY THE CITY OF OTTAWA UNDER SECTION 51 OF THE PLANNING ACT THIS 10 DAY OF DECEMBER , 2024 .

LILY XU, MCIP, RPP, MANAGER
DEVELOPMENT REVIEW SOUTH
PLANNING, INFRASTRUCTURE AND ECONOMIC DEVELOPMENT DEPARTMENT, CITY OF OTTAWA

KEY MAP
NOT TO SCALE

AREA SCHEDULE	
LOT\BLOCK	AREA (sqm)
1	24 270
2	31 567
3	5 815
4	25 048
5	4 946
6	24 159
7	108 756
8	14 476
9	7 328
10	2 543
11	79 573
12	37 388
13	14 242
14	44 448
15	1 997
STREETS	72 516
TOTAL	499 072

ANNIS, O'SULLIVAN, VOLLEBEKK LTD.
14 Concourse Gate, Suite 500
Nepean, Ont. K2E 7S6
Phone: (613) 727-0850 / Fax: (613) 727-1079
Email: Nepean@aovltd.com
Ontario Land Surveyors
Job No. 15320-14 Urbandale Pt Lt21 Cl RF GL DPS D16 N

SITE STATISTICS

OVERALL SITE:
TOTAL SITE AREA = 685,437.67 SF (15.74 ACRES) (6.37 HA.)
TOTAL GR. FL. RETAIL AREA = 159,906 SF (14,855.75 SM)
TOTAL 2ND FL. OFFICE AREA = 40,791SF (3,789.60 SM)
TOTAL GLA = 200,697 SF (18,645.36 SM)

TOTAL PARKING REQ. @ 3.6/100 SM = 671 CARS
TOTAL PARKING PROVIDED = 3.77/100 SM = 703 CARS

PHASE 1 STATS:
PHASE 1 AREA = 507,218.12 SF (11.64 ACRES) (4.71 HA.)
TOTAL GLA = 105,193 SF (8,872.61 SM)

TOTAL RETAIL PARKING REQUIRED @ 3.6/100 SM = 320 CARS
TOTAL PARKING PROVIDED = 5.98/100 SM = 531 CARS

PHASE 1 BUILDING AREAS:

	GROUND FL. RETAIL	2ND FL. OFFICE
BIG BOX RETAIL STORE A	51,899 SF	1,091 SF
BUILDING B	6,000 SF	-
BUILDING C	15,000 SF	-
BUILDING D	6,000 SF	-
BUILDING G	5,000 SF	-
BUILDING H	11,203 SF	-
BUILDING L	6,000 SF	-
BUILDING M	3,000 SF	-
TOTAL	***104,102 SF***	***1,091 SF***

PHASE 2 STATS:
PHASE 2 AREA = 178,219.55 SF (4.09 ACRES) (1.66 HA.)
TOTAL GLA = 95,504 SF (8,872.61 SM)

TOTAL PARKING REQ. @ 3.6/100 SM = 320 CARS
TOTAL PARKING PROVIDED = 1.94/100 SM = 172 CARS

PHASE 2 BUILDING AREAS:

	GROUND FL. RETAIL	2ND FL. OFFICE
BUILDING E	21,895 SF	21,895 SF
BUILDING F	10,968 SF	10,968 SF
BUILDING I	9,284 SF	-
BUILDING J	6,837 SF	6,837 SF
BUILDING K	6,820 SF	-
TOTAL	***55,804 SF***	***39,700 SF***

PLAN OF SURVEY OF
PART OF LOT 21
CONCESSION 2 (RIDEAU FRONT)
Geographic Township of Gloucester
CITY OF OTTAWA
Surveyed by Annis, O'Sullivan, Vollebekk Ltd.

GENERAL NOTES:

1. DEPRESSED CURB AND RAMP
2. CONCRETE SIDEWALK 3.0 M WIDE (UNLESS NOTED OTHERWISE)
3. CONCRETE SIDEWALK AT BUILDING SHALL BE CONSTRUCTED BY BUILDING CONTRACTOR REFER TO ARCH. DWGS. FOR EXTENT
4. GUARDRAIL AS REQUIRED BY OBC
5. SIAMESE CONNECTION
6. CONCRETE CURB
7. HEAVY DUTY CONCRETE PAVING
8. 90° PARKING STRIPING (TYP.)
9. HANDICAP PAVEMENT MARKING AND SIGN (RC-6 TYP.)
10. LANDSCAPE FEATURE (REFER TO LANDSCAPE DWGS)
11. EDGE OF BUILDING SLAB FLUSH WITH ASPHALT
12. STOP BAR
13. FIRE LANE SIGN
14. PLANTERS
15. DO NOT ENTER SIGN
16. BOLLARD PAINTED YELLOW
17. LANDSCAPE AREA
18. NO PARKING LOADING ZONE
19. STOP SIGN (RA-1)
20. BIKE RACKS
21. ORNAMENTAL & MASONRY FENCE
22. CONCRETE ISLAND/AREA (TYP.)
23. LANDSCAPED ISLAND/AREA (TYP.)
24. PAINTED ISLAND (TYP.)
25. CONCRETE TRASH COMPACTOR PAD
26. TRANSFORMER PAD (SEE ARCH. DWGS.)
27. RETAINING WALLS AT TRUCK WELLS (SEE ARCH. DWGS.)
28. SCREEN WALL
29. COLOURED STAMPED ASPHALT PEDESTRIAN CROSSWALK
30. PAINTED TRAFFIC FLOW ARROWS
31. GAS METER
32. WALL-MOUNTED FIRE LANE SIGN
33. FIRE HYDRANT
34. PYLON SIGN
35. ONE-WAY SIGN (RB-21)
36. YIELD SIGN

LEGEND:

- *6M PERMANENT WIDENING (AREA = 1,691.40 SM)*
- *6M TEMPORARY WIDENING FOR LRT CONSTRUCTION (AREA = 1,695.71 SM)*
- *LANDSCAPE AREA*
- *TEXTURED WALKWAY*
- *FIRE ROUTE*
- *GAS METER LOCATION*
- *EXISTING EASEMENT*
- *PHASE LINE*
- *PYLON SIGN*
- *DEPRESSED CURB AND RAMP*
- *BICYCLE RACK*
- *PROPOSED NEW ROAD WIDENING*
- *PROPOSED NEW LIGHT STANDARDS*

APPROVED
By Lily Xu at 12;05 pm, Nov 01, 2022

LILY XU, MCIP, RPP
MANAGER, DEVELOPMENT REVIEW SOUTH
PLANNING, INFRASTRUCTURE & ECONOMIC DEVELOPMENT DEPARTMENT, CITY OF OTTAWA

SP-100

DATE ISSUED: 22-06-08

CITY FILE NO.:

No.	REVISIONS (MARK VOID ALL COPIES PREVIOUS FINAL DATE)	YY/MM/DD	BY
32.	PHASE LINES REVISED TO INCLUDE SIDEWALKS IN PH.	22-06-08	AU
31.	PHASE 2 LINE REVISED	22-05-19	AU
30.	LIMEBANK CURB ALIGNMENT ADJUSTED	21-08-12	AU
29.	RE-SUBMIT FOR SPA	21-08-05	AU
28.	REVISED AS PER BA GROUP COMMENTS	21-08-05	AU
27.	REVISED AS PER BA GROUP COMMENTS	21-07-29	AU
26.	REVISED AS PER BA GROUP COMMENTS	21-07-27	AU
25.	NEW TOWNSQUARE BOULEVARD, REVISED STATISTICS	21-05-28	AU
24.	BUILDING A + PROPERTY LINES + TOWN SQUARE BLVD. REVISED	21-02-21	AU
23.	PATIOS ADDED, SITE ENTRANCES REVISED	17/09/18	AU
22.	LIGHT STANDARDS ADDED	16/11/30	AU
21.	BUILDING C DRIVE-THRU AND SIZE	16/11/09	AU
20.	TRANSIT ROAD DETAILS REMOVED	16/09/09	AU
19.	GAS ADDED, MOVED SIDEWALK TO M, CART CORRALS FOR 'A'	16/09/01	AU
18.	NORTH-WEST CORNER SIDE WALK REVISED	16/09/12	AU
17.	PROPERTY BEARINGS ADDED	15/08/26	AU
16.	L.B. AREA 4 SIDEWALKS ADDED TO BLDG. H,I,D,K	15/08/11	AU
15.	REVISED LANDSCAPING AREAS	15/07/28	AU
14.	PROPOSED NEW ROAD WIDENING	15/07/21	AU
13.	MUNICIPAL SIDEWALK AND LANDSCAPE REVISED	15/07/21	AU
12.	TRANSFORMER 'S' ADDED	15/05/20	AU
11.	REVISED AS PER LANDSCAPE COMMENTS	15/04/21	AU
10.	REVISED AS PER CITY COMMENTS	14/12/15	AU
9.	LIMEBANK ENTRANCE	14/08/11	AU
8.	RIGHT TURN LANES REVISED	14/07/10	AU
7.	BLDG. A SHELL PLAN REVISED	14/07/07	AU
6.	RIGHT TURN LANES ADDED	14/07/03	AU
5.	COLLECTOR ROAD 'D' REVISED	14/07/02	AU
4.	SUP + HYDRO EASEMENT NOTES	14/06/23	AU
3.	REVISED MEDIANS AND PROPOSED ROAD	14/06/02	AU
2.	ADDITIONAL EASEMENT INFORMATION	14/05/05	AU
1.	ISSUED FOR SITE PLAN APPROVAL	14/04/09	AU

Contractor must check and verify all dimensions on the job and report any discrepancies to the Architect before proceeding with the work.

Do not scale the drawing.

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This drawing must be read in the context of all the other drawings which constitute the document.

MASTER SITE PLAN

SCALE: 1:500

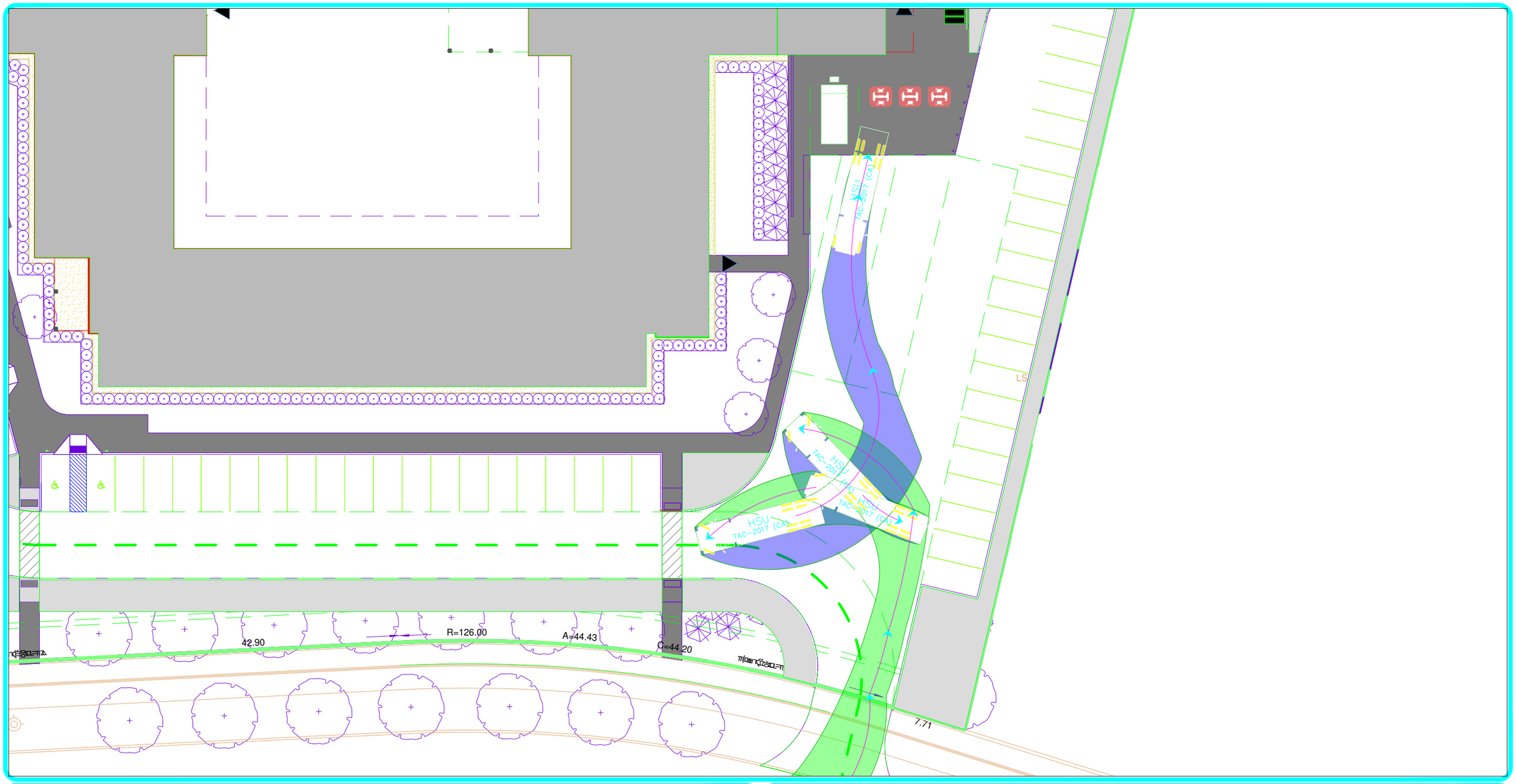
TOWN SQUARE COMMERCIAL CENTRE
LIMEBANK ROAD & EARL ARMSTRONG ROAD
OTTAWA, ONTARIO
FOR: OWNER

PETROFF PARTNERSHIP ARCHITECTS
PETROFF
260 TOWN CENTRE BLVD. SUITE 300
MARKHAM ONTARIO CANADA L3R 8H8
TEL. 905. 470.7000 FAX. 905. 470. 2500

DRAWN BY	RY / CT
CHECKED BY	A.U.
DATE	SEPT. 16, 2011
ISSUED	JUNE 8, 2022

PROJECT No. 11159.00
DWG. No. SP-100

Appendix I: AutoTURN Movements



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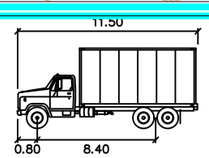
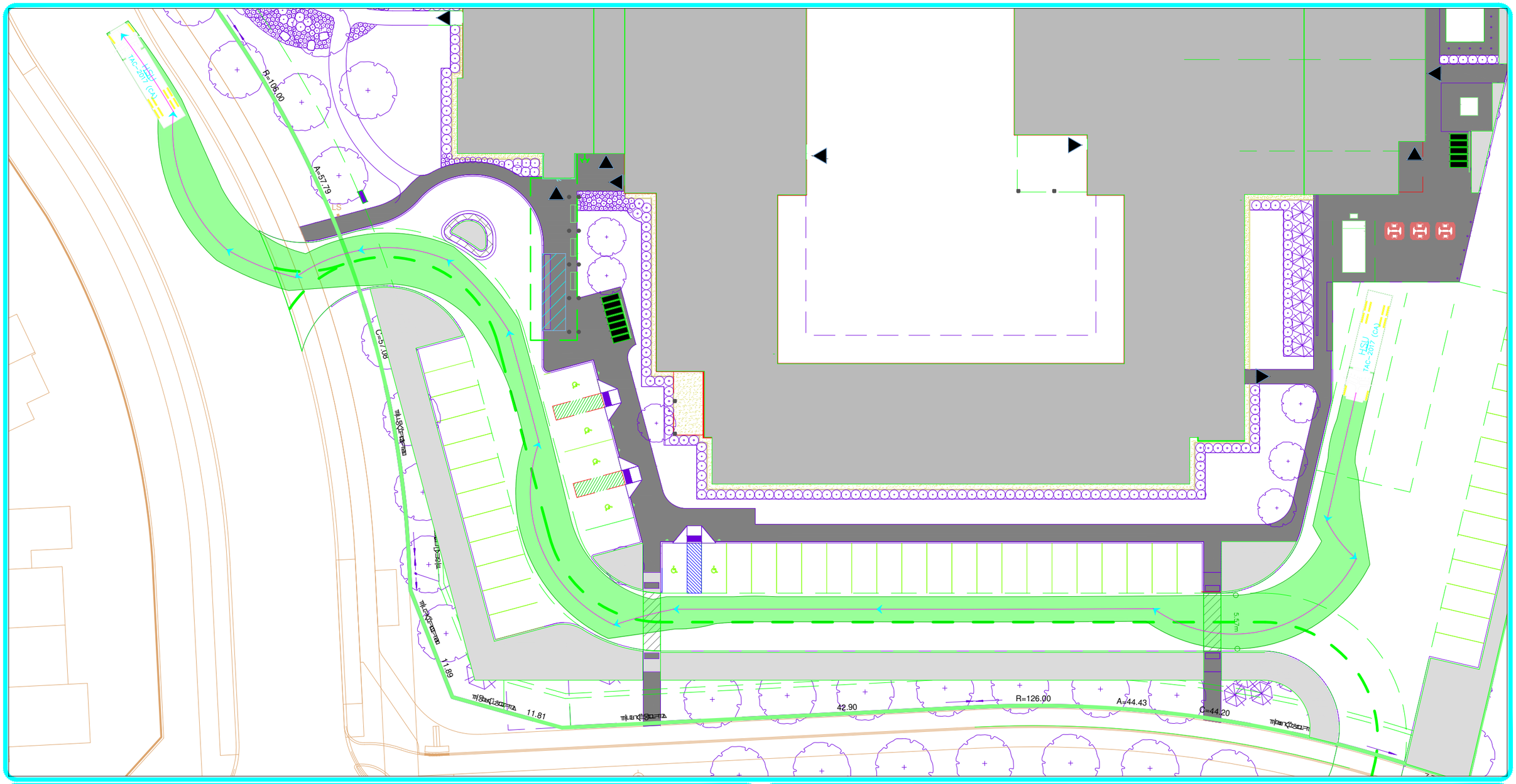


HSU

meters	
Width	: 2.60
Track	: 2.60
Lock to Lock Time	: 6.0
Steering Angle	: 40.0

Project: EXTEDICARE RIVERSIDE 980 EARL ARMSTRONG		
Title: HEAVY VEHICLE INBOUND VEHICLE MOVEMENT		
Approved by:	Date: 2025-04-21	Project No.: OTT-25014856-A0
Drawn by:	Scale:	Figure no.:



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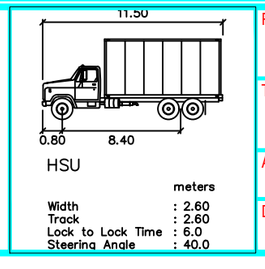
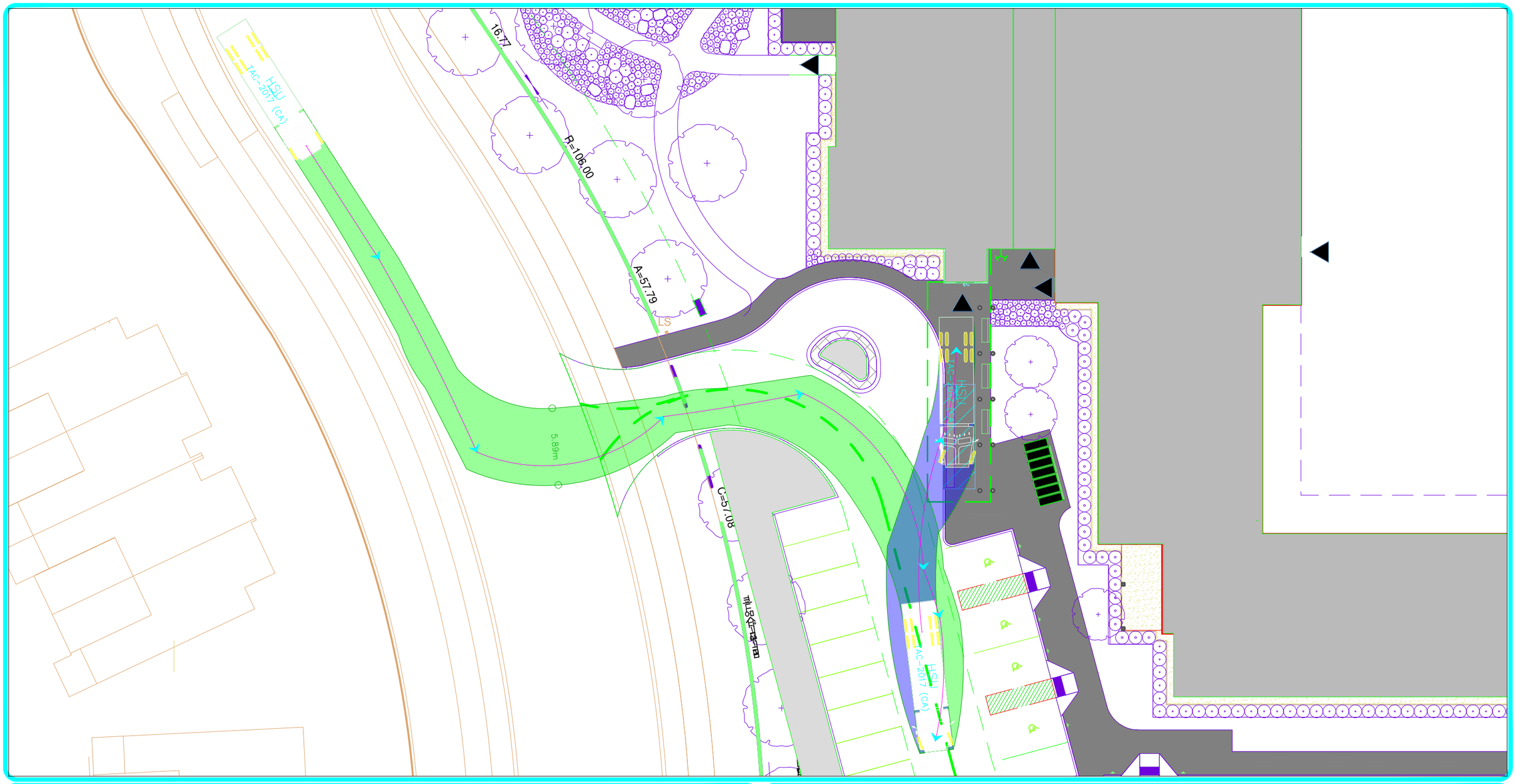
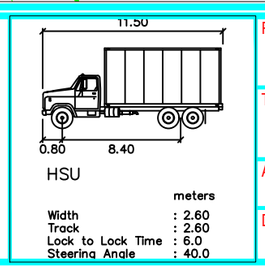


Project: EXTEDICARE RIVERSIDE 980 EARL ARMSTRONG		
Title: HEAVY VEHICLE OUTBOUND VEHICLE MOVEMENT		
Approved by:	Date: 2025-04-21	Project No.: OTT-25014856-A0
Drawn by:	Scale:	Figure no.:

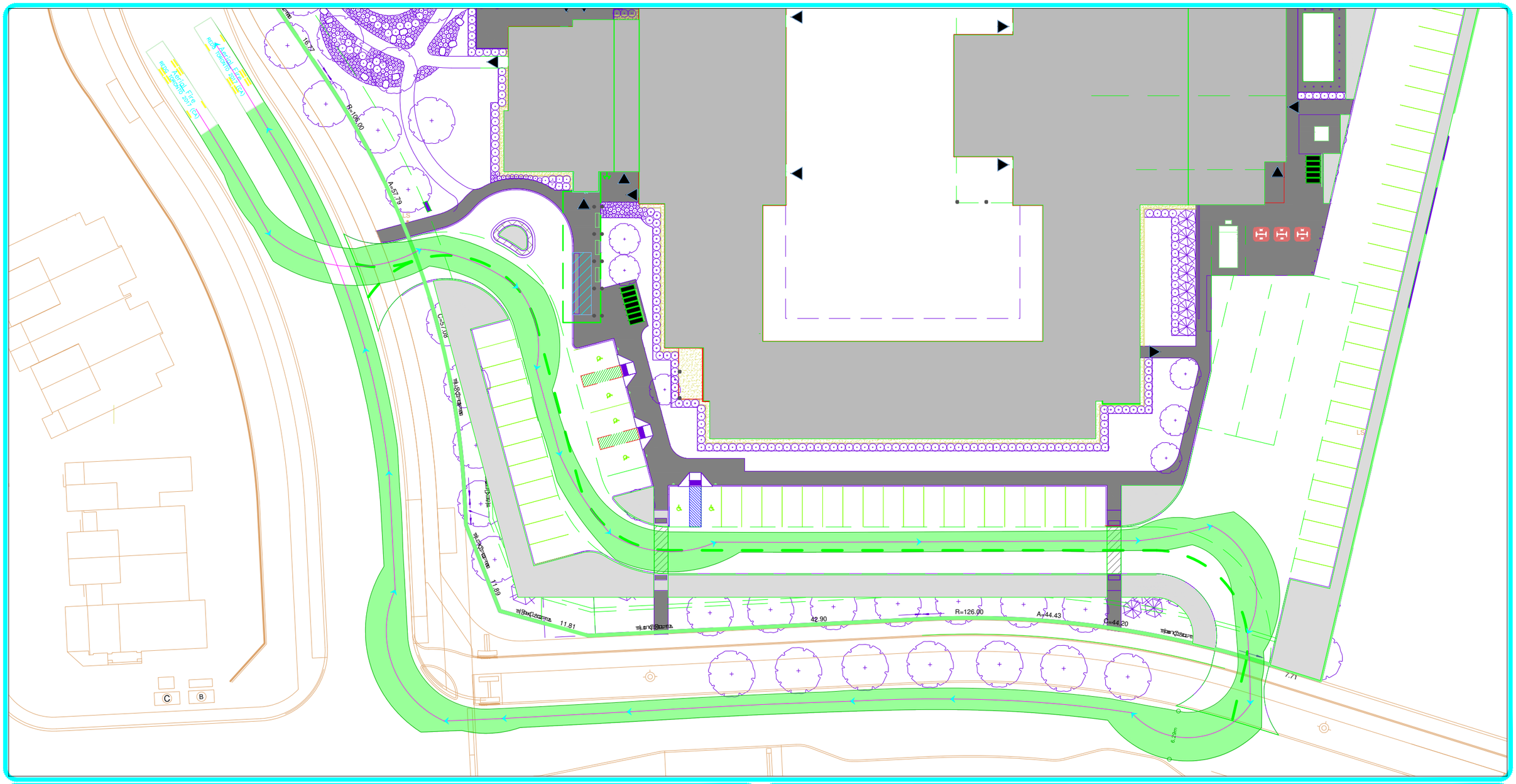




Project: EXTEDICARE RIVERSIDE
980 EARL ARMSTRONG

Title: HEAVY VEHICLE INBOUND VEHICLE MOVEMENT

Approved by:	Date: 2025-04-21	Project No.: OTT-25014856-A0
Drawn by:	Scale:	Figure no.:



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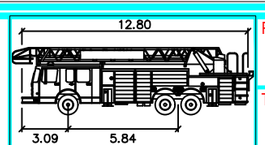
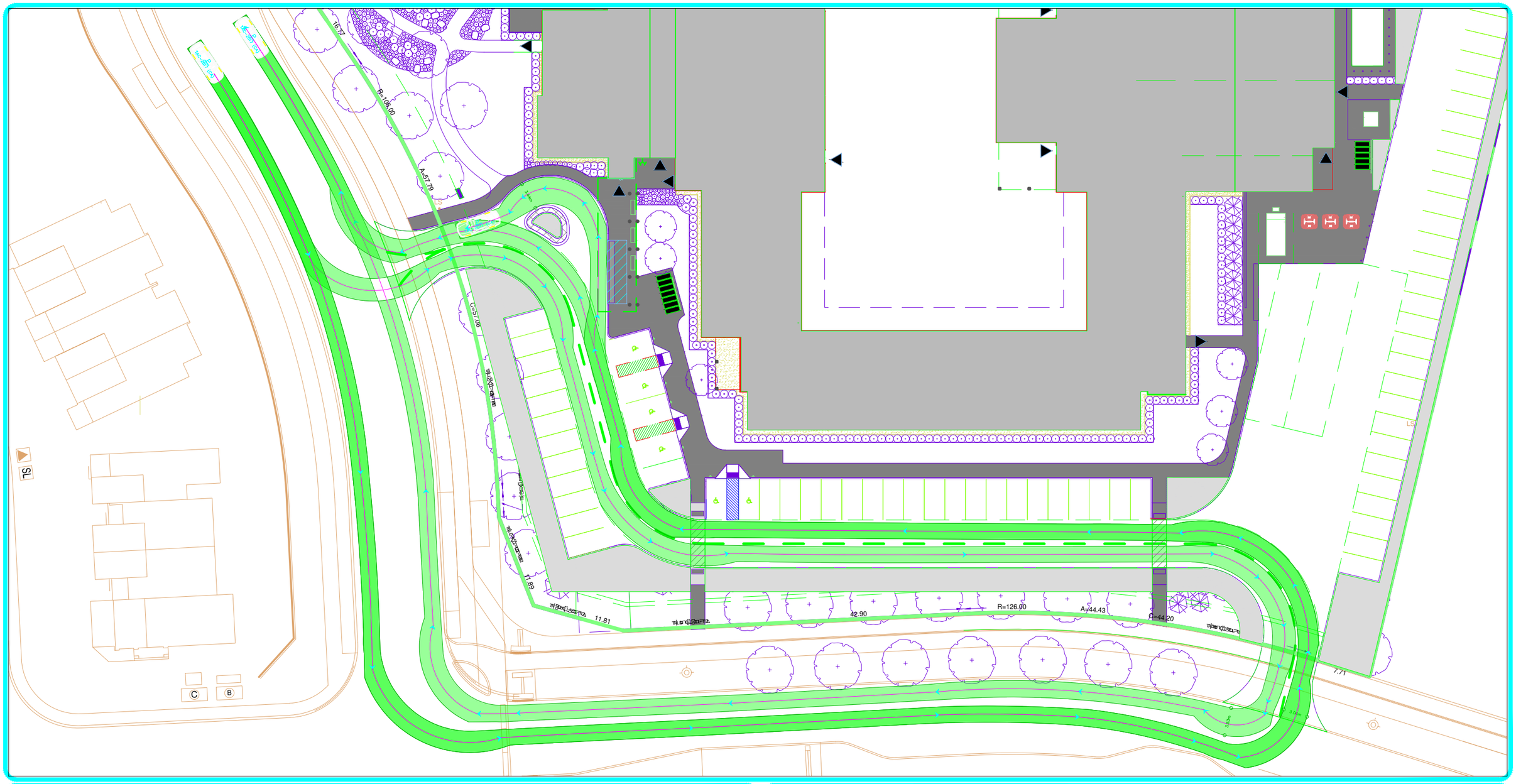


Aerial Fire

	meters
Width	: 2.54
Track	: 2.54
Lock to Lock Time	: 6.0
Steering Angle	: 37.0

Project: EXTEDICARE RIVERSIDE 980 EARL ARMSTRONG		
Title: FIRE TRUCK CIRCULATION		
Approved by:	Date: 2025-04-21	Project No.: OTT-25014856-A0
Drawn by:	Scale:	Figure no.:



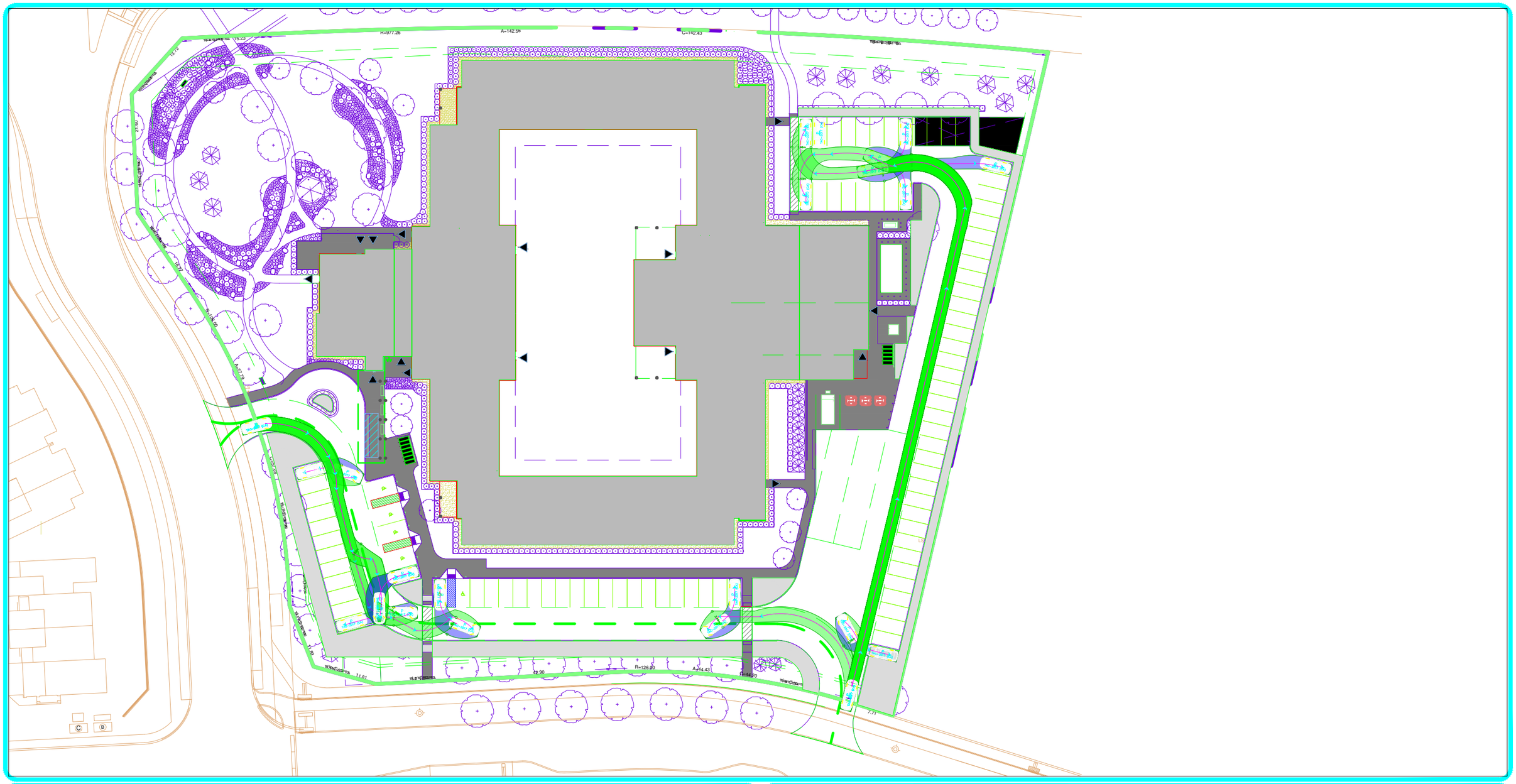
5.60

1.10 3.20

P

	meters
Width	: 2.00
Track	: 2.00
Lock to Lock Time	: 6.0
Steering Angle	: 35.9

Project: EXTEDICARE RIVERSIDE 980 EARL ARMSTRONG		
Title: PASSENGER VEHICLE CIRCULATION		
Approved by:	Date: 2025-04-21	Project No.: OTT-25014856-A0
Drawn by:	Scale:	Figure no.:



5.60

1.10 3.20

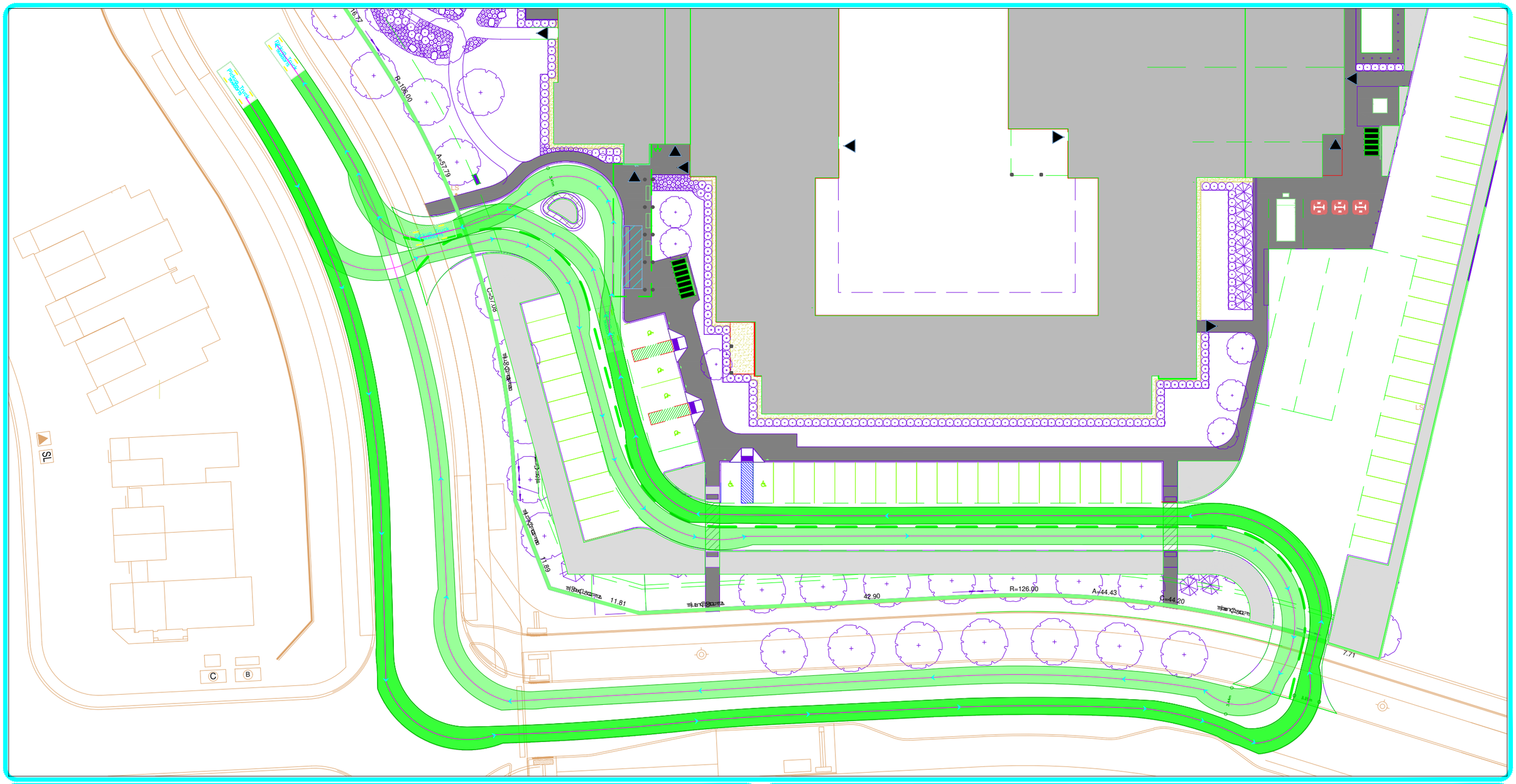
P

	meters
Width	: 2.00
Track	: 2.00
Lock to Lock Time	: 6.0
Steering Angle	: 35.9

Project: EXTEDICARE RIVERSIDE
980 EARL ARMSTRONG

Title: PASSENGER VEHICLE PARKING MOVEMENT

Approved by:	Date: 2025-04-21	Project No.: OTT-25014856-A0
Drawn by:	Scale:	Figure no.:



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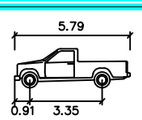
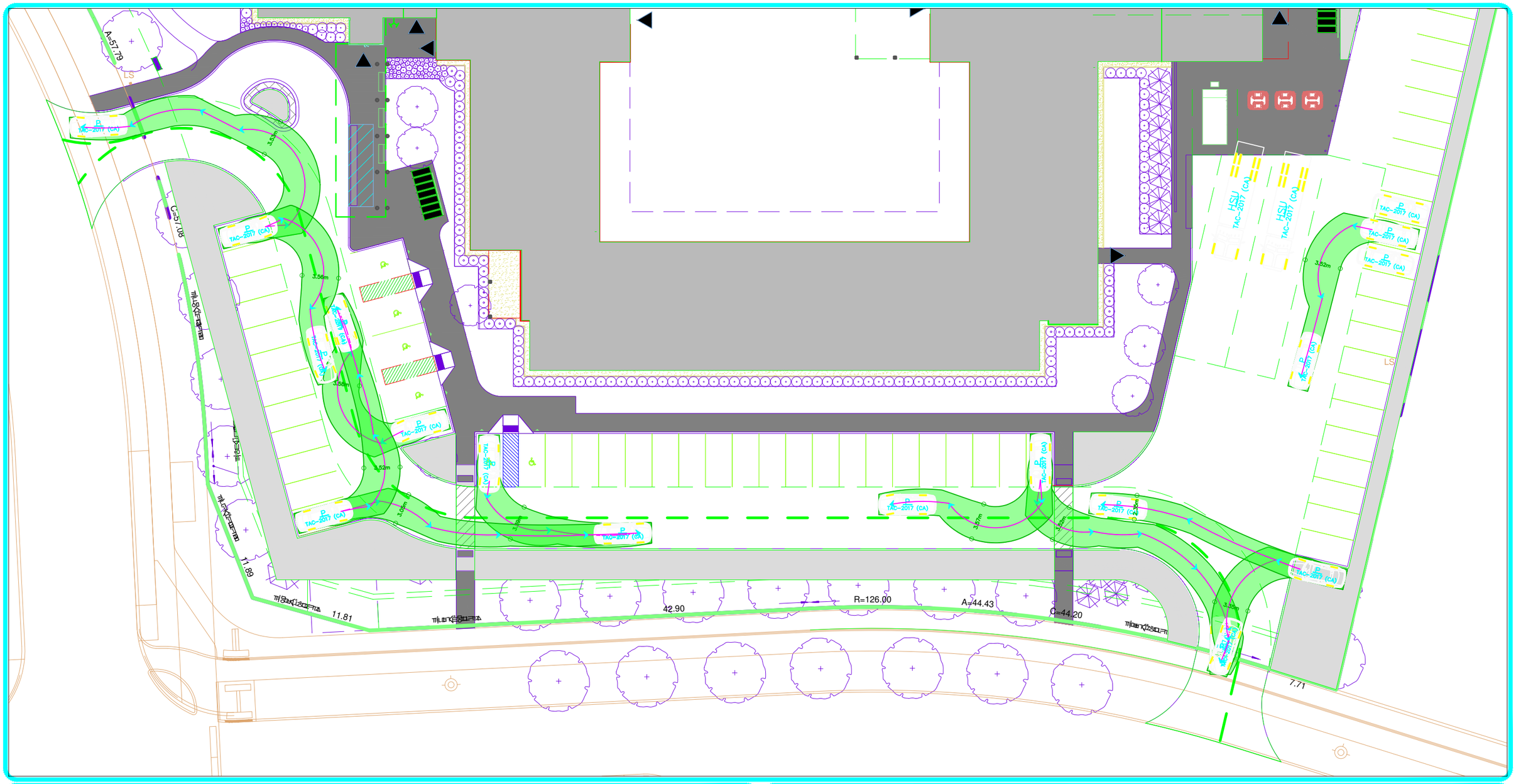


Pickup Truck

	meters
Width	: 2.13
Track	: 1.83
Lock to Lock Time	: 6.0
Steering Angle	: 31.6

Project: EXTEDICARE RIVERSIDE 980 EARL ARMSTRONG		
Title: F-150 VEHICLE CIRCULATION		
Approved by:	Date: 2025-04-21	Project No.: OTT-25014856-A0
Drawn by:	Scale:	Figure no.: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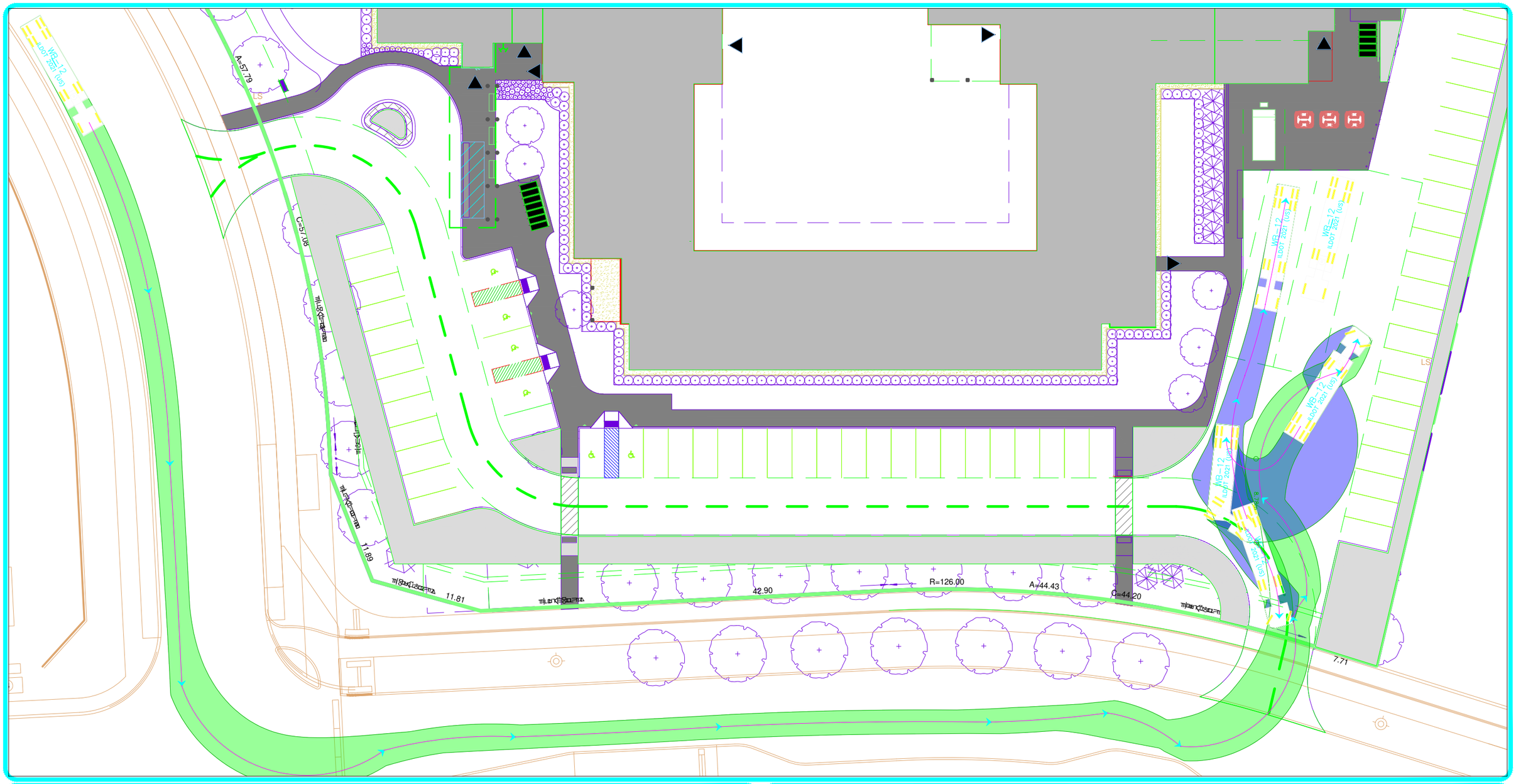
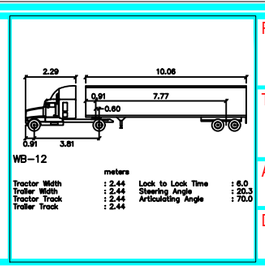
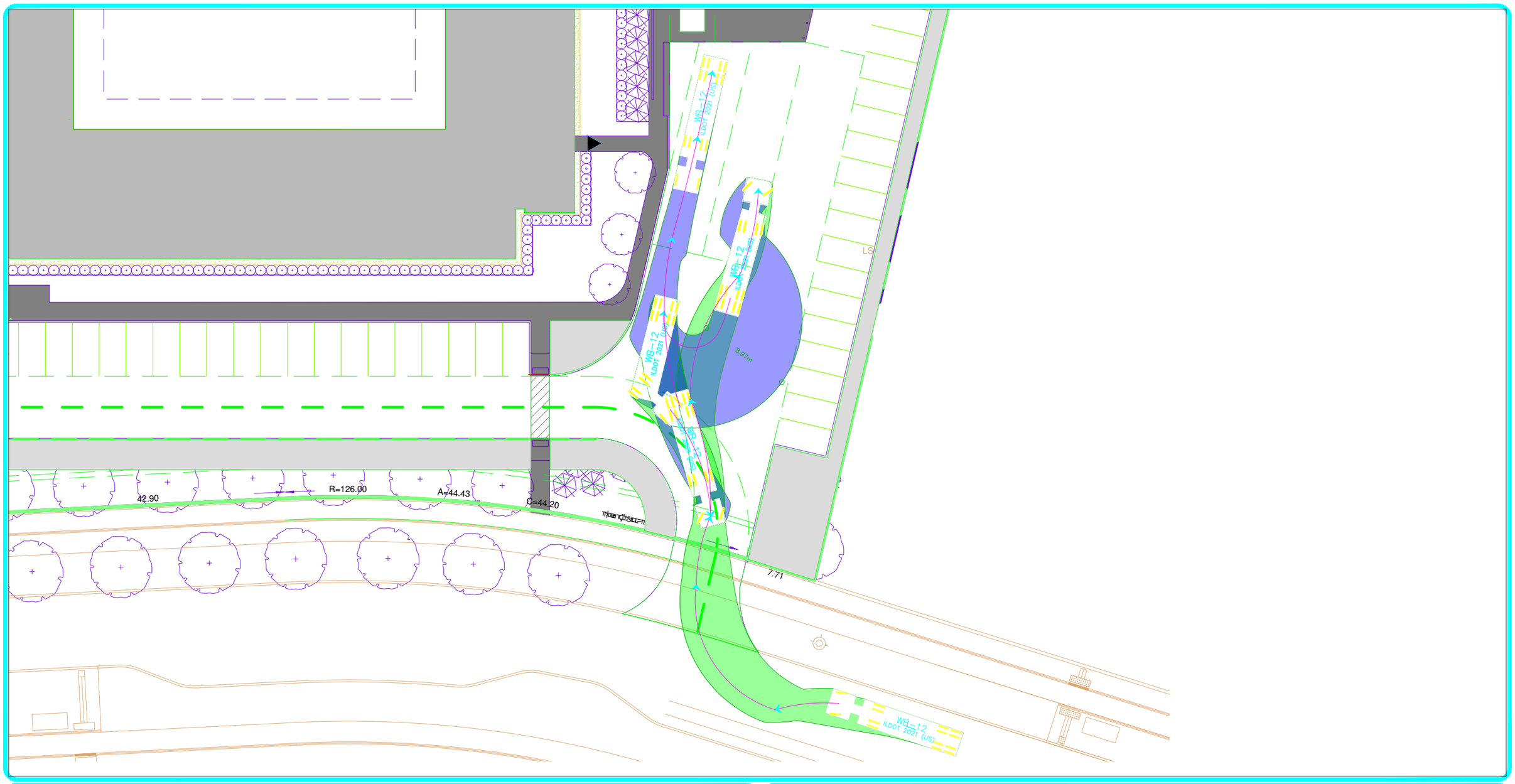
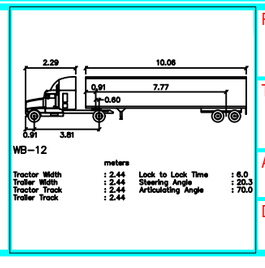




Project: EXTEDICARE RIVERSIDE 980 EARL ARMSTRONG		
Title: WB-12 VEHICLE PARKING MOVEMENT		
Approved by:	Date: 2026-04-21	Project No.: OTT-25014856-A0
Drawn by:	Scale:	Figure no.:





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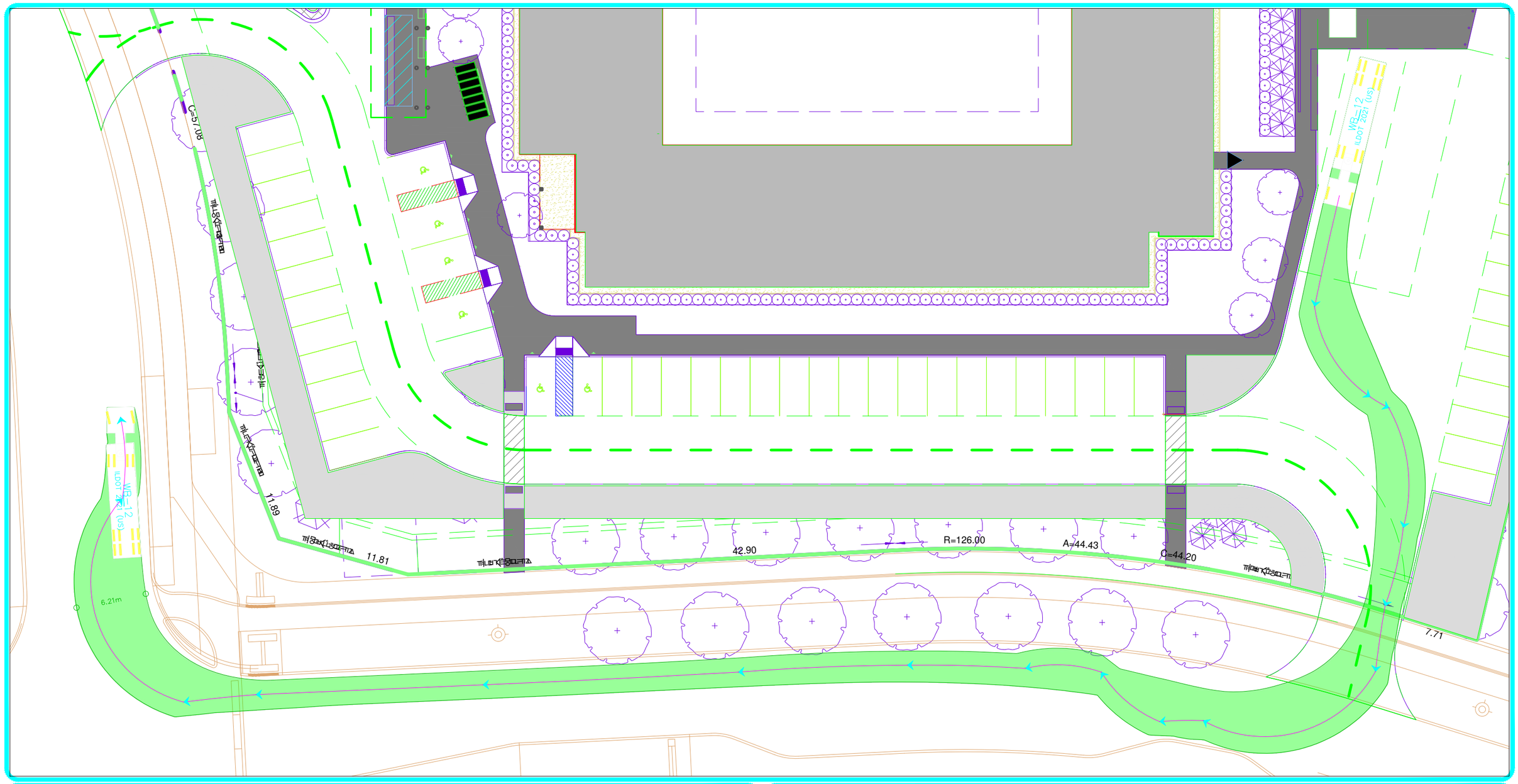

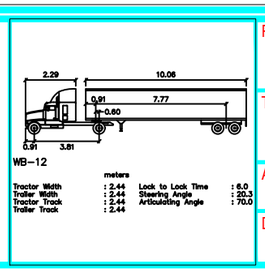

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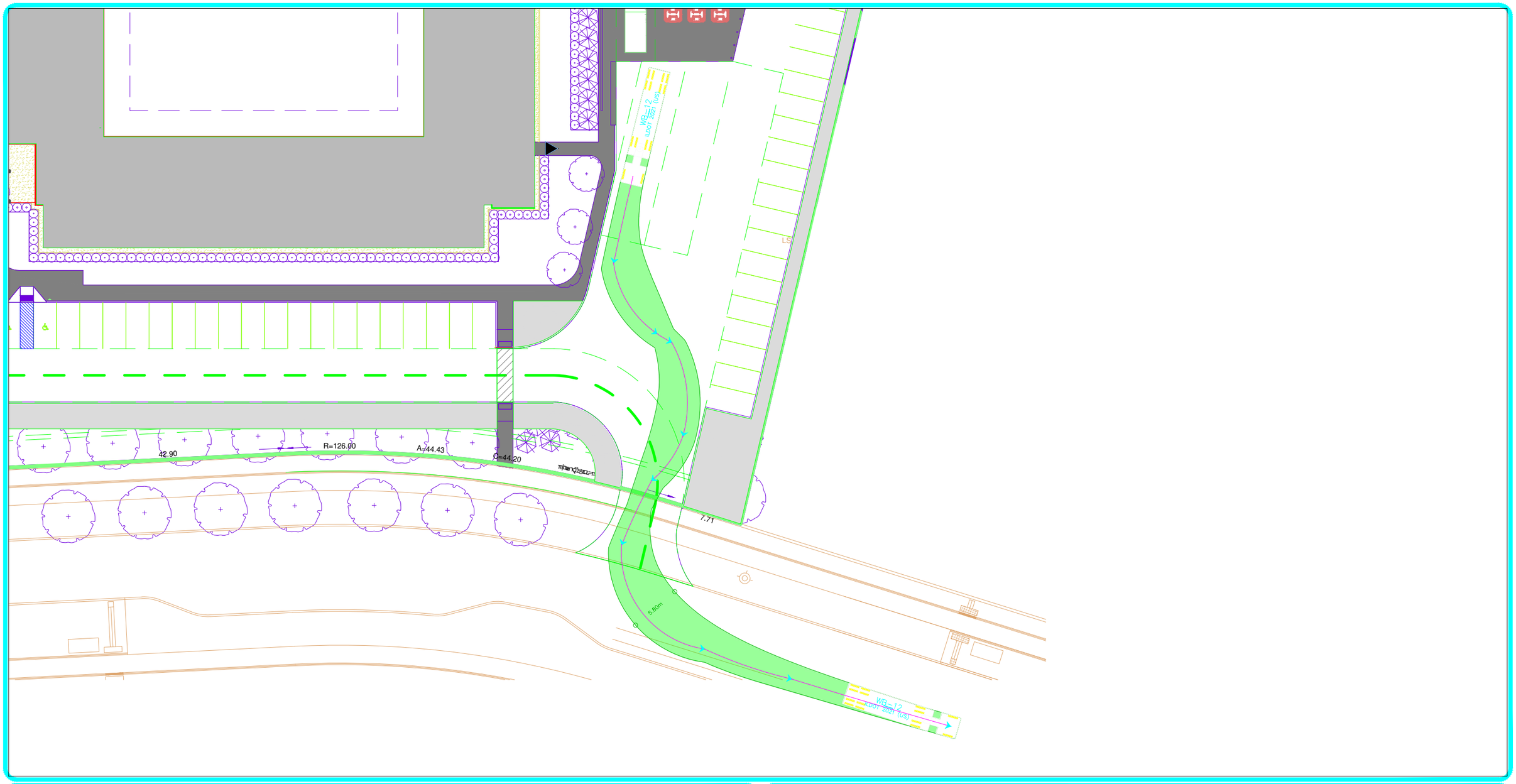

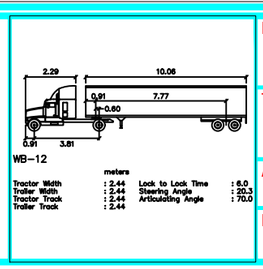

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