QuantumTraffic

Traffic Impact Assessment Report

Section 7, Phillip

Proposed Mixed-Use Development

06/03/2026

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Document Control

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Abbreviations

Key Term or Abbreviation	Definition
ACT	Australian Capital Territory
AS2890.1	Australian Standard 2890 Part 1: Off-Street Car Parking
ATPT	Active Travel Planning Tool
B85	85th Percentile Design Car
B99	99th Percentile Design Car
CIT	Canberra Institute of Technology
DA	Development Application
DOS	Degree of Saturation
GFA	Gross Floor Area
GLFA	Gross Leasable Floor Area
HRV	Design Heavy Rigid Vehicle
LOS	Level of Service
NCC 2022	National Construction Code 2022
NLA	Net Leasable Area
SA2	Statistical Area 2
TIA	Traffic/Transport Impact Assessment
ZEV	Zero-Emission Vehicle

1 Introduction

1.1 Project Background

Quantum Traffic have been engaged (in February 2025) by Hellenic Property Investments 2 Pty Ltd to undertake a Traffic Impact Assessment (TIA) in relation to the Development Application (DA) for Woden Village, a proposed mixed-use development on Section 7, Phillip. Woden Village is proposed to comprise three (3) buildings across the site, including a commercial carpark, as well as community, office and residential land uses.

As this analysis was initiated prior to 1 July 2025, it has been undertaken with reference to the *Guidelines for Transport Impact Assessment (2016)*.

Table 1 below presents the comments received in relation to past versions of this report, along with references/responses to address those comments.

Table 1: Comments and References/Responses

Comment	Reference/Response
Further Information Request (28 November 2025)	
15. Section 2.6.2, pg. 25: It seems that the SIDRA 2025 base scenario has not been calibrated and validated to represent current traffic conditions. From the modelling results (Table 4), all intersections appear to be working well (i.e. LOS C or lower) without much congestion (i.e. DOS < 0.85). However, in reality, intersections along Launceston St, Melrose Dr, Easty St and Yamba Dr experience traffic operation issues especially in the peak hours, with longer delays, queueing and congestion, as shown in the screenshots below from Google Maps. Therefore, please calibrate/ validate the existing base models, and then use the calibrated and validated models for the future base and project case scenarios. If needed, it is advised to discuss with Roads ACT and seek the existing network performance (such as queuing, delays, etc), as they monitor this network through PTZ cameras and other ITS tools. As the future/ project case models were developed based on the non-calibrated/ validated models, it is anticipated that the network performance outputs are likely undermined. Therefore, CED are unable to accept these results, and subsequent study outputs and conclusions.	The 2025 existing conditions intersection performance analysis (section 2.6, page 29) has been revised (using the 'area type factor' parameter) to better reflect the identified traffic conditions (Figure 9, page 30). These calibrated models have then been carried forwards to form the basis of the base and development scenarios.
16. In addition, it seems that pedestrian crossings have not been coded at the signalised intersections and need to be coded. Refer to Active Travel comments as well.	When pedestrian crossings are included in the intersection analysis models, the SIDRA software calculates minimum cycle times which exceed the average cycle times observed under the existing conditions. As such, the pedestrian crossings have been omitted from the model in order to accurately represent existing traffic signal timings (which include the time required to operate the pedestrian phases).

Comment	Reference/Response
17. Section 2.6.2, pg. 25: Further to this, it is also noted that during initial discussions with Quantum Traffic in April 2025, it was agreed that traffic modelling analysis is to be undertaken using microsimulation modelling. Why has SIDRA intersection analysis been used instead?	While we were initially requested to utilise the Woden Valley Reference Traffic Model (WVRTM) for this analysis, a parallel analysis for a separate proposal identified critical limitations with the WVRTM. As we were requested to revert to SIDRA when analysing that other proposal, we similarly reverted to SIDRA in the analysis of this proposal.
18. Section 2.6.2, pg. 25: How was background traffic growth analysed?	Section 2.4.1 (page 29) has been added to clarify that 2.0% per annum linear growth in traffic demands, has been adopted of over the analysis period.
19. Section 2.10, pg. 30: Given there are a high number of vulnerable road users in the area given the town centre location and crash data also showed collision with a pedestrian, please detail any observed road user behaviour and road safety risks to all road users.	The factors which contributed to the reported pedestrian crash on the subject site (ID: 290953) are not known. The proposed on-site car parking has been designed in accordance with AS2890.1, and to minimise the conflicts between pedestrians and circulating vehicles.
20. Section 3.2, pg. 32: Description of site accesses near the Callam Street/Neptune/Street/Wilbow Street intersection and the Wilbow Street slip lane does not makes sense as this area is approximately 300m south of the site.	Section 3.2 (page 39) has been revised to correct this error.
21. Section 3.2, pg. 32: How do the proposed site accesses interact with existing and proposed site accesses in the area such as the Section 6, Section 35 and Section 183 Phillip? Are there any likely safety issues of the proposed site accesses given the crash history in the area, such as along Matilda Street and Bowes Street?	Sections 2.5 and 3.2 (pages 29 and 39 respectively) have been revised to include the relative distances between the proposed vehicle accesses and existing vehicle accesses located opposite. The proposed vehicle accesses are not expected to cause significant safety issues due to the clear sightlines and low vehicle speeds.
22. Tables 6&7, pg. 34: It is noted that the parking provision for non-residential landuses in particular are within the benchmarks outlined in the Commercial Zones Technical Specifications. Residential land-uses have no minimum requirements and however have been provided 292 car parking spaces for residents and 22 car parking spaces for visitors.	Table 8 (page 41) shows that despite the proposed residential land uses having no overall car parking benchmarks, 292 car parking spaces are proposed for residents in the basement of Building A, and visitors have been assumed to occupy 40 of the public car parking spaces within Building B.

Comment	Reference/Response
23. Motorcycle Parking, pg. 38: It is noted that no motorcycle parking is proposed onsite. It is up to the Statutory Planning team to determine if this is appropriate.	The Proposed Motorcycle Parking Provision section (page 45) notes that the proposed shortfall of 14 motorcycle parking spaces, compared to the suggested benchmark, is considered to be appropriate due to the oversupply of car parking spaces and the ability for motorcycles to be parked within car parking spaces.
24. Electric Vehicle Parking, pg. 40: It is noted that no electric vehicle parking is currently proposed on-site. Electric vehicle parking is to be provided on-site as outlined in the Commercial Zones Technical Specifications.	The Proposed Electric Car Parking Provision section (page 47) notes that electric car parking spaces are not shown on the plans, and hence recommends that 348 'EV ready' car parking spaces be provided in order to satisfy the relevant benchmarks.
25. Section 3.4, pg. 47: No network changes have been assumed in the future base scenarios. Given the light rail to Woden, this needs to be considered. Please refer to Light Rail comments attached as well.	Section 3.4 (page 54) has been revised to note that the proposed changes to the road network associated with Light Rail Stage 2B are independent of this proposal.
26. Table 22, pg. 48: Based on light rail modelling assumptions, a trip rate of 1 trip/100m2 GFA for office has been adopted. Hence, please update the trip rate of 0.99 trips/100m2 GFA to 1 trip/100m2 GFA for the office land-use.	The analysis has been revised to update the peak hour traffic generation rates for office (as well as community and non-retail commercial) land uses from 0.96-0.99 vehicle trips per 100m^2 GFA to 1 vehicle trip per 100m^2 GFA. Across the proposed 17,847m^2 GFA of these land uses, this reflects increases in the order of 2-8 peak hour vehicle trips.

Comment	Reference/Response
27. Section 4.2.1, pg. 49: Traffic signals have been optimised. This assumption cannot be confirmed given the proposed light rail to Woden and the changes to signal timings are unknown. In addition, in all scenarios, it seems that pedestrian crossings have not been coded at the signalised intersections and need to be coded.	As noted in the response to item 16, the pedestrian crossings have been omitted in order to accurately model the existing traffic signal timings (including the time required to operate the pedestrian phases). The intersection analysis undertaken for the 2030 and 2040 future analysis years (sections 2.6.2 and 4.2.2, pages 29 and 57 respectively) has been revised to assume the existing traffic signal timings are retained in the first instance. Minor modifications (shown at Table 26, page 59) are recommended to the Bowes Street / Launceston Street (taking 1s of average phase time from phase D, to give to phase G) and Launceston Street / Wisdom Street / Yamba Drive (taking 5s of average phase time from E phase, to give to D phase) intersections in the 2030 and 2040 weekday evening peak hours, in order to better accommodate the anticipated development traffic demands. Given the scale of these modifications, it is anticipated that the SCATS controller would dynamically adjust the phase timings based on the detected traffic demands. Furthermore, and noting the number of pedestrians which cross these intersections during the weekday evening peak hours, these changes would not be expected to impact the operation of pedestrian phases.
28. Sight Distance, pg. 58: It is noted some access driveways proposed do not provide adequate sight distance. Adequate sight distance must be provided at the verge crossings. If this cannot be achieved, an analysis of risks and associated severity must be provided, along with mitigation measures.	The Sight Distance at Access Driveway Exits section (page 68) recommends that low-height landscaping be provided to guide pedestrians away from the pedestrian sight triangle at Building A, and that further modifications to the structure and/or the vehicle exit be made at Building C, in order to provide a pedestrian sight triangle as specified in AS2890.1.

Comment	Reference/Response
29. Gradients of access driveways, pg. 59: Boom gates are to be relocated to allow for vehicles to stop along a horizontal grade.	The Gradients of Access Driveways section (page 69) recommends that the boomgates at the exit from the basement of Building B, and the exit from Building C, be relocated, to the north and south respectively, in order to allow exiting vehicles to stop on a grade of no more than 1:10.
30. Table 28, pg. 59: Please outline if there is adequate space onsite to accommodate the calculated queuing areas at the access points?	Table 31 (page 69) has been revised to include the available queue storage at each of the proposed access controls.

1.2 Purpose of this Report

This report summarises the various traffic engineering and transport planning assessments undertaken in relation to the proposed development.

1.3 Site Location and Context

The site is located within Woden Town Centre, has an area of 14.97ha and is bounded by Bowes Street to the west and south, Callam Street to the east and Matilda Street to the north, as shown at Figure 1 below. Notable land uses located near the subject site include:

- Canberra Institute of Technology (CIT) Woden Campus, located immediately southeast of the subject site,
- Hellenic Club Woden, located immediately north of the subject site,
- Woden Town Square, located approximately 100m southwest of the subject site,
- Woden Library, located approximately 220m southwest of the subject site,
- Westfield Woden, located approximately 250m south of the subject site,
- Eddison Park, located approximately 280m east of the subject site,
- Canberra College Phillip Campus, located approximately 350m northeast of the subject site, and
- Phillip Swimming and Ice Skating Centre, located approximately 400m northwest of the subject site.

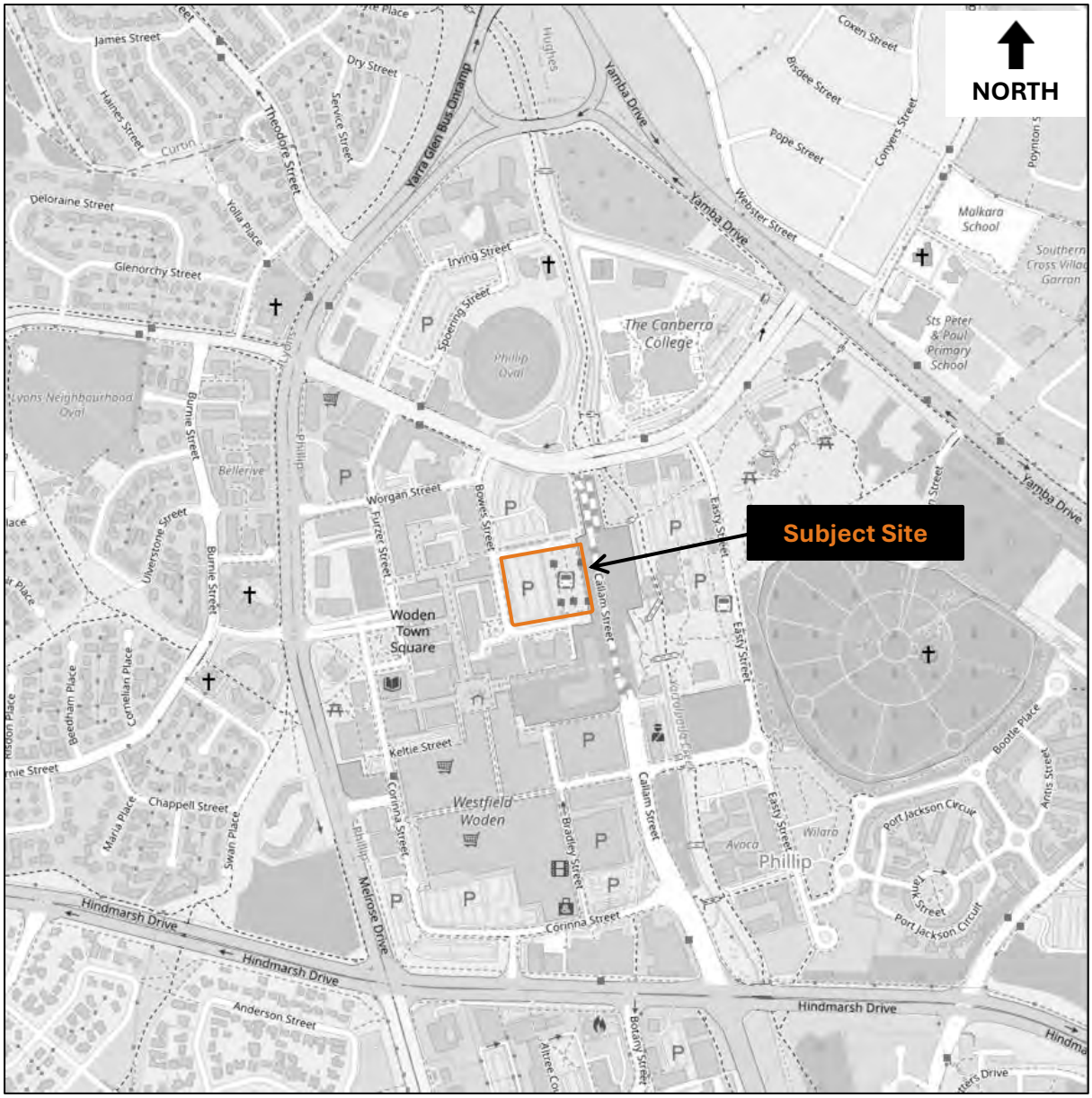


Figure 1: Locality Plan (source: OpenStreetMap)

1.4 Study Area

The study area for this analysis extends along Launceston Street from Melrose Drive to Yamba Drive and along Bowes Street from Launceston Street to the southern boundary of the subject site.

1.5 Assessment Methodology

The performance of the analysed intersections has been assessed using the SIDRA Intersection 8 software package. The SIDRA software quantifies intersection performance using the following four (4) measures:

- Degree of Saturation (DOS), which represents the ratio of traffic demands to theoretical intersection capacity,
- Average delay, in seconds, experienced by vehicles at the intersection,
- Level of Service (LOS), which converts average delay to a letter grade, and

- 95th percentile queue length, in metres, which reflects the length of queueing that has a 5% chance of being exceeded.

The *RMS Traffic Modelling Guidelines* specify that the maximum practical DOS for various intersection types are as set out at Table 2 below. Beyond these values, traffic flows can become unstable, with minor flow disruptions likely to cause outsized delays and queue lengths.

Table 2: Practical Capacity of Intersections

Intersection Type	Maximum Practical DOS
Traffic Signals	0.90
Roundabouts	0.85
Priority-Control	0.80

The *RMS Guide to Traffic Generating Developments (2002)* defines the LOS criteria as presented at Table 3 below.

Table 3: LOS Criteria for Intersections

Level of Service	Average Delay
A	≤ 14s
B	15s – 28s
C	29s – 42s
D	43s – 56s
E	57s – 70s
F	> 70s

The 95th percentile queue lengths have been assessed against the available storage length within each respective lane.

It is important to acknowledge that the consideration of these measures introduces an inherent bias which prioritises the movement of motor vehicles at the exclusion of all other uses of the road reserve (i.e. movement of people on foot, by bicycle, by public transport or in private vehicles; the movement of goods; the use of the public realm as a destination rather than a thoroughfare). While it is appropriate, yet sub-optimal, to consider the performance of sections of the road network which serve a predominantly 'movement' function, in these terms, these measures are counter-productive when considering the performance of the sections of the road network which serve a predominantly 'place' function. This bias is in direct opposition to the Territory's transport vision for *"a world class transport system that supports a compact, sustainable and vibrant city"*, as low-occupancy motor vehicles are a uniquely space-inefficient, unsustainable, and isolating form of transport. While the consideration of such a narrow set of parameters has become standard practice within the traffic engineering industry, this narrow perspective has also resulted in increasing levels of car dependency. In urban environments such as this, it is therefore necessary to consider modifications to transport infrastructure which will support the strategic vision for the transport network and public realm, rather than simply seeking to accommodate ever-increasing forecasted traffic demands.

1.6 Strategic Context

1.6.1 ACT Planning Strategy 2018

The ACT Planning Strategy 2018 identifies a vision for Canberra to be *"a sustainable, competitive and equitable city that respects Canberra's unique legacy as a city in the landscape and the National Capital, while being responsive to the future and resilient to change"*.

The strategy commits to delivering up to 70% of new housing within the existing urban footprint, particularly in areas well served by public transport (i.e. within 800m of light rail and rapid bus corridors). The strategy also identifies a need to reduce car dependency by investing in active travel infrastructure and enhancing public transport options. Overall, the transport vision presented in the Strategy supports inclusive, walkable neighbourhoods and fosters equitable access to jobs, services, and public spaces for all residents.

1.6.2 ACT Transport Strategy 2020

The ACT Transport Strategy 2020 presents a vision for *"a world-class [transport] system that supports a compact, sustainable, and vibrant city"*.

The strategy prioritises the integration of transport and land use planning to deliver a more efficient urban form, aligning with the ACT Planning Strategy 2018 and the Climate Change Strategy 2019–2025. The strategy acknowledges that while transport planning and investment has historically prioritised road expansion to support urban growth, this approach leads to higher future maintenance costs, increased car dependency, and greater greenhouse gas emissions, while failing to address the root causes of congestion. In contrast, the ACT Transport Strategy 2020 signals a shift towards investing in public transport, walking, and cycling infrastructure in support of the vision to create a more compact, sustainable, and liveable city, while reducing transport emissions and improving transport choice.

1.6.3 Climate Change Strategy 2019-2025

The ACT Climate Change Strategy 2019–2025 identifies transport as a major contributor to emissions and a critical focus area for achieving the Territory's emissions reduction targets. Since electricity emissions have been eliminated, transport accounts for approximately 60% of ACT emissions, making it the largest single sectoral source.

To address this, the strategy outlines a broad range of actions focused on transitioning to zero-emissions transport, reducing reliance on private vehicles, and encouraging more sustainable travel behaviours. Key priorities include:

- Improving public transport services (e.g. expanding light rail and rapid bus networks) to increase uptake.
- Encouraging active travel through expanded cycling infrastructure, improved walkability, and safety enhancements.
- Reducing car use by trialling car-free zones, supporting car share schemes, and planning for a more compact, efficient urban form.
- Accelerating the shift to zero-emissions vehicles (ZEVs) via incentives (e.g. rebates, registration discounts), supporting public charging infrastructure, and transitioning the government fleet—including buses—to ZEVs.

- Smarter use of roads, with a focus on prioritising space for public and active transport, implementing smart city technologies, and exploring options for efficient road pricing or registration reform.

The strategy integrates transport with broader planning and climate policies, recognising the need for coordinated action across sectors and levels of government. It highlights that community participation, infrastructure investment, and regulatory changes will all be essential to meeting the 2045 net zero emissions goal.

1.6.4 Territory Plan 2023

The Territory Plan 2023 is a notifiable instrument prepared and administered by the Territory Planning Authority under Section 45 of the Planning Act.

The Territory Plan 2023 provides a statutory framework for the future development and conservation of land within the ACT, with the objective of ensuring that the planning and development of the ACT provides the people of the ACT with an attractive, safe, and efficient environment in which to live, work, and have their recreation, in a manner which is not inconsistent with the National Capital Plan.

Part B – Maps

The subject site is located in the locality of Phillip within Woden District, is zoned as CZ2: Business Zone and is not subject to any overlays, as shown at Figure 2 below.

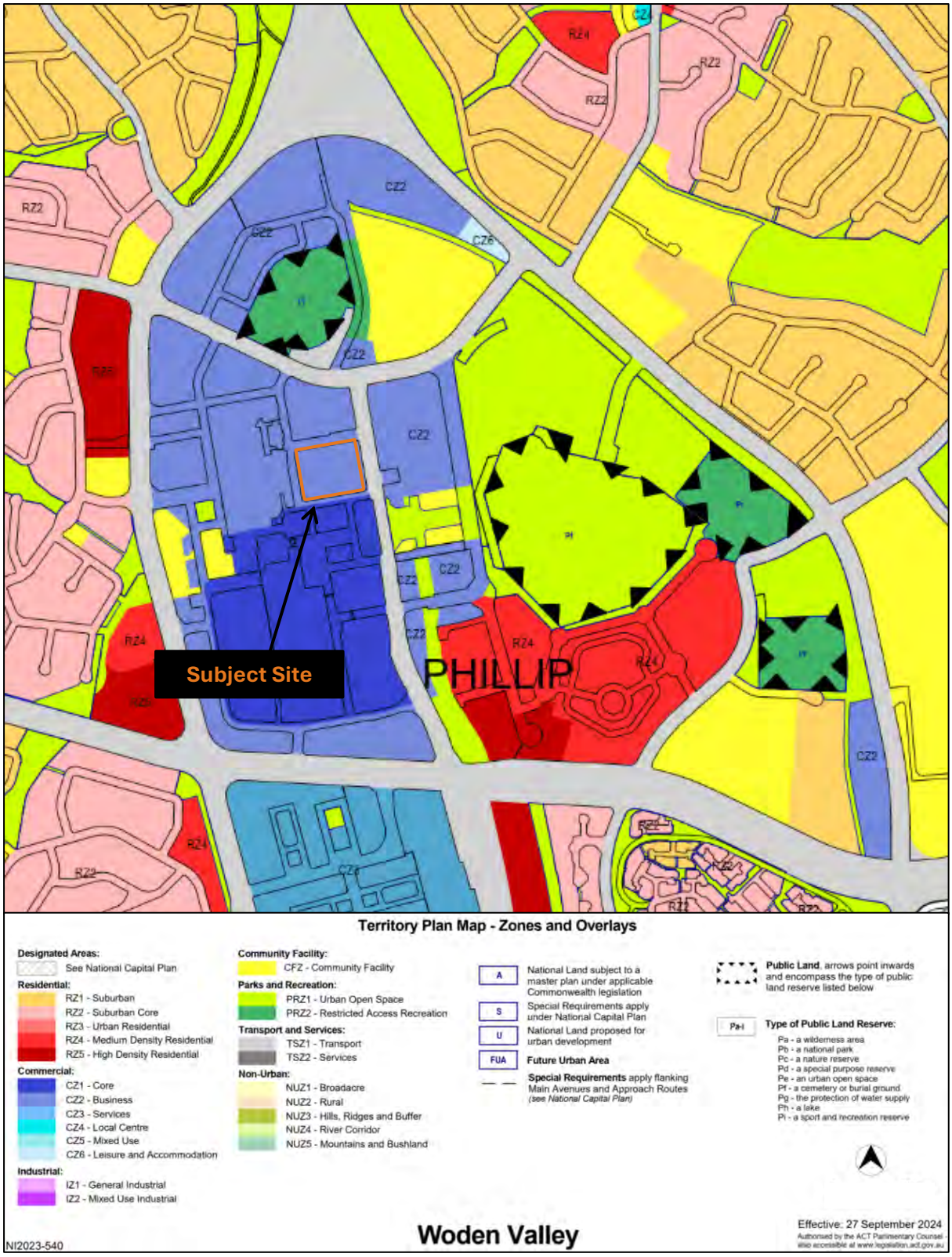


Figure 2: Zoning and Overlays (source: ACTmapi)

Part D – District Policies

District Policies are a central feature of the ACT's planning framework, guiding development based on strategic planning and analysis specific to each district. They set out specific development considerations and requirements which take precedence over the general requirements identified elsewhere within the Territory Plan 2023.

Policy Outcomes

Policy outcomes describe the desired development outcomes to be achieved and identify features that are of particular importance in a particular district.

The transport-related policy outcomes, identified in the Woden District Policy, which relate to the subject site include:

3. Develop Woden town centre as an educational and commercial hub, building on the Canberra Institute of Technology and the transformational potential of the future light rail connectivity and new residences.
5. Plan for and deliver light rail from the City Centre to Woden, as the central spine of the public transport network in south Canberra.
8. Deliver urban transformation and support new sustainable communities linked to the future light rail corridor between Curtin and Mawson.

Assessment Outcomes

Assessment outcomes reflect the broader policy goals of the Territory Plan and are the primary basis for assessing DAs within the ACT.

The Woden District Policy does not list any area specific assessment outcomes which apply to the subject site.

Assessment Requirements

Assessment requirements set the mandatory development controls within specific areas.

The subject site is located within the RC1 area within Figure 10 of the Woden District Policy (replicated at Figure 3 below).

Figure 11 of the Woden District Policy (replicated at Figure 4 below) identifies a proposed road which bisects the subject site in a north-south direction and a landscaped area across the northern part of the subject site.

The subject site is identified as an existing carpark in Figure 13 of the Woden District Policy (replicated at Figure x below). Bowes Street to the west of the subject site and Callam Street to the east of the subject site are shown as primary active frontages, and Matilda Street to the north of the subject site is shown as a secondary active frontage in this figure.

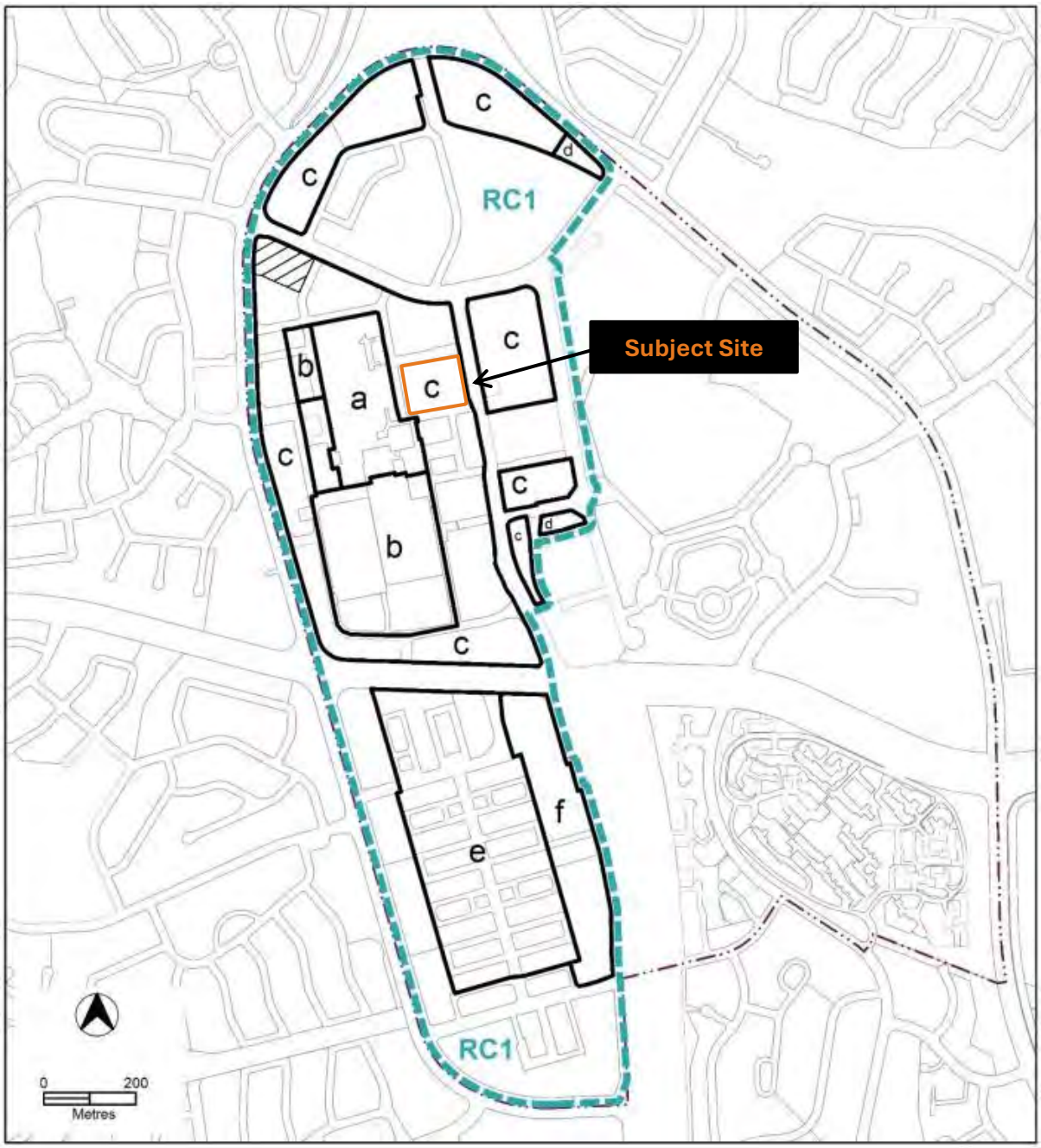


Figure 3: Phillip (Town Centre) – Building Heights, Land and Site Use and Building Design (source: Figure 10 of Woden District Policy)

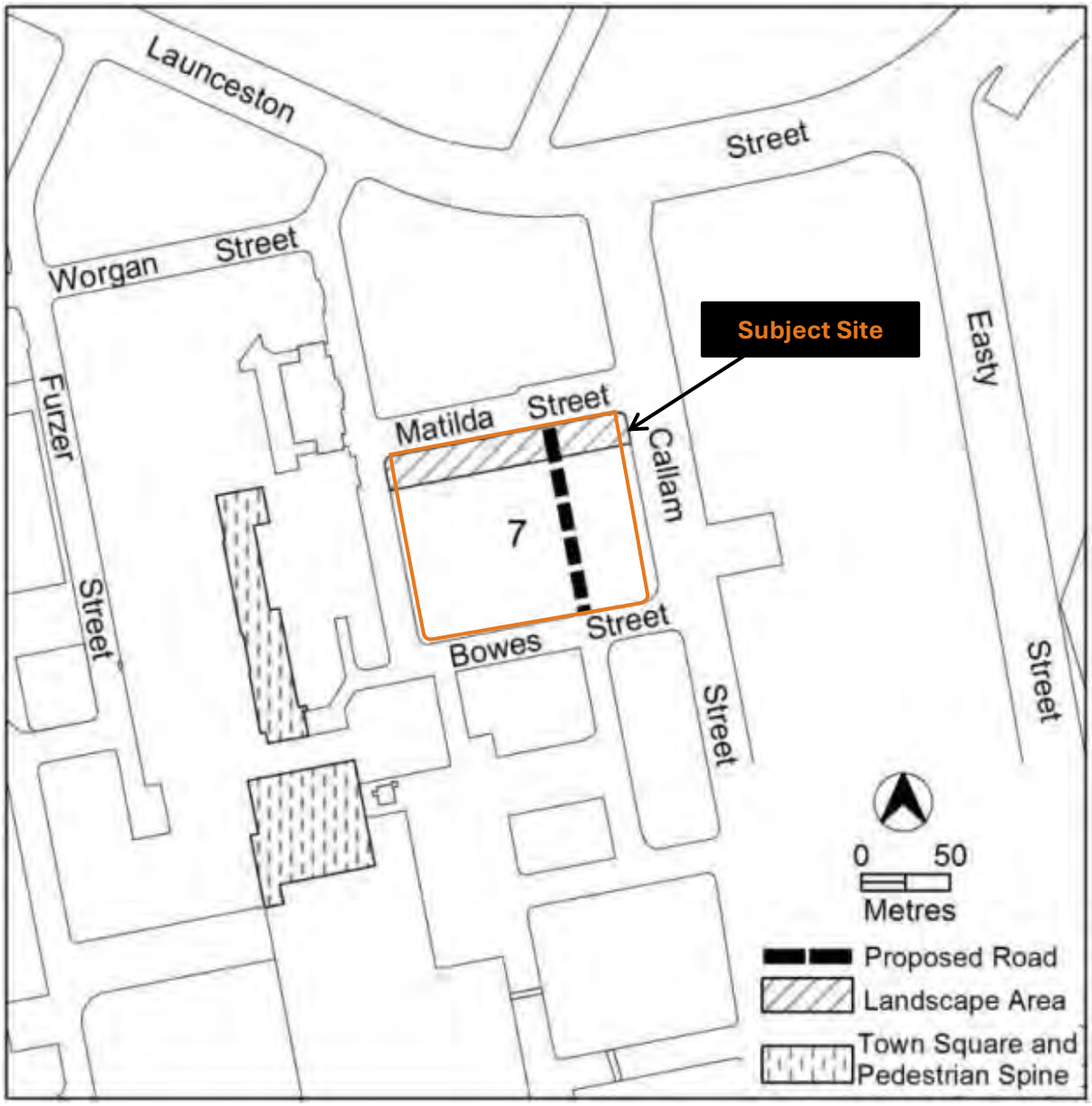


Figure 4: Phillip – Public Space and Roads (source: Figure 11 of Woden District Policy)

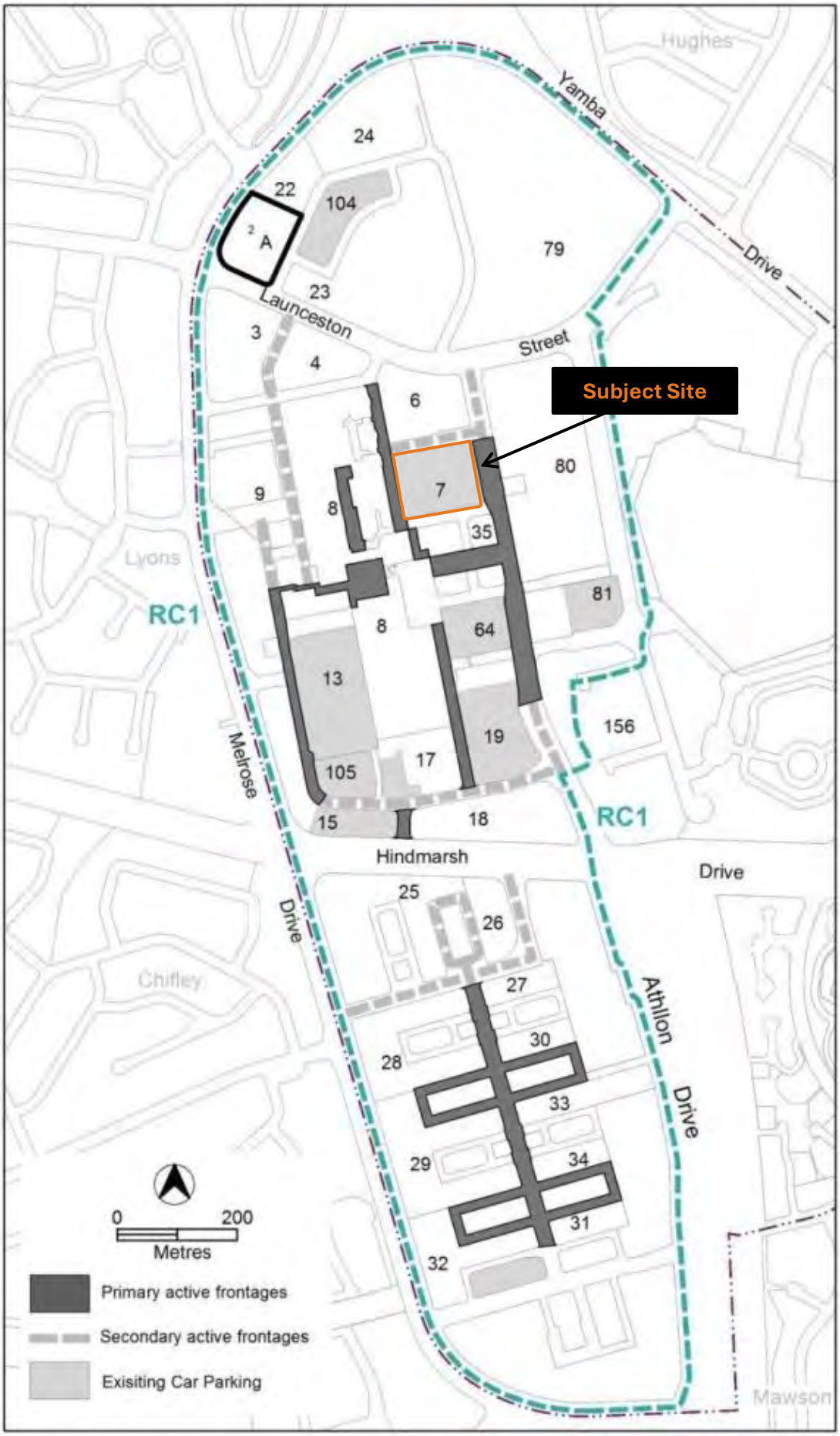


Figure 5: Phillip – Active Frontages and Parking (source: Figure 13 of Woden District Policy)

As such, the following transport-related assessment requirements apply to the subject site:

30. In the RC1 area in Figure 10, development is consistent with the following, where relevant:
    b) Provide clear and safe pedestrian connections between residential developments fronting Melrose Drive and Eddison Park.
    e) Provide a street network designed for low vehicle speeds and easy pedestrian access.
31. A public road and 20m wide public landscaped area are provided in accordance with Figure 11.
51. Development of public car parking areas identified in Figure 13 provides for car parking that is generated by the development and makes a substantial contribution to the long term parking supply for the town centre as endorsed by the Territory.

Part E – Zone Policies

Zone policies in the ACT planning framework generally outline the desired outcomes, assessment criteria, and key requirements that distinguish each zone.

Policy Outcomes

Policy outcomes describe the desired development outcomes to be achieved and identify features that are of particular importance in a specific zone.

The transport-related policy outcomes, identified in the Commercial Zones Policy, which relate to developments in CZ2: Business Zones include:

1. Provide for office and business sites that are accessible to public transport and convenience retailing and services.
4. Create vibrant lively pedestrian routes and public spaces.
6. Provide a high-quality public space by facilitating active uses on ground floor level that connect with the wider open space, pedestrian and cycle networks to promote active travel and living.
7. Encourage an attractive, safe, well-lit and connected pedestrian environment with convenient access to public transport.

Assessment Outcomes

Assessment outcomes reflect the broader policy goals of the Territory Plan and are the primary basis for assessing DAs within the ACT.

The transport-related assessment outcomes, identified in the Commercial Zones Policy, include:

Access and Movement:

7. The functionality and layout of the development is accessible and adaptable while achieving good connections with the surrounding area. This includes consideration of traffic flow and passive surveillance.
8. The development encourages active travel through safe and convenient access to the active travel network.

9. Access to, from and within the site permits safe and legible movement while catering for all users (including pedestrians). This includes consideration of vehicle manoeuvrability and access routes.

Parking, Services and Utilities:

24. The development provides electric vehicle parking and access to charging locations in multi-unit housing and commercial buildings.
25. The development provides appropriate end-of-trip facilities in buildings, which includes secure bicycle parking and change rooms (including showers, lockers and drying facilities).
26. Vehicle and bicycle parking sufficiently caters for the development while minimising visual impacts from the street or public space. This includes consideration of parking location, dimensions and number of spaces provided.

Assessment Requirements

Assessment requirements set the mandatory development controls within specific zones.

The Commercial Zones Policy does not list any transport-related assessment requirements which apply in CZ2: Business Zone.

1.7 Report Structure

This report has been structured as follows:

- **Section 2** documents the existing and assumed future base conditions,
- **Section 3** presents the traffic engineering and transport planning details of the proposed development,
- **Section 4** presents an assessment of the likely traffic impacts associated with the operation of the proposed development,
- **Section 5** presents a traffic engineering design review of the proposed development, and
- **Section 6** presents the key findings from this analysis.

2 Existing and Planned Conditions

2.1 Land Use Type

The aerial photograph at Figure 6 below shows that the subject site currently accommodates a commercial carpark (244 car spaces) and the temporary Woden Interchange.

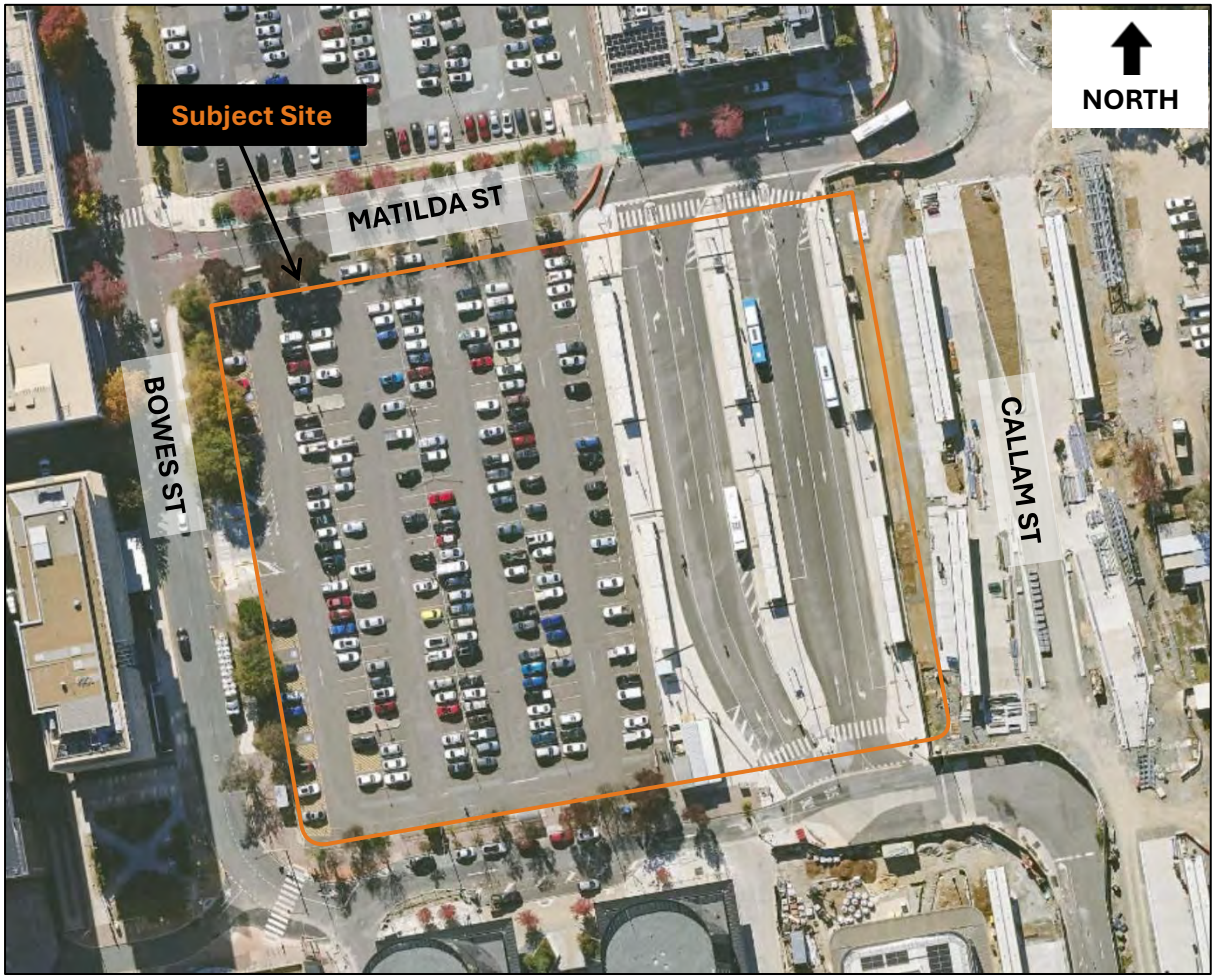


Figure 6: Aerial Photograph (source: ACTmapi)

This analysis assumes that the commercial carpark would remain on the subject site in the future base scenarios, but that the temporary Woden Interchange would be replaced by the Woden Interchange, currently under construction on Callam Street.

2.2 Travel Pattern

Data collected at the 2021 Census indicates that both residents and workers of the Phillip SA2 statistical area, travelled to work primarily via private motor vehicle (68% and 83%, respectively), followed by public transport (14% and 10%, respectively) and active transport (17% and 6%, respectively). It is noted that the mode shares presented at Table 4 below include only those who reported a mode of travel to work (i.e. excludes those not working, working from home, or not reporting how they travelled to work).

Table 4: Existing Mode Shares – Residents and Workers of Phillip SA2

Travel Mode		Residents	Workers
Public Transport	Train	-	-
	Bus	14%	10%
	Ferry	-	-
	Tram / Light Rail	-	-
	Taxi / Ride-share Service	1%	-
Vehicle	Car As Driver	61%	75%
	Car As Passenger	7%	7%
	Truck	-	-
	Motorbike / Scooter	-	1%
Active Transport	Bicycle	1%	1%
	Walked Only	16%	5%
Other	Other Mode	-	-

2.3 Surrounding Road Network Description

Bowes Street is a minor collector road which extends approximately 380m from Launceston Street in the north to the southeast corner of the subject site. Adjacent to the subject site, Bowes Street comprises a single carriageway of approximately 9m width which accommodates a single traffic lane in each direction. Adjacent to the subject site, on-street parking is permitted only within indented parking spaces on the east side of the carriageway. Bowes Street is subject to a posted 50km/h speed limit. Active travel facilities along Bowes Street typically comprise paved verges on both sides of the roadway. Pedestrian priority (zebra) crossings are provided on the north side of the Matilda Street intersection and the southeast side of the Bowes Place intersection. Bowes Street does not form part of the heavy vehicle network but does accommodate public transport buses associated with the temporary Woden Interchange.

Matilda Street is an access street which extends approximately 150m from Bowes Street in the west to the northeast corner of the subject site. Adjacent to the subject site, Matilda Street comprises a single carriageway of approximately 8m width, which accommodates a single traffic lane in each direction. On-street parking is prohibited on both sides of the roadway by a continuous dividing line. Matilda Street is subject to the urban default speed limit of 50km/h. Active travel facilities along Matilda Street comprise a 2.0m wide shared path and a 3m wide dedicated bicycle path on the north side of the roadway. Matilda Street does not form part of the heavy vehicle network but does accommodate public transport buses associated with the temporary Woden Interchange.

Launceston Street is a major collector which extends approximately 2.42km from Hindmarsh Drive in the southwest to Yamba Drive in the northeast. In the vicinity of the subject site, Launceston Street comprises dual carriageways of approximately 9.5m width, separated by a raised median of approximately 9.5m width. Each carriageway typically accommodates an unprotected, kerbside bicycle lane and two (2) traffic lanes in a single direction. On-street parking is prohibited by the bicycle lanes. Launceston Street is subject to a posted 60km/h speed limit. Active travel facilities along Launceston Street comprise a 1.35m wide path along the south side of the roadway, and a 1.8m wide path along the north side of the roadway. Signalised pedestrian crossings are provided on all legs of the Bowes Street and Callam Street intersections. Launceston Street does not form part of the heavy vehicle network but does accommodate public transport buses.

2.4 Traffic Volumes

Classified turning movement counts were undertaken at six (6) locations near the subject site, as listed below and outlined in red at Figure 7 below:

- Launceston Street / Melrose Drive,
- Bowes Street / Launceston Street,
- Easty Street / Launceston Street,
- Launceston Street / Wisdom Street / Yamba Drive,
- Bowes Street / Worgan Street, and
- Bowes Street / Section 7 Carpark Access.

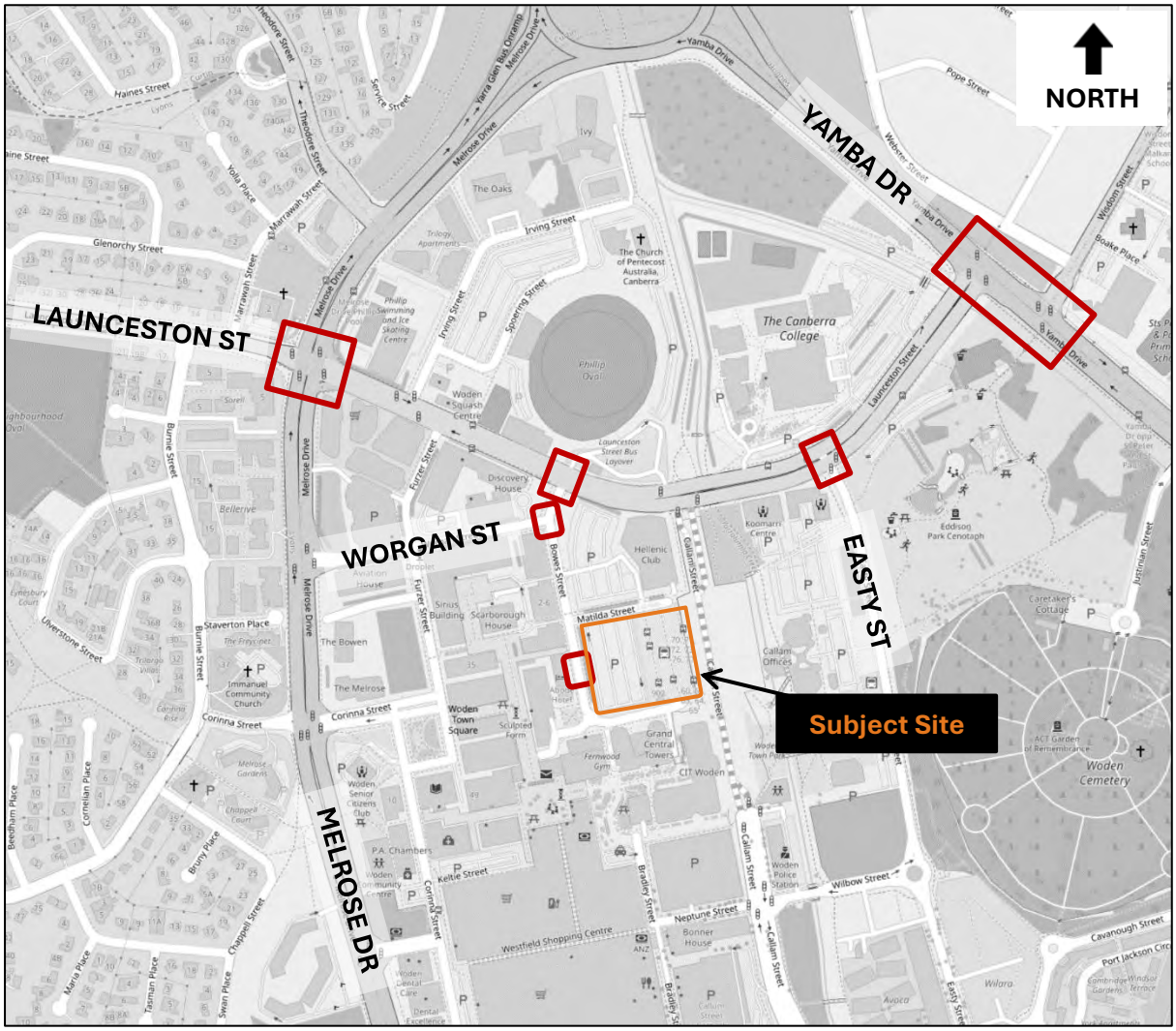


Figure 7: Turning Movement Count Locations (source: OpenStreetMap)

These surveys were undertaken throughout the day on Tuesday, 1 July 2025 to quantify the existing traffic volumes in the vicinity of the subject site. Figure 8 below presents the observed traffic volume profile and identifies a morning peak hour beginning at 8:15am and an evening peak hour beginning at 4:30pm.

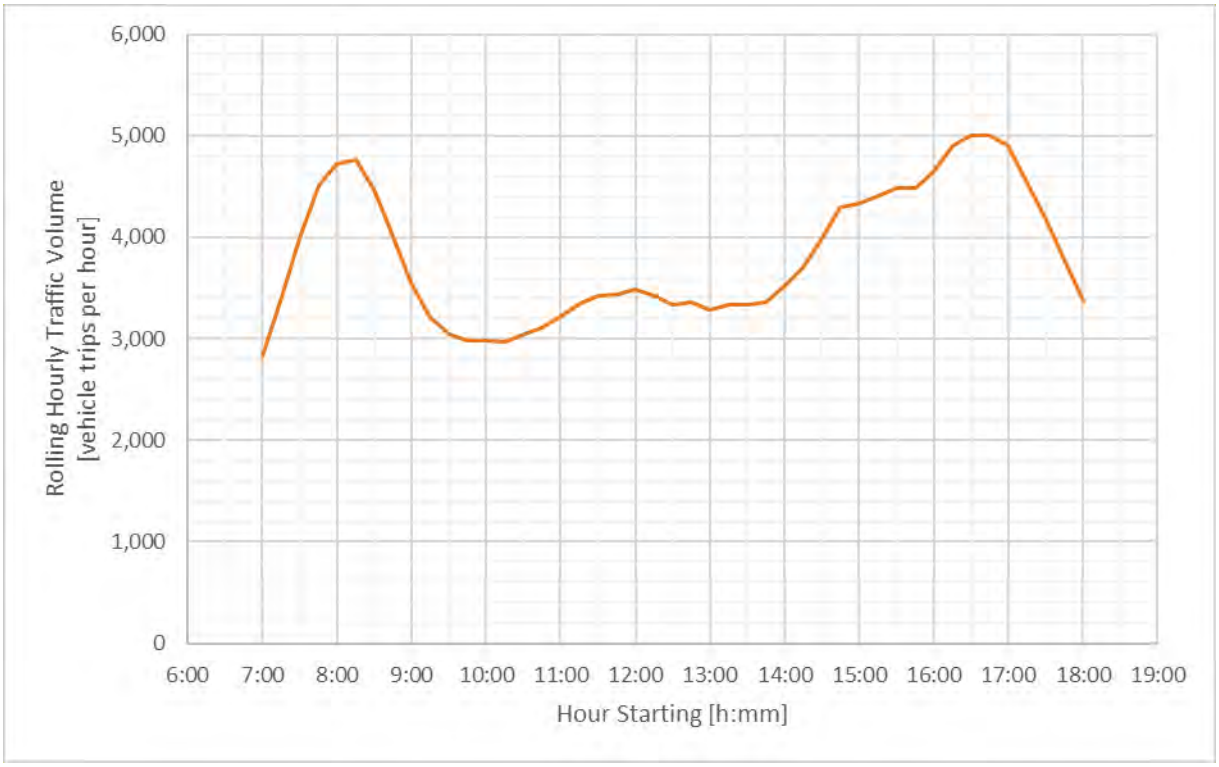


Figure 8: Traffic Volume Profile – 2025 Existing Conditions

2.4.1 Background Growth

This analysis assumes linear growth in traffic demands of 2.0% per annum over the analysis period, excluding traffic demands associated with both the existing public carpark on the subject site and the temporary redistribution of public buses to Matilda Street associated with the Woden Interchange works at the time of the traffic data collection.

2.5 Existing Site

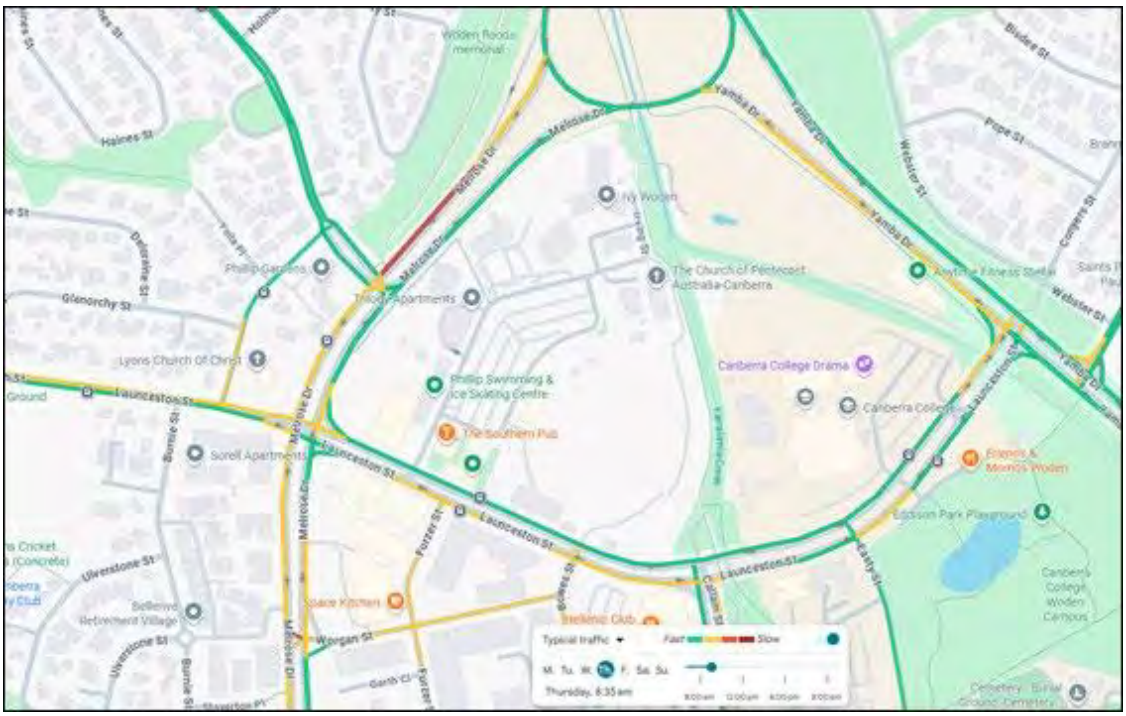
While Callam Street is currently closed to vehicle traffic between Bradley Street and Launceston Street, vehicle access to the subject site is via:

- Bowes Street, approximately 50m south of Matilda Street (and approximately 25m south of the existing vehicle egress from Section 8, Phillip), for vehicles accessing the commercial carpark,
- Bowes Street, approximately 110m east of Bowes Place (and approximately 20m east of the existing vehicle access to Section 35, Phillip), for buses accessing the temporary bus interchange, and
- Matilda Street, approximately 100m east of Bowes Street (and approximately 20m east of the existing vehicle access to Section 6, Phillip), for buses accessing the temporary bus interchange.

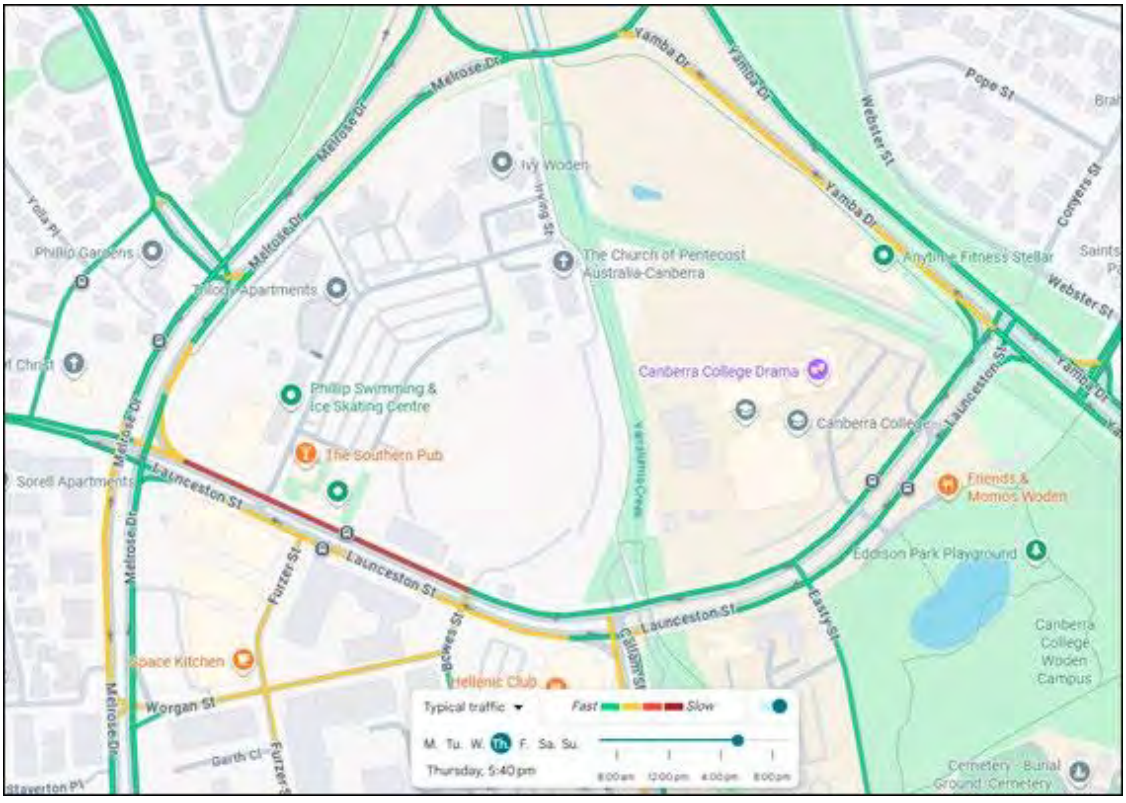
2.6 Road Network Performance

As aforementioned, this analysis utilises the SIDRA software package to analyse the performance of key intersections near the subject site. In accordance with previous advice received from CED, these intersections have each been analysed as individual sites.

Furthermore, as requested by CED, the model has been calibrated in order to generally reflect the conditions presented at Figure 9 below.



a) Weekday Morning Peak Hour



b) Weekday Evening Peak Hour

Figure 9: Calibration Queue Length Targets (source: Google Maps)

As the colour scale indicates typical vehicle speeds compared to the free-flow speed for each length of road: from green (>80% of free-flow speed), to yellow (50%-80%), red (20%-50%), and dark red (<20%), these traffic conditions generally show:

Weekday Morning Peak Hour

- A moderate reduction in vehicle speeds on the south, east, and west approaches to the Launceston Street / Melrose Drive intersection, likely associated with the significant reduction in the speed of northbound traffic on Melrose Drive on approach to the Melrose Drive / Yamba Drive / Yarra Glen roundabout,
- A moderate reduction in the speed of westbound traffic on Launceston Street from Melrose Drive to Callam Street, and
- Vehicles at the Easty Street / Launceston Street intersection operating at close to free-flow speeds, and
- Vehicles at the Launceston Street / Wisdom Street / Yamba Drive intersection operating at close to free-flow speeds, noting that the moderate reduction in the speed of northbound traffic on Yamba Drive on approach to the Melrose Drive / Yamba Drive / Yarra Glen roundabout, does not extend beyond the Launceston Street / Yamba Drive intersection.

Weekday Evening Peak Hour

- A moderate reduction in vehicle speeds on the south, and east approaches to the Launceston Street / Melrose Drive intersection, likely associated with the significant reduction in the speed of eastbound traffic on Launceston Street on approach to the Bowes Street / Launceston Street intersection,
- A significant reduction in the speed of eastbound traffic on Launceston Street from Bowes Street to Launceston Street, and
- Vehicles at the Easty Street / Launceston Street intersection operating at close to free-flow speeds, and
- Vehicles at the Launceston Street / Wisdom Street / Yamba Drive intersection operating at close to free-flow speeds, noting that the moderate reduction in the speed of northbound traffic on Yamba Drive on approach to the Melrose Drive / Yamba Drive / Yarra Glen roundabout, does not extend beyond the Launceston Street / Yamba Drive intersection.

The following key intersections have been analysed:

- Launceston Street / Melrose Drive,
- Bowes Street / Launceston Street,
- Easty Street / Launceston Street,
- Launceston Street / Wisdom Street / Yamba Drive, and
- Bowes Street / Worgan Street.

It is noted that the Callam Street / Launceston Street and Callam Street / Matilda Street intersections have not been analysed as the northern section of Callam Street was temporarily closed to all traffic, due to construction works associated with Woden Interchange, at the time of the data collection.

2.6.1 Traffic Signal Operation

The existing operation of the traffic signals at the Launceston Street / Melrose Drive, Bowes Street / Launceston Street, Easty Street / Launceston Street and Launceston Street / Wisdom Street / Yamba Drive intersections has been derived from historical SCATS data, from Tuesday, 1 July 2025. Despite the significant changes in traffic demands from the 2025 existing conditions to the 2030 and 2040 base scenarios, the existing signal phasing and phase timings have been retained in the 2030 and 2040 base scenarios, as requested by CED.

2.6.2 Modelling Results

Table 5 below summarises the performance of the road network under the existing and planned conditions. Detailed intersection performance results are provided at Appendices A-C.

Table 5: Intersection Performance Summary – Existing and Planned Conditions

Intersection	2025 Existing Conditions		2030 Base Scenario		2040 Base Scenario	
	DOS	Delay (LOS)	DOS	Delay (LOS)	DOS	Delay (LOS)
Weekday Morning Peak Hour						
Launceston St / Melrose Dr	0.87	44s (D)	0.96	52s (D)	1.13	94s (F)
Bowes St / Launceston St	0.94	31s (C)	0.48	29s (C)	0.54	29s (C)
Bowes St / Worgan St	0.26	8s (A)	0.16	5s (A)	0.18	5s (A)
Bowes St / Matilda St	0.26	21s (B)	0.15	7s (A)	0.17	7s (A)
Bowes St / Section 7	0.15	5s (A)	0.11	5s (A)	0.12	5s (A)
Easty St / Launceston St	0.38	19s (B)	0.42	18s (B)	0.50	18s (B)
Launceston St / Wisdom St / Yamba Dr	0.69	40s (C)	0.85	45s (D)	1.10	115s (F)
Weekday Evening Peak Hour						
Launceston St / Melrose Dr	0.88	41s (C)	0.97	47s (D)	1.13	78s (F)
Bowes St / Launceston St	0.95	31s (C)	0.77	31s (C)	0.88	32s (C)
Bowes St / Worgan St	0.27	8s (A)	0.19	6s (A)	0.24	7s (A)
Bowes St / Matilda St	0.31	27s (B)	0.23	8s (A)	0.27	9s (A)
Bowes St / Section 7	0.13	5s (A)	0.10	5s (A)	0.10	5s (A)
Easty St / Launceston St	0.46	21s (B)	0.51	20s (B)	0.60	20s (B)
Launceston St / Wisdom St / Yamba Dr	0.63	35s (C)	0.84	38s (C)	1.19	98s (F)

The intersection performance analysis indicates that the existing conditions traffic volumes exceed the practical capacity of both the Launceston Street / Melrose Drive, and the Bowes Street / Launceston Street intersections during both the weekday morning and evening peak hours. It is noted that the poor performance of the Bowes Street / Launceston Street intersection is likely due to the routes taken by buses serving the temporary Woden Interchange at the time of the data collection.

The analysis indicates that, the redistribution of these bus movements to/from the Woden Interchange on Callam Street, would significantly outweigh five (5) years of background growth in traffic demands, such that the 2030 base scenario traffic demands remain within the practical capacity of the Bowes Street / Launceston Street intersection. The Launceston Street / Melrose Drive intersection is expected to continue to operate in excess of its practical capacity in both weekday peak hours of the 2030 base scenario.

Furthermore, the analysis indicates that the redistribution of bus movements to/from the Woden Interchange on Callam Street, would outweigh even 15 years of background growth in traffic demands, such that the 2040 base scenario traffic demands remain within the practical capacity of the Bowes Street / Launceston Street intersection during the morning peak hour, but would marginally exceed the practical capacity of the intersection during the weekday evening peak hour. The analysis indicates that the 2040 base scenario traffic demands would exceed the theoretical capacity of both the Launceston Street / Melrose Drive, and the Launceston Street / Wisdom Street / Yamba Drive intersections during both weekday peak hours. Average delays experienced at these intersections are expected to align with LOS F during both weekday peak hours.

2.7 Public Transport

There are a total of 19 public transport routes which serve stops located within close walking distance of the subject site, as shown at Figure 10 below. These include bus routes R4, R5, R6, 57, 58, 59, 60/61, 62, 63, 64, 65, 66, 70, 71, 72, 73, 76, 77 and 902 which serve Woden Interchange located on the eastern part of the subject site.

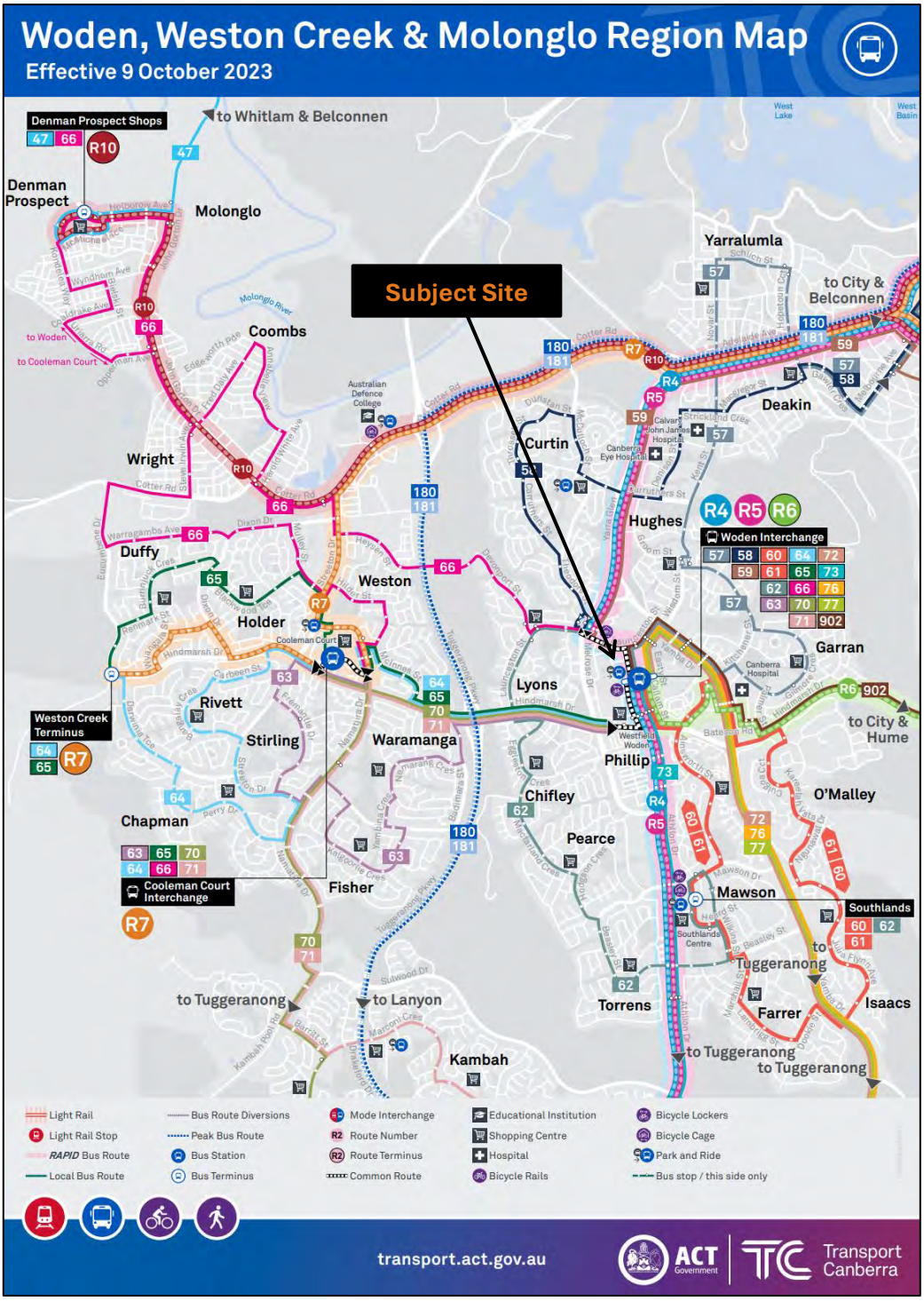


Figure 10: Public Transport Network (source: Transport Canberra)

2.8 Active Travel

The subject site is located in close proximity to a number of strategic active travel routes, as shown on the *Active Travel Planning Tool* (*ATPT*), presented at Figure 11 below and listed below:

- An existing main community route (Woden Cycle Loop) which runs along the north side of Matilda Street, approximately 15m north of the subject site,
- A future main community route (Woden Cycle Loop) which runs along the east side of Callam Street, approximately 50m east of the subject site,

- A future main community route (Future Canberra Hospital – Chifley) which runs through the public open space, approximately 90m west of the subject site, and
- An existing principal community route (C4 City – Tuggeranong via Woden) which runs along the east side of Yarralumla Creek, approximately 130m east of the site.

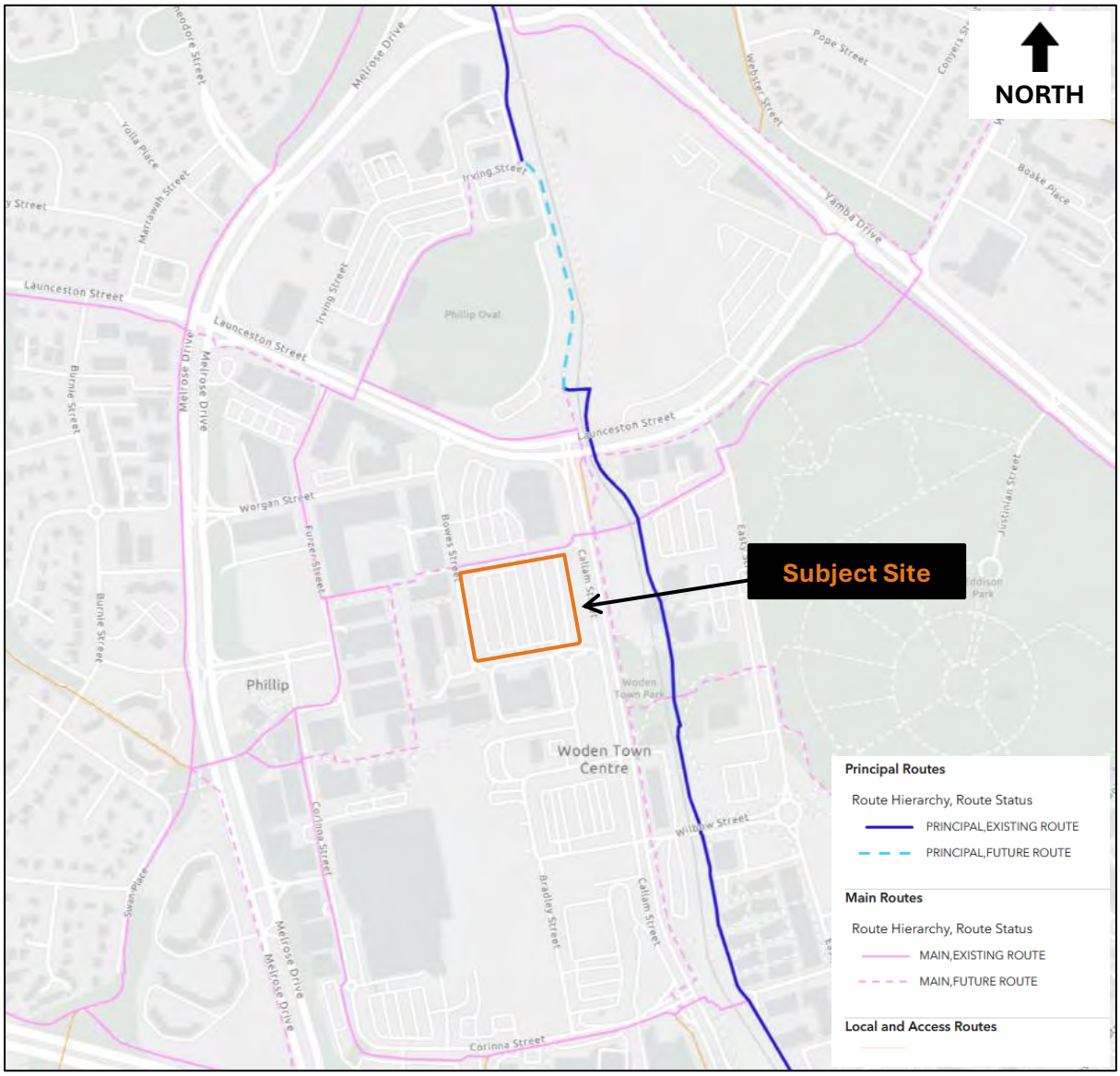


Figure 11: Strategic Active Travel Network (source: ATPT)

With the exception of the shared paths which comprise the Woden Cycle Loop along Matilda Street and C4 City – Tuggeranong via Woden along Yarralumla Creek, all active travel infrastructure in the vicinity of the site comprises an existing network of paths which parallel the road network. This path network provides off-road pedestrian and low speed cyclist connections between the subject site and the surrounding land uses.

2.9 Parking

A series of car parking surveys were undertaken on Thursday, 27 March 2025 and Saturday, 29 March 2025 to quantify the existing car parking demands within approximately 400m walking distance of the subject site, as shown at Figure 12below.

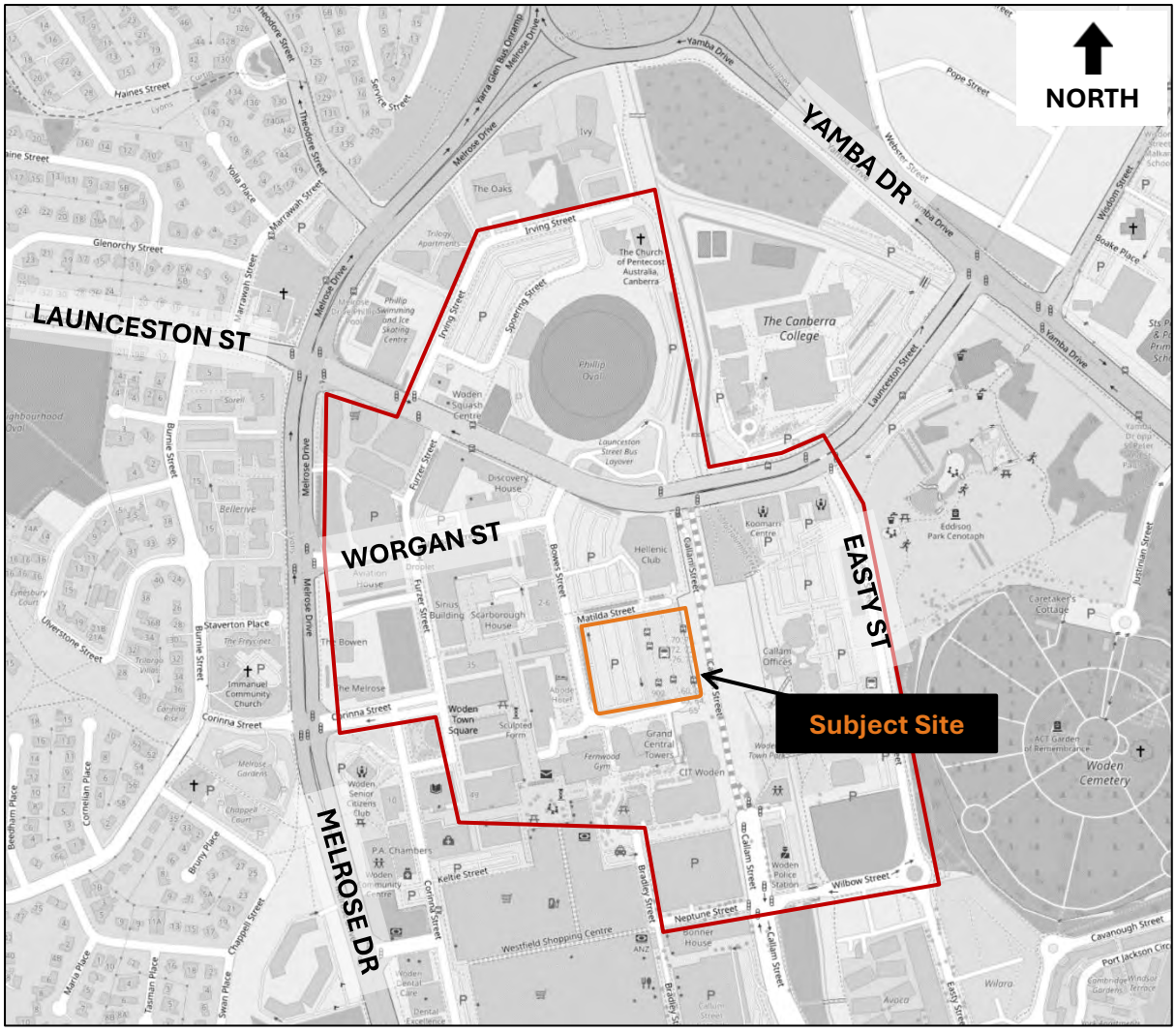


Figure 12: Car Parking Survey Area (source: OpenStreetMap)

These surveys captured existing car parking demands at 120-minute intervals between 8am and 8pm, as presented at Figure 15 below. Full details are provided at Appendix D.

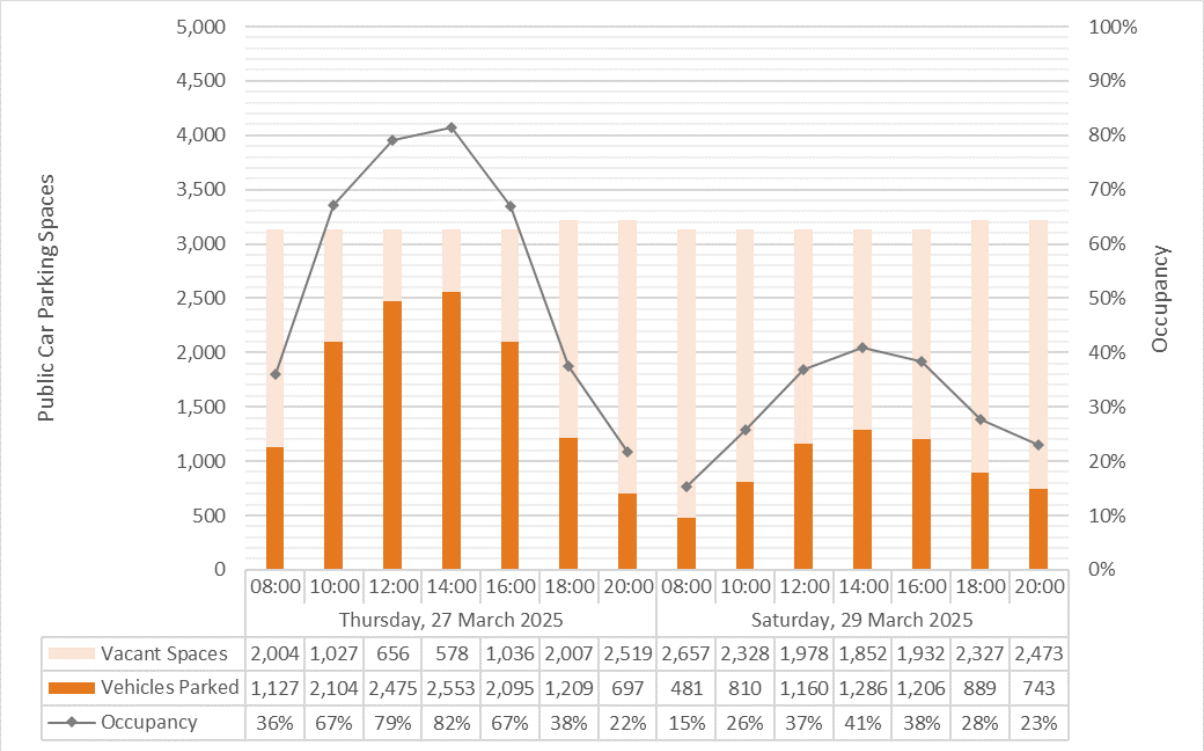


Figure 13: Public Car Parking Occupancy – Existing Conditions

The car parking surveys identified between 3,131 and 3,216 public car parking spaces (depending on the parking restrictions at any given time) located within the survey area. The car parking demands within this area were observed to increase during the morning to peak at 2pm on both the Thursday and the Saturday, before decreasing during the afternoon and evening. Peak car parking demands were observed at 2pm during the Thursday surveys when 2,553 vehicles were observed to be parked (82% occupancy). Noting that 85% occupancy is typically considered to balance the impacts associated with the provision of car parking spaces, against the impacts associated with vehicles circulating while searching for a vacant car parking space, these car parking surveys suggest that there is a suitable supply of public car parking within the survey area.

2.10 Road Safety

Figure 14 below shows 12 crashes were reported to have occurred within close proximity of the subject site in the five (5) year period to 30 June 2025. These crashes included 10 which resulted in property damage only (shown in yellow) and two (2) which resulted in injuries (shown in red).

The first injury crash (ID: 290953) occurred within the surface carpark on the subject site, at approximately 7am on a Friday in September 2022 and involved a vehicle colliding with a pedestrian.

The second injury crash (ID: 341252) occurred on Bowes Street, between Worgan Street and Matilda Street, at approximately 9am on a Wednesday in March 2024 and involved an undefined collision between two vehicles.

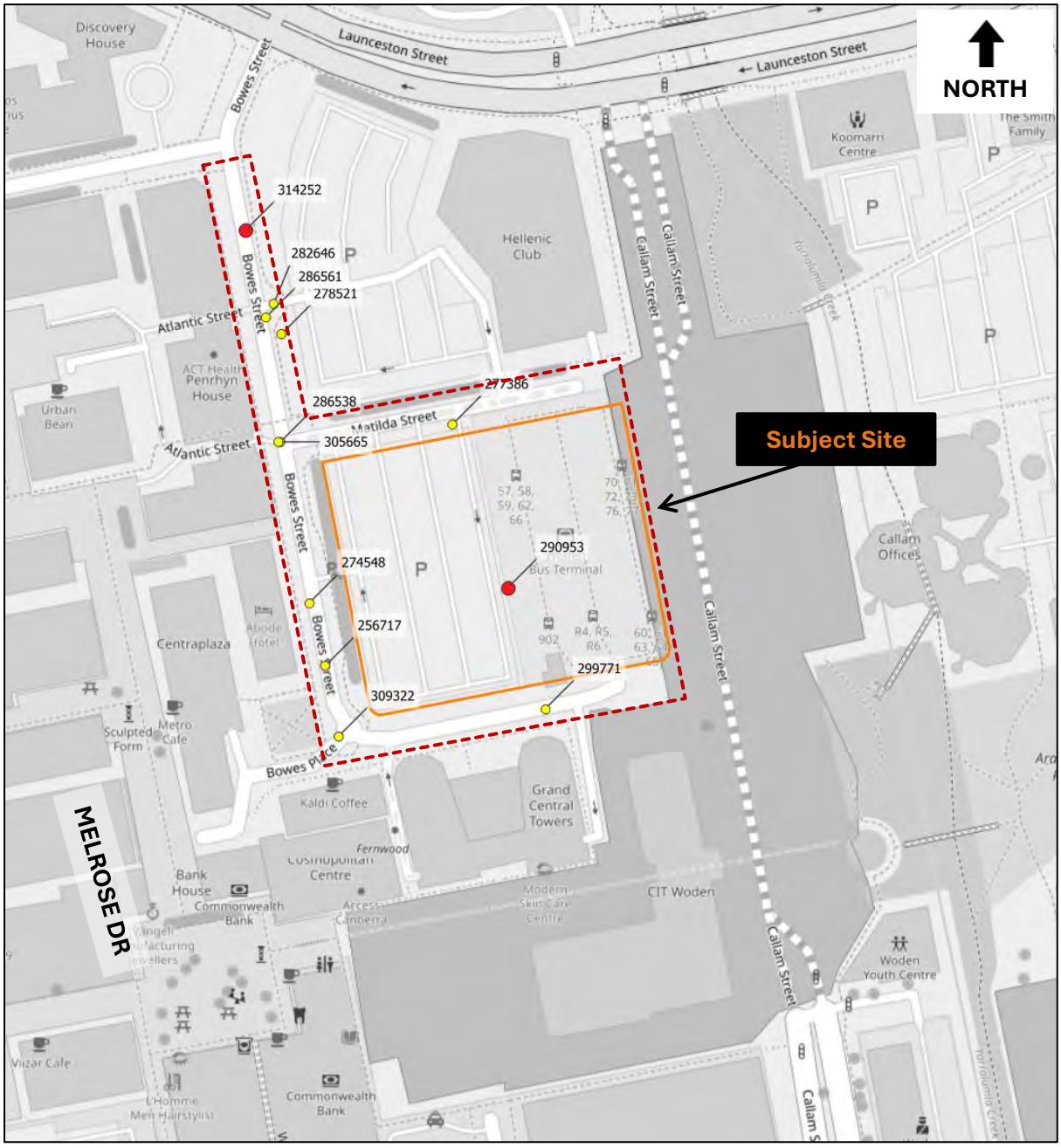


Figure 14: Crash History – 1 July 2020 to 30 June 2025

3 Proposed Development

3.1 Overview

The proposal is to develop the subject site to accommodate Woden Village, a mixed-use development comprising three (3) buildings, as follows:

Building A (Residential):

- 200 residential dwellings, comprising:
  - 110 apartments with one (1) bedroom,
  - 49 apartments with two (2) bedrooms, and
  - 41 apartments with three (3) bedrooms.
- Commercial land uses comprising:
  - Five (5) non-retail commercial tenancies (totalling 502m^2 GFA), and
  - Two (2) retail tenancies (totalling 168m^2 GFA).
- 293 car parking spaces for residents.

Building B (Commercial Carpark):

- 639 commercial car parking spaces, comprising:
  - 164 car parking spaces within basement levels, and
  - 475 car parking spaces within above-ground levels.
- A single indoor recreation tenancy (635m^2 GFA).

Building C (Community & Office):

- Commercial land uses comprising:
  - A single non-retail commercial tenancy (103m^2 GFA),
  - 11 levels of office (totalling 13,373m^2 GFA), and
  - Three (3) retail tenancies (totalling 277m^2 GFA).
- Five (5) levels of community land use (totalling 3,869m^2 GFA), and
- 141 car parking spaces for employees.

3.2 Access Arrangements

Vehicle access to the site is proposed in four (4) locations, as follows:

- Egress by all vehicles over the northern boundary of the subject site, via Matilda Street, approximately 90m east of Bowes Street (and approximately 10m east of the existing vehicle access to Section 6, Phillip). This access forms the northern end of the proposed north-south road,
- Access and egress by all vehicles over the western boundary of the subject site, via Bowes Street, approximately 70m south of Matilda Street (and approximately 45m south of the existing vehicle egress from Section 8, Phillip). This access forms the western end of the proposed east-west laneway,
- Access and egress by light vehicles over the southern boundary of the subject site, via Bowes Street, approximately 50m east of Bowes Place (and approximately 40m west of the existing vehicle access to Section 35, Phillip). This access serves the podium levels of Building B, and

- Access by all vehicles over the southern boundary of the subject site, via Bowes Street, approximately 90m east of Bowes Place (and opposite the existing vehicle access to Section 35, Phillip). This access serves the proposed north-south road.

3.3 Parking Assessments

The following sections set out the benchmarks/requirements for the various types of parking associated with the proposed development. It is important to note that under the current *Territory Plan* only the Assessment Outcomes are to be considered as mandatory rules/requirements, with *Advisory Note 06: Planning Technical Specifications* stating that:

> *"The planning technical specifications are not rules, and compliance is not mandatory."*

On this basis, this assessment distinguishes between 'benchmarks' (i.e. from the *Technical Specifications* documents that support the *Territory Plan*), which are not mandatory, and 'requirements' (i.e. from the *National Construction Code*), which are mandatory.

3.3.1 Vehicle Parking

Assessment Outcome 26 of the *Commercial Zones Policy* requires that:

> *"Vehicle and bicycle parking sufficiently caters for the development while minimising visual impacts from the street or public space. This includes consideration of parking location, dimensions and number of spaces provided."*

Overall Car Parking

Overall Car Parking Benchmarks

Specification 26.1a of the *Commercial Zones Specifications* identifies that the rates presented in Table 5 of that document represent one such set of benchmarks for overall car parking associated with developments in commercial zones.

Furthermore, the *Commercial Zones Specifications* suggests that these car parking spaces be located as set out in the Parking Locational Requirements table, replicated as Table 6 below.

Table 6: Car Parking Locational Benchmarks

Land Use	Long-Stay Parking	Short-Stay Parking	Operational Parking
Residential	On-site	On-site or within 100m	On-site
All Other Land Uses	On-site or within 200m	On-site or within 100m	On-site

On this basis, the proposed development has a benchmark for a total of 442 car parking spaces, as set out at Table 7 below.

Proposed Car Parking Provision

The proposed development includes a total of 1,072 on-site car parking spaces, which represents a surplus of 630 car parking spaces compared to the suggested benchmarks, as set out at Table 8 below.

Table 7: Overall Car Parking Benchmarks

Land Use (User Group)	Benchmark Rate	Size / Number				Benchmark [car spaces]			
		Building A	Building B	Building C	Total	Building A	Building B	Building C	Total
Community	3 per 100m² GFA	-	-	3,869m² GFA	**3,869m² GFA**	-	-	116	**116**
Indoor Recreation	3 per 100m² GFA	-	635m² GFA	-	**635m² GFA**	-	19	-	**19**
Non-Retail Commercial	3 per 100m² GFA	502m² GFA	-	103m² GFA	**605m² GFA**	15	-	3	**18**
Office	2 per 100m² GFA	-	-	13,373m² GFA	**13,373m² GFA**	-	-	267	**267**
Public Carpark	-	-	639 spaces	-	**639 spaces**	-	0	-	**0**
Residential (Residents)	No minimum benchmark	200 units	-	-	**200 units**	0	-	-	**0**
Residential (Visitors)			-	-		0	-	-	**0**
Retail	5 per 100m² GFA	168m² GFA	-	277m² GFA	**445m² GFA**	8	-	14	**22**
Total	**-**	**-**	**-**	**-**	**-**	**23**	**19**	**400**	**442**

Table 8: Overall Car Parking Provision

Land Use (User Group)	Benchmark [car spaces]				Proposed Provision [car spaces]			
	Building A	Building B	Building C	Total	Building A	Building B	Building C	Total
Community	-	-	116	**116**	-	116	0	**116**
Indoor Recreation	-	19	-	**19**	-	19	-	**19**
Non-Retail Commercial	15	-	3	**18**	0	18	0	**18**
Office	-	-	267	**267**	-	126	141	**267**
Public Carpark	-	0	-	**0**	-	298	-	**298**
Residential (Residents)	0	-	-	**0**	292	-	-	**292**
Residential (Visitors)	0	-	-	**0**	0	40	-	**40**
Retail	8	-	14	**22**	0	22	0	**22**
Total	**23**	**19**	**400**	**442**	**292**	**639**	**141**	**1,072**

Accessible Car Parking

Accessible Car Parking Requirements

Clause D4D6 of *NCC 2022* specifies the requirements for accessible car parking associated with different building classes. On this basis, the proposed development has a requirement for seven (7) accessible car parking spaces, as set out at Table 9 below.

Accessible Car Parking Benchmark

Specification 26.3a of *Commercial Zones Specifications* identifies one such benchmark for accessible car parking as a minimum of 3% of the overall car parking benchmark, rounded up to the nearest integer. It is noted that this benchmark only applies to public carparks with more than 10 car parking spaces. On this basis, the proposed development has a benchmark for 20 accessible car parking spaces, as set out at Table 10 below.

Proposed Accessible Car Parking Provision

The proposed development includes 26 accessible car parking spaces, which represents a surplus of 19 spaces compared to the accessible car parking requirement and a surplus of six (6) spaces compared to the benchmark for accessible car parking, as set out at Table 11 below.

Table 9: Accessible Car Parking Requirements

Building Class (Land Use)	Requirement Rate	Size / Number				Requirement [accessible car spaces]			
		Building A	Building B	Building C	Total	Building A	Building B	Building C	Total
Class 2 (Residential)	No minimum requirement	0 units	-	-	**0 units**	0	-	-	**0**
		0 spaces	40 spaces	-	**40 spaces**	0	0	-	**0**
Class 5 (Non-Retail Commercial & Office)	1 per 100, or part thereof	0 spaces	144 spaces	141 spaces	**285 spaces**	0	2	2	**4**
Class 9b (Community & Indoor Recreation)		-	110 spaces	0 spaces	**135 spaces**	-	2	0	**2**
Class 6 (Retail)	1 per 50, or part thereof	0 spaces	22 spaces	0 spaces	**22 spaces**	0	1	0	**1**
Class 7b (Public Carpark)	No minimum requirement	-	298 spaces	-	**298 spaces**	-	0	-	**0**
Total	**-**	**-**	**-**	**-**	**-**	**0**	**5**	**2**	**7**

Table 10: Accessible Car Parking Benchmarks

Land Use	Benchmark Rate	Size / Number				Benchmark [accessible car spaces]			
		Building A	Building B	Building C	Total	Building A	Building B	Building C	Total
All Land Uses	3% of spaces in public carparks containing more than 10 spaces	0 public spaces	639 public spaces	0 public spaces	**639 public spaces**	0	20	0	**20**

Table 11: Accessible Car Parking Provision

Building Class (Land Use)	Requirement (Benchmark) [accessible car spaces]				Provision [accessible car spaces]			
	Building A	Building B	Building C	Total	Building A	Building B	Building C	Total
Class 2 (Residential)	0	-	-	**0**	6	-	-	**6**
	0	0	-	**0**	0	20	-	**25**
Class 5 (Non-Retail Commercial & Office)	0	2	2	**4**	0		5	
Class 9b (Community & Indoor Recreation)	-	2	0	**2**	-			
Class 6 (Retail)	0	1	0	**1**	0		0	
Class 7b (Public Carpark)	-	0	-	**0**	-		-	
Total	**0 (0)**	**5 (20)**	**2 (0)**	**7 (20)**	**6**	**20**	**5**	**31**

Motorcycle Parking

Motorcycle Parking Benchmark

The note following Table 5 of the *Commercial Zones Specifications* identifies one such benchmark for motorcycle parking as a rate of three (3) motorcycle spaces per 100 car spaces, for carparks comprising at least 30 car spaces. The *Commercial Zones Specifications* is unclear as to whether the motorcycle parking benchmark is to be calculated based on the benchmark for overall car parking or the proposed overall car parking provision. This analysis calculates the motorcycle parking benchmark based on the overall car parking benchmark, noting that the proposed development includes car parking which significantly exceeds the overall car parking benchmark and that dedicated motorcycle parking spaces would be expected to increase the availability of car parking spaces (as motorcycles would not park within car parking spaces). On this basis, the proposed development has a benchmark for 14 motorcycle parking spaces.

Proposed Motorcycle Parking Provision

The proposed development contains no dedicated motorcycle parking spaces. While this provision represents a shortfall of 14 spaces compared to the motorcycle parking benchmark, as set out at Table 13 below, it is considered appropriate noting the significant oversupply of car parking spaces which could be used to accommodate motorcycles.

Service Vehicle Parking

Service Vehicle Parking Benchmark

Specification 26.1b of the *Commercial Zones Specifications* identifies one such benchmark for service vehicle parking as a minimum of one (1) service vehicle parking space be provided in developments with 40 or more dwellings. On this basis, the proposed development, has a benchmark for one (1) service vehicle parking space, as set out at Table 14 below.

Proposed Service Vehicle Parking Provision

The proposed development includes a service vehicle parking space with dimensions suitable to accommodate the HRV design vehicle. This provision satisfies the benchmarks for service vehicle parking, as set out at Table 15 below.

Table 12: Motorcycle Parking Benchmarks

Land Use	Benchmark Rate	Size / Number				Benchmark [motorcycle spaces]			
		Building A	Building B	Building C	Total	Building A	Building B	Building C	Total
All Land Uses	3 per 100 spaces in carparks containing 30 or more spaces	23 spaces	19 spaces	400 spaces	**442 spaces**	1	1	12	**14**

Table 13: Motorcycle Parking Provision

Land Use	Benchmark [motorcycle spaces]				Provision [motorcycle spaces]			
	Building A	Building B	Building C	Total	Building A	Building B	Building C	Total
All Land Uses	1	1	12	**14**	0	0	0	**0**

Table 14: Service Vehicle Parking Benchmarks

Land Use	Benchmark Rate	Size / Number				Benchmark [service vehicle spaces]			
		Building A	Building B	Building C	Total	Building A	Building B	Building C	Total
Residential	1 for 40 or more units	200 units	-	-	**200 units**	1	-	-	**1**
All Other Land Uses	-	-	-	-	**-**	-	-	-	**-**
Total	**-**	**200 units**	**-**	**-**	**200 units**	**1**	**-**	**-**	**1**

Table 15: Service Vehicle Parking Provision

Land Use	Benchmark [service vehicle spaces]				Provision [service vehicle spaces]			
	Building A	Building B	Building C	Total	Building A	Building B	Building C	Total
Residential	1	-	-	**1**	1	-	-	**1**
All Other Land Uses	-	-	-	**-**	-	-	-	**-**
Total	**1**	**-**	**-**	**1**	**1**	**-**	**-**	**1**

3.3.2 Electric Vehicle Parking

Assessment Outcome 24 of the *Commercial Zones Policy* requires that:

> *"The development provides electric vehicle parking and access to charging locations in multiunit housing and commercial buildings."*

Electric Car Parking

Electric Car Parking Requirements

Clause J9D4 of *NCC 2022* specifies the requirements for electric car parking associated with different land uses. On this basis, the proposed development has a requirement for 409 electric car parking spaces, to the 'EV capable' standard, as set out at Table 16 below.

It is noted that the 'EV capable' standard primarily includes the provision of sufficient electrical capacity and distribution boards.

Electric Car Parking Benchmarks

Specification 24.1 of the *Commercial Zones Specifications* identifies one such set of benchmarks for electric car parking. On this basis, the proposed development has a benchmark for 348 electric car parking spaces, to the 'EV ready' standard, as set out at Table 17 below.

It is noted that the 'EV ready' standard, as defined under the *Territory Plan 2023*, includes sufficient electrical capacity, distribution boards, conduits and cabling from the distribution boards to the spaces, and an electrical outlet at each space.

Proposed Electric Car Parking Provision

Noting that the development plans do not identify individual electric car parking spaces, it is recommended that the proposed development include electric car parking spaces to satisfy the benchmark for 348 electric car parking spaces, as set out at Table 18 below.

Table 16: Electric Car Parking Requirements

Building Class (Land Use)	Requirement Rate	Size / Number				Requirement [electric car spaces]			
		Building A	Building B	Building C	Total	Building A	Building B	Building C	Total
Class 2 (Residential)	100% of spaces, assumed resident spaces only	292 spaces	-	-	**292 spaces**	292	-	-	**292**
		0 spaces	40 spaces	-	**40 spaces**	-	-	-	**0**
Class 5 (Non-Retail Commercial & Office)	10% of spaces	0 spaces	144 spaces	141 spaces	**285 spaces**	0	15	15	**30**
Class 6 (Retail)		0 spaces	22 spaces	0 spaces	**22 spaces**				
Class 7b (Public Carpark)	20% of spaces	-	298 spaces	-	**298 spaces**	-	87	0	**87**
Class 9b (Community & Indoor Recreation)		-	135 spaces	0 spaces	**135 spaces**				
Total	**-**	**-**	**-**	**-**	**-**	**292**	**102**	**15**	**409**

Table 17: Electric Car Parking Benchmarks

Land Use	Benchmark Rate	Size / Number				Benchmark [electric car spaces]			
		Building A	Building B	Building C	Total	Building A	Building B	Building C	Total
Residential	1 per unit	200 units	-	-	**200 units**	200	-	-	**200**
		0	40 spaces	-	**40 spaces**	-	-	-	**-**
All Other Land Uses	20% of spaces	0	599 spaces	141 spaces	**740 spaces**	0	120	28	**148**
Total	**-**	**-**	**-**	**-**	**-**	**200**	**120**	**28**	**348**

Table 18: Electric Car Parking Provision

Building Class (Land Use)	Requirement (Benchmark) [electric car spaces]				Provision [electric car spaces]			
	Building A	Building B	Building C	Total	Building A	Building B	Building C	Total
Class 2 (Residential)	292 (200)	- (-)	- (-)	**292** **(200)**	200	-	-	**200**
	- (-)	- (-)	- (-)	**-** **(-)**	-	-	-	**-**
Class 5 (Non-Retail Commercial & Office) Class 6 (Retail) Class 7b (Public Carpark) Class 9b (Community & Indoor Recreation)	0 (0)	109 (120)	15 (28)	**124** **(148)**	0	120	28	**148**
Total	**292** **(200)**	**109** **(120)**	**15** **(28)**	**416** **(348)**	**200**	**120**	**28**	**348**

3.3.3 Bicycle Parking and End-Of-Trip Facilities

Assessment Outcome 25 of the *Commercial Zones Policy* requires that:

> *"The development includes appropriate end-of-trip facilities in buildings, which includes secure bicycle parking and change rooms (including showers, lockers and drying facilities)."*

Bicycle Parking

Bicycle Parking Benchmarks

The second specification 25.1a of the *Commercial Zones Specifications* identifies that the rates presented in Table 4 of that document represent one such set of benchmarks for bicycle parking associated with developments in commercial zones. On this basis, the proposed development has a benchmark for 303 long-stay and 77 short-stay bicycle parking spaces, as set out at Table 19 below.

Proposed Bicycle Parking Provision

The proposed development includes 360 dedicated long-stay and 102 short-stay bicycle parking spaces. This provision represents a surplus of 57 long-stay and 25 short-stay bicycle parking spaces compared to the suggested benchmarks, as set out at Table 20 below.

End-Of-Trip Facilities

End-Of-Trip Facility Benchmarks

Specification 25.3 of the *Commercial Zones Specifications* identifies one set of benchmarks for end-of-trip facilities for developments located in commercial zones. On this basis, the proposed development has benchmarks for seven (7) showers and 128 lockers, as set out at Table 21 below.

Proposed End-Of-Trip Facilities

The proposed development includes seven (7) showers, which satisfies the benchmark for showers. Noting that the development plans do not identify individual lockers, it is recommended that the proposed development include 128 lockers to satisfy the benchmark, as set out at Table 22 below.

Table 19: Bicycle Parking Benchmarks

Land Use	Benchmark Rate	Size / Number				Benchmark [bicycle spaces]			
		Building A	Building B	Building C	Total	Building A	Building B	Building C	Total
Long-Stay Bicycle Parking									
Community	1 per 1,500m² NLA	-	-	3,183m² NLA	**3,183m² NLA**	-	-	2	**2**
Indoor Recreation	1 per 3,000m² NLA	-	540m² NLA	-	**540m² NLA**	-	0	-	**0**
Non-Retail Commercial	1 per 200m² NLA	427m² NLA	-	88m² NLA	**515m² NLA**	2	-	0	**2**
Office	1 per 200m² NLA	-	-	11,102m² NLA	**11,102m² NLA**	-	-	56	**56**
Public Carpark	-	-	640 spaces	-	**640 spaces**	-	0	-	**0**
Residential	1 per 1-bed unit	110 units	-	-	**110 units**	110	-	-	**110**
	1 per 2-bed unit	49 units			**49 units**	49	-	-	**49**
	2 per 3-bed unit	41 units	-	-	**41 units**	82	-	-	**82**
Retail	1 per 250m² NLA	143m² NLA	-	235m² NLA	**378m² NLA**	1	-	1	**2**
Total	**-**	**-**	**-**	**-**	**-**	**244**	**0**	**59**	**303**
Short-Stay Bicycle Parking									
Community	1 per 150m² NLA	-	-	3,183m² NLA	**3,183m² NLA**	-	-	21	**21**
Indoor Recreation	1 per 150m² NLA	-	540m² NLA	-	**540m² NLA**	-	4	-	**4**
Non-Retail Commercial	1 per 400m² NLA	427m² NLA	-	88m² NLA	**515m² NLA**	1	-	0	**1**
Office	1 per 400m² NLA	-	-	11,102m² NLA	**11,102m² NLA**	-	-	28	**28**
Public Carpark	-	-	640 spaces	-	**640 spaces**	-	0	-	**0**
Residential	1 per 10 units	200 units	-	-	**200 units**	20	-	-	**20**
Retail	1 per 100m² NLA	143m² NLA	-	235m² NLA	**378m² NLA**	1	-	2	**3**
Total	**-**	**-**	**-**	**-**	**-**	**22**	**4**	**51**	**77**

Table 20: Bicycle Parking Provision

Land Use	Benchmark [bicycle spaces]				Provision [bicycle spaces]			
	Building A	Building B	Building C	Total	Building A	Building B	Building C	Total
Long-Stay Bicycle Parking								
Community	-	-	2	**2**	-	-	2	**2**
Indoor Recreation	-	0	-	**0**	-	0	-	**0**
Non-Retail Commercial	2	-	0	**2**	2	-	0	**2**
Office	-	-	56	**56**	-	-	89	**89**
Public Carpark	-	0	-	**0**	-	0	-	**0**
Residential	110	-	-	**110**	265	-	-	**265**
	49	-	-	**49**				
	82	-	-	**82**				
Retail	1	-	1	**2**	1	-	1	**2**
Total	**244**	**0**	**59**	**303**	**268**	**0**	**92**	**360**
Short-Stay Bicycle Parking								
Community	-	-	21	**21**	-		0	
Indoor Recreation	-	4	-	**4**	-		-	
Non-Retail Commercial	1	-	0	**1**	0		0	
Office	-	-	28	**28**	-	102	0	**102**
Public Carpark	-	0	-	**0**	-		-	
Residential	20	-	-	**20**	0		-	
Retail	1	-	2	**3**	0		0	
Total	**22**	**4**	**51**	**77**	**0**	**102**	**0**	**102**

Table 21: End-Of-Trip Facility Benchmarks

Land Use	Benchmark Rate	Size / Number				Benchmark [showers / lockers]			
		Building A	Building B	Building C	Total	Building A	Building B	Building C	Total
Shower and Change Facilities									
Residential	-	241 spaces	-	-	**241 spaces**	0	-	-	**0**
All Other Land Uses	1 for the first 5 spaces, or part thereof, plus 1 for each 10 spaces thereafter	3 spaces	0 spaces	59 spaces	**62 spaces**	1	0	6	**7**
Total	**-**	**-**	**-**	**-**	**-**	**1**	**0**	**6**	**7**
Personal Storage Facilities									
Residential	-	241 spaces	-	-	**241 spaces**	0	-	-	**0**
All Other Land Uses	2 per space	3 spaces	0 spaces	59 spaces	**62 spaces**	6	0	118	**124**
Total	**-**	**-**	**-**	**-**	**-**	**6**	**0**	**118**	**124**

Table 22: End-Of-Trip Facility Provision

Land Use	Benchmark [showers / lockers]				Provision [showers / lockers]			
	Building A	Building B	Building C	Total	Building A	Building B	Building C	Total
Shower and Change Facilities								
Residential	0	-	-	**0**	0	-	-	**0**
All Other Land Uses	1	0	6	**7**	0	4	3	**7**
Total	**1**	**0**	**6**	**7**	**0**	**4**	**3**	**7**
Personal Storage Facilities								
Residential	0	-	-	**0**	0	-	-	**0**
All Other Land Uses	6	0	118	**124**	0	48	96	**144**
Total	**6**	**0**	**118**	**124**	**0**	**48**	**96**	**144**

3.4 Network Changes

The proposed development does not include any changes to the broader road network, beyond the construction of two (2) internal roadways within the subject site. Any changes to the road network associated with the Light Rail Stage 2B project are independent of this proposal.

3.4.1 Proposed North-South Road

The proposed north-south road extends approximately 120m from Bowes Street in the south to Matilda Street in the north and has a single lane cross section of approximately 4m width. The proposed north-south road will accommodate traffic in the northbound direction only.

Vehicle access to Building A is proposed via the proposed north-south road, with basement carpark access and egress for light vehicle located approximately 10m north of Bowes Street, and heavy vehicle access and egress located approximately 65m north of Bowes Street.

3.4.2 Proposed East-West Laneway

The proposed east-west laneway extends approximately 90m from Bowes Street in the west to the proposed north-south laneway in the east. Within approximately 35m of Bowes Street, the proposed east-west laneway has a cross-sectional width of approximately 6.5m, which accommodates a single lane of traffic in each direction. The eastern 55m of the proposed east-west laneway is proposed to have a single lane cross section of approximately 3.5m width which will accommodate traffic in the eastbound direction only.

Vehicle access to Building B basement and Building C is proposed via the proposed east-west laneway, with basement carpark access and egress for light vehicles located approximately 40m east of Bowes Street, and heavy vehicle access and egress located approximately 30m east of Bowes Street. Kerbing is proposed to enforce left-turn only restrictions for vehicles exiting the basements of Buildings B and C to the proposed east-west laneway.

3.4.3 Impacts to On-Street Car Parking

The proposed development includes a total of 16 indented on-street car parking spaces along the frontages of the subject site. These include:

- Three (3) car parking spaces along the northern frontage to Matilda Street,
- Seven (7) car parking spaces along the western frontage to Bowes Street, and
- Six (6) car parking spaces along the southern frontage to Bowes Street.

Noting that the frontages of the subject site accommodated only seven (7) car parking spaces under the existing conditions, the proposed development would result in a net increase in the supply of on-street car parking, by nine (9) spaces.

4 Operational Impact Assessment

4.1 Trip Assessment

4.1.1 Traffic Demands

The following sections set out the anticipated traffic demands associated with the proposed development.

Traffic Generation

The traffic generation rates adopted for the proposed land uses are presented at Table 23 below.

Table 23: Adopted Traffic Generation Rates

Land Use	Traffic Generation Rate	Inbound Split
Weekday Morning Peak Hour		
Community	1.00 vehicle trips / 100m² GFA[A]	90%[B]
Indoor Recreation	2.00 vehicle trips / 100m² GFA[C]	20%[C]
Non-Retail Commercial	1.00 vehicle trips / 100m² GFA[A]	90%[B]
Office	1.00 vehicle trips / 100m² GFA[A]	90%[B]
Public Carpark	0.64 vehicle trips / car space[D]	62%[D]
Residential	0.34 vehicle trips / dwelling[E]	30%[F]
Retail	3.34 vehicle trips / 100m² GLFA[G]	80%[H]
Weekday Evening Peak Hour		
Community	1.00 vehicle trips / 100m² GFA[A]	5%[B]
Indoor Recreation	2.60 vehicle trips / 100m² GFA[C]	60%[C]
Non-Retail Commercial	1.00 vehicle trips / 100m² GFA[A]	5%[B]
Office	1.00 vehicle trips / 100m² GFA[A]	5%[B]
Public Carpark	0.71 vehicle trips / car space[D]	46%[D]
Residential	0.34 vehicle trips / dwelling[E]	60%[F]
Retail	4.67 vehicle trips / 100m² GLFA[G]	50%[H]

Sources:
[A] Office trip generation rate as specified by CED.
[B] Derived from RTA *Trip Generation and Parking Generation Surveys (Office Blocks) – Data Report*.
[C] Estimated / derived from RMS *Trip Generation and Parking Demands Surveys of Gymnasiums: Data and Analysis Report*.
[D] Derived from existing public carpark on subject site.
[E] Published in TCCS *Engineering Advisory Note 14*. Assumes 10% peak hour factor.
[F] Derived from RMS *High Density Residential Trip Generation Surveys: Data Report*.
[G] Published in TfNSW *Guide to Transport Impact Assessment* – Thursday rate for regional shopping centres.
[H] Derived from RTA *Trip Generation and Parking Demand Surveys of Shopping Centre: Data Report*.

As such, the proposed development is expected to generate approximately 423 vehicle trips during the weekday morning peak hour and approximately 448 vehicle trips during the weekday evening peak hour, as set out at Table 24 below.

Table 24: Development Traffic Generation

Land Use	Peak Hour Vehicle Trips (Inbound | Outbound)				
	Building A (Residential)	Building B (Commercial Carpark)		Building C (Community & Office)	Total
	Basement	Basement	Podium	Basement	
Weekday Morning Peak Hour					
Community	-	10 (9 | 1)	29 (26 | 3)	-	**39 (35 | 4)**
Indoor Recreation	-	3 (1 | 3)	10 (2 | 7)	-	**13 (3 | 10)**
Non-Retail Commercial	-	2 (1 | 0)	4 (4 | 1)	-	**6 (5 | 1)**
Office	-	20 (18 | 2)	57 (52 | 6)	57 (51 | 5)	**134 (121 | 13)**
Public Carpark	-	42 (26 | 16)	123 (77 | 46)	-	**149 (93 | 56)**
Residential	67 (20 | 47)	-	-	-	**67 (20 | 47)**
Retail	-	4 (3 | 1)	11 (9 | 2)	-	**15 (12 | 3)**
Total	**67 (20 | 47)**	**77 (56 | 21)**	**222 (162 | 61)**	**57 (51 | 5)**	**423 (289 | 134)**
Weekday Evening Peak Hour					
Community	-	10 (1 | 9)	29 (1 | 28)	-	**39 (2 | 37)**
Indoor Recreation	-	4 (3 | 2)	13 (7 | 5)	-	**17 (10 | 7)**
Non-Retail Commercial	-	2 (0 | 2)	4 (0 | 4)	-	**6 (0 | 6)**
Office	-	20 (1 | 19)	57 (3 | 54)	57 (3 | 54)	**134 (7 | 127)**
Public Carpark	-	42 (19 | 23)	122 (56 | 66)	-	**164 (75 | 89)**
Residential	67 (40 | 27)	-	-	-	**67 (40 | 27)**
Retail	-	5 (3 | 3)	16 (8 | 7)	-	**21 (11 | 10)**
Total	**67 (40 | 27)**	**83 (27 | 58)**	**241 (75 | 164)**	**57 (3 | 54)**	**448 (145 | 303)**

4.2 Road Network Impact Assessment

4.2.1 Traffic Signal Operation

As for the 2030 and 2040 base scenarios, the SIDRA software has been permitted to optimise both the signal phasing and phase timings in the 2030 and 2040 development scenarios, to replicate the SCATS controllers dynamically reacting to real-time traffic demands.

4.2.2 Modelling Results

Table 25 below compares the performance of the road network under the 2030 base scenario against that under the 2030 development scenario. Detailed intersection performance results are provided at Appendices B and E.

Table 25: Intersection Performance Summary – 2030 Future Analysis Year

Intersection	2030 Base Scenario		2030 Development Scenario		2030 Development Scenario with Recommendations	
	DOS	Delay (LOS)	DOS	Delay (LOS)	DOS	Delay (LOS)
Weekday Morning Peak Hour						
Launceston St / Melrose Dr	0.96	52s (D)	0.96	51s (D)	-	-
Bowes St / Launceston St	0.48	29s (C)	0.57	29s (C)	-	-
Bowes St / Worgan St	0.16	5s (A)	0.34	6s (A)	-	-
Bowes St / Matilda St	0.15	7s (A)	0.25	9s (A)	-	-
Bowes St / East-West Ln	0.11	5s (A)	0.22	6s (A)	-	-
Bldg B Basement / Bldg C / East-West Ln	-	-	0.06	3s (A)	-	-
Bldg B Podium / Bowes St	-	-	0.16	4s (A)	-	-
Bldg A / North-South Rd	-	-	0.05	2s (A)	-	-
East-West Ln / North-South Rd	-	-	0.09	4s (A)	-	-
Matilda St / North-South Rd	-	-	0.08	5s (A)	-	-
Easty St / Launceston St	0.42	18s (B)	0.42	18s (B)	-	-
Launceston St / Wisdom St / Yamba Dr	0.85	45s (D)	0.87	47s (D)	-	-

Intersection	2030 Base Scenario		2030 Development Scenario		2030 Development Scenario with Recommendations	
	DOS	Delay (LOS)	DOS	Delay (LOS)	DOS	Delay (LOS)
Weekday Evening Peak Hour						
Launceston St / Melrose Dr	0.97	47s (D)	0.97	47s (D)	-	-
Bowes St / Launceston St	0.77	31s (C)	0.86	32s (C)	0.79	31s (C)
Bowes St / Worgan St	0.19	6s (A)	0.34	8s (A)	-	-
Bowes St / Matilda St	0.23	8s (A)	0.46	12s (A)	-	-
Bowes St / East-West Ln	0.10	5s (A)	0.15	5s (A)	-	-
Bldg B Basement / Bldg C / East-West Ln	-	-	0.03	3s (A)	-	-
Bldg B Podium / Bowes St	-	-	0.12	4s (A)	-	-
Bldg A / North-South Rd	-	-	0.11	2s (A)	-	-
East-West Ln / North-South Rd	-	-	0.14	4s (A)	-	-
Matilda St / North-South Rd	-	-	0.16	5s (A)	-	-
Easty St / Launceston St	0.51	20s (B)	0.51	20s (B)	-	-
Launceston St / Wisdom St / Yamba Dr	0.84	38s (C)	1.12	60s (E)	0.90	45s (D)

The intersection performance analysis indicates that the proposed development would have minimal impact on the performance of the road network during the 2030 weekday morning peak hour. During the 2030 weekday evening peak hour, adverse impacts associated with the proposed development would be limited to the Bowes Street / Launceston Street intersection (expected to operate marginally in excess of its practical capacity), and the Launceston Street / Wisdom Street / Yamba Drive intersection (expected to operate in excess of its theoretical capacity).

Minor modifications to traffic signal timings, as set out at Table 26 below, are recommended in order to better accommodate the anticipated development traffic demands at the Bowes Street / Launceston Street, and Launceston Street / Wisdom Street / Yamba Drive intersections.

Table 26: Modified Traffic Signal Timings – Future Analysis Years

Intersection		Average Phase Time (Phase Frequency)							
		A	B	C	D	E	F	G	Cycle
Weekday Evening Peak Hour									
Bowes St / Launceston St	**Ex.**	30s (100%)	-	-	33s (100%)	18s (51%)	-	16s (97%)	**89s**
	Rec.	30s (100%)	-	-	32s (100%)	18s (51%)	-	17s (97%)	**89s**
Launceston St / Wisdom St / Yamba Dr	**Ex.**	64s (100%)	-	-	23s (100%)	27s (100%)	-	-	**114s**
	Rec.	64s (100%)	-	-	28s (100%)	22s (100%)	-	-	**114s**

Table 27 below compares the performance of the road network under the 2040 base scenario against that under the 2040 development scenario. Detailed intersection performance results are provided at Appendices C and F.

Table 27: Intersection Performance Summary – 2040 Future Analysis Year

Intersection	2040 Base Scenario		2040 Development Scenario		2040 Development Scenario with Recommendations	
	DOS	Delay (LOS)	DOS	Delay (LOS)	DOS	Delay (LOS)
Weekday Morning Peak Hour						
Launceston St / Melrose Dr	1.13	94s (F)	1.13	93s (F)	-	-
Bowes St / Launceston St	0.54	29s ©	0.63	30s ©	-	-
Bowes St / Worgan St	0.18	5s (A)	0.37	7s (A)	-	-
Bowes St / Matilda St	0.17	7s (A)	0.27	10s (A)	-	-
Bowes St / East-West Ln	0.12	5s (A)	0.23	6s (A)	-	-
Bldg B Basement / Bldg C / East-West Ln	-	-	0.06	3s (A)	-	-
Bldg B Podium / Bowes St	-	-	0.17	4s (A)	-	-
Bldg A / North-South Rd	-	-	0.05	2s (A)	-	-
East-West Ln / North-South Rd	-	-	0.09	4s (A)	-	-
Matilda St / North-South Rd	-	-	0.08	5s (A)	-	-
Easty St / Launceston St	0.50	18s (B)	0.50	18s (B)	-	-
Launceston St / Wisdom St / Yamba Dr	1.10	115s (F)	1.12	123s (F)	-	-

Intersection	2040 Base Scenario		2040 Development Scenario		2040 Development Scenario with Recommendations	
	DOS	Delay (LOS)	DOS	Delay (LOS)	DOS	Delay (LOS)
Weekday Evening Peak Hour						
Launceston St / Melrose Dr	1.13	78s (F)	1.13	78s (F)	-	-
Bowes St / Launceston St	0.88	32s (C)	0.98	35s (C)	0.89	33s (C)
Bowes St / Worgan St	0.24	7s (A)	0.40	9s (A)	-	-
Bowes St / Matilda St	0.27	9s (A)	0.52	14s (A)	-	-
Bowes St / East-West Ln	0.10	5s (A)	0.16	5s (A)	-	-
Bldg B Basement / Bldg C / East-West Ln	-	-	0.03	3s (A)	-	-
Bldg B Podium / Bowes St	-	-	0.13	4s (A)	-	-
Bldg A / North-South Rd	-	-	0.11	2s (A)	-	-
East-West Ln / North-South Rd	-	-	0.14	4s (A)	-	-
Matilda St / North-South Rd	-	-	0.16	5s (A)	-	-
Easty St / Launceston St	0.60	20s (B)	0.60	20s (B)	-	-
Launceston St / Wisdom St / Yamba Dr	1.19	98s (F)	1.31	109s (F)	1.07	87 (F)

The intersection performance analysis indicates that the proposed development would have minimal impact on the performance of the road network during the 2040 weekday morning peak hour. During the 2040 weekday evening peak hour, adverse impacts associated with the proposed development would again be limited to the Bowes Street / Launceston Street intersection (expected to operate in excess of its practical capacity), and the Launceston Street / Wisdom Street / Yamba Drive intersection (expected to operate in excess of its theoretical capacity).

Again, the minor modifications to traffic signal timings, as set out at Table 26 above, are recommended in order to better accommodate the anticipated development traffic demands at the Bowes Street / Launceston Street, and Launceston Street / Wisdom Street / Yamba Drive intersections.

4.3 Public Transport

Assuming that the proposed development has similar mode shares as the broader Phillip SA2 (Table 4, page 27), the proposed development would generate a total of approximately 43 public

transport trips during the weekday morning peak hour and approximately 44 public transport trips during the weekday evening peak hour, as set out at Table 28 below.

Table 28: Development Public Transport Demands

Land Use	Peak Hour Public Transport Trips (Inbound | Outbound)			
	Building A (Residential)	Building B (Commercial Carpark)	Building C (Community & Office)	Total
Weekday Morning Peak Hour				
Community	-	-	5 (5 | 0)	**5 (5 | 0)**
Indoor Recreation	-	2 (0 | 2)	-	**2 (0 | 2)**
Non-Retail Commercial	1 (1 | 0)	-	0 (0 | 0)	**1 (1 | 0)**
Office	-	-	18 (16 | 2)	**18 (16 | 2)**
Public Carpark	-	-	-	**-**
Residential	15 (5 | 10)	-	-	**15 (5 | 10)**
Retail	1 (1 | 0)	-	1 (1 | 0)	**2 (2 | 0)**
Total	**17 (7 | 10)**	**2 (0 | 2)**	**24 (22 | 2)**	**43 (29 | 14)**
Weekday Evening Peak Hour				
Community	-	-	5 (0 | 5)	**5 (0 | 5)**
Indoor Recreation	-	2 (1 | 1)	-	**2 (1 | 1)**
Non-Retail Commercial	1 (0 | 1)	-	0 (0 | 0)	**1 (0 | 1)**
Office	-	-	18 (1 | 17)	**18 (1 | 17)**
Public Carpark	-	-	-	**-**
Residential	15 (9 | 6)	-	-	**15 (9 | 6)**
Retail	1 (0 | 1)	-	2 (1 | 1)	**3 (1 | 2)**
Total	**17 (9 | 8)**	**2 (1 | 1)**	**25 (2 | 23)**	**44 (12 | 32)**

These public transport trips are expected to be accommodated by the existing public transport network.

4.4 Active Travel

4.4.1 Walking Only

Assuming that the proposed development has similar mode shares as the broader Phillip SA2 (Table 4, page 27), the proposed development would generate a total of approximately 32 walking

only trips during each of the weekday morning and evening peak hours, as set out at Table 29 below.

Table 29: Development Pedestrian Demands

Land Use	Peak Hour Pedestrian Trips (Inbound | Outbound)			
	Building A (Residential)	Building B (Commercial Carpark)	Building C (Community & Office)	Total
Weekday Morning Peak Hour				
Community	-	-	3 (2 | 1)	**3 (2 | 1)**
Indoor Recreation	-	1 (0 | 1)	-	**1 (0 | 1)**
Non-Retail Commercial	0 (0 | 0)	-	0 (0 | 0)	**0 (0 | 0)**
Office	-	-	9 (8 | 1)	**9 (8 | 1)**
Public Carpark	-	-	-	**-**
Residential	18 (5 | 13)	-	-	**18 (5 | 13)**
Retail	0 (0 | 0)	-	1 (1 | 0)	**1 (1 | 0)**
Total	**18 (5 | 13)**	**1 (0 | 1)**	**13 (11 | 2)**	**32 (16 | 16)**
Weekday Evening Peak Hour				
Community	-	-	3 (0 | 3)	**3 (0 | 3)**
Indoor Recreation	-	1 (1 | 0)	-	**1 (1 | 0)**
Non-Retail Commercial	0 (0 | 0)	-	0 (0 | 0)	**0 (0 | 0)**
Office	-	-	9 (0 | 9)	**9 (0 | 9)**
Public Carpark	-	-	-	**-**
Residential	18 (11 | 7)	-	-	**18 (11 | 7)**
Retail	0 (0 | 0)	-	1 (1 | 0)	**1 (1 | 0)**
Total	**18 (11 | 7)**	**1 (1 | 0)**	**13 (1 | 12)**	**32 (13 | 19)**

These pedestrian trips are expected to be accommodated by the existing active travel network.

4.4.2 Cycling

Assuming that the proposed development has similar mode shares as the broader Phillip SA2 (Table 4, page 27), the proposed development would generate a total of approximately five (5) bicycle trips during each of the weekday morning and evening peak hours, as set out at Table 30 below.

Table 30: Development Cycling Demands

Land Use	Peak Hour Pedestrian Trips (Inbound | Outbound)			
	Building A (Residential)	Building B (Commercial Carpark)	Building C (Community & Office)	Total
Weekday Morning Peak Hour				
Community	-	-	1 (1 | 0)	**1 (1 | 0)**
Indoor Recreation	-	0 (0 | 0)	-	**0 (0 | 0)**
Non-Retail Commercial	0 (0 | 0)	-	0 (0 | 0)	**0 (0 | 0)**
Office	-	-	3 (2 | 1)	**3 (2 | 1)**
Public Carpark	-	-	-	**-**
Residential	1 (0 | 1)	-	-	**1 (0 | 1)**
Retail	0 (0 | 0)	-	0 (0 | 0)	**0 (0 | 0)**
Total	**1 (0 | 1)**	**0 (0 | 0)**	**4 (3 | 1)**	**5 (3 | 2)**
Weekday Evening Peak Hour				
Community	-	-	1 (0 | 1)	**1 (0 | 1)**
Indoor Recreation	-	0 (0 | 0)	-	**0 (0 | 0)**
Non-Retail Commercial	0 (0 | 0)	-	0 (0 | 0)	**0 (0 | 0)**
Office	-	-	3 (0 | 3)	**3 (0 | 3)**
Public Carpark	-	-	-	**-**
Residential	1 (1 | 0)	-	-	**1 (1 | 0)**
Retail	0 (0 | 0)	-	0 (0 | 0)	**0 (0 | 0)**
Total	**1 (1 | 0)**	**0 (0 | 0)**	**4 (0 | 4)**	**5 (1 | 4)**

These bicycle trips are expected to be accommodated by the existing active travel network.

4.5 Parking

Noting that the proposed development includes on-site car parking which significantly exceeds the suggested benchmarks, the proposed development is not expected to adversely impact the car parking conditions in the surrounding area.

5 Site Layout and Design

The following design review has been undertaken with reference to development plans prepared by Metier3, dated 14 August 2025, and received on 4 March 2026.

5.1 Car Parking Layout and Access

5.1.1 Scope and General

Classification of Off-Street Car Parking Facilities

The expected users of the proposed on-site carparks most closely align with the following user classes:

- **Building A:** User class 1A (residential),
- **Building B:** User class 3 (short-term city and town centre parking), and
- **Building C:** User class 1A (employees).

5.1.2 Design of Parking Modules, Circulation Roadways and Ramps

Preliminary Design Considerations

Parking Angle

The proposed carpark within Building A contain only car parking spaces oriented perpendicular (at 90 degrees) to the aisle.

The proposed carpark within Building B contains both car parking spaces oriented perpendicular (at 90 degrees), and parallel to the aisle.

The proposed carpark within Building C contain only car parking spaces oriented perpendicular (at 90 degrees) to the aisle.

Parking Aisle Length

The proposed carpark within Building A contains aisles up to approximately 75m in length, as such, speed humps are not required to manage vehicle speeds. It is noted that the proposed parking aisle provides access to all 292 class 1A parking spaces. As such, there is a risk of congestion due to vehicles manoeuvring into and out of parking spaces.

The proposed carpark within Building B contains aisles up to approximately 60m in length, as such, speed humps are not required to manage vehicle speeds. It is noted that the proposed parking aisles provide access to 164 and 476 class 3 parking spaces, within the basement and podium levels respectively. As such, there is a high risk of congestion due to vehicles manoeuvring into and out of parking spaces, particularly within the podium levels.

The proposed carpark within Building C contains aisles up to approximately 60m in length, as such, speed humps are not required to manage vehicle speeds. It is noted that the proposed parking aisle provides access to 128 of the class 1A parking spaces. As such, there is a risk of congestion due to vehicles manoeuvring into and out of parking spaces.

Assignment of User Class to Parking Modules

The carparks within Buildings A and C meet the definition of private carparks. In any case, all car parking spaces within each carpark align with a single user class, as follows:

- **Building A:** User class 1A,
- **Building B:** User class 3, and
- **Building C:** User class 1A.

Design of Parking Modules

Angle Parking Spaces

All 292 car parking spaces within Building A have dimensions of 2.4m width by 5.4m length, which accord with the minima for user class 1A.

The 637 perpendicular car parking spaces within Building B have dimensions of 2.6m width by 5.4m length, which accord with the minima for user class 3.

All of the car parking spaces within Building C have dimensions of 2.4m width by 5.4m length, which accord with the minima for user class 1A.

Angle Parking Aisle

Aisle Widths

All car parking spaces within Building A are located perpendicular (at 90-degrees) to aisles of 5.8m width. This aisle width is suitable to accommodate simultaneous two-way vehicle movements on straight alignments and accords with the minimum width of class 1A car parking spaces.

The 637 angle car parking spaces within Building B are located perpendicular (at 90-degrees) to aisles of at least 5.8m width. This aisle width is suitable to accommodate simultaneous two-way vehicle movements on straight alignments and accords with the minimum width of class 3 car parking spaces.

All car parking spaces within Building C are located perpendicular (at 90-degrees) to aisles of at least 5.8m width. This aisle width is suitable to accommodate simultaneous two-way vehicle movements on straight alignments and accords with the minimum width of class 1A car parking spaces.

Blind Aisles

The whole of the carpark within Building A forms a single blind aisle. A blind aisle extension of approximately 2.8m between the last parking space and the wall is proposed at the northern end of Basement 4. As all spaces within this carpark are proposed to be allocated to residents, there is no requirement for turning provision.

The carpark within Building B does not contain any blind aisles.

The carpark within Building C forms a total of six (6) blind aisles. Blind aisle extensions of at least 1.3m between the last parking space and the adjacent wall are proposed at each of the blind aisles. As all spaces within this carpark are proposed to be allocated to office staff, there is no requirement for turning provision.

Parallel Parking in Parking Aisles

The carpark within Building A does not contain any parallel car parking spaces.

The carpark within Building B contains two (2) parallel car parking spaces, both of which are located opposite angle parking spaces. These parallel parking spaces have dimensions of 2.1m width by 6.3m length and are located adjacent to aisles which have been locally widened to 6.3m.

The carpark within Building C does not contain any parallel car parking spaces.

Physical Controls

The carpark within Building A does not require any physical controls (i.e. barriers, kerbs, wheel stops, etc).

The carpark within Building B requires barriers to contain vehicles at the edges of the podium levels.

The carpark within Building C does not require any physical controls (i.e. barriers, kerbs, wheel stops, etc).

Gradients within Parking Modules

The carparks within all Buildings (A-C) include gradients of up to 1:20 within car parking modules.

Provision for Motorcycles

The proposed on-site carparks do not contain any dedicated motorcycle parking spaces.

Design of Circulation Roadways and Ramps

Layout Design of Circulation Roadways and Ramps

The proposed carpark within Building A has been designed to accommodate simultaneous two-way traffic (swept paths of one B85 and one B99 design vehicle) around corners and along ramps, due to the lack of intervisibility between opposing vehicles.

The proposed carpark within the basement levels of Building B is proposed to operate with a clockwise circulation to overcome the lack of width at the top and bottom of the ramps to accommodate simultaneous two-way traffic, where there is limited intervisibility. The ramps within the podium levels have been designed to accommodate simultaneous two-way traffic (swept paths of one B85 and one B99 design vehicle), due to the lack of intervisibility along ramps.

The proposed carpark within Building C has been designed to accommodate simultaneous two-way traffic (swept paths of one B85 and one B99 design vehicle) along the ramps and the corners immediately adjacent to the bottom of the ramps, due to the lack of intervisibility around corners and along ramps.

Circulation Roadway and Ramp Grades

The proposed carpark within Building A has a maximum ramp gradient of 1:4 (25%), this aligns with the maximum grade permissible within private carparks. Grade transitions have been designed to allow the B99 design vehicle to pass without scraping or bottoming out.

The proposed carpark within Building B has a maximum ramp gradient of 1:5 (20%), this aligns with the maximum grade permissible within public carparks. Grade transitions have been designed to allow the B99 design vehicle to pass without scraping or bottoming out.

The proposed carpark within Building C has a maximum ramp gradient of 1:5 (20%), this is less than the maximum grade permissible within private carparks. Grade transitions have been designed to allow the B99 design vehicle to pass without scraping or bottoming out.

Design of Domestic Driveways

The proposed development does not contain any domestic driveways.

5.1.3 Access Facilities to Off-Street Parking Areas and Queuing Areas

General

Categories of Access Facilities

The proposed carpark within Building A aligns with access facility category 2 (292 class 1A parking spaces and local frontage road).

The proposed carpark within the basement levels of Building B aligns with access facility category 3 (164 class 3 parking spaces and local frontage road).

The proposed carpark within the podium levels of Building B aligns with access facility category 4 (475 class 3 parking spaces and local frontage road).

The proposed carpark within Building C aligns with access facility category 2 (141 class 1A parking spaces and local frontage road).

Access Driveways – Widths and Location

Access Driveway Widths

All access driveways within the proposed development have been assessed as part of the intersection performance analysis, under the development scenarios.

Access Driveway Location

None of the proposed access driveways are located in the "prohibited locations of access driveways" as defined in *AS2890.1*. It is noted that exit movement from the basement levels of Building B and Building C are proposed to be restricted to left turns only to reduce conflicts.

Sight Distance at Access Driveway Exits

The pedestrian sight triangle shown at the exit to the proposed Building A carpark, implies that vehicles will be positioned partly across the pedestrian space. It is therefore recommended that (low-level) landscaping be installed to guide pedestrians away from the pedestrian sight triangle.

A pedestrian sight triangle is not required at the exit to the basement levels of the proposed Building B carpark, as there is no verge on the south side of the East-West Laneway in this location.

The plans show that the pedestrians sight triangle at the exit to the podium levels of the proposed Building B carpark would be clear to obstructions to visibility.

The plans show a non-standard sight triangle at the exit to the proposed Building C carpark. This sight triangle, while providing a level of intervisibility to approaching pedestrians, does not meet the standard specified in Figure 3.3 of *AS2890.1*. It is therefore recommended that further modifications to the structure and/or the vehicle exit be sought as the proposal progresses,

noting that conflicts between vehicles and pedestrians in this situation could be mitigated through signage and warning systems.

Gradients of Access Driveways

The access driveway to the proposed carpark within Building A includes a 6m length with a gradient of 1:20 (5%), located directly adjacent to the building frontage.

The access driveway to the proposed carpark within the basement levels of Building B includes an approximately 8m length with a horizontal gradient, located directly adjacent to the building frontage. It is recommended that the exit boomgate be relocated to the north to allow an exiting vehicle to stop on this horizontal grade.

The access driveway to the proposed carpark within the podium levels of Building B includes an approximately 8m length with a horizontal gradient, located directly adjacent to the building frontage. It is noted that the geometry of the access driveway will likely preclude the installation of a payment terminal which is accessible to the driver of an exiting vehicle. As such, patrons will need to make payment prior to entering their vehicle to leave the carpark.

The access driveway to the proposed carpark within Building C includes a 6m length with a gradient of 1:20 (5%), located directly adjacent to the building frontage. It is recommended that the exit boomgate be relocated to the south to allow an exiting vehicle to stop on this 1:20 grade.

Queuing Areas

Table 31 below compares the estimated queue lengths, based on first principles queuing analysis with consideration for the arrival and service rates, against the available queue storage, at each access driveway.

Table 31: First Principles Queuing Analysis

Metric	Value
Building A	
Arrival Rate	40 vehicle movements per hour
Access Control	Card Reader
Service Channels	1 lane
Service Rate	400 vehicle movements per hour
Utilisation	0.10
Queue Length (95th-98th percentile)	1 vehicle, equivalent to 6m
Available Queue Storage	6m at 1:20 grade
Building B Basement	
Arrival Rate	57 vehicle movements per hour
Access Control	Numberplate Recognition (Free-Flow)
Service Channels	1 lane
Service Rate	600 vehicle movements per hour
Utilisation	0.10
Queue Length (95th-98th percentile)	1 vehicle, equivalent to 6m
Available Queue Storage	8m at horizontal grade

Metric	Value
Building B Podium	
Arrival Rate	164 vehicle movements per hour
Access Control	Numberplate Recognition (Free-Flow)
Service Channels	1 lane
Service Rate	600 vehicle movements per hour
Utilisation	0.27
Queue Length (95th-98th percentile)	2-3 vehicles, equivalent to 12-18m
Available Queue Storage	18m at horizontal grade
Building C	
Arrival Rate	51 vehicle movements per hour
Access Control	Car Reader
Service Channels	1 lane
Service Rate	400 vehicle movements per hour
Utilisation	0.13
Queue Length (95th-98th percentile)	1 vehicle, equivalent to 6m
Available Queue Storage	6m at 1:20 grade

Access to Mechanical Parking Installations

The proposed development does not include any mechanical car parking (i.e. car stackers).

5.1.4 Additional Requirements for Car Parking Structures

Column Location and Spacing

All vertical obstructions (columns and walls) are located outside the manoeuvring and door opening clearances around each parking space.

Headroom

The proposed carpark within Building A has a floor-to-floor height of at least 2.8m. This is sufficient to accommodate up to 0.3m of overhead structure and services above the accessible car parking spaces and up to 0.6m of overhead structure and services elsewhere within the carpark.

The proposed carpark within the basement levels of Building B has a floor-to-floor height of at least 2.8m. This is sufficient to accommodate up to 0.3m of overhead structure and services above the accessible car parking spaces and up to 0.6m of overhead structure and services elsewhere within the carpark.

The proposed carpark within the podium levels of Building B has a floor-to-floor height of at least 3.2m. This is sufficient to accommodate up to 0.7m of overhead structure and services above the accessible car parking spaces and up to 1.0m of overhead structure and services elsewhere within the carpark.

The proposed carpark within Building C has a floor-to-floor height of at least 2.8m. This is sufficient to accommodate up to 0.3m of overhead structure and services above the accessible car parking spaces and up to 0.6m of overhead structure and services elsewhere within the carpark.

Design of Enclosed Garages

The proposed development does not include any enclosed garages.

6 Conclusion and Recommendations

Quantum Traffic have been engaged by Hellenic Property Investments 2 Pty Ltd to undertake a Traffic Impact Assessment (TIA) in relation to the proposed Woden Village development at Section 7, Phillip. This TIA has been undertaken with reference to the *Guidelines for Transport Impact Assessment (2016)*.

6.1 Proposal

The proposal is to demolish the existing public carpark and temporary Woden Interchange on the subject site in order to accommodate Woden Village, a mixed-use development comprising the following land uses:

- 3,869m^2 GFA of community land use,
- 635m^2 GFA of indoor recreation,
- 605m^2 GFA of non-retail commercial,
- 13,373m^2 GFA of office,
- 200 residential dwellings, comprising:
    - 110 apartments with one (1) bedroom,
    - 49 apartments with two (2) bedrooms, and
    - 41 apartments with three (3) bedrooms.
- 445m^2 GFA of retail, and
- 1,072 on-site car parking spaces, comprising:
    - 639 commercial car parking spaces, and
    - 433 private car parking spaces.

Vehicle access is proposed via two (2) new internal roadways within the subject site:

- North-South Road which extends from Bowes Street in the south to Matilda Street in the north and accommodates a single lane of northbound traffic, and
- East-West Laneway which extends from Bowes Street in the west to North-South Road in the east and accommodates a single lane of traffic in each direction for the western 35m, and a single lane of eastbound traffic for the remaining 55m.

6.2 Key Findings

This analysis found that the proposed development:

- Significantly exceeds the suggested benchmark for overall car parking,
- Exceeds both the requirement and suggested benchmark for accessible car parking,
- Has an acceptable shortfall of dedicated motorcycle parking, compared to the suggested benchmark, as motorcycles can be parked within standard car parking spaces,
- Accords with the suggested benchmark for service vehicle parking,
- Has a suggested benchmark for 348 'EV ready' car parking spaces,
- Exceeds the suggested benchmarks for long-stay and short-stay bicycle parking,
- Exceeds with the suggested benchmarks for shower and change facilities, and personal storage facilities,
- Is not expected to significantly impact the performance of the road network in the weekday morning peak hours of the 2030 or 2040 future analysis years, and

- Is expected to result in minor impacts to the performance of the Bowes Street / Launceston Street and Launceston Street / Wisdom Street / Yamba Drive intersections, during the weekday evening peak hours of the 2030 and 2040 future analysis years. It is noted that these impacts could be mitigated with minor modifications to the traffic signal timings at these intersections.

6.3 Recommendations

It is recommended that:

- 348 'EV ready' car parking spaces be provided within the proposed development, in order to accord with the relevant suggested benchmark,
- Minor modifications be made to the signal timings at the Bowes Street / Launceston Street, and Launceston Street / Wisdom Street / Yamba Drive intersections, during the weekday evening peak hours, to better accommodate the development traffic demands,
- Low level landscaping be provided to guide pedestrians away from the pedestrian sight triangle at the access driveway for Building A,
- Changes be made to the structure and/or vehicle exit at the access driveway for Building C to improve intervisibility between drivers of exiting vehicles and pedestrians on the north side of the East-West Laneway, and
- The boomgates at the exits for the basements of Buildings B and C be relocated, such that exiting vehicles can stop on a grade of less than 1:10.

6.4 Conclusion

On the basis of the above, there are no traffic engineering or transport planning reasons why the proposed development should not be approved, subject to appropriate conditions.

Appendix A:

Intersection Performance Results – 2025 Existing Conditions

USER REPORT FOR SITE

Project: 24-0487_20260304

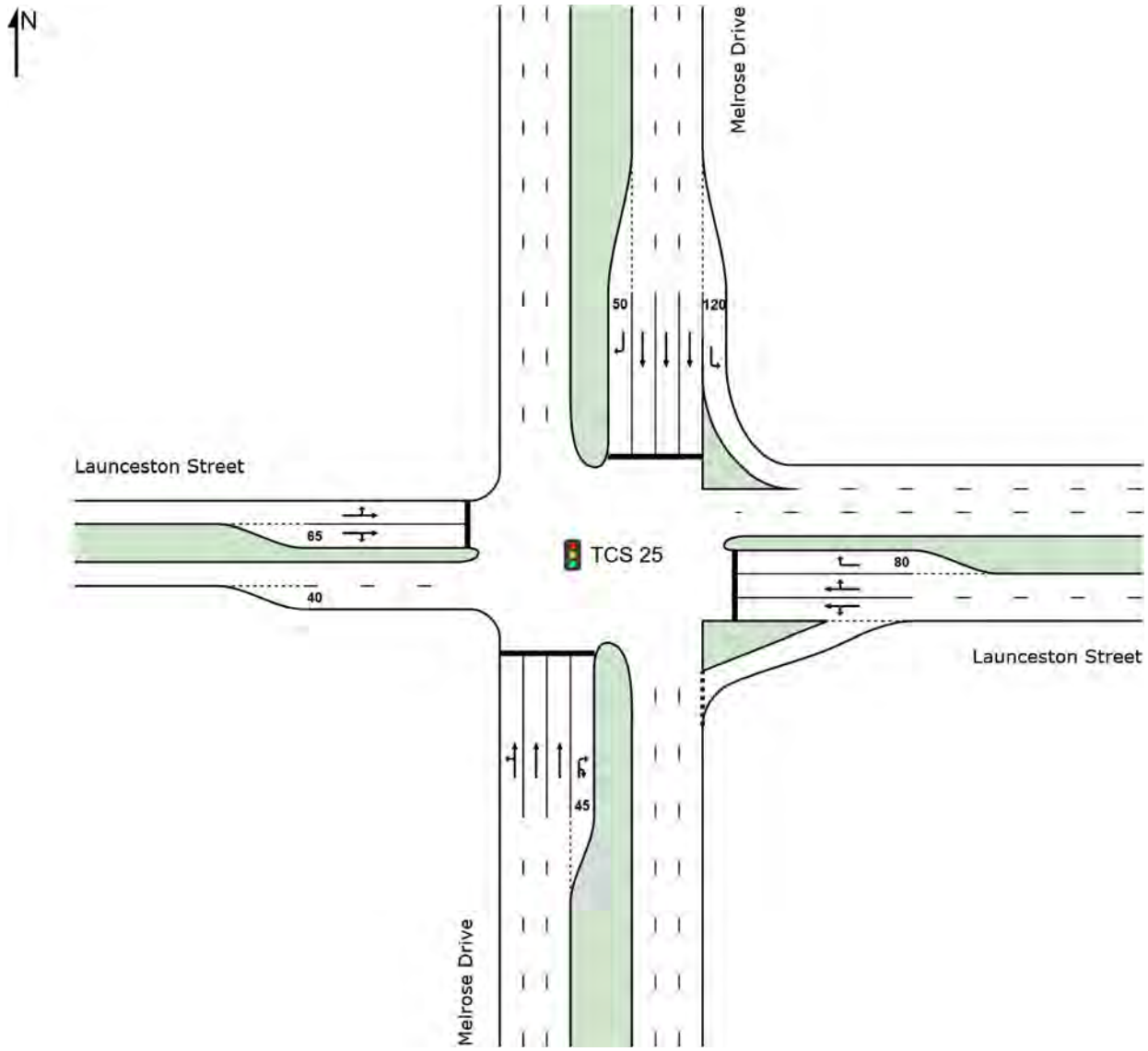
Template: Default Site User Report

Site: TCS 25 [2025 ExCond - AM: LS-MD]

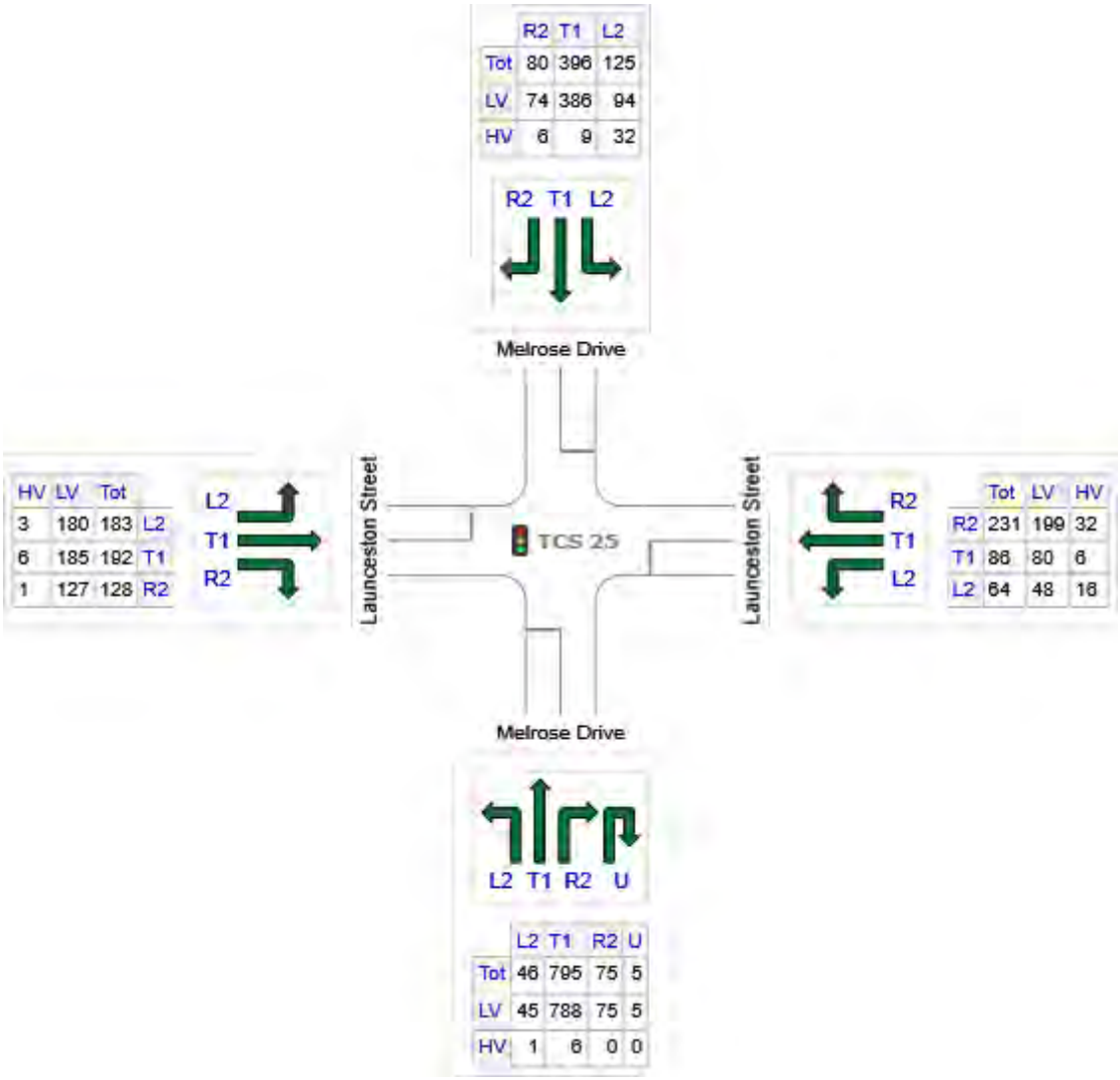
Launceston Street / Melrose Drive
Existing Signalised X-Intersection
Site Category: 2025 Existing Conditions - Weekday Morning Peak Hour
Signals - Fixed Time Isolated Cycle Time = 103 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E, F
Output Phase Sequence: A, D, E, F

Site Layout



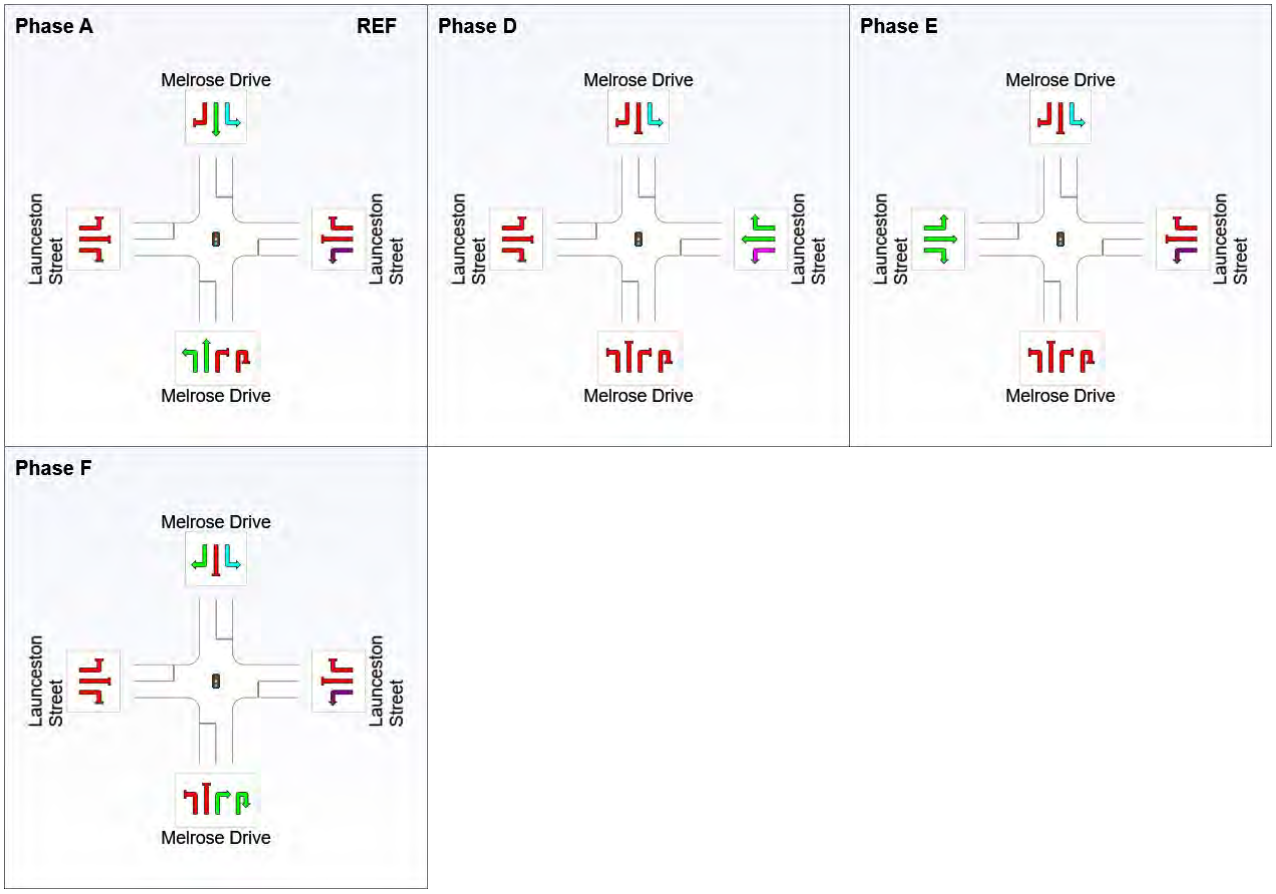
OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Melrose Drive	921	914	7
E: Launceston Street	381	327	54
N: Melrose Drive	601	554	47
W: Launceston Street	503	493	11
Total	2406	2287	119

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase

Phase Timing Summary

Phase	A	D	E	F
Phase Change Time (sec)	0	28	56	87
Green Time (sec)	22	22	25	10
Phase Time (sec)	28	28	31	16
Phase Split	27%	27%	30%	16%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Melrose Drive												
1	L2	46	2.3	0.872	59.6	LOS E	16.5	116.3	1.00	1.04	1.31	15.2
2	T1	795	0.8	0.872	53.9	LOS D	16.6	117.1	1.00	1.03	1.31	26.2
3	R2	75	0.0	0.567	56.8	LOS E	4.1	28.8	1.00	0.79	1.03	13.5
3u	U	5	0.0	0.567	58.2	LOS E	4.1	28.8	1.00	0.79	1.03	18.3
Approach		921	0.8	0.872	54.4	LOS D	16.6	117.1	1.00	1.01	1.29	24.8
East: Launceston Street												
4	L2	64	24.6	0.163	13.8	LOS A	1.7	14.0	0.58	0.64	0.58	32.9
5	T1	86	7.3	0.479	27.8	LOS B	6.5	49.9	0.78	0.73	0.78	17.2
6	R2	231	13.7	0.479	44.9	LOS D	6.5	49.9	0.92	0.79	0.92	26.2
Approach		381	14.1	0.479	35.8	LOS C	6.5	49.9	0.83	0.75	0.83	25.4
North: Melrose Drive												
7	L2	125	25.2	0.080	5.9	LOS A	0.0	0.0	0.00	0.51	0.00	48.8
8	T1	396	2.4	0.322	37.3	LOS C	5.7	40.5	0.89	0.72	0.89	31.8
9	R2	80	7.9	0.469	55.5	LOS D	4.0	29.9	0.99	0.77	0.99	22.8
Approach		601	7.9	0.469	33.1	LOS C	5.7	40.5	0.72	0.68	0.72	32.4
West: Launceston Street												
10	L2	183	1.7	0.695	44.8	LOS D	12.0	85.3	0.97	0.86	1.01	25.7
11	T1	192	3.3	0.695	40.2	LOS C	12.1	86.2	0.97	0.86	1.01	13.6
12	R2	128	0.8	0.695	44.7	LOS D	12.1	86.2	0.97	0.86	1.01	18.1
Approach		503	2.1	0.695	43.0	LOS D	12.1	86.2	0.97	0.86	1.01	20.1
All Vehicles		2406	4.9	0.872	43.8	LOS D	16.6	117.1	0.90	0.86	1.02	25.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	Demand Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	95% Back of Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Melrose Drive													
Lane 1	286	1.0	328	0.872	100	54.9	LOS D	16.5	116.3	Full	205	0.0	0.0
Lane 2	289	0.8	331	0.872	100	53.9	LOS D	16.6	117.1	Full	205	0.0	0.0
Lane 3	266	0.8	305[1]	0.872	100	53.7	LOS D	15.1	106.7	Full	205	0.0	0.0
Lane 4	80	0.0	141	0.567	100	56.9	LOS E	4.1	28.8	Short	45	0.0	NA
Approach	921	0.8		0.872		54.4	LOS D	16.6	117.1				
East: Launceston Street													
Lane 1	100	18.4	613	0.163	34[6]	12.3	LOS A	1.7	14.0	Full	90	0.0	0.0
Lane 2	143	11.4	299	0.479	100	43.3	LOS D	6.5	49.9	Full	90	0.0	0.0
Lane 3	138	13.7	289	0.479	100	44.9	LOS D	6.3	49.2	Short	80	0.0	NA
Approach	381	14.1		0.479		35.8	LOS C	6.5	49.9				
North: Melrose Drive													
Lane 1	125	25.2	1574	0.080	100	5.9	LOS A	0.0	0.0	Short	120	0.0	NA
Lane 2	132	2.4	410	0.322	100	37.3	LOS C	5.7	40.5	Full	470	0.0	0.0
Lane 3	132	2.4	410	0.322	100	37.3	LOS C	5.7	40.5	Full	470	0.0	0.0
Lane 4	132	2.4	410	0.322	100	37.3	LOS C	5.7	40.5	Full	470	0.0	0.0
Lane 5	80	7.9	171	0.469	100	55.5	LOS D	4.0	29.9	Short	50	0.0	NA
Approach	601	7.9		0.469		33.1	LOS C	5.7	40.5				
West: Launceston Street													
Lane 1	250	2.1	360	0.695	100	43.6	LOS D	12.0	85.3	Full	95	0.0	0.0
Lane 2	253	2.0	364	0.695	100	42.5	LOS C	12.1	86.2	Short	65	0.0	NA
Approach	503	2.1		0.695		43.0	LOS D	12.1	86.2				
Intersection	2406	4.9		0.872		43.8	LOS D	16.6	117.1				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

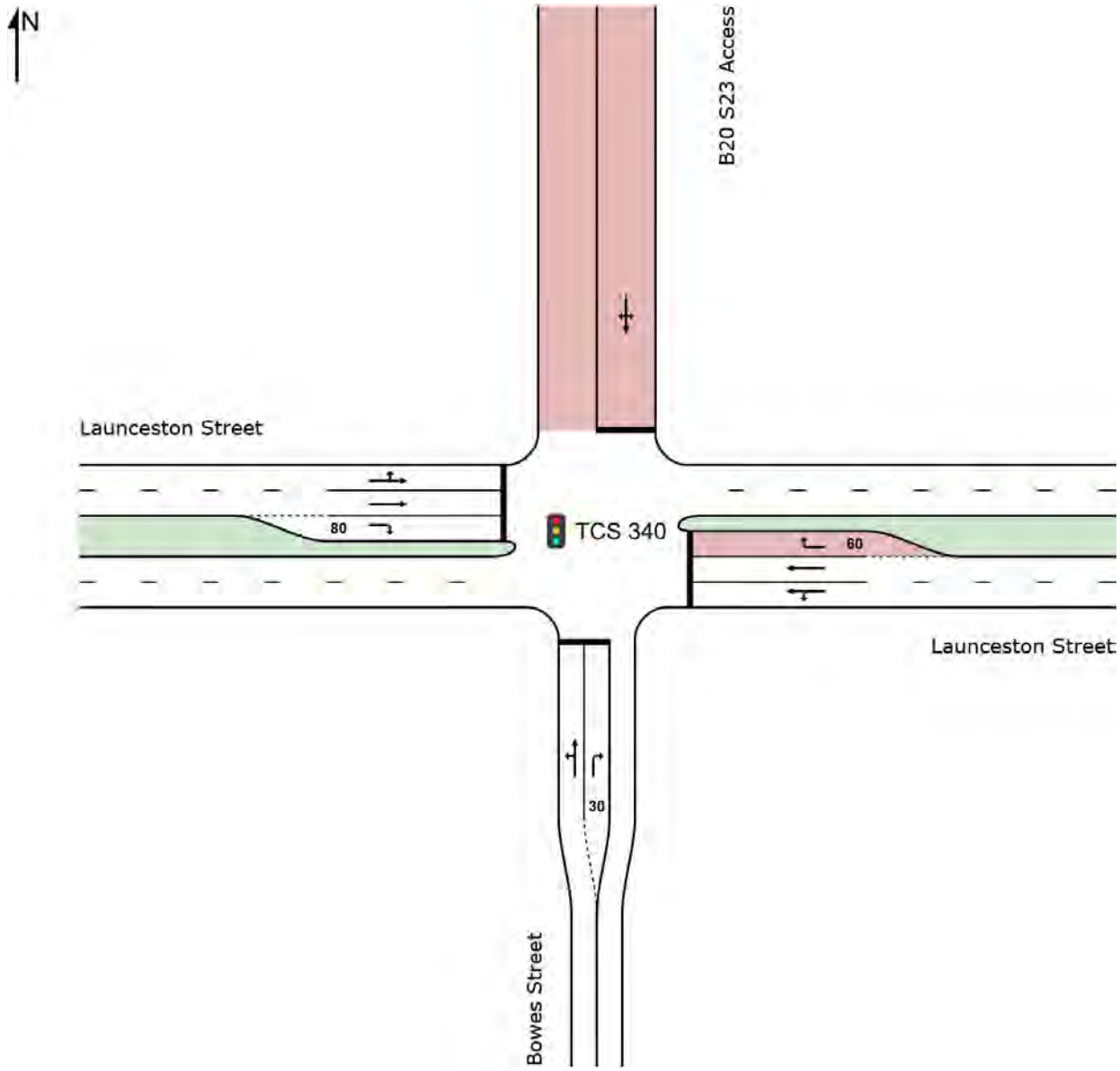
1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
6 Lane under-utilisation due to downstream effects

Site: TCS 340 [2025 ExCond - AM: BS-LS]

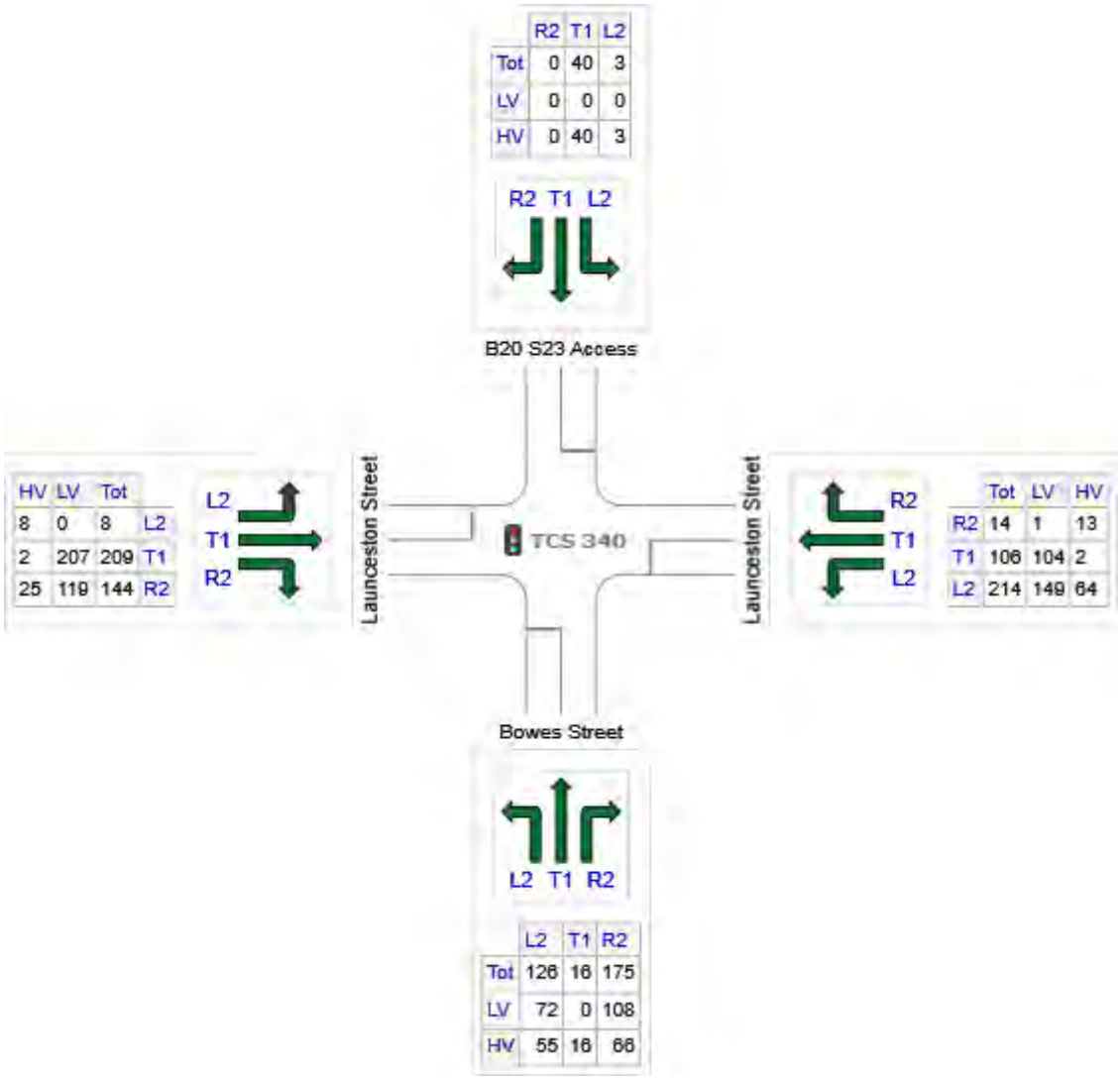
Block 20 Section 23 Access / Bowes Street / Launceston Street
Existing Signalised X-Intersection
Site Category: 2025 Existing Conditions - Weekday Morning Peak Hour
Signals - Fixed Time Isolated Cycle Time = 84 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E, G
Output Phase Sequence: A, D, E, G

Site Layout



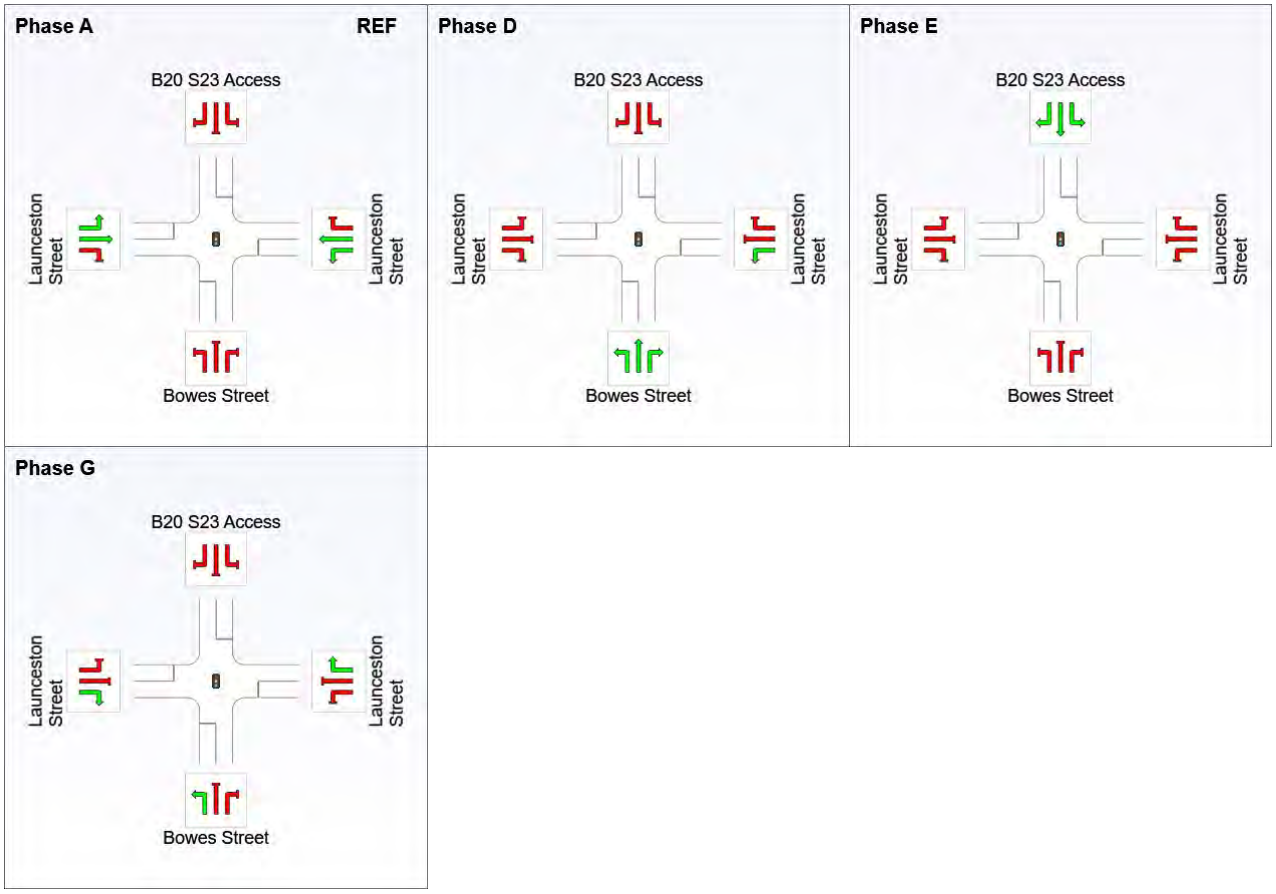
OD Demand Flows



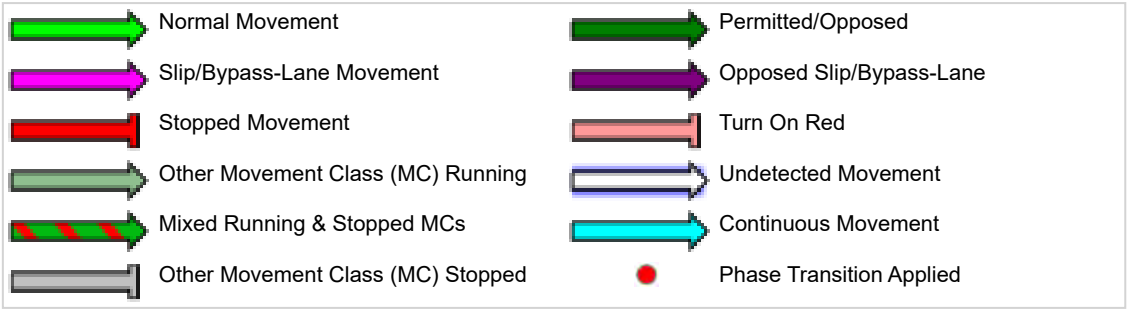
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	317	180	137
E: Launceston Street	334	255	79
N: B20 S23 Access	43	0	43
W: Launceston Street	362	326	36
Total	1056	761	295

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	D	E	G
Phase Change Time (sec)	0	27	55	68
Green Time (sec)	22	22	7	12
Phase Time (sec)	28	28	11	17
Phase Split	33%	33%	13%	20%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	126	43.3	0.274	14.5	LOS A	2.8	27.8	0.73	0.73	0.73	19.9
2	T1	16	100.0	0.274	14.9	LOS B	2.8	27.8	0.73	0.73	0.73	12.4
3	R2	175	38.0	0.480	32.0	LOS C	6.2	57.3	0.89	0.79	0.89	11.7
Approach		317	43.2	0.480	24.2	LOS B	6.2	57.3	0.82	0.76	0.82	14.2
East: Launceston Street												
4	L2	214	30.0	0.235	14.1	LOS A	4.1	36.1	0.50	0.71	0.50	20.8
5	T1	106	2.0	0.211	26.3	LOS B	3.4	24.5	0.82	0.65	0.82	19.9
6	R2	14	92.3	0.086	41.6	LOS C	0.5	6.4	0.90	0.69	0.90	9.7
Approach		334	23.7	0.235	19.1	LOS B	4.1	36.1	0.62	0.69	0.62	19.7
North: B20 S23 Access												
7	L2	3	100.0	0.406	43.1	LOS D	1.8	24.0	0.99	0.74	0.99	8.4
8	T1	40	100.0	0.406	43.1	LOS D	1.8	24.0	0.99	0.74	0.99	5.4
9	R2	0	100.0	0.406	43.1	LOS D	1.8	24.0	0.99	0.74	0.99	8.9
Approach		43	100.0	0.406	43.1	LOS D	1.8	24.0	0.99	0.74	0.99	5.6
West: Launceston Street												
10	L2	8	100.0	0.340	33.9	LOS C	3.6	27.4	0.85	0.70	0.85	13.4
11	T1	209	1.0	0.340	28.0	LOS B	3.9	27.2	0.85	0.70	0.85	19.0
12	R2	144	17.5	0.941	70.1	LOS E	8.2	66.0	1.00	1.15	1.83	6.9
Approach		362	9.9	0.941	45.0	LOS D	8.2	66.0	0.91	0.88	1.24	12.0
All Vehicles		1056	27.9	0.941	30.5	LOS C	8.2	66.0	0.79	0.78	0.91	14.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	Demand Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	95% Back of Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Bowes Street													
Lane 1	142	49.6	519	0.274	100	14.6	LOS B	2.8	27.8	Full	35	0.0	50.4[8]
Lane 2	175	38.0	364[1]	0.480	100	32.0	LOS C	6.2	57.3	Short	30	0.0	NA
Approach	317	43.2		0.480		24.2	LOS B	6.2	57.3				
East: Launceston Street													
Lane 1	214	30.0	910	0.235	100	14.1	LOS A	4.1	36.1	Full	95	0.0	0.0
Lane 2	106	2.0	504	0.211	90[5]	26.3	LOS B	3.4	24.5	Full	95	0.0	0.0
Lane 3	14	92.3	160	0.086	100	41.6	LOS C	0.5	6.4	Short	60	0.0	NA
Approach	334	23.7		0.235		19.1	LOS B	4.1	36.1				
North: B20 S23 Access													
Lane 1	43	100.0	106	0.406	100	43.1	LOS D	1.8	24.0	Full	30	0.0	0.0
Approach	43	100.0		0.406		43.1	LOS D	1.8	24.0				
West: Launceston Street													
Lane 1	106	8.9	310	0.340	100	28.9	LOS C	3.6	27.4	Full	105	0.0	0.0
Lane 2	112	1.0	330	0.340	100	28.0	LOS B	3.9	27.2	Full	105	0.0	0.0
Lane 3	144	17.5	153	0.941	100	70.1	LOS E	8.2	66.0	Short	80	0.0	NA
Approach	362	9.9		0.941		45.0	LOS D	8.2	66.0				
Intersection	1056	27.9		0.941		30.5	LOS C	8.2	66.0				

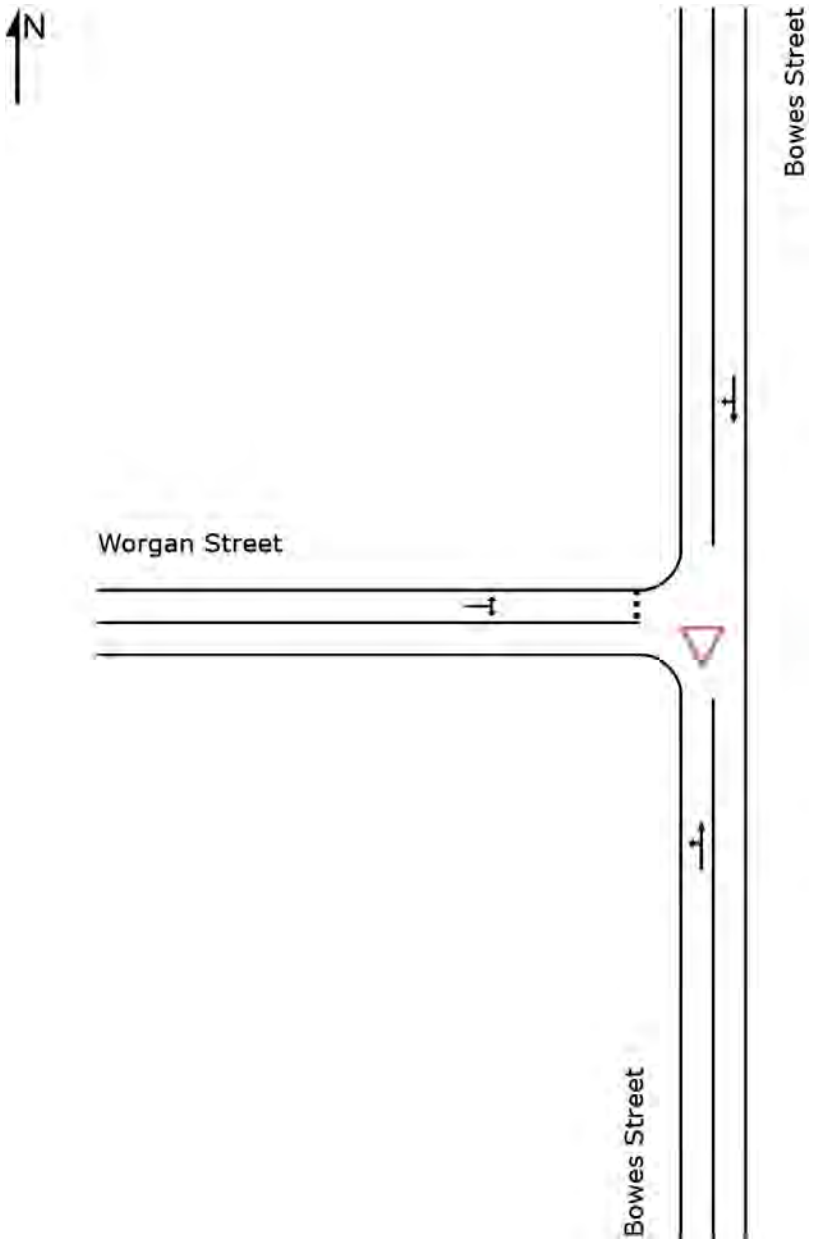
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
5 Lane under-utilisation found by the program
8 Probability of Blockage has been set on the basis of a queue that overflows from a short lane.

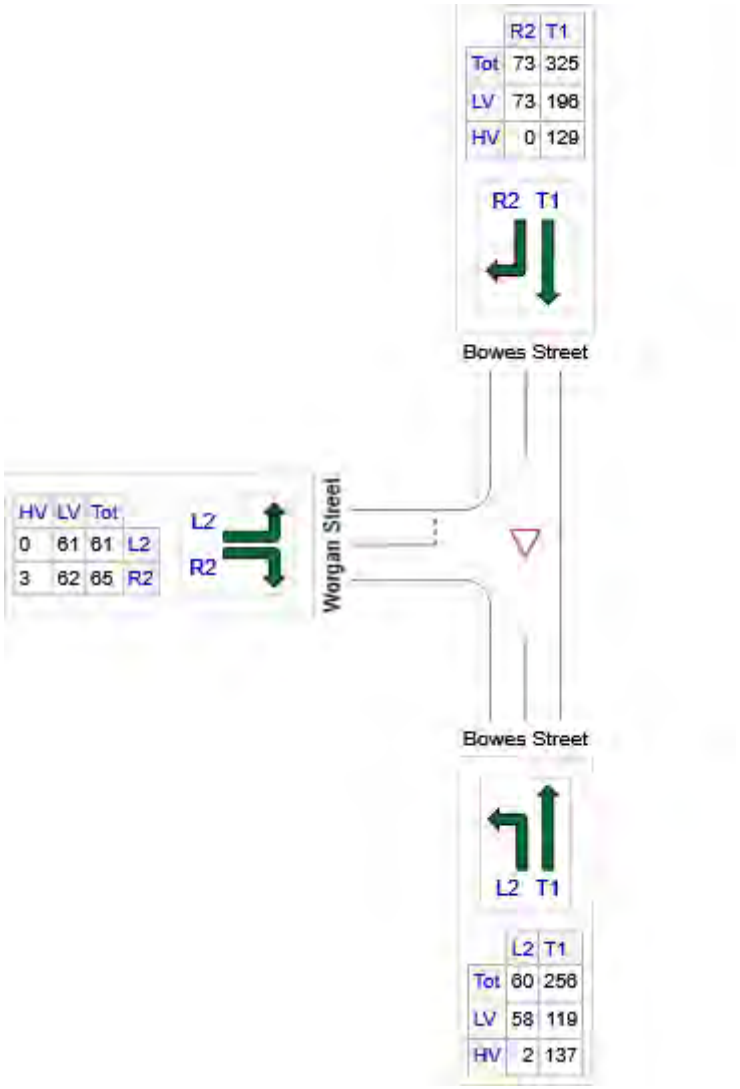
Site: [2025 ExCond - AM: BS-WS]

Bowes Street / Worgan Street
Existing Priority-Controlled (Give-Way) T-Intersection
Site Category: 2025 Existing Conditions - Weekday Morning Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	316	177	139
N: Bowes Street	398	268	129
W: Worgan Street	126	123	3
Total	840	568	272

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	60	3.5	0.210	4.6	LOS A	0.0	0.0	0.00	0.10	0.00	32.9
2	T1	256	53.5	0.210	0.0	LOS A	0.0	0.0	0.00	0.10	0.00	44.0
Approach		316	44.0	0.210	0.9	NA	0.0	0.0	0.00	0.10	0.00	41.3
North: Bowes Street												
8	T1	325	39.8	0.262	0.5	LOS A	0.6	5.2	0.16	0.12	0.16	43.6
9	R2	73	0.0	0.262	5.0	LOS A	0.6	5.2	0.16	0.12	0.16	17.1
Approach		398	32.5	0.262	1.3	NA	0.6	5.2	0.16	0.12	0.16	37.4
West: Worgan Street												
10	L2	61	0.0	0.162	4.4	LOS A	0.6	4.2	0.48	0.68	0.48	18.6
12	R2	65	4.8	0.162	7.7	LOS A	0.6	4.2	0.48	0.68	0.48	29.2
Approach		126	2.5	0.162	6.1	LOS A	0.6	4.2	0.48	0.68	0.48	24.5
All Vehicles		840	32.3	0.262	1.9	NA	0.6	5.2	0.15	0.20	0.15	36.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

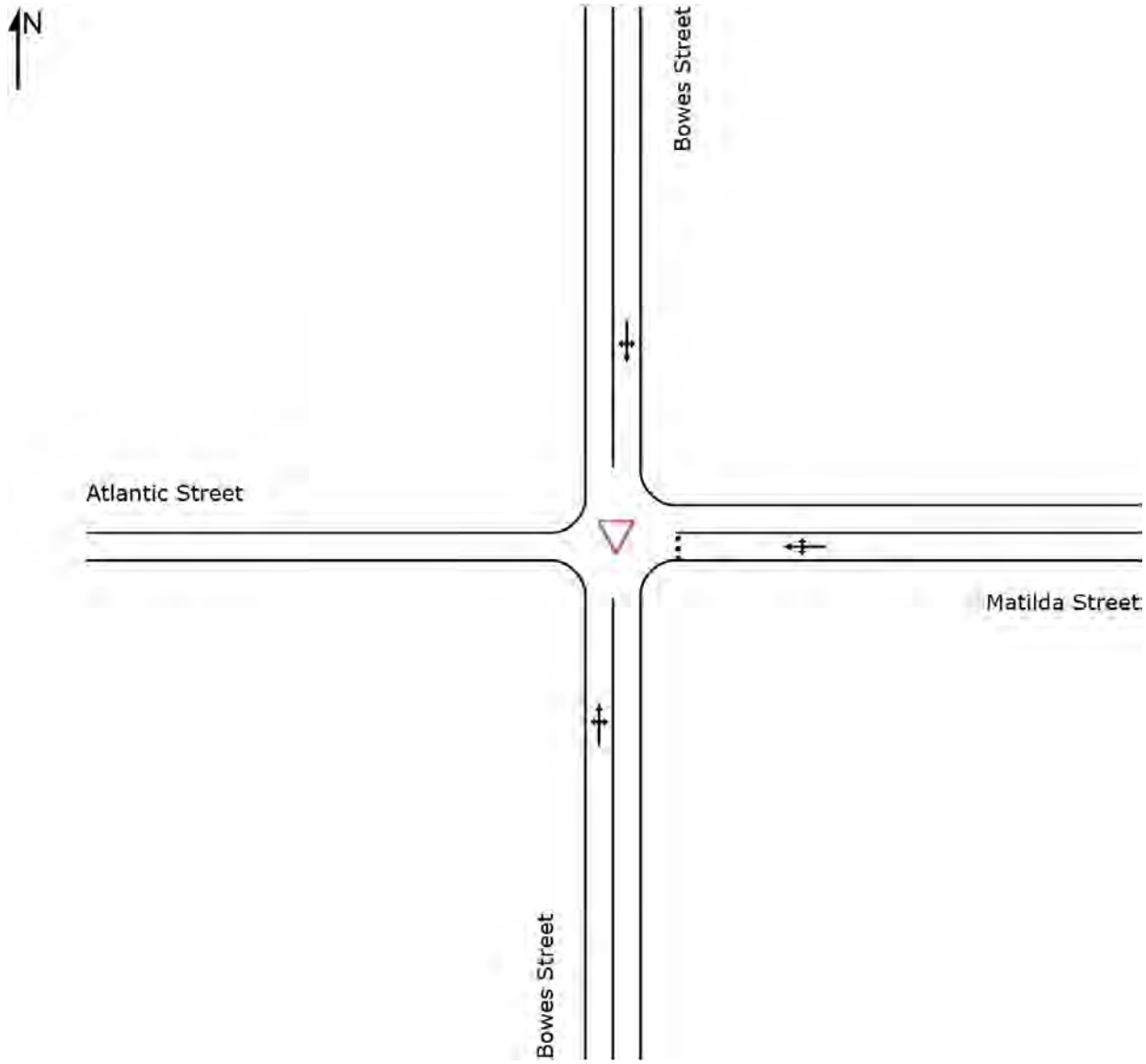
Lane Use and Performance													
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Bowes Street													
Lane 1	316	44.0	1504	0.210	100	0.9	LOS A	0.0	0.0	Full	105	0.0	0.0
Approach	316	44.0		0.210		0.9	NA	0.0	0.0				
North: Bowes Street													
Lane 1	398	32.5	1517	0.262	100	1.3	LOS A	0.6	5.2	Full	35	0.0	0.0
Approach	398	32.5		0.262		1.3	NA	0.6	5.2				
West: Worgan Street													
Lane 1	126	2.5	779	0.162	100	6.1	LOS A	0.6	4.2	Full	35	0.0	0.0
Approach	126	2.5		0.162		6.1	LOS A	0.6	4.2				
Intersection	840	32.3		0.262		1.9	NA	0.6	5.2				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

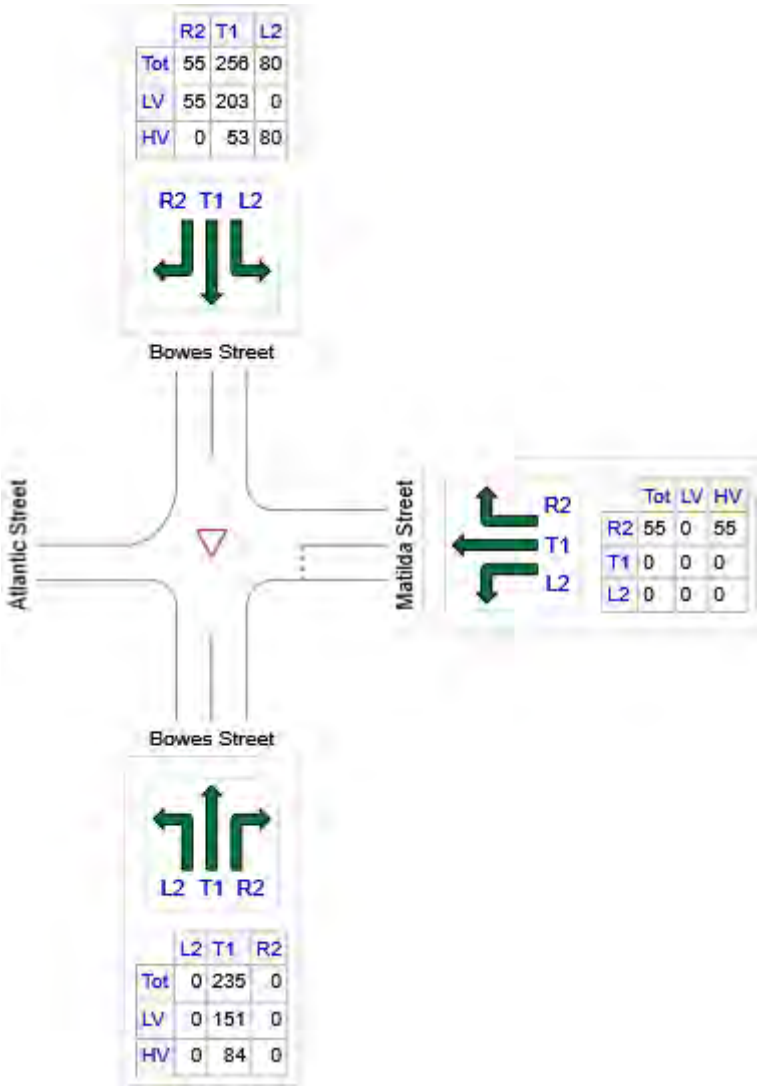
Site: [2025 ExCond - AM: AS-BS-MS]

Atlantic Street / Bowes Street / Matilda Street
Existing Priority-Controlled (Give-Way) T-Intersection
Site Category: 2025 Existing Conditions - Weekday Morning Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	235	151	84
E: Matilda Street	55	0	55
N: Bowes Street	391	258	133
Total	681	409	272

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	0	0.0	0.149	4.7	LOS A	0.0	0.0	0.00	0.00	0.00	24.3
2	T1	235	35.9	0.149	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
3	R2	0	0.0	0.149	5.3	LOS A	0.0	0.0	0.00	0.00	0.00	43.5
Approach		235	35.8	0.149	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.9
East: Matilda Street												
4	L2	0	0.0	0.247	6.5	LOS A	0.9	11.1	0.76	0.86	0.85	15.7
5	T1	0	0.0	0.247	8.8	LOS A	0.9	11.1	0.76	0.86	0.85	16.1
6	R2	55	99.8	0.247	20.6	LOS B	0.9	11.1	0.76	0.86	0.85	17.4
Approach		55	99.4	0.247	20.6	LOS B	0.9	11.1	0.76	0.86	0.85	17.4
North: Bowes Street												
7	L2	80	99.9	0.256	5.9	LOS A	0.6	5.1	0.17	0.18	0.17	35.7
8	T1	256	20.6	0.256	0.3	LOS A	0.6	5.1	0.17	0.18	0.17	43.8
9	R2	55	0.0	0.256	6.0	LOS A	0.6	5.1	0.17	0.18	0.17	28.1
Approach		391	34.0	0.256	2.2	NA	0.6	5.1	0.17	0.18	0.17	37.8
All Vehicles		681	39.9	0.256	3.0	NA	0.9	11.1	0.16	0.17	0.16	36.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

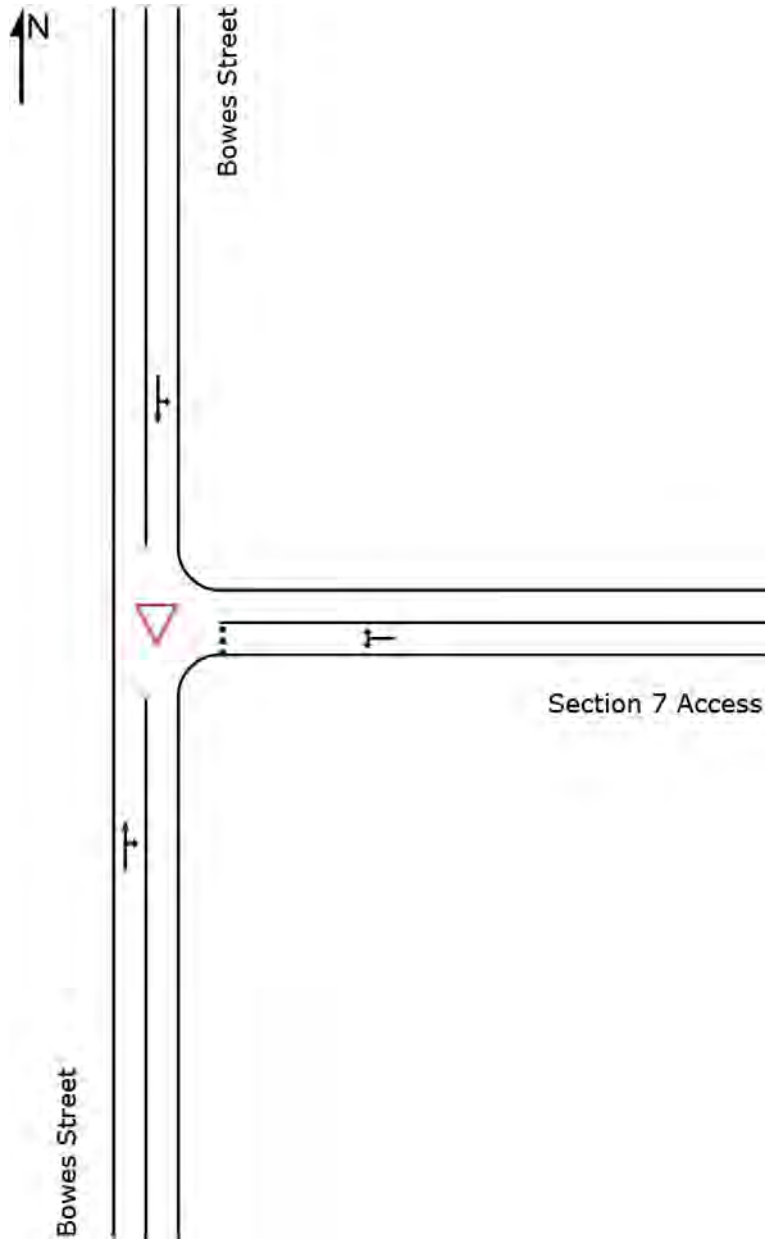
	Demand Flows Total veh/h	Demand Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	95% Back of Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Bowes Street													
Lane 1	235	35.8	1581	0.149	100	0.0	LOS A	0.0	0.0	Full	45	0.0	0.0
Approach	235	35.8		0.149		0.0	NA	0.0	0.0				
East: Matilda Street													
Lane 1	55	99.4	223	0.247	100	20.6	LOS B	0.9	11.1	Full	80	0.0	0.0
Approach	55	99.4		0.247		20.6	LOS B	0.9	11.1				
North: Bowes Street													
Lane 1	391	34.0	1526	0.256	100	2.2	LOS A	0.6	5.1	Full	110	0.0	0.0
Approach	391	34.0		0.256		2.2	NA	0.6	5.1				
Intersection	681	39.9		0.256		3.0	NA	0.9	11.1				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

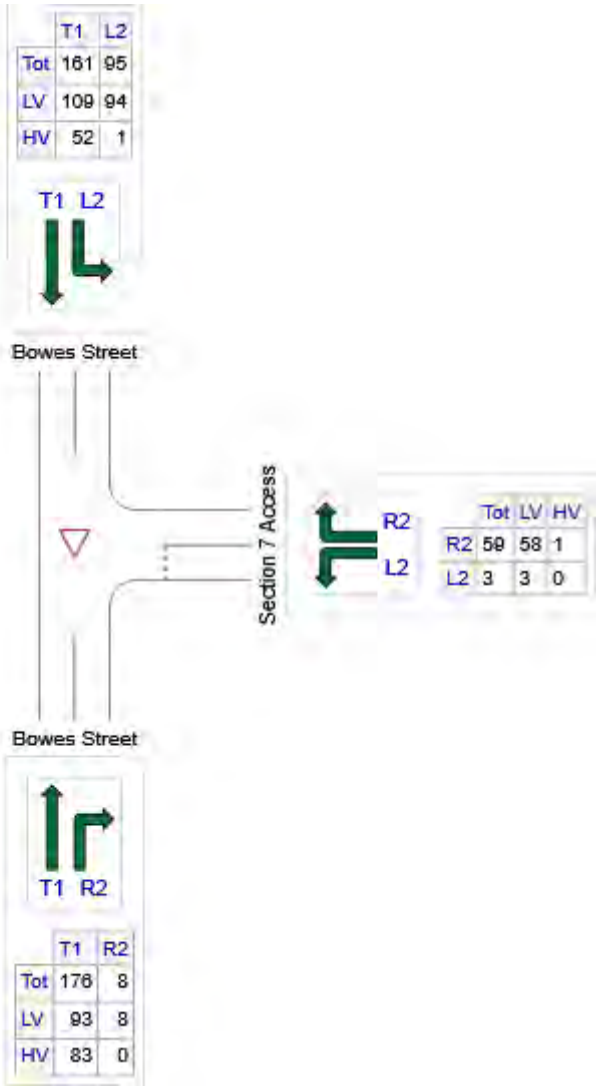
Site: [2025 ExCond - AM: BS-S7]

Bowes Street / Section 7 Access
Existing Priority-Controlled (Give-Way) T-Intersection
Site Category: 2025 Existing Conditions - Weekday Morning Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	184	101	83
E: Section 7 Access	62	61	1
N: Bowes Street	256	203	53
Total	502	365	137

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
2	T1	176	47.3	0.123	0.1	LOS A	0.1	0.6	0.04	0.03	0.04	47.4
3	R2	8	0.0	0.123	5.4	LOS A	0.1	0.6	0.04	0.03	0.04	47.5
Approach		184	45.1	0.123	0.3	NA	0.1	0.6	0.04	0.03	0.04	47.4
East: Section 7 Access												
4	L2	3	0.0	0.073	0.6	LOS A	0.2	1.7	0.41	0.41	0.41	23.2
6	R2	59	1.8	0.073	2.6	LOS A	0.2	1.7	0.41	0.41	0.41	22.6
Approach		62	1.7	0.073	2.5	LOS A	0.2	1.7	0.41	0.41	0.41	22.6
North: Bowes Street												
7	L2	95	1.1	0.151	4.3	LOS A	0.0	0.0	0.00	0.20	0.00	23.0
8	T1	161	32.0	0.151	0.0	LOS A	0.0	0.0	0.00	0.20	0.00	41.3
Approach		256	20.6	0.151	1.6	NA	0.0	0.0	0.00	0.20	0.00	33.8
All Vehicles		502	27.3	0.151	1.2	NA	0.2	1.7	0.07	0.16	0.07	36.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	Demand Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	95% Back of Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Bowes Street													
Lane 1	184	45.1	1499	0.123	100	0.3	LOS A	0.1	0.6	Full	60	0.0	0.0
Approach	184	45.1		0.123		0.3	NA	0.1	0.6				
East: Section 7 Access													
Lane 1	62	1.7	850	0.073	100	2.5	LOS A	0.2	1.7	Full	15	0.0	0.0
Approach	62	1.7		0.073		2.5	LOS A	0.2	1.7				
North: Bowes Street													
Lane 1	256	20.6	1692	0.151	100	1.6	LOS A	0.0	0.0	Full	60	0.0	0.0
Approach	256	20.6		0.151		1.6	NA	0.0	0.0				
Intersection	502	27.3		0.151		1.2	NA	0.2	1.7				

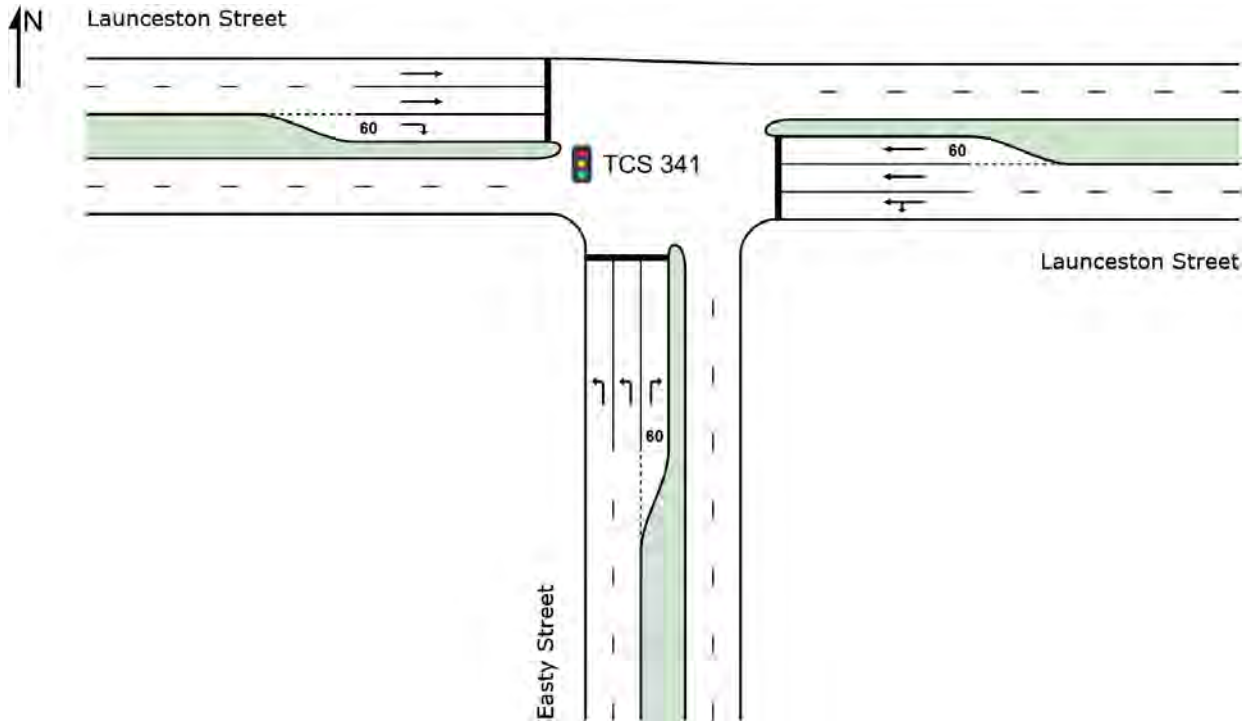
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: TCS 341 [2025 ExCond - AM: ES-LS]

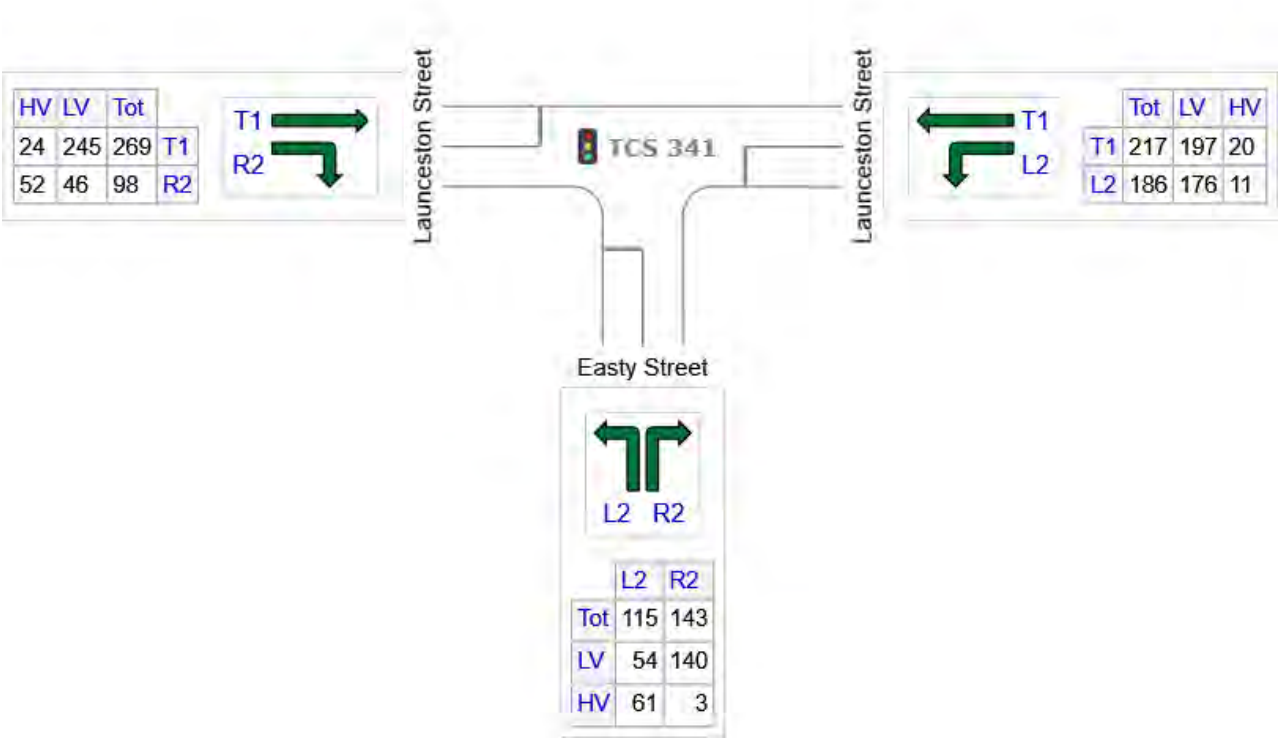
Easty Street / Launceston Street
Existing Signalised T-Intersection
Site Category: 2025 Existing Conditions - Weekday Morning Peak Hour
Signals - Fixed Time Isolated Cycle Time = 68 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Site Layout



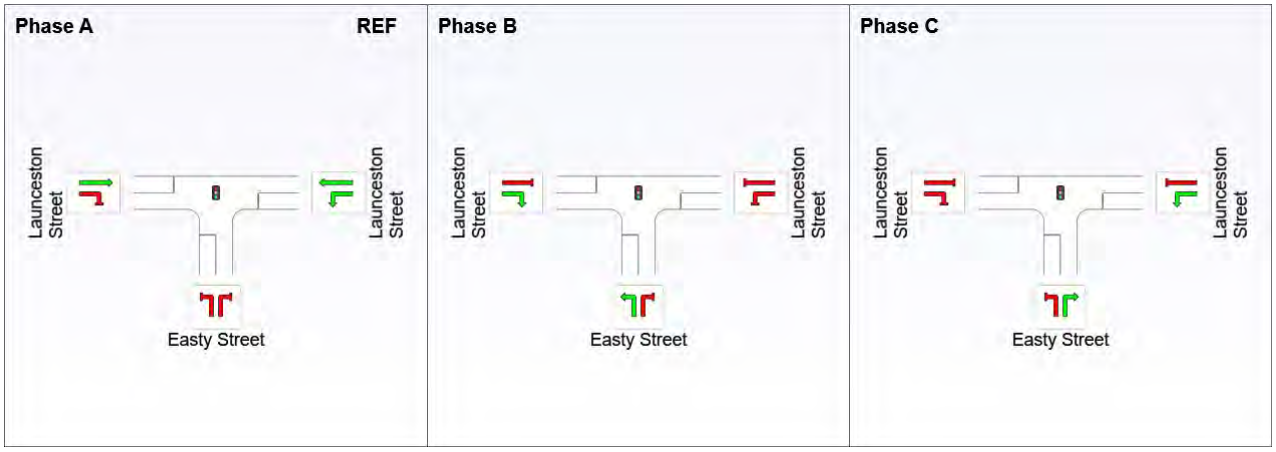
OD Demand Flows



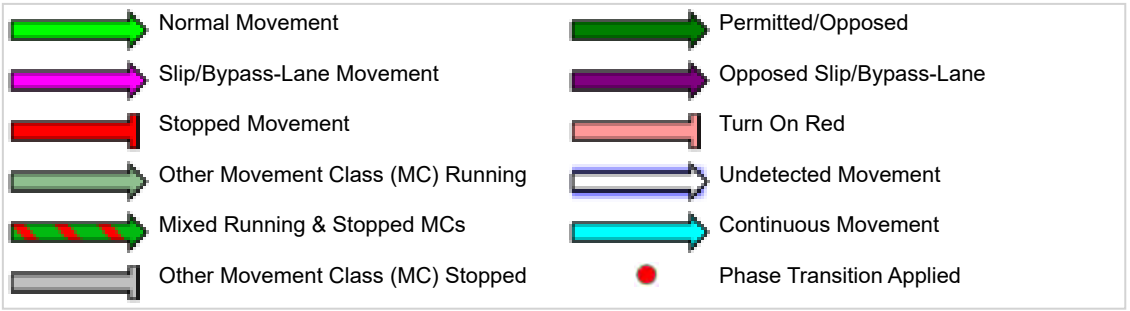
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Easty Street	258	194	64
E: Launceston Street	403	373	31
W: Launceston Street	367	292	76
Total	1028	858	171

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	30	49
Green Time (sec)	25	13	14
Phase Time (sec)	31	18	19
Phase Split	46%	26%	28%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Easty Street												
1	L2	115	53.2	0.223	30.0	LOS C	1.7	17.2	0.88	0.73	0.88	23.1
3	R2	143	2.2	0.380	29.3	LOS C	4.2	30.3	0.91	0.77	0.91	25.9
Approach		258	24.9	0.380	29.6	LOS C	4.2	30.3	0.89	0.75	0.89	24.7
East: Launceston Street												
4	L2	186	5.6	0.161	8.5	LOS A	2.4	17.7	0.42	0.61	0.42	34.6
5	T1	217	9.2	0.160	15.7	LOS B	2.4	18.4	0.71	0.56	0.71	28.1
Approach		403	7.6	0.161	12.3	LOS A	2.4	18.4	0.57	0.59	0.57	31.3
West: Launceston Street												
11	T1	269	9.0	0.199	15.9	LOS B	3.1	23.2	0.72	0.58	0.72	27.9
12	R2	98	52.7	0.379	30.9	LOS C	3.0	30.5	0.91	0.76	0.91	22.9
Approach		367	20.6	0.379	19.9	LOS B	3.1	30.5	0.77	0.63	0.77	26.3
All Vehicles		1028	16.6	0.380	19.4	LOS B	4.2	30.5	0.72	0.64	0.72	27.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	Demand Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	95% Back of Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Easty Street													
Lane 1	57	53.2	257	0.223	100	30.0	LOS C	1.7	17.2	Full	305	0.0	0.0
Lane 2	57	53.2	257	0.223	100	30.0	LOS C	1.7	17.2	Full	305	0.0	0.0
Lane 3	143	2.2	376	0.380	100	29.3	LOS C	4.2	30.3	Short	60	0.0	NA
Approach	258	24.9		0.380		29.6	LOS C	4.2	30.3				
East: Launceston Street													
Lane 1	186	5.6	1155	0.161	100	8.5	LOS A	2.4	17.7	Full	260	0.0	0.0
Lane 2	108	9.2	676	0.160	99[5]	15.7	LOS B	2.4	18.4	Full	260	0.0	0.0
Lane 3	108	9.2	676	0.160	99[5]	15.7	LOS B	2.4	18.4	Short	60	0.0	NA
Approach	403	7.6		0.161		12.3	LOS A	2.4	18.4				
West: Launceston Street													
Lane 1	135	9.0	677	0.199	100	15.9	LOS B	3.1	23.2	Full	130	0.0	0.0
Lane 2	135	9.0	677	0.199	100	15.9	LOS B	3.1	23.2	Full	130	0.0	0.0
Lane 3	98	52.7	258	0.379	100	30.9	LOS C	3.0	30.5	Short	60	0.0	NA
Approach	367	20.6		0.379		19.9	LOS B	3.1	30.5				
Intersection	1028	16.6		0.380		19.4	LOS B	4.2	30.5				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5 Lane under-utilisation found by the program

USER REPORT FOR NETWORK SITE

Project: 24-0487_20260304

Template: Default Site User Report

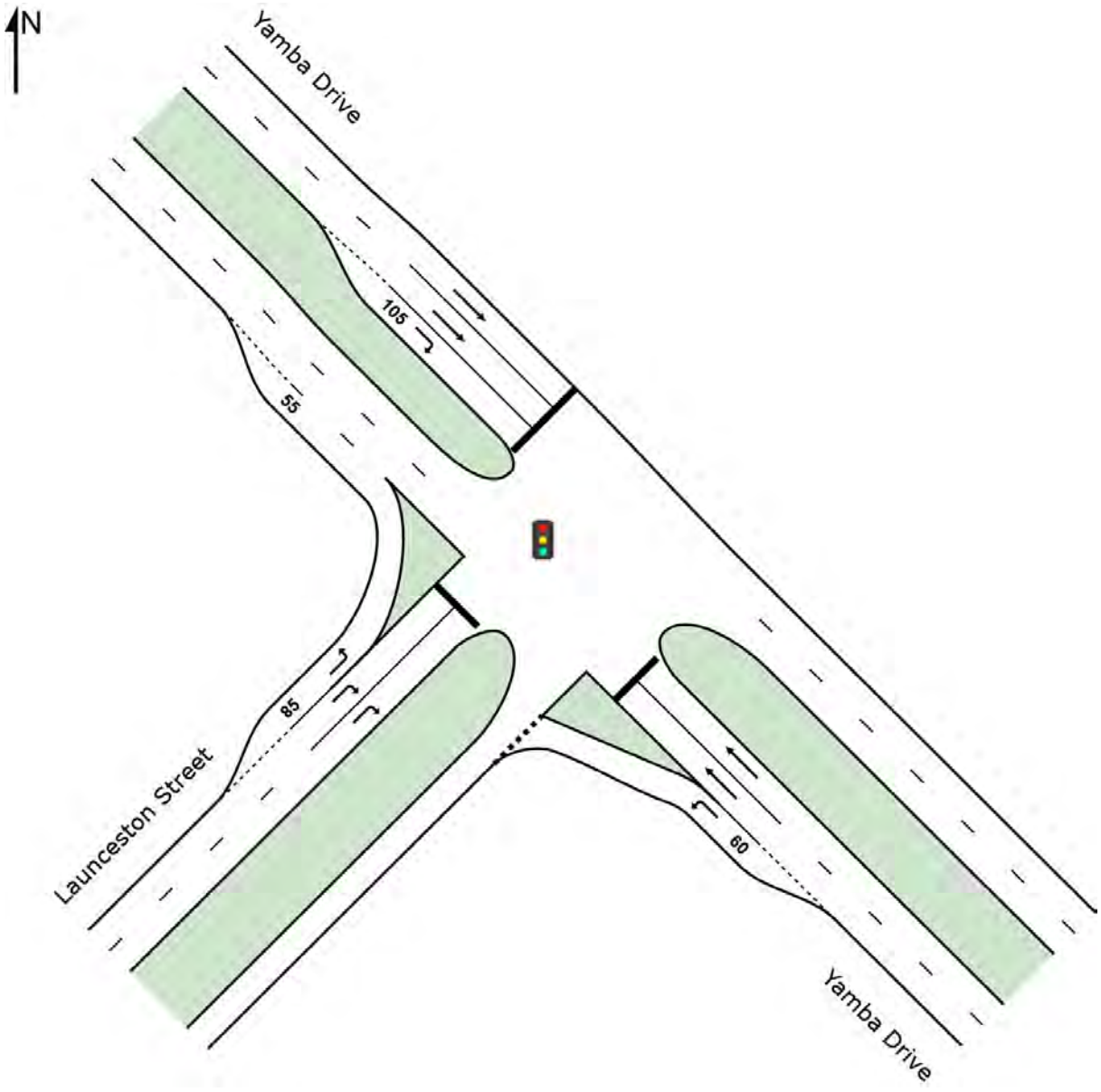
Site: [2025 ExCond - AM: LS-YD]

Network: 1 [2025 ExCond - AM: LS-WS-YD]

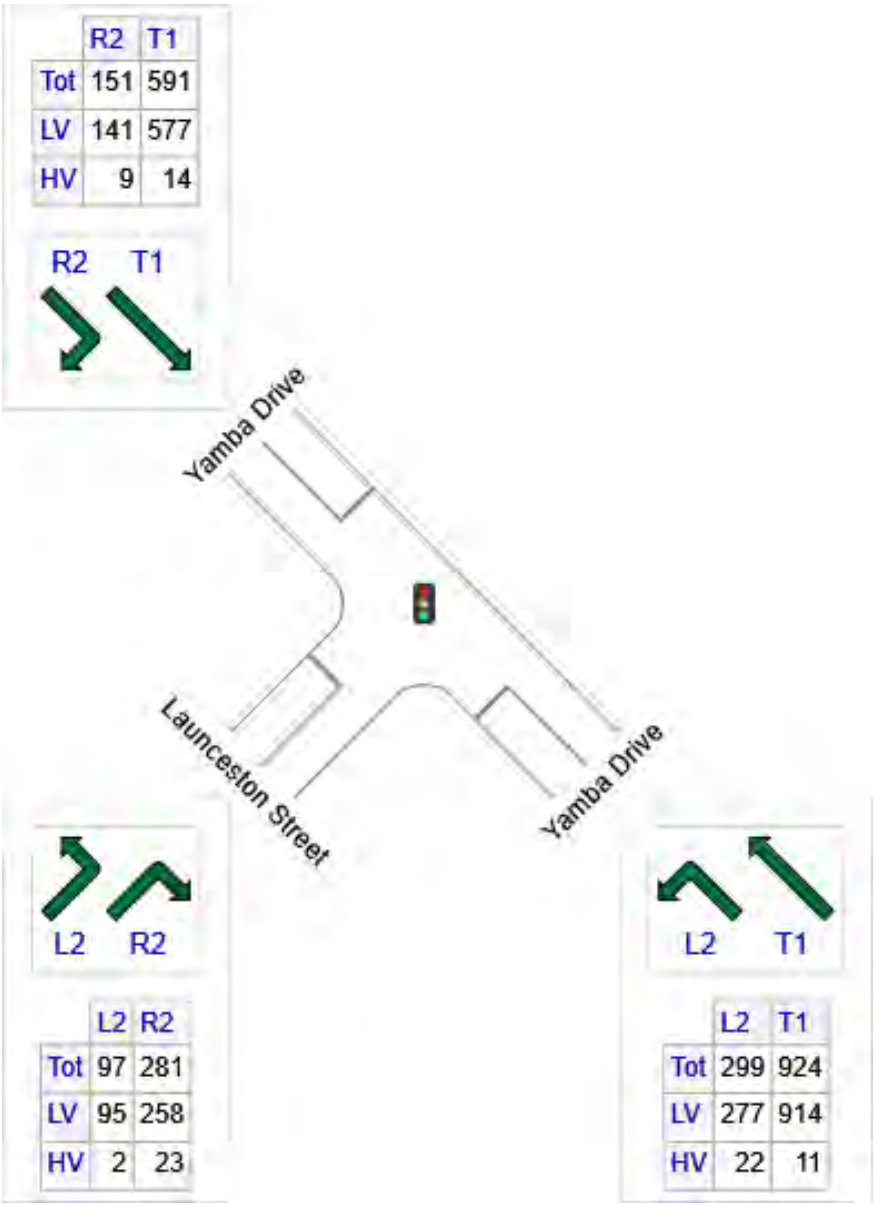
Northwest part of Launceston Street / Wisdom Street / Yamba Drive
Existing Signalised Offset X-Intersection
Site Category: 2025 Existing Conditions - Weekday Morning Peak Hour
Signals - Fixed Time Coordinated Cycle Time = 128 seconds (CCG User-Given Phase Times)
Common Control Group: CCG1 [CCG]

Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E
Output Phase Sequence: A, D, E

Site Layout



OD Demand Flows

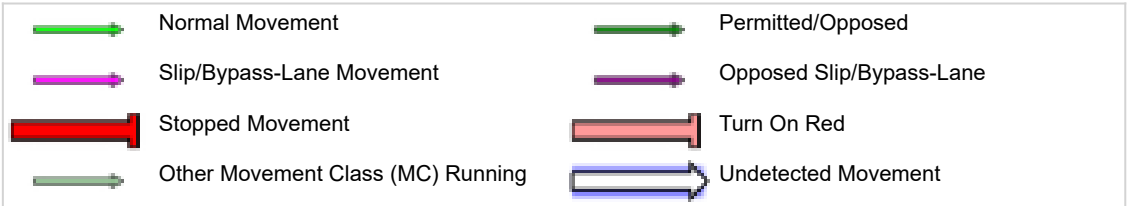


	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
SE: Yamba Drive	1223	1191	33
NW: Yamba Drive	741	718	23
SW: Launceston Street	378	353	25
Total	2342	2261	81

Input Phase Sequence (CCG)

Movement Class: All Movement Classes

REF: Reference Phase
VAR: Variable Phase



Mixed Running & Stopped MCs

Continuous Movement

Other Movement Class (MC) Stopped

Phase Transition Applied

Phase Timing Summary (CCG)

Phase	A	D	E
Phase Change Time (sec)	0	66	93
Green Time (sec)	60	21	29
Phase Time (sec)	66	27	35
Phase Split	52%	21%	27%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles														
Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Yamba Drive														
4	L2	299	7.4	299	7.4	0.208	4.8	LOS A	0.4	2.7	0.03	0.58	0.03	40.6
5	T1	924	1.1	924	1.1	0.509	6.5	LOS A	9.7	68.6	0.25	0.23	0.25	53.9
Approach		1223	2.7	1223	2.7	0.509	6.1	LOS A	9.7	68.6	0.20	0.31	0.20	49.4
NorthWest: Yamba Drive														
11	T1	591	2.3	591	2.3	0.380	23.4	LOS C	11.8	84.1	0.69	0.60	0.69	24.7
12	R2	151	6.3	151	6.3	0.374	52.6	LOS D	8.0	58.9	0.89	0.80	0.89	20.9
Approach		741	3.1	741	3.1	0.380	29.3	LOS C	11.8	84.1	0.73	0.64	0.73	23.2
SouthWest: Launceston Street														
1	L2	97	2.2	97	2.2	0.053	2.9	LOS A	0.0	0.0	0.00	0.36	0.00	39.5
3	R2	281	8.2	281	8.2	0.566	58.0	LOS E	8.3	62.3	0.97	0.80	0.97	12.0
Approach		378	6.7	378	6.7	0.566	43.9	LOS D	8.3	62.3	0.72	0.69	0.72	16.4
All Vehicles		2342	3.5	2342	3.5	0.566	19.5	LOS B	11.8	84.1	0.45	0.48	0.45	29.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
SouthEast: Yamba Drive															
Lane 1	299	7.4	299	7.4	1434	0.208	100	4.8	LOS A	0.4	2.7	Short	60	0.0	NA
Lane 2	462	1.1	462	1.1	907	0.509	100	3.3	LOS A	3.8	26.8	Full	65	0.0	0.0
Lane 3	462	1.1	462	1.1	907	0.509	100	9.6	LOS A	9.7	68.6	Full	65	0.0	9.9
Approach	1223	2.7	1223	2.7		0.509		6.1	LOS A	9.7	68.6				
NorthWest: Yamba Drive															
Lane 1	295	2.3	295	2.3	776	0.380	100	23.4	LOS C	11.8	84.1	Full	215	-13.8 N3	0.0
Lane 2	295	2.3	295	2.3	776	0.380	100	23.4	LOS C	11.8	84.1	Full	215	-13.8 N3	0.0
Lane 3	151	6.3	151	6.3	403	0.374	100	52.6	LOS D	8.0	58.9	Short	105	0.0	NA
Approach	741	3.1	741	3.1		0.380		29.3	LOS C	11.8	84.1				
SouthWest: Launceston Street															
Lane 1	97	2.2	97	2.2	1829	0.053	100	2.9	LOS A	0.0	0.0	Short	85	0.0	NA
Lane 2	141	8.2	141	8.2	248	0.566	100	58.0	LOS E	8.3	62.3	Full	260	-13.8 N3	0.0
Lane 3	141	8.2	141	8.2	248	0.566	100	58.0	LOS E	8.3	62.3	Full	260	-13.8 N3	0.0
Approach	378	6.7	378	6.7		0.566		43.9	LOS D	8.3	62.3				
Intersection	2342	3.5	2342	3.5		0.566		19.5	LOS B	11.8	84.1				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N3 Capacity Adjustment due to downstream lane blockage determined by the program.

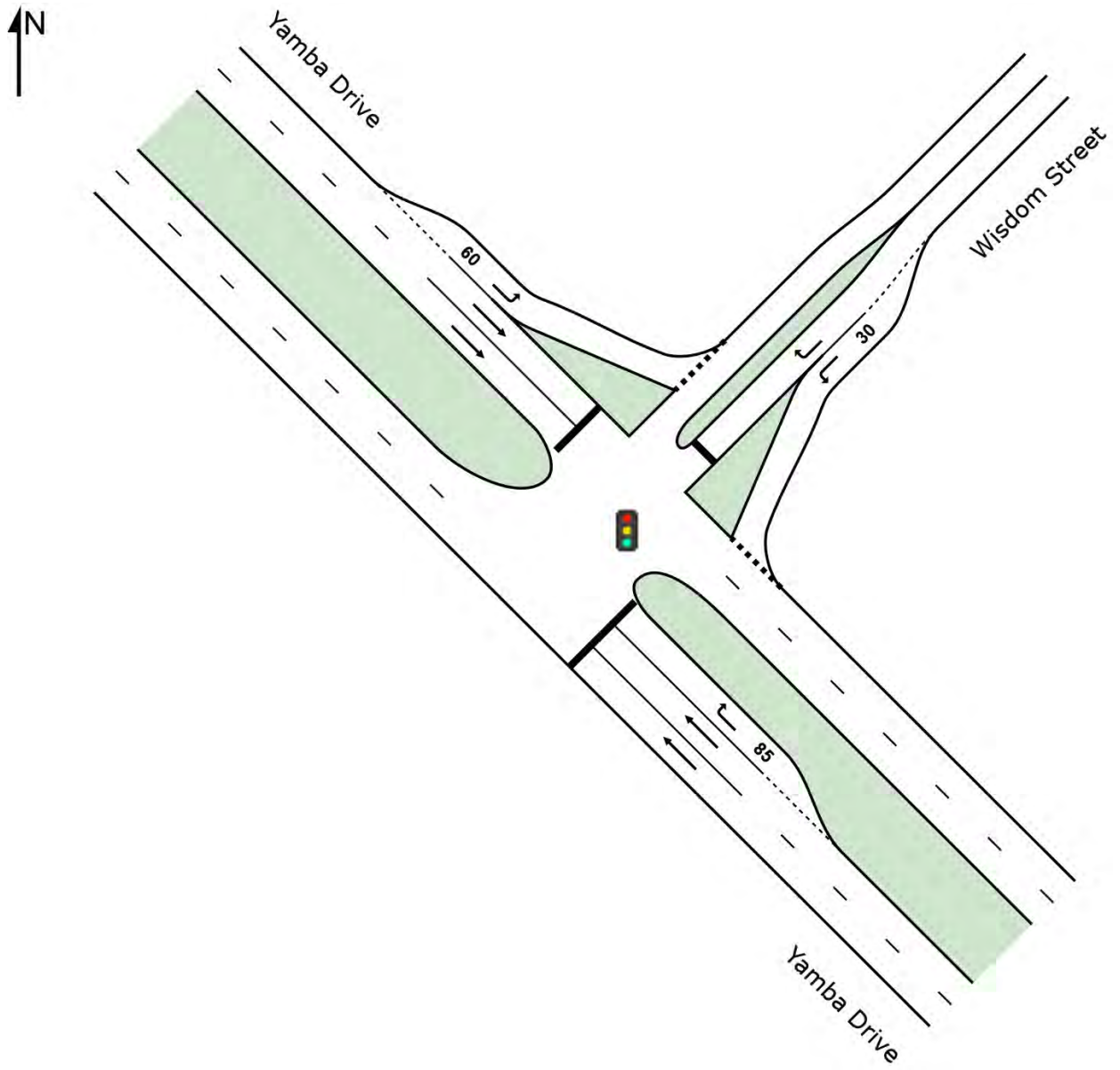
Site: [2025 ExCond - AM: WS-YD] Network: 1 [2025 ExCond - AM: LS-WS-YD]

Southeast part of Launceston Street / Wisdom Street / Yamba Drive
Existing Signalised Offset Cross Intersection
Site Category: 2025 Existing Conditions - Weekday Morning Peak Hour
Signals - Fixed Time Coordinated Cycle Time = 128 seconds (CCG User-Given Phase Times)
Common Control Group: CCG1 [CCG]

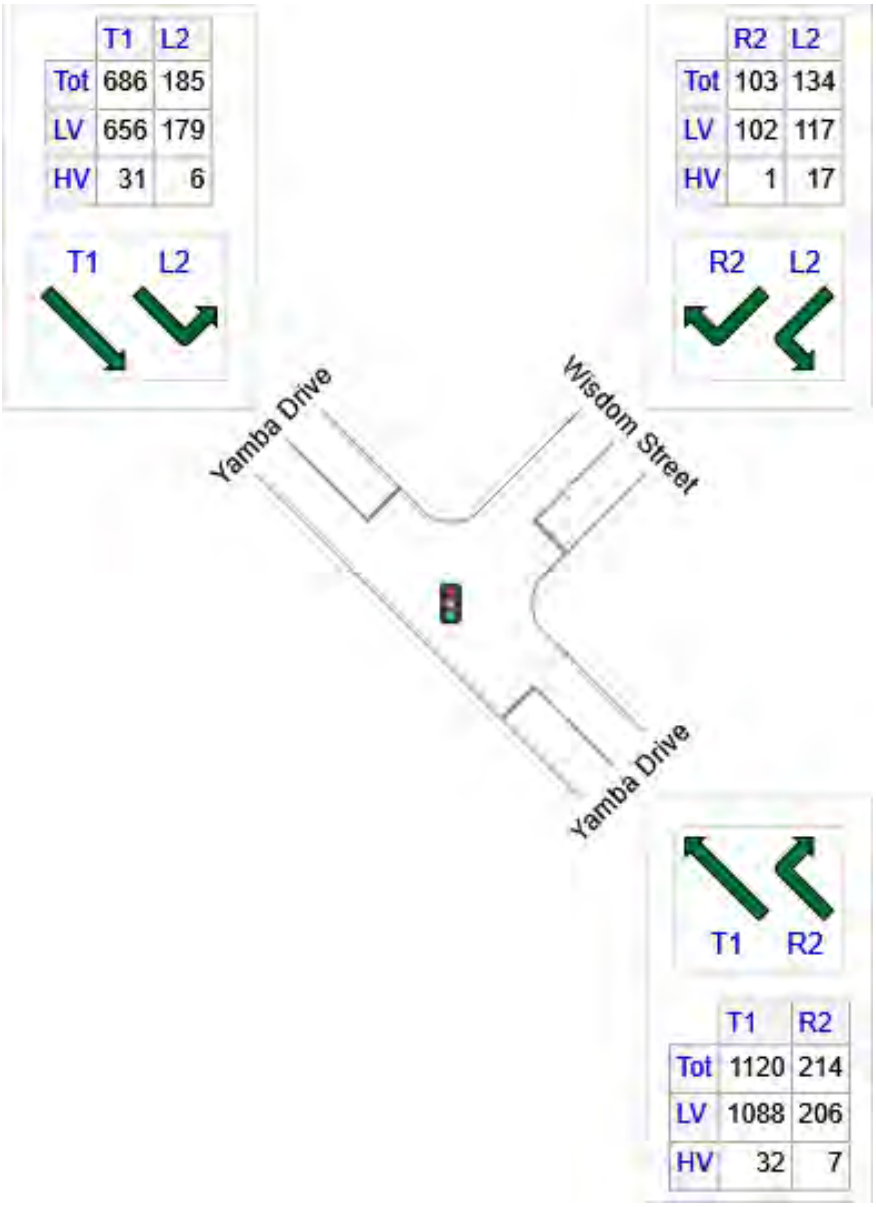
Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E
Output Phase Sequence: A, D, E

Some CCG output elements have been omitted as they have already been included under other Sites belonging to the same CCG.

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
SE: Yamba Drive	1334	1295	39
NE: Wisdom Street	237	219	18
NW: Yamba Drive	872	835	37
Total	2442	2348	94

Movement Performance - Vehicles														
Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Yamba Drive														
11	T1	1120	2.8	1120	2.8	0.694	27.8	LOS C	30.3	217.1	0.83	0.74	0.83	43.8
12	R2	214	3.4	214	3.4	0.520	54.1	LOS D	11.8	85.0	0.93	0.82	0.93	34.6
Approach		1334	2.9	1334	2.9	0.694	32.0	LOS C	30.3	217.1	0.85	0.76	0.85	40.9
NorthEast: Wisdom Street														
1	L2	134	12.6	134	12.6	0.125	4.7	LOS A	1.3	9.9	0.21	0.49	0.21	47.6
3	R2	103	1.0	103	1.0	0.379	55.7	LOS E	5.9	41.3	0.94	0.78	0.94	21.2
Approach		237	7.6	237	7.6	0.379	26.9	LOS C	5.9	41.3	0.53	0.62	0.53	35.5
NorthWest: Yamba Drive														
4	L2	185	3.4	185	3.4	0.130	4.8	LOS A	0.2	1.5	0.02	0.58	0.02	40.3
5	T1	686	4.4	686	4.4	0.386	17.7	LOS B	9.9	71.6	0.50	0.44	0.50	53.9
Approach		872	4.2	872	4.2	0.386	15.0	LOS B	9.9	71.6	0.40	0.47	0.40	50.4
All Vehicles		2442	3.8	2442	3.8	0.694	25.5	LOS C	30.3	217.1	0.66	0.64	0.66	42.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
SouthEast: Yamba Drive															
Lane 1	623	2.8	623	2.8	898	0.694	100	28.5	LOS C	30.3	217.1	Full	735	0.0	0.0
Lane 2	497	2.8	497	2.8	716[1]	0.694	100	27.0	LOS C	22.9	164.4	Full	735	-9.9 N3	0.0
Lane 3	214	3.4	214	3.4	411	0.520	100	54.1	LOS D	11.8	85.0	Short	85	0.0	NA
Approach	1334	2.9	1334	2.9		0.694		32.0	LOS C	30.3	217.1				
NorthEast: Wisdom Street															
Lane 1	134	12.6	134	12.6	1066	0.125	100	4.7	LOS A	1.3	9.9	Short	30	0.0	NA
Lane 2	103	1.0	103	1.0	272	0.379	100	55.7	LOS E	5.9	41.3	Full	680	-9.9 N3	0.0
Approach	237	7.6	237	7.6		0.379		26.9	LOS C	5.9	41.3				
NorthWest: Yamba Drive															
Lane 1	185	3.4	185	3.4	1424	0.130	100	4.8	LOS A	0.2	1.5	Short	60	0.0	NA
Lane 2	343	4.4	343	4.4	888	0.386	100	17.7	LOS B	9.9	71.6	Full	65	0.0	13.8
Lane 3	343	4.4	343	4.4	888	0.386	100	17.7	LOS B	9.9	71.6	Full	65	0.0	13.8
Approach	872	4.2	872	4.2		0.386		15.0	LOS B	9.9	71.6				
Intersection	2442	3.8	2442	3.8		0.694		25.5	LOS C	30.3	217.1				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
N3 Capacity Adjustment due to downstream lane blockage determined by the program.

USER REPORT FOR SITE

Project: 24-0487_20260304

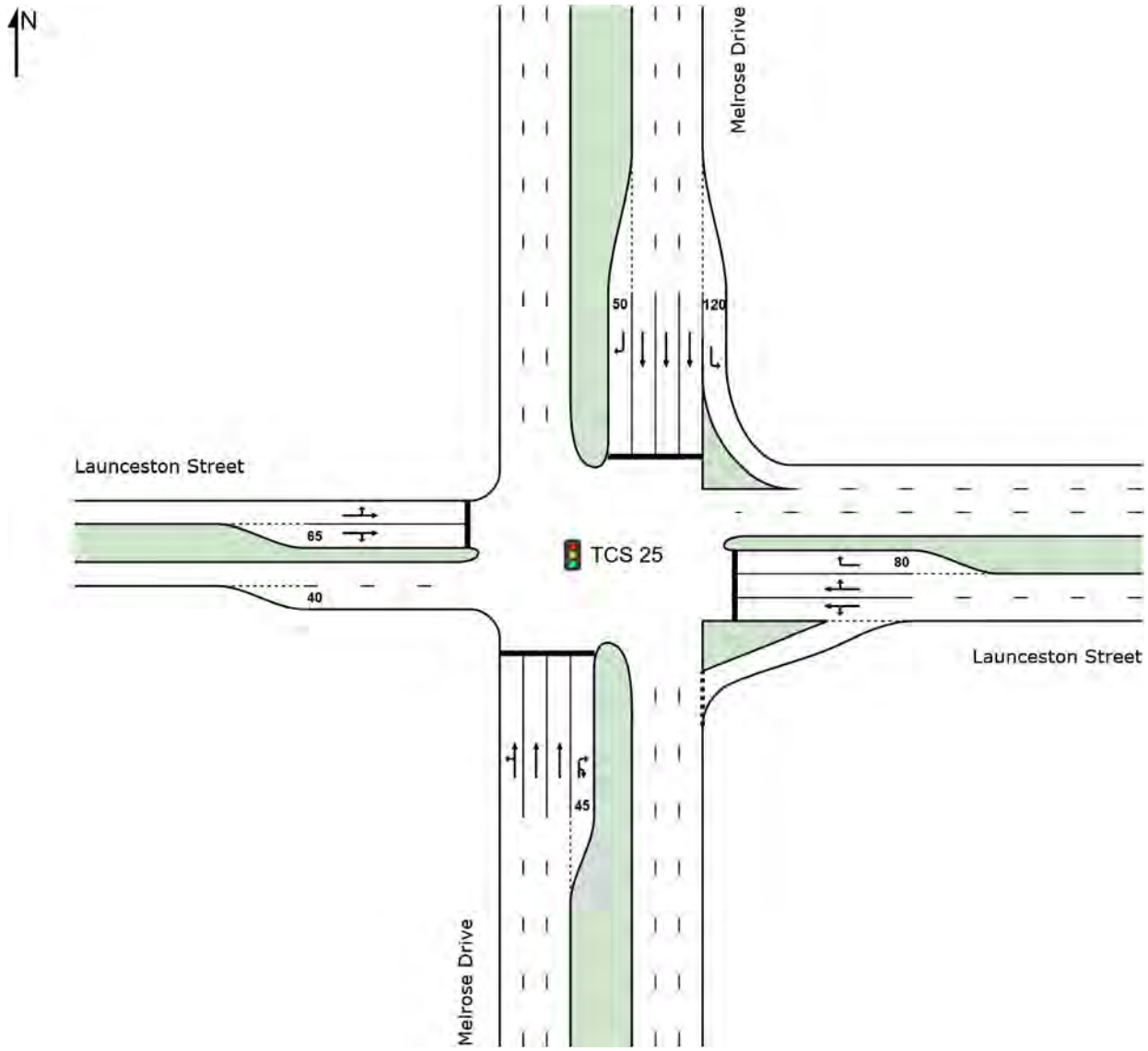
Template: Default Site User Report

Site: TCS 25 [2025 ExCond - PM: LS-MD]

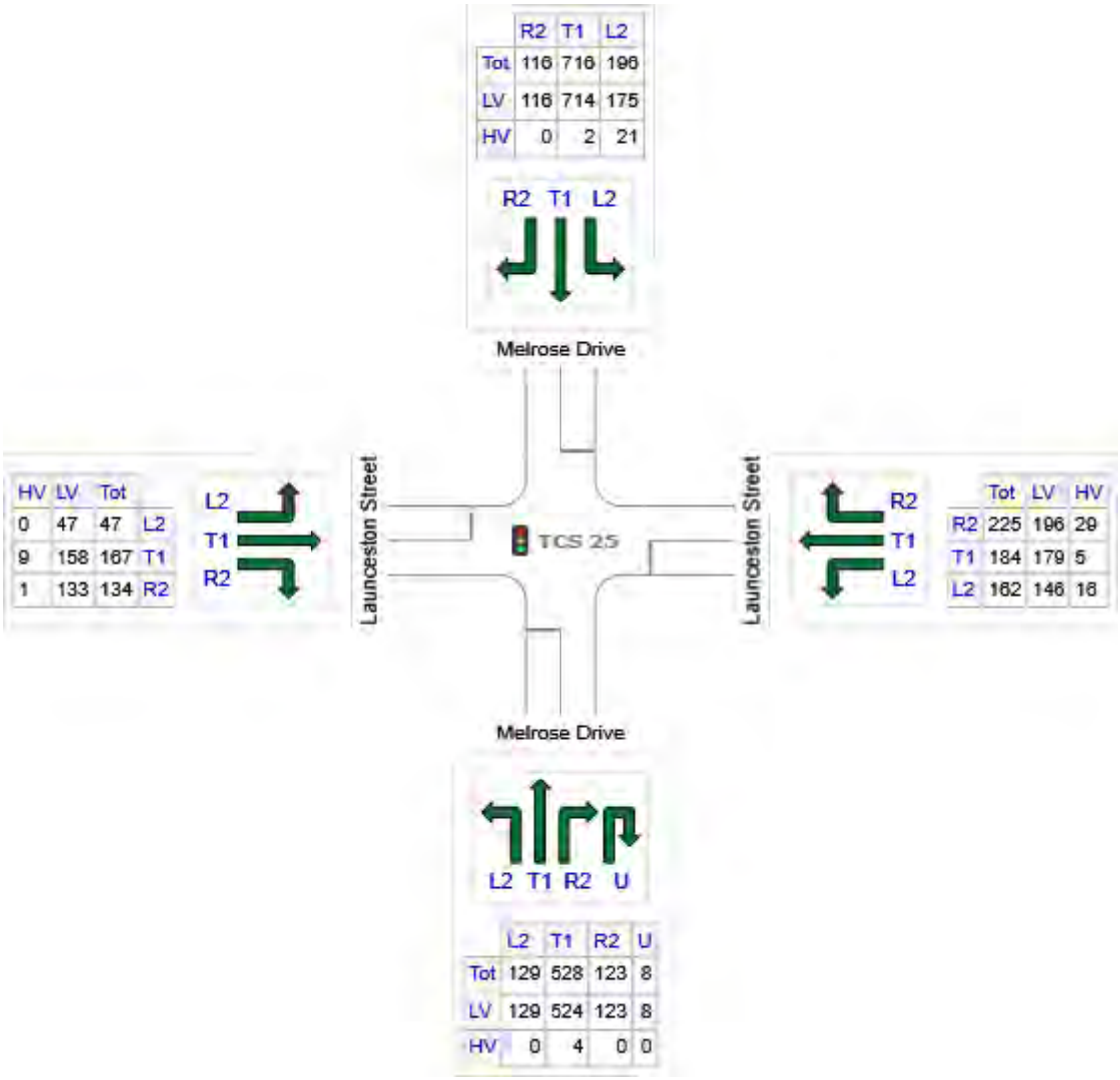
Launceston Street / Melrose Drive
Existing Signalised X-Intersection
Site Category: 2025 Existing Conditions - Weekday Evening Peak Hour
Signals - Fixed Time Isolated Cycle Time = 110 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, B, D, E, F
Output Phase Sequence: A, B, D, E, F

Site Layout



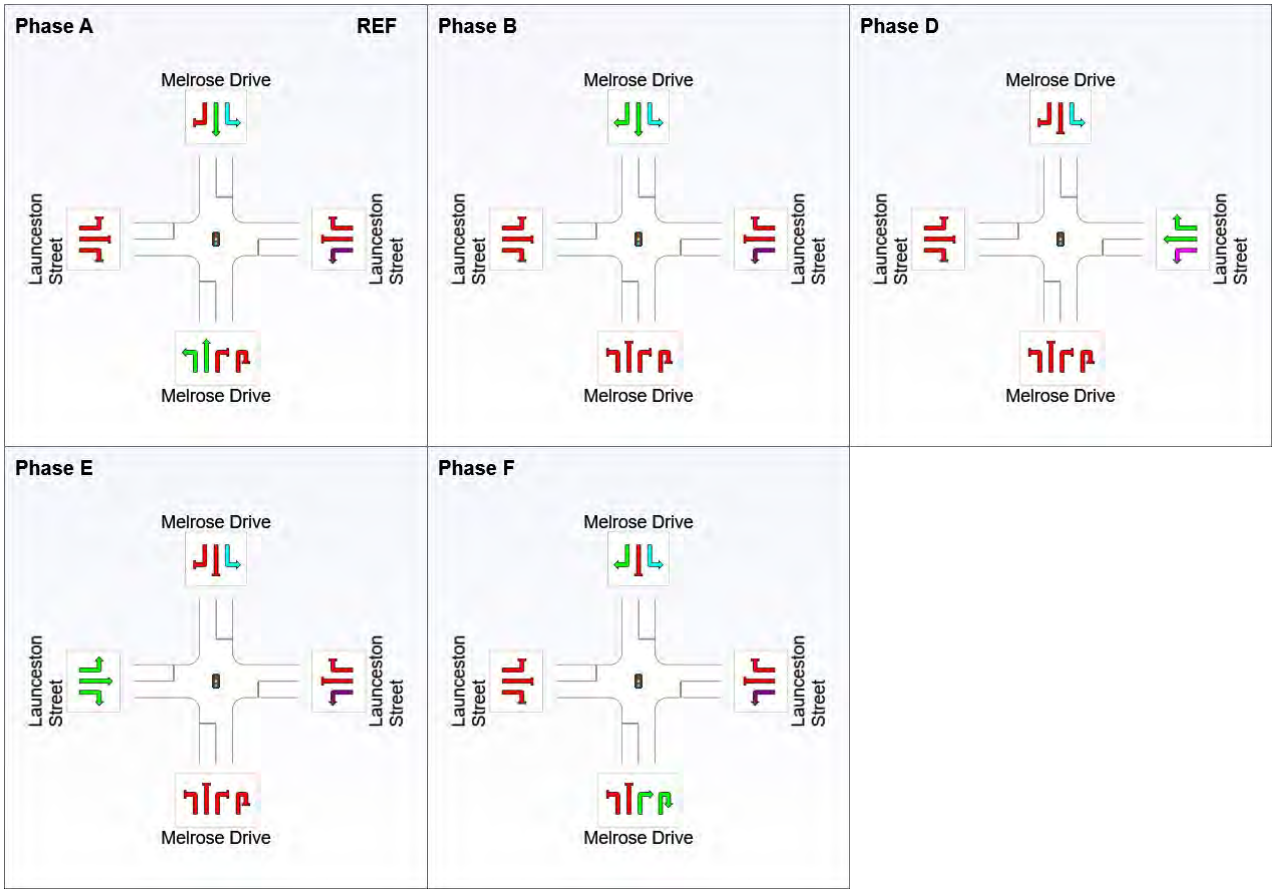
OD Demand Flows



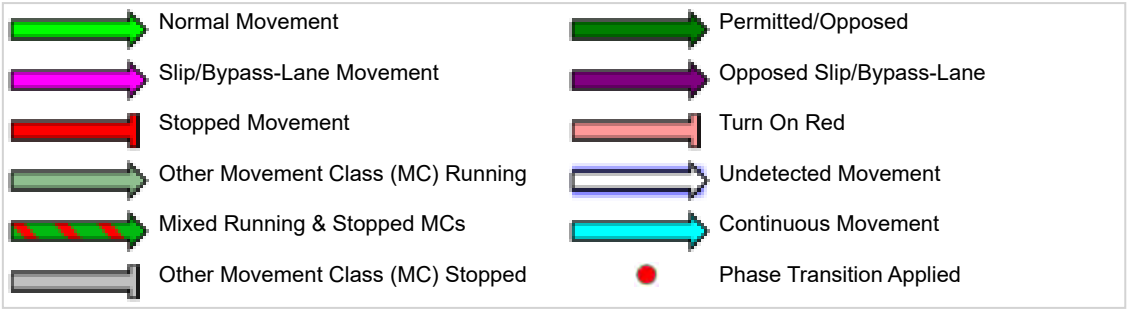
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Melrose Drive	789	785	4
E: Launceston Street	572	521	51
N: Melrose Drive	1027	1004	23
W: Launceston Street	348	338	11
Total	2737	2648	88

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	B	D	E	F
Phase Change Time (sec)	0	29	37	60	90
Green Time (sec)	23	2	23	24	14
Phase Time (sec)	29	2	29	30	20
Phase Split	26%	2%	26%	27%	18%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Melrose Drive												
1	L2	129	0.0	0.842	61.3	LOS E	13.0	91.1	1.00	1.00	1.28	14.3
2	T1	528	0.8	0.842	55.5	LOS D	13.3	93.7	1.00	1.00	1.28	25.6
3	R2	123	0.0	0.875	70.9	LOS F	8.3	58.4	1.00	1.01	1.46	11.6
3u	U	8	0.0	0.875	72.3	LOS F	8.3	58.4	1.00	1.01	1.46	15.7
Approach		789	0.5	0.875	59.1	LOS E	13.3	93.7	1.00	1.00	1.31	21.7
East: Launceston Street												
4	L2	162	9.7	0.287	5.8	LOS A	0.6	4.5	0.07	0.56	0.07	42.5
5	T1	184	2.9	0.550	43.8	LOS D	10.4	75.7	0.95	0.80	0.95	13.2
6	R2	225	13.1	0.550	48.2	LOS D	10.4	75.7	0.95	0.81	0.95	25.1
Approach		572	8.8	0.550	34.7	LOS C	10.4	75.7	0.70	0.74	0.70	23.6
North: Melrose Drive												
7	L2	196	10.8	0.114	5.7	LOS A	0.0	0.0	0.00	0.52	0.00	49.2
8	T1	716	0.3	0.435	34.9	LOS C	10.5	73.8	0.87	0.73	0.87	32.7
9	R2	116	0.0	0.429	35.2	LOS C	4.0	27.9	0.95	0.78	1.00	29.3
Approach		1027	2.3	0.435	29.4	LOS C	10.5	73.8	0.71	0.70	0.72	34.3
West: Launceston Street												
10	L2	47	0.0	0.428	45.0	LOS D	8.2	59.5	0.91	0.76	0.91	26.5
11	T1	167	5.7	0.428	40.4	LOS C	8.2	59.5	0.91	0.77	0.91	13.8
12	R2	134	0.8	0.428	44.9	LOS D	8.1	57.8	0.91	0.78	0.91	17.7
Approach		348	3.0	0.428	42.8	LOS D	8.2	59.5	0.91	0.77	0.91	17.6
All Vehicles		2737	3.2	0.875	40.8	LOS C	13.3	93.7	0.82	0.80	0.91	26.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	Demand Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	95% Back of Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Melrose Drive													
Lane 1	216	0.3	257	0.842	100	59.1	LOS E	13.0	91.1	Full	205	0.0	0.0
Lane 2	222	0.8	264	0.842	100	55.5	LOS D	13.3	93.7	Full	205	0.0	0.0
Lane 3	220	0.8	261[1]	0.842	100	55.5	LOS D	13.2	92.7	Full	205	0.0	0.0
Lane 4	132	0.0	150	0.875	100	71.0	LOS F	8.3	58.4	Short	45	0.0	NA
Approach	789	0.5		0.875		59.1	LOS E	13.3	93.7				
East: Launceston Street													
Lane 1	162	9.7	565	0.287	52[5]	5.8	LOS A	0.6	4.5	Full	90	0.0	0.0
Lane 2	214	4.3	389	0.550	100	44.4	LOS D	10.4	75.7	Full	90	0.0	0.0
Lane 3	196	13.1	355	0.550	100	48.2	LOS D	9.6	74.5	Short	80	0.0	NA
Approach	572	8.8		0.550		34.7	LOS C	10.4	75.7				
North: Melrose Drive													
Lane 1	196	10.8	1725	0.114	100	5.7	LOS A	0.0	0.0	Short	120	0.0	NA
Lane 2	239	0.3	548	0.435	100	34.9	LOS C	10.5	73.8	Full	470	0.0	0.0
Lane 3	239	0.3	548	0.435	100	34.9	LOS C	10.5	73.8	Full	470	0.0	0.0
Lane 4	239	0.3	548	0.435	100	34.9	LOS C	10.5	73.8	Full	470	0.0	0.0
Lane 5	116	0.0	270	0.429	100	35.2	LOS C	4.0	27.9	Short	50	0.0	NA
Approach	1027	2.3		0.435		29.4	LOS C	10.5	73.8				
West: Launceston Street													
Lane 1	175	4.1	409	0.428	100	41.6	LOS C	8.2	59.5	Full	95	0.0	0.0
Lane 2	173	1.9	405	0.428	100	43.9	LOS D	8.1	57.8	Short	65	0.0	NA
Approach	348	3.0		0.428		42.8	LOS D	8.2	59.5				
Intersection	2737	3.2		0.875		40.8	LOS C	13.3	93.7				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

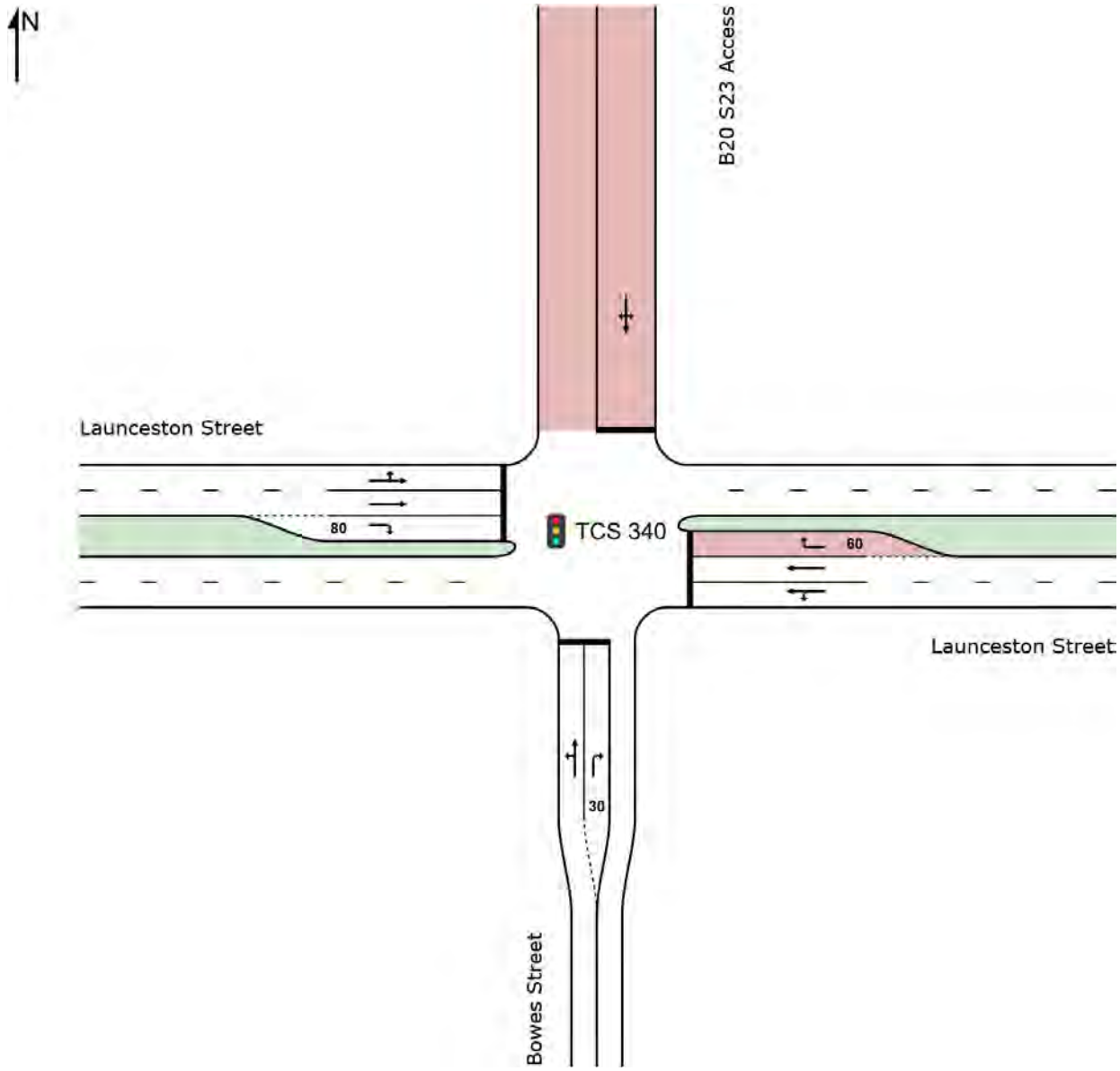
1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
5 Lane under-utilisation found by the program

Site: TCS 340 [2025 ExCond - PM: BS-LS]

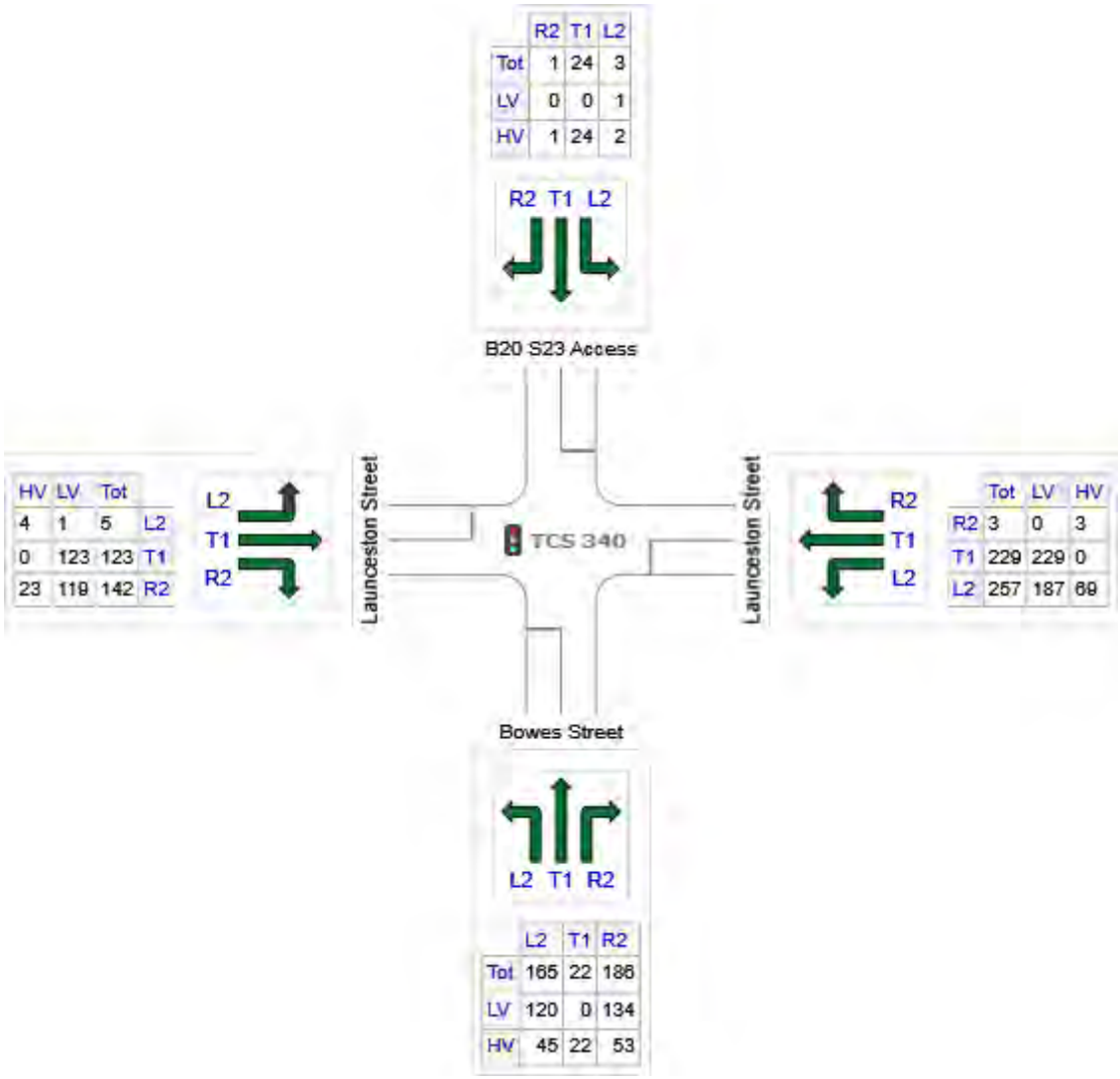
Block 20 Section 23 Access / Bowes Street / Launceston Street
Existing Signalised X-Intersection
Site Category: 2025 Existing Conditions - Weekday Evening Peak Hour
Signals - Fixed Time Isolated Cycle Time = 89 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E, G
Output Phase Sequence: A, D, E, G

Site Layout



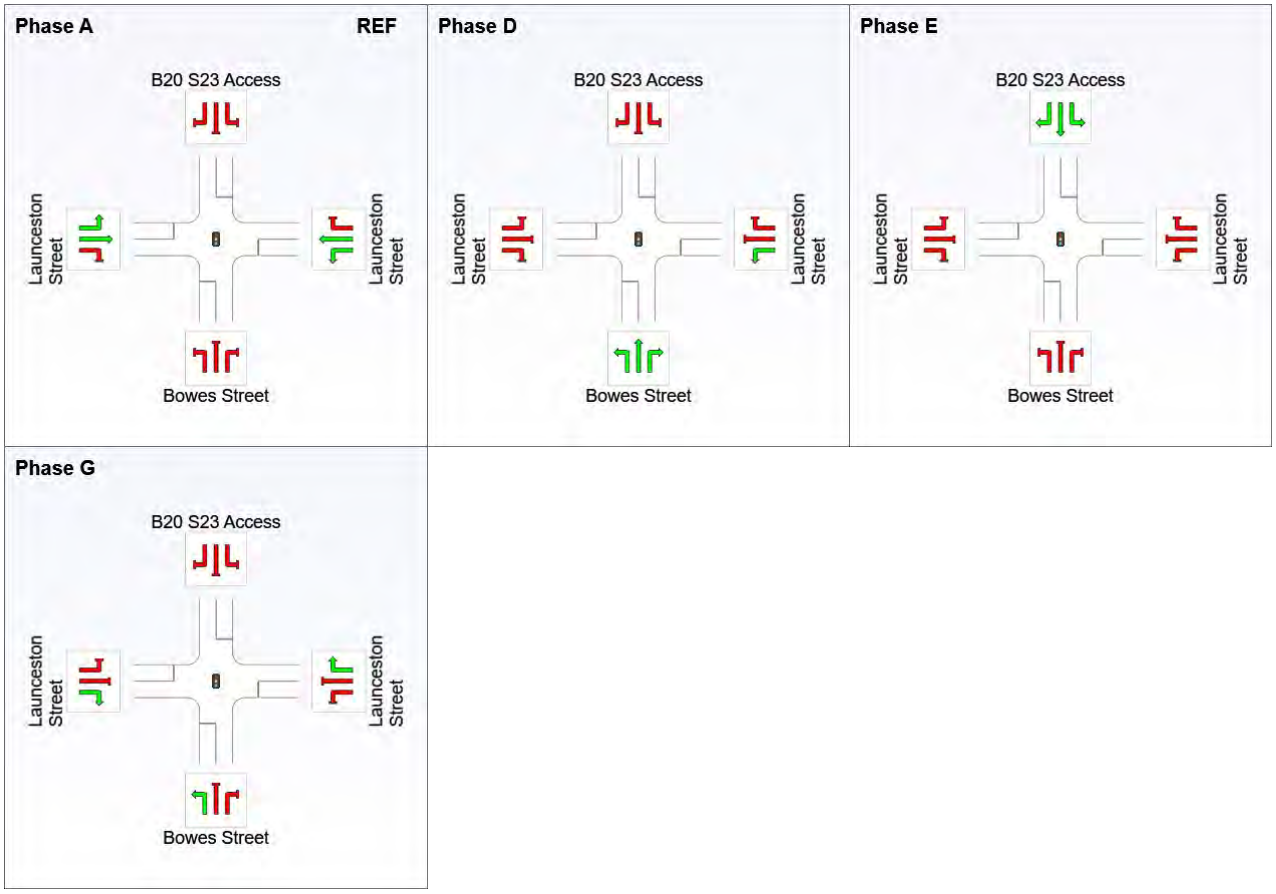
OD Demand Flows



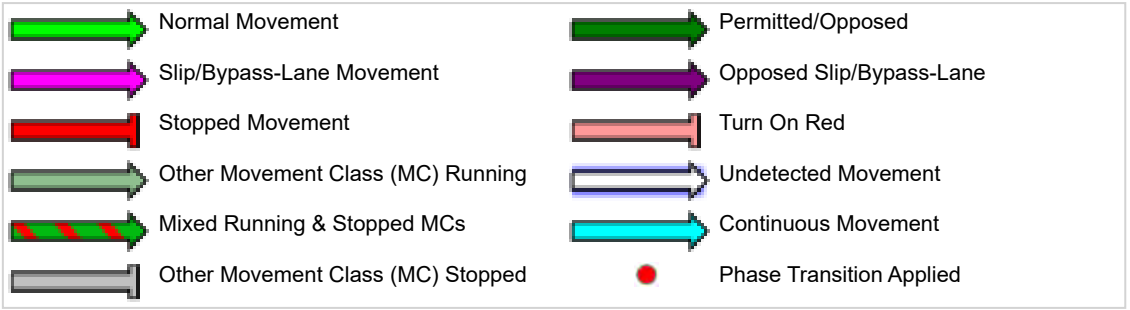
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	374	254	120
E: Launceston Street	489	417	73
N: B20 S23 Access	28	1	27
W: Launceston Street	271	243	27
Total	1162	915	247

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	D	E	G
Phase Change Time (sec)	0	30	63	76
Green Time (sec)	24	27	7	10
Phase Time (sec)	30	33	10	16
Phase Split	34%	37%	11%	18%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	165	27.4	0.317	15.3	LOS B	4.0	37.1	0.73	0.74	0.73	19.9
2	T1	22	100.0	0.317	15.8	LOS B	4.0	37.1	0.73	0.74	0.73	12.0
3	R2	186	28.2	0.423	30.1	LOS C	6.5	56.7	0.84	0.78	0.84	12.3
Approach		374	32.1	0.423	22.7	LOS B	6.5	56.7	0.79	0.76	0.79	14.9
East: Launceston Street												
4	L2	257	27.0	0.388	22.0	LOS B	8.0	67.4	0.69	0.75	0.69	16.3
5	T1	229	0.0	0.388	27.5	LOS B	8.0	67.4	0.84	0.72	0.84	19.1
6	R2	3	100.0	0.026	45.8	LOS D	0.1	1.7	0.91	0.64	0.91	9.0
Approach		489	14.8	0.388	24.7	LOS B	8.0	67.4	0.76	0.74	0.76	17.7
North: B20 S23 Access												
7	L2	3	66.7	0.280	45.3	LOS D	1.3	16.2	0.98	0.71	0.98	8.0
8	T1	24	100.0	0.280	45.3	LOS D	1.3	16.2	0.98	0.71	0.98	5.2
9	R2	1	100.0	0.280	45.3	LOS D	1.3	16.2	0.98	0.71	0.98	8.6
Approach		28	96.3	0.280	45.3	LOS D	1.3	16.2	0.98	0.71	0.98	5.7
West: Launceston Street												
10	L2	5	80.0	0.157	33.0	LOS C	2.1	15.6	0.80	0.63	0.80	13.8
11	T1	123	0.0	0.157	27.1	LOS B	2.2	15.5	0.80	0.63	0.80	19.6
12	R2	142	16.3	0.950	73.3	LOS F	8.4	66.7	1.00	1.14	1.81	6.6
Approach		271	10.1	0.950	51.5	LOS D	8.4	66.7	0.90	0.90	1.33	10.4
All Vehicles		1162	21.3	0.950	30.8	LOS C	8.4	67.4	0.81	0.78	0.91	14.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	Demand Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	95% Back of Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Bowes Street													
Lane 1	187	36.0	590	0.317	100	15.4	LOS B	4.0	37.1	Full	35	0.0	49.3[8]
Lane 2	186	28.2	440[1]	0.423	100	30.1	LOS C	6.5	56.7	Short	30	0.0	NA
Approach	374	32.1		0.423		22.7	LOS B	6.5	56.7				
East: Launceston Street													
Lane 1	282	24.6	729	0.388	100	21.5	LOS B	8.0	67.4	Full	95	0.0	0.0
Lane 2	204	0.0	526	0.388	100	28.9	LOS C	7.3	51.1	Full	95	0.0	0.0
Lane 3	3	100.0	122	0.026	100	45.8	LOS D	0.1	1.7	Short	60	0.0	NA
Approach	489	14.8		0.388		24.7	LOS B	8.0	67.4				
North: B20 S23 Access													
Lane 1	28	96.3	102	0.280	100	45.3	LOS D	1.3	16.2	Full	30	0.0	0.0
Approach	28	96.3		0.280		45.3	LOS D	1.3	16.2				
West: Launceston Street													
Lane 1	63	6.7	399	0.157	100	27.6	LOS B	2.1	15.6	Full	105	0.0	0.0
Lane 2	66	0.0	421	0.157	100	27.0	LOS B	2.2	15.5	Full	105	0.0	0.0
Lane 3	142	16.3	150	0.950	100	73.3	LOS F	8.4	66.7	Short	80	0.0	NA
Approach	271	10.1		0.950		51.5	LOS D	8.4	66.7				
Intersection	1162	21.3		0.950		30.8	LOS C	8.4	67.4				

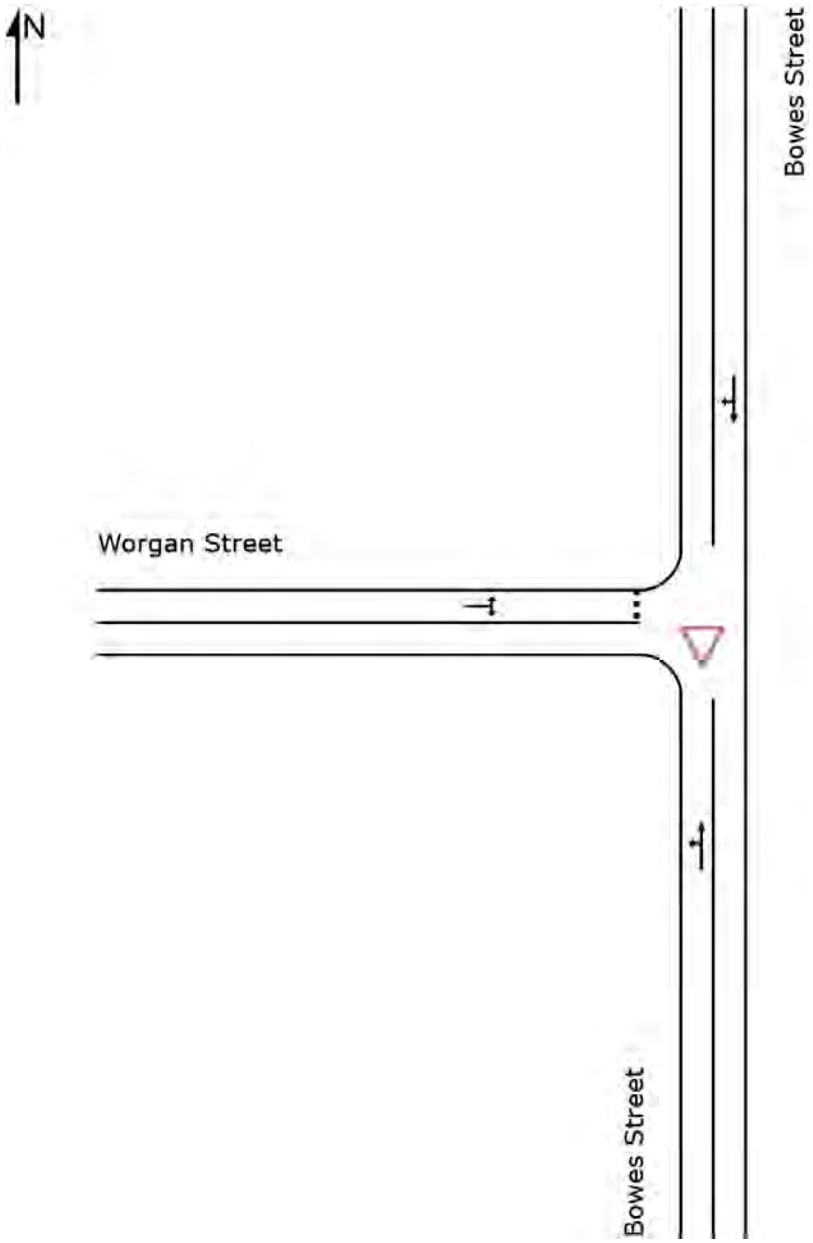
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
8 Probability of Blockage has been set on the basis of a queue that overflows from a short lane.

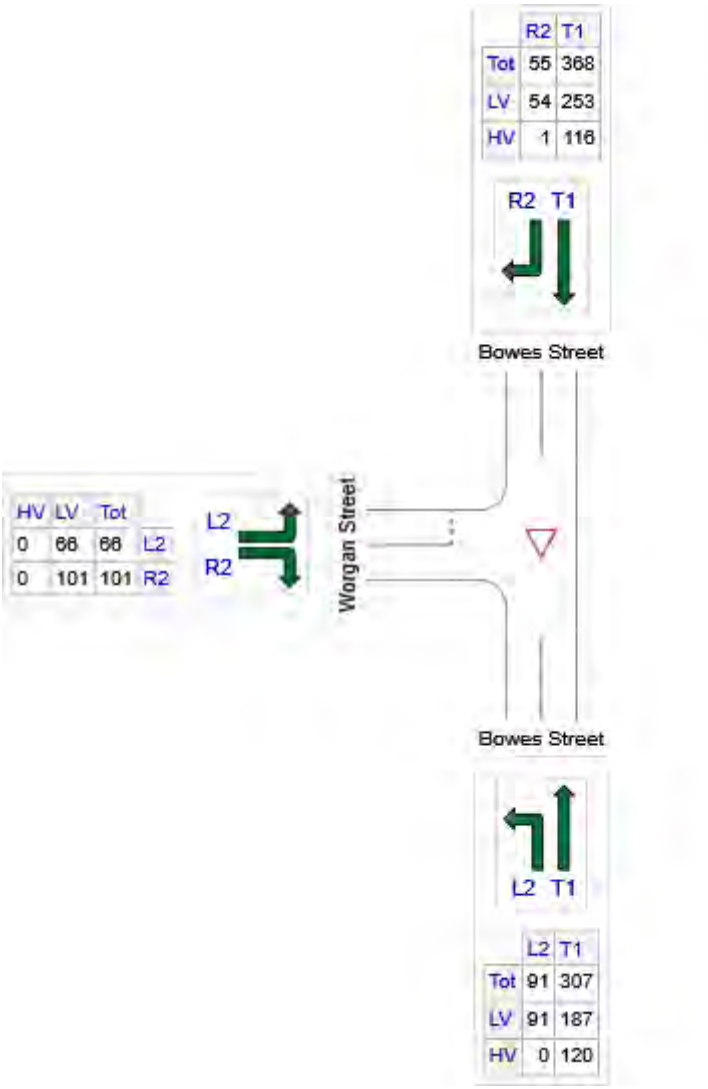
Site: [2025 ExCond - PM: BS-WS]

Bowes Street / Worgan Street
Existing Priority-Controlled (Give-Way) T-Intersection
Site Category: 2025 Existing Conditions - Weekday Evening Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	398	278	120
N: Bowes Street	423	306	117
W: Worgan Street	167	167	0
Total	988	752	237

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	91	0.0	0.246	4.6	LOS A	0.0	0.0	0.00	0.12	0.00	32.9
2	T1	307	39.0	0.246	0.0	LOS A	0.0	0.0	0.00	0.12	0.00	44.0
Approach		398	30.2	0.246	1.0	NA	0.0	0.0	0.00	0.12	0.00	40.9
North: Bowes Street												
8	T1	368	31.4	0.273	0.5	LOS A	0.5	4.5	0.15	0.08	0.15	44.7
9	R2	55	1.9	0.273	5.5	LOS A	0.5	4.5	0.15	0.08	0.15	17.4
Approach		423	27.6	0.273	1.1	NA	0.5	4.5	0.15	0.08	0.15	40.1
West: Worgan Street												
10	L2	66	0.0	0.238	4.7	LOS A	0.9	6.2	0.53	0.74	0.55	17.6
12	R2	101	0.0	0.238	8.4	LOS A	0.9	6.2	0.53	0.74	0.55	28.4
Approach		167	0.0	0.238	6.9	LOS A	0.9	6.2	0.53	0.74	0.55	24.5
All Vehicles		988	24.0	0.273	2.1	NA	0.9	6.2	0.15	0.21	0.16	36.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

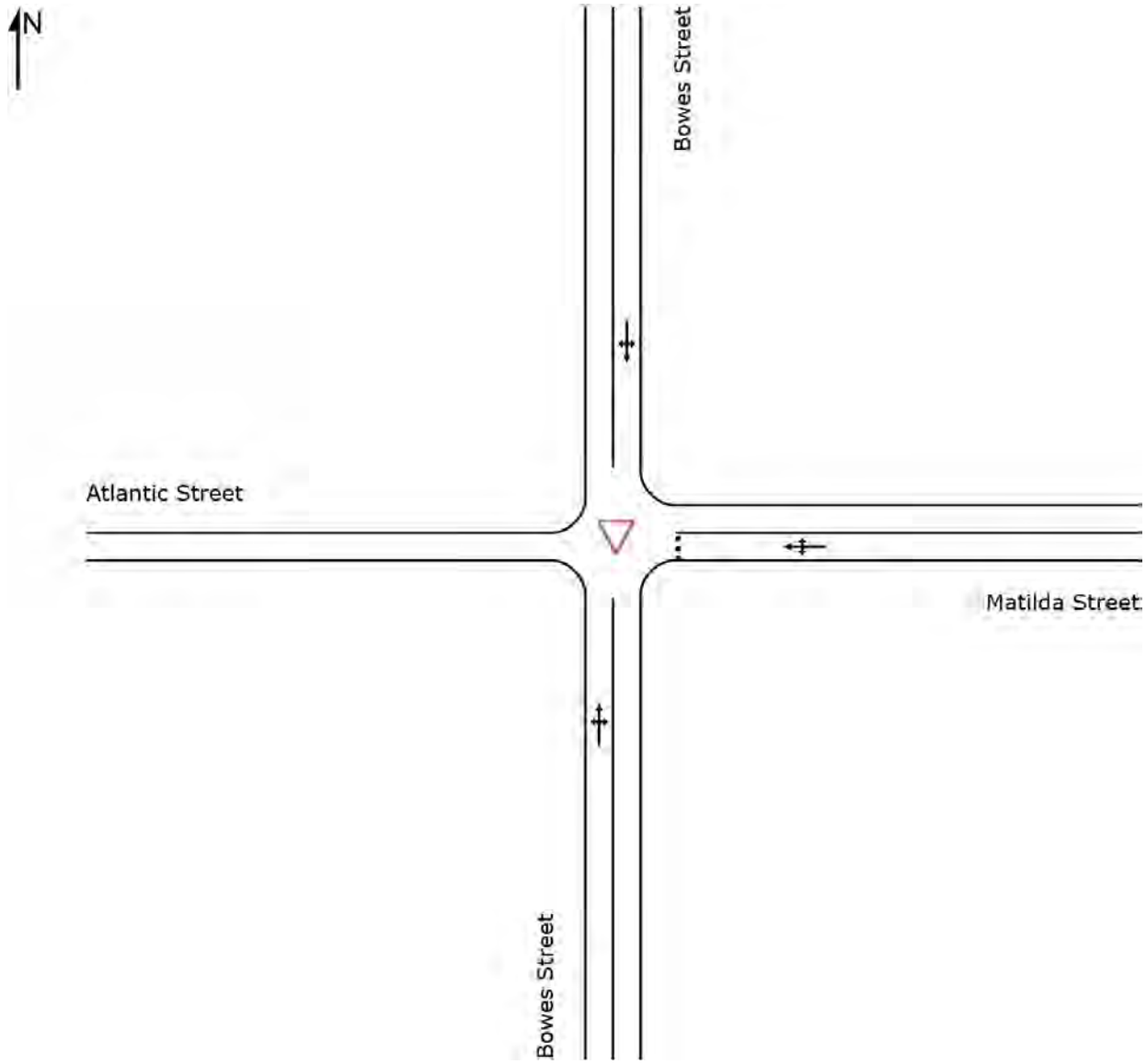
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Bowes Street													
Lane 1	398	30.2	1615	0.246	100	1.0	LOS A	0.0	0.0	Full	105	0.0	0.0
Approach	398	30.2		0.246		1.0	NA	0.0	0.0				
North: Bowes Street													
Lane 1	423	27.6	1551	0.273	100	1.1	LOS A	0.5	4.5	Full	35	0.0	0.0
Approach	423	27.6		0.273		1.1	NA	0.5	4.5				
West: Worgan Street													
Lane 1	167	0.0	702	0.238	100	6.9	LOS A	0.9	6.2	Full	35	0.0	0.0
Approach	167	0.0		0.238		6.9	LOS A	0.9	6.2				
Intersection	988	24.0		0.273		2.1	NA	0.9	6.2				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

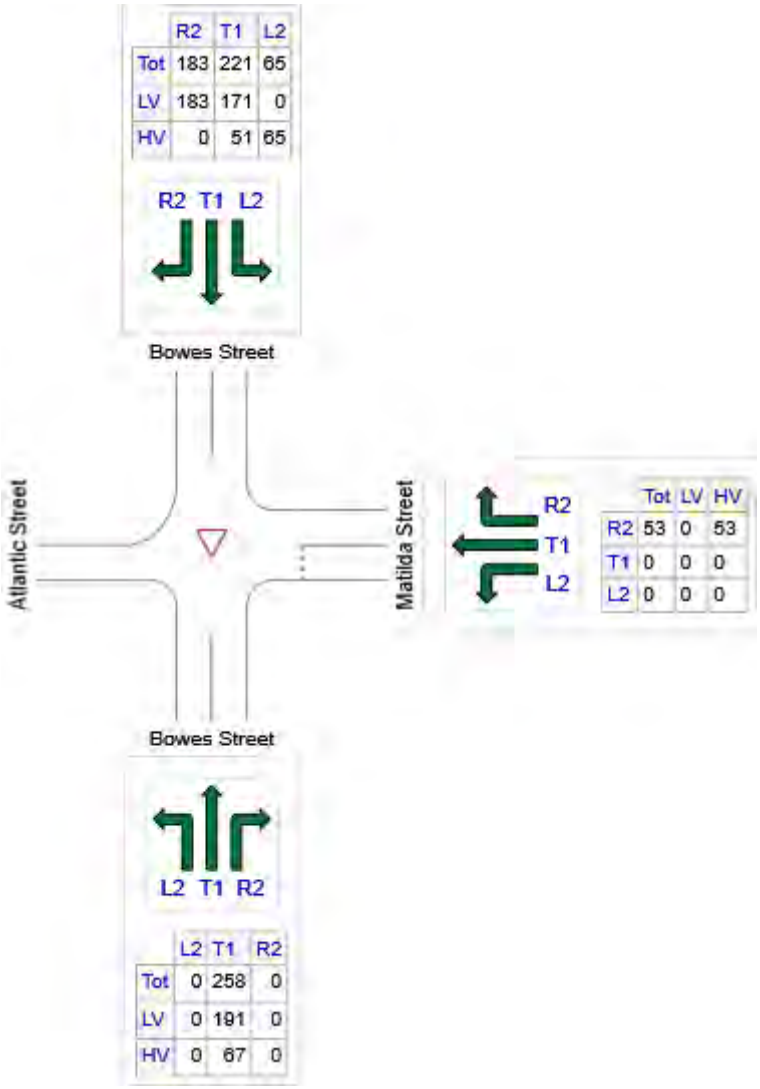
Site: [2025 ExCond - PM: AS-BS-MS]

Atlantic Street / Bowes Street / Matilda Street
Existing Priority-Controlled (Give-Way) T-Intersection
Site Category: 2025 Existing Conditions - Weekday Evening Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	258	191	67
E: Matilda Street	53	0	53
N: Bowes Street	470	354	116
Total	781	545	236

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	0	0.0	0.155	4.5	LOS A	0.0	0.0	0.00	0.00	0.00	24.3
2	T1	258	26.1	0.155	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
3	R2	0	0.0	0.155	5.0	LOS A	0.0	0.0	0.00	0.00	0.00	43.5
Approach		258	26.1	0.155	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.9
East: Matilda Street												
4	L2	0	0.0	0.301	7.5	LOS A	1.0	13.5	0.82	0.90	0.97	13.1
5	T1	0	0.0	0.301	11.1	LOS A	1.0	13.5	0.82	0.90	0.97	14.3
6	R2	53	99.8	0.301	26.8	LOS B	1.0	13.5	0.82	0.90	0.97	15.2
Approach		53	99.4	0.301	26.7	LOS B	1.0	13.5	0.82	0.90	0.97	15.1
North: Bowes Street												
7	L2	65	99.8	0.310	6.5	LOS A	1.5	13.1	0.38	0.33	0.38	32.1
8	T1	221	22.9	0.310	0.9	LOS A	1.5	13.1	0.38	0.33	0.38	37.6
9	R2	183	0.0	0.310	6.2	LOS A	1.5	13.1	0.38	0.33	0.38	26.3
Approach		470	24.7	0.310	3.7	NA	1.5	13.1	0.38	0.33	0.38	30.6
All Vehicles		781	30.2	0.310	4.1	NA	1.5	13.5	0.29	0.26	0.30	31.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

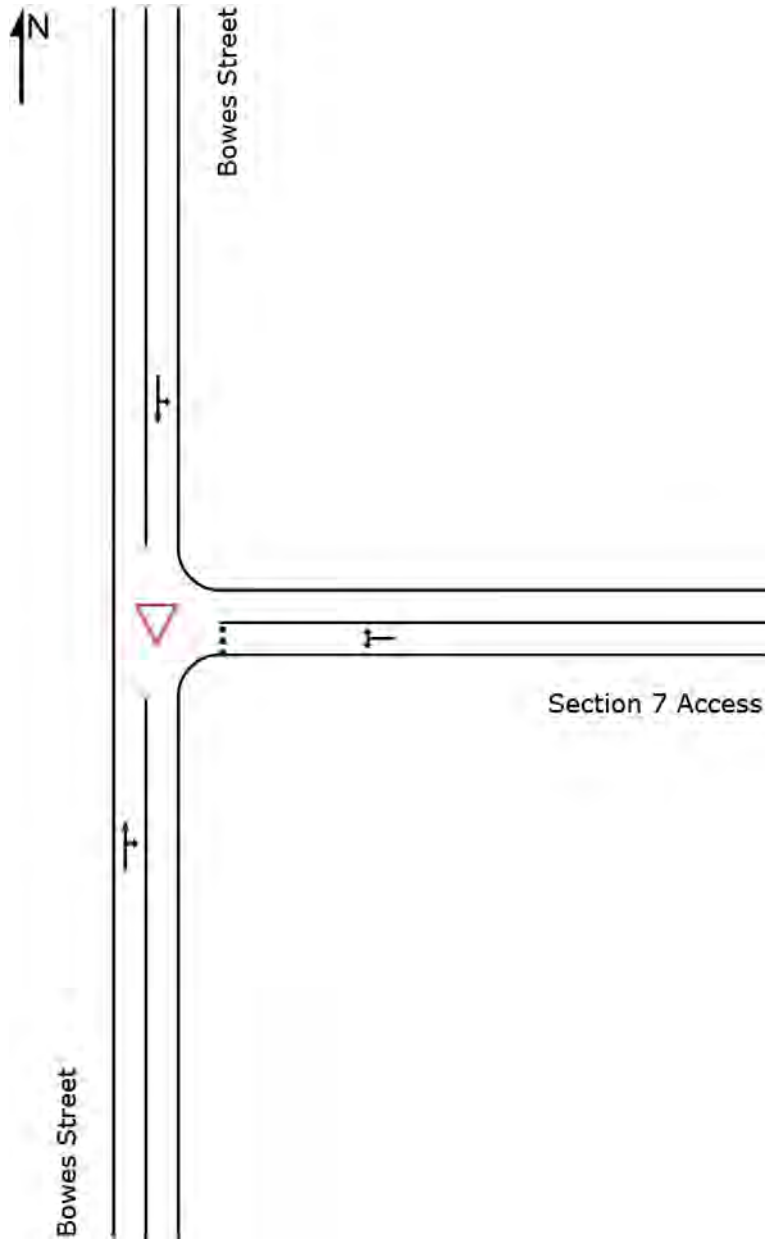
	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Bowes Street													
Lane 1	258	26.1	1667	0.155	100	0.0	LOS A	0.0	0.0	Full	45	0.0	0.0
Approach	258	26.1		0.155		0.0	NA	0.0	0.0				
East: Matilda Street													
Lane 1	53	99.4	176	0.301	100	26.7	LOS B	1.0	13.5	Full	80	0.0	0.0
Approach	53	99.4		0.301		26.7	LOS B	1.0	13.5				
North: Bowes Street													
Lane 1	470	24.7	1516	0.310	100	3.7	LOS A	1.5	13.1	Full	110	0.0	0.0
Approach	470	24.7		0.310		3.7	NA	1.5	13.1				
Intersection	781	30.2		0.310		4.1	NA	1.5	13.5				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

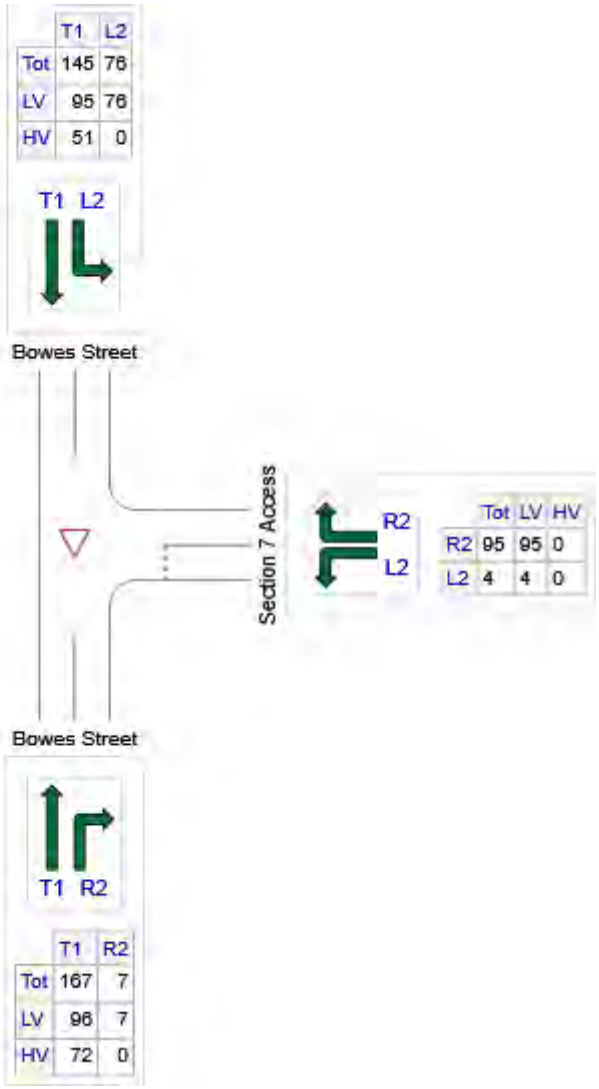
Site: [2025 ExCond - PM: BS-S7]

Bowes Street / Section 7 Access
Existing Priority-Controlled (Give-Way) T-Intersection
Site Category: 2025 Existing Conditions - Weekday Evening Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	175	103	72
E: Section 7 Access	99	99	0
N: Bowes Street	221	171	51
Total	495	373	122

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
2	T1	167	42.8	0.114	0.0	LOS A	0.1	0.5	0.03	0.02	0.03	47.7
3	R2	7	0.0	0.114	5.2	LOS A	0.1	0.5	0.03	0.02	0.03	48.0
Approach		175	41.0	0.114	0.3	NA	0.1	0.5	0.03	0.02	0.03	47.7
East: Section 7 Access												
4	L2	4	0.0	0.111	0.5	LOS A	0.4	2.6	0.40	0.40	0.40	23.5
6	R2	95	0.0	0.111	2.4	LOS A	0.4	2.6	0.40	0.40	0.40	22.9
Approach		99	0.0	0.111	2.3	LOS A	0.4	2.6	0.40	0.40	0.40	23.0
North: Bowes Street												
7	L2	76	0.0	0.132	4.3	LOS A	0.0	0.0	0.00	0.19	0.00	23.1
8	T1	145	34.8	0.132	0.0	LOS A	0.0	0.0	0.00	0.19	0.00	41.6
Approach		221	22.9	0.132	1.5	NA	0.0	0.0	0.00	0.19	0.00	34.5
All Vehicles		495	24.7	0.132	1.2	NA	0.4	2.6	0.09	0.17	0.09	35.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	Demand Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	95% Back of Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Bowes Street													
Lane 1	175	41.0	1533	0.114	100	0.3	LOS A	0.1	0.5	Full	60	0.0	0.0
Approach	175	41.0		0.114		0.3	NA	0.1	0.5				
East: Section 7 Access													
Lane 1	99	0.0	895	0.111	100	2.3	LOS A	0.4	2.6	Full	15	0.0	0.0
Approach	99	0.0		0.111		2.3	LOS A	0.4	2.6				
North: Bowes Street													
Lane 1	221	22.9	1673	0.132	100	1.5	LOS A	0.0	0.0	Full	60	0.0	0.0
Approach	221	22.9		0.132		1.5	NA	0.0	0.0				
Intersection	495	24.7		0.132		1.2	NA	0.4	2.6				

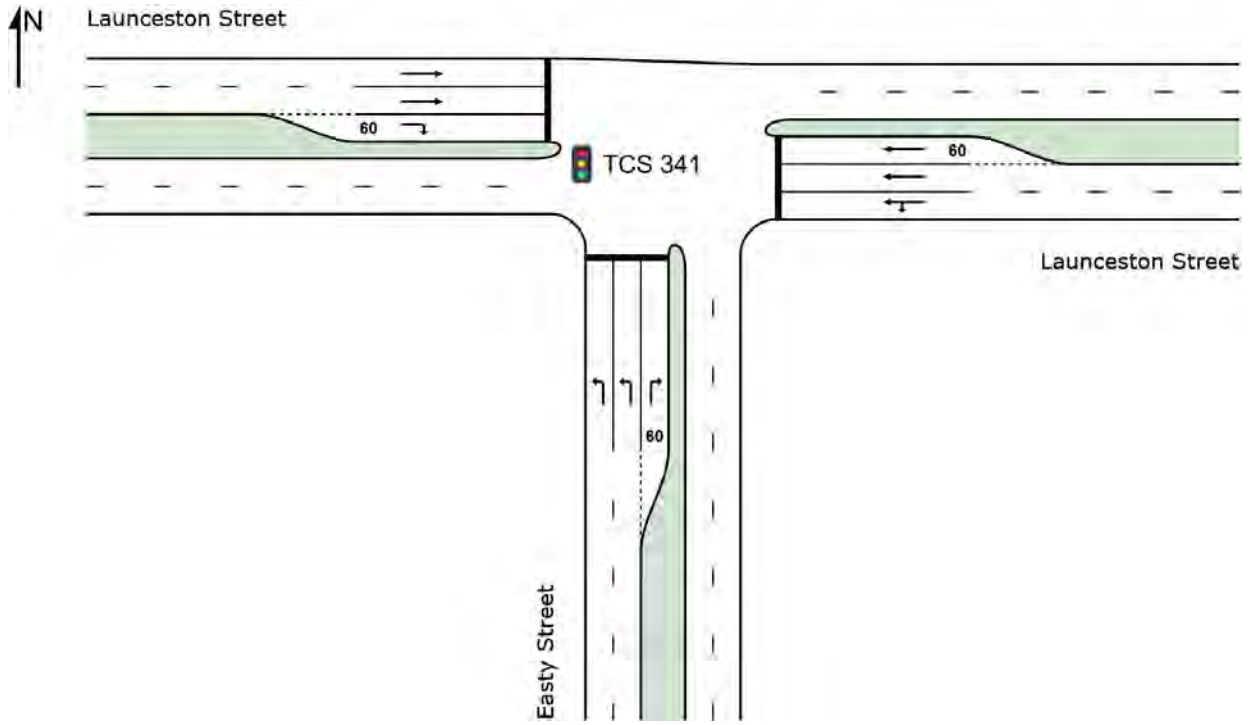
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: TCS 341 [2025 ExCond - PM: ES-LS]

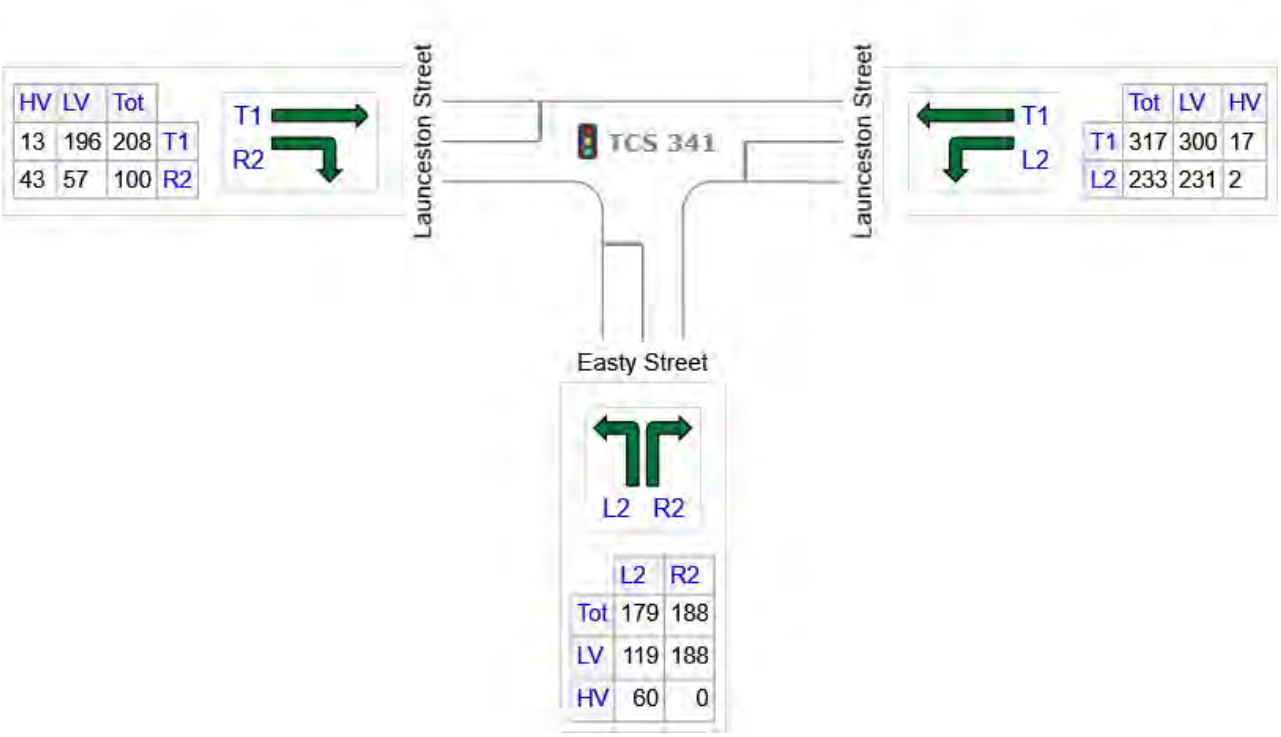
Easty Street / Launceston Street
Existing Signalised T-Intersection
Site Category: 2025 Existing Conditions - Weekday Evening Peak Hour
Signals - Fixed Time Isolated Cycle Time = 73 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Site Layout



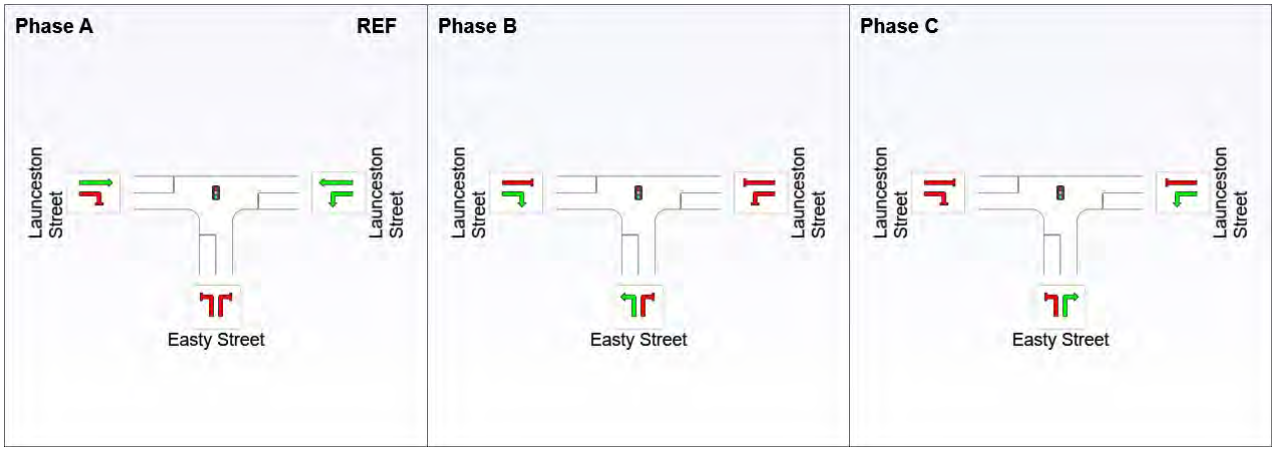
OD Demand Flows



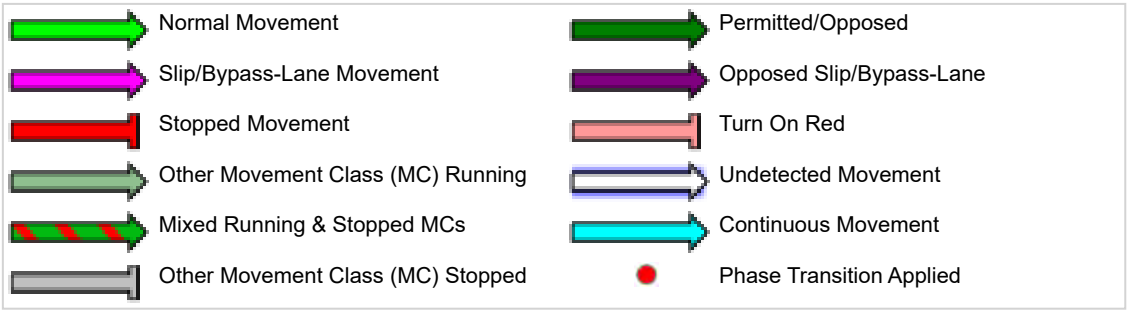
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Easty Street	367	307	60
E: Launceston Street	549	531	19
W: Launceston Street	308	253	56
Total	1225	1091	135

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	33	52
Green Time (sec)	27	13	16
Phase Time (sec)	33	18	22
Phase Split	45%	25%	30%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Easty Street												
1	L2	179	33.5	0.335	33.2	LOS C	2.9	26.3	0.92	0.76	0.92	22.1
3	R2	188	0.0	0.463	30.8	LOS C	6.0	42.1	0.92	0.79	0.92	25.4
Approach		367	16.3	0.463	32.0	LOS C	6.0	42.1	0.92	0.77	0.92	23.9
East: Launceston Street												
4	L2	233	0.9	0.188	8.2	LOS A	3.1	21.8	0.40	0.61	0.40	34.8
5	T1	317	5.3	0.227	17.1	LOS B	3.9	28.6	0.73	0.59	0.73	27.3
Approach		549	3.4	0.227	13.4	LOS A	3.9	28.6	0.59	0.60	0.59	30.7
West: Launceston Street												
11	T1	208	6.1	0.150	16.6	LOS B	2.5	18.3	0.70	0.56	0.70	27.6
12	R2	100	43.2	0.395	33.7	LOS C	3.3	31.9	0.93	0.77	0.93	22.1
Approach		308	18.1	0.395	22.1	LOS B	3.3	31.9	0.77	0.63	0.77	25.4
All Vehicles		1225	11.0	0.463	21.2	LOS B	6.0	42.1	0.73	0.66	0.73	26.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	Demand Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	95% Back of Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Easty Street													
Lane 1	89	33.5	267	0.335	100	33.2	LOS C	2.9	26.3	Full	305	0.0	0.0
Lane 2	89	33.5	267	0.335	100	33.2	LOS C	2.9	26.3	Full	305	0.0	0.0
Lane 3	188	0.0	407	0.463	100	30.8	LOS C	6.0	42.1	Short	60	0.0	NA
Approach	367	16.3		0.463		32.0	LOS C	6.0	42.1				
East: Launceston Street													
Lane 1	233	0.9	1239	0.188	83[5]	8.2	LOS A	3.1	21.8	Full	260	0.0	0.0
Lane 2	158	5.3	697	0.227	100	17.1	LOS B	3.9	28.6	Full	260	0.0	0.0
Lane 3	158	5.3	697	0.227	100	17.1	LOS B	3.9	28.6	Short	60	0.0	NA
Approach	549	3.4		0.227		13.4	LOS A	3.9	28.6				
West: Launceston Street													
Lane 1	104	6.1	694	0.150	100	16.6	LOS B	2.5	18.3	Full	130	0.0	0.0
Lane 2	104	6.1	694	0.150	100	16.6	LOS B	2.5	18.3	Full	130	0.0	0.0
Lane 3	100	43.2	253	0.395	100	33.7	LOS C	3.3	31.9	Short	60	0.0	NA
Approach	308	18.1		0.395		22.1	LOS B	3.3	31.9				
Intersection	1225	11.0		0.463		21.2	LOS B	6.0	42.1				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5 Lane under-utilisation found by the program

USER REPORT FOR NETWORK SITE

Project: 24-0487_20260304

Template: Default Site User Report

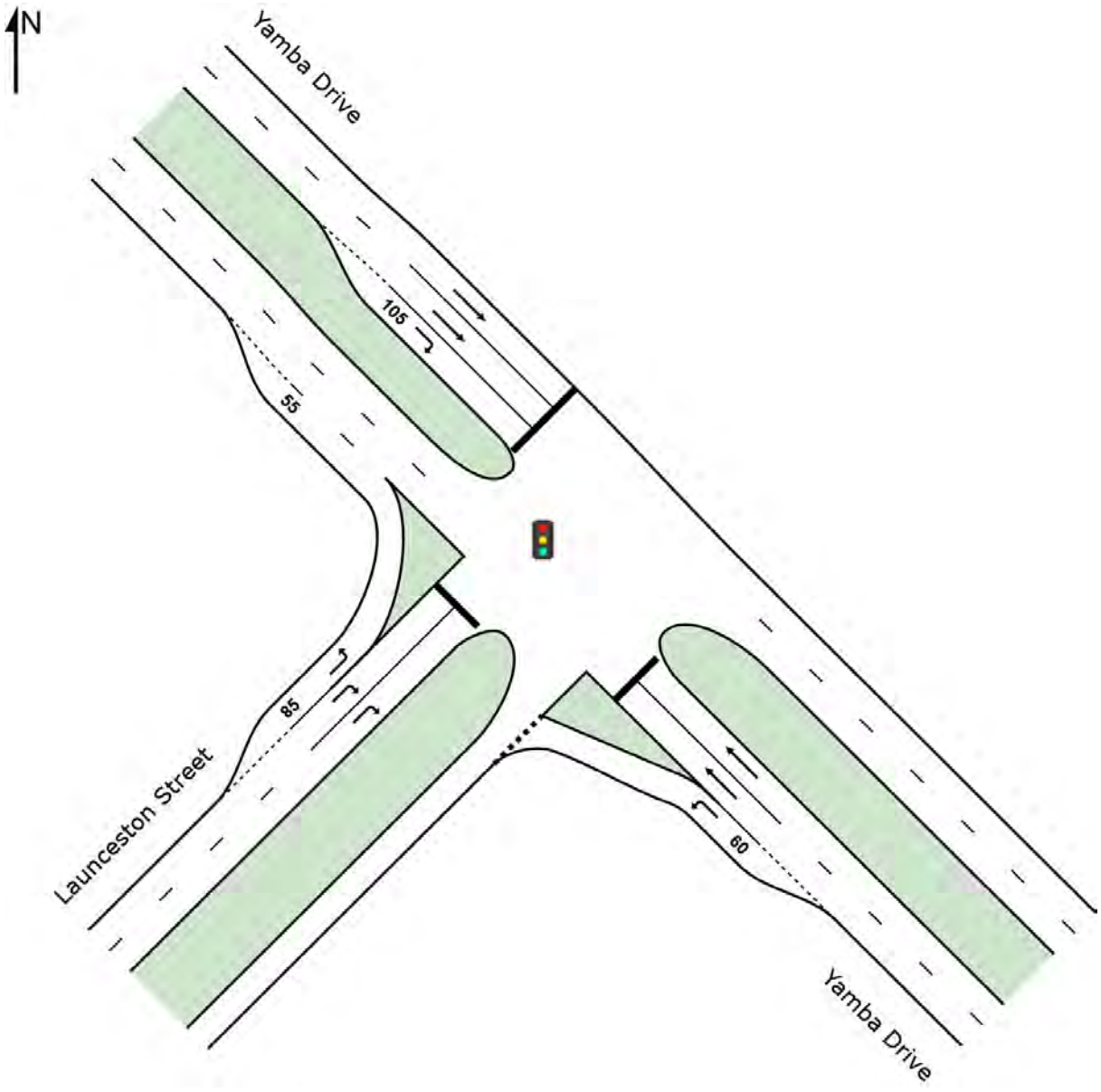
Site: [2025 ExCond - PM: LS-YD]

Network: 2 [2025 ExCond - PM: LS-WS-YD]

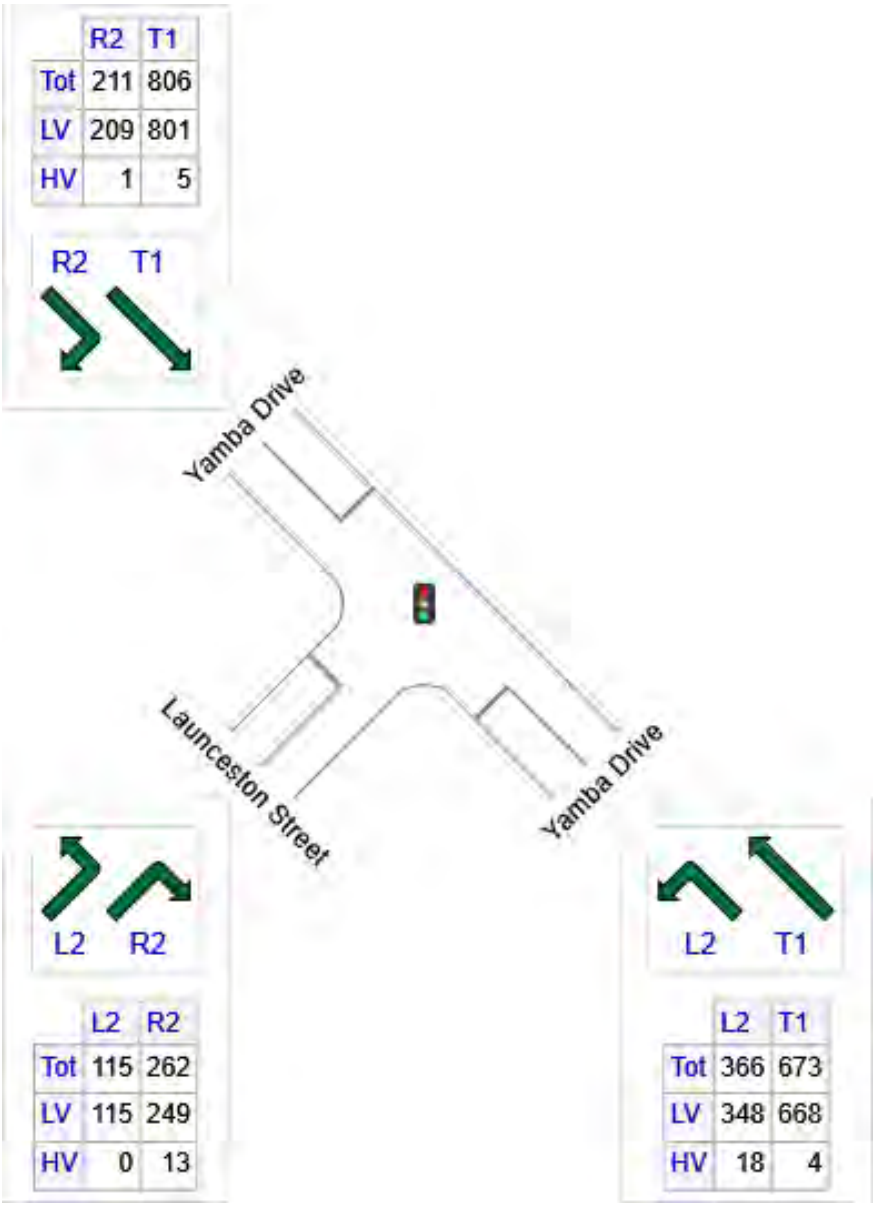
Northwest part of Launceston Street / Wisdom Street / Yamba Drive
Existing Signalised Offset X-Intersection
Site Category: 2025 Existing Conditions - Weekday Evening Peak Hour
Signals - Fixed Time Coordinated Cycle Time = 114 seconds (CCG User-Given Phase Times)
Common Control Group: CCG1 [CCG]

Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E
Output Phase Sequence: A, D, E

Site Layout



OD Demand Flows

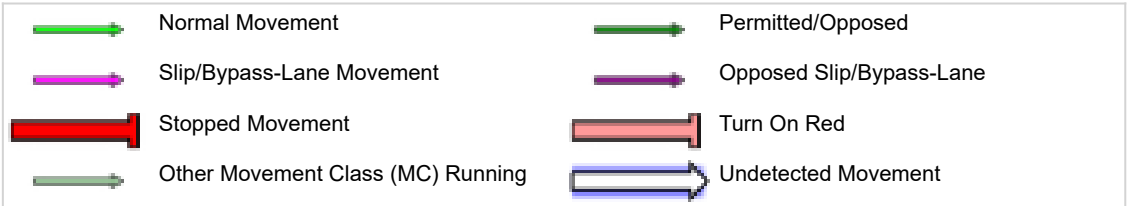


	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
SE: Yamba Drive	1039	1017	22
NW: Yamba Drive	1017	1011	6
SW: Launceston Street	377	364	13
Total	2433	2392	41

Input Phase Sequence (CCG)

Movement Class: All Movement Classes

REF: Reference Phase
VAR: Variable Phase



Mixed Running & Stopped MCs

Continuous Movement


Other Movement Class (MC) Stopped


Phase Transition Applied

Phase Timing Summary (CCG)

Phase	A	D	E
Phase Change Time (sec)	0	63	87
Green Time (sec)	57	18	21
Phase Time (sec)	63	24	27
Phase Split	55%	21%	24%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles														
Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Yamba Drive														
4	L2	366	4.9	366	4.9	0.258	4.9	LOS A	0.4	3.3	0.03	0.59	0.03	40.6
5	T1	673	0.6	673	0.6	0.346	7.5	LOS A	6.3	44.4	0.27	0.24	0.27	51.3
Approach		1039	2.1	1039	2.1	0.346	6.5	LOS A	6.3	44.4	0.19	0.36	0.19	46.5
NorthWest: Yamba Drive														
11	T1	806	0.7	806	0.7	0.563	21.3	LOS C	15.6	109.6	0.75	0.66	0.75	26.3
12	R2	211	0.5	211	0.5	0.618	54.2	LOS D	11.0	77.3	0.97	0.82	0.97	20.5
Approach		1017	0.6	1017	0.6	0.618	28.1	LOS C	15.6	109.6	0.79	0.70	0.79	23.8
SouthWest: Launceston Street														
1	L2	115	0.0	115	0.0	0.062	2.9	LOS A	0.0	0.0	0.00	0.37	0.00	39.5
3	R2	262	4.8	262	4.8	0.627	54.3	LOS D	7.2	52.2	0.98	0.83	1.02	12.6
Approach		377	3.4	377	3.4	0.627	38.6	LOS D	7.2	52.2	0.68	0.69	0.71	18.1
All Vehicles		2433	1.7	2433	1.7	0.627	20.5	LOS C	15.6	109.6	0.52	0.55	0.52	28.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
SouthEast: Yamba Drive															
Lane 1	366	4.9	366	4.9	1417	0.258	100	4.9	LOS A	0.4	3.3	Short	60	0.0	NA
Lane 2	336	0.6	336	0.6	971	0.346	100	4.3	LOS A	3.1	21.8	Full	65	0.0	0.0
Lane 3	336	0.6	336	0.6	971	0.346	100	10.7	LOS B	6.3	44.4	Full	65	0.0	0.0
Approach	1039	2.1	1039	2.1		0.346		6.5	LOS A	6.3	44.4				
NorthWest: Yamba Drive															
Lane 1	403	0.7	403	0.7	716	0.563	100	21.3	LOS C	15.6	109.6	Full	215	-26.3 N3	0.0
Lane 2	403	0.7	403	0.7	716	0.563	100	21.3	LOS C	15.6	109.6	Full	215	-26.3 N3	0.0
Lane 3	211	0.5	211	0.5	341	0.618	100	54.2	LOS D	11.0	77.3	Short	105	0.0	NA
Approach	1017	0.6	1017	0.6		0.618		28.1	LOS C	15.6	109.6				
SouthWest: Launceston Street															
Lane 1	115	0.0	115	0.0	1857	0.062	100	2.9	LOS A	0.0	0.0	Short	85	0.0	NA
Lane 2	131	4.8	131	4.8	209	0.627	100	54.3	LOS D	7.2	52.2	Full	260	-26.3 N3	0.0
Lane 3	131	4.8	131	4.8	209	0.627	100	54.3	LOS D	7.2	52.2	Full	260	-26.3 N3	0.0
Approach	377	3.4	377	3.4		0.627		38.6	LOS D	7.2	52.2				
Intersection	2433	1.7	2433	1.7		0.627		20.5	LOS C	15.6	109.6				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N3 Capacity Adjustment due to downstream lane blockage determined by the program.

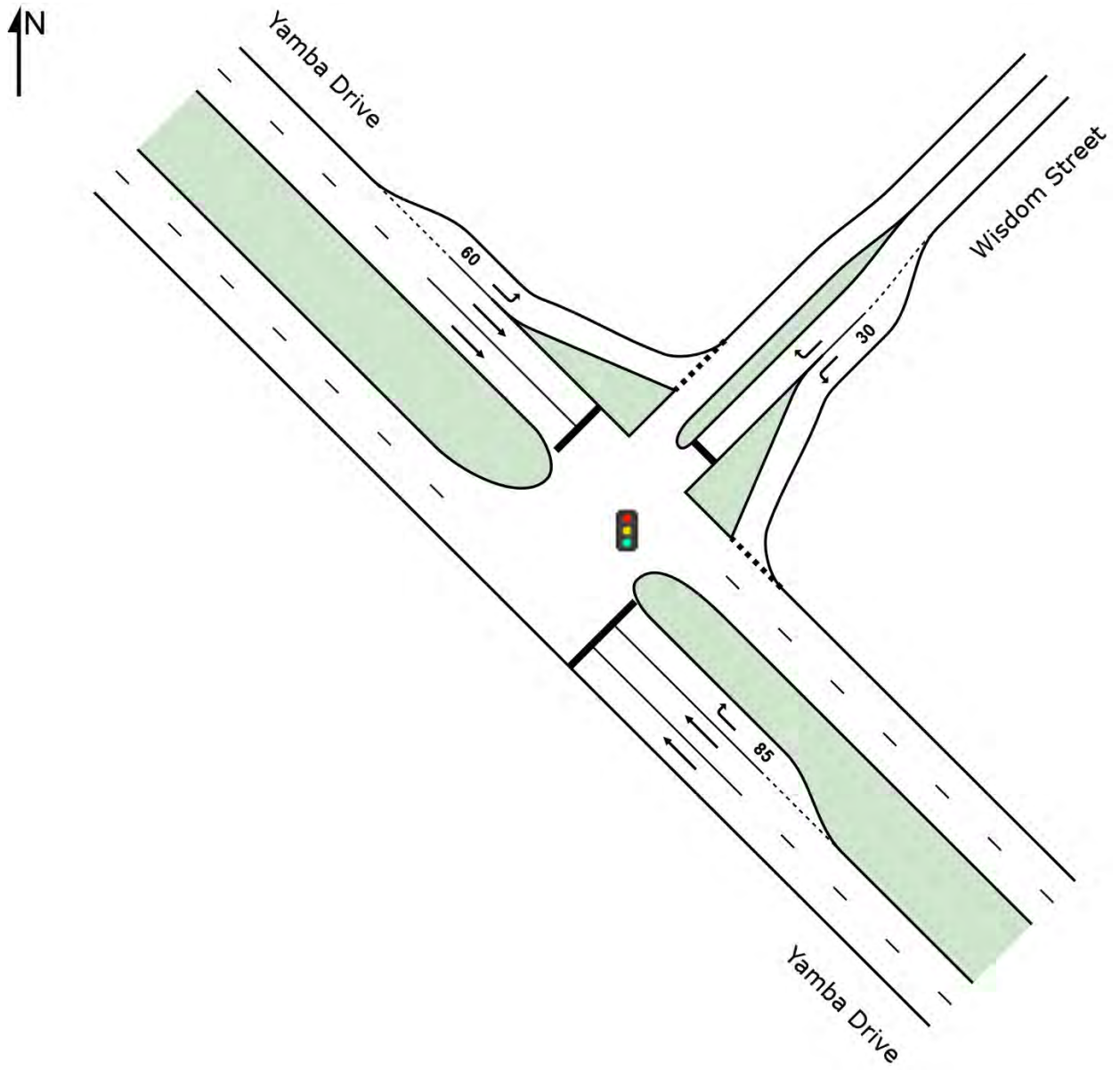
Site: [2025 ExCond - PM: WS-YD] Network: 2 [2025 ExCond - PM: LS-WS-YD]

Southeast part of Launceston Street / Wisdom Street / Yamba Drive
Existing Signalised Offset Cross Intersection
Site Category: 2025 Existing Conditions - Weekday Evening Peak Hour
Signals - Fixed Time Coordinated Cycle Time = 114 seconds (CCG User-Given Phase Times)
Common Control Group: CCG1 [CCG]

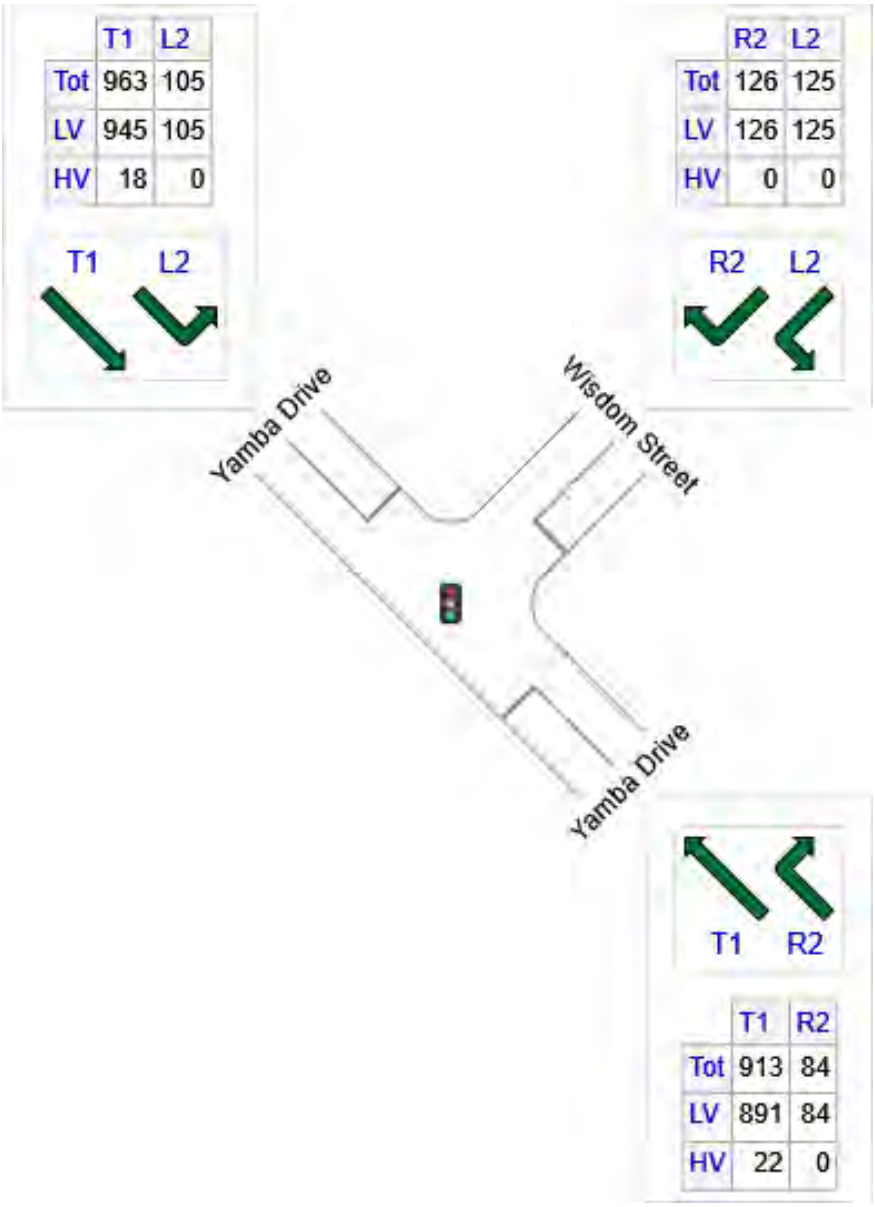
Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E
Output Phase Sequence: A, D, E

Some CCG output elements have been omitted as they have already been included under other Sites belonging to the same CCG.

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
SE: Yamba Drive	997	975	22
NE: Wisdom Street	252	252	0
NW: Yamba Drive	1068	1051	18
Total	2317	2277	40

Movement Performance - Vehicles														
Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Yamba Drive														
11	T1	913	2.4	913	2.4	0.475	19.9	LOS B	16.4	117.5	0.70	0.62	0.70	50.3
12	R2	84	0.0	84	0.0	0.246	50.2	LOS D	4.1	28.4	0.90	0.77	0.90	35.5
Approach		997	2.2	997	2.2	0.475	22.4	LOS C	16.4	117.5	0.72	0.63	0.72	47.4
NorthEast: Wisdom Street														
1	L2	125	0.0	125	0.0	0.123	5.3	LOS A	1.4	9.6	0.26	0.52	0.26	49.6
3	R2	126	0.0	126	0.0	0.431	51.1	LOS D	6.5	45.4	0.95	0.78	0.95	22.0
Approach		252	0.0	252	0.0	0.431	28.3	LOS C	6.5	45.4	0.61	0.65	0.61	35.2
NorthWest: Yamba Drive														
4	L2	105	0.0	105	0.0	0.067	4.7	LOS A	0.1	0.6	0.02	0.59	0.02	40.4
5	T1	963	1.9	963	1.9	0.500	13.0	LOS B	11.6	82.1	0.47	0.42	0.47	59.1
Approach		1068	1.7	1068	1.7	0.500	12.2	LOS B	11.6	82.1	0.43	0.43	0.43	56.6
All Vehicles		2317	1.7	2317	1.7	0.500	18.3	LOS B	16.4	117.5	0.57	0.54	0.57	48.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
SouthEast: Yamba Drive															
Lane 1	456	2.4	456	2.4	960	0.475	100	19.9	LOS B	16.4	117.5	Full	735	0.0	0.0
Lane 2	456	2.4	456	2.4	960	0.475	100	19.9	LOS B	16.4	117.5	Full	735	0.0	0.0
Lane 3	84	0.0	84	0.0	342	0.246	100	50.2	LOS D	4.1	28.4	Short	85	0.0	NA
Approach	997	2.2	997	2.2		0.475		22.4	LOS C	16.4	117.5				
NorthEast: Wisdom Street															
Lane 1	125	0.0	125	0.0	1017	0.123	100	5.3	LOS A	1.4	9.6	Short	30	0.0	NA
Lane 2	126	0.0	126	0.0	293	0.431	100	51.1	LOS D	6.5	45.4	Full	680	0.0	0.0
Approach	252	0.0	252	0.0		0.431		28.3	LOS C	6.5	45.4				
NorthWest: Yamba Drive															
Lane 1	105	0.0	105	0.0	1566	0.067	100	4.7	LOS A	0.1	0.6	Short	60	0.0	NA
Lane 2	482	1.9	482	1.9	963	0.500	100	13.0	LOS B	11.6	82.1	Full	65	0.0	26.3
Lane 3	482	1.9	482	1.9	963	0.500	100	13.0	LOS B	11.6	82.1	Full	65	0.0	26.3
Approach	1068	1.7	1068	1.7		0.500		12.2	LOS B	11.6	82.1				
Intersection	2317	1.7	2317	1.7		0.500		18.3	LOS B	16.4	117.5				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Appendix B:

Intersection Performance Results – 2030 Base Scenario

USER REPORT FOR SITE

Project: 24-0487_20260304

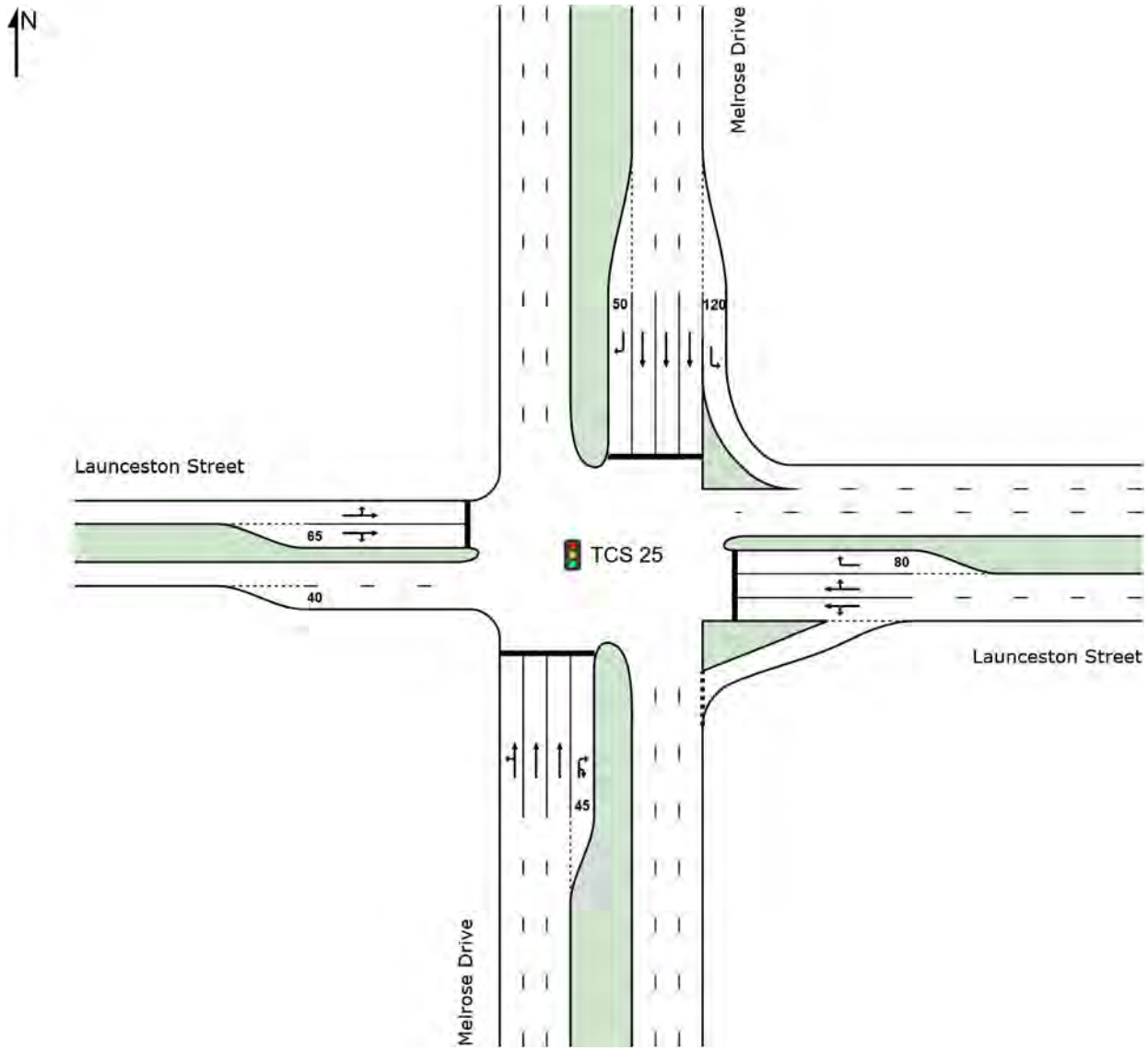
Template: Default Site User Report

Site: TCS 25 [2030 Base - AM: LS-MD]

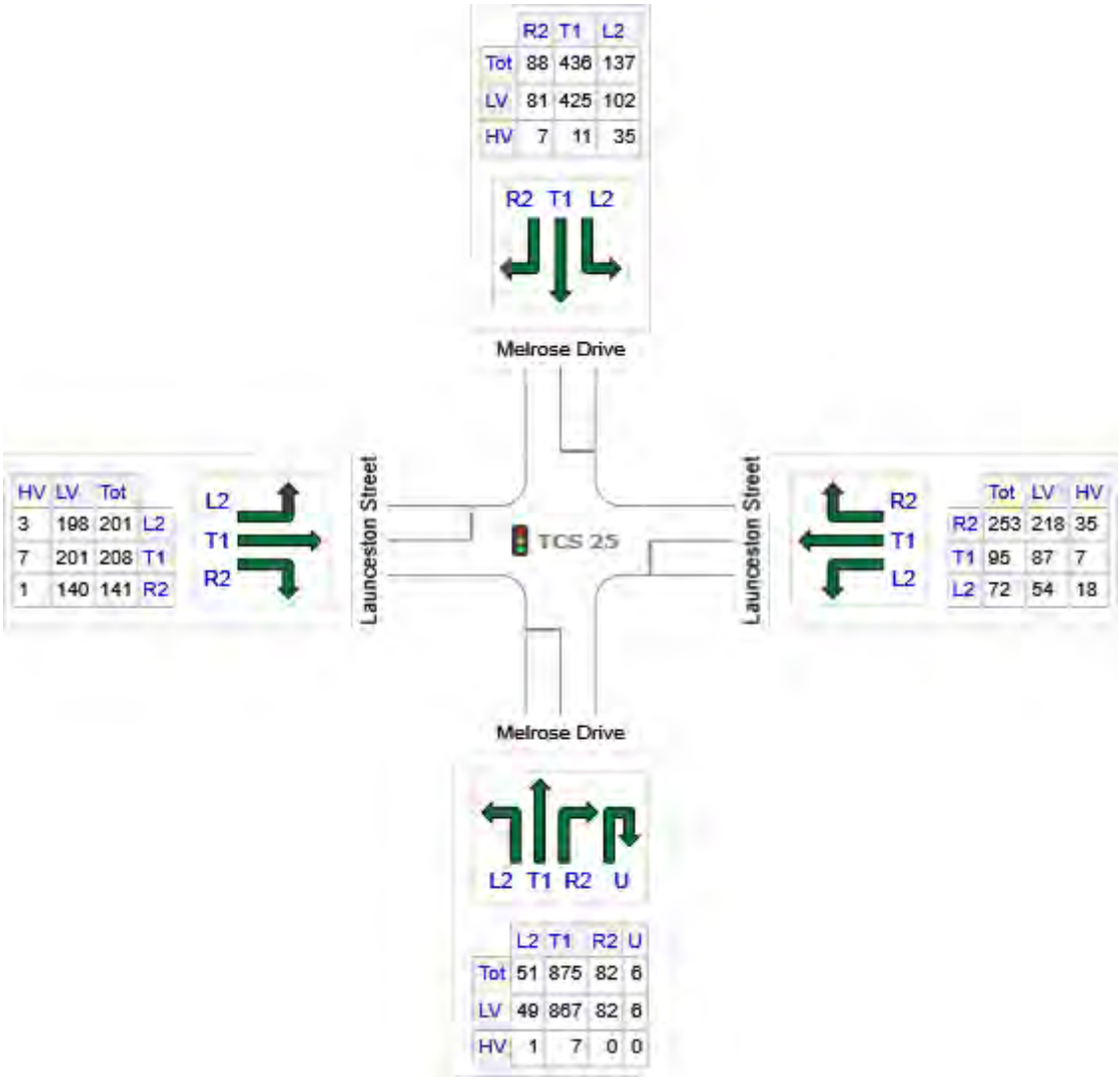
Launceston Street / Melrose Drive
Existing Signalised X-Intersection
Site Category: 2030 Base Scenario - Weekday Morning Peak Hour
Signals - Fixed Time Isolated Cycle Time = 103 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E, F
Output Phase Sequence: A, D, E, F

Site Layout



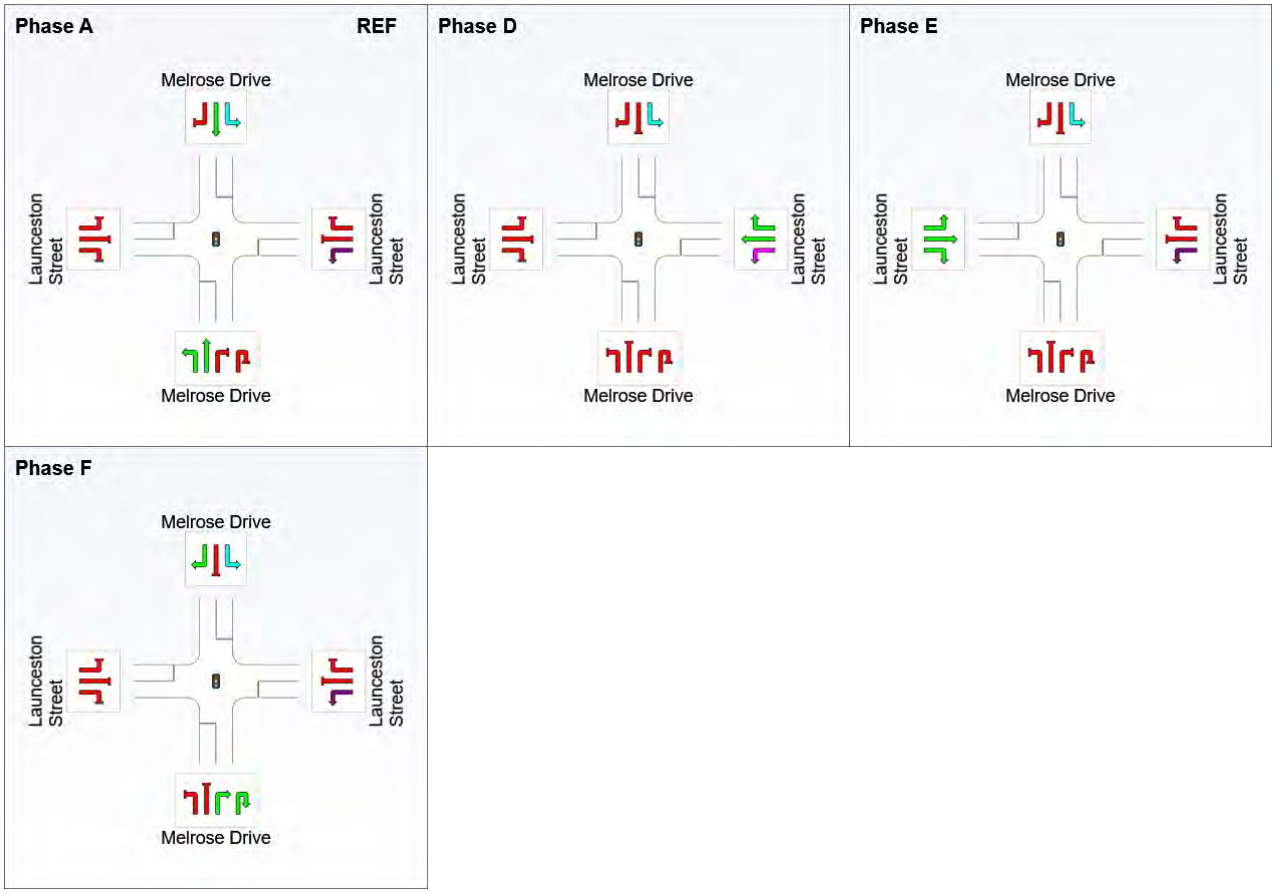
OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Melrose Drive	1014	1005	8
E: Launceston Street	419	359	60
N: Melrose Drive	661	608	53
W: Launceston Street	551	539	12
Total	2644	2512	133

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase

Phase Timing Summary

Phase	A	D	E	F
Phase Change Time (sec)	0	28	56	87
Green Time (sec)	22	22	25	10
Phase Time (sec)	28	28	31	16
Phase Split	27%	27%	30%	16%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Melrose Drive												
1	L2	51	2.1	0.959	80.0	LOS F	21.7	153.6	1.00	1.21	1.59	12.0
2	T1	875	0.8	0.959	74.3	LOS F	21.9	154.6	1.00	1.20	1.59	21.6
3	R2	82	0.0	0.628	57.7	LOS E	4.6	32.3	1.00	0.82	1.08	13.4
3u	U	6	0.0	0.628	59.1	LOS E	4.6	32.3	1.00	0.82	1.08	18.2
Approach		1014	0.8	0.959	73.2	LOS F	21.9	154.6	1.00	1.17	1.55	20.6
East: Launceston Street												
4	L2	72	25.0	0.179	13.3	LOS A	1.7	14.2	0.57	0.65	0.57	33.3
5	T1	95	7.8	0.526	28.0	LOS B	7.2	55.5	0.79	0.74	0.79	17.1
6	R2	253	13.8	0.526	45.4	LOS D	7.2	55.5	0.94	0.80	0.94	26.0
Approach		419	14.3	0.526	36.0	LOS C	7.2	55.5	0.84	0.76	0.84	25.3
North: Melrose Drive												
7	L2	137	25.4	0.087	5.9	LOS A	0.0	0.0	0.00	0.51	0.00	48.8
8	T1	436	2.4	0.354	37.6	LOS C	6.3	44.9	0.90	0.73	0.90	31.6
9	R2	88	8.3	0.520	55.8	LOS D	4.5	33.4	0.99	0.78	0.99	22.7
Approach		661	8.0	0.520	33.4	LOS C	6.3	44.9	0.72	0.69	0.72	32.2
West: Launceston Street												
10	L2	201	1.6	0.760	47.5	LOS D	13.8	98.3	0.99	0.91	1.10	24.9
11	T1	208	3.5	0.760	42.9	LOS D	13.9	99.3	0.99	0.91	1.09	12.9
12	R2	141	0.7	0.760	47.4	LOS D	13.9	99.3	0.99	0.91	1.09	17.4
Approach		551	2.1	0.760	45.8	LOS D	13.9	99.3	0.99	0.91	1.09	19.3
All Vehicles		2644	5.0	0.959	51.6	LOS D	21.9	154.6	0.90	0.93	1.14	23.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	Demand Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	95% Back of Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Melrose Drive													
Lane 1	315	1.0	328	0.959	100	75.3	LOS F	21.7	153.6	Full	205	0.0	0.0
Lane 2	318	0.8	331	0.959	100	74.3	LOS F	21.9	154.6	Full	205	0.0	0.0
Lane 3	293	0.8	305[1]	0.959	100	74.4	LOS F	20.0	141.0	Full	205	0.0	0.0
Lane 4	88	0.0	141	0.628	100	57.8	LOS E	4.6	32.3	Short	45	0.0	NA
Approach	1014	0.8		0.959		73.2	LOS F	21.9	154.6				
East: Launceston Street													
Lane 1	110	19.0	616	0.179	34[6]	11.8	LOS A	1.7	14.2	Full	90	0.0	0.0
Lane 2	157	11.6	299	0.526	100	43.8	LOS D	7.2	55.5	Full	90	0.0	0.0
Lane 3	152	13.8	289	0.526	100	45.4	LOS D	7.0	54.7	Short	80	0.0	NA
Approach	419	14.3		0.526		36.0	LOS C	7.2	55.5				
North: Melrose Drive													
Lane 1	137	25.4	1573	0.087	100	5.9	LOS A	0.0	0.0	Short	120	0.0	NA
Lane 2	145	2.4	410	0.354	100	37.6	LOS C	6.3	44.9	Full	470	0.0	0.0
Lane 3	145	2.4	410	0.354	100	37.6	LOS C	6.3	44.9	Full	470	0.0	0.0
Lane 4	145	2.4	410	0.354	100	37.6	LOS C	6.3	44.9	Full	470	0.0	0.0
Lane 5	88	8.3	170	0.520	100	55.8	LOS D	4.5	33.4	Short	50	0.0	NA
Approach	661	8.0		0.520		33.4	LOS C	6.3	44.9				
West: Launceston Street													
Lane 1	274	2.1	360	0.760	100	46.3	LOS D	13.8	98.3	Full	95	0.0	9.0[8]
Lane 2	277	2.1	364	0.760	100	45.2	LOS D	13.9	99.3	Short	65	0.0	NA
Approach	551	2.1		0.760		45.8	LOS D	13.9	99.3				
Intersection	2644	5.0		0.959		51.6	LOS D	21.9	154.6				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

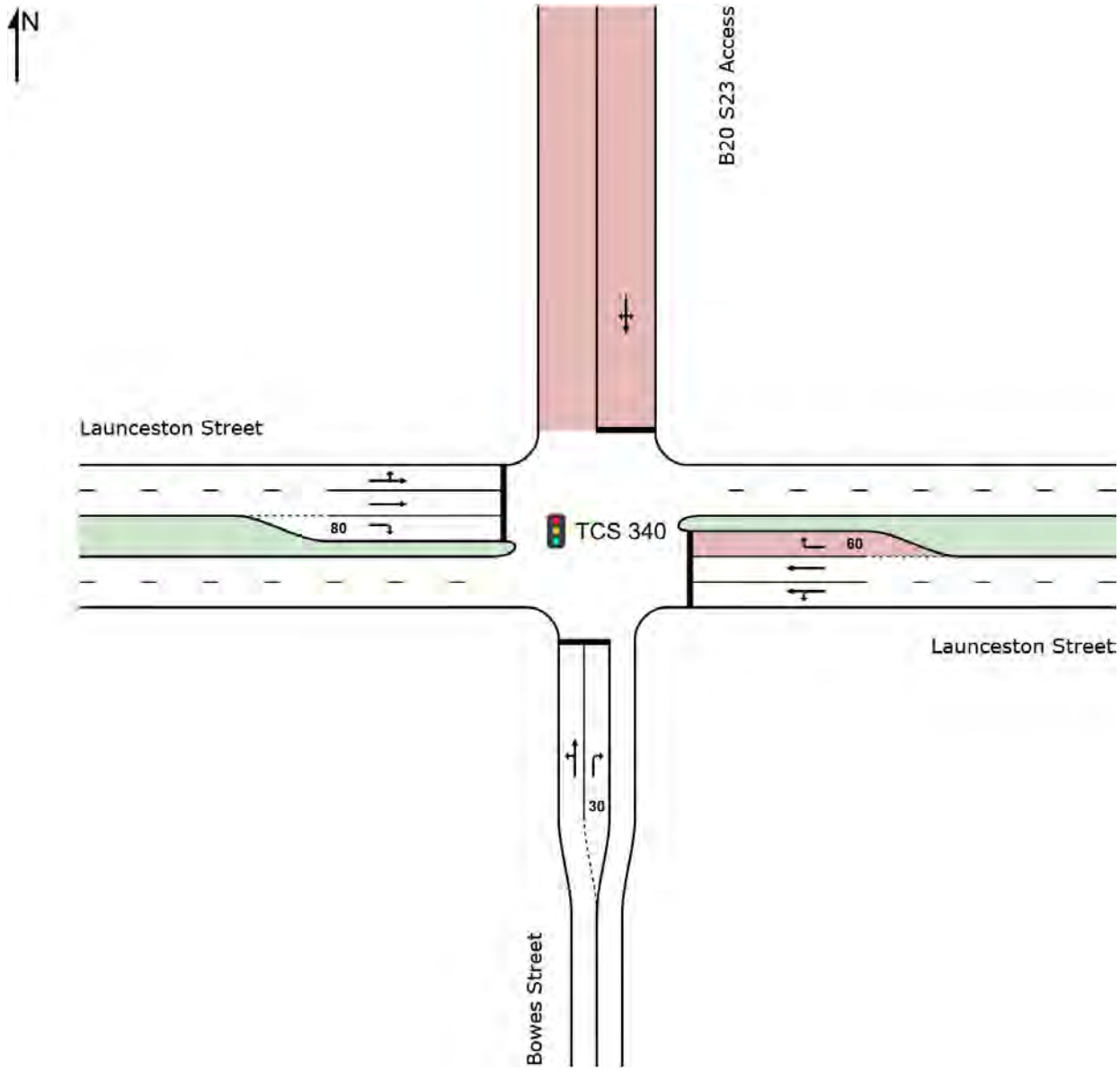
1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
6 Lane under-utilisation due to downstream effects
8 Probability of Blockage has been set on the basis of a queue that overflows from a short lane.

Site: TCS 340 [2030 Base - AM: BS-LS]

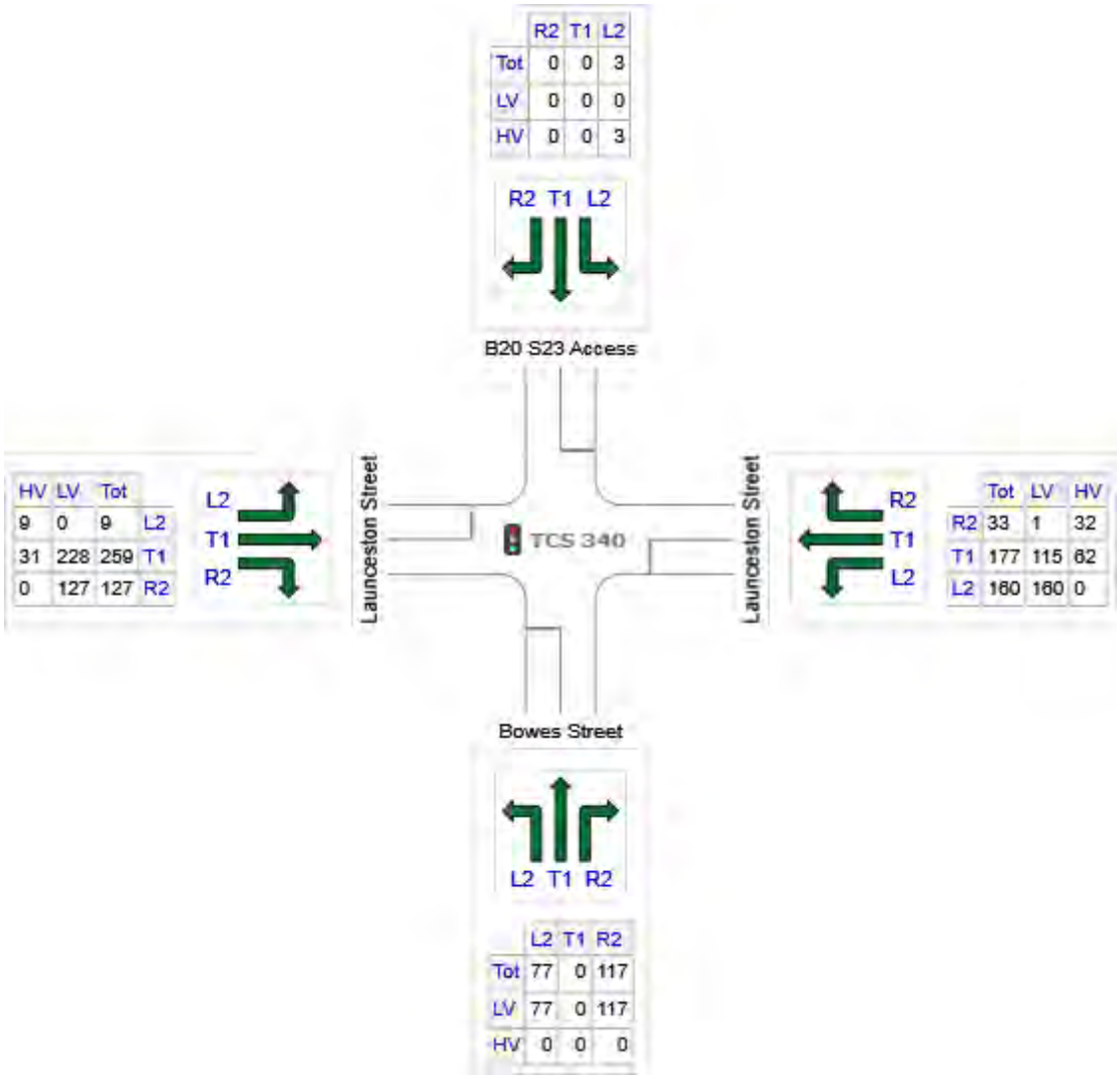
Block 20 Section 23 Access / Bowes Street / Launceston Street
Existing Signalised X-Intersection
Site Category: 2030 Base Scenario - Weekday Morning Peak Hour
Signals - Fixed Time Isolated Cycle Time = 84 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E, G
Output Phase Sequence: A, D, E, G

Site Layout



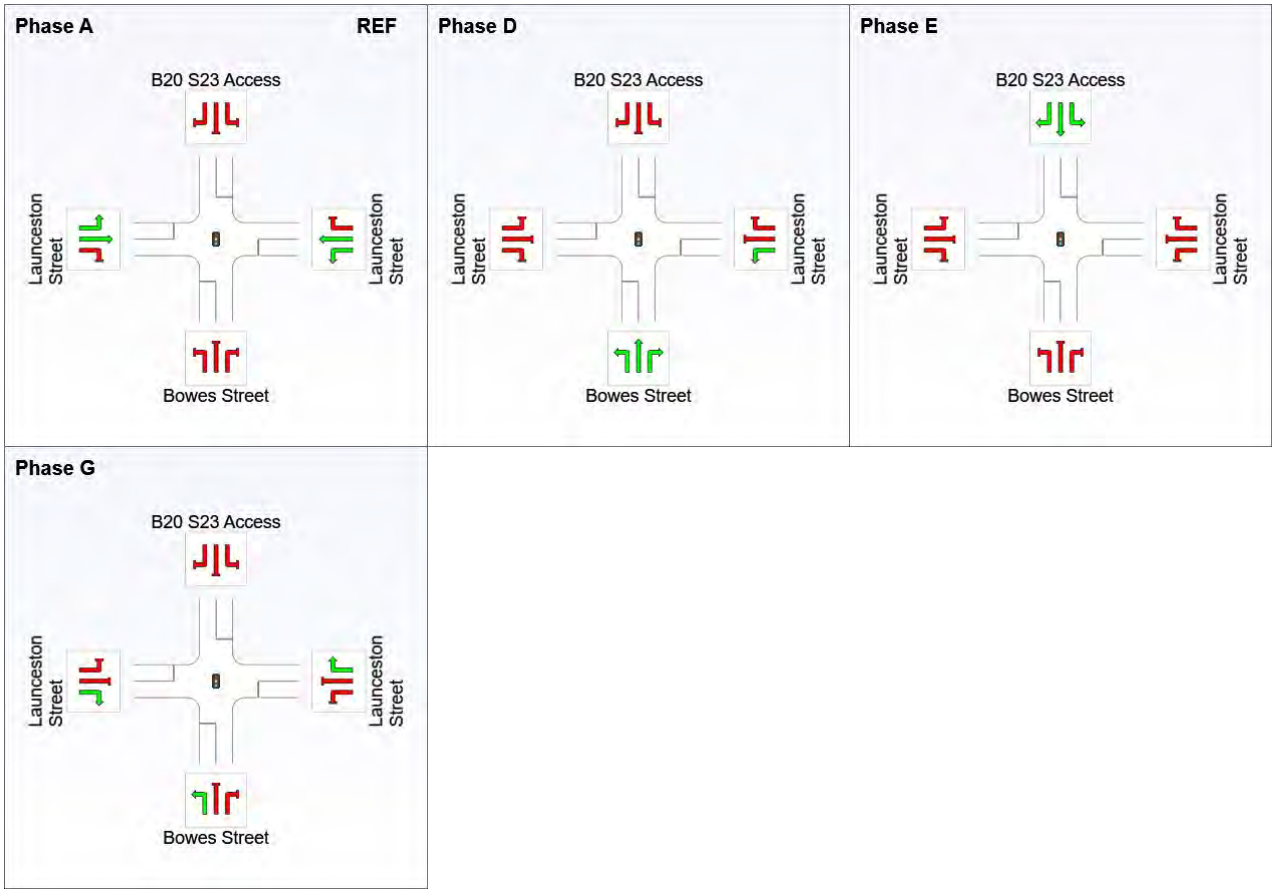
OD Demand Flows



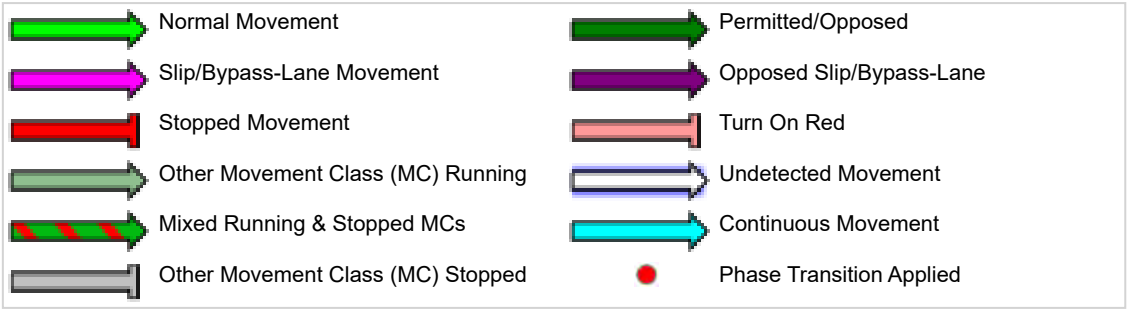
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	194	194	0
E: Launceston Street	369	276	94
N: B20 S23 Access	3	0	3
W: Launceston Street	396	356	40
Total	962	825	137

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	D	E	G
Phase Change Time (sec)	0	27	55	68
Green Time (sec)	22	22	7	12
Phase Time (sec)	28	28	11	17
Phase Split	33%	33%	13%	20%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	77	0.0	0.100	12.1	LOS A	1.3	8.9	0.64	0.68	0.64	23.6
2	T1	0	0.0	0.100	12.6	LOS A	1.3	8.9	0.64	0.68	0.64	13.7
3	R2	117	0.0	0.240	29.8	LOS C	3.8	26.7	0.83	0.75	0.83	12.6
Approach		194	0.0	0.240	22.8	LOS B	3.8	26.7	0.75	0.72	0.75	15.6
East: Launceston Street												
4	L2	160	0.0	0.323	26.8	LOS B	6.1	45.2	0.77	0.75	0.77	14.3
5	T1	177	35.1	0.323	26.0	LOS B	6.1	45.2	0.83	0.70	0.83	19.5
6	R2	33	96.8	0.208	42.7	LOS D	1.3	16.1	0.92	0.73	0.92	9.5
Approach		369	25.4	0.323	27.8	LOS B	6.1	45.2	0.81	0.73	0.81	16.2
North: B20 S23 Access												
7	L2	3	100.0	0.034	40.6	LOS C	0.1	1.8	0.94	0.61	0.94	8.6
8	T1	0	100.0	0.034	40.6	LOS C	0.1	1.8	0.94	0.61	0.94	5.5
9	R2	0	100.0	0.034	40.6	LOS C	0.1	1.8	0.94	0.61	0.94	9.1
Approach		3	100.0	0.034	40.6	LOS C	0.1	1.8	0.94	0.61	0.94	8.5
West: Launceston Street												
10	L2	9	100.0	0.290	32.9	LOS C	4.4	35.3	0.84	0.69	0.84	13.7
11	T1	259	11.8	0.290	27.1	LOS B	4.6	35.2	0.84	0.69	0.84	19.5
12	R2	127	0.0	0.480	42.7	LOS D	5.0	35.1	0.97	0.79	0.97	10.3
Approach		396	10.1	0.480	32.4	LOS C	5.0	35.3	0.88	0.72	0.88	15.8
All Vehicles		962	14.2	0.480	28.7	LOS C	6.1	45.2	0.83	0.72	0.83	15.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

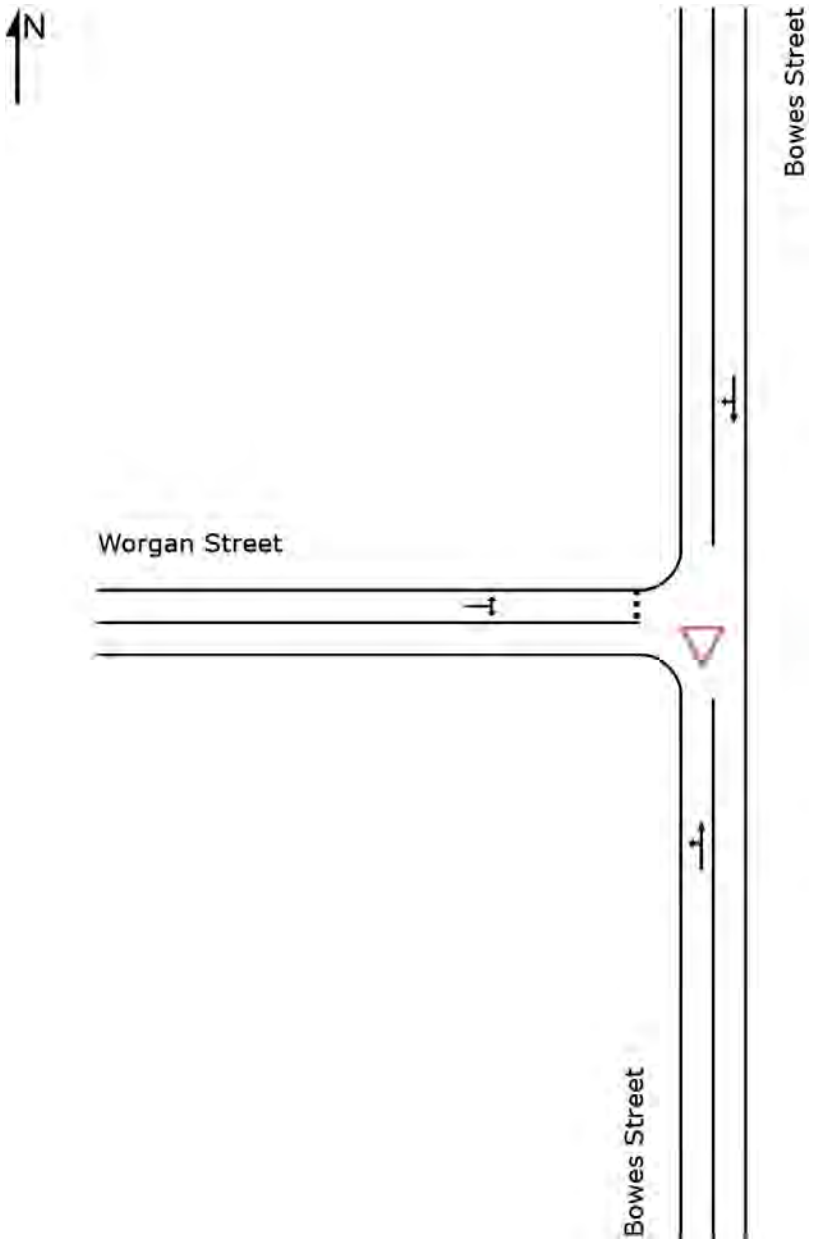
Lane Use and Performance													
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Bowes Street													
Lane 1	77	0.0	772	0.100	100	12.1	LOS A	1.3	8.9	Full	35	0.0	0.0
Lane 2	117	0.0	486	0.240	100	29.8	LOS C	3.8	26.7	Short	30	0.0	NA
Approach	194	0.0		0.240		22.8	LOS B	3.8	26.7				
East: Launceston Street													
Lane 1	202	7.4	626	0.323	100	25.7	LOS B	6.1	45.2	Full	95	0.0	0.0
Lane 2	134	35.1	416	0.323	100	27.5	LOS B	4.5	41.4	Full	95	0.0	0.0
Lane 3	33	96.8	157	0.208	100	42.7	LOS D	1.3	16.1	Short	60	0.0	NA
Approach	369	25.4		0.323		27.8	LOS B	6.1	45.2				
North: B20 S23 Access													
Lane 1	3	100.0	99	0.034	100	40.6	LOS C	0.1	1.8	Full	30	0.0	0.0
Approach	3	100.0		0.034		40.6	LOS C	0.1	1.8				
West: Launceston Street													
Lane 1	131	18.2	452	0.290	100	27.9	LOS B	4.4	35.3	Full	105	0.0	0.0
Lane 2	137	11.8	474	0.290	100	27.1	LOS B	4.6	35.2	Full	105	0.0	0.0
Lane 3	127	0.0	265	0.480	100	42.7	LOS D	5.0	35.1	Short	80	0.0	NA
Approach	396	10.1		0.480		32.4	LOS C	5.0	35.3				
Intersection	962	14.2		0.480		28.7	LOS C	6.1	45.2				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

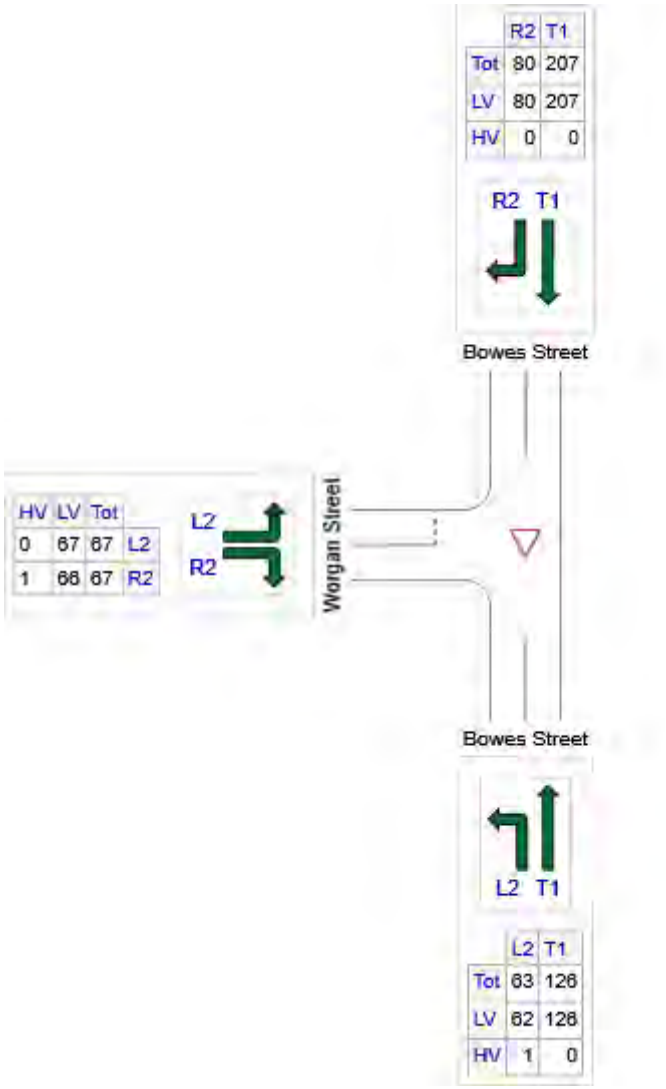
Site: [2030 Base - AM: BS-WS]

Bowes Street / Worgan Street
Existing Priority-Controlled (Give-Way) T-Intersection
Site Category: 2030 Base Scenario - Weekday Morning Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	189	188	1
N: Bowes Street	287	287	0
W: Worgan Street	135	134	1
Total	612	609	2

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	63	1.7	0.099	4.6	LOS A	0.0	0.0	0.00	0.18	0.00	32.9
2	T1	126	0.0	0.099	0.0	LOS A	0.0	0.0	0.00	0.18	0.00	43.9
Approach		189	0.6	0.099	1.5	NA	0.0	0.0	0.00	0.18	0.00	39.5
North: Bowes Street												
8	T1	207	0.0	0.160	0.3	LOS A	0.5	3.3	0.14	0.15	0.14	44.7
9	R2	80	0.0	0.160	3.8	LOS A	0.5	3.3	0.14	0.15	0.14	17.4
Approach		287	0.0	0.160	1.3	NA	0.5	3.3	0.14	0.15	0.14	35.3
West: Worgan Street												
10	L2	67	0.0	0.122	3.6	LOS A	0.5	3.3	0.27	0.55	0.27	21.0
12	R2	67	1.6	0.122	5.0	LOS A	0.5	3.3	0.27	0.55	0.27	32.7
Approach		135	0.8	0.122	4.3	LOS A	0.5	3.3	0.27	0.55	0.27	27.4
All Vehicles		612	0.3	0.160	2.0	NA	0.5	3.3	0.13	0.25	0.13	34.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

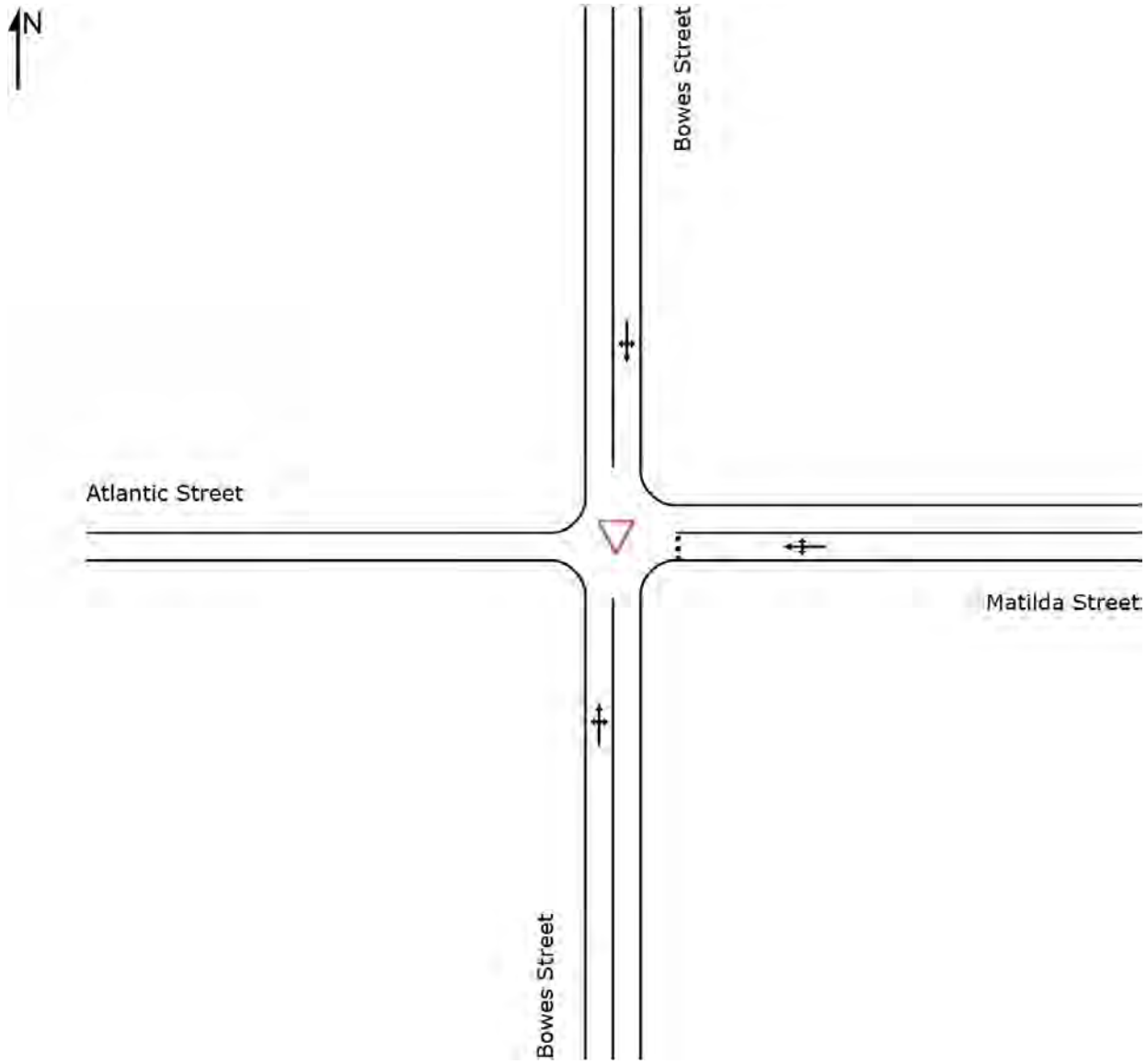
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Bowes Street													
Lane 1	189	0.6	1910	0.099	100	1.5	LOS A	0.0	0.0	Full	105	0.0	0.0
Approach	189	0.6		0.099		1.5	NA	0.0	0.0				
North: Bowes Street													
Lane 1	287	0.0	1790	0.160	100	1.3	LOS A	0.5	3.3	Full	35	0.0	0.0
Approach	287	0.0		0.160		1.3	NA	0.5	3.3				
West: Worgan Street													
Lane 1	135	0.8	1103	0.122	100	4.3	LOS A	0.5	3.3	Full	35	0.0	0.0
Approach	135	0.8		0.122		4.3	LOS A	0.5	3.3				
Intersection	612	0.3		0.160		2.0	NA	0.5	3.3				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

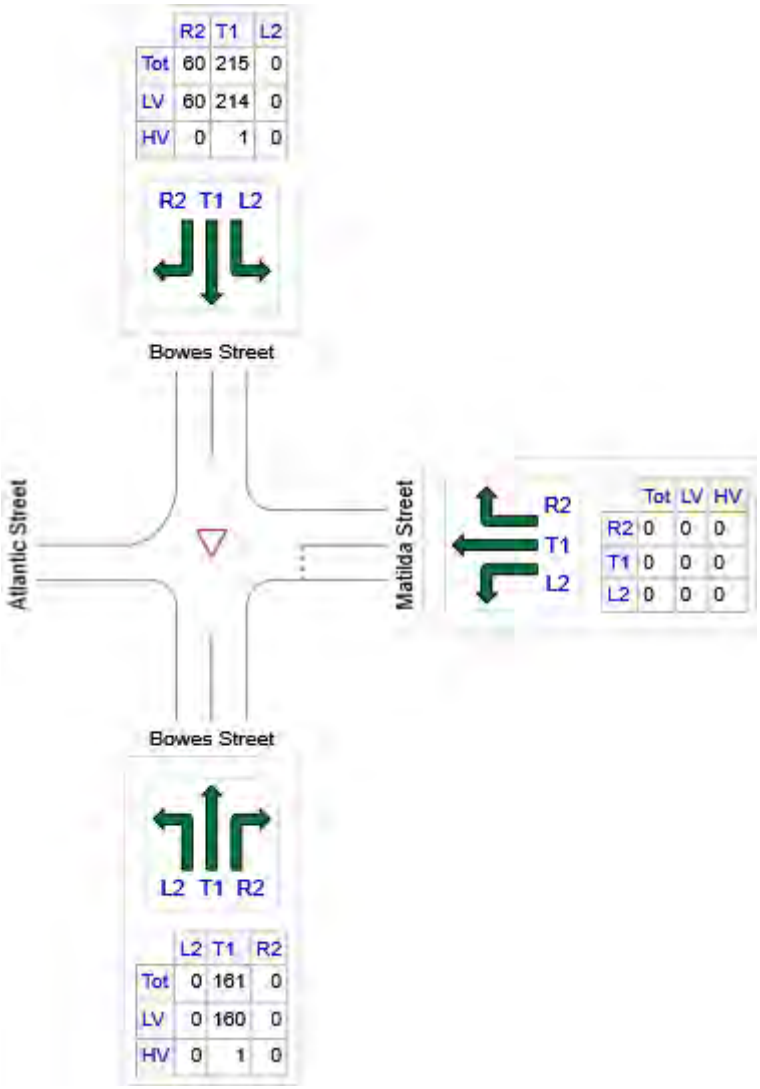
Site: [2030 Base - AM: AS-BS-MS]

Atlantic Street / Bowes Street / Matilda Street
Existing Priority-Controlled (Give-Way) T-Intersection
Site Category: 2030 Base Scenario - Weekday Morning Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	161	160	1
E: Matilda Street	0	0	0
N: Bowes Street	275	274	1
Total	436	434	2

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	0	0.0	0.083	4.1	LOS A	0.0	0.0	0.00	0.00	0.00	24.3
2	T1	161	0.7	0.083	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
3	R2	0	0.0	0.083	4.3	LOS A	0.0	0.0	0.00	0.00	0.00	43.5
Approach		161	0.7	0.083	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.9
East: Matilda Street												
4	L2	0	0.0	0.000	5.1	LOS A	0.0	0.0	0.36	0.50	0.36	28.1
5	T1	0	0.0	0.000	5.7	LOS A	0.0	0.0	0.36	0.50	0.36	22.3
6	R2	0	0.0	0.000	6.8	LOS A	0.0	0.0	0.36	0.50	0.36	33.2
Approach		0	0.0	0.000	5.9	LOS A	0.0	0.0	0.36	0.50	0.36	26.8
North: Bowes Street												
7	L2	0	0.0	0.150	5.1	LOS A	0.4	2.9	0.14	0.13	0.14	43.0
8	T1	215	0.5	0.150	0.2	LOS A	0.4	2.9	0.14	0.13	0.14	44.0
9	R2	60	0.0	0.150	5.4	LOS A	0.4	2.9	0.14	0.13	0.14	28.2
Approach		275	0.4	0.150	1.3	NA	0.4	2.9	0.14	0.13	0.14	37.7
All Vehicles		436	0.5	0.150	0.8	NA	0.4	2.9	0.09	0.08	0.09	41.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

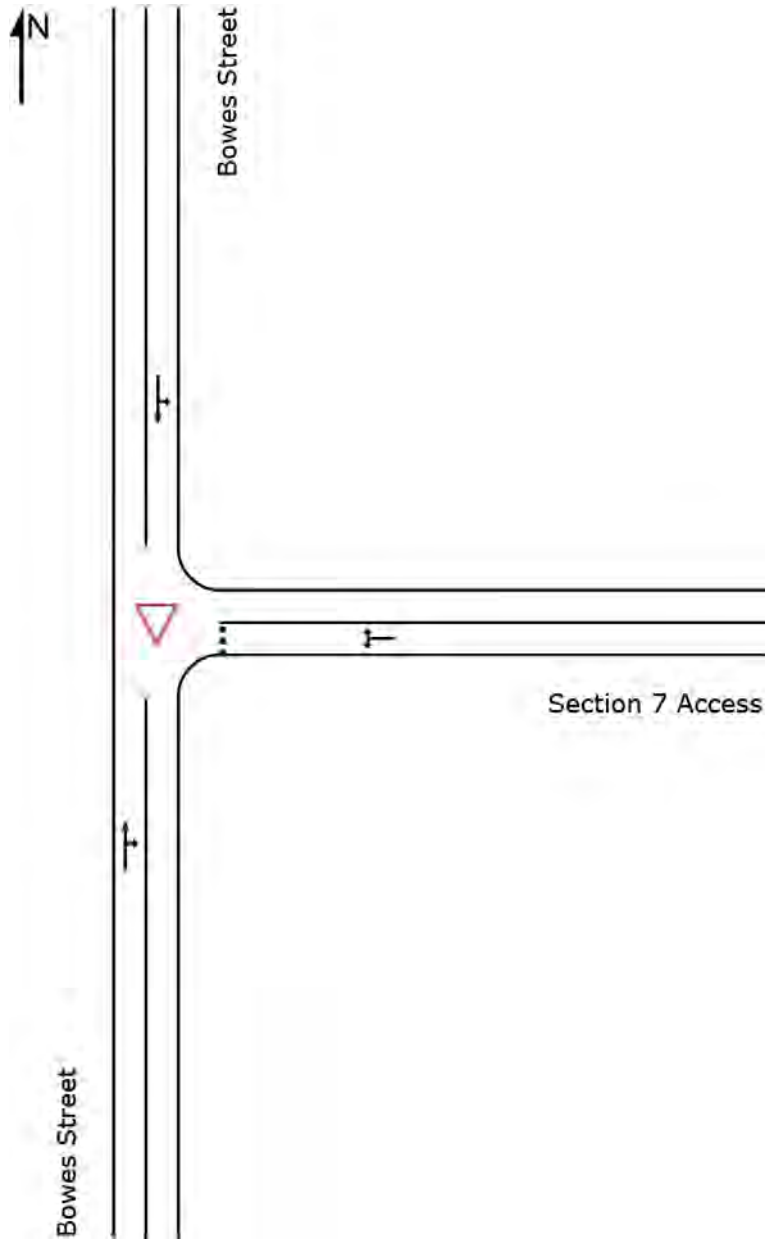
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Bowes Street													
Lane 1	161	0.7	1941	0.083	100	0.0	LOS A	0.0	0.0	Full	45	0.0	0.0
Approach	161	0.7		0.083		0.0	NA	0.0	0.0				
East: Matilda Street													
Lane 1	0	0.0	902	0.000	100	5.9	LOS A	0.0	0.0	Full	80	0.0	0.0
Approach	0	0.0		0.000		5.9	LOS A	0.0	0.0				
North: Bowes Street													
Lane 1	275	0.4	1831	0.150	100	1.3	LOS A	0.4	2.9	Full	110	0.0	0.0
Approach	275	0.4		0.150		1.3	NA	0.4	2.9				
Intersection	436	0.5		0.150		0.8	NA	0.4	2.9				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

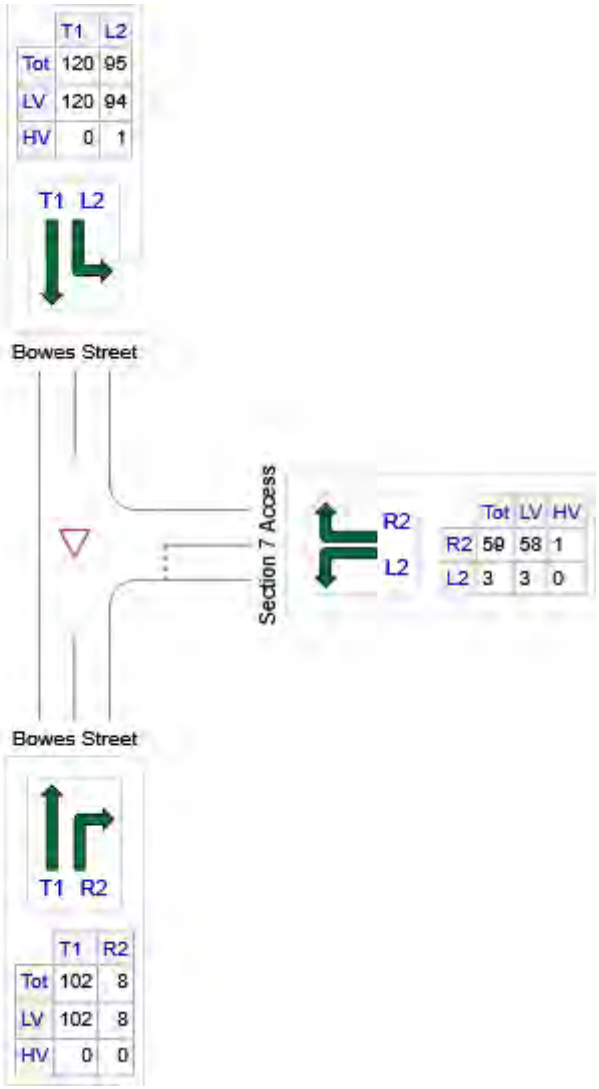
Site: [2030 Base - AM: BS-S7]

Bowes Street / Section 7 Access
Existing Priority-Controlled (Give-Way) T-Intersection
Site Category: 2030 Base Scenario - Weekday Morning Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	111	111	0
E: Section 7 Access	62	61	1
N: Bowes Street	215	214	1
Total	387	385	2

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
2	T1	102	0.0	0.058	0.1	LOS A	0.1	0.4	0.06	0.04	0.06	47.2
3	R2	8	0.0	0.058	5.0	LOS A	0.1	0.4	0.06	0.04	0.06	47.2
Approach		111	0.0	0.058	0.5	NA	0.1	0.4	0.06	0.04	0.06	47.2
East: Section 7 Access												
4	L2	3	0.0	0.061	0.4	LOS A	0.2	1.4	0.31	0.30	0.31	24.7
6	R2	59	1.8	0.061	1.7	LOS A	0.2	1.4	0.31	0.30	0.31	24.0
Approach		62	1.7	0.061	1.6	LOS A	0.2	1.4	0.31	0.30	0.31	24.0
North: Bowes Street												
7	L2	95	1.1	0.113	4.3	LOS A	0.0	0.0	0.00	0.24	0.00	23.2
8	T1	120	0.0	0.113	0.0	LOS A	0.0	0.0	0.00	0.24	0.00	41.7
Approach		215	0.5	0.113	1.9	NA	0.0	0.0	0.00	0.24	0.00	32.7
All Vehicles		387	0.5	0.113	1.4	NA	0.2	1.4	0.07	0.19	0.07	34.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Bowes Street													
Lane 1	111	0.0	1898	0.058	100	0.5	LOS A	0.1	0.4	Full	60	0.0	0.0
Approach	111	0.0		0.058		0.5	NA	0.1	0.4				
East: Section 7 Access													
Lane 1	62	1.7	1013	0.061	100	1.6	LOS A	0.2	1.4	Full	15	0.0	0.0
Approach	62	1.7		0.061		1.6	LOS A	0.2	1.4				
North: Bowes Street													
Lane 1	215	0.5	1901	0.113	100	1.9	LOS A	0.0	0.0	Full	60	0.0	0.0
Approach	215	0.5		0.113		1.9	NA	0.0	0.0				
Intersection	387	0.5		0.113		1.4	NA	0.2	1.4				

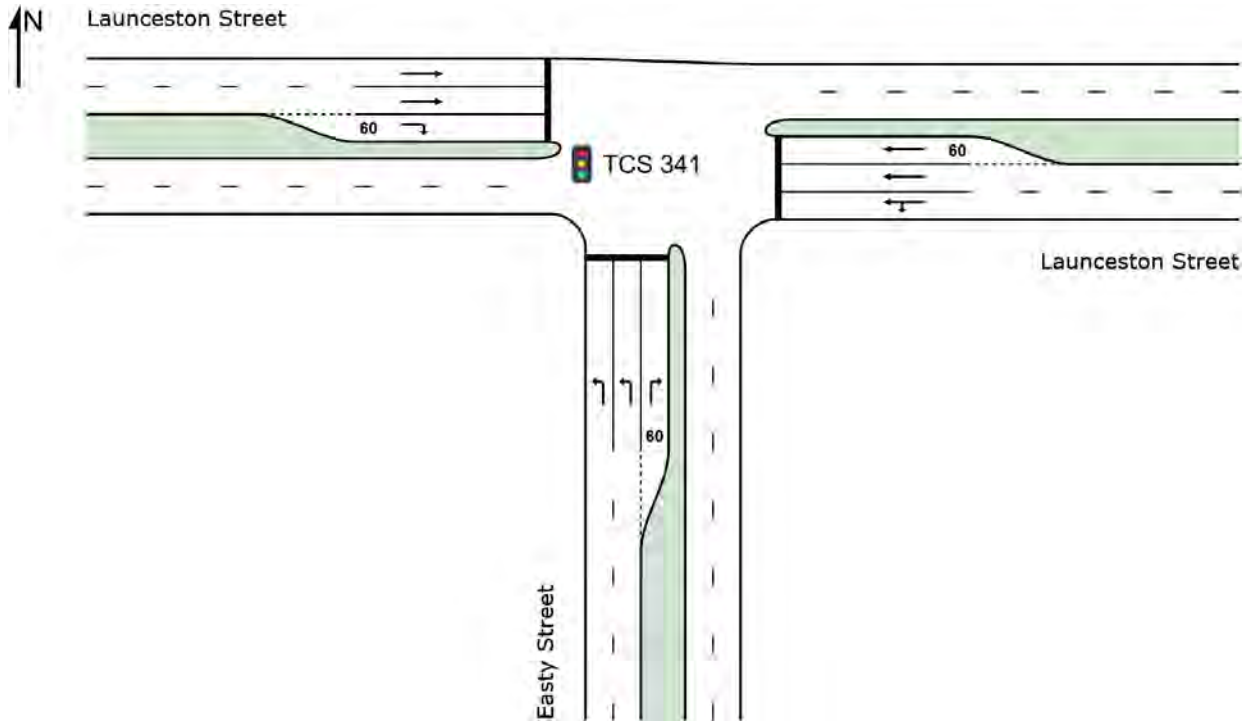
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: TCS 341 [2030 Base - AM: ES-LS]

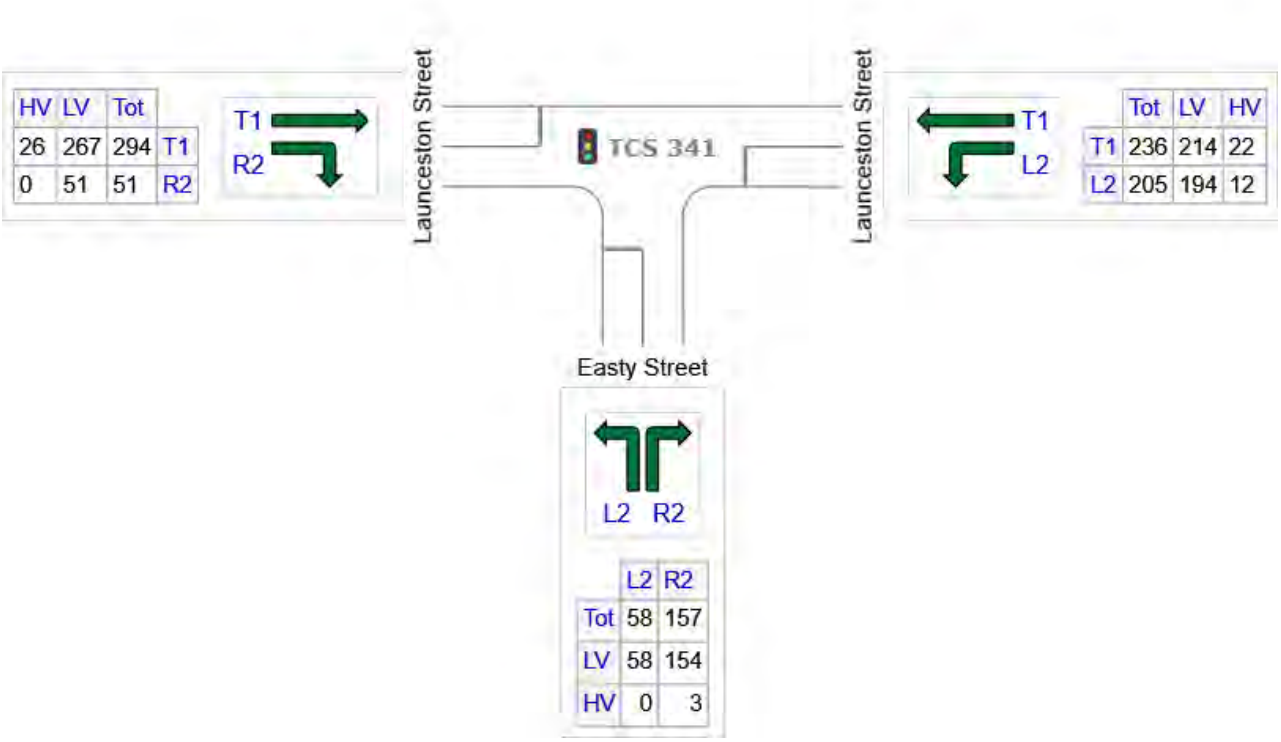
Easty Street / Launceston Street
Existing Signalised T-Intersection
Site Category: 2030 Base Scenario - Weekday Morning Peak Hour
Signals - Fixed Time Isolated Cycle Time = 68 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Site Layout



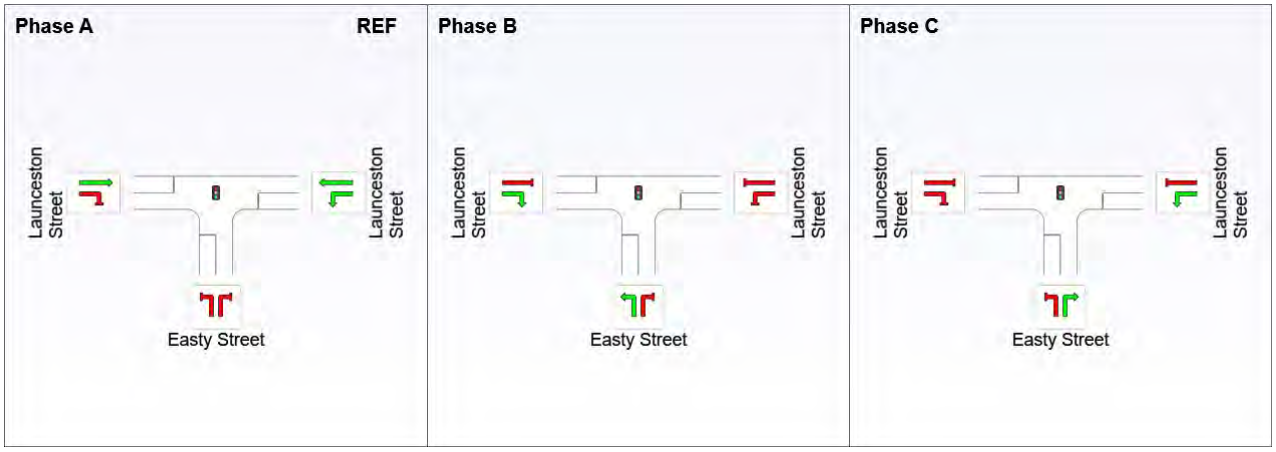
OD Demand Flows



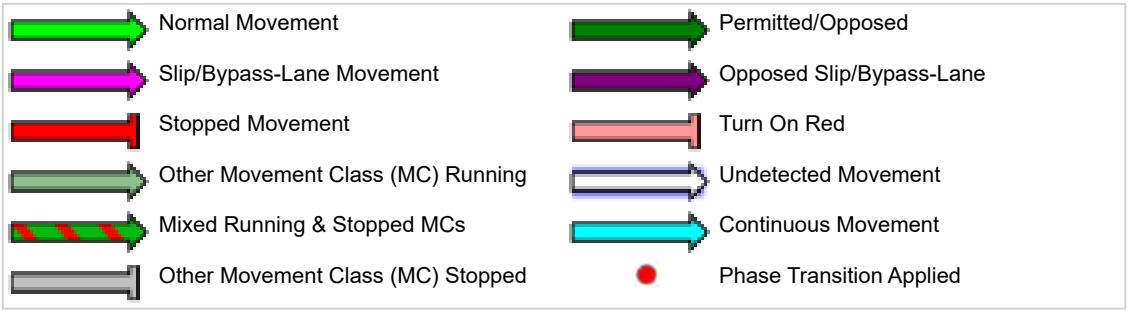
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Easty Street	215	212	3
E: Launceston Street	441	407	34
W: Launceston Street	344	318	26
Total	1000	937	63

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	30	49
Green Time (sec)	25	13	14
Phase Time (sec)	31	18	19
Phase Split	46%	26%	28%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Easty Street												
1	L2	58	0.0	0.082	28.3	LOS B	0.8	5.7	0.85	0.69	0.85	23.7
3	R2	157	2.0	0.416	29.5	LOS C	4.7	33.4	0.91	0.78	0.91	25.8
Approach		215	1.5	0.416	29.2	LOS C	4.7	33.4	0.90	0.75	0.90	25.3
East: Launceston Street												
4	L2	205	5.6	0.178	8.6	LOS A	2.7	19.8	0.42	0.62	0.42	34.6
5	T1	236	9.4	0.174	15.8	LOS B	2.7	20.2	0.71	0.57	0.71	28.0
Approach		441	7.6	0.178	12.4	LOS A	2.7	20.2	0.58	0.59	0.58	31.3
West: Launceston Street												
11	T1	294	9.0	0.217	16.1	LOS B	3.4	25.5	0.72	0.59	0.72	27.9
12	R2	51	0.0	0.142	28.7	LOS C	1.4	10.0	0.87	0.71	0.87	23.7
Approach		344	7.6	0.217	17.9	LOS B	3.4	25.5	0.75	0.61	0.75	27.1
All Vehicles		1000	6.3	0.416	17.9	LOS B	4.7	33.4	0.70	0.63	0.70	28.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	Demand Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	95% Back of Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Easty Street													
Lane 1	29	0.0	355	0.082	100	28.3	LOS B	0.8	5.7	Full	305	0.0	0.0
Lane 2	29	0.0	355	0.082	100	28.3	LOS B	0.8	5.7	Full	305	0.0	0.0
Lane 3	157	2.0	377	0.416	100	29.5	LOS C	4.7	33.4	Short	60	0.0	NA
Approach	215	1.5		0.416		29.2	LOS C	4.7	33.4				
East: Launceston Street													
Lane 1	205	5.6	1155	0.178	100	8.6	LOS A	2.7	19.8	Full	260	0.0	0.0
Lane 2	118	9.4	676	0.174	98[5]	15.8	LOS B	2.7	20.2	Full	260	0.0	0.0
Lane 3	118	9.4	676	0.174	98[5]	15.8	LOS B	2.7	20.2	Short	60	0.0	NA
Approach	441	7.6		0.178		12.4	LOS A	2.7	20.2				
West: Launceston Street													
Lane 1	147	9.0	677	0.217	100	16.1	LOS B	3.4	25.5	Full	130	0.0	0.0
Lane 2	147	9.0	677	0.217	100	16.1	LOS B	3.4	25.5	Full	130	0.0	0.0
Lane 3	51	0.0	355	0.142	100	28.7	LOS C	1.4	10.0	Short	60	0.0	NA
Approach	344	7.6		0.217		17.9	LOS B	3.4	25.5				
Intersection	1000	6.3		0.416		17.9	LOS B	4.7	33.4				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5 Lane under-utilisation found by the program

USER REPORT FOR NETWORK SITE

Project: 24-0487_20260304

Template: Default Site User Report

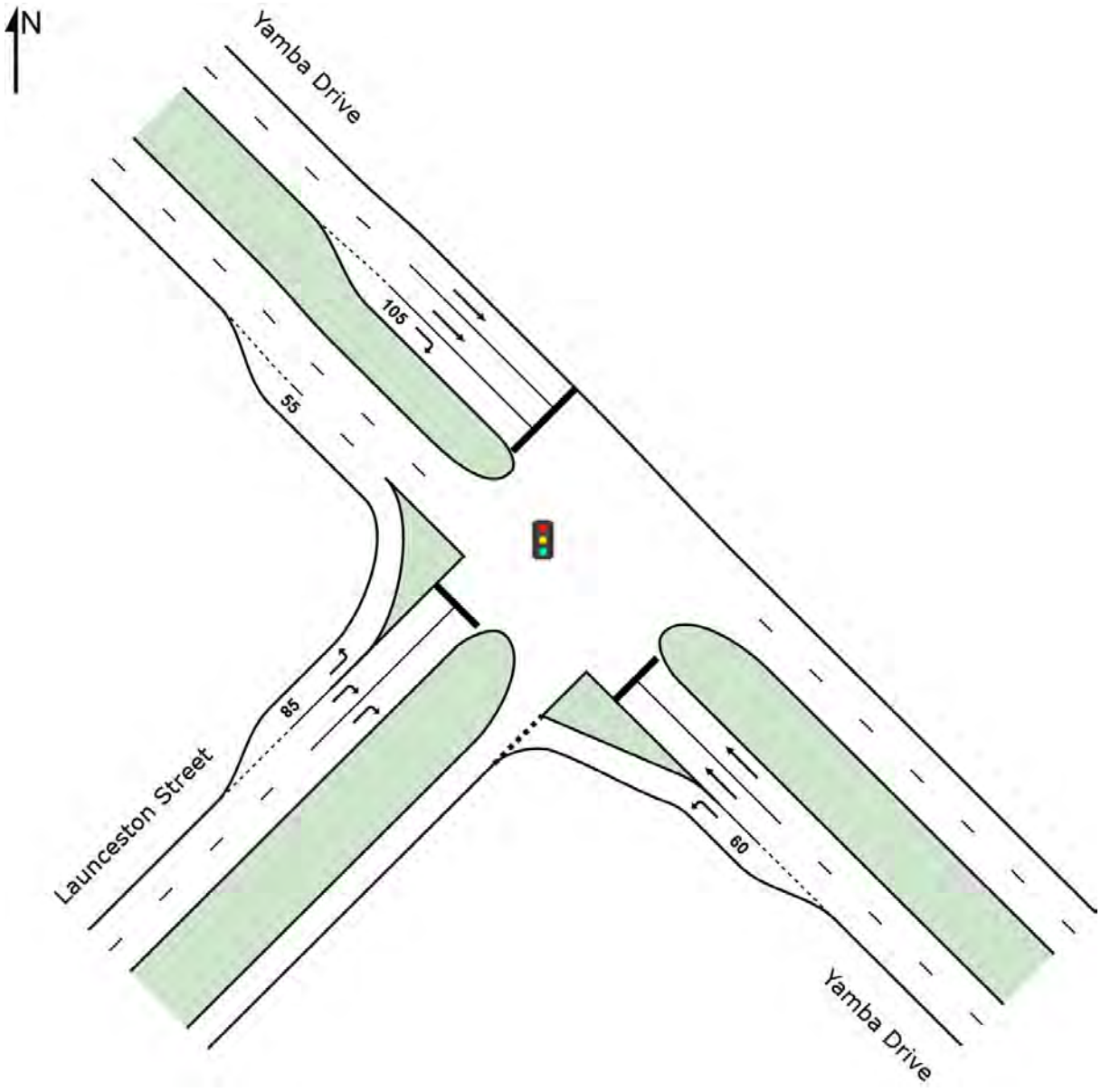
Site: [2030 Base - AM: LS-YD]

Network: 3 [2030 Base - AM: LS-WS-YD]

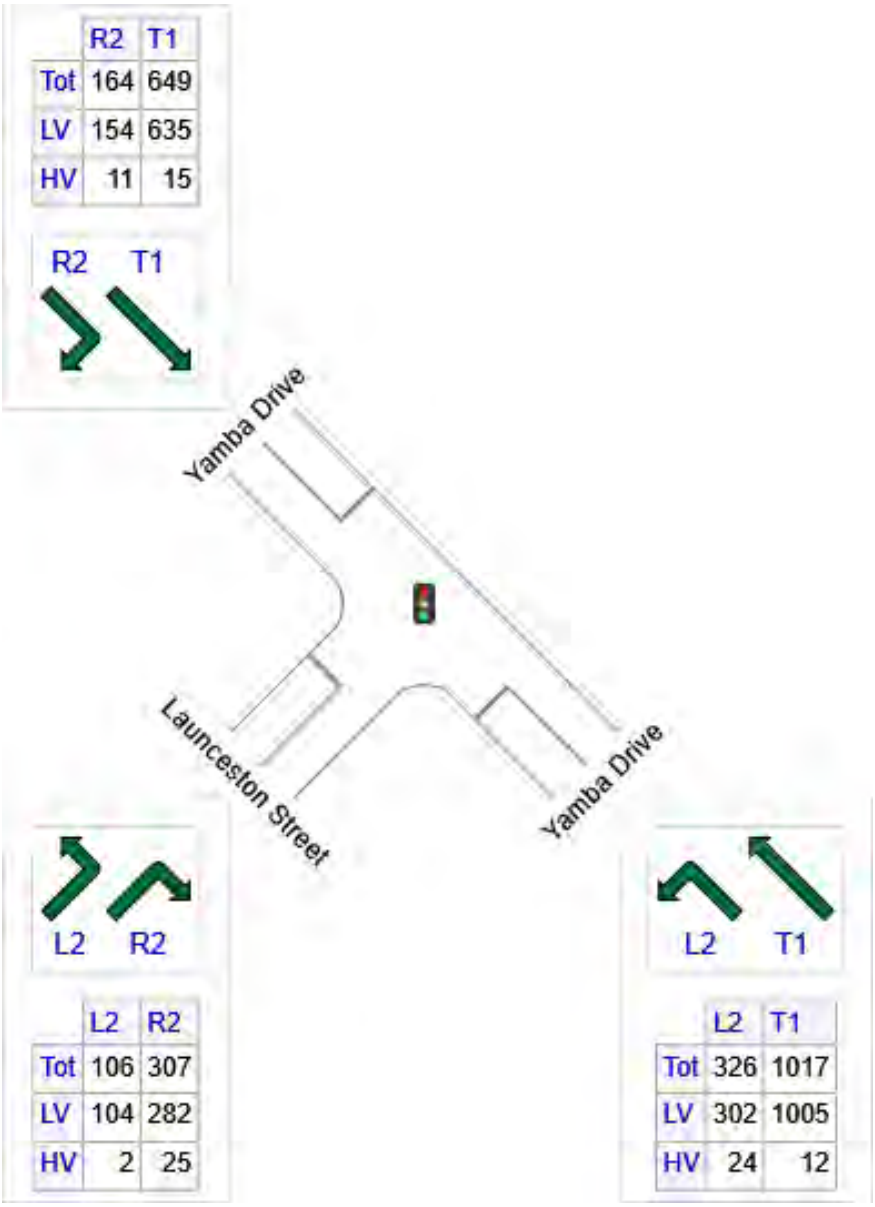
Northwest part of Launceston Street / Wisdom Street / Yamba Drive
Existing Signalised Offset X-Intersection
Site Category: 2030 Base Scenario - Weekday Morning Peak Hour
Signals - Fixed Time Coordinated Cycle Time = 128 seconds (CCG User-Given Phase Times)
Common Control Group: CCG1 [CCG]

Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E
Output Phase Sequence: A, D, E

Site Layout



OD Demand Flows

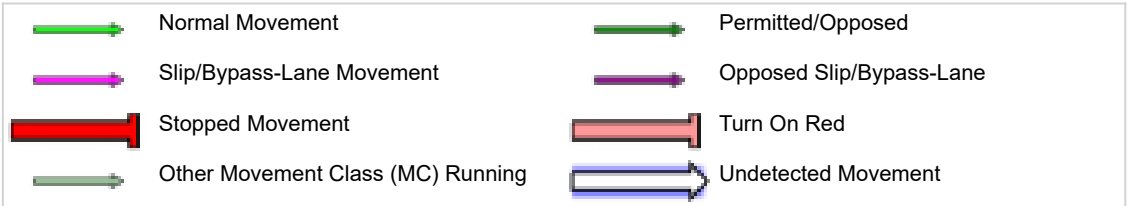


	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
SE: Yamba Drive	1343	1307	36
NW: Yamba Drive	814	788	25
SW: Launceston Street	414	386	27
Total	2571	2482	88

Input Phase Sequence (CCG)

Movement Class: All Movement Classes

REF: Reference Phase
VAR: Variable Phase



Mixed Running & Stopped MCs

Continuous Movement

Other Movement Class (MC) Stopped

Phase Transition Applied

Phase Timing Summary (CCG)

Phase	A	D	E
Phase Change Time (sec)	0	66	93
Green Time (sec)	60	21	29
Phase Time (sec)	66	27	35
Phase Split	52%	21%	27%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles														
Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Yamba Drive														
4	L2	326	7.4	326	7.4	0.229	4.8	LOS A	0.4	3.1	0.03	0.58	0.03	40.6
5	T1	1017	1.1	1017	1.1	0.560	6.8	LOS A	11.9	84.4	0.28	0.25	0.28	53.0
Approach		1343	2.7	1343	2.7	0.560	6.3	LOS A	11.9	84.4	0.22	0.33	0.22	48.9
NorthWest: Yamba Drive														
11	T1	649	2.3	649	2.3	0.482	25.0	LOS C	13.8	98.8	0.74	0.65	0.74	23.5
12	R2	164	6.4	164	6.4	0.408	53.0	LOS D	8.8	65.0	0.90	0.80	0.90	20.8
Approach		814	3.1	814	3.1	0.482	30.6	LOS C	13.8	98.8	0.77	0.68	0.77	22.5
SouthWest: Launceston Street														
1	L2	106	2.0	106	2.0	0.058	2.9	LOS A	0.0	0.0	0.00	0.36	0.00	39.5
3	R2	307	8.2	307	8.2	0.714	62.0	LOS E	9.7	72.6	1.00	0.88	1.09	11.5
Approach		414	6.6	414	6.6	0.714	46.8	LOS D	9.7	72.6	0.74	0.75	0.81	15.8
All Vehicles		2571	3.4	2571	3.4	0.714	20.5	LOS C	13.8	98.8	0.48	0.51	0.49	28.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
SouthEast: Yamba Drive															
Lane 1	326	7.4	326	7.4	1423	0.229	100	4.8	LOS A	0.4	3.1	Short	60	0.0	NA
Lane 2	508	1.1	508	1.1	907	0.560	100	3.1	LOS A	4.2	29.8	Full	65	0.0	0.0
Lane 3	508	1.1	508	1.1	907	0.560	100	10.4	LOS B	11.9	84.4	Full	65	0.0	28.7
Approach	1343	2.7	1343	2.7		0.560		6.3	LOS A	11.9	84.4				
NorthWest: Yamba Drive															
Lane 1	325	2.3	325	2.3	674	0.482	100	25.0	LOS C	13.8	98.8	Full	215	-25.2 N3	0.0
Lane 2	325	2.3	325	2.3	674	0.482	100	25.0	LOS C	13.8	98.8	Full	215	-25.2 N3	0.0
Lane 3	164	6.4	164	6.4	402	0.408	100	53.0	LOS D	8.8	65.0	Short	105	0.0	NA
Approach	814	3.1	814	3.1		0.482		30.6	LOS C	13.8	98.8				
SouthWest: Launceston Street															
Lane 1	106	2.0	106	2.0	1831	0.058	100	2.9	LOS A	0.0	0.0	Short	85	0.0	NA
Lane 2	154	8.2	154	8.2	215	0.714	100	62.0	LOS E	9.7	72.6	Full	260	-25.2 N3	0.0
Lane 3	154	8.2	154	8.2	215	0.714	100	62.0	LOS E	9.7	72.6	Full	260	-25.2 N3	0.0
Approach	414	6.6	414	6.6		0.714		46.8	LOS D	9.7	72.6				
Intersection	2571	3.4	2571	3.4		0.714		20.5	LOS C	13.8	98.8				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N3 Capacity Adjustment due to downstream lane blockage determined by the program.

Site: [2030 Base - AM: WS-YD]

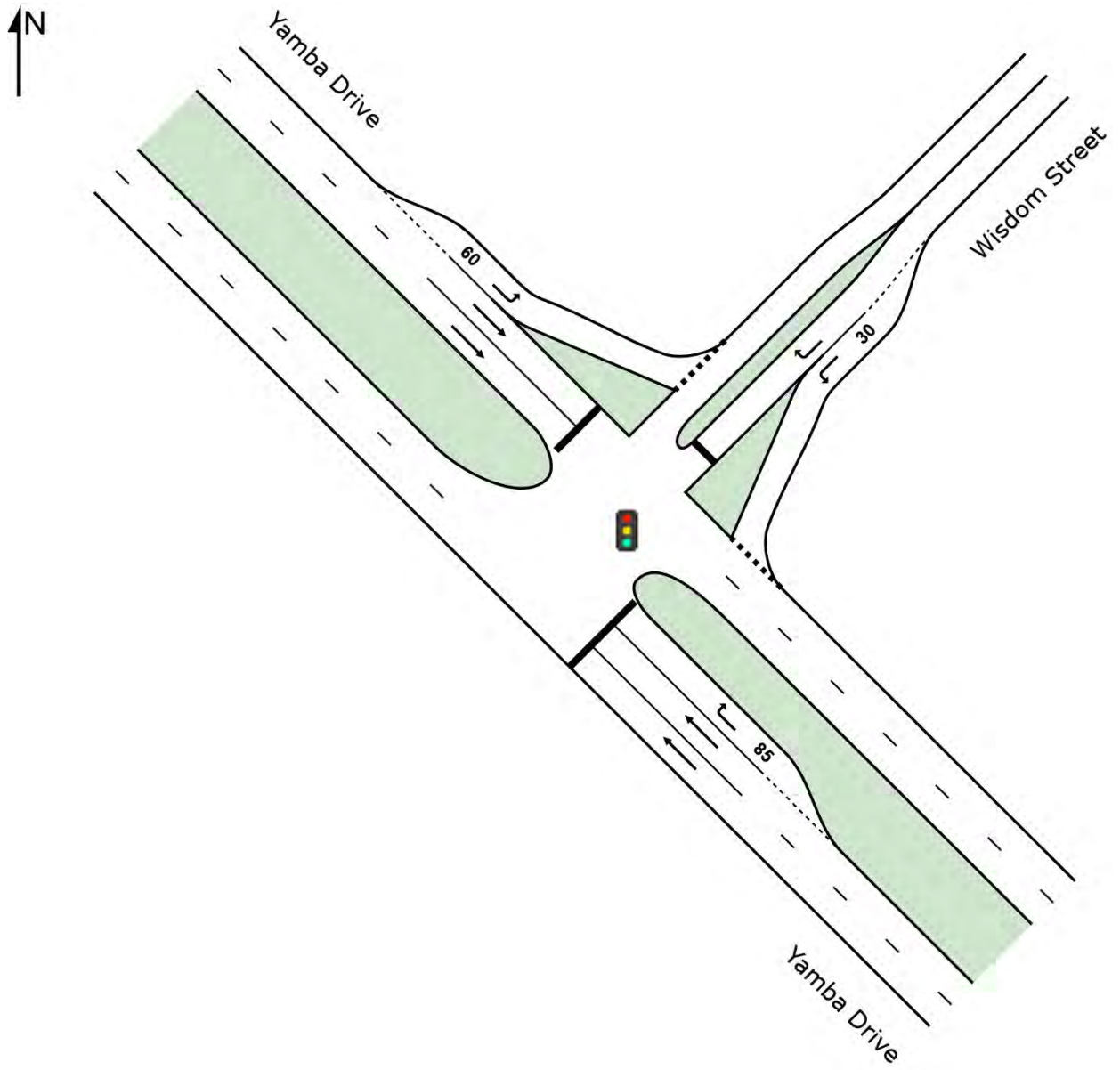
Network: 3 [2030 Base - AM: LS-WS-YD]

Southeast part of Launceston Street / Wisdom Street / Yamba Drive
Existing Signalised Offset Cross Intersection
Site Category: 2030 Base Scenario - Weekday Morning Peak Hour
Signals - Fixed Time Coordinated Cycle Time = 128 seconds (CCG User-Given Phase Times)
Common Control Group: CCG1 [CCG]

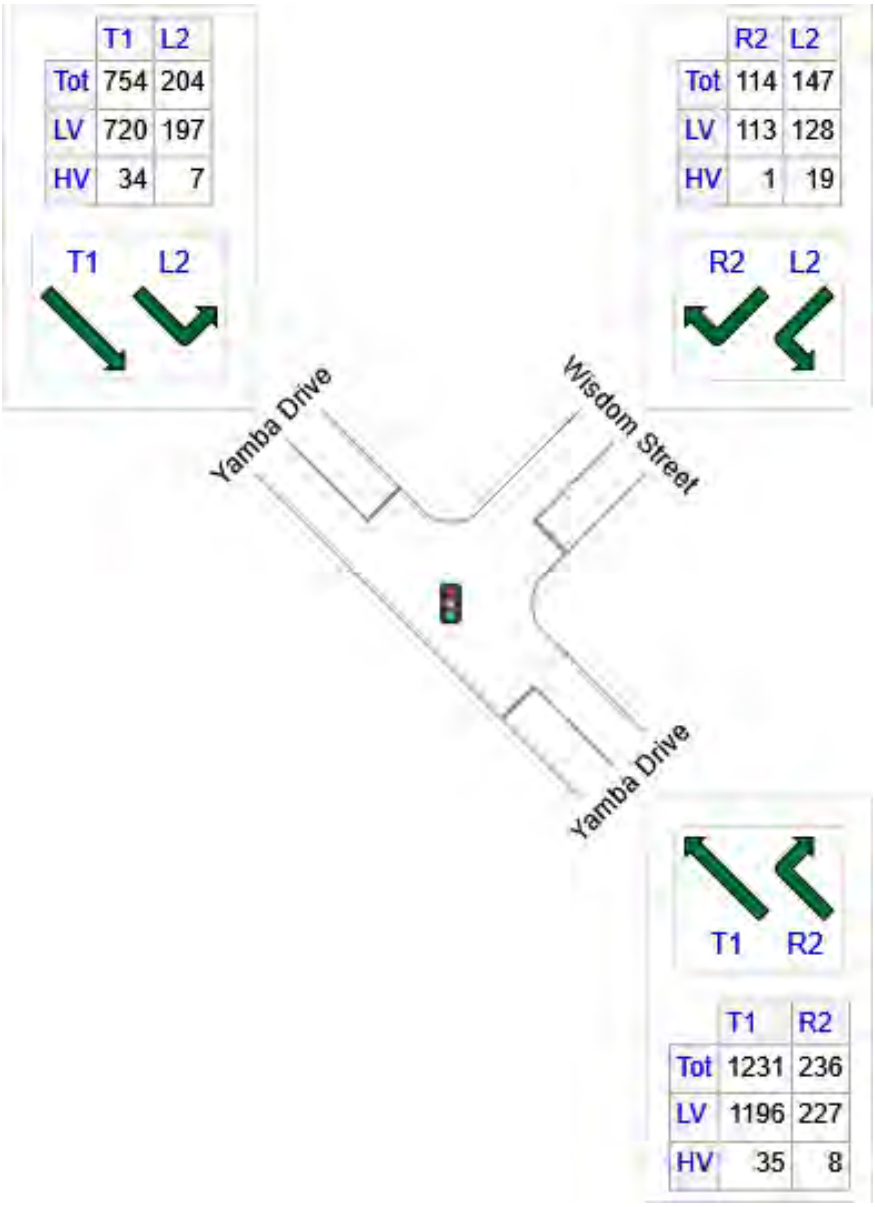
Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E
Output Phase Sequence: A, D, E

Some CCG output elements have been omitted as they have already been included under other Sites belonging to the same CCG.

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
SE: Yamba Drive	1466	1423	43
NE: Wisdom Street	261	241	20
NW: Yamba Drive	958	917	41
Total	2685	2581	104

Movement Performance - Vehicles														
Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Yamba Drive														
11	T1	1231	2.8	1231	2.8	0.847	36.9	LOS D	43.7	313.5	0.92	0.89	1.00	38.2
12	R2	236	3.6	236	3.6	0.575	54.8	LOS D	13.2	95.3	0.94	0.83	0.94	34.5
Approach		1466	2.9	1466	2.9	0.847	39.8	LOS D	43.7	313.5	0.93	0.88	0.99	37.1
NorthEast: Wisdom Street														
1	L2	147	12.9	147	12.9	0.142	5.1	LOS A	1.6	12.7	0.24	0.51	0.24	47.4
3	R2	114	0.9	114	0.9	0.527	57.9	LOS E	6.7	47.4	0.96	0.80	0.96	20.8
Approach		261	7.7	261	7.7	0.527	28.1	LOS C	6.7	47.4	0.55	0.63	0.55	35.2
NorthWest: Yamba Drive														
4	L2	204	3.6	204	3.6	0.145	4.9	LOS A	0.2	1.8	0.03	0.58	0.03	40.3
5	T1	754	4.5	754	4.5	0.424	18.0	LOS B	11.2	81.2	0.52	0.45	0.52	53.6
Approach		958	4.3	958	4.3	0.424	15.2	LOS B	11.2	81.2	0.41	0.48	0.41	50.2
All Vehicles		2685	3.9	2685	3.9	0.847	29.9	LOS C	43.7	313.5	0.71	0.71	0.74	40.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
SouthEast: Yamba Drive															
Lane 1	760	2.8	760	2.8	898	0.847	100	35.4	LOS D	43.7	313.5	Full	735	0.0	0.0
Lane 2	470	2.8	470	2.8	556[1]	0.847	100	39.4	LOS D	27.5	197.2	Full	735	-28.7[N3]	0.0
Lane 3	236	3.6	236	3.6	410	0.575	100	54.8	LOS D	13.2	95.3	Short	85	0.0	NA
Approach	1466	2.9	1466	2.9		0.847		39.8	LOS D	43.7	313.5				
NorthEast: Wisdom Street															
Lane 1	147	12.9	147	12.9	1036	0.142	100	5.1	LOS A	1.6	12.7	Short	30	0.0	NA
Lane 2	114	0.9	114	0.9	216	0.527	100	57.9	LOS E	6.7	47.4	Full	680	-28.7[N3]	0.0
Approach	261	7.7	261	7.7		0.527		28.1	LOS C	6.7	47.4				
NorthWest: Yamba Drive															
Lane 1	204	3.6	204	3.6	1405	0.145	100	4.9	LOS A	0.2	1.8	Short	60	0.0	NA
Lane 2	377	4.5	377	4.5	888	0.424	100	18.0	LOS B	11.2	81.2	Full	65	0.0	25.2
Lane 3	377	4.5	377	4.5	888	0.424	100	18.0	LOS B	11.2	81.2	Full	65	0.0	25.2
Approach	958	4.3	958	4.3		0.424		15.2	LOS B	11.2	81.2				
Intersection	2685	3.9	2685	3.9		0.847		29.9	LOS C	43.7	313.5				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
N3 Capacity Adjustment due to downstream lane blockage determined by the program.

USER REPORT FOR SITE

Project: 24-0487_20260304

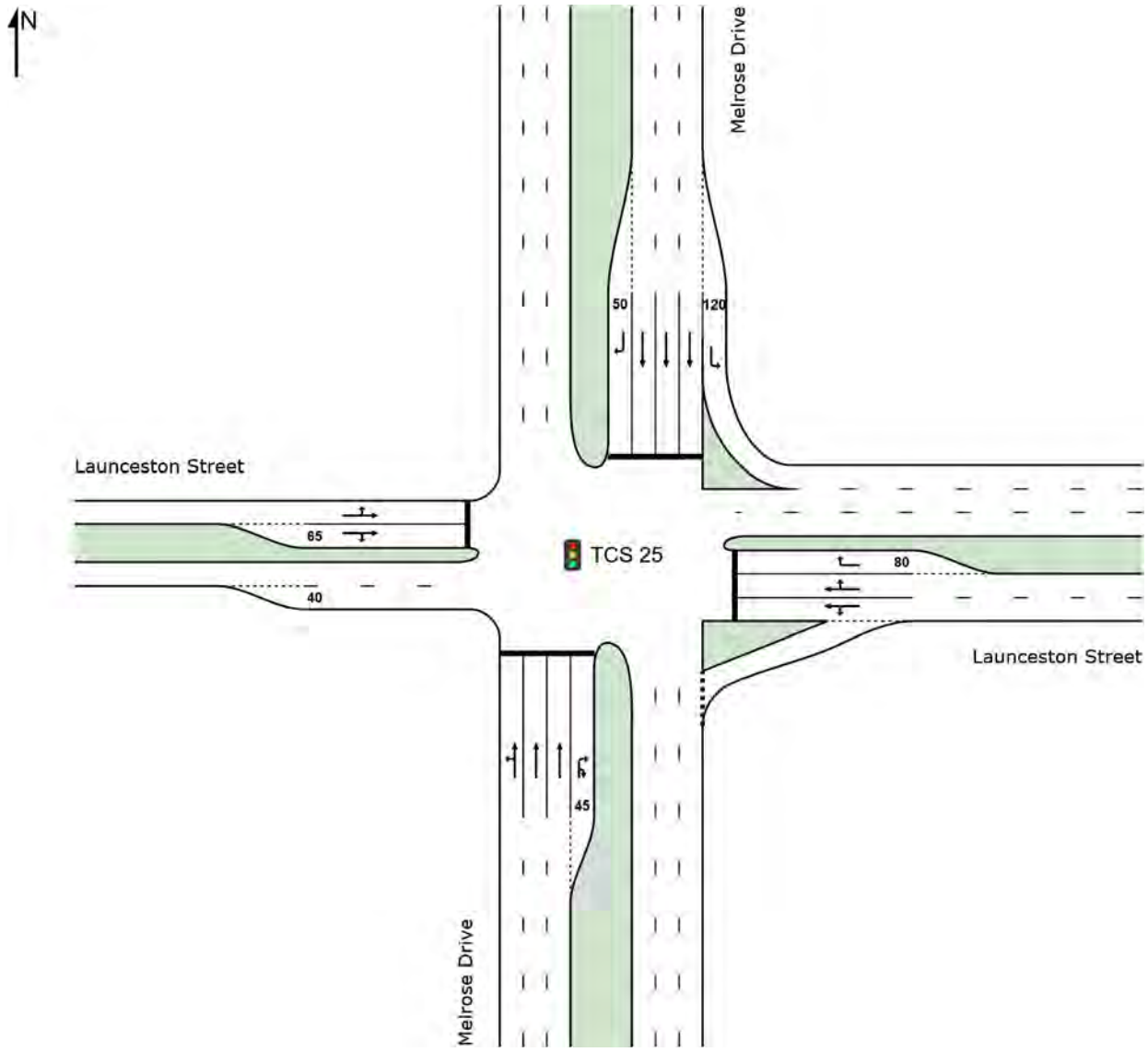
Template: Default Site User Report

Site: TCS 25 [2030 Base - PM: LS-MD]

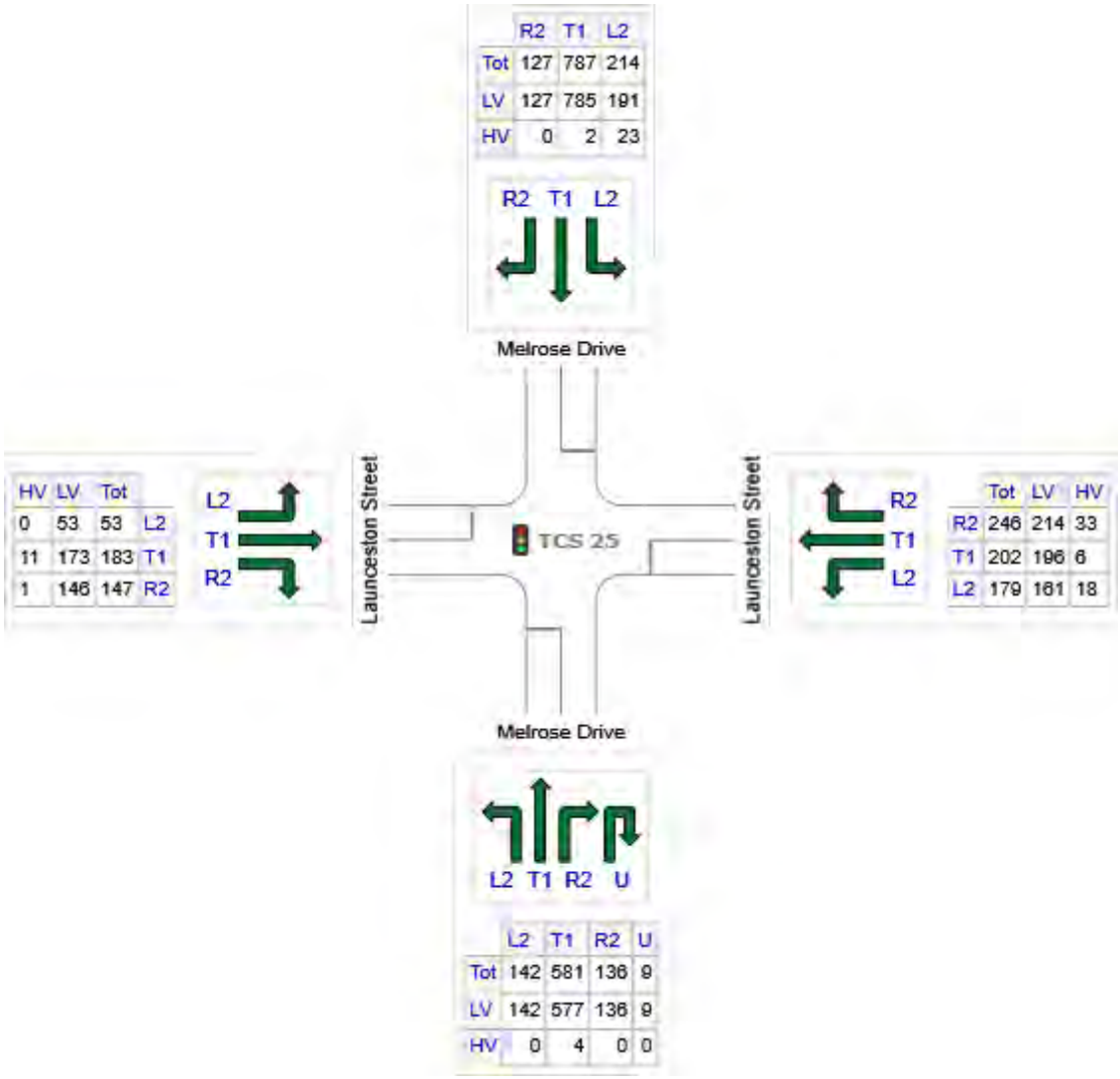
Launceston Street / Melrose Drive
Existing Signalised X-Intersection
Site Category: 2030 Base Scenario - Weekday Evening Peak Hour
Signals - Fixed Time Isolated Cycle Time = 110 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, B, D, E, F
Output Phase Sequence: A, B, D, E, F

Site Layout



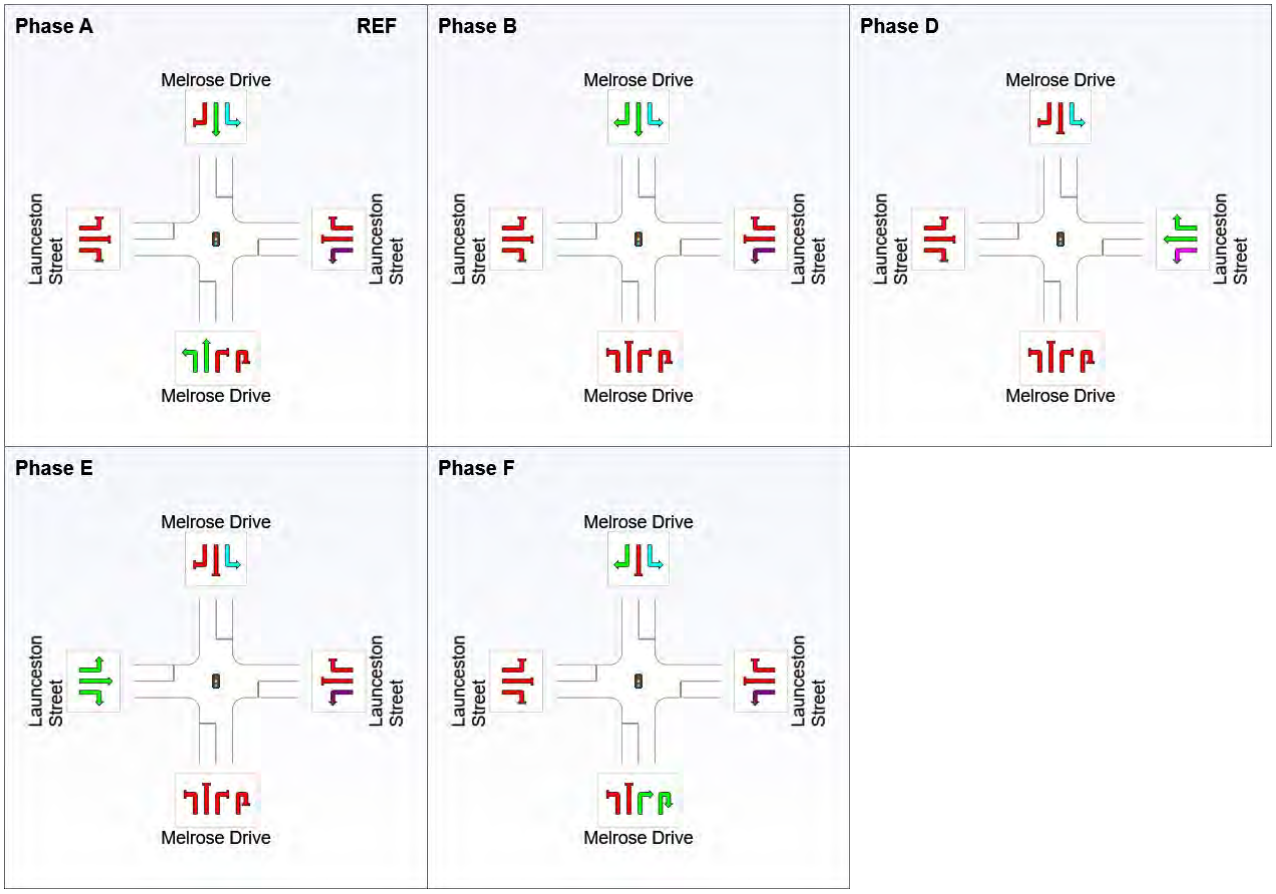
OD Demand Flows



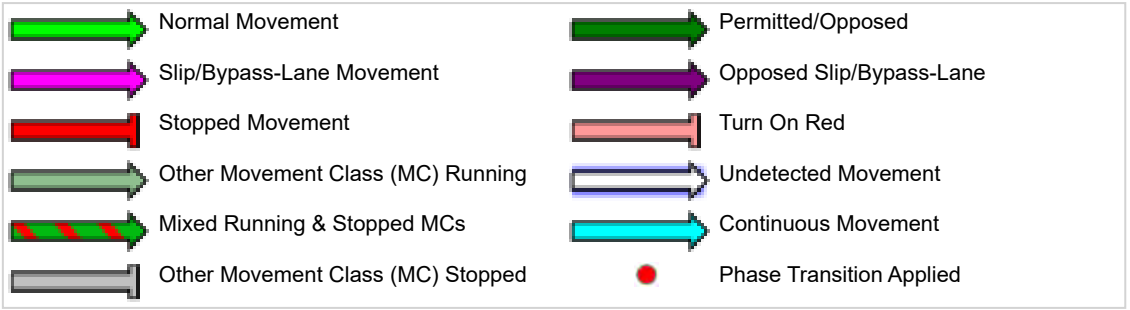
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Melrose Drive	868	864	4
E: Launceston Street	627	571	57
N: Melrose Drive	1128	1103	25
W: Launceston Street	383	372	12
Total	3007	2909	98

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	B	D	E	F
Phase Change Time (sec)	0	29	37	60	90
Green Time (sec)	23	2	23	24	14
Phase Time (sec)	29	2	29	30	20
Phase Split	26%	2%	26%	27%	18%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Melrose Drive												
1	L2	142	0.0	0.945	82.0	LOS F	17.5	122.9	1.00	1.16	1.57	11.4
2	T1	581	0.7	0.945	76.1	LOS F	17.9	126.2	1.00	1.16	1.57	21.2
3	R2	136	0.0	0.966	91.9	LOS F	10.8	75.4	1.00	1.15	1.76	9.6
3u	U	9	0.0	0.966	93.3	LOS F	10.8	75.4	1.00	1.15	1.76	13.0
Approach		868	0.5	0.966	79.7	LOS F	17.9	126.2	1.00	1.16	1.60	17.8
East: Launceston Street												
4	L2	179	10.0	0.317	5.8	LOS A	0.7	5.0	0.08	0.57	0.08	42.4
5	T1	202	3.1	0.603	44.3	LOS D	11.6	84.2	0.96	0.81	0.96	13.1
6	R2	246	13.2	0.603	48.8	LOS D	11.6	84.2	0.96	0.82	0.96	24.9
Approach		627	9.1	0.603	35.1	LOS C	11.6	84.2	0.71	0.74	0.71	23.4
North: Melrose Drive												
7	L2	214	10.8	0.124	5.7	LOS A	0.0	0.0	0.00	0.52	0.00	49.2
8	T1	787	0.3	0.478	35.4	LOS C	11.7	82.3	0.88	0.74	0.88	32.5
9	R2	127	0.0	0.472	37.3	LOS C	4.6	32.3	0.96	0.80	1.03	28.4
Approach		1128	2.2	0.478	30.0	LOS C	11.7	82.3	0.72	0.71	0.73	34.0
West: Launceston Street												
10	L2	53	0.0	0.471	45.4	LOS D	9.1	66.1	0.92	0.77	0.92	26.3
11	T1	183	5.7	0.471	40.9	LOS C	9.1	66.1	0.92	0.78	0.92	13.7
12	R2	147	0.7	0.471	45.4	LOS D	9.0	64.2	0.92	0.79	0.92	17.5
Approach		383	3.0	0.471	43.2	LOS D	9.1	66.1	0.92	0.78	0.92	17.5
All Vehicles		3007	3.3	0.966	47.1	LOS D	17.9	126.2	0.83	0.86	1.00	24.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	Demand Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	95% Back of Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Melrose Drive													
Lane 1	243	0.3	257	0.945	100	79.7	LOS F	17.5	122.9	Full	205	0.0	0.0
Lane 2	249	0.7	264	0.945	100	76.0	LOS F	17.9	126.2	Full	205	0.0	0.0
Lane 3	231	0.7	244[1]	0.945	100	76.1	LOS F	16.4	115.8	Full	205	0.0	0.0
Lane 4	145	0.0	150	0.966	100	92.0	LOS F	10.8	75.4	Short	45	0.0	NA
Approach	868	0.5		0.966		79.7	LOS F	17.9	126.2				
East: Launceston Street													
Lane 1	179	10.0	564	0.317	53[5]	5.8	LOS A	0.7	5.0	Full	90	0.0	0.0
Lane 2	234	4.5	388	0.603	100	44.9	LOS D	11.6	84.2	Full	90	0.0	0.0
Lane 3	214	13.2	355	0.603	100	48.8	LOS D	10.6	82.8	Short	80	0.0	NA
Approach	627	9.1		0.603		35.1	LOS C	11.6	84.2				
North: Melrose Drive													
Lane 1	214	10.8	1724	0.124	100	5.7	LOS A	0.0	0.0	Short	120	0.0	NA
Lane 2	262	0.3	549	0.478	100	35.4	LOS C	11.7	82.3	Full	470	0.0	0.0
Lane 3	262	0.3	549	0.478	100	35.4	LOS C	11.7	82.3	Full	470	0.0	0.0
Lane 4	262	0.3	549	0.478	100	35.4	LOS C	11.7	82.3	Full	470	0.0	0.0
Lane 5	127	0.0	270	0.472	100	37.3	LOS C	4.6	32.3	Short	50	0.0	NA
Approach	1128	2.2		0.478		30.0	LOS C	11.7	82.3				
West: Launceston Street													
Lane 1	193	4.2	409	0.471	100	42.1	LOS C	9.1	66.1	Full	95	0.0	0.0
Lane 2	191	1.9	405	0.471	100	44.4	LOS D	9.0	64.2	Short	65	0.0	NA
Approach	383	3.0		0.471		43.2	LOS D	9.1	66.1				
Intersection	3007	3.3		0.966		47.1	LOS D	17.9	126.2				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

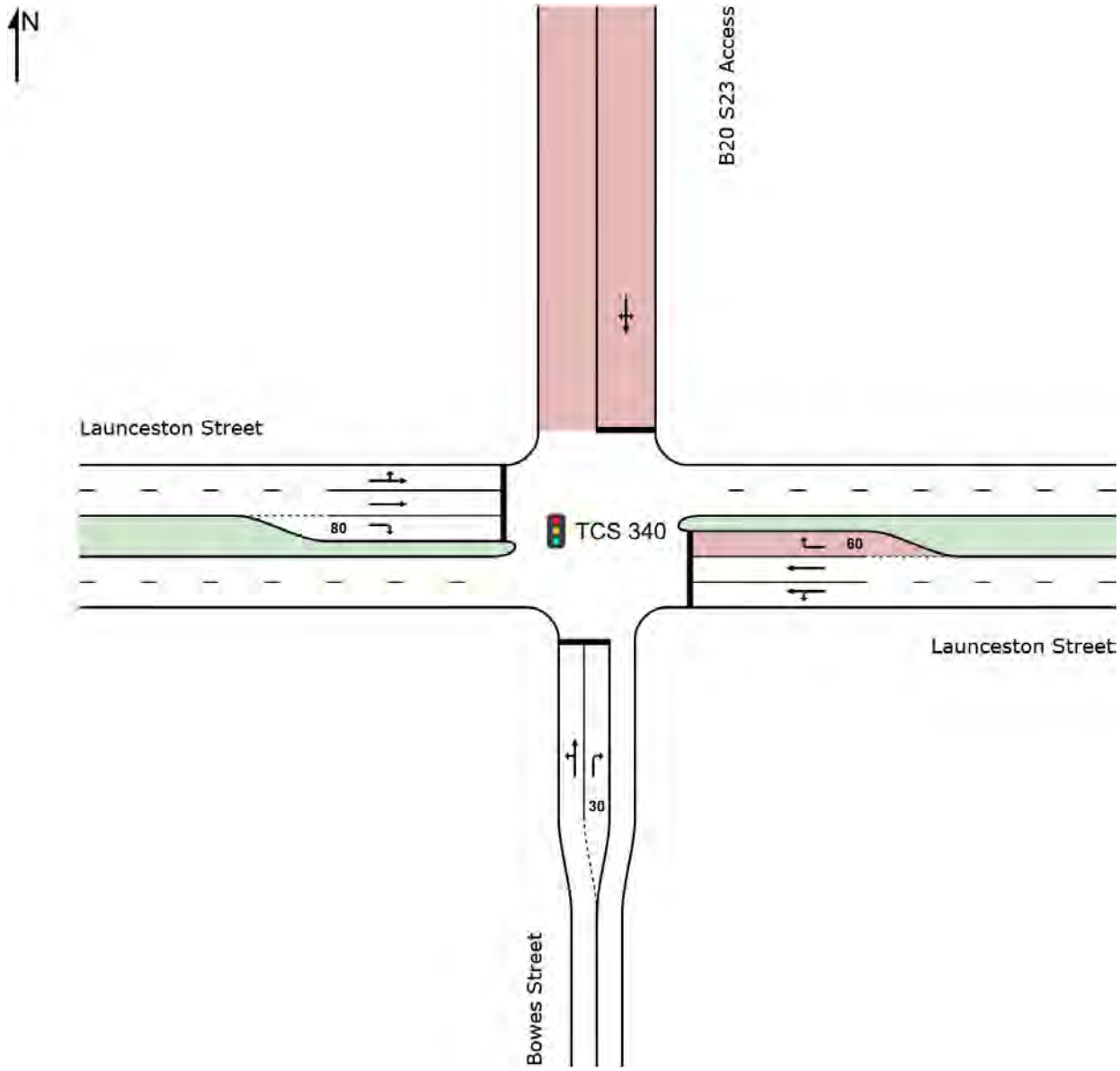
1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
5 Lane under-utilisation found by the program

Site: TCS 340 [2030 Base - PM: BS-LS]

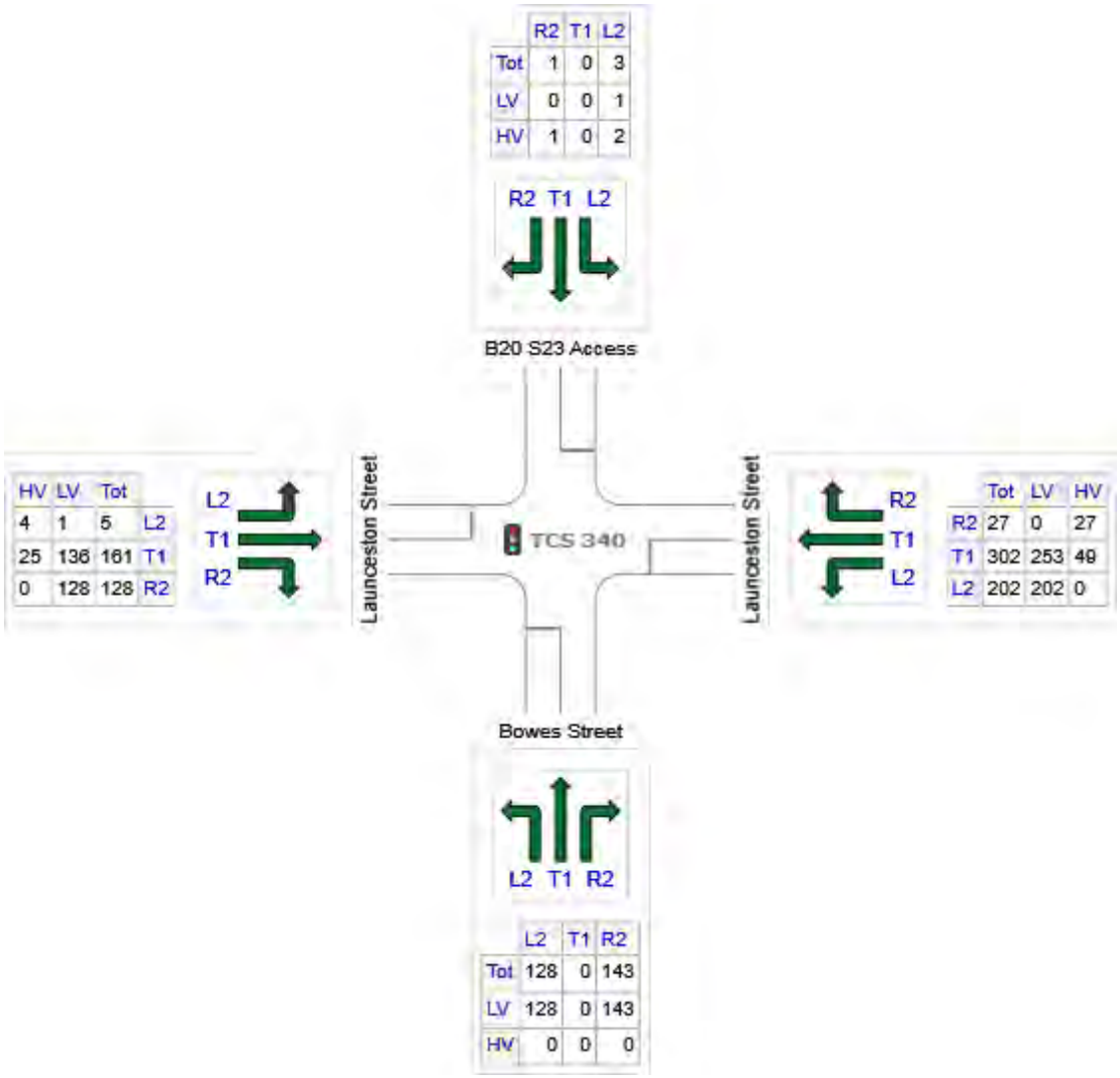
Block 20 Section 23 Access / Bowes Street / Launceston Street
Existing Signalised X-Intersection
Site Category: 2030 Base Scenario - Weekday Evening Peak Hour
Signals - Fixed Time Isolated Cycle Time = 89 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E, G
Output Phase Sequence: A, D, E, G

Site Layout



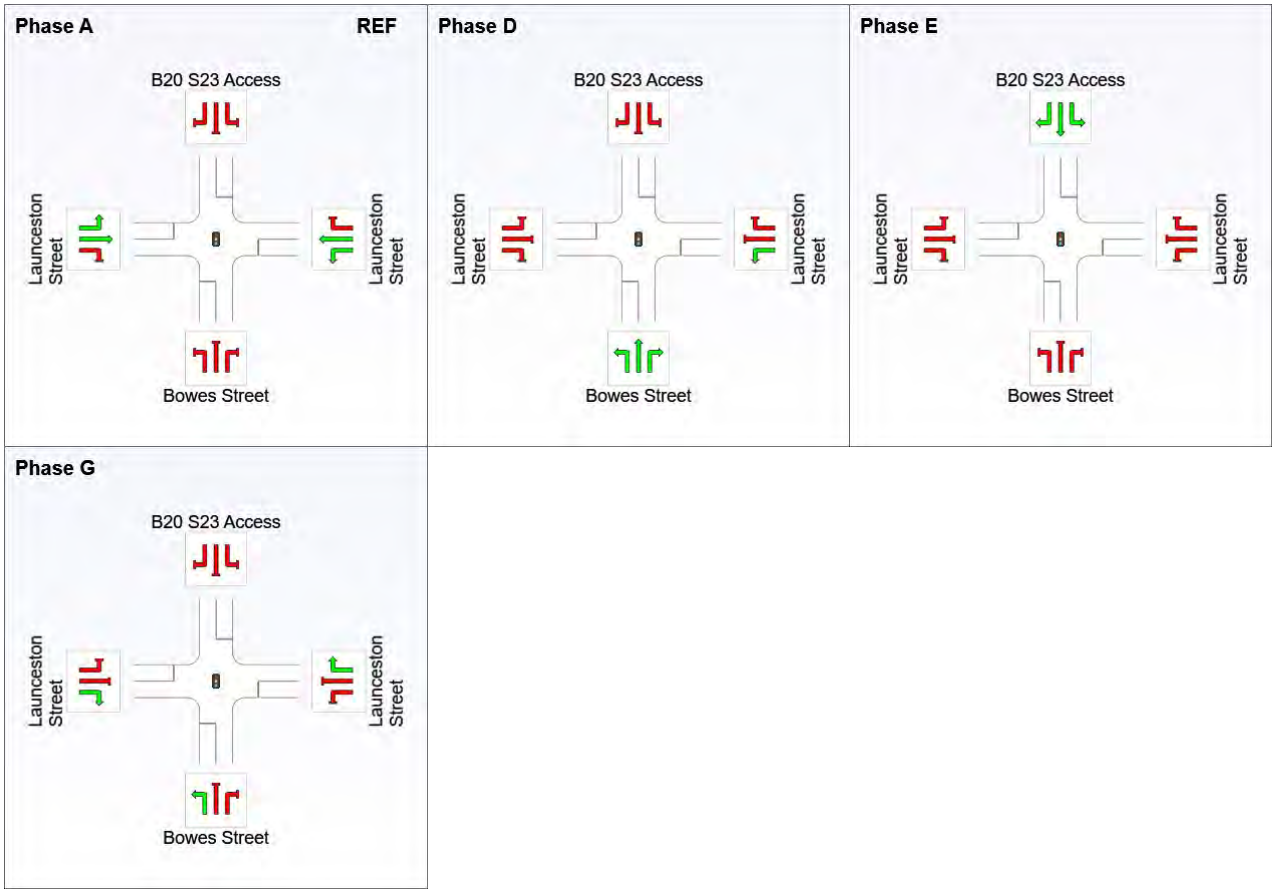
OD Demand Flows



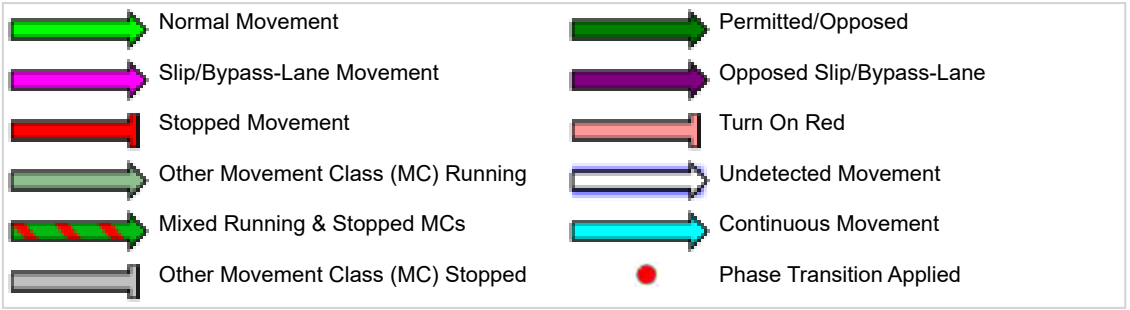
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	272	272	0
E: Launceston Street	532	455	77
N: B20 S23 Access	4	1	3
W: Launceston Street	295	265	29
Total	1102	993	110

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	D	E	G
Phase Change Time (sec)	0	30	63	76
Green Time (sec)	24	27	7	10
Phase Time (sec)	30	33	10	16
Phase Split	34%	37%	11%	18%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	128	0.0	0.162	12.9	LOS A	2.4	16.6	0.65	0.70	0.65	22.8
2	T1	0	0.0	0.162	13.4	LOS A	2.4	16.6	0.65	0.70	0.65	13.2
3	R2	143	0.0	0.254	28.5	LOS C	4.7	33.0	0.80	0.75	0.80	13.0
Approach		272	0.0	0.254	21.2	LOS B	4.7	33.0	0.73	0.73	0.73	16.4
East: Launceston Street												
4	L2	202	0.0	0.470	31.5	LOS C	9.8	71.3	0.85	0.78	0.85	12.9
5	T1	302	16.4	0.470	28.8	LOS C	9.8	71.3	0.88	0.75	0.88	18.3
6	R2	27	100.0	0.225	47.9	LOS D	1.2	15.2	0.94	0.73	0.94	8.7
Approach		532	14.5	0.470	30.8	LOS C	9.8	71.3	0.87	0.76	0.87	15.6
North: B20 S23 Access												
7	L2	3	66.7	0.042	43.2	LOS D	0.2	2.1	0.95	0.62	0.95	8.3
8	T1	0	100.0	0.042	43.2	LOS D	0.2	2.1	0.95	0.62	0.95	5.3
9	R2	1	100.0	0.042	43.2	LOS D	0.2	2.1	0.95	0.62	0.95	8.8
Approach		4	75.6	0.042	43.2	LOS D	0.2	2.1	0.95	0.62	0.95	8.3
West: Launceston Street												
10	L2	5	80.0	0.221	33.7	LOS C	2.8	23.1	0.82	0.65	0.82	13.6
11	T1	161	15.7	0.221	27.7	LOS B	2.9	23.1	0.82	0.65	0.82	19.2
12	R2	128	0.0	0.769	52.9	LOS D	6.1	42.6	1.00	0.90	1.26	8.7
Approach		295	10.0	0.769	38.8	LOS C	6.1	42.6	0.90	0.76	1.01	13.4
All Vehicles		1102	9.9	0.769	30.6	LOS C	9.8	71.3	0.84	0.75	0.87	15.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

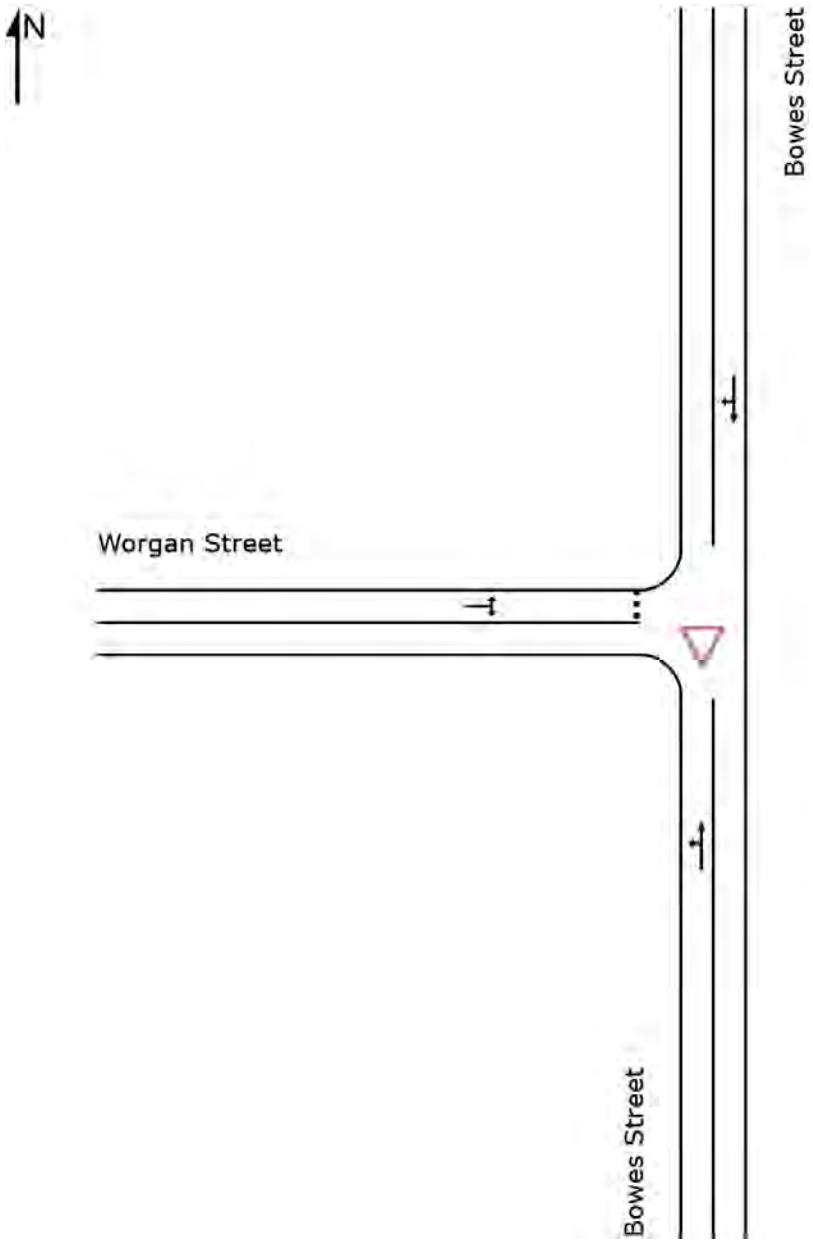
	Demand Flows Total veh/h	Demand Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	95% Back of Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Bowes Street													
Lane 1	129	0.0	792	0.162	100	12.9	LOS A	2.4	16.6	Full	35	0.0	0.0
Lane 2	143	0.0	563	0.254	100	28.5	LOS C	4.7	33.0	Short	30	0.0	NA
Approach	272	0.0		0.254		21.2	LOS B	4.7	33.0				
East: Launceston Street													
Lane 1	281	4.6	597	0.470	100	29.9	LOS C	9.8	71.3	Full	95	0.0	0.0
Lane 2	223	16.4	475	0.470	100	29.8	LOS C	8.3	65.9	Full	95	0.0	0.0
Lane 3	27	100.0	122	0.225	100	47.9	LOS D	1.2	15.2	Short	60	0.0	NA
Approach	532	14.5		0.470		30.8	LOS C	9.8	71.3				
North: B20 S23 Access													
Lane 1	4	75.6	104	0.042	100	43.2	LOS D	0.2	2.1	Full	30	0.0	0.0
Approach	4	75.6		0.042		43.2	LOS D	0.2	2.1				
West: Launceston Street													
Lane 1	82	19.8	370	0.221	100	28.1	LOS B	2.8	23.1	Full	105	0.0	0.0
Lane 2	84	15.7	382	0.221	100	27.7	LOS B	2.9	23.1	Full	105	0.0	0.0
Lane 3	128	0.0	167	0.769	100	52.9	LOS D	6.1	42.6	Short	80	0.0	NA
Approach	295	10.0		0.769		38.8	LOS C	6.1	42.6				
Intersection	1102	9.9		0.769		30.6	LOS C	9.8	71.3				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

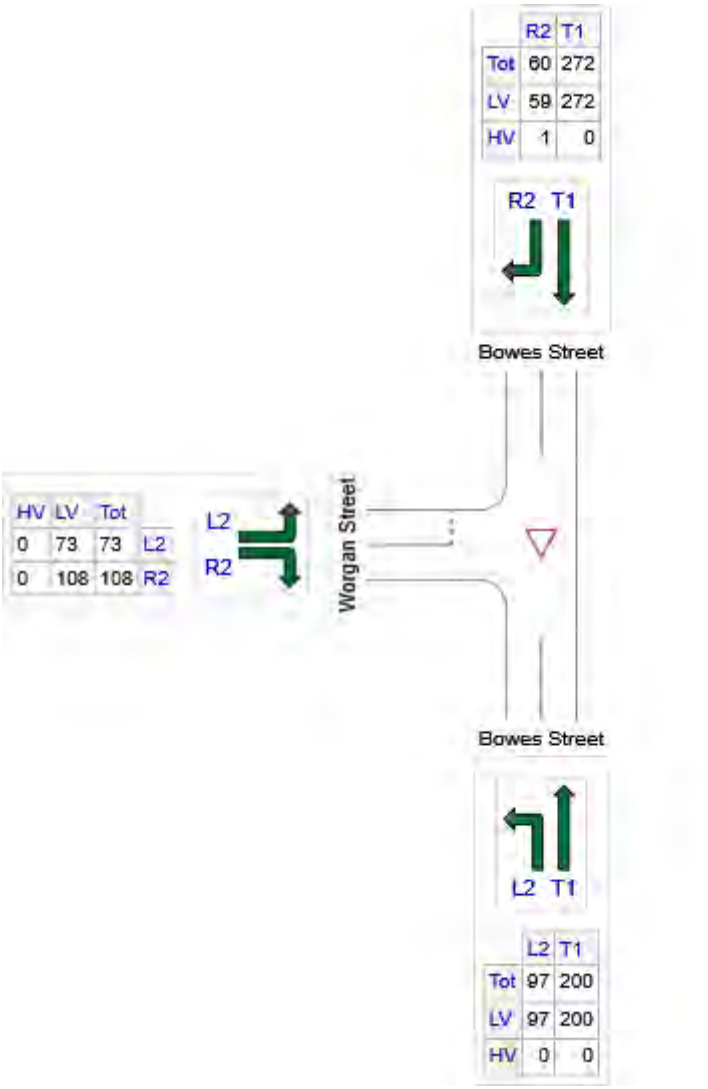
Site: [2030 Base - PM: BS-WS]

Bowes Street / Worgan Street
Existing Priority-Controlled (Give-Way) T-Intersection
Site Category: 2030 Base Scenario - Weekday Evening Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	297	297	0
N: Bowes Street	332	331	1
W: Worgan Street	181	181	0
Total	809	808	1

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	97	0.0	0.155	4.6	LOS A	0.0	0.0	0.00	0.18	0.00	32.9
2	T1	200	0.0	0.155	0.0	LOS A	0.0	0.0	0.00	0.18	0.00	44.0
Approach		297	0.0	0.155	1.5	NA	0.0	0.0	0.00	0.18	0.00	39.7
North: Bowes Street												
8	T1	272	0.0	0.185	0.4	LOS A	0.4	3.1	0.13	0.10	0.13	45.5
9	R2	60	1.8	0.185	4.3	LOS A	0.4	3.1	0.13	0.10	0.13	17.6
Approach		332	0.3	0.185	1.1	NA	0.4	3.1	0.13	0.10	0.13	39.0
West: Worgan Street												
10	L2	73	0.0	0.191	3.9	LOS A	0.7	5.1	0.39	0.63	0.39	19.8
12	R2	108	0.0	0.191	5.8	LOS A	0.7	5.1	0.39	0.63	0.39	31.4
Approach		181	0.0	0.191	5.1	LOS A	0.7	5.1	0.39	0.63	0.39	27.2
All Vehicles		809	0.1	0.191	2.1	NA	0.7	5.1	0.14	0.25	0.14	36.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

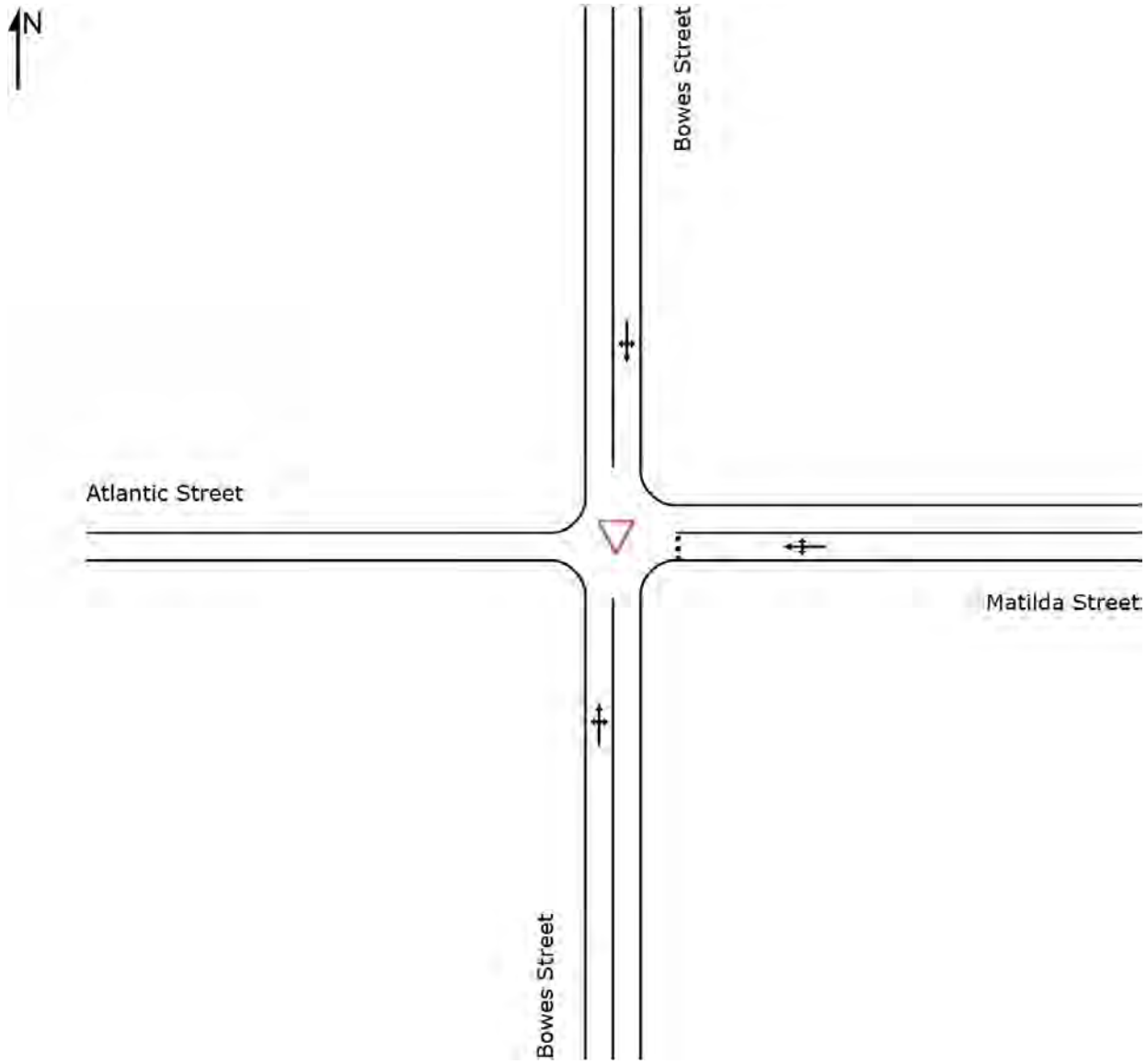
Lane Use and Performance													
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Bowes Street													
Lane 1	297	0.0	1919	0.155	100	1.5	LOS A	0.0	0.0	Full	105	0.0	0.0
Approach	297	0.0		0.155		1.5	NA	0.0	0.0				
North: Bowes Street													
Lane 1	332	0.3	1789	0.185	100	1.1	LOS A	0.4	3.1	Full	35	0.0	0.0
Approach	332	0.3		0.185		1.1	NA	0.4	3.1				
West: Worgan Street													
Lane 1	181	0.0	946	0.191	100	5.1	LOS A	0.7	5.1	Full	35	0.0	0.0
Approach	181	0.0		0.191		5.1	LOS A	0.7	5.1				
Intersection	809	0.1		0.191		2.1	NA	0.7	5.1				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

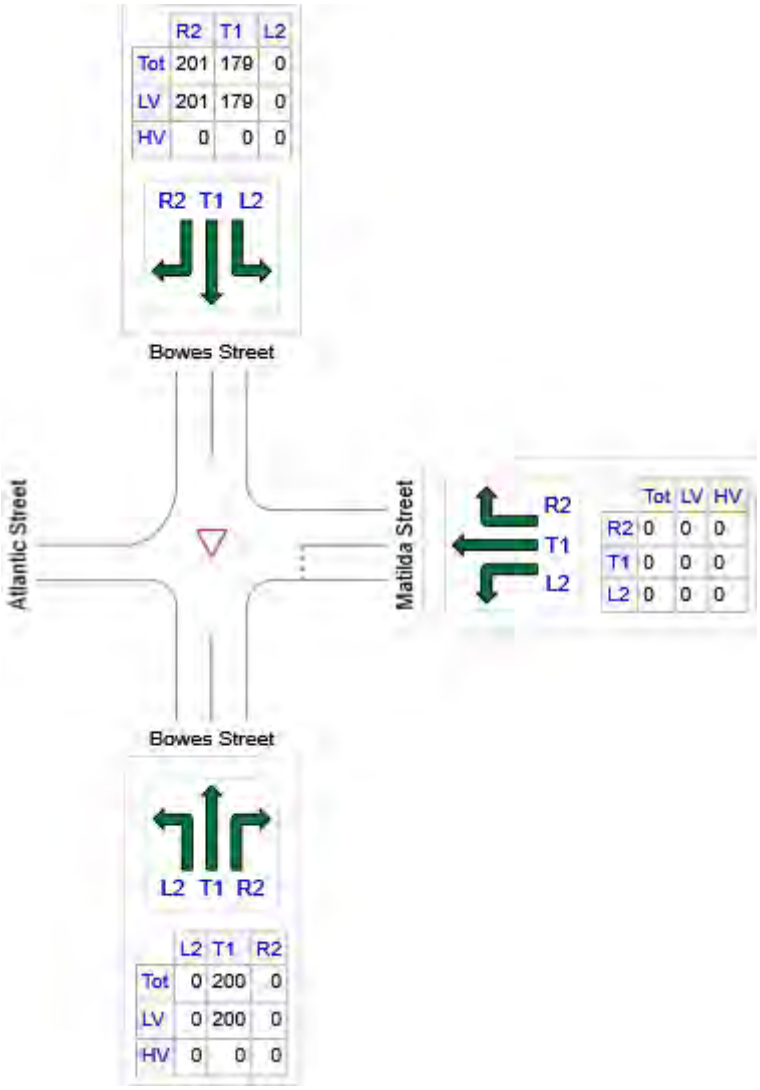
Site: [2030 Base - PM: AS-BS-MS]

Atlantic Street / Bowes Street / Matilda Street
Existing Priority-Controlled (Give-Way) T-Intersection
Site Category: 2030 Base Scenario - Weekday Evening Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	200	200	0
E: Matilda Street	0	0	0
N: Bowes Street	380	380	0
Total	581	581	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	0	0.0	0.103	4.0	LOS A	0.0	0.0	0.00	0.00	0.00	24.3
2	T1	200	0.0	0.103	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
3	R2	0	0.0	0.103	4.2	LOS A	0.0	0.0	0.00	0.00	0.00	43.5
Approach		200	0.0	0.103	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.9
East: Matilda Street												
4	L2	0	0.0	0.000	5.0	LOS A	0.0	0.0	0.37	0.51	0.37	27.1
5	T1	0	0.0	0.000	6.6	LOS A	0.0	0.0	0.37	0.51	0.37	21.9
6	R2	0	0.0	0.000	7.9	LOS A	0.0	0.0	0.37	0.51	0.37	32.3
Approach		0	0.0	0.000	6.5	LOS A	0.0	0.0	0.37	0.51	0.37	26.1
North: Bowes Street												
7	L2	0	0.0	0.228	5.3	LOS A	1.2	8.3	0.32	0.32	0.32	38.2
8	T1	179	0.0	0.228	0.6	LOS A	1.2	8.3	0.32	0.32	0.32	38.1
9	R2	201	0.0	0.228	5.6	LOS A	1.2	8.3	0.32	0.32	0.32	26.4
Approach		380	0.0	0.228	3.3	NA	1.2	8.3	0.32	0.32	0.32	29.8
All Vehicles		581	0.0	0.228	2.1	NA	1.2	8.3	0.21	0.21	0.21	33.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

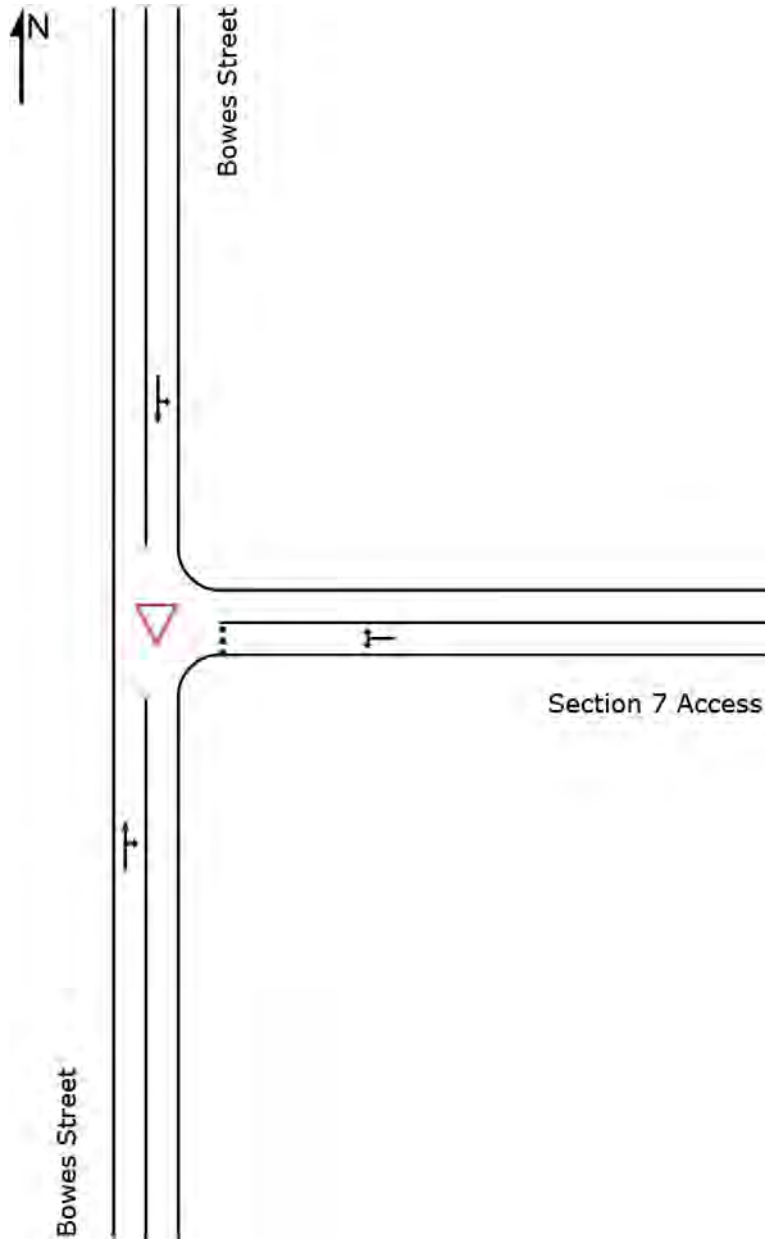
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Bowes Street													
Lane 1	200	0.0	1950	0.103	100	0.0	LOS A	0.0	0.0	Full	45	0.0	0.0
Approach	200	0.0		0.103		0.0	NA	0.0	0.0				
East: Matilda Street													
Lane 1	0	0.0	785	0.000	100	6.5	LOS A	0.0	0.0	Full	80	0.0	0.0
Approach	0	0.0		0.000		6.5	LOS A	0.0	0.0				
North: Bowes Street													
Lane 1	380	0.0	1668	0.228	100	3.3	LOS A	1.2	8.3	Full	110	0.0	0.0
Approach	380	0.0		0.228		3.3	NA	1.2	8.3				
Intersection	581	0.0		0.228		2.1	NA	1.2	8.3				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

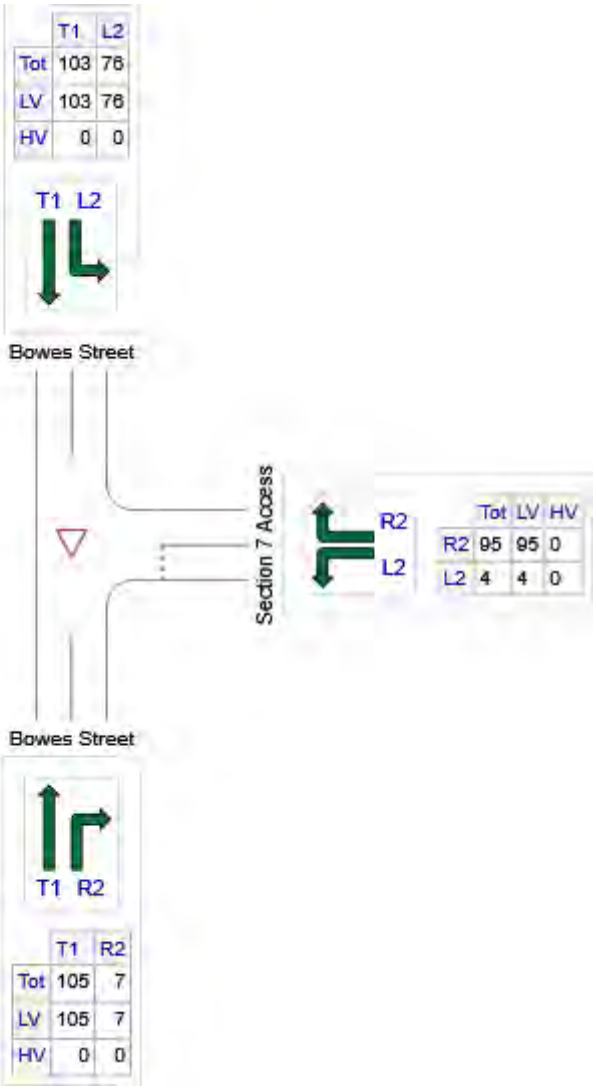
Site: [2030 Base - PM: BS-S7]

Bowes Street / Section 7 Access
Existing Priority-Controlled (Give-Way) T-Intersection
Site Category: 2030 Base Scenario - Weekday Evening Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	113	113	0
E: Section 7 Access	99	99	0
N: Bowes Street	179	179	0
Total	391	391	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
2	T1	105	0.0	0.059	0.1	LOS A	0.1	0.4	0.04	0.04	0.04	47.6
3	R2	7	0.0	0.059	4.9	LOS A	0.1	0.4	0.04	0.04	0.04	47.9
Approach		113	0.0	0.059	0.4	NA	0.1	0.4	0.04	0.04	0.04	47.7
East: Section 7 Access												
4	L2	4	0.0	0.095	0.3	LOS A	0.3	2.2	0.30	0.29	0.30	24.8
6	R2	95	0.0	0.095	1.6	LOS A	0.3	2.2	0.30	0.29	0.30	24.1
Approach		99	0.0	0.095	1.5	LOS A	0.3	2.2	0.30	0.29	0.30	24.2
North: Bowes Street												
7	L2	76	0.0	0.094	4.3	LOS A	0.0	0.0	0.00	0.23	0.00	23.3
8	T1	103	0.0	0.094	0.0	LOS A	0.0	0.0	0.00	0.23	0.00	41.9
Approach		179	0.0	0.094	1.8	NA	0.0	0.0	0.00	0.23	0.00	33.2
All Vehicles		391	0.0	0.095	1.3	NA	0.3	2.2	0.09	0.19	0.09	34.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Bowes Street													
Lane 1	113	0.0	1910	0.059	100	0.4	LOS A	0.1	0.4	Full	60	0.0	0.0
Approach	113	0.0		0.059		0.4	NA	0.1	0.4				
East: Section 7 Access													
Lane 1	99	0.0	1046	0.095	100	1.5	LOS A	0.3	2.2	Full	15	0.0	0.0
Approach	99	0.0		0.095		1.5	LOS A	0.3	2.2				
North: Bowes Street													
Lane 1	179	0.0	1910	0.094	100	1.8	LOS A	0.0	0.0	Full	60	0.0	0.0
Approach	179	0.0		0.094		1.8	NA	0.0	0.0				
Intersection	391	0.0		0.095		1.3	NA	0.3	2.2				

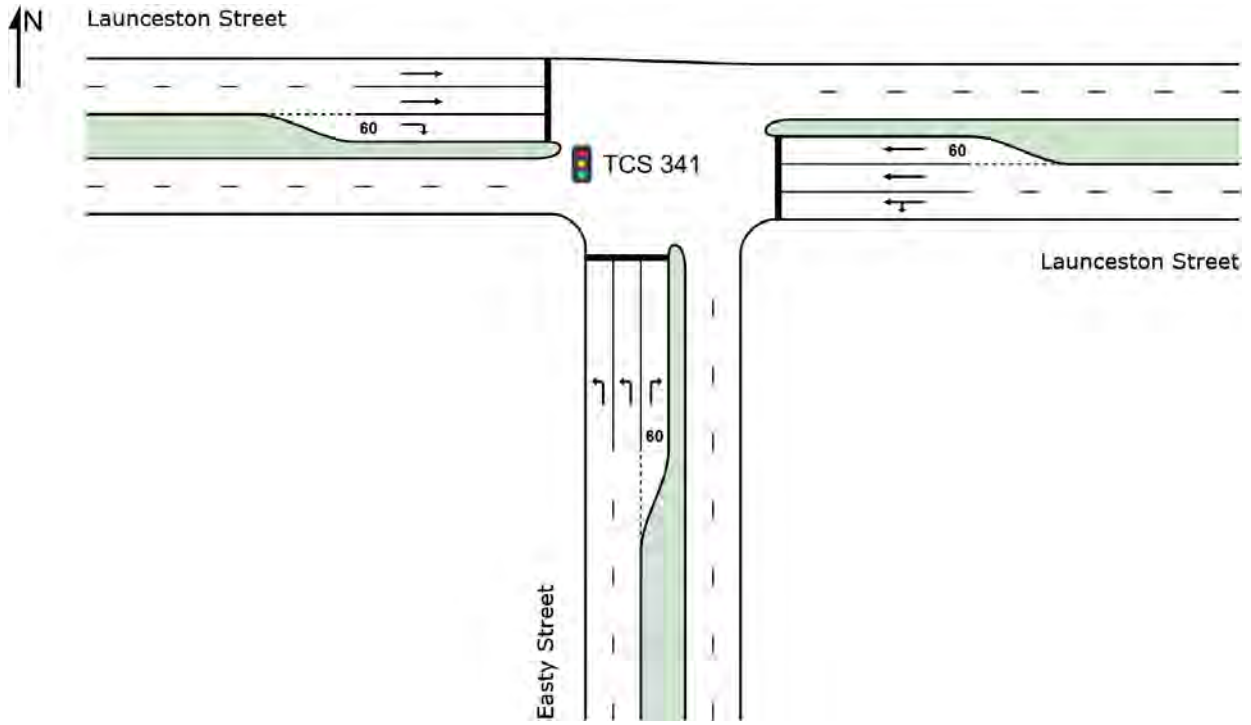
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: TCS 341 [2030 Base - PM: ES-LS]

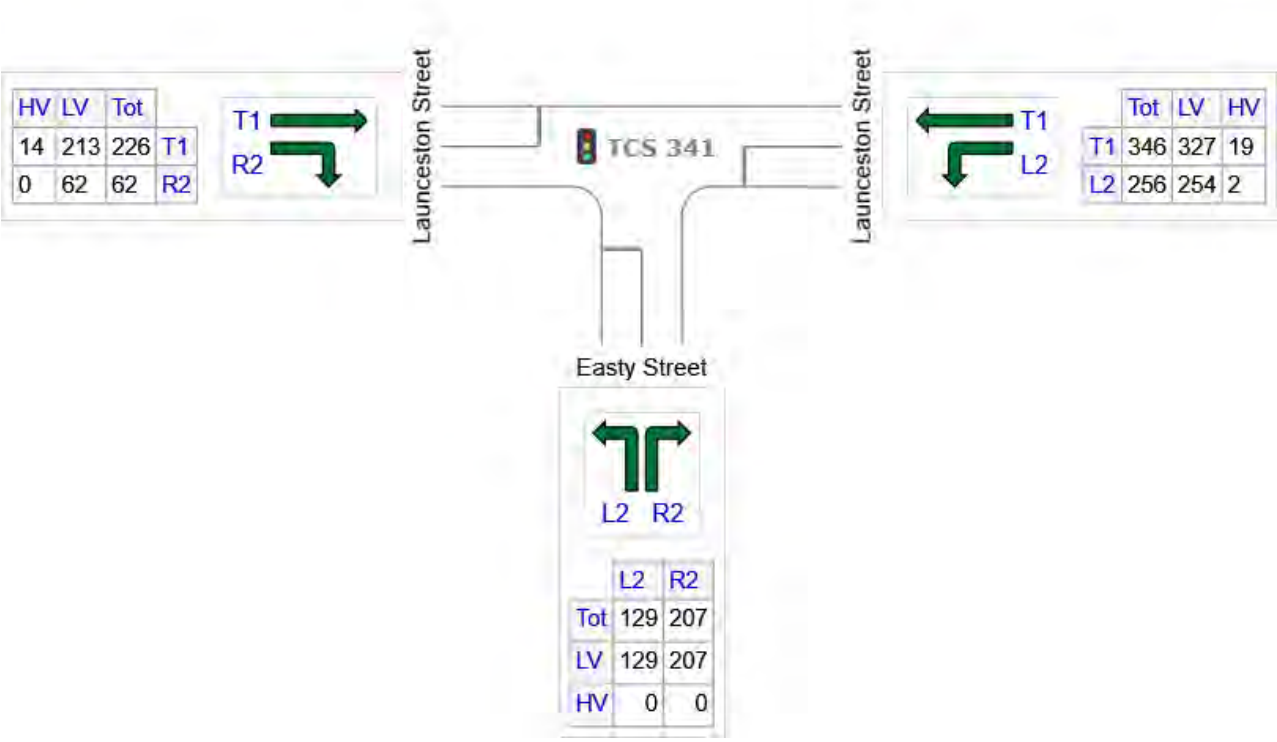
Easty Street / Launceston Street
Existing Signalised T-Intersection
Site Category: 2030 Base Scenario - Weekday Evening Peak Hour
Signals - Fixed Time Isolated Cycle Time = 73 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Site Layout



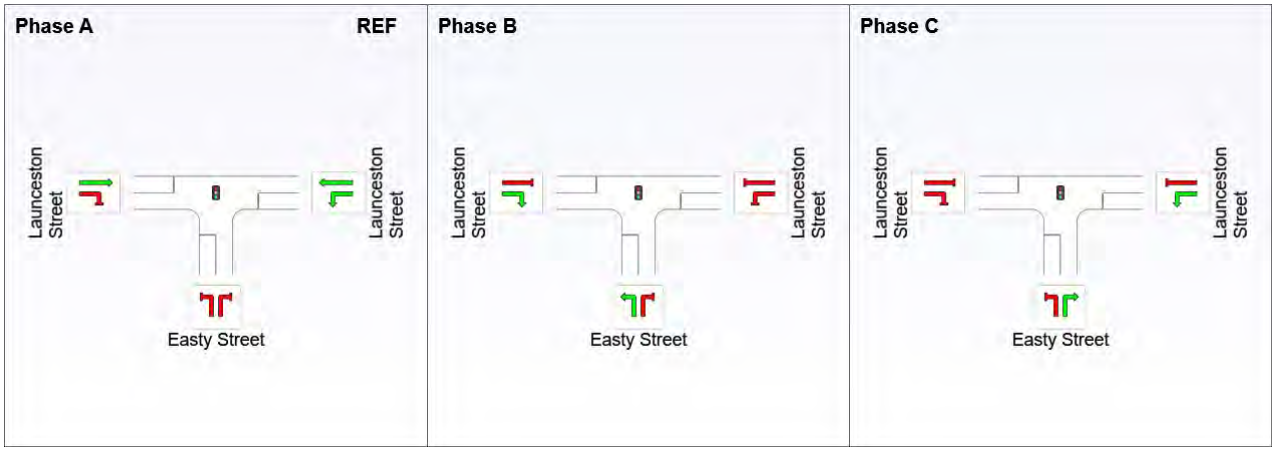
OD Demand Flows



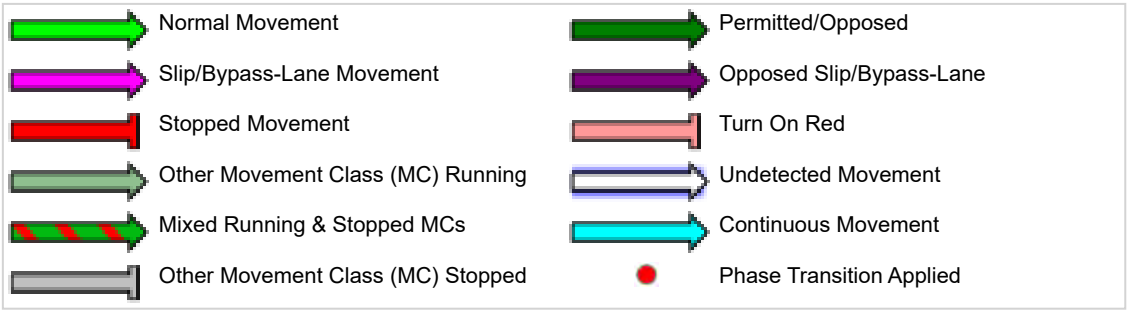
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Easty Street	337	337	0
E: Launceston Street	602	581	21
W: Launceston Street	288	275	14
Total	1227	1193	35

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	33	52
Green Time (sec)	27	13	16
Phase Time (sec)	33	18	22
Phase Split	45%	25%	30%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Easty Street												
1	L2	129	0.0	0.196	31.8	LOS C	2.0	14.2	0.89	0.73	0.89	22.5
3	R2	207	0.0	0.509	31.2	LOS C	6.7	46.9	0.93	0.80	0.93	25.3
Approach		337	0.0	0.509	31.4	LOS C	6.7	46.9	0.91	0.77	0.91	24.3
East: Launceston Street												
4	L2	256	0.8	0.206	8.3	LOS A	3.4	24.3	0.41	0.62	0.41	34.7
5	T1	346	5.5	0.249	17.3	LOS B	4.3	31.6	0.73	0.60	0.73	27.2
Approach		602	3.5	0.249	13.5	LOS A	4.3	31.6	0.59	0.61	0.59	30.6
West: Launceston Street												
11	T1	226	6.0	0.163	16.7	LOS B	2.7	20.0	0.71	0.57	0.71	27.6
12	R2	62	0.0	0.188	31.6	LOS C	1.9	13.6	0.89	0.73	0.89	22.7
Approach		288	4.7	0.188	19.9	LOS B	2.7	20.0	0.74	0.60	0.74	26.3
All Vehicles		1227	2.8	0.509	19.9	LOS B	6.7	46.9	0.72	0.65	0.72	27.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Easty Street													
Lane 1	65	0.0	331	0.196	100	31.8	LOS C	2.0	14.2	Full	305	0.0	0.0
Lane 2	65	0.0	331	0.196	100	31.8	LOS C	2.0	14.2	Full	305	0.0	0.0
Lane 3	207	0.0	407	0.509	100	31.2	LOS C	6.7	46.9	Short	60	0.0	NA
Approach	337	0.0		0.509		31.4	LOS C	6.7	46.9				
East: Launceston Street													
Lane 1	256	0.8	1239	0.206	83[5]	8.3	LOS A	3.4	24.3	Full	260	0.0	0.0
Lane 2	173	5.5	696	0.249	100	17.3	LOS B	4.3	31.6	Full	260	0.0	0.0
Lane 3	173	5.5	696	0.249	100	17.3	LOS B	4.3	31.6	Short	60	0.0	NA
Approach	602	3.5		0.249		13.5	LOS A	4.3	31.6				
West: Launceston Street													
Lane 1	113	6.0	694	0.163	100	16.7	LOS B	2.7	20.0	Full	130	0.0	0.0
Lane 2	113	6.0	694	0.163	100	16.7	LOS B	2.7	20.0	Full	130	0.0	0.0
Lane 3	62	0.0	331	0.188	100	31.6	LOS C	1.9	13.6	Short	60	0.0	NA
Approach	288	4.7		0.188		19.9	LOS B	2.7	20.0				
Intersection	1227	2.8		0.509		19.9	LOS B	6.7	46.9				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5 Lane under-utilisation found by the program

USER REPORT FOR NETWORK SITE

Project: 24-0487_20260304

Template: Default Site User Report

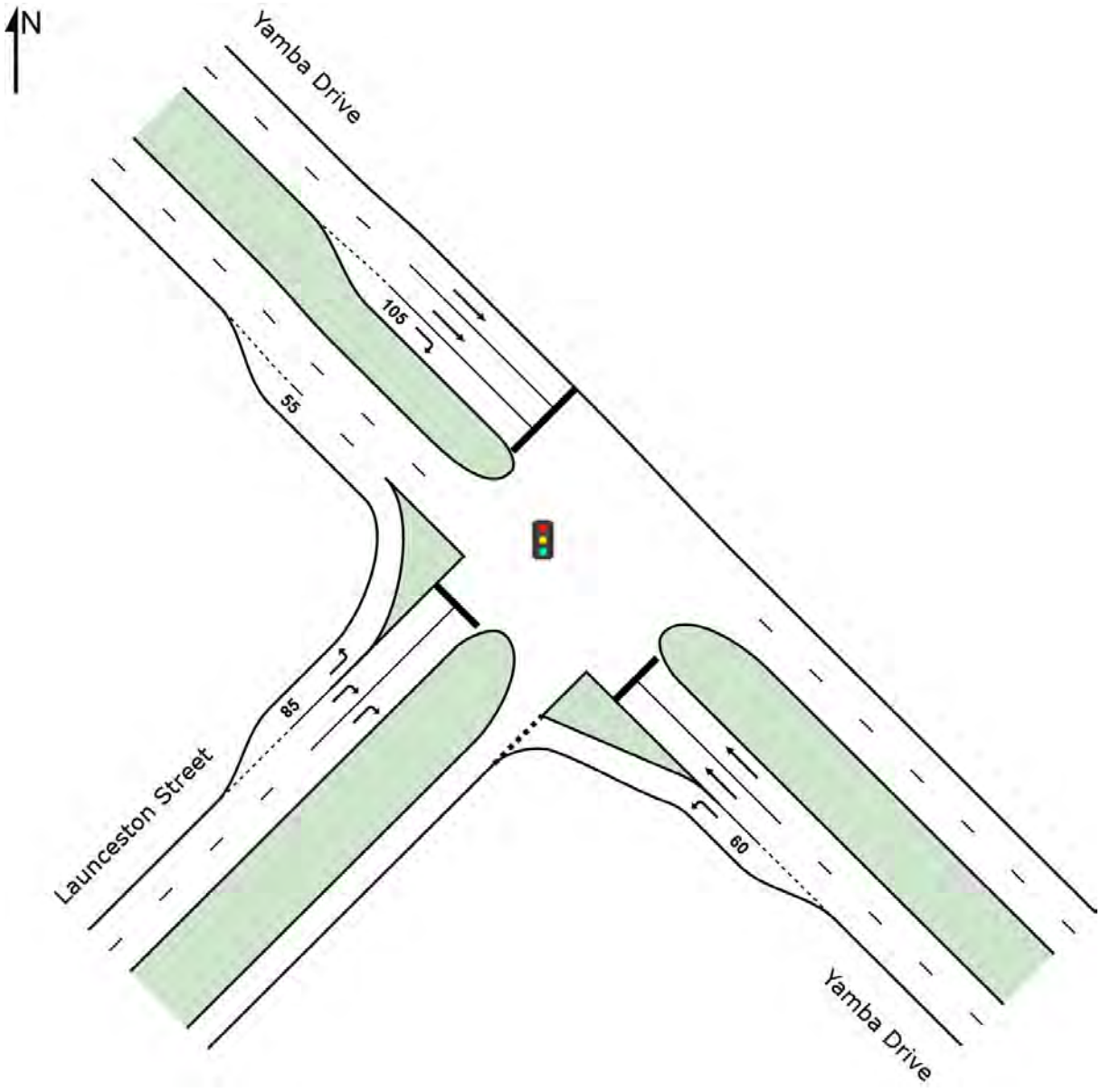
Site: [2030 Base - PM: LS-YD]

Network: 4 [2030 Base - PM: LS-WS-YD]

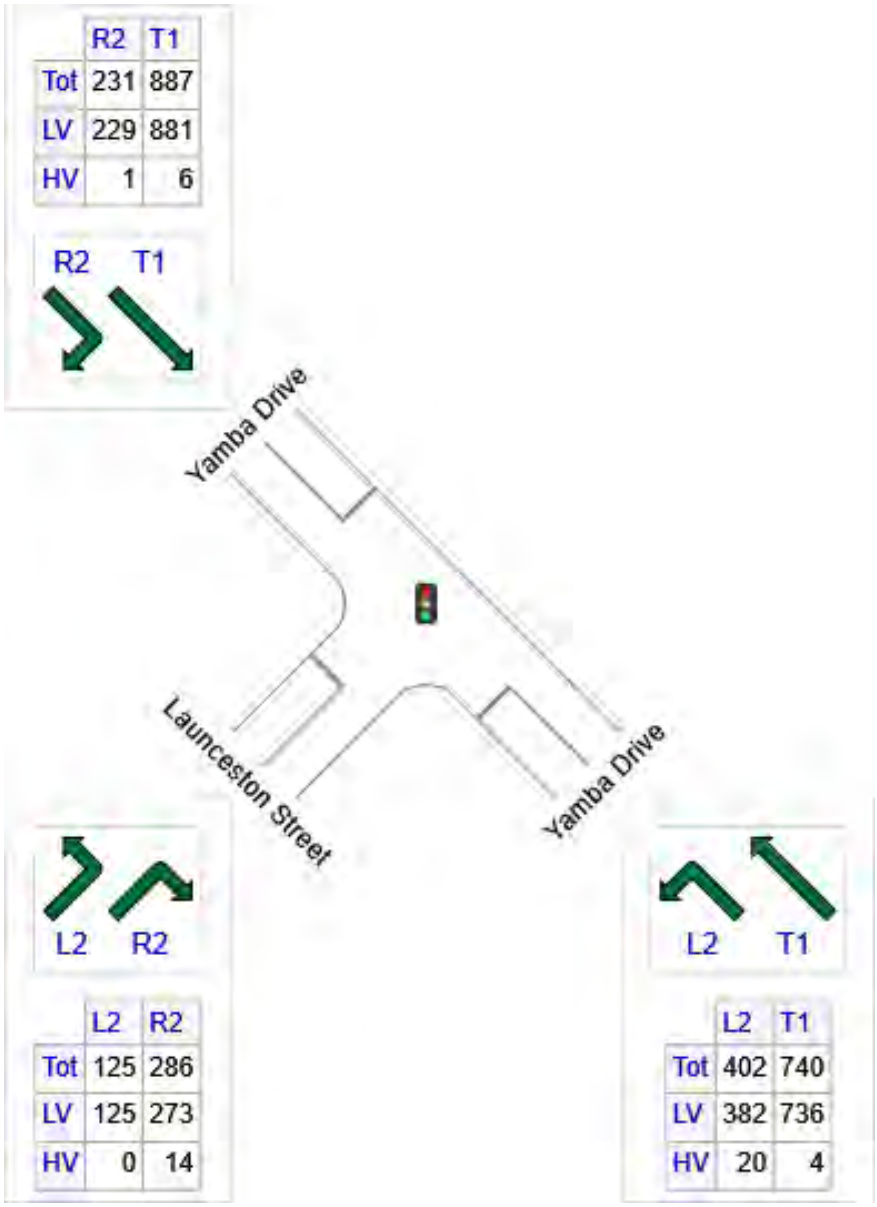
Northwest part of Launceston Street / Wisdom Street / Yamba Drive
Existing Signalised Offset X-Intersection
Site Category: 2030 Base Scenario - Weekday Evening Peak Hour
Signals - Fixed Time Coordinated Cycle Time = 114 seconds (CCG User-Given Phase Times)
Common Control Group: CCG1 [CCG]

Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E
Output Phase Sequence: A, D, E

Site Layout



OD Demand Flows

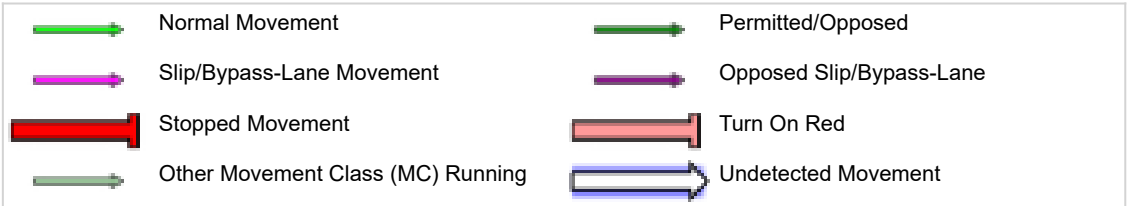


	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
SE: Yamba Drive	1142	1118	24
NW: Yamba Drive	1118	1111	7
SW: Launceston Street	412	398	14
Total	2672	2626	45

Input Phase Sequence (CCG)

Movement Class: All Movement Classes

REF: Reference Phase
VAR: Variable Phase



Mixed Running & Stopped MCs

Continuous Movement


Other Movement Class (MC) Stopped


Phase Transition Applied

Phase Timing Summary (CCG)

Phase	A	D	E
Phase Change Time (sec)	0	63	87
Green Time (sec)	57	18	21
Phase Time (sec)	63	24	27
Phase Split	55%	21%	24%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles														
Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Yamba Drive														
4	L2	402	5.0	402	5.0	0.287	4.9	LOS A	0.5	3.7	0.03	0.59	0.03	40.6
5	T1	740	0.6	740	0.6	0.381	7.7	LOS A	7.2	50.7	0.28	0.25	0.28	50.8
Approach		1142	2.1	1142	2.1	0.381	6.7	LOS A	7.2	50.7	0.19	0.37	0.19	46.3
NorthWest: Yamba Drive														
11	T1	887	0.7	887	0.7	0.761	27.1	LOS C	20.9	147.5	0.87	0.81	0.91	22.2
12	R2	231	0.5	231	0.5	0.676	55.2	LOS E	12.3	86.4	0.99	0.84	1.01	20.2
Approach		1118	0.7	1118	0.7	0.761	32.9	LOS C	20.9	147.5	0.89	0.81	0.93	21.5
SouthWest: Launceston Street														
1	L2	125	0.0	125	0.0	0.067	2.9	LOS A	0.0	0.0	0.00	0.37	0.00	39.5
3	R2	286	4.8	286	4.8	0.841	65.6	LOS E	9.1	66.2	1.00	1.02	1.35	11.0
Approach		412	3.3	412	3.3	0.841	46.5	LOS D	9.1	66.2	0.70	0.82	0.94	16.2
All Vehicles		2672	1.7	2672	1.7	0.841	23.8	LOS C	20.9	147.5	0.56	0.62	0.62	26.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
SouthEast: Yamba Drive															
Lane 1	402	5.0	402	5.0	1402	0.287	100	4.9	LOS A	0.5	3.7	Short	60	0.0	NA
Lane 2	370	0.6	370	0.6	971	0.381	100	4.4	LOS A	3.6	25.2	Full	65	0.0	0.0
Lane 3	370	0.6	370	0.6	971	0.381	100	10.9	LOS B	7.2	50.7	Full	65	0.0	0.0
Approach	1142	2.1	1142	2.1		0.381		6.7	LOS A	7.2	50.7				
NorthWest: Yamba Drive															
Lane 1	444	0.7	444	0.7	583	0.761	100	27.1	LOS C	20.9	147.5	Full	215	-40.0 N3	0.0
Lane 2	444	0.7	444	0.7	583	0.761	100	27.1	LOS C	20.9	147.5	Full	215	-40.0 N3	0.0
Lane 3	231	0.5	231	0.5	341	0.676	100	55.2	LOS E	12.3	86.4	Short	105	0.0	NA
Approach	1118	0.7	1118	0.7		0.761		32.9	LOS C	20.9	147.5				
SouthWest: Launceston Street															
Lane 1	125	0.0	125	0.0	1857	0.067	100	2.9	LOS A	0.0	0.0	Short	85	0.0	NA
Lane 2	143	4.8	143	4.8	170	0.841	100	65.6	LOS E	9.1	66.2	Full	260	-40.0 N3	0.0
Lane 3	143	4.8	143	4.8	170	0.841	100	65.6	LOS E	9.1	66.2	Full	260	-40.0 N3	0.0
Approach	412	3.3	412	3.3		0.841		46.5	LOS D	9.1	66.2				
Intersection	2672	1.7	2672	1.7		0.841		23.8	LOS C	20.9	147.5				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N3 Capacity Adjustment due to downstream lane blockage determined by the program.

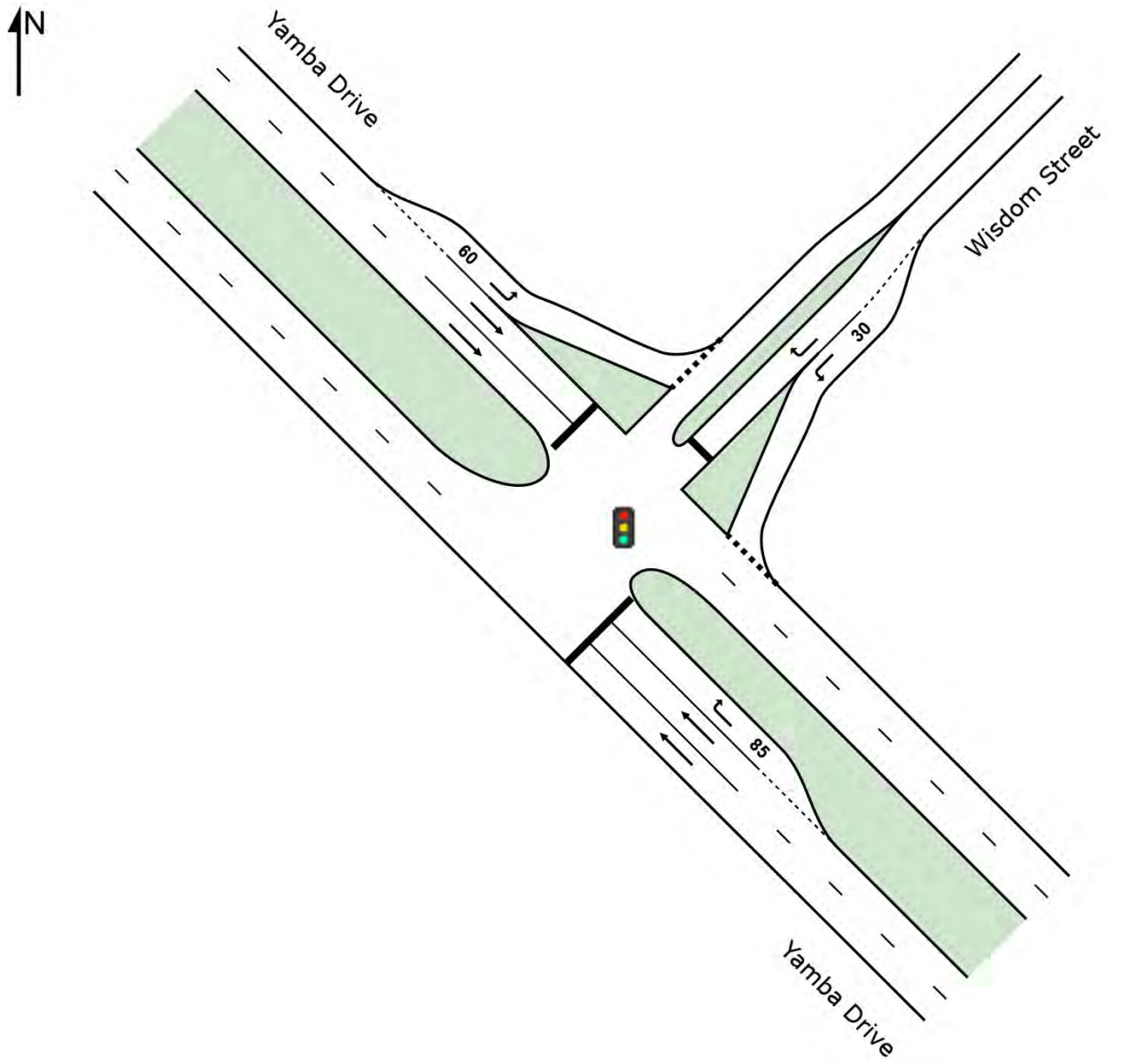
Site: [2030 Base - PM: WS-YD] Network: 4 [2030 Base - PM: LS-WS-YD]

Southeast part of Launceston Street / Wisdom Street / Yamba Drive
Existing Signalised Offset Cross Intersection
Site Category: 2030 Base Scenario - Weekday Evening Peak Hour
Signals - Fixed Time Coordinated Cycle Time = 114 seconds (CCG User-Given Phase Times)
Common Control Group: CCG1 [CCG]

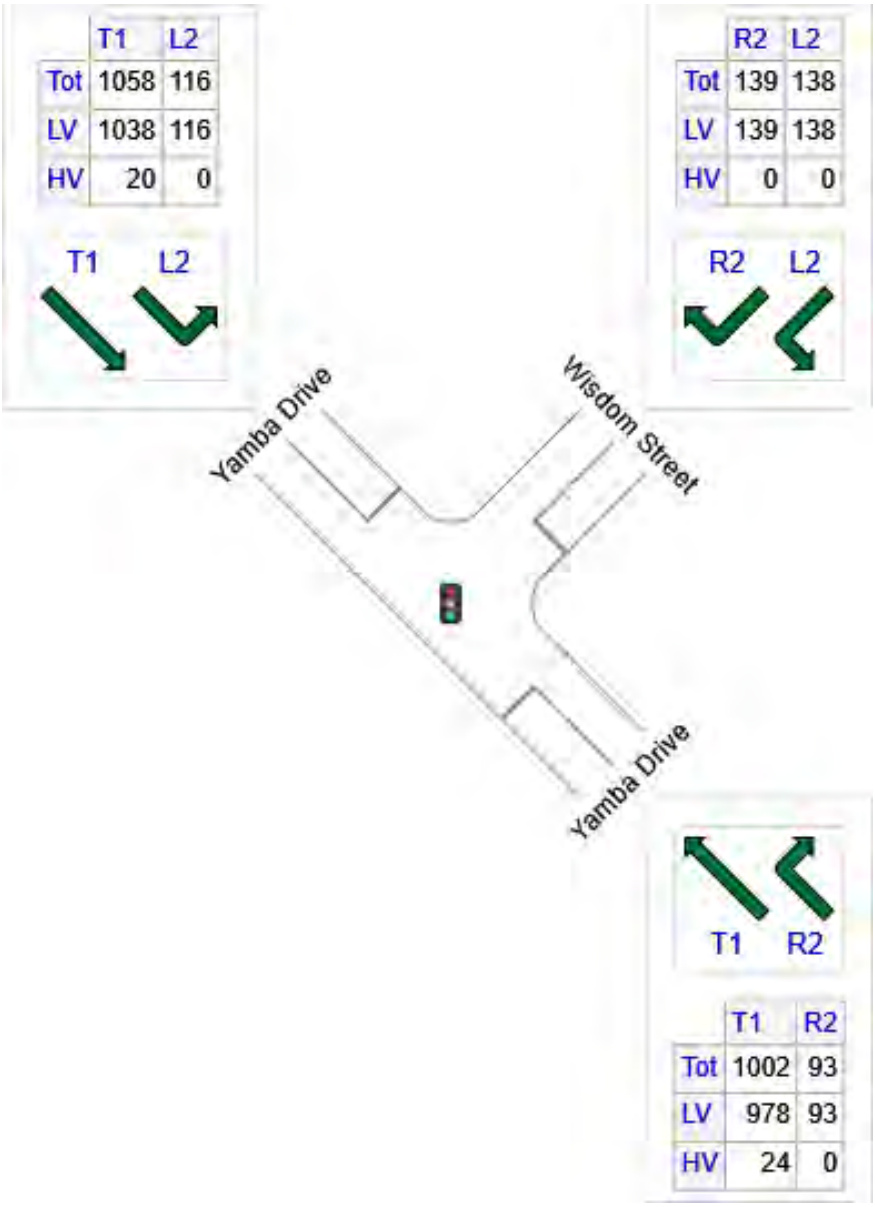
Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E
Output Phase Sequence: A, D, E

Some CCG output elements have been omitted as they have already been included under other Sites belonging to the same CCG.

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
SE: Yamba Drive	1095	1071	24
NE: Wisdom Street	277	277	0
NW: Yamba Drive	1174	1154	20
Total	2545	2501	44

Movement Performance - Vehicles														
Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Yamba Drive														
11	T1	1002	2.4	1002	2.4	0.522	20.5	LOS C	18.6	133.1	0.73	0.65	0.73	49.7
12	R2	93	0.0	93	0.0	0.271	50.5	LOS D	4.5	31.4	0.90	0.77	0.90	35.5
Approach		1095	2.2	1095	2.2	0.522	23.0	LOS C	18.6	133.1	0.74	0.66	0.74	46.9
NorthEast: Wisdom Street														
1	L2	138	0.0	138	0.0	0.140	5.8	LOS A	1.8	12.4	0.30	0.54	0.30	49.3
3	R2	139	0.0	139	0.0	0.474	51.5	LOS D	7.2	50.4	0.96	0.79	0.96	22.0
Approach		277	0.0	277	0.0	0.474	28.8	LOS C	7.2	50.4	0.63	0.66	0.63	35.0
NorthWest: Yamba Drive														
4	L2	116	0.0	116	0.0	0.074	4.7	LOS A	0.1	0.6	0.02	0.59	0.02	40.4
5	T1	1058	1.9	1058	1.9	0.549	13.4	LOS B	13.4	95.3	0.50	0.44	0.50	58.6
Approach		1174	1.7	1174	1.7	0.549	12.5	LOS B	13.4	95.3	0.45	0.46	0.45	56.2
All Vehicles		2545	1.7	2545	1.7	0.549	18.8	LOS B	18.6	133.1	0.59	0.57	0.59	48.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
SouthEast: Yamba Drive															
Lane 1	501	2.4	501	2.4	960	0.522	100	20.5	LOS C	18.6	133.1	Full	735	0.0	0.0
Lane 2	501	2.4	501	2.4	960	0.522	100	20.5	LOS C	18.6	133.1	Full	735	0.0	0.0
Lane 3	93	0.0	93	0.0	342	0.271	100	50.5	LOS D	4.5	31.4	Short	85	0.0	NA
Approach	1095	2.2	1095	2.2		0.522		23.0	LOS C	18.6	133.1				
NorthEast: Wisdom Street															
Lane 1	138	0.0	138	0.0	984	0.140	100	5.8	LOS A	1.8	12.4	Short	30	0.0	NA
Lane 2	139	0.0	139	0.0	293	0.474	100	51.5	LOS D	7.2	50.4	Full	680	0.0	0.0
Approach	277	0.0	277	0.0		0.474		28.8	LOS C	7.2	50.4				
NorthWest: Yamba Drive															
Lane 1	116	0.0	116	0.0	1559	0.074	100	4.7	LOS A	0.1	0.6	Short	60	0.0	NA
Lane 2	529	1.9	529	1.9	963	0.549	100	13.4	LOS B	13.4	95.3	Full	65	0.0	40.0
Lane 3	529	1.9	529	1.9	963	0.549	100	13.4	LOS B	13.4	95.3	Full	65	0.0	40.0
Approach	1174	1.7	1174	1.7		0.549		12.5	LOS B	13.4	95.3				
Intersection	2545	1.7	2545	1.7		0.549		18.8	LOS B	18.6	133.1				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Appendix C:

Intersection Performance Results – 2040 Base Scenario

USER REPORT FOR SITE

Project: 24-0487_20260304

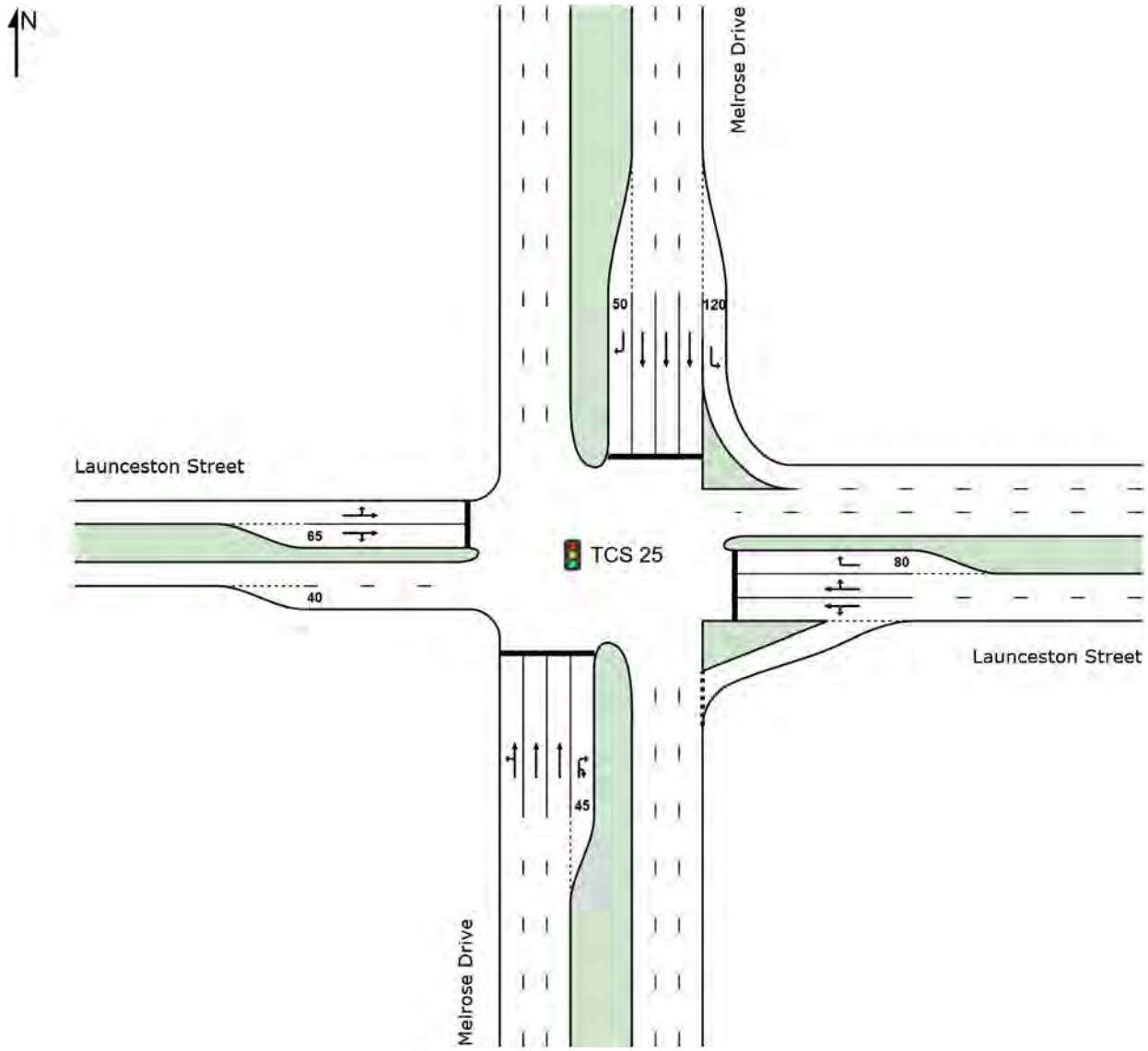
Template: Default Site User Report

Site: TCS 25 [2040 Base - AM: LS-MD]

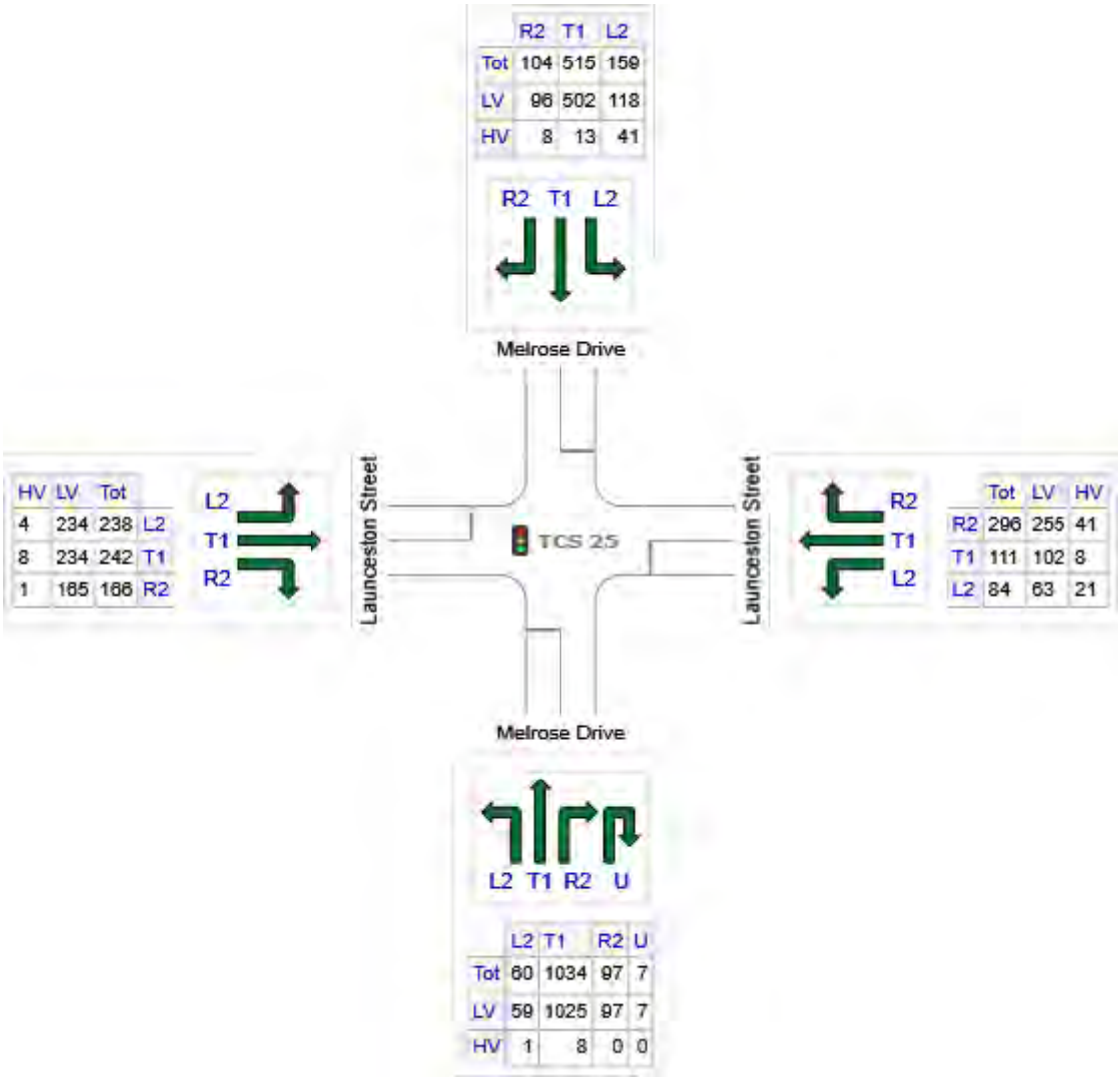
Launceston Street / Melrose Drive
Existing Signalised X-Intersection
Site Category: 2040 Base Scenario - Weekday Morning Peak Hour
Signals - Fixed Time Isolated Cycle Time = 103 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E, F
Output Phase Sequence: A, D, E, F

Site Layout



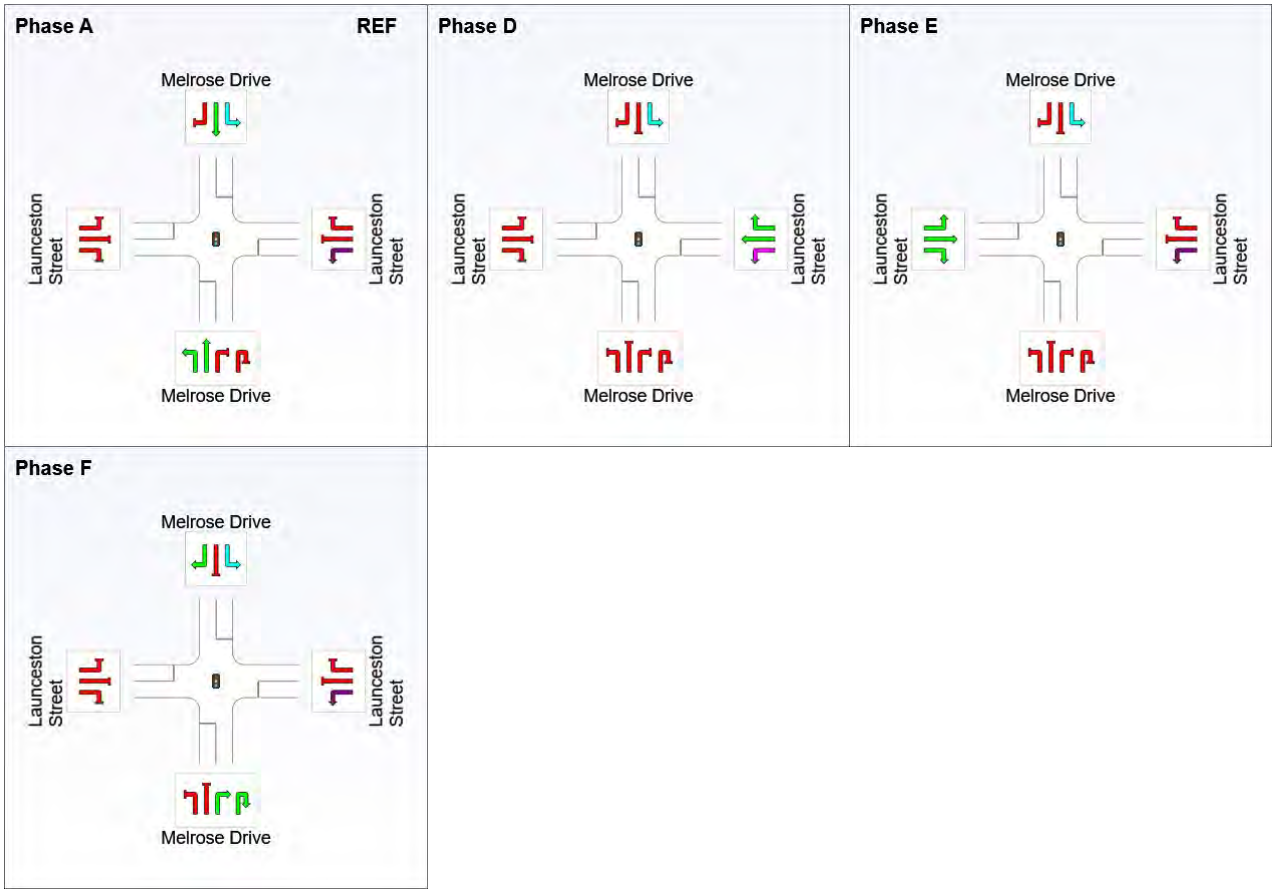
OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Melrose Drive	1198	1188	9
E: Launceston Street	491	420	71
N: Melrose Drive	778	716	62
W: Launceston Street	646	633	14
Total	3113	2957	156

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase

Phase Timing Summary

Phase	A	D	E	F
Phase Change Time (sec)	0	28	56	87
Green Time (sec)	22	22	25	10
Phase Time (sec)	28	28	31	16
Phase Split	27%	27%	30%	16%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Melrose Drive												
1	L2	60	1.8	1.133	190.1	LOS F	42.1	297.0	1.00	1.73	2.46	5.5
2	T1	1034	0.8	1.133	184.7	LOS F	42.4	299.2	1.00	1.73	2.47	10.8
3	R2	97	0.0	0.739	60.0	LOS E	5.6	39.5	1.00	0.88	1.21	13.0
3u	U	7	0.0	0.739	61.4	LOS E	5.6	39.5	1.00	0.88	1.21	17.7
Approach		1198	0.8	1.133	174.2	LOS F	42.4	299.2	1.00	1.65	2.36	10.6
East: Launceston Street												
4	L2	84	25.0	0.210	13.3	LOS A	1.9	15.1	0.58	0.66	0.58	33.3
5	T1	111	7.6	0.617	28.9	LOS C	8.7	66.7	0.81	0.75	0.81	16.8
6	R2	296	13.9	0.617	46.4	LOS D	8.7	66.7	0.96	0.82	0.96	25.7
Approach		491	14.4	0.617	36.8	LOS C	8.7	66.7	0.86	0.78	0.86	25.0
North: Melrose Drive												
7	L2	159	25.8	0.101	5.9	LOS A	0.0	0.0	0.00	0.51	0.00	48.8
8	T1	515	2.5	0.419	38.2	LOS C	7.6	54.0	0.91	0.75	0.91	31.4
9	R2	104	8.1	0.611	56.8	LOS E	5.3	40.0	1.00	0.80	1.05	22.4
Approach		778	8.0	0.611	34.1	LOS C	7.6	54.0	0.74	0.71	0.74	32.0
West: Launceston Street												
10	L2	238	1.8	0.893	60.5	LOS E	19.2	136.8	1.00	1.05	1.35	21.6
11	T1	242	3.5	0.893	55.8	LOS D	19.4	138.2	1.00	1.08	1.35	10.6
12	R2	166	0.6	0.893	60.3	LOS E	19.4	138.2	1.00	1.09	1.34	14.6
Approach		646	2.1	0.893	58.7	LOS E	19.4	138.2	1.00	1.07	1.35	16.3
All Vehicles		3113	5.0	1.133	93.5	LOS F	42.4	299.2	0.91	1.16	1.51	15.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Melrose Drive													
Lane 1	372	1.0	328	1.133	100	185.4	LOS F	42.1	297.0	Full	205	0.0	38.9
Lane 2	376	0.8	331	1.133	100	184.4	LOS F	42.4	299.2	Full	205	0.0	39.6
Lane 3	346	0.8	305[1]	1.133	100	185.3	LOS F	39.2	276.0	Full	205	0.0	32.1
Lane 4	104	0.0	141	0.739	100	60.1	LOS E	5.6	39.5	Short	45	0.0	NA
Approach	1198	0.8		1.133		174.2	LOS F	42.4	299.2				
East: Launceston Street													
Lane 1	128	19.0	612	0.210	34[6]	11.9	LOS A	1.9	15.1	Full	90	0.0	0.0
Lane 2	184	11.6	299	0.617	100	44.8	LOS D	8.7	66.7	Full	90	0.0	0.0
Lane 3	178	13.9	289	0.617	100	46.5	LOS D	8.4	65.8	Short	80	0.0	NA
Approach	491	14.4		0.617		36.8	LOS C	8.7	66.7				
North: Melrose Drive													
Lane 1	159	25.8	1568	0.101	100	5.9	LOS A	0.0	0.0	Short	120	0.0	NA
Lane 2	172	2.5	410	0.419	100	38.2	LOS C	7.6	54.0	Full	470	0.0	0.0
Lane 3	172	2.5	410	0.419	100	38.2	LOS C	7.6	54.0	Full	470	0.0	0.0
Lane 4	172	2.5	410	0.419	100	38.2	LOS C	7.6	54.0	Full	470	0.0	0.0
Lane 5	104	8.1	170	0.611	100	56.8	LOS E	5.3	40.0	Short	50	0.0	NA
Approach	778	8.0		0.611		34.1	LOS C	7.6	54.0				
West: Launceston Street													
Lane 1	321	2.2	360	0.893	100	59.3	LOS E	19.2	136.8	Full	95	0.0	39.2[8]
Lane 2	325	2.0	364	0.893	100	58.1	LOS E	19.4	138.2	Short	65	0.0	NA
Approach	646	2.1		0.893		58.7	LOS E	19.4	138.2				
Intersection	3113	5.0		1.133		93.5	LOS F	42.4	299.2				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

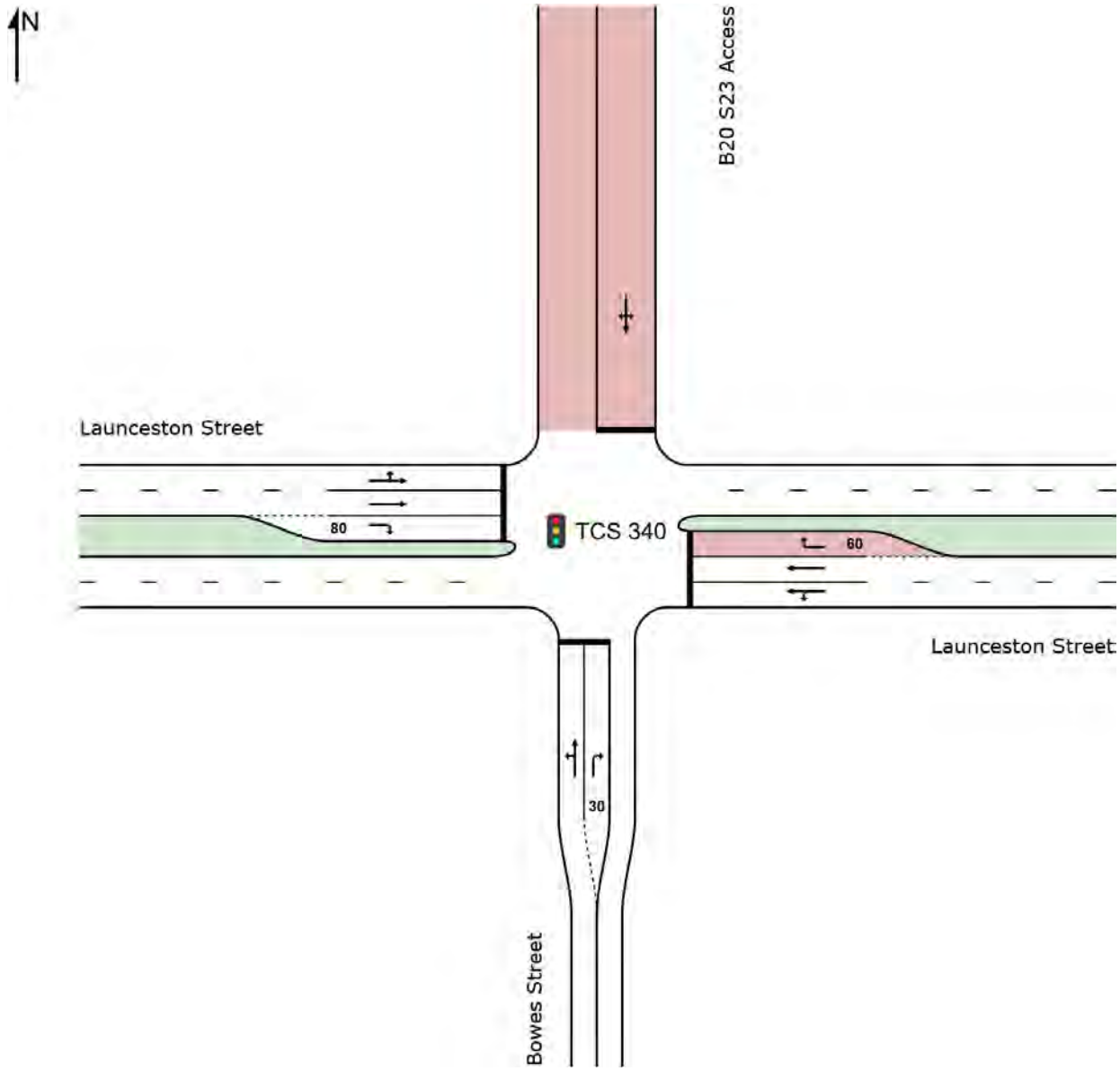
1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
6 Lane under-utilisation due to downstream effects
8 Probability of Blockage has been set on the basis of a queue that overflows from a short lane.

Site: TCS 340 [2040 Base - AM: BS-LS]

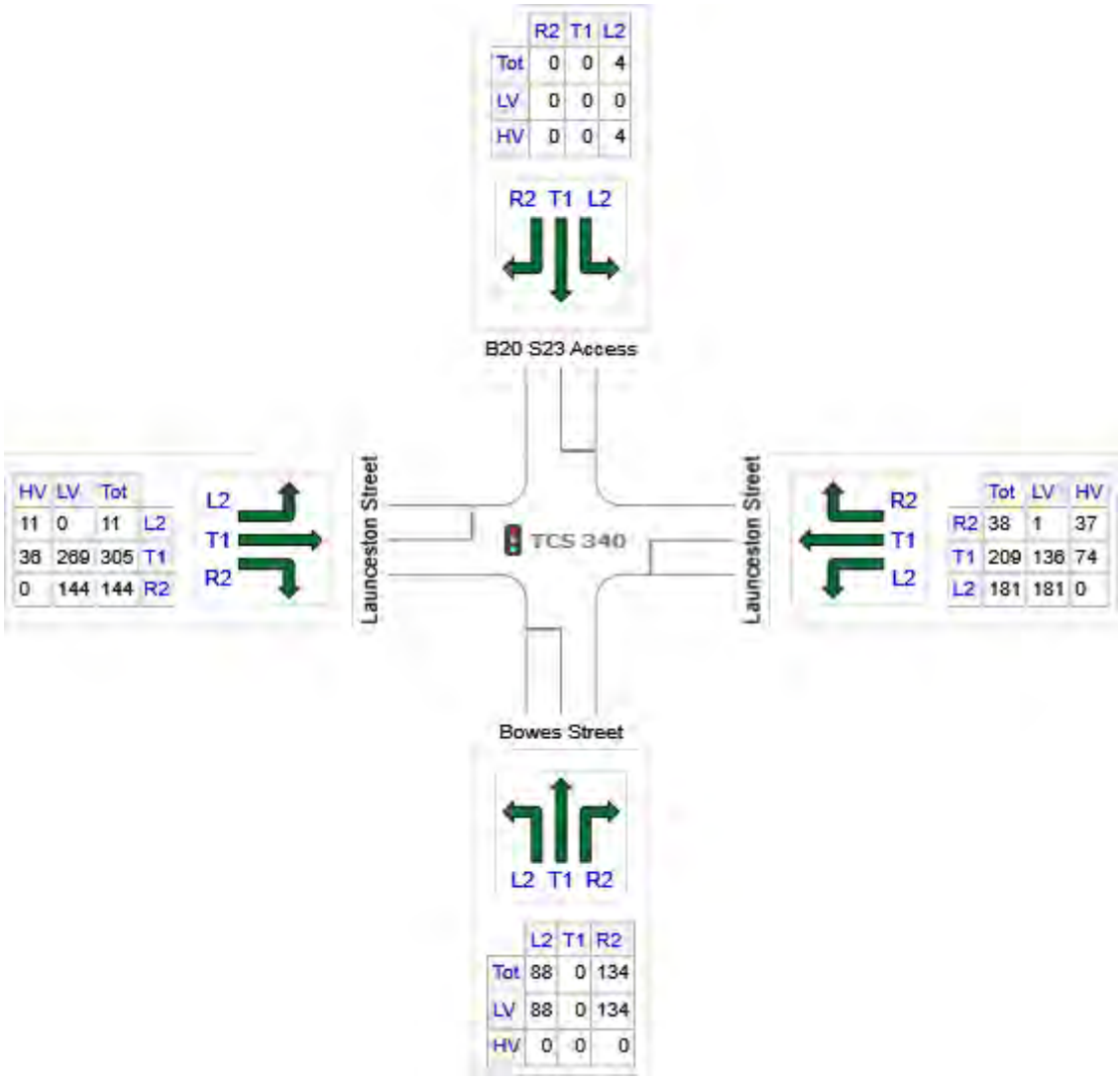
Block 20 Section 23 Access / Bowes Street / Launceston Street
Existing Signalised X-Intersection
Site Category: 2040 Base Scenario - Weekday Morning Peak Hour
Signals - Fixed Time Isolated Cycle Time = 84 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E, G
Output Phase Sequence: A, D, E, G

Site Layout



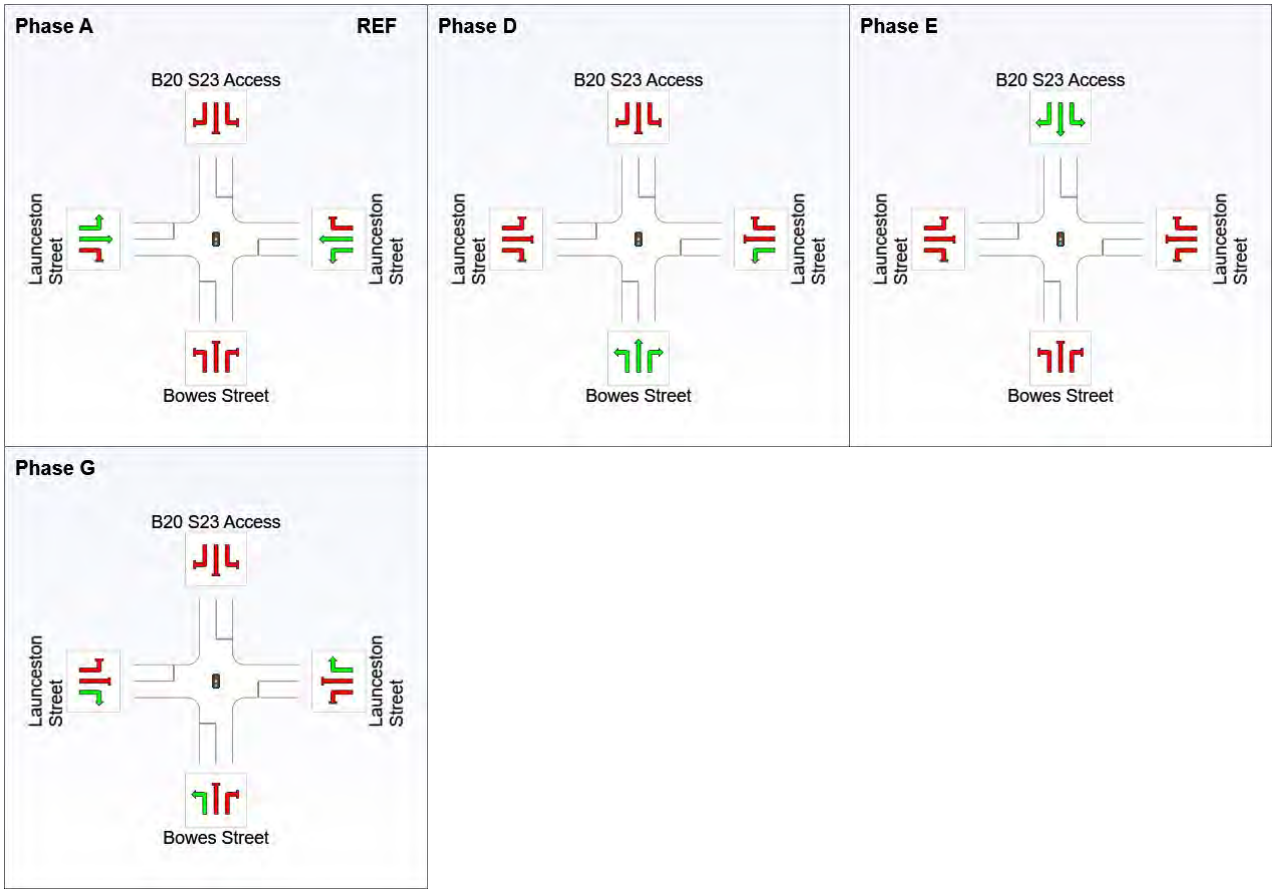
OD Demand Flows



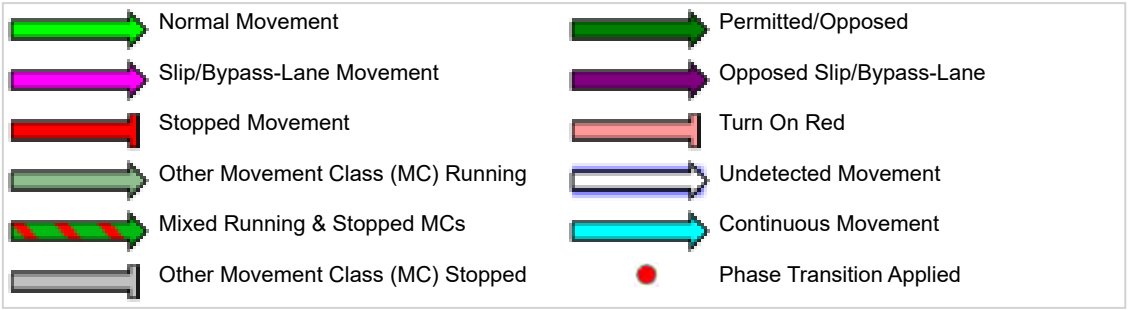
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	222	222	0
E: Launceston Street	428	318	111
N: B20 S23 Access	4	0	4
W: Launceston Street	460	414	46
Total	1115	954	161

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	D	E	G
Phase Change Time (sec)	0	27	55	68
Green Time (sec)	22	22	7	12
Phase Time (sec)	28	28	11	17
Phase Split	33%	33%	13%	20%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	88	0.0	0.115	12.2	LOS A	1.5	10.3	0.64	0.68	0.64	23.5
2	T1	0	0.0	0.115	12.7	LOS A	1.5	10.3	0.64	0.68	0.64	13.7
3	R2	134	0.0	0.275	30.1	LOS C	4.4	30.9	0.84	0.76	0.84	12.5
Approach		222	0.0	0.275	23.0	LOS B	4.4	30.9	0.76	0.73	0.76	15.5
East: Launceston Street												
4	L2	181	0.0	0.379	28.0	LOS B	7.3	54.2	0.80	0.76	0.80	13.8
5	T1	209	35.2	0.379	26.6	LOS B	7.3	54.2	0.85	0.72	0.85	19.2
6	R2	38	97.2	0.242	42.9	LOS D	1.5	18.9	0.92	0.74	0.92	9.5
Approach		428	25.8	0.379	28.7	LOS C	7.3	54.2	0.83	0.74	0.83	15.9
North: B20 S23 Access												
7	L2	4	100.0	0.045	40.8	LOS C	0.2	2.3	0.94	0.62	0.94	8.6
8	T1	0	100.0	0.045	40.8	LOS C	0.2	2.3	0.94	0.62	0.94	5.4
9	R2	0	100.0	0.045	40.8	LOS C	0.2	2.3	0.94	0.62	0.94	9.1
Approach		4	100.0	0.045	40.8	LOS C	0.2	2.3	0.94	0.62	0.94	8.5
West: Launceston Street												
10	L2	11	100.0	0.340	33.4	LOS C	5.2	42.1	0.85	0.71	0.85	13.5
11	T1	305	11.7	0.340	27.5	LOS B	5.5	42.0	0.85	0.70	0.85	19.3
12	R2	144	0.0	0.544	43.2	LOS D	5.7	40.2	0.98	0.80	0.98	10.3
Approach		460	10.1	0.544	32.7	LOS C	5.7	42.1	0.89	0.73	0.89	15.7
All Vehicles		1115	14.5	0.544	29.2	LOS C	7.3	54.2	0.84	0.73	0.84	15.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

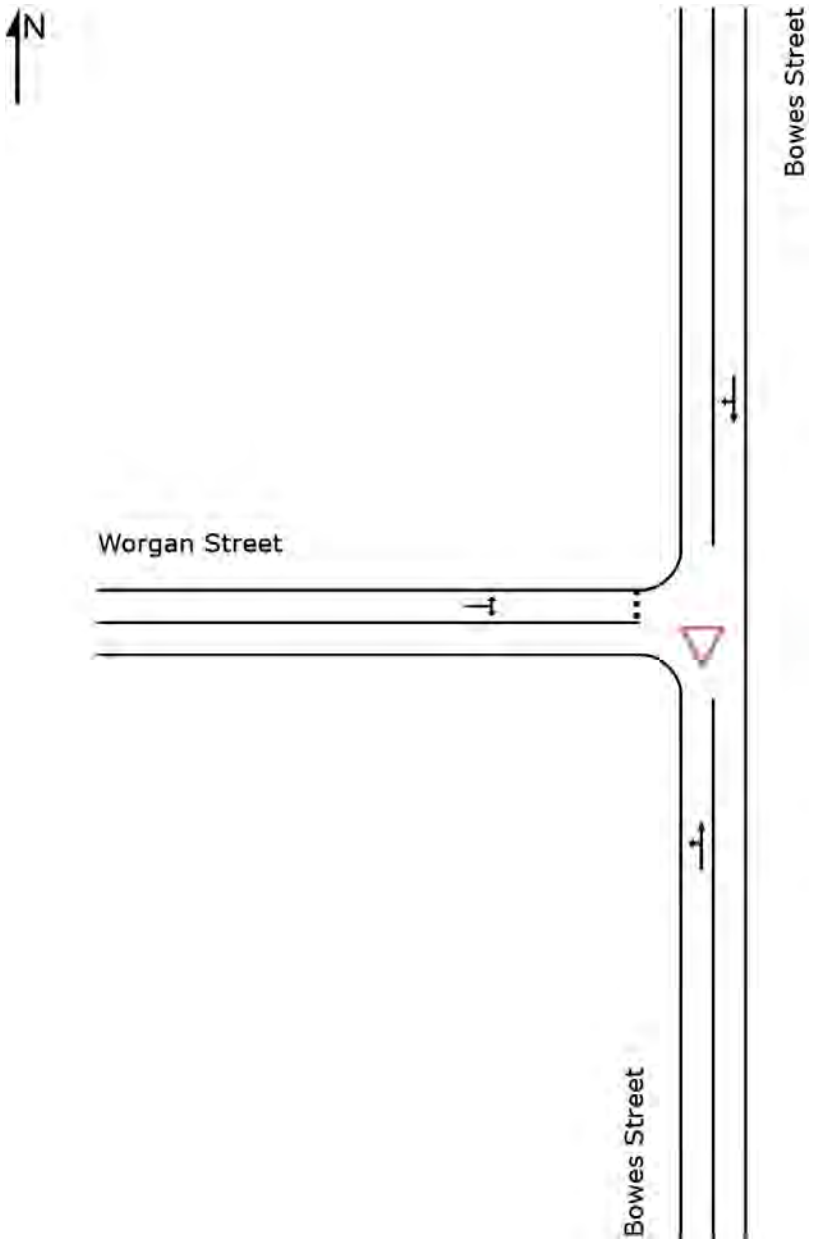
Lane Use and Performance													
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Bowes Street													
Lane 1	89	0.0	773	0.115	100	12.2	LOS A	1.5	10.3	Full	35	0.0	0.0
Lane 2	134	0.0	486	0.275	100	30.1	LOS C	4.4	30.9	Short	30	0.0	NA
Approach	222	0.0		0.275		23.0	LOS B	4.4	30.9				
East: Launceston Street													
Lane 1	233	7.8	614	0.379	100	26.8	LOS B	7.3	54.2	Full	95	0.0	0.0
Lane 2	158	35.2	416	0.379	100	28.0	LOS B	5.4	49.4	Full	95	0.0	0.0
Lane 3	38	97.2	157	0.242	100	42.9	LOS D	1.5	18.9	Short	60	0.0	NA
Approach	428	25.8		0.379		28.7	LOS C	7.3	54.2				
North: B20 S23 Access													
Lane 1	4	100.0	99	0.045	100	40.8	LOS C	0.2	2.3	Full	30	0.0	0.0
Approach	4	100.0		0.045		40.8	LOS C	0.2	2.3				
West: Launceston Street													
Lane 1	154	17.7	454	0.340	100	28.3	LOS B	5.2	42.1	Full	105	0.0	0.0
Lane 2	161	11.7	475	0.340	100	27.5	LOS B	5.5	42.0	Full	105	0.0	0.0
Lane 3	144	0.0	265	0.544	100	43.2	LOS D	5.7	40.2	Short	80	0.0	NA
Approach	460	10.1		0.544		32.7	LOS C	5.7	42.1				
Intersection	1115	14.5		0.544		29.2	LOS C	7.3	54.2				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

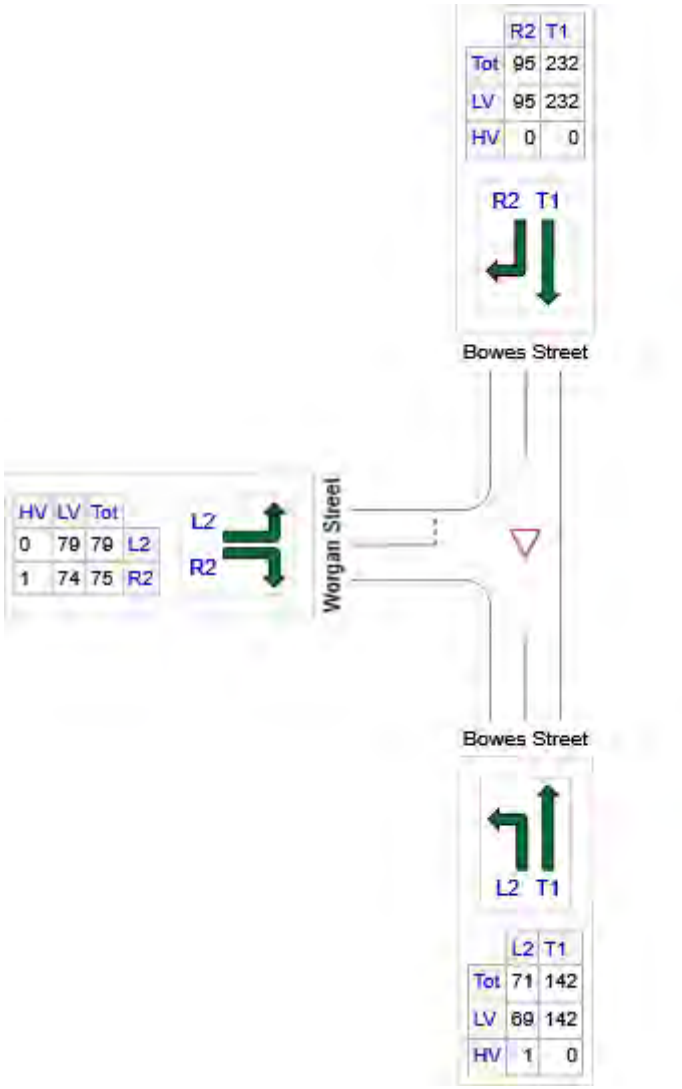
Site: [2040 Base - AM: BS-WS]

Bowes Street / Worgan Street
Existing Priority-Controlled (Give-Way) T-Intersection
Site Category: 2040 Base Scenario - Weekday Morning Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	213	212	1
N: Bowes Street	326	326	0
W: Worgan Street	154	153	1
Total	693	691	2

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	71	1.5	0.111	4.6	LOS A	0.0	0.0	0.00	0.18	0.00	32.9
2	T1	142	0.0	0.111	0.0	LOS A	0.0	0.0	0.00	0.18	0.00	44.0
Approach		213	0.5	0.111	1.5	NA	0.0	0.0	0.00	0.18	0.00	39.6
North: Bowes Street												
8	T1	232	0.0	0.184	0.4	LOS A	0.6	4.1	0.16	0.16	0.16	44.3
9	R2	95	0.0	0.184	3.9	LOS A	0.6	4.1	0.16	0.16	0.16	17.3
Approach		326	0.0	0.184	1.4	NA	0.6	4.1	0.16	0.16	0.16	34.6
West: Worgan Street												
10	L2	79	0.0	0.144	3.7	LOS A	0.6	3.9	0.29	0.56	0.29	20.7
12	R2	75	1.4	0.144	5.3	LOS A	0.6	3.9	0.29	0.56	0.29	32.4
Approach		154	0.7	0.144	4.5	LOS A	0.6	3.9	0.29	0.56	0.29	26.9
All Vehicles		693	0.3	0.184	2.1	NA	0.6	4.1	0.14	0.26	0.14	34.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

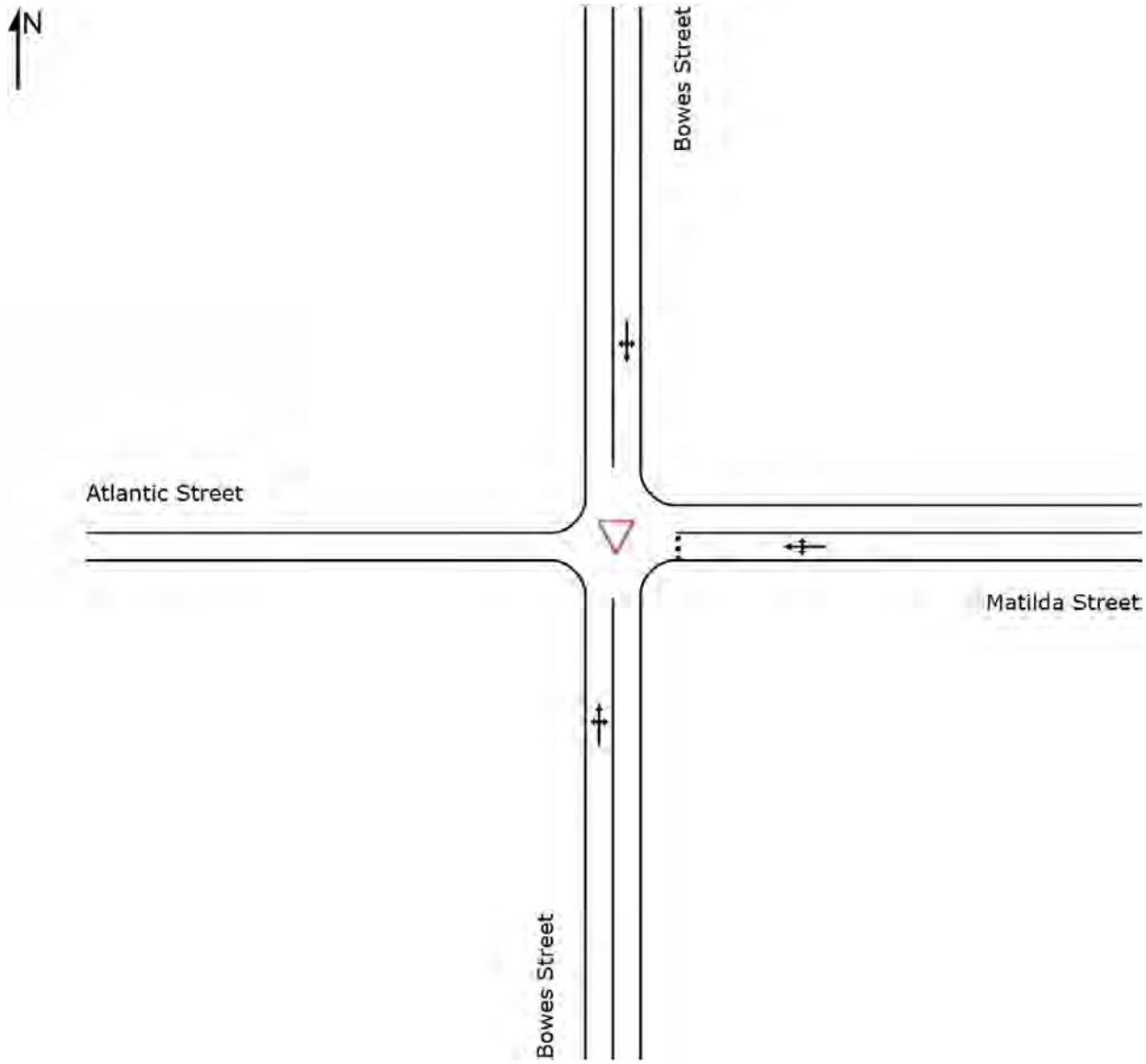
Lane Use and Performance													
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Bowes Street													
Lane 1	213	0.5	1911	0.111	100	1.5	LOS A	0.0	0.0	Full	105	0.0	0.0
Approach	213	0.5		0.111		1.5	NA	0.0	0.0				
North: Bowes Street													
Lane 1	326	0.0	1771	0.184	100	1.4	LOS A	0.6	4.1	Full	35	0.0	0.0
Approach	326	0.0		0.184		1.4	NA	0.6	4.1				
West: Worgan Street													
Lane 1	154	0.7	1068	0.144	100	4.5	LOS A	0.6	3.9	Full	35	0.0	0.0
Approach	154	0.7		0.144		4.5	LOS A	0.6	3.9				
Intersection	693	0.3		0.184		2.1	NA	0.6	4.1				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

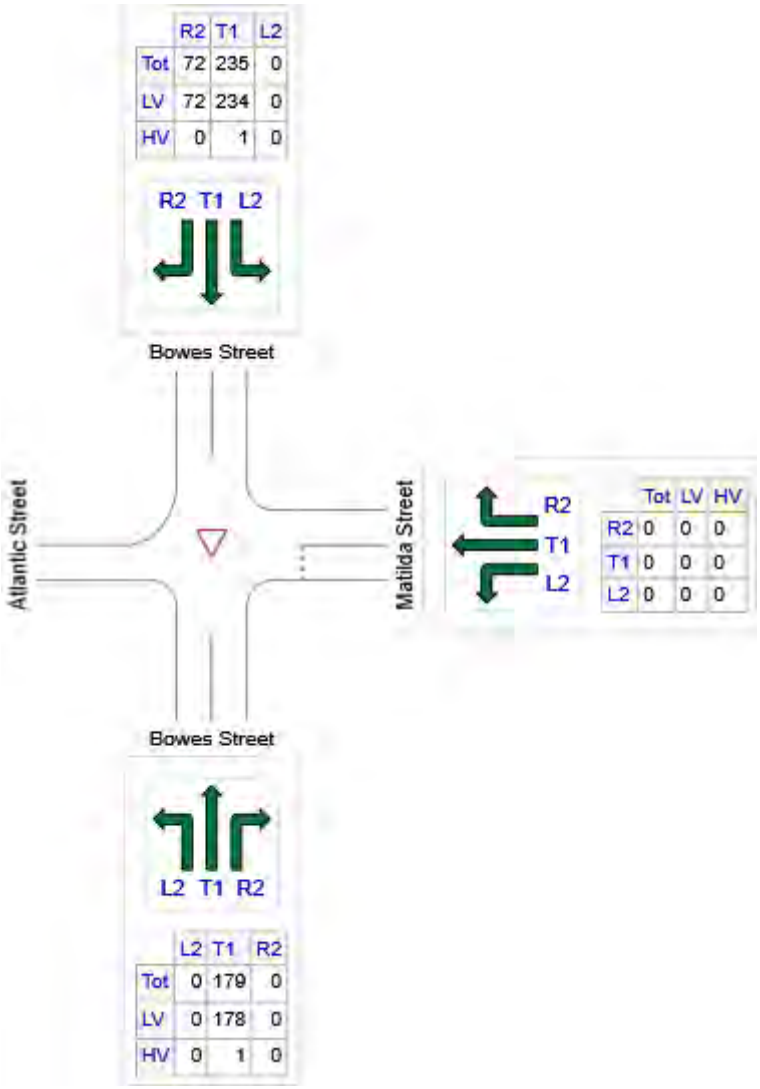
Site: [2040 Base - AM: AS-BS-MS]

Atlantic Street / Bowes Street / Matilda Street
Existing Priority-Controlled (Give-Way) T-Intersection
Site Category: 2040 Base Scenario - Weekday Morning Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	179	178	1
E: Matilda Street	0	0	0
N: Bowes Street	306	305	1
Total	486	484	2

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	0	0.0	0.092	4.1	LOS A	0.0	0.0	0.00	0.00	0.00	24.3
2	T1	179	0.6	0.092	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
3	R2	0	0.0	0.092	4.4	LOS A	0.0	0.0	0.00	0.00	0.00	43.5
Approach		179	0.6	0.092	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.9
East: Matilda Street												
4	L2	0	0.0	0.000	5.2	LOS A	0.0	0.0	0.39	0.50	0.39	27.8
5	T1	0	0.0	0.000	6.0	LOS A	0.0	0.0	0.39	0.50	0.39	22.1
6	R2	0	0.0	0.000	7.2	LOS A	0.0	0.0	0.39	0.50	0.39	32.9
Approach		0	0.0	0.000	6.1	LOS A	0.0	0.0	0.39	0.50	0.39	26.6
North: Bowes Street												
7	L2	0	0.0	0.169	5.2	LOS A	0.5	3.6	0.16	0.14	0.16	42.6
8	T1	235	0.4	0.169	0.2	LOS A	0.5	3.6	0.16	0.14	0.16	43.5
9	R2	72	0.0	0.169	5.5	LOS A	0.5	3.6	0.16	0.14	0.16	28.0
Approach		306	0.3	0.169	1.5	NA	0.5	3.6	0.16	0.14	0.16	37.0
All Vehicles		486	0.4	0.169	0.9	NA	0.5	3.6	0.10	0.09	0.10	40.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

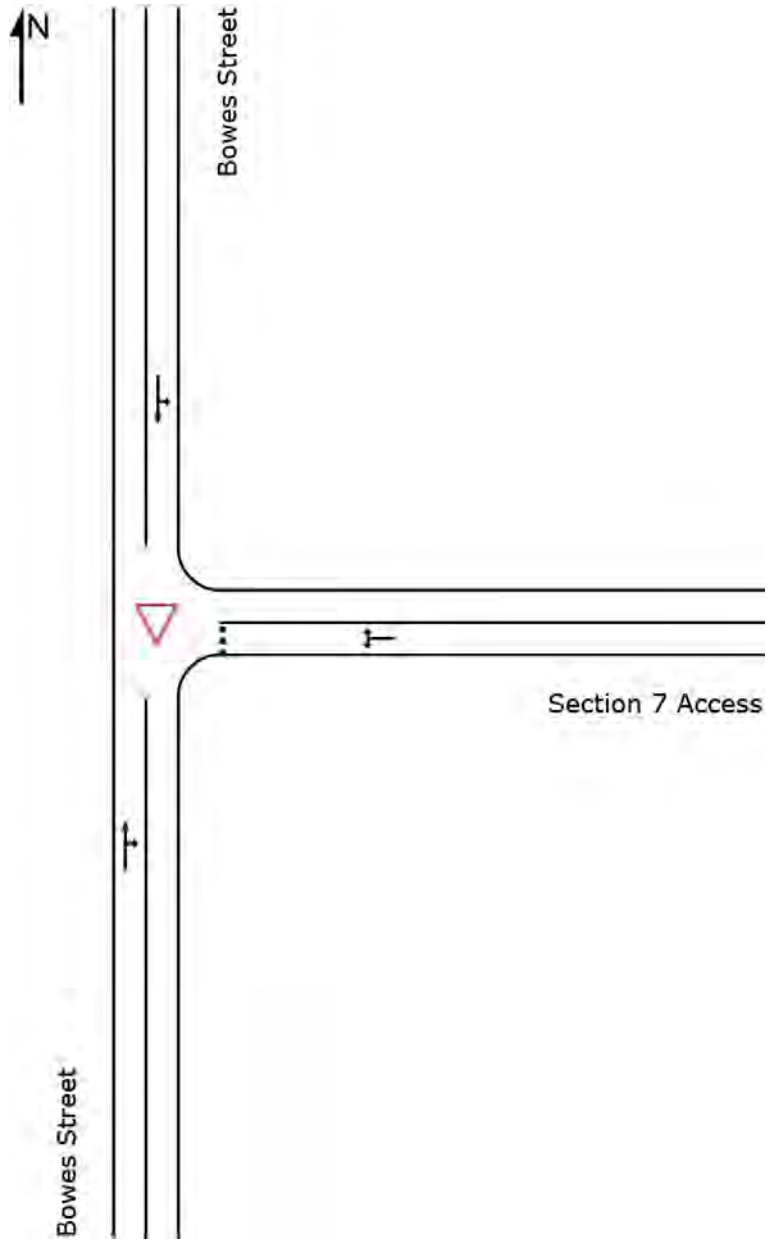
	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Bowes Street													
Lane 1	179	0.6	1942	0.092	100	0.0	LOS A	0.0	0.0	Full	45	0.0	0.0
Approach	179	0.6		0.092		0.0	NA	0.0	0.0				
East: Matilda Street													
Lane 1	0	0.0	857	0.000	100	6.1	LOS A	0.0	0.0	Full	80	0.0	0.0
Approach	0	0.0		0.000		6.1	LOS A	0.0	0.0				
North: Bowes Street													
Lane 1	306	0.3	1816	0.169	100	1.5	LOS A	0.5	3.6	Full	110	0.0	0.0
Approach	306	0.3		0.169		1.5	NA	0.5	3.6				
Intersection	486	0.4		0.169		0.9	NA	0.5	3.6				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

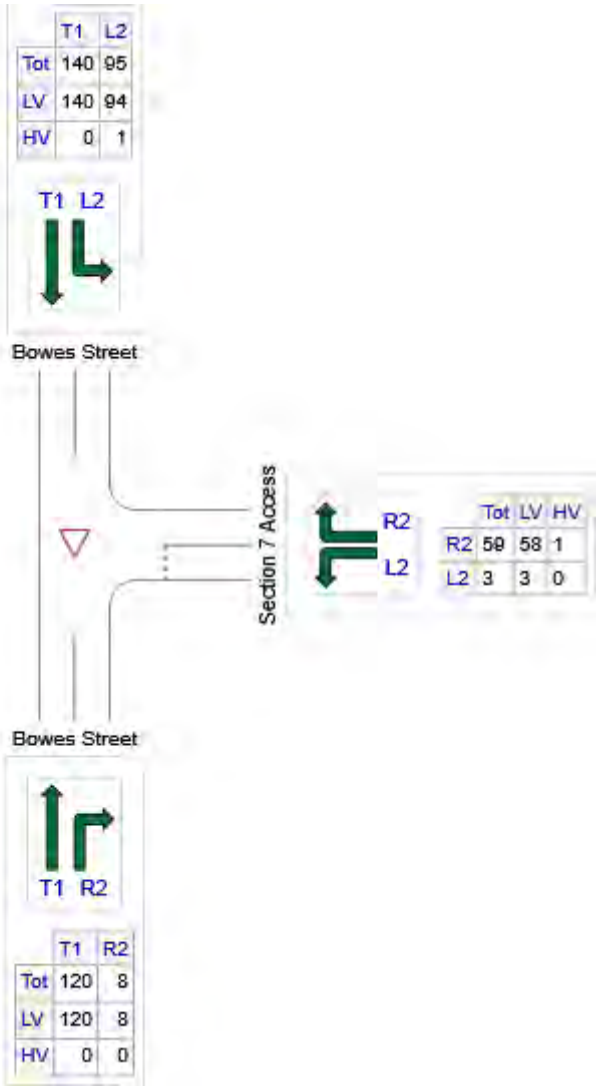
Site: [2040 Base - AM: BS-S7]

Bowes Street / Section 7 Access
Existing Priority-Controlled (Give-Way) T-Intersection
Site Category: 2040 Base Scenario - Weekday Morning Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	128	128	0
E: Section 7 Access	62	61	1
N: Bowes Street	235	234	1
Total	425	423	2

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
2	T1	120	0.0	0.068	0.1	LOS A	0.1	0.4	0.05	0.04	0.05	47.5
3	R2	8	0.0	0.068	5.1	LOS A	0.1	0.4	0.05	0.04	0.05	47.6
Approach		128	0.0	0.068	0.4	NA	0.1	0.4	0.05	0.04	0.05	47.5
East: Section 7 Access												
4	L2	3	0.0	0.064	0.4	LOS A	0.2	1.5	0.33	0.32	0.33	24.5
6	R2	59	1.8	0.064	1.8	LOS A	0.2	1.5	0.33	0.32	0.33	23.8
Approach		62	1.7	0.064	1.8	LOS A	0.2	1.5	0.33	0.32	0.33	23.9
North: Bowes Street												
7	L2	95	1.1	0.123	4.3	LOS A	0.0	0.0	0.00	0.22	0.00	23.4
8	T1	140	0.0	0.123	0.0	LOS A	0.0	0.0	0.00	0.22	0.00	42.3
Approach		235	0.4	0.123	1.8	NA	0.0	0.0	0.00	0.22	0.00	33.9
All Vehicles		425	0.5	0.123	1.3	NA	0.2	1.5	0.06	0.18	0.06	35.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Bowes Street													
Lane 1	128	0.0	1902	0.068	100	0.4	LOS A	0.1	0.4	Full	60	0.0	0.0
Approach	128	0.0		0.068		0.4	NA	0.1	0.4				
East: Section 7 Access													
Lane 1	62	1.7	978	0.064	100	1.8	LOS A	0.2	1.5	Full	15	0.0	0.0
Approach	62	1.7		0.064		1.8	LOS A	0.2	1.5				
North: Bowes Street													
Lane 1	235	0.4	1905	0.123	100	1.8	LOS A	0.0	0.0	Full	60	0.0	0.0
Approach	235	0.4		0.123		1.8	NA	0.0	0.0				
Intersection	425	0.5		0.123		1.3	NA	0.2	1.5				

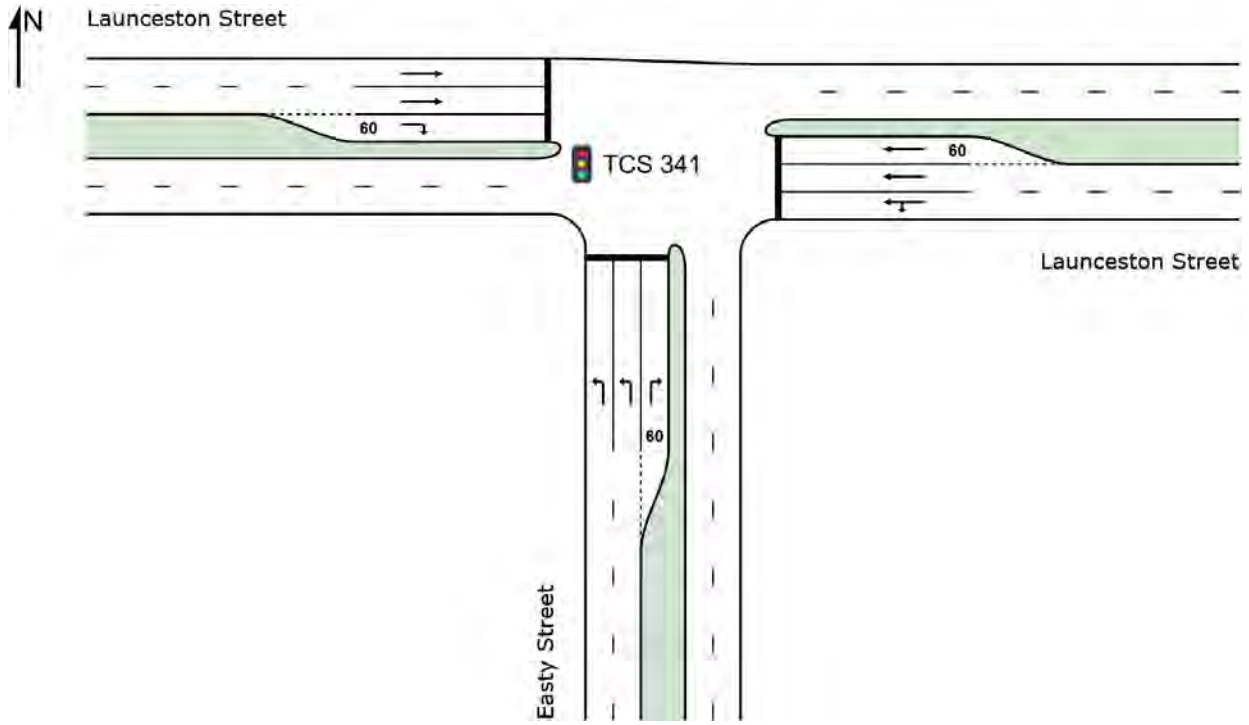
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: TCS 341 [2040 Base - AM: ES-LS]

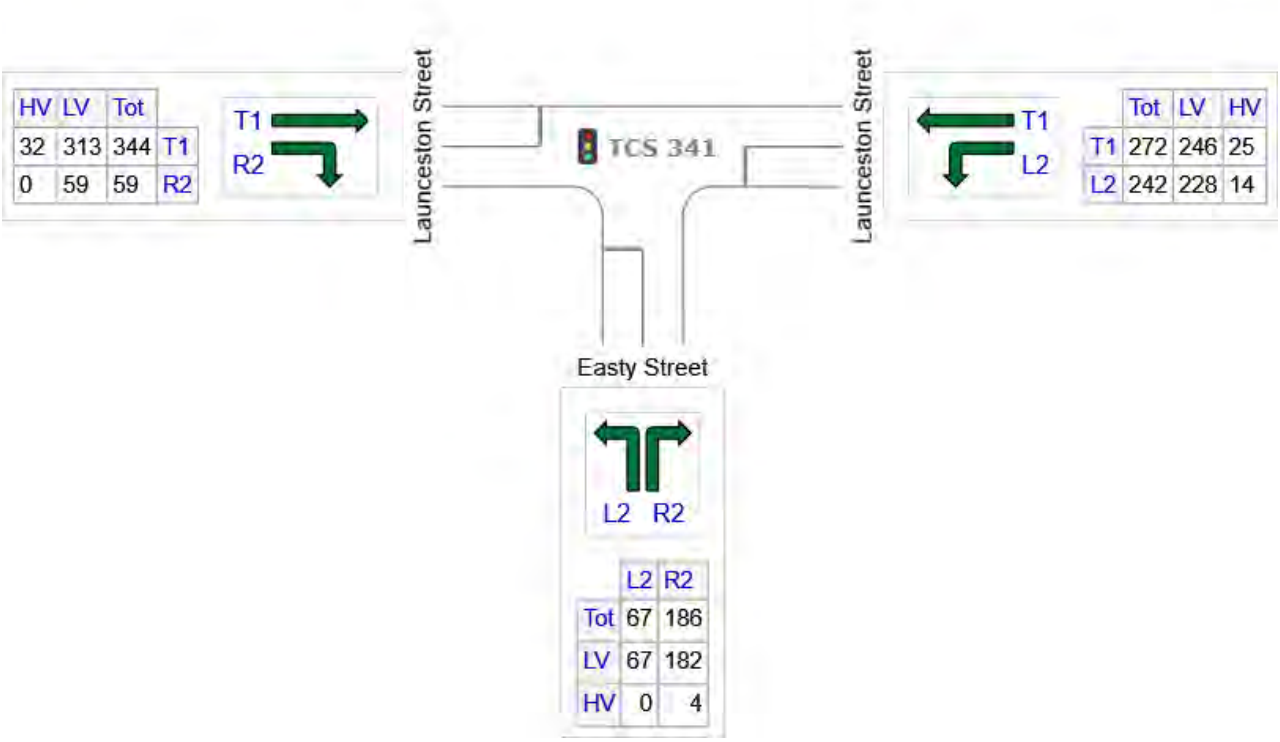
Easty Street / Launceston Street
Existing Signalised T-Intersection
Site Category: 2040 Base Scenario - Weekday Morning Peak Hour
Signals - Fixed Time Isolated Cycle Time = 68 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Site Layout



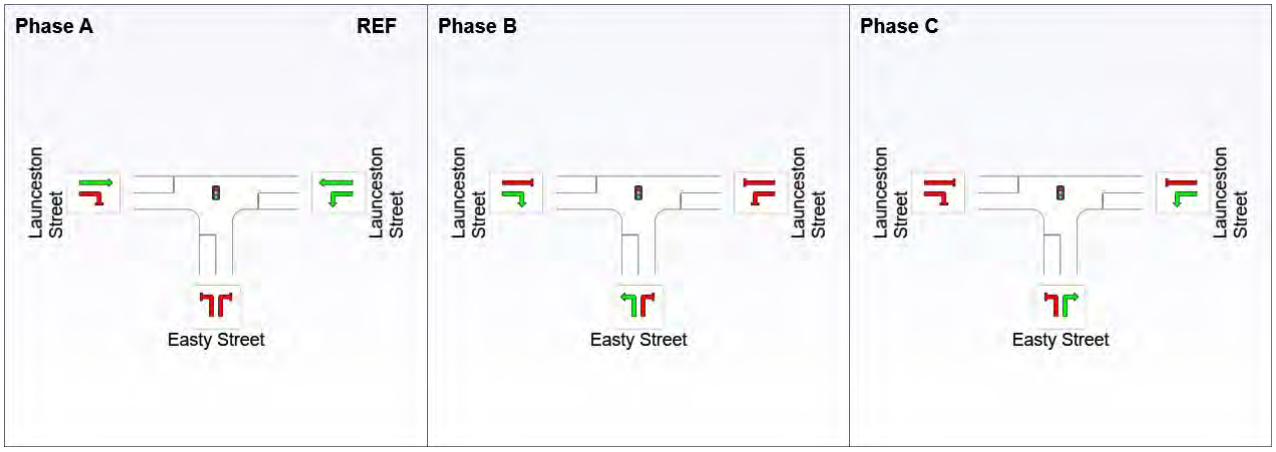
OD Demand Flows



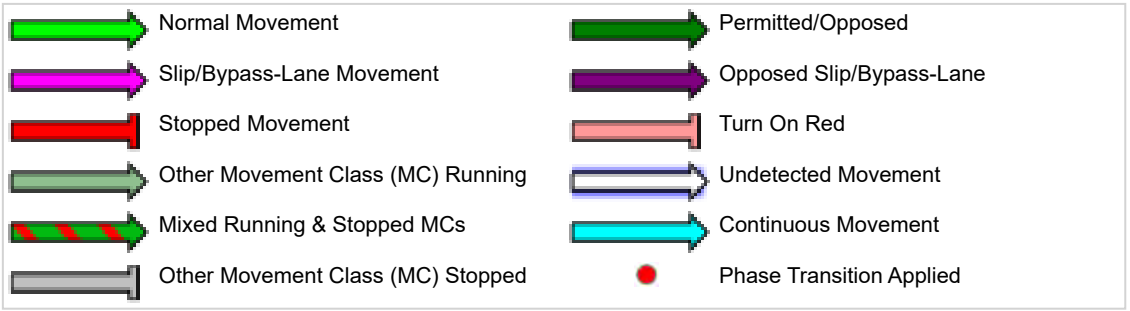
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Easty Street	254	249	4
E: Launceston Street	514	475	39
W: Launceston Street	403	372	32
Total	1171	1096	75

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	30	49
Green Time (sec)	25	13	14
Phase Time (sec)	31	18	19
Phase Split	46%	26%	28%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Easty Street												
1	L2	67	0.0	0.095	28.4	LOS B	0.9	6.6	0.86	0.69	0.86	23.6
3	R2	186	2.3	0.495	30.1	LOS C	5.7	40.6	0.93	0.79	0.93	25.6
Approach		254	1.7	0.495	29.6	LOS C	5.7	40.6	0.91	0.76	0.91	25.2
East: Launceston Street												
4	L2	242	5.7	0.210	8.7	LOS A	3.3	23.9	0.43	0.63	0.43	34.5
5	T1	272	9.3	0.201	15.9	LOS B	3.1	23.5	0.72	0.58	0.72	27.9
Approach		514	7.6	0.210	12.5	LOS A	3.3	23.9	0.59	0.60	0.59	31.2
West: Launceston Street												
11	T1	344	9.2	0.254	16.3	LOS B	4.0	30.4	0.74	0.61	0.74	27.7
12	R2	59	0.0	0.166	28.8	LOS C	1.7	11.8	0.87	0.72	0.87	23.7
Approach		403	7.8	0.254	18.1	LOS B	4.0	30.4	0.76	0.62	0.76	27.0
All Vehicles		1171	6.4	0.495	18.2	LOS B	5.7	40.6	0.71	0.64	0.71	28.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Easty Street													
Lane 1	34	0.0	355	0.095	100	28.4	LOS B	0.9	6.6	Full	305	0.0	0.0
Lane 2	34	0.0	355	0.095	100	28.4	LOS B	0.9	6.6	Full	305	0.0	0.0
Lane 3	186	2.3	376	0.495	100	30.1	LOS C	5.7	40.6	Short	60	0.0	NA
Approach	254	1.7		0.495		29.6	LOS C	5.7	40.6				
East: Launceston Street													
Lane 1	242	5.7	1155	0.210	100	8.7	LOS A	3.3	23.9	Full	260	0.0	0.0
Lane 2	136	9.3	676	0.201	96[5]	15.9	LOS B	3.1	23.5	Full	260	0.0	0.0
Lane 3	136	9.3	676	0.201	96[5]	15.9	LOS B	3.1	23.5	Short	60	0.0	NA
Approach	514	7.6		0.210		12.5	LOS A	3.3	23.9				
West: Launceston Street													
Lane 1	172	9.2	677	0.254	100	16.3	LOS B	4.0	30.4	Full	130	0.0	0.0
Lane 2	172	9.2	677	0.254	100	16.3	LOS B	4.0	30.4	Full	130	0.0	0.0
Lane 3	59	0.0	355	0.166	100	28.8	LOS C	1.7	11.8	Short	60	0.0	NA
Approach	403	7.8		0.254		18.1	LOS B	4.0	30.4				
Intersection	1171	6.4		0.495		18.2	LOS B	5.7	40.6				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5 Lane under-utilisation found by the program

USER REPORT FOR NETWORK SITE

Project: 24-0487_20260304

Template: Default Site User Report

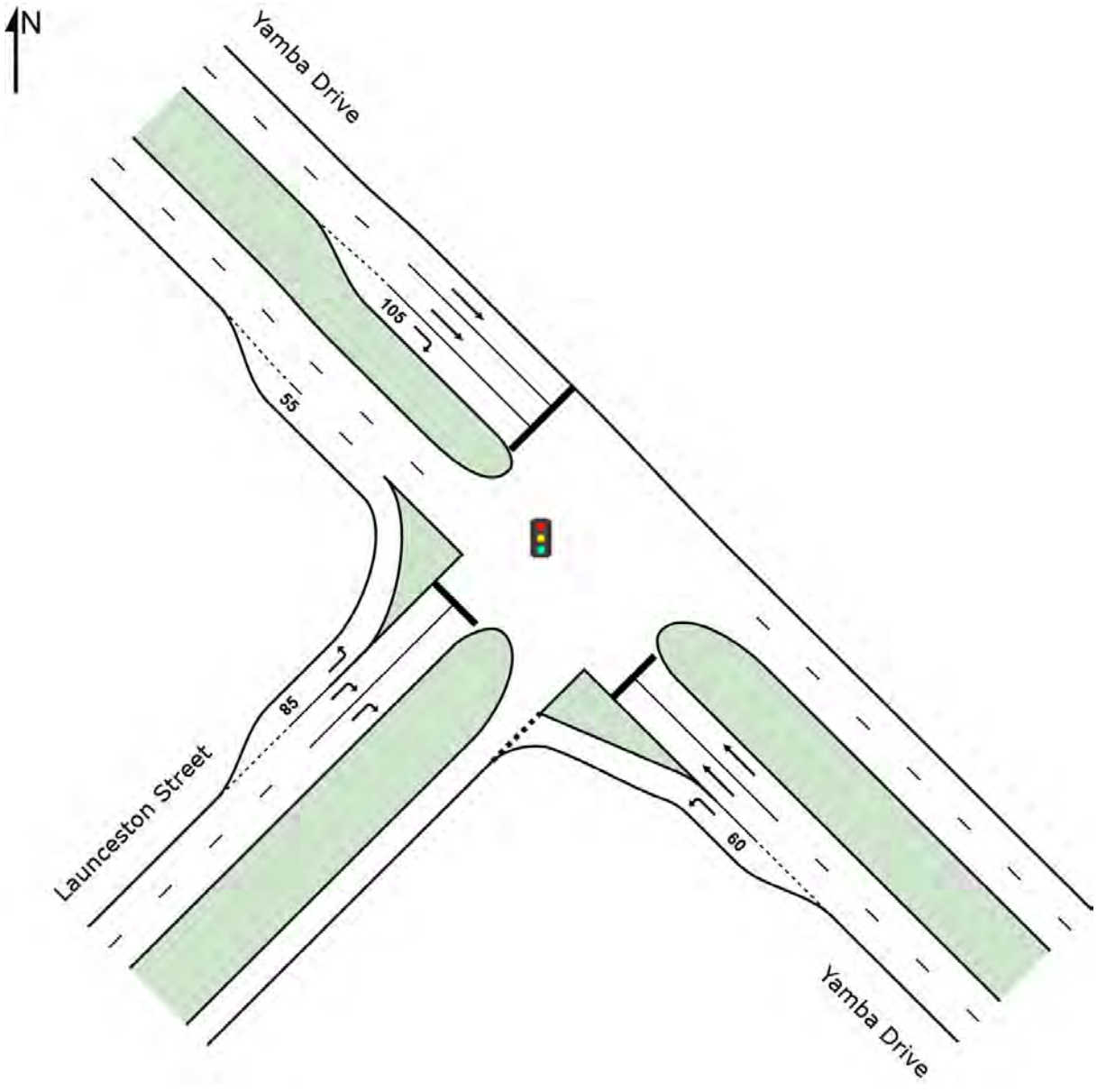
Site: [2040 Base - AM: LS-YD]

Network: 5 [2040 Base - AM: LS-WS-YD]

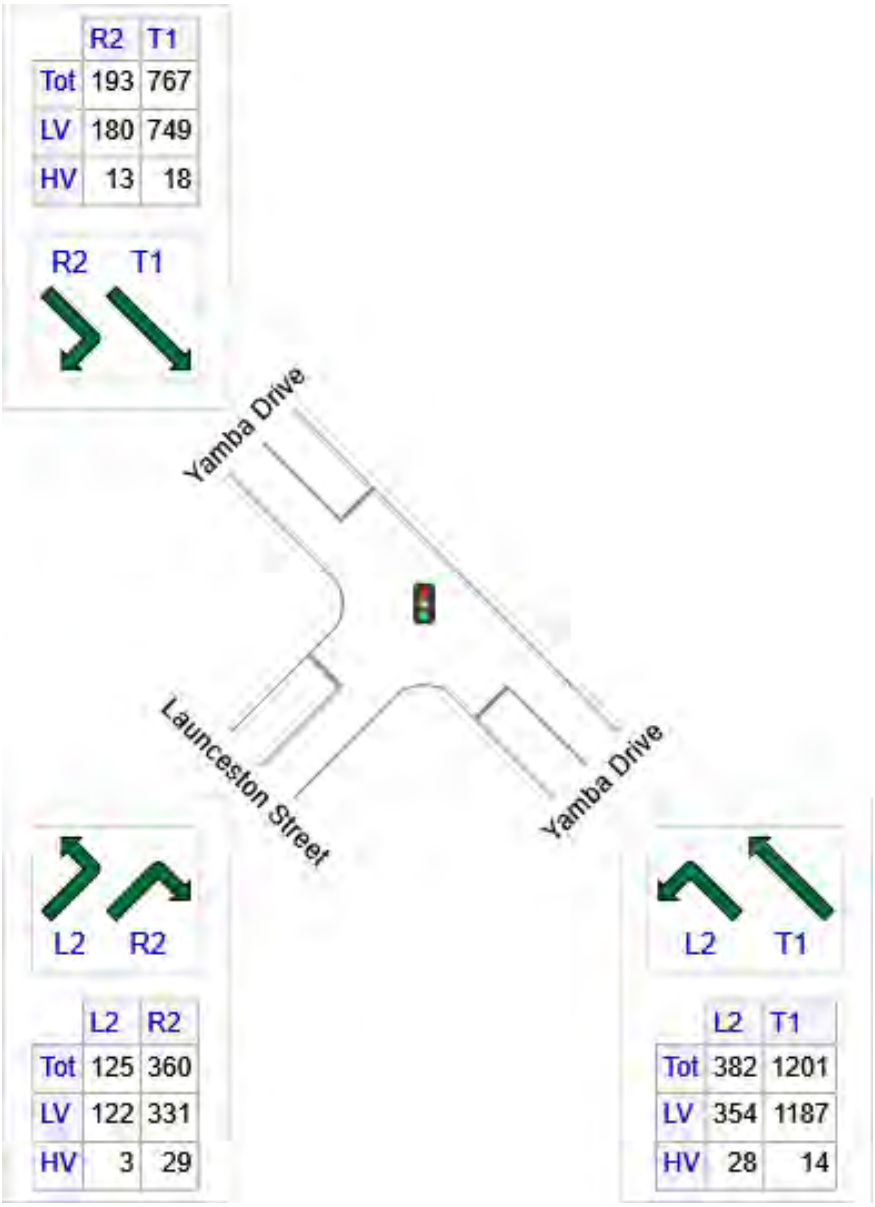
Northwest part of Launceston Street / Wisdom Street / Yamba Drive
Existing Signalised Offset X-Intersection
Site Category: 2040 Base Scenario - Weekday Morning Peak Hour
Signals - Fixed Time Coordinated Cycle Time = 128 seconds (CCG User-Given Phase Times)
Common Control Group: CCG1 [CCG]

Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E
Output Phase Sequence: A, D, E

Site Layout



OD Demand Flows

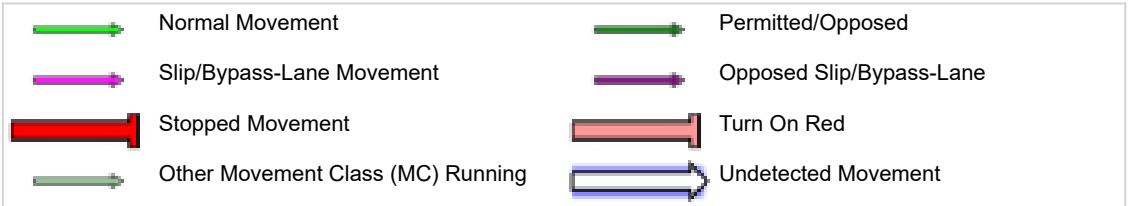


	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
SE: Yamba Drive	1583	1541	42
NW: Yamba Drive	960	929	31
SW: Launceston Street	485	453	33
Total	3028	2923	105

Input Phase Sequence (CCG)

Movement Class: All Movement Classes

REF: Reference Phase
VAR: Variable Phase



Mixed Running & Stopped MCs

Continuous Movement

Other Movement Class (MC) Stopped

Phase Transition Applied

Phase Timing Summary (CCG)

Phase	A	D	E
Phase Change Time (sec)	0	66	93
Green Time (sec)	60	21	29
Phase Time (sec)	66	27	35
Phase Split	52%	21%	27%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Yamba Drive														
4	L2	382	7.4	342	7.4	0.244	4.9	LOS A	0.5	3.4	0.03	0.58	0.03	40.6
5	T1	1201	1.1	1075	1.1	0.592	12.1	LOS B	15.0	106.1	0.42	0.38	0.42	41.9
Approach		1583	2.7	1416[N1]	2.6	0.592	10.4	LOS B	15.0	106.1	0.33	0.43	0.33	41.6
NorthWest: Yamba Drive														
11	T1	767	2.3	767	2.3	0.745	31.5	LOS C	20.2	144.2	0.88	0.80	0.90	19.9
12	R2	193	6.6	193	6.6	0.479	53.9	LOS D	10.5	77.8	0.92	0.81	0.92	20.6
Approach		960	3.2	960	3.2	0.745	36.0	LOS D	20.2	144.2	0.89	0.80	0.91	20.1
SouthWest: Launceston Street														
1	L2	125	2.5	125	2.5	0.069	2.9	LOS A	0.0	0.0	0.00	0.36	0.00	39.5
3	R2	360	8.2	360	8.2	1.093	175.8	LOS F	21.1	158.4	1.00	1.50	2.16	4.8
Approach		485	6.7	485	6.7	1.093	131.2	LOS F	21.1	158.4	0.74	1.21	1.60	7.3
All Vehicles		3028	3.5	2862[N1]	3.7	1.093	39.4	LOS D	21.1	158.4	0.59	0.69	0.74	18.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
SouthEast: Yamba Drive															
Lane 1	382	7.4	342	7.4	1400	0.244	100	4.9	LOS A	0.5	3.4	Short	60	0.0	NA
Lane 2	601	1.1	537	1.1	907	0.592	100	6.3	LOS A	8.7	61.3	Full	65	0.0	0.0
Lane 3	601	1.1	537	1.1	907	0.592	100	17.9	LOS B	15.0 [N4]	106.1 [N4]	Full	65	0.0	50.0
Approach	1583	2.7	1416 [N1]	2.6		0.592		10.4	LOS B	15.0	106.1				
NorthWest: Yamba Drive															
Lane 1	384	2.3	384	2.3	515	0.745	100	31.5	LOS C	20.2	144.2	Full	215	-42.8 [N3]	0.0
Lane 2	384	2.3	384	2.3	515	0.745	100	31.5	LOS C	20.2	144.2	Full	215	-42.8 [N3]	0.0
Lane 3	193	6.6	193	6.6	402	0.479	100	53.9	LOS D	10.5	77.8	Short	105	0.0	NA
Approach	960	3.2	960	3.2		0.745		36.0	LOS D	20.2	144.2				
SouthWest: Launceston Street															
Lane 1	125	2.5	125	2.5	1824	0.069	100	2.9	LOS A	0.0	0.0	Short	85	0.0	NA
Lane 2	180	8.2	180	8.2	165	1.093	100	175.8	LOS F	21.1	158.4	Full	260	-42.8 [N3]	0.0
Lane 3	180	8.2	180	8.2	165	1.093	100	175.8	LOS F	21.1	158.4	Full	260	-42.8 [N3]	0.0
Approach	485	6.7	485	6.7		1.093		131.2	LOS F	21.1	158.4				
Intersection	3028	3.5	2862 [N1]	3.7		1.093		39.4	LOS D	21.1	158.4				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.
N3 Capacity Adjustment due to downstream lane blockage determined by the program.
N4 Average back of queue has been restricted to the available queue storage space.

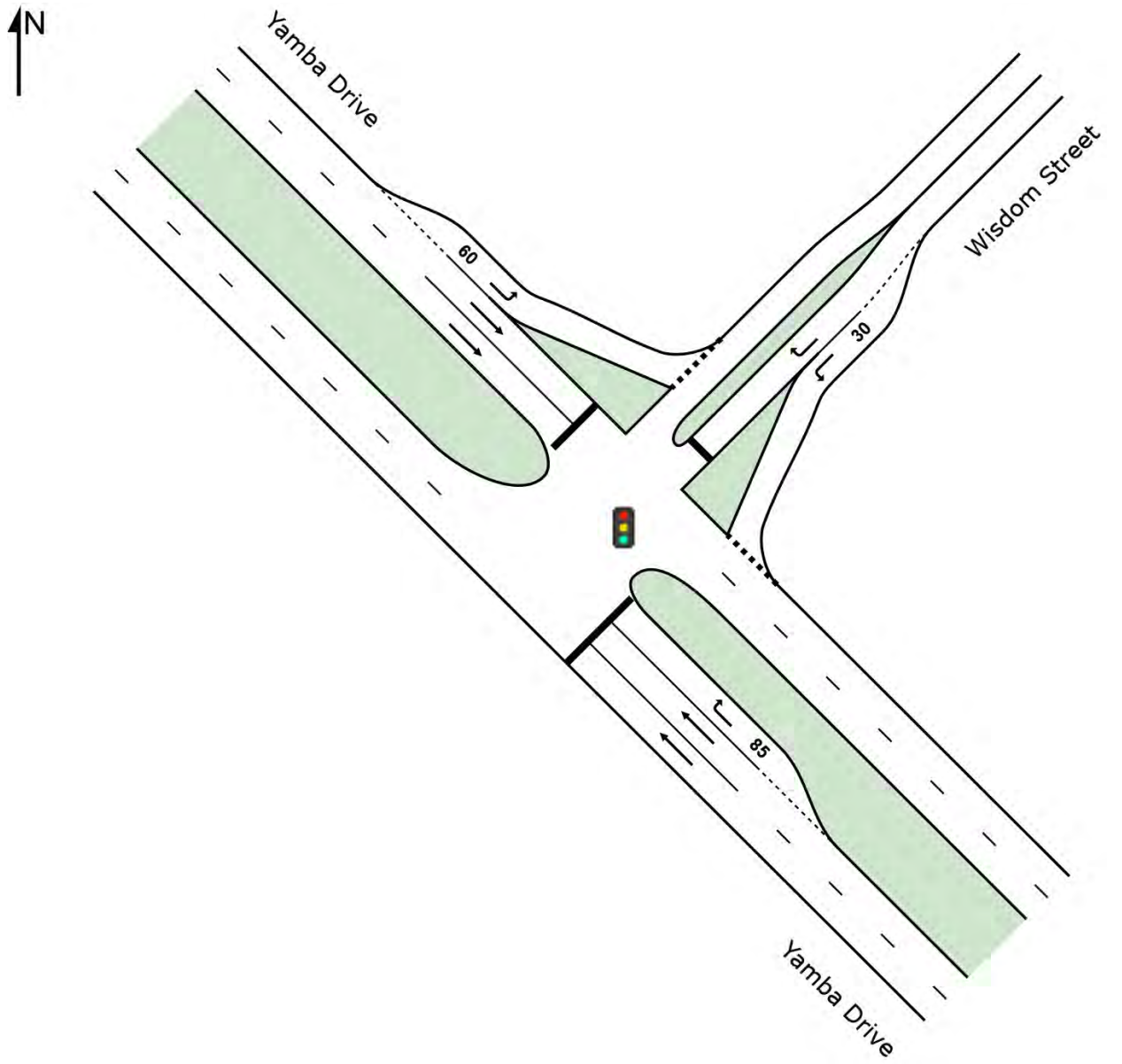
Site: [2040 Base - AM: WS-YD] Network: 5 [2040 Base - AM: LS-WS-YD]

Southeast part of Launceston Street / Wisdom Street / Yamba Drive
Existing Signalised Offset Cross Intersection
Site Category: 2040 Base Scenario - Weekday Morning Peak Hour
Signals - Fixed Time Coordinated Cycle Time = 128 seconds (CCG User-Given Phase Times)
Common Control Group: CCG1 [CCG]

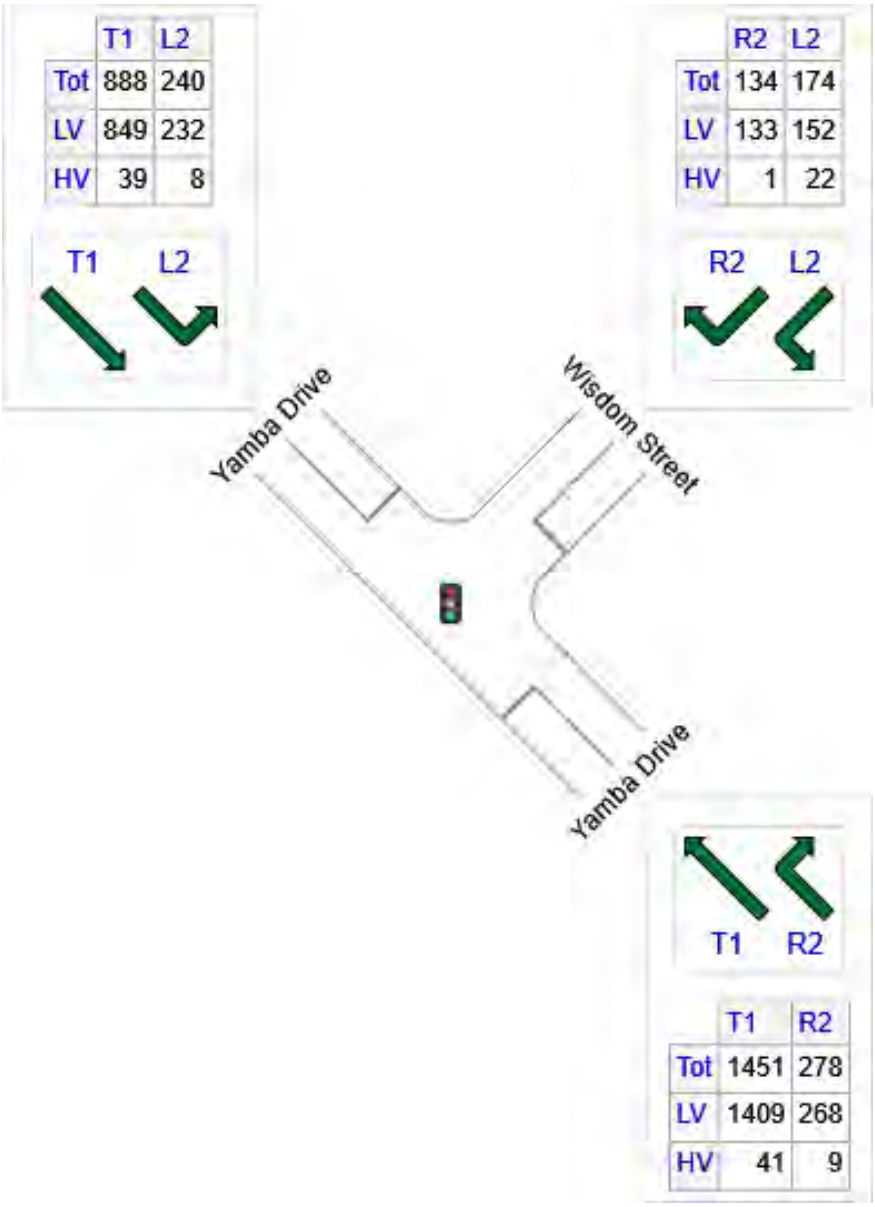
Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E
Output Phase Sequence: A, D, E

Some CCG output elements have been omitted as they have already been included under other Sites belonging to the same CCG.

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
SE: Yamba Drive	1728	1678	51
NE: Wisdom Street	307	284	23
NW: Yamba Drive	1128	1081	47
Total	3164	3043	121

Movement Performance - Vehicles														
Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Yamba Drive														
11	T1	1451	2.8	1451	2.8	1.100	161.7	LOS F	117.9	845.4	1.00	1.59	1.94	13.6
12	R2	278	3.4	278	3.4	0.677	56.1	LOS E	16.0	115.3	0.97	0.84	0.97	34.2
Approach		1728	2.9	1728	2.9	1.100	144.8	LOS F	117.9	845.4	1.00	1.47	1.79	16.2
NorthEast: Wisdom Street														
1	L2	174	12.7	174	12.7	0.175	5.7	LOS A	2.4	18.3	0.28	0.53	0.28	47.1
3	R2	134	0.8	134	0.8	1.018	130.4	LOS F	13.3	93.5	1.00	1.35	1.92	12.9
Approach		307	7.5	307	7.5	1.018	60.0	LOS E	13.3	93.5	0.59	0.89	0.99	27.4
NorthWest: Yamba Drive														
4	L2	240	3.5	237	3.5	0.172	5.9	LOS A	1.3	9.3	0.11	0.61	0.11	39.7
5	T1	888	4.4	876	4.3	0.493	18.2	LOS B	13.5	98.2	0.54	0.48	0.54	53.4
Approach		1128	4.2	1113[N1]	4.1	0.493	15.6	LOS B	13.5	98.2	0.45	0.50	0.45	49.9
All Vehicles		3164	3.8	3149[N1]	3.8	1.100	90.8	LOS F	117.9	845.4	0.76	1.07	1.24	22.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
SouthEast: Yamba Drive															
Lane 1	987	2.8	987	2.8	898	1.100	100	156.4	LOS F	117.9	845.4	Full	735	0.0	17.7
Lane 2	463	2.8	463	2.8	421[1]	1.100	100	173.0	LOS F	59.1	424.0	Full	735	-50.0[N3]	0.0
Lane 3	278	3.4	278	3.4	411	0.677	100	56.1	LOS E	16.0	115.3	Short	85	0.0	NA
Approach	1728	2.9	1728	2.9		1.100		144.8	LOS F	117.9	845.4				
NorthEast: Wisdom Street															
Lane 1	174	12.7	174	12.7	993	0.175	100	5.7	LOS A	2.4	18.3	Short	30	0.0	NA
Lane 2	134	0.8	134	0.8	131[1]	1.018	100	130.4	LOS F	13.3	93.5	Full	680	-50.0[N3]	0.0
Approach	307	7.5	307	7.5		1.018		60.0	LOS E	13.3	93.5				
NorthWest: Yamba Drive															
Lane 1	240	3.5	237	3.5	1374	0.172	100	5.9	LOS A	1.3	9.3	Short	60	0.0	NA
Lane 2	444	4.4	438	4.3	889	0.493	100	18.2	LOS B	13.5	98.2	Full	65	0.0	42.8
Lane 3	444	4.4	438	4.3	889	0.493	100	18.2	LOS B	13.5	98.2	Full	65	0.0	42.8
Approach	1128	4.2	1113[N1]	4.1		0.493		15.6	LOS B	13.5	98.2				
Intersection	3164	3.8	3149[N1]	3.8		1.100		90.8	LOS F	117.9	845.4				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.
N3 Capacity Adjustment due to downstream lane blockage determined by the program.

USER REPORT FOR SITE

Project: 24-0487_20260304

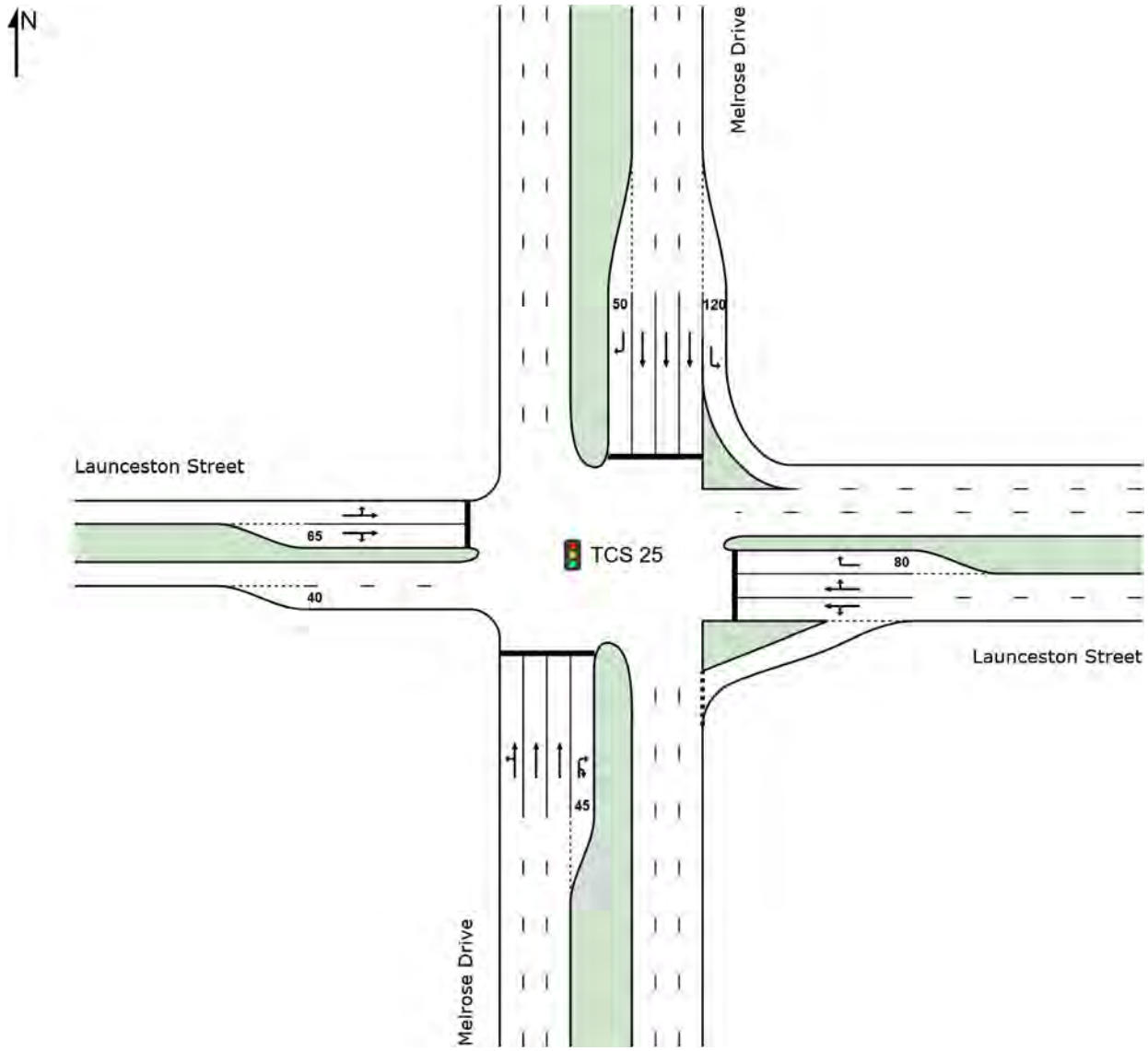
Template: Default Site User Report

Site: TCS 25 [2040 Base - PM: LS-MD]

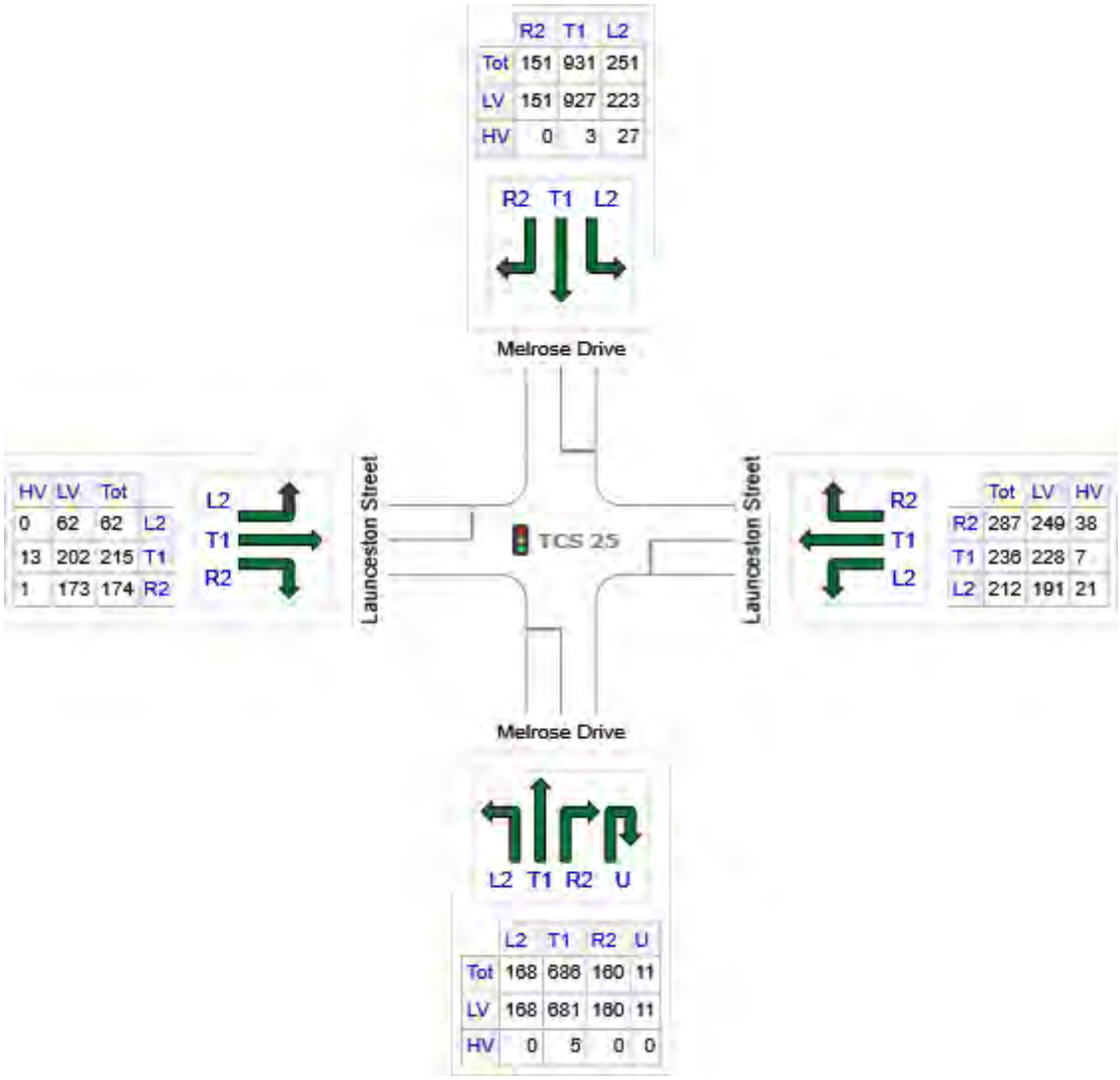
Launceston Street / Melrose Drive
Existing Signalised X-Intersection
Site Category: 2040 Base Scenario - Weekday Evening Peak Hour
Signals - Fixed Time Isolated Cycle Time = 110 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, B, D, E, F
Output Phase Sequence: A, B, D, E, F

Site Layout



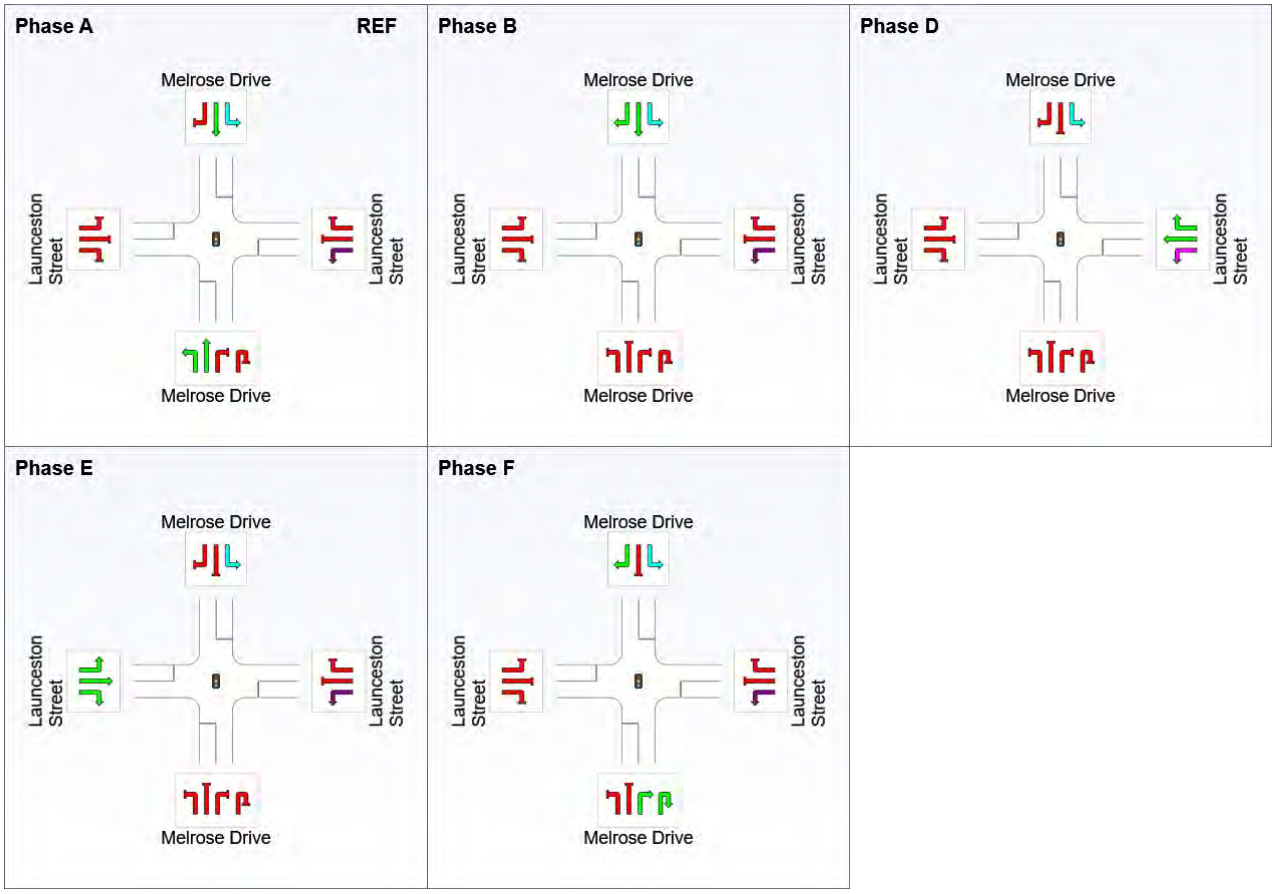
OD Demand Flows



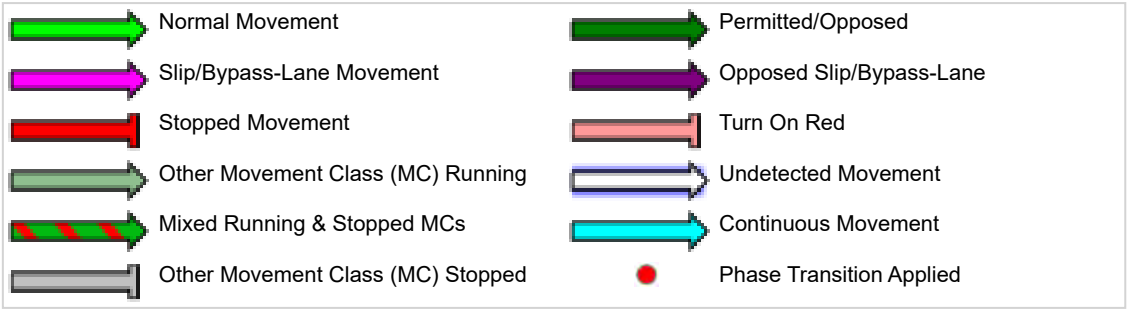
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Melrose Drive	1025	1020	5
E: Launceston Street	735	668	66
N: Melrose Drive	1332	1301	31
W: Launceston Street	451	437	14
Total	3542	3426	116

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	B	D	E	F
Phase Change Time (sec)	0	29	37	60	90
Green Time (sec)	23	2	23	24	14
Phase Time (sec)	29	2	29	30	20
Phase Split	26%	2%	26%	27%	18%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Melrose Drive												
1	L2	168	0.0	1.121	186.7	LOS F	33.1	232.4	1.00	1.61	2.37	5.4
2	T1	686	0.8	1.121	181.2	LOS F	33.9	239.0	1.00	1.61	2.37	11.0
3	R2	160	0.0	1.133	196.2	LOS F	19.8	138.6	1.00	1.49	2.51	4.9
3u	U	11	0.0	1.133	197.6	LOS F	19.8	138.6	1.00	1.49	2.51	6.7
Approach		1025	0.5	1.133	184.6	LOS F	33.9	239.0	1.00	1.59	2.39	9.1
East: Launceston Street												
4	L2	212	10.0	0.375	5.8	LOS A	0.8	6.1	0.08	0.57	0.08	42.4
5	T1	236	3.1	0.704	46.2	LOS D	14.1	102.2	0.98	0.86	1.02	12.7
6	R2	287	13.2	0.704	50.8	LOS D	14.1	102.2	0.98	0.86	1.03	24.4
Approach		735	9.0	0.704	36.4	LOS C	14.1	102.2	0.72	0.77	0.75	22.9
North: Melrose Drive												
7	L2	251	10.9	0.145	5.7	LOS A	0.0	0.0	0.00	0.52	0.00	49.1
8	T1	931	0.3	0.602	36.6	LOS C	15.4	108.1	0.91	0.78	0.91	32.0
9	R2	151	0.0	0.557	40.7	LOS C	5.9	41.4	0.98	0.82	1.09	27.2
Approach		1332	2.3	0.602	31.2	LOS C	15.4	108.1	0.75	0.73	0.76	33.4
West: Launceston Street												
10	L2	62	0.0	0.554	46.3	LOS D	11.0	79.5	0.94	0.79	0.94	26.0
11	T1	215	5.9	0.554	41.7	LOS C	11.0	79.5	0.94	0.80	0.94	13.4
12	R2	174	0.6	0.554	46.3	LOS D	10.9	77.2	0.94	0.81	0.94	17.3
Approach		451	3.0	0.554	44.1	LOS D	11.0	79.5	0.94	0.80	0.94	17.2
All Vehicles		3542	3.3	1.133	78.3	LOS F	33.9	239.0	0.84	1.00	1.25	17.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Melrose Drive													
Lane 1	288	0.3	257	1.121	100	184.4	LOS F	33.1	232.4	Full	205	0.0	16.3
Lane 2	296	0.8	264	1.121	100	180.8	LOS F	33.9	239.0	Full	205	0.0	18.9
Lane 3	271	0.8	242[1]	1.121	100	181.7	LOS F	31.2	219.6	Full	205	0.0	11.2
Lane 4	171	0.0	151	1.133	100	196.3	LOS F	19.8	138.6	Short	45	0.0	NA
Approach	1025	0.5		1.133		184.6	LOS F	33.9	239.0				
East: Launceston Street													
Lane 1	212	10.0	564	0.375	53[5]	5.8	LOS A	0.8	6.1	Full	90	0.0	0.0
Lane 2	273	4.5	389	0.704	100	46.8	LOS D	14.1	102.2	Full	90	0.0	16.5
Lane 3	250	13.2	355	0.704	100	50.9	LOS D	12.9	100.8	Short	80	0.0	NA
Approach	735	9.0		0.704		36.4	LOS C	14.1	102.2				
North: Melrose Drive													
Lane 1	251	10.9	1723	0.145	100	5.7	LOS A	0.0	0.0	Short	120	0.0	NA
Lane 2	330	0.3	548	0.602	100	37.0	LOS C	15.4	108.1	Full	470	0.0	0.0
Lane 3	330	0.3	548	0.602	100	37.0	LOS C	15.4	108.1	Full	470	0.0	0.0
Lane 4	271	0.3	450[1]	0.602	100	35.6	LOS C	12.2	85.4	Full	470	0.0	0.0
Lane 5	151	0.0	270	0.557	100	40.7	LOS C	5.9	41.4	Short	50	0.0	NA
Approach	1332	2.3		0.602		31.2	LOS C	15.4	108.1				
West: Launceston Street													
Lane 1	226	4.3	409	0.554	100	43.0	LOS D	11.0	79.5	Full	95	0.0	0.0
Lane 2	224	1.8	405	0.554	100	45.3	LOS D	10.9	77.2	Short	65	0.0	NA
Approach	451	3.0		0.554		44.1	LOS D	11.0	79.5				
Intersection	3542	3.3		1.133		78.3	LOS F	33.9	239.0				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

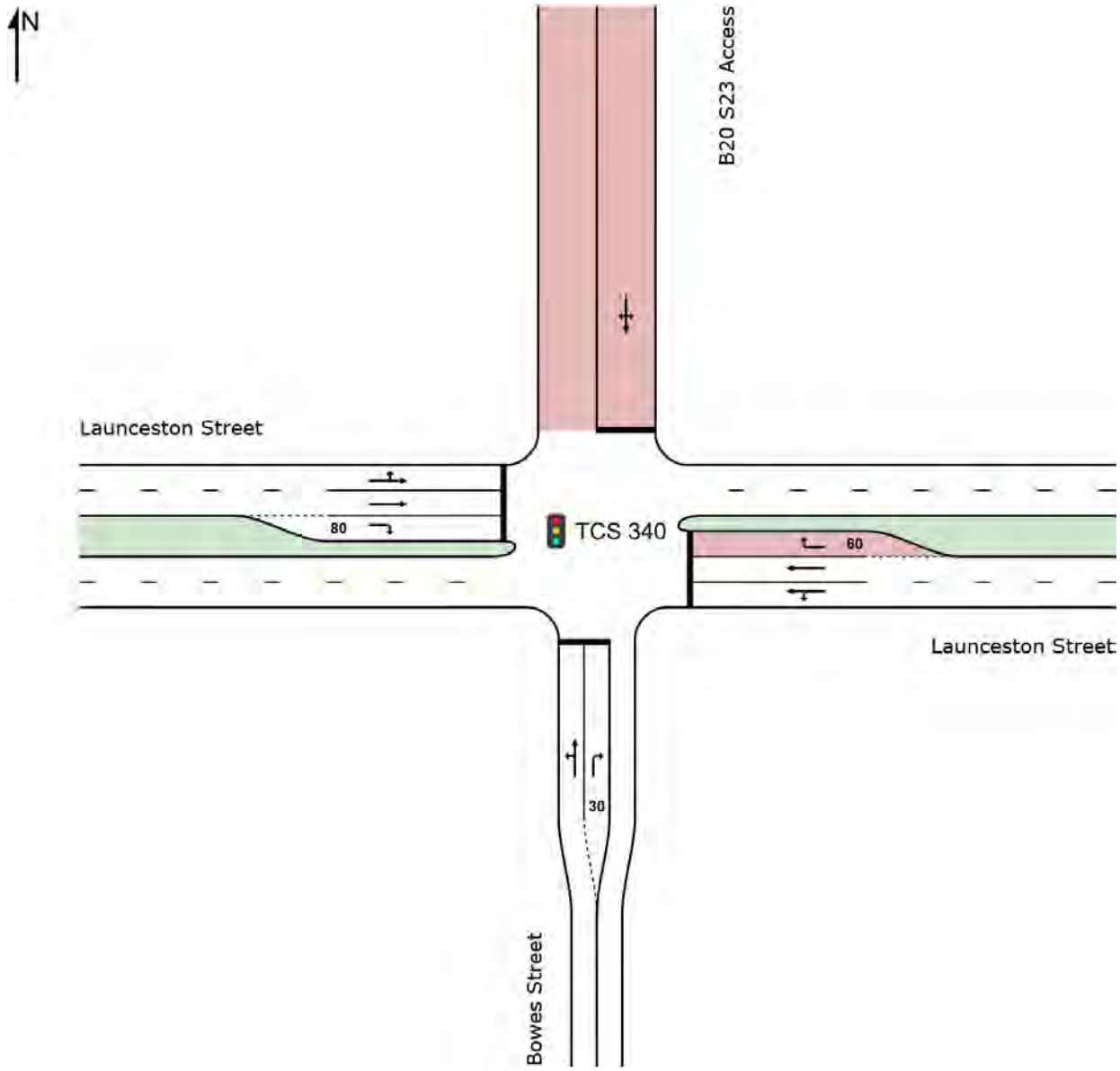
1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
5 Lane under-utilisation found by the program

Site: TCS 340 [2040 Base - PM: BS-LS]

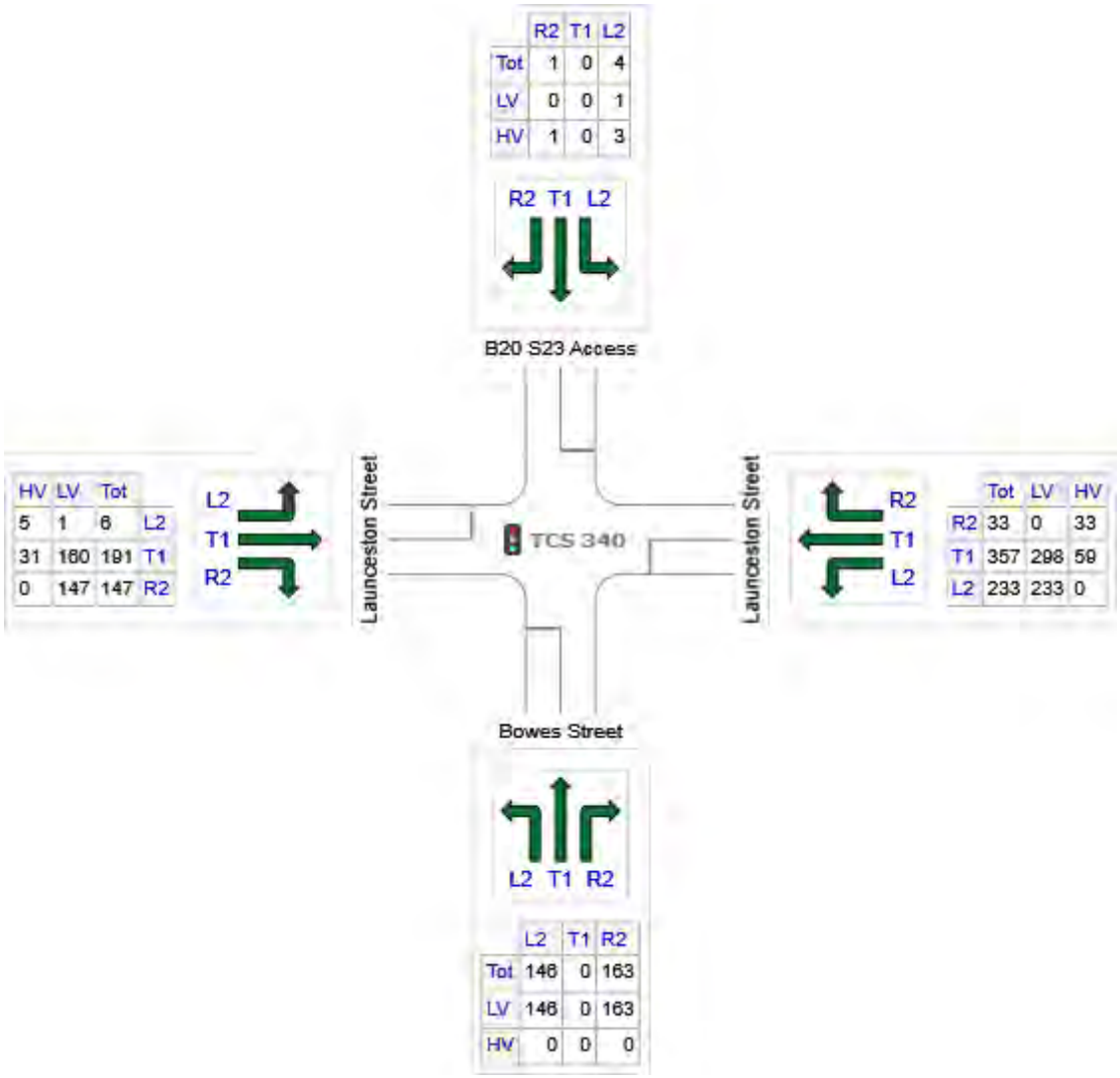
Block 20 Section 23 Access / Bowes Street / Launceston Street
Existing Signalised X-Intersection
Site Category: 2040 Base Scenario - Weekday Evening Peak Hour
Signals - Fixed Time Isolated Cycle Time = 89 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E, G
Output Phase Sequence: A, D, E, G

Site Layout



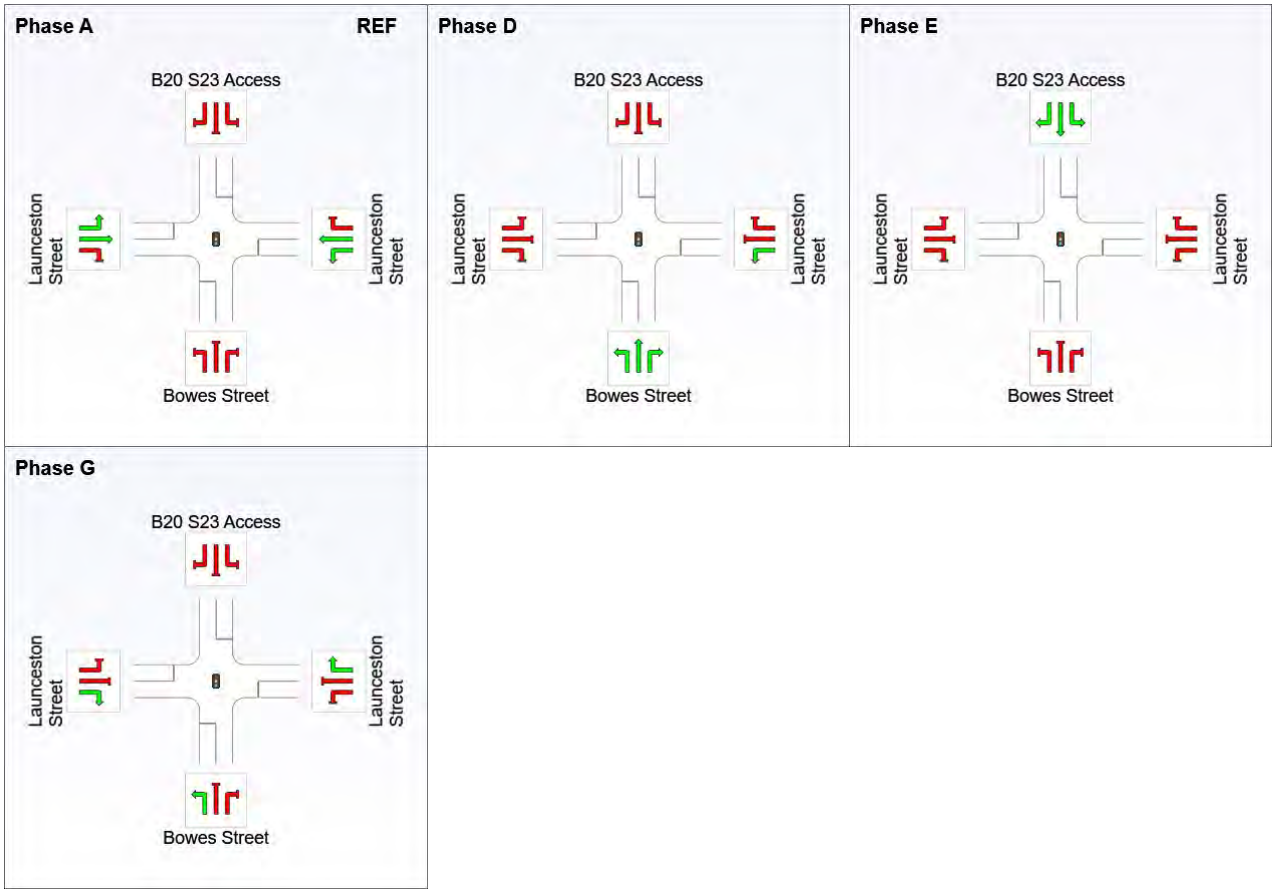
OD Demand Flows



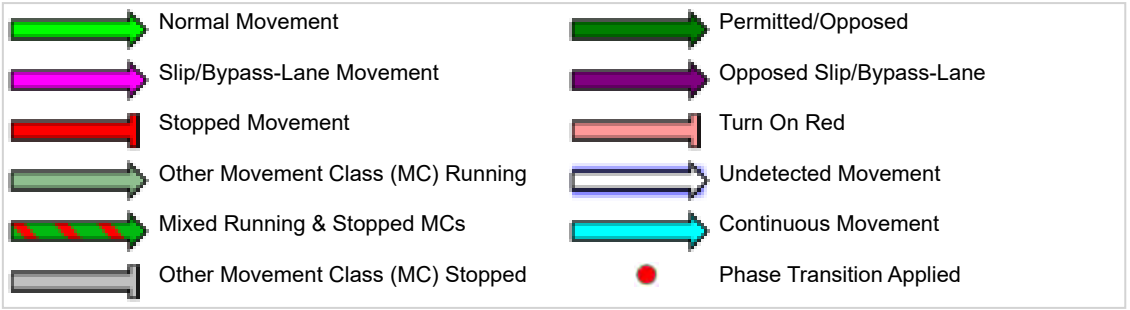
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	310	310	0
E: Launceston Street	622	531	92
N: B20 S23 Access	5	1	4
W: Launceston Street	344	308	36
Total	1281	1150	132

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	D	E	G
Phase Change Time (sec)	0	30	63	76
Green Time (sec)	24	27	7	10
Phase Time (sec)	30	33	10	16
Phase Split	34%	37%	11%	18%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	146	0.0	0.185	13.1	LOS A	2.7	19.1	0.66	0.70	0.66	22.7
2	T1	0	0.0	0.185	13.5	LOS A	2.7	19.1	0.66	0.70	0.66	13.1
3	R2	163	0.0	0.290	28.9	LOS C	5.4	38.1	0.81	0.76	0.81	12.9
Approach		310	0.0	0.290	21.4	LOS B	5.4	38.1	0.73	0.73	0.73	16.3
East: Launceston Street												
4	L2	233	0.0	0.552	32.4	LOS C	11.8	86.0	0.88	0.80	0.88	12.6
5	T1	357	16.5	0.552	29.6	LOS C	11.8	86.0	0.90	0.78	0.90	17.9
6	R2	33	100.0	0.268	48.2	LOS D	1.4	18.2	0.95	0.74	0.95	8.6
Approach		622	14.7	0.552	31.6	LOS C	11.8	86.0	0.89	0.78	0.89	15.4
North: B20 S23 Access												
7	L2	4	75.0	0.053	43.5	LOS D	0.2	2.7	0.95	0.63	0.95	8.2
8	T1	0	100.0	0.053	43.5	LOS D	0.2	2.7	0.95	0.63	0.95	5.3
9	R2	1	100.0	0.053	43.5	LOS D	0.2	2.7	0.95	0.63	0.95	8.8
Approach		5	80.4	0.053	43.5	LOS D	0.2	2.7	0.95	0.63	0.95	8.3
West: Launceston Street												
10	L2	6	83.3	0.263	34.1	LOS C	3.4	27.8	0.83	0.67	0.83	13.5
11	T1	191	16.0	0.263	28.1	LOS B	3.5	27.8	0.83	0.67	0.83	19.1
12	R2	147	0.0	0.883	59.9	LOS E	7.6	53.5	1.00	1.02	1.52	7.8
Approach		344	10.4	0.883	41.8	LOS C	7.6	53.5	0.90	0.82	1.13	12.7
All Vehicles		1281	10.3	0.883	31.9	LOS C	11.8	86.0	0.86	0.78	0.92	14.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	Demand Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	95% Back of Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Bowes Street													
Lane 1	146	0.0	792	0.185	100	13.1	LOS A	2.7	19.1	Full	35	0.0	12.8[8]
Lane 2	163	0.0	563	0.290	100	28.9	LOS C	5.4	38.1	Short	30	0.0	NA
Approach	310	0.0		0.290		21.4	LOS B	5.4	38.1				
East: Launceston Street													
Lane 1	327	4.8	592	0.552	100	30.8	LOS C	11.8	86.0	Full	95	0.0	0.0
Lane 2	262	16.5	475	0.552	100	30.6	LOS C	10.0	79.6	Full	95	0.0	0.0
Lane 3	33	100.0	122	0.268	100	48.2	LOS D	1.4	18.2	Short	60	0.0	NA
Approach	622	14.7		0.552		31.6	LOS C	11.8	86.0				
North: B20 S23 Access													
Lane 1	5	80.4	101	0.053	100	43.5	LOS D	0.2	2.7	Full	30	0.0	0.0
Approach	5	80.4		0.053		43.5	LOS D	0.2	2.7				
West: Launceston Street													
Lane 1	97	20.4	369	0.263	100	28.5	LOS C	3.4	27.8	Full	105	0.0	0.0
Lane 2	100	16.0	381	0.263	100	28.1	LOS B	3.5	27.8	Full	105	0.0	0.0
Lane 3	147	0.0	167	0.883	100	59.9	LOS E	7.6	53.5	Short	80	0.0	NA
Approach	344	10.4		0.883		41.8	LOS C	7.6	53.5				
Intersection	1281	10.3		0.883		31.9	LOS C	11.8	86.0				

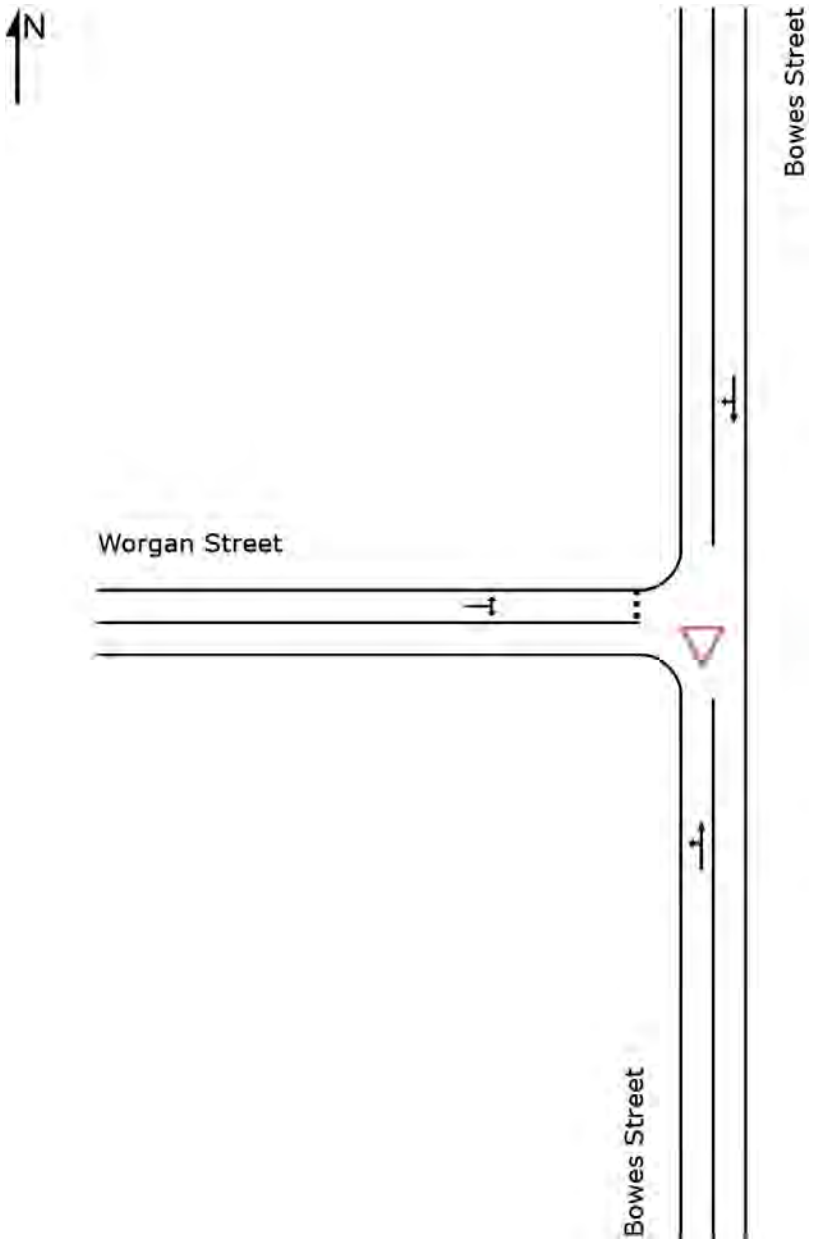
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

8 Probability of Blockage has been set on the basis of a queue that overflows from a short lane.

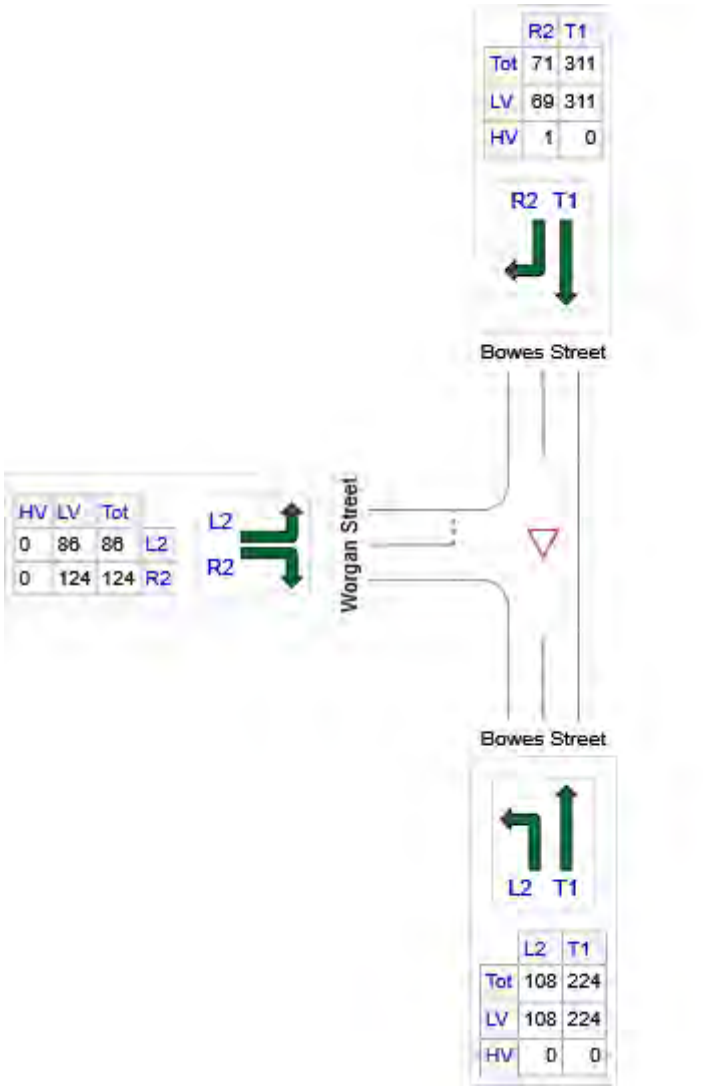
Site: [2040 Base - PM: BS-WS]

Bowes Street / Worgan Street
Existing Priority-Controlled (Give-Way) T-Intersection
Site Category: 2040 Base Scenario - Weekday Evening Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	333	333	0
N: Bowes Street	381	380	1
W: Worgan Street	211	211	0
Total	924	923	1

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	108	0.0	0.173	4.6	LOS A	0.0	0.0	0.00	0.18	0.00	32.9
2	T1	224	0.0	0.173	0.0	LOS A	0.0	0.0	0.00	0.18	0.00	44.0
Approach		333	0.0	0.173	1.5	NA	0.0	0.0	0.00	0.18	0.00	39.7
North: Bowes Street												
8	T1	311	0.0	0.215	0.4	LOS A	0.5	3.9	0.15	0.11	0.15	45.0
9	R2	71	1.5	0.215	4.6	LOS A	0.5	3.9	0.15	0.11	0.15	17.5
Approach		381	0.3	0.215	1.2	NA	0.5	3.9	0.15	0.11	0.15	38.5
West: Worgan Street												
10	L2	86	0.0	0.236	4.0	LOS A	0.9	6.4	0.42	0.66	0.42	19.3
12	R2	124	0.0	0.236	6.5	LOS A	0.9	6.4	0.42	0.66	0.42	30.7
Approach		211	0.0	0.236	5.5	LOS A	0.9	6.4	0.42	0.66	0.42	26.4
All Vehicles		924	0.1	0.236	2.3	NA	0.9	6.4	0.16	0.26	0.16	35.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

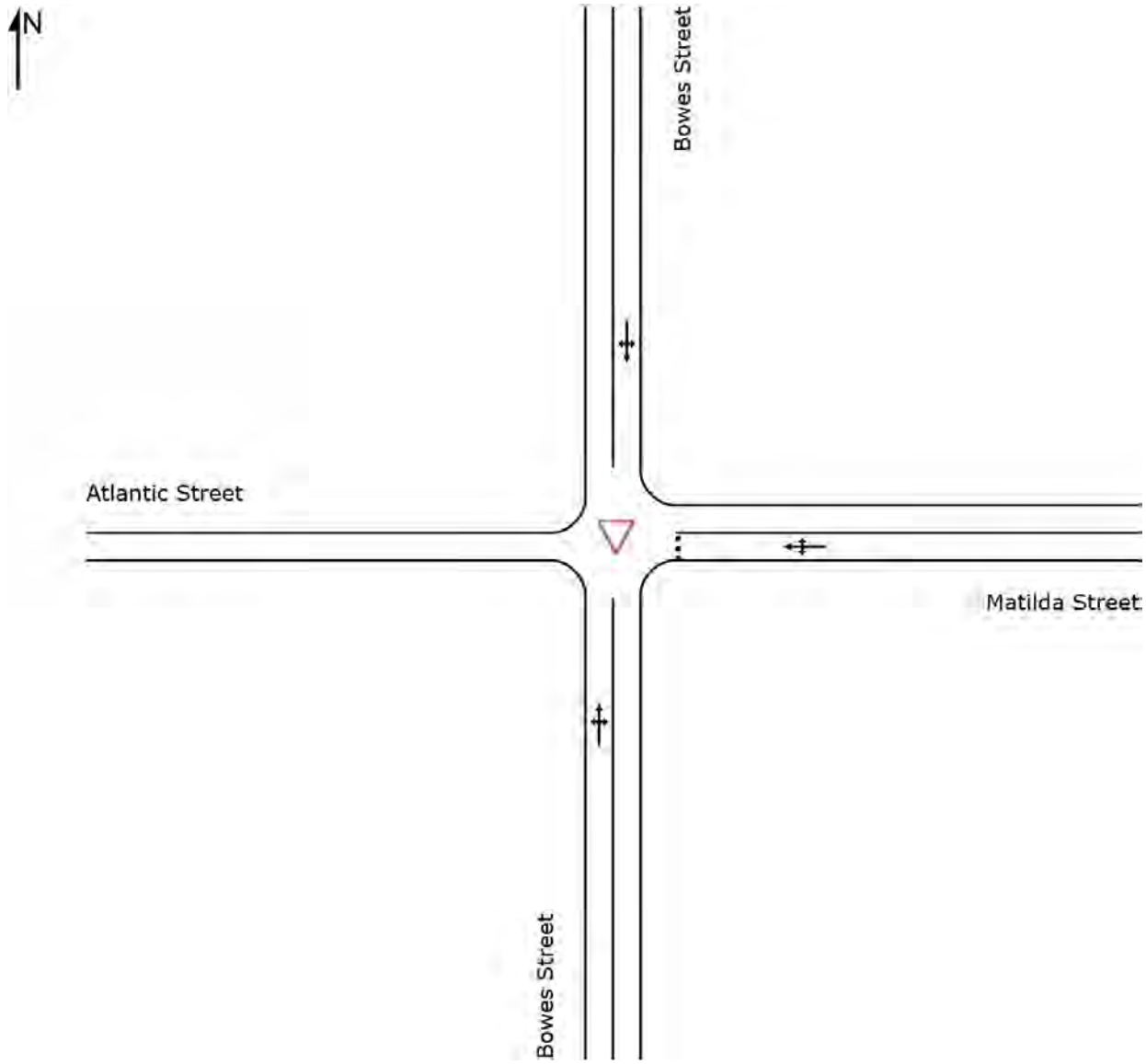
Lane Use and Performance													
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Bowes Street													
Lane 1	333	0.0	1919	0.173	100	1.5	LOS A	0.0	0.0	Full	105	0.0	0.0
Approach	333	0.0		0.173		1.5	NA	0.0	0.0				
North: Bowes Street													
Lane 1	381	0.3	1770	0.215	100	1.2	LOS A	0.5	3.9	Full	35	0.0	0.0
Approach	381	0.3		0.215		1.2	NA	0.5	3.9				
West: Worgan Street													
Lane 1	211	0.0	891	0.236	100	5.5	LOS A	0.9	6.4	Full	35	0.0	0.0
Approach	211	0.0		0.236		5.5	LOS A	0.9	6.4				
Intersection	924	0.1		0.236		2.3	NA	0.9	6.4				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

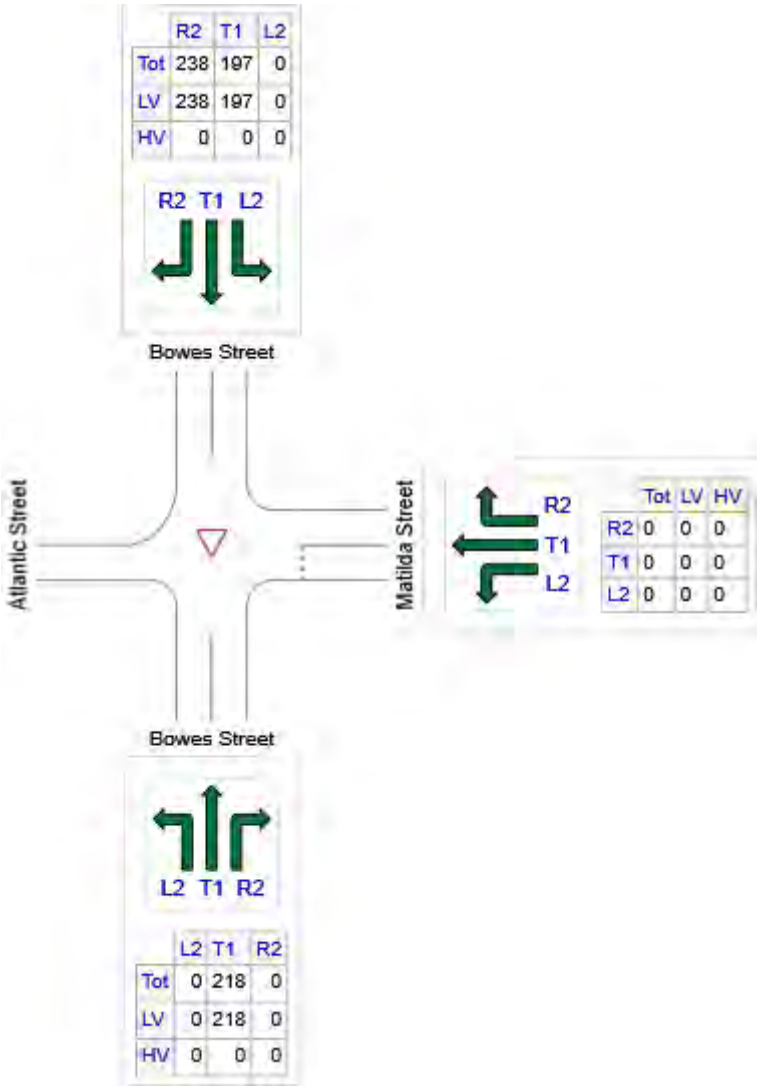
Site: [2040 Base - PM: AS-BS-MS]

Atlantic Street / Bowes Street / Matilda Street
Existing Priority-Controlled (Give-Way) T-Intersection
Site Category: 2040 Base Scenario - Weekday Evening Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	218	218	0
E: Matilda Street	0	0	0
N: Bowes Street	435	435	0
Total	653	653	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	0	0.0	0.112	4.0	LOS A	0.0	0.0	0.00	0.00	0.00	24.3
2	T1	218	0.0	0.112	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
3	R2	0	0.0	0.112	4.3	LOS A	0.0	0.0	0.00	0.00	0.00	43.5
Approach		218	0.0	0.112	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.9
East: Matilda Street												
4	L2	0	0.0	0.000	5.1	LOS A	0.0	0.0	0.40	0.52	0.40	26.5
5	T1	0	0.0	0.000	7.2	LOS A	0.0	0.0	0.40	0.52	0.40	21.6
6	R2	0	0.0	0.000	8.7	LOS A	0.0	0.0	0.40	0.52	0.40	31.7
Approach		0	0.0	0.000	7.0	LOS A	0.0	0.0	0.40	0.52	0.40	25.7
North: Bowes Street												
7	L2	0	0.0	0.265	5.5	LOS A	1.4	10.1	0.35	0.34	0.35	37.8
8	T1	197	0.0	0.265	0.7	LOS A	1.4	10.1	0.35	0.34	0.35	37.6
9	R2	238	0.0	0.265	5.7	LOS A	1.4	10.1	0.35	0.34	0.35	26.3
Approach		435	0.0	0.265	3.5	NA	1.4	10.1	0.35	0.34	0.35	29.4
All Vehicles		653	0.0	0.265	2.3	NA	1.4	10.1	0.23	0.22	0.23	33.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

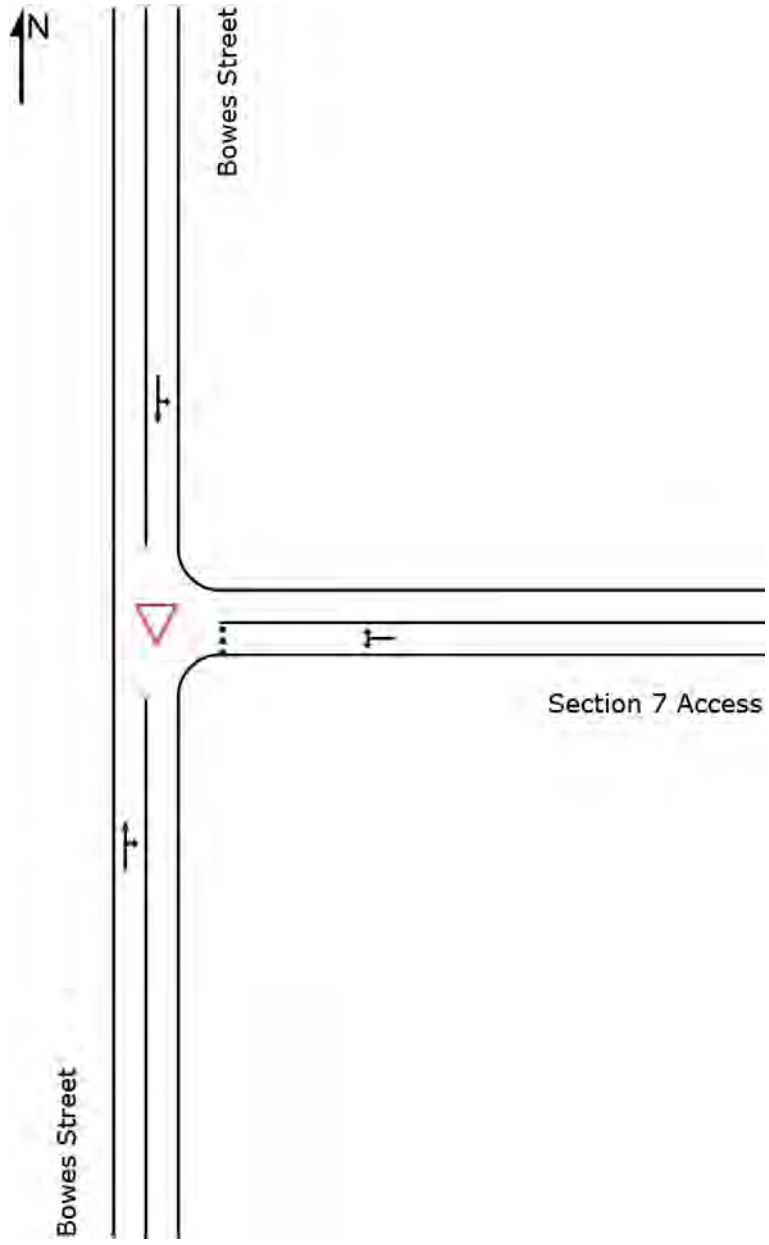
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Bowes Street													
Lane 1	218	0.0	1950	0.112	100	0.0	LOS A	0.0	0.0	Full	45	0.0	0.0
Approach	218	0.0		0.112		0.0	NA	0.0	0.0				
East: Matilda Street													
Lane 1	0	0.0	722	0.000	100	7.0	LOS A	0.0	0.0	Full	80	0.0	0.0
Approach	0	0.0		0.000		7.0	LOS A	0.0	0.0				
North: Bowes Street													
Lane 1	435	0.0	1643	0.265	100	3.5	LOS A	1.4	10.1	Full	110	0.0	0.0
Approach	435	0.0		0.265		3.5	NA	1.4	10.1				
Intersection	653	0.0		0.265		2.3	NA	1.4	10.1				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

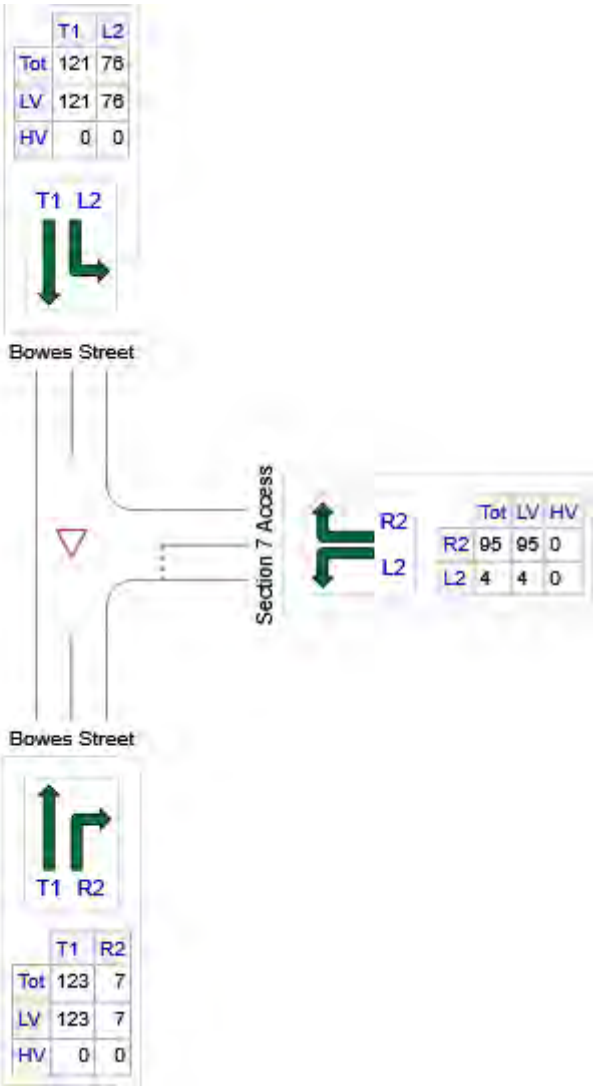
Site: [2040 Base - PM: BS-S7]

Bowes Street / Section 7 Access
Existing Priority-Controlled (Give-Way) T-Intersection
Site Category: 2040 Base Scenario - Weekday Evening Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	131	131	0
E: Section 7 Access	99	99	0
N: Bowes Street	197	197	0
Total	426	426	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
2	T1	123	0.0	0.068	0.1	LOS A	0.1	0.4	0.04	0.03	0.04	47.9
3	R2	7	0.0	0.068	5.0	LOS A	0.1	0.4	0.04	0.03	0.04	48.3
Approach		131	0.0	0.068	0.3	NA	0.1	0.4	0.04	0.03	0.04	47.9
East: Section 7 Access												
4	L2	4	0.0	0.098	0.4	LOS A	0.3	2.3	0.32	0.32	0.32	24.6
6	R2	95	0.0	0.098	1.7	LOS A	0.3	2.3	0.32	0.32	0.32	24.0
Approach		99	0.0	0.098	1.7	LOS A	0.3	2.3	0.32	0.32	0.32	24.0
North: Bowes Street												
7	L2	76	0.0	0.103	4.3	LOS A	0.0	0.0	0.00	0.21	0.00	23.5
8	T1	121	0.0	0.103	0.0	LOS A	0.0	0.0	0.00	0.21	0.00	42.5
Approach		197	0.0	0.103	1.7	NA	0.0	0.0	0.00	0.21	0.00	34.4
All Vehicles		426	0.0	0.103	1.3	NA	0.3	2.3	0.09	0.18	0.09	35.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Bowes Street													
Lane 1	131	0.0	1913	0.068	100	0.3	LOS A	0.1	0.4	Full	60	0.0	0.0
Approach	131	0.0		0.068		0.3	NA	0.1	0.4				
East: Section 7 Access													
Lane 1	99	0.0	1012	0.098	100	1.7	LOS A	0.3	2.3	Full	15	0.0	0.0
Approach	99	0.0		0.098		1.7	LOS A	0.3	2.3				
North: Bowes Street													
Lane 1	197	0.0	1913	0.103	100	1.7	LOS A	0.0	0.0	Full	60	0.0	0.0
Approach	197	0.0		0.103		1.7	NA	0.0	0.0				
Intersection	426	0.0		0.103		1.3	NA	0.3	2.3				

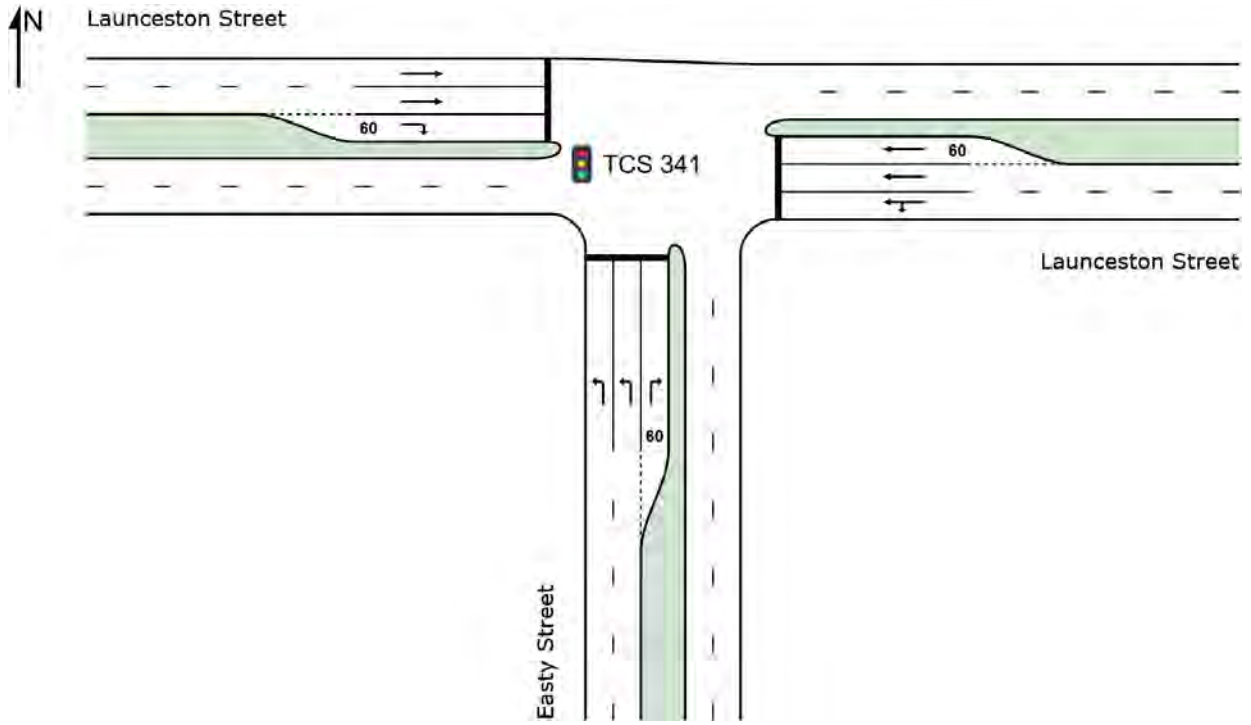
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: TCS 341 [2040 Base - PM: ES-LS]

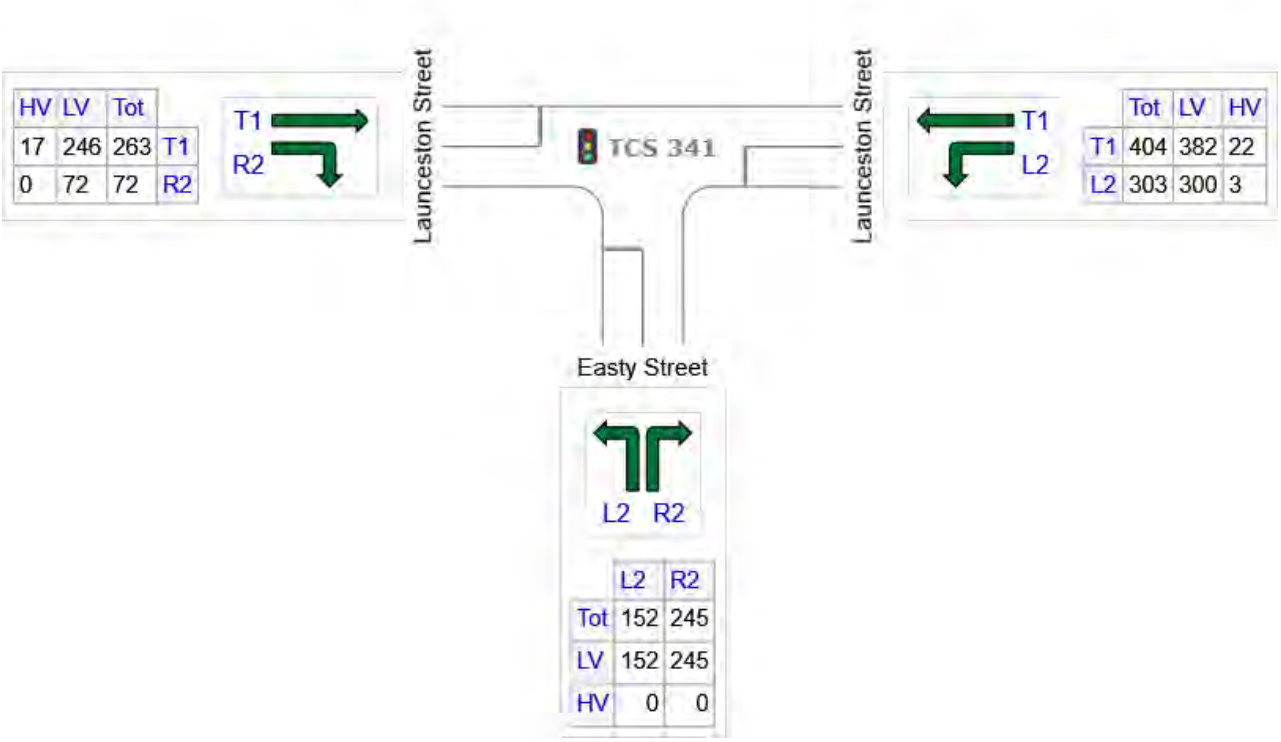
Easty Street / Launceston Street
Existing Signalised T-Intersection
Site Category: 2040 Base Scenario - Weekday Evening Peak Hour
Signals - Fixed Time Isolated Cycle Time = 73 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Site Layout



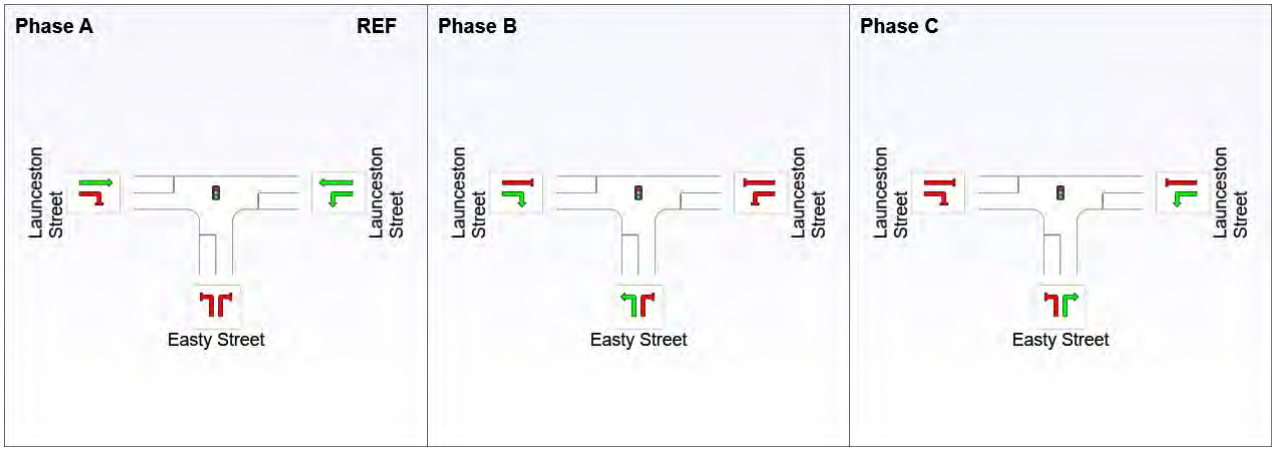
OD Demand Flows



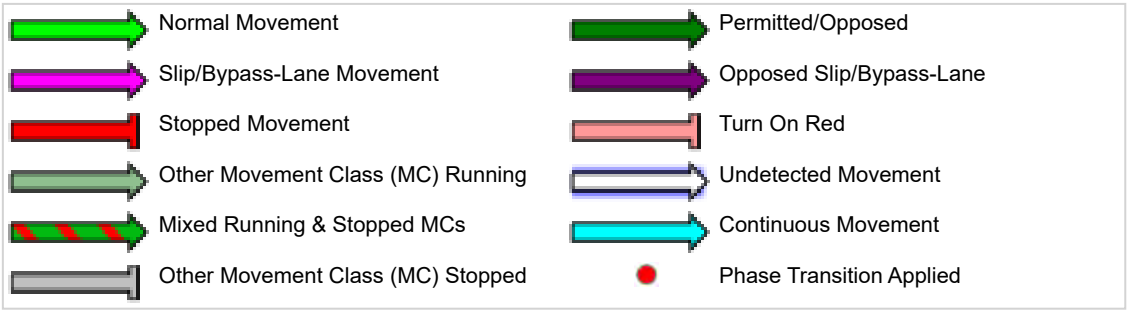
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Easty Street	397	397	0
E: Launceston Street	707	682	25
W: Launceston Street	335	318	17
Total	1439	1397	42

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	33	52
Green Time (sec)	27	13	16
Phase Time (sec)	33	18	22
Phase Split	45%	25%	30%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Easty Street												
1	L2	152	0.0	0.229	32.0	LOS C	2.4	16.7	0.90	0.74	0.90	22.5
3	R2	245	0.0	0.603	31.9	LOS C	8.1	56.9	0.95	0.81	0.95	25.1
Approach		397	0.0	0.603	31.9	LOS C	8.1	56.9	0.93	0.78	0.93	24.2
East: Launceston Street												
4	L2	303	1.0	0.245	8.4	LOS A	4.2	29.7	0.42	0.63	0.42	34.6
5	T1	404	5.5	0.290	17.6	LOS B	5.1	37.5	0.75	0.62	0.75	27.1
Approach		707	3.6	0.290	13.7	LOS A	5.1	37.5	0.61	0.62	0.61	30.5
West: Launceston Street												
11	T1	263	6.4	0.190	16.9	LOS B	3.2	23.6	0.71	0.58	0.71	27.4
12	R2	72	0.0	0.216	31.8	LOS C	2.3	15.8	0.89	0.73	0.89	22.7
Approach		335	5.0	0.216	20.1	LOS B	3.2	23.6	0.75	0.61	0.75	26.2
All Vehicles		1439	2.9	0.603	20.2	LOS B	8.1	56.9	0.73	0.66	0.73	27.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Easty Street													
Lane 1	76	0.0	331	0.229	100	32.0	LOS C	2.4	16.7	Full	305	0.0	0.0
Lane 2	76	0.0	331	0.229	100	32.0	LOS C	2.4	16.7	Full	305	0.0	0.0
Lane 3	245	0.0	407	0.603	100	31.9	LOS C	8.1	56.9	Short	60	0.0	NA
Approach	397	0.0		0.603		31.9	LOS C	8.1	56.9				
East: Launceston Street													
Lane 1	303	1.0	1237	0.245	84[5]	8.4	LOS A	4.2	29.7	Full	260	0.0	0.0
Lane 2	202	5.5	696	0.290	100	17.6	LOS B	5.1	37.5	Full	260	0.0	0.0
Lane 3	202	5.5	696	0.290	100	17.6	LOS B	5.1	37.5	Short	60	0.0	NA
Approach	707	3.6		0.290		13.7	LOS A	5.1	37.5				
West: Launceston Street													
Lane 1	132	6.4	692	0.190	100	16.9	LOS B	3.2	23.6	Full	130	0.0	0.0
Lane 2	132	6.4	692	0.190	100	16.9	LOS B	3.2	23.6	Full	130	0.0	0.0
Lane 3	72	0.0	331	0.216	100	31.8	LOS C	2.3	15.8	Short	60	0.0	NA
Approach	335	5.0		0.216		20.1	LOS B	3.2	23.6				
Intersection	1439	2.9		0.603		20.2	LOS B	8.1	56.9				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5 Lane under-utilisation found by the program

USER REPORT FOR NETWORK SITE

Project: 24-0487_20260304

Template: Default Site User Report

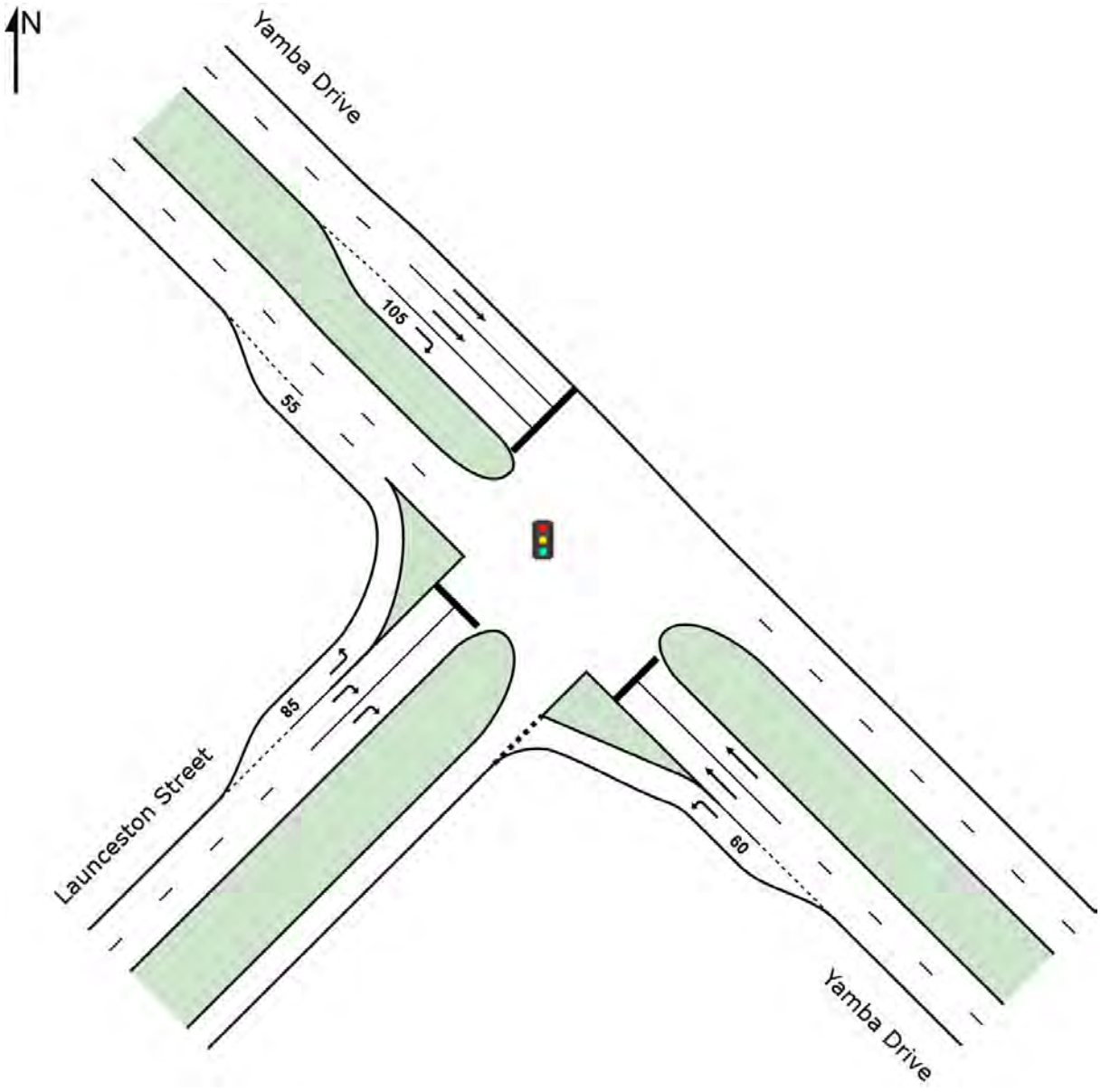
Site: [2040 Base - PM: LS-YD]

Network: 6 [2040 Base - PM: LS-WS-YD]

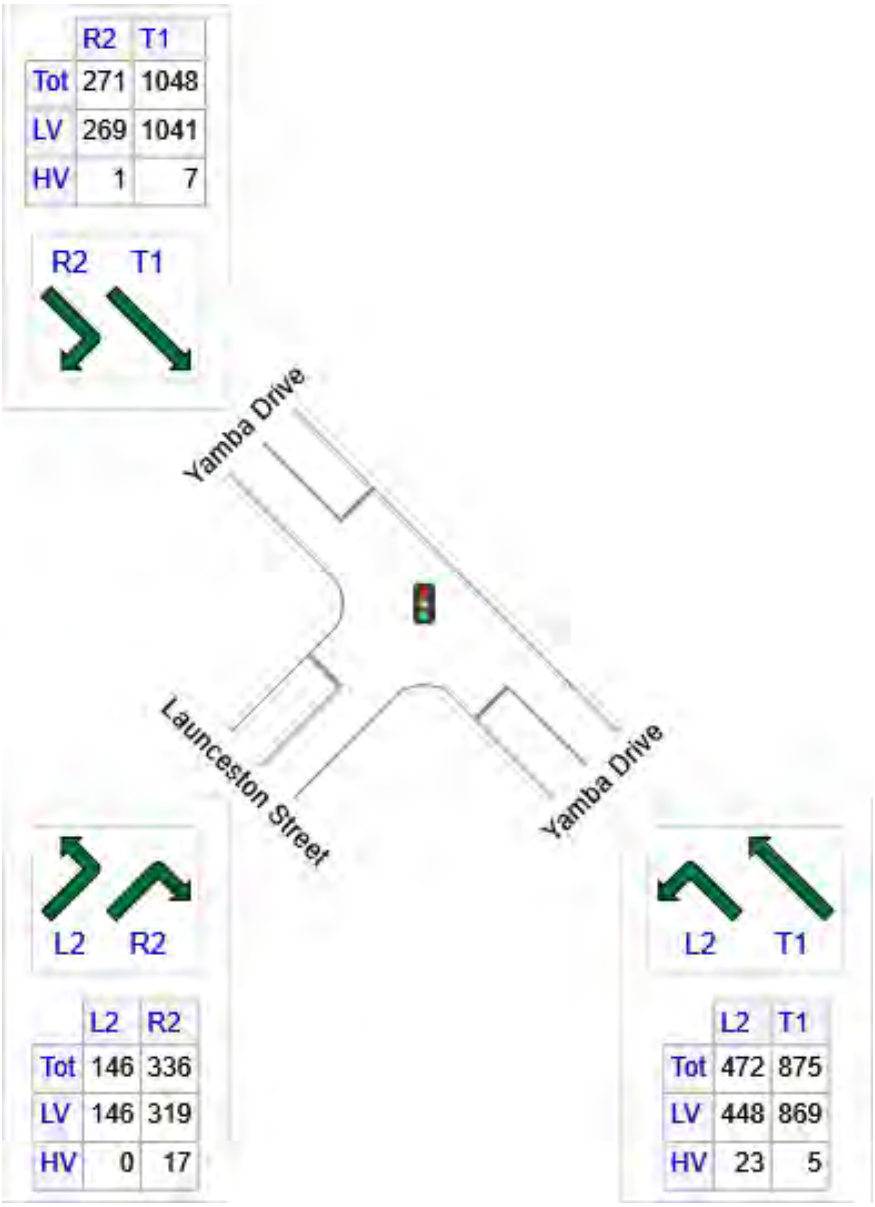
Northwest part of Launceston Street / Wisdom Street / Yamba Drive
Existing Signalised Offset X-Intersection
Site Category: 2040 Base Scenario - Weekday Evening Peak Hour
Signals - Fixed Time Coordinated Cycle Time = 114 seconds (CCG User-Given Phase Times)
Common Control Group: CCG1 [CCG]

Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E
Output Phase Sequence: A, D, E

Site Layout



OD Demand Flows

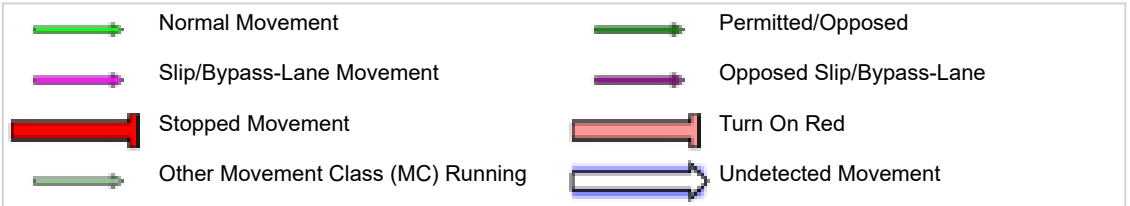


	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
SE: Yamba Drive	1346	1318	28
NW: Yamba Drive	1319	1311	8
SW: Launceston Street	482	465	17
Total	3147	3094	54

Input Phase Sequence (CCG)

Movement Class: All Movement Classes

REF: Reference Phase
VAR: Variable Phase



Mixed Running & Stopped MCs

Continuous Movement


Other Movement Class (MC) Stopped


Phase Transition Applied

Phase Timing Summary (CCG)

Phase	A	D	E
Phase Change Time (sec)	0	63	87
Green Time (sec)	57	18	21
Phase Time (sec)	63	24	27
Phase Split	55%	21%	24%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles														
Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Yamba Drive														
4	L2	472	4.9	472	4.9	0.343	5.0	LOS A	0.7	5.0	0.03	0.60	0.06	40.4
5	T1	875	0.6	875	0.6	0.450	8.1	LOS A	9.5	67.1	0.31	0.28	0.31	49.7
Approach		1346	2.1	1346	2.1	0.450	7.0	LOS A	9.5	67.1	0.21	0.39	0.22	45.6
NorthWest: Yamba Drive														
11	T1	1048	0.7	1048	0.7	1.084	153.0	LOS F	60.6	427.1	1.00	1.53	2.06	5.0
12	R2	271	0.4	271	0.4	0.793	59.6	LOS E	15.5	108.7	1.00	0.89	1.13	19.3
Approach		1319	0.6	1319	0.6	1.084	133.9	LOS F	60.6	427.1	1.00	1.40	1.87	6.8
SouthWest: Launceston Street														
1	L2	146	0.0	146	0.0	0.079	2.9	LOS A	0.0	0.0	0.00	0.37	0.00	39.5
3	R2	336	5.0	336	5.0	1.186	242.1	LOS F	22.7	165.7	1.00	1.83	2.73	3.6
Approach		482	3.5	482	3.5	1.186	169.5	LOS F	22.7	165.7	0.70	1.39	1.90	6.0
All Vehicles		3147	1.7	3147	1.7	1.186	85.1	LOS F	60.6	427.1	0.62	0.96	1.17	10.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
SouthEast: Yamba Drive															
Lane 1	472	4.9	472	4.9	1374	0.343	100	5.0	LOS A	0.7	5.0	Short	60	0.0	NA
Lane 2	437	0.6	437	0.6	971	0.450	100	4.3	LOS A	4.4	31.2	Full	65	0.0	0.0
Lane 3	437	0.6	437	0.6	971	0.450	100	11.9	LOS B	9.5	67.1	Full	65	0.0	7.9
Approach	1346	2.1	1346	2.1		0.450		7.0	LOS A	9.5	67.1				
NorthWest: Yamba Drive															
Lane 1	526	0.7	526	0.7	485	1.084	100	152.9	LOS F	60.6	427.1	Full	215	-50.0 N3	68.7
Lane 2	523	0.7	523	0.7	482 1	1.084	100	153.1	LOS F	60.3	424.6	Full	215	-50.0 N3	68.1
Lane 3	271	0.4	271	0.4	341	0.793	100	59.6	LOS E	15.5	108.7	Short	105	0.0	NA
Approach	1319	0.6	1319	0.6		1.084		133.9	LOS F	60.6	427.1				
SouthWest: Launceston Street															
Lane 1	146	0.0	146	0.0	1857	0.079	100	2.9	LOS A	0.0	0.0	Short	85	0.0	NA
Lane 2	168	5.0	168	5.0	142	1.186	100	242.1	LOS F	22.7	165.7	Full	260	-50.0 N3	0.0
Lane 3	168	5.0	168	5.0	142	1.186	100	242.1	LOS F	22.7	165.7	Full	260	-50.0 N3	0.0
Approach	482	3.5	482	3.5		1.186		169.5	LOS F	22.7	165.7				
Intersection	3147	1.7	3147	1.7		1.186		85.1	LOS F	60.6	427.1				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
N3 Capacity Adjustment due to downstream lane blockage determined by the program.

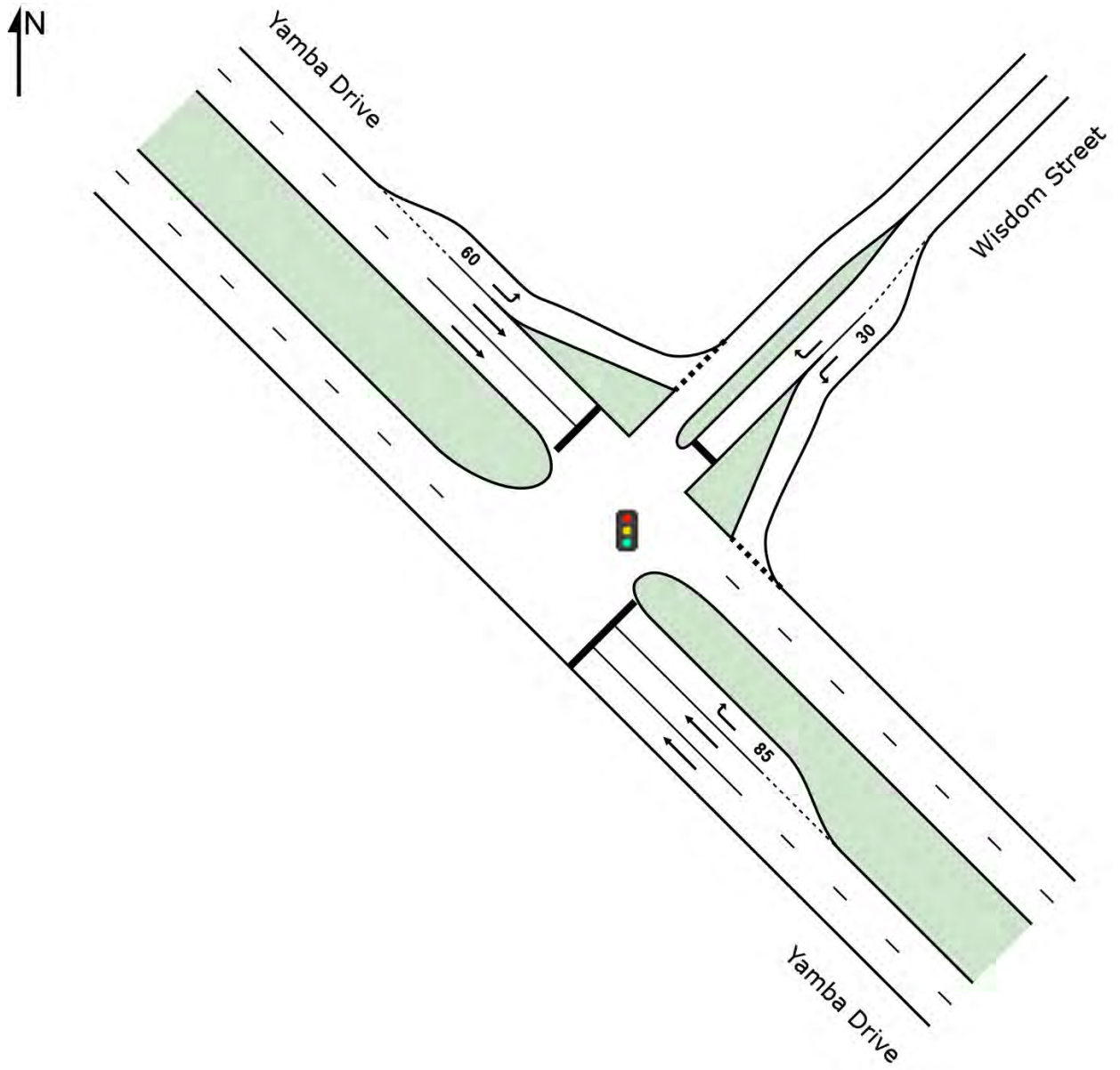
Site: [2040 Base - PM: WS-YD] Network: 6 [2040 Base - PM: LS-WS-YD]

Southeast part of Launceston Street / Wisdom Street / Yamba Drive
Existing Signalised Offset Cross Intersection
Site Category: 2040 Base Scenario - Weekday Evening Peak Hour
Signals - Fixed Time Coordinated Cycle Time = 114 seconds (CCG User-Given Phase Times)
Common Control Group: CCG1 [CCG]

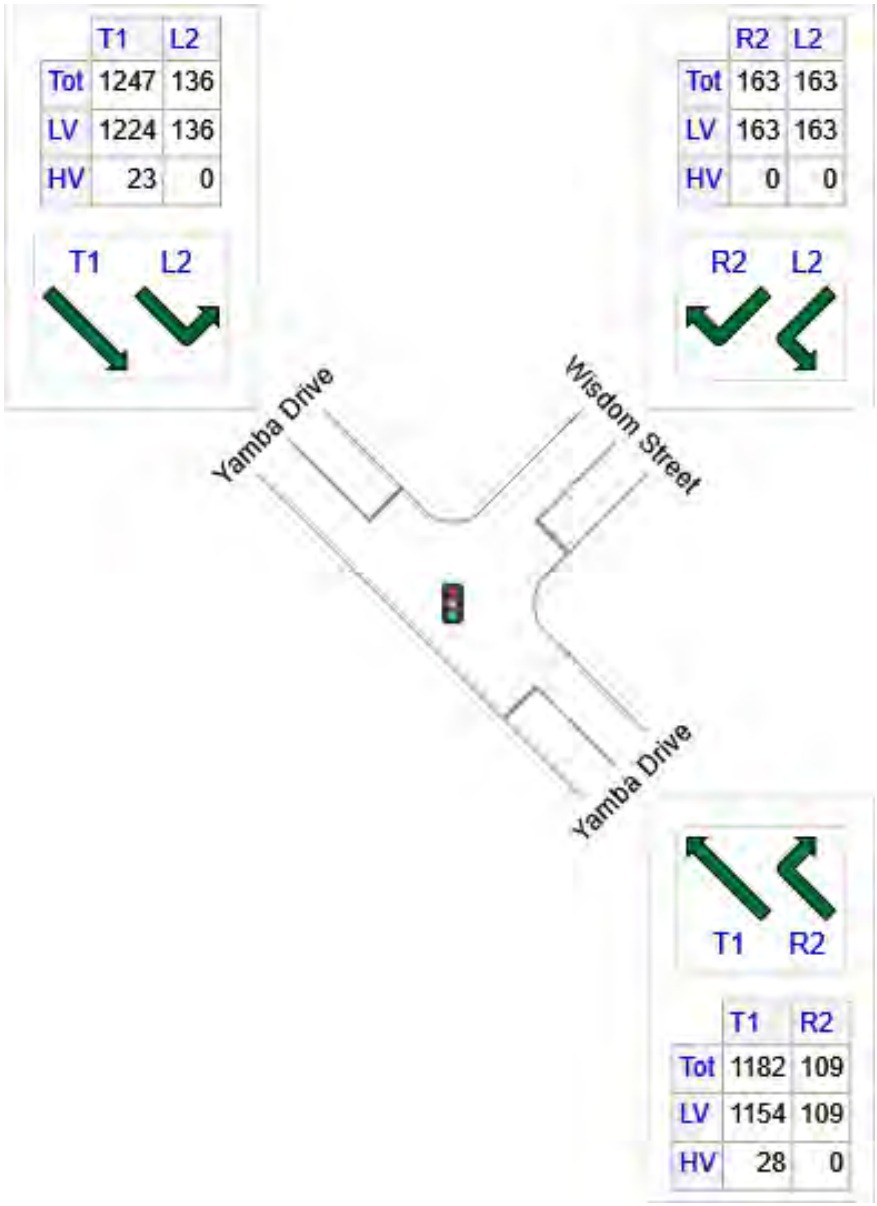
Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E
Output Phase Sequence: A, D, E

Some CCG output elements have been omitted as they have already been included under other Sites belonging to the same CCG.

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
SE: Yamba Drive	1292	1263	28
NE: Wisdom Street	326	326	0
NW: Yamba Drive	1383	1360	23
Total	3001	2949	52

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Yamba Drive														
11	T1	1182	2.4	1182	2.4	0.664	22.4	LOS C	26.3	187.8	0.79	0.71	0.79	48.1
12	R2	109	0.0	109	0.0	0.320	50.9	LOS D	5.4	37.5	0.91	0.78	0.91	35.4
Approach		1292	2.2	1292	2.2	0.664	24.8	LOS C	26.3	187.8	0.80	0.72	0.80	45.6
NorthEast: Wisdom Street														
1	L2	163	0.0	163	0.0	0.177	8.0	LOS A	3.0	21.3	0.40	0.59	0.40	48.3
3	R2	163	0.0	163	0.0	0.961	86.1	LOS F	11.7	82.0	0.98	1.21	1.69	16.9
Approach		326	0.0	326	0.0	0.961	47.1	LOS D	11.7	82.0	0.69	0.90	1.04	30.0
NorthWest: Yamba Drive														
4	L2	136	0.0	135	0.0	0.087	5.1	LOS A	0.4	2.7	0.08	0.60	0.08	40.2
5	T1	1247	1.9	1236	1.8	0.656	15.3	LOS B	14.9	106.1	0.58	0.53	0.58	56.4
Approach		1383	1.7	1370[N1]	1.6	0.656	14.3	LOS B	14.9	106.1	0.53	0.53	0.53	54.4
All Vehicles		3001	1.7	2988[N1]	1.7	0.961	22.4	LOS C	26.3	187.8	0.67	0.65	0.71	45.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Lane Use and Performance

	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
SouthEast: Yamba Drive															
Lane 1	638	2.4	638	2.4	960	0.664	100	22.7	LOS C	26.3	187.8	Full	735	0.0	0.0
Lane 2	544	2.4	544	2.4	819[1]	0.664	100	22.0	LOS C	21.7	154.9	Full	735	-7.9[N3]	0.0
Lane 3	109	0.0	109	0.0	342	0.320	100	50.9	LOS D	5.4	37.5	Short	85	0.0	NA
Approach	1292	2.2	1292	2.2		0.664		24.8	LOS C	26.3	187.8				
NorthEast: Wisdom Street															
Lane 1	163	0.0	163	0.0	923	0.177	100	8.0	LOS A	3.0	21.3	Short	30	0.0	NA
Lane 2	163	0.0	163	0.0	170[1]	0.961	100	86.1	LOS F	11.7	82.0	Full	680	-7.9[N3]	0.0
Approach	326	0.0	326	0.0		0.961		47.1	LOS D	11.7	82.0				
NorthWest: Yamba Drive															
Lane 1	136	0.0	135	0.0	1545	0.087	100	5.1	LOS A	0.4	2.7	Short	60	0.0	NA
Lane 2	610	1.9	604	1.8	921[1]	0.656	100	15.0	LOS B	14.9_4^N	106.1[N4]	Full	65	0.0	50.0
Lane 3	638	1.9	632	1.8	964	0.656	100	15.6	LOS B	14.9_4^N	106.1[N4]	Full	65	0.0	50.0
Approach	1383	1.7	1370[N1]	1.6		0.656		14.3	LOS B	14.9	106.1				
Intersection	3001	1.7	2988[N1]	1.7		0.961		22.4	LOS C	26.3	187.8				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.
N3 Capacity Adjustment due to downstream lane blockage determined by the program.
N4 Average back of queue has been restricted to the available queue storage space.

Appendix D:

Car Parking Conditions – 2025 Existing Conditions

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Existing Conditions Car Parking Data

QuantumTraffic

Street	Section	Side	Walking Distance Zone	Restriction	Capacity	Cars Parked Thursday, 27 March 2025						
						08:00	10:00	12:00	14:00	16:00	18:00	20:00
Irving St	Building No.12 to Spoering St	South / East	>400m	No Stopping	-	0	0	0	0	0	0	0
	Spoering St (East) to Spoering St (West)		>400m	No Stopping	-	0	0	0	0	0	0	0
			>400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	12	8	10	11	11	12	12	10
			>400m	No Stopping	-	0	0	0	0	0	0	0
			>400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	16	9	10	14	15	16	16	14
			>400m	No Stopping	-	0	0	0	0	0	0	0
	Spoering St to Launceston St		>400m	No Stopping	-	0	0	0	0	0	0	0
	Launceston St to Irving St	North / West	>400m	No Stopping	-	0	0	0	0	0	0	0
			>400m	P 5mins 7:30am-6pm Mon-Fri	5	0	1	2	2	1	3	2
			>400m	Bus Zone	-	0	0	0	0	0	0	0
			>400m	No Parking	9	0	0	0	0	0	0	0
			>400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	5	2	3	5	4	5	5	2
			>400m	No Parking	2	0	0	0	0	0	0	0
			>400m	Loading Zone	3	1	1	0	1	0	1	0
			>400m	No Parking	2	0	0	0	0	0	0	0
			>400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	5	2	3	4	1	2	2	1
			>400m	No Parking	1	0	0	0	0	0	0	0
				Capacity		**43**	**43**	**43**	**43**	**43**	**43**	**43**
				Vehicles Parked		**21**	**27**	**36**	**33**	**36**	**38**	**29**
				Vacant Spaces		**22**	**16**	**7**	**10**	**7**	**5**	**14**
				Occupancy		**49%**	**63%**	**84%**	**77%**	**84%**	**88%**	**67%**
Spoering St	Irving St to Irving St	South / East	>400m	No Stopping	1	0	0	0	0	0	0	0
			>400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	3	2	3	3	3	2	1	1
			>400m	No Stopping	2	0	0	0	0	0	0	0
			>400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	18	12	13	14	14	16	18	14
			>400m	No Stopping	4	0	0	0	0	0	0	0
			>400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	4	1	0	1	4	2	4	1
			>400m	No Stopping	3	0	0	0	0	0	0	0
		North / West	>400m	No Stopping	5	0	0	0	0	0	0	0
			>400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	22	5	13	15	14	16	18	18
			>400m	No Stopping	4	0	0	0	0	0	0	0
				Capacity		**47**	**47**	**47**	**47**	**47**	**47**	**47**
				Vehicles Parked		**20**	**29**	**33**	**35**	**36**	**41**	**34**
				Vacant Spaces		**27**	**18**	**14**	**12**	**11**	**6**	**13**
				Occupancy		**43%**	**62%**	**70%**	**74%**	**77%**	**87%**	**72%**
Furzer St	Launceston St to Worgan St	East	200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	10	0	0	0	0	0	0	0
	Worgan St to W2 Woden		200m-400m	No Stopping	25	0	0	0	0	0	0	0
			200m-400m	No Parking	2	0	0	0	0	0	0	0
	Libraries ACT - Woden to Furzer St	West	200m-400m	No Parking	1	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
	Furzer St to Corinna St		200m-400m	No Stopping	-	0	0	0	0	0	0	0
	Corinna St to Garth Cl		200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	2	0	2	2	1	1	1	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	7	2	4	2	3	2	3	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
	Garth Cl to Worgan St		200m-400m	No Stopping	-	0	0	0	0	0	0	0
	Worgan St to Launceston St		200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	2	1	2	2	2	1	2	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
				Capacity		**11**	**11**	**11**	**11**	**11**	**11**	**11**
				Vehicles Parked		**3**	**8**	**6**	**6**	**4**	**6**	**0**
				Vacant Spaces		**8**	**3**	**5**	**5**	**7**	**5**	**11**
				Occupancy		**27%**	**73%**	**55%**	**55%**	**36%**	**55%**	**0%**

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Existing Conditions Car Parking Data

Street	Section	Side	Walking Distance Zone	Restriction	Capacity	Cars Parked Thursday, 27 March 2025						
						08:00	10:00	12:00	14:00	16:00	18:00	20:00
Bowes St	Launceston St to Matilda St	East	100m-200m	No Stopping	-	0	0	0	0	0	0	0
			100m-200m	No Parking	6	0	0	0	0	0	0	0
			<100m	No Stopping	-	0	0	0	0	0	0	0
	Matilda St to Callam St	North / East	Adjacent	No Parking	5	0	0	0	0	0	0	0
			Adjacent	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	2	0	1	2	2	2	1	0
			Adjacent	No Parking	12	0	0	0	0	0	0	0
			Adjacent	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	5	2	3	5	2	4	4	1
	Callam St to Bowes Pl	South	<100m	No Stopping	-	0	0	0	0	0	0	0
			<100m	No Parking	8	0	0	0	0	0	0	0
			<100m	No Parking	1	0	0	0	0	0	0	0
	Bowes Pl to Atlantic St	West	<100m	No Stopping	-	0	0	0	0	0	0	0
			<100m	Loading Zone 30mins 7:30am-6pm Mon-Fri	2	0	1	2	2	1	0	0
			<100m	No Parking	3	0	0	0	0	0	0	0
			<100m	No Stopping	-	0	0	0	0	0	0	0
	Atlantic St to Worgan St		<100m	No Stopping	-	0	0	0	0	0	0	0
			<100m	Loading Zone 30mins 7:30am-6pm Mon-Fri	2	0	1	2	1	2	1	0
			100m-200m	No Parking	12	0	0	0	0	0	0	0
			100m-200m	No Stopping	-	0	0	0	0	0	0	0
	Worgan St to Launceston St		100m-200m	No Parking	2	0	0	0	0	0	0	0
			100m-200m	No Stopping	-	0	0	0	0	0	0	0
				Capacity		**7**	**7**	**7**	**7**	**7**	**11**	**11**
				Vehicles Parked		**2**	**4**	**7**	**4**	**6**	**6**	**1**
				Vacant Spaces		**5**	**3**	**0**	**3**	**1**	**5**	**10**
				Occupancy		**29%**	**57%**	**100%**	**57%**	**86%**	**55%**	**9%**
Easty St	Launceston St to Opp Wilbow St	East	200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	5	0	0	0	0	0	0	0
			200m-400m	Bus Zone	-	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	2	0	0	0	0	0	0	0
			200m-400m	Bus Zone	-	0	0	0	0	0	0	0
			200m-400m	No Parking	1	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	Bus Zone	-	0	0	0	0	0	0	0
			200m-400m	No Parking	4	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	12	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
	Wilbow St to Launceston St	West	200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	18	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	5	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
				Capacity		**0**	**0**	**0**	**0**	**0**	**0**	**0**
				Vehicles Parked		**0**	**0**	**0**	**0**	**0**	**0**	**0**
				Vacant Spaces		**0**	**0**	**0**	**0**	**0**	**0**	**0**
				Occupancy		-	-	-	-	-	-	-

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Existing Conditions Car Parking Data

Street	Section	Side	Walking Distance Zone	Restriction	Capacity	Cars Parked Thursday, 27 March 2025						
						08:00	10:00	12:00	14:00	16:00	18:00	20:00
Launceston St	Irving St to Opp Easty St	North	200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	Bus Zone	-	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	19	0	0	0	0	0	0	0
			200m-400m	Bus Zone	-	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	4	0	0	0	0	0	0	0
	Easty St to Callam St	South	200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	18	0	0	0	0	0	0	0
	Callam St to Bowes St		100m-200m	No Stopping	-	0	0	0	0	0	0	0
			100m-200m	No Stopping	-	0	0	0	0	0	0	0
			100m-200m	No Parking	11	0	0	0	0	0	0	0
			100m-200m	No Stopping	-	0	0	0	0	0	0	0
	Bowes St to Furzer St		200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	4	0	0	0	0	0	0	0
			200m-400m	Bus Zone	-	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
	Furzer St to Opp Irving St		200m-400m	No Stopping	-	0	0	0	0	0	0	0
				Capacity		**0**	**0**	**0**	**0**	**0**	**0**	**0**
				Vehicles Parked		**0**	**0**	**0**	**0**	**0**	**0**	**0**
				Vacant Spaces		**0**	**0**	**0**	**0**	**0**	**0**	**0**
				Occupancy		-	-	-	-	-	-	-
Worgan St	Melrose Dr to Furzer St	North	200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	3	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	2	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
	Furzer St to Bowes St		200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	1P Pay Parking 8:30am-5:30pm Mon-Fri, P 15mins 7am-8:30am, 5:30pm-6pm Mon-Fri	5	2	3	5	5	5	4	1
			100m-200m	No Stopping	-	0	0	0	0	0	0	0
	Bowes St to Furzer St	South	100m-200m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	1P Pay Parking 8:30am-5:30pm Mon-Fri	2	0	0	1	2	2	1	1
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	1P Pay Parking 8:30am-5:30pm Mon-Fri	9	6	7	8	8	8	7	6
			200m-400m	No Parking Pick Up and Set Down Only	2	0	0	1	1	2	1	1
			200m-400m	Taxi Zone	2	0	1	2	1	0	0	1
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
	Furzer St to Melrose Dr		200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	Loading Zone	3	2	1	2	2	2	1	0
			200m-400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	6	3	5	6	6	2	6	2
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
				Capacity		**22**	**22**	**22**	**22**	**22**	**22**	**22**
				Vehicles Parked		**11**	**15**	**20**	**21**	**17**	**18**	**10**
				Vacant Spaces		**11**	**7**	**2**	**1**	**5**	**4**	**12**
				Occupancy		**50%**	**68%**	**91%**	**95%**	**77%**	**82%**	**45%**

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Existing Conditions Car Parking Data

Street	Section	Side	Walking Distance Zone	Restriction	Capacity	Cars Parked Thursday, 27 March 2025						
						08:00	10:00	12:00	14:00	16:00	18:00	20:00
Corinna St	Melrose Dr to Furzer St	North	200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	4	2	3	4	4	4	2	3
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	1/2P 8:30am-5:30pm Mon-Fri	2	2	2	2	2	2	2	1
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
	Furzer St to Corinna St	South	200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	1/2P 8:30am-5:30pm Mon-Fri	2	1	0	2	1	1	1	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
	Corinna St to Melrose Dr		200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	6	3	4	5	6	6	6	4
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
				Capacity		**14**	**14**	**14**	**14**	**14**	**14**	**14**
				Vehicles Parked		**8**	**9**	**13**	**13**	**13**	**11**	**8**
				Vacant Spaces		**6**	**5**	**1**	**1**	**1**	**3**	**6**
				Occupancy		**57%**	**64%**	**93%**	**93%**	**93%**	**79%**	**57%**
Neptune St	Bradley St to Callam St	North	200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
	Callam St to Bradley St	South	200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	Loading Zone 30mins 7:30am-6pm Mon-Fri	3	3	1	2	3	3	3	1
			200m-400m	P 5mins	3	2	1	2	2	1	2	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
				Capacity		**3**	**3**	**3**	**3**	**3**	**6**	**6**
				Vehicles Parked		**2**	**1**	**2**	**2**	**1**	**5**	**1**
				Vacant Spaces		**1**	**2**	**1**	**1**	**2**	**1**	**5**
				Occupancy		**67%**	**33%**	**67%**	**67%**	**33%**	**83%**	**17%**
Wilbow St	Callam St to Easty St	North	200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	7	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
	Easty St to Callam St	South	200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	8	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
				Capacity		**0**	**0**	**0**	**0**	**0**	**0**	**0**
				Vehicles Parked		**0**	**0**	**0**	**0**	**0**	**0**	**0**
				Vacant Spaces		**0**	**0**	**0**	**0**	**0**	**0**	**0**
				Occupancy		-	-	-	-	-	-	-
S104 Off-Street Carpark (ACT Government)			>400m	P Disabled Only	6	2	4	5	5	6	5	4
			>400m	Pay Parking 8:30am-5:30pm Mon-Fri,	393	129	287	366	370	276	175	122
			>400m	P Motorbikes Only	5	0	1	1	1	1	0	1
				Capacity		**399**	**399**	**399**	**399**	**399**	**399**	**399**
				Vehicles Parked		**131**	**291**	**371**	**375**	**282**	**180**	**126**
				Vacant Spaces		**268**	**108**	**28**	**24**	**117**	**219**	**273**
				Occupancy		**33%**	**73%**	**93%**	**94%**	**71%**	**45%**	**32%**
S23 Off-Street Carpark (ACT Government)			200m-400m	Pay Parking 8:30am-5:30pm Mon-Fri,	37	0	0	0	0	0	0	0
				Capacity		**37**	**37**	**37**	**37**	**37**	**37**	**37**
				Vehicles Parked		**0**	**0**	**0**	**0**	**0**	**0**	**0**
				Vacant Spaces		**37**	**37**	**37**	**37**	**37**	**37**	**37**
				Occupancy		**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**
B3 S16 Off-Street Carpark (Skypark)			200m-400m	P Disabled Only	6	2	3	5	4	2	2	2
			200m-400m	Pay Parking	989	361	643	789	862	743	92	8
				Capacity		**995**	**995**	**995**	**995**	**995**	**995**	**995**
				Vehicles Parked		**363**	**646**	**794**	**866**	**745**	**94**	**10**
				Vacant Spaces		**632**	**349**	**201**	**129**	**250**	**901**	**985**
				Occupancy		**36%**	**65%**	**80%**	**87%**	**75%**	**9%**	**1%**

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Existing Conditions Car Parking Data

Street	Section	Side	Walking Distance Zone	Restriction	Capacity	Cars Parked Thursday, 27 March 2025						
						08:00	10:00	12:00	14:00	16:00	18:00	20:00
S6 Off-Street Carpark (Hellenic Club)			<100m	Pay Parking 8:30am-5:30pm Mon-Fri,	237	28	98	178	192	115	237	237
			<100m	P Disabled Only	12	2	4	5	7	8	8	10
			<100m	Motorbikes Parking	4	0	0	0	0	0	0	0
				Capacity		**249**	**249**	**249**	**249**	**249**	**249**	**249**
				Vehicles Parked		**30**	**102**	**183**	**199**	**123**	**245**	**247**
				Vacant Spaces		**219**	**147**	**66**	**50**	**126**	**4**	**2**
				Occupancy		**12%**	**41%**	**73%**	**80%**	**49%**	**98%**	**99%**
S7 Off-Street Carpark (ACT Government)			On-Site	Pay Parking 8:30am-5:30pm Mon-Fri,	70	56	67	69	68	42	51	49
			On-Site	P Disabled Only	15	8	10	12	12	10	10	8
			On-Site	Motorbikes Parking	25	4	3	5	3	6	6	5
			On-Site	Permit Zone 7:30am-5:30pm	78	67	69	59	29	24	30	19
			On-Site	4P Ticket Pay Parking 8:30am-5:30pm Mon-Fri	81	79	71	69	63	60	29	21
				Capacity		**166**	**166**	**166**	**166**	**166**	**244**	**244**
				Vehicles Parked		**143**	**148**	**150**	**143**	**112**	**120**	**97**
				Vacant Spaces		**23**	**18**	**16**	**23**	**54**	**124**	**147**
				Occupancy		**86%**	**89%**	**90%**	**86%**	**67%**	**49%**	**40%**
B33 S80 Off-Street Carpark (ACT Government)			<100m	Closed due to construction works	-	0	0	0	0	0	0	0
				Capacity		**0**	**0**	**0**	**0**	**0**	**0**	**0**
				Vehicles Parked		**0**	**0**	**0**	**0**	**0**	**0**	**0**
				Vacant Spaces		**0**	**0**	**0**	**0**	**0**	**0**	**0**
				Occupancy		-	-	-	-	-	-	-
B30 S80 Off-Street Carpark (ACT Government)			100m-200m	P Disabled Only	3	1	1	2	2	2	2	1
			100m-200m	Loading Zone	2	0	0	0	0	0	0	0
			100m-200m	1P Parking	4	1	3	2	3	1	0	0
			100m-200m	Permit Zone Government Vehicles Only	20	4	14	12	13	2	1	0
			100m-200m	Pay Parking 8:30am-5:30pm Mon-Fri,	248	186	229	223	198	194	43	22
				Capacity		**255**	**255**	**255**	**255**	**255**	**255**	**255**
				Vehicles Parked		**188**	**233**	**227**	**203**	**197**	**45**	**23**
				Vacant Spaces		**67**	**22**	**28**	**52**	**58**	**210**	**232**
				Occupancy		**74%**	**91%**	**89%**	**80%**	**77%**	**18%**	**9%**
B29 S80 Off-Street Carpark (ACT Government)			100m-200m	Pay Parking 8:30am-5:30pm Mon-Fri,	70	25	46	47	48	21	18	3
				Capacity		**70**	**70**	**70**	**70**	**70**	**70**	**70**
				Vehicles Parked		**25**	**46**	**47**	**48**	**21**	**18**	**3**
				Vacant Spaces		**45**	**24**	**23**	**22**	**49**	**52**	**67**
				Occupancy		**36%**	**66%**	**67%**	**69%**	**30%**	**26%**	**4%**
Easty St Off-Street Carpark (ACT Government)			200m-400m	Pay Parking 8:30am-5:30pm Mon-Fri,	44	31	44	43	42	29	3	1
				Capacity		**44**	**44**	**44**	**44**	**44**	**44**	**44**
				Vehicles Parked		**31**	**44**	**43**	**42**	**29**	**3**	**1**
				Vacant Spaces		**13**	**0**	**1**	**2**	**15**	**41**	**43**
				Occupancy		**70%**	**100%**	**98%**	**95%**	**66%**	**7%**	**2%**
S64 Off-Street Carpark (Westfield)			100m-200m	Pay Parking	752	149	498	539	557	467	376	107
			100m-200m	P Disabled Only	17	0	3	4	6	6	3	0
				Capacity		**769**	**769**	**769**	**769**	**769**	**769**	**769**
				Vehicles Parked		**149**	**501**	**543**	**563**	**473**	**379**	**107**
				Vacant Spaces		**620**	**268**	**226**	**206**	**296**	**390**	**662**
				Occupancy		**19%**	**65%**	**71%**	**73%**	**62%**	**49%**	**14%**
On-Site				**Capacity**		**166**	**166**	**166**	**166**	**166**	**244**	**244**
				Vehicles Parked		**143**	**148**	**150**	**143**	**112**	**120**	**97**
				Vacant Spaces		**23**	**18**	**16**	**23**	**54**	**124**	**147**
				Occupancy		**86%**	**89%**	**90%**	**86%**	**67%**	**49%**	**40%**
On-Site or Adjacent				**Capacity**		**173**	**173**	**173**	**173**	**173**	**251**	**251**
				Vehicles Parked		**145**	**152**	**157**	**147**	**118**	**125**	**98**
				Vacant Spaces		**28**	**21**	**16**	**26**	**55**	**126**	**153**
				Occupancy		**84%**	**88%**	**91%**	**85%**	**68%**	**50%**	**39%**
On-Site or Within 100m				**Capacity**		**422**	**422**	**422**	**422**	**422**	**504**	**504**
				Vehicles Parked		**175**	**254**	**340**	**346**	**241**	**371**	**345**
				Vacant Spaces		**247**	**168**	**82**	**76**	**181**	**133**	**159**
				Occupancy		**41%**	**60%**	**81%**	**82%**	**57%**	**74%**	**68%**

Street	Section	Side	Walking Distance Zone	Restriction	Capacity	Cars Parked Thursday, 27 March 2025						
						08:00	10:00	12:00	14:00	16:00	18:00	20:00
On-Site or Within 200m				Capacity		1,516	1,516	1,516	1,516	1,516	1,598	1,598
				Vehicles Parked		537	1,034	1,157	1,160	932	813	478
				Vacant Spaces		979	482	359	356	584	785	1,120
				Occupancy		35%	68%	76%	77%	61%	51%	30%
On-Site or Within 400m				Capacity		2,642	2,642	2,642	2,642	2,642	2,727	2,727
				Vehicles Parked		955	1,757	2,035	2,110	1,741	950	508
				Vacant Spaces		1,687	885	607	532	901	1,777	2,219
				Occupancy		36%	67%	77%	80%	66%	35%	19%
Total				Capacity		3,131	3,131	3,131	3,131	3,131	3,216	3,216
				Vehicles Parked		1,127	2,104	2,475	2,553	2,095	1,209	697
				Vacant Spaces		2,004	1,027	656	578	1,036	2,007	2,519
				Occupancy		36%	67%	79%	82%	67%	38%	22%

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Existing Conditions Car Parking Data

QuantumTraffic

Street	Section	Side	Walking Distance Zone	Restriction	Capacity	Cars Parked Saturday, 29 March 2025						
						08:00	10:00	12:00	14:00	16:00	18:00	20:00
Irving St	Building No.12 to Spoering St	South / East	>400m	No Stopping	-	0	0	0	0	0	0	0
	Spoering St (East) to Spoering St (West)		>400m	No Stopping	-	0	0	0	0	0	0	0
			>400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	12	5	6	6	10	12	12	12
			>400m	No Stopping	-	0	0	0	0	0	0	0
			>400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	16	8	7	6	10	14	12	14
			>400m	No Stopping	-	0	0	0	0	0	0	0
	Spoering St to Launceston St		>400m	No Stopping	-	0	0	0	0	0	0	0
	Launceston St to Irving St	North / West	>400m	No Stopping	-	0	0	0	0	0	0	0
			>400m	P 5mins 7:30am-6pm Mon-Fri	5	2	1	2	1	0	1	2
			>400m	Bus Zone	-	0	0	0	0	0	0	0
			>400m	No Parking	9	0	0	0	0	0	0	0
			>400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	5	3	2	2	3	3	2	4
			>400m	No Parking	2	0	0	0	0	0	0	0
			>400m	Loading Zone	3	0	1	2	1	0	0	0
			>400m	No Parking	2	0	0	0	0	0	0	0
			>400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	5	3	5	4	1	2	3	2
			>400m	No Parking	1	0	0	0	0	0	0	0
				Capacity		**43**	**43**	**43**	**43**	**43**	**43**	**43**
				Vehicles Parked		**21**	**21**	**20**	**25**	**31**	**30**	**34**
				Vacant Spaces		**22**	**22**	**23**	**18**	**12**	**13**	**9**
				Occupancy		**49%**	**49%**	**47%**	**58%**	**72%**	**70%**	**79%**
Spoering St	Irving St to Irving St	South / East	>400m	No Stopping	1	0	0	0	0	0	0	0
			>400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	3	1	1	2	1	3	3	3
			>400m	No Stopping	2	0	0	0	0	0	0	0
			>400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	18	14	12	12	14	10	12	15
			>400m	No Stopping	4	0	0	0	0	0	0	0
			>400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	4	2	3	2	2	4	2	3
			>400m	No Stopping	3	0	0	0	0	0	0	0
		North / West	>400m	No Stopping	5	0	0	0	0	0	0	0
			>400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	22	10	12	12	10	13	13	12
			>400m	No Stopping	4	0	0	0	0	0	0	0
				Capacity		**47**	**47**	**47**	**47**	**47**	**47**	**47**
				Vehicles Parked		**27**	**28**	**28**	**27**	**30**	**30**	**33**
				Vacant Spaces		**20**	**19**	**19**	**20**	**17**	**17**	**14**
				Occupancy		**57%**	**60%**	**60%**	**57%**	**64%**	**64%**	**70%**
Furzer St	Launceston St to Worgan St	East	200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	10	0	0	0	0	0	0	0
	Worgan St to W2 Woden		200m-400m	No Stopping	25	0	0	0	0	0	0	0
			200m-400m	No Parking	2	0	0	0	0	0	0	0
	Libraries ACT - Woden to Furzer St	West	200m-400m	No Parking	1	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
	Furzer St to Corinna St		200m-400m	No Stopping	-	0	0	0	0	0	0	0
	Corinna St to Garth Cl		200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	2	1	2	2	1	0	1	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	7	0	1	3	4	5	4	3
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
	Garth Cl to Worgan St		200m-400m	No Stopping	-	0	0	0	0	0	0	0
	Worgan St to Launceston St		200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	2	1	1	2	2	1	0	1
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
				Capacity		**11**	**11**	**11**	**11**	**11**	**11**	**11**
				Vehicles Parked		**2**	**4**	**7**	**7**	**6**	**5**	**4**
				Vacant Spaces		**9**	**7**	**4**	**4**	**5**	**6**	**7**
				Occupancy		**18%**	**36%**	**64%**	**64%**	**55%**	**45%**	**36%**

2024-0487: Section 7, Phillip

Existing Conditions Car Parking Data

Street	Section	Side	Walking Distance Zone	Restriction	Capacity	Cars Parked Saturday, 29 March 2025						
						08:00	10:00	12:00	14:00	16:00	18:00	20:00
Bowes St	Launceston St to Matilda St	East	100m-200m	No Stopping	-	0	0	0	0	0	0	0
			100m-200m	No Parking	6	0	0	0	0	0	0	0
			<100m	No Stopping	-	0	0	0	0	0	0	0
	Matilda St to Callam St	North / East	Adjacent	No Parking	5	0	0	0	0	0	0	0
			Adjacent	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	2	1	2	2	1	0	1	0
			Adjacent	No Parking	12	0	0	0	0	0	0	0
			Adjacent	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	5	2	2	3	3	2	1	1
	Callam St to Bowes Pl	South	<100m	No Stopping	-	0	0	0	0	0	0	0
			<100m	No Parking	8	0	0	0	0	0	0	0
			<100m	No Parking	1	0	0	0	0	0	0	0
	Bowes Pl to Atlantic St	West	<100m	No Stopping	-	0	0	0	0	0	0	0
			<100m	Loading Zone 30mins 7:30am-6pm Mon-Fri	2	0	0	0	1	1	1	0
			<100m	No Parking	3	0	0	0	0	0	0	0
			<100m	No Stopping	-	0	0	0	0	0	0	0
	Atlantic St to Worgan St		<100m	No Stopping	-	0	0	0	0	0	0	0
			<100m	Loading Zone 30mins 7:30am-6pm Mon-Fri	2	0	1	1	0	0	1	0
			100m-200m	No Parking	12	0	0	0	0	0	0	0
			100m-200m	No Stopping	-	0	0	0	0	0	0	0
	Worgan St to Launceston St		100m-200m	No Parking	2	0	0	0	0	0	0	0
			100m-200m	No Stopping	-	0	0	0	0	0	0	0
				Capacity		**11**	**11**	**11**	**11**	**11**	**11**	**11**
				Vehicles Parked		**3**	**5**	**6**	**5**	**3**	**4**	**1**
				Vacant Spaces		**8**	**6**	**5**	**6**	**8**	**7**	**10**
				Occupancy		**27%**	**45%**	**55%**	**45%**	**27%**	**36%**	**9%**
Easty St	Launceston St to Opp Wilbow St	East	200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	5	0	0	0	0	0	0	0
			200m-400m	Bus Zone	-	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	2	0	0	0	0	0	0	0
			200m-400m	Bus Zone	-	0	0	0	0	0	0	0
			200m-400m	No Parking	1	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	Bus Zone	-	0	0	0	0	0	0	0
			200m-400m	No Parking	4	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	12	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
	Wilbow St to Launceston St	West	200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	18	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	5	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
				Capacity		**0**	**0**	**0**	**0**	**0**	**0**	**0**
				Vehicles Parked		**0**	**0**	**0**	**0**	**0**	**0**	**0**
				Vacant Spaces		**0**	**0**	**0**	**0**	**0**	**0**	**0**
				Occupancy		-	-	-	-	-	-	-

2024-0487: Section 7, Phillip

Existing Conditions Car Parking Data

Street	Section	Side	Walking Distance Zone	Restriction	Capacity	Cars Parked Saturday, 29 March 2025						
						08:00	10:00	12:00	14:00	16:00	18:00	20:00
Launceston St	Irving St to Opp Easty St	North	200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	Bus Zone	-	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	19	0	0	0	0	0	0	0
			200m-400m	Bus Zone	-	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	4	0	0	0	0	0	0	0
	Easty St to Callam St	South	200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	18	0	0	0	0	0	0	0
	Callam St to Bowes St		100m-200m	No Stopping	-	0	0	0	0	0	0	0
			100m-200m	No Stopping	-	0	0	0	0	0	0	0
			100m-200m	No Parking	11	0	0	0	0	0	0	0
			100m-200m	No Stopping	-	0	0	0	0	0	0	0
	Bowes St to Furzer St		200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	4	0	0	0	0	0	0	0
			200m-400m	Bus Zone	-	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
	Furzer St to Opp Irving St		200m-400m	No Stopping	-	0	0	0	0	0	0	0
				Capacity		**0**	**0**	**0**	**0**	**0**	**0**	**0**
				Vehicles Parked		**0**	**0**	**0**	**0**	**0**	**0**	**0**
				Vacant Spaces		**0**	**0**	**0**	**0**	**0**	**0**	**0**
				Occupancy		-	-	-	-	-	-	-
Worgan St	Melrose Dr to Furzer St	North	200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	3	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	2	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
	Furzer St to Bowes St		200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	1P Pay Parking 8:30am-5:30pm Mon-Fri, P 15mins 7am-8:30am, 5:30pm-6pm Mon-Fri	5	2	1	2	3	5	4	2
			100m-200m	No Stopping	-	0	0	0	0	0	0	0
	Bowes St to Furzer St	South	100m-200m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	1P Pay Parking 8:30am-5:30pm Mon-Fri	2	0	0	1	1	1	2	1
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	1P Pay Parking 8:30am-5:30pm Mon-Fri	9	5	6	4	7	5	5	4
			200m-400m	No Parking Pick Up and Set Down Only	2	0	0	1	1	1	0	0
			200m-400m	Taxi Zone	2	1	0	1	2	1	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
	Furzer St to Melrose Dr		200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	Loading Zone	3	0	0	1	2	2	1	0
			200m-400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	6	2	2	5	4	1	2	2
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
				Capacity		**22**	**22**	**22**	**22**	**22**	**22**	**22**
				Vehicles Parked		**9**	**9**	**12**	**15**	**12**	**13**	**9**
				Vacant Spaces		**13**	**13**	**10**	**7**	**10**	**9**	**13**
				Occupancy		**41%**	**41%**	**55%**	**68%**	**55%**	**59%**	**41%**

2024-0487: Section 7, Phillip

Existing Conditions Car Parking Data

Street	Section	Side	Walking Distance Zone	Restriction	Capacity	Cars Parked Saturday, 29 March 2025						
						08:00	10:00	12:00	14:00	16:00	18:00	20:00
Corinna St	Melrose Dr to Furzer St	North	200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	4	3	3	4	4	2	4	3
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	1/2P 8:30am-5:30pm Mon-Fri	2	1	2	2	2	2	2	1
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
	Furzer St to Corinna St	South	200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	1/2P 8:30am-5:30pm Mon-Fri	2	1	1	2	1	1	2	1
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
	Corinna St to Melrose Dr		200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	2P Pay Parking 8:30am-5:30pm Mon-Fri, 8:30am-12pm Sat	6	3	2	5	4	6	5	4
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
				Capacity		**14**	**14**	**14**	**14**	**14**	**14**	**14**
				Vehicles Parked		**8**	**8**	**13**	**11**	**11**	**13**	**9**
				Vacant Spaces		**6**	**6**	**1**	**3**	**3**	**1**	**5**
				Occupancy		**57%**	**57%**	**93%**	**79%**	**79%**	**93%**	**64%**
Neptune St	Bradley St to Callam St	North	200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
	Callam St to Bradley St	South	200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	Loading Zone 30mins 7:30am-6pm Mon-Fri	3	1	2	3	3	3	2	1
			200m-400m	P 5mins	3	1	2	1	0	0	1	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
				Capacity		**6**	**6**	**6**	**6**	**6**	**6**	**6**
				Vehicles Parked		**2**	**4**	**4**	**3**	**3**	**3**	**1**
				Vacant Spaces		**4**	**2**	**2**	**3**	**3**	**3**	**5**
				Occupancy		**33%**	**67%**	**67%**	**50%**	**50%**	**50%**	**17%**
Wilbow St	Callam St to Easty St	North	200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	7	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
	Easty St to Callam St	South	200m-400m	No Stopping	-	0	0	0	0	0	0	0
			200m-400m	No Parking	8	0	0	0	0	0	0	0
			200m-400m	No Stopping	-	0	0	0	0	0	0	0
				Capacity		**0**	**0**	**0**	**0**	**0**	**0**	**0**
				Vehicles Parked		**0**	**0**	**0**	**0**	**0**	**0**	**0**
				Vacant Spaces		**0**	**0**	**0**	**0**	**0**	**0**	**0**
				Occupancy		-	-	-	-	-	-	-
S104 Off-Street Carpark (ACT Government)			>400m	P Disabled Only	6	4	3	2	1	2	4	4
			>400m	Pay Parking 8:30am-5:30pm Mon-Fri,	393	89	156	246	229	267	193	175
			>400m	P Motorbikes Only	5	1	2	2	2	1	1	1
				Capacity		**399**	**399**	**399**	**399**	**399**	**399**	**399**
				Vehicles Parked		**93**	**159**	**248**	**230**	**269**	**197**	**179**
				Vacant Spaces		**306**	**240**	**151**	**169**	**130**	**202**	**220**
				Occupancy		**23%**	**40%**	**62%**	**58%**	**67%**	**49%**	**45%**
S23 Off-Street Carpark (ACT Government)			200m-400m	Pay Parking 8:30am-5:30pm Mon-Fri,	37	0	0	1	0	0	0	0
				Capacity		**37**	**37**	**37**	**37**	**37**	**37**	**37**
				Vehicles Parked		**0**	**0**	**1**	**0**	**0**	**0**	**0**
				Vacant Spaces		**37**	**37**	**36**	**37**	**37**	**37**	**37**
				Occupancy		**0%**	**0%**	**3%**	**0%**	**0%**	**0%**	**0%**
B3 S16 Off-Street Carpark (Skypark)			200m-400m	P Disabled Only	6	0	2	2	2	1	1	1
			200m-400m	Pay Parking	989	45	73	60	54	36	33	20
				Capacity		**995**	**995**	**995**	**995**	**995**	**995**	**995**
				Vehicles Parked		**45**	**75**	**62**	**56**	**37**	**34**	**21**
				Vacant Spaces		**950**	**920**	**933**	**939**	**958**	**961**	**974**
				Occupancy		**5%**	**8%**	**6%**	**6%**	**4%**	**3%**	**2%**

2024-0487: Section 7, Phillip

Existing Conditions Car Parking Data

QuantumTraffic

Street	Section	Side	Walking Distance Zone	Restriction	Capacity	Cars Parked Saturday, 29 March 2025						
						08:00	10:00	12:00	14:00	16:00	18:00	20:00
S6 Off-Street Carpark (Hellenic Club)			<100m	Pay Parking 8:30am-5:30pm Mon-Fri,	237	22	44	198	232	188	212	237
			<100m	P Disabled Only	12	0	1	2	5	4	8	7
			<100m	Motorbikes Parking	4	0	0	0	0	0	0	0
				Capacity		**249**	**249**	**249**	**249**	**249**	**249**	**249**
				Vehicles Parked		**22**	**45**	**200**	**237**	**192**	**220**	**244**
				Vacant Spaces		**227**	**204**	**49**	**12**	**57**	**29**	**5**
				Occupancy		**9%**	**18%**	**80%**	**95%**	**77%**	**88%**	**98%**
S7 Off-Street Carpark (ACT Government)			On-Site	Pay Parking 8:30am-5:30pm Mon-Fri,	70	29	51	53	54	54	39	43
			On-Site	P Disabled Only	15	8	7	12	12	10	10	8
			On-Site	Motorbikes Parking	25	2	2	2	2	2	2	2
			On-Site	Permit Zone 7:30am-5:30pm	78	41	52	43	41	44	29	18
			On-Site	4P Ticket Pay Parking 8:30am-5:30pm Mon-Fri	81	34	75	62	42	29	21	22
				Capacity		**166**	**166**	**166**	**166**	**166**	**244**	**244**
				Vehicles Parked		**71**	**133**	**127**	**108**	**93**	**99**	**91**
				Vacant Spaces		**95**	**33**	**39**	**58**	**73**	**145**	**153**
				Occupancy		**43%**	**80%**	**77%**	**65%**	**56%**	**41%**	**37%**
B33 S80 Off-Street Carpark (ACT Government)			<100m	Closed due to construction works	-	0	0	0	0	0	0	0
				Capacity		**0**	**0**	**0**	**0**	**0**	**0**	**0**
				Vehicles Parked		**0**	**0**	**0**	**0**	**0**	**0**	**0**
				Vacant Spaces		**0**	**0**	**0**	**0**	**0**	**0**	**0**
				Occupancy		-	-	-	-	-	-	-
B30 S80 Off-Street Carpark (ACT Government)			100m-200m	P Disabled Only	3	1	0	1	0	0	0	0
			100m-200m	Loading Zone	2	0	0	0	0	0	0	0
			100m-200m	1P Parking	4	1	2	1	0	0	0	0
			100m-200m	Permit Zone Government Vehicles Only	20	1	2	2	4	5	1	0
			100m-200m	Pay Parking 8:30am-5:30pm Mon-Fri,	248	58	59	61	43	34	20	24
				Capacity		**255**	**255**	**255**	**255**	**255**	**255**	**255**
				Vehicles Parked		**60**	**61**	**63**	**43**	**34**	**20**	**24**
				Vacant Spaces		**195**	**194**	**192**	**212**	**221**	**235**	**231**
				Occupancy		**24%**	**24%**	**25%**	**17%**	**13%**	**8%**	**9%**
B29 S80 Off-Street Carpark (ACT Government)			100m-200m	Pay Parking 8:30am-5:30pm Mon-Fri,	70	9	21	34	38	21	3	0
				Capacity		**70**	**70**	**70**	**70**	**70**	**70**	**70**
				Vehicles Parked		**9**	**21**	**34**	**38**	**21**	**3**	**0**
				Vacant Spaces		**61**	**49**	**36**	**32**	**49**	**67**	**70**
				Occupancy		**13%**	**30%**	**49%**	**54%**	**30%**	**4%**	**0%**
Easty St Off-Street Carpark (ACT Government)			200m-400m	Pay Parking 8:30am-5:30pm Mon-Fri,	44	34	37	31	24	1	0	0
				Capacity		**44**	**44**	**44**	**44**	**44**	**44**	**44**
				Vehicles Parked		**34**	**37**	**31**	**24**	**1**	**0**	**0**
				Vacant Spaces		**10**	**7**	**13**	**20**	**43**	**44**	**44**
				Occupancy		**77%**	**84%**	**70%**	**55%**	**2%**	**0%**	**0%**
S64 Off-Street Carpark (Westfield)			100m-200m	Pay Parking	752	74	197	299	450	455	211	91
			100m-200m	P Disabled Only	17	1	3	5	7	8	7	2
				Capacity		**769**	**769**	**769**	**769**	**769**	**769**	**769**
				Vehicles Parked		**75**	**200**	**304**	**457**	**463**	**218**	**93**
				Vacant Spaces		**694**	**569**	**465**	**312**	**306**	**551**	**676**
				Occupancy		**10%**	**26%**	**40%**	**59%**	**60%**	**28%**	**12%**
On-Site				**Capacity**		**166**	**166**	**166**	**166**	**166**	**244**	**244**
				Vehicles Parked		**71**	**133**	**127**	**108**	**93**	**99**	**91**
				Vacant Spaces		**95**	**33**	**39**	**58**	**73**	**145**	**153**
				Occupancy		**43%**	**80%**	**77%**	**65%**	**56%**	**41%**	**37%**
On-Site or Adjacent				**Capacity**		**173**	**173**	**173**	**173**	**173**	**251**	**251**
				Vehicles Parked		**74**	**137**	**132**	**112**	**95**	**101**	**92**
				Vacant Spaces		**99**	**36**	**41**	**61**	**78**	**150**	**159**
				Occupancy		**43%**	**79%**	**76%**	**65%**	**55%**	**40%**	**37%**
On-Site or Within 100m				**Capacity**		**426**	**426**	**426**	**426**	**426**	**504**	**504**
				Vehicles Parked		**96**	**183**	**333**	**350**	**288**	**323**	**336**
				Vacant Spaces		**330**	**243**	**93**	**76**	**138**	**181**	**168**
				Occupancy		**23%**	**43%**	**78%**	**82%**	**68%**	**64%**	**67%**

Street	Section	Side	Walking Distance Zone	Restriction	Capacity	Cars Parked Saturday, 29 March 2025						
						08:00	10:00	12:00	14:00	16:00	18:00	20:00
On-Site or Within 200m				Capacity		1,520	1,520	1,520	1,520	1,520	1,598	1,598
				Vehicles Parked		240	465	734	888	806	564	453
				Vacant Spaces		1,280	1,055	786	632	714	1,034	1,145
				Occupancy		16%	31%	48%	58%	53%	35%	28%
On-Site or Within 400m				Capacity		2,649	2,649	2,649	2,649	2,649	2,727	2,727
				Vehicles Parked		340	602	864	1,004	876	632	497
				Vacant Spaces		2,309	2,047	1,785	1,645	1,773	2,095	2,230
				Occupancy		13%	23%	33%	38%	33%	23%	18%
Total				Capacity		3,138	3,138	3,138	3,138	3,138	3,216	3,216
				Vehicles Parked		481	810	1,160	1,286	1,206	889	743
				Vacant Spaces		2,657	2,328	1,978	1,852	1,932	2,327	2,473
				Occupancy		15%	26%	37%	41%	38%	28%	23%

Appendix E:

Intersection Performance Results – 2030 Development Scenario

USER REPORT FOR SITE

Project: 24-0487_20260304

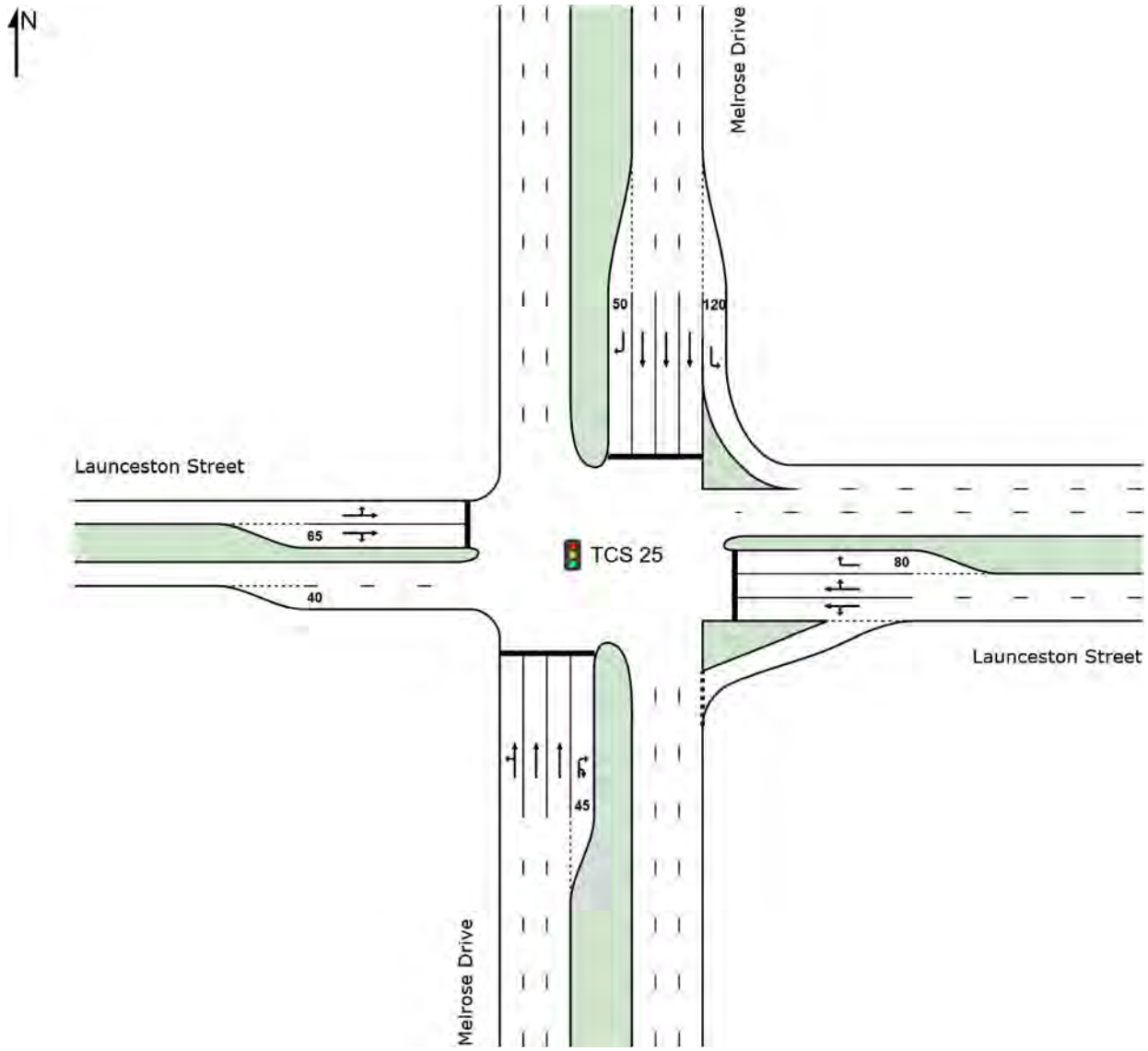
Template: Default Site User Report

Site: TCS 25 [2030 Dev - AM: LS-MD]

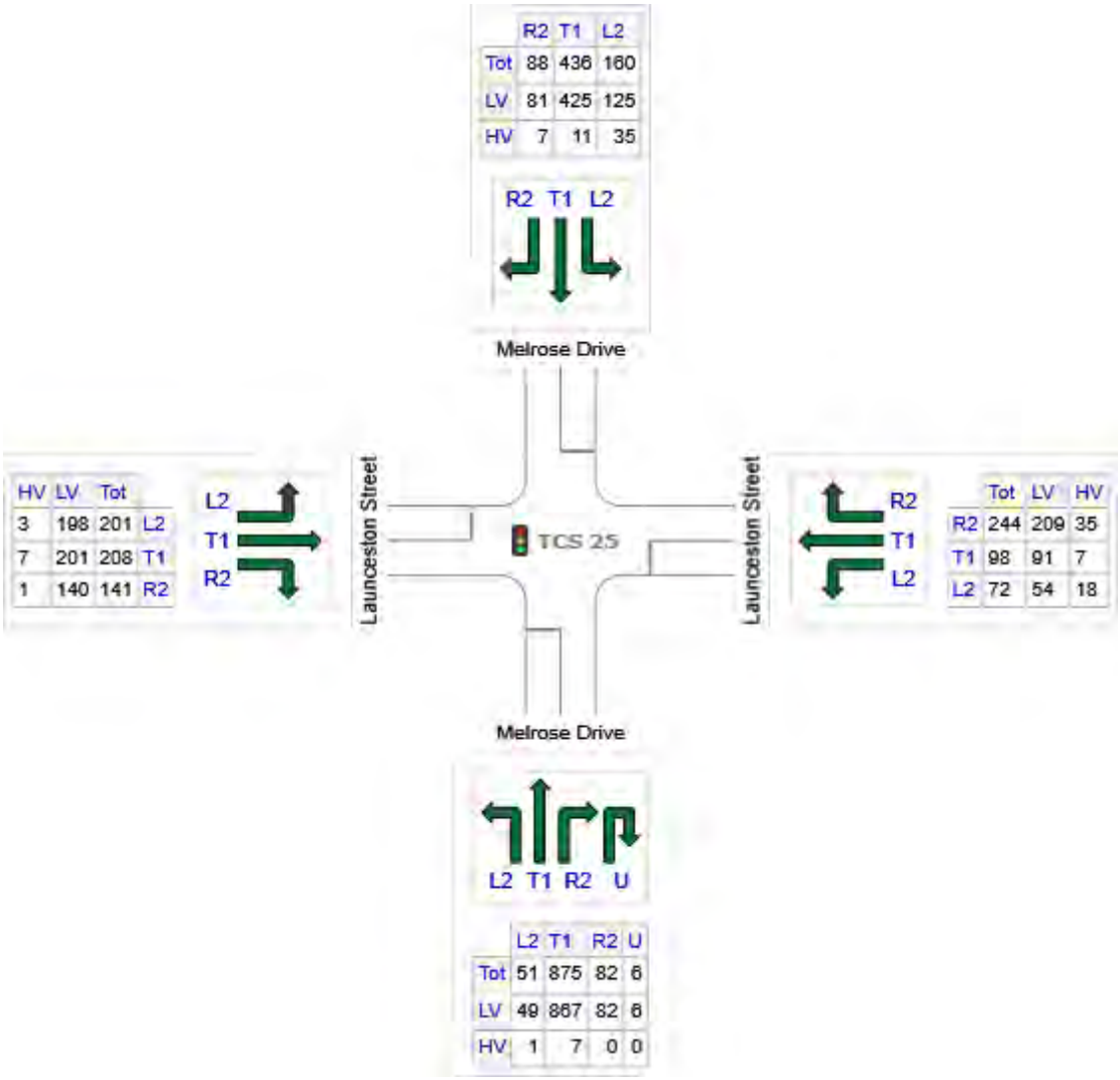
Launceston Street / Melrose Drive
Existing Signalised X-Intersection
Site Category: 2030 Development Scenario - Weekday Morning Peak Hour
Signals - Fixed Time Isolated Cycle Time = 103 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E, F
Output Phase Sequence: A, D, E, F

Site Layout



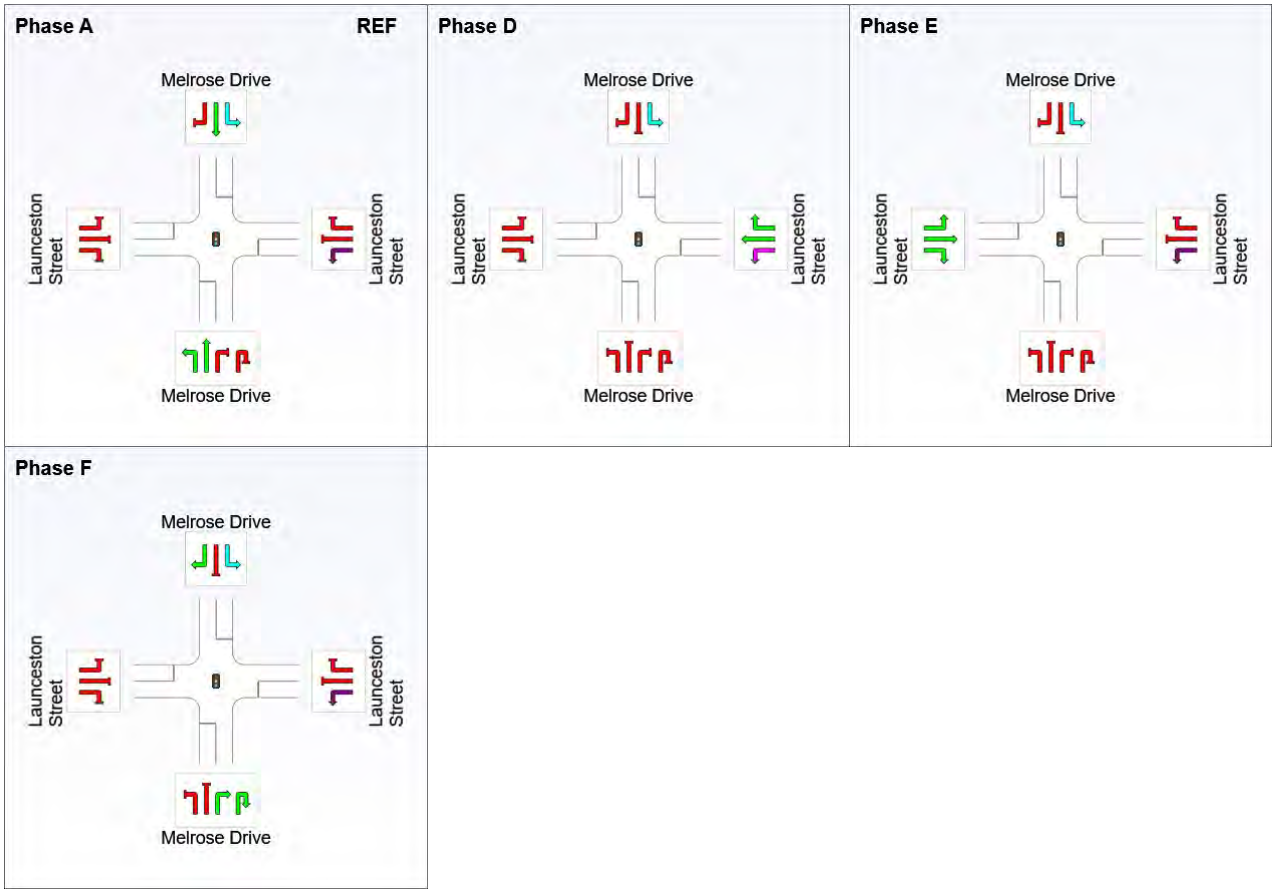
OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Melrose Drive	1014	1005	8
E: Launceston Street	414	354	60
N: Melrose Drive	684	632	53
W: Launceston Street	551	539	12
Total	2662	2529	133

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase

Phase Timing Summary

Phase	A	D	E	F
Phase Change Time (sec)	0	28	56	87
Green Time (sec)	22	22	25	10
Phase Time (sec)	28	28	31	16
Phase Split	27%	27%	30%	16%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Melrose Drive												
1	L2	51	2.1	0.959	80.0	LOS F	21.7	153.6	1.00	1.21	1.59	12.0
2	T1	875	0.8	0.959	74.3	LOS F	21.9	154.6	1.00	1.20	1.59	21.6
3	R2	82	0.0	0.628	57.7	LOS E	4.6	32.3	1.00	0.82	1.08	13.4
3u	U	6	0.0	0.628	59.1	LOS E	4.6	32.3	1.00	0.82	1.08	18.2
Approach		1014	0.8	0.959	73.2	LOS F	21.9	154.6	1.00	1.17	1.55	20.6
East: Launceston Street												
4	L2	72	25.0	0.176	13.3	LOS A	1.7	14.1	0.57	0.65	0.57	33.3
5	T1	98	7.5	0.518	28.6	LOS C	7.1	54.6	0.79	0.74	0.79	16.9
6	R2	244	14.2	0.518	45.3	LOS D	7.1	54.6	0.93	0.80	0.93	26.1
Approach		414	14.5	0.518	35.8	LOS C	7.1	54.6	0.84	0.76	0.84	25.2
North: Melrose Drive												
7	L2	160	21.7	0.099	5.8	LOS A	0.0	0.0	0.00	0.52	0.00	48.9
8	T1	436	2.4	0.354	37.6	LOS C	6.3	44.9	0.90	0.73	0.90	31.6
9	R2	88	8.3	0.520	55.8	LOS D	4.5	33.4	0.99	0.78	0.99	22.7
Approach		684	7.7	0.520	32.5	LOS C	6.3	44.9	0.70	0.68	0.70	32.6
West: Launceston Street												
10	L2	201	1.6	0.760	47.5	LOS D	13.8	98.3	0.99	0.91	1.10	24.9
11	T1	208	3.5	0.760	42.9	LOS D	13.9	99.3	0.99	0.91	1.09	12.9
12	R2	141	0.7	0.760	47.4	LOS D	13.9	99.3	0.99	0.91	1.09	17.4
Approach		551	2.1	0.760	45.8	LOS D	13.9	99.3	0.99	0.91	1.09	19.3
All Vehicles		2662	5.0	0.959	51.3	LOS D	21.9	154.6	0.89	0.93	1.13	23.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	Demand Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	95% Back of Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Melrose Drive													
Lane 1	315	1.0	328	0.959	100	75.3	LOS F	21.7	153.6	Full	205	0.0	0.0
Lane 2	318	0.8	331	0.959	100	74.3	LOS F	21.9	154.6	Full	205	0.0	0.0
Lane 3	293	0.8	305[1]	0.959	100	74.4	LOS F	20.0	141.0	Full	205	0.0	0.0
Lane 4	88	0.0	141	0.628	100	57.8	LOS E	4.6	32.3	Short	45	0.0	NA
Approach	1014	0.8		0.959		73.2	LOS F	21.9	154.6				
East: Launceston Street													
Lane 1	109	19.0	621	0.176	34[6]	11.8	LOS A	1.7	14.1	Full	90	0.0	0.0
Lane 2	155	11.6	299	0.518	100	43.6	LOS D	7.1	54.6	Full	90	0.0	0.0
Lane 3	149	14.2	288	0.518	100	45.3	LOS D	6.9	53.8	Short	80	0.0	NA
Approach	414	14.5		0.518		35.8	LOS C	7.1	54.6				
North: Melrose Drive													
Lane 1	160	21.7	1608	0.099	100	5.8	LOS A	0.0	0.0	Short	120	0.0	NA
Lane 2	145	2.4	410	0.354	100	37.6	LOS C	6.3	44.9	Full	470	0.0	0.0
Lane 3	145	2.4	410	0.354	100	37.6	LOS C	6.3	44.9	Full	470	0.0	0.0
Lane 4	145	2.4	410	0.354	100	37.6	LOS C	6.3	44.9	Full	470	0.0	0.0
Lane 5	88	8.3	170	0.520	100	55.8	LOS D	4.5	33.4	Short	50	0.0	NA
Approach	684	7.7		0.520		32.5	LOS C	6.3	44.9				
West: Launceston Street													
Lane 1	274	2.1	360	0.760	100	46.3	LOS D	13.8	98.3	Full	95	0.0	9.0[8]
Lane 2	277	2.1	364	0.760	100	45.2	LOS D	13.9	99.3	Short	65	0.0	NA
Approach	551	2.1		0.760		45.8	LOS D	13.9	99.3				
Intersection	2662	5.0		0.959		51.3	LOS D	21.9	154.6				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

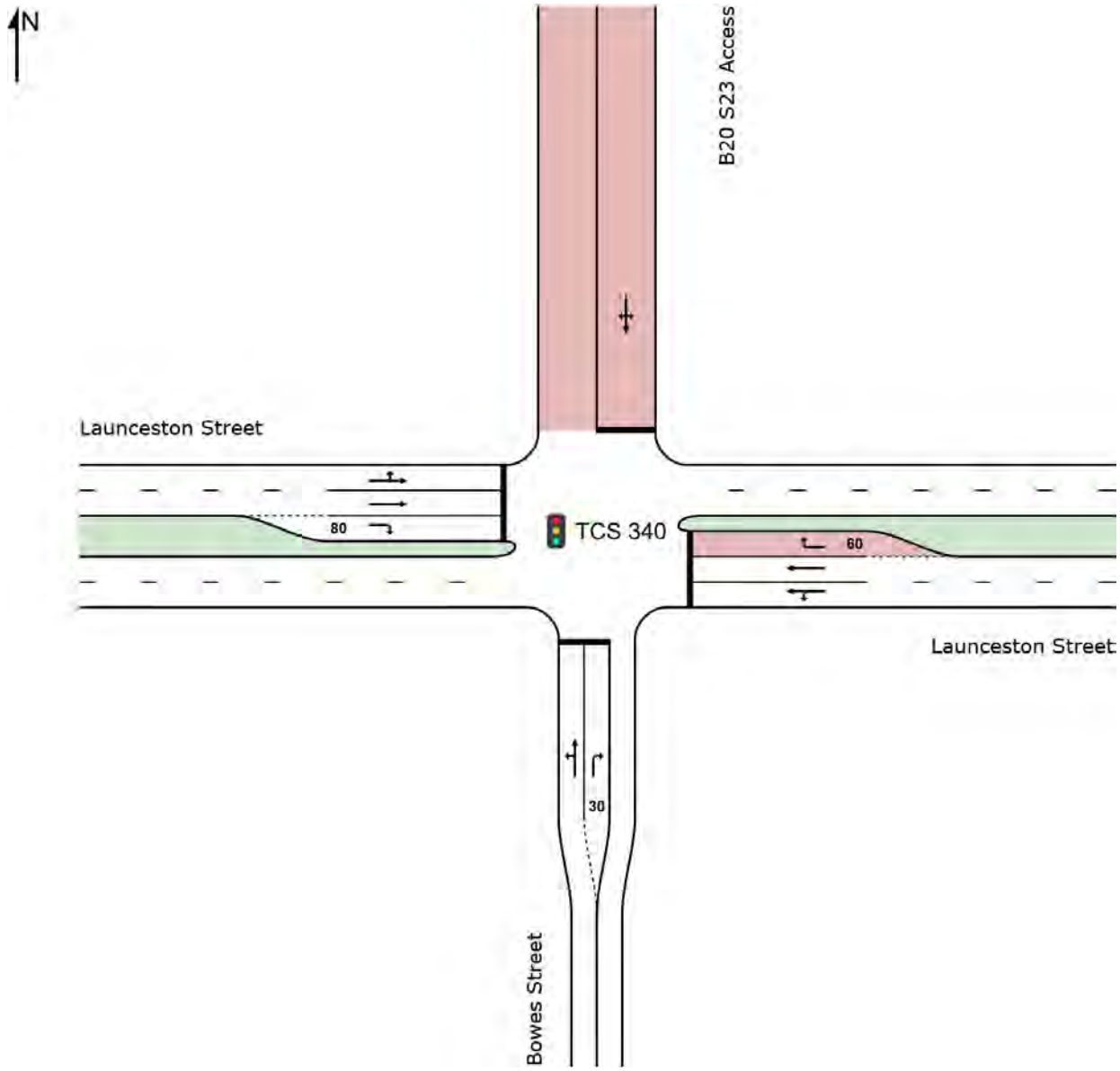
1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
6 Lane under-utilisation due to downstream effects
8 Probability of Blockage has been set on the basis of a queue that overflows from a short lane.

Site: TCS 340 [2030 Dev - AM: BS-LS]

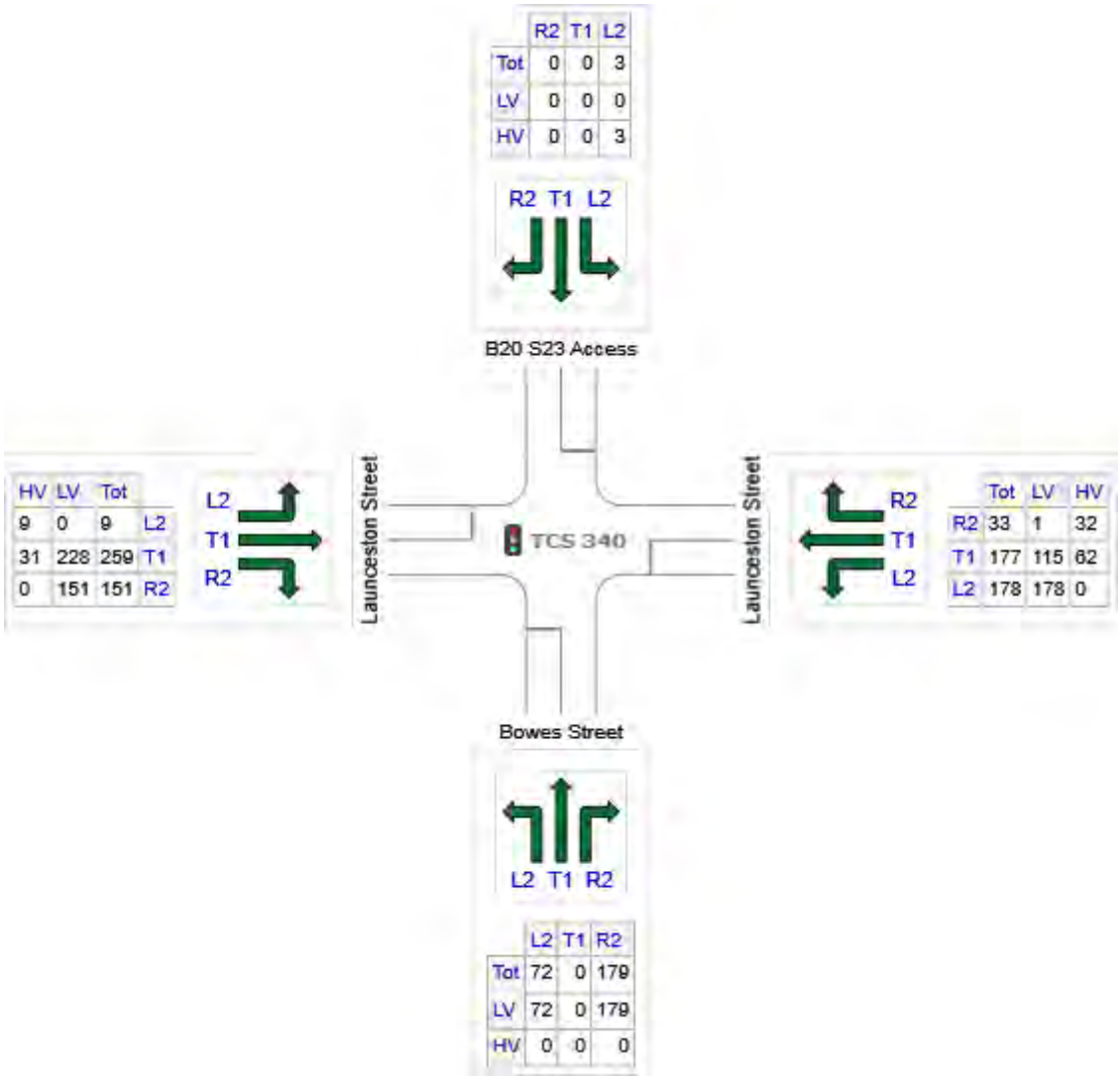
Block 20 Section 23 Access / Bowes Street / Launceston Street
Existing Signalised X-Intersection
Site Category: 2030 Development Scenario - Weekday Morning Peak Hour
Signals - Fixed Time Isolated Cycle Time = 84 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E, G
Output Phase Sequence: A, D, E, G

Site Layout



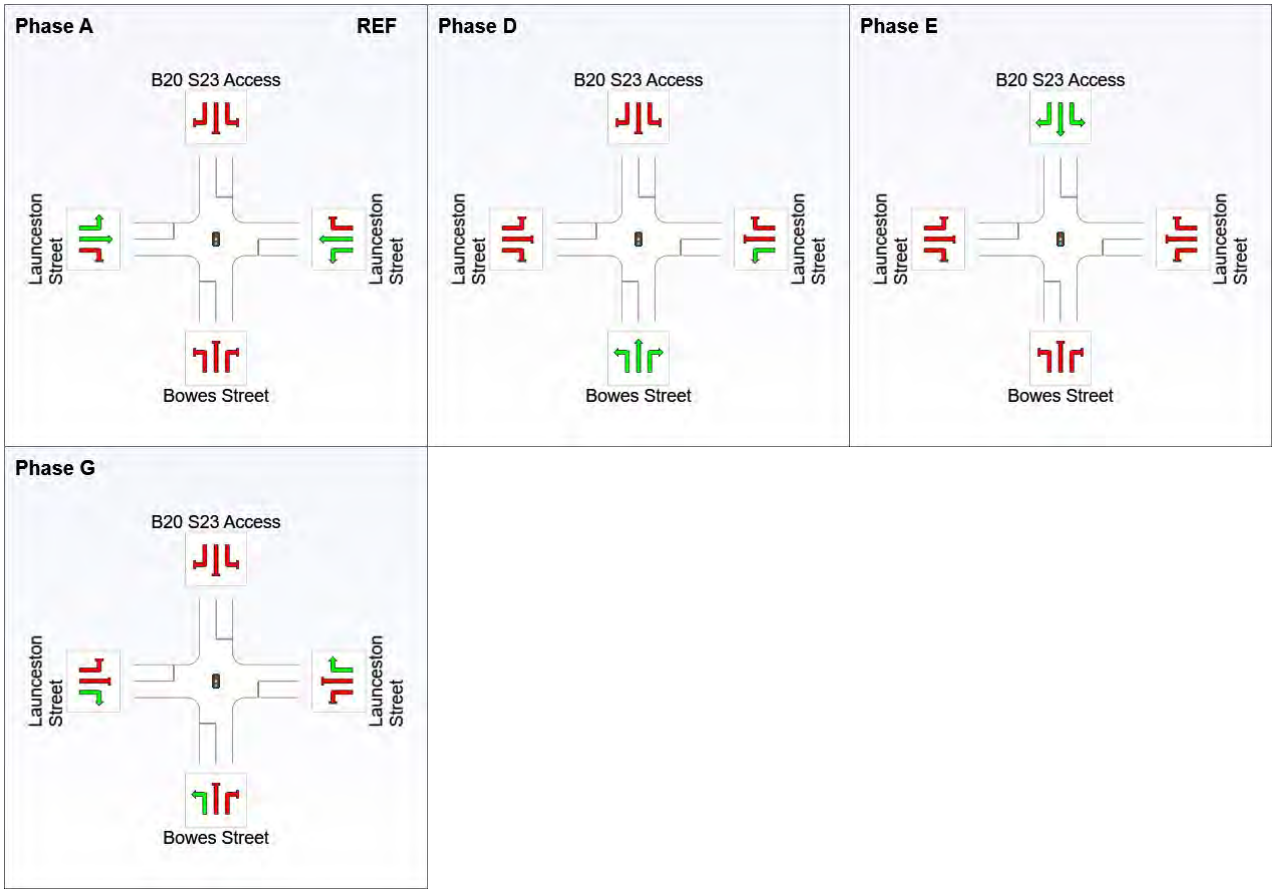
OD Demand Flows



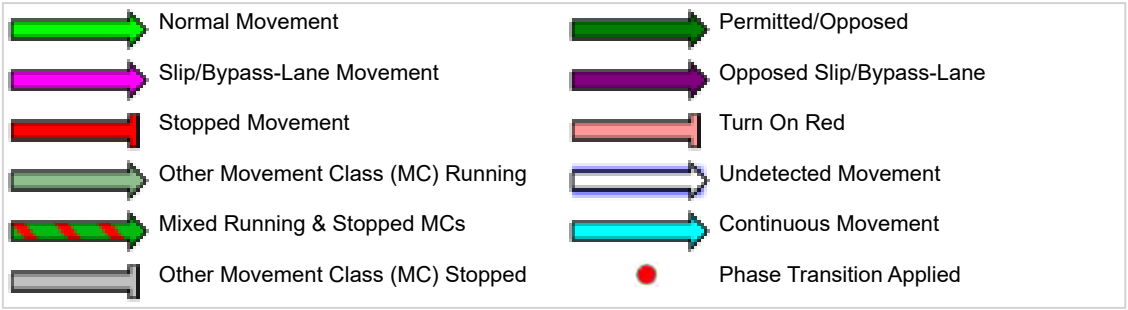
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	251	251	0
E: Launceston Street	387	294	94
N: B20 S23 Access	3	0	3
W: Launceston Street	419	379	40
Total	1060	923	137

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	D	E	G
Phase Change Time (sec)	0	27	55	68
Green Time (sec)	22	22	7	12
Phase Time (sec)	28	28	11	17
Phase Split	33%	33%	13%	20%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	72	0.0	0.093	12.1	LOS A	1.2	8.2	0.63	0.68	0.63	23.6
2	T1	0	0.0	0.093	12.6	LOS A	1.2	8.2	0.63	0.68	0.63	13.8
3	R2	179	0.0	0.368	30.9	LOS C	6.1	42.6	0.86	0.78	0.86	12.3
Approach		251	0.0	0.368	25.5	LOS B	6.1	42.6	0.80	0.75	0.80	14.3
East: Launceston Street												
4	L2	178	0.0	0.331	26.2	LOS B	6.4	47.5	0.76	0.75	0.76	14.5
5	T1	177	35.1	0.331	26.0	LOS B	6.4	47.5	0.83	0.71	0.83	19.5
6	R2	33	96.8	0.208	42.7	LOS D	1.3	16.1	0.92	0.73	0.92	9.5
Approach		387	24.2	0.331	27.5	LOS B	6.4	47.5	0.81	0.73	0.81	16.2
North: B20 S23 Access												
7	L2	3	100.0	0.034	40.6	LOS C	0.1	1.8	0.94	0.61	0.94	8.6
8	T1	0	100.0	0.034	40.6	LOS C	0.1	1.8	0.94	0.61	0.94	5.5
9	R2	0	100.0	0.034	40.6	LOS C	0.1	1.8	0.94	0.61	0.94	9.1
Approach		3	100.0	0.034	40.6	LOS C	0.1	1.8	0.94	0.61	0.94	8.5
West: Launceston Street												
10	L2	9	100.0	0.290	32.9	LOS C	4.4	35.3	0.84	0.69	0.84	13.7
11	T1	259	11.8	0.290	27.1	LOS B	4.6	35.2	0.84	0.69	0.84	19.5
12	R2	151	0.0	0.567	43.3	LOS D	6.0	42.1	0.98	0.80	0.98	10.2
Approach		419	9.5	0.567	33.2	LOS C	6.0	42.1	0.89	0.73	0.89	15.4
All Vehicles		1060	12.9	0.567	29.3	LOS C	6.4	47.5	0.84	0.73	0.84	15.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	Demand Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	95% Back of Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Bowes Street													
Lane 1	72	0.0	772	0.093	100	12.1	LOS A	1.2	8.2	Full	35	0.0	22.9[8]
Lane 2	179	0.0	486	0.368	100	30.9	LOS C	6.1	42.6	Short	30	0.0	NA
Approach	251	0.0		0.368		25.5	LOS B	6.1	42.6				
East: Launceston Street													
Lane 1	217	6.3	656	0.331	100	25.2	LOS B	6.4	47.5	Full	95	0.0	0.0
Lane 2	138	35.1	416	0.331	100	27.6	LOS B	4.7	42.5	Full	95	0.0	0.0
Lane 3	33	96.8	157	0.208	100	42.7	LOS D	1.3	16.1	Short	60	0.0	NA
Approach	387	24.2		0.331		27.5	LOS B	6.4	47.5				
North: B20 S23 Access													
Lane 1	3	100.0	99	0.034	100	40.6	LOS C	0.1	1.8	Full	30	0.0	0.0
Approach	3	100.0		0.034		40.6	LOS C	0.1	1.8				
West: Launceston Street													
Lane 1	131	18.2	452	0.290	100	27.9	LOS B	4.4	35.3	Full	105	0.0	0.0
Lane 2	137	11.8	474	0.290	100	27.1	LOS B	4.6	35.2	Full	105	0.0	0.0
Lane 3	151	0.0	265	0.567	100	43.3	LOS D	6.0	42.1	Short	80	0.0	NA
Approach	419	9.5		0.567		33.2	LOS C	6.0	42.1				
Intersection	1060	12.9		0.567		29.3	LOS C	6.4	47.5				

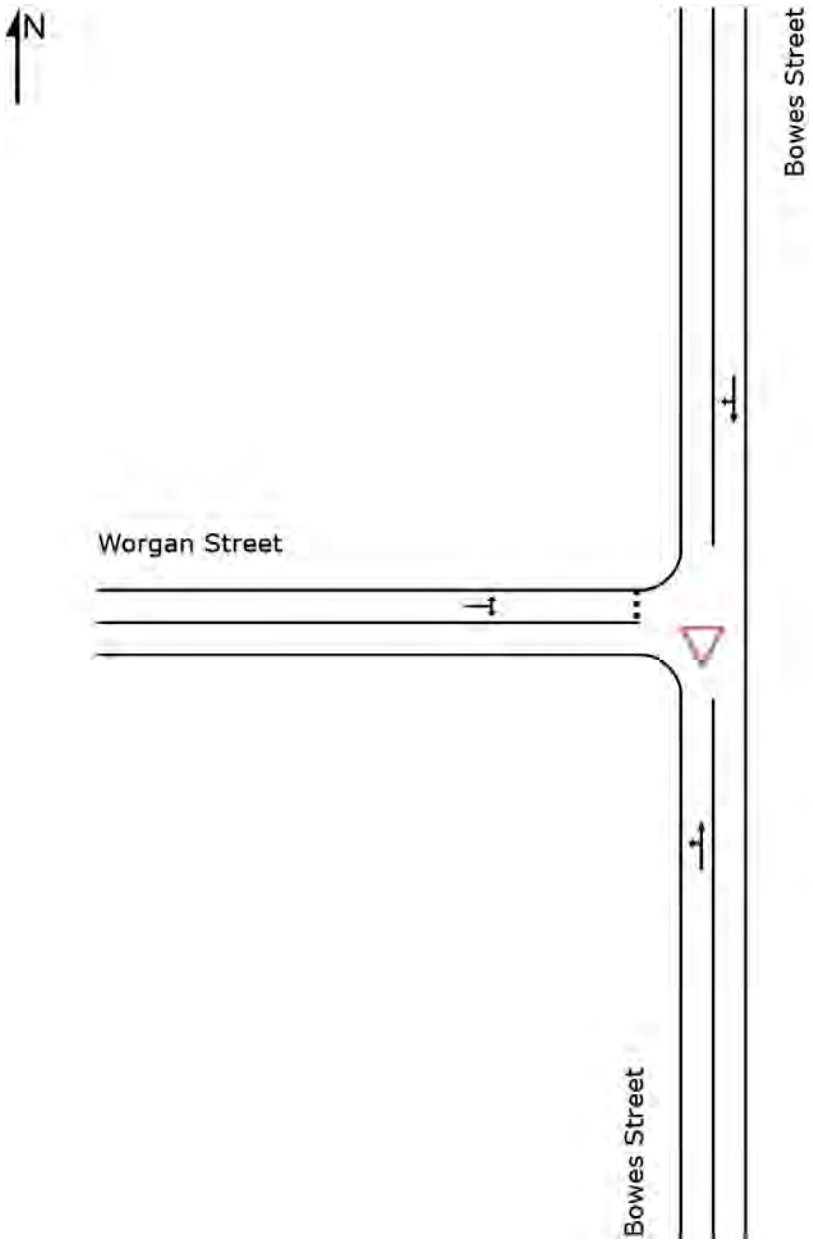
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

8 Probability of Blockage has been set on the basis of a queue that overflows from a short lane.

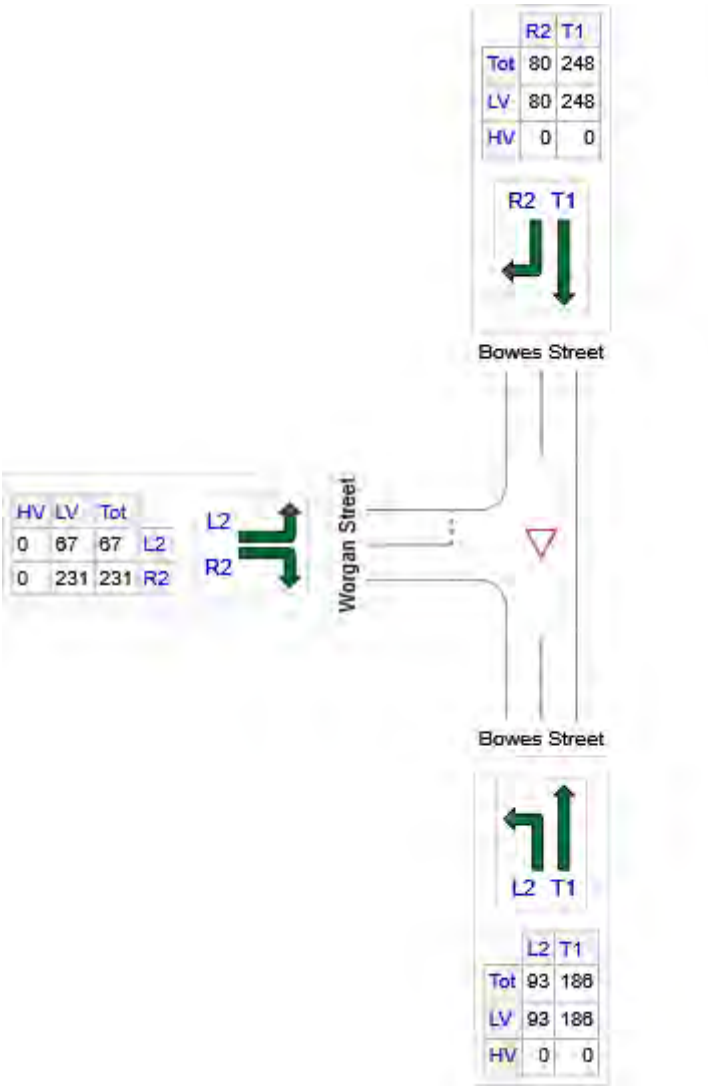
Site: [2030 Dev - AM: BS-WS]

Bowes Street / Worgan Street
Existing Priority-Controlled (Give-Way) T-Intersection
Site Category: 2030 Development Scenario - Weekday Morning Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	279	279	0
N: Bowes Street	328	328	0
W: Worgan Street	298	298	0
Total	905	905	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	93	0.0	0.145	4.6	LOS A	0.0	0.0	0.00	0.18	0.00	32.9
2	T1	186	0.0	0.145	0.0	LOS A	0.0	0.0	0.00	0.18	0.00	43.9
Approach		279	0.0	0.145	1.5	NA	0.0	0.0	0.00	0.18	0.00	39.5
North: Bowes Street												
8	T1	248	0.0	0.187	0.4	LOS A	0.5	3.8	0.16	0.14	0.16	44.4
9	R2	80	0.0	0.187	4.2	LOS A	0.5	3.8	0.16	0.14	0.16	17.3
Approach		328	0.0	0.187	1.3	NA	0.5	3.8	0.16	0.14	0.16	36.2
West: Worgan Street												
10	L2	67	0.0	0.337	4.2	LOS A	1.6	11.0	0.46	0.72	0.51	18.7
12	R2	231	0.0	0.337	6.3	LOS A	1.6	11.0	0.46	0.72	0.51	30.0
Approach		298	0.0	0.337	5.8	LOS A	1.6	11.0	0.46	0.72	0.51	27.7
All Vehicles		905	0.0	0.337	2.9	NA	1.6	11.0	0.21	0.34	0.23	33.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

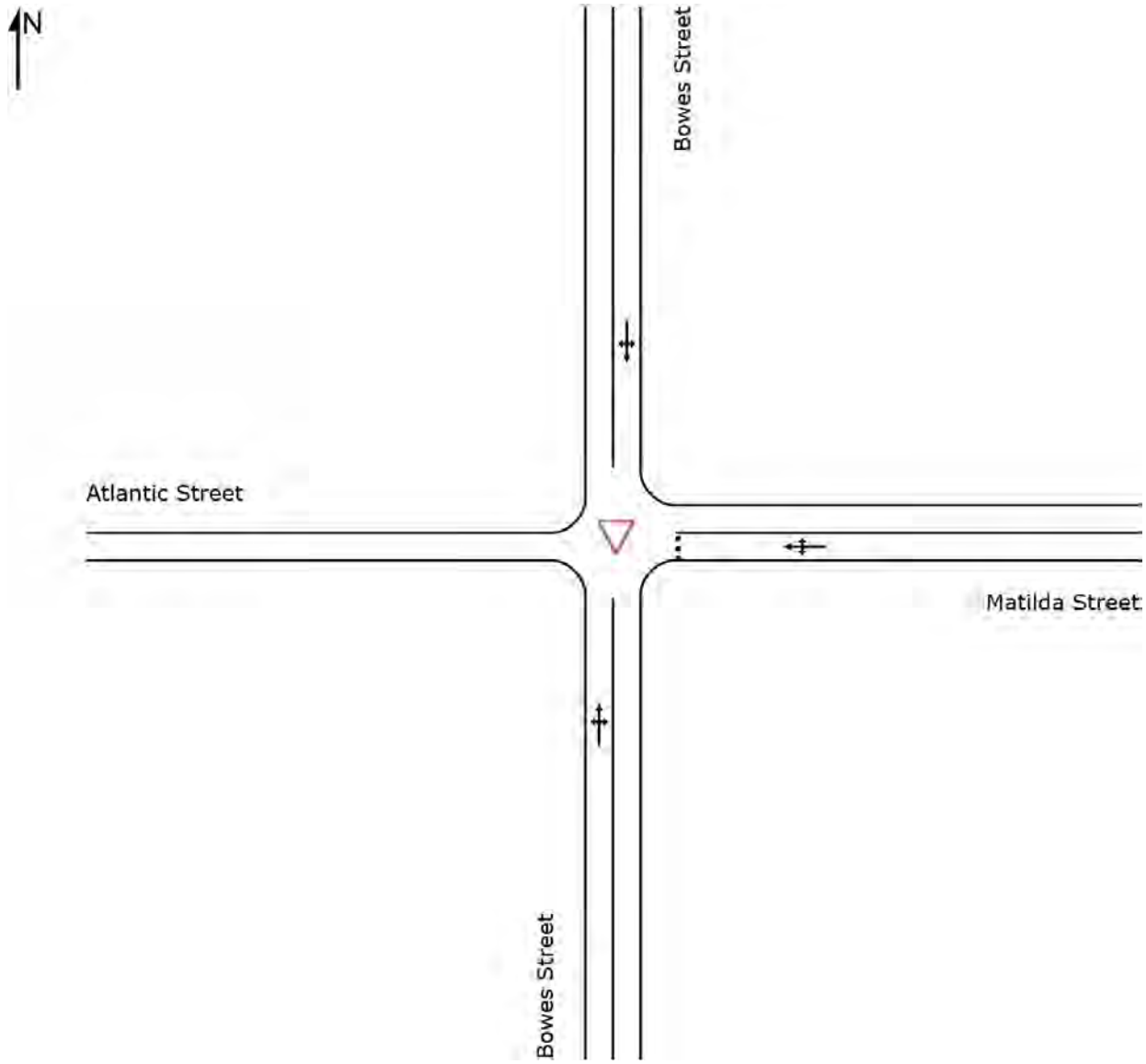
Lane Use and Performance													
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Bowes Street													
Lane 1	279	0.0	1918	0.145	100	1.5	LOS A	0.0	0.0	Full	105	0.0	0.0
Approach	279	0.0		0.145		1.5	NA	0.0	0.0				
North: Bowes Street													
Lane 1	328	0.0	1761	0.187	100	1.3	LOS A	0.5	3.8	Full	35	0.0	0.0
Approach	328	0.0		0.187		1.3	NA	0.5	3.8				
West: Worgan Street													
Lane 1	298	0.0	883	0.337	100	5.8	LOS A	1.6	11.0	Full	35	0.0	0.0
Approach	298	0.0		0.337		5.8	LOS A	1.6	11.0				
Intersection	905	0.0		0.337		2.9	NA	1.6	11.0				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

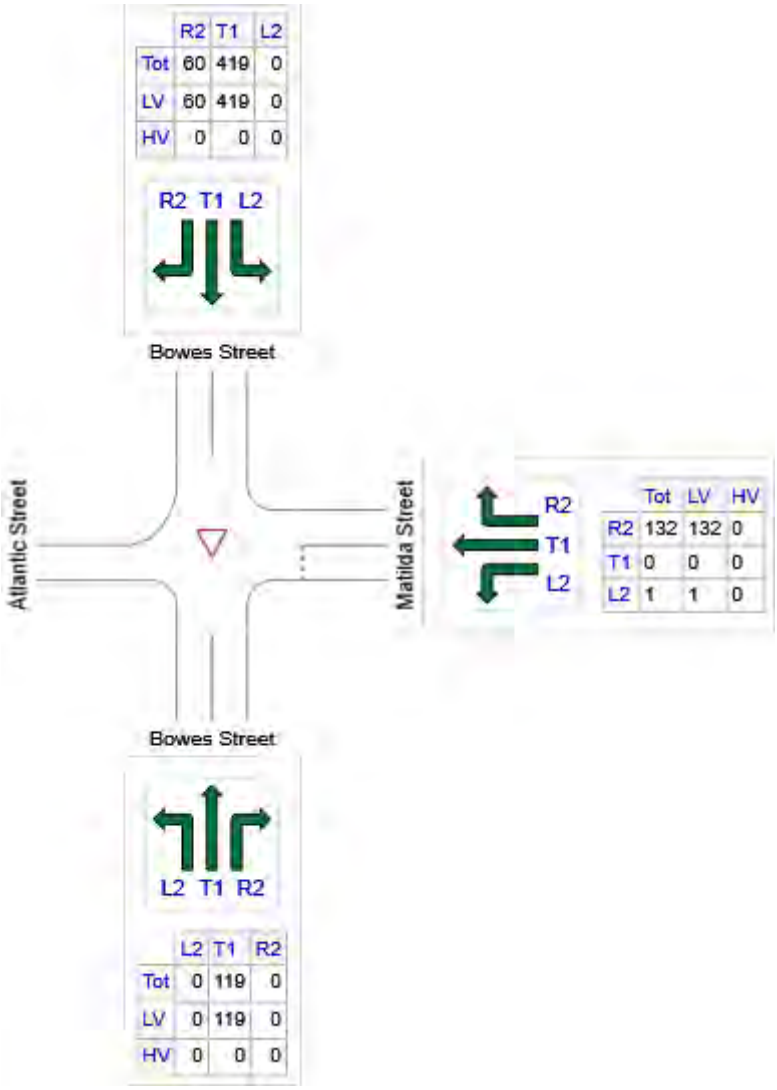
Site: [2030 Dev - AM: AS-BS-MS]

Atlantic Street / Bowes Street / Matilda Street
Existing Priority-Controlled (Give-Way) T-Intersection
Site Category: 2030 Development Scenario - Weekday Morning Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	119	119	0
E: Matilda Street	133	133	0
N: Bowes Street	479	479	0
Total	731	731	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	0	0.0	0.061	4.6	LOS A	0.0	0.0	0.00	0.00	0.00	24.3
2	T1	119	0.0	0.061	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
3	R2	0	0.0	0.061	5.2	LOS A	0.0	0.0	0.00	0.00	0.00	43.5
Approach		119	0.0	0.061	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.9
East: Matilda Street												
4	L2	1	0.0	0.238	6.4	LOS A	0.9	6.0	0.57	0.82	0.61	23.3
5	T1	0	0.0	0.238	7.8	LOS A	0.9	6.0	0.57	0.82	0.61	20.2
6	R2	132	0.0	0.238	9.4	LOS A	0.9	6.0	0.57	0.82	0.61	28.6
Approach		133	0.0	0.238	9.4	LOS A	0.9	6.0	0.57	0.82	0.61	28.6
North: Bowes Street												
7	L2	0	0.0	0.253	5.0	LOS A	0.5	3.3	0.08	0.08	0.08	44.9
8	T1	419	0.0	0.253	0.1	LOS A	0.5	3.3	0.08	0.08	0.08	46.4
9	R2	60	0.0	0.253	5.3	LOS A	0.5	3.3	0.08	0.08	0.08	28.8
Approach		479	0.0	0.253	0.7	NA	0.5	3.3	0.08	0.08	0.08	41.8
All Vehicles		731	0.0	0.253	2.2	NA	0.9	6.0	0.15	0.20	0.16	39.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

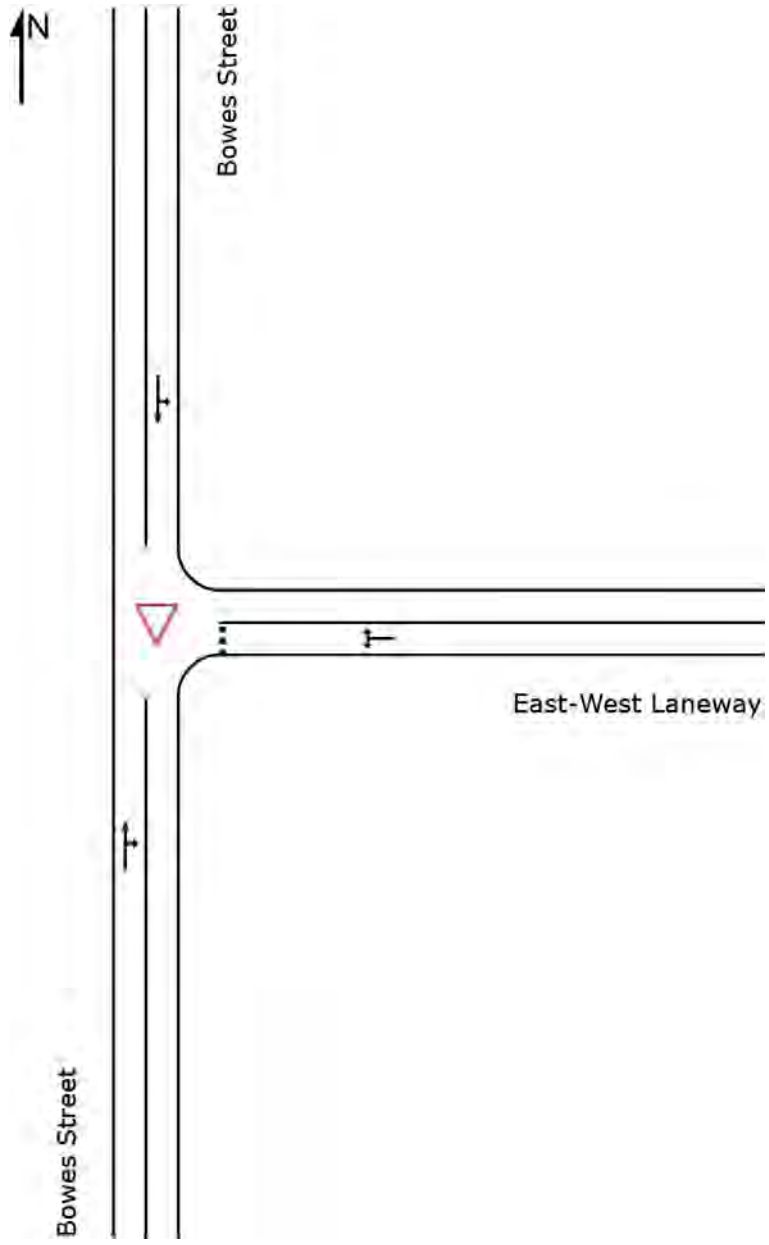
Lane Use and Performance													
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Bowes Street													
Lane 1	119	0.0	1949	0.061	100	0.0	LOS A	0.0	0.0	Full	45	0.0	0.0
Approach	119	0.0		0.061		0.0	NA	0.0	0.0				
East: Matilda Street													
Lane 1	133	0.0	557	0.238	100	9.4	LOS A	0.9	6.0	Full	80	0.0	0.0
Approach	133	0.0		0.238		9.4	LOS A	0.9	6.0				
North: Bowes Street													
Lane 1	479	0.0	1892	0.253	100	0.7	LOS A	0.5	3.3	Full	110	0.0	0.0
Approach	479	0.0		0.253		0.7	NA	0.5	3.3				
Intersection	731	0.0		0.253		2.2	NA	0.9	6.0				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

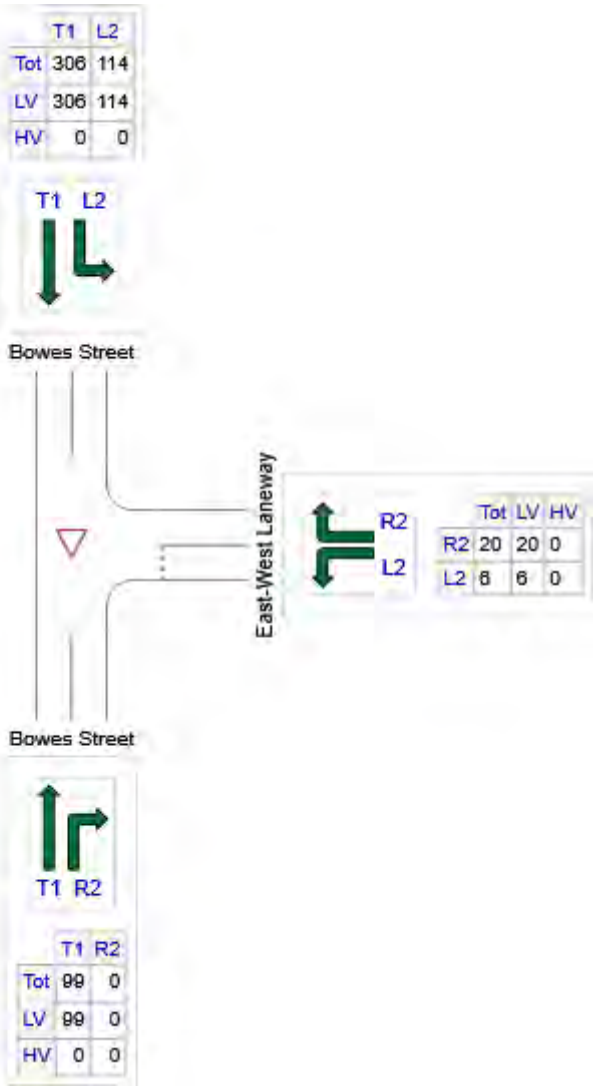
Site: [2030 Dev - AM: BS-EWL]

Bowes Street / East-West Laneway
Proposed Priority-Controlled (Give-Way) T-Intersection
Site Category: 2030 Development Scenario - Weekday Morning Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	99	99	0
E: East-West Laneway	26	26	0
N: Bowes Street	420	420	0
Total	545	545	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
2	T1	99	0.0	0.051	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
3	R2	0	0.0	0.051	5.9	LOS A	0.0	0.0	0.00	0.00	0.00	41.7
Approach		99	0.0	0.051	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.9
East: East-West Laneway												
4	L2	6	0.0	0.029	1.0	LOS A	0.1	0.7	0.40	0.35	0.40	23.1
6	R2	20	0.0	0.029	2.5	LOS A	0.1	0.7	0.40	0.35	0.40	22.7
Approach		26	0.0	0.029	2.1	LOS A	0.1	0.7	0.40	0.35	0.40	22.8
North: Bowes Street												
7	L2	114	0.0	0.218	4.3	LOS A	0.0	0.0	0.00	0.15	0.00	25.4
8	T1	306	0.0	0.218	0.0	LOS A	0.0	0.0	0.00	0.15	0.00	44.5
Approach		420	0.0	0.218	1.2	NA	0.0	0.0	0.00	0.15	0.00	38.1
All Vehicles		545	0.0	0.218	1.0	NA	0.1	0.7	0.02	0.13	0.02	38.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

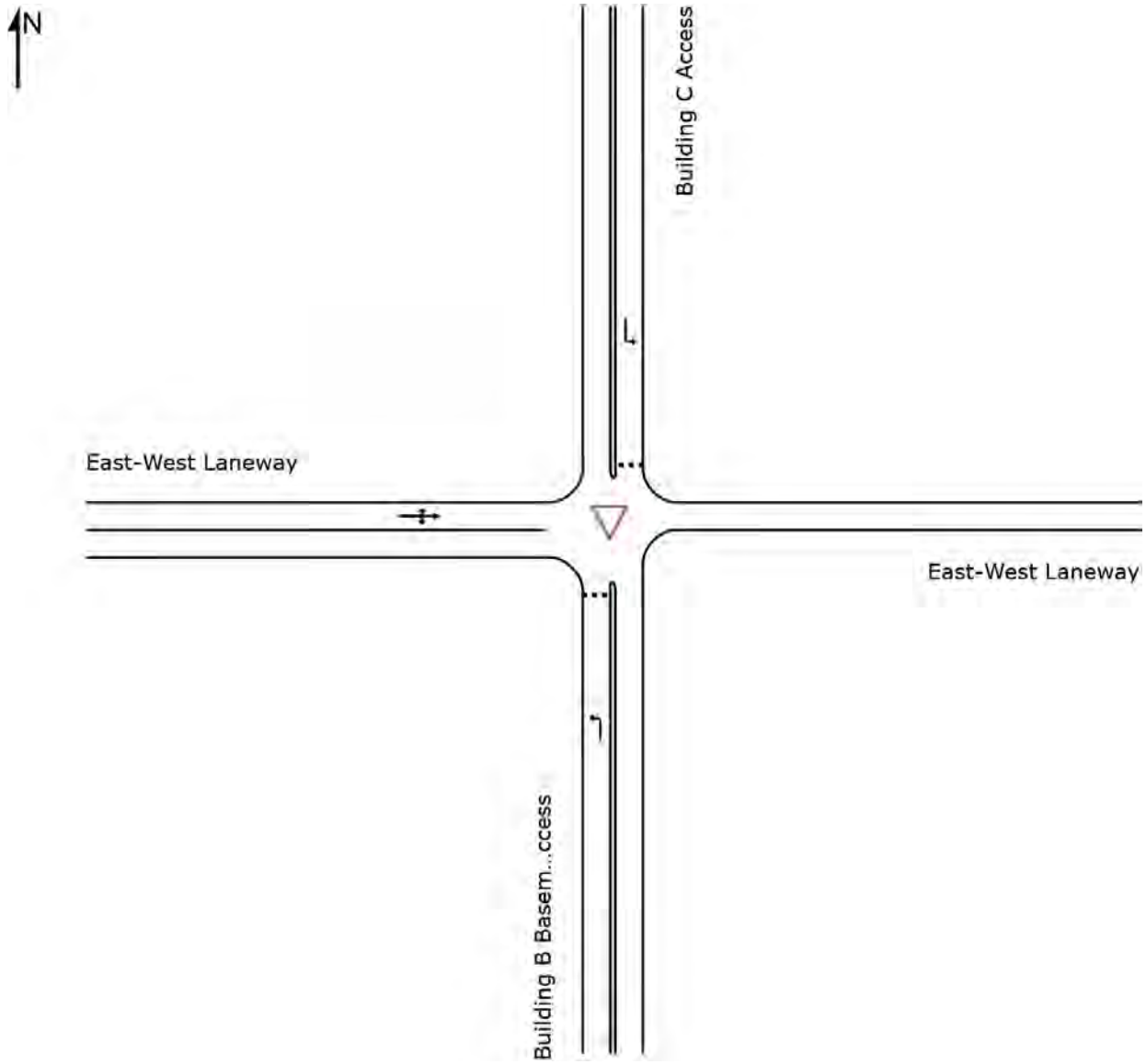
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Bowes Street													
Lane 1	99	0.0	1949	0.051	100	0.0	LOS A	0.0	0.0	Full	60	0.0	0.0
Approach	99	0.0		0.051		0.0	NA	0.0	0.0				
East: East-West Laneway													
Lane 1	26	0.0	902	0.029	100	2.1	LOS A	0.1	0.7	Full	30	0.0	0.0
Approach	26	0.0		0.029		2.1	LOS A	0.1	0.7				
North: Bowes Street													
Lane 1	420	0.0	1924	0.218	100	1.2	LOS A	0.0	0.0	Full	60	0.0	0.0
Approach	420	0.0		0.218		1.2	NA	0.0	0.0				
Intersection	545	0.0		0.218		1.0	NA	0.1	0.7				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

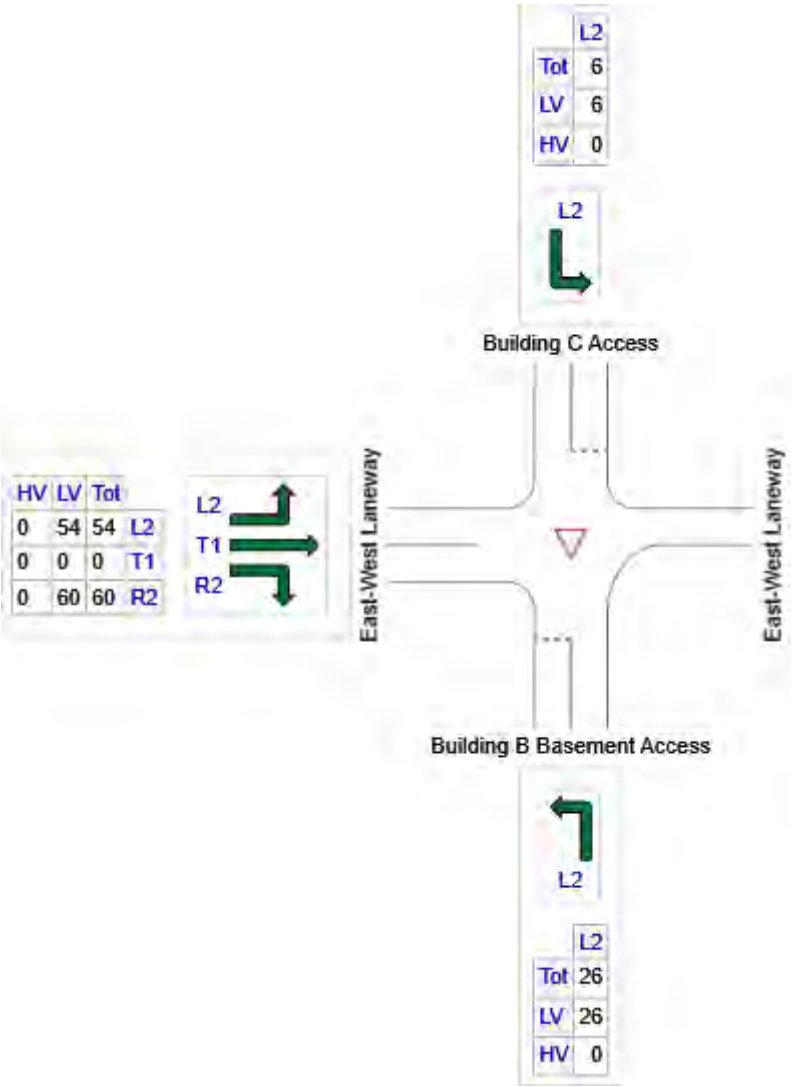
Site: [2030 Dev - AM: BldgBB-BldgC-EWL]

Building B Basement Access / Building C Access / East-West Laneway
Proposed Priority-Controlled (Give-Way) T-Intersection
Site Category: 2030 Development Scenario - Weekday Morning Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Building B Basement Access	26	26	0
N: Building C Access	6	6	0
W: East-West Laneway	114	114	0
Total	146	146	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Building B Basement Access												
1	L2	26	0.0	0.014	2.3	LOS A	0.0	0.0	0.00	0.50	0.00	26.8
Approach		26	0.0	0.014	2.3	LOS A	0.0	0.0	0.00	0.50	0.00	26.8
North: Building C Access												
4	L2	6	0.0	0.004	0.0	LOS A	0.0	0.1	0.00	0.00	0.00	26.3
Approach		6	0.0	0.004	0.0	LOS A	0.0	0.1	0.00	0.00	0.00	26.3
West: East-West Laneway												
7	L2	54	0.0	0.061	3.1	LOS A	0.0	0.0	0.00	0.53	0.00	23.1
8	T1	0	0.0	0.061	0.2	LOS A	0.0	0.0	0.00	0.53	0.00	39.0
12	R2	60	0.0	0.061	2.9	LOS A	0.0	0.0	0.00	0.53	0.00	25.6
Approach		114	0.0	0.061	3.0	NA	0.0	0.0	0.00	0.53	0.00	24.3
All Vehicles		146	0.0	0.061	2.7	NA	0.0	0.1	0.00	0.50	0.00	24.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

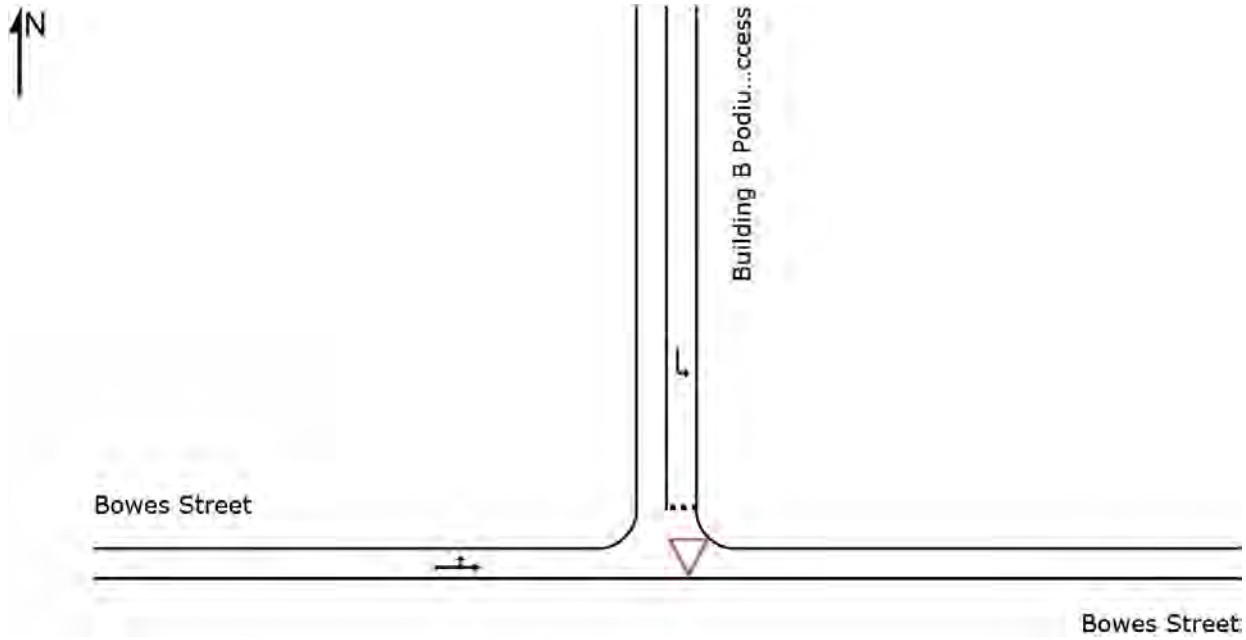
Lane Use and Performance													
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Building B Basement Access													
Lane 1	26	0.0	1857	0.014	100	2.3	LOS A	0.0	0.0	Full	10	0.0	0.0
Approach	26	0.0		0.014		2.3	LOS A	0.0	0.0				
North: Building C Access													
Lane 1	6	0.0	1636	0.004	100	0.0	LOS A	0.0	0.1	Full	10	0.0	0.0
Approach	6	0.0		0.004		0.0	LOS A	0.0	0.1				
West: East-West Laneway													
Lane 1	114	0.0	1857	0.061	100	3.0	LOS A	0.0	0.0	Full	30	0.0	0.0
Approach	114	0.0		0.061		3.0	NA	0.0	0.0				
Intersection	146	0.0		0.061		2.7	NA	0.0	0.1				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

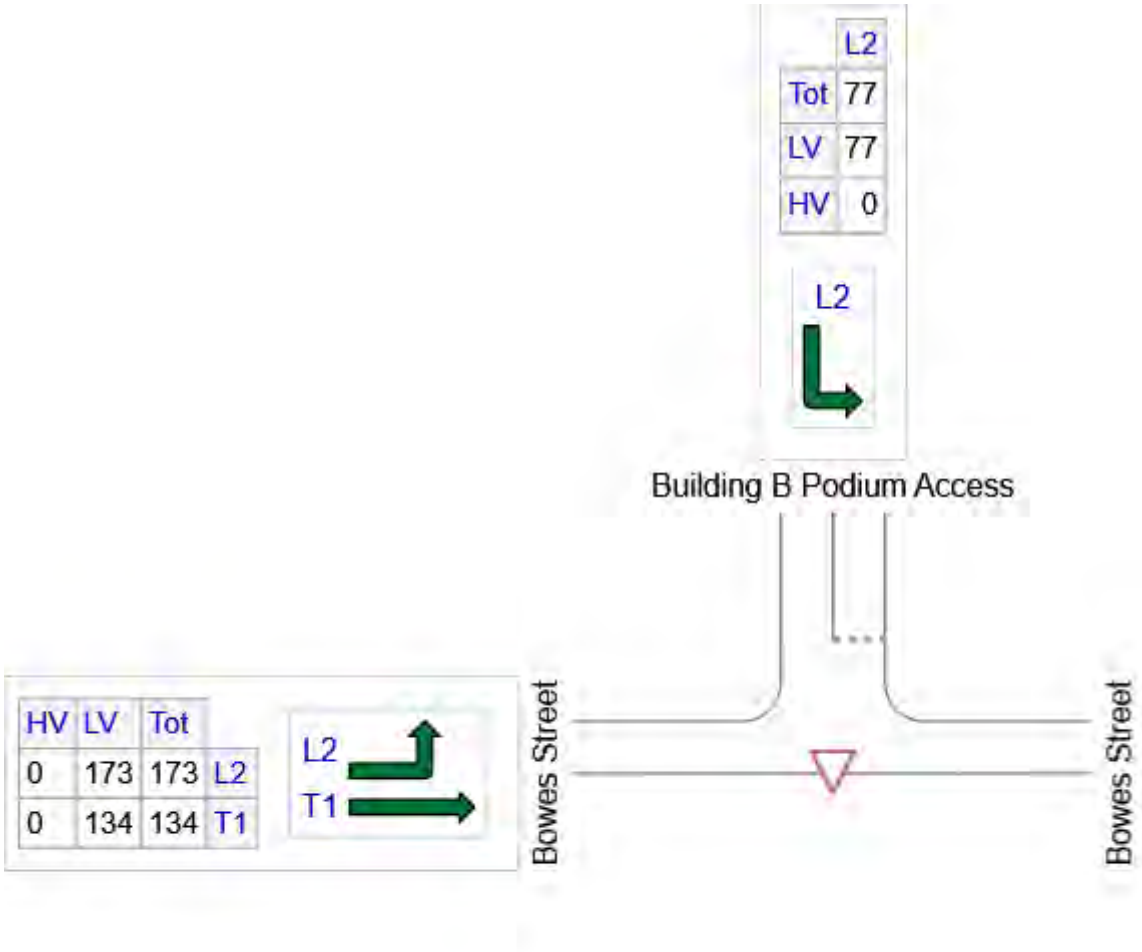
Site: [2030 Dev - AM: BldgBP-BS]

Building B Podium Access / Bowes Street
Proposed Priority-Controlled (Give-Way) T-Intersection
Site Category: 2030 Development Scenario - Weekday Morning Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
N: Building B Podium Access	77	77	0
W: Bowes Street	306	306	0
Total	383	383	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
North: Building B Podium Access												
4	L2	77	0.0	0.053	0.4	LOS A	0.2	1.5	0.23	0.10	0.23	21.5
Approach		77	0.0	0.053	0.4	LOS A	0.2	1.5	0.23	0.10	0.23	21.5
West: Bowes Street												
7	L2	173	0.0	0.162	3.5	LOS A	0.0	0.0	0.00	0.30	0.00	24.3
8	T1	134	0.0	0.162	0.0	LOS A	0.0	0.0	0.00	0.30	0.00	37.7
Approach		306	0.0	0.162	1.9	NA	0.0	0.0	0.00	0.30	0.00	29.4
All Vehicles		383	0.0	0.162	1.6	NA	0.2	1.5	0.05	0.26	0.05	27.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

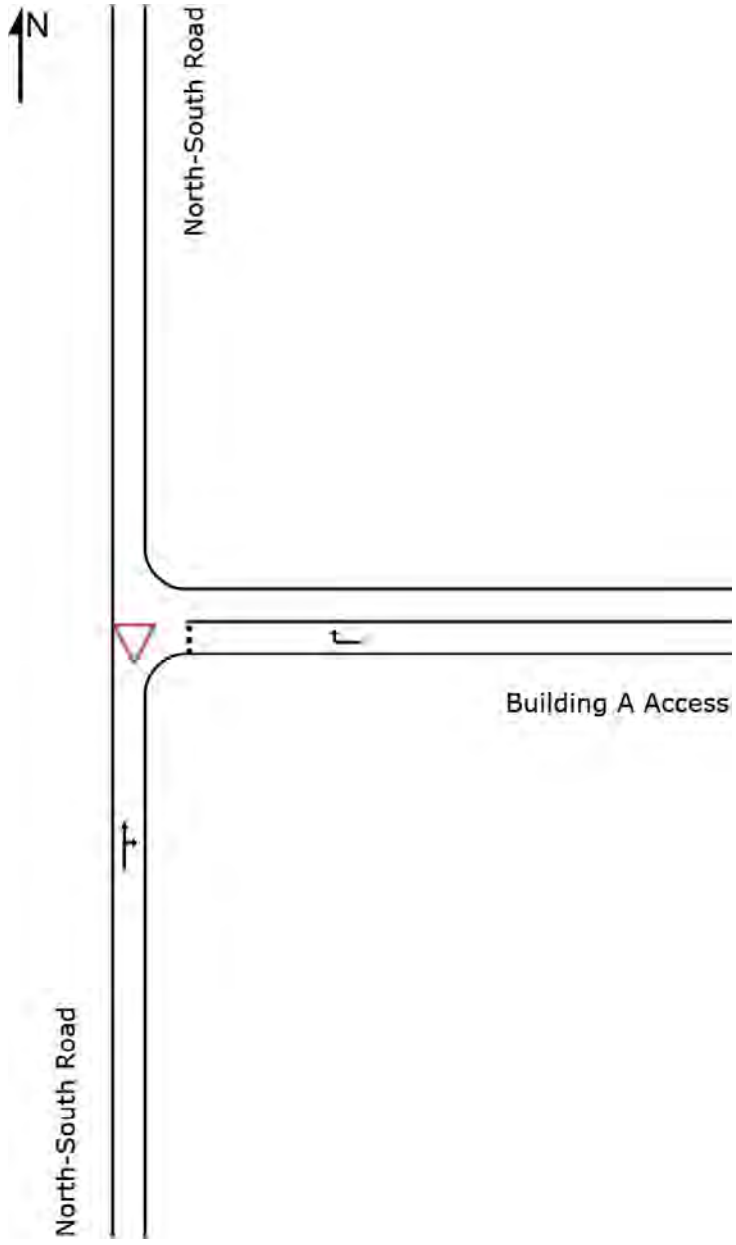
Lane Use and Performance													
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
North: Building B Podium Access													
Lane 1	77	0.0	1461	0.053	100	0.4	LOS A	0.2	1.5	Full	15	0.0	0.0
Approach	77	0.0		0.053		0.4	LOS A	0.2	1.5				
West: Bowes Street													
Lane 1	306	0.0	1897	0.162	100	1.9	LOS A	0.0	0.0	Full	40	0.0	0.0
Approach	306	0.0		0.162		1.9	NA	0.0	0.0				
Intersection	383	0.0		0.162		1.6	NA	0.2	1.5				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

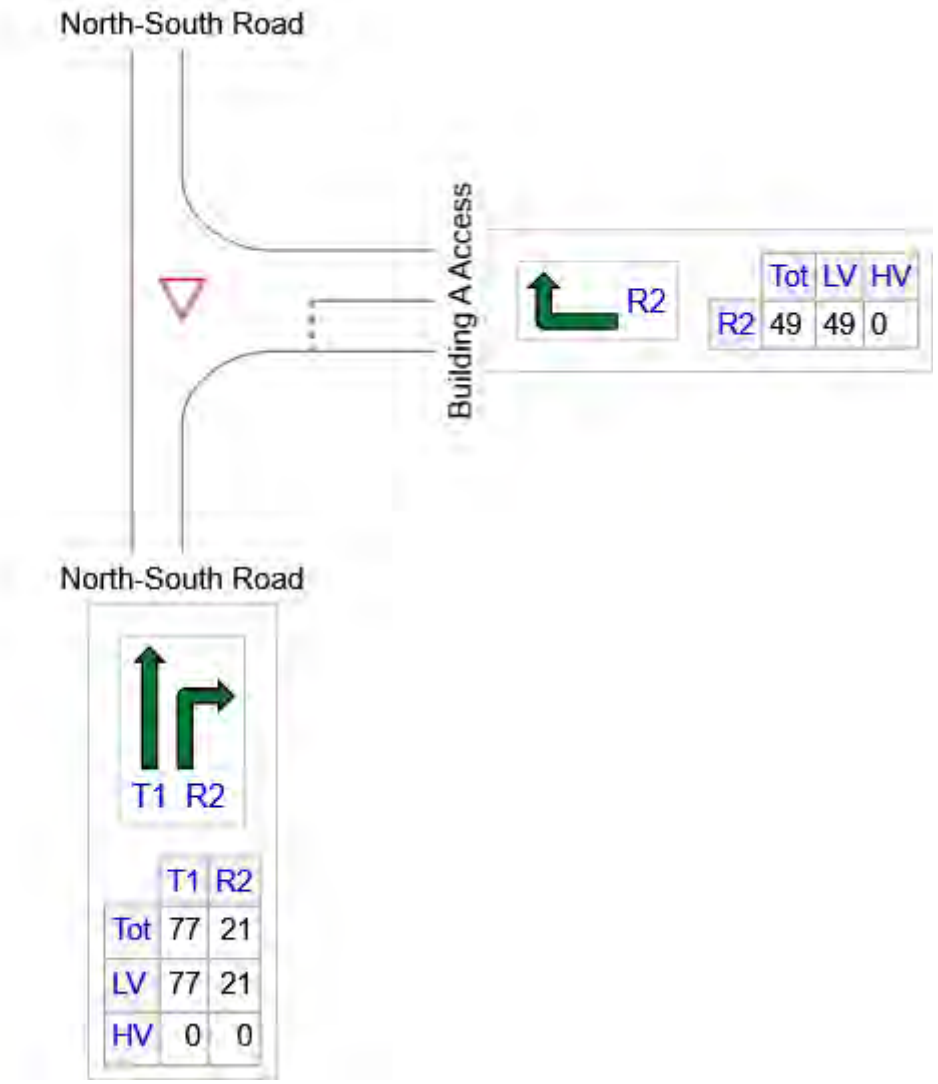
Site: [2030 Dev - AM: BldgA-NSR]

Building A Access / North-South Road
Proposed Priority-Controlled (Give-Way) T-Intersection
Site Category: 2030 Development Scenario - Weekday Morning Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: North-South Road	98	98	0
E: Building A Access	49	49	0
Total	147	147	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: North-South Road												
2	T1	77	0.0	0.051	0.0	LOS A	0.0	0.0	0.00	0.12	0.00	44.4
3	R2	21	0.0	0.051	2.1	LOS A	0.0	0.0	0.00	0.12	0.00	28.7
Approach		98	0.0	0.051	0.5	NA	0.0	0.0	0.00	0.12	0.00	40.8
East: Building A Access												
6	R2	49	0.0	0.037	1.2	LOS A	0.1	0.8	0.16	0.25	0.16	19.5
Approach		49	0.0	0.037	1.2	LOS A	0.1	0.8	0.16	0.25	0.16	19.5
All Vehicles		147	0.0	0.051	0.7	NA	0.1	0.8	0.05	0.17	0.05	29.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

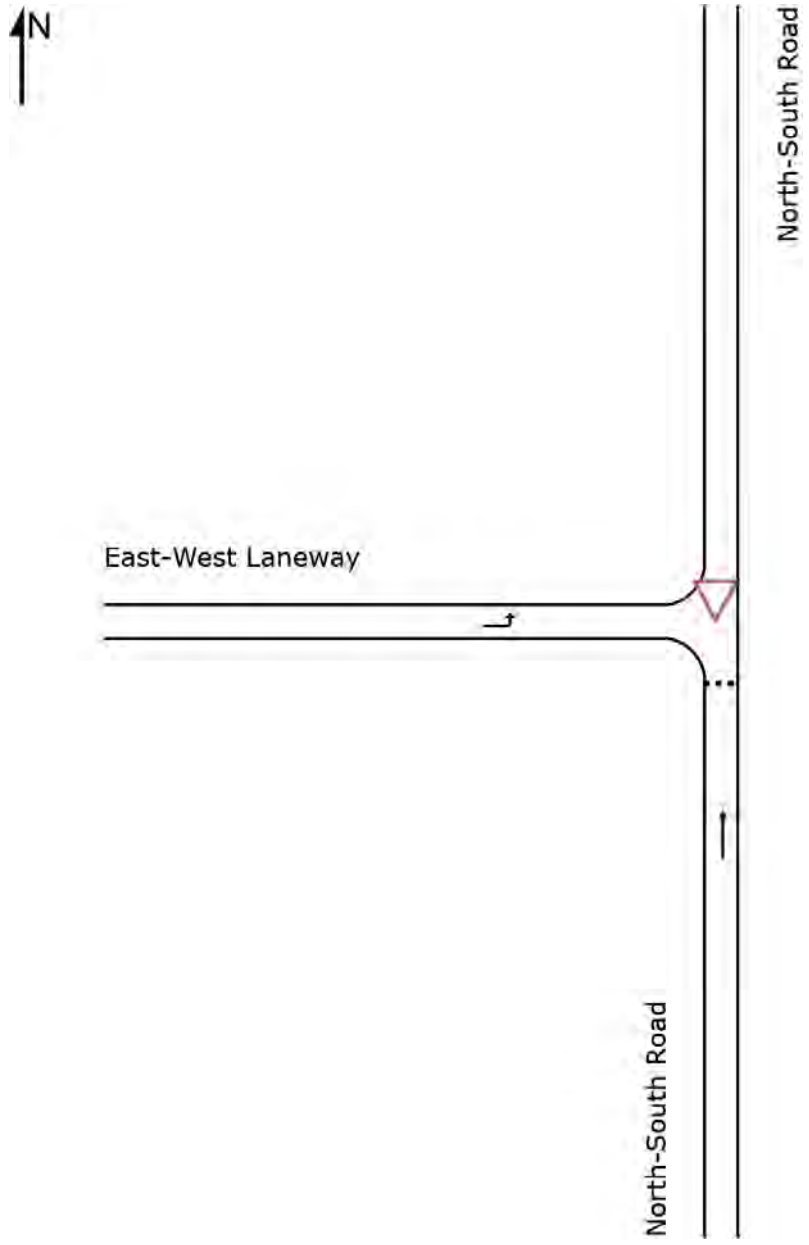
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: North-South Road													
Lane 1	98	0.0	1929	0.051	100	0.5	LOS A	0.0	0.0	Full	10	0.0	0.0
Approach	98	0.0		0.051		0.5	NA	0.0	0.0				
East: Building A Access													
Lane 1	49	0.0	1340	0.037	100	1.2	LOS A	0.1	0.8	Full	15	0.0	0.0
Approach	49	0.0		0.037		1.2	LOS A	0.1	0.8				
Intersection	147	0.0		0.051		0.7	NA	0.1	0.8				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

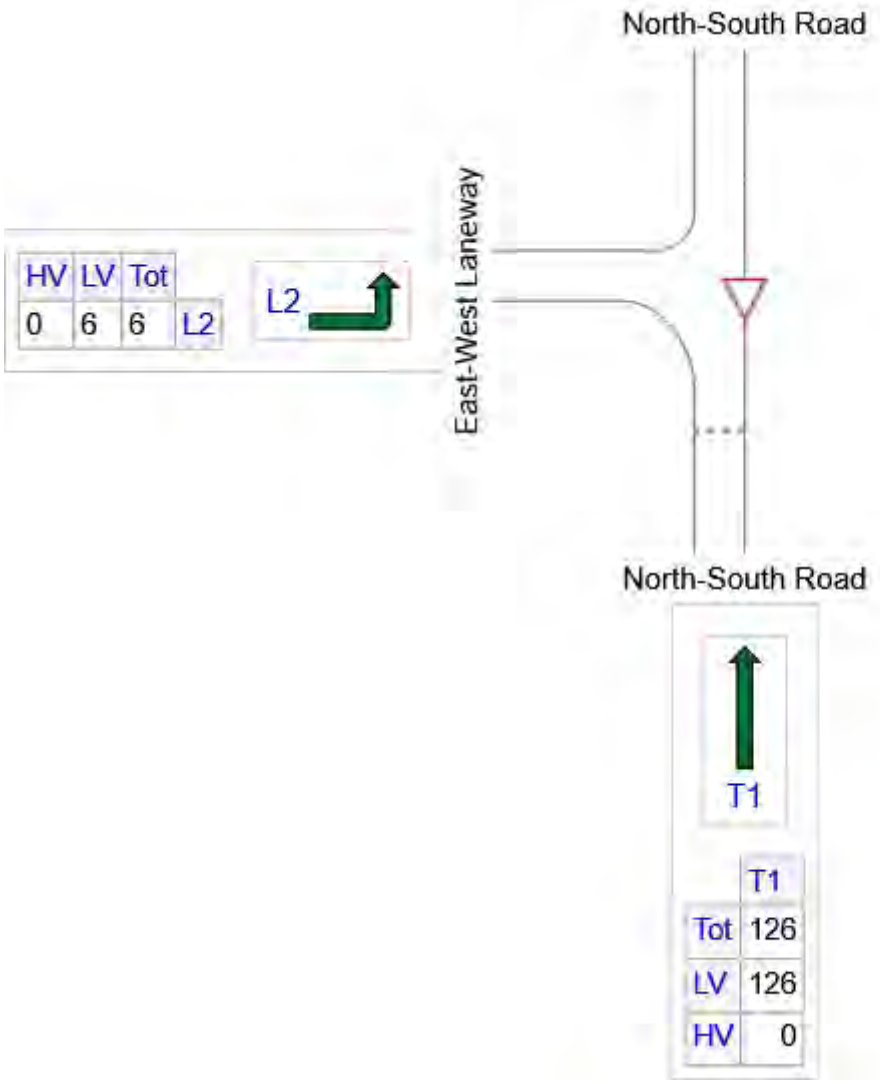
Site: [2030 Dev - AM: EWL-NSR]

East-West Laneway / North-South Road
Proposed Priority-Controlled (Give-Way) T-Intersection
Site Category: 2030 Development Scenario - Weekday Morning Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: North-South Road	126	126	0
W: East-West Laneway	6	6	0
Total	133	133	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: North-South Road												
2	T1	126	0.0	0.085	1.9	LOS A	0.3	2.2	0.04	0.46	0.04	37.2
Approach		126	0.0	0.085	1.9	LOS A	0.3	2.2	0.04	0.46	0.04	37.2
West: East-West Laneway												
7	L2	6	0.0	0.003	3.7	LOS A	0.0	0.0	0.00	0.52	0.00	31.5
Approach		6	0.0	0.003	3.7	NA	0.0	0.0	0.00	0.52	0.00	31.5
All Vehicles		133	0.0	0.085	2.0	NA	0.3	2.2	0.03	0.47	0.03	36.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

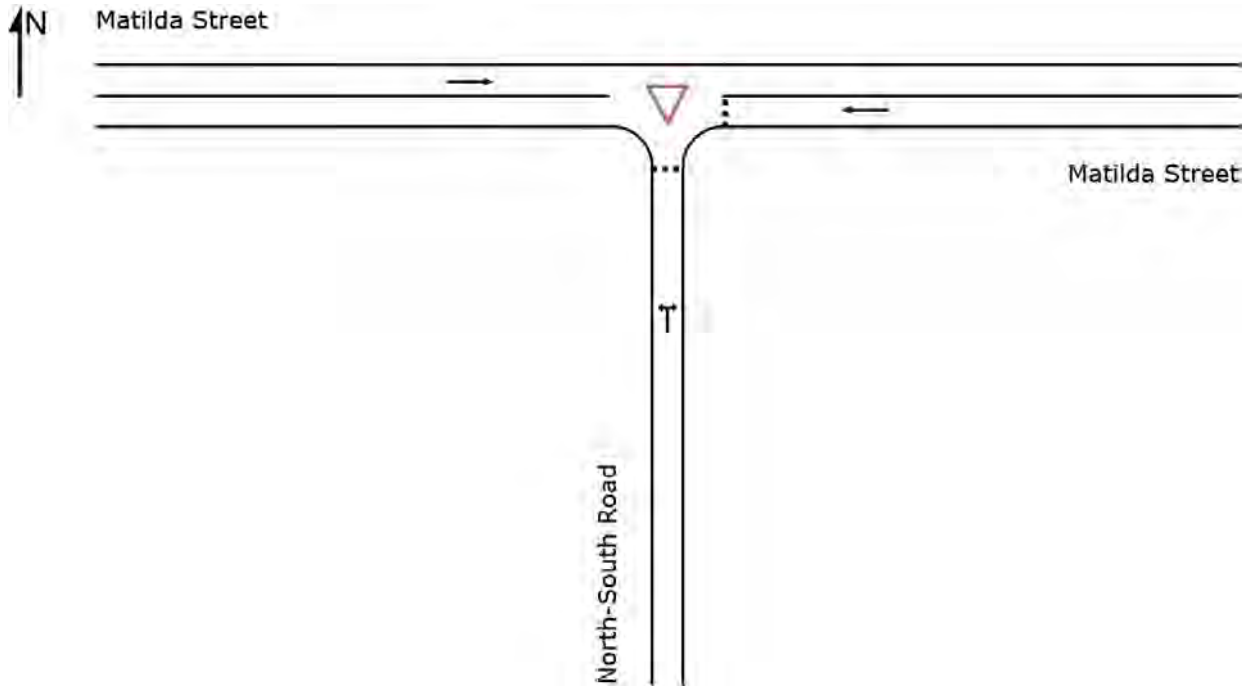
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: North-South Road													
Lane 1	126	0.0	1493	0.085	100	1.9	LOS A	0.3	2.2	Full	30	0.0	0.0
Approach	126	0.0		0.085		1.9	LOS A	0.3	2.2				
West: East-West Laneway													
Lane 1	6	0.0	1857	0.003	100	3.7	LOS A	0.0	0.0	Full	45	0.0	0.0
Approach	6	0.0		0.003		3.7	NA	0.0	0.0				
Intersection	133	0.0		0.085		2.0	NA	0.3	2.2				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

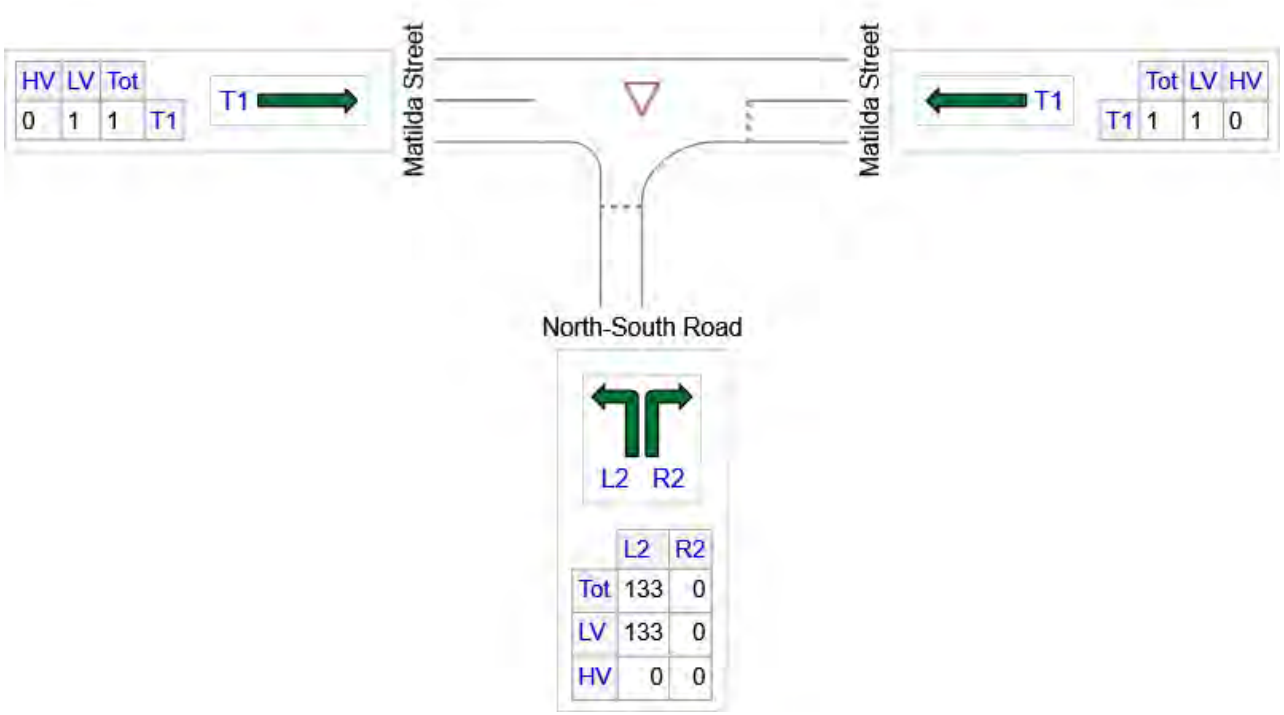
Site: [2030 Dev - AM: MS-NSR]

Matilda Street / North-South Road
Proposed Priority-Controlled (Give-Way) T-Intersection
Site Category: 2030 Development Scenario - Weekday Morning Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: North-South Road	133	133	0
E: Matilda Street	1	1	0
W: Matilda Street	1	1	0
Total	135	135	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: North-South Road												
1	L2	133	0.0	0.081	4.7	LOS A	0.3	2.4	0.01	0.56	0.01	35.2
3	R2	0	0.0	0.081	4.9	LOS A	0.3	2.4	0.01	0.56	0.01	29.6
Approach		133	0.0	0.081	4.7	LOS A	0.3	2.4	0.01	0.56	0.01	35.2
East: Matilda Street												
5	T1	1	0.0	0.001	1.9	LOS A	0.0	0.0	0.00	0.48	0.00	39.7
Approach		1	0.0	0.001	1.9	LOS A	0.0	0.0	0.00	0.48	0.00	39.7
West: Matilda Street												
11	T1	1	0.0	0.001	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach		1	0.0	0.001	0.0	NA	0.0	0.0	0.00	0.00	0.00	60.0
All Vehicles		135	0.0	0.081	4.7	NA	0.3	2.4	0.01	0.55	0.01	35.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: North-South Road													
Lane 1	133	0.0	1635	0.081	100	4.7	LOS A	0.3	2.4	Full	70	0.0	0.0
Approach	133	0.0		0.081		4.7	LOS A	0.3	2.4				
East: Matilda Street													
Lane 1	1	0.0	1950	0.001	100	1.9	LOS A	0.0	0.0	Full	30	0.0	0.0
Approach	1	0.0		0.001		1.9	LOS A	0.0	0.0				
West: Matilda Street													
Lane 1	1	0.0	1950	0.001	100	0.0	LOS A	0.0	0.0	Full	90	0.0	0.0
Approach	1	0.0		0.001		0.0	NA	0.0	0.0				
Intersection	135	0.0		0.081		4.7	NA	0.3	2.4				

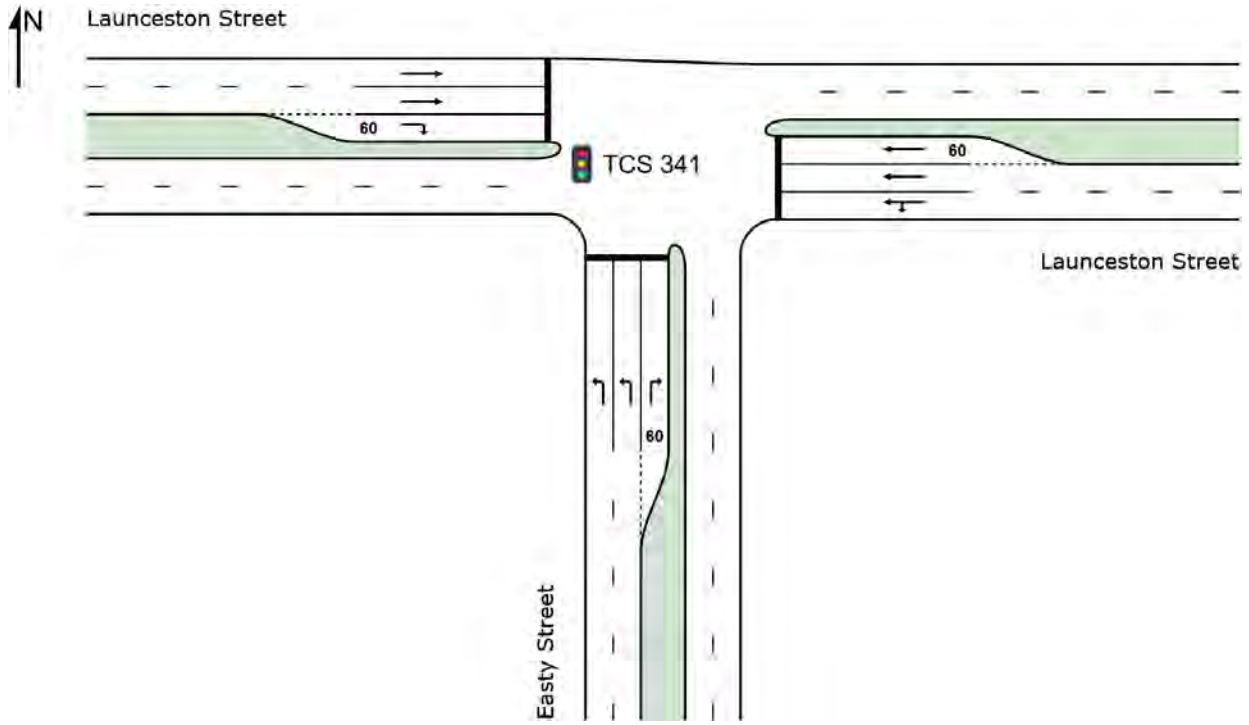
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: TCS 341 [2030 Dev - AM: ES-LS]

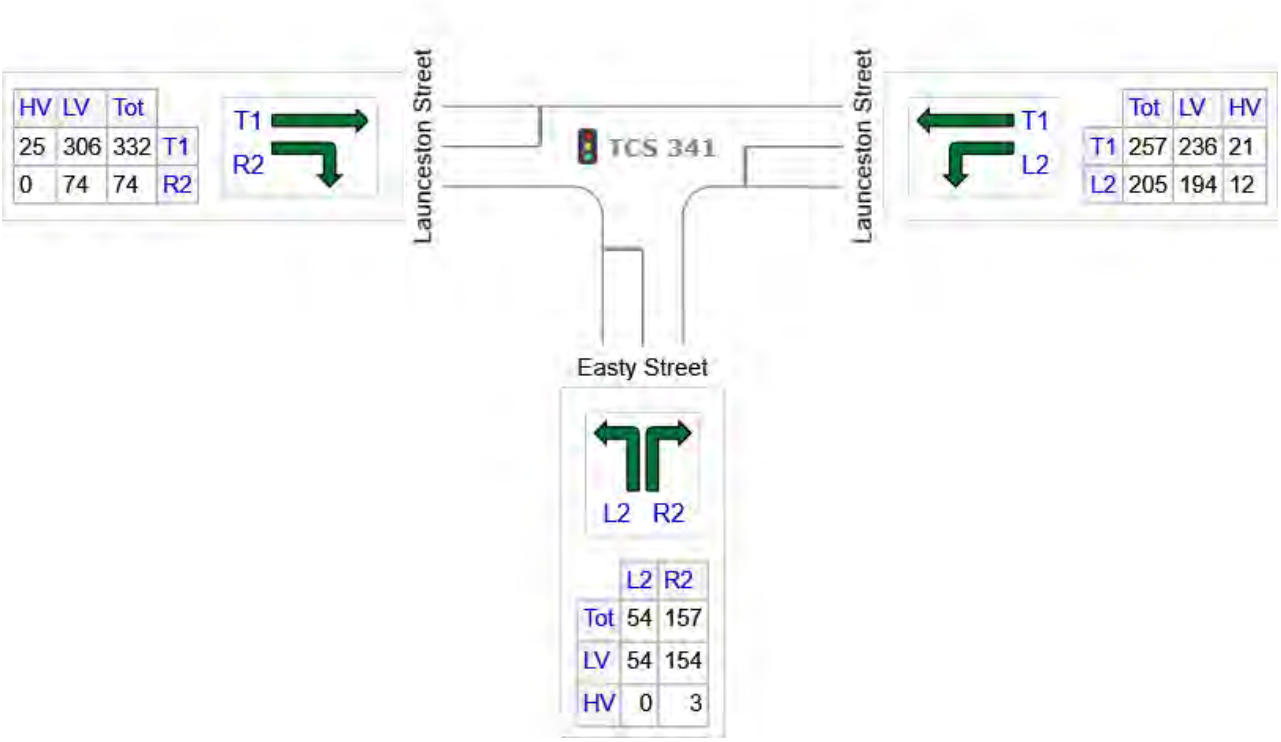
Easty Street / Launceston Street
Existing Signalised T-Intersection
Site Category: 2030 Development Scenario - Weekday Morning Peak Hour
Signals - Fixed Time Isolated Cycle Time = 68 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Site Layout



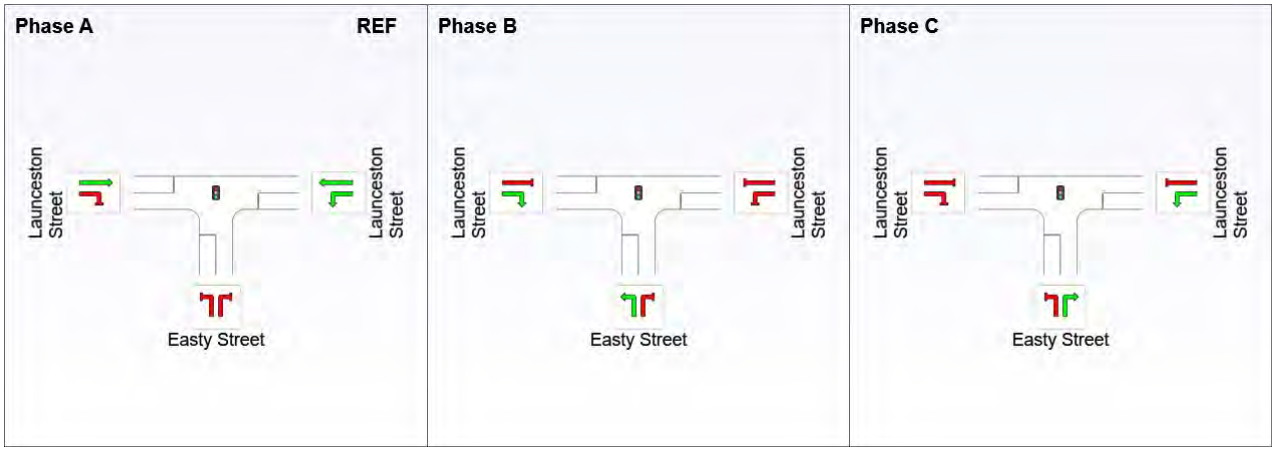
OD Demand Flows



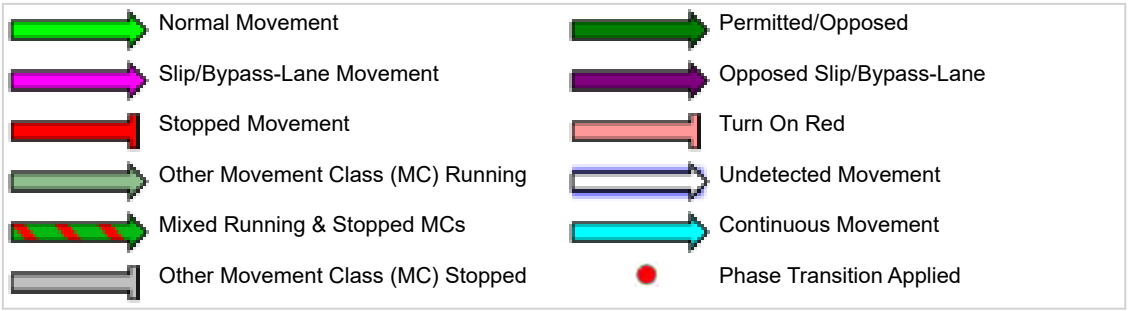
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Easty Street	211	207	3
E: Launceston Street	462	429	33
W: Launceston Street	405	380	25
Total	1078	1017	61

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	30	49
Green Time (sec)	25	13	14
Phase Time (sec)	31	18	19
Phase Split	46%	26%	28%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Easty Street												
1	L2	54	0.0	0.076	28.3	LOS B	0.7	5.2	0.85	0.68	0.85	23.7
3	R2	157	2.0	0.416	29.5	LOS C	4.7	33.4	0.91	0.78	0.91	25.8
Approach		211	1.5	0.416	29.2	LOS C	4.7	33.4	0.90	0.75	0.90	25.3
East: Launceston Street												
4	L2	205	5.6	0.178	8.6	LOS A	2.7	19.8	0.42	0.62	0.42	34.6
5	T1	257	8.2	0.189	15.9	LOS B	2.9	21.9	0.72	0.58	0.72	28.0
Approach		462	7.1	0.189	12.6	LOS A	2.9	21.9	0.59	0.60	0.59	31.1
West: Launceston Street												
11	T1	332	7.6	0.243	16.2	LOS B	3.9	28.8	0.73	0.60	0.73	27.8
12	R2	74	0.0	0.208	29.1	LOS C	2.1	14.9	0.88	0.73	0.88	23.6
Approach		405	6.2	0.243	18.6	LOS B	3.9	28.8	0.76	0.62	0.76	26.8
All Vehicles		1078	5.7	0.416	18.1	LOS B	4.7	33.4	0.71	0.64	0.71	28.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Easty Street													
Lane 1	27	0.0	355	0.076	100	28.3	LOS B	0.7	5.2	Full	305	0.0	0.0
Lane 2	27	0.0	355	0.076	100	28.3	LOS B	0.7	5.2	Full	305	0.0	0.0
Lane 3	157	2.0	377	0.416	100	29.5	LOS C	4.7	33.4	Short	60	0.0	NA
Approach	211	1.5		0.416		29.2	LOS C	4.7	33.4				
East: Launceston Street													
Lane 1	205	5.6	1155	0.178	94[5]	8.6	LOS A	2.7	19.8	Full	260	0.0	0.0
Lane 2	128	8.2	681	0.189	100	15.9	LOS B	2.9	21.9	Full	260	0.0	0.0
Lane 3	128	8.2	681	0.189	100	15.9	LOS B	2.9	21.9	Short	60	0.0	NA
Approach	462	7.1		0.189		12.6	LOS A	2.9	21.9				
West: Launceston Street													
Lane 1	166	7.6	683	0.243	100	16.2	LOS B	3.9	28.8	Full	130	0.0	0.0
Lane 2	166	7.6	683	0.243	100	16.2	LOS B	3.9	28.8	Full	130	0.0	0.0
Lane 3	74	0.0	355	0.208	100	29.1	LOS C	2.1	14.9	Short	60	0.0	NA
Approach	405	6.2		0.243		18.6	LOS B	3.9	28.8				
Intersection	1078	5.7		0.416		18.1	LOS B	4.7	33.4				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5 Lane under-utilisation found by the program

USER REPORT FOR NETWORK SITE

Project: 24-0487_20260304

Template: Default Site User Report

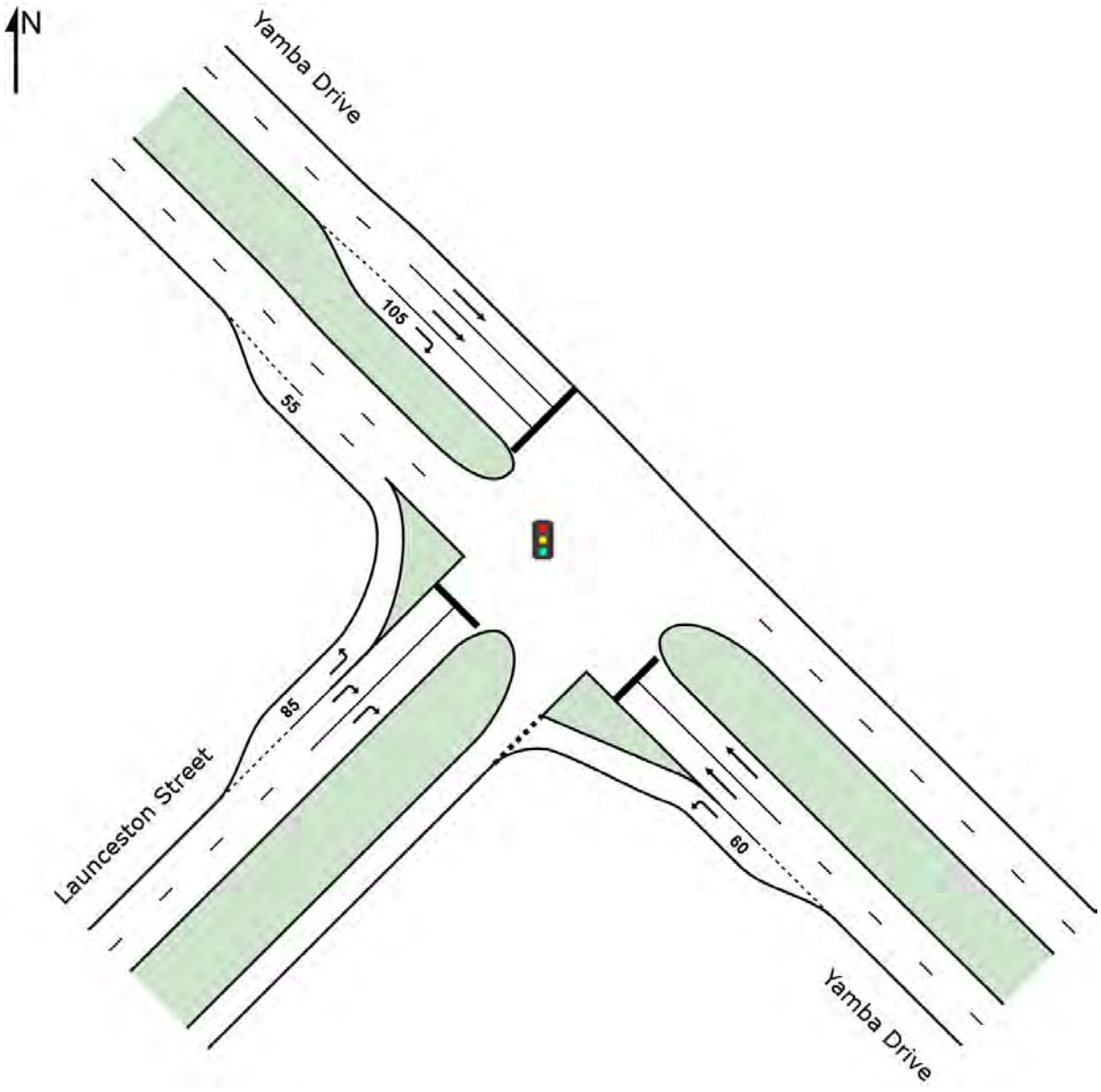
Site: [2030 Dev - AM: LS-YD]

Network: 9 [2030 Dev - AM: LS-WS-YD]

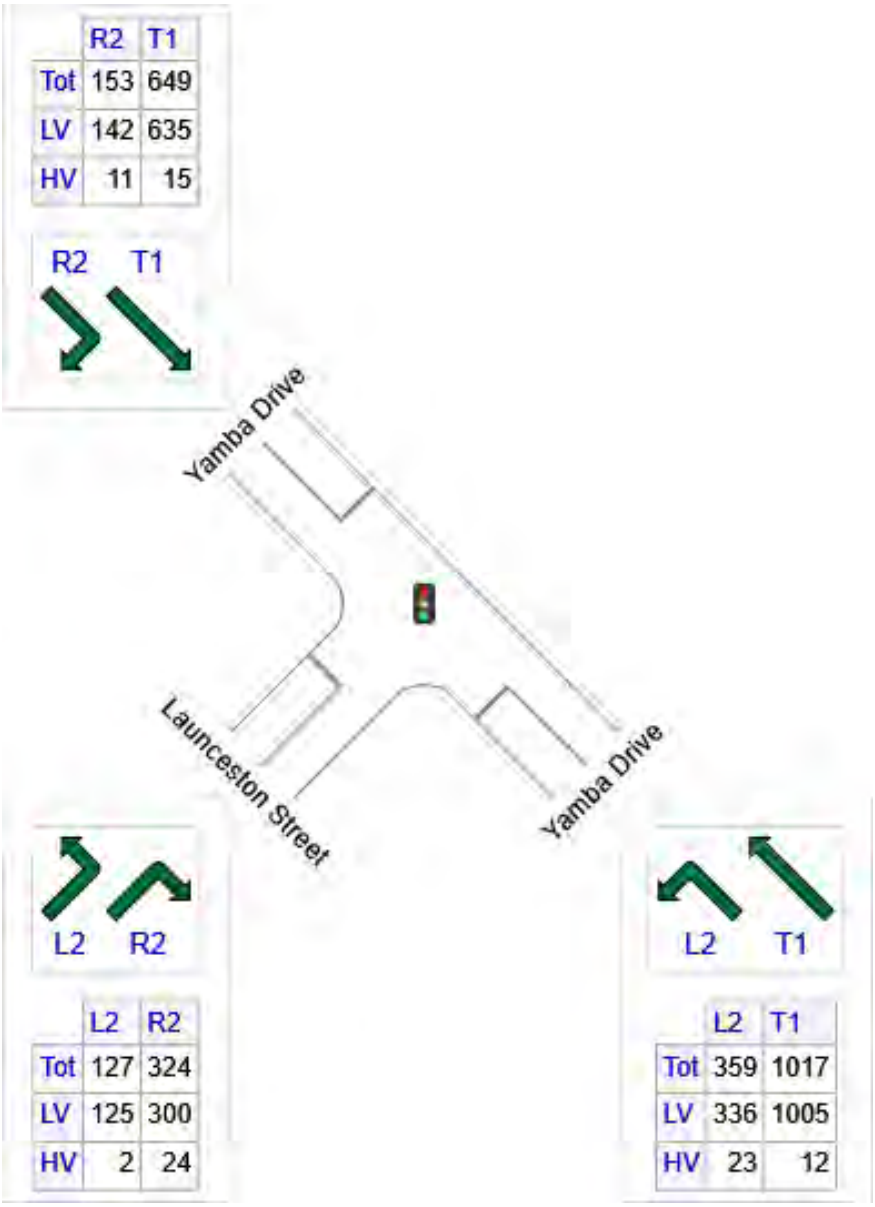
Northwest part of Launceston Street / Wisdom Street / Yamba Drive
Existing Signalised Offset X-Intersection
Site Category: 2030 Development Scenario - Weekday Morning Peak Hour
Signals - Fixed Time Coordinated Cycle Time = 128 seconds (CCG User-Given Phase Times)
Common Control Group: CCG1 [CCG]

Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E
Output Phase Sequence: A, D, E

Site Layout



OD Demand Flows

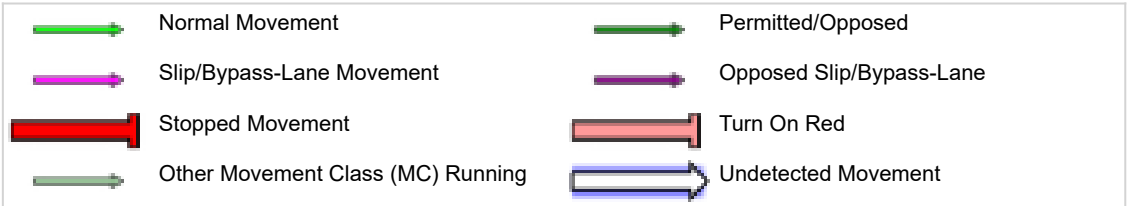


	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
SE: Yamba Drive	1376	1341	35
NW: Yamba Drive	802	777	25
SW: Launceston Street	452	425	26
Total	2629	2543	86

Input Phase Sequence (CCG)

Movement Class: All Movement Classes

REF: Reference Phase
VAR: Variable Phase



Mixed Running & Stopped MCs

Continuous Movement

Other Movement Class (MC) Stopped

Phase Transition Applied

Phase Timing Summary (CCG)

Phase	A	D	E
Phase Change Time (sec)	0	66	93
Green Time (sec)	60	21	29
Phase Time (sec)	66	27	35
Phase Split	52%	21%	27%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles														
Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Yamba Drive														
4	L2	359	6.5	359	6.5	0.249	4.8	LOS A	0.5	3.4	0.03	0.58	0.03	40.6
5	T1	1017	1.1	1017	1.1	0.560	6.8	LOS A	11.9	84.4	0.28	0.25	0.28	52.9
Approach		1376	2.5	1376	2.5	0.560	6.3	LOS A	11.9	84.4	0.21	0.34	0.21	48.6
NorthWest: Yamba Drive														
11	T1	649	2.3	649	2.3	0.514	25.5	LOS C	14.2	101.0	0.75	0.66	0.75	23.2
12	R2	153	6.9	153	6.9	0.381	52.7	LOS D	8.1	60.2	0.89	0.80	0.89	20.8
Approach		802	3.1	802	3.1	0.514	30.7	LOS C	14.2	101.0	0.78	0.69	0.78	22.3
SouthWest: Launceston Street														
1	L2	127	1.7	127	1.7	0.069	2.9	LOS A	0.0	0.0	0.00	0.37	0.00	39.5
3	R2	324	7.5	324	7.5	0.799	66.8	LOS E	10.8	80.7	1.00	0.95	1.21	10.9
Approach		452	5.8	452	5.8	0.799	48.8	LOS D	10.8	80.7	0.72	0.78	0.87	15.6
All Vehicles		2629	3.3	2629	3.3	0.799	21.0	LOS C	14.2	101.0	0.47	0.52	0.50	28.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
SouthEast: Yamba Drive															
Lane 1	359	6.5	359	6.5	1441	0.249	100	4.8	LOS A	0.5	3.4	Short	60	0.0	NA
Lane 2	508	1.1	508	1.1	907	0.560	100	3.3	LOS A	4.4	30.8	Full	65	0.0	0.0
Lane 3	508	1.1	508	1.1	907	0.560	100	10.4	LOS B	11.9	84.4	Full	65	0.0	28.7
Approach	1376	2.5	1376	2.5		0.560		6.3	LOS A	11.9	84.4				
NorthWest: Yamba Drive															
Lane 1	325	2.3	325	2.3	631	0.514	100	25.5	LOS C	14.2	101.0	Full	215	-29.9 N3	0.0
Lane 2	325	2.3	325	2.3	631	0.514	100	25.5	LOS C	14.2	101.0	Full	215	-29.9 N3	0.0
Lane 3	153	6.9	153	6.9	401	0.381	100	52.7	LOS D	8.1	60.2	Short	105	0.0	NA
Approach	802	3.1	802	3.1		0.514		30.7	LOS C	14.2	101.0				
SouthWest: Launceston Street															
Lane 1	127	1.7	127	1.7	1836	0.069	100	2.9	LOS A	0.0	0.0	Short	85	0.0	NA
Lane 2	162	7.5	162	7.5	203	0.799	100	66.8	LOS E	10.8	80.7	Full	260	-29.9 N3	0.0
Lane 3	162	7.5	162	7.5	203	0.799	100	66.8	LOS E	10.8	80.7	Full	260	-29.9 N3	0.0
Approach	452	5.8	452	5.8		0.799		48.8	LOS D	10.8	80.7				
Intersection	2629	3.3	2629	3.3		0.799		21.0	LOS C	14.2	101.0				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N3 Capacity Adjustment due to downstream lane blockage determined by the program.

Site: [2030 Dev - AM: WS-YD]

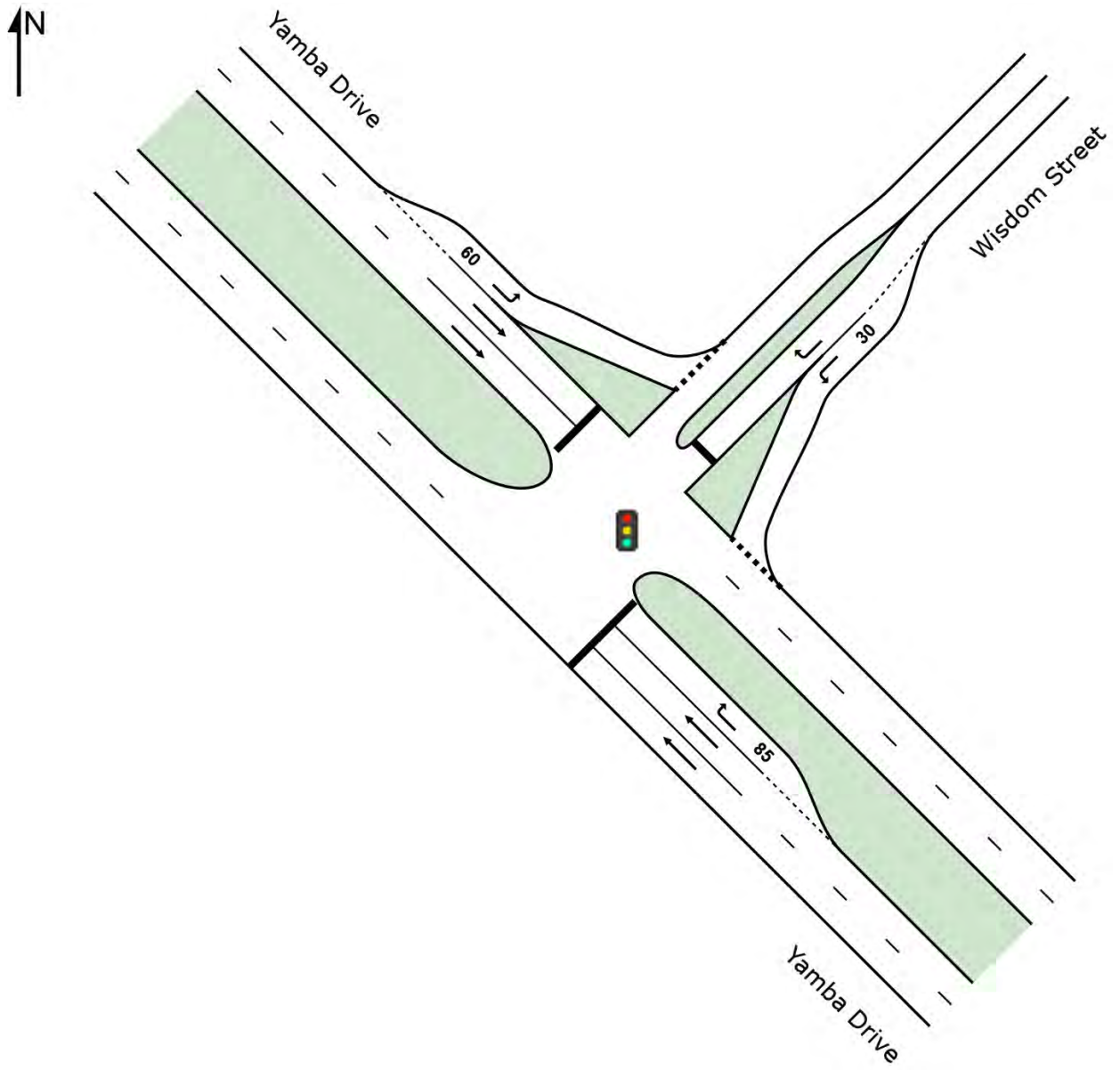
Network: 9 [2030 Dev - AM: LS-WS-YD]

Southeast part of Launceston Street / Wisdom Street / Yamba Drive
Existing Signalised Offset Cross Intersection
Site Category: 2030 Development Scenario - Weekday Morning Peak Hour
Signals - Fixed Time Coordinated Cycle Time = 128 seconds (CCG User-Given Phase Times)
Common Control Group: CCG1 [CCG]

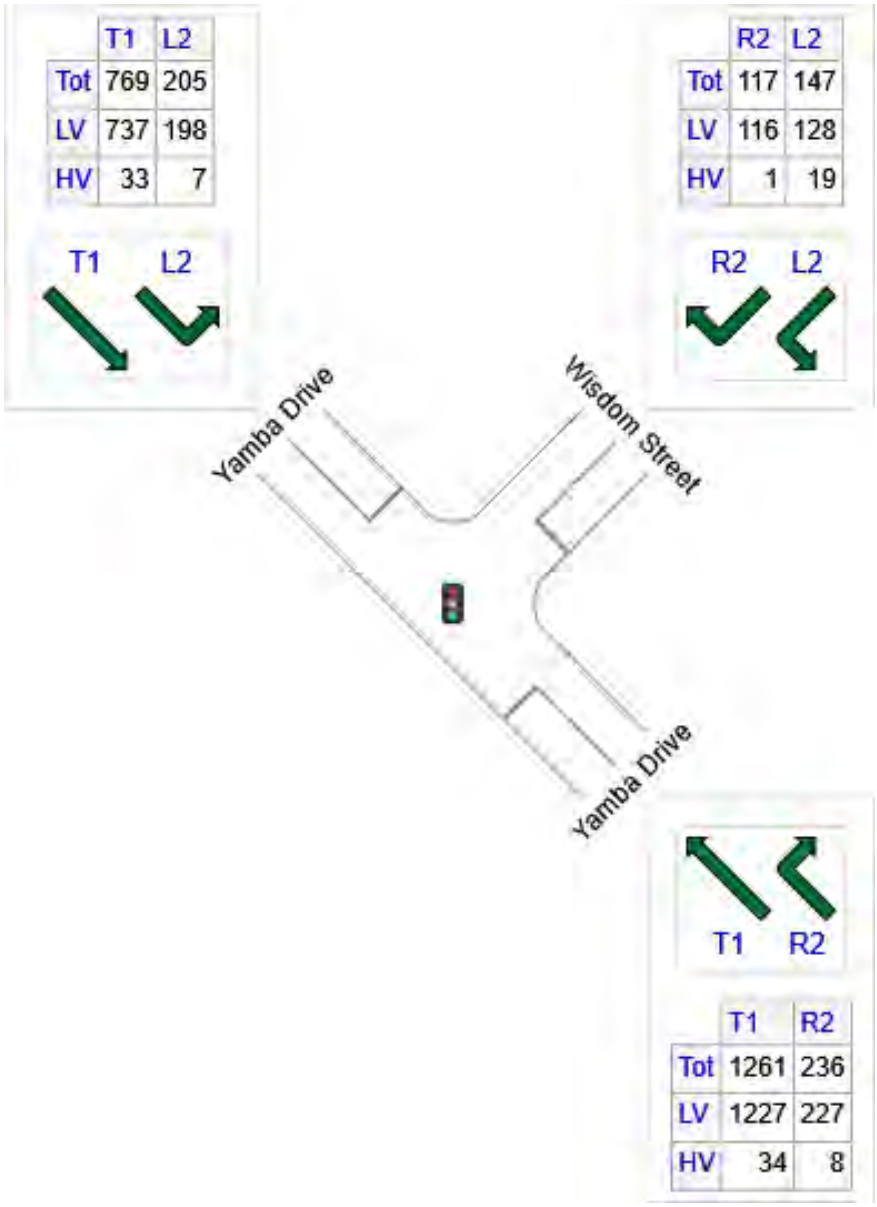
Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E
Output Phase Sequence: A, D, E

Some CCG output elements have been omitted as they have already been included under other Sites belonging to the same CCG.

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
SE: Yamba Drive	1497	1455	42
NE: Wisdom Street	264	244	20
NW: Yamba Drive	975	935	40
Total	2736	2634	102

Movement Performance - Vehicles														
Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Yamba Drive														
11	T1	1261	2.7	1261	2.7	0.866	39.8	LOS D	46.8	334.8	0.94	0.92	1.04	36.6
12	R2	236	3.6	236	3.6	0.575	54.8	LOS D	13.2	95.3	0.94	0.83	0.94	34.5
Approach		1497	2.8	1497	2.8	0.866	42.2	LOS D	46.8	334.8	0.94	0.91	1.02	36.0
NorthEast: Wisdom Street														
1	L2	147	12.9	147	12.9	0.143	5.1	LOS A	1.7	12.8	0.24	0.51	0.24	47.4
3	R2	117	0.9	117	0.9	0.542	58.0	LOS E	6.9	48.9	0.97	0.80	0.97	20.8
Approach		264	7.6	264	7.6	0.542	28.5	LOS C	6.9	48.9	0.56	0.64	0.56	35.0
NorthWest: Yamba Drive														
4	L2	205	3.6	205	3.6	0.146	4.9	LOS A	0.2	1.8	0.03	0.58	0.03	40.3
5	T1	769	4.2	769	4.2	0.433	18.7	LOS B	11.8	85.5	0.53	0.47	0.53	52.9
Approach		975	4.1	975	4.1	0.433	15.8	LOS B	11.8	85.5	0.43	0.49	0.43	49.8
All Vehicles		2736	3.7	2736	3.7	0.866	31.5	LOS C	46.8	334.8	0.72	0.73	0.77	39.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
SouthEast: Yamba Drive															
Lane 1	778	2.7	778	2.7	898	0.866	100	38.0	LOS D	46.8	334.8	Full	735	0.0	0.0
Lane 2	483	2.7	483	2.7	558[1]	0.866	100	42.8	LOS D	29.6	211.8	Full	735	-28.7[N3]	0.0
Lane 3	236	3.6	236	3.6	410	0.575	100	54.8	LOS D	13.2	95.3	Short	85	0.0	NA
Approach	1497	2.8	1497	2.8		0.866		42.2	LOS D	46.8	334.8				
NorthEast: Wisdom Street															
Lane 1	147	12.9	147	12.9	1029	0.143	100	5.1	LOS A	1.7	12.8	Short	30	0.0	NA
Lane 2	117	0.9	117	0.9	216	0.542	100	58.0	LOS E	6.9	48.9	Full	680	-28.7[N3]	0.0
Approach	264	7.6	264	7.6		0.542		28.5	LOS C	6.9	48.9				
NorthWest: Yamba Drive															
Lane 1	205	3.6	205	3.6	1405	0.146	100	4.9	LOS A	0.2	1.8	Short	60	0.0	NA
Lane 2	385	4.2	385	4.2	890	0.433	100	18.7	LOS B	11.8	85.5	Full	65	0.0	29.9
Lane 3	385	4.2	385	4.2	890	0.433	100	18.7	LOS B	11.8	85.5	Full	65	0.0	29.9
Approach	975	4.1	975	4.1		0.433		15.8	LOS B	11.8	85.5				
Intersection	2736	3.7	2736	3.7		0.866		31.5	LOS C	46.8	334.8				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
N3 Capacity Adjustment due to downstream lane blockage determined by the program.

USER REPORT FOR SITE

Project: 24-0487_20260304

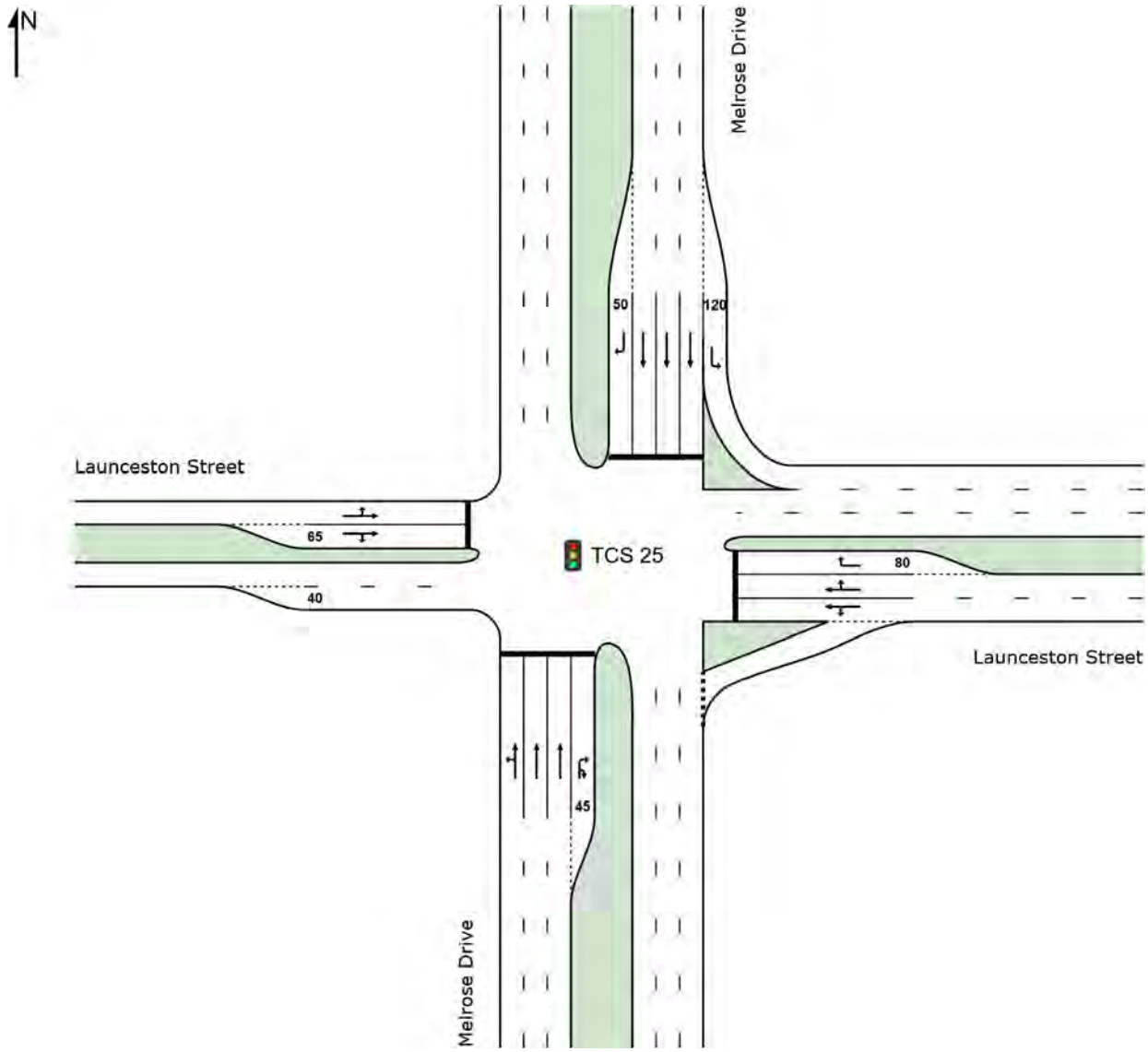
Template: Default Site User Report

Site: TCS 25 [2030 Dev - PM: LS-MD]

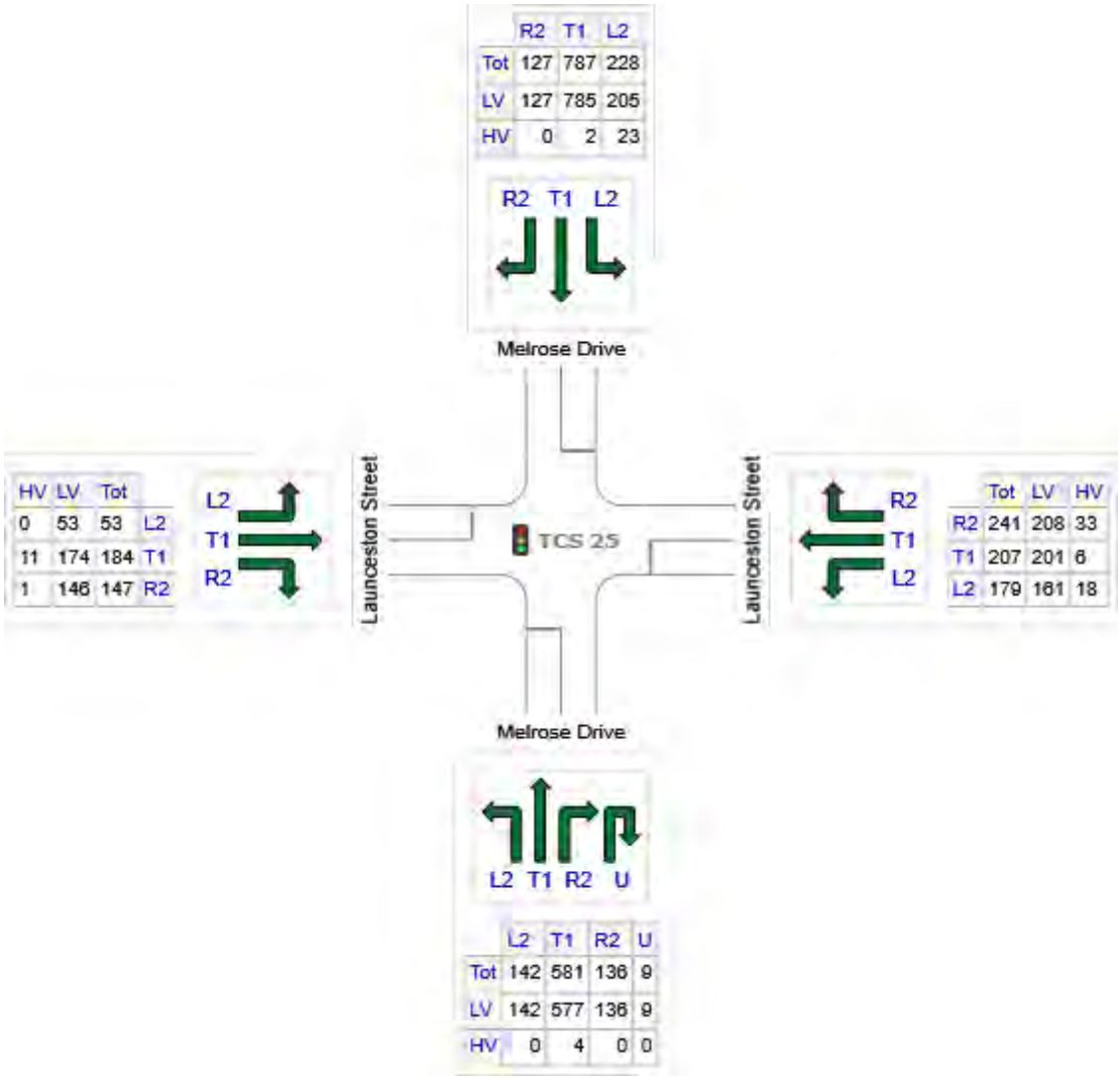
Launceston Street / Melrose Drive
Existing Signalised X-Intersection
Site Category: 2030 Development Scenario - Weekday Evening Peak Hour
Signals - Fixed Time Isolated Cycle Time = 110 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, B, D, E, F
Output Phase Sequence: A, B, D, E, F

Site Layout



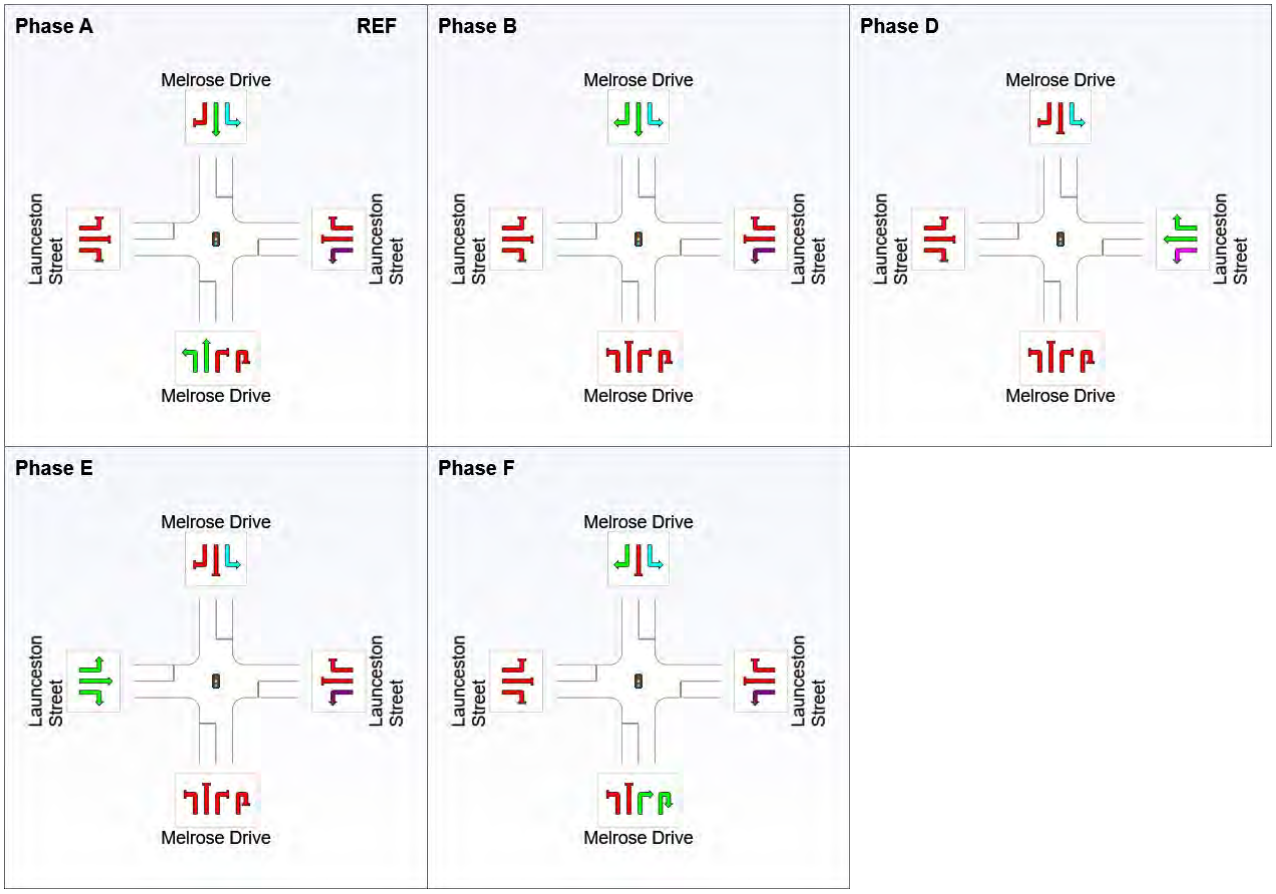
OD Demand Flows



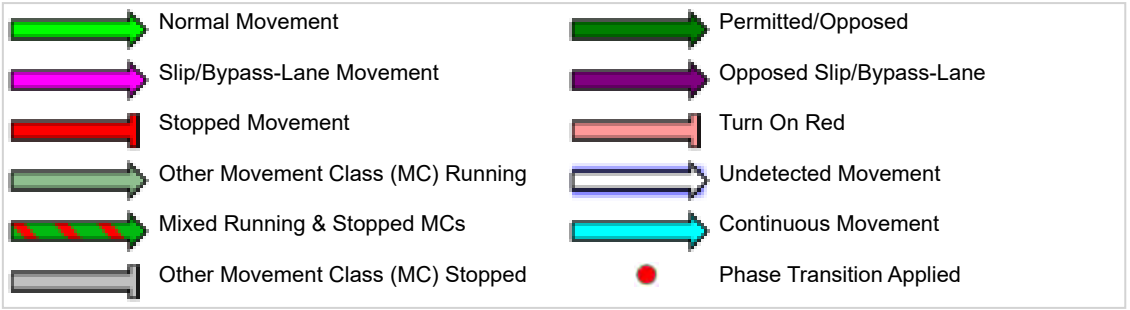
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Melrose Drive	868	864	4
E: Launceston Street	627	571	57
N: Melrose Drive	1143	1118	25
W: Launceston Street	384	373	12
Total	3023	2925	98

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	B	D	E	F
Phase Change Time (sec)	0	29	37	60	90
Green Time (sec)	23	2	23	24	14
Phase Time (sec)	29	2	29	30	20
Phase Split	26%	2%	26%	27%	18%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Melrose Drive												
1	L2	142	0.0	0.945	82.0	LOS F	17.5	122.9	1.00	1.16	1.57	11.4
2	T1	581	0.7	0.945	76.1	LOS F	17.9	126.2	1.00	1.16	1.57	21.2
3	R2	136	0.0	0.966	91.9	LOS F	10.8	75.4	1.00	1.15	1.76	9.6
3u	U	9	0.0	0.966	93.3	LOS F	10.8	75.4	1.00	1.15	1.76	13.0
Approach		868	0.5	0.966	79.7	LOS F	17.9	126.2	1.00	1.16	1.60	17.8
East: Launceston Street												
4	L2	179	10.0	0.317	5.8	LOS A	0.7	5.0	0.08	0.57	0.08	42.4
5	T1	207	3.0	0.603	44.3	LOS D	11.6	84.2	0.96	0.81	0.96	13.1
6	R2	241	13.5	0.603	48.8	LOS D	11.6	84.2	0.96	0.82	0.96	24.9
Approach		627	9.1	0.603	35.0	LOS C	11.6	84.2	0.71	0.74	0.71	23.3
North: Melrose Drive												
7	L2	228	10.1	0.132	5.7	LOS A	0.0	0.0	0.00	0.52	0.00	49.2
8	T1	787	0.3	0.478	35.4	LOS C	11.7	82.3	0.88	0.74	0.88	32.5
9	R2	127	0.0	0.472	37.3	LOS C	4.6	32.3	0.96	0.80	1.03	28.4
Approach		1143	2.2	0.478	29.7	LOS C	11.7	82.3	0.71	0.71	0.72	34.1
West: Launceston Street												
10	L2	53	0.0	0.472	45.4	LOS D	9.1	66.3	0.92	0.77	0.92	26.3
11	T1	184	5.7	0.472	40.9	LOS C	9.1	66.3	0.92	0.78	0.92	13.7
12	R2	147	0.7	0.472	45.4	LOS D	9.1	64.4	0.92	0.79	0.92	17.5
Approach		384	3.0	0.472	43.2	LOS D	9.1	66.3	0.92	0.78	0.92	17.4
All Vehicles		3023	3.2	0.966	46.9	LOS D	17.9	126.2	0.82	0.85	1.00	24.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Melrose Drive													
Lane 1	243	0.3	257	0.945	100	79.7	LOS F	17.5	122.9	Full	205	0.0	0.0
Lane 2	249	0.7	264	0.945	100	76.0	LOS F	17.9	126.2	Full	205	0.0	0.0
Lane 3	231	0.7	244[1]	0.945	100	76.1	LOS F	16.4	115.8	Full	205	0.0	0.0
Lane 4	145	0.0	150	0.966	100	92.0	LOS F	10.8	75.4	Short	45	0.0	NA
Approach	868	0.5		0.966		79.7	LOS F	17.9	126.2				
East: Launceston Street													
Lane 1	179	10.0	564	0.317	53[5]	5.8	LOS A	0.7	5.0	Full	90	0.0	0.0
Lane 2	235	4.3	389	0.603	100	44.8	LOS D	11.6	84.2	Full	90	0.0	0.0
Lane 3	214	13.5	354	0.603	100	48.8	LOS D	10.6	82.7	Short	80	0.0	NA
Approach	627	9.1		0.603		35.0	LOS C	11.6	84.2				
North: Melrose Drive													
Lane 1	228	10.1	1732	0.132	100	5.7	LOS A	0.0	0.0	Short	120	0.0	NA
Lane 2	262	0.3	549	0.478	100	35.4	LOS C	11.7	82.3	Full	470	0.0	0.0
Lane 3	262	0.3	549	0.478	100	35.4	LOS C	11.7	82.3	Full	470	0.0	0.0
Lane 4	262	0.3	549	0.478	100	35.4	LOS C	11.7	82.3	Full	470	0.0	0.0
Lane 5	127	0.0	270	0.472	100	37.3	LOS C	4.6	32.3	Short	50	0.0	NA
Approach	1143	2.2		0.478		29.7	LOS C	11.7	82.3				
West: Launceston Street													
Lane 1	193	4.2	409	0.472	100	42.1	LOS C	9.1	66.3	Full	95	0.0	0.0
Lane 2	191	1.9	405	0.472	100	44.4	LOS D	9.1	64.4	Short	65	0.0	NA
Approach	384	3.0		0.472		43.2	LOS D	9.1	66.3				
Intersection	3023	3.2		0.966		46.9	LOS D	17.9	126.2				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

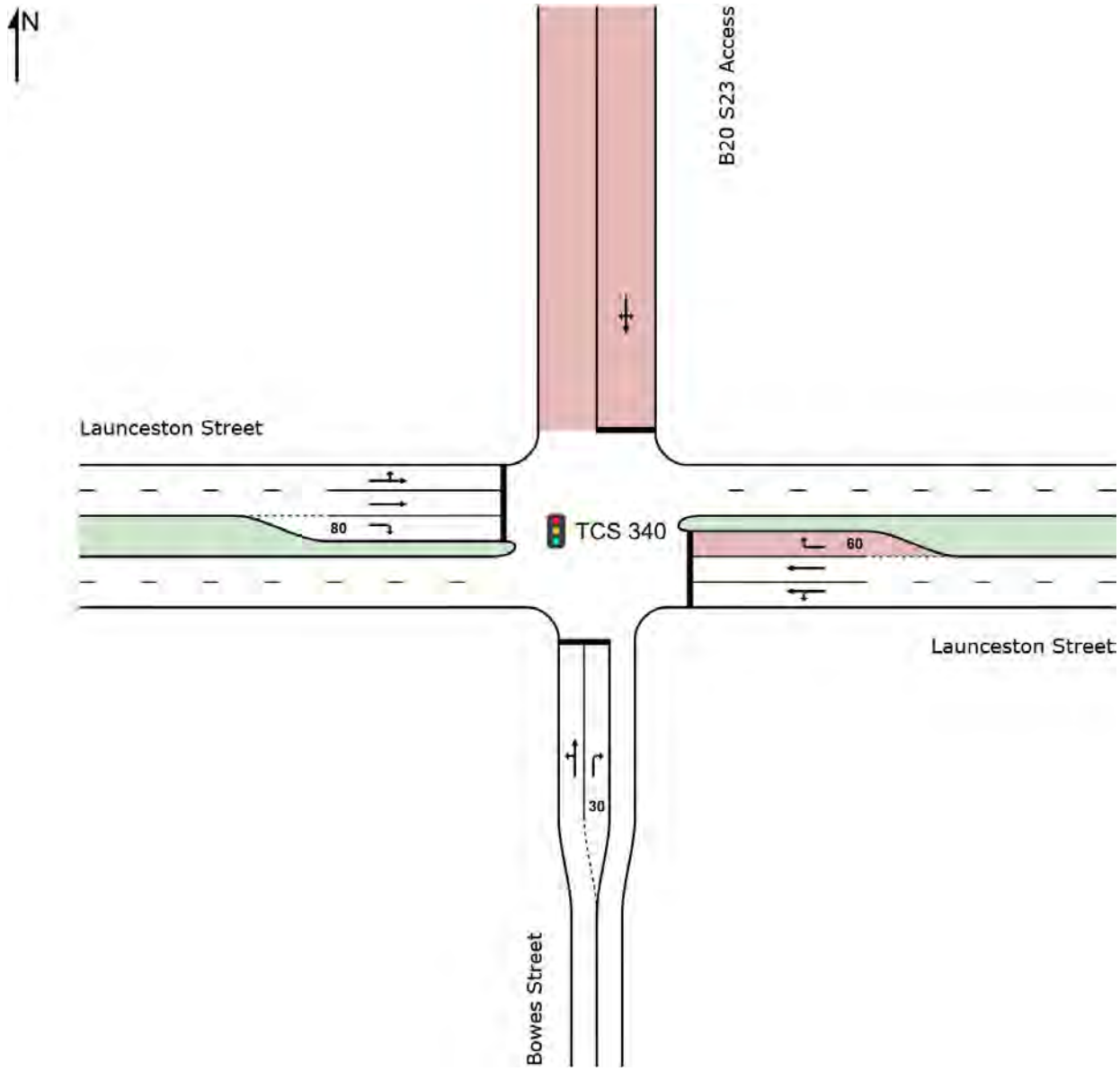
1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
5 Lane under-utilisation found by the program

Site: TCS 340 [2030 Dev - PM: BS-LS]

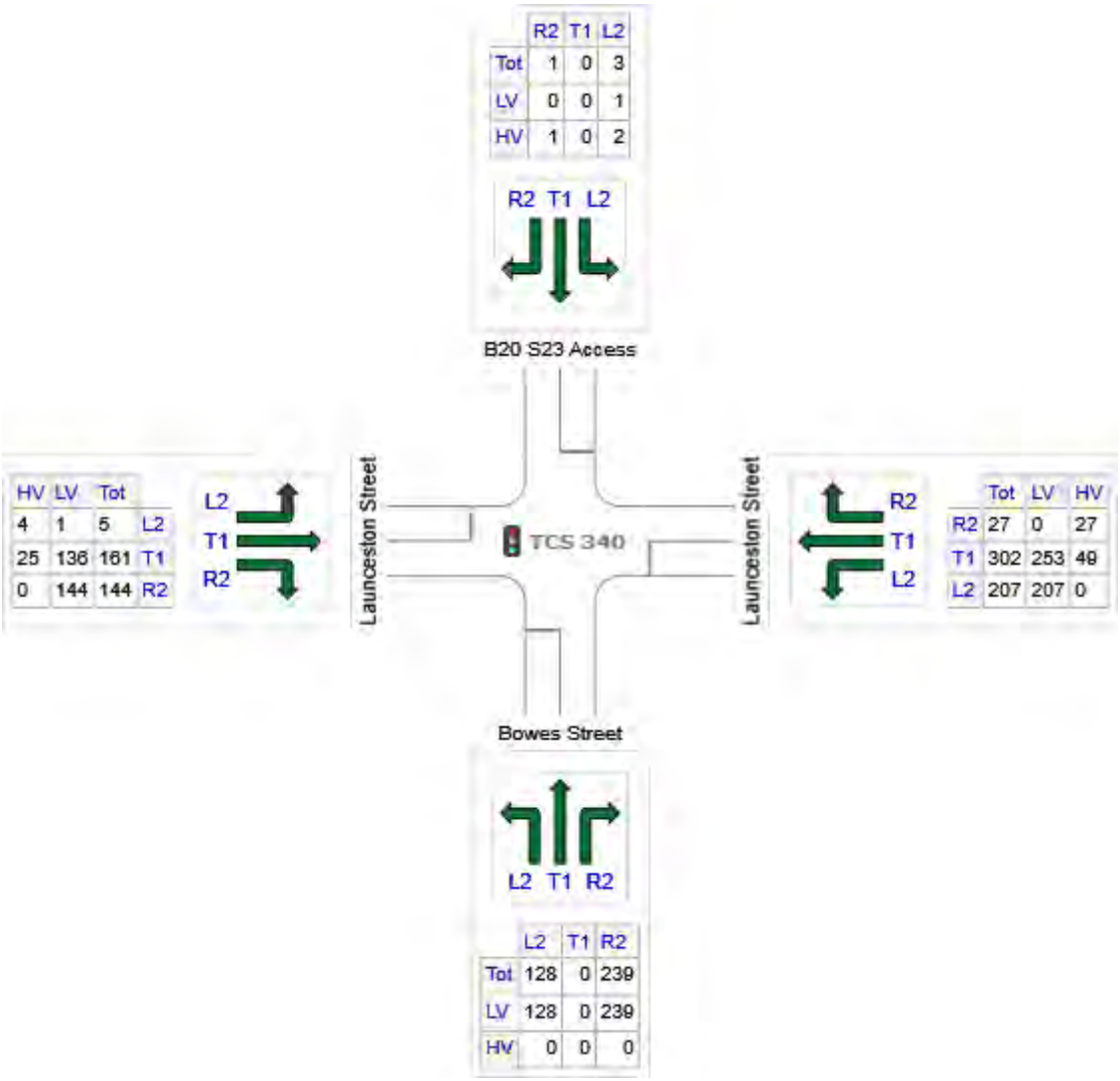
Block 20 Section 23 Access / Bowes Street / Launceston Street
Existing Signalised X-Intersection
Site Category: 2030 Development Scenario - Weekday Evening Peak Hour
Signals - Fixed Time Isolated Cycle Time = 89 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E, G
Output Phase Sequence: A, D, E, G

Site Layout



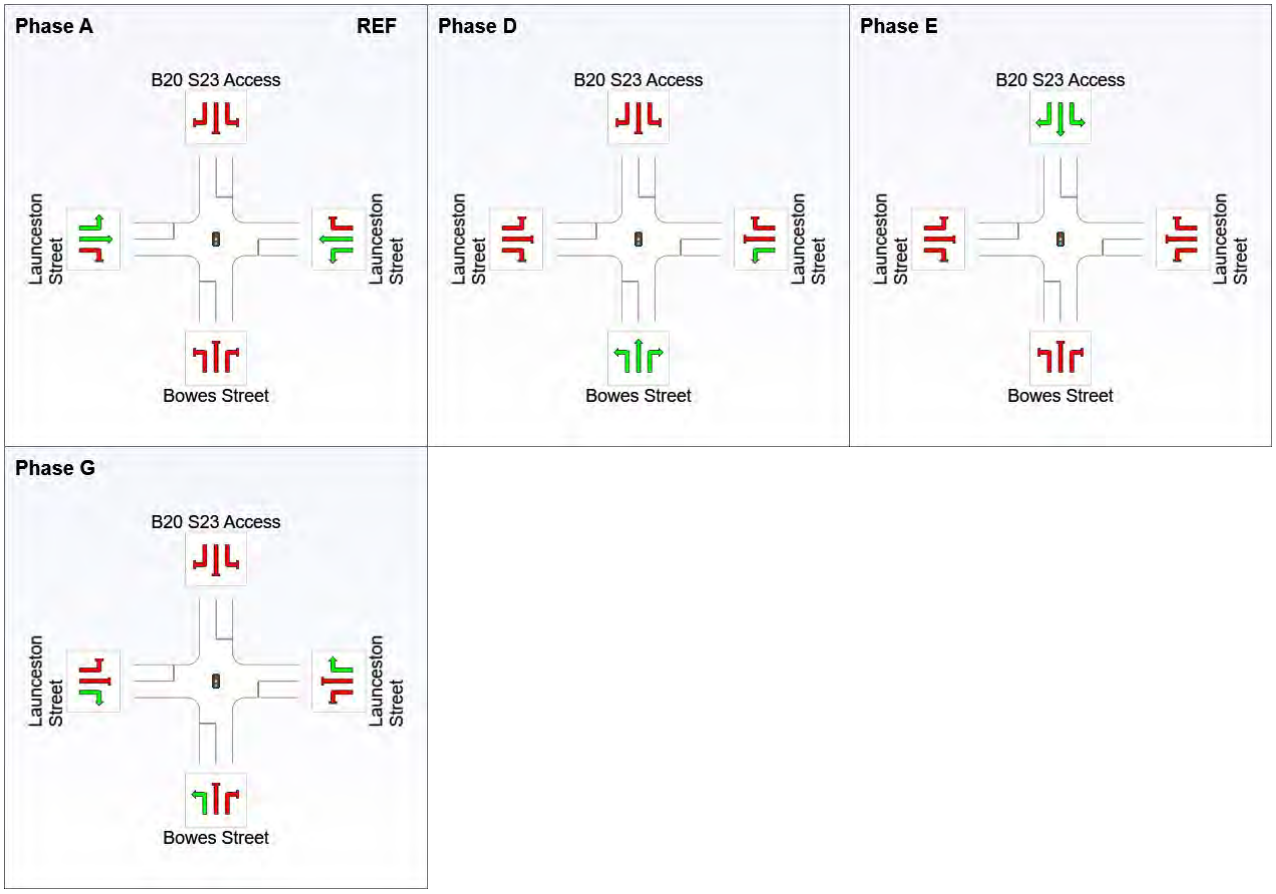
OD Demand Flows



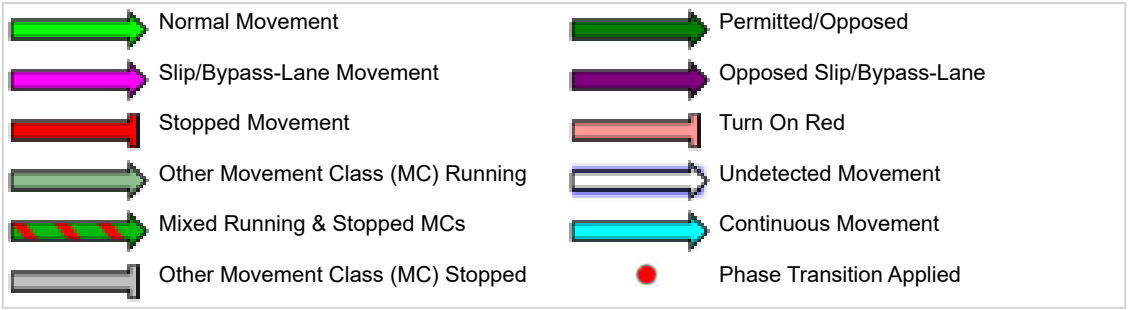
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	367	367	0
E: Launceston Street	537	460	77
N: B20 S23 Access	4	1	3
W: Launceston Street	311	281	29
Total	1219	1110	110

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	D	E	G
Phase Change Time (sec)	0	30	63	76
Green Time (sec)	24	27	7	10
Phase Time (sec)	30	33	10	16
Phase Split	34%	37%	11%	18%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	128	0.0	0.162	12.9	LOS A	2.4	16.6	0.65	0.70	0.65	22.8
2	T1	0	0.0	0.162	13.4	LOS A	2.4	16.6	0.65	0.70	0.65	13.2
3	R2	239	0.0	0.447	30.2	LOS C	8.4	58.7	0.85	0.79	0.85	12.5
Approach		367	0.0	0.447	24.1	LOS B	8.4	58.7	0.78	0.76	0.78	15.0
East: Launceston Street												
4	L2	207	0.0	0.473	30.8	LOS C	9.8	71.5	0.84	0.78	0.84	13.1
5	T1	302	16.4	0.473	28.6	LOS C	9.8	71.5	0.87	0.75	0.87	18.3
6	R2	27	100.0	0.225	47.9	LOS D	1.2	15.2	0.94	0.73	0.94	8.7
Approach		537	14.3	0.473	30.5	LOS C	9.8	71.5	0.86	0.76	0.86	15.7
North: B20 S23 Access												
7	L2	3	66.7	0.042	43.2	LOS D	0.2	2.1	0.95	0.62	0.95	8.3
8	T1	0	100.0	0.042	43.2	LOS D	0.2	2.1	0.95	0.62	0.95	5.3
9	R2	1	100.0	0.042	43.2	LOS D	0.2	2.1	0.95	0.62	0.95	8.8
Approach		4	75.6	0.042	43.2	LOS D	0.2	2.1	0.95	0.62	0.95	8.3
West: Launceston Street												
10	L2	5	80.0	0.221	33.7	LOS C	2.8	23.1	0.82	0.65	0.82	13.6
11	T1	161	15.7	0.221	27.7	LOS B	2.9	23.1	0.82	0.65	0.82	19.2
12	R2	144	0.0	0.864	58.1	LOS E	7.3	51.2	1.00	0.99	1.47	8.1
Approach		311	9.5	0.864	41.9	LOS C	7.3	51.2	0.90	0.81	1.12	12.5
All Vehicles		1219	9.0	0.864	31.5	LOS C	9.8	71.5	0.85	0.77	0.90	14.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	Demand Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	95% Back of Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Bowes Street													
Lane 1	129	0.0	792	0.162	100	12.9	LOS A	2.4	16.6	Full	35	0.0	52.5[8]
Lane 2	239	0.0	535[1]	0.447	100	30.2	LOS C	8.4	58.7	Short	30	0.0	NA
Approach	367	0.0		0.447		24.1	LOS B	8.4	58.7				
East: Launceston Street													
Lane 1	285	4.4	602	0.473	100	29.3	LOS C	9.8	71.5	Full	95	0.0	0.0
Lane 2	225	16.4	475	0.473	100	29.8	LOS C	8.3	66.4	Full	95	0.0	0.0
Lane 3	27	100.0	122	0.225	100	47.9	LOS D	1.2	15.2	Short	60	0.0	NA
Approach	537	14.3		0.473		30.5	LOS C	9.8	71.5				
North: B20 S23 Access													
Lane 1	4	75.6	104	0.042	100	43.2	LOS D	0.2	2.1	Full	30	0.0	0.0
Approach	4	75.6		0.042		43.2	LOS D	0.2	2.1				
West: Launceston Street													
Lane 1	82	19.8	370	0.221	100	28.1	LOS B	2.8	23.1	Full	105	0.0	0.0
Lane 2	84	15.7	382	0.221	100	27.7	LOS B	2.9	23.1	Full	105	0.0	0.0
Lane 3	144	0.0	167	0.864	100	58.1	LOS E	7.3	51.2	Short	80	0.0	NA
Approach	311	9.5		0.864		41.9	LOS C	7.3	51.2				
Intersection	1219	9.0		0.864		31.5	LOS C	9.8	71.5				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

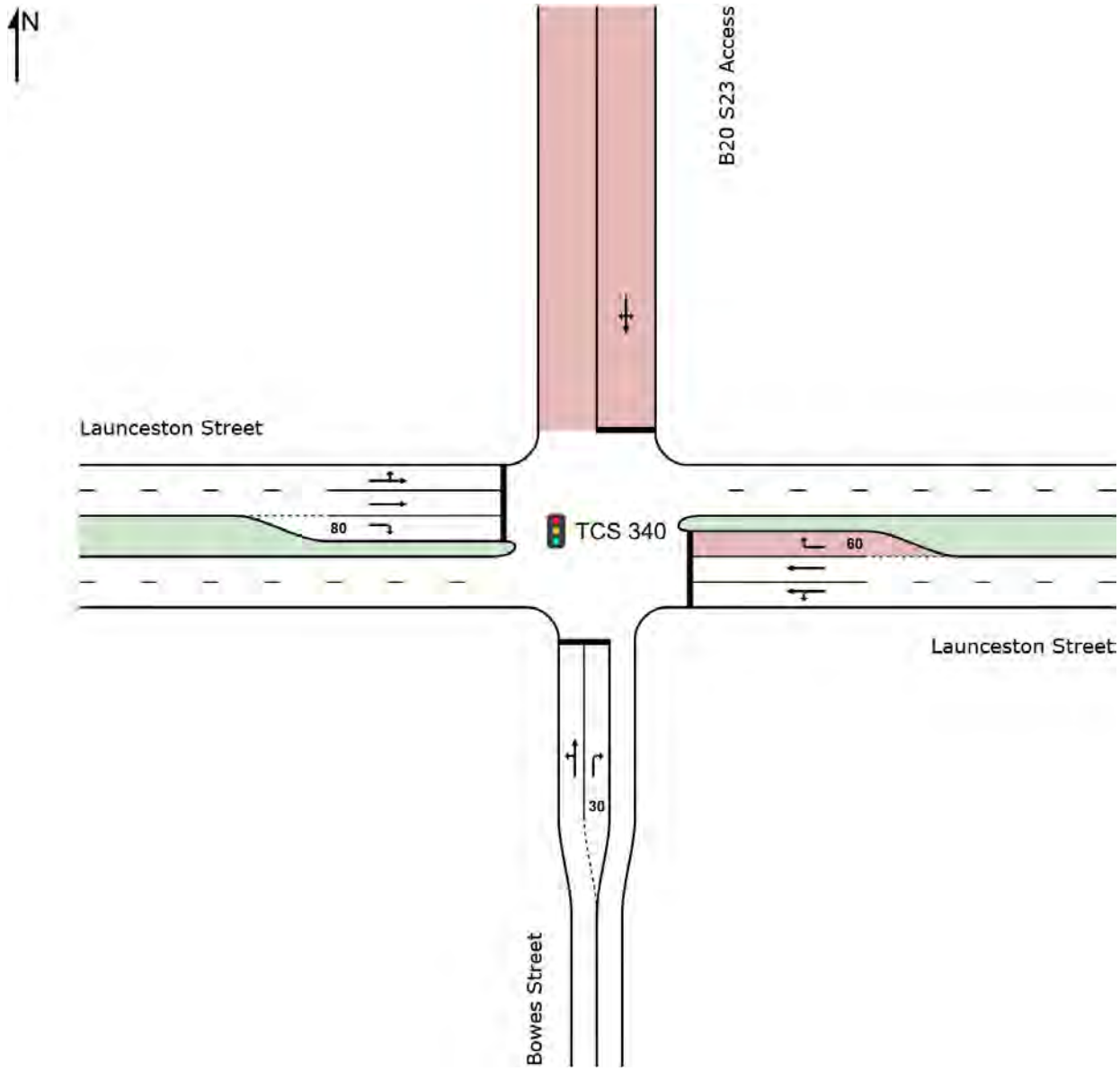
1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
8 Probability of Blockage has been set on the basis of a queue that overflows from a short lane.

Site: TCS 340 [2030 Dev - PM: BS-LS (Rec)]

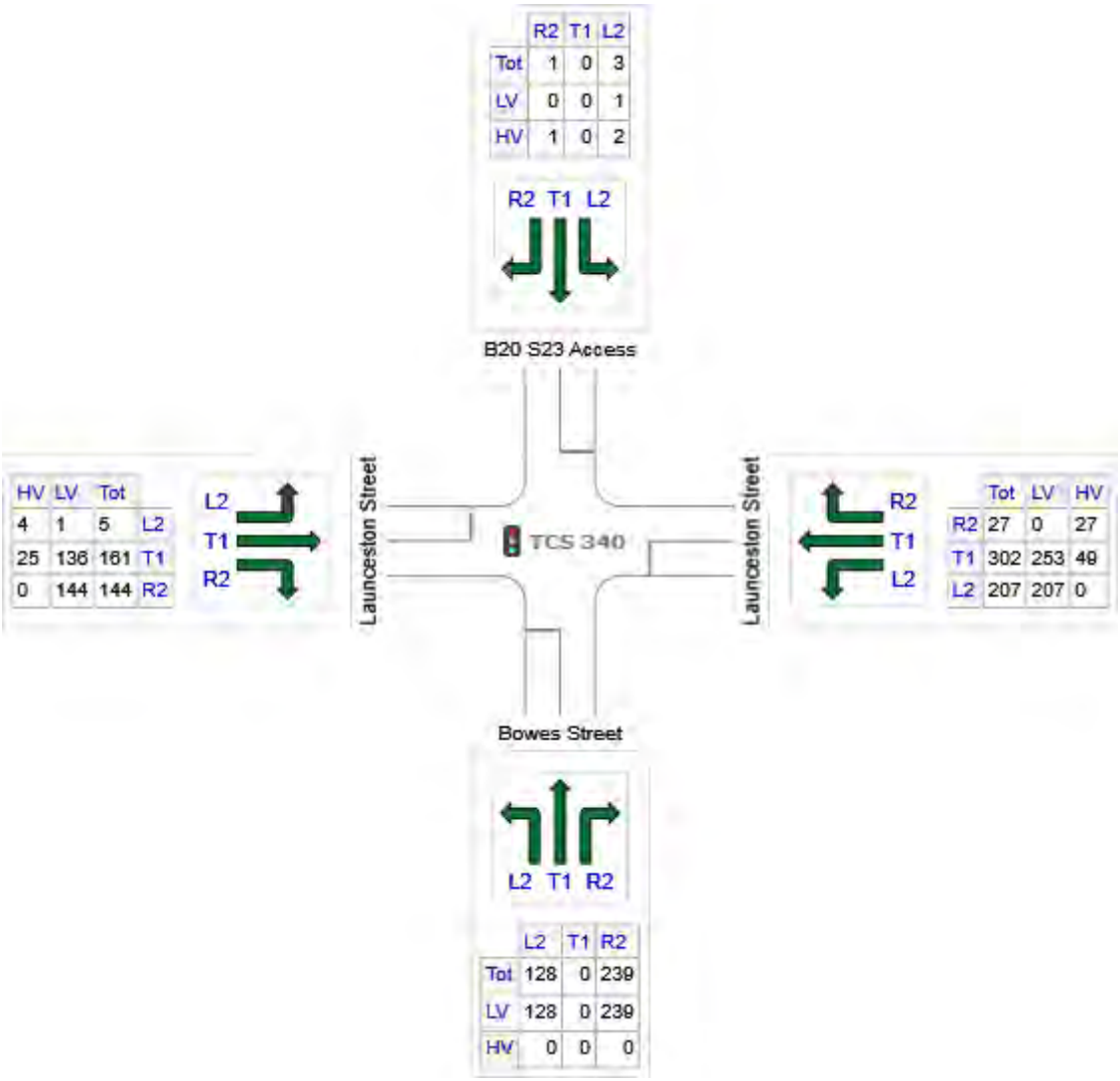
Block 20 Section 23 Access / Bowes Street / Launceston Street
Existing Signalised X-Intersection
Site Category: 2030 Development Scenario - Weekday Evening Peak Hour
Signals - Fixed Time Isolated Cycle Time = 89 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E, G
Output Phase Sequence: A, D, E, G

Site Layout



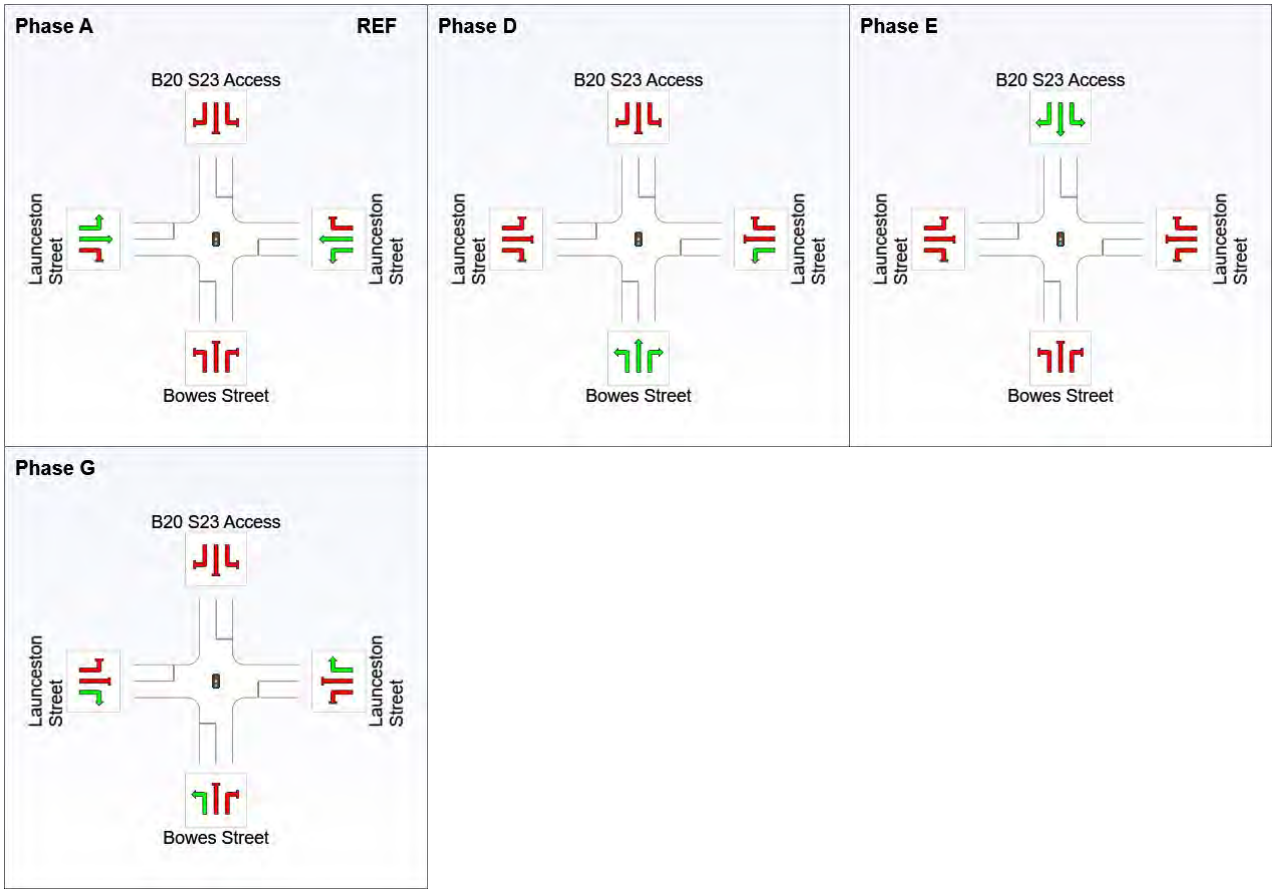
OD Demand Flows



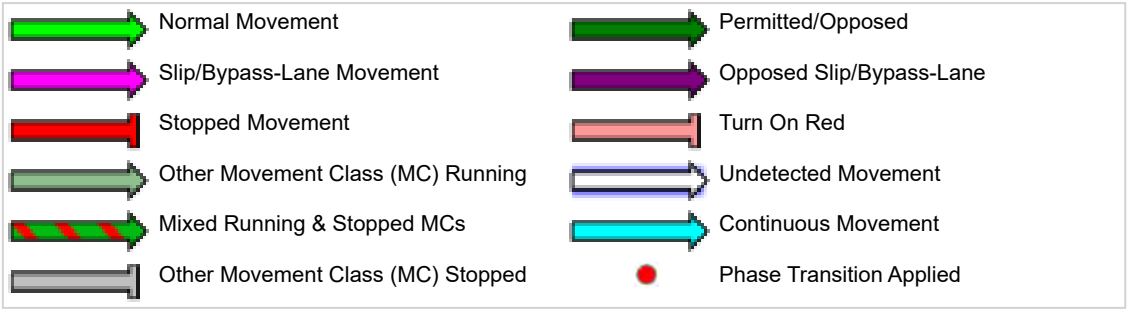
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	367	367	0
E: Launceston Street	537	460	77
N: B20 S23 Access	4	1	3
W: Launceston Street	311	281	29
Total	1219	1110	110

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	D	E	G
Phase Change Time (sec)	0	30	62	75
Green Time (sec)	24	26	7	11
Phase Time (sec)	30	32	10	17
Phase Split	34%	36%	11%	19%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	128	0.0	0.162	13.0	LOS A	2.4	16.6	0.65	0.70	0.65	22.8
2	T1	0	0.0	0.162	13.4	LOS A	2.4	16.6	0.65	0.70	0.65	13.2
3	R2	239	0.0	0.468	31.1	LOS C	8.5	59.7	0.86	0.79	0.86	12.2
Approach		367	0.0	0.468	24.7	LOS B	8.5	59.7	0.79	0.76	0.79	14.7
East: Launceston Street												
4	L2	207	0.0	0.473	30.8	LOS C	9.8	71.5	0.84	0.78	0.84	13.1
5	T1	302	16.4	0.473	28.6	LOS C	9.8	71.5	0.87	0.75	0.87	18.3
6	R2	27	100.0	0.204	46.5	LOS D	1.1	14.9	0.93	0.73	0.93	8.9
Approach		537	14.3	0.473	30.4	LOS C	9.8	71.5	0.86	0.76	0.86	15.7
North: B20 S23 Access												
7	L2	3	66.7	0.042	43.2	LOS D	0.2	2.1	0.95	0.62	0.95	8.3
8	T1	0	100.0	0.042	43.2	LOS D	0.2	2.1	0.95	0.62	0.95	5.3
9	R2	1	100.0	0.042	43.2	LOS D	0.2	2.1	0.95	0.62	0.95	8.8
Approach		4	75.6	0.042	43.2	LOS D	0.2	2.1	0.95	0.62	0.95	8.3
West: Launceston Street												
10	L2	5	80.0	0.221	33.7	LOS C	2.8	23.1	0.82	0.65	0.82	13.6
11	T1	161	15.7	0.221	27.7	LOS B	2.9	23.1	0.82	0.65	0.82	19.2
12	R2	144	0.0	0.785	52.7	LOS D	6.9	48.1	1.00	0.92	1.27	8.7
Approach		311	9.5	0.785	39.4	LOS C	6.9	48.1	0.90	0.77	1.03	13.1
All Vehicles		1219	9.0	0.785	31.0	LOS C	9.8	71.5	0.85	0.76	0.88	14.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	Demand Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	95% Back of Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Bowes Street													
Lane 1	129	0.0	792	0.162	100	13.0	LOS A	2.4	16.6	Full	35	0.0	54.2[8]
Lane 2	239	0.0	511[1]	0.468	100	31.1	LOS C	8.5	59.7	Short	30	0.0	NA
Approach	367	0.0		0.468		24.7	LOS B	8.5	59.7				
East: Launceston Street													
Lane 1	285	4.4	602	0.473	100	29.3	LOS C	9.8	71.5	Full	95	0.0	0.0
Lane 2	225	16.4	475	0.473	100	29.8	LOS C	8.3	66.4	Full	95	0.0	0.0
Lane 3	27	100.0	134	0.204	100	46.5	LOS D	1.1	14.9	Short	60	0.0	NA
Approach	537	14.3		0.473		30.4	LOS C	9.8	71.5				
North: B20 S23 Access													
Lane 1	4	75.6	104	0.042	100	43.2	LOS D	0.2	2.1	Full	30	0.0	0.0
Approach	4	75.6		0.042		43.2	LOS D	0.2	2.1				
West: Launceston Street													
Lane 1	82	19.8	370	0.221	100	28.1	LOS B	2.8	23.1	Full	105	0.0	0.0
Lane 2	84	15.7	382	0.221	100	27.7	LOS B	2.9	23.1	Full	105	0.0	0.0
Lane 3	144	0.0	184	0.785	100	52.7	LOS D	6.9	48.1	Short	80	0.0	NA
Approach	311	9.5		0.785		39.4	LOS C	6.9	48.1				
Intersection	1219	9.0		0.785		31.0	LOS C	9.8	71.5				

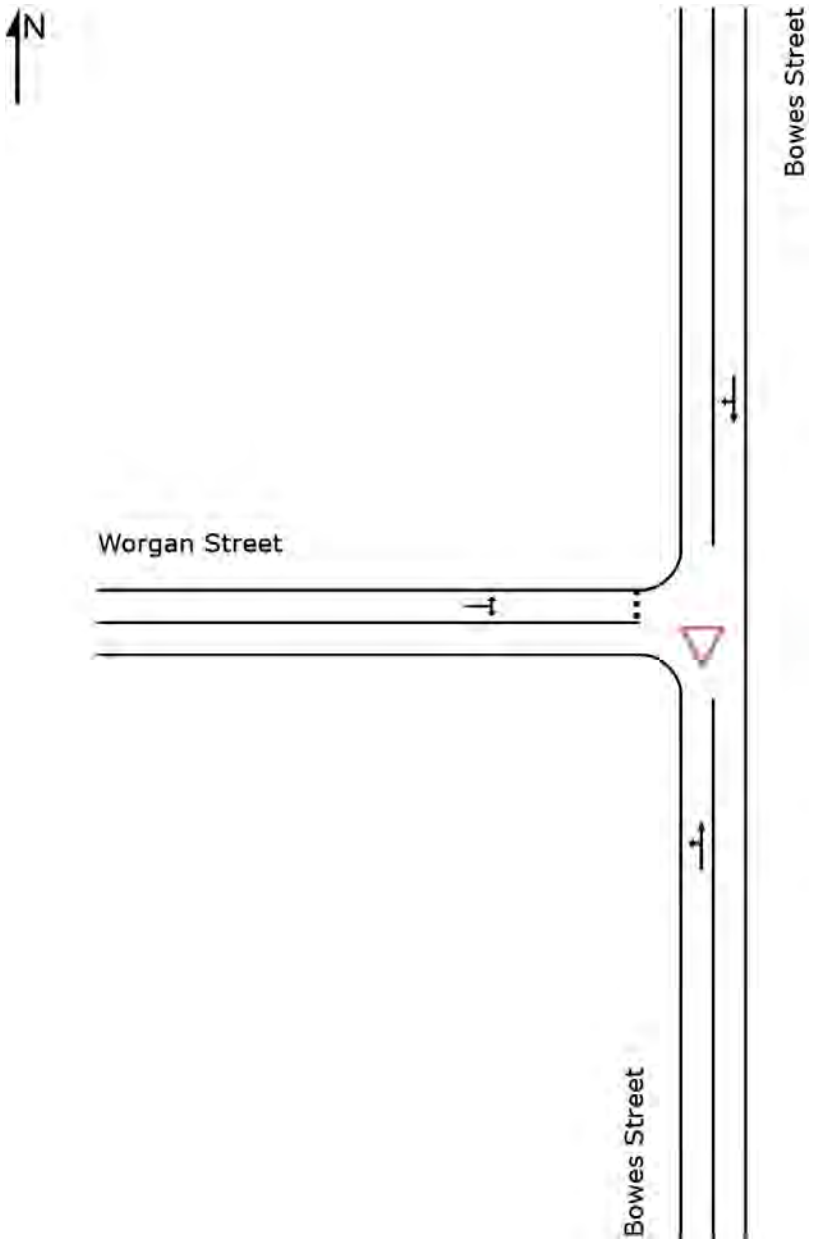
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
8 Probability of Blockage has been set on the basis of a queue that overflows from a short lane.

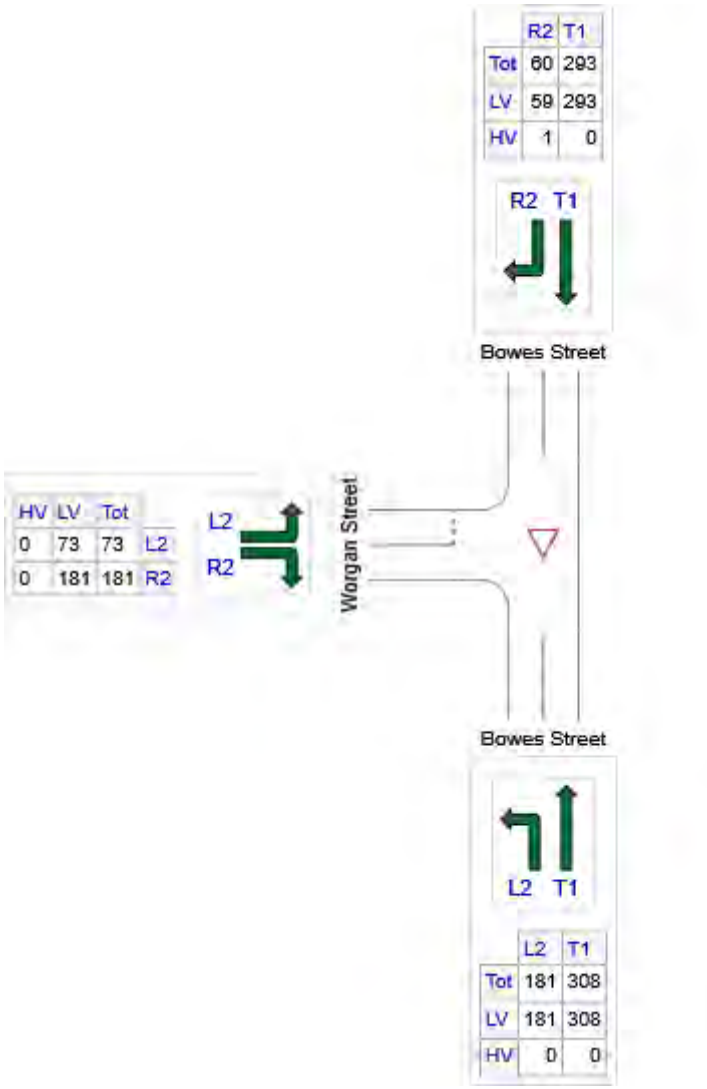
Site: [2030 Dev - PM: BS-WS]

Bowes Street / Worgan Street
Existing Priority-Controlled (Give-Way) T-Intersection
Site Category: 2030 Development Scenario - Weekday Evening Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	489	489	0
N: Bowes Street	353	352	1
W: Worgan Street	254	254	0
Total	1096	1095	1

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	181	0.0	0.256	4.6	LOS A	0.0	0.0	0.00	0.20	0.00	32.6
2	T1	308	0.0	0.256	0.0	LOS A	0.0	0.0	0.00	0.20	0.00	43.3
Approach		489	0.0	0.256	1.7	NA	0.0	0.0	0.00	0.20	0.00	38.6
North: Bowes Street												
8	T1	293	0.0	0.207	0.7	LOS A	0.6	4.0	0.20	0.10	0.20	43.8
9	R2	60	1.8	0.207	5.5	LOS A	0.6	4.0	0.20	0.10	0.20	17.1
Approach		353	0.3	0.207	1.5	NA	0.6	4.0	0.20	0.10	0.20	38.0
West: Worgan Street												
10	L2	73	0.0	0.338	4.9	LOS A	1.5	10.7	0.54	0.78	0.65	17.4
12	R2	181	0.0	0.338	7.9	LOS A	1.5	10.7	0.54	0.78	0.65	28.1
Approach		254	0.0	0.338	7.1	LOS A	1.5	10.7	0.54	0.78	0.65	25.4
All Vehicles		1096	0.1	0.338	2.9	NA	1.5	10.7	0.19	0.30	0.21	34.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

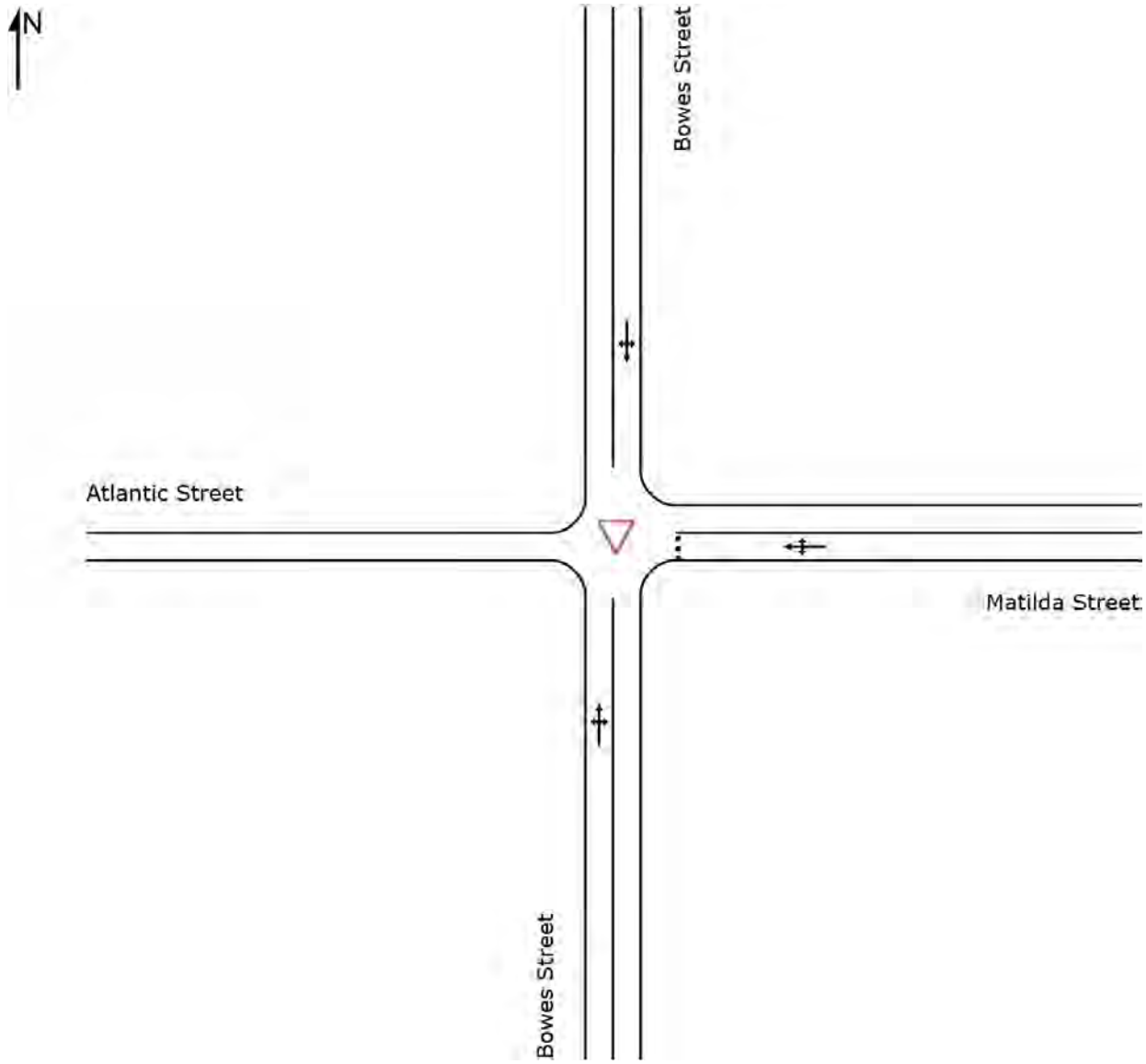
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Bowes Street													
Lane 1	489	0.0	1915	0.256	100	1.7	LOS A	0.0	0.0	Full	105	0.0	0.0
Approach	489	0.0		0.256		1.7	NA	0.0	0.0				
North: Bowes Street													
Lane 1	353	0.3	1702	0.207	100	1.5	LOS A	0.6	4.0	Full	35	0.0	0.0
Approach	353	0.3		0.207		1.5	NA	0.6	4.0				
West: Worgan Street													
Lane 1	254	0.0	751	0.338	100	7.1	LOS A	1.5	10.7	Full	35	0.0	0.0
Approach	254	0.0		0.338		7.1	LOS A	1.5	10.7				
Intersection	1096	0.1		0.338		2.9	NA	1.5	10.7				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

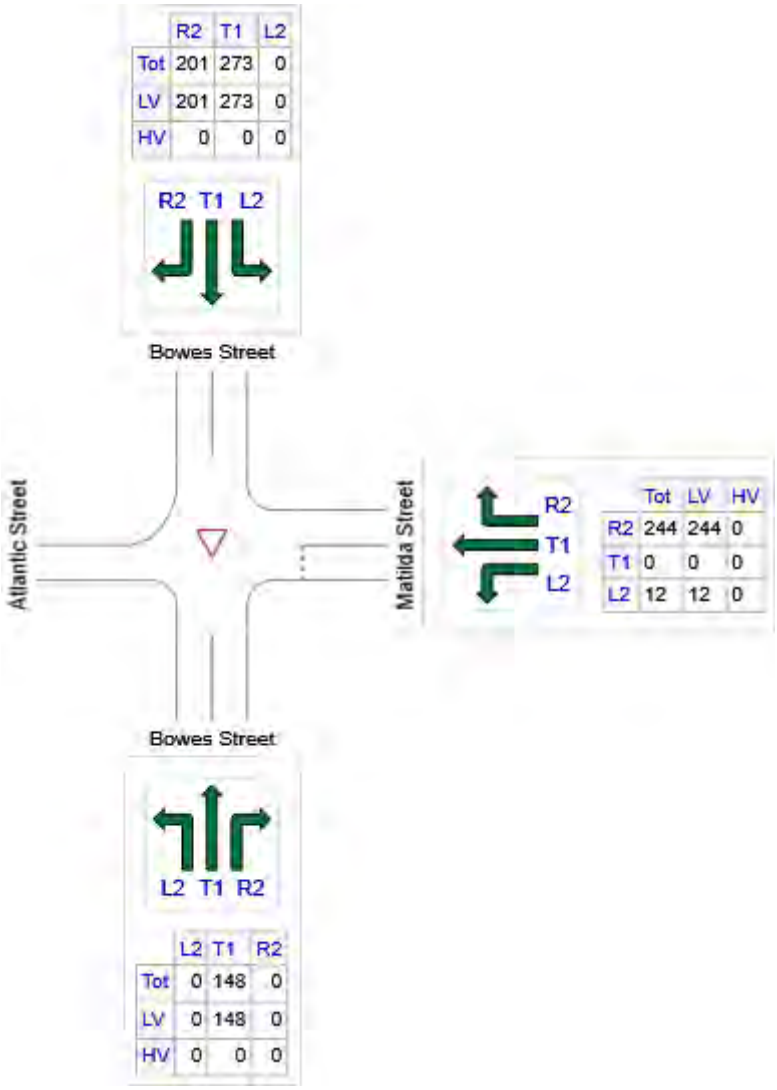
Site: [2030 Dev - PM: AS-BS-MS]

Atlantic Street / Bowes Street / Matilda Street
Existing Priority-Controlled (Give-Way) T-Intersection
Site Category: 2030 Development Scenario - Weekday Evening Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	149	149	0
E: Matilda Street	256	256	0
N: Bowes Street	474	474	0
Total	878	878	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	0	0.0	0.076	4.2	LOS A	0.0	0.0	0.00	0.00	0.00	24.3
2	T1	148	0.0	0.076	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
3	R2	0	0.0	0.076	4.5	LOS A	0.0	0.0	0.00	0.00	0.00	43.5
Approach		149	0.0	0.076	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.9
East: Matilda Street												
4	L2	12	0.0	0.463	7.1	LOS A	2.3	16.4	0.65	0.94	0.95	21.2
5	T1	0	0.0	0.463	9.8	LOS A	2.3	16.4	0.65	0.94	0.95	19.2
6	R2	244	0.0	0.463	11.7	LOS A	2.3	16.4	0.65	0.94	0.95	26.4
Approach		256	0.0	0.463	11.5	LOS A	2.3	16.4	0.65	0.94	0.95	26.2
North: Bowes Street												
7	L2	0	0.0	0.270	5.2	LOS A	1.3	9.3	0.25	0.25	0.25	39.8
8	T1	273	0.0	0.270	0.4	LOS A	1.3	9.3	0.25	0.25	0.25	40.0
9	R2	201	0.0	0.270	5.4	LOS A	1.3	9.3	0.25	0.25	0.25	27.0
Approach		474	0.0	0.270	2.5	NA	1.3	9.3	0.25	0.25	0.25	31.9
All Vehicles		878	0.0	0.463	4.7	NA	2.3	16.4	0.32	0.41	0.41	31.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

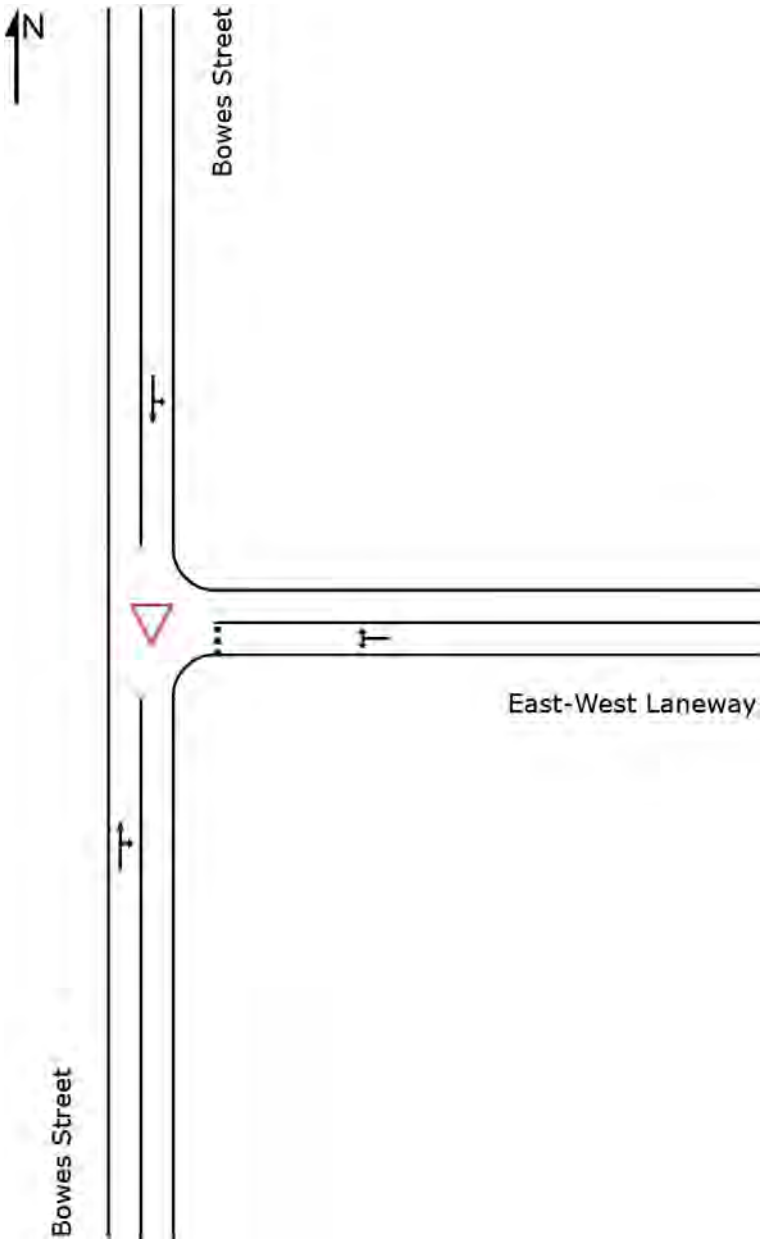
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Bowes Street													
Lane 1	149	0.0	1949	0.076	100	0.0	LOS A	0.0	0.0	Full	45	0.0	0.0
Approach	149	0.0		0.076		0.0	NA	0.0	0.0				
East: Matilda Street													
Lane 1	256	0.0	553	0.463	100	11.5	LOS A	2.3	16.4	Full	80	0.0	0.0
Approach	256	0.0		0.463		11.5	LOS A	2.3	16.4				
North: Bowes Street													
Lane 1	474	0.0	1754	0.270	100	2.5	LOS A	1.3	9.3	Full	110	0.0	0.0
Approach	474	0.0		0.270		2.5	NA	1.3	9.3				
Intersection	878	0.0		0.463		4.7	NA	2.3	16.4				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

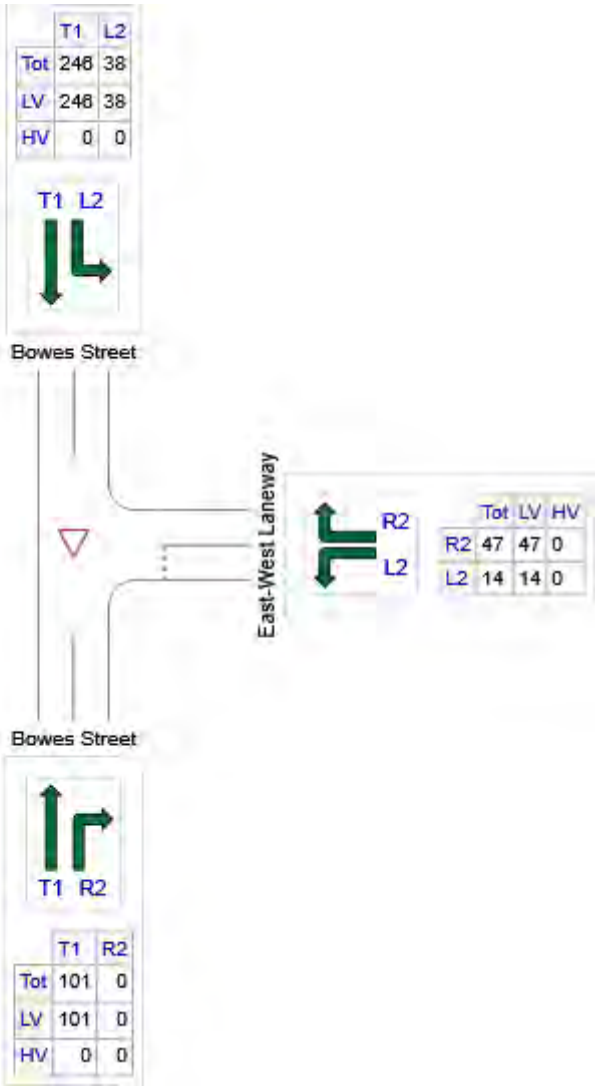
Site: [2030 Dev - PM: BS-EWL]

Bowes Street / East-West Laneway
Proposed Priority-Controlled (Give-Way) T-Intersection
Site Category: 2030 Development Scenario - Weekday Evening Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	101	101	0
E: East-West Laneway	61	61	0
N: Bowes Street	284	284	0
Total	446	446	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
2	T1	101	0.0	0.052	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
3	R2	0	0.0	0.052	5.3	LOS A	0.0	0.0	0.00	0.00	0.00	41.7
Approach		101	0.0	0.052	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.9
East: East-West Laneway												
4	L2	14	0.0	0.062	0.8	LOS A	0.2	1.5	0.36	0.32	0.36	23.6
6	R2	47	0.0	0.062	2.1	LOS A	0.2	1.5	0.36	0.32	0.36	23.1
Approach		61	0.0	0.062	1.8	LOS A	0.2	1.5	0.36	0.32	0.36	23.2
North: Bowes Street												
7	L2	38	0.0	0.147	4.3	LOS A	0.0	0.0	0.00	0.07	0.00	26.4
8	T1	246	0.0	0.147	0.0	LOS A	0.0	0.0	0.00	0.07	0.00	47.1
Approach		284	0.0	0.147	0.6	NA	0.0	0.0	0.00	0.07	0.00	43.5
All Vehicles		446	0.0	0.147	0.6	NA	0.2	1.5	0.05	0.09	0.05	40.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

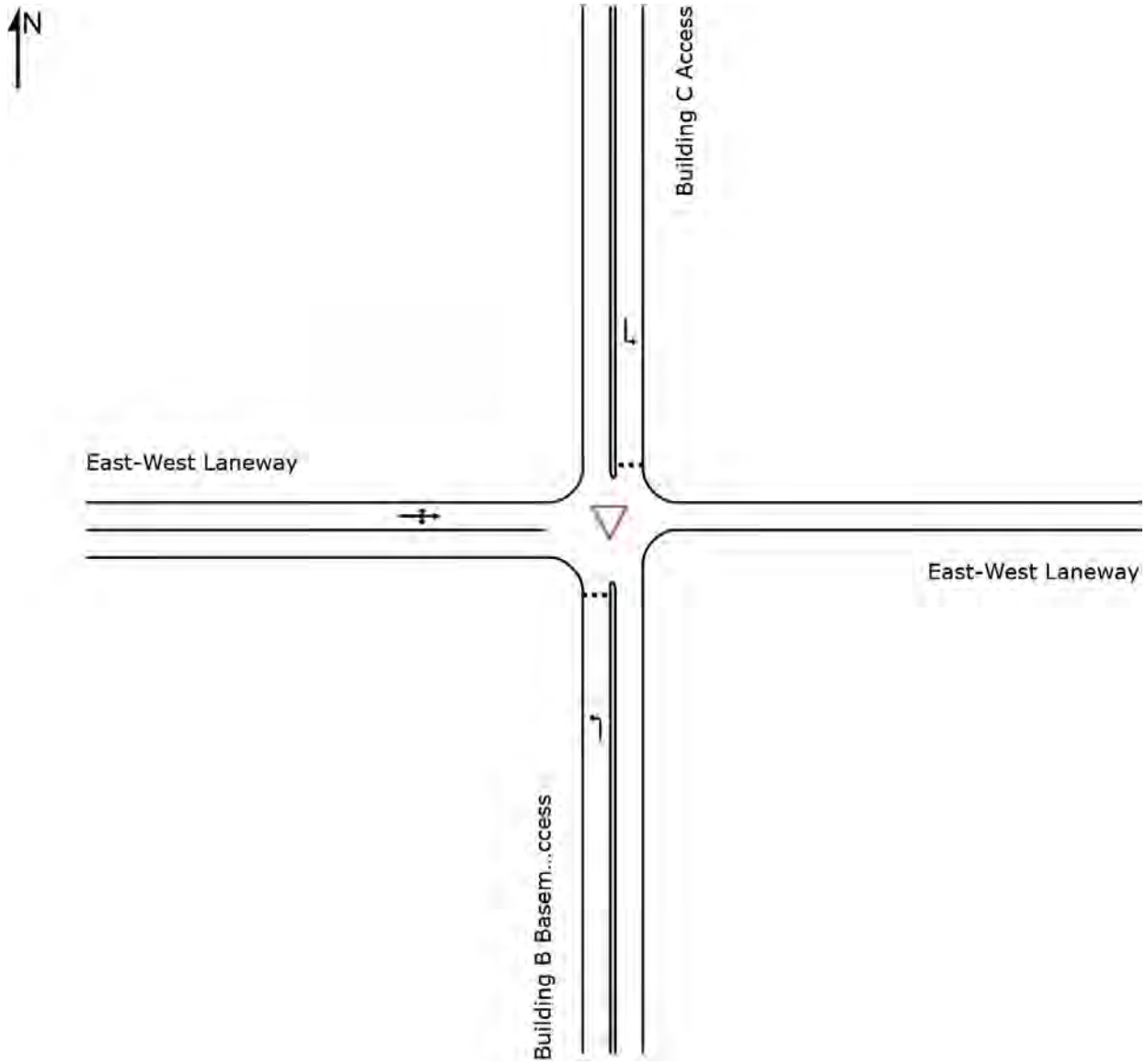
Lane Use and Performance													
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Bowes Street													
Lane 1	101	0.0	1949	0.052	100	0.0	LOS A	0.0	0.0	Full	60	0.0	0.0
Approach	101	0.0		0.052		0.0	NA	0.0	0.0				
East: East-West Laneway													
Lane 1	61	0.0	988	0.062	100	1.8	LOS A	0.2	1.5	Full	30	0.0	0.0
Approach	61	0.0		0.062		1.8	LOS A	0.2	1.5				
North: Bowes Street													
Lane 1	284	0.0	1937	0.147	100	0.6	LOS A	0.0	0.0	Full	60	0.0	0.0
Approach	284	0.0		0.147		0.6	NA	0.0	0.0				
Intersection	446	0.0		0.147		0.6	NA	0.2	1.5				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

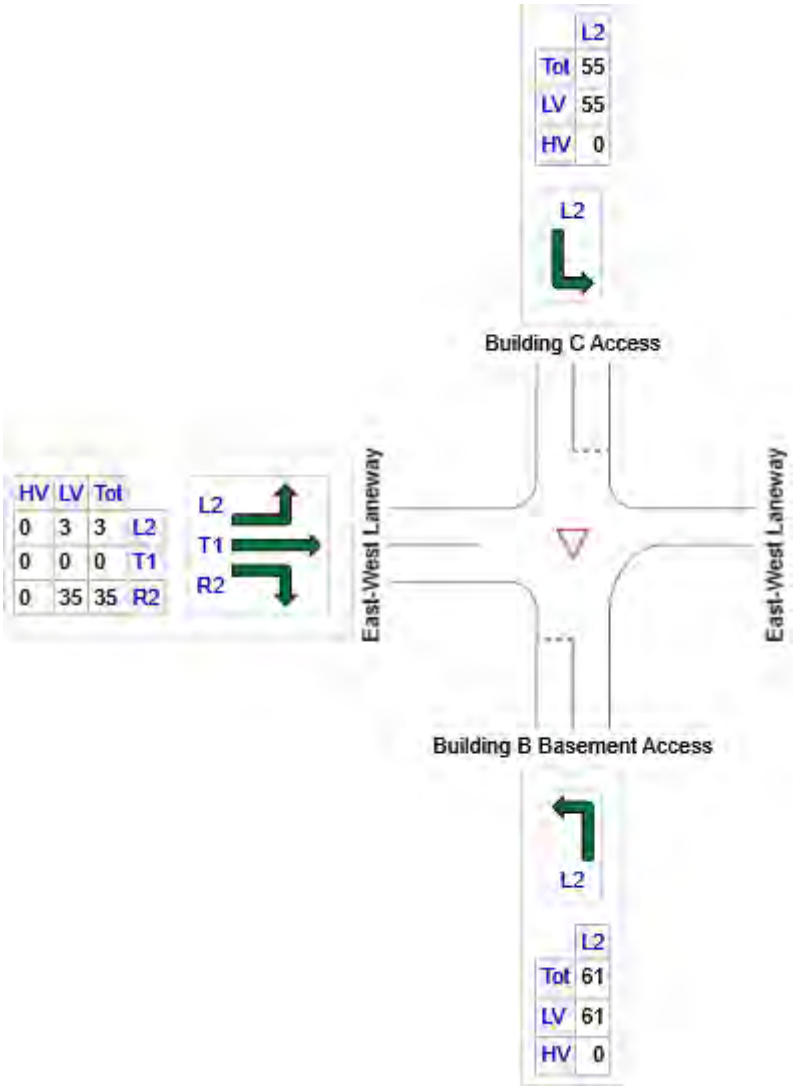
Site: [2030 Dev - PM: BldgBB-BldgC-EWL]

Building B Basement Access / Building C Access / East-West Laneway
Proposed Priority-Controlled (Give-Way) T-Intersection
Site Category: 2030 Development Scenario - Weekday Evening Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Building B Basement Access	61	61	0
N: Building C Access	55	55	0
W: East-West Laneway	38	38	0
Total	154	154	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Building B Basement Access												
1	L2	61	0.0	0.033	2.3	LOS A	0.0	0.0	0.00	0.50	0.00	26.8
Approach		61	0.0	0.033	2.3	LOS A	0.0	0.0	0.00	0.50	0.00	26.8
North: Building C Access												
4	L2	55	0.0	0.033	0.0	LOS A	0.1	0.9	0.00	0.00	0.00	26.3
Approach		55	0.0	0.033	0.0	LOS A	0.1	0.9	0.00	0.00	0.00	26.3
West: East-West Laneway												
7	L2	3	0.0	0.020	3.1	LOS A	0.0	0.0	0.00	0.54	0.00	26.5
8	T1	0	0.0	0.020	0.4	LOS A	0.0	0.0	0.00	0.54	0.00	40.2
12	R2	35	0.0	0.020	2.9	LOS A	0.0	0.0	0.00	0.54	0.00	25.9
Approach		38	0.0	0.020	2.9	NA	0.0	0.0	0.00	0.54	0.00	26.0
All Vehicles		154	0.0	0.033	1.6	NA	0.1	0.9	0.00	0.33	0.00	26.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

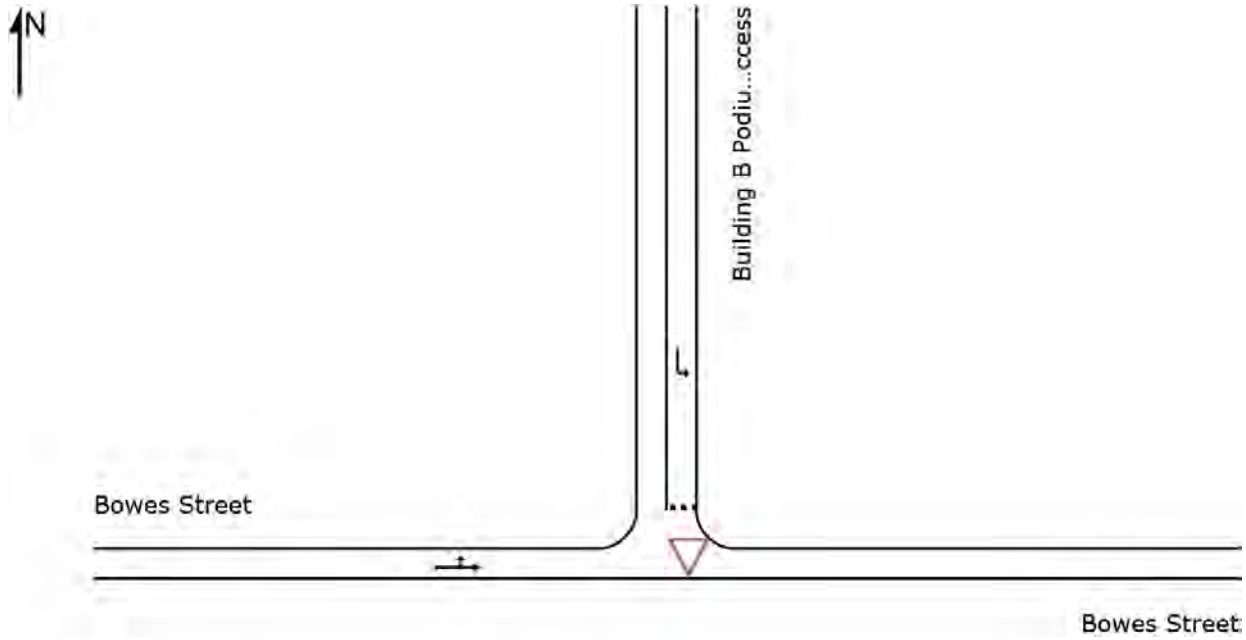
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Building B Basement Access													
Lane 1	61	0.0	1857	0.033	100	2.3	LOS A	0.0	0.0	Full	10	0.0	0.0
Approach	61	0.0		0.033		2.3	LOS A	0.0	0.0				
North: Building C Access													
Lane 1	55	0.0	1636	0.033	100	0.0	LOS A	0.1	0.9	Full	10	0.0	0.0
Approach	55	0.0		0.033		0.0	LOS A	0.1	0.9				
West: East-West Laneway													
Lane 1	38	0.0	1857	0.020	100	2.9	LOS A	0.0	0.0	Full	30	0.0	0.0
Approach	38	0.0		0.020		2.9	NA	0.0	0.0				
Intersection	154	0.0		0.033		1.6	NA	0.1	0.9				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

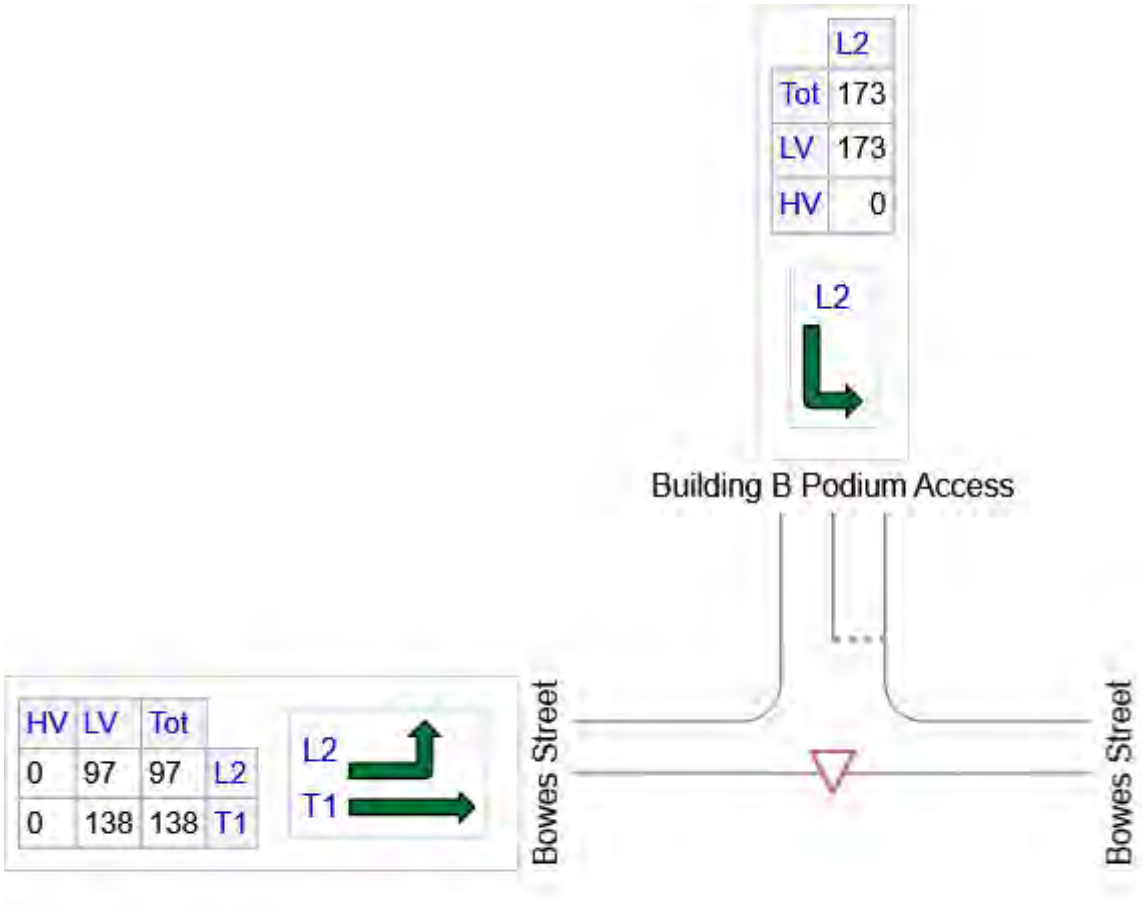
Site: [2030 Dev - PM: BldgBP-BS]

Building B Podium Access / Bowes Street
Proposed Priority-Controlled (Give-Way) T-Intersection
Site Category: 2030 Development Scenario - Weekday Evening Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
N: Building B Podium Access	173	173	0
W: Bowes Street	235	235	0
Total	407	407	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
North: Building B Podium Access												
4	L2	173	0.0	0.119	0.4	LOS A	0.5	3.5	0.24	0.11	0.24	21.3
Approach		173	0.0	0.119	0.4	LOS A	0.5	3.5	0.24	0.11	0.24	21.3
West: Bowes Street												
7	L2	97	0.0	0.123	3.5	LOS A	0.0	0.0	0.00	0.22	0.00	25.5
8	T1	138	0.0	0.123	0.0	LOS A	0.0	0.0	0.00	0.22	0.00	40.3
Approach		235	0.0	0.123	1.4	NA	0.0	0.0	0.00	0.22	0.00	33.3
All Vehicles		407	0.0	0.123	1.0	NA	0.5	3.5	0.10	0.17	0.10	27.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

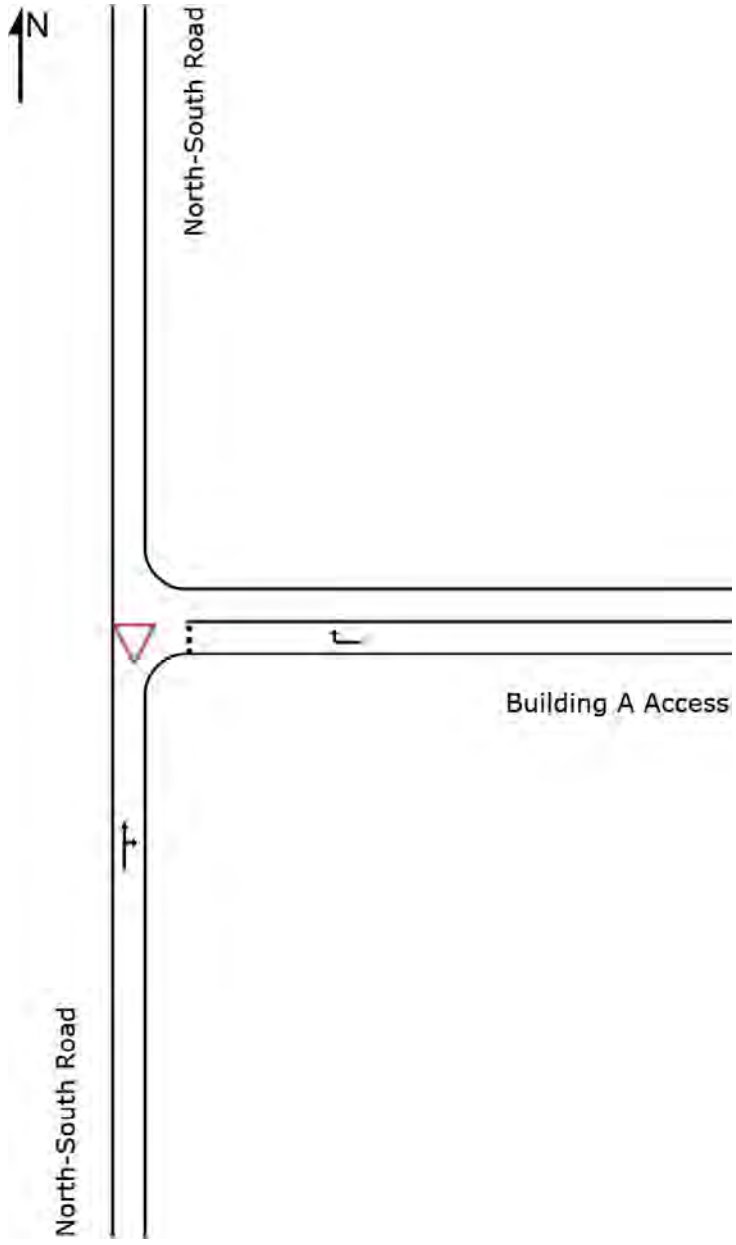
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
North: Building B Podium Access													
Lane 1	173	0.0	1456	0.119	100	0.4	LOS A	0.5	3.5	Full	15	0.0	0.0
Approach	173	0.0		0.119		0.4	LOS A	0.5	3.5				
West: Bowes Street													
Lane 1	235	0.0	1911	0.123	100	1.4	LOS A	0.0	0.0	Full	40	0.0	0.0
Approach	235	0.0		0.123		1.4	NA	0.0	0.0				
Intersection	407	0.0		0.123		1.0	NA	0.5	3.5				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

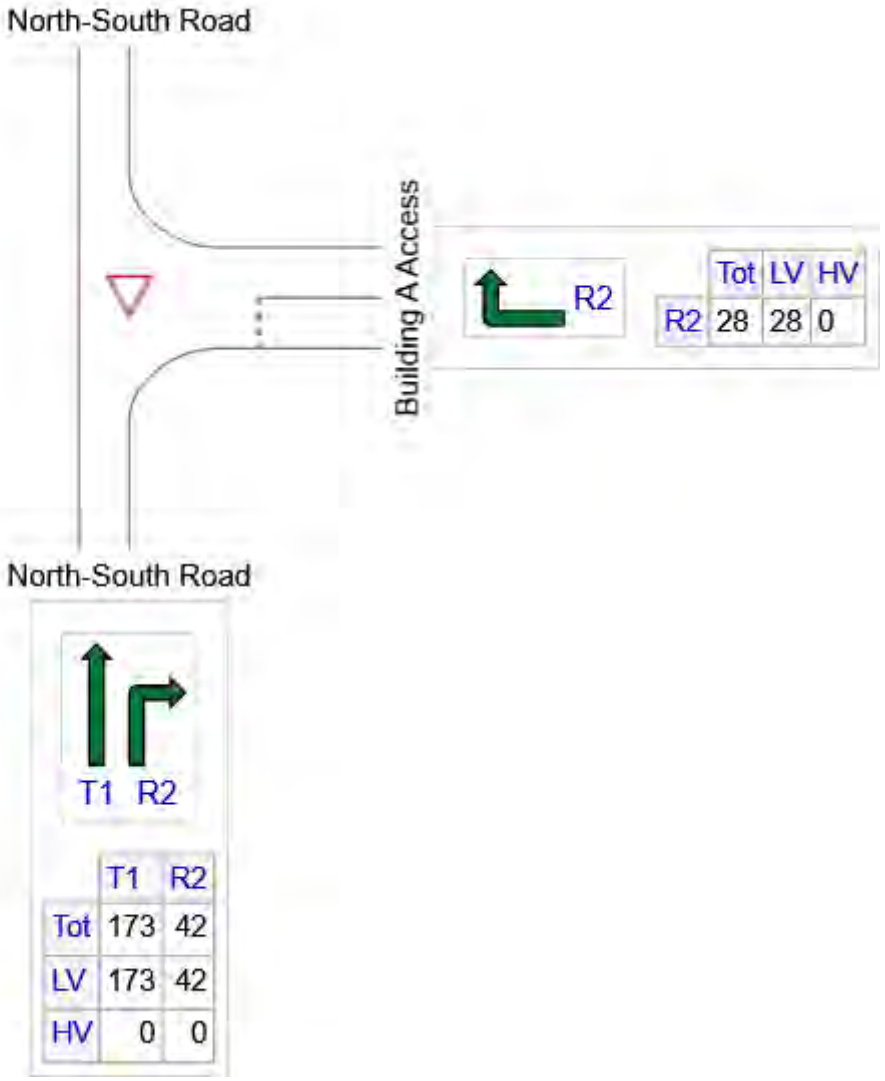
Site: [2030 Dev - PM: BldgA-NSR]

Building A Access / North-South Road
Proposed Priority-Controlled (Give-Way) T-Intersection
Site Category: 2030 Development Scenario - Weekday Evening Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: North-South Road	215	215	0
E: Building A Access	28	28	0
Total	243	243	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: North-South Road												
2	T1	173	0.0	0.111	0.0	LOS A	0.0	0.0	0.00	0.11	0.00	44.8
3	R2	42	0.0	0.111	2.1	LOS A	0.0	0.0	0.00	0.11	0.00	29.0
Approach		215	0.0	0.111	0.4	NA	0.0	0.0	0.00	0.11	0.00	41.5
East: Building A Access												
6	R2	28	0.0	0.023	1.5	LOS A	0.1	0.5	0.25	0.30	0.25	19.0
Approach		28	0.0	0.023	1.5	LOS A	0.1	0.5	0.25	0.30	0.25	19.0
All Vehicles		243	0.0	0.111	0.5	NA	0.1	0.5	0.03	0.13	0.03	35.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

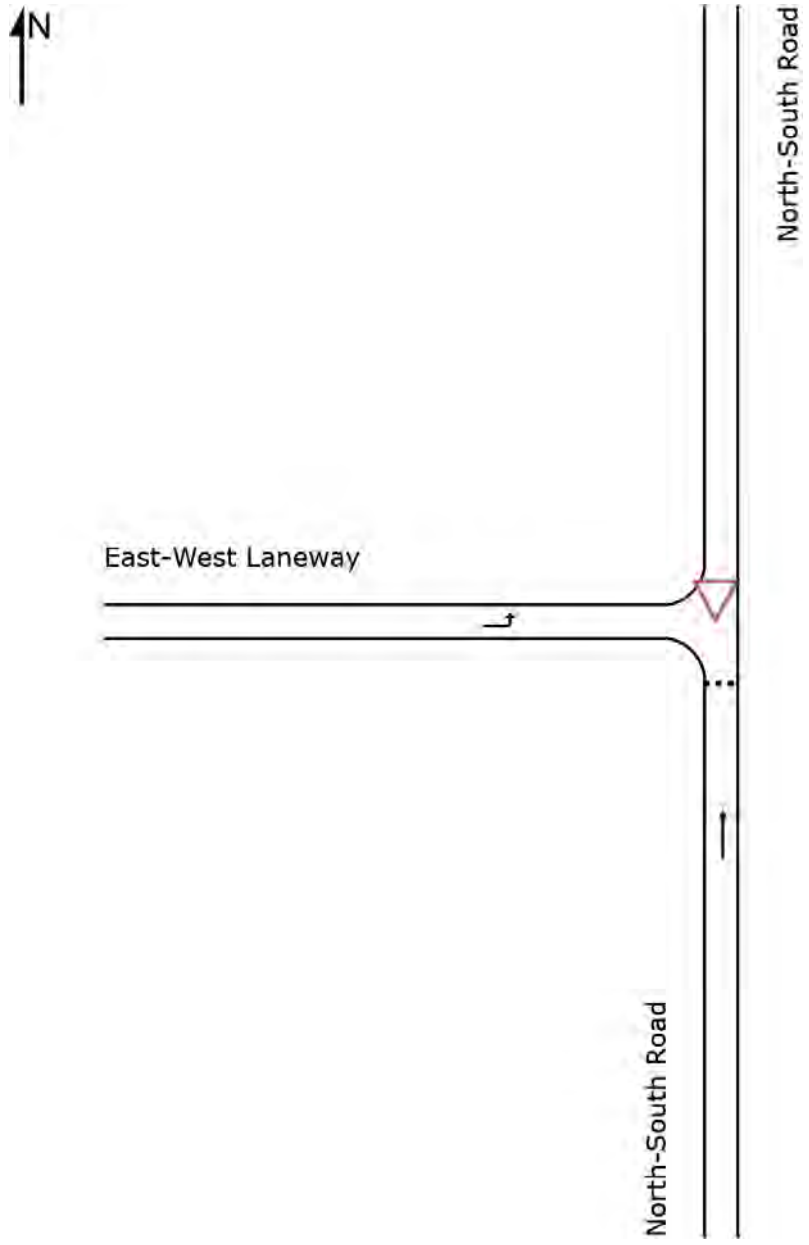
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: North-South Road													
Lane 1	215	0.0	1931	0.111	100	0.4	LOS A	0.0	0.0	Full	10	0.0	0.0
Approach	215	0.0		0.111		0.4	NA	0.0	0.0				
East: Building A Access													
Lane 1	28	0.0	1220	0.023	100	1.5	LOS A	0.1	0.5	Full	15	0.0	0.0
Approach	28	0.0		0.023		1.5	LOS A	0.1	0.5				
Intersection	243	0.0		0.111		0.5	NA	0.1	0.5				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

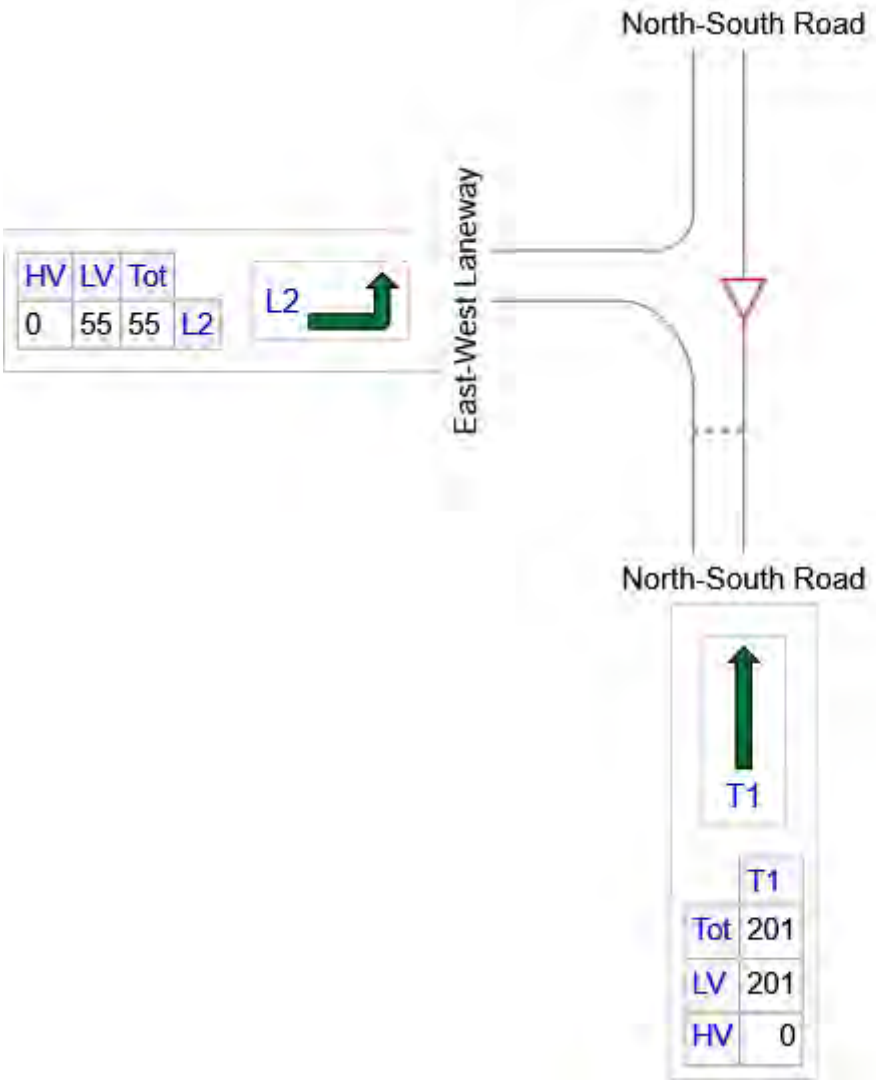
Site: [2030 Dev - PM: EWL-NSR]

East-West Laneway / North-South Road
Proposed Priority-Controlled (Give-Way) T-Intersection
Site Category: 2030 Development Scenario - Weekday Evening Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: North-South Road	201	201	0
W: East-West Laneway	55	55	0
Total	256	256	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: North-South Road												
2	T1	201	0.0	0.140	2.1	LOS A	0.6	3.9	0.14	0.46	0.14	36.5
Approach		201	0.0	0.140	2.1	LOS A	0.6	3.9	0.14	0.46	0.14	36.5
West: East-West Laneway												
7	L2	55	0.0	0.029	3.7	LOS A	0.0	0.0	0.00	0.52	0.00	31.5
Approach		55	0.0	0.029	3.7	NA	0.0	0.0	0.00	0.52	0.00	31.5
All Vehicles		256	0.0	0.140	2.4	NA	0.6	3.9	0.11	0.47	0.11	35.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

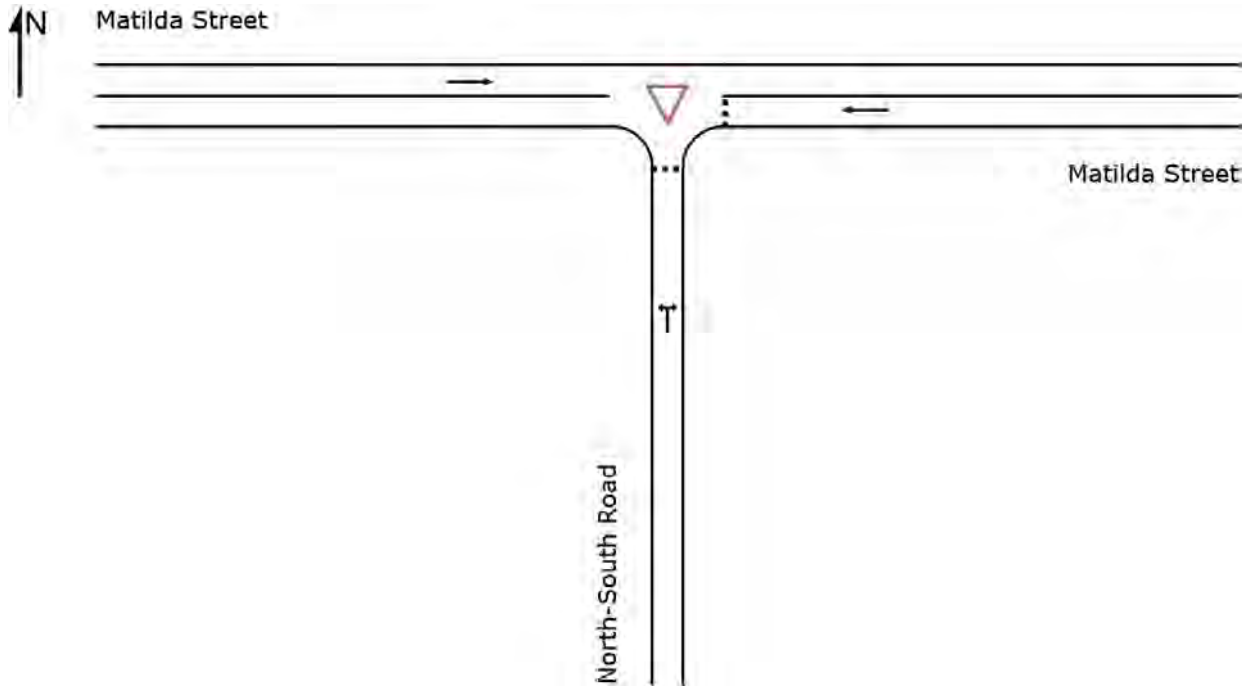
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: North-South Road													
Lane 1	201	0.0	1436	0.140	100	2.1	LOS A	0.6	3.9	Full	30	0.0	0.0
Approach	201	0.0		0.140		2.1	LOS A	0.6	3.9				
West: East-West Laneway													
Lane 1	55	0.0	1857	0.029	100	3.7	LOS A	0.0	0.0	Full	45	0.0	0.0
Approach	55	0.0		0.029		3.7	NA	0.0	0.0				
Intersection	256	0.0		0.140		2.4	NA	0.6	3.9				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

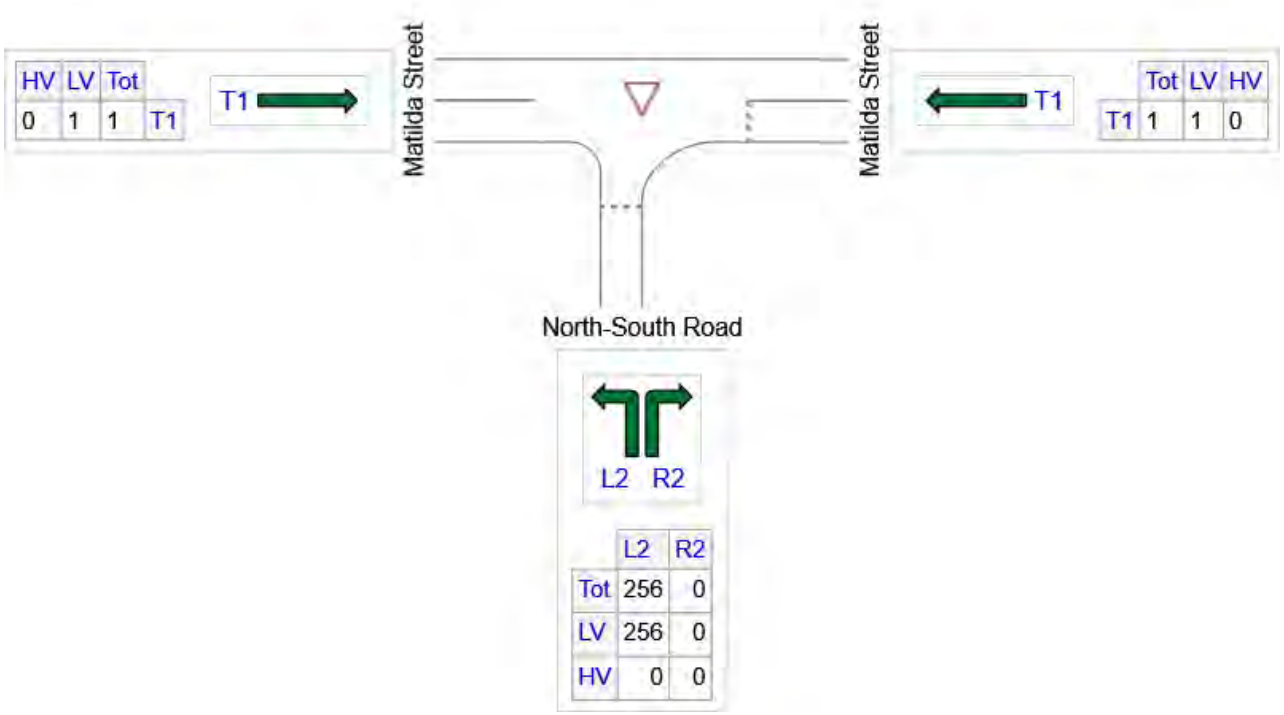
Site: [2030 Dev - PM: MS-NSR]

Matilda Street / North-South Road
Proposed Priority-Controlled (Give-Way) T-Intersection
Site Category: 2030 Development Scenario - Weekday Evening Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: North-South Road	256	256	0
E: Matilda Street	1	1	0
W: Matilda Street	1	1	0
Total	258	258	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: North-South Road												
1	L2	256	0.0	0.157	4.7	LOS A	0.7	5.0	0.01	0.56	0.01	35.2
3	R2	0	0.0	0.157	4.9	LOS A	0.7	5.0	0.01	0.56	0.01	29.6
Approach		256	0.0	0.157	4.7	LOS A	0.7	5.0	0.01	0.56	0.01	35.2
East: Matilda Street												
5	T1	1	0.0	0.001	1.9	LOS A	0.0	0.0	0.00	0.48	0.00	39.7
Approach		1	0.0	0.001	1.9	LOS A	0.0	0.0	0.00	0.48	0.00	39.7
West: Matilda Street												
11	T1	1	0.0	0.001	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach		1	0.0	0.001	0.0	NA	0.0	0.0	0.00	0.00	0.00	60.0
All Vehicles		258	0.0	0.157	4.7	NA	0.7	5.0	0.01	0.56	0.01	35.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: North-South Road													
Lane 1	256	0.0	1635	0.157	100	4.7	LOS A	0.7	5.0	Full	70	0.0	0.0
Approach	256	0.0		0.157		4.7	LOS A	0.7	5.0				
East: Matilda Street													
Lane 1	1	0.0	1950	0.001	100	1.9	LOS A	0.0	0.0	Full	30	0.0	0.0
Approach	1	0.0		0.001		1.9	LOS A	0.0	0.0				
West: Matilda Street													
Lane 1	1	0.0	1950	0.001	100	0.0	LOS A	0.0	0.0	Full	90	0.0	0.0
Approach	1	0.0		0.001		0.0	NA	0.0	0.0				
Intersection	258	0.0		0.157		4.7	NA	0.7	5.0				

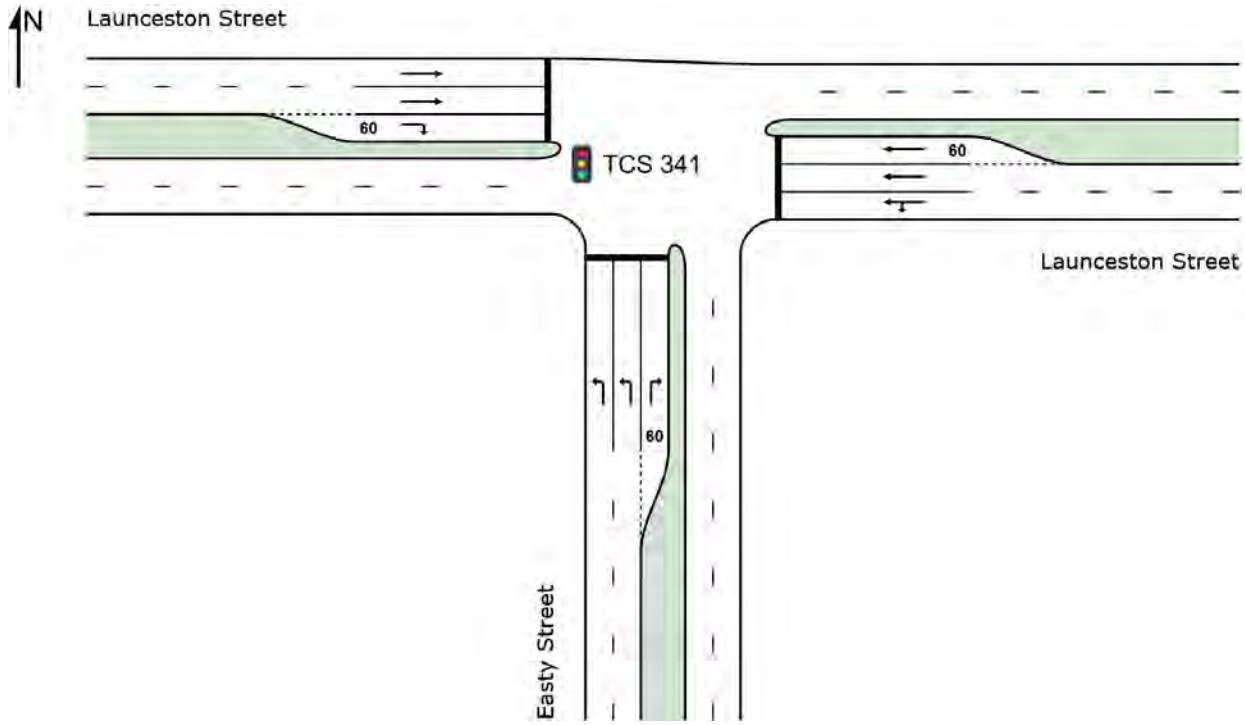
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: TCS 341 [2030 Dev - PM: ES-LS]

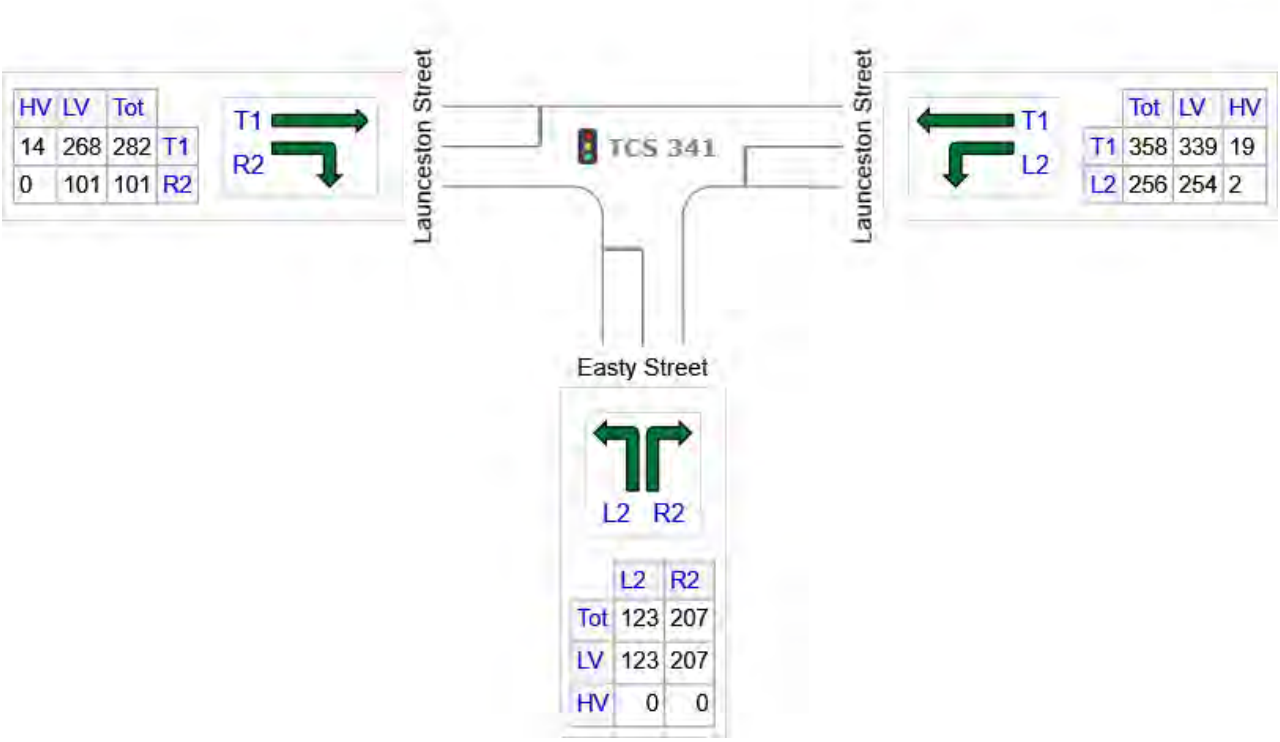
Easty Street / Launceston Street
Existing Signalised T-Intersection
Site Category: 2030 Development Scenario - Weekday Evening Peak Hour
Signals - Fixed Time Isolated Cycle Time = 73 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Site Layout



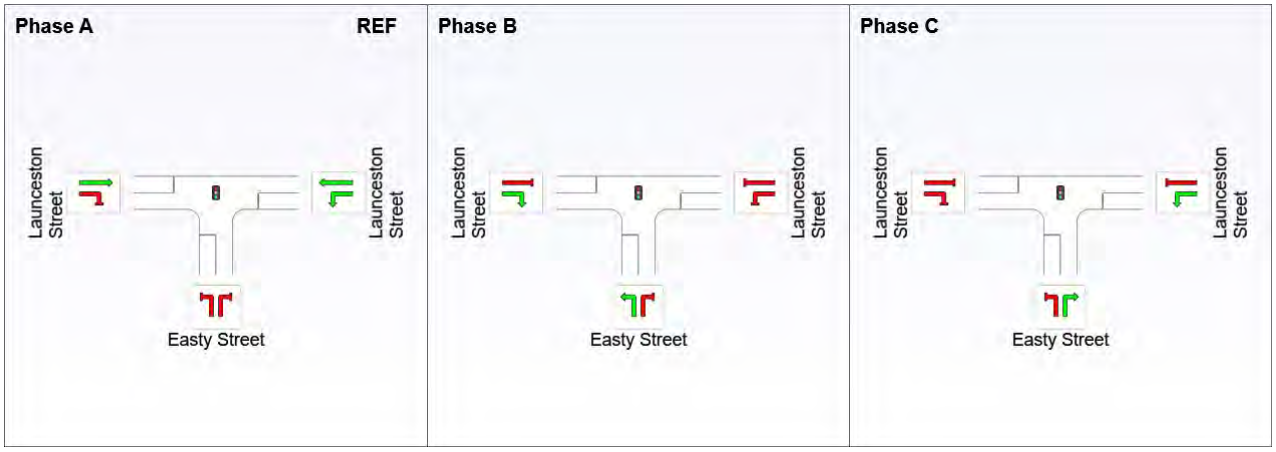
OD Demand Flows



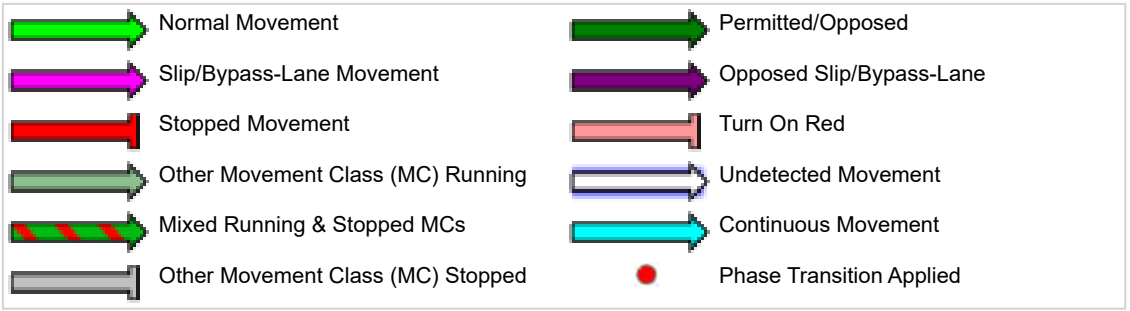
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Easty Street	331	331	0
E: Launceston Street	614	593	21
W: Launceston Street	383	369	14
Total	1327	1293	35

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	33	52
Green Time (sec)	27	13	16
Phase Time (sec)	33	18	22
Phase Split	45%	25%	30%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Easty Street												
1	L2	123	0.0	0.186	31.7	LOS C	1.9	13.5	0.89	0.73	0.89	22.6
3	R2	207	0.0	0.509	31.2	LOS C	6.7	46.9	0.93	0.80	0.93	25.3
Approach		331	0.0	0.509	31.4	LOS C	6.7	46.9	0.91	0.77	0.91	24.4
East: Launceston Street												
4	L2	256	0.8	0.206	8.3	LOS A	3.4	24.3	0.41	0.62	0.41	34.7
5	T1	358	5.3	0.257	17.4	LOS B	4.5	32.7	0.74	0.61	0.74	27.2
Approach		614	3.4	0.257	13.6	LOS A	4.5	32.7	0.60	0.61	0.60	30.5
West: Launceston Street												
11	T1	282	4.9	0.202	16.9	LOS B	3.4	25.1	0.72	0.58	0.72	27.4
12	R2	101	0.0	0.306	32.4	LOS C	3.2	22.7	0.91	0.75	0.91	22.5
Approach		383	3.6	0.306	21.0	LOS B	3.4	25.1	0.77	0.63	0.77	25.8
All Vehicles		1327	2.6	0.509	20.2	LOS B	6.7	46.9	0.73	0.66	0.73	27.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Easty Street													
Lane 1	62	0.0	331	0.186	100	31.7	LOS C	1.9	13.5	Full	305	0.0	0.0
Lane 2	62	0.0	331	0.186	100	31.7	LOS C	1.9	13.5	Full	305	0.0	0.0
Lane 3	207	0.0	407	0.509	100	31.2	LOS C	6.7	46.9	Short	60	0.0	NA
Approach	331	0.0		0.509		31.4	LOS C	6.7	46.9				
East: Launceston Street													
Lane 1	256	0.8	1239	0.206	80[5]	8.3	LOS A	3.4	24.3	Full	260	0.0	0.0
Lane 2	179	5.3	697	0.257	100	17.4	LOS B	4.5	32.7	Full	260	0.0	0.0
Lane 3	179	5.3	697	0.257	100	17.4	LOS B	4.5	32.7	Short	60	0.0	NA
Approach	614	3.4		0.257		13.6	LOS A	4.5	32.7				
West: Launceston Street													
Lane 1	141	4.9	699	0.202	100	16.9	LOS B	3.4	25.1	Full	130	0.0	0.0
Lane 2	141	4.9	699	0.202	100	16.9	LOS B	3.4	25.1	Full	130	0.0	0.0
Lane 3	101	0.0	331	0.306	100	32.4	LOS C	3.2	22.7	Short	60	0.0	NA
Approach	383	3.6		0.306		21.0	LOS B	3.4	25.1				
Intersection	1327	2.6		0.509		20.2	LOS B	6.7	46.9				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5 Lane under-utilisation found by the program

USER REPORT FOR NETWORK SITE

Project: 24-0487_20260304

Template: Default Site User Report

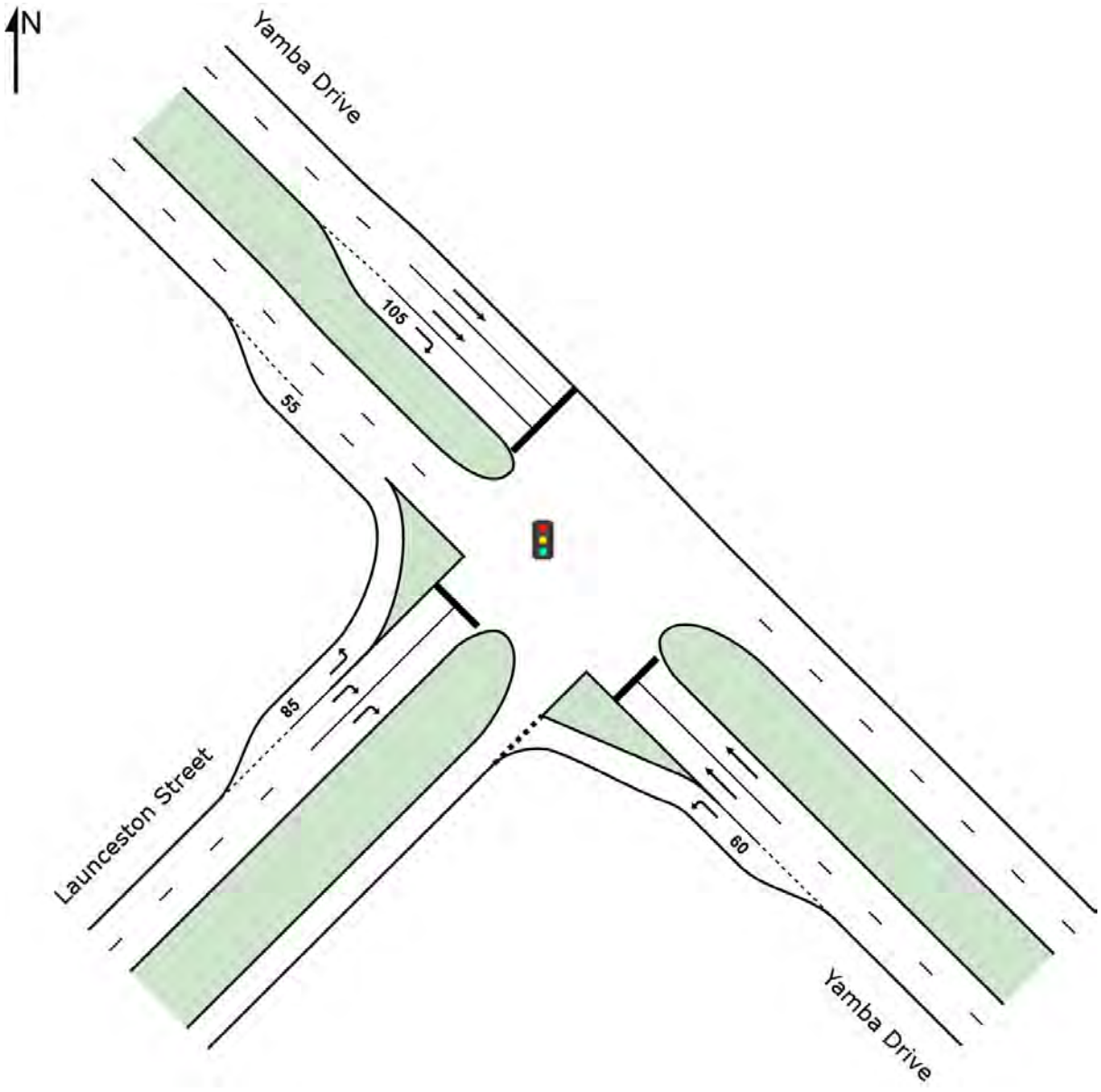
Site: [2030 Dev - PM: LS-YD]

Network: 10 [2030 Dev - PM: LS-WS-YD]

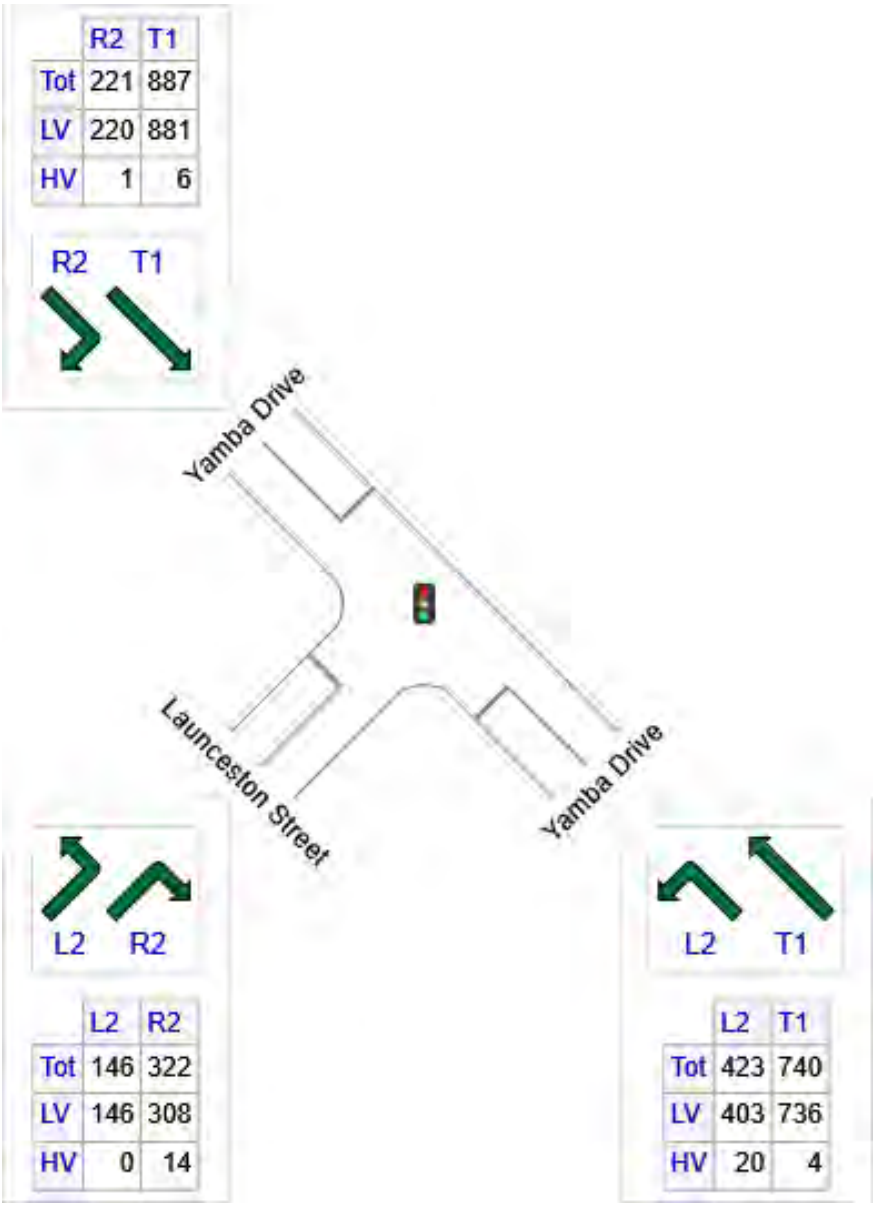
Northwest part of Launceston Street / Wisdom Street / Yamba Drive
Existing Signalised Offset X-Intersection
Site Category: 2030 Development Scenario - Weekday Evening Peak Hour
Signals - Fixed Time Coordinated Cycle Time = 114 seconds (CCG User-Given Phase Times)
Common Control Group: CCG1 [CCG]

Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E
Output Phase Sequence: A, D, E

Site Layout



OD Demand Flows

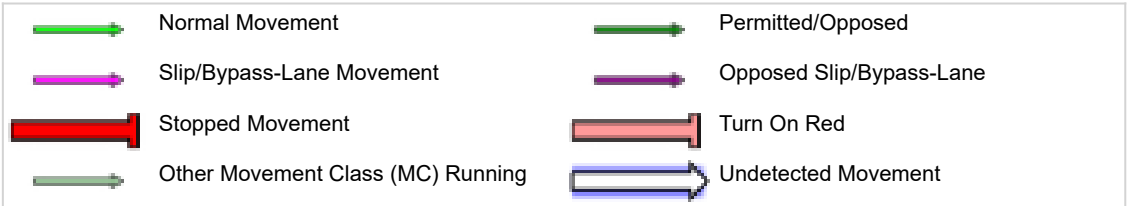


	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
SE: Yamba Drive	1163	1139	24
NW: Yamba Drive	1108	1101	7
SW: Launceston Street	468	455	14
Total	2740	2695	45

Input Phase Sequence (CCG)

Movement Class: All Movement Classes

REF: Reference Phase
VAR: Variable Phase



Mixed Running & Stopped MCs

Continuous Movement


Other Movement Class (MC) Stopped


Phase Transition Applied

Phase Timing Summary (CCG)

Phase	A	D	E
Phase Change Time (sec)	0	63	87
Green Time (sec)	57	18	21
Phase Time (sec)	63	24	27
Phase Split	55%	21%	24%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles														
Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Yamba Drive														
4	L2	423	4.7	423	4.7	0.300	4.9	LOS A	0.6	4.0	0.03	0.59	0.03	40.6
5	T1	740	0.6	740	0.6	0.381	7.7	LOS A	7.2	50.6	0.29	0.25	0.29	50.8
Approach		1163	2.1	1163	2.1	0.381	6.6	LOS A	7.2	50.6	0.19	0.37	0.19	46.1
NorthWest: Yamba Drive														
11	T1	887	0.7	887	0.7	0.906	53.5	LOS D	30.7	216.5	0.99	1.07	1.30	13.0
12	R2	221	0.5	221	0.5	0.648	54.6	LOS D	11.6	81.8	0.98	0.83	0.98	20.4
Approach		1108	0.7	1108	0.7	0.906	53.7	LOS D	30.7	216.5	0.98	1.03	1.23	14.9
SouthWest: Launceston Street														
1	L2	146	0.0	146	0.0	0.079	2.9	LOS A	0.0	0.0	0.00	0.37	0.00	39.5
3	R2	322	4.2	322	4.2	1.121	190.6	LOS F	19.0	138.2	1.00	1.66	2.44	4.5
Approach		468	2.9	468	2.9	1.121	132.0	LOS F	19.0	138.2	0.69	1.26	1.68	7.5
All Vehicles		2740	1.7	2740	1.7	1.121	47.1	LOS D	30.7	216.5	0.60	0.79	0.87	16.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
SouthEast: Yamba Drive															
Lane 1	423	4.7	423	4.7	1411	0.300	100	4.9	LOS A	0.6	4.0	Short	60	0.0	NA
Lane 2	370	0.6	370	0.6	971	0.381	100	4.4	LOS A	3.6	25.4	Full	65	0.0	0.0
Lane 3	370	0.6	370	0.6	971	0.381	100	10.9	LOS B	7.2	50.6	Full	65	0.0	0.0
Approach	1163	2.1	1163	2.1		0.381		6.6	LOS A	7.2	50.6				
NorthWest: Yamba Drive															
Lane 1	446	0.7	446	0.7	492	0.906	100	53.4	LOS D	30.7	216.5	Full	215	-49.3 N3	5.6
Lane 2	442	0.7	442	0.7	488	0.906	100	53.6	LOS D	30.5	214.9	Full	215	-49.7 N3	4.9
Lane 3	221	0.5	221	0.5	341	0.648	100	54.6	LOS D	11.6	81.8	Short	105	0.0	NA
Approach	1108	0.7	1108	0.7		0.906		53.7	LOS D	30.7	216.5				
SouthWest: Launceston Street															
Lane 1	146	0.0	146	0.0	1857	0.079	100	2.9	LOS A	0.0	0.0	Short	85	0.0	NA
Lane 2	162	4.2	162	4.2	144	1.121	100	190.5	LOS F	19.0	138.2	Full	260	-49.3 N3	0.0
Lane 3	160	4.2	160	4.2	143	1.121	100	190.7	LOS F	18.9	137.0	Full	260	-49.7 N3	0.0
Approach	468	2.9	468	2.9		1.121		132.0	LOS F	19.0	138.2				
Intersection	2740	1.7	2740	1.7		1.121		47.1	LOS D	30.7	216.5				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N3 Capacity Adjustment due to downstream lane blockage determined by the program.

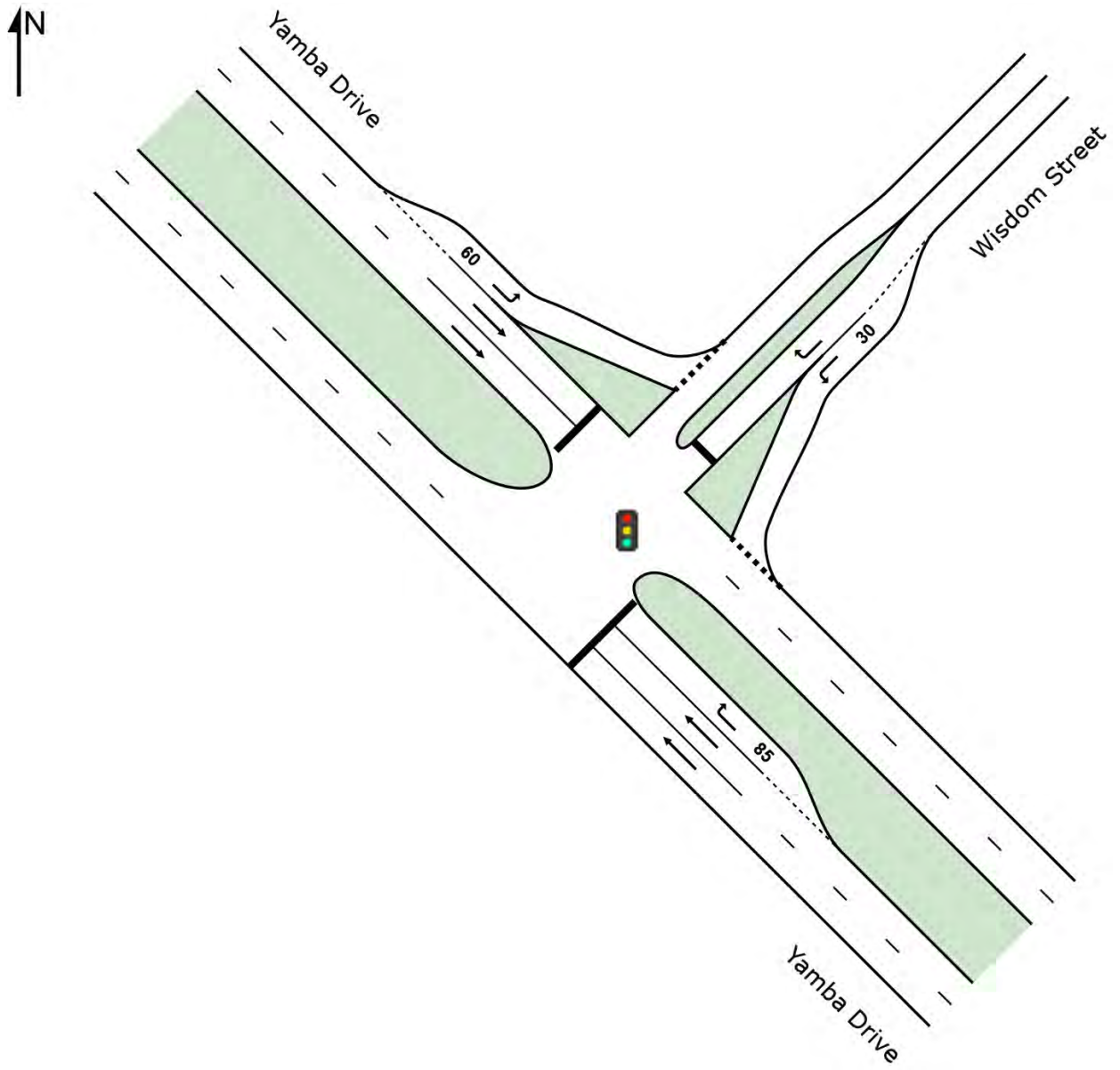
Site: [2030 Dev - PM: WS-YD] Network: 10 [2030 Dev - PM: LS-WS-YD]

Southeast part of Launceston Street / Wisdom Street / Yamba Drive
Existing Signalised Offset Cross Intersection
Site Category: 2030 Development Scenario - Weekday Evening Peak Hour
Signals - Fixed Time Coordinated Cycle Time = 114 seconds (CCG User-Given Phase Times)
Common Control Group: CCG1 [CCG]

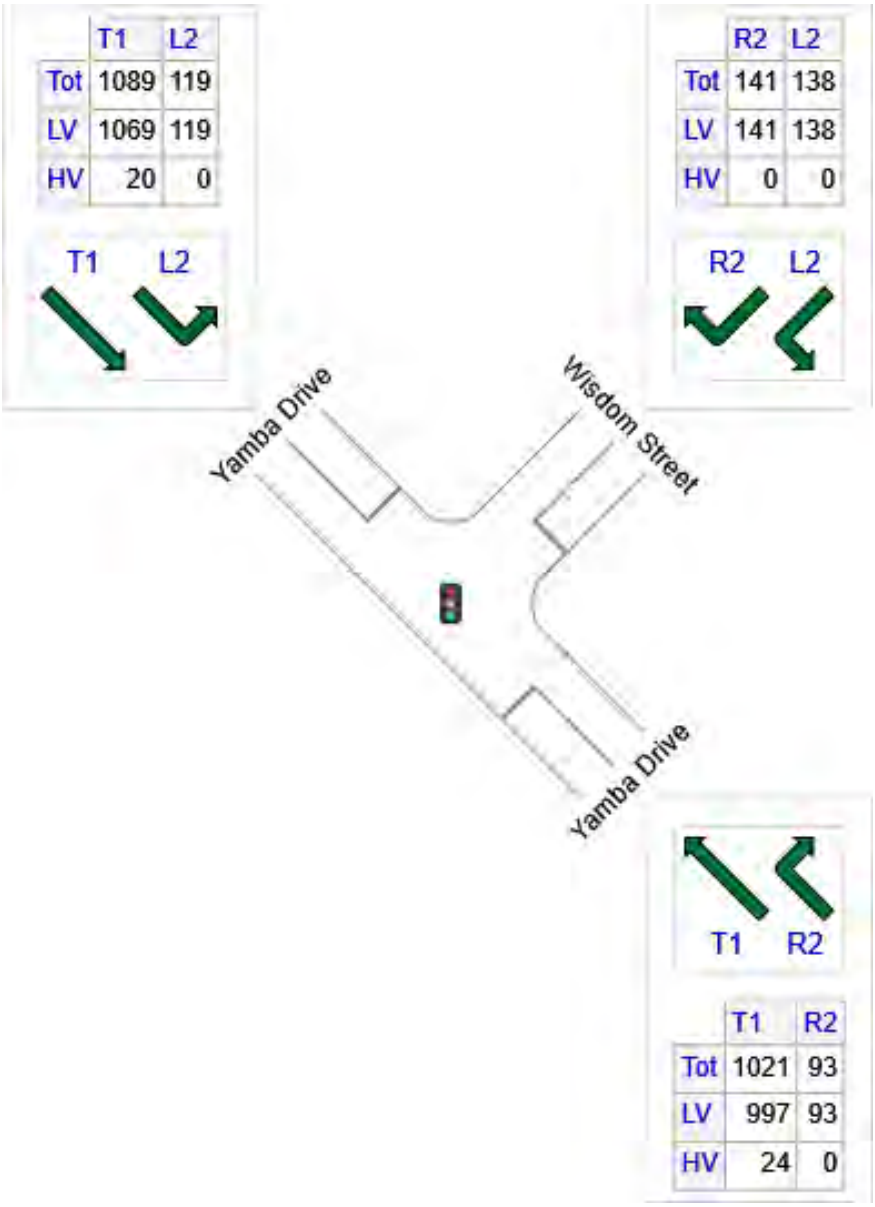
Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E
Output Phase Sequence: A, D, E

Some CCG output elements have been omitted as they have already been included under other Sites belonging to the same CCG.

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
SE: Yamba Drive	1114	1089	24
NE: Wisdom Street	279	279	0
NW: Yamba Drive	1208	1188	20
Total	2601	2557	44

Movement Performance - Vehicles														
Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Yamba Drive														
11	T1	1021	2.4	1021	2.4	0.532	20.6	LOS C	19.1	136.5	0.73	0.65	0.73	49.6
12	R2	93	0.0	93	0.0	0.271	50.5	LOS D	4.5	31.4	0.90	0.77	0.90	35.5
Approach		1114	2.2	1114	2.2	0.532	23.1	LOS C	19.1	136.5	0.75	0.66	0.75	46.8
NorthEast: Wisdom Street														
1	L2	138	0.0	138	0.0	0.142	6.4	LOS A	2.0	13.7	0.32	0.55	0.32	49.1
3	R2	141	0.0	141	0.0	0.481	51.6	LOS D	7.3	51.2	0.96	0.79	0.96	21.9
Approach		279	0.0	279	0.0	0.481	29.2	LOS C	7.3	51.2	0.64	0.67	0.64	34.8
NorthWest: Yamba Drive														
4	L2	119	0.0	119	0.0	0.076	5.1	LOS A	0.4	2.7	0.09	0.60	0.09	40.1
5	T1	1089	1.8	1089	1.8	0.566	14.5	LOS B	14.9	105.8	0.53	0.48	0.53	57.2
Approach		1208	1.7	1208	1.7	0.566	13.6	LOS B	14.9	105.8	0.49	0.49	0.49	55.1
All Vehicles		2601	1.7	2601	1.7	0.566	19.4	LOS B	19.1	136.5	0.62	0.58	0.62	47.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
SouthEast: Yamba Drive															
Lane 1	511	2.4	511	2.4	960	0.532	100	20.6	LOS C	19.1	136.5	Full	735	0.0	0.0
Lane 2	511	2.4	511	2.4	960	0.532	100	20.6	LOS C	19.1	136.5	Full	735	0.0	0.0
Lane 3	93	0.0	93	0.0	342	0.271	100	50.5	LOS D	4.5	31.4	Short	85	0.0	NA
Approach	1114	2.2	1114	2.2		0.532		23.1	LOS C	19.1	136.5				
NorthEast: Wisdom Street															
Lane 1	138	0.0	138	0.0	970	0.142	100	6.4	LOS A	2.0	13.7	Short	30	0.0	NA
Lane 2	141	0.0	141	0.0	293	0.481	100	51.6	LOS D	7.3	51.2	Full	680	0.0	0.0
Approach	279	0.0	279	0.0		0.481		29.2	LOS C	7.3	51.2				
NorthWest: Yamba Drive															
Lane 1	119	0.0	119	0.0	1559	0.076	100	5.1	LOS A	0.4	2.7	Short	60	0.0	NA
Lane 2	544	1.8	544	1.8	961[1]	0.566	100	14.5	LOS B	14.8	105.3	Full	65	0.0	49.3
Lane 3	546	1.8	546	1.8	964	0.566	100	14.6	LOS B	14.9	105.8	Full	65	0.0	49.7
Approach	1208	1.7	1208	1.7		0.566		13.6	LOS B	14.9	105.8				
Intersection	2601	1.7	2601	1.7		0.566		19.4	LOS B	19.1	136.5				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.

USER REPORT FOR NETWORK SITE

Project: 24-0487_20260304

Template: Default Site User Report

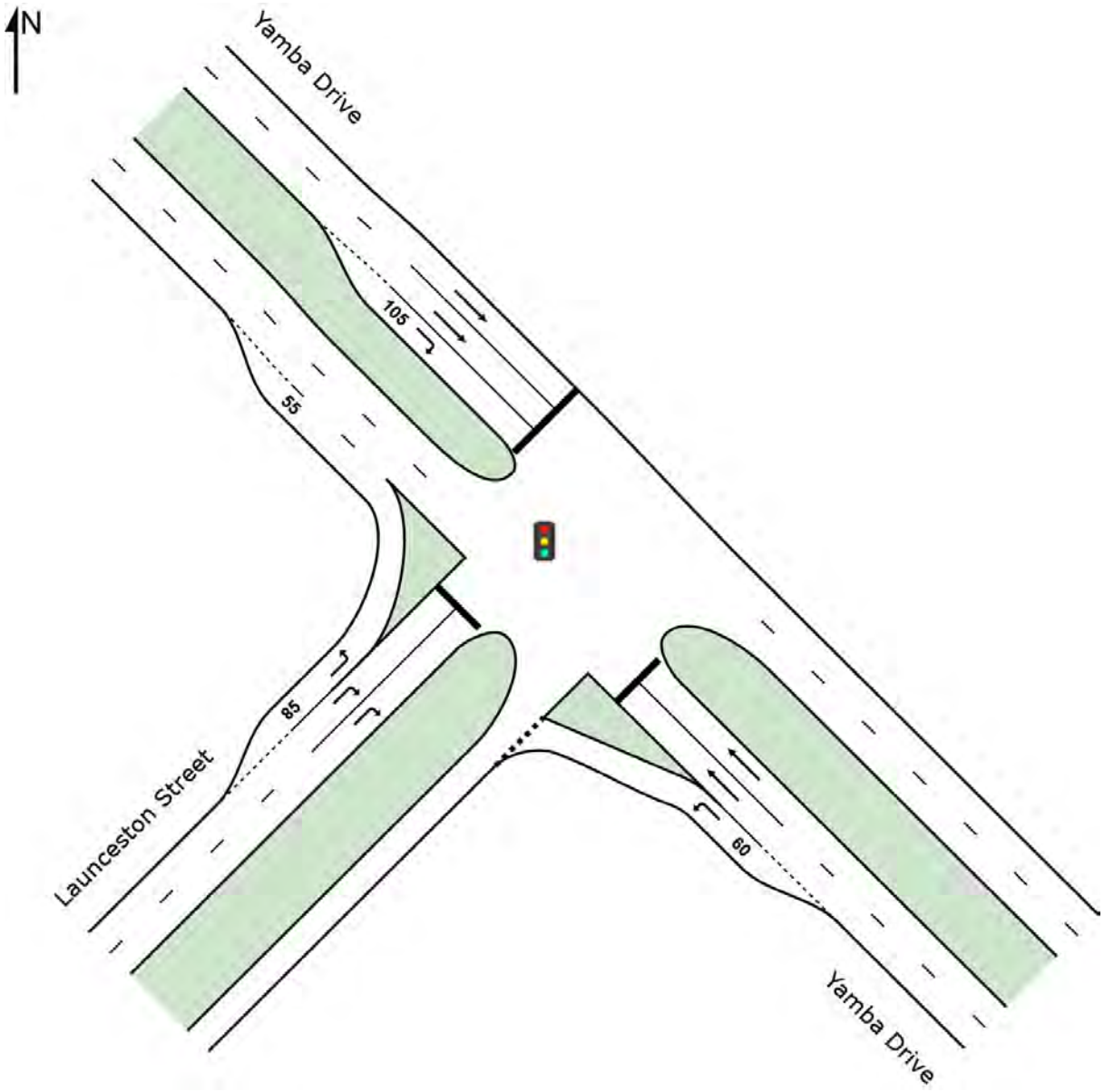
Site: [2030 Dev - PM: LS-YD (Rec)]

Network: 11 [2030 Dev - PM: LS-WS-YD (Rec)]

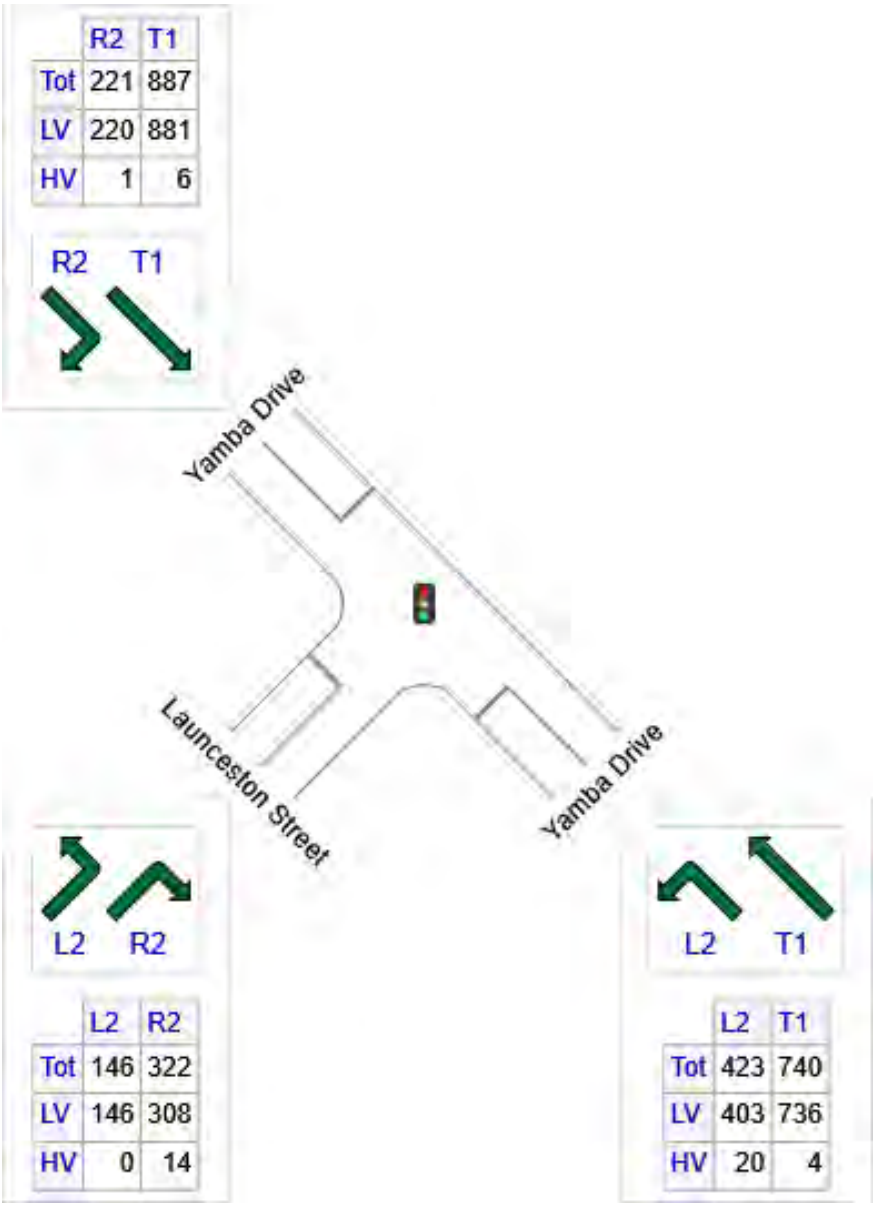
Northwest part of Launceston Street / Wisdom Street / Yamba Drive
Existing Signalised Offset X-Intersection
Site Category: 2030 Development Scenario - Weekday Evening Peak Hour
Signals - Fixed Time Coordinated Cycle Time = 114 seconds (CCG User-Given Phase Times)
Common Control Group: CCG1 [CCG]

Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E
Output Phase Sequence: A, D, E

Site Layout



OD Demand Flows

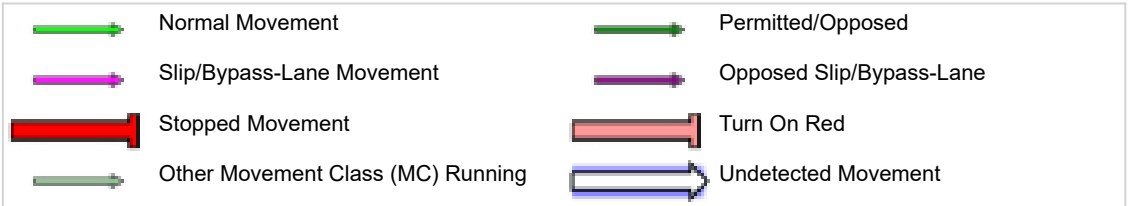


	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
SE: Yamba Drive	1163	1139	24
NW: Yamba Drive	1108	1101	7
SW: Launceston Street	468	455	14
Total	2740	2695	45

Input Phase Sequence (CCG)

Movement Class: All Movement Classes

REF: Reference Phase
VAR: Variable Phase



Mixed Running & Stopped MCs

Continuous Movement

Other Movement Class (MC) Stopped

Phase Transition Applied

Phase Timing Summary (CCG)

Phase	A	D	E
Phase Change Time (sec)	0	64	92
Green Time (sec)	58	22	16
Phase Time (sec)	64	28	22
Phase Split	56%	25%	19%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles														
Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Yamba Drive														
4	L2	423	4.7	423	4.7	0.296	4.9	LOS A	0.5	3.7	0.03	0.59	0.05	40.6
5	T1	740	0.6	740	0.6	0.374	7.5	LOS A	7.1	50.2	0.28	0.25	0.28	51.2
Approach		1163	2.1	1163	2.1	0.374	6.6	LOS A	7.1	50.2	0.19	0.37	0.20	46.3
NorthWest: Yamba Drive														
11	T1	887	0.7	887	0.7	0.871	43.3	LOS D	27.5	193.9	0.95	0.99	1.17	15.5
12	R2	221	0.5	221	0.5	0.851	67.2	LOS E	13.5	94.8	1.00	0.92	1.27	17.8
Approach		1108	0.7	1108	0.7	0.871	48.1	LOS D	27.5	193.9	0.96	0.98	1.19	16.2
SouthWest: Launceston Street														
1	L2	146	0.0	146	0.0	0.079	2.9	LOS A	0.0	0.0	0.00	0.37	0.00	39.5
3	R2	322	4.2	322	4.2	0.898	73.5	LOS E	11.2	81.2	1.00	1.12	1.49	10.1
Approach		468	2.9	468	2.9	0.898	51.5	LOS D	11.2	81.2	0.69	0.88	1.03	15.3
All Vehicles		2740	1.7	2740	1.7	0.898	31.0	LOS C	27.5	193.9	0.59	0.70	0.74	22.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
SouthEast: Yamba Drive															
Lane 1	423	4.7	423	4.7	1430	0.296	100	4.9	LOS A	0.5	3.7	Short	60	0.0	NA
Lane 2	370	0.6	370	0.6	988	0.374	100	4.3	LOS A	3.6	25.2	Full	65	0.0	0.0
Lane 3	370	0.6	370	0.6	988	0.374	100	10.7	LOS B	7.1	50.2	Full	65	0.0	0.0
Approach	1163	2.1	1163	2.1		0.374		6.6	LOS A	7.1	50.2				
NorthWest: Yamba Drive															
Lane 1	444	0.7	444	0.7	510	0.871	100	43.3	LOS D	27.5	193.9	Full	215	-48.4 N3	0.0
Lane 2	443	0.7	443	0.7	509	0.871	100	43.3	LOS D	27.5	193.7	Full	215	-48.4 N3	0.0
Lane 3	221	0.5	221	0.5	260	0.851	100	67.2	LOS E	13.5	94.8	Short	105	0.0	NA
Approach	1108	0.7	1108	0.7		0.871		48.1	LOS D	27.5	193.9				
SouthWest: Launceston Street															
Lane 1	146	0.0	146	0.0	1857	0.079	100	2.9	LOS A	0.0	0.0	Short	85	0.0	NA
Lane 2	161	4.2	161	4.2	180	0.898	100	73.5	LOS E	11.2	81.2	Full	260	-48.4 N3	0.0
Lane 3	161	4.2	161	4.2	179	0.898	100	73.5	LOS E	11.2	81.1	Full	260	-48.4 N3	0.0
Approach	468	2.9	468	2.9		0.898		51.5	LOS D	11.2	81.2				
Intersection	2740	1.7	2740	1.7		0.898		31.0	LOS C	27.5	193.9				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N3 Capacity Adjustment due to downstream lane blockage determined by the program.

Site: [2030 Dev - PM: WS-YD (Rec)]

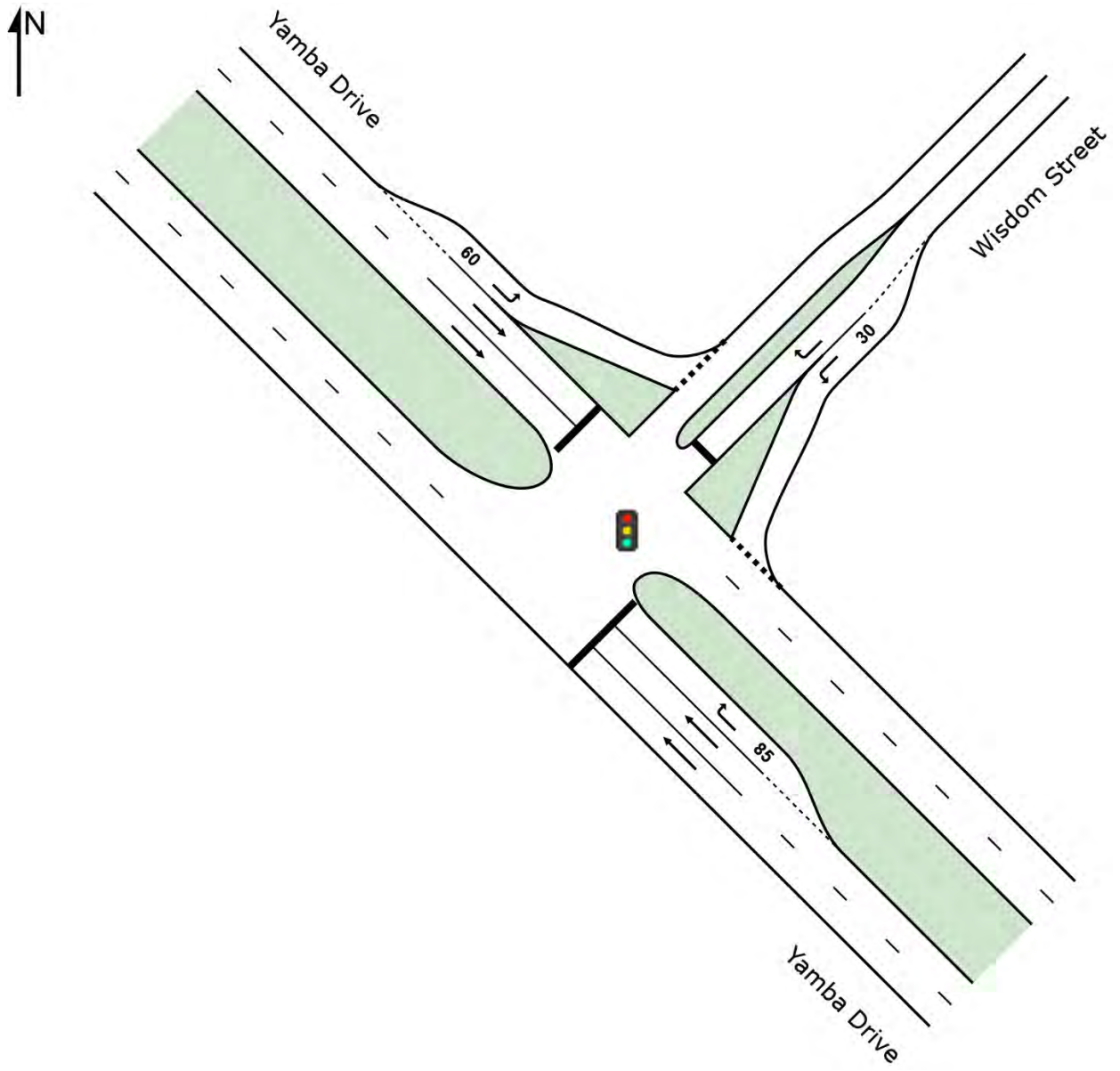
Network: 11 [2030 Dev - PM: LS-WS-YD (Rec)]

Southeast part of Launceston Street / Wisdom Street / Yamba Drive
Existing Signalised Offset Cross Intersection
Site Category: 2030 Development Scenario - Weekday Evening Peak Hour
Signals - Fixed Time Coordinated Cycle Time = 114 seconds (CCG User-Given Phase Times)
Common Control Group: CCG1 [CCG]

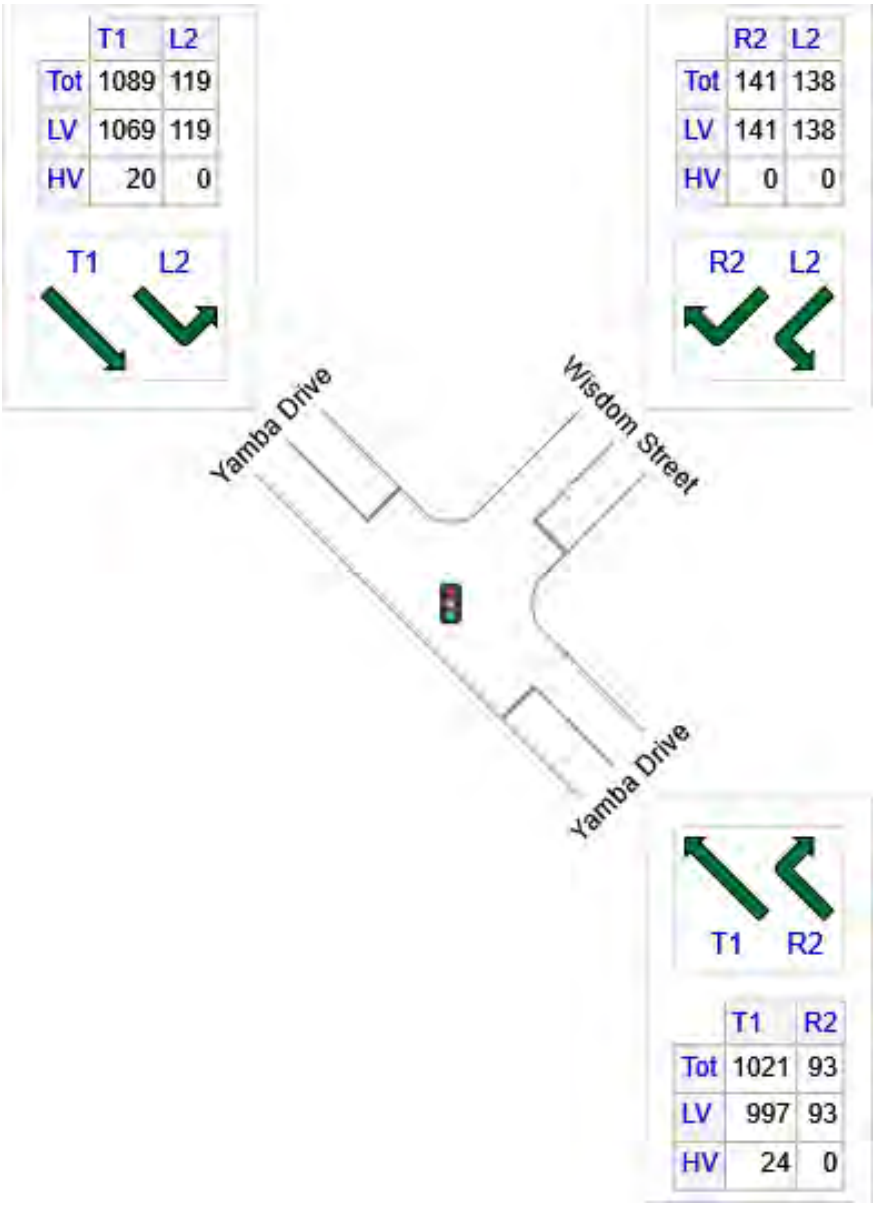
Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E
Output Phase Sequence: A, D, E

Some CCG output elements have been omitted as they have already been included under other Sites belonging to the same CCG.

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
SE: Yamba Drive	1114	1089	24
NE: Wisdom Street	279	279	0
NW: Yamba Drive	1208	1188	20
Total	2601	2557	44

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Yamba Drive														
11	T1	1021	2.4	1021	2.4	0.523	19.9	LOS B	18.8	134.0	0.72	0.64	0.72	50.3
12	R2	93	0.0	93	0.0	0.355	55.8	LOS E	4.8	33.4	0.95	0.78	0.95	34.2
Approach		1114	2.2	1114	2.2	0.523	22.9	LOS C	18.8	134.0	0.74	0.65	0.74	47.0
NorthEast: Wisdom Street														
1	L2	138	0.0	138	0.0	0.144	6.1	LOS A	1.9	13.1	0.31	0.54	0.31	49.2
3	R2	141	0.0	141	0.0	0.394	47.2	LOS D	7.0	48.7	0.92	0.78	0.92	22.8
Approach		279	0.0	279	0.0	0.394	26.9	LOS C	7.0	48.7	0.62	0.66	0.62	35.6
NorthWest: Yamba Drive														
4	L2	119	0.0	119	0.0	0.075	4.7	LOS A	0.1	0.7	0.02	0.59	0.02	40.4
5	T1	1089	1.8	1089	1.8	0.556	14.3	LOS B	14.7	104.3	0.53	0.47	0.53	57.5
Approach		1208	1.7	1208	1.7	0.556	13.3	LOS B	14.7	104.3	0.48	0.48	0.48	55.3
All Vehicles		2601	1.7	2601	1.7	0.556	18.9	LOS B	18.8	134.0	0.60	0.57	0.60	48.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
SouthEast: Yamba Drive															
Lane 1	511	2.4	511	2.4	977	0.523	100	19.9	LOS B	18.8	134.0	Full	735	0.0	0.0
Lane 2	511	2.4	511	2.4	977	0.523	100	19.9	LOS B	18.8	134.0	Full	735	0.0	0.0
Lane 3	93	0.0	93	0.0	261	0.355	100	55.8	LOS E	4.8	33.4	Short	85	0.0	NA
Approach	1114	2.2	1114	2.2		0.523		22.9	LOS C	18.8	134.0				
NorthEast: Wisdom Street															
Lane 1	138	0.0	138	0.0	959	0.144	100	6.1	LOS A	1.9	13.1	Short	30	0.0	NA
Lane 2	141	0.0	141	0.0	358	0.394	100	47.2	LOS D	7.0	48.7	Full	680	0.0	0.0
Approach	279	0.0	279	0.0		0.394		26.9	LOS C	7.0	48.7				
NorthWest: Yamba Drive															
Lane 1	119	0.0	119	0.0	1576	0.075	100	4.7	LOS A	0.1	0.7	Short	60	0.0	NA
Lane 2	545	1.8	545	1.8	980[1]	0.556	100	14.3	LOS B	14.7	104.3	Full	65	0.0	48.4
Lane 3	545	1.8	545	1.8	980	0.556	100	14.3	LOS B	14.7	104.3	Full	65	0.0	48.4
Approach	1208	1.7	1208	1.7		0.556		13.3	LOS B	14.7	104.3				
Intersection	2601	1.7	2601	1.7		0.556		18.9	LOS B	18.8	134.0				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.

Appendix F:

Intersection Performance Results – 2040 Development Scenario

USER REPORT FOR SITE

Project: 24-0487_20260304

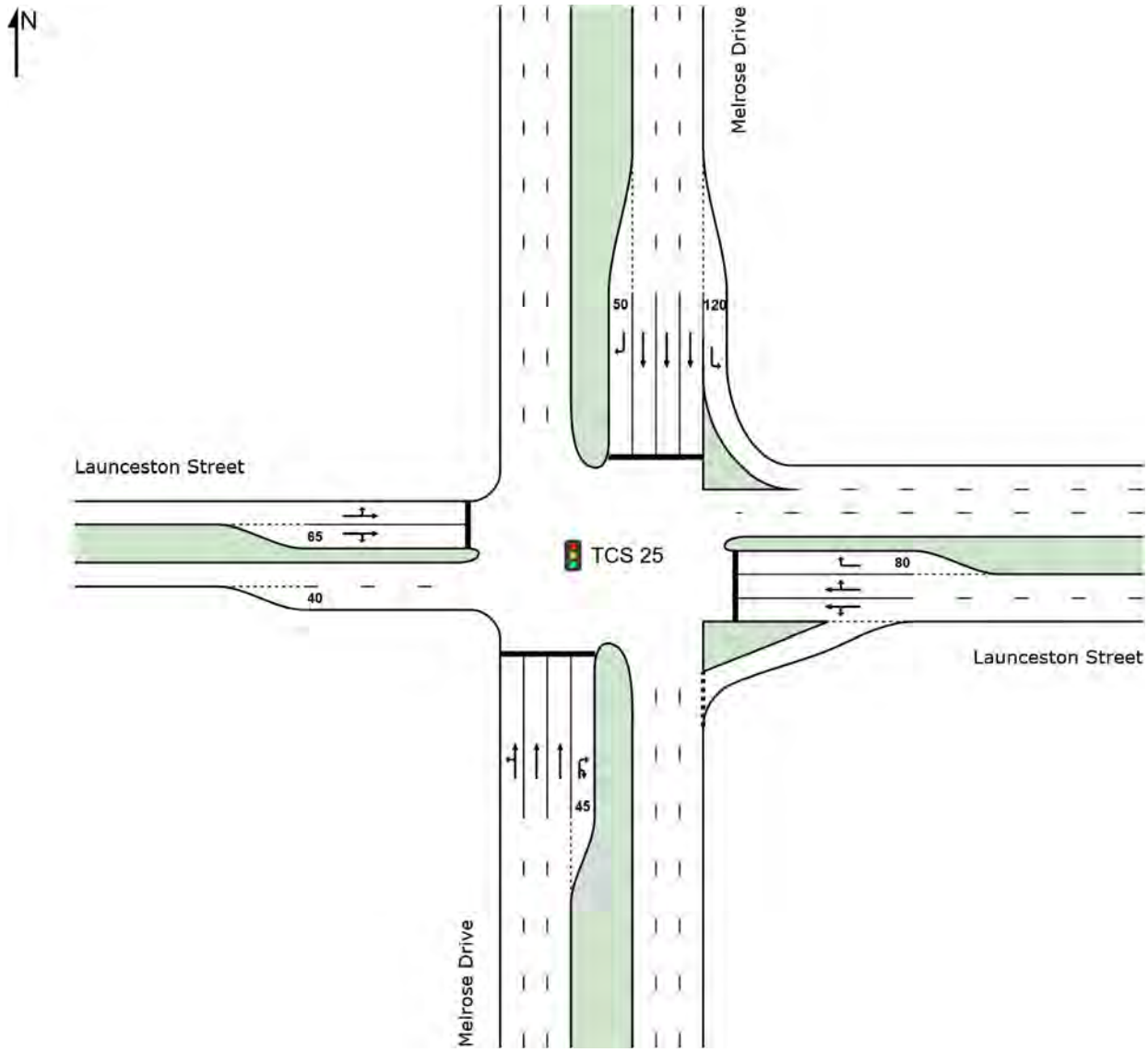
Template: Default Site User Report

Site: TCS 25 [2040 Dev - AM: LS-MD]

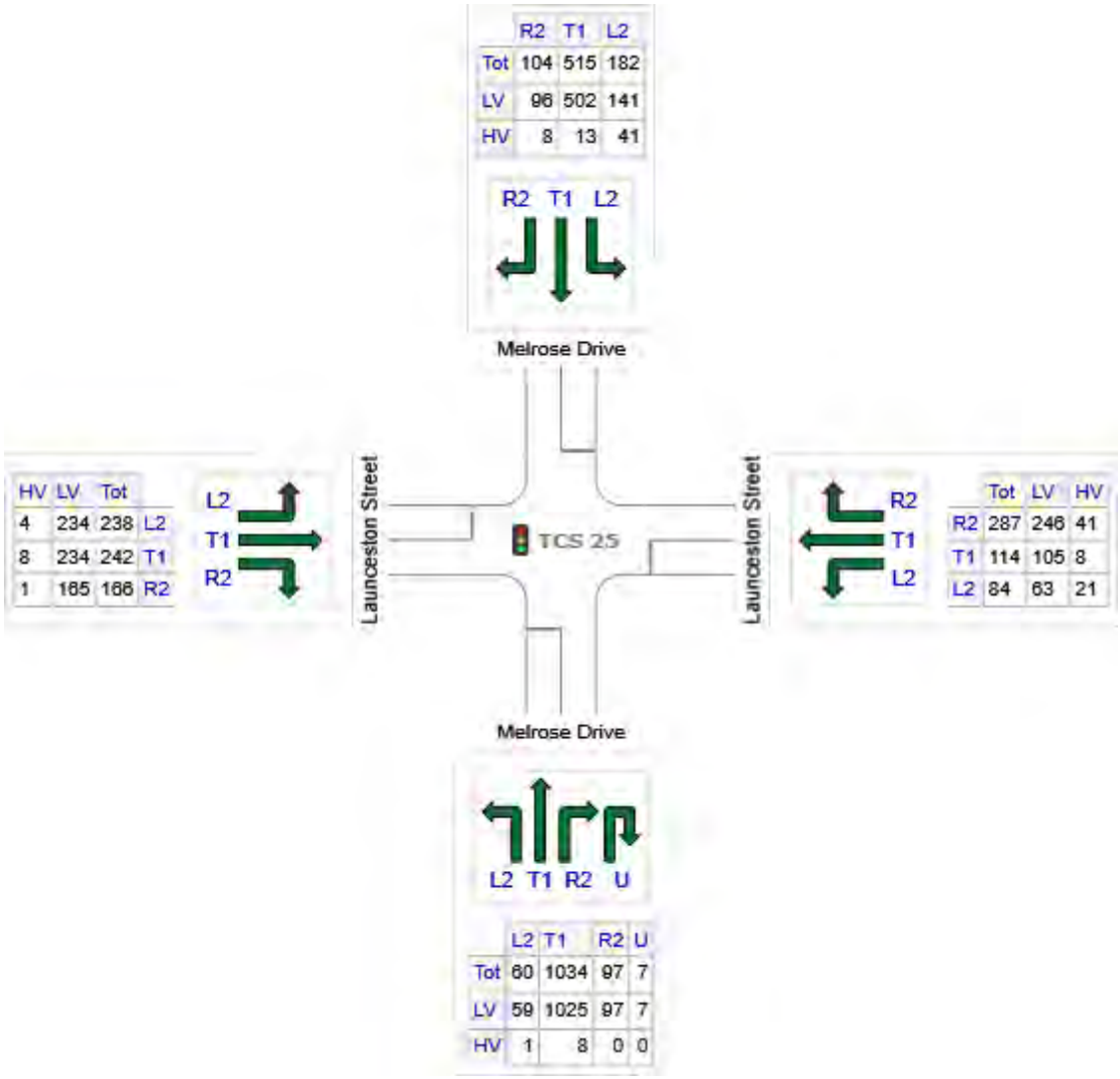
Launceston Street / Melrose Drive
Existing Signalised X-Intersection
Site Category: 2040 Development Scenario - Weekday Morning Peak Hour
Signals - Fixed Time Isolated Cycle Time = 103 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E, F
Output Phase Sequence: A, D, E, F

Site Layout



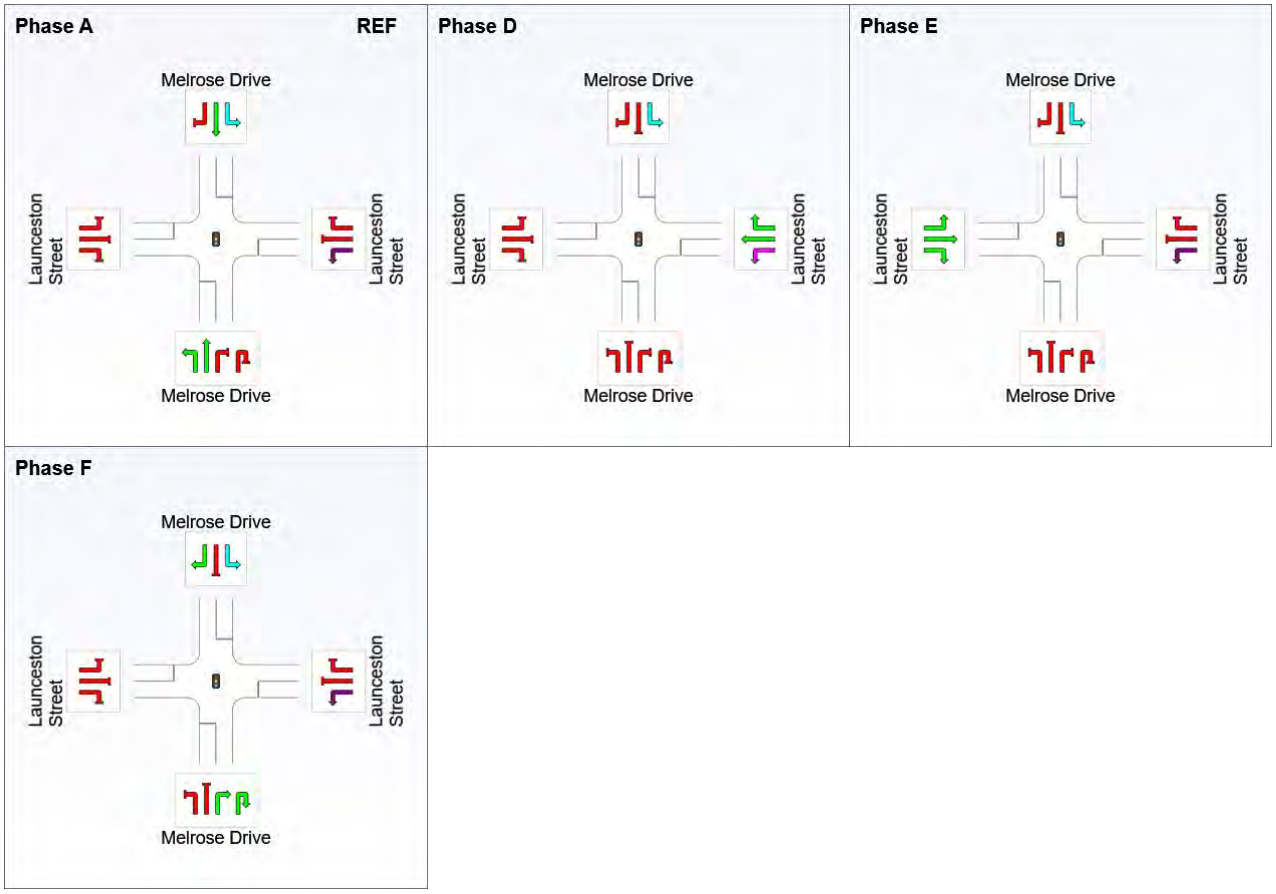
OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Melrose Drive	1198	1188	9
E: Launceston Street	485	415	71
N: Melrose Drive	801	739	62
W: Launceston Street	646	633	14
Total	3131	2975	156

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase

Phase Timing Summary

Phase	A	D	E	F
Phase Change Time (sec)	0	28	56	87
Green Time (sec)	22	22	25	10
Phase Time (sec)	28	28	31	16
Phase Split	27%	27%	30%	16%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Melrose Drive												
1	L2	60	1.8	1.133	190.1	LOS F	42.1	297.0	1.00	1.73	2.46	5.5
2	T1	1034	0.8	1.133	184.7	LOS F	42.4	299.2	1.00	1.73	2.47	10.8
3	R2	97	0.0	0.739	60.0	LOS E	5.6	39.5	1.00	0.88	1.21	13.0
3u	U	7	0.0	0.739	61.4	LOS E	5.6	39.5	1.00	0.88	1.21	17.7
Approach		1198	0.8	1.133	174.2	LOS F	42.4	299.2	1.00	1.65	2.36	10.6
East: Launceston Street												
4	L2	84	25.0	0.207	13.0	LOS A	1.8	14.7	0.57	0.65	0.57	33.5
5	T1	114	7.4	0.610	29.3	LOS C	8.5	65.8	0.81	0.75	0.81	16.7
6	R2	287	14.3	0.610	46.3	LOS D	8.5	65.8	0.96	0.82	0.96	25.8
Approach		485	14.5	0.610	36.5	LOS C	8.5	65.8	0.86	0.77	0.86	25.0
North: Melrose Drive												
7	L2	182	22.5	0.114	5.9	LOS A	0.0	0.0	0.00	0.52	0.00	48.8
8	T1	515	2.5	0.419	38.2	LOS C	7.6	54.0	0.91	0.75	0.91	31.4
9	R2	104	8.1	0.611	56.8	LOS E	5.3	40.0	1.00	0.80	1.05	22.4
Approach		801	7.8	0.611	33.2	LOS C	7.6	54.0	0.72	0.70	0.72	32.3
West: Launceston Street												
10	L2	238	1.8	0.893	60.5	LOS E	19.2	136.8	1.00	1.05	1.35	21.6
11	T1	242	3.5	0.893	55.8	LOS D	19.4	138.2	1.00	1.08	1.35	10.6
12	R2	166	0.6	0.893	60.3	LOS E	19.4	138.2	1.00	1.09	1.34	14.6
Approach		646	2.1	0.893	58.7	LOS E	19.4	138.2	1.00	1.07	1.35	16.3
All Vehicles		3131	5.0	1.133	92.9	LOS F	42.4	299.2	0.90	1.15	1.50	15.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	Demand Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	95% Back of Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Melrose Drive													
Lane 1	372	1.0	328	1.133	100	185.4	LOS F	42.1	297.0	Full	205	0.0	38.9
Lane 2	376	0.8	331	1.133	100	184.4	LOS F	42.4	299.2	Full	205	0.0	39.6
Lane 3	346	0.8	305[1]	1.133	100	185.3	LOS F	39.2	276.0	Full	205	0.0	32.1
Lane 4	104	0.0	141	0.739	100	60.1	LOS E	5.6	39.5	Short	45	0.0	NA
Approach	1198	0.8		1.133		174.2	LOS F	42.4	299.2				
East: Launceston Street													
Lane 1	128	19.0	616	0.207	34[6]	11.6	LOS A	1.8	14.7	Full	90	0.0	0.0
Lane 2	182	11.6	299	0.610	100	44.6	LOS D	8.5	65.8	Full	90	0.0	0.0
Lane 3	176	14.3	288	0.610	100	46.3	LOS D	8.3	64.9	Short	80	0.0	NA
Approach	485	14.5		0.610		36.5	LOS C	8.5	65.8				
North: Melrose Drive													
Lane 1	182	22.5	1600	0.114	100	5.9	LOS A	0.0	0.0	Short	120	0.0	NA
Lane 2	172	2.5	410	0.419	100	38.2	LOS C	7.6	54.0	Full	470	0.0	0.0
Lane 3	172	2.5	410	0.419	100	38.2	LOS C	7.6	54.0	Full	470	0.0	0.0
Lane 4	172	2.5	410	0.419	100	38.2	LOS C	7.6	54.0	Full	470	0.0	0.0
Lane 5	104	8.1	170	0.611	100	56.8	LOS E	5.3	40.0	Short	50	0.0	NA
Approach	801	7.8		0.611		33.2	LOS C	7.6	54.0				
West: Launceston Street													
Lane 1	321	2.2	360	0.893	100	59.3	LOS E	19.2	136.8	Full	95	0.0	39.2[8]
Lane 2	325	2.0	364	0.893	100	58.1	LOS E	19.4	138.2	Short	65	0.0	NA
Approach	646	2.1		0.893		58.7	LOS E	19.4	138.2				
Intersection	3131	5.0		1.133		92.9	LOS F	42.4	299.2				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

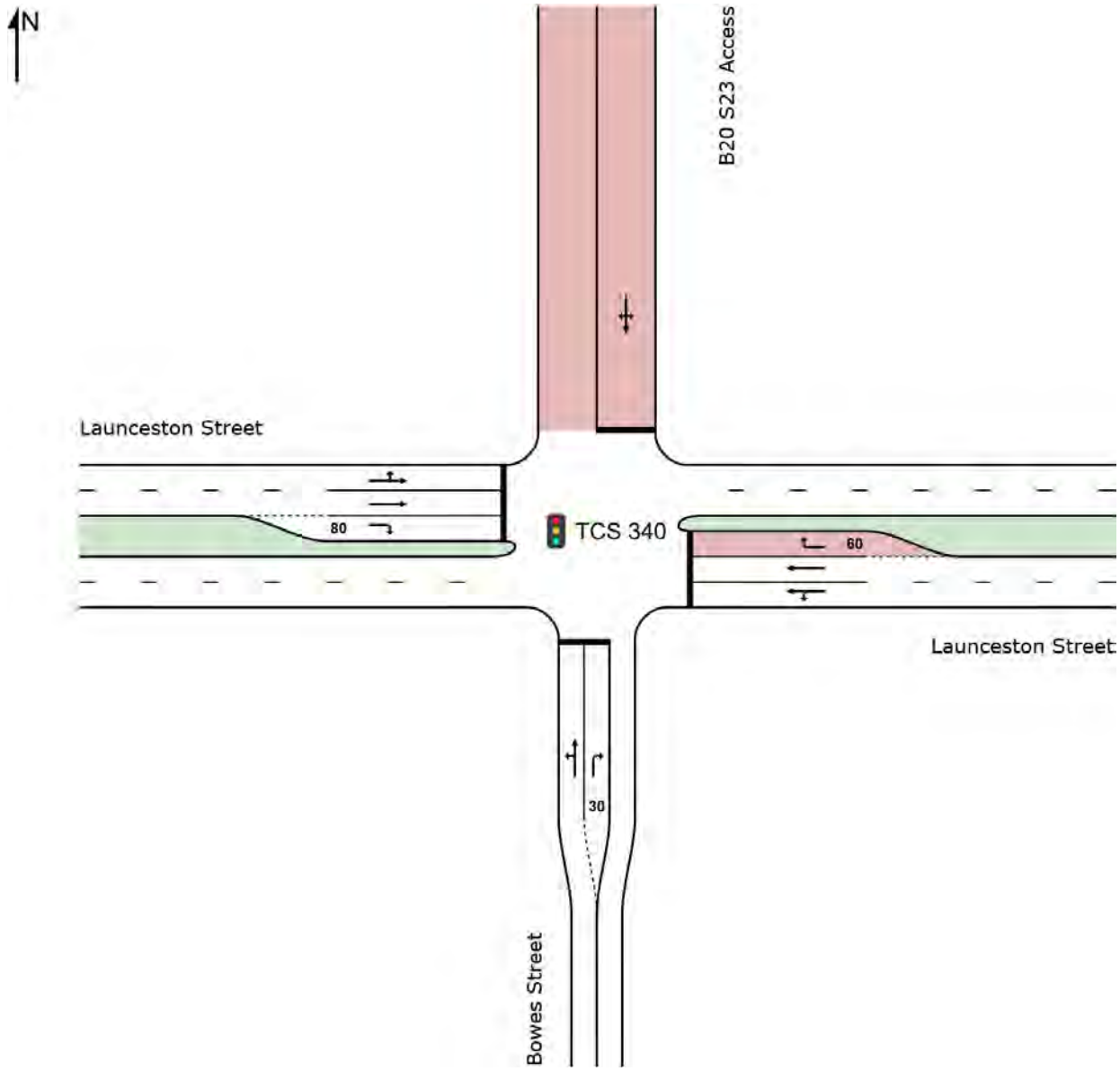
1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
6 Lane under-utilisation due to downstream effects
8 Probability of Blockage has been set on the basis of a queue that overflows from a short lane.

Site: TCS 340 [2040 Dev - AM: BS-LS]

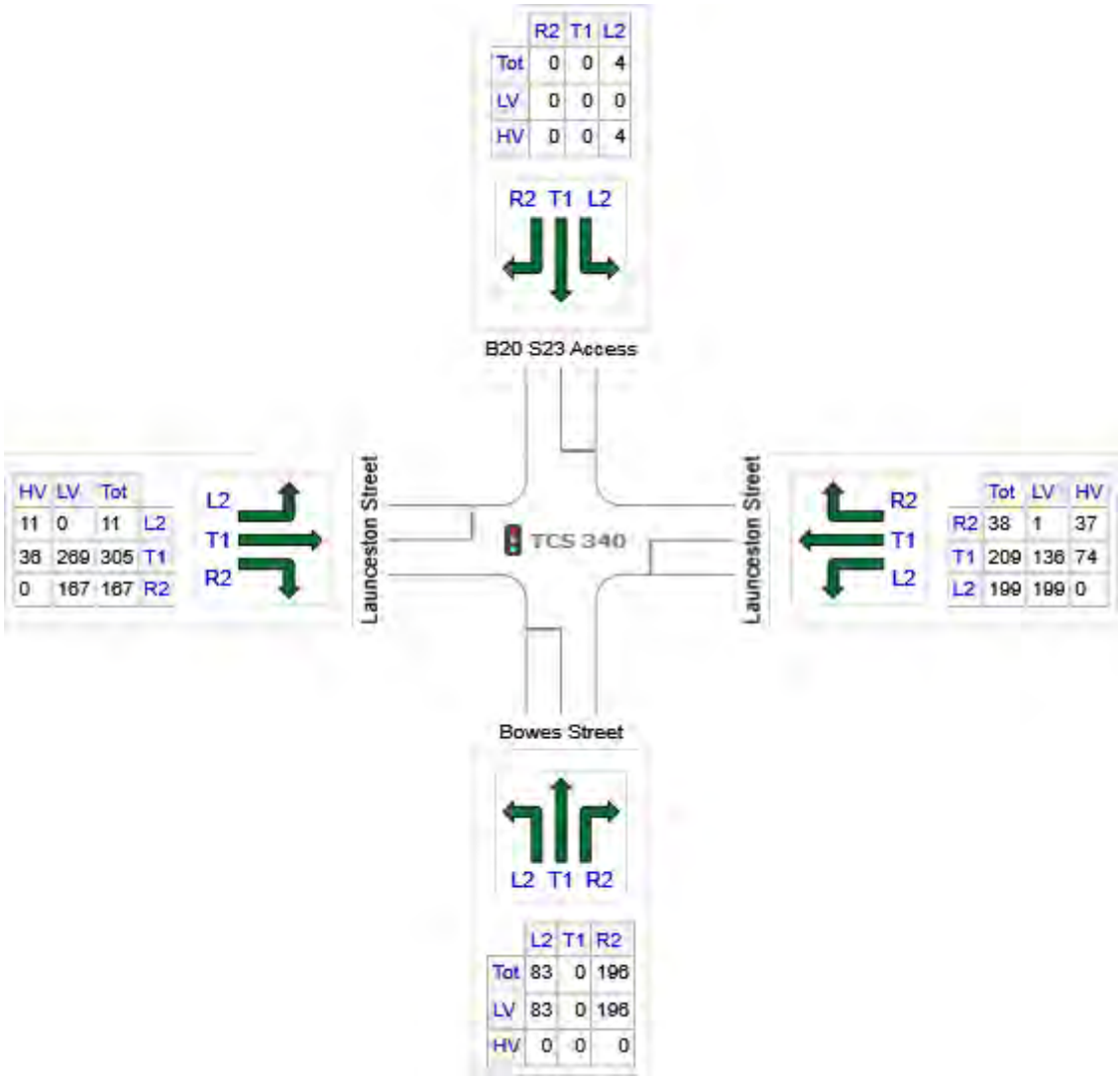
Block 20 Section 23 Access / Bowes Street / Launceston Street
Existing Signalised X-Intersection
Site Category: 2040 Development Scenario - Weekday Morning Peak Hour
Signals - Fixed Time Isolated Cycle Time = 84 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E, G
Output Phase Sequence: A, D, E, G

Site Layout



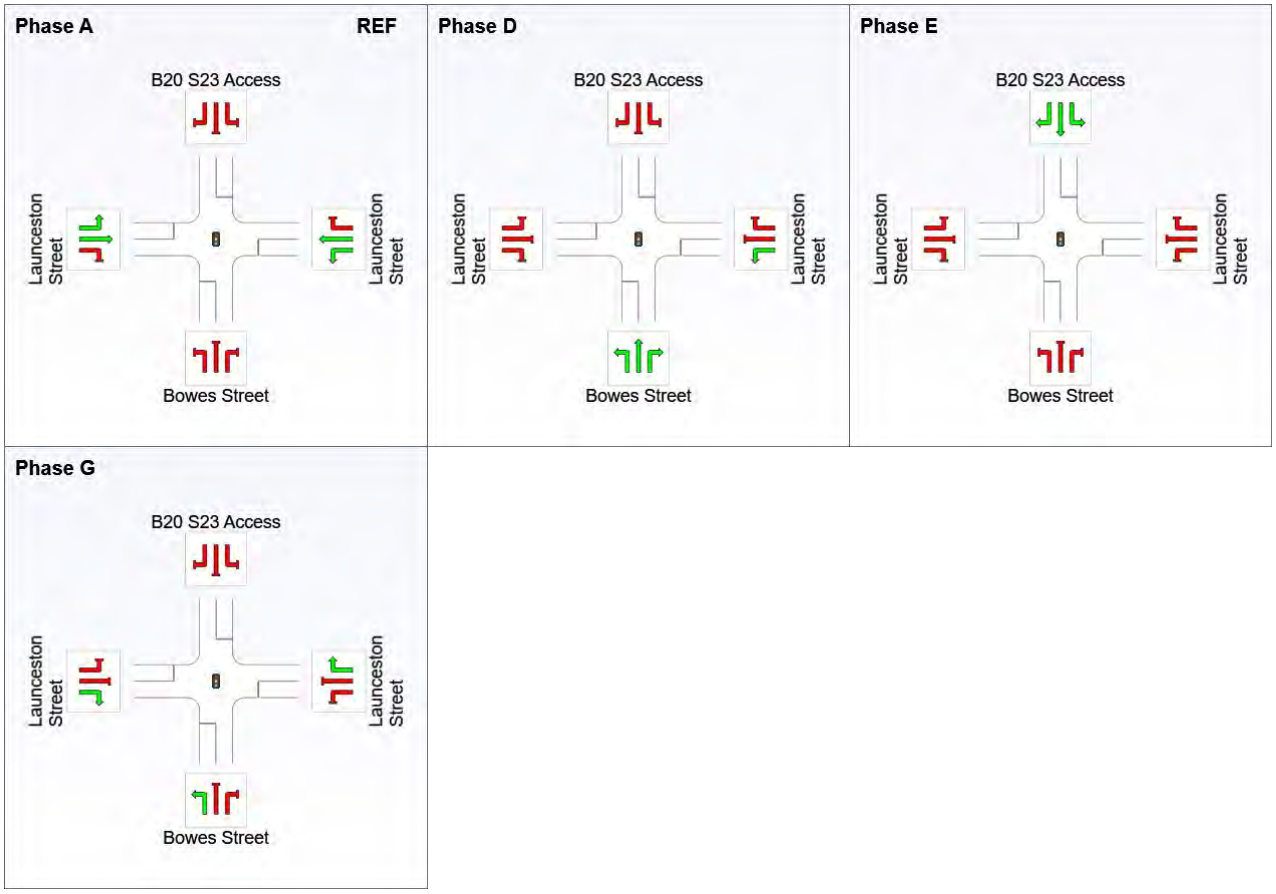
OD Demand Flows



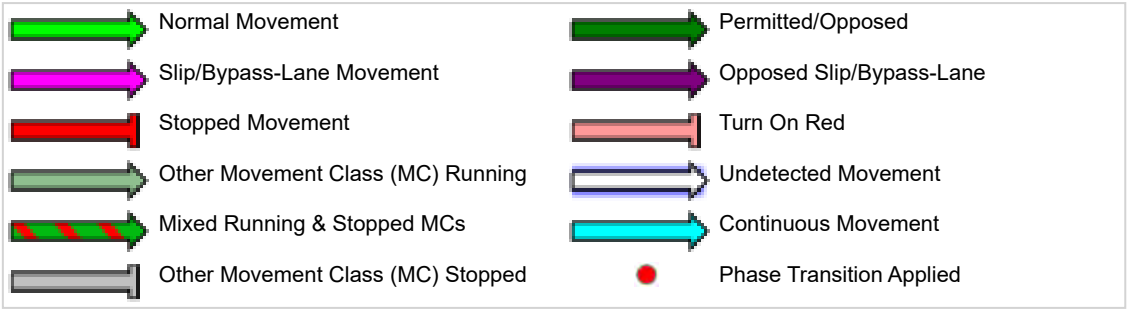
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	279	279	0
E: Launceston Street	446	336	111
N: B20 S23 Access	4	0	4
W: Launceston Street	483	437	46
Total	1213	1052	161

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	D	E	G
Phase Change Time (sec)	0	27	55	68
Green Time (sec)	22	22	7	12
Phase Time (sec)	28	28	11	17
Phase Split	33%	33%	13%	20%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	83	0.0	0.108	12.1	LOS A	1.4	9.6	0.64	0.68	0.64	23.6
2	T1	0	0.0	0.108	12.6	LOS A	1.4	9.6	0.64	0.68	0.64	13.7
3	R2	196	0.0	0.403	31.2	LOS C	6.7	47.1	0.87	0.78	0.87	12.2
Approach		279	0.0	0.403	25.5	LOS B	6.7	47.1	0.80	0.75	0.80	14.4
East: Launceston Street												
4	L2	199	0.0	0.387	27.4	LOS B	7.6	56.5	0.79	0.77	0.79	14.0
5	T1	209	35.2	0.387	26.6	LOS B	7.6	56.5	0.85	0.72	0.85	19.2
6	R2	38	97.2	0.242	42.9	LOS D	1.5	18.9	0.92	0.74	0.92	9.5
Approach		446	24.8	0.387	28.4	LOS B	7.6	56.5	0.83	0.74	0.83	16.0
North: B20 S23 Access												
7	L2	4	100.0	0.045	40.8	LOS C	0.2	2.3	0.94	0.62	0.94	8.6
8	T1	0	100.0	0.045	40.8	LOS C	0.2	2.3	0.94	0.62	0.94	5.4
9	R2	0	100.0	0.045	40.8	LOS C	0.2	2.3	0.94	0.62	0.94	9.1
Approach		4	100.0	0.045	40.8	LOS C	0.2	2.3	0.94	0.62	0.94	8.5
West: Launceston Street												
10	L2	11	100.0	0.340	33.4	LOS C	5.2	42.1	0.85	0.71	0.85	13.5
11	T1	305	11.7	0.340	27.5	LOS B	5.5	42.0	0.85	0.70	0.85	19.3
12	R2	167	0.0	0.631	44.1	LOS D	6.8	47.8	0.99	0.82	1.03	10.1
Approach		483	9.6	0.631	33.5	LOS C	6.8	47.8	0.90	0.74	0.92	15.3
All Vehicles		1213	13.3	0.631	29.8	LOS C	7.6	56.5	0.85	0.75	0.86	15.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	Demand Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	95% Back of Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Bowes Street													
Lane 1	83	0.0	772	0.108	100	12.1	LOS A	1.4	9.6	Full	35	0.0	32.1[8]
Lane 2	196	0.0	486	0.403	100	31.2	LOS C	6.7	47.1	Short	30	0.0	NA
Approach	279	0.0		0.403		25.5	LOS B	6.7	47.1				
East: Launceston Street													
Lane 1	247	6.9	639	0.387	100	26.3	LOS B	7.6	56.5	Full	95	0.0	0.0
Lane 2	161	35.2	416	0.387	100	28.1	LOS B	5.5	50.6	Full	95	0.0	0.0
Lane 3	38	97.2	157	0.242	100	42.9	LOS D	1.5	18.9	Short	60	0.0	NA
Approach	446	24.8		0.387		28.4	LOS B	7.6	56.5				
North: B20 S23 Access													
Lane 1	4	100.0	99	0.045	100	40.8	LOS C	0.2	2.3	Full	30	0.0	0.0
Approach	4	100.0		0.045		40.8	LOS C	0.2	2.3				
West: Launceston Street													
Lane 1	154	17.7	454	0.340	100	28.3	LOS B	5.2	42.1	Full	105	0.0	0.0
Lane 2	161	11.7	475	0.340	100	27.5	LOS B	5.5	42.0	Full	105	0.0	0.0
Lane 3	167	0.0	265	0.631	100	44.1	LOS D	6.8	47.8	Short	80	0.0	NA
Approach	483	9.6		0.631		33.5	LOS C	6.8	47.8				
Intersection	1213	13.3		0.631		29.8	LOS C	7.6	56.5				

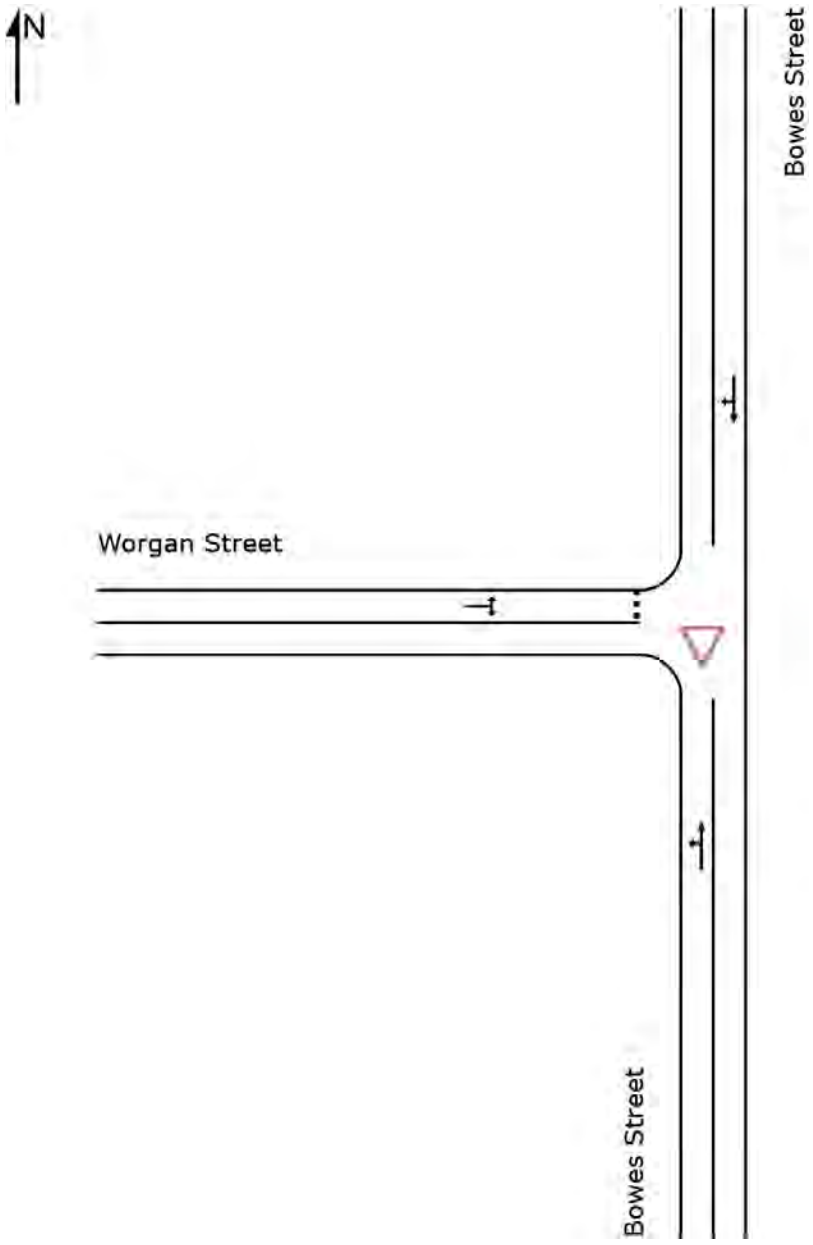
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

8 Probability of Blockage has been set on the basis of a queue that overflows from a short lane.

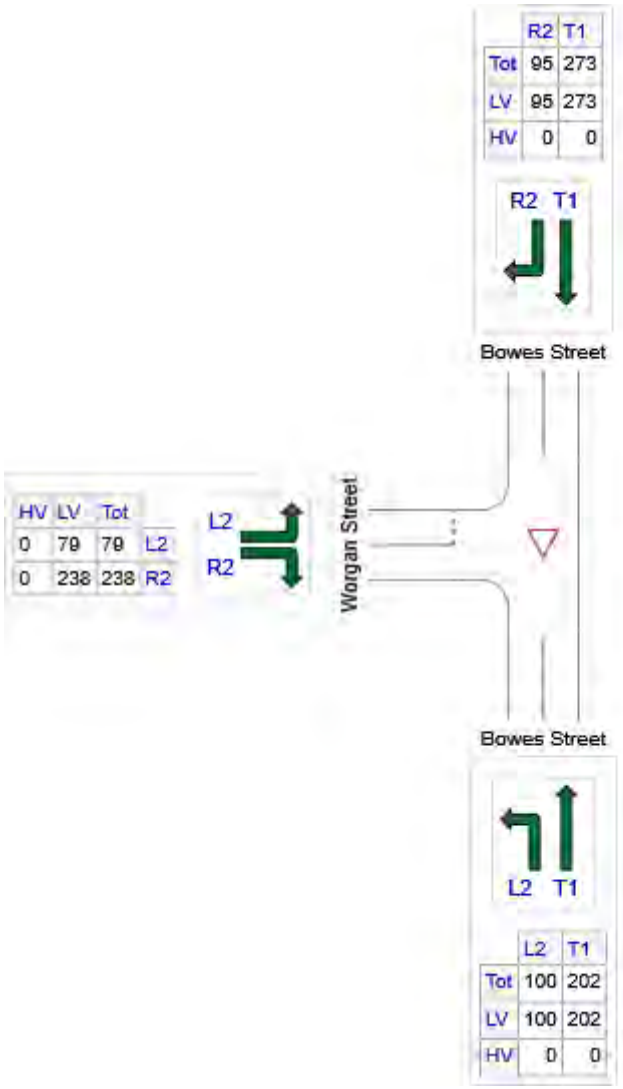
Site: [2040 Dev - AM: BS-WS]

Bowes Street / Worgan Street
Existing Priority-Controlled (Give-Way) T-Intersection
Site Category: 2040 Development Scenario - Weekday Morning Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	302	302	0
N: Bowes Street	367	367	0
W: Worgan Street	317	317	0
Total	986	986	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	100	0.0	0.157	4.6	LOS A	0.0	0.0	0.00	0.18	0.00	32.9
2	T1	202	0.0	0.157	0.0	LOS A	0.0	0.0	0.00	0.18	0.00	43.9
Approach		302	0.0	0.157	1.5	NA	0.0	0.0	0.00	0.18	0.00	39.5
North: Bowes Street												
8	T1	273	0.0	0.211	0.5	LOS A	0.7	4.7	0.18	0.15	0.18	43.9
9	R2	95	0.0	0.211	4.4	LOS A	0.7	4.7	0.18	0.15	0.18	17.2
Approach		367	0.0	0.211	1.5	NA	0.7	4.7	0.18	0.15	0.18	35.3
West: Worgan Street												
10	L2	79	0.0	0.374	4.5	LOS A	1.9	13.2	0.48	0.75	0.59	18.1
12	R2	238	0.0	0.374	7.0	LOS A	1.9	13.2	0.48	0.75	0.59	29.1
Approach		317	0.0	0.374	6.4	LOS A	1.9	13.2	0.48	0.75	0.59	26.6
All Vehicles		986	0.0	0.374	3.1	NA	1.9	13.2	0.22	0.35	0.26	33.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

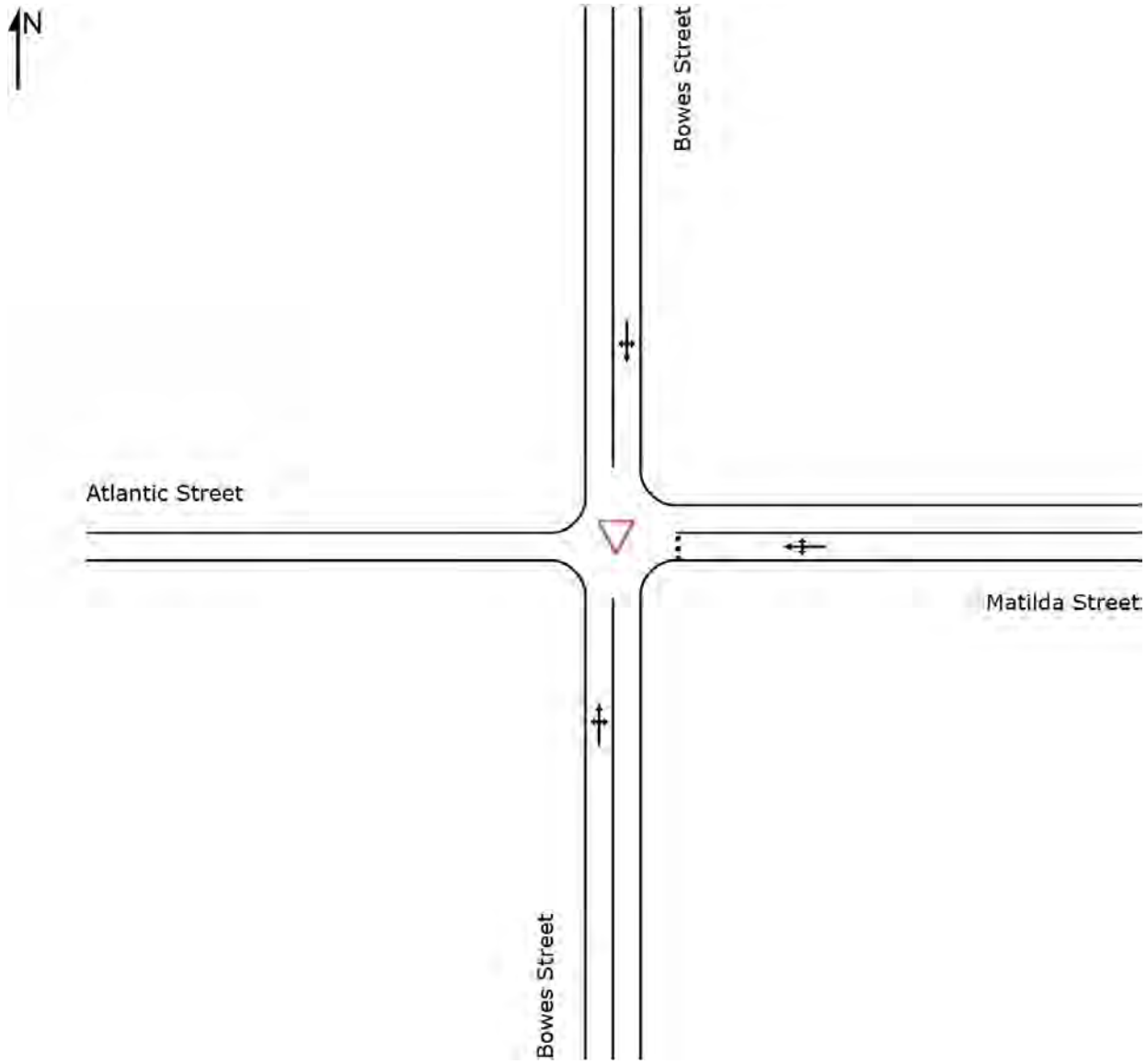
Lane Use and Performance													
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Bowes Street													
Lane 1	302	0.0	1918	0.157	100	1.5	LOS A	0.0	0.0	Full	105	0.0	0.0
Approach	302	0.0		0.157		1.5	NA	0.0	0.0				
North: Bowes Street													
Lane 1	367	0.0	1738	0.211	100	1.5	LOS A	0.7	4.7	Full	35	0.0	0.0
Approach	367	0.0		0.211		1.5	NA	0.7	4.7				
West: Worgan Street													
Lane 1	317	0.0	848	0.374	100	6.4	LOS A	1.9	13.2	Full	35	0.0	0.0
Approach	317	0.0		0.374		6.4	LOS A	1.9	13.2				
Intersection	986	0.0		0.374		3.1	NA	1.9	13.2				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

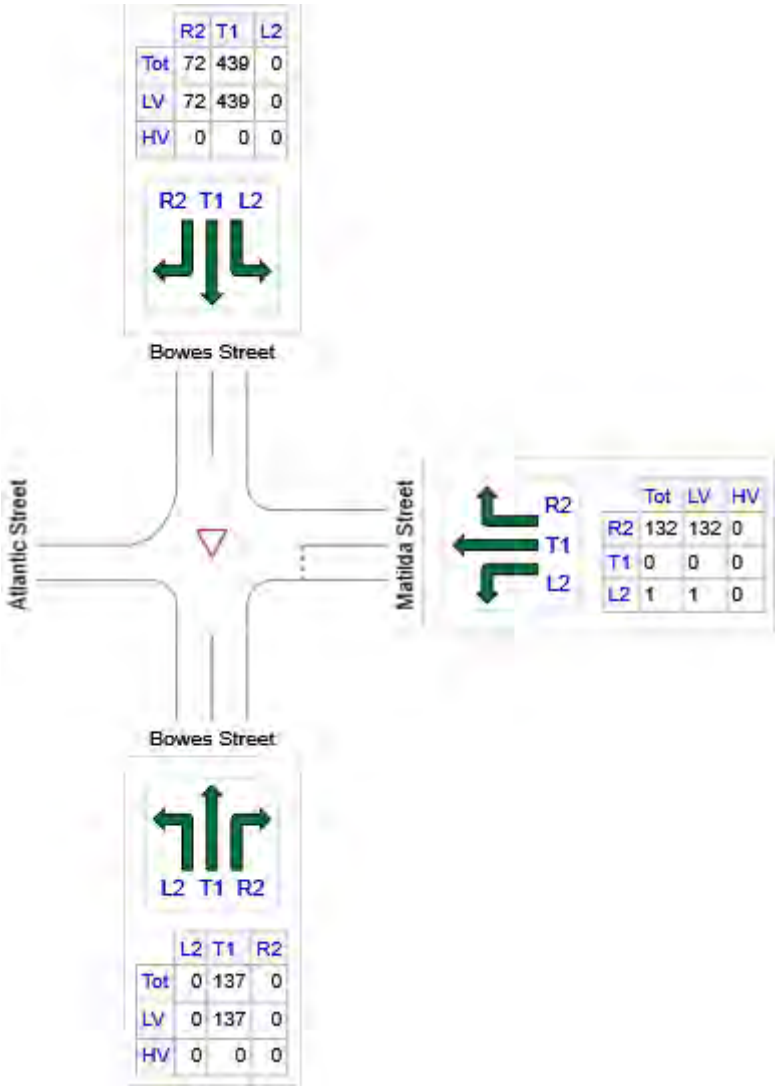
Site: [2040 Dev - AM: AS-BS-MS]

Atlantic Street / Bowes Street / Matilda Street
Existing Priority-Controlled (Give-Way) T-Intersection
Site Category: 2040 Development Scenario - Weekday Morning Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	137	137	0
E: Matilda Street	133	133	0
N: Bowes Street	511	511	0
Total	780	780	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	0	0.0	0.070	4.7	LOS A	0.0	0.0	0.00	0.00	0.00	24.3
2	T1	137	0.0	0.070	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
3	R2	0	0.0	0.070	5.3	LOS A	0.0	0.0	0.00	0.00	0.00	43.5
Approach		137	0.0	0.070	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.9
East: Matilda Street												
4	L2	1	0.0	0.256	6.7	LOS A	0.9	6.6	0.61	0.85	0.68	22.5
5	T1	0	0.0	0.256	8.4	LOS A	0.9	6.6	0.61	0.85	0.68	19.8
6	R2	132	0.0	0.256	10.2	LOS A	0.9	6.6	0.61	0.85	0.68	27.7
Approach		133	0.0	0.256	10.1	LOS A	0.9	6.6	0.61	0.85	0.68	27.7
North: Bowes Street												
7	L2	0	0.0	0.272	5.1	LOS A	0.6	4.0	0.10	0.09	0.10	44.5
8	T1	439	0.0	0.272	0.1	LOS A	0.6	4.0	0.10	0.09	0.10	45.9
9	R2	72	0.0	0.272	5.4	LOS A	0.6	4.0	0.10	0.09	0.10	28.6
Approach		511	0.0	0.272	0.9	NA	0.6	4.0	0.10	0.09	0.10	41.0
All Vehicles		780	0.0	0.272	2.3	NA	0.9	6.6	0.17	0.20	0.18	38.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

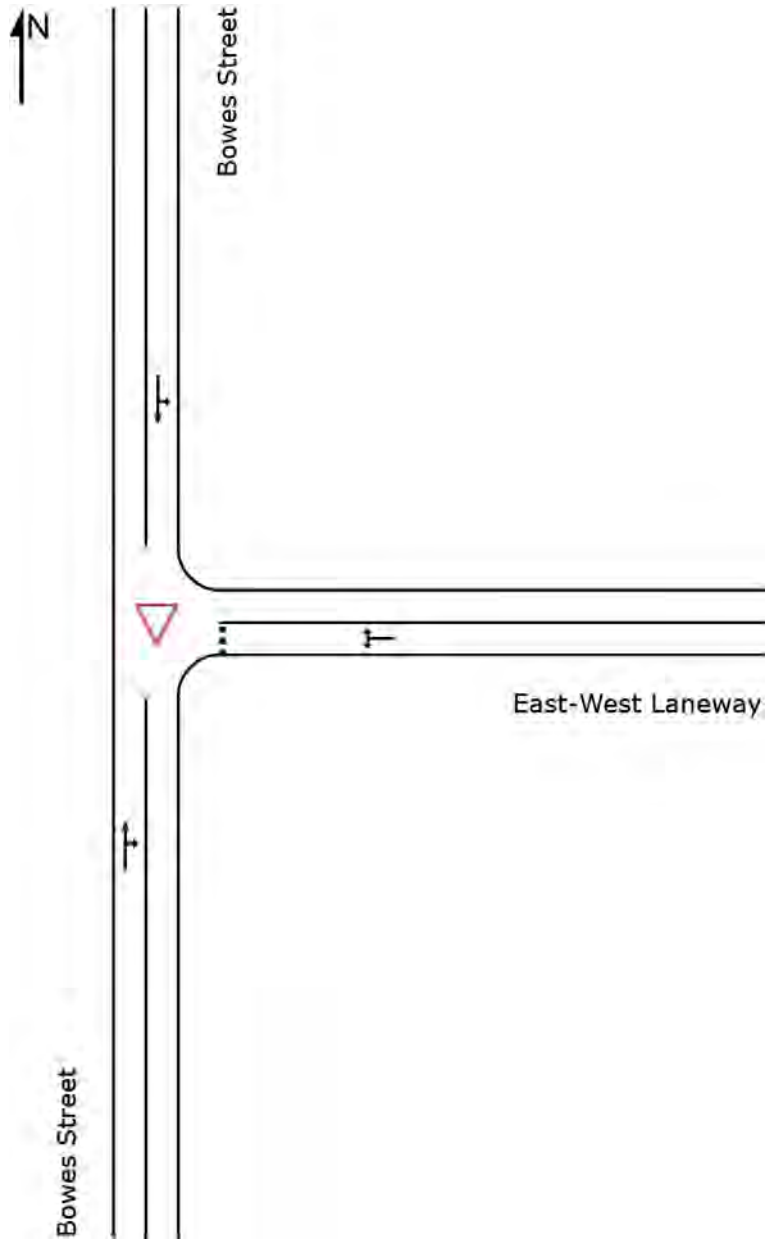
	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Bowes Street													
Lane 1	137	0.0	1949	0.070	100	0.0	LOS A	0.0	0.0	Full	45	0.0	0.0
Approach	137	0.0		0.070		0.0	NA	0.0	0.0				
East: Matilda Street													
Lane 1	133	0.0	519	0.256	100	10.1	LOS A	0.9	6.6	Full	80	0.0	0.0
Approach	133	0.0		0.256		10.1	LOS A	0.9	6.6				
North: Bowes Street													
Lane 1	511	0.0	1880	0.272	100	0.9	LOS A	0.6	4.0	Full	110	0.0	0.0
Approach	511	0.0		0.272		0.9	NA	0.6	4.0				
Intersection	780	0.0		0.272		2.3	NA	0.9	6.6				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

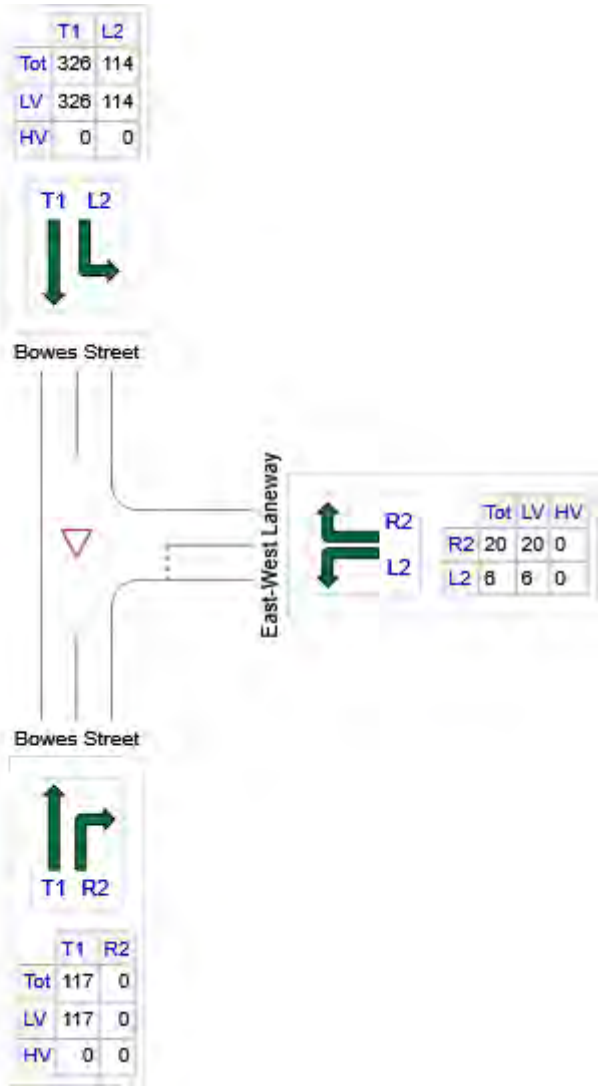
Site: [2040 Dev - AM: BS-EWL]

Bowes Street / East-West Laneway
Proposed Priority-Controlled (Give-Way) T-Intersection
Site Category: 2040 Development Scenario - Weekday Morning Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	117	117	0
E: East-West Laneway	26	26	0
N: Bowes Street	440	440	0
Total	583	583	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
2	T1	117	0.0	0.060	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
3	R2	0	0.0	0.060	6.0	LOS A	0.0	0.0	0.00	0.00	0.00	41.7
Approach		117	0.0	0.060	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.9
East: East-West Laneway												
4	L2	6	0.0	0.030	1.1	LOS A	0.1	0.7	0.41	0.37	0.41	22.9
6	R2	20	0.0	0.030	2.7	LOS A	0.1	0.7	0.41	0.37	0.41	22.4
Approach		26	0.0	0.030	2.3	LOS A	0.1	0.7	0.41	0.37	0.41	22.5
North: Bowes Street												
7	L2	114	0.0	0.229	4.3	LOS A	0.0	0.0	0.00	0.14	0.00	25.5
8	T1	326	0.0	0.229	0.0	LOS A	0.0	0.0	0.00	0.14	0.00	44.7
Approach		440	0.0	0.229	1.1	NA	0.0	0.0	0.00	0.14	0.00	38.5
All Vehicles		583	0.0	0.229	1.0	NA	0.1	0.7	0.02	0.12	0.02	39.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

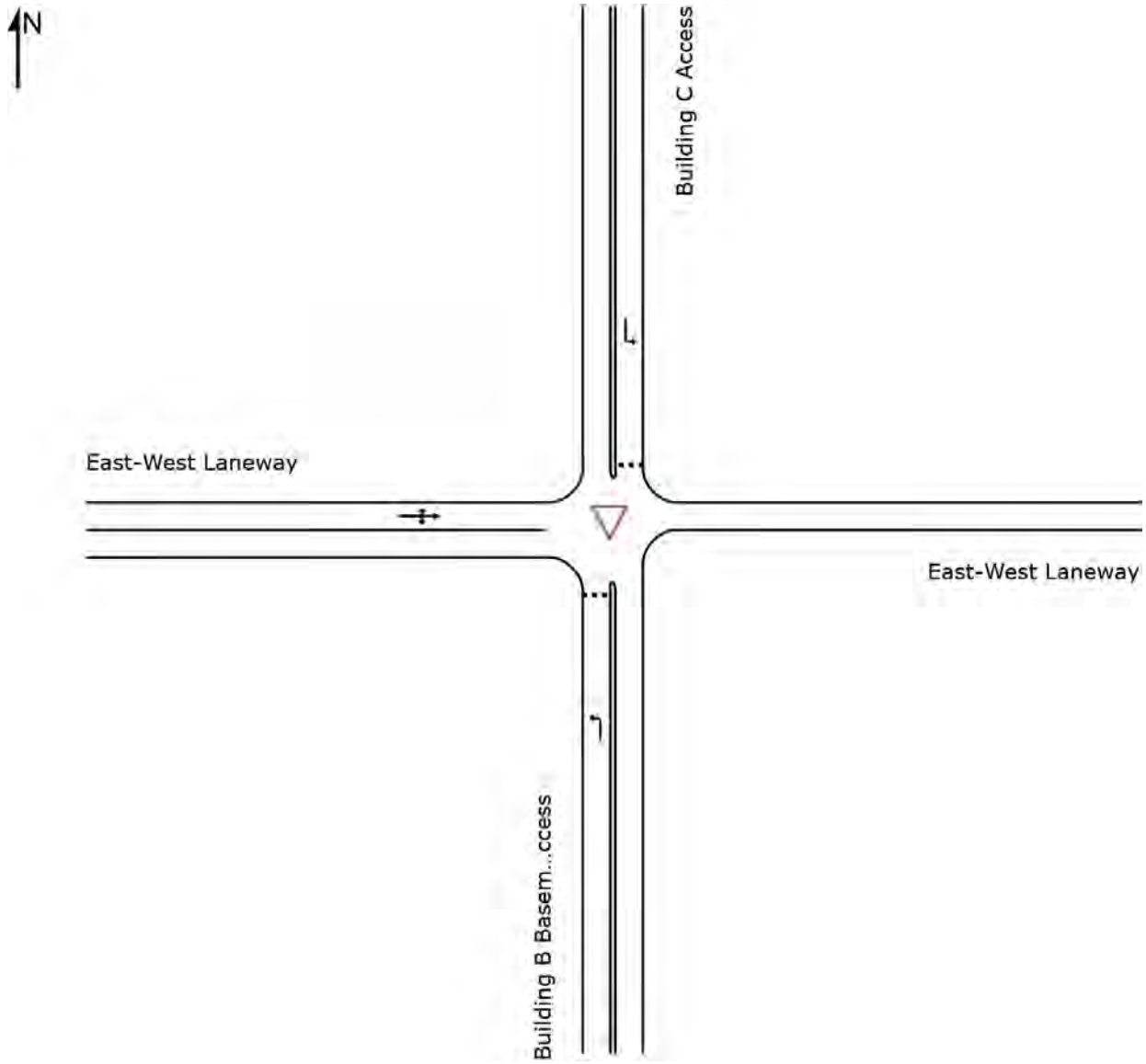
Lane Use and Performance													
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Bowes Street													
Lane 1	117	0.0	1949	0.060	100	0.0	LOS A	0.0	0.0	Full	60	0.0	0.0
Approach	117	0.0		0.060		0.0	NA	0.0	0.0				
East: East-West Laneway													
Lane 1	26	0.0	868	0.030	100	2.3	LOS A	0.1	0.7	Full	30	0.0	0.0
Approach	26	0.0		0.030		2.3	LOS A	0.1	0.7				
North: Bowes Street													
Lane 1	440	0.0	1925	0.229	100	1.1	LOS A	0.0	0.0	Full	60	0.0	0.0
Approach	440	0.0		0.229		1.1	NA	0.0	0.0				
Intersection	583	0.0		0.229		1.0	NA	0.1	0.7				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

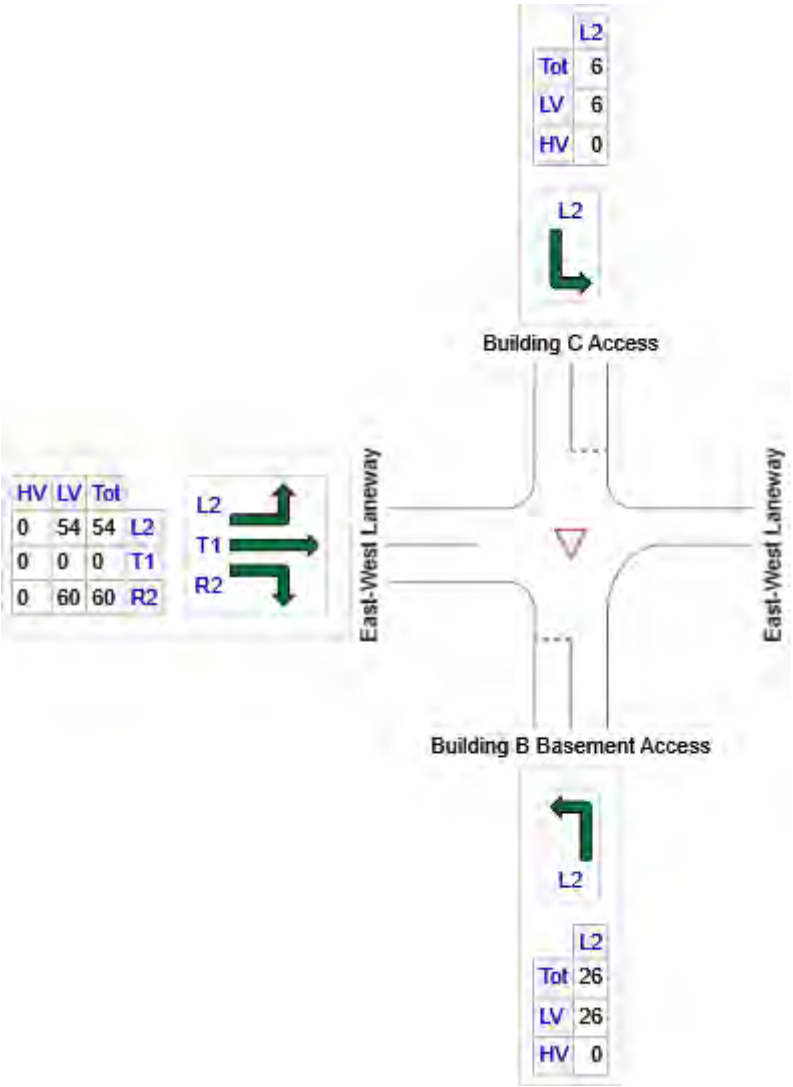
Site: [2040 Dev - AM: BldgBB-BldgC-EWL]

Building B Basement Access / Building C Access / East-West Laneway
Proposed Priority-Controlled (Give-Way) T-Intersection
Site Category: 2040 Development Scenario - Weekday Morning Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Building B Basement Access	26	26	0
N: Building C Access	6	6	0
W: East-West Laneway	114	114	0
Total	146	146	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Building B Basement Access												
1	L2	26	0.0	0.014	2.3	LOS A	0.0	0.0	0.00	0.50	0.00	26.8
Approach		26	0.0	0.014	2.3	LOS A	0.0	0.0	0.00	0.50	0.00	26.8
North: Building C Access												
4	L2	6	0.0	0.004	0.0	LOS A	0.0	0.1	0.00	0.00	0.00	26.3
Approach		6	0.0	0.004	0.0	LOS A	0.0	0.1	0.00	0.00	0.00	26.3
West: East-West Laneway												
7	L2	54	0.0	0.061	3.1	LOS A	0.0	0.0	0.00	0.53	0.00	23.1
8	T1	0	0.0	0.061	0.2	LOS A	0.0	0.0	0.00	0.53	0.00	39.0
12	R2	60	0.0	0.061	2.9	LOS A	0.0	0.0	0.00	0.53	0.00	25.6
Approach		114	0.0	0.061	3.0	NA	0.0	0.0	0.00	0.53	0.00	24.3
All Vehicles		146	0.0	0.061	2.7	NA	0.0	0.1	0.00	0.50	0.00	24.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

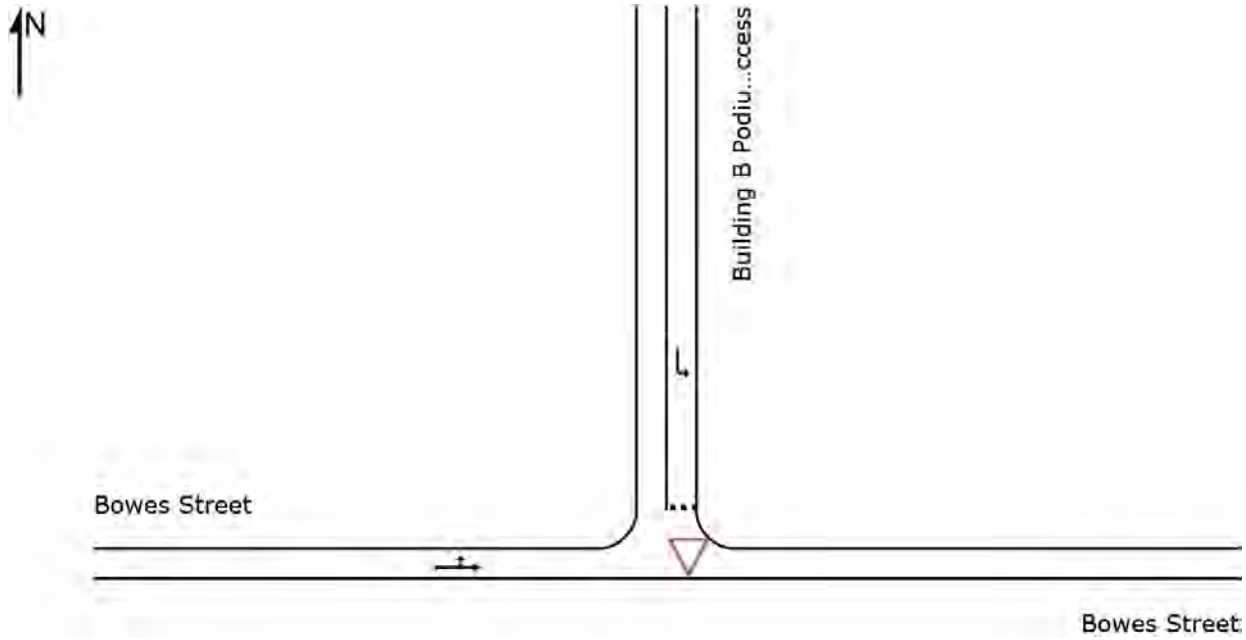
Lane Use and Performance													
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Building B Basement Access													
Lane 1	26	0.0	1857	0.014	100	2.3	LOS A	0.0	0.0	Full	10	0.0	0.0
Approach	26	0.0		0.014		2.3	LOS A	0.0	0.0				
North: Building C Access													
Lane 1	6	0.0	1636	0.004	100	0.0	LOS A	0.0	0.1	Full	10	0.0	0.0
Approach	6	0.0		0.004		0.0	LOS A	0.0	0.1				
West: East-West Laneway													
Lane 1	114	0.0	1857	0.061	100	3.0	LOS A	0.0	0.0	Full	30	0.0	0.0
Approach	114	0.0		0.061		3.0	NA	0.0	0.0				
Intersection	146	0.0		0.061		2.7	NA	0.0	0.1				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

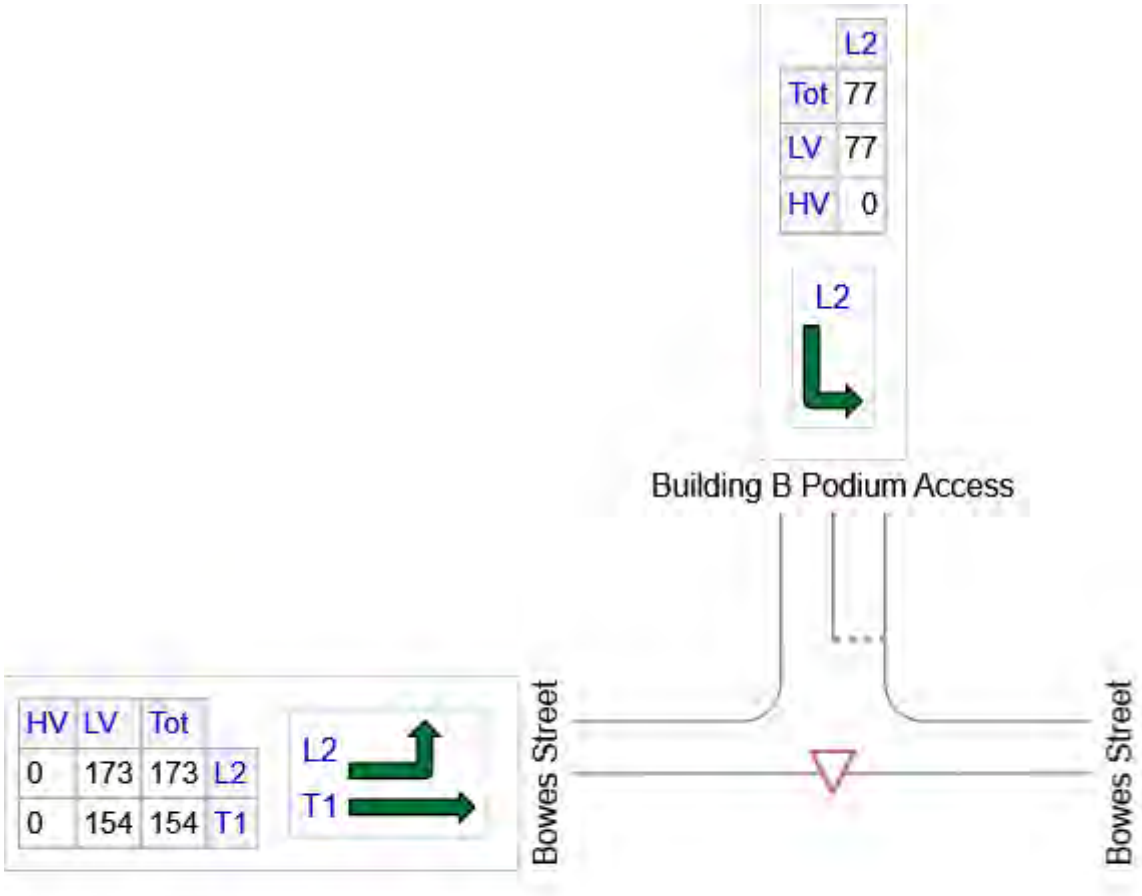
Site: [2040 Dev - AM: BldgBP-BS]

Building B Podium Access / Bowes Street
Proposed Priority-Controlled (Give-Way) T-Intersection
Site Category: 2040 Development Scenario - Weekday Morning Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
N: Building B Podium Access	77	77	0
W: Bowes Street	326	326	0
Total	403	403	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
North: Building B Podium Access												
4	L2	77	0.0	0.054	0.5	LOS A	0.2	1.5	0.25	0.11	0.25	21.3
Approach		77	0.0	0.054	0.5	LOS A	0.2	1.5	0.25	0.11	0.25	21.3
West: Bowes Street												
7	L2	173	0.0	0.172	3.5	LOS A	0.0	0.0	0.00	0.28	0.00	24.6
8	T1	154	0.0	0.172	0.0	LOS A	0.0	0.0	0.00	0.28	0.00	38.3
Approach		326	0.0	0.172	1.8	NA	0.0	0.0	0.00	0.28	0.00	30.2
All Vehicles		403	0.0	0.172	1.6	NA	0.2	1.5	0.05	0.25	0.05	28.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

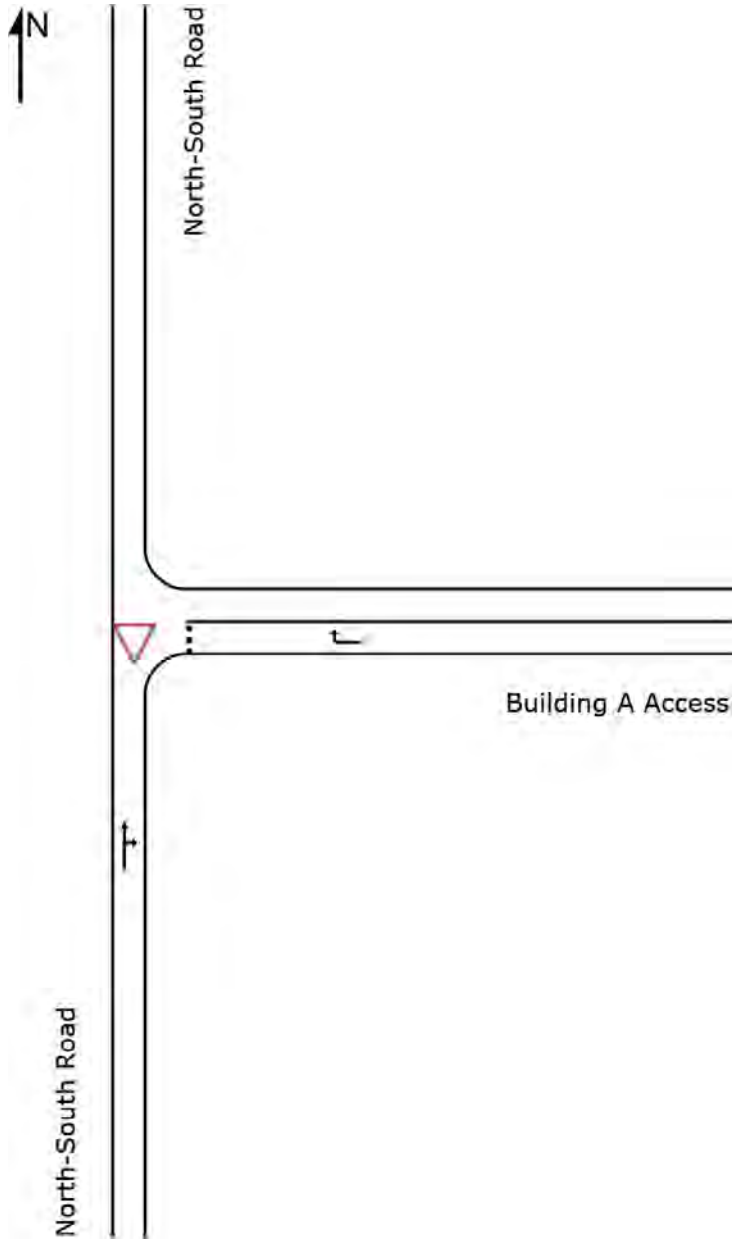
Lane Use and Performance													
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
North: Building B Podium Access													
Lane 1	77	0.0	1435	0.054	100	0.5	LOS A	0.2	1.5	Full	15	0.0	0.0
Approach	77	0.0		0.054		0.5	LOS A	0.2	1.5				
West: Bowes Street													
Lane 1	326	0.0	1900	0.172	100	1.8	LOS A	0.0	0.0	Full	40	0.0	0.0
Approach	326	0.0		0.172		1.8	NA	0.0	0.0				
Intersection	403	0.0		0.172		1.6	NA	0.2	1.5				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

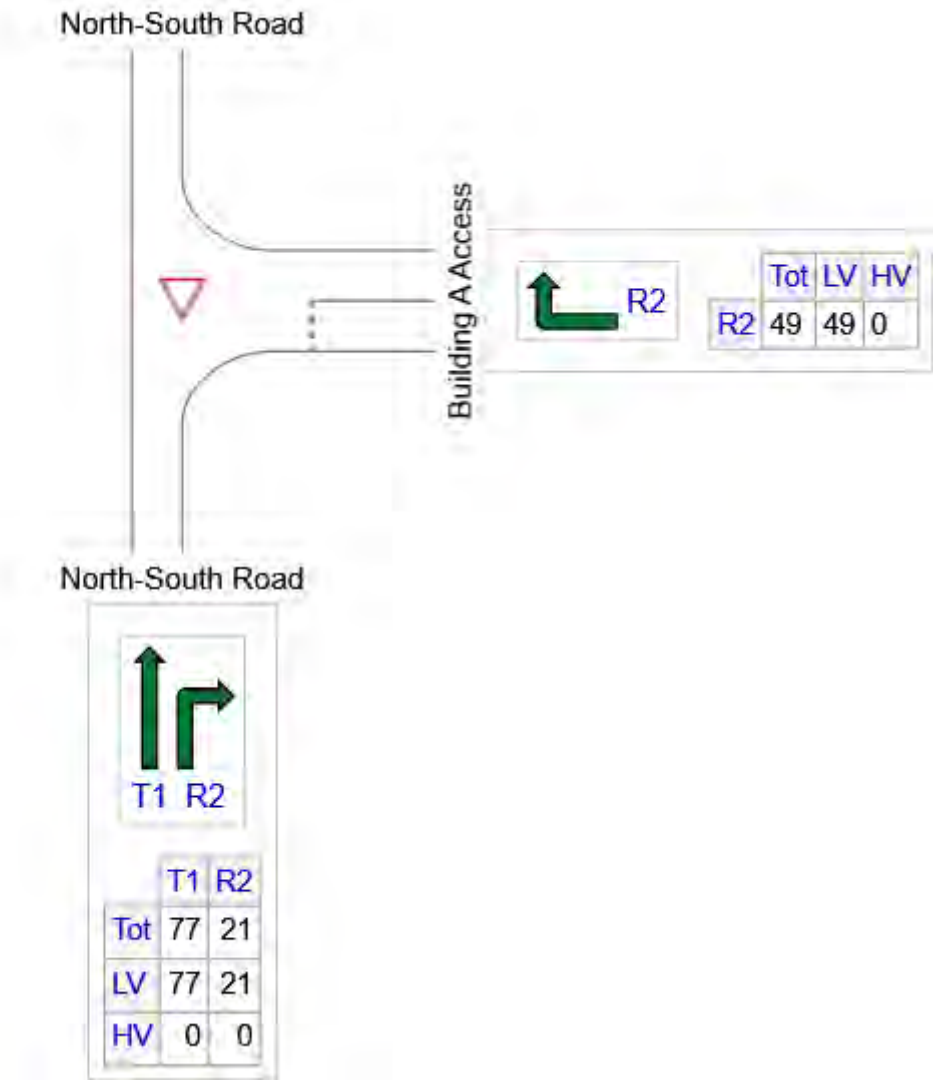
Site: [2040 Dev - AM: BldgA-NSR]

Building A Access / North-South Road
Proposed Priority-Controlled (Give-Way) T-Intersection
Site Category: 2040 Development Scenario - Weekday Morning Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: North-South Road	98	98	0
E: Building A Access	49	49	0
Total	147	147	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: North-South Road												
2	T1	77	0.0	0.051	0.0	LOS A	0.0	0.0	0.00	0.12	0.00	44.4
3	R2	21	0.0	0.051	2.1	LOS A	0.0	0.0	0.00	0.12	0.00	28.7
Approach		98	0.0	0.051	0.5	NA	0.0	0.0	0.00	0.12	0.00	40.8
East: Building A Access												
6	R2	49	0.0	0.037	1.2	LOS A	0.1	0.8	0.16	0.25	0.16	19.5
Approach		49	0.0	0.037	1.2	LOS A	0.1	0.8	0.16	0.25	0.16	19.5
All Vehicles		147	0.0	0.051	0.7	NA	0.1	0.8	0.05	0.17	0.05	29.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

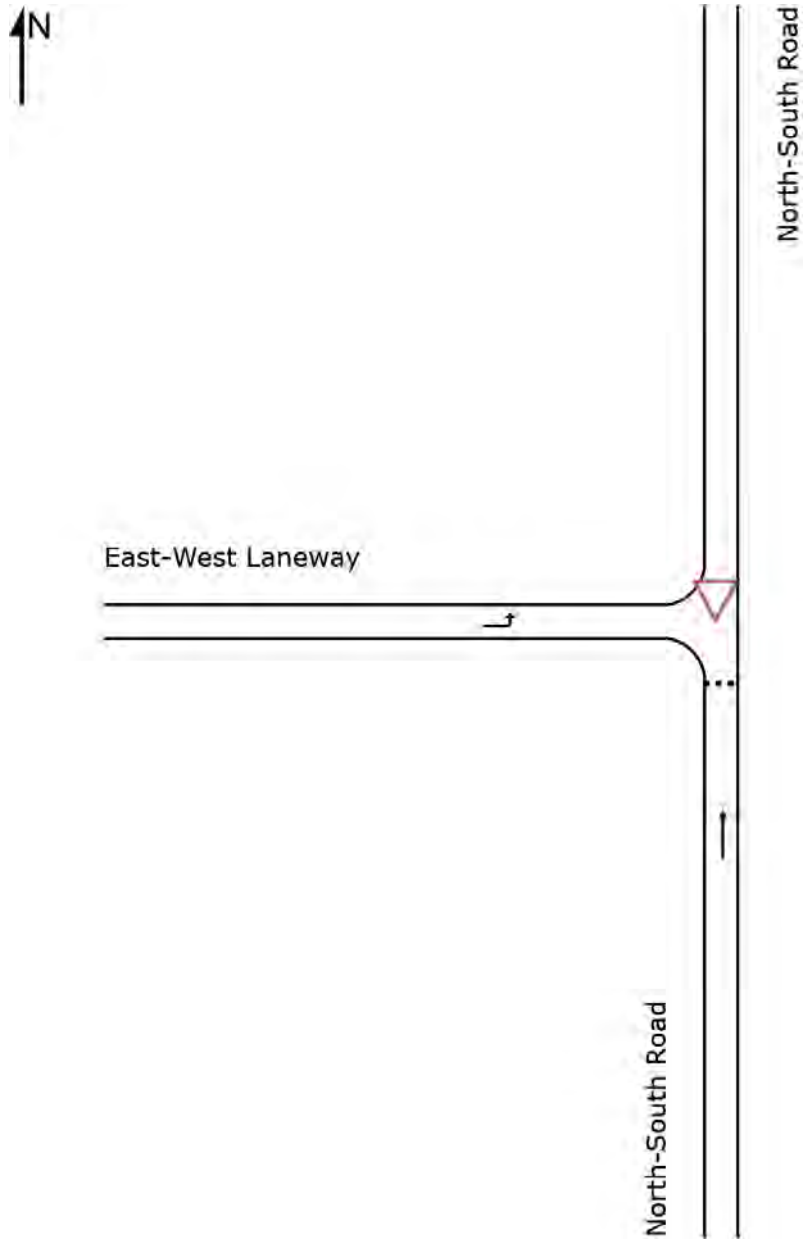
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: North-South Road													
Lane 1	98	0.0	1929	0.051	100	0.5	LOS A	0.0	0.0	Full	10	0.0	0.0
Approach	98	0.0		0.051		0.5	NA	0.0	0.0				
East: Building A Access													
Lane 1	49	0.0	1340	0.037	100	1.2	LOS A	0.1	0.8	Full	15	0.0	0.0
Approach	49	0.0		0.037		1.2	LOS A	0.1	0.8				
Intersection	147	0.0		0.051		0.7	NA	0.1	0.8				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

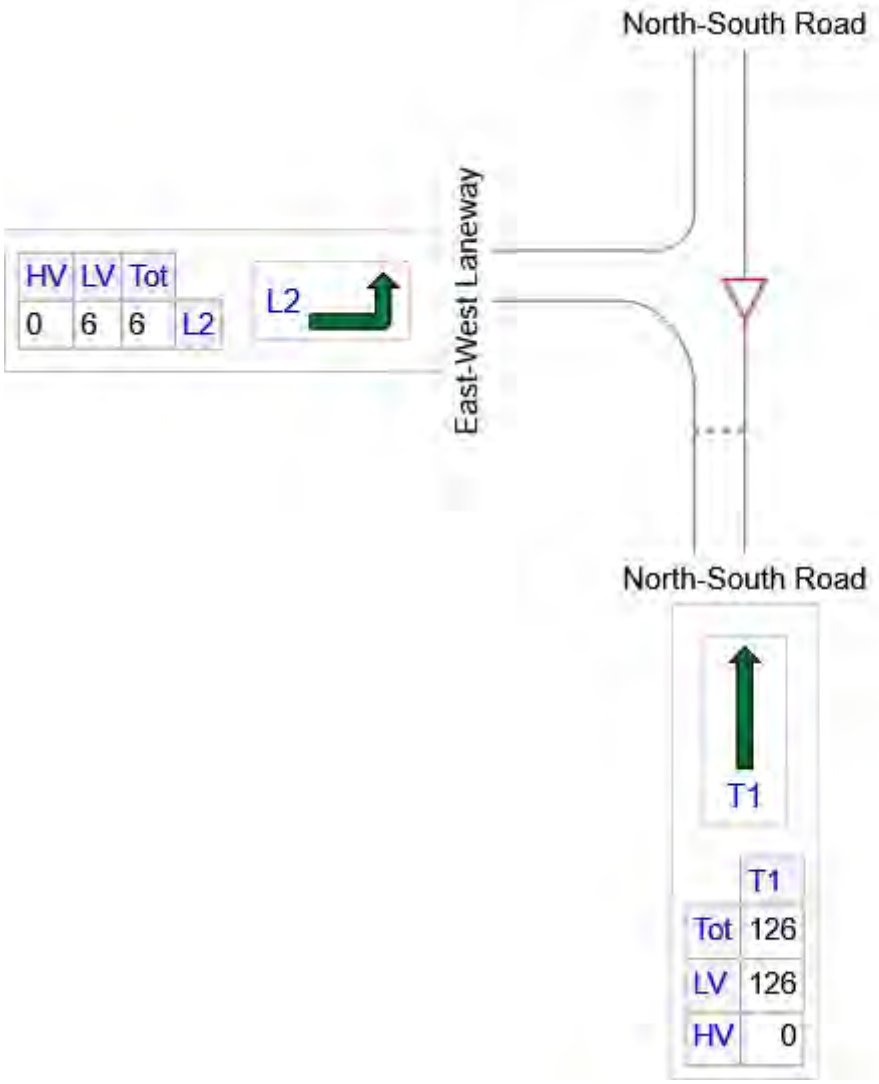
Site: [2040 Dev - AM: EWL-NSR]

East-West Laneway / North-South Road
Proposed Priority-Controlled (Give-Way) T-Intersection
Site Category: 2040 Development Scenario - Weekday Morning Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: North-South Road	126	126	0
W: East-West Laneway	6	6	0
Total	133	133	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: North-South Road												
2	T1	126	0.0	0.085	1.9	LOS A	0.3	2.2	0.04	0.46	0.04	37.2
Approach		126	0.0	0.085	1.9	LOS A	0.3	2.2	0.04	0.46	0.04	37.2
West: East-West Laneway												
7	L2	6	0.0	0.003	3.7	LOS A	0.0	0.0	0.00	0.52	0.00	31.5
Approach		6	0.0	0.003	3.7	NA	0.0	0.0	0.00	0.52	0.00	31.5
All Vehicles		133	0.0	0.085	2.0	NA	0.3	2.2	0.03	0.47	0.03	36.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

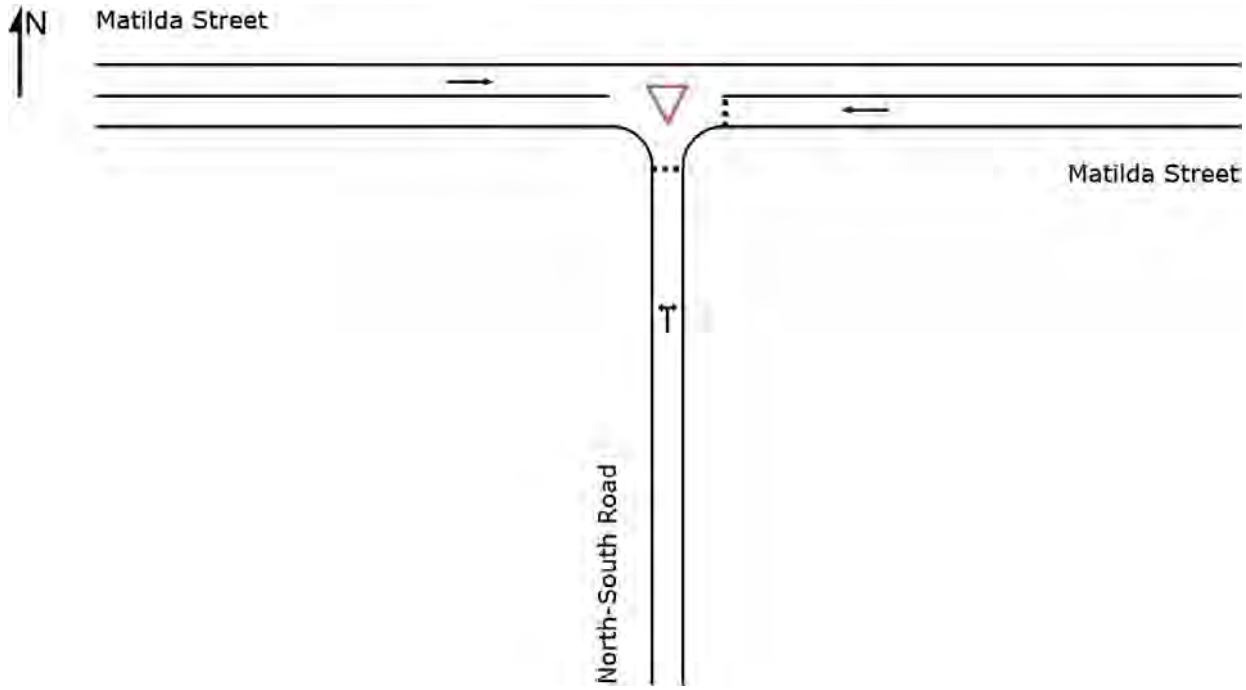
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: North-South Road													
Lane 1	126	0.0	1493	0.085	100	1.9	LOS A	0.3	2.2	Full	30	0.0	0.0
Approach	126	0.0		0.085		1.9	LOS A	0.3	2.2				
West: East-West Laneway													
Lane 1	6	0.0	1857	0.003	100	3.7	LOS A	0.0	0.0	Full	45	0.0	0.0
Approach	6	0.0		0.003		3.7	NA	0.0	0.0				
Intersection	133	0.0		0.085		2.0	NA	0.3	2.2				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

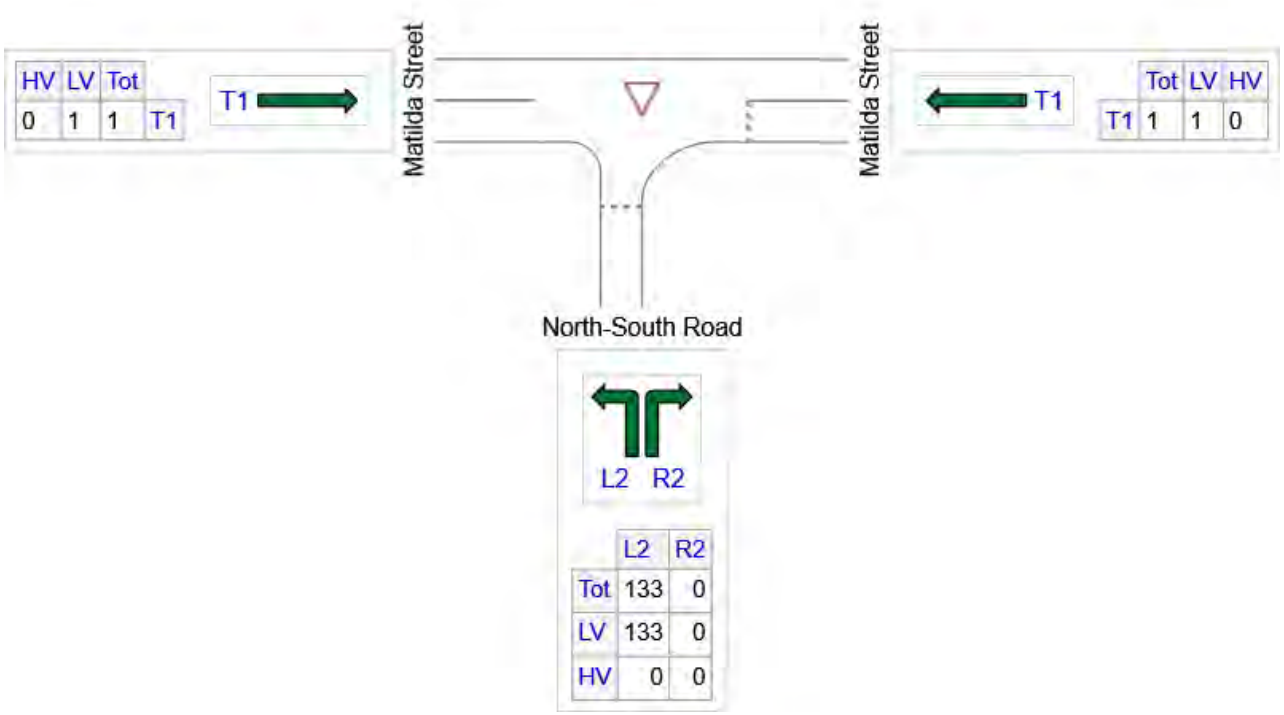
Site: [2040 Dev - AM: MS-NSR]

Matilda Street / North-South Road
Proposed Priority-Controlled (Give-Way) T-Intersection
Site Category: 2040 Development Scenario - Weekday Morning Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: North-South Road	133	133	0
E: Matilda Street	1	1	0
W: Matilda Street	1	1	0
Total	135	135	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: North-South Road												
1	L2	133	0.0	0.081	4.7	LOS A	0.3	2.4	0.01	0.56	0.01	35.2
3	R2	0	0.0	0.081	4.9	LOS A	0.3	2.4	0.01	0.56	0.01	29.6
Approach		133	0.0	0.081	4.7	LOS A	0.3	2.4	0.01	0.56	0.01	35.2
East: Matilda Street												
5	T1	1	0.0	0.001	1.9	LOS A	0.0	0.0	0.00	0.48	0.00	39.7
Approach		1	0.0	0.001	1.9	LOS A	0.0	0.0	0.00	0.48	0.00	39.7
West: Matilda Street												
11	T1	1	0.0	0.001	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach		1	0.0	0.001	0.0	NA	0.0	0.0	0.00	0.00	0.00	60.0
All Vehicles		135	0.0	0.081	4.7	NA	0.3	2.4	0.01	0.55	0.01	35.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: North-South Road													
Lane 1	133	0.0	1635	0.081	100	4.7	LOS A	0.3	2.4	Full	70	0.0	0.0
Approach	133	0.0		0.081		4.7	LOS A	0.3	2.4				
East: Matilda Street													
Lane 1	1	0.0	1950	0.001	100	1.9	LOS A	0.0	0.0	Full	30	0.0	0.0
Approach	1	0.0		0.001		1.9	LOS A	0.0	0.0				
West: Matilda Street													
Lane 1	1	0.0	1950	0.001	100	0.0	LOS A	0.0	0.0	Full	90	0.0	0.0
Approach	1	0.0		0.001		0.0	NA	0.0	0.0				
Intersection	135	0.0		0.081		4.7	NA	0.3	2.4				

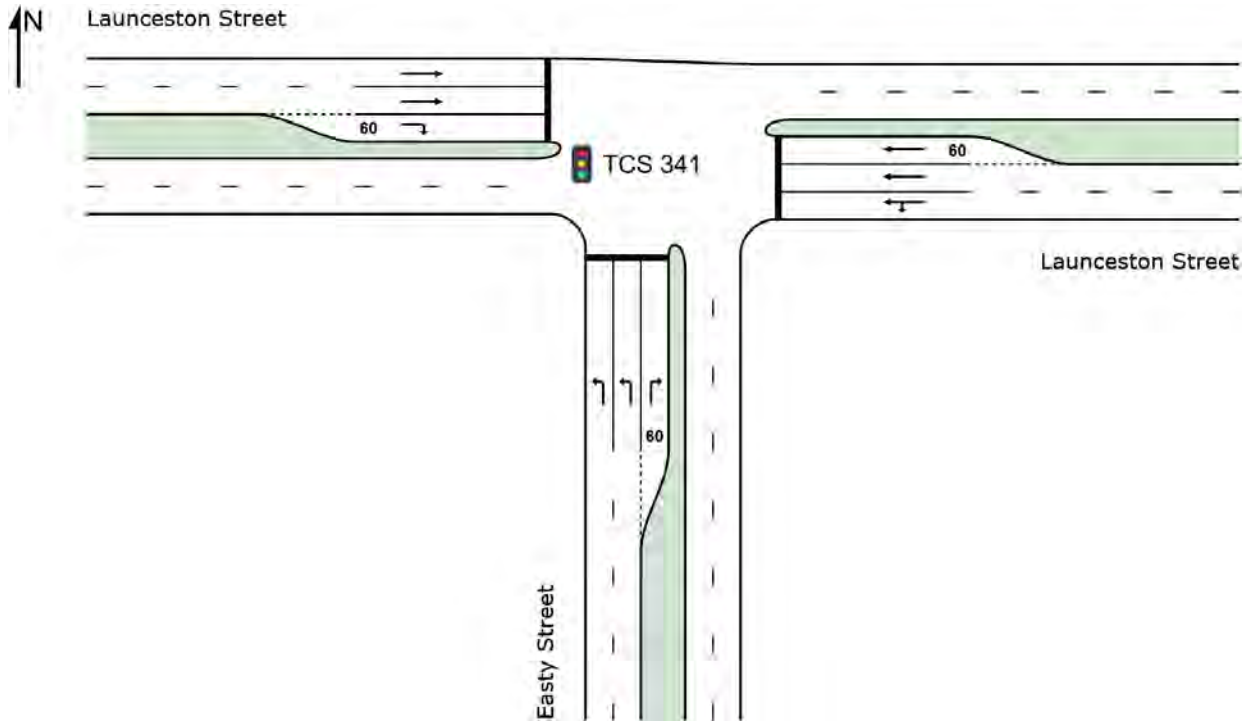
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: TCS 341 [2040 Dev - AM: ES-LS]

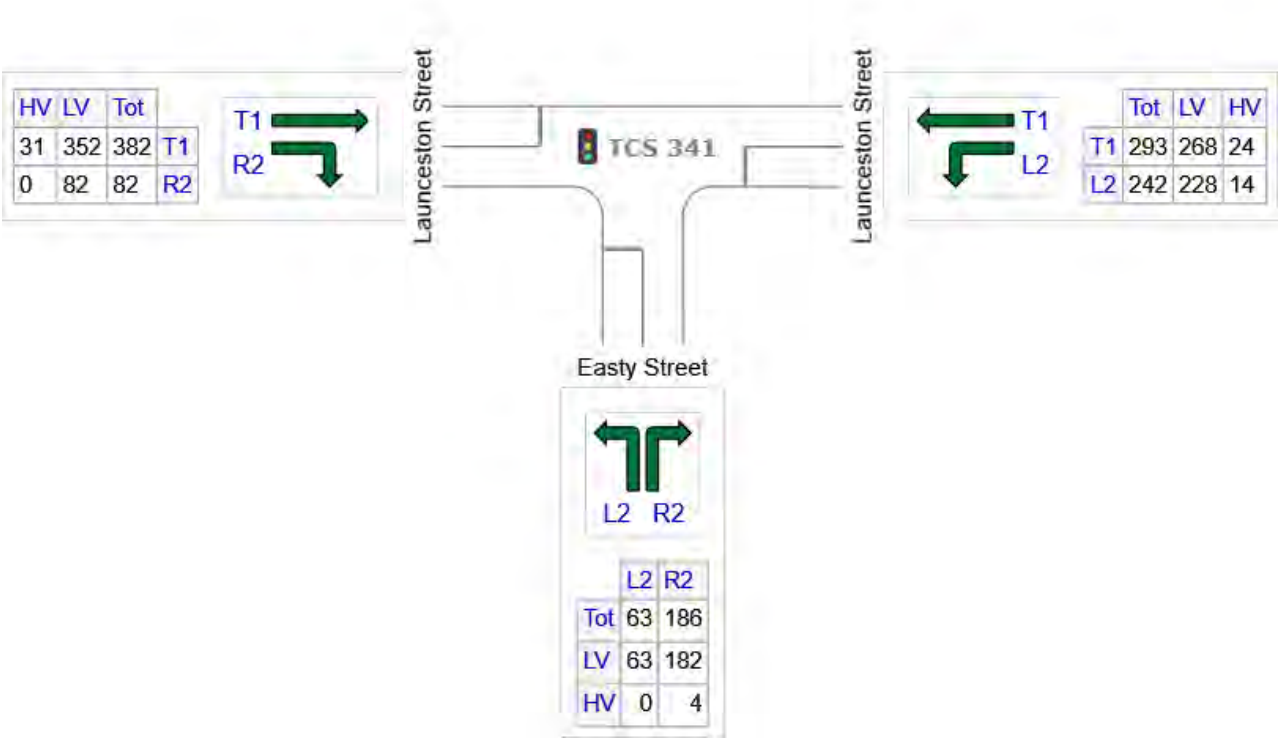
Easty Street / Launceston Street
Existing Signalised T-Intersection
Site Category: 2040 Development Scenario - Weekday Morning Peak Hour
Signals - Fixed Time Isolated Cycle Time = 68 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Site Layout



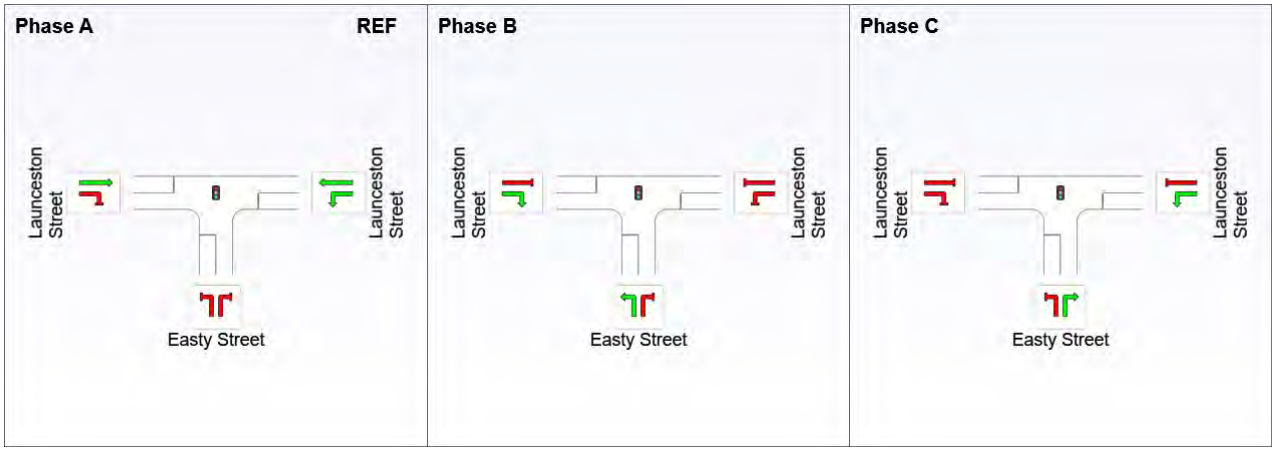
OD Demand Flows



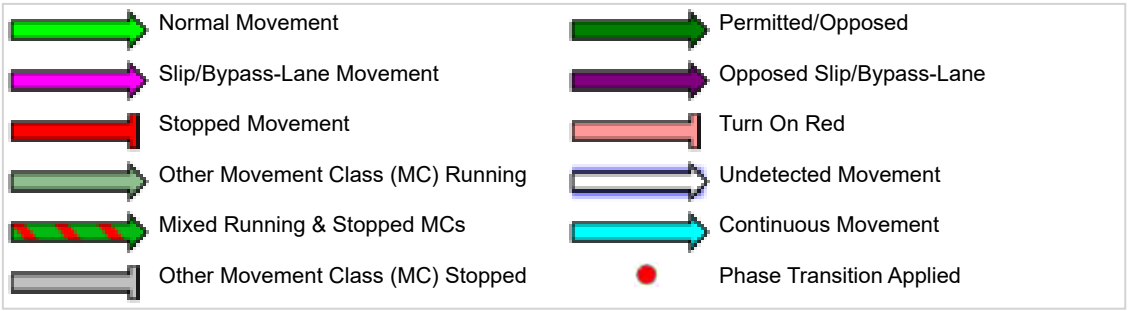
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Easty Street	249	245	4
E: Launceston Street	535	497	38
W: Launceston Street	464	434	31
Total	1248	1176	73

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	30	49
Green Time (sec)	25	13	14
Phase Time (sec)	31	18	19
Phase Split	46%	26%	28%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Easty Street												
1	L2	63	0.0	0.089	28.4	LOS B	0.9	6.2	0.85	0.69	0.85	23.7
3	R2	186	2.3	0.495	30.1	LOS C	5.7	40.6	0.93	0.79	0.93	25.6
Approach		249	1.7	0.495	29.6	LOS C	5.7	40.6	0.91	0.77	0.91	25.2
East: Launceston Street												
4	L2	242	5.7	0.210	8.7	LOS A	3.3	23.9	0.43	0.63	0.43	34.5
5	T1	293	8.3	0.215	16.0	LOS B	3.4	25.2	0.72	0.59	0.72	27.9
Approach		535	7.1	0.215	12.7	LOS A	3.4	25.2	0.59	0.61	0.59	31.1
West: Launceston Street												
11	T1	382	8.0	0.280	16.5	LOS B	4.5	33.8	0.75	0.62	0.75	27.6
12	R2	82	0.0	0.231	29.2	LOS C	2.4	16.7	0.88	0.74	0.88	23.5
Approach		464	6.6	0.280	18.8	LOS B	4.5	33.8	0.77	0.64	0.77	26.7
All Vehicles		1248	5.8	0.495	18.3	LOS B	5.7	40.6	0.72	0.65	0.72	28.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Easty Street													
Lane 1	32	0.0	355	0.089	100	28.4	LOS B	0.9	6.2	Full	305	0.0	0.0
Lane 2	32	0.0	355	0.089	100	28.4	LOS B	0.9	6.2	Full	305	0.0	0.0
Lane 3	186	2.3	376	0.495	100	30.1	LOS C	5.7	40.6	Short	60	0.0	NA
Approach	249	1.7		0.495		29.6	LOS C	5.7	40.6				
East: Launceston Street													
Lane 1	242	5.7	1155	0.210	97[5]	8.7	LOS A	3.3	23.9	Full	260	0.0	0.0
Lane 2	146	8.3	680	0.215	100	16.0	LOS B	3.4	25.2	Full	260	0.0	0.0
Lane 3	146	8.3	680	0.215	100	16.0	LOS B	3.4	25.2	Short	60	0.0	NA
Approach	535	7.1		0.215		12.7	LOS A	3.4	25.2				
West: Launceston Street													
Lane 1	191	8.0	682	0.280	100	16.5	LOS B	4.5	33.8	Full	130	0.0	0.0
Lane 2	191	8.0	682	0.280	100	16.5	LOS B	4.5	33.8	Full	130	0.0	0.0
Lane 3	82	0.0	355	0.231	100	29.2	LOS C	2.4	16.7	Short	60	0.0	NA
Approach	464	6.6		0.280		18.8	LOS B	4.5	33.8				
Intersection	1248	5.8		0.495		18.3	LOS B	5.7	40.6				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5 Lane under-utilisation found by the program

USER REPORT FOR NETWORK SITE

Project: 24-0487_20260304

Template: Default Site User Report

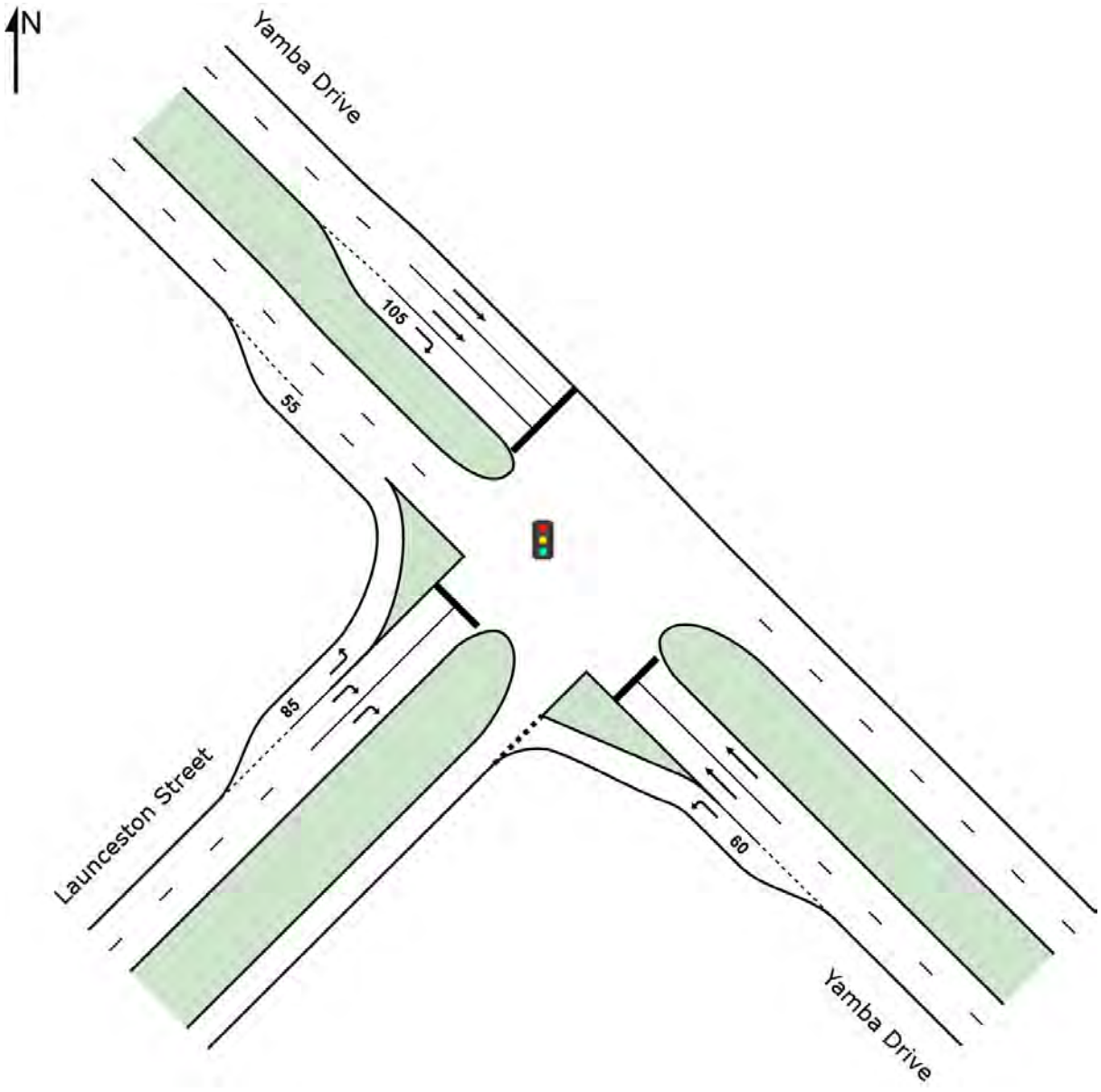
Site: [2040 Dev - AM: LS-YD]

Network: 7 [2040 Dev - AM: LS-WS-YD]

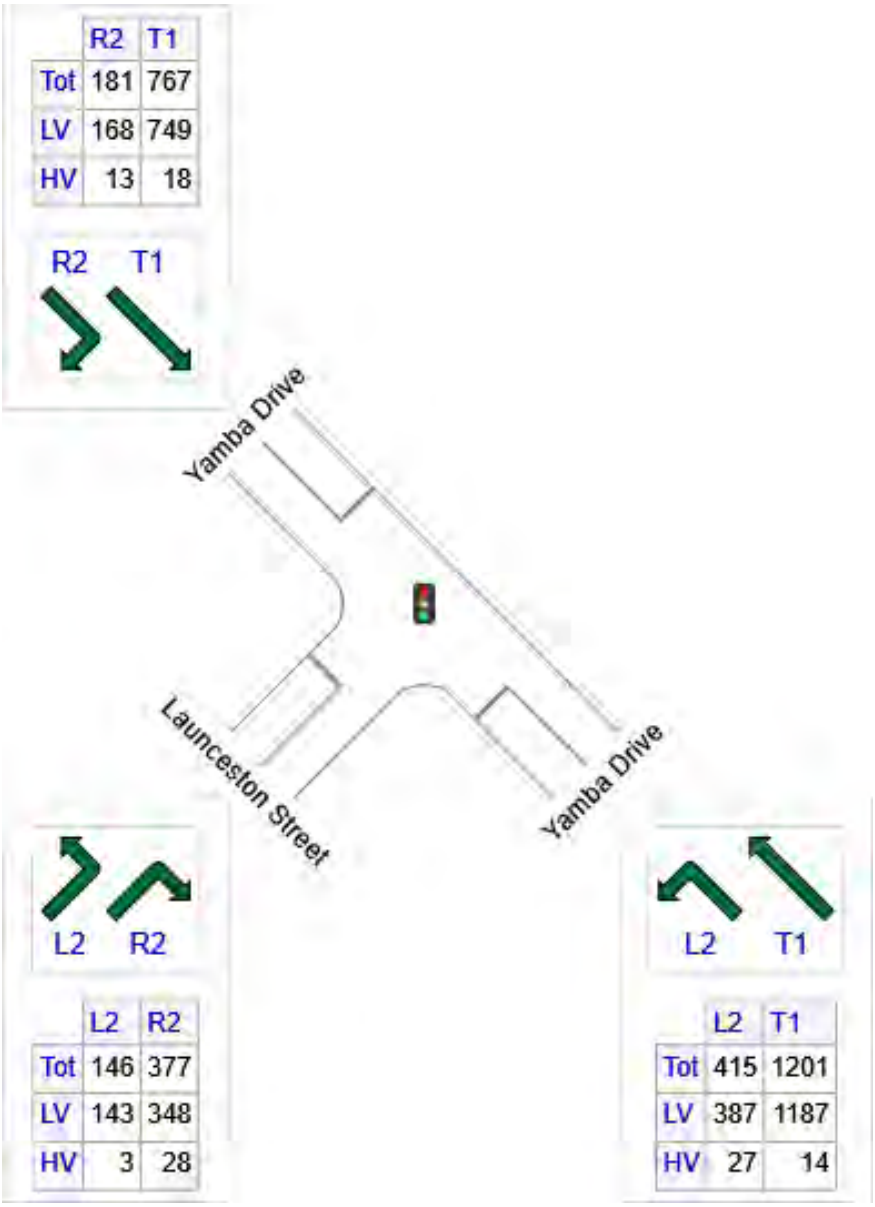
Northwest part of Launceston Street / Wisdom Street / Yamba Drive
Existing Signalised Offset X-Intersection
Site Category: 2040 Development Scenario - Weekday Morning Peak Hour
Signals - Fixed Time Coordinated Cycle Time = 128 seconds (CCG User-Given Phase Times)
Common Control Group: CCG1 [CCG]

Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E
Output Phase Sequence: A, D, E

Site Layout



OD Demand Flows

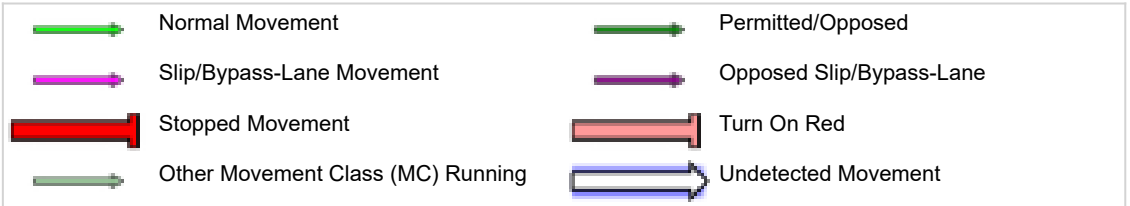


	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
SE: Yamba Drive	1616	1575	41
NW: Yamba Drive	948	918	31
SW: Launceston Street	523	492	32
Total	3087	2984	103

Input Phase Sequence (CCG)

Movement Class: All Movement Classes

REF: Reference Phase
VAR: Variable Phase



Mixed Running & Stopped MCs

Continuous Movement

Other Movement Class (MC) Stopped

Phase Transition Applied

Phase Timing Summary (CCG)

Phase	A	D	E
Phase Change Time (sec)	0	66	93
Green Time (sec)	60	21	29
Phase Time (sec)	66	27	35
Phase Split	52%	21%	27%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Yamba Drive														
4	L2	415	6.6	366	6.5	0.258	4.9	LOS A	0.5	3.7	0.03	0.58	0.03	40.6
5	T1	1201	1.1	1060	1.1	0.584	12.2	LOS B	15.0	106.1	0.42	0.38	0.42	41.8
Approach		1616	2.5	1426[N1]	2.5	0.584	10.3	LOS B	15.0	106.1	0.32	0.43	0.32	41.4
NorthWest: Yamba Drive														
11	T1	767	2.3	767	2.3	0.721	29.6	LOS C	19.4	138.2	0.86	0.77	0.86	20.8
12	R2	181	7.0	181	7.0	0.452	53.6	LOS D	9.8	72.8	0.91	0.81	0.91	20.6
Approach		948	3.2	948	3.2	0.721	34.2	LOS C	19.4	138.2	0.87	0.78	0.87	20.8
SouthWest: Launceston Street														
1	L2	146	2.2	146	2.2	0.080	2.9	LOS A	0.0	0.0	0.00	0.36	0.00	39.5
3	R2	377	7.5	377	7.5	1.103	182.5	LOS F	22.6	168.3	1.00	1.52	2.19	4.7
Approach		523	6.0	523	6.0	1.103	132.2	LOS F	22.6	168.3	0.72	1.20	1.58	7.4
All Vehicles		3087	3.3	2897[N1]	3.6	1.103	40.1	LOS D	22.6	168.3	0.57	0.68	0.73	18.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
SouthEast: Yamba Drive															
Lane 1	415	6.6	366	6.5	1417	0.258	100	4.9	LOS A	0.5	3.7	Short	60	0.0	NA
Lane 2	601	1.1	530	1.1	907	0.584	100	6.4	LOS A	8.6	60.6	Full	65	0.0	0.0
Lane 3	601	1.1	530	1.1	907	0.584	100	18.0	LOS B	15.0[N4]	106.1[N4]	Full	65	0.0	50.0
Approach	1616	2.5	1426[N1]	2.5		0.584		10.3	LOS B	15.0	106.1				
NorthWest: Yamba Drive															
Lane 1	384	2.3	384	2.3	532	0.721	100	29.6	LOS C	19.4	138.2	Full	215	-40.9[N3]	0.0
Lane 2	384	2.3	384	2.3	532	0.721	100	29.6	LOS C	19.4	138.2	Full	215	-40.9[N3]	0.0
Lane 3	181	7.0	181	7.0	401	0.452	100	53.6	LOS D	9.8	72.8	Short	105	0.0	NA
Approach	948	3.2	948	3.2		0.721		34.2	LOS C	19.4	138.2				
SouthWest: Launceston Street															
Lane 1	146	2.2	146	2.2	1829	0.080	100	2.9	LOS A	0.0	0.0	Short	85	0.0	NA
Lane 2	188	7.5	188	7.5	171	1.103	100	182.5	LOS F	22.6	168.3	Full	260	-40.9[N3]	0.0
Lane 3	188	7.5	188	7.5	171	1.103	100	182.5	LOS F	22.6	168.3	Full	260	-40.9[N3]	0.0
Approach	523	6.0	523	6.0		1.103		132.2	LOS F	22.6	168.3				
Intersection	3087	3.3	2897[N1]	3.6		1.103		40.1	LOS D	22.6	168.3				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.
N3 Capacity Adjustment due to downstream lane blockage determined by the program.
N4 Average back of queue has been restricted to the available queue storage space.

Site: [2040 Dev - AM: WS-YD]

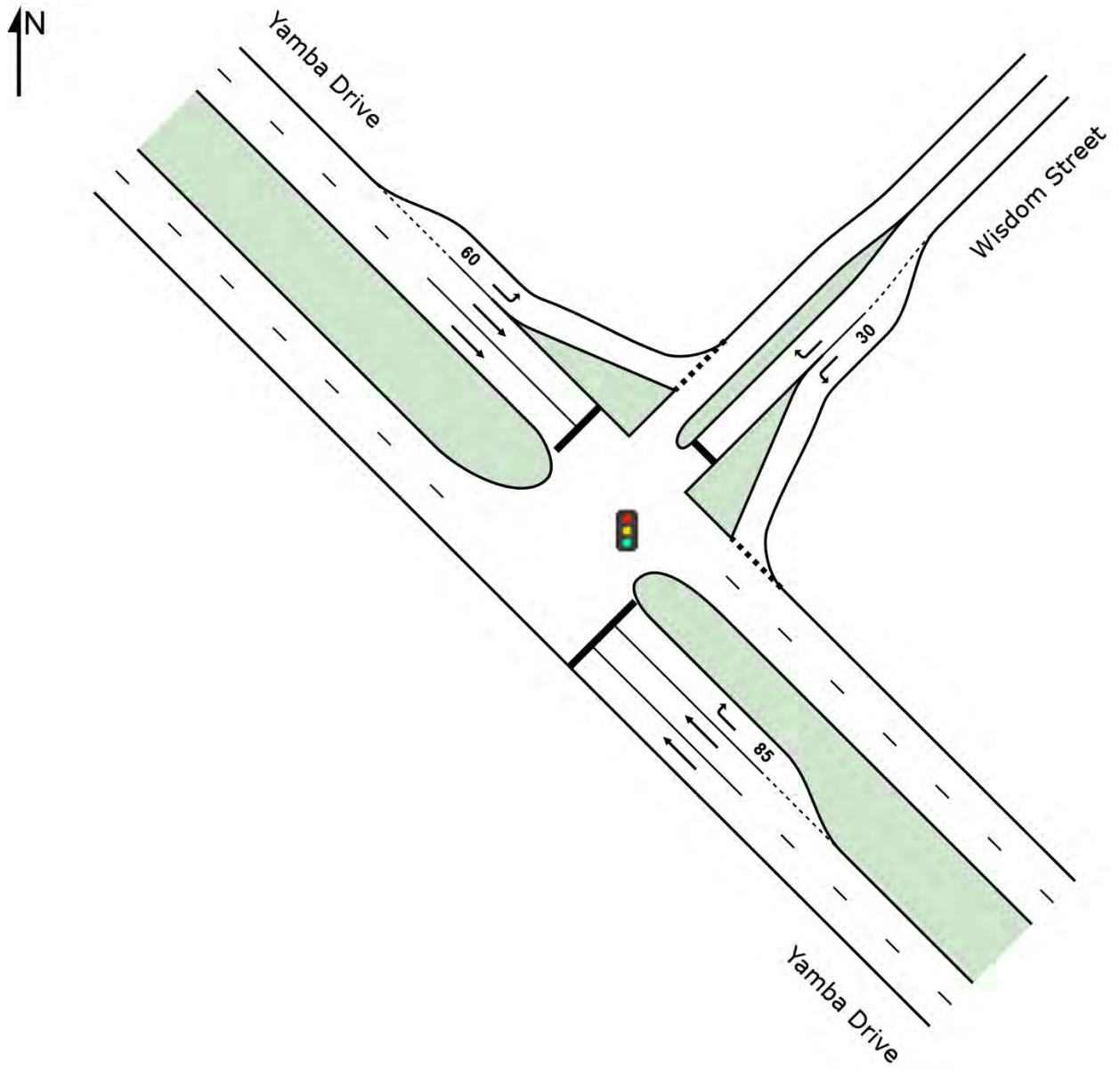
Network: 7 [2040 Dev - AM: LS-WS-YD]

Southeast part of Launceston Street / Wisdom Street / Yamba Drive
Existing Signalised Offset Cross Intersection
Site Category: 2040 Development Scenario - Weekday Morning Peak Hour
Signals - Fixed Time Coordinated Cycle Time = 128 seconds (CCG User-Given Phase Times)
Common Control Group: CCG1 [CCG]

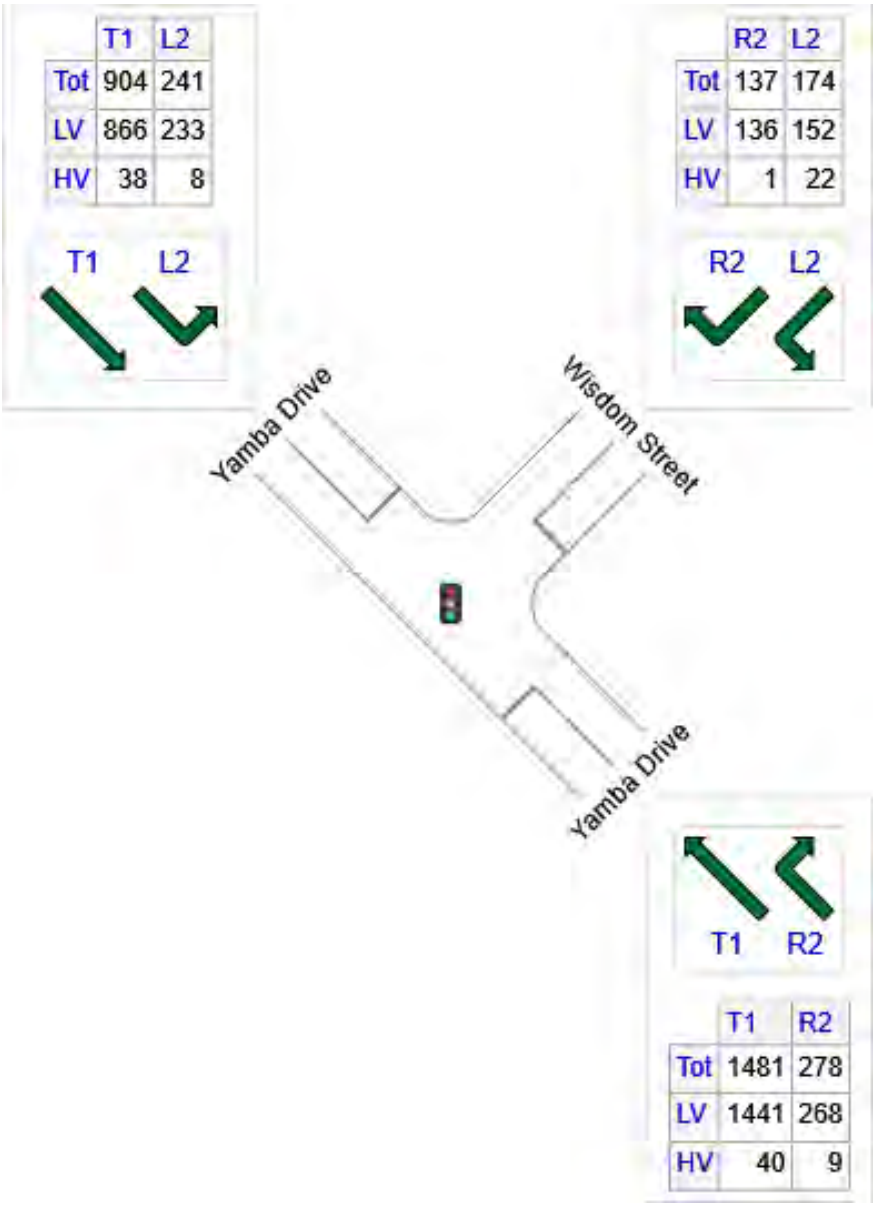
Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E
Output Phase Sequence: A, D, E

Some CCG output elements have been omitted as they have already been included under other Sites belonging to the same CCG.

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
SE: Yamba Drive	1759	1709	49
NE: Wisdom Street	311	287	23
NW: Yamba Drive	1145	1099	46
Total	3215	3096	119

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Yamba Drive														
11	T1	1481	2.7	1481	2.7	1.122	179.0	LOS F	126.6	906.6	1.00	1.67	2.05	12.4
12	R2	278	3.4	278	3.4	0.677	56.1	LOS E	16.0	115.3	0.97	0.84	0.97	34.2
Approach		1759	2.8	1759	2.8	1.122	159.6	LOS F	126.6	906.6	1.00	1.54	1.88	14.9
NorthEast: Wisdom Street														
1	L2	174	12.7	174	12.7	0.174	5.7	LOS A	2.3	18.2	0.28	0.53	0.28	47.1
3	R2	137	0.8	137	0.8	1.040	143.0	LOS F	14.3	100.9	1.00	1.40	2.00	12.1
Approach		311	7.5	311	7.5	1.040	66.2	LOS E	14.3	100.9	0.60	0.91	1.04	26.1
NorthWest: Yamba Drive														
4	L2	241	3.5	233	3.4	0.169	5.9	LOS A	1.3	9.0	0.11	0.61	0.11	39.7
5	T1	904	4.2	873	4.1	0.490	17.9	LOS B	13.3	96.3	0.53	0.47	0.53	53.7
Approach		1145	4.0	1105 N1	3.9	0.490	15.4	LOS B	13.3	96.3	0.44	0.50	0.44	50.1
All Vehicles		3215	3.7	3175 N1	3.7	1.122	100.2	LOS F	126.6	906.6	0.76	1.11	1.29	20.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Lane Use and Performance

	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
SouthEast: Yamba Drive															
Lane 1	1008	2.7	1008	2.7	898	1.122	100	173.9	LOS F	126.6	906.6	Full	735	0.0	24.1
Lane 2	473	2.7	473	2.7	422[1]	1.122	100	189.8	LOS F	63.1	452.3	Full	735	-50.0[N3]	0.0
Lane 3	278	3.4	278	3.4	411	0.677	100	56.1	LOS E	16.0	115.3	Short	85	0.0	NA
Approach	1759	2.8	1759	2.8		1.122		159.6	LOS F	126.6	906.6				
NorthEast: Wisdom Street															
Lane 1	174	12.7	174	12.7	995	0.174	100	5.7	LOS A	2.3	18.2	Short	30	0.0	NA
Lane 2	137	0.8	137	0.8	132[1]	1.040	100	143.0	LOS F	14.3	100.9	Full	680	-50.0[N3]	0.0
Approach	311	7.5	311	7.5		1.040		66.2	LOS E	14.3	100.9				
NorthWest: Yamba Drive															
Lane 1	241	3.5	233	3.4	1375	0.169	100	5.9	LOS A	1.3	9.0	Short	60	0.0	NA
Lane 2	452	4.2	436	4.1	891	0.490	100	17.9	LOS B	13.3	96.3	Full	65	0.0	40.9
Lane 3	452	4.2	436	4.1	891	0.490	100	17.9	LOS B	13.3	96.3	Full	65	0.0	40.9
Approach	1145	4.0	1105[N1]	3.9		0.490		15.4	LOS B	13.3	96.3				
Intersection	3215	3.7	3175[N1]	3.7		1.122		100.2	LOS F	126.6	906.6				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.
N3 Capacity Adjustment due to downstream lane blockage determined by the program.

USER REPORT FOR SITE

Project: 24-0487_20260304

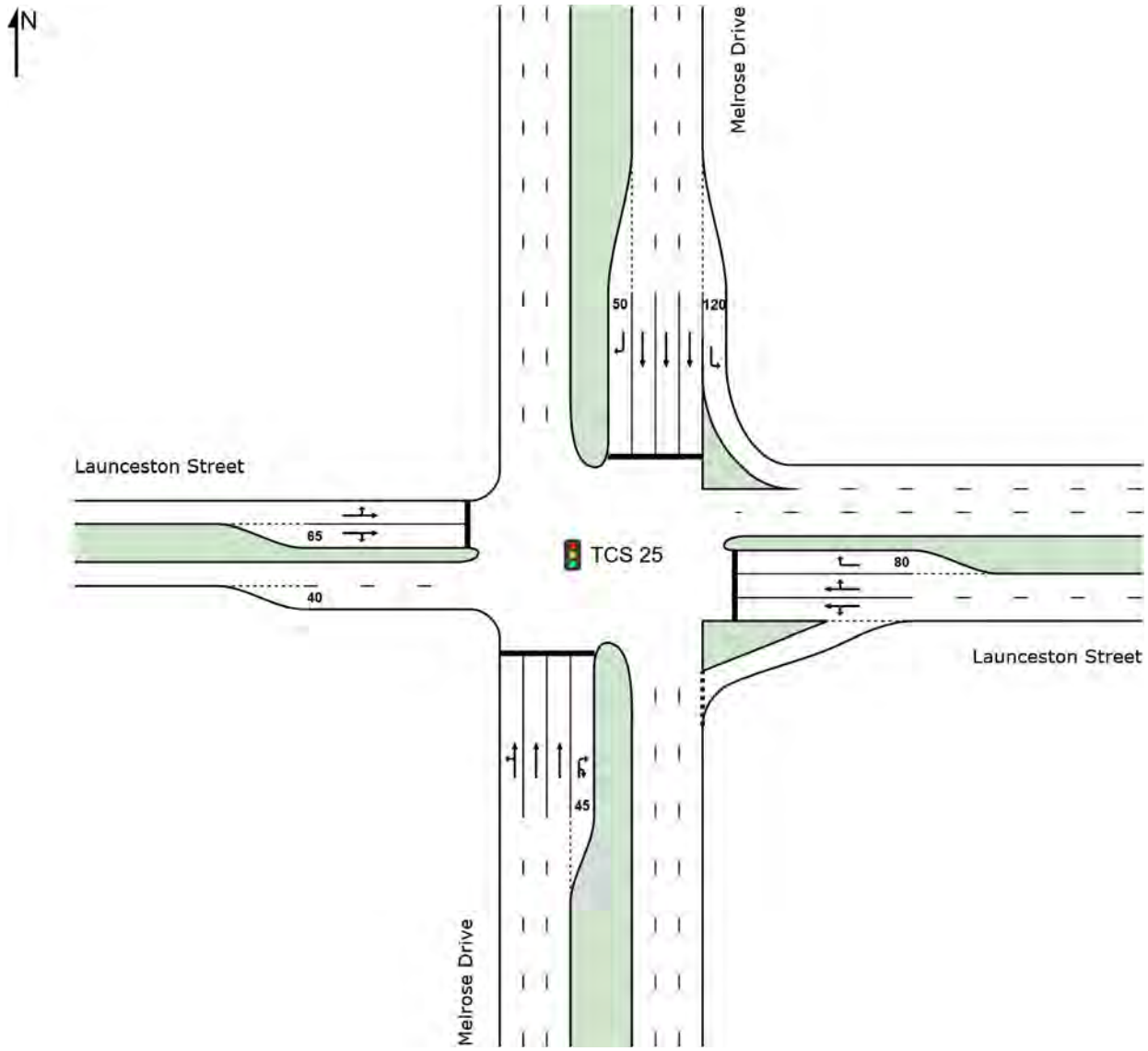
Template: Default Site User Report

Site: TCS 25 [2040 Dev - PM: LS-MD]

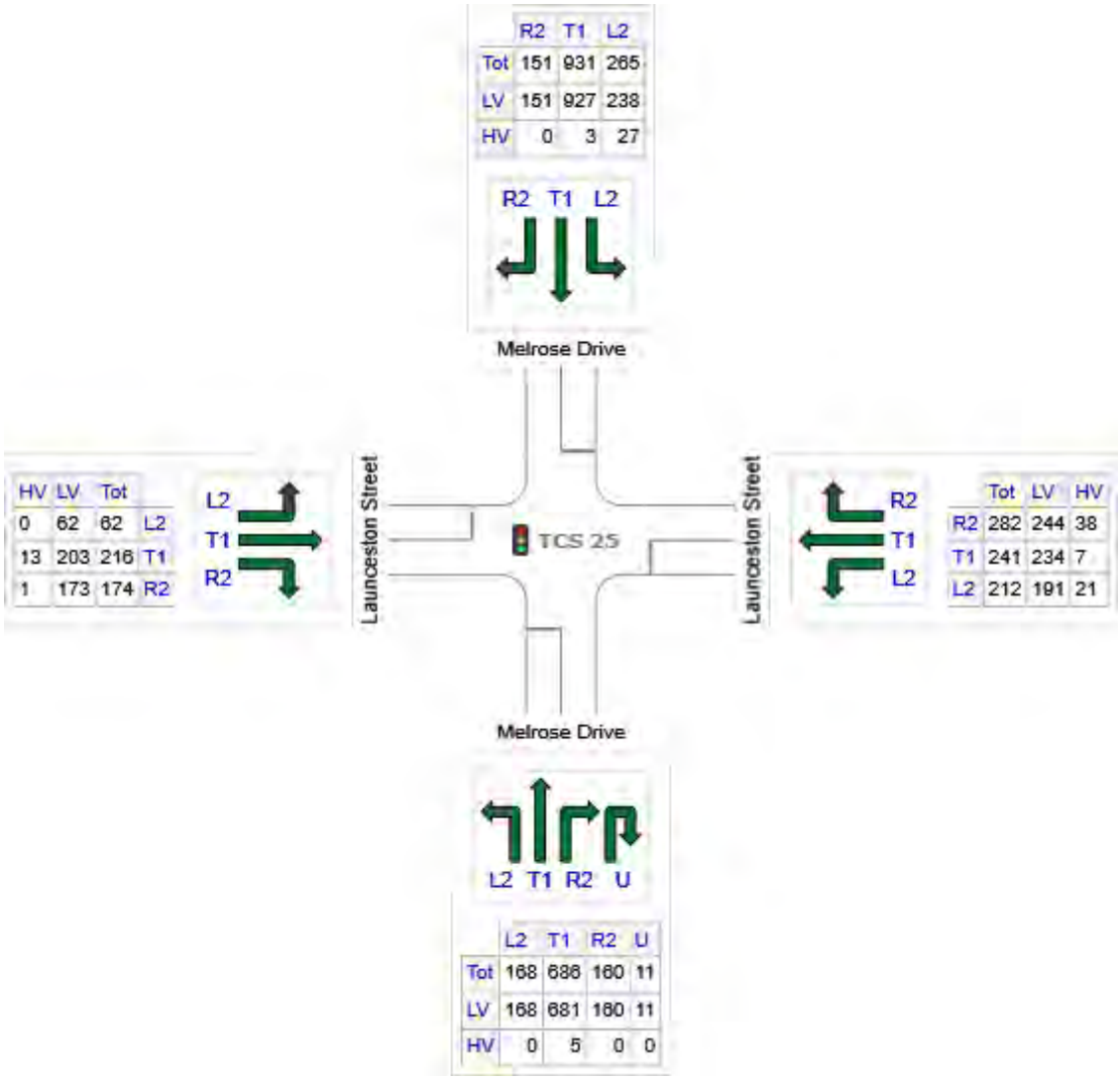
Launceston Street / Melrose Drive
Existing Signalised X-Intersection
Site Category: 2040 Development Scenario - Weekday Evening Peak Hour
Signals - Fixed Time Isolated Cycle Time = 110 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, B, D, E, F
Output Phase Sequence: A, B, D, E, F

Site Layout



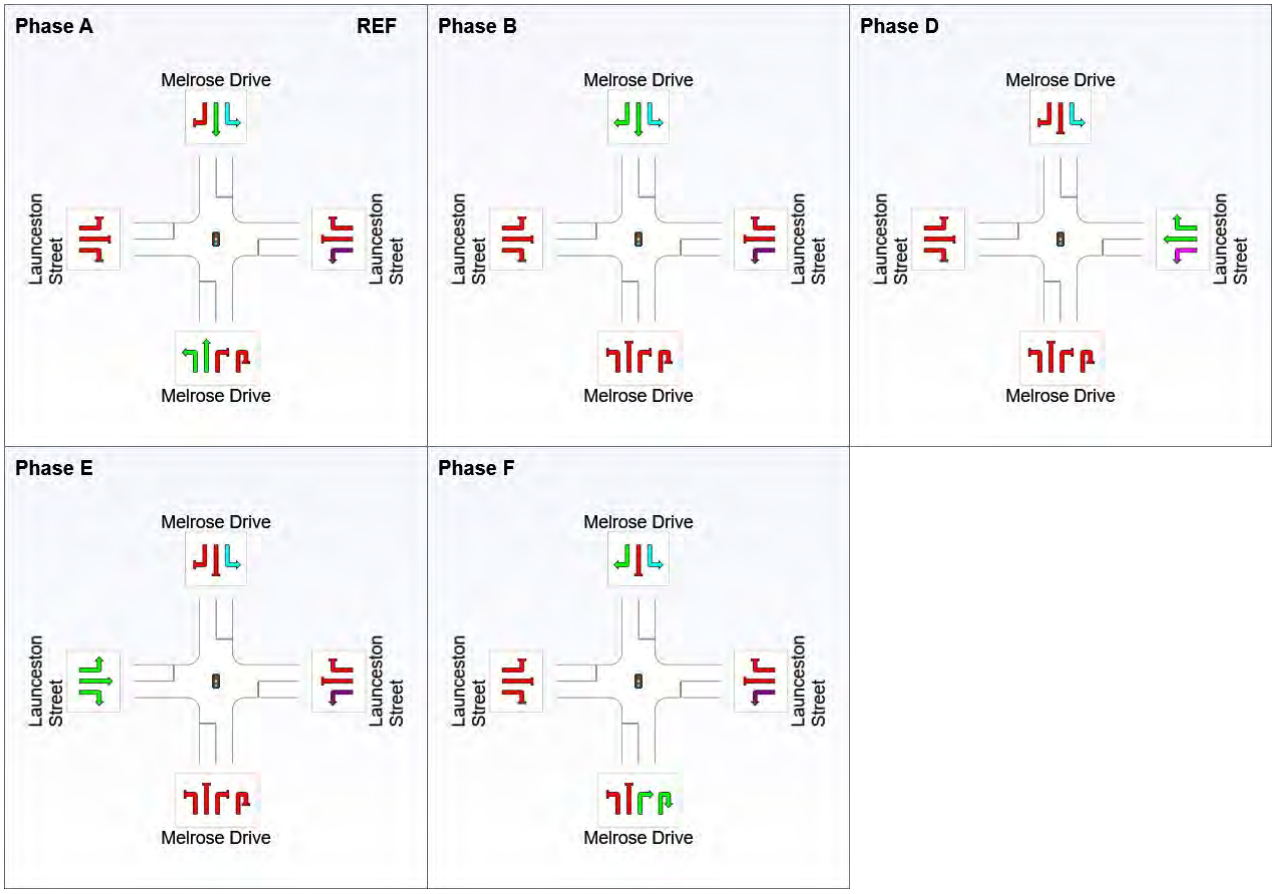
OD Demand Flows



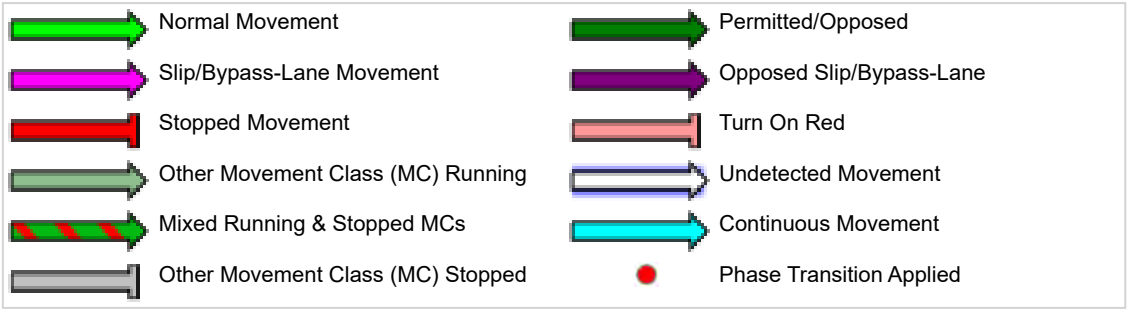
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Melrose Drive	1025	1020	5
E: Launceston Street	735	668	66
N: Melrose Drive	1346	1316	31
W: Launceston Street	452	438	14
Total	3558	3442	116

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	B	D	E	F
Phase Change Time (sec)	0	29	37	60	90
Green Time (sec)	23	2	23	24	14
Phase Time (sec)	29	2	29	30	20
Phase Split	26%	2%	26%	27%	18%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Melrose Drive												
1	L2	168	0.0	1.121	186.7	LOS F	33.1	232.4	1.00	1.61	2.37	5.4
2	T1	686	0.8	1.121	181.2	LOS F	33.9	239.0	1.00	1.61	2.37	11.0
3	R2	160	0.0	1.133	196.2	LOS F	19.8	138.6	1.00	1.49	2.51	4.9
3u	U	11	0.0	1.133	197.6	LOS F	19.8	138.6	1.00	1.49	2.51	6.7
Approach		1025	0.5	1.133	184.6	LOS F	33.9	239.0	1.00	1.59	2.39	9.1
East: Launceston Street												
4	L2	212	10.0	0.375	5.8	LOS A	0.8	6.1	0.08	0.57	0.08	42.4
5	T1	241	3.1	0.703	46.2	LOS D	14.1	102.2	0.98	0.86	1.02	12.7
6	R2	282	13.4	0.703	50.8	LOS D	14.1	102.2	0.98	0.86	1.03	24.3
Approach		735	9.0	0.703	36.3	LOS C	14.1	102.2	0.72	0.77	0.75	22.9
North: Melrose Drive												
7	L2	265	10.3	0.153	5.7	LOS A	0.0	0.0	0.00	0.52	0.00	49.2
8	T1	931	0.3	0.602	36.6	LOS C	15.4	108.1	0.91	0.78	0.91	32.0
9	R2	151	0.0	0.557	40.7	LOS C	5.9	41.4	0.98	0.82	1.09	27.2
Approach		1346	2.3	0.602	31.0	LOS C	15.4	108.1	0.74	0.73	0.75	33.5
West: Launceston Street												
10	L2	62	0.0	0.555	46.3	LOS D	11.0	79.7	0.94	0.79	0.94	26.0
11	T1	216	5.9	0.555	41.8	LOS C	11.0	79.7	0.94	0.80	0.94	13.4
12	R2	174	0.6	0.555	46.3	LOS D	10.9	77.4	0.94	0.81	0.94	17.3
Approach		452	3.0	0.555	44.1	LOS D	11.0	79.7	0.94	0.80	0.94	17.2
All Vehicles		3558	3.3	1.133	78.0	LOS F	33.9	239.0	0.84	1.00	1.25	17.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	Demand Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	95% Back of Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Melrose Drive													
Lane 1	288	0.3	257	1.121	100	184.4	LOS F	33.1	232.4	Full	205	0.0	16.3
Lane 2	296	0.8	264	1.121	100	180.8	LOS F	33.9	239.0	Full	205	0.0	18.9
Lane 3	271	0.8	242[1]	1.121	100	181.7	LOS F	31.2	219.6	Full	205	0.0	11.2
Lane 4	171	0.0	151	1.133	100	196.3	LOS F	19.8	138.6	Short	45	0.0	NA
Approach	1025	0.5		1.133		184.6	LOS F	33.9	239.0				
East: Launceston Street													
Lane 1	212	10.0	564	0.375	53[5]	5.8	LOS A	0.8	6.1	Full	90	0.0	0.0
Lane 2	274	4.3	389	0.703	100	46.7	LOS D	14.1	102.2	Full	90	0.0	16.5
Lane 3	249	13.4	354	0.703	100	50.9	LOS D	12.9	100.7	Short	80	0.0	NA
Approach	735	9.0		0.703		36.3	LOS C	14.1	102.2				
North: Melrose Drive													
Lane 1	265	10.3	1730	0.153	100	5.7	LOS A	0.0	0.0	Short	120	0.0	NA
Lane 2	330	0.3	548	0.602	100	37.0	LOS C	15.4	108.1	Full	470	0.0	0.0
Lane 3	330	0.3	548	0.602	100	37.0	LOS C	15.4	108.1	Full	470	0.0	0.0
Lane 4	271	0.3	450[1]	0.602	100	35.6	LOS C	12.2	85.4	Full	470	0.0	0.0
Lane 5	151	0.0	270	0.557	100	40.7	LOS C	5.9	41.4	Short	50	0.0	NA
Approach	1346	2.3		0.602		31.0	LOS C	15.4	108.1				
West: Launceston Street													
Lane 1	227	4.3	409	0.555	100	43.0	LOS D	11.0	79.7	Full	95	0.0	0.0
Lane 2	225	1.8	405	0.555	100	45.3	LOS D	10.9	77.4	Short	65	0.0	NA
Approach	452	3.0		0.555		44.1	LOS D	11.0	79.7				
Intersection	3558	3.3		1.133		78.0	LOS F	33.9	239.0				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

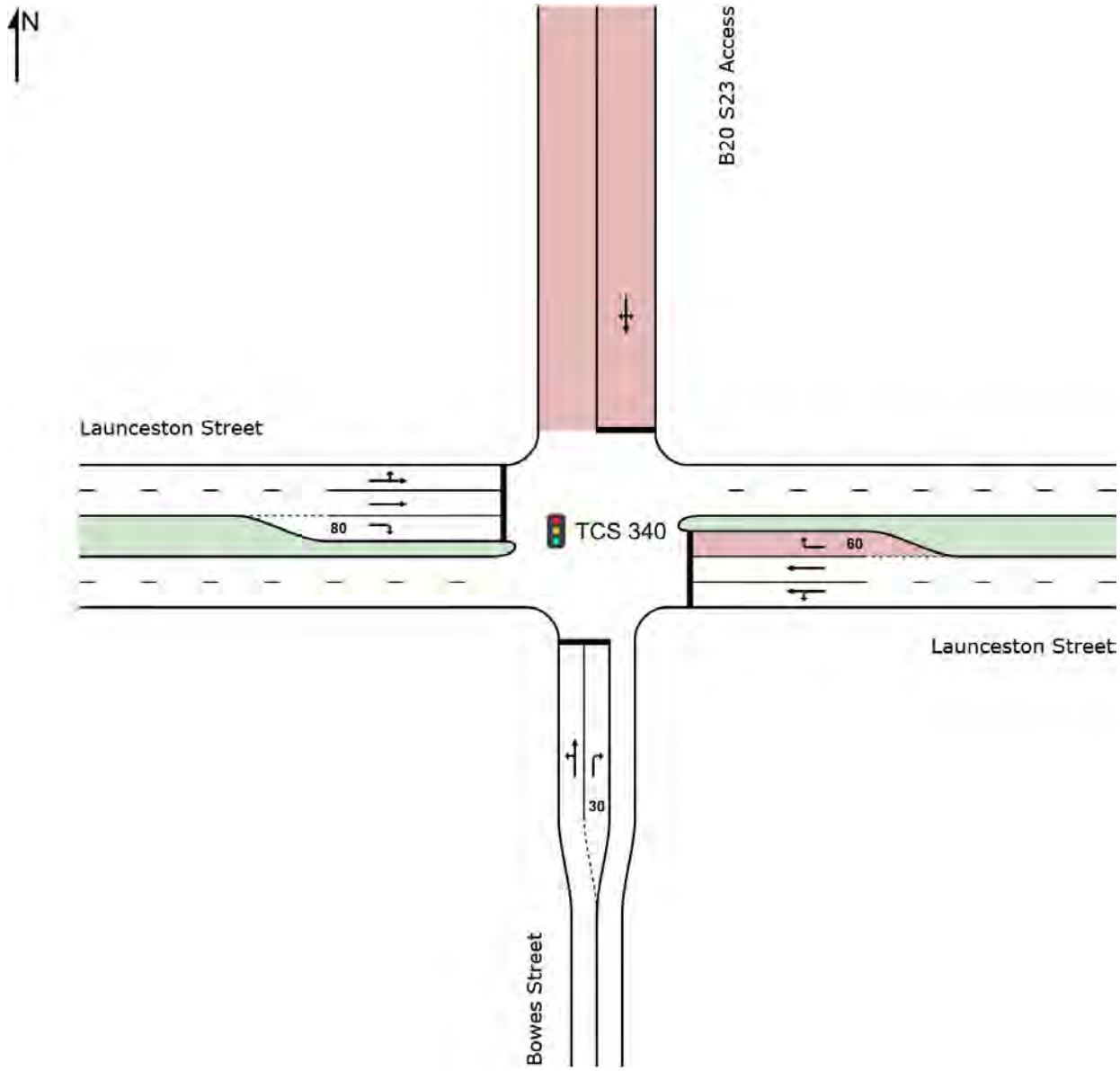
1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
5 Lane under-utilisation found by the program

Site: TCS 340 [2040 Dev - PM: BS-LS]

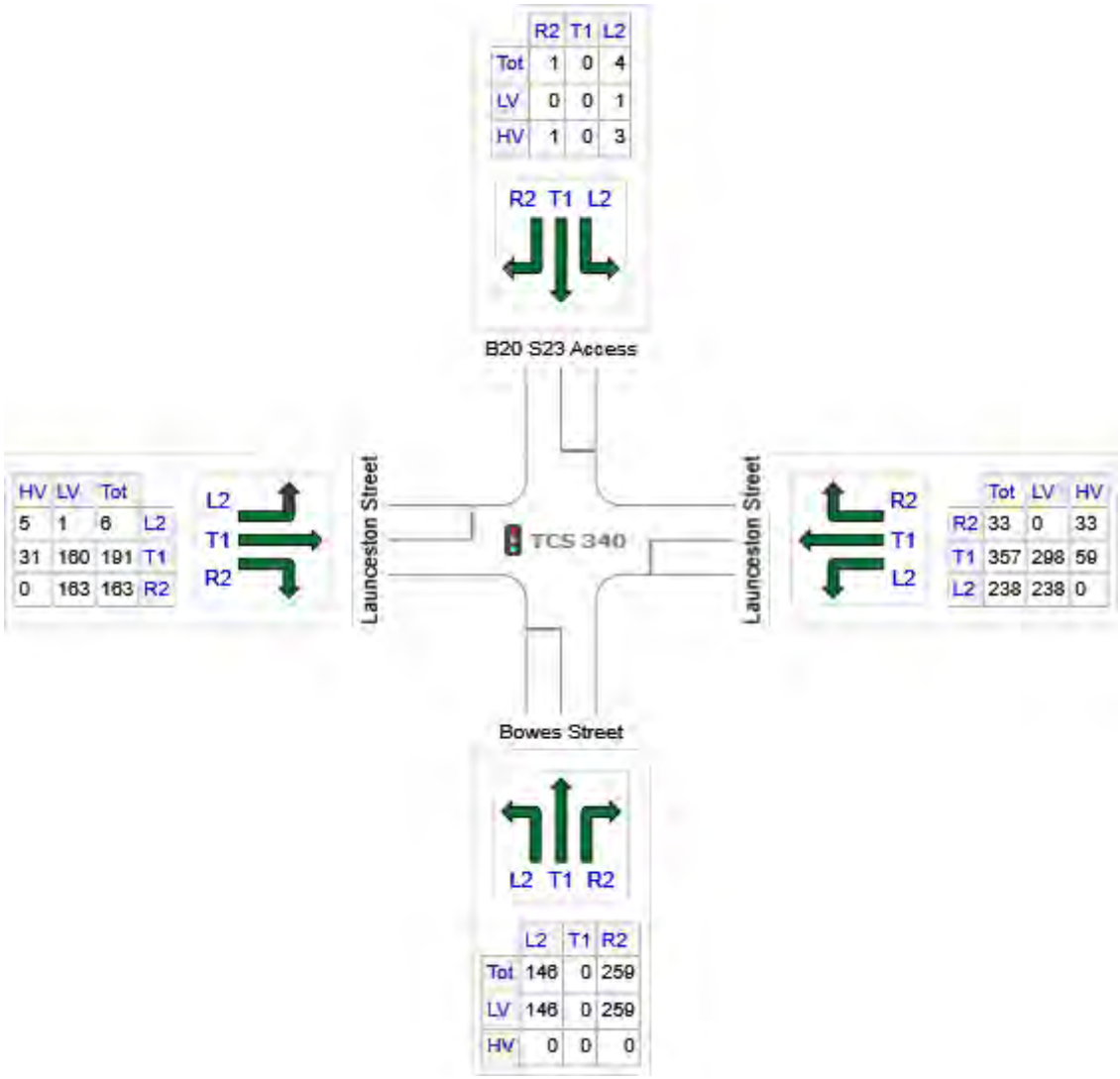
Block 20 Section 23 Access / Bowes Street / Launceston Street
Existing Signalised X-Intersection
Site Category: 2040 Development Scenario - Weekday Evening Peak Hour
Signals - Fixed Time Isolated Cycle Time = 89 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E, G
Output Phase Sequence: A, D, E, G

Site Layout



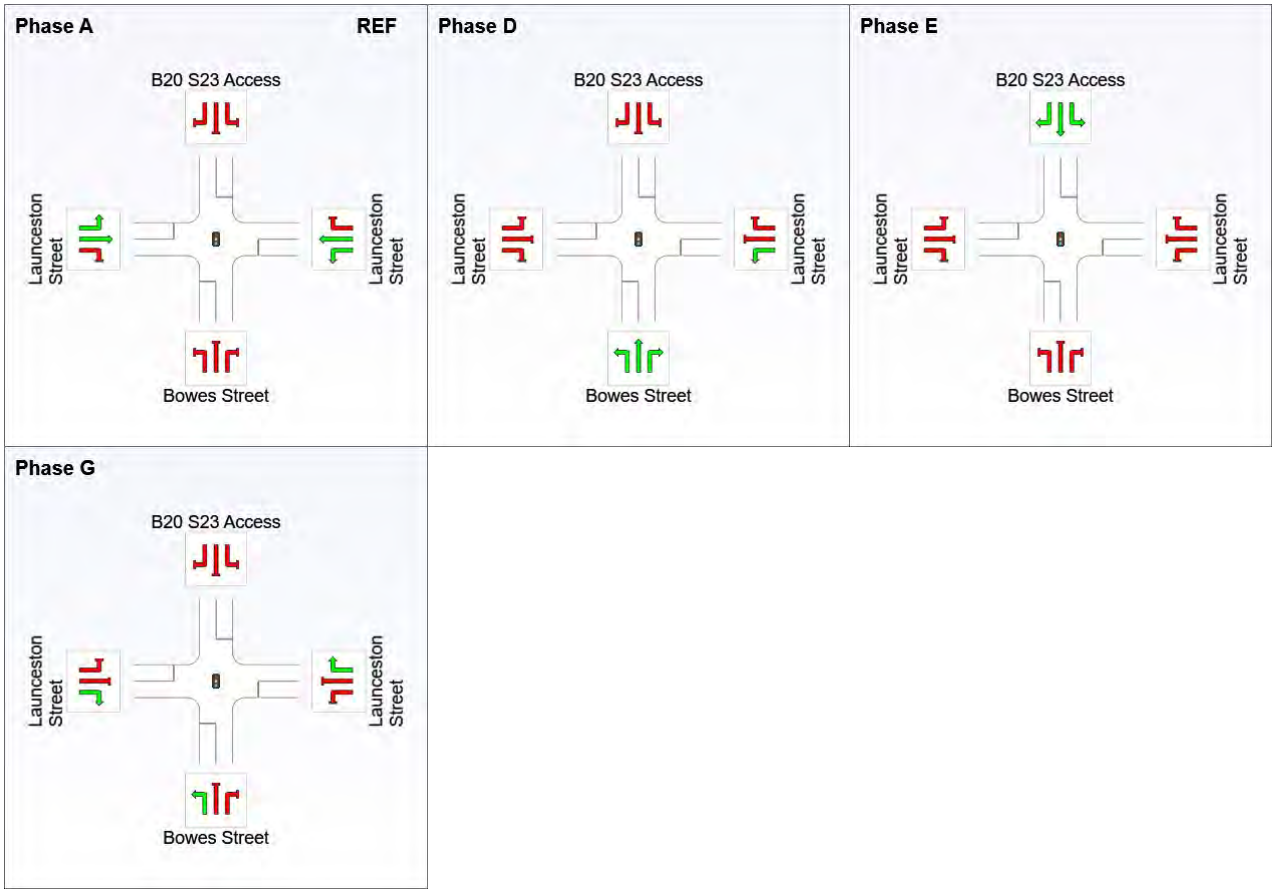
OD Demand Flows



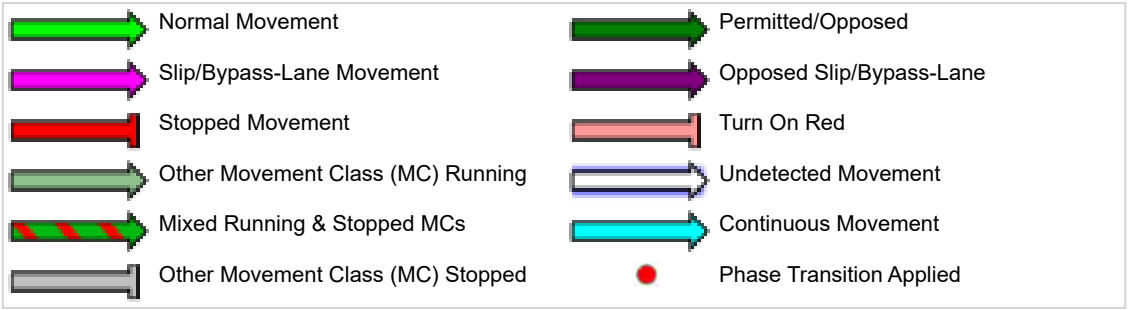
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	405	405	0
E: Launceston Street	627	536	92
N: B20 S23 Access	5	1	4
W: Launceston Street	360	324	36
Total	1398	1266	132

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	D	E	G
Phase Change Time (sec)	0	30	63	76
Green Time (sec)	24	27	7	10
Phase Time (sec)	30	33	10	16
Phase Split	34%	37%	11%	18%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	146	0.0	0.185	13.1	LOS A	2.7	19.1	0.66	0.70	0.66	22.7
2	T1	0	0.0	0.185	13.5	LOS A	2.7	19.1	0.66	0.70	0.66	13.1
3	R2	259	0.0	0.508	30.5	LOS C	9.2	64.4	0.86	0.79	0.86	12.4
Approach		405	0.0	0.508	24.2	LOS B	9.2	64.4	0.79	0.76	0.79	14.9
East: Launceston Street												
4	L2	238	0.0	0.555	32.4	LOS C	12.0	87.0	0.88	0.80	0.88	12.6
5	T1	357	16.5	0.555	29.6	LOS C	12.0	87.0	0.90	0.78	0.90	17.9
6	R2	33	100.0	0.268	48.2	LOS D	1.4	18.2	0.95	0.74	0.95	8.6
Approach		627	14.6	0.555	31.6	LOS C	12.0	87.0	0.90	0.79	0.90	15.3
North: B20 S23 Access												
7	L2	4	75.0	0.053	43.5	LOS D	0.2	2.7	0.95	0.63	0.95	8.2
8	T1	0	100.0	0.053	43.5	LOS D	0.2	2.7	0.95	0.63	0.95	5.3
9	R2	1	100.0	0.053	43.5	LOS D	0.2	2.7	0.95	0.63	0.95	8.8
Approach		5	80.4	0.053	43.5	LOS D	0.2	2.7	0.95	0.63	0.95	8.3
West: Launceston Street												
10	L2	6	83.3	0.263	34.1	LOS C	3.4	27.8	0.83	0.67	0.83	13.5
11	T1	191	16.0	0.263	28.1	LOS B	3.5	27.8	0.83	0.67	0.83	19.1
12	R2	163	0.0	0.977	81.2	LOS F	10.2	71.4	1.00	1.18	1.91	6.0
Approach		360	9.9	0.977	52.3	LOS D	10.2	71.4	0.91	0.90	1.32	10.5
All Vehicles		1398	9.4	0.977	34.8	LOS C	12.0	87.0	0.87	0.81	0.97	13.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	Demand Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	95% Back of Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Bowes Street													
Lane 1	146	0.0	792	0.185	100	13.1	LOS A	2.7	19.1	Full	35	0.0	61.4[8]
Lane 2	259	0.0	509[1]	0.508	100	30.5	LOS C	9.2	64.4	Short	30	0.0	NA
Approach	405	0.0		0.508		24.2	LOS B	9.2	64.4				
East: Launceston Street													
Lane 1	331	4.6	596	0.555	100	30.8	LOS C	12.0	87.0	Full	95	0.0	0.0
Lane 2	264	16.5	475	0.555	100	30.6	LOS C	10.0	80.1	Full	95	0.0	0.0
Lane 3	33	100.0	122	0.268	100	48.2	LOS D	1.4	18.2	Short	60	0.0	NA
Approach	627	14.6		0.555		31.6	LOS C	12.0	87.0				
North: B20 S23 Access													
Lane 1	5	80.4	101	0.053	100	43.5	LOS D	0.2	2.7	Full	30	0.0	0.0
Approach	5	80.4		0.053		43.5	LOS D	0.2	2.7				
West: Launceston Street													
Lane 1	97	20.4	369	0.263	100	28.5	LOS C	3.4	27.8	Full	105	0.0	0.0
Lane 2	100	16.0	381	0.263	100	28.1	LOS B	3.5	27.8	Full	105	0.0	0.0
Lane 3	163	0.0	167	0.977	100	81.2	LOS F	10.2	71.4	Short	80	0.0	NA
Approach	360	9.9		0.977		52.3	LOS D	10.2	71.4				
Intersection	1398	9.4		0.977		34.8	LOS C	12.0	87.0				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

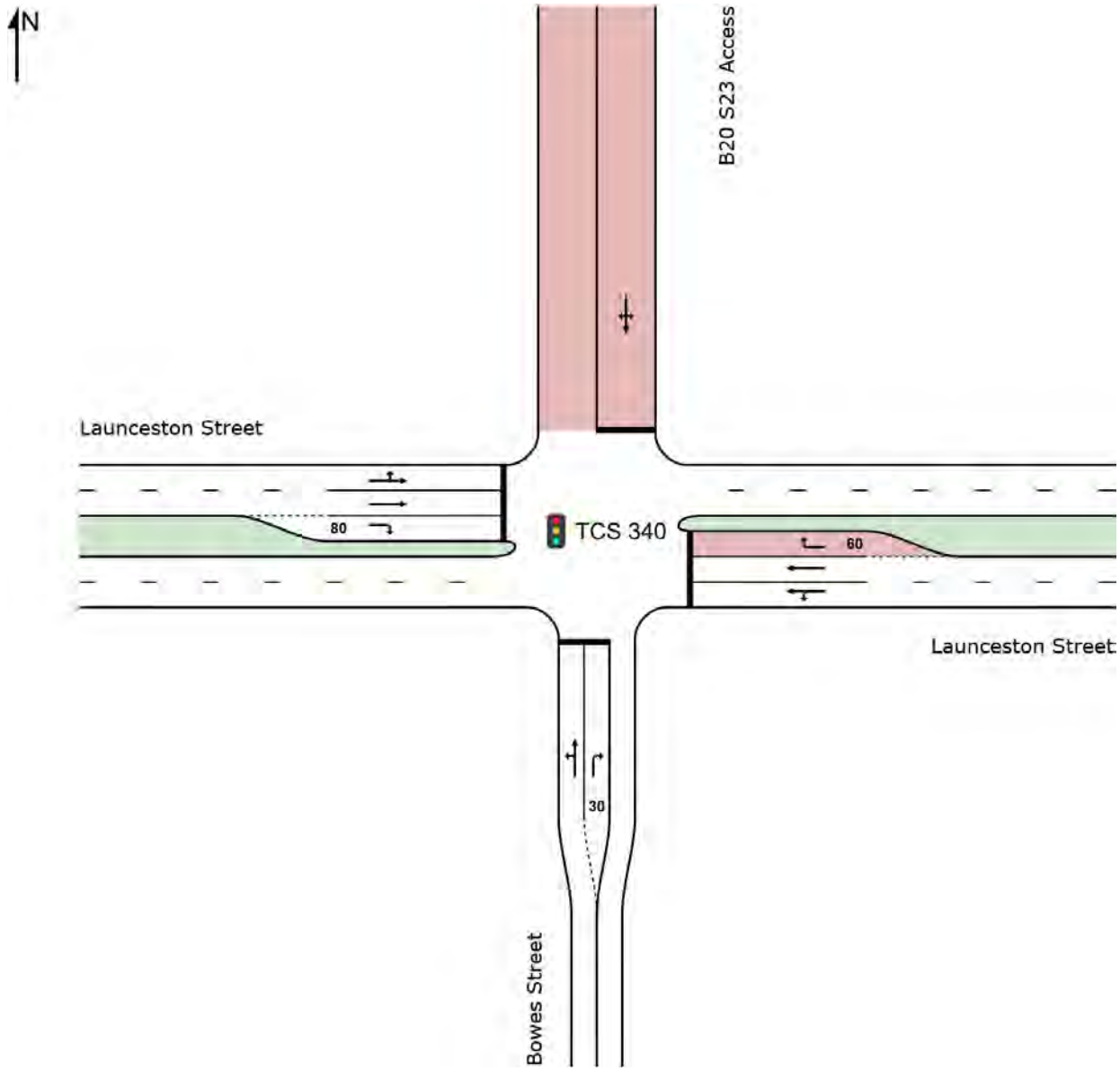
1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
8 Probability of Blockage has been set on the basis of a queue that overflows from a short lane.

Site: TCS 340 [2040 Dev - PM: BS-LS (Rec)]

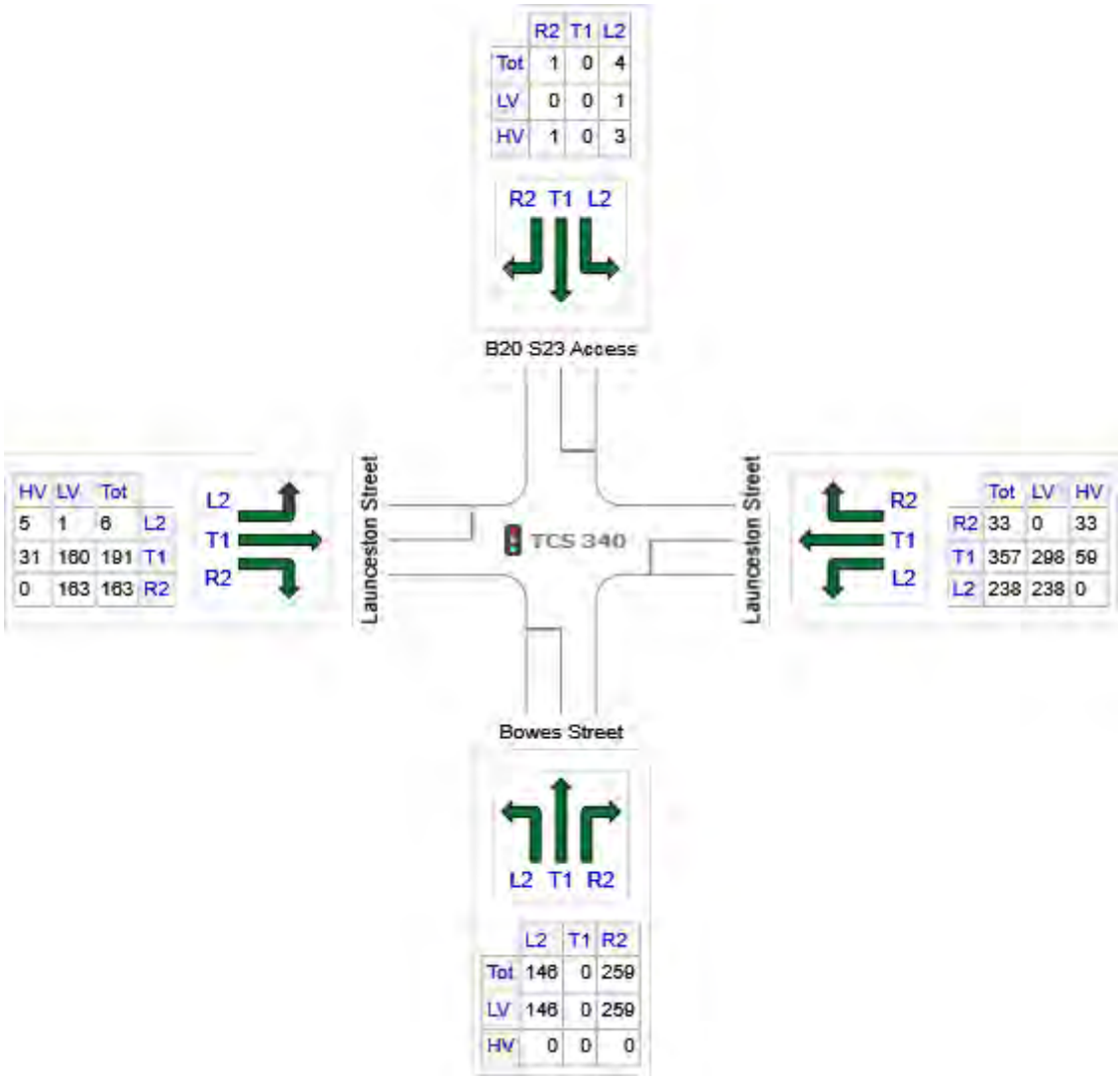
Block 20 Section 23 Access / Bowes Street / Launceston Street
Existing Signalised X-Intersection
Site Category: 2040 Development Scenario - Weekday Evening Peak Hour
Signals - Fixed Time Isolated Cycle Time = 89 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E, G
Output Phase Sequence: A, D, E, G

Site Layout



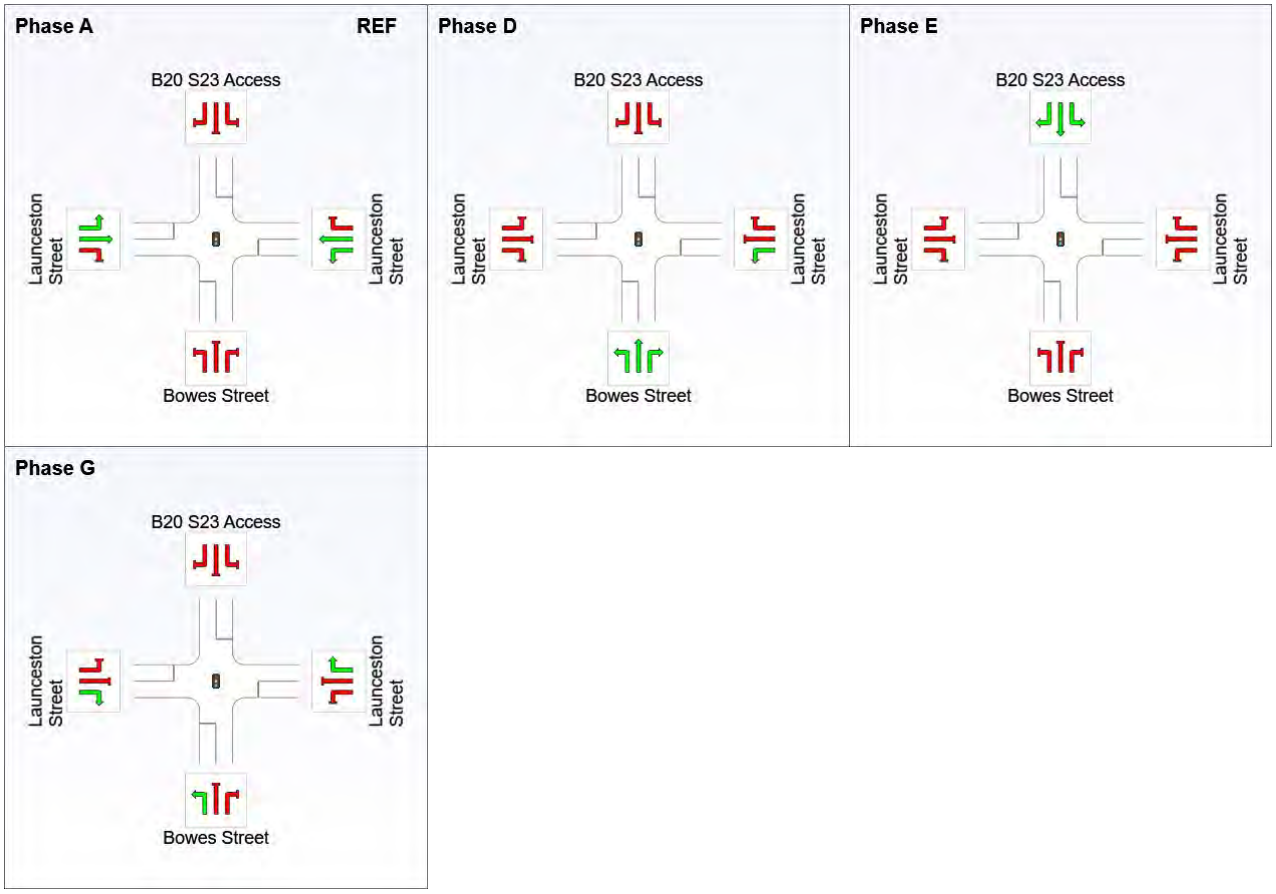
OD Demand Flows



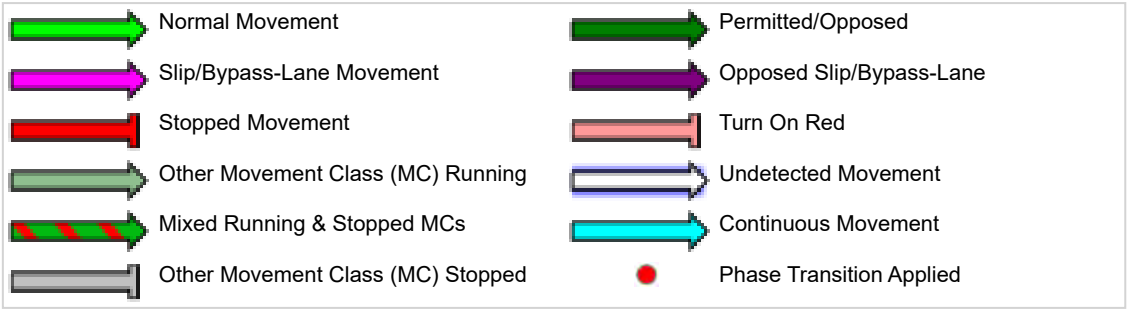
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	405	405	0
E: Launceston Street	627	536	92
N: B20 S23 Access	5	1	4
W: Launceston Street	360	324	36
Total	1398	1266	132

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	D	E	G
Phase Change Time (sec)	0	30	62	75
Green Time (sec)	24	26	7	11
Phase Time (sec)	30	32	10	17
Phase Split	34%	36%	11%	19%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	146	0.0	0.185	13.1	LOS A	2.7	19.1	0.66	0.70	0.66	22.7
2	T1	0	0.0	0.185	13.5	LOS A	2.7	19.1	0.66	0.70	0.66	13.1
3	R2	259	0.0	0.532	31.4	LOS C	9.4	65.6	0.87	0.80	0.87	12.1
Approach		405	0.0	0.532	24.8	LOS B	9.4	65.6	0.79	0.76	0.79	14.7
East: Launceston Street												
4	L2	238	0.0	0.555	32.4	LOS C	12.0	87.0	0.88	0.80	0.88	12.6
5	T1	357	16.5	0.555	29.6	LOS C	12.0	87.0	0.90	0.78	0.90	17.9
6	R2	33	100.0	0.244	46.8	LOS D	1.4	17.9	0.94	0.74	0.94	8.8
Approach		627	14.6	0.555	31.6	LOS C	12.0	87.0	0.89	0.79	0.89	15.3
North: B20 S23 Access												
7	L2	4	75.0	0.053	43.5	LOS D	0.2	2.7	0.95	0.63	0.95	8.2
8	T1	0	100.0	0.053	43.5	LOS D	0.2	2.7	0.95	0.63	0.95	5.3
9	R2	1	100.0	0.053	43.5	LOS D	0.2	2.7	0.95	0.63	0.95	8.8
Approach		5	80.4	0.053	43.5	LOS D	0.2	2.7	0.95	0.63	0.95	8.3
West: Launceston Street												
10	L2	6	83.3	0.263	34.1	LOS C	3.4	27.8	0.83	0.67	0.83	13.5
11	T1	191	16.0	0.263	28.1	LOS B	3.5	27.8	0.83	0.67	0.83	19.1
12	R2	163	0.0	0.889	60.1	LOS E	8.5	59.6	1.00	1.02	1.52	7.8
Approach		360	9.9	0.889	42.7	LOS D	8.5	59.6	0.91	0.83	1.14	12.4
All Vehicles		1398	9.4	0.889	32.5	LOS C	12.0	87.0	0.87	0.79	0.93	14.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	Demand Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	95% Back of Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Bowes Street													
Lane 1	146	0.0	792	0.185	100	13.1	LOS A	2.7	19.1	Full	35	0.0	63.0[8]
Lane 2	259	0.0	487[1]	0.532	100	31.4	LOS C	9.4	65.6	Short	30	0.0	NA
Approach	405	0.0		0.532		24.8	LOS B	9.4	65.6				
East: Launceston Street													
Lane 1	331	4.6	596	0.555	100	30.8	LOS C	12.0	87.0	Full	95	0.0	0.0
Lane 2	264	16.5	475	0.555	100	30.6	LOS C	10.0	80.1	Full	95	0.0	0.0
Lane 3	33	100.0	134	0.244	100	46.8	LOS D	1.4	17.9	Short	60	0.0	NA
Approach	627	14.6		0.555		31.6	LOS C	12.0	87.0				
North: B20 S23 Access													
Lane 1	5	80.4	101	0.053	100	43.5	LOS D	0.2	2.7	Full	30	0.0	0.0
Approach	5	80.4		0.053		43.5	LOS D	0.2	2.7				
West: Launceston Street													
Lane 1	97	20.4	369	0.263	100	28.5	LOS C	3.4	27.8	Full	105	0.0	0.0
Lane 2	100	16.0	381	0.263	100	28.1	LOS B	3.5	27.8	Full	105	0.0	0.0
Lane 3	163	0.0	184	0.889	100	60.1	LOS E	8.5	59.6	Short	80	0.0	NA
Approach	360	9.9		0.889		42.7	LOS D	8.5	59.6				
Intersection	1398	9.4		0.889		32.5	LOS C	12.0	87.0				

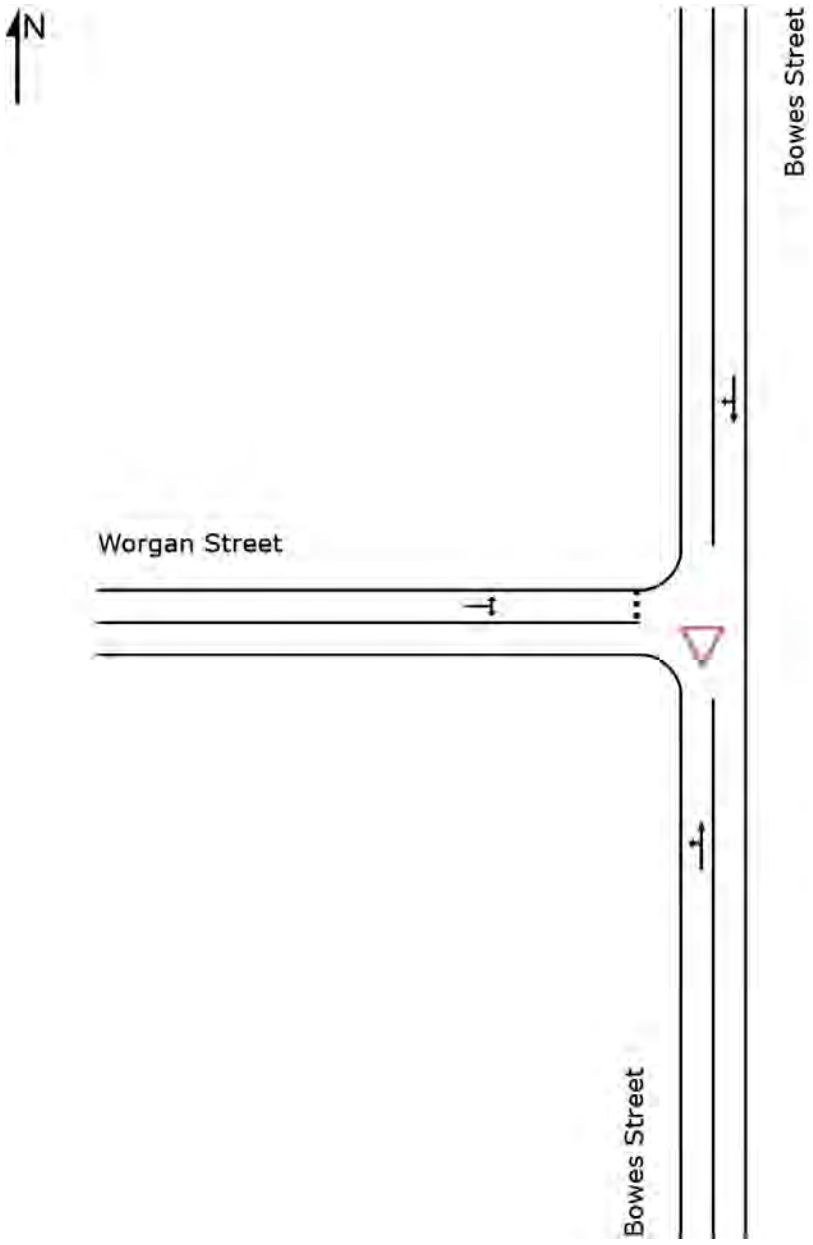
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
8 Probability of Blockage has been set on the basis of a queue that overflows from a short lane.

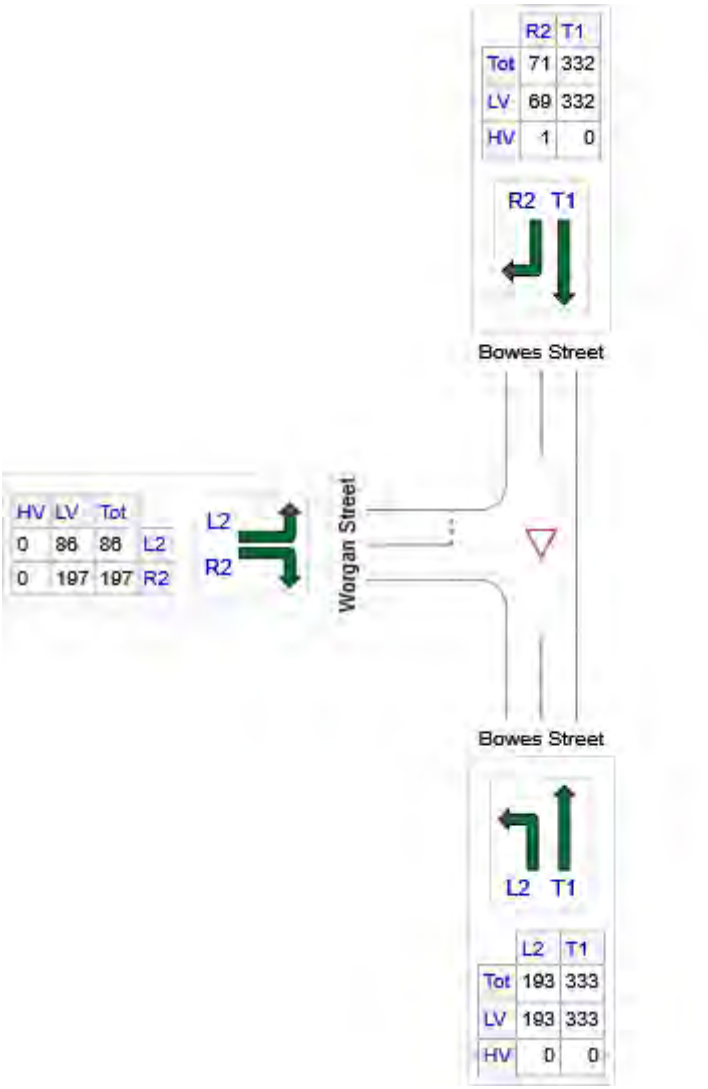
Site: [2040 Dev - PM: BS-WS]

Bowes Street / Worgan Street
Existing Priority-Controlled (Give-Way) T-Intersection
Site Category: 2040 Development Scenario - Weekday Evening Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	525	525	0
N: Bowes Street	402	401	1
W: Worgan Street	283	283	0
Total	1211	1209	1

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	193	0.0	0.274	4.6	LOS A	0.0	0.0	0.00	0.20	0.00	32.6
2	T1	333	0.0	0.274	0.0	LOS A	0.0	0.0	0.00	0.20	0.00	43.3
Approach		525	0.0	0.274	1.7	NA	0.0	0.0	0.00	0.20	0.00	38.7
North: Bowes Street												
8	T1	332	0.0	0.240	0.9	LOS A	0.7	5.0	0.23	0.11	0.23	43.1
9	R2	71	1.5	0.240	5.9	LOS A	0.7	5.0	0.23	0.11	0.23	16.9
Approach		402	0.3	0.240	1.7	NA	0.7	5.0	0.23	0.11	0.23	37.2
West: Worgan Street												
10	L2	86	0.0	0.401	5.5	LOS A	2.0	13.9	0.57	0.83	0.77	16.5
12	R2	197	0.0	0.401	9.2	LOS A	2.0	13.9	0.57	0.83	0.77	26.8
Approach		283	0.0	0.401	8.0	LOS A	2.0	13.9	0.57	0.83	0.77	23.9
All Vehicles		1211	0.1	0.401	3.2	NA	2.0	13.9	0.21	0.32	0.26	33.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

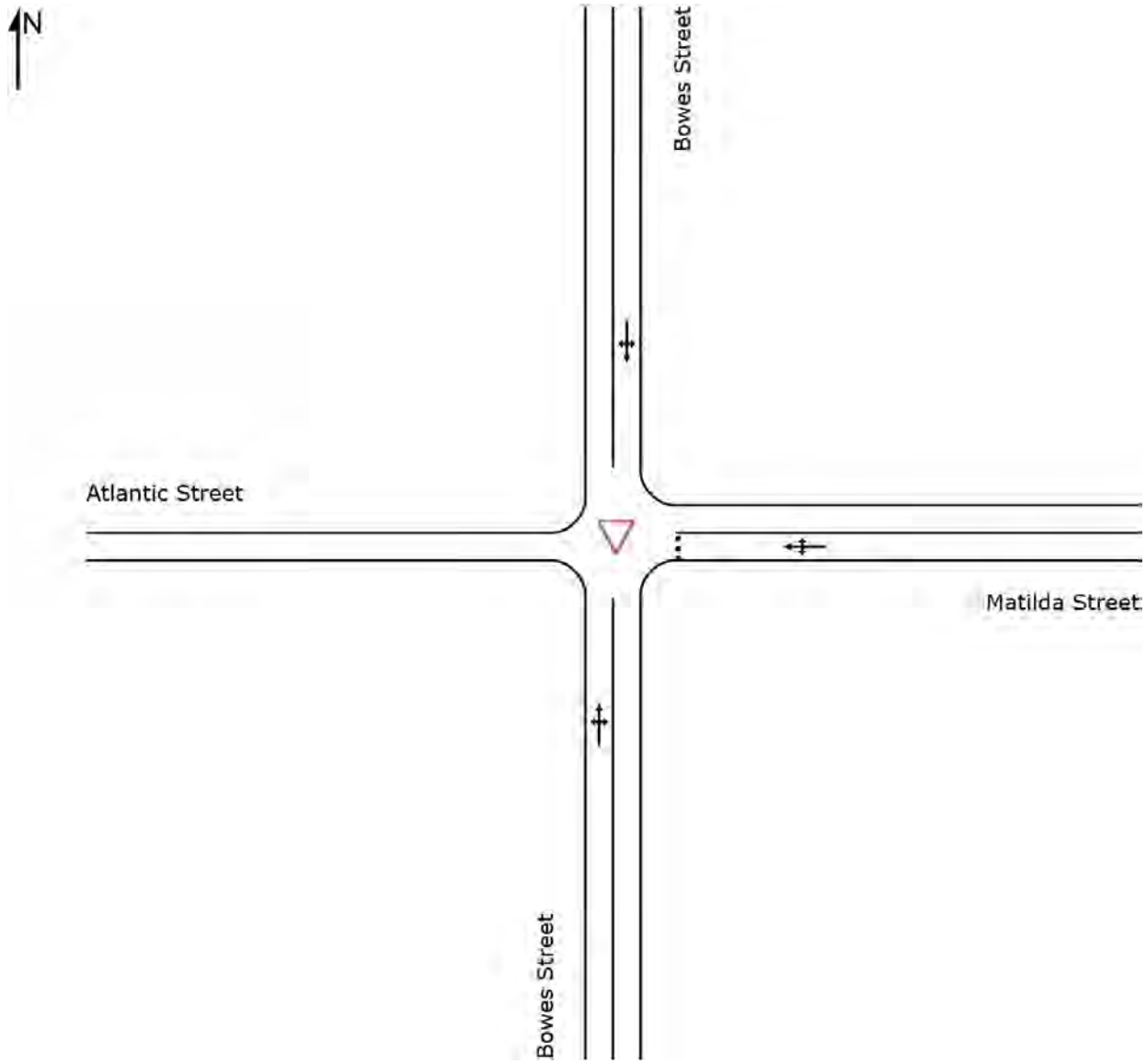
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Bowes Street													
Lane 1	525	0.0	1915	0.274	100	1.7	LOS A	0.0	0.0	Full	105	0.0	0.0
Approach	525	0.0		0.274		1.7	NA	0.0	0.0				
North: Bowes Street													
Lane 1	402	0.3	1675	0.240	100	1.7	LOS A	0.7	5.0	Full	35	0.0	0.0
Approach	402	0.3		0.240		1.7	NA	0.7	5.0				
West: Worgan Street													
Lane 1	283	0.0	705	0.401	100	8.0	LOS A	2.0	13.9	Full	35	0.0	0.0
Approach	283	0.0		0.401		8.0	LOS A	2.0	13.9				
Intersection	1211	0.1		0.401		3.2	NA	2.0	13.9				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

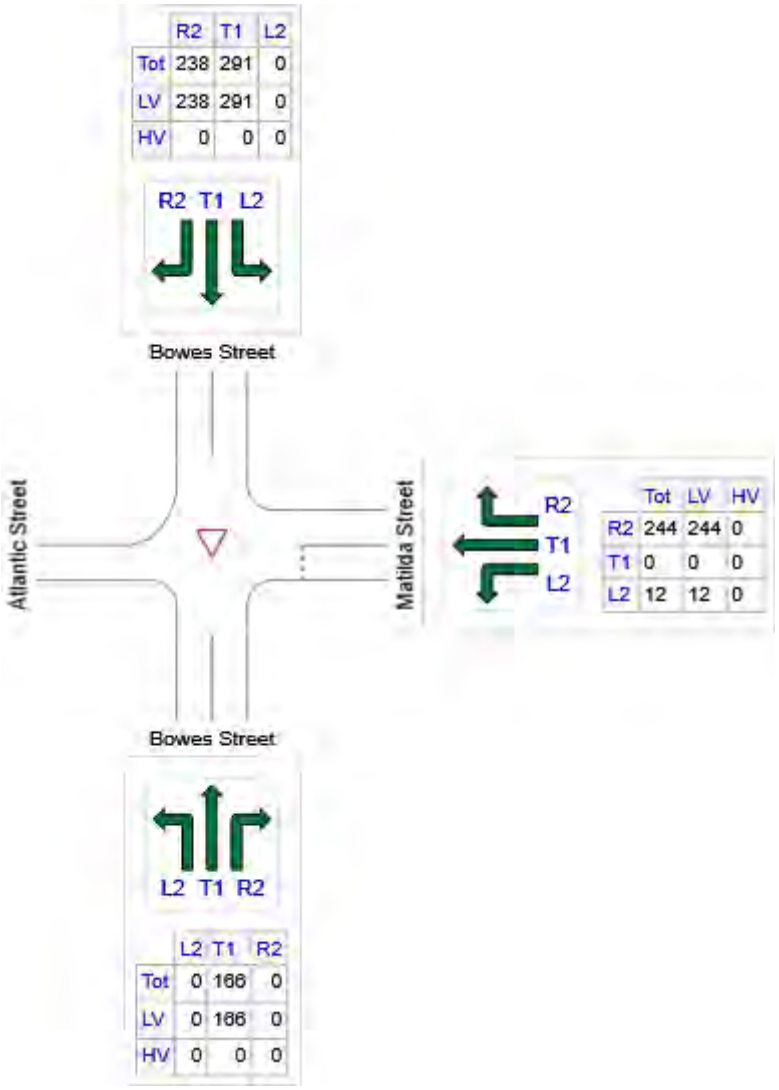
Site: [2040 Dev - PM: AS-BS-MS]

Atlantic Street / Bowes Street / Matilda Street
Existing Priority-Controlled (Give-Way) T-Intersection
Site Category: 2040 Development Scenario - Weekday Evening Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	167	167	0
E: Matilda Street	256	256	0
N: Bowes Street	529	529	0
Total	951	951	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
1	L2	0	0.0	0.085	4.2	LOS A	0.0	0.0	0.00	0.00	0.00	24.3
2	T1	166	0.0	0.085	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
3	R2	0	0.0	0.085	4.6	LOS A	0.0	0.0	0.00	0.00	0.00	43.5
Approach		167	0.0	0.085	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.9
East: Matilda Street												
4	L2	12	0.0	0.516	7.8	LOS A	2.7	18.7	0.71	1.00	1.11	19.7
5	T1	0	0.0	0.516	11.3	LOS A	2.7	18.7	0.71	1.00	1.11	18.4
6	R2	244	0.0	0.516	13.5	LOS A	2.7	18.7	0.71	1.00	1.11	24.8
Approach		256	0.0	0.516	13.2	LOS A	2.7	18.7	0.71	1.00	1.11	24.6
North: Bowes Street												
7	L2	0	0.0	0.306	5.3	LOS A	1.6	11.3	0.28	0.27	0.28	39.2
8	T1	291	0.0	0.306	0.5	LOS A	1.6	11.3	0.28	0.27	0.28	39.3
9	R2	238	0.0	0.306	5.5	LOS A	1.6	11.3	0.28	0.27	0.28	26.8
Approach		529	0.0	0.306	2.8	NA	1.6	11.3	0.28	0.27	0.28	31.2
All Vehicles		951	0.0	0.516	5.1	NA	2.7	18.7	0.35	0.42	0.46	30.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

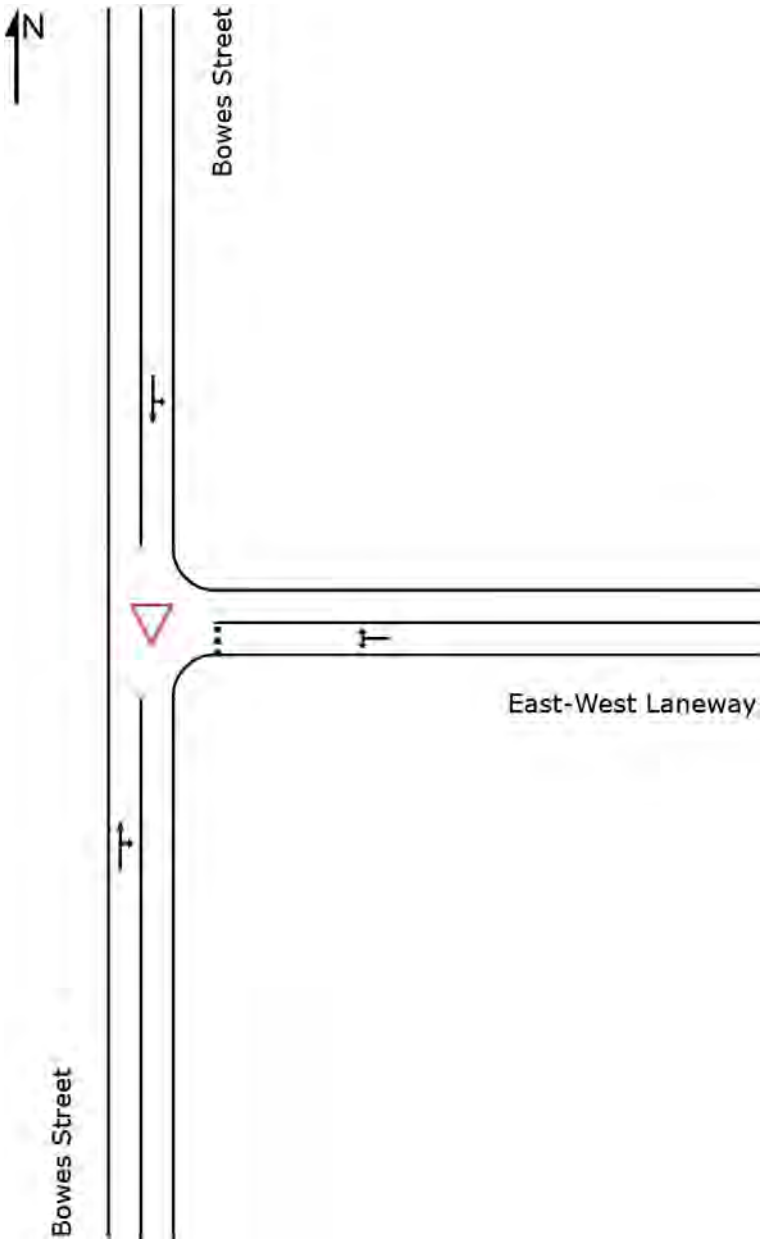
	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Bowes Street													
Lane 1	167	0.0	1949	0.085	100	0.0	LOS A	0.0	0.0	Full	45	0.0	0.0
Approach	167	0.0		0.085		0.0	NA	0.0	0.0				
East: Matilda Street													
Lane 1	256	0.0	496	0.516	100	13.2	LOS A	2.7	18.7	Full	80	0.0	0.0
Approach	256	0.0		0.516		13.2	LOS A	2.7	18.7				
North: Bowes Street													
Lane 1	529	0.0	1730	0.306	100	2.8	LOS A	1.6	11.3	Full	110	0.0	0.0
Approach	529	0.0		0.306		2.8	NA	1.6	11.3				
Intersection	951	0.0		0.516		5.1	NA	2.7	18.7				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

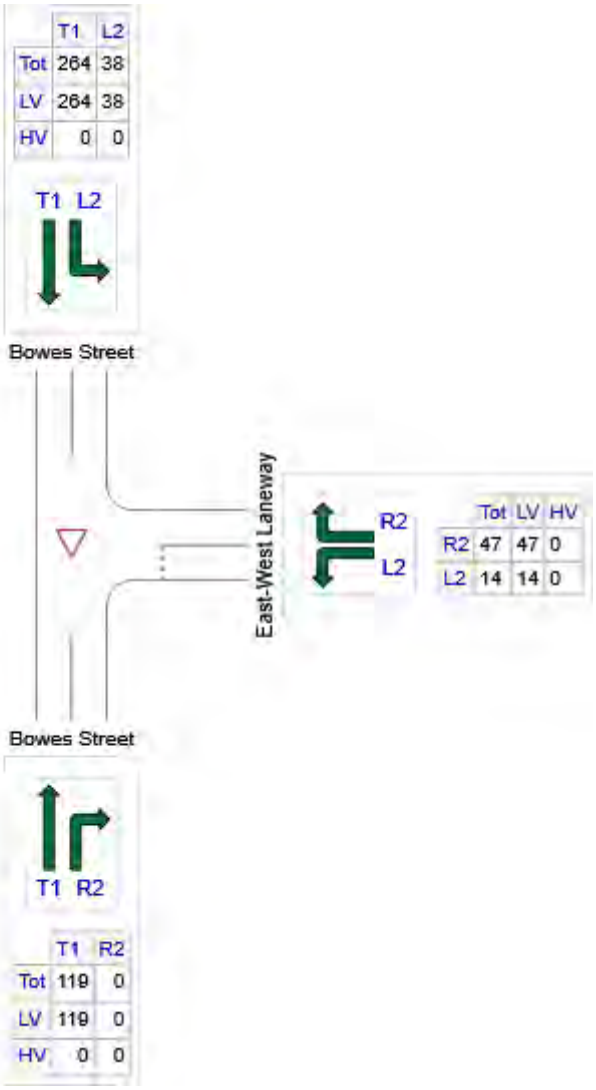
Site: [2040 Dev - PM: BS-EWL]

Bowes Street / East-West Laneway
Proposed Priority-Controlled (Give-Way) T-Intersection
Site Category: 2040 Development Scenario - Weekday Evening Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Bowes Street	119	119	0
E: East-West Laneway	61	61	0
N: Bowes Street	302	302	0
Total	482	482	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Bowes Street												
2	T1	119	0.0	0.061	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
3	R2	0	0.0	0.061	5.4	LOS A	0.0	0.0	0.00	0.00	0.00	41.7
Approach		119	0.0	0.061	0.0	NA	0.0	0.0	0.00	0.00	0.00	50.0
East: East-West Laneway												
4	L2	14	0.0	0.064	0.9	LOS A	0.2	1.5	0.37	0.34	0.37	23.4
6	R2	47	0.0	0.064	2.3	LOS A	0.2	1.5	0.37	0.34	0.37	22.9
Approach		61	0.0	0.064	1.9	LOS A	0.2	1.5	0.37	0.34	0.37	23.0
North: Bowes Street												
7	L2	38	0.0	0.156	4.3	LOS A	0.0	0.0	0.00	0.07	0.00	26.5
8	T1	264	0.0	0.156	0.0	LOS A	0.0	0.0	0.00	0.07	0.00	47.3
Approach		302	0.0	0.156	0.5	NA	0.0	0.0	0.00	0.07	0.00	43.8
All Vehicles		482	0.0	0.156	0.6	NA	0.2	1.5	0.05	0.09	0.05	41.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

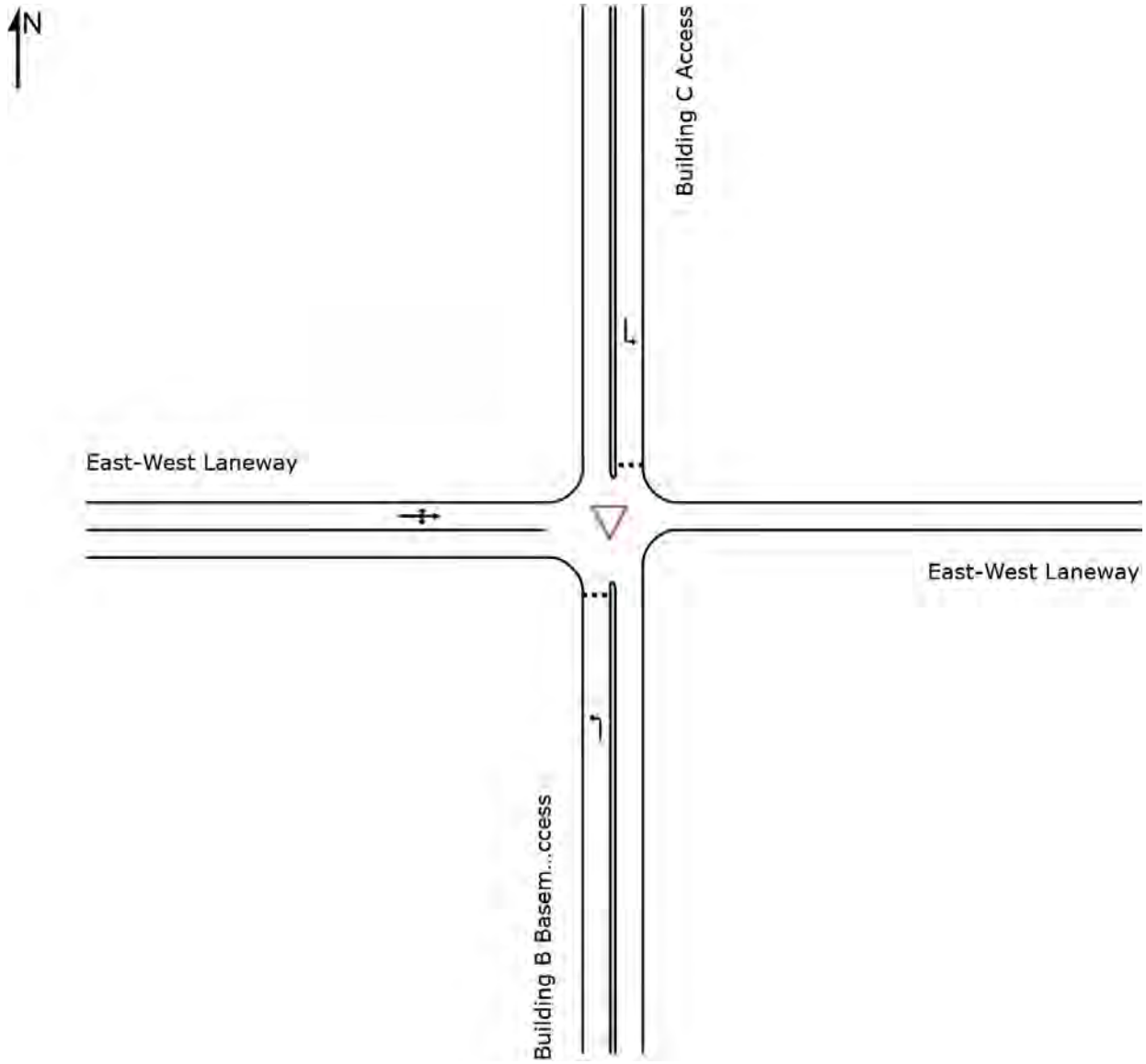
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Bowes Street													
Lane 1	119	0.0	1949	0.061	100	0.0	LOS A	0.0	0.0	Full	60	0.0	0.0
Approach	119	0.0		0.061		0.0	NA	0.0	0.0				
East: East-West Laneway													
Lane 1	61	0.0	956	0.064	100	1.9	LOS A	0.2	1.5	Full	30	0.0	0.0
Approach	61	0.0		0.064		1.9	LOS A	0.2	1.5				
North: Bowes Street													
Lane 1	302	0.0	1938	0.156	100	0.5	LOS A	0.0	0.0	Full	60	0.0	0.0
Approach	302	0.0		0.156		0.5	NA	0.0	0.0				
Intersection	482	0.0		0.156		0.6	NA	0.2	1.5				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

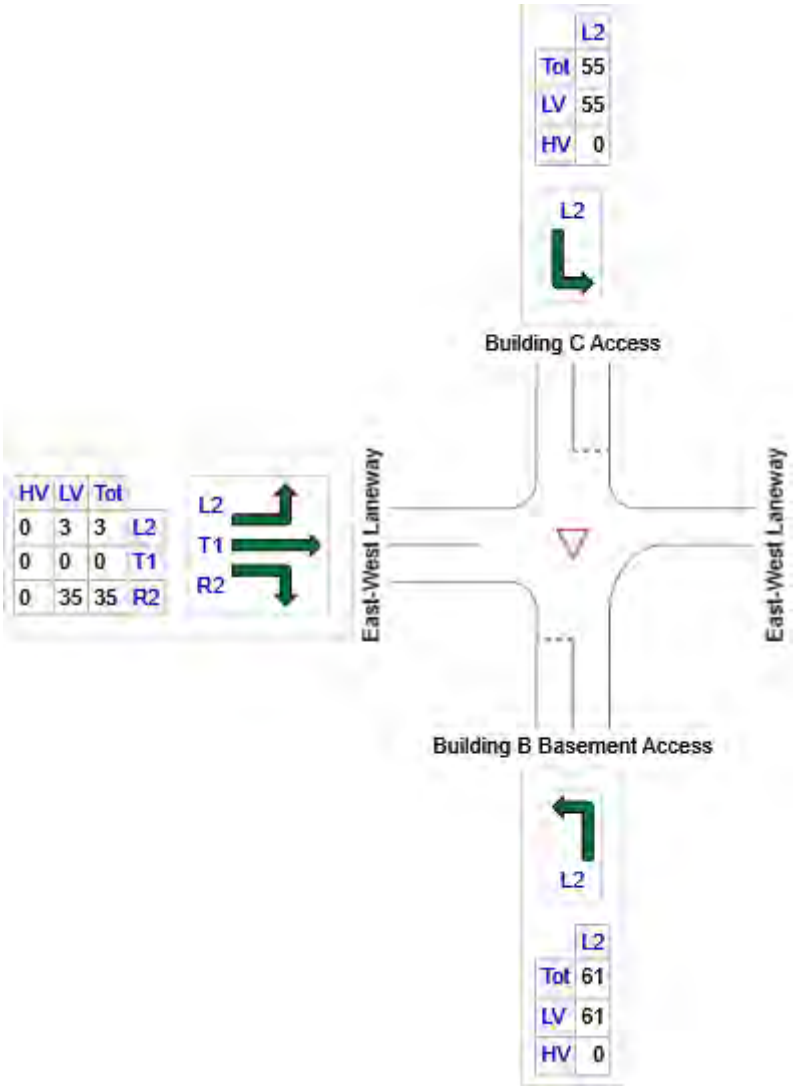
Site: [2040 Dev - PM: BldgBB-BldgC-EWL]

Building B Basement Access / Building C Access / East-West Laneway
Proposed Priority-Controlled (Give-Way) T-Intersection
Site Category: 2040 Development Scenario - Weekday Evening Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Building B Basement Access	61	61	0
N: Building C Access	55	55	0
W: East-West Laneway	38	38	0
Total	154	154	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Building B Basement Access												
1	L2	61	0.0	0.033	2.3	LOS A	0.0	0.0	0.00	0.50	0.00	26.8
Approach		61	0.0	0.033	2.3	LOS A	0.0	0.0	0.00	0.50	0.00	26.8
North: Building C Access												
4	L2	55	0.0	0.033	0.0	LOS A	0.1	0.9	0.00	0.00	0.00	26.3
Approach		55	0.0	0.033	0.0	LOS A	0.1	0.9	0.00	0.00	0.00	26.3
West: East-West Laneway												
7	L2	3	0.0	0.020	3.1	LOS A	0.0	0.0	0.00	0.54	0.00	26.5
8	T1	0	0.0	0.020	0.4	LOS A	0.0	0.0	0.00	0.54	0.00	40.2
12	R2	35	0.0	0.020	2.9	LOS A	0.0	0.0	0.00	0.54	0.00	25.9
Approach		38	0.0	0.020	2.9	NA	0.0	0.0	0.00	0.54	0.00	26.0
All Vehicles		154	0.0	0.033	1.6	NA	0.1	0.9	0.00	0.33	0.00	26.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

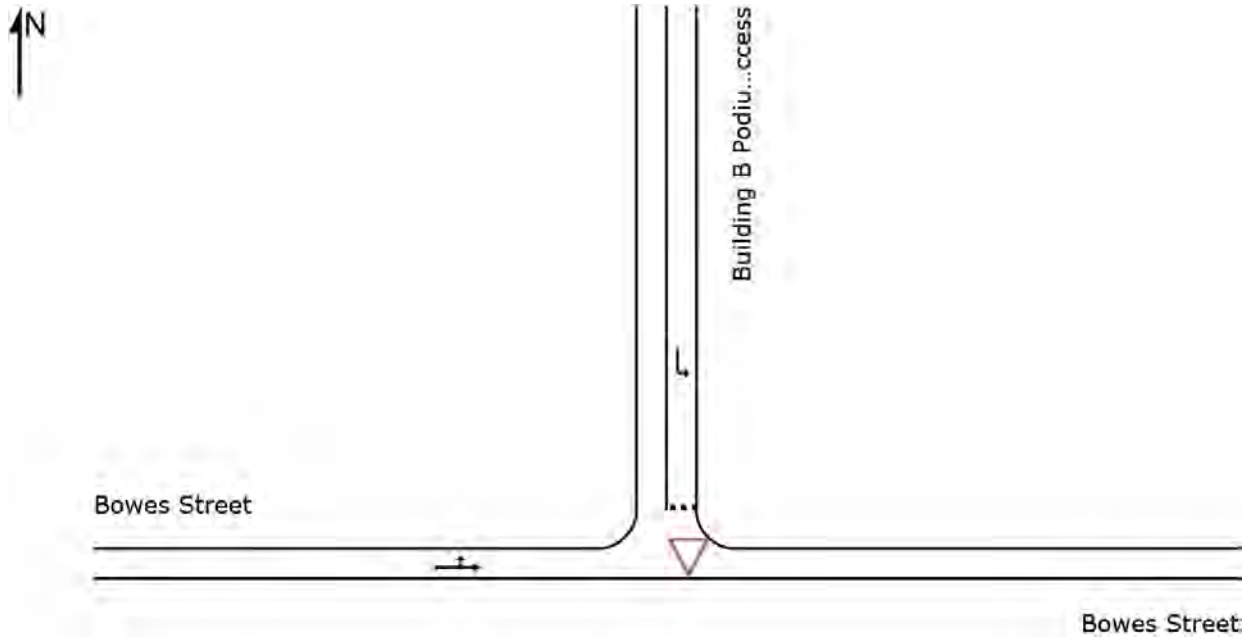
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Building B Basement Access													
Lane 1	61	0.0	1857	0.033	100	2.3	LOS A	0.0	0.0	Full	10	0.0	0.0
Approach	61	0.0		0.033		2.3	LOS A	0.0	0.0				
North: Building C Access													
Lane 1	55	0.0	1636	0.033	100	0.0	LOS A	0.1	0.9	Full	10	0.0	0.0
Approach	55	0.0		0.033		0.0	LOS A	0.1	0.9				
West: East-West Laneway													
Lane 1	38	0.0	1857	0.020	100	2.9	LOS A	0.0	0.0	Full	30	0.0	0.0
Approach	38	0.0		0.020		2.9	NA	0.0	0.0				
Intersection	154	0.0		0.033		1.6	NA	0.1	0.9				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

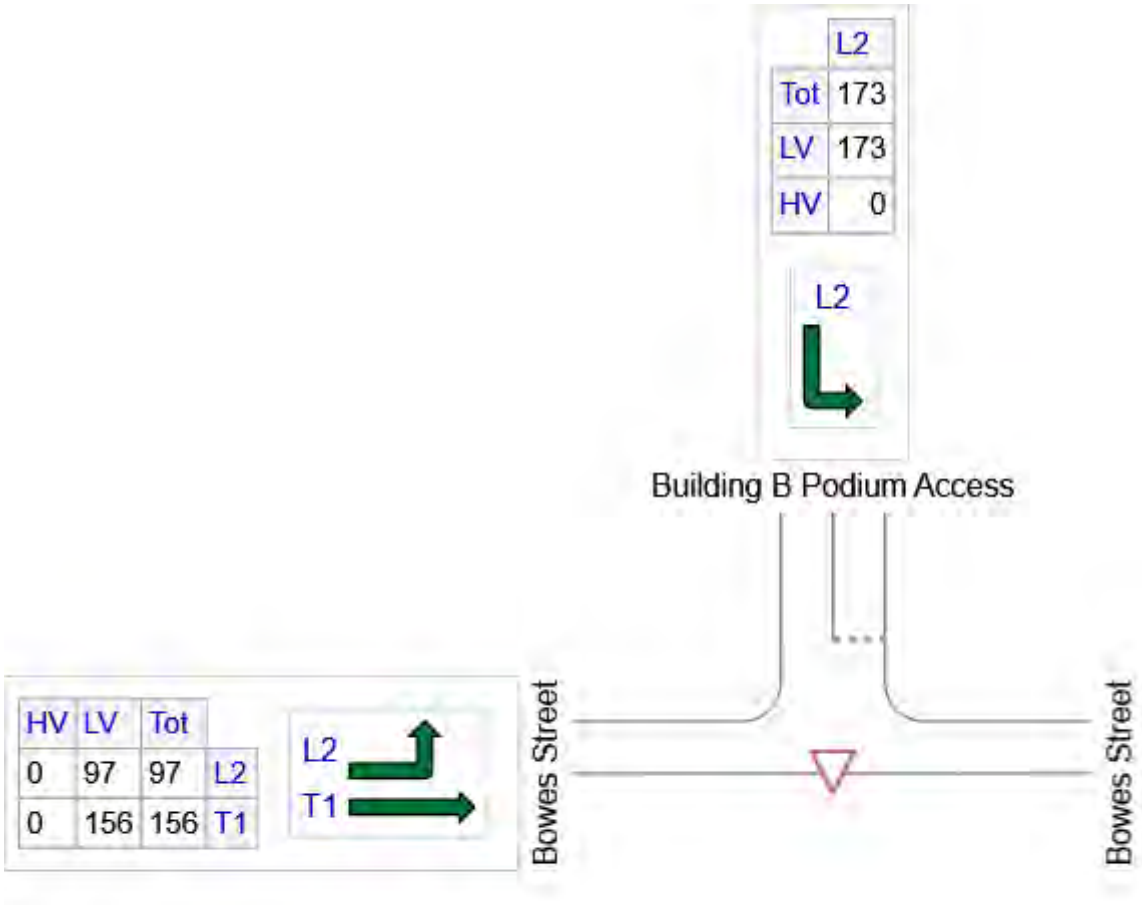
Site: [2040 Dev - PM: BldgBP-BS]

Building B Podium Access / Bowes Street
Proposed Priority-Controlled (Give-Way) T-Intersection
Site Category: 2040 Development Scenario - Weekday Evening Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
N: Building B Podium Access	173	173	0
W: Bowes Street	253	253	0
Total	425	425	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
North: Building B Podium Access												
4	L2	173	0.0	0.121	0.5	LOS A	0.5	3.6	0.26	0.13	0.26	21.2
Approach		173	0.0	0.121	0.5	LOS A	0.5	3.6	0.26	0.13	0.26	21.2
West: Bowes Street												
7	L2	97	0.0	0.132	3.5	LOS A	0.0	0.0	0.00	0.20	0.00	25.8
8	T1	156	0.0	0.132	0.0	LOS A	0.0	0.0	0.00	0.20	0.00	40.8
Approach		253	0.0	0.132	1.3	NA	0.0	0.0	0.00	0.20	0.00	34.1
All Vehicles		425	0.0	0.132	1.0	NA	0.5	3.6	0.11	0.17	0.11	28.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

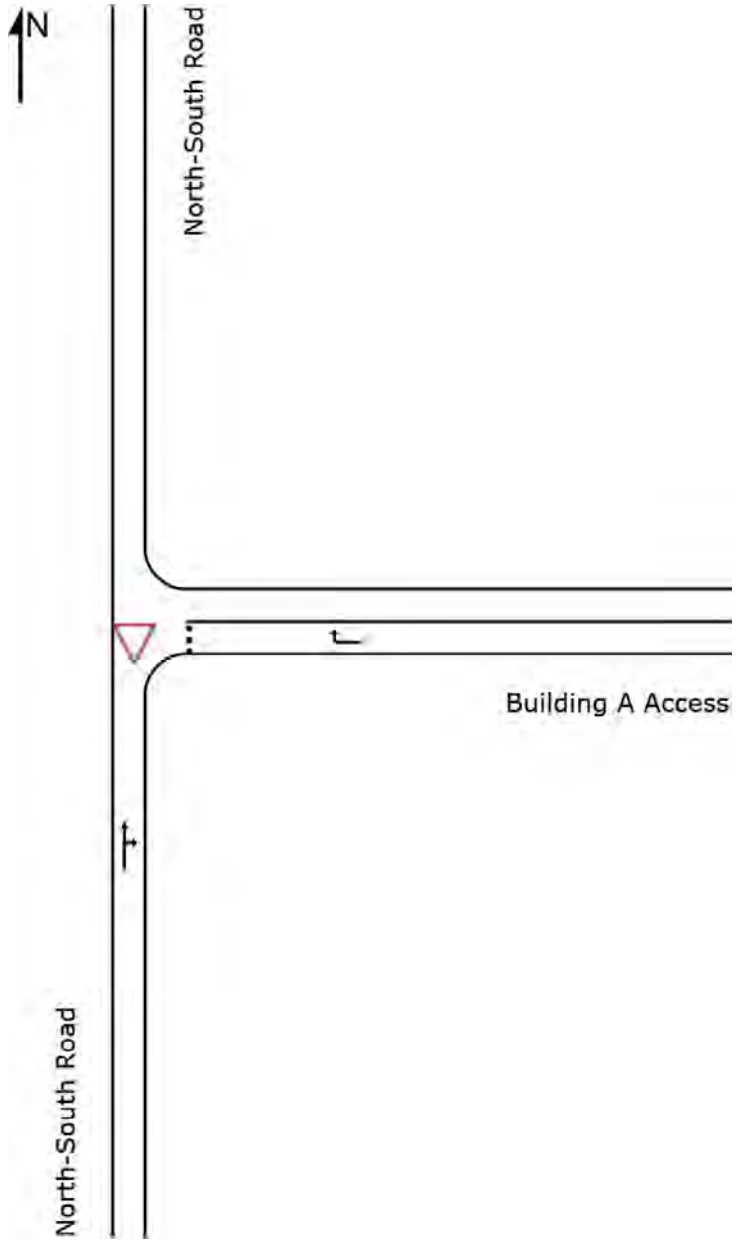
Lane Use and Performance													
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
North: Building B Podium Access													
Lane 1	173	0.0	1432	0.121	100	0.5	LOS A	0.5	3.6	Full	15	0.0	0.0
Approach	173	0.0		0.121		0.5	LOS A	0.5	3.6				
West: Bowes Street													
Lane 1	253	0.0	1913	0.132	100	1.3	LOS A	0.0	0.0	Full	40	0.0	0.0
Approach	253	0.0		0.132		1.3	NA	0.0	0.0				
Intersection	425	0.0		0.132		1.0	NA	0.5	3.6				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

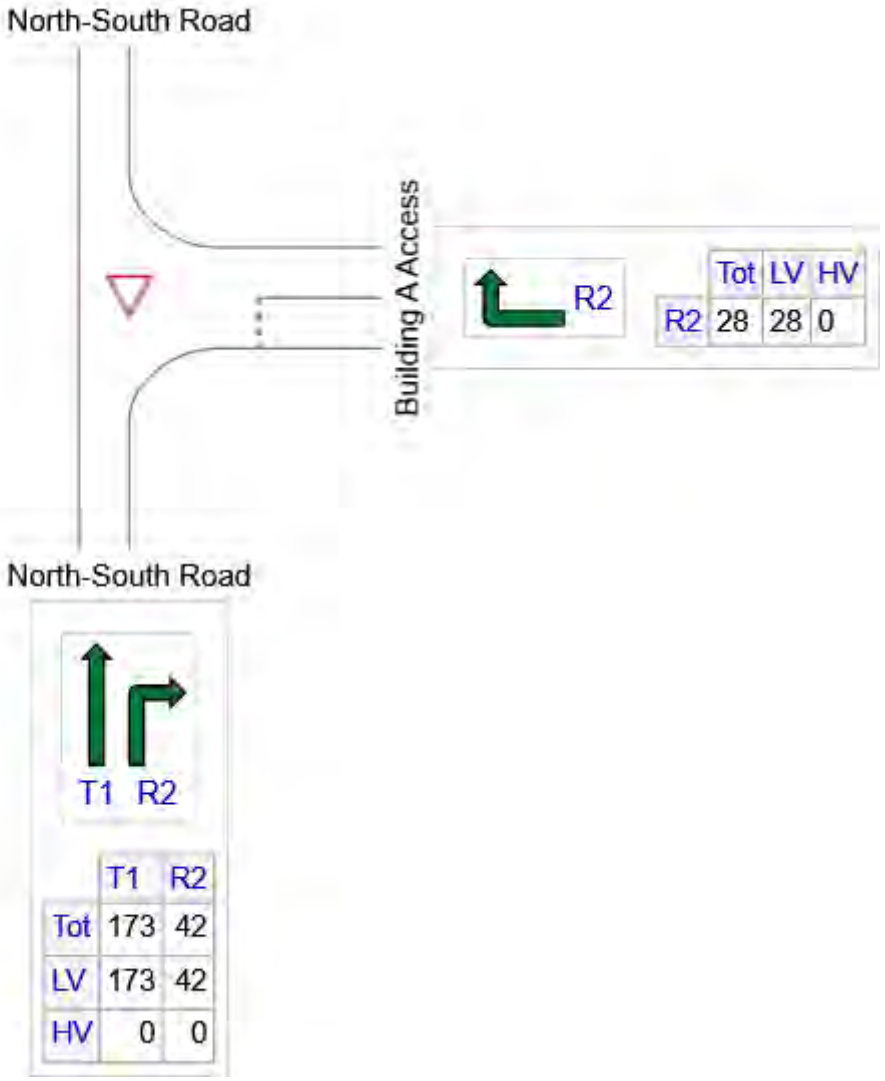
Site: [2040 Dev - PM: BldgA-NSR]

Building A Access / North-South Road
Proposed Priority-Controlled (Give-Way) T-Intersection
Site Category: 2040 Development Scenario - Weekday Evening Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: North-South Road	215	215	0
E: Building A Access	28	28	0
Total	243	243	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: North-South Road												
2	T1	173	0.0	0.111	0.0	LOS A	0.0	0.0	0.00	0.11	0.00	44.8
3	R2	42	0.0	0.111	2.1	LOS A	0.0	0.0	0.00	0.11	0.00	29.0
Approach		215	0.0	0.111	0.4	NA	0.0	0.0	0.00	0.11	0.00	41.5
East: Building A Access												
6	R2	28	0.0	0.023	1.5	LOS A	0.1	0.5	0.25	0.30	0.25	19.0
Approach		28	0.0	0.023	1.5	LOS A	0.1	0.5	0.25	0.30	0.25	19.0
All Vehicles		243	0.0	0.111	0.5	NA	0.1	0.5	0.03	0.13	0.03	35.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

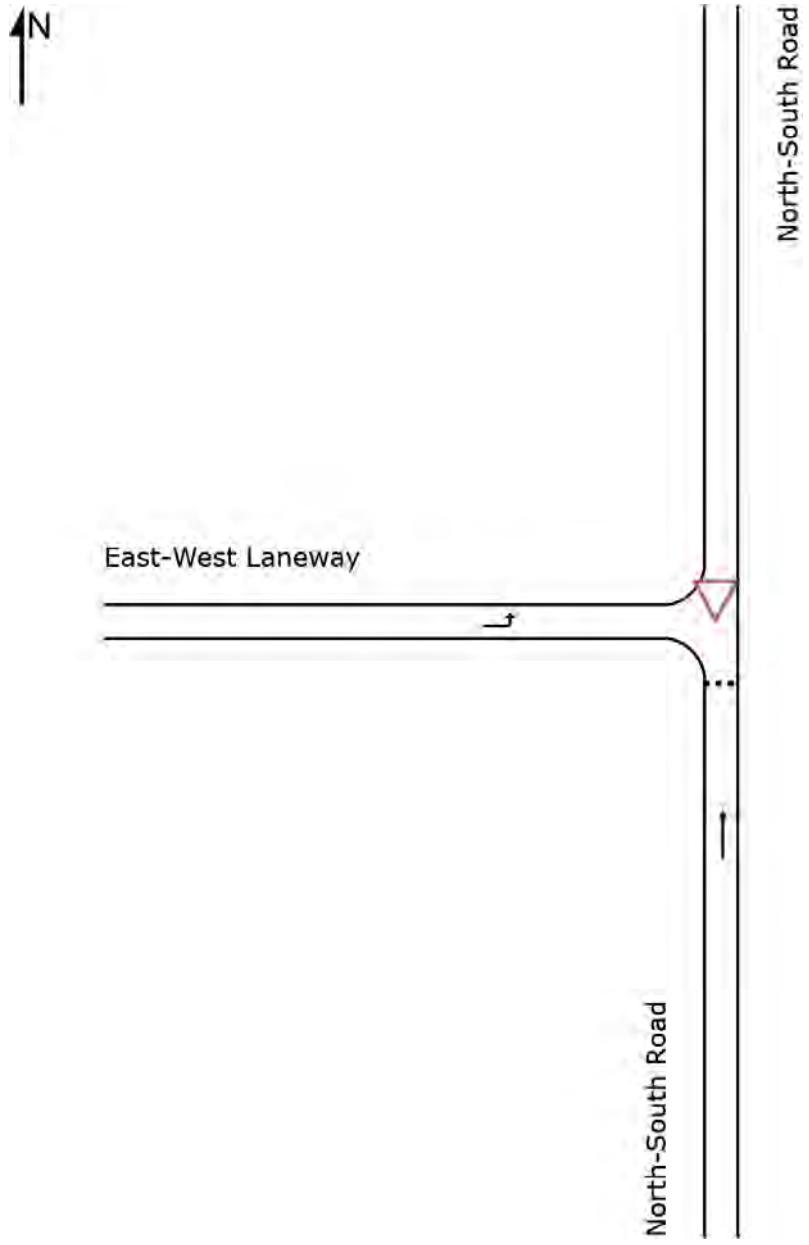
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: North-South Road													
Lane 1	215	0.0	1931	0.111	100	0.4	LOS A	0.0	0.0	Full	10	0.0	0.0
Approach	215	0.0		0.111		0.4	NA	0.0	0.0				
East: Building A Access													
Lane 1	28	0.0	1220	0.023	100	1.5	LOS A	0.1	0.5	Full	15	0.0	0.0
Approach	28	0.0		0.023		1.5	LOS A	0.1	0.5				
Intersection	243	0.0		0.111		0.5	NA	0.1	0.5				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

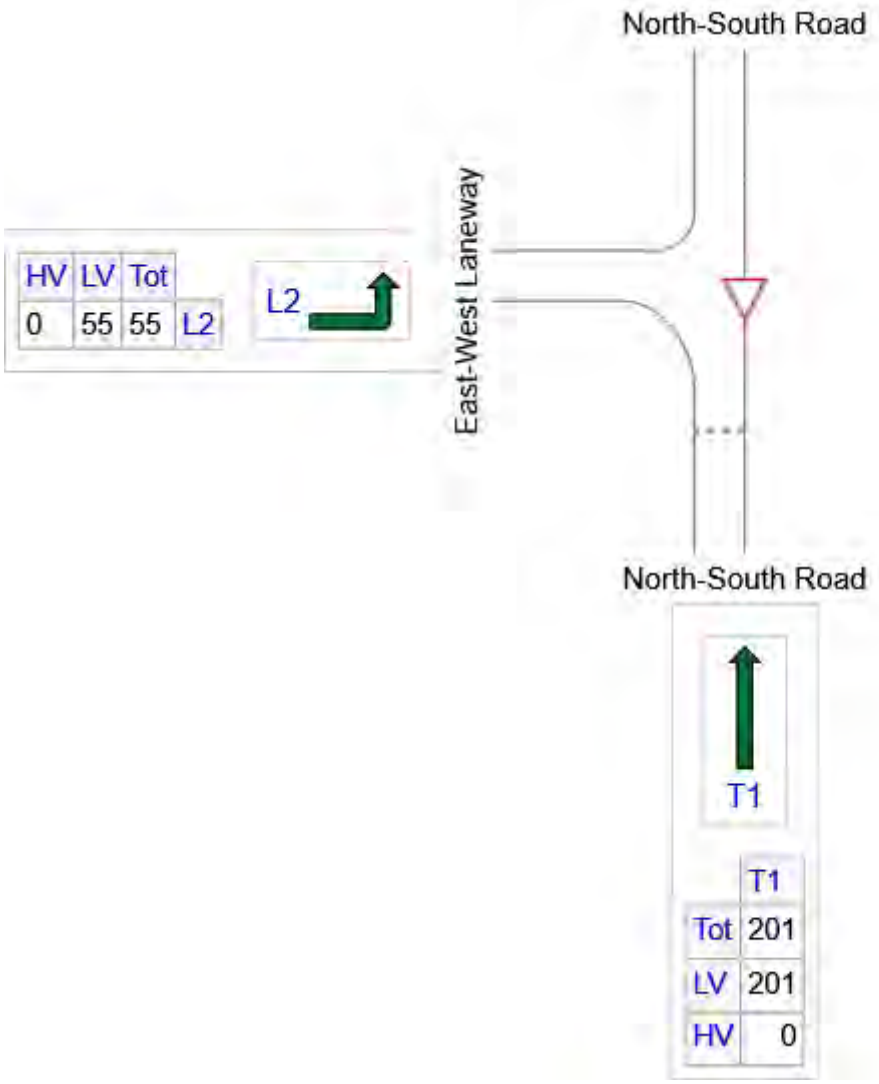
Site: [2040 Dev - PM: EWL-NSR]

East-West Laneway / North-South Road
Proposed Priority-Controlled (Give-Way) T-Intersection
Site Category: 2040 Development Scenario - Weekday Evening Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: North-South Road	201	201	0
W: East-West Laneway	55	55	0
Total	256	256	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: North-South Road												
2	T1	201	0.0	0.140	2.1	LOS A	0.6	3.9	0.14	0.46	0.14	36.5
Approach		201	0.0	0.140	2.1	LOS A	0.6	3.9	0.14	0.46	0.14	36.5
West: East-West Laneway												
7	L2	55	0.0	0.029	3.7	LOS A	0.0	0.0	0.00	0.52	0.00	31.5
Approach		55	0.0	0.029	3.7	NA	0.0	0.0	0.00	0.52	0.00	31.5
All Vehicles		256	0.0	0.140	2.4	NA	0.6	3.9	0.11	0.47	0.11	35.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

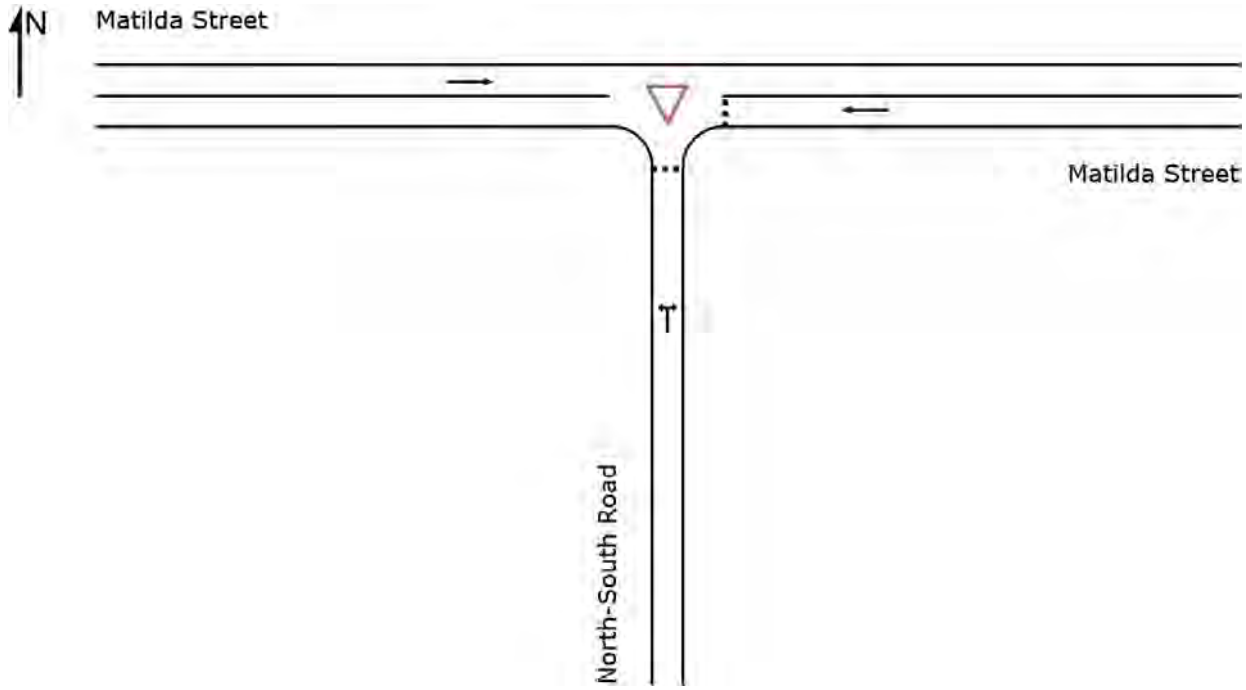
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: North-South Road													
Lane 1	201	0.0	1436	0.140	100	2.1	LOS A	0.6	3.9	Full	30	0.0	0.0
Approach	201	0.0		0.140		2.1	LOS A	0.6	3.9				
West: East-West Laneway													
Lane 1	55	0.0	1857	0.029	100	3.7	LOS A	0.0	0.0	Full	45	0.0	0.0
Approach	55	0.0		0.029		3.7	NA	0.0	0.0				
Intersection	256	0.0		0.140		2.4	NA	0.6	3.9				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

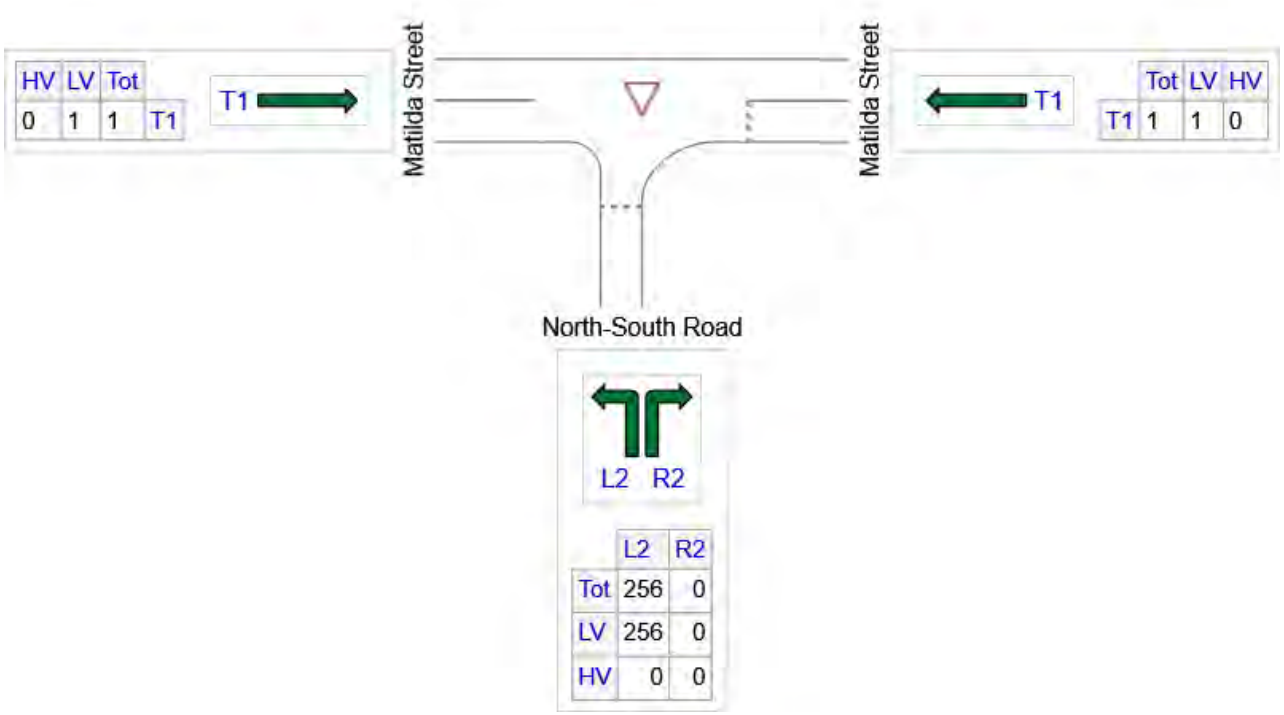
Site: [2040 Dev - PM: MS-NSR]

Matilda Street / North-South Road
Proposed Priority-Controlled (Give-Way) T-Intersection
Site Category: 2040 Development Scenario - Weekday Evening Peak Hour
Giveway / Yield (Two-Way)

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: North-South Road	256	256	0
E: Matilda Street	1	1	0
W: Matilda Street	1	1	0
Total	258	258	0

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: North-South Road												
1	L2	256	0.0	0.157	4.7	LOS A	0.7	5.0	0.01	0.56	0.01	35.2
3	R2	0	0.0	0.157	4.9	LOS A	0.7	5.0	0.01	0.56	0.01	29.6
Approach		256	0.0	0.157	4.7	LOS A	0.7	5.0	0.01	0.56	0.01	35.2
East: Matilda Street												
5	T1	1	0.0	0.001	1.9	LOS A	0.0	0.0	0.00	0.48	0.00	39.7
Approach		1	0.0	0.001	1.9	LOS A	0.0	0.0	0.00	0.48	0.00	39.7
West: Matilda Street												
11	T1	1	0.0	0.001	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach		1	0.0	0.001	0.0	NA	0.0	0.0	0.00	0.00	0.00	60.0
All Vehicles		258	0.0	0.157	4.7	NA	0.7	5.0	0.01	0.56	0.01	35.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: North-South Road													
Lane 1	256	0.0	1635	0.157	100	4.7	LOS A	0.7	5.0	Full	70	0.0	0.0
Approach	256	0.0		0.157		4.7	LOS A	0.7	5.0				
East: Matilda Street													
Lane 1	1	0.0	1950	0.001	100	1.9	LOS A	0.0	0.0	Full	30	0.0	0.0
Approach	1	0.0		0.001		1.9	LOS A	0.0	0.0				
West: Matilda Street													
Lane 1	1	0.0	1950	0.001	100	0.0	LOS A	0.0	0.0	Full	90	0.0	0.0
Approach	1	0.0		0.001		0.0	NA	0.0	0.0				
Intersection	258	0.0		0.157		4.7	NA	0.7	5.0				

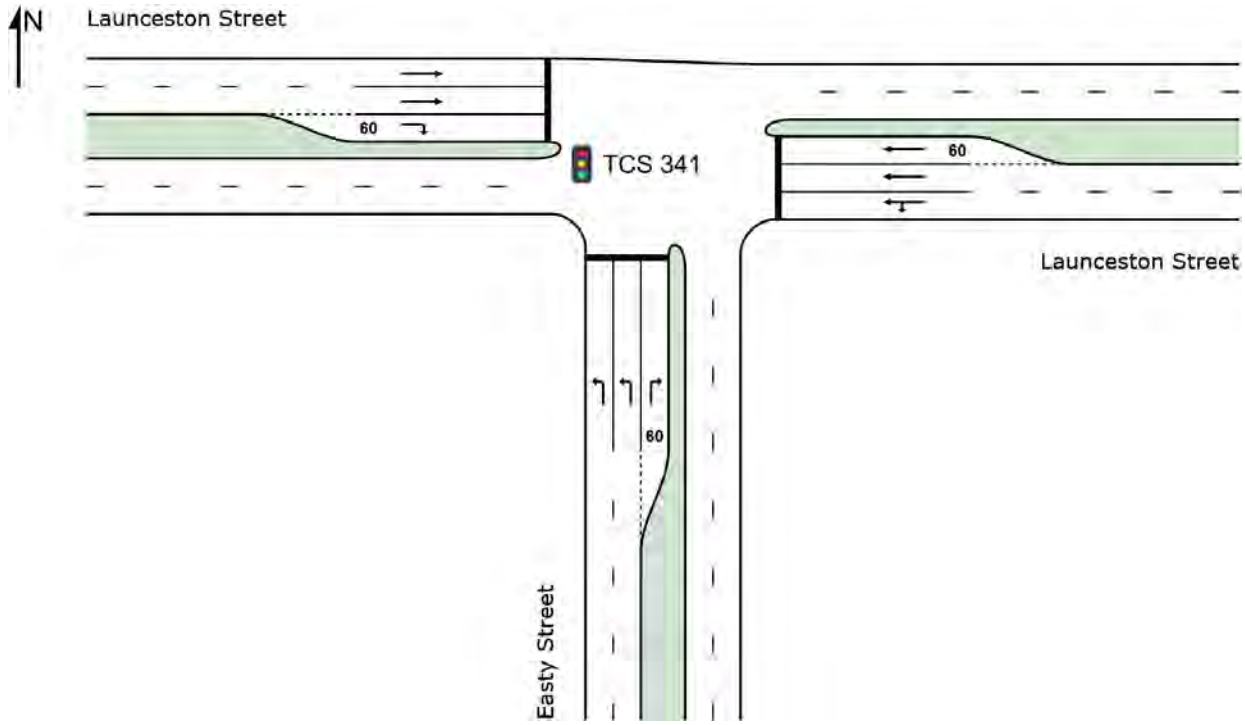
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: TCS 341 [2040 Dev - PM: ES-LS]

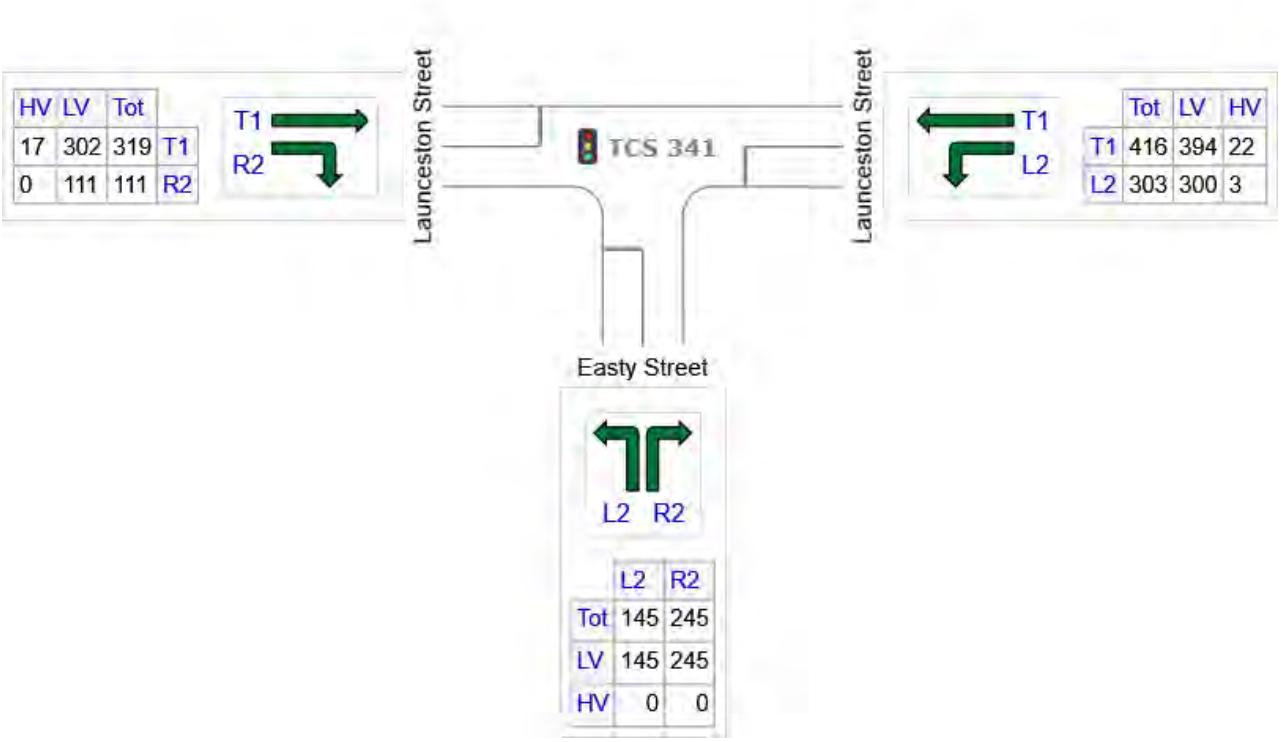
Easty Street / Launceston Street
Existing Signalised T-Intersection
Site Category: 2040 Development Scenario - Weekday Evening Peak Hour
Signals - Fixed Time Isolated Cycle Time = 73 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Site Layout



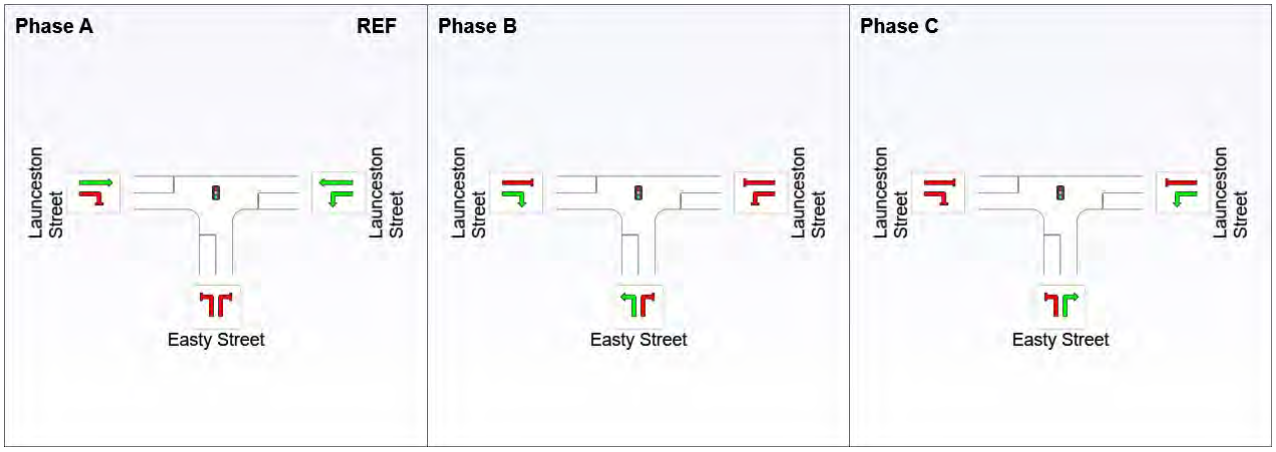
OD Demand Flows



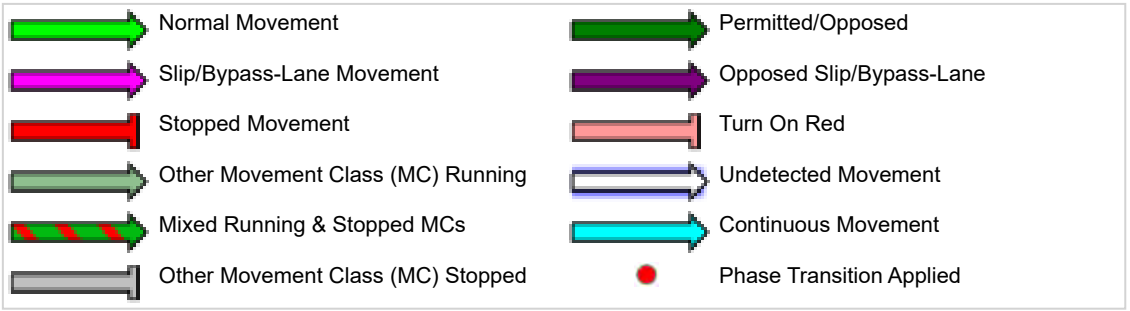
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Easty Street	391	391	0
E: Launceston Street	719	694	25
W: Launceston Street	429	413	17
Total	1539	1497	42

Input Phase Sequence

Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	33	52
Green Time (sec)	27	13	16
Phase Time (sec)	33	18	22
Phase Split	45%	25%	30%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Easty Street												
1	L2	145	0.0	0.220	31.9	LOS C	2.3	16.0	0.89	0.74	0.89	22.5
3	R2	245	0.0	0.603	31.9	LOS C	8.1	56.9	0.95	0.81	0.95	25.1
Approach		391	0.0	0.603	31.9	LOS C	8.1	56.9	0.93	0.78	0.93	24.2
East: Launceston Street												
4	L2	303	1.0	0.245	8.4	LOS A	4.2	29.7	0.42	0.63	0.42	34.6
5	T1	416	5.3	0.298	17.7	LOS B	5.3	38.7	0.75	0.62	0.75	27.0
Approach		719	3.5	0.298	13.8	LOS A	5.3	38.7	0.61	0.62	0.61	30.4
West: Launceston Street												
11	T1	319	5.3	0.229	17.1	LOS B	3.9	28.8	0.73	0.59	0.73	27.3
12	R2	111	0.0	0.334	32.6	LOS C	3.6	25.0	0.92	0.76	0.92	22.4
Approach		429	3.9	0.334	21.1	LOS B	3.9	28.8	0.78	0.64	0.78	25.8
All Vehicles		1539	2.7	0.603	20.4	LOS B	8.1	56.9	0.74	0.67	0.74	27.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Easty Street													
Lane 1	73	0.0	331	0.220	100	31.9	LOS C	2.3	16.0	Full	305	0.0	0.0
Lane 2	73	0.0	331	0.220	100	31.9	LOS C	2.3	16.0	Full	305	0.0	0.0
Lane 3	245	0.0	407	0.603	100	31.9	LOS C	8.1	56.9	Short	60	0.0	NA
Approach	391	0.0		0.603		31.9	LOS C	8.1	56.9				
East: Launceston Street													
Lane 1	303	1.0	1237	0.245	82[5]	8.4	LOS A	4.2	29.7	Full	260	0.0	0.0
Lane 2	208	5.3	697	0.298	100	17.7	LOS B	5.3	38.7	Full	260	0.0	0.0
Lane 3	208	5.3	697	0.298	100	17.7	LOS B	5.3	38.7	Short	60	0.0	NA
Approach	719	3.5		0.298		13.8	LOS A	5.3	38.7				
West: Launceston Street													
Lane 1	159	5.3	697	0.229	100	17.1	LOS B	3.9	28.8	Full	130	0.0	0.0
Lane 2	159	5.3	697	0.229	100	17.1	LOS B	3.9	28.8	Full	130	0.0	0.0
Lane 3	111	0.0	331	0.334	100	32.6	LOS C	3.6	25.0	Short	60	0.0	NA
Approach	429	3.9		0.334		21.1	LOS B	3.9	28.8				
Intersection	1539	2.7		0.603		20.4	LOS B	8.1	56.9				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5 Lane under-utilisation found by the program

USER REPORT FOR NETWORK SITE

Project: 24-0487_20260304

Template: Default Site User Report

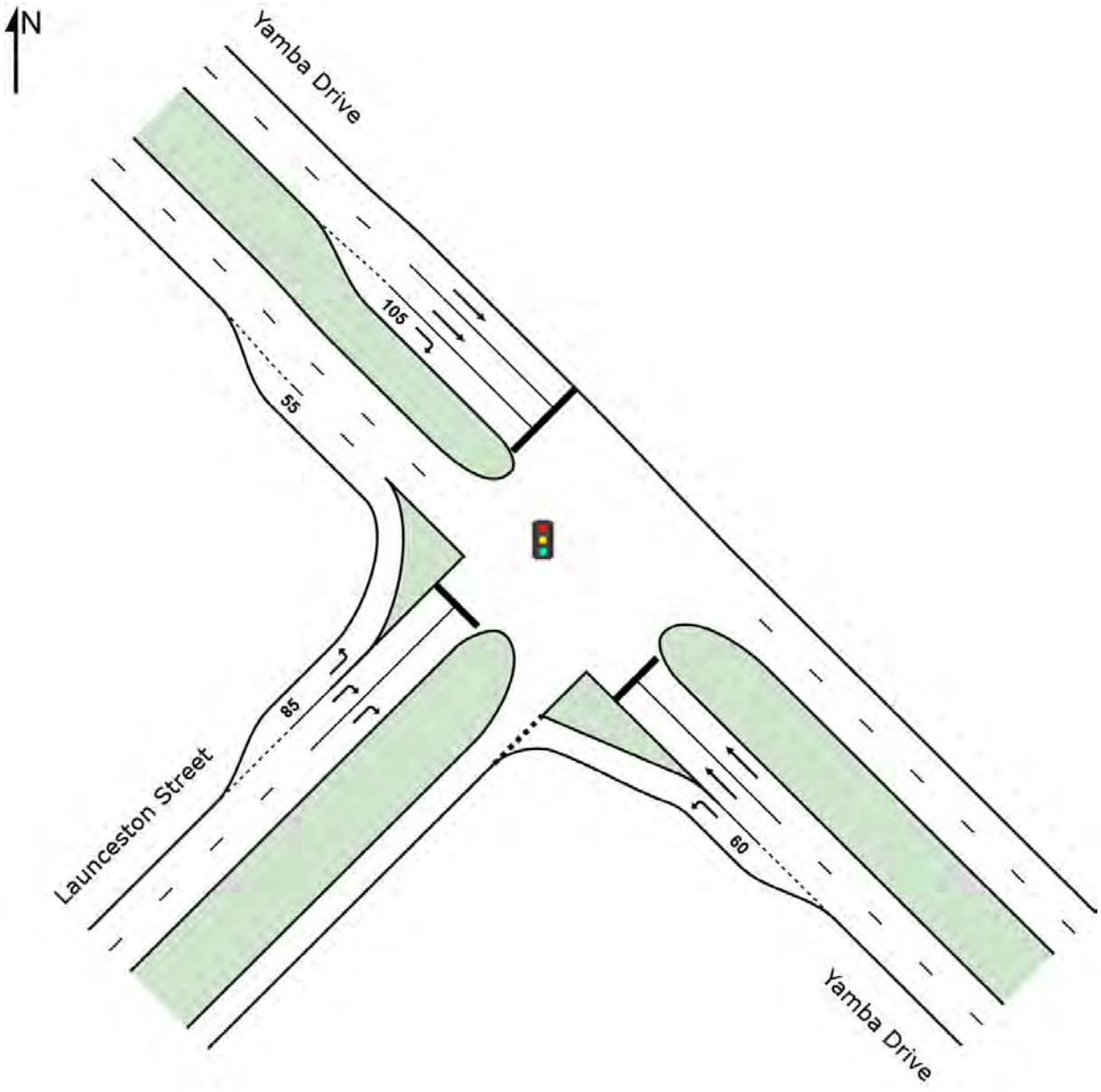
Site: [2040 Dev - PM: LS-YD]

Network: 8 [2040 Dev - PM: LS-WS-YD]

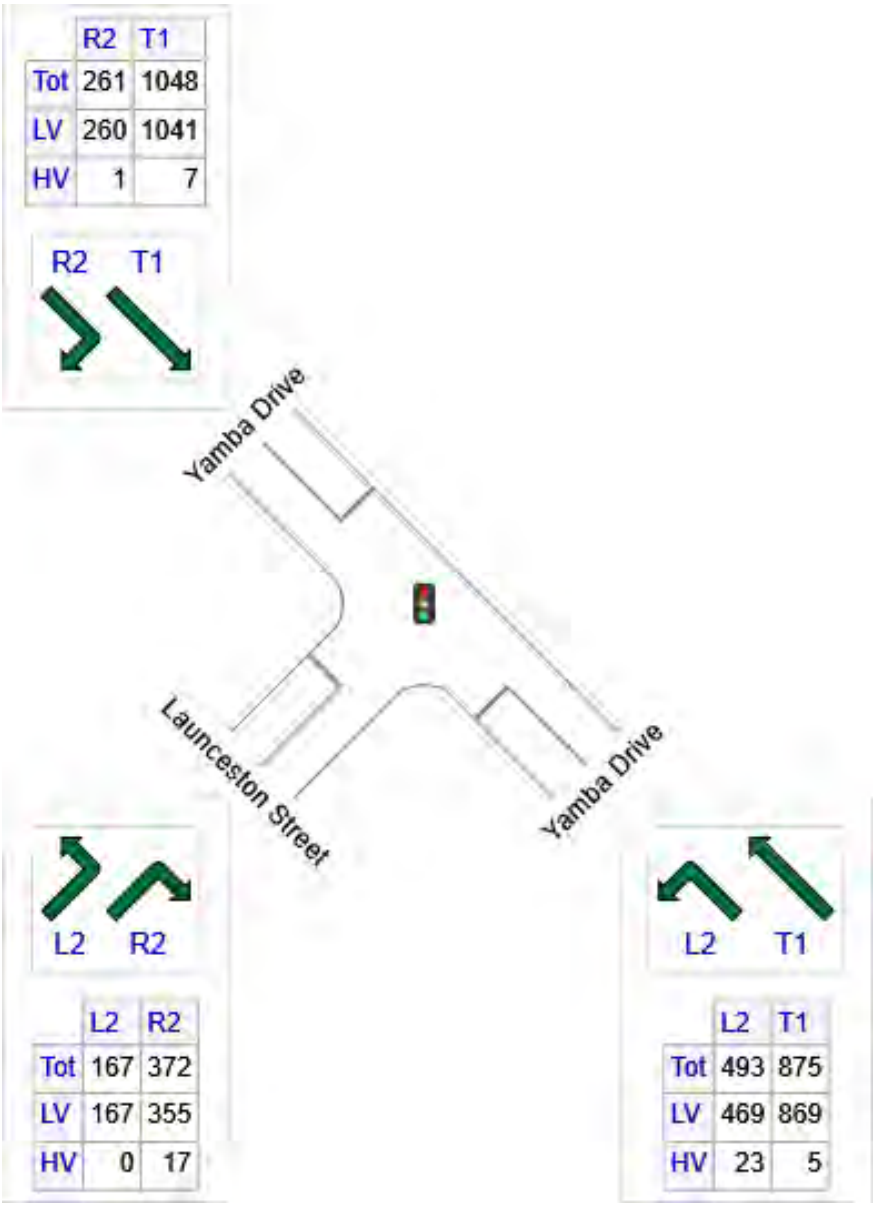
Northwest part of Launceston Street / Wisdom Street / Yamba Drive
Existing Signalised Offset X-Intersection
Site Category: 2040 Development Scenario - Weekday Evening Peak Hour
Signals - Fixed Time Coordinated Cycle Time = 114 seconds (CCG User-Given Phase Times)
Common Control Group: CCG1 [CCG]

Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E
Output Phase Sequence: A, D, E

Site Layout



OD Demand Flows

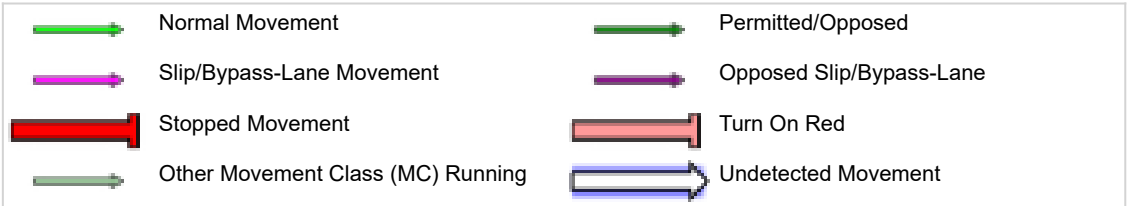


	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
SE: Yamba Drive	1367	1339	28
NW: Yamba Drive	1309	1301	8
SW: Launceston Street	539	522	17
Total	3216	3162	54

Input Phase Sequence (CCG)

Movement Class: All Movement Classes

REF: Reference Phase
VAR: Variable Phase



Mixed Running & Stopped MCs

Continuous Movement


Other Movement Class (MC) Stopped


Phase Transition Applied

Phase Timing Summary (CCG)

Phase	A	D	E
Phase Change Time (sec)	0	63	87
Green Time (sec)	57	18	21
Phase Time (sec)	63	24	27
Phase Split	55%	21%	24%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles														
Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Yamba Drive														
4	L2	493	4.7	493	4.7	0.356	5.0	LOS A	0.7	5.2	0.03	0.59	0.06	40.4
5	T1	875	0.6	875	0.6	0.450	8.2	LOS A	9.6	67.3	0.31	0.28	0.31	49.6
Approach		1367	2.1	1367	2.1	0.450	7.0	LOS A	9.6	67.3	0.21	0.39	0.22	45.5
NorthWest: Yamba Drive														
11	T1	1048	0.7	1048	0.7	1.084	152.9	LOS F	60.6	427.0	1.00	1.53	2.06	5.0
12	R2	261	0.4	261	0.4	0.765	58.3	LOS E	14.6	102.8	1.00	0.88	1.10	19.6
Approach		1309	0.6	1309	0.6	1.084	134.1	LOS F	60.6	427.0	1.00	1.40	1.87	6.8
SouthWest: Launceston Street														
1	L2	167	0.0	167	0.0	0.090	2.9	LOS A	0.0	0.0	0.00	0.37	0.00	39.5
3	R2	372	4.5	372	4.5	1.308	343.8	LOS F	30.6	222.5	1.00	2.13	3.24	2.6
Approach		539	3.1	539	3.1	1.308	237.9	LOS F	30.6	222.5	0.69	1.58	2.23	4.5
All Vehicles		3216	1.7	3216	1.7	1.308	97.4	LOS F	60.6	427.0	0.61	1.00	1.23	9.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
SouthEast: Yamba Drive															
Lane 1	493	4.7	493	4.7	1382	0.356	100	5.0	LOS A	0.7	5.2	Short	60	0.0	NA
Lane 2	437	0.6	437	0.6	971	0.450	100	4.3	LOS A	4.4	31.2	Full	65	0.0	0.0
Lane 3	437	0.6	437	0.6	971	0.450	100	12.0	LOS B	9.6	67.3	Full	65	0.0	8.2
Approach	1367	2.1	1367	2.1		0.450		7.0	LOS A	9.6	67.3				
NorthWest: Yamba Drive															
Lane 1	526	0.7	526	0.7	485	1.084	100	152.9	LOS F	60.6	427.0	Full	215	-50.0 N3	68.7
Lane 2	523	0.7	523	0.7	482 1	1.084	100	153.0	LOS F	60.3	424.5	Full	215	-50.0 N3	68.1
Lane 3	261	0.4	261	0.4	341	0.765	100	58.3	LOS E	14.6	102.8	Short	105	0.0	NA
Approach	1309	0.6	1309	0.6		1.084		134.1	LOS F	60.6	427.0				
SouthWest: Launceston Street															
Lane 1	167	0.0	167	0.0	1857	0.090	100	2.9	LOS A	0.0	0.0	Short	85	0.0	NA
Lane 2	186	4.5	186	4.5	142	1.308	100	343.8	LOS F	30.6	222.5	Full	260	-50.0 N3	0.0
Lane 3	186	4.5	186	4.5	142	1.308	100	343.8	LOS F	30.6	222.5	Full	260	-50.0 N3	0.0
Approach	539	3.1	539	3.1		1.308		237.9	LOS F	30.6	222.5				
Intersection	3216	1.7	3216	1.7		1.308		97.4	LOS F	60.6	427.0				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.

N3 Capacity Adjustment due to downstream lane blockage determined by the program.

Site: [2040 Dev - PM: WS-YD]

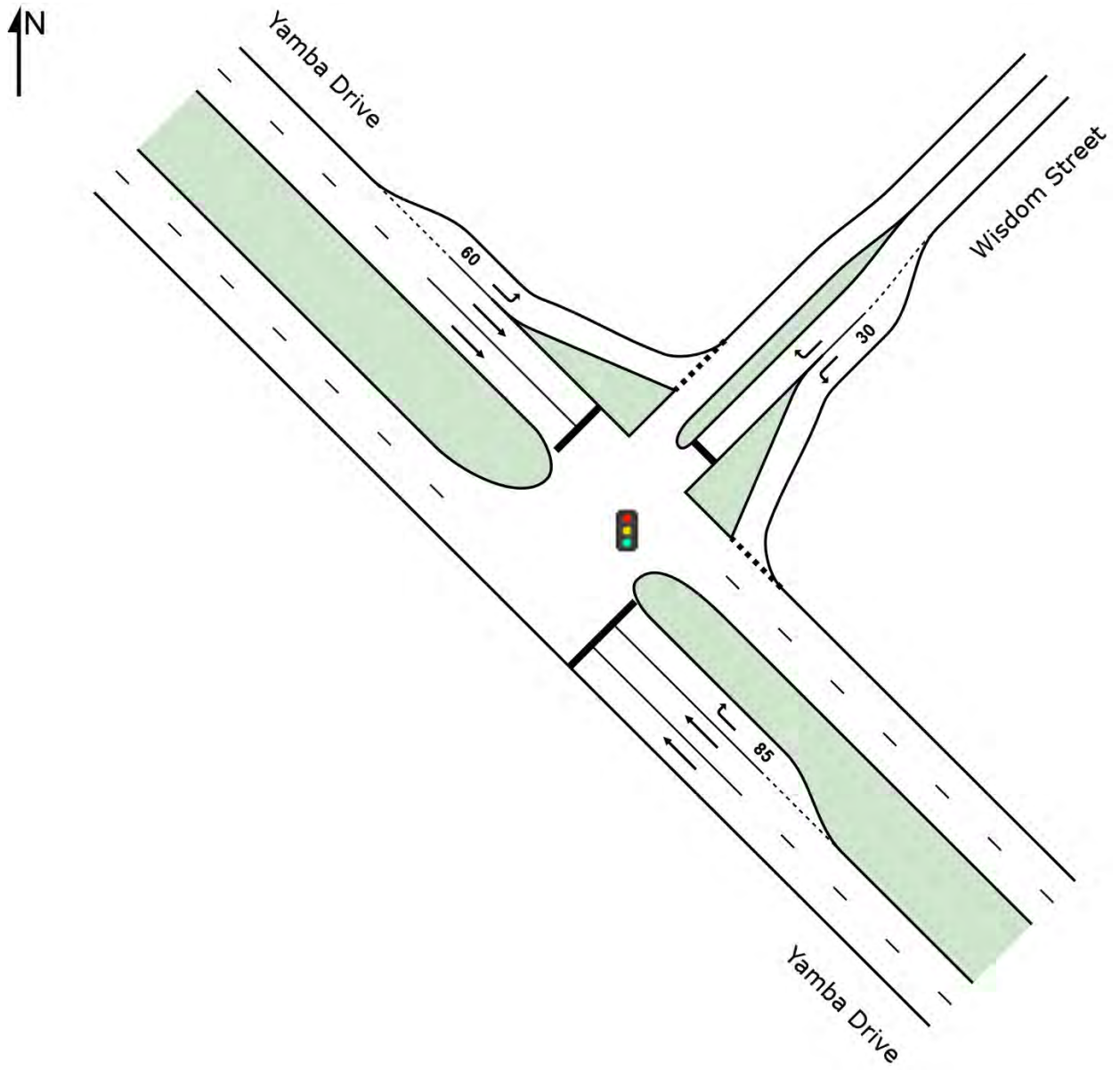
Network: 8 [2040 Dev - PM: LS-WS-YD]

Southeast part of Launceston Street / Wisdom Street / Yamba Drive
Existing Signalised Offset Cross Intersection
Site Category: 2040 Development Scenario - Weekday Evening Peak Hour
Signals - Fixed Time Coordinated Cycle Time = 114 seconds (CCG User-Given Phase Times)
Common Control Group: CCG1 [CCG]

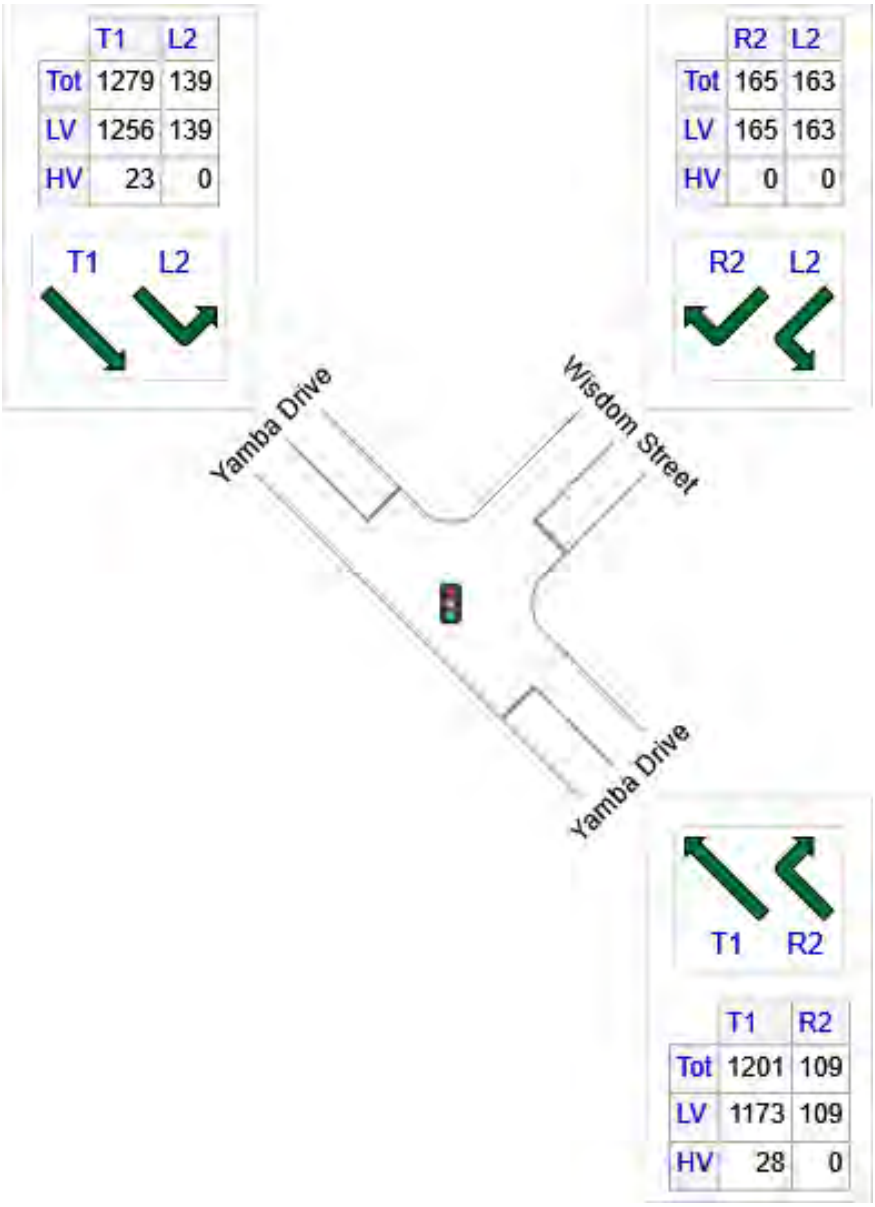
Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E
Output Phase Sequence: A, D, E

Some CCG output elements have been omitted as they have already been included under other Sites belonging to the same CCG.

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
SE: Yamba Drive	1311	1282	28
NE: Wisdom Street	328	328	0
NW: Yamba Drive	1418	1395	23
Total	3057	3005	52

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Yamba Drive														
11	T1	1201	2.4	1201	2.4	0.679	22.6	LOS C	27.2	194.2	0.80	0.72	0.80	47.9
12	R2	109	0.0	109	0.0	0.320	50.9	LOS D	5.4	37.5	0.91	0.78	0.91	35.4
Approach		1311	2.2	1311	2.2	0.679	24.9	LOS C	27.2	194.2	0.81	0.73	0.81	45.5
NorthEast: Wisdom Street														
1	L2	163	0.0	163	0.0	0.176	8.0	LOS A	3.0	21.3	0.40	0.58	0.40	48.3
3	R2	165	0.0	165	0.0	0.972	90.3	LOS F	12.2	85.3	0.98	1.23	1.73	16.4
Approach		328	0.0	328	0.0	0.972	49.4	LOS D	12.2	85.3	0.69	0.91	1.07	29.4
NorthWest: Yamba Drive														
4	L2	139	0.0	134	0.0	0.087	5.1	LOS A	0.4	2.8	0.08	0.60	0.08	40.2
5	T1	1279	1.8	1236	1.7	0.655	15.0	LOS B	14.9	106.1	0.58	0.52	0.58	56.8
Approach		1418	1.6	1371[N1]	1.5	0.655	14.0	LOS B	14.9	106.1	0.53	0.53	0.53	54.7
All Vehicles		3057	1.7	3009[N1]	1.7	0.972	22.6	LOS C	27.2	194.2	0.67	0.65	0.71	45.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Lane Use and Performance

	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
SouthEast: Yamba Drive															
Lane 1	652	2.4	652	2.4	960	0.679	100	23.0	LOS C	27.2	194.2	Full	735	0.0	0.0
Lane 2	549	2.4	549	2.4	808[1]	0.679	100	22.1	LOS C	22.0	156.9	Full	735	-8.2[N3]	0.0
Lane 3	109	0.0	109	0.0	342	0.320	100	50.9	LOS D	5.4	37.5	Short	85	0.0	NA
Approach	1311	2.2	1311	2.2		0.679		24.9	LOS C	27.2	194.2				
NorthEast: Wisdom Street															
Lane 1	163	0.0	163	0.0	924	0.176	100	8.0	LOS A	3.0	21.3	Short	30	0.0	NA
Lane 2	165	0.0	165	0.0	170[1]	0.972	100	90.3	LOS F	12.2	85.3	Full	680	-8.2[N3]	0.0
Approach	328	0.0	328	0.0		0.972		49.4	LOS D	12.2	85.3				
NorthWest: Yamba Drive															
Lane 1	139	0.0	134	0.0	1545	0.087	100	5.1	LOS A	0.4	2.8	Short	60	0.0	NA
Lane 2	626	1.8	605	1.7	924[1]	0.655	100	14.7	LOS B	14.9_4^N	106.1[N4]	Full	65	0.0	50.0
Lane 3	653	1.8	631	1.7	964	0.655	100	15.2	LOS B	14.9_4^N	106.1[N4]	Full	65	0.0	50.0
Approach	1418	1.6	1371[N1]	1.5		0.655		14.0	LOS B	14.9	106.1				
Intersection	3057	1.7	3009[N1]	1.7		0.972		22.6	LOS C	27.2	194.2				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.
N3 Capacity Adjustment due to downstream lane blockage determined by the program.
N4 Average back of queue has been restricted to the available queue storage space.

USER REPORT FOR NETWORK SITE

Project: 24-0487_20260304

Template: Default Site User Report

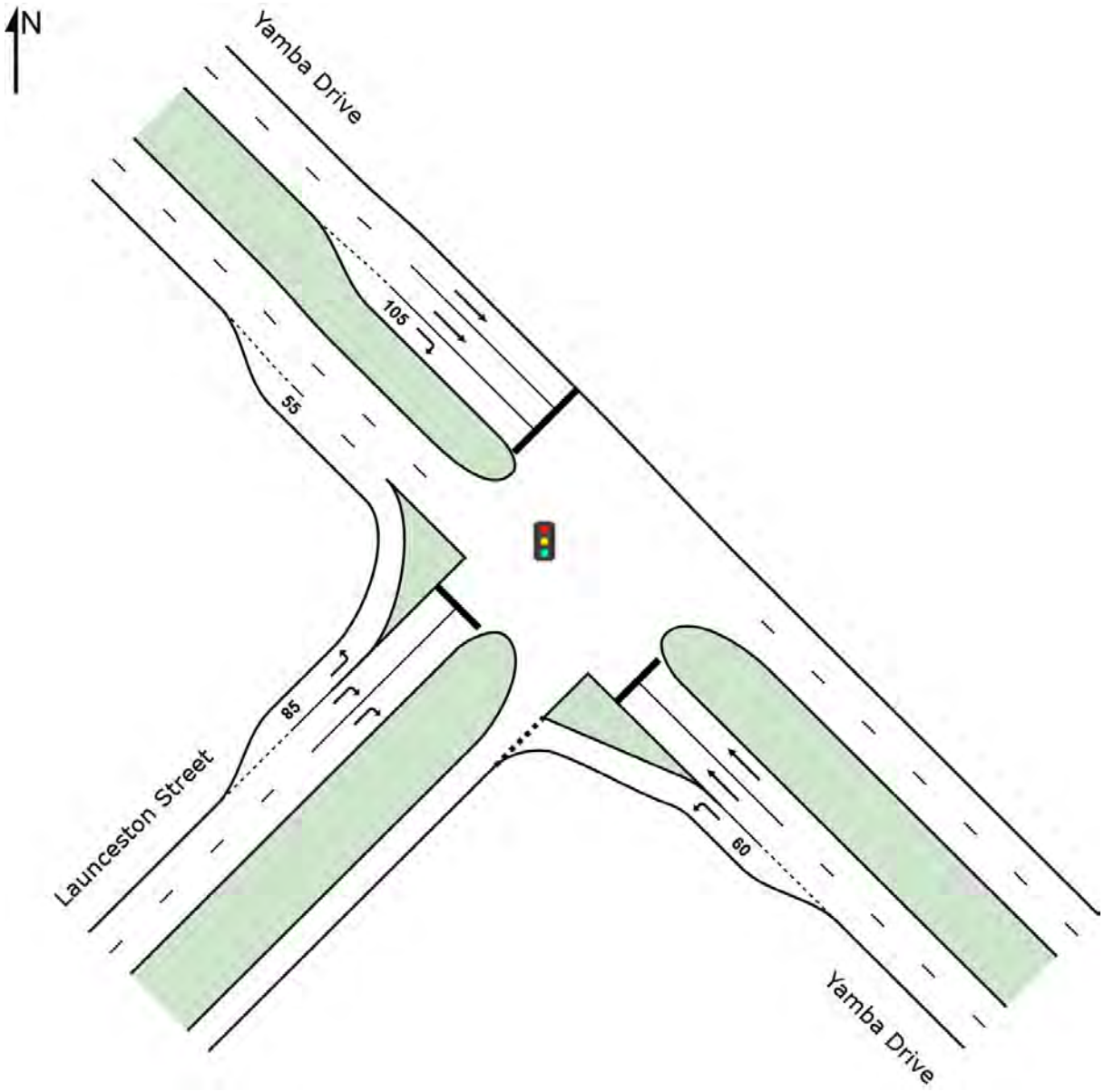
Site: [2040 Dev - PM: LS-YD (Rec)]

Network: 13 [2040 Dev - PM: LS-WS-YD (Rec)]

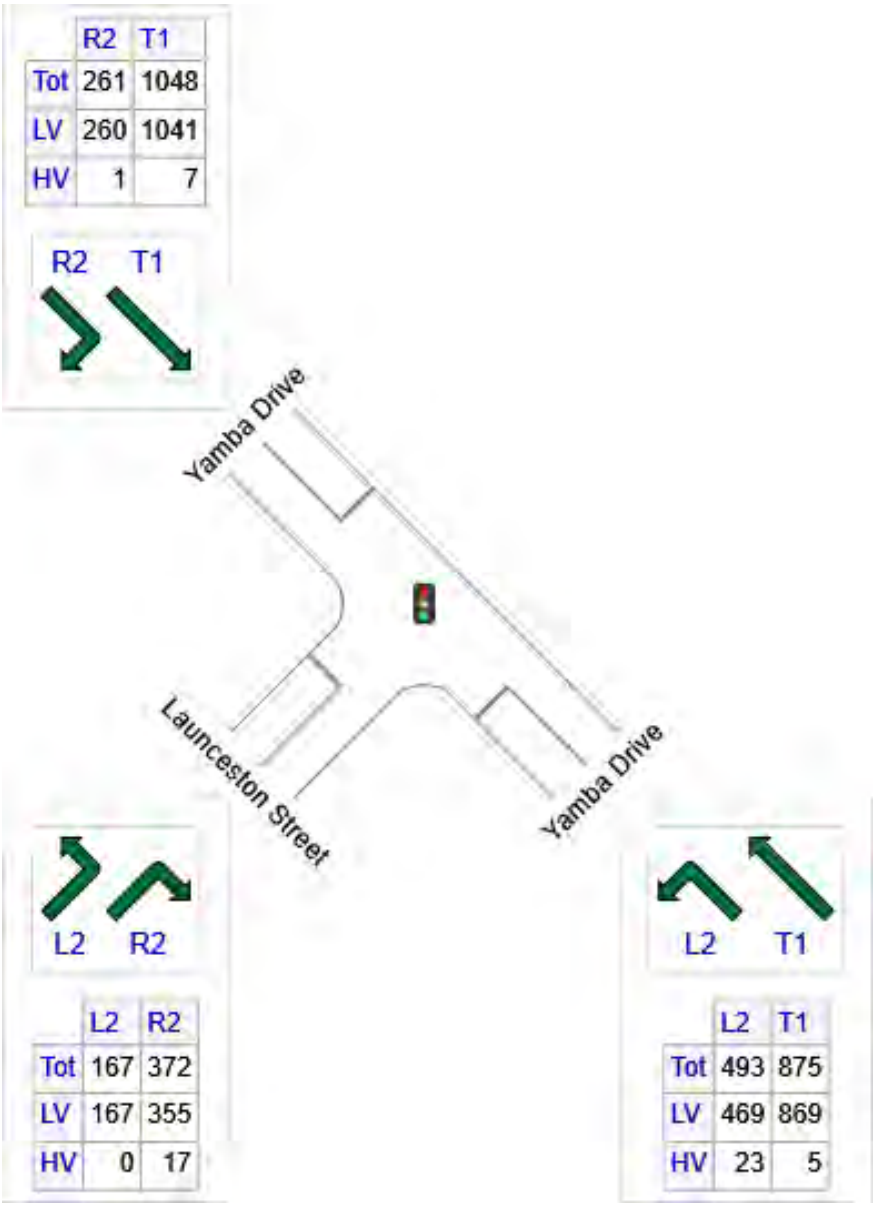
Northwest part of Launceston Street / Wisdom Street / Yamba Drive
Existing Signalised Offset X-Intersection
Site Category: 2040 Development Scenario - Weekday Evening Peak Hour
Signals - Fixed Time Coordinated Cycle Time = 114 seconds (CCG User-Given Phase Times)
Common Control Group: CCG1 [CCG]

Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E
Output Phase Sequence: A, D, E

Site Layout



OD Demand Flows

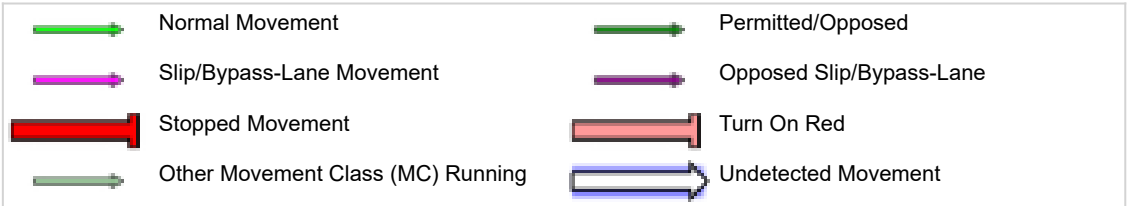


	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
SE: Yamba Drive	1367	1339	28
NW: Yamba Drive	1309	1301	8
SW: Launceston Street	539	522	17
Total	3216	3162	54

Input Phase Sequence (CCG)

Movement Class: All Movement Classes

REF: Reference Phase
VAR: Variable Phase



Mixed Running & Stopped MCs

Continuous Movement

Other Movement Class (MC) Stopped

Phase Transition Applied

Phase Timing Summary (CCG)

Phase	A	D	E
Phase Change Time (sec)	0	64	92
Green Time (sec)	58	22	16
Phase Time (sec)	64	28	22
Phase Split	56%	25%	19%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Movement Performance - Vehicles														
Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Yamba Drive														
4	L2	493	4.7	493	4.7	0.344	4.9	LOS A	0.6	4.4	0.03	0.60	0.07	40.5
5	T1	875	0.6	875	0.6	0.443	8.0	LOS A	9.4	66.1	0.31	0.27	0.31	50.1
Approach		1367	2.1	1367	2.1	0.443	6.9	LOS A	9.4	66.1	0.21	0.39	0.22	45.8
NorthWest: Yamba Drive														
11	T1	1048	0.7	1048	0.7	1.067	140.4	LOS F	58.4	411.5	1.00	1.48	1.97	5.5
12	R2	261	0.4	261	0.4	1.004	106.7	LOS F	21.2	149.0	1.00	1.10	1.75	12.8
Approach		1309	0.6	1309	0.6	1.067	133.7	LOS F	58.4	411.5	1.00	1.41	1.93	6.8
SouthWest: Launceston Street														
1	L2	167	0.0	167	0.0	0.090	2.9	LOS A	0.0	0.0	0.00	0.37	0.00	39.5
3	R2	372	4.5	372	4.5	1.070	154.0	LOS F	19.6	142.3	1.00	1.52	2.18	5.5
Approach		539	3.1	539	3.1	1.070	107.1	LOS F	19.6	142.3	0.69	1.16	1.50	8.9
All Vehicles		3216	1.7	3216	1.7	1.070	75.3	LOS E	58.4	411.5	0.61	0.93	1.13	11.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
SouthEast: Yamba Drive															
Lane 1	493	4.7	493	4.7	1433	0.344	100	4.9	LOS A	0.6	4.4	Short	60	0.0	NA
Lane 2	437	0.6	437	0.6	988	0.443	100	4.3	LOS A	4.4	31.2	Full	65	0.0	0.0
Lane 3	437	0.6	437	0.6	988	0.443	100	11.6	LOS B	9.4	66.1	Full	65	0.0	6.5
Approach	1367	2.1	1367	2.1		0.443		6.9	LOS A	9.4	66.1				
NorthWest: Yamba Drive															
Lane 1	527	0.7	527	0.7	494	1.067	100	140.3	LOS F	58.4	411.5	Full	215	-50.0 N3	65.1
Lane 2	522	0.7	522	0.7	489 1	1.067	100	140.5	LOS F	57.9	407.9	Full	215	-50.0 N3	64.3
Lane 3	261	0.4	261	0.4	260	1.004	100	106.7	LOS F	21.2	149.0	Short	105	0.0	NA
Approach	1309	0.6	1309	0.6		1.067		133.7	LOS F	58.4	411.5				
SouthWest: Launceston Street															
Lane 1	167	0.0	167	0.0	1857	0.090	100	2.9	LOS A	0.0	0.0	Short	85	0.0	NA
Lane 2	186	4.5	186	4.5	174	1.070	100	154.0	LOS F	19.6	142.3	Full	260	-50.0 N3	0.0
Lane 3	186	4.5	186	4.5	174	1.070	100	154.0	LOS F	19.6	142.3	Full	260	-50.0 N3	0.0
Approach	539	3.1	539	3.1		1.070		107.1	LOS F	19.6	142.3				
Intersection	3216	1.7	3216	1.7		1.070		75.3	LOS E	58.4	411.5				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
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Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
N3 Capacity Adjustment due to downstream lane blockage determined by the program.

Site: [2040 Dev - PM: WS-YD (Rec)]

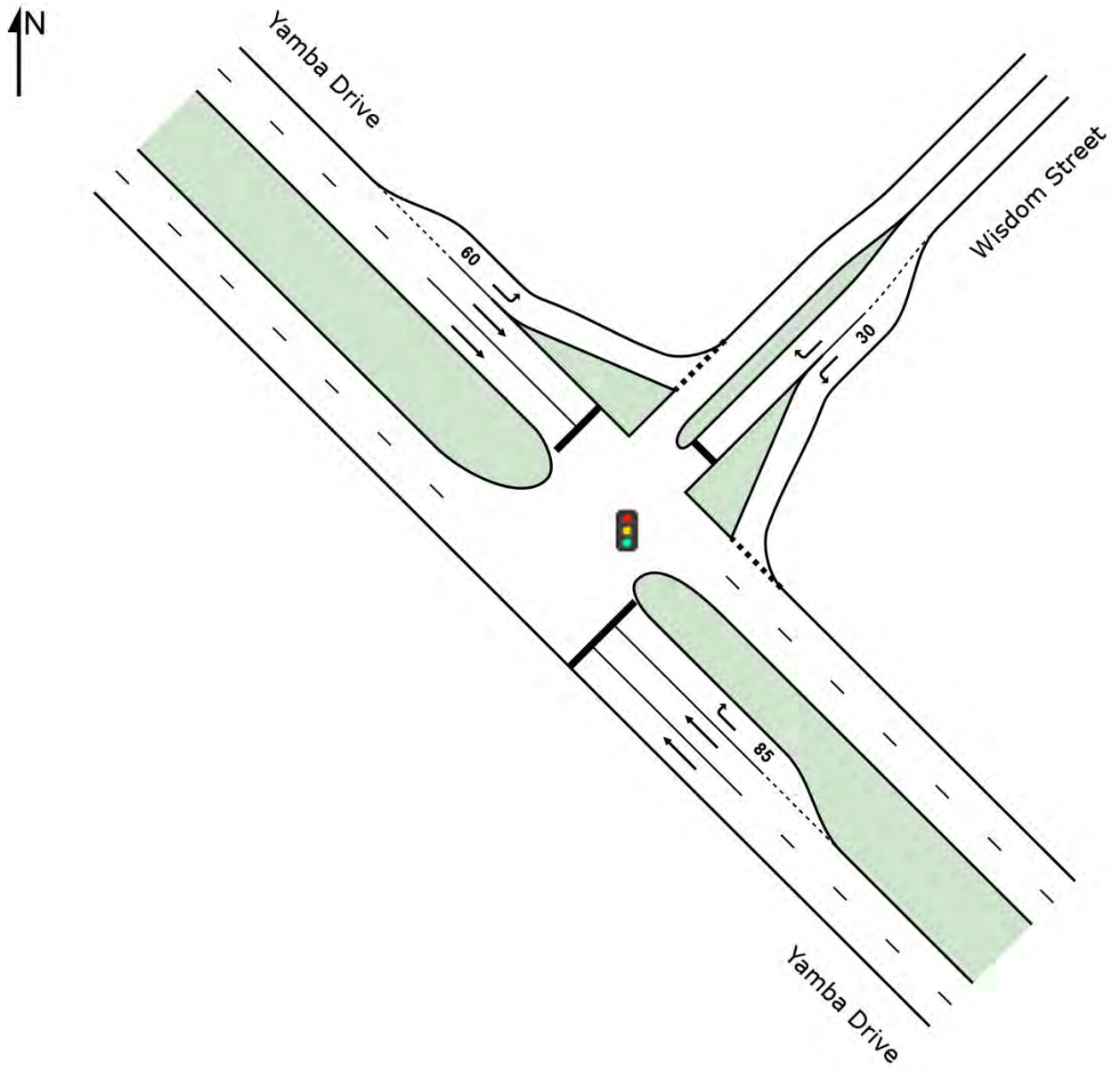
Network: 13 [2040 Dev - PM: LS-WS-YD (Rec)]

Southeast part of Launceston Street / Wisdom Street / Yamba Drive
Existing Signalised Offset Cross Intersection
Site Category: 2040 Development Scenario - Weekday Evening Peak Hour
Signals - Fixed Time Coordinated Cycle Time = 114 seconds (CCG User-Given Phase Times)
Common Control Group: CCG1 [CCG]

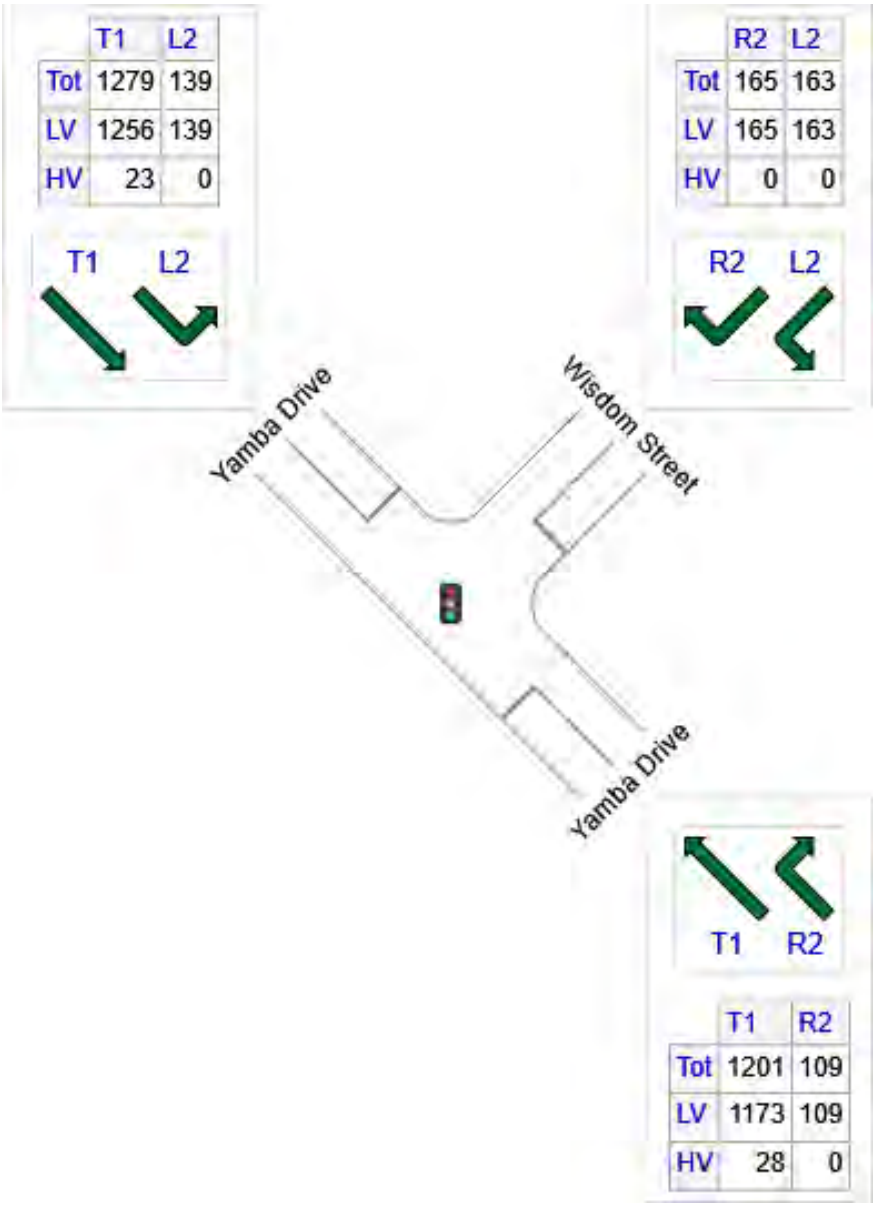
Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: SCATS
Reference Phase: Phase A
Input Phase Sequence: A, D, E
Output Phase Sequence: A, D, E

Some CCG output elements have been omitted as they have already been included under other Sites belonging to the same CCG.

Site Layout



OD Demand Flows



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
SE: Yamba Drive	1311	1282	28
NE: Wisdom Street	328	328	0
NW: Yamba Drive	1418	1395	23
Total	3057	3005	52

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Yamba Drive														
11	T1	1201	2.4	1201	2.4	0.666	21.7	LOS C	26.6	189.9	0.78	0.71	0.78	48.7
12	R2	109	0.0	109	0.0	0.420	56.4	LOS E	5.7	40.0	0.96	0.79	0.96	34.1
Approach		1311	2.2	1311	2.2	0.666	24.6	LOS C	26.6	189.9	0.80	0.71	0.80	45.8
NorthEast: Wisdom Street														
1	L2	163	0.0	163	0.0	0.181	8.5	LOS A	3.2	22.6	0.42	0.59	0.42	48.1
3	R2	165	0.0	165	0.0	0.767	52.7	LOS D	8.9	62.4	0.94	0.89	1.12	21.7
Approach		328	0.0	328	0.0	0.767	30.8	LOS C	8.9	62.4	0.68	0.74	0.77	34.4
NorthWest: Yamba Drive														
4	L2	139	0.0	139	0.0	0.089	4.8	LOS A	0.1	0.8	0.02	0.59	0.02	40.3
5	T1	1279	1.8	1279	1.8	0.670	15.1	LOS B	14.9	106.1	0.59	0.53	0.59	56.6
Approach		1418	1.6	1418	1.6	0.670	14.1	LOS B	14.9	106.1	0.53	0.54	0.53	54.6
All Vehicles		3057	1.7	3057	1.7	0.767	20.4	LOS C	26.6	189.9	0.66	0.63	0.67	47.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
SouthEast: Yamba Drive															
Lane 1	651	2.4	651	2.4	977	0.666	100	22.1	LOS C	26.6	189.9	Full	735	0.0	0.0
Lane 2	551	2.4	551	2.4	827[1]	0.666	100	21.1	LOS C	21.5	153.5	Full	735	-6.5[N3]	0.0
Lane 3	109	0.0	109	0.0	261	0.420	100	56.4	LOS E	5.7	40.0	Short	85	0.0	NA
Approach	1311	2.2	1311	2.2		0.666		24.6	LOS C	26.6	189.9				
NorthEast: Wisdom Street															
Lane 1	163	0.0	163	0.0	899	0.181	100	8.5	LOS A	3.2	22.6	Short	30	0.0	NA
Lane 2	165	0.0	165	0.0	216[1]	0.767	100	52.7	LOS D	8.9	62.4	Full	680	-6.5[N3]	0.0
Approach	328	0.0	328	0.0		0.767		30.8	LOS C	8.9	62.4				
NorthWest: Yamba Drive															
Lane 1	139	0.0	139	0.0	1563	0.089	100	4.8	LOS A	0.1	0.8	Short	60	0.0	NA
Lane 2	622	1.8	622	1.8	927[1]	0.670	100	14.9	LOS B	14.9_4^N	106.1[N4]	Full	65	0.0	50.0
Lane 3	657	1.8	657	1.8	981	0.670	100	15.3	LOS B	14.9_4^N	106.1[N4]	Full	65	0.0	50.0
Approach	1418	1.6	1418	1.6		0.670		14.1	LOS B	14.9	106.1				
Intersection	3057	1.7	3057	1.7		0.767		20.4	LOS C	26.6	189.9				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
N3 Capacity Adjustment due to downstream lane blockage determined by the program.
N4 Average back of queue has been restricted to the available queue storage space.