Transport Engineering Report

Mark Lane – Precinct One

for Phil Usher Construction



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Executive Summary

Colliers International Engineering and Design (TTMC) Pty Ltd has prepared this Transport Engineering Report to accompany a Development Application for a Material Change of Use and Building Works at 807 & 811 Main Street and associated properties along Mark Lane, Kangaroo Point (subject site).

The proposed development, Precinct 1 Scheme, comprises two residential towers (approximately 953 units / dwellings), a 177-key hotel, and a mix of retail, childcare, and community uses. The subject site is located within the Woolloongabba Priority Development Area (PDA), and the proposal scheme has been developed having regard to the PDA Development Scheme and its transport and movement objectives.

Parking Provision

The proposed development provides approximately 1,066 car parking spaces, which aligns with EDQ's PDA Development Scheme maximum parking rates for residents. Visitor parking supply is also compliant with the minimum EDQ PDA requirements. Parking allocation and arrangements are considered appropriate for the scale and nature of the development, providing a balanced outcome that supports resident and other land use demands, while maintaining compliance with applicable planning controls.

The car parking layout is generally compliant with relevant Brisbane City Council Transport, Access, Parking and Servicing (TAPS) Planning Scheme Policy (PSP) design parameters and / or Australian Standards and achieves a safe and functional outcome.

The development proposes over 1,200 bicycle parking spaces which is analogous with Brisbane City Council Transport, Access, Parking and Servicing (TAPS) Planning Scheme Policy (PSP) rates for residents and visitors.

Access and Movement

The proposed access strategy rationalises existing access arrangements and provides a clear functional hierarchy between service and general traffic. Service vehicle access is accommodated via dedicated Left-in / Left-out arrangements from Main Street and Vulture Street, minimising conflicts within the road network, particularly within the minor roads. General vehicle access is provided via Mark Lane and the proposed New Lane (including assignment of specific accesses to uses for wayfinding). This approach supports the efficient distribution of traffic, minimises conflict points, and enhances pedestrian amenity along all frontages.

Servicing

The development incorporates a coordinated servicing strategy, including dedicated loading facilities, on-site manoeuvring, and waste collection areas. Service vehicles are able to be accommodated wholly within the site and can enter and exit in a forward direction with minimal potential conflicts with the subject site / development at the boundary.

The number, configuration and location of loading bays consider the requirements of specific uses / activities and incorporate some shared-use which is appropriate for a mixed-use development, and consistent with the intent of relevant guidelines.

Traffic Impacts

The traffic impact assessment indicates that the additional development-generated traffic will be accommodated within the surrounding road network without significant adverse impacts. Intersection assessments demonstrate that key intersections will generally continue to operate within acceptable levels of service under future traffic scenarios, with only minor increases in delay. Further, The distribution of traffic across multiple access points further assists in minimising localised impacts.

The Vulture Street / Main Street intersection is forecast to approach capacity - marginally exceeding the generally accepted 90% - 95% DoS threshold during the PM peak period in future year assessment horizons - in the both the Base (without development) and Development scenarios. While analysis noted delay increases at the Vulture Street / Main Street of approximately 12.9% (above the 5% GTIA threshold), the proposed development provides spatial allowances along the Vulture and Main Street frontages, which will enable future upgrade of this intersection (by others) to mitigate additional traffic within the PDA area.

Otherwise, the surrounding road network is considered capable of generally accommodating the forecast traffic demands associated with the development with significant impact to operations or safety.

Conclusion

Overall, the proposed development achieves an integrated and functional transport outcome that is consistent with the intent of the Woolloongabba PDA Development Scheme and relevant statutory and guideline requirements. The proposed parking, access, servicing, and traffic arrangements are considered appropriate and demonstrate that the development can be accommodated generally without significant adverse impacts on the surrounding transport network (noting accommodation for future upgrades).

1. Introduction

1.1. Purpose

Colliers International Engineering and Design (TTMC) Pty Ltd has been engaged by Philip Usher Constructions to prepare this Transport Engineering Report to accompany a Development Application (DA) for Material Change of Use (MCU) for the proposed Multiple Dwelling, Short-term Accommodation and Centre Activities - Food and Drink Outlet, Function Facility, Health Care Service, Indoor Sport and Recreation, Office, Sales Office, Shop and Theatre and Building Works (BW) involving local heritage places. The Development Application is made over 807 & 811 Main Street, and 6, 18, 26, 26A, 32, 32A, 38, 44, 46, 48 and 52 Mark Lane, Kangaroo Point.

It is understood this report will accompany a Development Application to be lodged to Economic Development Queensland (EDQ) with referral to Brisbane City Council ('Council') and the Department of Transport and Main Roads (DTMR).

1.2. Background

Colliers has been providing consultancy services for the potential development of this site and surrounding area for current applicants and master planning transport advice. As such, we are already aware of the key transport issues and opportunities presented by the proposed development of this site. The following Transport Engineering Report assesses the potential development with respect to this history but also considers the scale of proposed development and any recent changes to the planning guidelines.

The subject site is located within the Woolloongabba Priority Development Area (PDA), which was declared by the Queensland Government in September 2023 and amended in October 2025 to support the delivery of the Cross River Rail project and facilitate the urban renewal of the Woolloongabba precinct.

The Woolloongabba PDA is intended to enable the development of a high-density, mixed-use urban environment, centred around the new Cross River Rail station and integrated public transport infrastructure. The PDA promotes a transit-oriented development (TOD) model, which prioritises public and active transport accessibility, reduces reliance on private vehicles, and encourages walkability through a highly connected and legible street network.

The Woolloongabba PDA Development Scheme sets out the planning and design framework for the precinct, including specific requirements relating to transport, access, and movement. Development within the PDA is expected to align with the following transport planning principles:

- Support for active transport and pedestrian priority within and around the precinct;
- Integration with existing and future public transport infrastructure, including the Cross River Rail station, the South-East Busway, and local bus services;
- Efficient management of servicing and access requirements for vehicles without compromising pedestrian and cyclist safety;

- Delivery of a transport network that accommodates expected future growth while minimising impacts on the external road network.

This development proposal has been prepared with consideration of the Woolloongabba PDA objectives and transport outcomes, ensuring that the proposed access, parking, servicing, and traffic generation are consistent with the intent of the PDA Development Scheme and broader planning policies.

Further, Colliers has attended several pre-lodgement meetings with EDQ over the last 3 years to discuss key traffic and transport matters associated with the proposed development. Items discussed included:

- External road network design
- Access locations and arrangements
- Servicing and loading provisions
- Proposed parking supply rates

The outcome of the meetings were generally positive, with no major concerns raised by EDQ in relation to traffic, access, or parking supply. EDQ was receptive to the overall design approach, noting that Colliers would provide comprehensive technical reporting to justify any performance-based solutions.

A key item of discussion was the proposed external road network and development servicing. EDQ was receptive to the overall design approach, noting that Colliers would provide comprehensive technical reporting to justify any performance-based solutions, provided it could be demonstrated that the design allows for safe and accessible vehicle movements and does not compromise pedestrian safety or the operation of the adjacent road network.

1.3. Scope

The scope of the transport aspects investigated includes:

- Reviewing the prevailing traffic and transport conditions surrounding the site.
- Identifying parking supply required to cater for development demands.
- Assessing the parking layout to provide efficient and safe internal circulation and manoeuvring.
- Assessing the access configuration to provide efficient and safe manoeuvring between the site and the public road network for cars, service vehicles, cyclists and pedestrians.
- Identifying the service vehicle needs for the site
- Assessing the internal service vehicle layouts to provide efficiency and safety for on-site service vehicle operation
- Reviewing access to a suitable level of public and active transport provisions.
- Identification of likely traffic volumes and traffic distribution from the development.

- Outline of general traffic impacts of development on the surrounding road network.

The development plans have been assessed against the following guidelines and planning documents:

- Woolloongabba Priority Development Area (PDA) Development Scheme
- Brisbane City Council Planning Scheme (City Plan 2014), specifically:
  - Transport, Access, Parking and Servicing Code (TAPS Code)
- Australian Standards for Parking Facilities, specifically:
  - Part 1: Off-street car parking (AS2890.1:2004).
  - Part 2: Off-street commercial vehicle facilities (AS2890.2:2018).
  - Part 3: Bicycle parking (AS2890.3:2015).
  - Part 6: Off-street parking for people with disabilities (AS2890.6:2009).

2. Site Location

The site is located at 807 & 811 Main Street, and 6, 18, 26, 26A, 32, 32A, 38, 44, 46, 48 and 52 Mark Lane, Kangaroo Point. near the intersection of Main Street and Vulture Street, as shown in Figure 2.1 overleaf . The site has road frontages to Mark Lane, Main Street and Vulture Street. The real property description includes the follows land parcels:

- 52 Mark Lane Lot 1 on RP99746
- 48 Mark Lane Lot 1 on RP99240
- 46 Mark Lane Lot 2 on RP11186
- 44 Mark Lane Lot 5 on RP11186
- 38 Mark Lane Lot 3 on SP352812
- 32 Mark Lane Lot 1 on RP11182
- 32A Mark Lane Lot 1 on RP11180
- 26 Mark Lane Lot 2 on SP260456
- 26A Mark Lane Lot 2 on RP11180
- 18 Mark Lane Lot 1 on SP260456
- 803 Main Street Lot 10 on SP3528332
- 807 Main Street Lot 9 on SP184393
- 811 Main Street Lot 8 on SP184392
- 352 Vulture Street Lot 1 on SP328486



Figure 2.1: Site Location (Immediate Context)

The site is currently occupied by various single, multiple-dwelling units and vacant land.

Key site characteristics from a planning perspective include:

- Approximately 11,520m² site area
- Mixed Use (Inner City) zoning

Major attractors to / from the subject site are:

- Large centres
- Education
- Hospitals
- Commercial
- Shopping centre

3. The Proposed Development

3.1. Development Profile

The proposed land uses for this development are summarised in Table 3-1.

Table 3-1: Proposed land uses

Land Use	Area/Qty
Tower 1 - Multiple Dwellings	
• 1 Bedroom	234
• 2 Bedroom	423
• 3 Bedroom	25
Total	683
Tower 2 - Multiple Dwellings	
• 1 Bedroom	54
• 2 Bedroom	106
• 3 Bedroom	55
• 4 Bedroom	55
Total	270
Tower 3 - Hotel	177 keys
Specialist:	
• Community Use	1,240m² GFA
• Retail	656m² GFA
• Childcare	946m² GFA

A copy of the development plans, prepared by Woods Bagot, is included in Appendix A.

3.2. Parking

The development plan includes the following parking supply:

- 952 resident spaces (incl. PWD spaces)
- 144 visitor spaces (incl. PWD spaces)
- 48 hotel spaces
- 21 Childcare spaces
- 1155 bicycle spaces, 924 Residential and 231 Visitors, located throughout the site

Further details regarding the proposed car and bicycle parking provisions are included in Section 5.

3.3. Access

The development has three road frontages and is currently providing access from each of these. It is intended to rationalise the number of access points while maintaining vehicle access from all frontages. The proposed plans also provide substantially improved pedestrian access to the site across all frontages.

- Vulture Street access is located at the southern side of the subject site. This will be a modified 7.0m wide Type B2 crossover for service vehicles only, providing Left-in / Left-out only connection to Vulture Street.
- Main Street access is located at the eastern side of the subject site. This will be a 7.0m wide Type B2 crossover for service vehicles only, providing Left-in / Left-out only connection to Main Street.
- Mark Lane access is located at the northern side of the subject site. This will be a 7.0m wide Type B2 crossover for cars (residents) only, providing all turn movements to Mark Lane.
- New Lane, northern access, is located at the western side of the subject site. This will be a 7.0m wide Type B2 crossover for cars (hotel) only, providing all turn movements to the New Lane.
- New Road, southern access, is located at the western side of the subject site. This will be a 7.0m wide Type B2 crossover for cars (residents and visitors) only, providing all turn movements to the New Lane.
- Pedestrian access to the precinct is achieved via several footpath linkages.
- Cyclist access to the precinct via several footpath links and vehicular driveways.

Further details regarding the proposed access arrangements are included in Section 6.

3.4. Servicing

The development proposal includes the following servicing arrangements:

- Provisions for on-site refuse and recycling storage
- Provisions for deliveries on-site and a dedicated loading dock areas based on the location of the respective use access points – building entrances and vertical transport.
- Provisions for maintenance vehicles on-site.

Further details regarding the proposed servicing arrangements is included in Section 7.

3.5. Construction Staging

The development is proposed to be delivered through a staged construction sequence approach to allow flexibility in delivery timing while maintaining safe and efficient pedestrian and vehicle access, infrastructure, and servicing at all times.

Therefore, the development has been divided into three built-form stages, supported by interim and permanent access and infrastructure easements. The proposed stages consist of the following arrangements and indicative delivery dates:

- Precinct 1: Stage 1 (Tower 1) + Podium - completed 2029
- Precinct 1: Stage 2 - Hotel completed - 2030
- Precinct 1: Stage 3 (Tower 2) completed - 2031

Refer to the staging plans included in architectural plans provided Appendix A.

Overall, the proposed staging plan ensures that each development stage can operate independently in the short term, while safeguarding the long-term functionality, access, and movement requirements of the ultimate precinct.

4. Site Travel Environment

4.1. Public Transport Facilities and Services

4.1.1. Train Services

While there are currently no rail stations within immediate walking distance of the subject site, future public transport accessibility will be significantly enhanced by the delivery of the Woolloongabba Rail Station as part of the Cross River Rail project.

The future station is located opposite the site (around a 2-minute walk) and will provide high-frequency rail services connecting to key destinations, including the Albert Street Rail Station, as well as integration into the wider SEQ rail network. The Woolloongabba station is currently under construction and is expected to be operational before 2030.

The current closest rail station to the subject site is South Bank Train Station, which is approximately 1.1 kilometres (~15 minutes) walk to the west. This station services the Cleveland Line and the Beenleigh Line. It is noted that once the Cross River Rail (CCR) project is completed (currently under construction), the Woolloongabba Station will be within 400m (5-minute) walk of the subject site.

The Cleveland Line runs between Shorncliffe and Cleveland, servicing suburbs in between including Buranda, Morningside, Manly, and Lota. This service operates on all days, with weekday peak hour frequencies of approximately 15 minutes and off-peak frequencies of 30 minutes.

The Beenleigh Line runs between Beenleigh and Bowen Hills, servicing suburbs in between including Loganlea, Sunnybank, Buranda, and South Bank. This service operates on all days, with weekday peak hour frequencies of approximately 15 minutes and off-peak frequencies of 30 minutes.

The subject site benefits from strong existing bus connectivity, noting the proximity of the Woolloongabba Bus Station to the south and will experience further enhancement to public transport accessibility upon completion of Cross River Rail project.

4.1.2. Bus Services

The subject site is well serviced by high-frequency bus routes. Bus stops are currently provided along Main Street in close proximity to the subject site (within approximately 100 – 200m walking distance), offering convenient access for residents, workers, and visitors.

These bus stops are serviced by multiple TransLink bus routes, providing direct connections to the Brisbane CBD, Fortitude Valley, South Brisbane, and other key inner-city and suburban destinations. Bus services along Main Street typically operate at high frequencies, with services generally every 5 – 10 minutes during peak periods and every 10 – 15 minutes during off-peak periods, seven days a week.

In addition, the subject site is located within approximately 800 m (10-minute walk) of the Woolloongabba Busway Station, which forms part of the South-East Busway – see Figure 4-1.

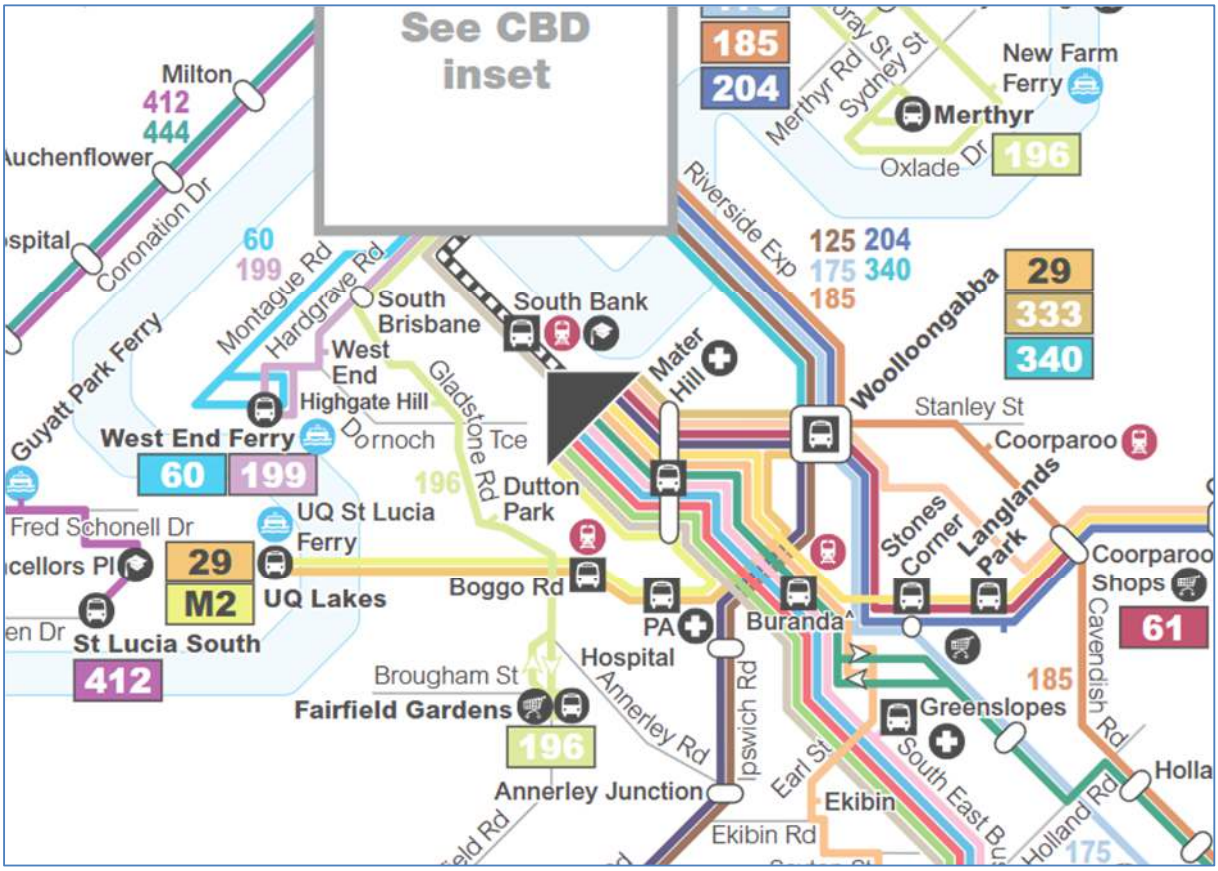


Figure 4-1: Existing Bus Services Near the Vicinity of the Site

This busway station provides high-capacity, high-frequency services across the broader Brisbane metropolitan area.

4.1.3. Ferry Services

The subject site is located in close proximity to the Mowbray Park Ferry Terminal, which is less than 900m walk to the north-east. This ferry terminal services CityCat services operating between UQ St Lucia and Northshore Hamilton.

The CityCat service runs on all days, with weekday peak hour frequencies of approximately 15 minutes and off-peak frequencies of 30 minutes.

4.2. Active Transport Facilities

4.2.1. Bicycles

The subject site is located close to the Veloway 1 (V1) cycleway, which is identified as a 'Primary Cycle Route' under Brisbane City Council's Bicycle Network Overlay Code. The V1 cycleway is an extensive dedicated cycle

corridor running between Brisbane CBD and Eight Mile Plains, providing a high-quality, off-road cycle route for cyclists commuting between the Brisbane inner-city, Woolloongabba, and Brisbane's southern suburbs.

Access to the V1 cycleway from the subject site is possible via Potter Street and Stanley Street, with connections available to both the Woolloongabba Bikeway network and the V1 via entry points located along O'Keefe Street.

In the more immediate surrounds, Vulture Street and Potter Street provide cycle provisions in the form of shared on-road treatments and access to nearby off-road cycle paths. Stanley Street also offers dedicated on-street cycle lanes linking the site to South Brisbane, Kangaroo Point, and the wider inner-city cycle network.

The surrounding bicycle provisions are shown in Figure 4-2.



Figure 4-2: Surrounding Bicycle Provisions

The subject site is also located within the main coverage areas of e-mobility hire schemes such as Beam, Neuron, and Lime which offer shared e-scooter and e-bike services. There are some primary e-scooter hubs in proximity to the subject site including one at Woolloongabba Busway Station (approx. 300m walk) and another near Mowbray Park Ferry Terminal (approx. 900m walk).

4.2.2. Pedestrians

Formal pedestrian footpaths are provided on both sides of Main Street, Vulture Street and Lahey Lane, facilitating safe and convenient pedestrian access to and from the subject site to nearby destinations and transport nodes.

Signalised pedestrian crossings are located along Main Street at nearby intersections, including connections toward the Kangaroo Point peninsula and Woolloongabba. Additional signal controlled crossings are available along key corridors such as Stanley Street and Vulture Street within a short walking distance.

The subject site also benefits from proximity to the Kangaroo Point Cliffs Park, which provides high-quality pedestrian pathways and links to the Brisbane River edge, enhancing walkability and connectivity to nearby recreational areas.

Walkability Summary

The subject site is located within an established urban environment that benefits from good pedestrian infrastructure, with formal footpaths, signalised crossings, and pedestrian refuges supporting safe and convenient walking routes.

Key local destinations, including Woolloongabba's commercial precinct, the Woolloongabba Busway Station, Buranda Train Station, and the future Cross River Rail Woolloongabba Station, are all within comfortable walking distance of the subject site.

The combination of formal pedestrian infrastructure, short walking distances to public transport, nearby services, and active transport links contributes to a highly walkable environment. It is noted that the subject site was a 'Walk Score' (see www.walkscore.com) of 93 ("Walker's Paradise") and a Transit Score of 89 ("Excellent Transit") – even prior to the Woolloongabba Station (CRR) opening.

The existing infrastructure is considered sufficient to encourage and support walking for both daily trips and last-mile connections to external transport options, reducing dependence on private vehicles for short-distance travel

Pedestrian Bridges

The subject site is located within convenient walking and cycling distance of the Kangaroo Point Bridge and Goodwill Bridge, dedicated active transport bridges connecting Kangaroo Point and South Bank to the Brisbane CBD respectively.

These bridges provide direct, high-quality pedestrian and cyclist connection across the Brisbane River, significantly reducing travel times to the CBD and enhancing accessibility to employment, retail, and entertainment precincts. The bridge is designed to support both commuter and recreational users, with generous path widths, lighting, and accessible gradients.

The infrastructure provides substantial enhancement to the active transport network, encouraging walking and cycling as viable alternatives to private vehicle use for trips to and from the subject site.

4.3. The Road Network

4.3.1. Road Hierarchy

The hierarchy and characteristics of roads in the immediate vicinity of the site are shown in Table 4-1.

Table 4-1: Surrounding Road Hierarchy

Road	Posted Speed Limit	Road Configuration			Classification	Authority
		Reserve Width	Carriageway Width	Lane Configuration		
Vulture Street	60 km/h	20–25	11–12	Four (4) traffic lanes plus turn lanes. No standing on north side of road, road shoulder / parking lane on south side. One direction only – eastbound	District Road	DTMR
Mark Lane	50 km/h[1]	10m	4m to 6m	One traffic lanes plus informal kerbside parking.	Local Road	Council
Leahy Lane	50 km/h[1]	20m	5–6	one) traffic lanes plus informal kerbside parking.	Local Road	Council
Main Street	60 km/h	30 metres	20–22 metres	Four (4) traffic lanes (two in each direction) with a central median and dedicated turning lanes at major intersections. Parking generally restricted / prohibited	Arterial Road	DTMR
Leopard Stret	50 km/h	20 metres	12 metres	Two/Three traffic lanes and kerbside parking along both sides, with restrictions near signalised intersections.	District Road	Council

The following is noted in regard to surrounding key road network intersections:

- Vulture Street and Main Street is a signalised intersection, providing controlled movements for both vehicular and pedestrian traffic.
- Vulture Street and Leopard Street is a signalised intersection, facilitating safe access between the local road network and the arterial route.
- Vulture Street and Mark Lane is a priority-controlled (Give Way) intersection, with Mark Lane required to give way to traffic on Vulture Street.
- Vulture Street and Leahy Lane is a priority-controlled (Give Way) intersection, with Leahy Lane giving way to all movements along Vulture Street.

4.4. Transport Planning

The subject site is located within the Woolloongabba PDA, which is undergoing significant transformation as part of Brisbane's broader urban growth strategy, supported by major transport infrastructure investment, including the Cross River Rail project.

As part of the PDA planning framework, EDQ, in collaboration with Council and the DTMR, has identified a coordinated approach to transport planning in the area. This integrated strategy aims to improve multimodal access, reduce dependency on private vehicles, and promote sustainable urban development outcomes.

The transport planning initiatives relevant to the subject site include:

- Delivery of the Woolloongabba Station, a new high-capacity underground rail station positioned within walking distance of the site, which will provide residents, employees, and visitors with improved access to the South-East Queensland rail network, significantly reducing travel times to key employment, education, and recreational destinations across the city.
- Planned upgrades to the pedestrian and cycling network, including new connections, wider footpaths, and safe crossing points that will link the site to nearby public transport nodes, public open space, and surrounding urban precincts.
- Proposed improvements to local road corridors and intersection layouts to support changes in traffic circulation patterns, especially in response to altered travel behaviour following the opening of the Woolloongabba Station and ongoing PDA redevelopment.
- A focus on the creation of a connected, safe, and efficient transport environment that prioritises walking, cycling, and public transport use, while managing private vehicle movements and parking supply to align with EDQ's and Council's strategic objectives for inner-city living and active transport.

Overall, the transport planning vision for the Woolloongabba PDA seeks to ensure future developments, including the proposed reconfiguration and multi-unit development at the subject site, are supported by a well-integrated transport network. These planned improvements are expected to encourage sustainable travel behaviours and contribute positively to the function, safety, and liveability of the surrounding precinct.

4.5. Future Road Network Arrangements

As part of pre-lodgement discussions with EDQ, the external road network was reviewed in relation to land dedications, design arrangements, and construction / delivery. This included consideration of the land requirements to accommodate future road upgrades, proposed cross-sections and intersection treatments, and the staging of infrastructure delivery in the context of the development. Responsibility for the design, funding, and delivery of external works was also discussed.

The following sections summarise the key proposed road arrangements and cross-sections for the surrounding road network. A concept road layout plan, including cross-sections, is provided in Appendix B for further detail.

Vulture Street

The existing road profile for Vulture Street is proposed to be largely retained, with minor land dedications to tie into existing approvals adjacent to the site. This approach reflects the presence of fixed site constraints and heritage considerations, which limit the available corridor width.

The proposed key cross-section extents for Vulture Street comprises the following:

- A 0.92m (max width) land dedication along the northern side of the road, generally consistent with the Aria development (Ref. A006935599), except adjacent to the Russian Orthodox Church site where no land dedication is proposed due to heritage constraints.
- Provision for future land dedication at the intersection of Vulture Street and Main Street to accommodate potential road widening and/or a turn lane. This allowance is based on the approved cross-section associated with the Trilogy development (Ref. A005344952).
- Corner truncations provided per Council's standards - generally 6m 3-chord truncation - on each intersection where required.

Mark Lane

Per the PDA guidelines, Mark Lane is proposed as a modified neighbourhood road. Similar to Vulture Street, and given the existing alignment of Mark Lane and constraints to the northern verge, the following cross-section is proposed:

- Two 3.0 m travel lanes (post land dedication)
- One 3.75 m verge (post land dedication)
- Corner truncations provided in accordance with Council's standards - generally 6m 3-chord truncation - at each intersection where required.

Lahey Lane

The proposed cross-section for Lahey Lane has been accepted by EDQ, comprising the following elements:

- Two 3.75 m verges (post land dedication)
- One 2.5 m parking lane (western side)
- Two 3.0 m travel lanes
- Corner truncations provided in accordance with Council's standards - generally 6m 3-chord truncation - at intersections where required

Main Street

Main Street is set to be retained per the existing layout with exception of the following modification:

- Land dedication based on the approved cross-section associated with the Trilogy development (Ref. A005344952). The dedication is to be extended for the full extent of the Main Street frontage.
- Corner truncations provided per Council's standards - generally 6m 3-chord truncation - on each intersection where required.

New Lane

The development proposes a new road (north-south orientation) per the PDA guidelines. The provisions of the new road comprise the following elements:

- One 2.5m verge on the eastern side
- One 3.75m verge on the western side consisting of the following
  - One 2.5m indented parking lane
  - One 1.5m verge
- Two 3.0 m travel lanes
- Corner truncations provided in accordance with Councils standards (6 m × 3 m chords) at intersections where required
- Standard minor road T- intersection at Mark Lane junction.

5. Parking Arrangements

5.1. Parking Supply

5.1.1. Car parking

In accordance with the requirements of the Woolloongabba PDA Development Scheme, the parking supply for the proposed development is to be provided in line with the rates set out in Schedule 3: Car Parking Rates. Table 5-1 provides a summary of the parking supply requirements in line with the PDA, and the proposed provisions, for the development scheme.

Table 5-1: Car Parking Supply Requirement overview

Land Use / Component	PDA Requirement	Extent	Requirement	Provision
Multiple Dwelling (Residents): • 1 Bedroom • 2 Bedrooms • 3 Bedroom • 4 Bedrooms	 0.5 space / unit (max) 1.0 spaces / unit (max) 1.5 spaces / unit (max) 2.0 spaces / unit (max)	Total: 953 units 289 units 529 units 80 units 55 units	Total: 904 car spaces (max) 145 spaces (max) 529 spaces (max) 120 spaces (max) 110 spaces (max)	Total: 858 car spaces 764 standard spaces 94 tandem spaces
Multiple Dwelling (Visitors)	0.15 spaces / unit (min)	953 units	143 spaces	**144 spaces**
Short-term accommodation	0.25 spaces / key (max)	177 Keys	45 spaces	43 spaces
Other uses	1 space / 300m^2 GFA (max)	2,842m^2 GFA	10 spaces	**21 spaces**
Total			**1,102 spaces**	**1,066 spaces**

The proposed development scheme includes a multi-level parking arrangement in both Basement and Podium, designed to cater to the needs of both residents and visitors, hotel guests and staff, and retail / community use / child-care land uses.

Parking will be distributed across several dedicated levels within the site, ensuring an adequate supply for occupants, visitors, and customers. The parking supply allocation to users for each level, is as follows:

- Basement Level 2: resident parking for Towers 1 and 2
- Basement Level 1: resident parking for Towers 1 and 2, and visitor parking for Tower 1
- Lower Ground Level: Shared parking for child-care, community use and retail uses; and visitor parking for Tower 2
- Plaza Level: parking for hotel use
- Podium Levels 1 – 4: resident parking for Towers 1 and 2

The parking layout has been strategically planned to separate residential and retail parking where appropriate, promoting security and convenience for users of each land use. Further information regarding the location and allocation of parking for each use / user group which is outlined in the following sections.

5.1.2. Hotel

The hotel use parking is noted as a maximum under the EDQ PDA rates. For the proposed 177 keys (considered equivalent to rooms for assessment purposes), the maximum parking that could be allocated to this use would be 45 spaces. The proposed parking supply provision of 43 spaces is compliant with the EDQ rates. Further, the Hotel use parking supply is accessed through the northern New Lane access and is separate all other parking supplies – therefore, the potential for utilisation of other parking areas by Hotel patrons (and vice versa) is considered negligible.

5.1.3. Residential Parking

Per Table 5-1, the residential use parking requirement for the site outlines a maximum provision for residents and a minimum provision for visitors, with an indicative requirement of 1,047 spaces. The development scheme proposes 858 residential parking spaces and 144 residential visitor parking spaces, totalling 1,002 spaces. This proposed parking supply meets the minimum visitor car parking supply, as well as keeping within the maximum car parking supply for residents – 904 max. under EDQ rates with 858 resident spaces proposed.

It is noted that for the 2-bedroom, 3-bedroom, and 4+-bedroom units, they will have up to one standard parking space allocated - tandem parking spaces would need to be assigned to the 3-bedroom and 4-bedroom units. Therefore, the 2-bed, 3-bed, and 4-bed units would account for 664 standard spaces of the 764 standard spaces within the proposed development scheme layout. Under the proposed arrangements, the remaining 100 standard spaces would be assigned to the 1-bedroom units – an effective supply rate of 0.33 car parking spaces for the 1-bedroom units – which is compliant with the EDQ maximum parking rates.

Accordingly, the proposed parking supply provision is generally in compliance with EDQ's maximum parking rates as outlined within the PDA documentation.

It is also noted that there is opportunity to increase the overall parking supply. This may be considered to factor in the scale, density, and nature of the proposed development – which will attract a diverse resident profile, often with varying levels of car ownership depending on factors such as household size, tenure type, and affinity to public transport.

5.1.4. Shared Use Parking

The publicly accessible car parking spaces, for the non-residential ,child-care, community use and retail uses will be provided in a specific area (separate from the residential visitor car parking areas) accessed from the New Lane. While the proposed parking supply for these spaces is marginally over the maximum EDQ rates – 24 spaces proposed where a maximum of 13 spaces is identified – it is considered appropriate for the scale and mix of uses.

While there will be flexible use of these spaces with demand occurring at during different times of the day, there may also be some overlap of higher / peak demands between uses, which will create higher overall demands. The marginally higher parking supply will be able to cater for short peak demands and ensure that parking demands do not impact residential visitor parking.

5.1.5. Construction Staging – Parking

A preliminary review of the intended construction program identified that Tower 1 and the Hotel will initially be constructed, along with the Basements 1 and 2, Vulture Street and Plaza parking levels – no Podium parking levels, accessed from Mark Lane, will be available for the initial Stages 1 and 2 phase of construction.

As the Hotel use and parking supply is separate from the other uses within the development scheme, these 43 spaces will operate independently in Stage 1 and 2, and also in Stage 3. Similarly, the child-care, Community use and retail parking is separate from the resident / visitor parking supply, this supply of 21 spaces also remains appropriate within the initial construction Stages 1 and 2.

It is noted that in Stage 1, there will likely be some use of a portion of the Podium parking levels. There may be some additional parking allocated to a small number of 2-bedroom and 3-bedroom apartments, which would result in these supply rates being marginally over the EDQ maximums. This is considered appropriate as this will ensures that both residential parking needs are met, while also providing flexibility to respond to future changes in demand, private vehicle ownership trends and previous Council City Frame rates, particularly the 2-bedroom units being above one (1) space per unit.

Should the Podium parking not be available, the Basement and northern portion of the Lower Ground Levels of parking would be available for Tower 1 residents and visitors – comprising 490 spaces (including 46 tandem spaces). Given the 681 units within Tower 1, there would be a need for 103 visitor parking spaces. The remaining 387 spaces would be assigned to residents, noting that the EDQ maximum parking rates would allow for up to 578 spaces could be provided for Tower 1 unit mix. The relative parking rate for the Tower 1 (Build-to-Rent) would effectively be 0.52 spaces per unit.

5.1.6. PWD Parking

The TAPS PSP indicates the following requirements for PWD parking:

- A provision rate of 1 PWD space for every 50 ‘ordinary’ spaces (with a minimum of 1 space).
- A minimum of 1 visitor PWD space is required for multiple dwelling.
- PWD spaces are provided as close as possible to the main building entrance.

For the proposed development, the number of ‘ordinary’ parking spaces is 201 spaces, which is equal to all visitor and retail parking. With regards to resident parking, these are not included within this umber given that the Building Code of Australia (BCA) does not nominate any PWD requirements for Class 2 (residential) buildings. Based on a supply of 201 spaces, a minimum of four (4) PWD spaces are required.

The development plan includes allowance for four (4) PWD parking spaces, satisfying the requirements of the TAPS PSP. These PWD spaces are located throughout the lower basement parking level and where possible, adjacent to the main building entry / lift lobby.

5.1.7. Bicycle Parking

The bicycle parking provision for the proposed development land uses has been assessed against Table 21 of Council's TAPS PSP, in accordance with the PDA guidelines. Further consideration has been given to Austroads' Cycling Aspects of the Austroads Guides for residential uses, as this approach better reflects actual resident demand by accounting for dwelling size and number of bedrooms.

Table 5-2 provides a summary of the bicycle parking supply requirements from both Council's TAPS PSP and Austroads and assesses the proposed provisions for the development scheme. The retail, community use, and childcare uses do not require formal bicycle parking provision under Council's TAPS PSP.

Table 5-2: Development Bicycle Parking Supply Assessment

Users	TAPS PSP		Austroads Rates		
	Bicycle Parking Rates	Total Required	Austroads	Total Required	Provided
Resident:					
Stage 1	1 per unit (683 units)	683 spaces	1 per 4 beds (1,156 beds)	289 spaces	
Stage 2	1 per unit (270 units)	272 spaces	1 per 4 beds (651 beds)	163 spaces	
Total:		*953 spaces*		*452 spaces*	962 spaces
Visitor:					
Stage 1	1 per 4 units (683 units)	171 spaces	1 per 16 beds (1,156 beds)	73 spaces	
Stage 2	1 per 4 units (270 units)	68 spaces	1 per 16 beds (651 beds)	41 spaces	
Total		*259 spaces*		*114 spaces*	244 spaces
Grand Total		**1,212 spaces**		**567 spaces**	**1,206 spaces**

From the tabulated figures above, while the proposed bicycle parking supply for overall development essentially meets Council TAPS PSP requirements (99% provision of Council TAPS PSP requirements).

It is also noted that the proposed bicycle provision would also satisfy the resident and visitor bicycle parking rates from the Austroads' *Cycling Aspects of Austroads Guides*., which is noted as being ~45% of Council TAPS PSP rates.

Further, as many of the uses (including scale of uses) do not require bicycle parking under Council's TAPS PSP, provision of bicycle parking for the non-residential uses is expected to be provided within the design of the various use areas.

The proposed supply and arrangements of the bicycle parking within the proposed development scheme is considered to adequately cater for the different users (residents, visitors, and staff) to the subject site – noting the higher propensity for walking and the current rail station under construction. The various elements of bicycle parking supply are generally in accordance with dimensions of AS2890.3:2015.

5.2. Parking Layout

Generally, the internal layout is generally compliant with EDQ, Council (TAPS PSP) and AS2890.1:2004 requirements. There may be instances where intrusions are within parking bays and aisles. These will be further revised as part of the detailed design process.

The proposed parking levels are as follows:

- Basement levels 2-1, Residential allocated parking
- Lower ground, Shared parking (Residential, Residential Visitors and Mixed-Use)
- Plaza level, Hotel parking (Visitors)
- Podium levels 1 - 4, Residential allocated parking

Table 5-3 identifies the characteristics of the proposed parking layouts with respect to the TAPS PSP design provisions.

Table 5-3: TAPS PSP Parking Design Requirements

Design Aspect	Provision	Proposed Provision	Compliance
Car Parking			
Parking space length: • Staff space (Class 1) • Visitor space (Class 3) • Small Car space • PWD space (Class 5)	 5.4m (min) 5.4m (min) 5.0m (min) 5.4m (min)	 5.4m (min) 5.4m (min) 5.4m (min) 5.4m (min)	 Compliant Compliant Compliant Compliant
Parking space width: • Staff space (Class 1) • Visitor space (Class 3) • Small Car space • PWD space (Class 5)	 2.4m (min) 2.6m (min) 2.3m (min) 2.4m + 2.4m 'Shared Area'	 2.4m (min) 2.6m (min) 2.4m (min) 2.4m + 2.4m 'Shared Area'	 Compliant Compliant Compliant Compliant
Aisle Width: • Parking aisle • Circulation road/ramp (one-way, >20m) • Circulation road/ramp (two-way, 101-300vph)	 6.2m – 5.8m 5.0m (min) + clearance to walls 6.5m (min) + clearance to walls	 Generally 8.0m, 6.0m (min) 5.2m (min) + clearance to walls 6.5m (min) + clearance to walls	 Compliant* Compliant Compliant
Parking envelope clearance	Located as per AS 2890.01	Located as per AS 2890.01	Compliant
Maximum Gradient: • PWD parking • Parking aisle • Ramp	 1:40 (2.5%) 1:20 (5.0%) 1:6 (16.7%)	 1:40 (2.5%) 1:20 (5.0%) 1:6 (16.7%)	 Compliant Compliant Compliant
Maximum Gradient Transitions	1:8 (12.5%) summit[1] 1:6.67 (15.0%) sag[1]	1:8 (12.5%) summit[1] 1:6.67 (15.0%) sag[1]	Compliant
Blind Aisle Extension	2.0m or 8.0m extension to aisle width beyond final space	**1.0m (min)**	Performance Solution
Height Clearance: • General Minimum • Over PWD space	 2.3m 2.5m	 3.9m to 2.6m 2.5m	 Compliant Compliant
Small Car Spaces	20% of parking within reserved car parks	Within the 20% 'Small Car' rate	Compliant*

*Compliant, with commentary provided below.

[1] TAPS PSP is silent with regards to this matter, so revert to AS2890.1 as per Section 1.2 of the TAPS PSP.

[2] TAPS PSP is silent with regards to this matter, so revert to AS2890.3 as per Section 1.2 of the TAPS PSP.

Further details in relation to deemed compliance of required provisions, or justification for design aspects resolved with performance solutions, is provided following.

Blind Aisle Extension

Council's TAPS PSP identifies an additional 2.0m for blind aisle extensions, past the last car parking space. It is noted that the proposed development's parking layout typically provides 1.0m length blind aisle extensions. The proposed 1.0m blind aisle extensions are compliant with AS2890.1:2004 minimum requirements (1.0m) and are therefore considered satisfactory.

The development parking layouts are generally consistent with the provisions of the relevant guidelines.

5.2.1. Access Controls

It is considered necessary to control the access to development parking, given the proximity of the subject site to a (future – under construction) rail station, which may result in non-development (i.e. commuter) parking demands. The access controls will need to be provided to allow for all range of user types, including:

- Swipe card, fob or number plate recognition (NPR) for resident access
- Ticketing or NPR, with credit card facilities for non-residential access
- PIN code, NPR or ticket validation for residential visitor access

6. Access Arrangements

Historically, the subject site at has been serviced by multiple access points from multiple properties across its three primary frontages: Vulture Street, Main Street, Mark Lane. This previous lots / uses facilitated a combination of residential and service vehicle movements, resulting is a high number of crossovers. Further, existing applications over the portions of the subject site were approved with various accesses including accesses to the major roads of Vulture Street and Main Street.

In line with EDQ's PDA and Council guidelines, there is a general preference to consolidate access points and direct traffic to lower-order roads where feasible. However, given the scale and mixed-use nature of the proposed development, it is appropriate to maintain access from all available frontages. This approach enables the distribution of traffic across the surrounding network, reducing pressure on any single frontage and improving overall site functionality.

Therefore, the proposed development seeks to rationalise the existing access arrangements while retaining vehicular connectivity to each frontage. This results in a reduced number of, but more efficient, access points that are designed to separate servicing and general traffic, and to enhance pedestrian amenity along each interface.

Five distinct vehicle access locations are proposed to support the operational needs of the development:

- Vulture Street access is located at the southern side of the subject site. This will be a modified 7.0m wide Type B2 crossover for service vehicles only, providing Left-in / Left-out only connection to Vulture Street.
- Main Street access is located at the eastern side of the subject site. This will be a 7.0m wide Type B2 crossover for service vehicles only, providing Left-in / Left-out only connection to Main Street.
- Mark Lane access is located at the northern side of the subject site. This will be a 7.0m wide Type B2 crossover for cars (residents) only, providing all turn movements to Mark Lane.
- New Lane, northern access, is located at the western side of the subject site. This will be a 7.0m wide Type B2 crossover for cars (hotel) only, providing all turn movements to the New Lane.
- New Road, southern access, is located at the western side of the subject site. This will be a 7.0m wide Type B2 crossover for cars (residents and visitors) only, providing all turn movements to the New Lane.

This vehicle access strategy ensures that service vehicle activity is appropriately located on the higher-order road network to minimise travel distance (particularly on minor roads), while general vehicle (private car) access is distributed via the surrounding local road network. In doing so, the proposed development scheme balances operational efficiency with safety and amenity outcomes.

Importantly, the proposed arrangement represents an overall reduction and consolidation of access points compared to the historical site configuration, consistent with EDQ's PDA and Council objectives. At the same time, it maintains sufficient capacity to accommodate the anticipated traffic generation of the development, while improving internal circulation and minimising potential conflict points.

Additionally, the rationalised layout allows for substantial upgrades to pedestrian infrastructure along all frontages, including reduced crossover widths, improved sightlines and enhanced continuity of footpaths, thereby supporting a safer and more legible streetscape outcome.

6.1. Vehicular Access

6.1.1. Vulture Street – Service Vehicles

Vulture Street access is proposed to function as the primary entry point for service vehicles associated with Stage 1 of the development. This access has been purposefully separated from the main residential and visitor access points to consolidate servicing activities. This arrangement supports efficient loading and unloading operations while minimising potential conflicts with general traffic, pedestrians, and internal circulation movements within the site.

The proposed access is generally aligned with the previously approved Trilogy development (Ref. A005344952) driveway location, reflecting a coordinated and consistent approach to access management along Vulture Street. This positioning maximises separation from adjacent crossovers and nearby intersections, optimising available sight distances and reducing the potential for conflict between entering and exiting vehicles and through traffic.

The Stage 1 loading dock is strategically located at this level, providing a direct and legible connection to the Vulture Street access. The loading facility has been designed to accommodate service vehicles up to Heavy Rigid Vehicle (HRV) classification, consistent with the expected servicing requirements of the development. The internal layout enables vehicles to enter, manoeuvre, service the site uses from dedicated loading bays, and exit the site in a forward direction, thereby avoiding reversing movements onto the public road network and maintaining a high standard of operational safety.

The design provisions for the Vulture Street access have been assessed against the relevant requirements of the PDA, the TAPS Planning Scheme Policy (PSP), and other applicable guidelines. Key parameters considered include access width, separation distances, sight distance, and driveway geometry to ensure a safe and functional outcome is achieved. The design provisions of the Vulture Street access and the respective provisions of the PDA, TAPS PSP and relevant guidelines are detailed in Table 6-1.

Table 6-1: Vulture Street Access Arrangements

Design Aspect	Provision	Proposed Provision	Compliance
Width / Crossover Type to accommodate: • Service vehicles	Type C2	Type B2 Left-in / Left-out	Performance Solution
Distance from: • major intersection • adjacent driveway • traffic signals	30m (min) 15m (min) Clear of queuing	200m 75m Downstream of signals	Compliant Compliant Compliant
Sight Distance	110m (desirable)	120m - Left in Left out	Compliant

Design Aspect	Provision	Proposed Provision	Compliance
	85 m (minimum)		
Driveway Sight Splays	2.0m wide x 5.0m deep (on each side)	2.0m wide x 5.0m deep (on each side)	Compliant
Maximum Driveway grade	1:20 (5%) maximum within first 6m	1:20 (5%) maximum within first 6m	Compliant

In general, the proposed Jephson Street northern access arrangements are generally consistent with the provisions of the EDQ PDA, Council's TAPS policy and other relevant guidelines. Further details in relation to deemed compliance of required provisions, or justification for design aspects resolved with performance solutions, are provided in the following.

Access Design and Widths

The access is proposed as a modified 7m Type B2 crossover, operating under a left-in/left-out arrangement. The design aligns with relevant standards and ensures smooth and orderly traffic circulation, supporting the functional requirements of both the service and retail components of the development.

6.1.2. Main Street – Service Vehicles

Main Street access is proposed to function as the primary entry point for service vehicles associated with Stages 2 and 3 of the development. This access has been deliberately separated from the primary residential and visitor access points to ensure that servicing activities are consolidated within a dedicated interface. This approach facilitates efficient loading and unloading operations while minimising potential conflicts with general traffic, pedestrians, and internal circulation movements within the site.

The Stage 2 loading dock is strategically located at this level, directly connected to the Main Street access to provide a clear and efficient path of travel for service vehicles. The loading area has been designed to accommodate service vehicles up to Heavy Rigid Vehicle (HRV) classification, consistent with the anticipated servicing demands of the development. The layout allows vehicles to enter, manoeuvre, load or unload in dedicated service bays, and exit the site in a forward direction, thereby avoiding the need for reversing movements onto the public road network. This ensures that larger delivery vehicles can be managed effectively without adversely impacting surrounding traffic conditions or compromising safety.

The proposed access is generally aligned with the previously approved Trilogy development (Ref. A005344952) driveway location, reflecting a coordinated approach to access management along Main Street. This positioning maximises separation from adjacent crossovers and nearby intersections, which in turn optimises available sight distances for drivers and reduces the likelihood of conflict points. The alignment also supports improved driver awareness and predictability of vehicle movements, contributing to a safer operating environment for all road users.

The design provisions for the Main Street access have been assessed against the relevant requirements of the PDA, the TAPS Planning Scheme Policy (PSP), and other applicable guidelines. This assessment considers key parameters such as access width, sight distance, separation distances, and driveway geometry to ensure the proposal achieves a safe and efficient outcome. A summary of this assessment is provided in Table 6.2.

The design provisions of the Main Street access and the respective provisions of the PDA, TAPS PSP and relevant guidelines are detailed in Table 6-2.

Table 6-2: Main Street Access Arrangements

Design Aspect	Provision	Proposed Provision	Compliance
Width / Crossover Type to accommodate: • Service vehicles	Type C2	Type B2 Left-in / Left-out	Performance Solution
Distance from: • major intersection • adjacent driveway • traffic signals	30m (min) 15m (min) Clear of queuing	90m 22m Downstream of signals	Compliant Compliant Compliant
Sight Distance	110m (desirable) 85 m (minimum)	90m - Left in Left out	Compliant
Driveway Sight Splays	2.0m wide x 5.0m deep (on each side)	2.0m wide x 5.0m deep (on each side)	Compliant
Maximum Driveway grade	1:20 (5%) maximum within first 6m	1:20 (5%) maximum within first 6m	Compliant

Access Design and Widths

The access is proposed as a modified 7.5m Type B2 crossover, operating under a left-in/left-out arrangement. The design aligns with relevant standards and ensures smooth and orderly traffic circulation, supporting the functional requirements of both the service and retail components of the development.

Bus Stop Relocation

There is a current bus stop on Main Street within the subject site frontage to the south of Mark Lane. With the widening of Mark Lane, there will not be sufficient space to retain this bus stop in its current location. Therefore, in terms of a relocated bus stop, a new location further to the south is proposed which achieves the following design outcomes based on TransLink's Public Transport Infrastructure Manual (PTIM):

- Bus stop is parallel / kerbside (not indented) as per existing arrangement
- The bus stop will need to be at least an Intermediate designation – to Council Standard Drawings
- There should be a minimum 9.0m clear zone for the bus shelter to allow rear door boarding
- The length of the 'bus zone' should be 27m – to cater for a 14.5m length bus and a 12.5m length bus
- There should be a 10m separation from the Main Street Loading Dock driveway and the top (northern end) of the 'bus zone'.
- A minimum of 20m separation from the Vulture Street intersection is provided.

6.1.3. Mark Lane – Private Vehicles

The Mark Lane access is proposed to function as the primary entry point to the residential podium parking levels. Positioned along a lower-order road, this access provides a direct and convenient route for residents, reducing interaction with higher-intensity traffic associated with retail and servicing functions. An assessment of the Mark Lane vehicle access is provided in Table 6-3.

Table 6-3: Mark Lane Vehicle Access Arrangements

Design Aspect	Provision	Proposed Provision	Compliance
Width / Crossover Type to accommodate: • Cars	Type B2	Type B2 all movements	Compliant
Distance from: • minor intersection • adjacent driveway • traffic signals	20m (min) 15m (min) Clear of queuing	40m 40m Clear of queuing	Compliant Compliant Compliant
Sight Distance	110m (desirable) 85 m (minimum)	Clear to Intersections 50m	Compliant
Driveway Sight Splays	2.0m wide x 5.0m deep (on each side)	2.0m wide x 5.0m deep (on each side)	Compliant
Minimum Queuing Provisions	7 vehicles / 42m	2 vehicles / 12m	Performance Solution
Maximum Driveway grade	1:20 (5%) maximum within first 6m	1:20 (5%) maximum within first 6m	Compliant

The access is configured as a Type B2 crossover accommodating all vehicle movements. This arrangement supports efficient ingress and egress for light vehicles while maintaining a safe and orderly interface with the surrounding road network.

The design has been developed to ensure adequate sight distance, separation from nearby intersections, and sufficient internal queuing capacity. These provisions support safe operation and minimise the potential for impacts on the external road network.

The queuing space for resident vehicles between Mark Lane and the Podium ramp is noted as 12m (2 car lengths). This queuing length is considered sufficient as only residents will utilise this access. As residential carparking turn-over is relatively low, and the users will be familiar with the operations, thereby reducing queueing within the access and maintaining adequate operations within Mark Lane.

In general, the proposed Mark Lane vehicle access arrangements are consistent with the intent of the relevant guidelines and achieve a safe and functional outcome.

6.1.4. New Lane – Northern Access – Hotel

The New Lane northern access is proposed to function as the dedicated entry point for hotel visitors including drop-off activities. This access has been intentionally separated from other site access points to provide a clear and legible arrival experience while minimising interaction with residential, retail, and general visitor traffic. An assessment of the New Lane - Northern Access is provided in Table 6-4.

Table 6-4: New Lane - Northern Access Arrangements

Design Aspect	Provision	Proposed Provision	Compliance
Width / Crossover Type to accommodate: • Cars	Type B2	Type B2 all movements	Compliant
Distance from: • minor intersection • adjacent driveway • traffic signals	20m (min) 15m (min) Clear of queuing	25m 40m Clear of queuing	Compliant Compliant Compliant
Sight Distance	83 m (desirable) 65 m (minimum)	Clear to Intersections	Compliant
Driveway Sight Splays	2.0m wide x 5.0m deep (on each side)	2.0m wide x 5.0m deep (on each side)	Compliant
Minimum Queuing Provisions	2 vehicles / 12m	5vehicles / 30m	Compliant
Maximum Driveway grade	1:20 (5%) maximum within first 6m	1:20 (5%) maximum within first 6m	Compliant

The New Lane - Northern Access provides a direct route to the hotel drop-off area, reducing unnecessary internal circulation and avoiding the mixing of traffic streams for other users of the proposed development / subject site and also enhances site / development legibility.

Short-term stopping associated with pick-up and drop-off activities is contained within a dedicated area, ensuring these movements do not impact other access points or parking functions. The configuration supports efficient vehicle movements, allowing vehicles to enter, set-down or pick-up passengers, and exit with minimal delay, thereby reducing the potential for queuing and congestion.

In general, the proposed New Lane - Northern access arrangements access arrangements are generally consistent with the provisions of the relevant guidelines.

6.1.5. New Lane – Southern Access

The New Lane - Southern access is proposed to function as the primary entry point for residents, visitors, and users of the retail and childcare / community use parking areas, including Basement level Tower 1 resident and visitor parking. This access consolidates the majority of general traffic movements into a single, legible location, providing a clear and efficient interface with the external road network. An assessment of the New Lane - Northern Access is provided in Table 6-5 overleaf.

Table 6-5: New Lane - Southern Access Arrangements

Design Aspect	Provision	Proposed Provision	Compliance
Width / Crossover Type to accommodate: • Cars	Type B2	Type B2 all movements	Compliant
Distance from: • minor intersection • adjacent driveway • traffic signals	20m (min) 15m (min) Clear of queuing	70m 40m Clear of queuing	Compliant Compliant Compliant
Sight Distance	83 m (desirable) 65 m (minimum)	Clear to Intersections	Compliant
Driveway Sight Splays	2.0m wide x 5.0m deep (on each side)	2.0m wide x 5.0m deep (on each side)	Compliant
Minimum Queuing Provisions	7 vehicles / 42m	5 vehicles / 30m	Compliant
Maximum Driveway grade	1:20 (5%) maximum within first 6m	1:20 (5%) maximum within first 6m	Compliant

The access accommodates a range of vehicle types and has been designed to ensure safe and convenient ingress and egress. The configuration supports efficient traffic flow and provides sufficient on-site queuing capacity to prevent impacts on the surrounding road network. This assists in minimising congestion, particularly during peak periods.

The queuing space for resident vehicles between Mark Lane and the Podium ramp is noted as 30m (5 car lengths). This queuing length is considered sufficient noting the limited non-residential use parking, low-turnover residential parking and the 'dead-end' access point within the New Lane. Therefore, the reduced queueing within the access and maintaining adequate operations.

In general, the proposed New Road - Southern access arrangements access arrangements are generally consistent with the provisions of the relevant guidelines.

6.1.6. Access Conclusion

Overall, the proposed vehicular access strategy achieves a coordinated and functional outcome that responds to the scale and mixed-use nature of the development. The rationalisation of access points, combined with the separation of servicing and general traffic, results in a safer and more efficient internal and external traffic environment.

The design is consistent with the intent of the EDQ PDA, Council's TAPS Planning Scheme Policy, and relevant guidelines. Where variations are proposed, these have been addressed through performance-based design responses that demonstrate equivalent or improved safety and operational outcomes.

Therefore, the proposed access arrangements are considered appropriate and capable of accommodating the anticipated traffic demands of the development without adverse impacts on the surrounding road network.

7. Service Vehicle Arrangements

As part of the several discussions with EDQ and feedback received, the proposal includes a comprehensive arrangement of loading bays to support the operational functionality of the site and provide efficient service access from the surrounding road network. These facilities have been carefully positioned to minimise disruption to traffic, optimise site logistics, and ensure safe and practical access for all user groups. The key components of this servicing strategy include:

- A dedicated loading area, via Vulture Street, within Stage 1 - Tower 1 and community use / child-care uses, designed to accommodate service vehicles and facilitate routine deliveries without disrupting general traffic or pedestrian movements.
- A dedicated loading area, via Main Street for Hotel, within Stage 2 – Hotel, Stage 3 - Tower 2 and retail uses, designed to accommodate service vehicles and facilitate routine deliveries without disrupting general traffic or pedestrian movements.
- An internal porte cochère by the Hotel via the new road, providing a sheltered, private drop-off and pick-up point for customers, visitors, and rideshare services.

The internal servicing areas and porte cochère will be designed to comply with EDQ's PDA guidelines, Council's Planning Scheme Policy (PSP) and other relevant guidelines. This includes meeting requirements for service vehicle access, manoeuvrability, loading bay dimensions, and safe circulation for both vehicles.

7.1. Servicing Requirements

No specific servicing requirements are provided within the EDQ PDA guidelines. As such, the provisions of Section 3 of Council's TAPS PSP and AS 2990.02, relating to the design service vehicle and loading bay requirements for the proposed development uses, are summarised Table 7-1.

Table 7-1: TAPS PSP Service Vehicle Requirements

Land Use	Design Vehicle		Loading Bay Requirements				
	Regular Access	Occasional Access	VAN	SRV	MRV	LRV	RCV
Multiple Dwellings	RCV	LRV	-	-	-	2	2[1]
Short-term accommodation - in all other circumstances	SRV	RCV	1	1	0	-	1[1]
Childcare Centre	VAN	RCV		1			1
Community use	RCV	AV		1	1		1
Shop / Food & Drink Outlet (600 – 999m² GFA)	MRV	RCV	1	1	1	-	-
Proposed Provisions	**RCV**	**LRV**	**2**	**2**	**2**	**Shared Use of RCV bay**	**3**

Van = Council Van (AS2890.1:2004 B99 equivalent) | SRV = 6.4m Small Rigid Vehicle | MRV = 8.3m Medium Rigid Vehicle | LRV = 10.7m Large Rigid Vehicle | RCV = Refuse Collection Vehicle

[1] Section 3.3 of the TAPS PSP indicates a minimum of 1 loading bay is required for the regular access vehicle if no specific loading bay provisions are indicated in Tables 2, 3 or 4.

Under Section 3.3(4) of the TAPS Policy large multi-use developments may contain less than the sum of the individual component requirements. Under this approach, providing the retail component and managing this, would generally be sufficient to cater for the entire development. These bays are generally larger than the minimum for each vehicle type, allowing each bay to cater for vehicles of the appropriate size or larger.

Further, Councils TAPS PSP also details the following with respect to vehicle manoeuvring and on-site standing:

Occasional Access Service Vehicles

- This vehicle can perform a reverse movement (regardless of classification of frontage road) for one movement to / from the site.
- The vehicle can stand wholly contained within the site without blocking access to more than 50% of the car parking spaces.
- No formal loading bay provisions are required.

Regular Access Service Vehicles

- This vehicle can enter and leave the site in a forward gear.
- This vehicle parks/stands in dedicated on-site loading bays.
- A minimum of 1 loading bay is required for the regular access vehicle for each land use.

7.2. Proposed Loading Provisions

7.2.1. Design Vehicles

The development scheme proposes to adopt a LRV as Occasional Access service vehicle and RCV as a Regular Access vehicle; consistent with the provisions of councils TAPS PSP.

For mixed-use developments, it is generally appropriate to identify the service vehicle requirements associated with each individual land use component, in accordance with Brisbane City Council's TAPS PSP or relevant standards.

The overall servicing provision can then be based on the highest requirement generated by any single use, rather than a cumulative total, recognising that peak service demand periods typically differ across uses. This approach allows for a shared and managed servicing arrangement, where a single bay can accommodate multiple uses at different times of the day. The effectiveness of this strategy relies on appropriate bay design, signage, and management practices to ensure availability during each use's respective servicing peaks, thereby delivering an efficient and functional outcome for the full development.

7.2.2. Loading Bay Provisions

As identified in Table 7-1, the development scheme includes the following loading bay provisions:

- 2x VAN bays
- 2x SRV Bay
- 2x MRV bay
- 3x LRV / RCV Bays

The proposed loading bay provisions are below that detailed in Table 7-1, when considered based on each individual land use component of the development. Section 3.3 (Items 4 and 5) of the TAPS PSP indicates that in large multi-use developments with centralised service vehicle areas fewer service vehicles may be acceptable subject to satisfactory operations being demonstrated and supported by a RPEQ. To this effect, Colliers considers the proposed loading provisions are still suitable for a number of reasons outlined as follows:

Residential (Multi-Dwelling / Units)

The primary servicing demand generated by multi-unit residential developments typically relates to furniture delivery and removal vehicles. These trips are most common during resident move-in and move-out periods. As such, it is reasonable to expect a higher frequency of furniture deliveries during the initial occupancy phase of the development, when a significant number of residents are moving into the newly completed apartments. As such, Small Rigid Vehicles (SRVs) are anticipated to be the predominant service vehicles (particularly for Tower 1 with high proportion of 1-bed / 2-bed units), with delivery vehicles up to an MRV for the larger units, accessing the development / subject site for this use.

Following this initial period, the frequency of such deliveries is expected to reduce significantly, with ongoing demand typically limited to infrequent tenant turnovers or individual unit upgrades, generally resulting in less than one furniture delivery vehicle per week.

Retail / Childcare / Community Use

The proposed retail tenancies are expected to accommodate boutique stores or restaurants. As such, Small Rigid Vehicles (SRVs) are anticipated to be the predominant service vehicles accessing the development / subject site for this use. There may be occasional demand from Large Rigid Vehicles (LRVs) and MRVs is expected, as tenants fit out their spaces and move in equipment and stock. Once the tenancies are operational, servicing demand is expected to stabilise, with regular deliveries occurring at predictable intervals. Ongoing servicing will be managed in accordance with the dock management plan, ensuring efficient and coordinated use of the loading dock to support the operational needs of all tenancies.

Hotel

The proposed development is expected to operate as a hotel, with servicing primarily associated with guest accommodation, housekeeping, and food and beverage operations. As such, Small Rigid Vehicles (SRVs) are anticipated to be the predominant service vehicles accessing the site for deliveries such as linen and supplies.

Once operational, servicing demand is expected to stabilise, with routine deliveries occurring at regular and predictable intervals. Ongoing servicing will be managed in accordance with a loading dock management plan, ensuring efficient scheduling and coordination of vehicle movements to support the day-to-day operation of the hotel.

Waste Collection

Refer to the separate Waste Management Plan report for details of waste collection provisions.

7.3. Proposed Service Vehicle Design Provisions

7.3.1. Vulture Street – Internal Loading Bay

The primary loading bays for Stage 1 are accessed from Vulture Street, which is located within a dedicated service area. Access is provided via a service-only driveway, independent of the main access used by residents and visitors. This configuration allows service vehicles to enter, load or unload, and exit the site without interacting with general traffic or pedestrian areas. The loading bay has been designed to accommodate typical service vehicles and includes sufficient space for turning and manoeuvring, as confirmed by swept path analysis. A loading dock management plan is recommended to manage all loading aspects. The loading dock management plan can provide procedures and schedules for delivery times and collections. This will ensure loading bays are available for the correct service vehicle and suitable manoeuvring area. A dock manager is recommended to be on-site to ensure the appropriate scheduling of deliveries.

Table 7-2 identifies the service vehicle design provisions with respect to Council's TAPS PSP and AS2890.2:2018.

Table 7-2: TAPS PSP Service Vehicle Design Requirements

Design Aspect	TAPS PSP Provision	Proposed Provision	Compliance
Loading bay length:			
• SRV bay	7.0m (min)	8.5m (min)	Compliant
• MRV bay	9.0m (min)	10.5m (min)	Compliant
• LRV/RCV bay	11.0m (min)	14.0m (min)	Compliant
Loading bay width:			
• SRV bay	3.5m (min)	3.5m (min)	Compliant
• MRV bay	3.5m (min)	3.5m (min)	Compliant
• LRV bay	3.5m (min)	3.5m (min)	Compliant
Service aisle width (two-way)[1]	6.5m (min)	6.5m (min)	Compliant
Loading bay grades[1]	1:25 (4%) max	1:25 (4%) max	Compliant
Roadway/ramp grades:			
• Straight ramp	1:10 (10%) max[1]	1:10 (10%) max[1]	Compliant
• Grade transitions	1:20 (5%) max[1]	1:20 (5%) max[1]	Compliant
• Transverse grades	1:20 (5%) max[1]	1:20 (5%) max[1]	Compliant

Design Aspect	TAPS PSP Provision	Proposed Provision	Compliance
Height Clearance: • SRV • MRV/LRV • RCV[2]	 3.5m (min) 4.5m (min) 3.6m (min)	 4.5m (min) 4.5m (min) 4.5m (min)	 Compliant Compliant Compliant
Vehicle Manoeuvring	Occasional access vehicles can complete reverse in movement from road for one movement Regular access vehicles required to turn around fully on-site Demonstrate access to all loading bays for the design vehicle, whilst maintaining minimum 0.3m manoeuvring clearances to all obstructions	Occasional access vehicles can complete reverse in movement from road for one movement Regular access vehicles required to turn around fully on-site Demonstrate access to all loading bays for the design vehicle, whilst maintaining minimum 0.3m manoeuvring clearances to all obstructions	Compliant – Refer to swept paths in Appendix B

[1]Based on worst case provisions for LRV design vehicle.

[2]Based on a rear-loading RCV.

The proposed arrangement for Stage 1 loading bays are appropriately accessed from Vulture Street via a dedicated service-only driveway, ensuring separation from resident, visitor, and pedestrian movements. This arrangement facilitates efficient service vehicle access, allowing vehicles to enter, manoeuvre, load/unload, and exit the site without impacting general circulation.

The loading facilities are designed to accommodate a range of service vehicles, with sufficient space provided for safe turning and manoeuvring, as demonstrated by swept path analysis.

The implementation of a loading dock management plan, including coordinated delivery scheduling and on-site management, will further support the efficient operation of the loading areas.

Overall, the proposed design complies with the relevant requirements of Council's TAPS PSP and AS 2890.02, with all key design elements, including bay dimensions, aisle widths, gradients, clearances, and manoeuvring, meeting or exceeding the applicable standards.

7.3.2. Main Street – Internal Loading Bay

The primary loading bays for Stage 2 and 3 are accessed from Main Street, which is located within a dedicated service area. Access is provided via a service-only driveway, independent of the main access used by residents and visitors.

This configuration allows service vehicles to enter, load or unload, and exit the site without interacting with general traffic or pedestrian areas. The loading bay has been designed to accommodate typical service vehicles and includes sufficient space for turning and manoeuvring, as confirmed by swept path analysis. A loading dock management plan is recommended to manage all loading aspects. The loading dock management plan can provide procedures and schedules for delivery times and collections.

This will ensure loading bays are available for the correct service vehicle and suitable manoeuvring area. A dock manager is recommended to be on-site to ensure the appropriate scheduling of deliveries.

Table 7-3 identifies the service vehicle design provisions with respect to Council's TAPS PSP and AS2890.2:2018.

Table 7-3: Service Vehicle Design Requirements

Design Aspect	TAPS PSP Provision	Proposed Provision	Compliance
Loading bay length: • Van bay • SRV bay • MRV bay • LRV/RCV bay	 5.4m (min) 7.0m (min) 9.0m (min) 11.0m (min)	 5.4m (min) 8.5m (min) 10.5m (min) 14.0m (min)	 Compliant Compliant Compliant Compliant
Loading bay width: • Van bay • SRV bay • MRV bay • LRV bay	 3.0m (min) 3.5m (min) 3.5m (min) 3.5m (min)	 3.0m (min) 3.5m (min) 3.5m (min) 3.5m (min)	 Compliant Compliant Compliant Compliant
Service aisle width (two-way)[1]	6.5m (min)	6.5m (min)	Compliant
Loading bay grades[1]	1:25 (4%) max	1:25 (4%) max	Compliant
Roadway/ramp grades: • Straight ramp • Grade transitions • Transverse grades	 1:10 (10%) max[1] 1:20 (5%) max[1] 1:20 (5%) max[1]	 1:10 (10%) max[1] 1:20 (5%) max[1] 1:20 (5%) max[1]	 Compliant Compliant Compliant
Height Clearance: • Van • SRV • MRV/LRV • RCV[2]	 2.3m (min) 3.5m (min) 4.5m (min) 3.6m (min)	 5.0m (min) 5.0m (min) 5.0m (min) 5.0m (min)	 Compliant Compliant Compliant Compliant
Vehicle Manoeuvring	Occasional access vehicles can complete reverse in movement from road for one movement Regular access vehicles required to turn around fully on-site Demonstrate access to all loading bays for the design vehicle, whilst maintaining minimum 0.3m manoeuvring clearances to all obstructions	Occasional access vehicles can complete reverse in movement from road for one movement Regular access vehicles required to turn around fully on-site Demonstrate access to all loading bays for the design vehicle, whilst maintaining minimum 0.3m manoeuvring clearances to all obstructions	Compliant – Refer to swept paths in Appendix B

[1]Based on worst case provisions for LRV design vehicle.

[2]Based on a rear-loading RCV.

The primary loading bays for Stages 2 and 3 are appropriately located within a dedicated service area accessed from Main Street via a service-only driveway, ensuring separation from resident, visitor, and pedestrian movements. This arrangement enables service vehicles to enter, manoeuvre, load/unload, and exit the site efficiently without impacting general site circulation.

The loading facilities are designed to accommodate a range of service vehicles, with adequate space for turning and manoeuvring, as demonstrated by swept path analysis. The provision of a loading dock management plan, including coordinated scheduling and on-site management, will further support the efficient operation of the loading areas.

Overall, the proposed loading bay design complies with the relevant requirements of Council's TAPS PSP and AS 2890.02, with all key design element, including bay dimensions, aisle widths, gradients, clearances, and manoeuvring, meeting or exceeding the applicable standards.

7.3.3. Hotel – Port Cochere

The hotel porte cochère is accessed via the new road and fronts the Stage 2 lobby. The design allows for two vehicles to queue on-site and can accommodate vehicles up to the size of a minibus. It is indented from the main access parking aisle to the Hotel parking allocation to ensure smooth traffic flow. Table 7-4 identifies the service vehicle design provisions.

Table 7-4: TAPS PSP Service Vehicle Design Requirements

Design Aspect	TAPS PSP Provision	Proposed Provision	Compliance
Loading bay length: • Van bay	5.4m (min)	5.4m (min)	Compliant
Loading bay width: • Van bay	3.0m (min)	3.0m (min)	Compliant
Service aisle width (two-way)[1]	6.5m (min)	6.5m (min)	Compliant
Loading bay grades[1]	1:25 (4%) max	1:25 (4%) max	Compliant
Roadway/ramp grades: • Straight ramp • Grade transitions • Transverse grades	1:10 (10%) max[1] 1:20 (5%) max[1] 1:20 (5%) max[1]	1:10 (10%) max[1] 1:20 (5%) max[1] 1:20 (5%) max[1]	Compliant Compliant
Height Clearance: • VAN • Mini-bus (Toyota Coaster)	2.3m (min) 2.8m (min)	2.3m (min) 2.8 (min)	Compliant
Vehicle Manoeuvring	Regular access vehicles required to turn around fully on-site Demonstrate access to all loading bays for the design vehicle, whilst maintaining minimum 0.3m manoeuvring clearances to all obstructions	Regular access vehicles required to turn around fully on-site Demonstrate access to all loading bays for the design vehicle, whilst maintaining minimum 0.3m manoeuvring clearances to all obstructions	Compliant – Refer to swept paths in Appendix B

The proposed porte cochère arrangement provides safe and efficient access from the new road to the Stage 2 lobby, with adequate on-site queuing and capacity to accommodate vehicles up to minibus size without impacting internal traffic flow.

The loading and servicing design complies with all relevant guideline requirements, including dimensional standards, gradients, clearances, and manoeuvring provisions. Swept path analysis confirms that service vehicles can safely access and operate within the site, demonstrating that the proposed design will function effectively for the intended hotel use.

8. Traffic Impact Assessment

8.1. Development Traffic Demands

8.1.1. Traffic Generation

To estimate the expected traffic generation associated with the proposed development, reference has been made to the Transport for NSW (TfNSW) Guide to Transport Impact Assessment (GTIA) 2024.

Traffic generation for the high density residential component has been assessed using parking based vehicle trip rates. These rates have been adopted in preference to per dwelling rates as they directly reflect the provision of off street parking and quantify the maximum potential level of private vehicle activity that may be generated by the development. This approach is deliberately conservative, as it assumes full utilisation of all parking spaces irrespective of actual car ownership levels or travel behaviour.

Consistent with this approach, the hotel component has also been assessed using the same parking based rates. This represents a worst case scenario, noting that hotel uses typically exhibit more dispersed arrival and departure patterns and lower peak period vehicle demand than permanent residential developments.

Traffic generation for the child care component has been estimated using a trips per child place rate. As the final number of child care places are not confirmed at the time of this assessment, a conservative assumption of 100 child places has been adopted to estimate the potential traffic generation of this use.

The applicable traffic generation rates adopted for the proposed development are summarised below:

High Density Residential / Hotel:

- AM Peak Hour: 0.134 vehicles per hour (vph) per parking space + 4.9 vph
- PM Peak Hour: 0.20 vph per parking space
- Daily: 1.37 vpd per parking space

Child Care Centre:

- AM Peak Hour: 0.81 vph per licences child places
- PM Peak Hour: 0.80 vph per licences child places
- Daily: 2.97 vpd per licences child places

While the development includes commercial/retail and community uses, the anticipated external traffic generation of these uses is expected to be very low as these uses will predominantly service residents and locals within the immediate area. It is not expected that these uses will be a desired destination for broader trips. Moreover, based on the PDA requirement of 1 space per 300m^2 (GFA), approximately 8 parking spaces are required and therefore the commensurate traffic generation would have negligible impact to the road network.

Table 8-1 summarises the adopted traffic generation rates for the High Density Residential and Child Care components of the Precinct 1 development. It is noted that the Stage 1 parking supply has been conservatively adopted as the EDQ maximum parking rates.

Table 8-1: Traffic Generation Estimate

Land Use	Yield	Daily Trip Generation		Trip Generation			
		Rate	vpd	AM Peak	vph	PM Peak	vph
Multi-Unit Dwelling							
• Tower 1	635 spaces (incl. 103 visitor spaces)	1.37 vpd / off-street parking space	890	0.134 vph / off-street parking space + 4.9 vph	90	0.2 vph / off-street parking space	127
• Tower 2	367 spaces (incl. 41 visitor spaces)		503		55		74
• Hotel	43 spaces		59		11		9
Child Care	100 childcare places	2.97 vpd / child	297	0.81 vph / child	81	0.80 vph / child	80
Total			**1,749**		**237**		**290**

Regarding directional splits, in line with generally accepted traffic engineering practice, this is estimated to be:

High Density Residential / Hotel:

- AM Peak Hour: 25% inbound / 75% outbound
- PM Peak Hour: 75% inbound / 25% outbound

Child Care Centre:

- AM Peak Hour: 50% inbound / 50% outbound
- PM Peak Hour: 50% inbound / 50% outbound

Application of the above directional splits would result in proposed development traffic demand estimates as shown in Table 8-2.

Table 8-2: Traffic Generation Estimate (including Entry / Exit Distribution)

Land Use	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Multiple Unit Dwelling						
• Tower 1	23 vph	67 vph	90 vph	95 vph	32 vph	127 vph
• Tower 2	14 vph	41 vph	55 vph	56 vph	18 vph	74 vph
• Hotel	3 vph	8 vph	11 vph	7 vph	2 vph	9 vph
Child Care	41vph	40vph	81vph	40vph	40vph	80vph
Total	**81 vph**	**156 vph**	**237 vph**	**198 vph**	**92 vph**	**290 vph**

8.1.2. Shared Trips / Pass-By Trips (Child Care Use)

Child care centres typically generate a high proportion of locally based and linked trips, as parents generally drop off and pick up children as part of a journey to and from work, school, or other daily activities. Given the substantial residential component of the proposed development, it is reasonable to expect that a significant proportion of users of the child care centre will be residents from within the wider site or immediate surrounding catchment.

On this basis, a 40% discount has been applied to the gross child care traffic generation to account for the high proportion of internal and locally derived trips. Of the remaining external trips, it has been assumed that 50% will represent new trips to the surrounding road network, with the remaining 50% constituting pass-by trips. This assumption is considered conservative, noting the proximity of other established child care facilities in the area and the prevalence of linked trips, whereby parents do not make a dedicated vehicle journey solely for child care drop-off or pick-up.

Table 8-3 presents the estimated traffic generation for the child care centre, incorporating the applied internalisation discount and the assumed split between new and pass-by trips.

Table 8-3: Child Care Traffic Generation Estimate

Land Use	Peak	Base Demand	Discounted Demand			Pass By-Trips			New Trips		
			Total	In	Out	Total	In	Out	Total	In	Out
Child Care	AM	81 vph	49 vph	25 vph	24 vph	25 vph	13 vph	12 vph	24 vph	12 vph	12 vph
	PM	80 vph	48 vph	24 vph	24 vph	24 vph	12 vph	12 vph	24 vph	12 vph	12 vph

8.1.3. Committed Development Traffic Demands

In addition to the assumed base traffic growth, it is also considered necessary to include allowance for committed traffic from any significant approved / under construction developments. In this instance, the primary consideration for this includes the development at 344 Vulture Street, Woolloongabba, comprising a previously approved Reconfiguration of Lot and multi-unit development associated with the Russian Orthodox Church. The approved development includes 15 residential units and a community use component, with access retained via Vulture Street and Lahey Lane.

Traffic generation for the committed development was previously assessed as part of a TIA (Colliers Ref. 23BRT0331_DA RPT_02), which adopted a residential traffic generation rate of 0.30 vehicles per hour (vph) per dwelling in both the weekday AM and PM peak hours. This resulted in an estimated peak-period traffic demand of approximately five (5) vehicle trips in each peak hour.

8.2. Traffic Distribution

The traffic distribution for the development was determined using a multi-faceted approach:

- Aerial view analysis of macro-infrastructure surrounding the site.
- Review of local services and major trip attractors.
- Consideration of survey data collected in the immediate vicinity of the site in March 2025.

These traffic distribution assumptions have been included in **Appendix C**– Network Diagrams.

8.3. Surveyed (2025) Traffic Volumes

Colliers Data conducted traffic movement surveys in the vicinity of the subject site from 5:30AM – 9:30AM and 2:00PM – 6:00PM on Tuesday 18th March 2025. The intersections surveyed included:

- Site 1 – Vulture Street / Leopard Street Signalised Intersection
- Site 2 – Leopard Street / Mark Lane Priority-controlled Intersection
- Site 3 – Mark Lane / Lahey Lane Priority-controlled Intersection
- Site 4 – Mark Lane / Main Street Priority-controlled Intersection
- Site 5 – Vulture Street / Main Street Signalised Intersection
- Site 6 – Vulture Street / Lahey Lane Priority-controlled Intersection
- Existing Access 1 – Vulture Street / 314 Vulture Street
- Existing Access 2 – Lahey Lane / 314 Vulture Street
- Existing Access 3 – 11 Lahey Lane / Access
- Existing Access 4 – 10 Lahey Lane / Access
- Existing Access 5 – Vulture Street / Cathedral Access
- Existing Access 6 – Mark Lane / Cathedral Access

The weekday peak hour periods were found to be (based on the Vulture Street / Leopard Street and Vulture Street / Main Street intersection volumes):

- 7:00 AM to 8:00 AM
- 4:00 PM to 5:00 PM

The surveyed peak hour volumes are shown in **Appendix C**– Network Diagrams.

8.4. Assessment Years and Traffic Growth

A 1.0% per annum (p.a.) growth rate has been applied to background traffic on the major roads within the surrounding network, including Vulture Street, Main Street and Leopard Street, to account for general network growth over the assessment period.

No background growth has been applied to traffic movements associated with Mark Lane and Lahey Lane, as these roads primarily serve existing local developments and residents and do not function as through-routes. Traffic growth on these roads is therefore expected to be driven by committed and proposed development traffic rather than by wider background network growth.

The adopted 1.0% p.a. growth rate is considered conservative, noting that the Brisbane City Council Local Government Infrastructure Plan (LGIP), based on Table SC3.1.7, identifies lower average annual traffic growth rates of approximately 0.92% between 2026 and 2036.

8.5. Future Year Scenarios

The following future year scenarios have been derived for the purposes of the Traffic Assessment, reflecting existing conditions, background growth, committed development, and the assumed staging of the proposed development.

2025 Survey Scenario

This scenario represents existing traffic conditions at the time the traffic surveys were undertaken. It is used to establish baseline operating conditions of the surrounding road network under the existing road configuration.

2028 Growth Scenario

This scenario represents background traffic conditions grown to 2028, excluding any new development traffic. It provides the benchmark against which subsequent development scenarios are assessed.

2028 Base Scenario

This scenario includes background traffic growth to 2028, together with traffic generated by the previously approved and committed development at 344 Vulture Street (Russian Orthodox Church redevelopment), which is assumed to be fully operational by this time.

2029 Base + Development Scenario (Stage 1)

This scenario assumes completion and occupation of Tower 1 (Residential) and the Child Care Centre, in addition to background traffic growth and committed development traffic.

2030 Base + Development Scenario (Stage 2)

This scenario assumes completion and occupation of the Hotel component of the development, in addition to background traffic growth, committed development traffic, and Stage 1 of the proposed development

2031 Base + Development Scenario (Stage 3)

This scenario assumes completion and occupation of Tower 2 (Residential), representing full build-out of the development, in addition to background traffic growth and committed development traffic.

Based on the development traffic generation estimates and background traffic growth, traffic network diagrams have been prepared showing traffic movements on the surrounding network (roads / intersections) to the development site for each of the above scenarios. These network diagrams are included in **Appendix X** with the respective diagrams identified as follows:

- Traffic Network Diagram 1: 2025 Survey Traffic Volumes
- Traffic Network Diagram 2: 2028 Base Traffic Volumes
- Traffic Network Diagram 3: 2029 Base Traffic Volumes
- Traffic Network Diagram 4: 2030 Base Traffic Volumes
- Traffic Network Diagram 5: 2031 Base Traffic Volumes
- Traffic Network Diagram 6: Committed Development Traffic Volumes (Russian Orthodox Church)
- Traffic Network Diagram 7: Development Traffic Distribution & Volumes – Tower 1
- Traffic Network Diagram 8: Development Traffic Distribution & Volumes – Child Care Centre (New Trips)
- Traffic Network Diagram 9: Development Traffic Distribution & Volumes – Child Care Centre (Drop-In Trips)
- Traffic Network Diagram 10: Development Traffic Distribution & Volumes – Hotel
- Traffic Network Diagram 11: Development Traffic Distribution & Volumes – Tower 2
- Traffic Network Diagram 12: 2028 Base Traffic Volumes + Committed Development Traffic
- Traffic Network Diagram 13: 2029 Development Scenario (Base + Development Traffic)
- Traffic Network Diagram 14: 2030 Development Scenario (Base + Development Traffic)
- Traffic Network Diagram 15: 2031 Development Scenario (Base + Development Traffic)

8.6. Extent of Assessment

Traffic operations have been assessed at the following locations:

Existing Intersections:

- Site 1 – Vulture Street / Leopard Street Signalised Intersection
- Site 2 – Leopard Street / Mark Lane Priority-controlled Intersection
- Site 3 – Mark Lane / Lahey Lane Priority-controlled Intersection
- Site 4 – Mark Lane / Main Street Priority-controlled Intersection
- Site 5 – Vulture Street / Main Street Signalised Intersection
- Site 6 – Vulture Street / Lahey Lane Priority-controlled Intersection

Proposed (New) Intersections:

- Site 7 – Mark Lane / New Lane (proposed access)

Existing Accesses:

- Mark Lane / Precinct 1 Access
- New Lane / Precinct 1 Northern Access
- New Lane / Precinct 1 Southern Access
- Vulture Street / Precinct 1 Service Vehicle Access
- Main Street / Precinct 1 Service Vehicle Access

8.7. Road Network Performance

The SIDRA Intersection 10 software package has been used to assess the operational performance of the intersections identified above. In general, default SIDRA input parameters have been adopted for the analysis. Any departures from these default parameters are noted and discussed in the relevant sections of the report. Detailed SIDRA output reports for all assessed scenarios are provided in **Appendix D** – SIDRA Outputs.

All intersections have been analysed as part of a network configuration, rather than in isolation, to appropriately account for interactions between adjacent intersections. Figure 8-1 and Figure 8-2 overleaf illustrate the existing and future (proposed) road network layouts, respectively.

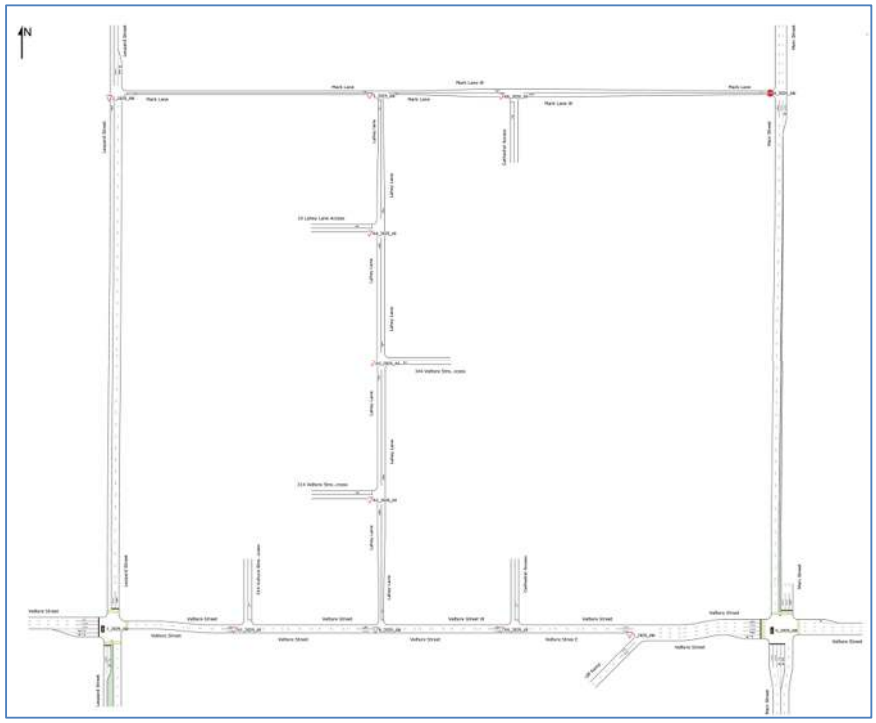


Figure 8-1: Existing Network Layout

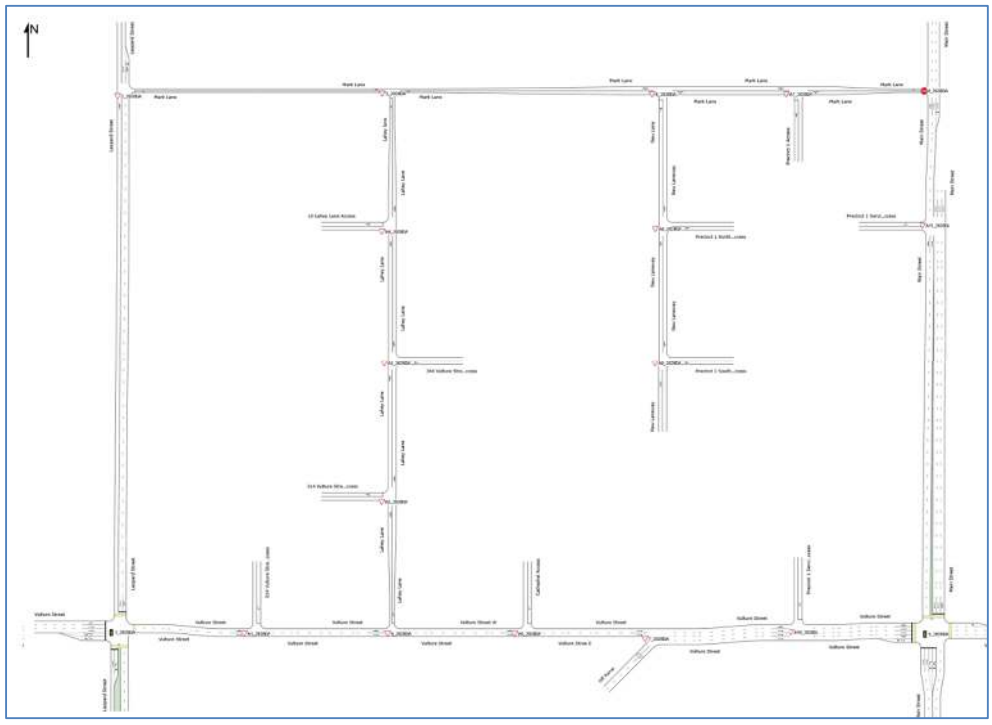


Figure 8-2: Proposed (Future) Network Layout

8.7.1. Site 1 – Vulture Street / Leopard Street Intersection

Figure 8-3 shows the configuration of the Vulture Street / Leopard Street intersection adopted in the SIDRA analysis.

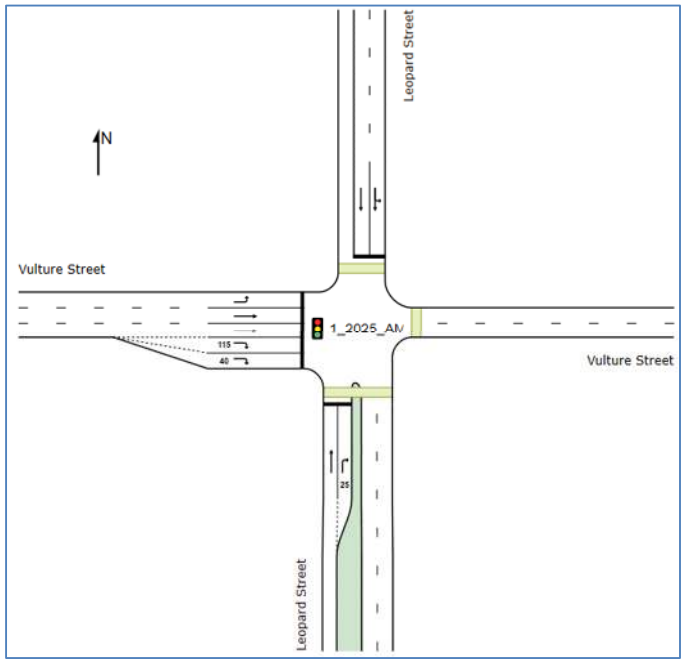


Figure 8-3: Vulture Street / Leopard Street Intersection – SIDRA Layout

This intersection was coordinated with the Vulture Street / Main Street intersection - a 120 second cycle time applied. The summary results of the SIDRA analysis under the various scenarios are summarised in Table 8-4.

Table 8-4: SIDRA Network Analysis Summary - Vulture Street / Leopard Street Signalised Intersection

NETWORK ANALYSIS							
Scenario	Degree of Saturation (DoS)	Average Delay (s)		Level of Service (LOS)	95th Percentile Queues		
		Total Int.	Worst Movement		Leopard St (S)	Leopard St (N)	Vulture St (W)
AM PEAK HOUR							
2025 Survey	49%	25	66 (Leopard St) S RT	C	<1m	119m	115m
2028 Base	51%	25	66 (Leopard St) S RT	C	<1m	123m	119m
2028 Base + Committed	51%	25	66 (Leopard St) S RT	C	<1m	124m	120m
2029 Base	51%	25	66 (Leopard St) S RT	C	<1m	125m	121m
2029 Base + Development	53%	26	66 (Leopard St) S RT	C	<1m	133m	127m
2030 Base	52%	26	66 (Leopard St) S RT	C	<1m	127m	122m
2030 Base + Development	54%	26	66 (Leopard St) S RT	C	<1m	135m	129m
2031 Base	52%	26	66 (Leopard St) S RT	C	<1m	128m	124m
2031 Base + Development	55%	26	66 (Leopard St) S RT	C	<1m	140m	132m

NETWORK ANALYSIS							
Scenario	Degree of Saturation (DoS)	Average Delay (s)		Level of Service (LOS)	95th Percentile Queues		
		Total Int.	Worst Movement		Leopard St (S)	Leopard St (N)	Vulture St (W)
PM PEAK HOUR							
2025 Survey	61%	21	66 (Leopard St) S RT	C	<1m	100m	180m
2028 Base	69%	21	67 (Leopard St) S RT	C	<1m	107m	219m
2028 Base + Committed	63%	21	66 (Leopard St) S RT	C	<1m	104m	189m
2029 Base	75%	21	68 (Leopard St) S RT	C	<1m	114m	260m
2029 Base + Development	67%	22	66 (Leopard St) S RT	C	<1m	111m	209m
2030 Base	79%	22	69 (Leopard St) S RT	C	<1m	119m	289m
2030 Base + Development	68%	22	66 (Leopard St) S RT	C	<1m	113m	215m
2031 Base	80%	23	69 (Leopard St) S RT	C	<1m	121m	294m
2031 Base + Development	71%	22	66 (Leopard St) S RT	C	<1m	118m	229m

RT – Right Turn Movement, Th – Through Movement, LT – Left Turn Movement, UT – U Turn Movement; N – North, S – South, E – East, W – West

The generally accepted Degree of Saturation (DoS) threshold for signalised intersections is 90%. As summarised in Table 8-4, the intersection operates within this threshold across all assessed scenarios during both the AM and PM peak periods. A Level of Service (LoS) of 'C' is maintained under all scenarios.

Increases in average intersection delay are negligible. In the AM peak, average delay increases from 25 seconds in the 2025 surveyed scenario to 26 seconds in the 2031 development scenario. In the PM peak, average delay increases from 21 seconds to 22 seconds over the same period.

Predicted 95th percentile queue lengths increase incrementally over time as a result of background traffic growth. The additional queues attributable to the proposed development are relatively minor, with the largest increase being approximately 12m on the northern approach (when comparing the 2031 Base and 2031 Development AM Peak scenarios), which equates to approximately two additional vehicle lengths.

Overall, the SIDRA analysis indicates that the intersection will continue to operate within acceptable performance parameters with the introduction of the proposed development.

8.7.2. Site 2 – Leopard Street / Mark Lane Intersection

Figure 8-4 overleaf shows the configuration of the Leopard Street / Leopard Street intersection adopted in the SIDRA analysis. The summary results of the SIDRA analysis under the various scenarios are summarised in Table 8-5 also overleaf.

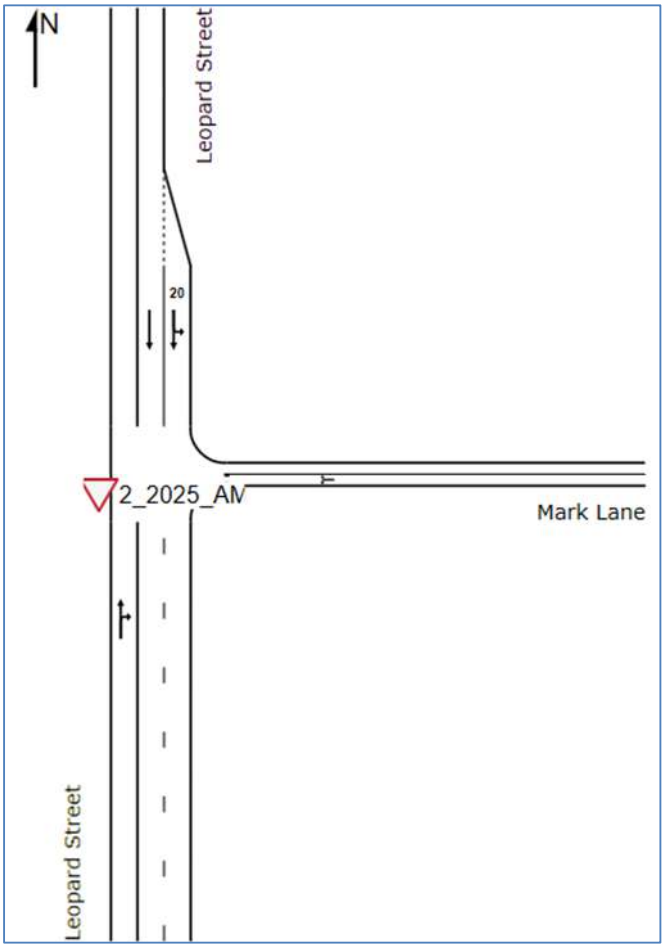


Figure 8-4: Leopard Street / Mark Lane Intersection – SIDRA Layout

Table 8-5: SIDRA Network Analysis Summary - Leopard Street / Mark Lane Intersection

NETWORK ANALYSIS							
Scenario	Degree of Saturation (DoS)	Average Delay (s)		Level of Service (LOS)	95th Percentile Queues		
		Total Int.	Worst Movement		Leopard St (S)	[2]Mark Lane (E)	[1]Leopard St (N)
AM PEAK HOUR							
2025 Survey	39%	<1	33 (Mark Lane) E RT	NA	<1m	2m	49m
2028 Base	40%	<1	36 (Mark Lane) E RT	NA	<1m	2m	53m
2028 Base + Committed	40%	<1	36 (Mark Lane) E RT	NA	<1m	2m	54m
2029 Base	40%	<1	36 (Mark Lane) E RT	NA	<1m	2m	55m
2029 Base + Development	40%	<1	42 (Mark Lane) E RT	NA	<1m	2m	63m
2030 Base	41%	<1	38 (Mark Lane) E RT	NA	<1m	2m	57m
2030 Base + Development	41%	<1	43 (Mark Lane) E RT	NA	<1m	3m	65m
2031 Base	41%	<1	39 (Mark Lane) E RT	NA	<1m	3m	58m
2031 Base + Development	41%	<1	47 (Mark Lane) E RT	NA	<1m	4m	62m

NETWORK ANALYSIS							
Scenario	Degree of Saturation (DoS)	Average Delay (s)		Level of Service (LOS)	95th Percentile Queues		
		Total Int.	Worst Movement		Leopard St (S)	[2]Mark Lane (E)	[1]Leopard St (N)
PM PEAK HOUR							
2025 Survey	43%	<1	26 (Mark Lane) E RT	NA	<1m	<1m	30m
2028 Base	45%	<1	28 (Mark Lane) E RT	NA	<1m	<1m	37m
2028 Base + Committed	45%	<1	28 (Mark Lane) E RT	NA	<1m	<1m	34m
2029 Base	45%	<1	29 (Mark Lane) E RT	NA	<1m	<1m	44m
2029 Base + Development	45%	<1	31 (Mark Lane) E RT	NA	<1m	<1m	41m
2030 Base	46%	<1	30 (Mark Lane) E RT	NA	<1m	<1m	49m
2030 Base + Development	46%	<1	32 (Mark Lane) E RT	NA	<1m	1m	43m
2031 Base	46%	<1	31 (Mark Lane) E RT	NA	<1m	1m	51m
2031 Base + Development	46%	1	34 (Mark Lane) E RT	NA	<1m	2m	48m

RT – Right Turn Movement, Th – Through Movement, LT – Left Turn Movement, UT – U Turn Movement; N – North, S – South, E – East, W – West

The generally accepted DoS threshold for priority-controlled intersections is 80%. As summarised in Table 8-5, the Leopard Street / Mark Lane intersection operates well within this threshold across all assessed scenarios during both the AM and PM peak periods.

Average delays remain negligible across all scenarios, with total intersection delays consistently less than one (1) second. As outlined in DTMR's Guide to Traffic Impact Assessment, average delay is the key performance metric for priority-controlled intersections, and where the average peak-hour delay for any turning movement exceeds 42 seconds, intersection upgrades should be considered for safety reasons where practicable. The SIDRA analysis demonstrates that the maximum average delay across all assessed scenarios is 47 seconds, occurring on the Mark Lane right-turn movement. While this delay slightly exceeds the 42 second threshold, the number of vehicles anticipated to turn right out of Mark Lane in the PM peak (as detailed in Colliers' Network Diagrams included in Appendix C) is one vehicle. Most vehicles heading north are anticipated to travel east of Mark Lane and then north via Main Street.

Queue lengths reported in Table 8-5 have been determined using a combination of site-specific and downstream-adjusted outputs, reflecting the influence of nearby downstream intersections on intersection performance.

For the northern approach of Leopard Street [1], queue lengths have been derived by considering the extent of downstream queuing from the signalised Vulture Street / Leopard Street intersection. SIDRA network analysis indicates that queues from this downstream intersection extend upstream past the Leopard Street / Mark Lane intersection in several AM and PM peak scenarios. To quantify the impact at the subject intersection, the 95th percentile back-of-queue length reported at the downstream site has been compared against the physical spacing between the two intersections. Where the downstream 95th percentile queue exceeds this spacing, the residual queue length extending beyond the Leopard Street / Mark Lane intersection has been reported in Table 8-5. As such, the queue lengths shown for the northern approach represent

downstream spillback from the signalised intersection, rather than queues generated by operational limitations at the Leopard Street / Mark Lane intersection itself.

For the eastern approach from Mark Lane, queue lengths have been taken from the individual (stand-alone) SIDRA site analysis outputs, as downstream queue spillback from the Vulture Street / Leopard Street intersection is assumed to predominantly extend northward along Leopard Street rather than into Mark Lane. The network analysis therefore does not reliably represent queuing conditions on the eastern approach itself in this instance. Given the low turning volumes from Mark Lane, queuing is minimal in the Base scenarios, with only short queues forming under development scenarios. In all cases, 95th percentile queue lengths remain very small (generally less than 2m) and well within acceptable operational limits.

Overall, while downstream queuing from the Vulture Street / Leopard Street intersection influences reported queues on the northern approach under certain scenarios, the Leopard Street / Mark Lane intersection itself continues to operate with low delays, low degrees of saturation, and acceptable queue lengths. Accordingly, the SIDRA analysis confirms that the proposed development will have no material impact on the operational performance or safety of the Leopard Street / Mark Lane intersection.

8.7.3. Site 3 – Mark Lane / Lahey Lane Intersection

Figure 8-5 shows the configuration of the Mark Lane / Lahey Lane intersection adopted in the SIDRA analysis. The summary results of the SIDRA analysis under the various scenarios are summarised in Table 8-6 overleaf.

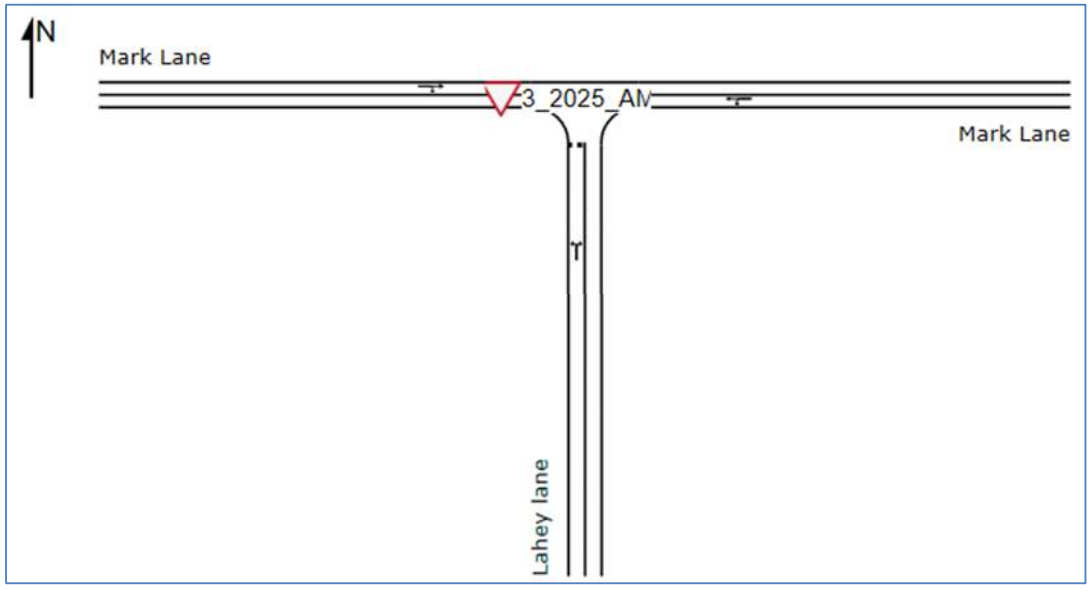


Figure 8-5: Mark Lane / Lahey Lane Intersection – SIDRA Layout

Table 8-6: SIDRA Network Analysis Summary – Mark Lane / Lahey Street Intersection

NETWORK ANALYSIS							
Scenario	Degree of Saturation (DoS)	Average Delay (s)		Level of Service (LOS)	95th Percentile Queues		
		Total Int.	Worst Movement		Lahey Lane (S)	Mark Lane (E)	Mark Lane (W)
AM PEAK HOUR							
2025 Survey	<1%	3	5 (Mark Lane) W RT	NA	<1m	<1m	<1m
2028 Base	<1%	3	5 (Mark Lane) W RT	NA	<1m	<1m	<1m
2028 Base + Committed	<1%	3	5 (Mark Lane) W RT	NA	<1m	<1m	<1m
2029 Base	<1%	3	5 (Mark Lane) W RT	NA	<1m	<1m	<1m
2029 Base + Development	4%	2	6 (Mark Lane) W RT	NA	<1m	<1m	<1m
2030 Base	<1%	3	5 (Mark Lane) W RT	NA	<1m	<1m	<1m
2030 Base + Development	4%	2	6 (Mark Lane) W RT	NA	<1m	<1m	<1m
2031 Base	<1%	3	5 (Mark Lane) W RT	NA	<1m	<1m	<1m
2031 Base + Development	6%	2	6 (Mark Lane) W RT	NA	<1m	<1m	<1m
PM PEAK HOUR							
2025 Survey	2%	2	5 (Mark Lane) W RT	NA	<1m	<1m	<1m
2028 Base	2%	2	5 (Mark Lane) W RT	NA	<1m	<1m	<1m
2028 Base + Committed	2%	2	5 (Mark Lane) W RT	NA	<1m	<1m	<1m
2029 Base	2%	2	5 (Mark Lane) W RT	NA	<1m	<1m	<1m
2029 Base + Development	8%	2	6 (Mark Lane) W RT	NA	2m	<1m	<1m
2030 Base	2%	2	5 (Mark Lane) W RT	NA	<1m	<1m	<1m
2030 Base + Development	8%	2	6 (Mark Lane) W RT	NA	2m	<1m	<1m
2031 Base	2%	2	5 (Mark Lane) W RT	NA	<1m	<1m	<1m
2031 Base + Development	11%	2	6 (Mark Lane) W RT	NA	3m	<1m	<1m

RT – Right Turn Movement, Th – Through Movement, LT – Left Turn Movement, UT – U Turn Movement; N – North, S – South, E – East, W – West

As summarised in Table 8-6, the Mark Lane / Lahey Street intersection well within the acceptable DoS threshold of 80% across all assessed scenarios during both the AM and PM peak periods (maximum DoS of 11% observed in the 2031 AM Development Scenario).

Average delays remain low across all scenarios, with total intersection delays in the order of two to three seconds. The worst delay is associated with the Mark Lane right-turn movement and remains minimal under all assessment years (maximum 6 second delay).

Predicted 95th percentile queue lengths are minimal (maximum 3m), with no material queuing observed on any approach.

Overall, the SIDRA analysis confirms that the proposed development will have no material impact on the operational performance or safety of the Mark Lane / Lahey Street intersection

8.7.4. Site 4 – Mark Lane / Main Street

Figure 8-6 shows the configuration of the Mark Lane / Main Street intersection adopted in the SIDRA analysis. The summary results of the SIDRA analysis under the various scenarios are summarised in Table 8-7.

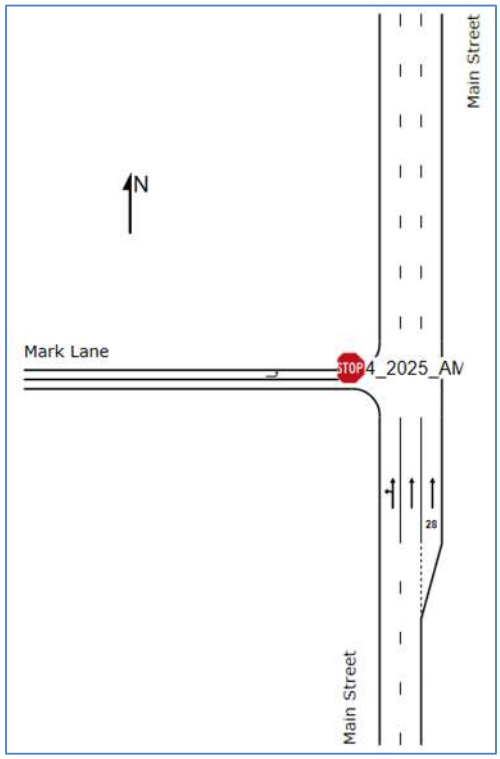


Figure 8-6: Mark Lane / Main Street Intersection – SIDRA Layout

Table 8-7: SIDRA Network Analysis Summary – Mark Lane / Main Street Intersection

NETWORK ANALYSIS						
Scenario	Degree of Saturation (DoS)	Average Delay (s)		Level of Service (LOS)	95th Percentile Queues	
		Total Int.	Worst Movement		Main St (S)	Mark Lane (W)
AM PEAK HOUR						
2025 Survey	19%	<1	9 (Mark Lane) W LT	NA	<1m	<1m
2028 Base	19%	<1	9 (Mark Lane) W LT	NA	<1m	<1m
2028 Base + Committed	19%	<1	8 (Mark Lane) W LT	NA	<1m	<1m
2029 Base	19%	<1	10 (Mark Lane) W LT	NA	<1m	<1m
2029 Base + Development	20%	<1	8 (Mark Lane) W LT	NA	<1m	1m
2030 Base	20%	<1	10 (Mark Lane) W LT	NA	<1m	<1m
2030 Base + Development	20%	<1	8 (Mark Lane) W LT	NA	<1m	1m
2031 Base	20%	<1	10 (Mark Lane) W LT	NA	<1m	<1m
2031 Base + Development	20%	<1	8 (Mark Lane) W LT	NA	<1m	2m

NETWORK ANALYSIS						
Scenario	Degree of Saturation (DoS)	Average Delay (s)		Level of Service (LOS)	95th Percentile Queues	
		Total Int.	Worst Movement		Main St (S)	Mark Lane (W)
PM PEAK HOUR						
2025 Survey	19%	<1	10 (Mark Lane) W LT	NA	<1m	<1m
2028 Base	19%	<1	10 (Mark Lane) W LT	NA	<1m	<1m
2028 Base + Committed	19%	<1	8 (Mark Lane) W LT	NA	<1m	<1m
2029 Base	20%	<1	10 (Mark Lane) W LT	NA	<1m	<1m
2029 Base + Development	20%	<1	8 (Mark Lane) W LT	NA	<1m	1m
2030 Base	20%	<1	10 (Mark Lane) W LT	NA	<1m	<1m
2030 Base + Development	20%	<1	8 (Mark Lane) W LT	NA	<1m	1m
2031 Base	20%	<1	10 (Mark Lane) W LT	NA	<1m	<1m
2031 Base + Development	21%	<1	8 (Mark Lane) W LT	NA	<1m	1m

RT – Right Turn Movement, Th – Through Movement, LT – Left Turn Movement, UT – U Turn Movement; N – North, S – South, E – East, W – West

As summarised in Table 8-7, the Mark Lane / Main Street intersection operates well within the acceptable DoS threshold of 80% across all assessed scenarios during both the AM and PM peak periods, with a maximum DoS of 21% observed in the 2031 PM Development Scenario.

Average delays remain low across all scenarios, with total intersection delays less than one second. The worst delay is associated with the Mark Lane left-turn movement and remains minimal under all assessment years, with a maximum average delay of approximately 10 seconds.

Predicted 95th percentile queue lengths are minimal (maximum 1m), with no material queuing observed on any approach.

Overall, the SIDRA analysis confirms that the proposed development will have no material impact on the operational performance or safety of the Mark Lane / Main Street intersection.

8.7.5. Site 5 – Vulture Street / Main Street Intersection

Figure 8-7 overleaf shows the configuration of the Vulture Street / Main Street intersection adopted in the SIDRA analysis. This intersection was coordinated with the Vulture Street / Leopard Street intersection - a 120 second cycle time applied. The summary results of the SIDRA analysis under the various scenarios are summarised in Table 8-8 also overleaf.

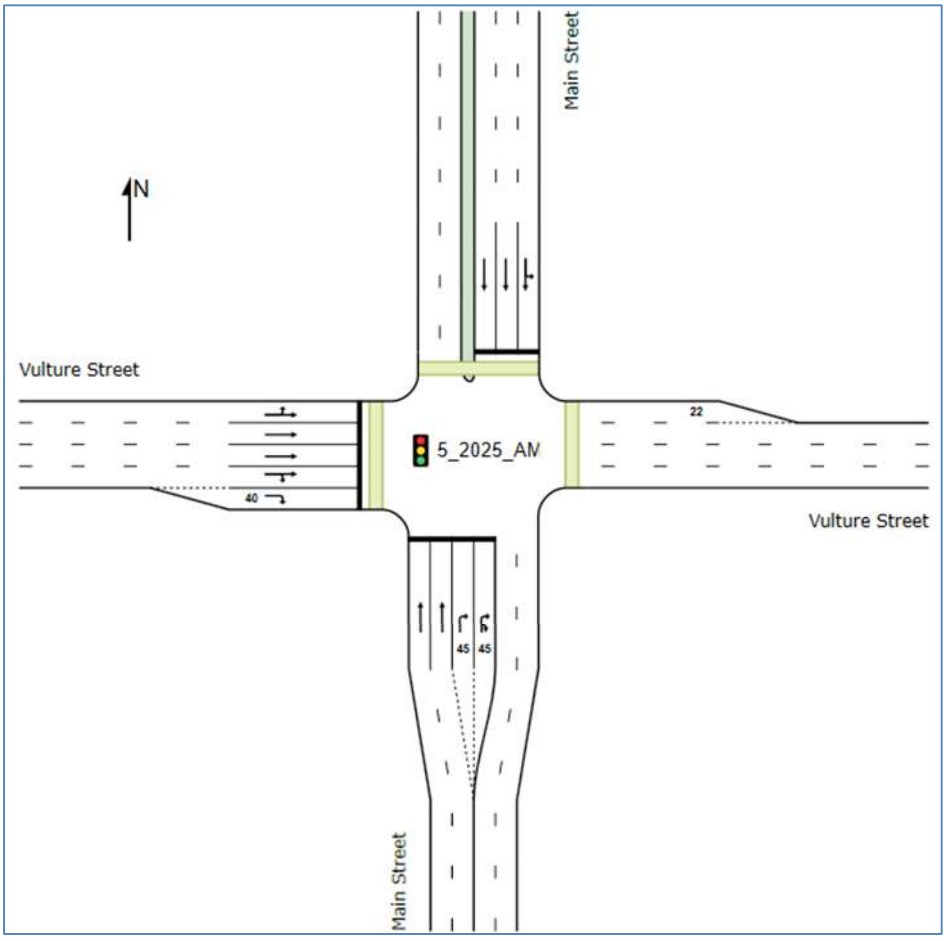


Figure 8-7: Vulture Street / Main Street Intersection – SIDRA Layout

Table 8-8: SIDRA Network Analysis Summary - Vulture Street / Main Street Intersection

NETWORK ANALYSIS							
Scenario	Degree of Saturation (DoS)	Average Delay (s)		Level of Service (LOS)	95th Percentile Queues		
		Total Int.	Worst Movement		Main St (S)	Main St (N)	Vulture St (W)
AM PEAK HOUR							
2025 Survey	67%	28	69 (Vulture St) S RT	C	124m	186m	115m
2028 Base	69%	29	69 (Vulture St) S RT	C	131m	194m	123m
2028 Base + Committed	69%	34	69 (Vulture St) S RT	C	131m	194m	159m
2029 Base	70%	29	70 (Vulture St) S RT	C	133m	197m	125m
2029 Base + Development	70%	35	70 (Vulture St) S RT	C	135m	198m	162m
2030 Base	71%	29	70 (Vulture St) S RT	C	135m	200m	128m
2030 Base + Development	71%	35	70 (Vulture St) S RT	C	137m	201m	165m
2031 Base	72%	29	70 (Vulture St) S RT	C	137m	203m	131m
2031 Base + Development	72%	35	70 (Vulture St) S UT	D	140m	204m	168m

NETWORK ANALYSIS							
Scenario	Degree of Saturation (DoS)	Average Delay (s)		Level of Service (LOS)	95th Percentile Queues		
		Total Int.	Worst Movement		Main St (S)	Main St (N)	Vulture St (W)
PM PEAK HOUR							
2025 Survey	91%	41	83 (Main St) S RT	D	163m	277m	338m
2028 Base	94%	46	85 (Main St) S RT	D	171m	305m	387m
2028 Base + Committed	94%	54	85 (Main St) S RT	D	171m	305m	416m
2029 Base	95%	48	86 (Main St) S RT	D	173m	316m	404m
2029 Base + Development	95%	57	86 (Main St) S RT	E	179m	317m	436m
2030 Base	96%	51	87 (Main St) S RT	D	176m	328m	425m
2030 Base + Development	96%	59	87 (Main St) S RT	E	182m	329m	455m
2031 Base	97%	53	88 (Main St) S RT	D	179m	340m	446m
2031 Base + Development	97%	62	88 (Main St) S RT	E	187m	341m	475m

RT – Right Turn Movement, Th – Through Movement, LT – Left Turn Movement, UT – U Turn Movement; N – North, S – South, E – East, W – West

As previously detailed, the generally accepted DoS threshold for signalised intersections is 90% - 95%. As summarised in Table 8-8, the intersection operates well within this threshold during the AM peak period across all assessed scenarios. A LoS of 'C' is essentially maintained under almost all AM peak scenarios.

In the PM peak period, the 90% - 95% DoS threshold is exceeded from the 2028 Base scenarios onwards, prior to the inclusion of any development-related traffic. This indicates that the exceedance is attributable to background traffic on the surrounding road network, rather than development-generated traffic.

The introduction of the proposed development-related traffic in the PM peak periods does not result in measurable change in DoS when compared to the corresponding Base scenarios.

Average intersection delays increase over time in line with background traffic growth. In the AM peak, average delay typically increases six (6) seconds from 29 seconds in the Base scenarios to 35 seconds in the Development scenarios. In the PM peak, average delay increases eight to nine (8 - 9) seconds from the Base scenarios to the Development scenarios.

Projected 95th percentile queue lengths increase incrementally over time, with the largest queues occurring on the Vulture Street western approach – particularly in the PM peak. It is noted that queueing at this intersection affects upstream locations on Vulture Street. Where such impacts occur, they have been identified in the relevant upstream intersection assessments. Notwithstanding this, the additional queueing attributable to the proposed development is limited and does not significantly worsen upstream network conditions.

Notwithstanding provision for a left-turn slip lane from the Vulture Street (West) approach has been allowed for with the development (frontage / verge) design – not part of this development proposal. Implementation of this left-turn lane (by others) will provide capacity (DoS) and operational (queuing / delay) improvements.

Overall, the SIDRA analysis indicates that while the intersection is forecast to experience increasing congestion over time due to background traffic growth, the proposed development results in only minor incremental impacts and does not materially compromise the operational performance of the intersection.

8.7.6. Site 6 – Vulture Street / Lahey Lane

Figure 8-8 shows the configuration of the Vulture Street / Lahey Lane intersection adopted in the SIDRA analysis. The results of the SIDRA analysis under the various scenarios are summarised in Table 8-9.

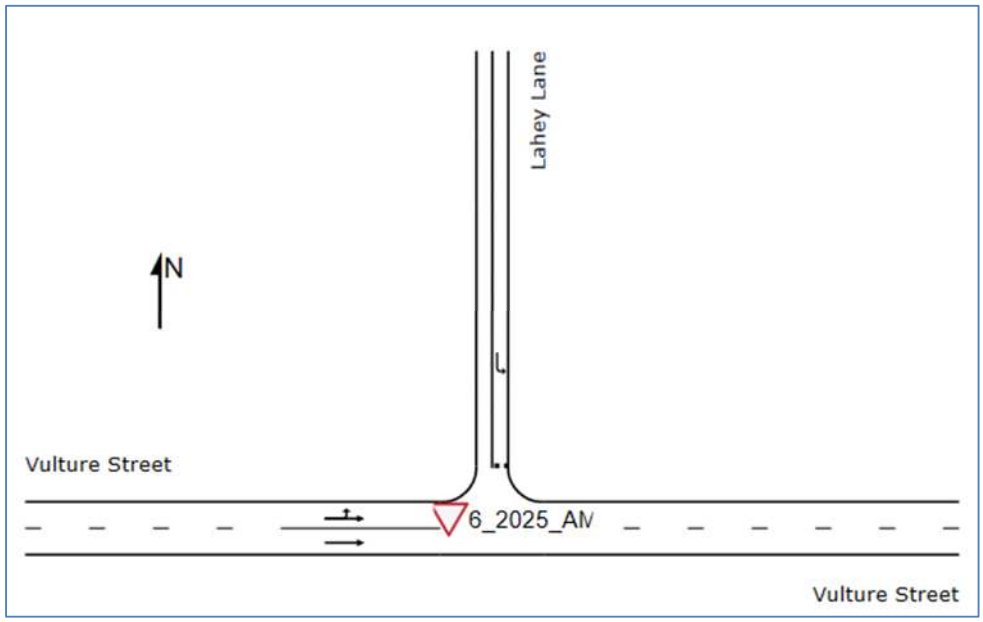


Figure 8-8: Vulture Street / Lahey Lane Intersection – SIDRA Layout

Table 8-9: SIDRA Network Analysis Summary – Vulture Street / Lahey Lane Intersection

NETWORK ANALYSIS						
Scenario	Degree of Saturation (DoS)	Average Delay (s)		Level of Service (LOS)	95th Percentile Queues	
		Total Int.	Worst Movement		Lahey La (N)	[1] Vulture St (W)
AM PEAK HOUR						
2025 Survey	19%	<1	4 (Lahey Lane) N LT	NA	<1m	<1m
2028 Base	20%	<1	4 (Lahey Lane) N LT	NA	<1m	<1m
2028 Base + Committed	20%	<1	4 (Lahey Lane) N LT	NA	<1m	<1m
2029 Base	20%	<1	4 (Lahey Lane) N LT	NA	<1m	<1m
2029 Base + Development	20%	<1	4 (Lahey Lane) N LT	NA	<1m	<1m
2030 Base	20%	<1	4 (Lahey Lane) N LT	NA	<1m	<1m
2030 Base + Development	21%	<1	4 (Lahey Lane) N LT	NA	<1m	<1m
2031 Base	20%	<1	4 (Lahey Lane) N LT	NA	<1m	<1m
2031 Base + Development	21%	<1	4 (Lahey Lane) N LT	NA	<1m	<1m

NETWORK ANALYSIS						
Scenario	Degree of Saturation (DoS)	Average Delay (s)		Level of Service (LOS)	95th Percentile Queues	
		Total Int.	Worst Movement		Lahey La (N)	[1] Vulture St (W)
PM PEAK HOUR						
2025 Survey	35%	<1	5 (Lahey Lane) N LT	NA	1m	150m
2028 Base	36%	<1	6 (Lahey Lane) N LT	NA	1m	199m
2028 Base + Committed	36%	<1	6 (Lahey Lane) N LT	NA	1m	228m
2029 Base	37%	<1	6 (Lahey Lane) N LT	NA	1m	216m
2029 Base + Development	37%	<1	6 (Lahey Lane) N LT	NA	1m	248m
2030 Base	37%	<1	6 (Lahey Lane) N LT	NA	1m	237m
2030 Base + Development	37%	<1	6 (Lahey Lane) N LT	NA	2m	267m
2031 Base	37%	<1	6 (Lahey Lane) N LT	NA	1m	258m
2031 Base + Development	38%	<1	6 (Lahey Lane) N LT	NA	2m	287m

RT – Right Turn Movement, Th – Through Movement, LT – Left Turn Movement, UT – U Turn Movement; N – North, S – South, E – East, W – West

As summarised in Table 8-9, the Vulture Street / Lahey Lane intersection operates well within the acceptable DoS threshold of 80% across all assessed scenarios during both the AM and PM peak periods, with a maximum DoS of 38% observed in the 2031 PM Development Scenario.

Average delays are low across all scenarios, with total intersection delays less than one (1) second. The worst delay is associated with the Lahey Lane left-turn movement and remains minimal under all assessment years, with a maximum average delay of approximately 6 seconds.

Queue lengths reported in Table 8-9 have been derived using a combination of site-specific and downstream-adjusted SIDRA network outputs to reflect the influence of nearby downstream signalised intersections on approach queuing.

For the western approach on Vulture Street [1], 95th percentile queue lengths reported in the PM peak are influenced by downstream queuing from the Vulture Street / Main Street intersection. SIDRA network analysis indicates that queues generated at this intersection extends upstream and under all PM peak scenarios, extend past the Vulture Street / Lahey Lane intersection. To quantify the impact at the subject intersection, the 95th percentile back-of-queue length at the downstream signalised intersection has been compared with the physical spacing between intersections. Where the downstream queue exceeds this spacing, the residual queue length extending beyond the Vulture Street / Lahey Lane intersection has been reported in Table 8-9. As such, the longer queues shown on the western approach represent downstream spillback effects, rather than queuing caused by operational / capacity constraints at the Vulture Street / Lahey Lane intersection itself.

Overall, while downstream queuing along Vulture Street influences reported 95th percentile queues on the western approach during the PM peak, the Vulture Street / Lahey Lane intersection itself continues to operate with low delays and low degrees of saturation. Accordingly, the SIDRA analysis confirms that the proposed development will have no material impact on the operational performance or safety of the Vulture Street / Lahey Lane intersection.

8.7.7. Site 7 – Mark Lane / New Lane Intersection

Figure 8-9 shows the configuration of the Mark Lane / New Lane intersection adopted in the SIDRA analysis. The results of the SIDRA analysis under the various scenarios are summarised in Table 8-10.

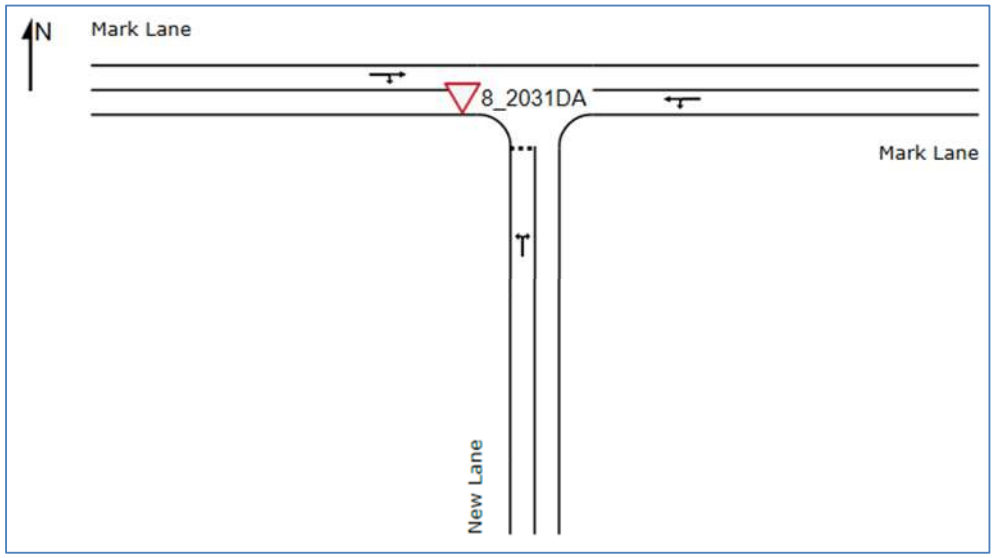


Figure 8-9: Mark Lane / New Lane – SIDRA Layout

Table 8-10: SIDRA Network Analysis Summary – Mark Lane / New Lane Intersection

NETWORK ANALYSIS							
Scenario	Degree of Saturation (DoS)	Average Delay (s)		Level of Service (LOS)	95th Percentile Queues		
		Total Int.	Worst Movement		New Lane (S)	Mark La (E)	Mark La (W)
AM PEAK HOUR							
2028 Base + Committed	<1%	2	5 (Mark Lane) W RT	NA	<1m	<1m	<1m
2029 Base + Development	5%	3	5 (Mark Lane) W RT	NA	1m	<1m	<1m
2030 Base + Development	6%	3	5 (Mark Lane) W RT	NA	2m	<1m	<1m
2031 Base + Development	8%	3	5 (Mark Lane) W RT	NA	2m	<1m	<1m
PM PEAK HOUR							
2028 Base + Committed	<1%	3	5 (Mark Lane) W RT	NA	<1m	<1m	<1m
2029 Base + Development	4%	4	5 (Mark Lane) W RT	NA	1m	<1m	1m
2030 Base + Development	4%	4	5 (Mark Lane) W RT	NA	1m	<1m	1m
2031 Base + Development	5%	4	5 (Mark Lane) W RT	NA	1m	<1m	2m

RT – Right Turn Movement, Th – Through Movement, LT – Left Turn Movement, UT – U Turn Movement; N – North, S – South, E – East, W – West

As summarised in Table 8-10, the proposed Mark Lane / New Lane intersection operates well within the acceptable DoS threshold of 80% across all assessed development scenarios during both the AM and PM peak periods. The maximum DoS observed is 8% in the 2031 AM Development Scenario, indicating substantial spare capacity at the intersection.

Average delays remain low across all assessed scenarios, with total intersection delays generally in the order of three to four seconds. The worst delay is associated with the Mark Lane right-turn movement and remains minimal, with a maximum average delay of approximately five (5) seconds.

Predicted 95th percentile queue lengths are minimal (maximum 3m), with no material queuing observed on any approach.

Overall, the SIDRA analysis confirms that the proposed Mark Lane / New Lane intersection will operate efficiently.

8.7.8. Development Accesses

For the development accesses, cursory SIDRA analysis was undertaken to review the main vehicle access capacity and typical operational performance in terms of queuing and delay. Table 8-11 outlines the typical operational characteristics for each of the main vehicle accesses – based on the 'worst case' scenario.

Table 8-11: SIDRA Network Analysis Summary – Vehicle Accesses

NETWORK ANALYSIS							
Scenario	Degree of Saturation (DoS)	Average Delay (s)		Level of Service (LOS)	95th Percentile Queues		
		Total Int.	Worst Movement		Lane Approach	Lane Approach	Access
Access							
Mark Lane (Podium Parking)	6%	3	6 (Precinct 1 Access) S	NA	<1m	<1m	2m
New Lane (Northern)	6%	3	6 (Precinct 1 Access) E	NA	<1m	<1m	<1m
New Lane (Southern)	6%	3	6 (Precinct 1 Access) E	NA	<1m	<1m	<1m

RT – Right Turn Movement, Th – Through Movement, LT – Left Turn Movement, UT – U Turn Movement; N – North, S – South, E – East, W – West

The summary of main vehicle access performance indicates that all accesses will operate well within capacity, with minimal queuing and delay at the accesses and also within the Lane approaches – either Mark Lane or the New Lane. These performance characteristics are in line with expectations given the relatively low turnover rates for the primarily residential uses of the proposed development – particularly, the minimal expected queuing will be adequately catered for within the provided queue space for each of the main vehicle accesses to the New Lane / Mark Lane.

Similar cursory assessment of the Loading Dock accesses indicated that there would be sufficient capacity at the Vulture Street and Main Street Loading Dock accesses to accommodate truck movements, with no material impact on through traffic operations. Any identified queuing on Vulture Street is attributable to downstream signalised intersections rather than the operation of the service access itself, confirming that the access can operate efficiently within the surrounding road network.

8.7.9. Net Delay Assessment

The net impact of development traffic on the surrounding road network has been assessed through comparison of total intersection delays under future-year scenarios. For the purpose of this Net Delay assessment, the two signalised intersections in the vicinity of the subject site – Vulture Street / Leopard Street and Vulture Street / Main Street have been assessed in terms of the 2031 Base scenario compared to the 2031 Base + Development scenario - the latter representing the full development scenario (where all stages of the Precinct 1 development are complete and operational).

The resulting net change in intersection delay is summarised in Table 8-12.

Table 8-12: Net Intersection Delay – 2031 Base Case vs 2031 Base + Development

Intersection	Impact of Full Development (2031)	
	AM Peak Hour	PM Peak Hour
Vulture Street / Leopard Street	2%	-2%
Vulture Street / Main Street	20.5%	16.5%
Total	**12.9%**	

As shown in Table 8 14, the change in net intersection delay varies between the two assessed locations when compared to the 2031 base case and considered against the Department of Transport and Main Roads (TMR) 5% significance trigger outlined in the Guide to Traffic Impact Assessment (GTIA).

At the Vulture Street / Leopard Street intersection, the development results in a negligible change in delay, with a 2% increase in the AM peak and a 2% reduction in the PM peak. These changes are well below the TMR 5% threshold and indicate that the development does not result in a material impact at this location.

The Vulture Street / Main Street intersection experiences increases in delay of 20.5% in the AM peak and 16.5% in the PM peak. These exceed the TMR 5% trigger, indicating a material impact at this intersection attributable to the development traffic of approximately 12.9%, which is above the 5% GTIA threshold. However, this outcome is solely due the performance of the Vulture Street / Main Street intersection, with the remainder of the assessed network operating within acceptable limits (<5% Net Delay impact).

Consequently, while a material impact is identified at a localised level, the broader network will continue to operate with generally comparable efficiency to the Base scenario at most intersections – noting that there are Net Delay impacts at the Vulture Street / Main Street intersection. The proposed development provides spatial allowances / widths along the Vulture Street and Main Street frontages, which will enable future upgrade of this intersection (by others) to mitigate additional traffic within the PDA area.

8.8. Traffic Impact Conclusion

Based on the SIDRA Intersection network analysis undertaken, existing and proposed intersections and access points within the traffic study area within the vicinity of the subject site are forecast to generally operate within acceptable performance parameters under all assessed scenarios.

Across the surrounding road network, minor intersections generally operate with low Degrees of Saturation, maintain acceptable Levels of Service, and exhibit low average delays and minimal queue lengths. For the major intersections – Vulture Street intersections with Leopard Street and Main Street - the analysis indicates that, in most cases, background traffic growth represented by the Base scenarios is the primary driver of future network conditions, with the introduction of the proposed development resulting in only modest incremental impacts on intersection and access performance.

The Vulture Street / Main Street intersection is forecast to marginally exceed the generally accepted 90% - 95% DoS threshold during the PM peak period in future year assessment horizons. However, this exceedance occurs in the Base scenarios prior to the inclusion of development traffic. The Vulture Street / Main Street intersection experiences increases in delay of approximately 12.9%, which is above the 5% GTIA threshold.

The proposed development provides spatial allowances / widths along the Vulture Street and Main Street frontages, which will enable future upgrade of this intersection (by others) to mitigate additional traffic within the PDA area.

Overall, the SIDRA analysis demonstrates that the additional traffic generated by the proposed development typically results in only minor incremental increases, and does not materially alter overall intersection capacity, delays, or queue lengths. Overall, the surrounding road network is generally capable of accommodating the proposed development and that all assessed intersections and site accesses are expected to operate safely and efficiently.

9. Summary and Conclusions

The proposed development comprises a large-scale, mixed-use precinct including multiple dwellings, short-term accommodation (hotel), and a range of complementary non-residential uses. The development is to be delivered in stages and is located within the Woolloongabba Priority Development Area (PDA), which promotes high-density, transit-oriented outcomes.

The proposal has been designed with consideration of the PDA planning framework, prioritising integration with public and active transport, and supporting a highly connected and walkable urban environment. The scale and nature of the development are consistent with the strategic intent for the precinct.

9.1. Parking Arrangements

The proposed development provides a comprehensive parking supply that responds to the requirements of the PDA Development Scheme and the operational needs of the various land uses. The provision of residential, visitor, hotel, and non-residential parking supplies are generally compliant with the PDA rates and have been designed to accommodate expected demand while maintaining flexibility through shared parking opportunities for the non-residential uses.

It is noted that in Stage 1, there will likely be some use of a portion of the Podium parking levels, which would result in these supply rates being marginally over the EDQ maximums. This is considered appropriate as this will ensures that both residential parking needs are met, while also providing flexibility to respond to future changes in demand, private vehicle ownership trends and previous Council City Frame rates.

The internal parking layout has been assessed against relevant standards, including the TAPS Planning Scheme Policy and Australian Standards, and is generally compliant. Where minor variations occur, these can be addressed through detailed design and are not expected to impact functionality or safety.

The development proposes over 1,200 bicycle parking spaces which is analogous with Brisbane City Council Transport, Access, Parking and Servicing (TAPS) Planning Scheme Policy (PSP) rates for residents and visitors. It is also noted that the proposed bicycle provision would also satisfy bicycle parking rates from the Austroads' Cycling Aspects of Austroads Guides., which is noted as being ~45% of Council TAPS PSP rates.

Overall, the proposed parking arrangements are suitable for the development.

9.2. Access Arrangements

The proposed access strategy rationalises the existing multiple crossovers while maintaining connectivity for the proposed development through strategic design. Access has been designed to appropriately separate service vehicle movements from general traffic, improving safety and operational efficiency – service vehicle access to the major road network (minimising circulation on minor roads) and carparking accesses to the minor roads (including assignment of specific accesses to uses for wayfinding). This approach aligns with the intent of relevant guidelines by directing service vehicle movements to higher-order roads and utilising local streets for lower-intensity traffic.

The access arrangements have been assessed against the relevant provisions of the PDA, Council's TAPS Planning Scheme Policy, and applicable standards, and are considered to provide safe, efficient, and practical outcomes, supporting improved pedestrian amenity by reduced conflicts and an enhanced streetscape.

9.3. Service Vehicle Arrangements

The development incorporates a well-considered servicing strategy, including dedicated loading areas, on-site manoeuvring, and separation from general traffic and pedestrian movements.

The proposed loading facilities are designed to accommodate the required service vehicle types for the specific development and are supported by swept path analysis demonstrating safe and efficient vehicle movements within the site. The number, configuration and location of loading bays consider the requirements of specific uses / activities, and incorporate some shared-use which is appropriate for a mixed-use development.

The servicing arrangements are consistent with the intent of Council's TAPS Planning Scheme Policy and relevant standards, and are considered sufficient to meet the operational needs of the development without impacting the surrounding road network.

9.4. Traffic Impact Assessment

The traffic impact assessment indicates that the additional development-generated traffic will be accommodated within the surrounding road network without significant adverse impacts. Intersection assessments demonstrate that key intersections will generally continue to operate within acceptable levels of service under future traffic scenarios, with only minor increases in delay. Further, The distribution of traffic across multiple access points further assists in minimising localised impacts.

The Vulture Street / Main Street intersection is forecast to marginally exceed the generally accepted 90% - 95% DoS threshold during the PM peak period in future year assessment horizons - noting this exceedance occurs in the Base scenarios prior to the inclusion of development traffic. The Vulture Street / Main Street intersection experiences increases in delay of approximately 12.9%, which is above the 5% GTIA threshold.

The proposed development provides spatial allowances along the Vulture and Main Street frontages, which will enable future upgrade of this intersection (by others) to mitigate additional traffic within the PDA area.

Otherwise, the surrounding road network is considered capable of generally accommodating the forecast traffic demands associated with the development with significant impact to operations or safety.

9.5. Conclusion

Based on the assessment contained within this report, the proposed development achieves a coordinated and integrated transport outcome that is consistent with the intent of the Woolloongabba PDA, Council's planning framework, and relevant engineering standards.

The proposed parking, access, and servicing arrangements are appropriate for the scale and nature of the development, and the surrounding road network has sufficient capacity to accommodate the anticipated traffic demands – noting spatial provisions along Vulture and Main Streets for future upgrades (by others).

Appendix A Development Plans



Drawing No	Sheet Title	Current Revision
PRESENTATION		
1 OVERALL ARRANGEMENT		
01 Drawing List		
SK01000	Drawing List	B
11 Site Plan, Grid and Setout		
SK11000	Site Plan : Existing	B
SK11010	Site Plan : Proposed	A
12 Plans		
SK12000	Plans : Basement 02	B
SK12001	Plans : Basement 01	B
SK12002	Plans : Lower Ground (Vulture St)	B
SK12003	Plans : Plaza	B
SK12004	Plans : Upper Ground (Mark Ln)	B
SK12005	Plans : Level 01 - Podium	B
SK12006	Plans : Level 02 - Podium	B
SK12007	Plans : Level 03 - Podium	B
SK12008	Plans : Level 04 - Podium	B
SK12009	Plans : Level 05 - Podium Roof	B
SK12010	Plans : Level 06 - Typical	B
SK12011	Plans : Level 11 - Hotel Roof	B
SK12033	Plans : Level 33 - T2 Amenities	B
SK12034	Plans : Level 34 - T2 Roof Plant	B
SK12036	Plans : Level 36 - T1 Amenities	B
SK12037	Plans : Level 37 - T1 High Rise	B
SK12049	Plans : Level 49 - T1 Amenities	B
SK12050	Plans : Level 50 - T1 Roof Plant	B
SK12051	Plans : Roof Plan	B
13 Elevations & Sections		
SK13001	Elevations : North (Mark Ln)	B
SK13002	Elevations : West (New Lane)	B
SK13003	Elevations : South (Vulture St)	B
SK13004	Elevations : East (Main St)	B
SK13011	Sections : Sheet 01	B
SK13012	Sections : Sheet 02	B
SK13013	Sections : Sheet 03	B
SK13014	Sections : Sheet 04	B
SK13015	Sections : Sheet 05	A
18 Areas		
SK18101	Area Plans : GFA - Sheet 01	B
SK18102	Area Plans : GFA - Sheet 02	B
SK18111	Area Plans : Landscape - Sheet 01	B
SK18112	Area Plans : Landscape - Sheet 02	A
SK18500	Area Plans : Communal Space	B
SK18600	Area Plans : Site Coverage	B
2 GENERAL ARRANGEMENT		
22 Floor Plans		
SK22101	Floor Plan : T1 - Typical Low Rise	B
SK22102	Floor Plan : T1 - Typical High Rise	B
SK22201	Floor Plan : T2 - Typical Floor	B
SK22301	Floor Plan : Hotel Typical	B
SK22302	Floor Plan : Hotel Typical	B
3 GENERAL ARRANGEMENT		
32 Sections		
SK32051	Sections : Street Interface - Sheet 01	A
SK32052	Sections : Street Interface - Sheet 02	A
SK32053	Sections : Street Interface - Sheet 03	A
SK32054	Sections : Street Interface - Sheet 04	A
SK32055	Sections : Street Interface - Sheet 05	A
9 GENERAL		
90 Shadow Study		
SK90001	Shadow Study : Summer	B
SK90002	Shadow Study : Winter	B
SK90003	Shadow Study : Equinox	B

Parking Schedule_Allocation

Allocation	Level	Count	Type
Childcare			
Childcare	LOWER GROUND - P1	21	
		21	
Hotel			
Hotel	PLAZA - P1	38	
Hotel	PLAZA - P1	5	Tandem Parking
		43	
Tower 1			
Tower 1	BASEMENT 02 - P1	136	
Tower 1	BASEMENT 01 - P1	55	
Tower 1	BASEMENT 01 - P1	13	Tandem Parking
Tower 1	LEVEL 01 - P1	2	
Tower 1	LEVEL 01 - P1	81	
Tower 1	LEVEL 02 - P1	81	
Tower 1	LEVEL 03 - P1	81	
Tower 1	LEVEL 04 - P1	2	
Tower 1	LEVEL 04 - P1	81	
		532	
Tower 2			
Tower 2	BASEMENT 02 - P1	40	
Tower 2	BASEMENT 02 - P1	11	Tandem Parking
Tower 2	BASEMENT 01 - P1	37	
Tower 2	BASEMENT 01 - P1	11	Tandem Parking
Tower 2	LOWER GROUND - P1	32	
Tower 2	LOWER GROUND - P1	11	Tandem Parking
Tower 2	LEVEL 01 - P1	34	
Tower 2	LEVEL 01 - P1	12	Tandem Parking
Tower 2	LEVEL 02 - P1	34	
Tower 2	LEVEL 02 - P1	12	Tandem Parking
Tower 2	LEVEL 03 - P1	34	
Tower 2	LEVEL 03 - P1	12	Tandem Parking
Tower 2	LEVEL 04 - P1	34	
Tower 2	LEVEL 04 - P1	12	Tandem Parking
		326	
Visitor T1			
Visitor T1	BASEMENT 01 - P1	103	
		103	
Visitor T2			
Visitor T2	LOWER GROUND - P1	41	
		41	
Grand total: 1066		1066	

Bike Schedule

Comments	Level	Bike Rack
Tower 1		
Tower 1	BASEMENT 02 - P1	104
Tower 1	BASEMENT 01 - P1	58
Tower 1	LOWER GROUND - P1	244
Tower 1	LEVEL 01 - P1	70
Tower 1	LEVEL 02 - P1	70
Tower 1	LEVEL 03 - P1	70
Tower 1	LEVEL 04 - P1	70
		686
Tower 2		
Tower 2	BASEMENT 02 - P1	114
Tower 2	BASEMENT 01 - P1	114
Tower 2	LOWER GROUND - P1	48
		276
Visitor T1		
Visitor T1	LOWER GROUND - P1	174
		174
Visitor T2		
Visitor T2	LOWER GROUND - P1	70
		70
Grand total		1206

Unit Mix - Hotel

Name	Count
Premium	
Premium	47
Premium: 47	
Standard	
Standard	120
Standard: 120	
Suite	
Suite	10
Suite: 10	
Grand total: 177	

Unit Mix - Tower 01

Name	Count
1 Bed - T1	
1 Bed	60
1 Bed + MPR	175
1 Bed - T1: 235	
2 Bed - T1	
2 Bed	315
2 Bed + MPR	108
2 Bed - T1: 423	
3 Bed - T1	
3 Bed + MPR	25
3 Bed - T1: 25	
Grand total: 683	

Unit Mix - Tower 02

Name	Count
1 Bed - T2	
1 Bed	54
1 Bed - T2: 54	
2 Bed - T2	
2 Bed	106
2 Bed - T2: 106	
3 Bed - T2	
3 Bed + MPR	55
3 Bed - T2: 55	
4 Bed - T2	
4 Bed + MPR	55
4 Bed - T2: 55	
Grand total: 270	

Recent revision history

#	Status	Description	Date
A		DA WIP - BACKGROUND UPDATE	17/04/26
B		DEVELOPMENT APPLICATION	01/05/26

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Project
Mark Lane Stage 1A and Precinct

Client
Philip Usher Constructions

Issuer
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Project number
150740

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Sheet size
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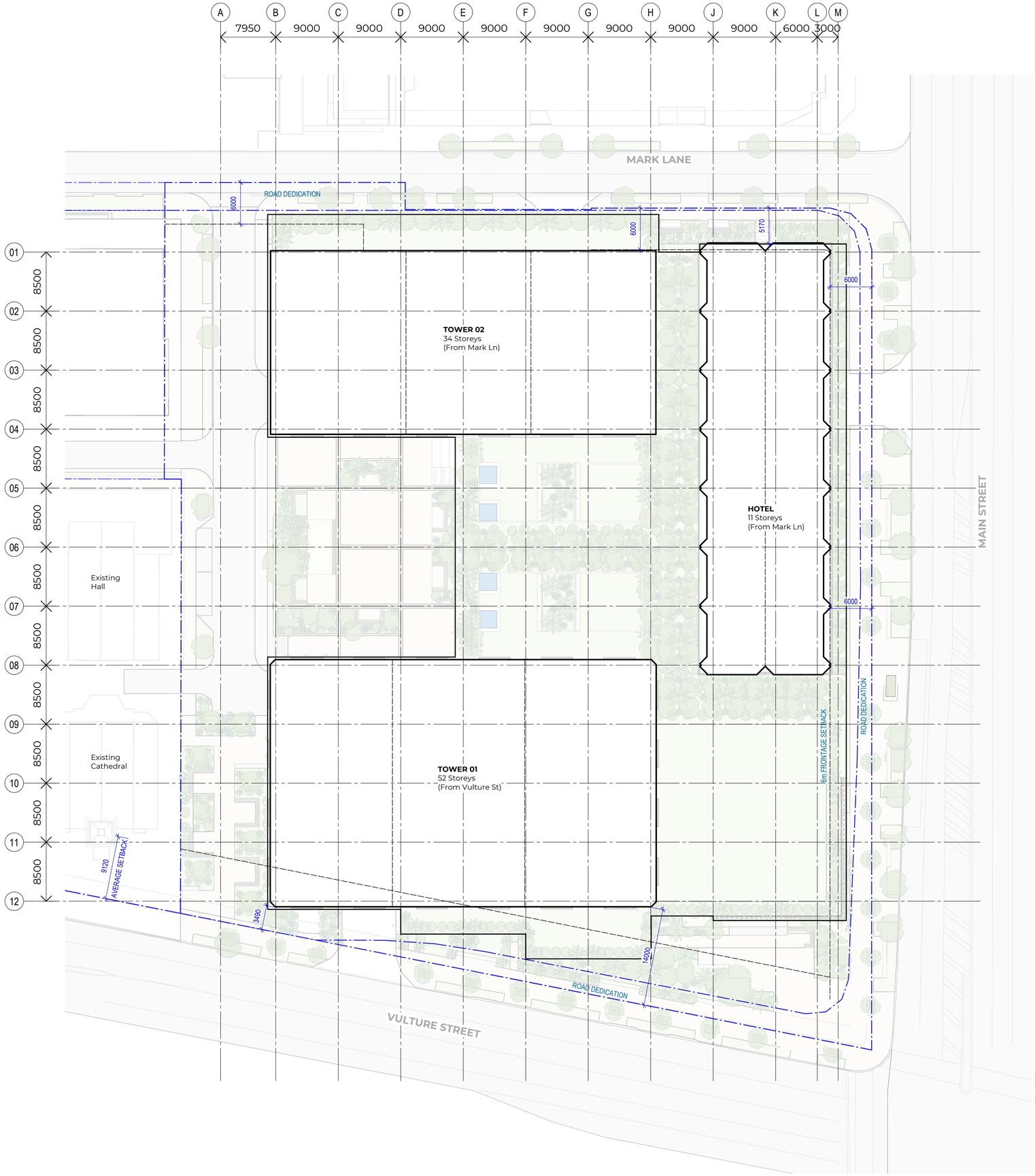
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Drawing List

Sheet number
SK01000

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PL

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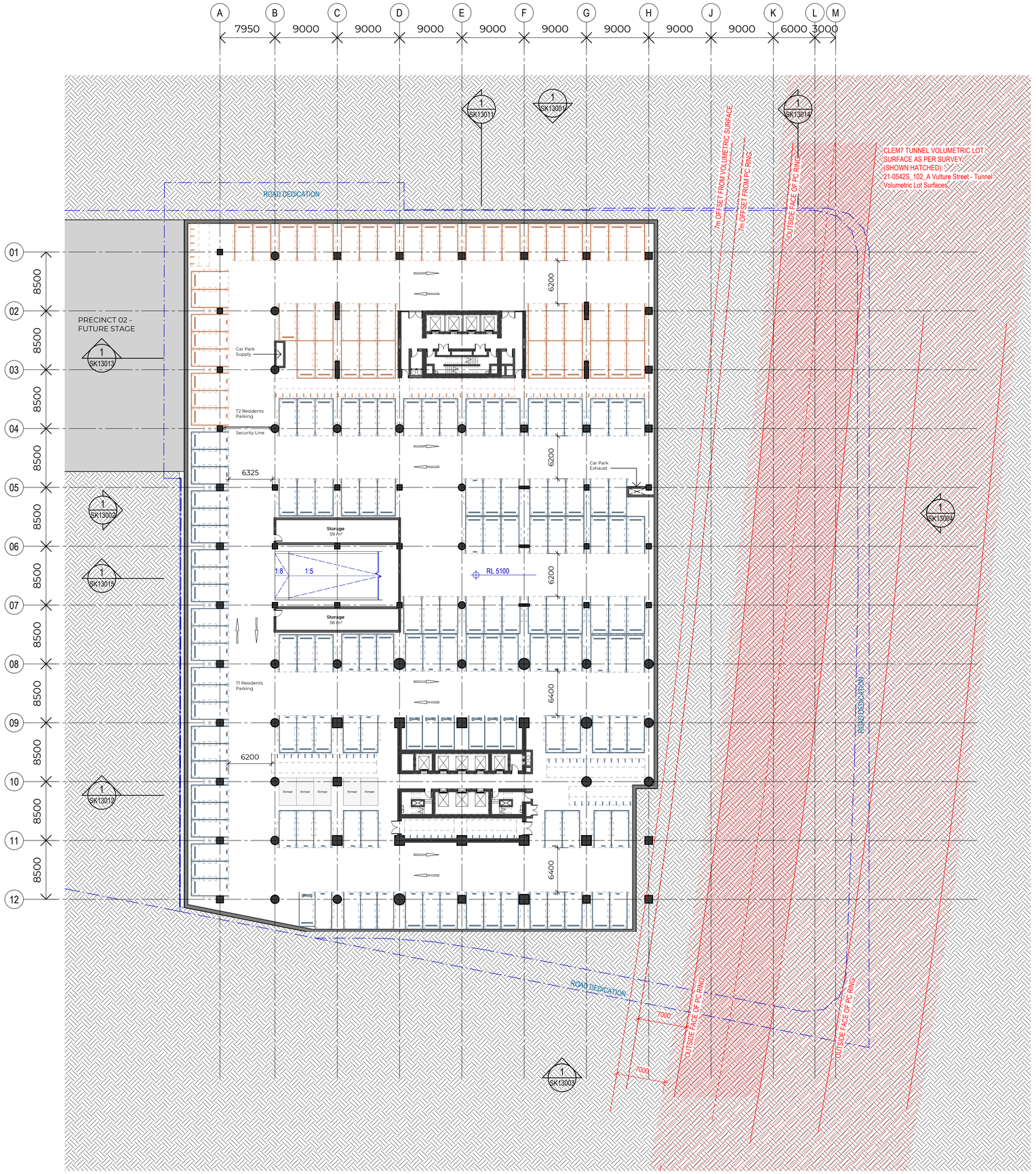
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Site Plan
Proposed

Sheet number
SK11010

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A

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Parking Allocation

- Hotel
- Other Uses
- Tower 1 - Visitor
- Tower 1 - Residents
- Tower 2 - Visitor
- Tower 2 - Residents

Project
Mark Lane Stage 1A and Precinct

Client
Philip Usher Constructions

Issuer
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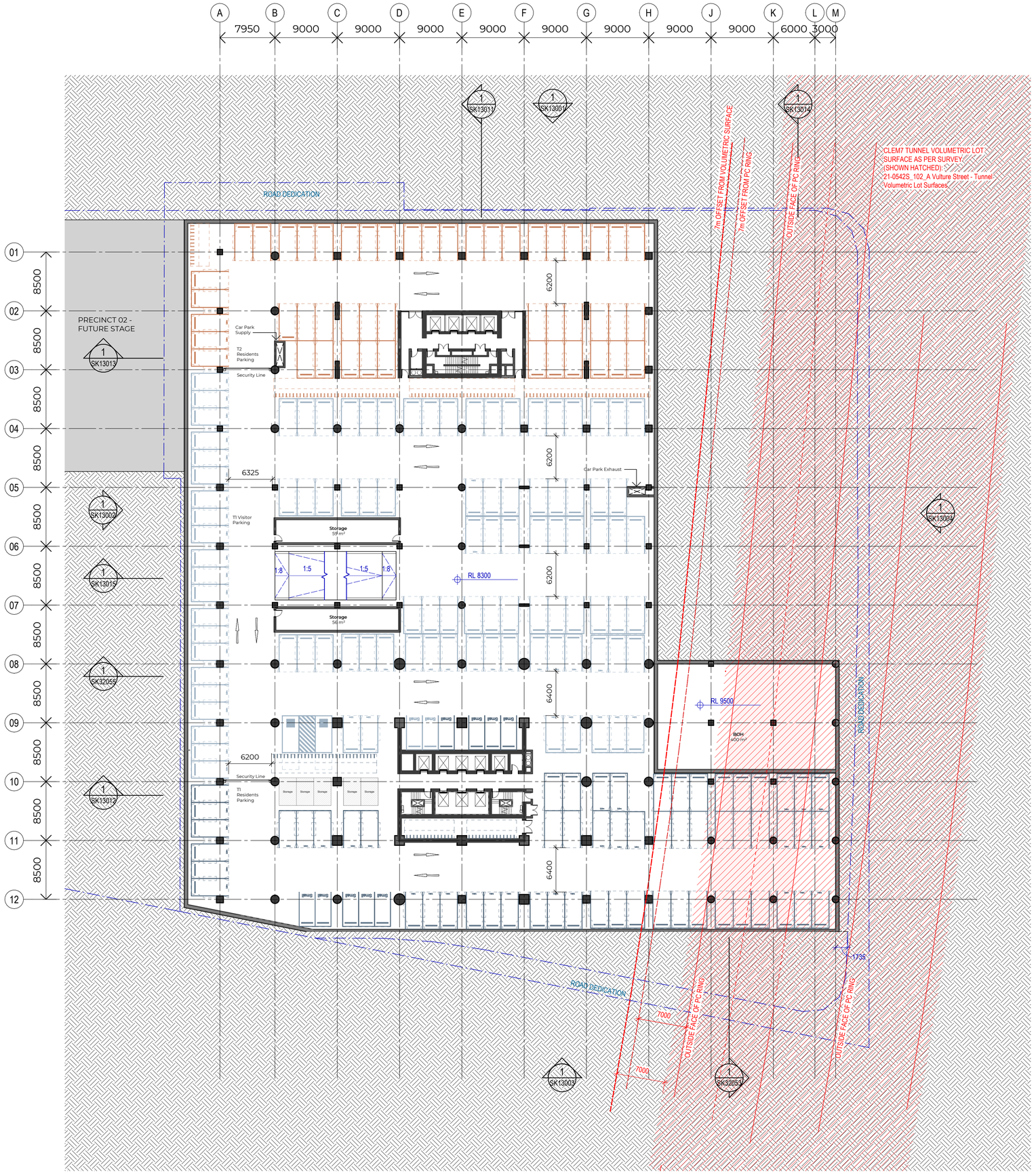
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Basement 02

Sheet number
SK12000

Revision
B

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Parking Allocation

- Hotel
- Other Uses
- Tower 1 - Visitor
- Tower 1 - Residents
- Tower 2 - Visitor
- Tower 2 - Residents

Project
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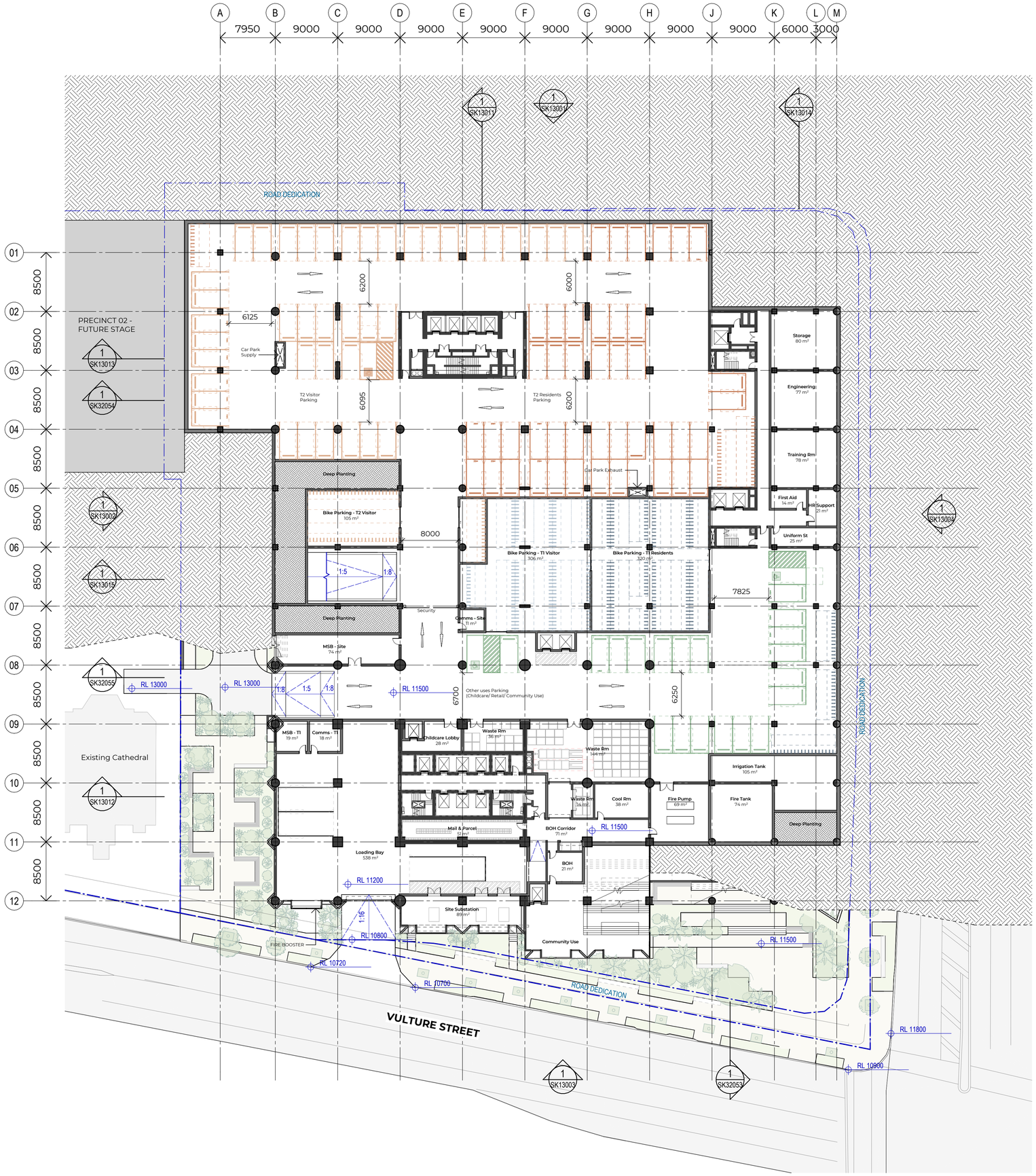
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Basement 01

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SK12001

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Parking Allocation

- Hotel
- Other Uses
- Tower 1 - Visitor
- Tower 1 - Residents
- Tower 2 - Visitor
- Tower 2 - Residents

Project
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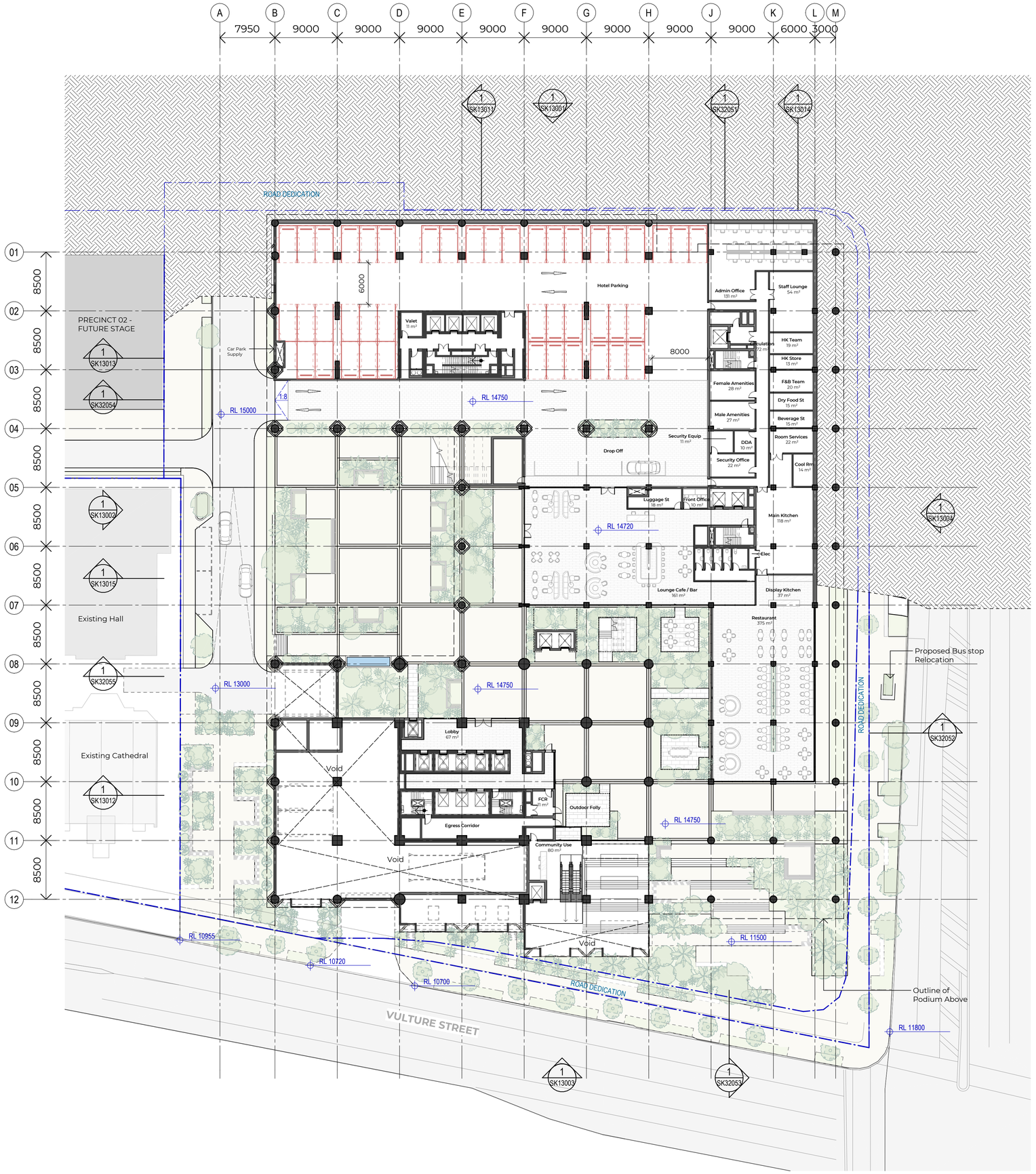
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Overall Arrangement
Plans
Lower Ground (Vulture St)

Sheet number
SK12002

Revision
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Parking Allocation

- Hotel
- Other Uses
- Tower 1 - Visitor
- Tower 1 - Residents
- Tower 2 - Visitor
- Tower 2 - Residents

Project
Mark Lane Stage 1A and Precinct

Client
Philip Usher Constructions

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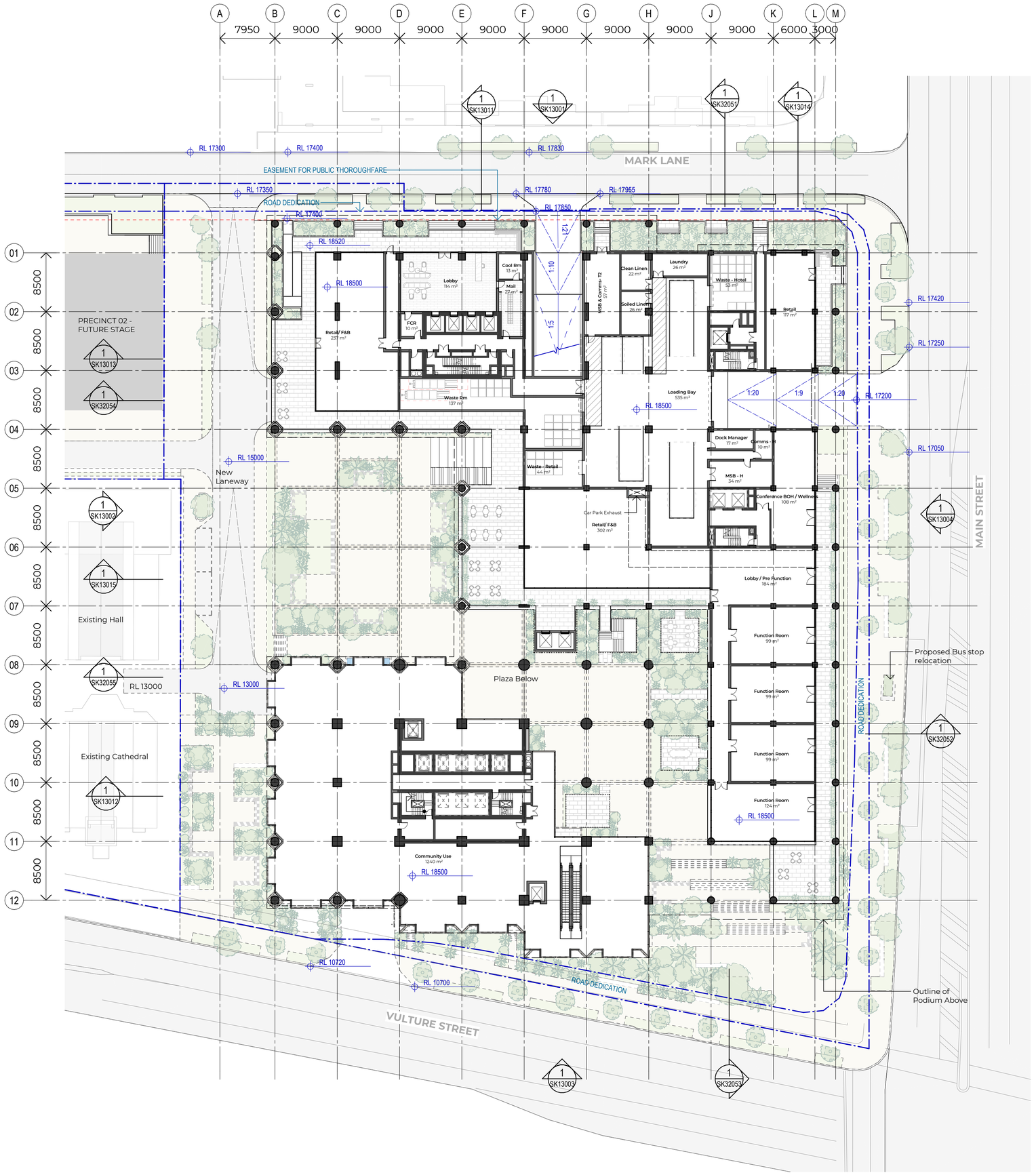
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Sheet title
Overall Arrangement Plans
Plaza

Sheet number	Revision
SK12003	B

Status
For Information



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Project
Mark Lane Stage 1A and Precinct

Client
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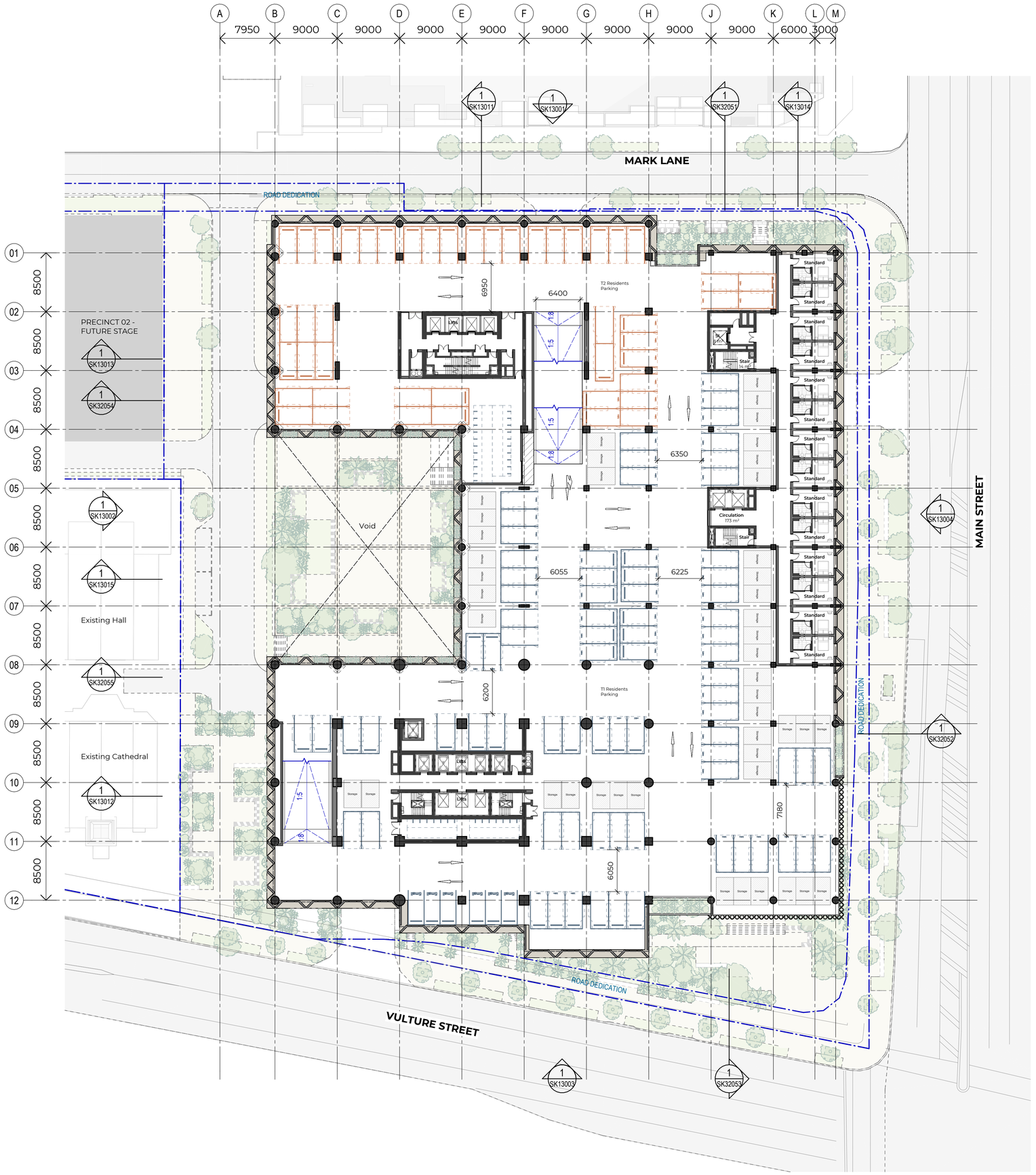
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Overall Arrangement Plans
Upper Ground (Mark Ln)

Sheet number	Revision
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Parking Allocation

- Hotel
- Other Uses
- Tower 1 - Visitor
- Tower 1 - Residents
- Tower 2 - Visitor
- Tower 2 - Residents

Project
Mark Lane Stage 1A and Precinct

Client
Philip Usher Constructions

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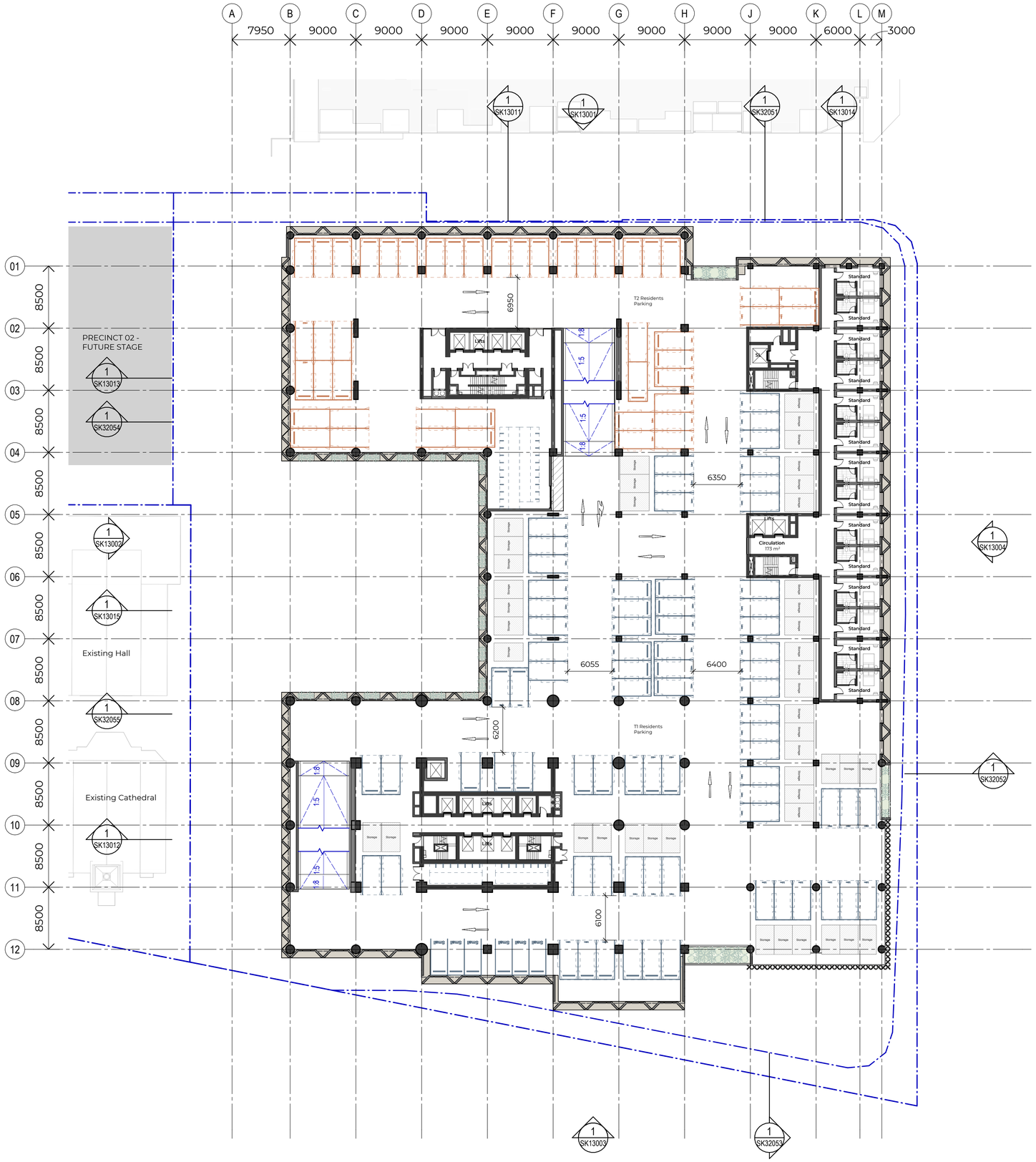
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PL	DL	A1	1 : 300

Sheet title
Overall Arrangement Plans
Level 01 - Podium

Sheet number	Revision
SK12005	B

Status
For Information

Date generated 30/04/2026 5:28:44 PM



Recent revision history

#	Status	Description	Date
A		DA WIP - BACKGROUND UPDATE	17/04/26
B		DEVELOPMENT APPLICATION	01/05/26

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Do not scale drawings.

Parking Allocation

- Hotel
- Other Uses
- Tower 1 - Visitor
- Tower 1 - Residents
- Tower 2 - Visitor
- Tower 2 - Residents

Project
Mark Lane Stage 1A and Precinct

Client
Philip Usher Constructions

Issuer
W—B
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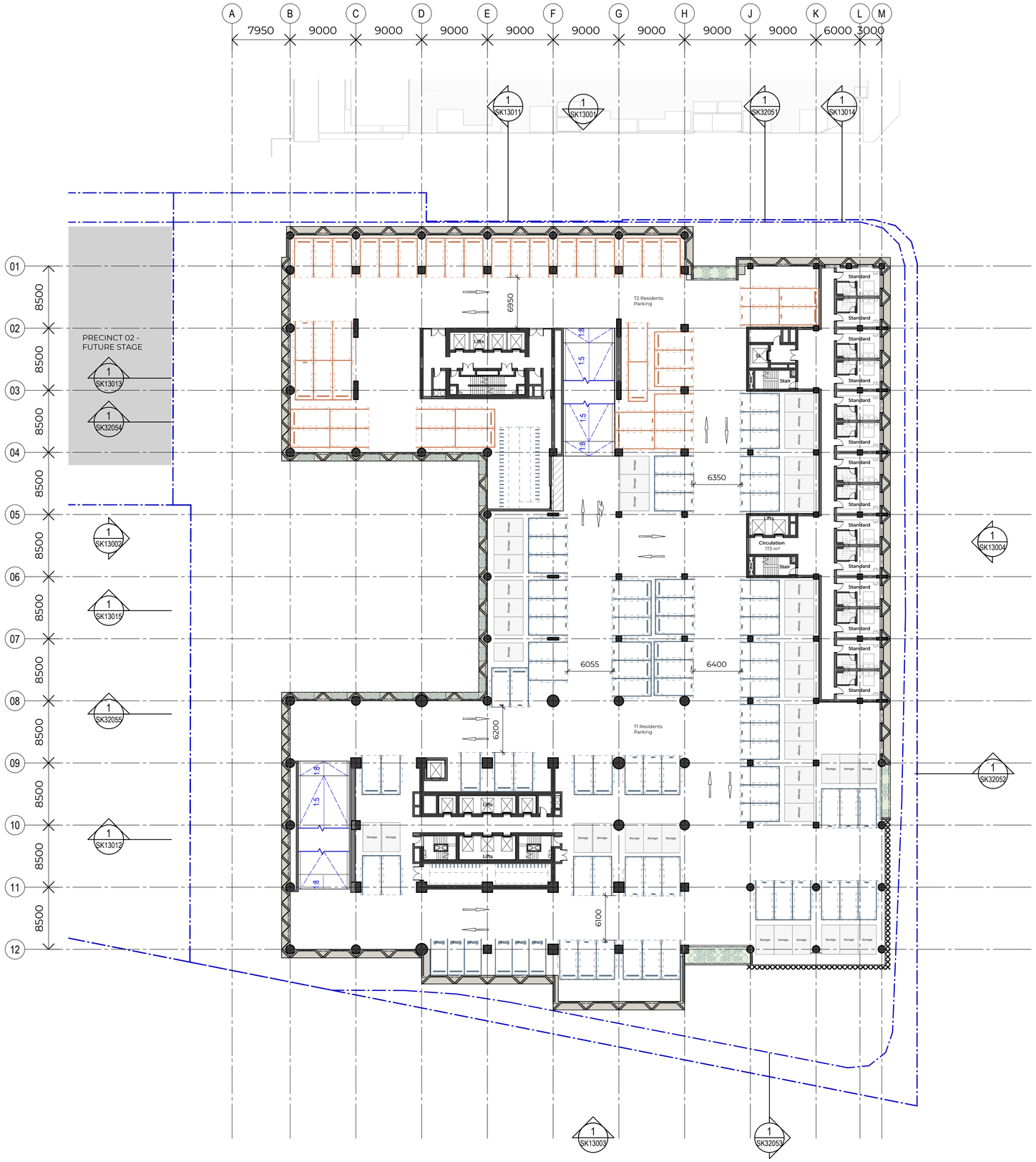
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Overall Arrangement Plans
Level 02 - Podium

Sheet number	Revision
SK12006	B

Status
For Information

Date generated 30/04/2026 5:28:59 PM



Recent revision history

#	Status	Description	Date
A		DA WIP - BACKGROUND UPDATE	17/04/26
B		DEVELOPMENT APPLICATION	01/05/26

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Parking Allocation

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- Other Uses
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- Tower 1 - Residents
- Tower 2 - Visitor
- Tower 2 - Residents

Project
Mark Lane Stage 1A and Precinct

Client
Philip Usher Constructions

Issuer
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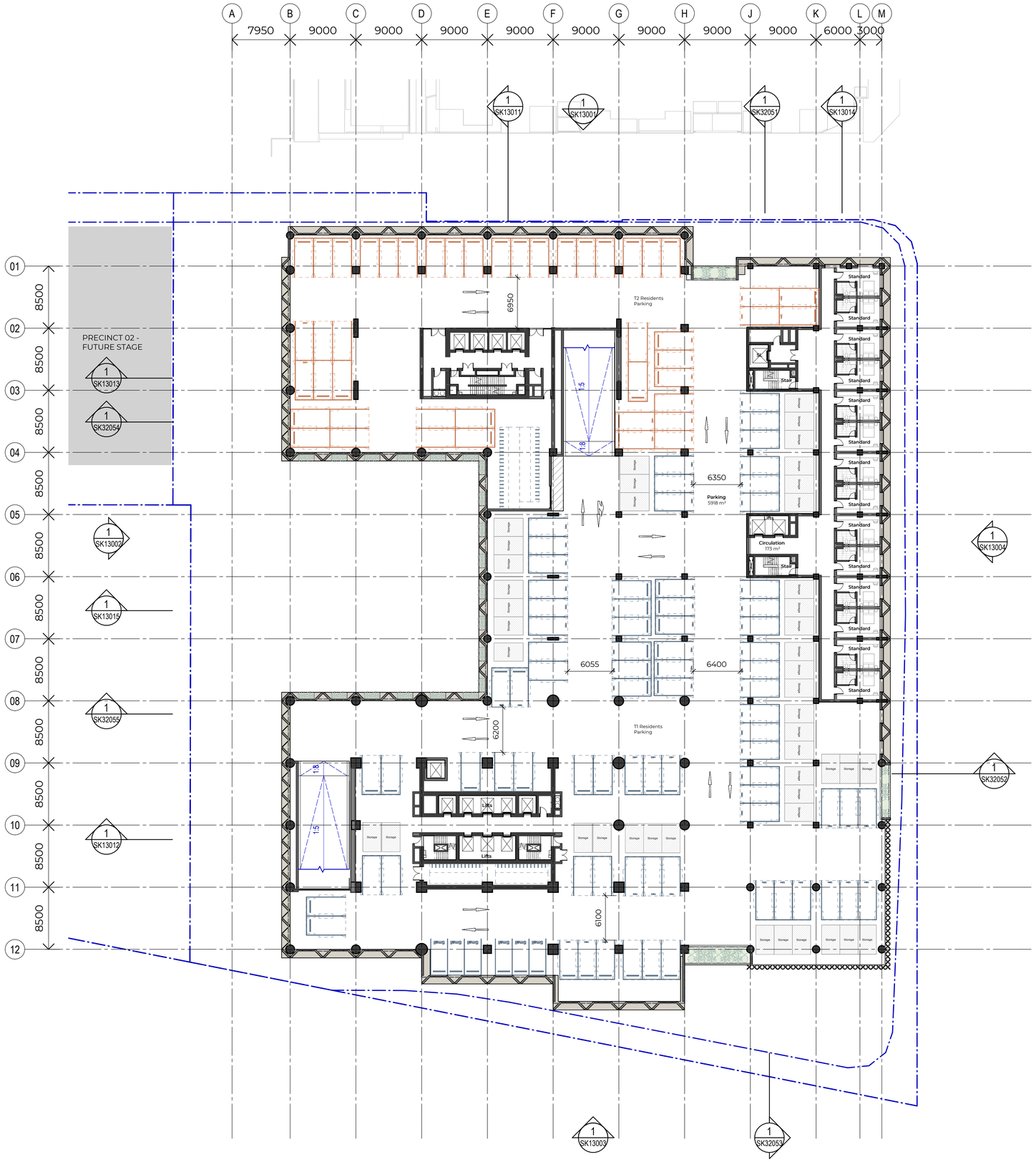
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Sheet title
Overall Arrangement Plans
Level 03 - Podium

Sheet number	Revision
SK12007	B

Status
For Information

Date generated 30/04/2026 5:29:09 PM



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B		DEVELOPMENT APPLICATION	01/05/26

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Parking Allocation

- Hotel
- Other Uses
- Tower 1 - Visitor
- Tower 1 - Residents
- Tower 2 - Visitor
- Tower 2 - Residents

Project
Mark Lane Stage 1A and Precinct

Client
Philip Usher Constructions

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Project number
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Size check
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Checked
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Approved
DL

Sheet size
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Sheet title
Overall Arrangement Plans
Level 04 - Podium

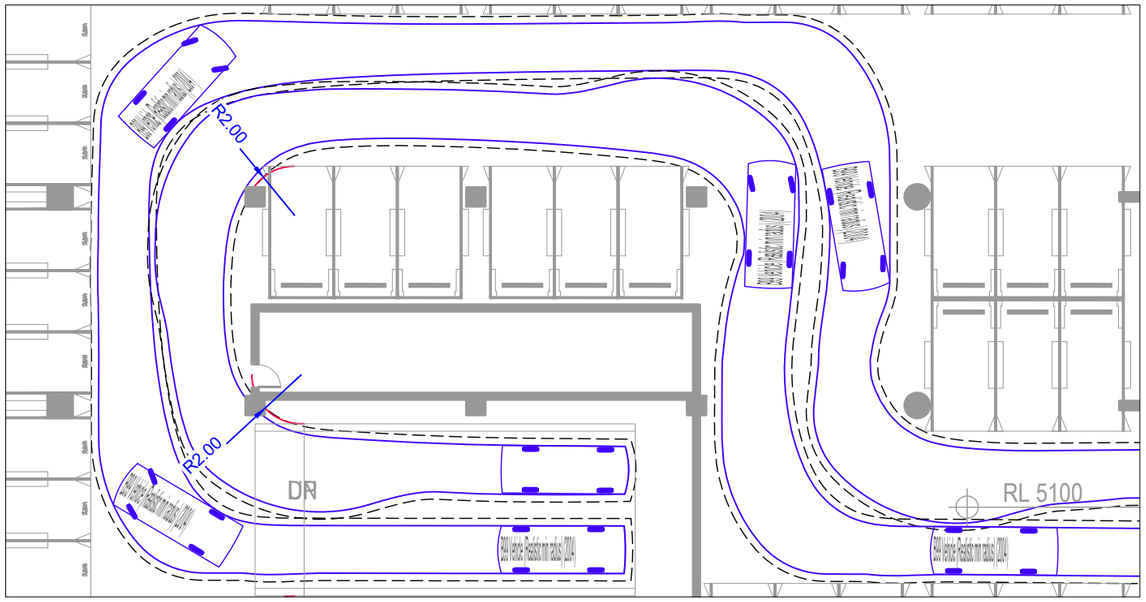
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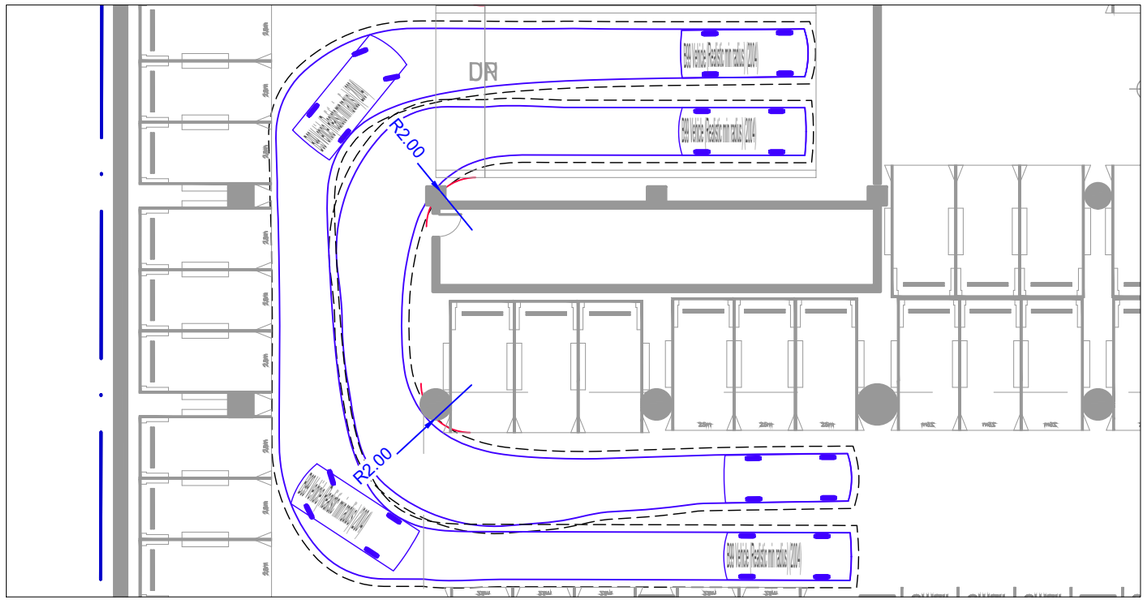
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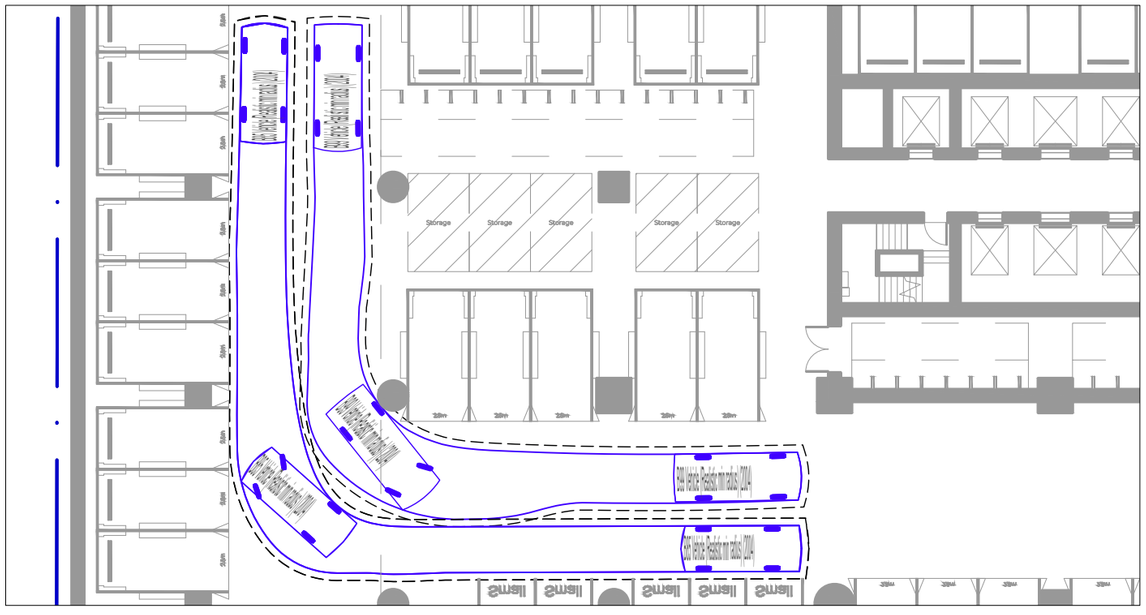
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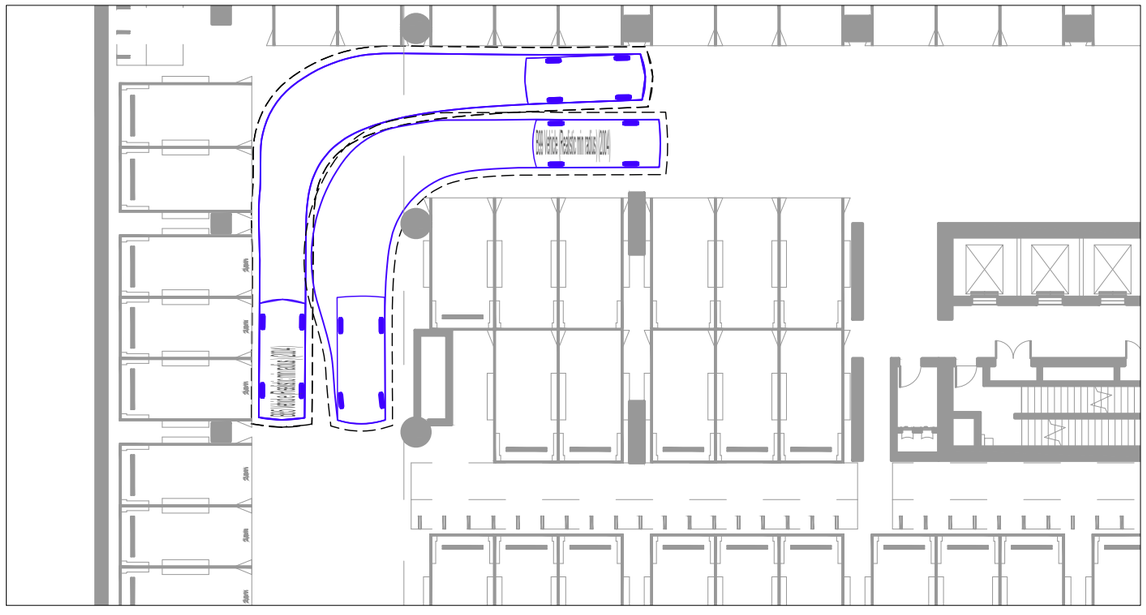
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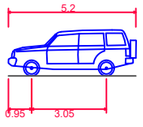






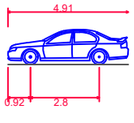


VEHICLE PROFILES



B99 Vehicle (Realistic min radius) (2004)

Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	1.878m
Min Body Ground Clearance	0.272m
Track Width	1.840m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6.250m
Design Speed Forward	5.0km/h
Clearance Envelope	0.300m



B85 Vehicle (Realistic min radius) (2004)

Overall Length	4.910m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5.750m
Design Speed Forward	5.0km/h
Clearance Envelope	0.300m

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29 April 2026

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
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SCALE 1:400 AT ORIGINAL SIZE

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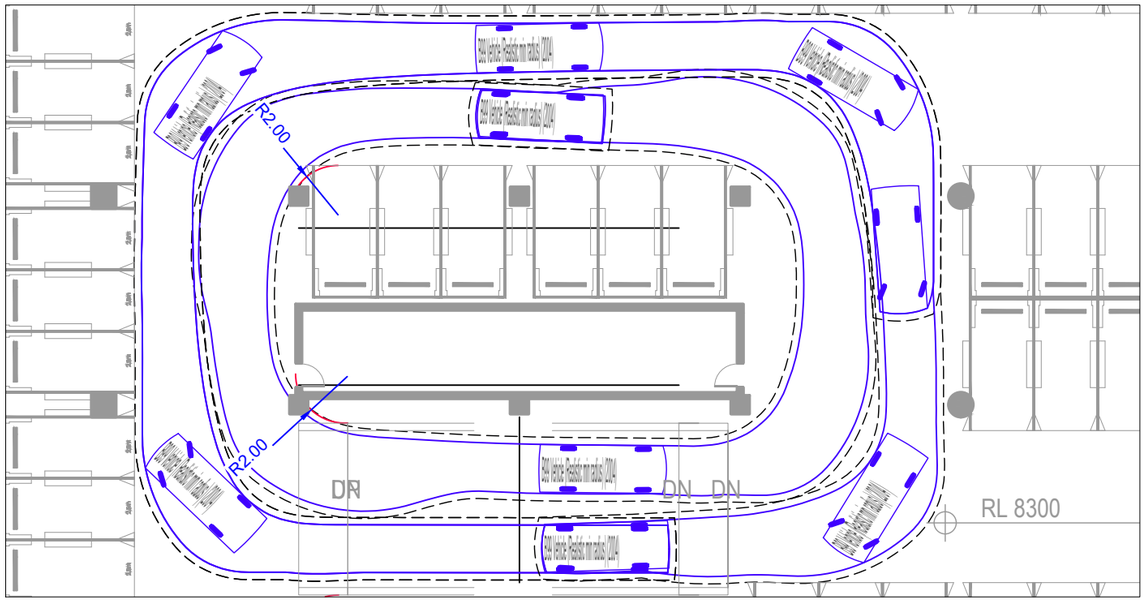
CLIENT: Philip Usher

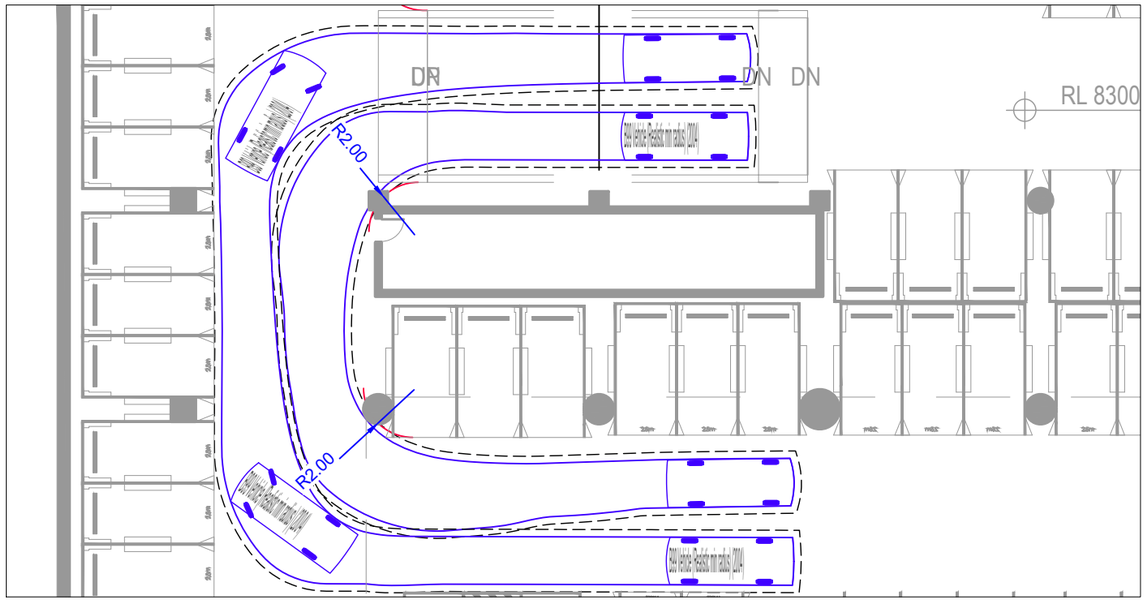
Colliers International Engineering & Design (TTMC) Pty Ltd
ABN 65 010 868 621
LEVEL 8, 369 Ann Street, BRISBANE QLD 4000
P.O. BOX 12015, BRISBANE QLD 4003
T: (07) 3327 9500 F: (07) 3327 9501
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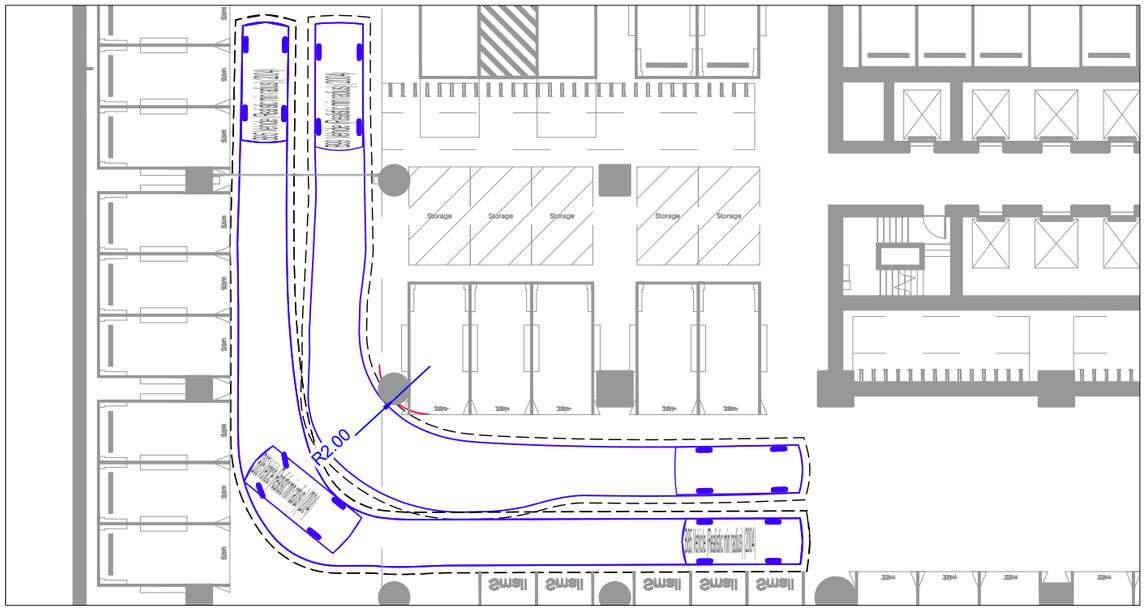
PROJECT: **Vulture St - Main Street Precinct, Kangaroo Point**

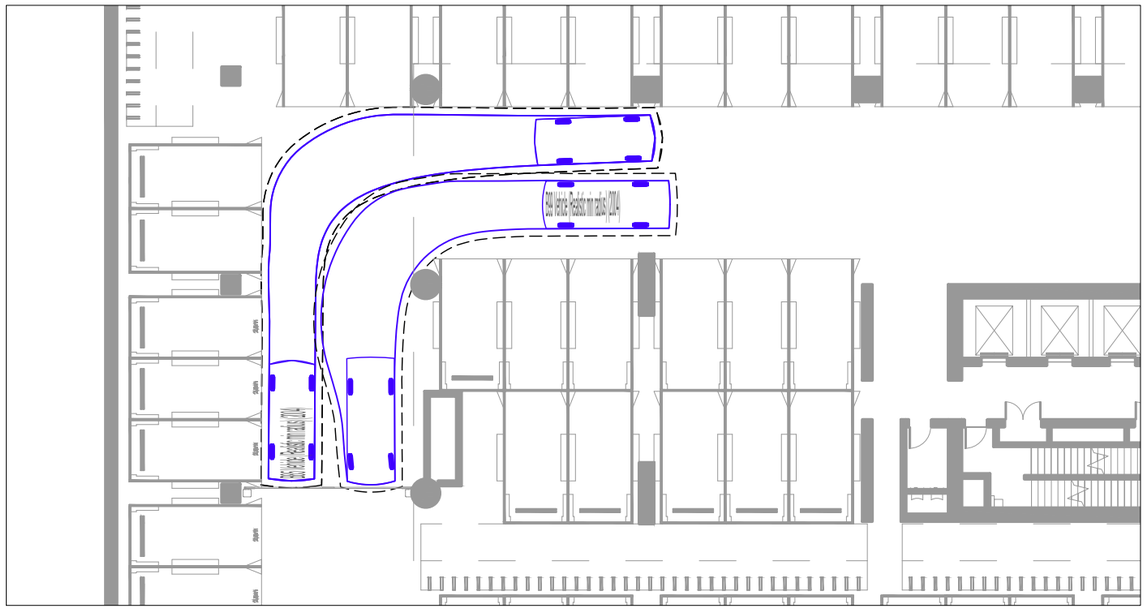
DRAWING TITLE: **SWEPT PATH ANALYSIS**
Basement 2 - B85 V B99 Circulation

PROJECT NUMBER	23BRT0331
ORIGINAL SIZE	A3
DRAWING NUMBER	23BRT0331- 01
REVISION	A
DATE	29 Apr 2026
SHEET	1 OF 1

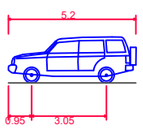






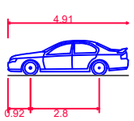


VEHICLE PROFILES



B99 Vehicle (Realistic min radius) (2004)

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Overall Width	1.940m
Overall Body Height	1.878m
Min Body Ground Clearance	0.272m
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Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6.250m
Design Speed Forward	5.0km/h
Clearance Envelope	0.300m



B85 Vehicle (Realistic min radius) (2004)

Overall Length	4.910m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5.750m
Design Speed Forward	5.0km/h
Clearance Envelope	0.300m

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29 April 2026

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SCALE 1:400 AT ORIGINAL SIZE

NORTH

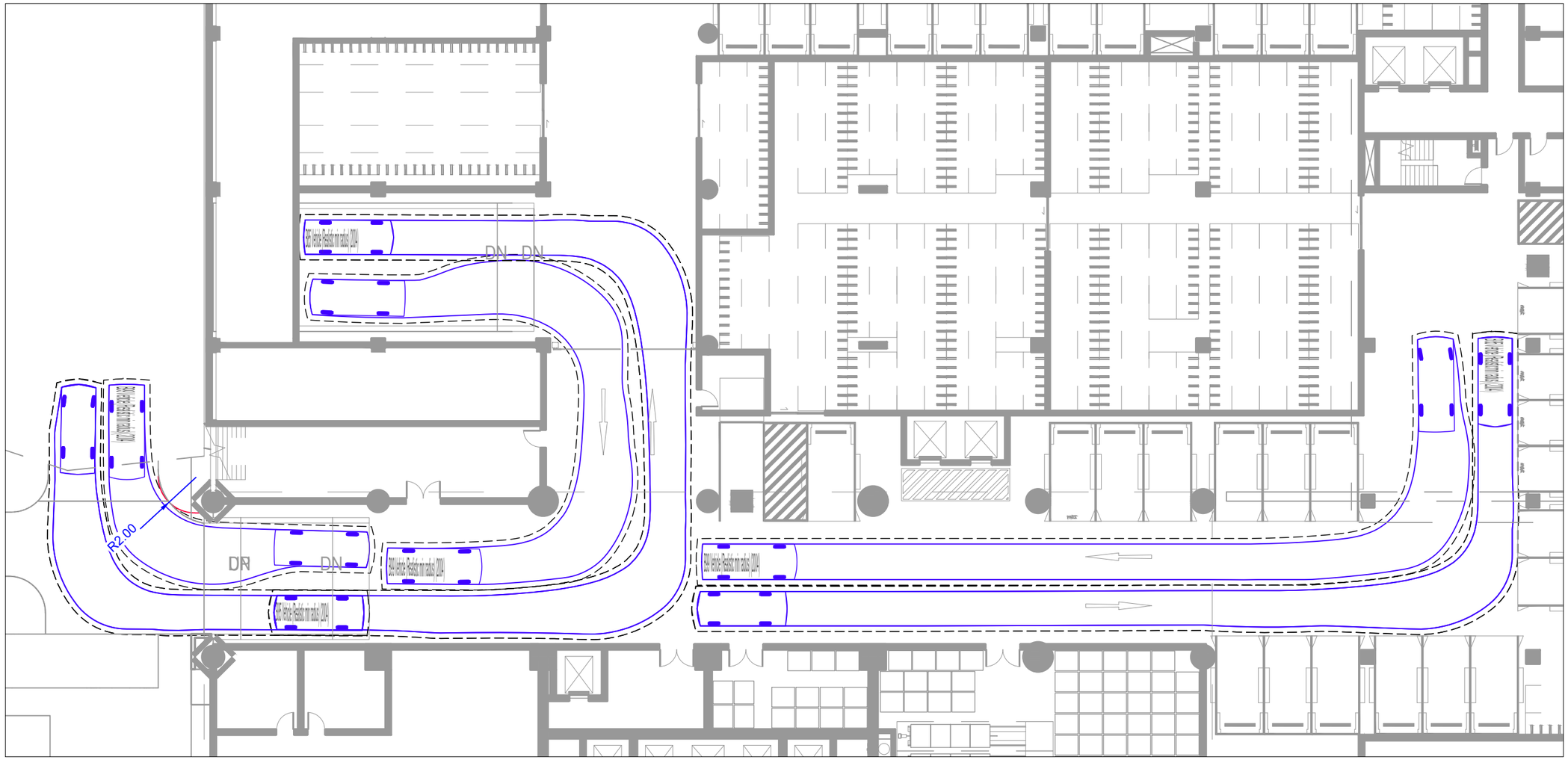
CLIENT
Philip Usher

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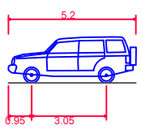
PROJECT
Vulture St - Main Street Precinct, Kangaroo Point

DRAWING TITLE
SWEPT PATH ANALYSIS
Basement 1 - B85 V B99 Circulation

PROJECT NUMBER	ORIGINAL SIZE
23BRT0331	A3
DRAWING NUMBER	REVISION
23BRT0331- 02	A
DATE	SHEET
29 Apr 2026	1 OF 1

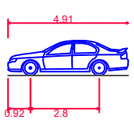


VEHICLE PROFILES



B99 Vehicle (Realistic min radius) (2004)

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Overall Width	1.940m
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Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5.750m
Design Speed Forward	5.0km/h
Clearance Envelope	0.300m

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29 April 2026

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SCALE 1:400 AT ORIGINAL SIZE

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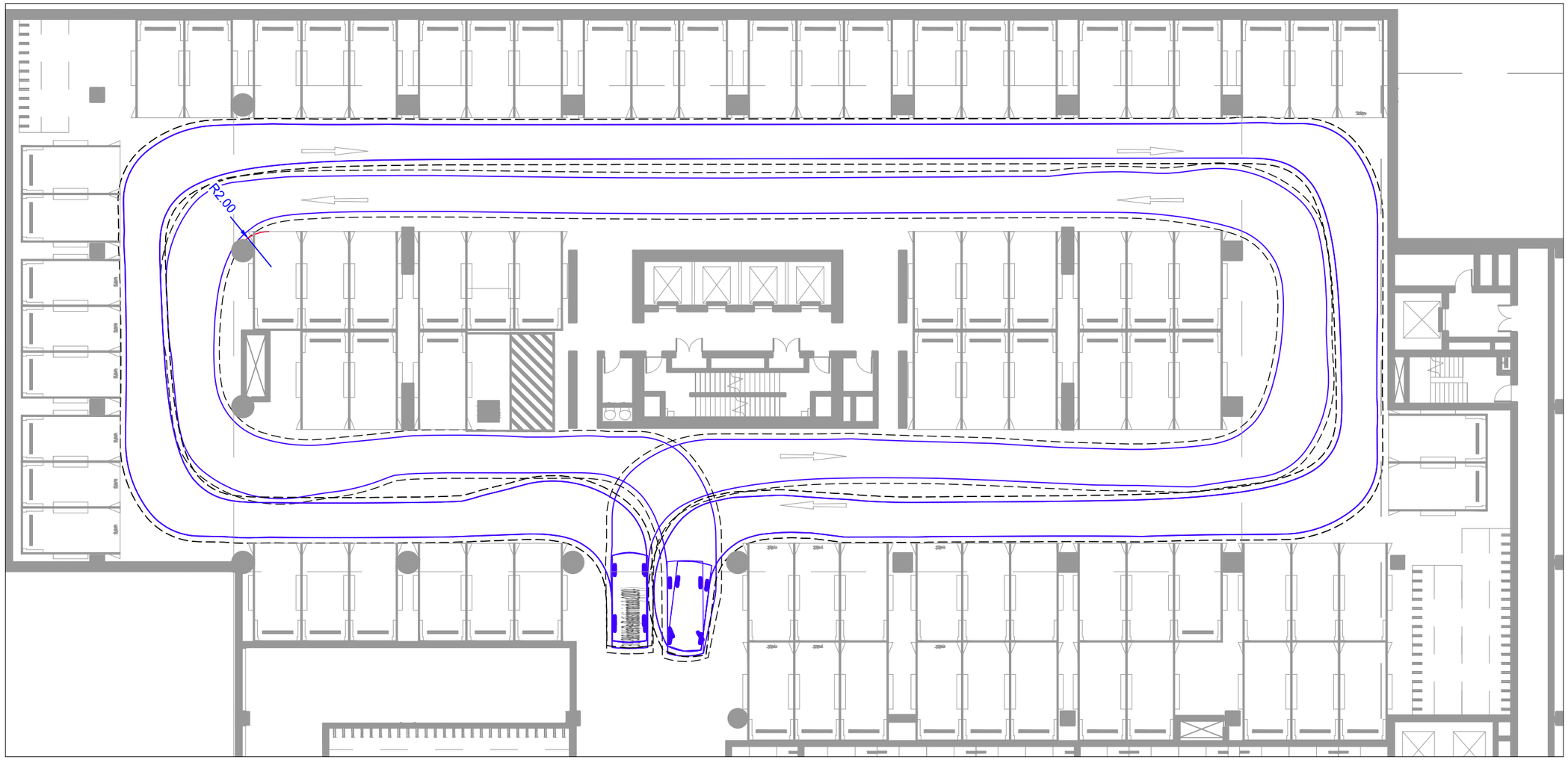
CLIENT: Philip Usher

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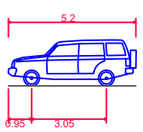
PROJECT: **Vulture St - Main Street Precinct, Kangaroo Point**

DRAWING TITLE: **SWEPT PATH ANALYSIS**
Lower Ground - B85 V B99 Circulation

PROJECT NUMBER	23BRT0331
ORIGINAL SIZE	A3
DRAWING NUMBER	23BRT0331- 03
REVISION	A
DATE	29 Apr 2026
SHEET	1 OF 4

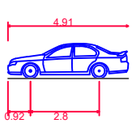


VEHICLE PROFILES



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Design Speed Forward	5.0km/h
Clearance Envelope	0.300m



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Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5.750m
Design Speed Forward	5.0km/h
Clearance Envelope	0.300m

PRELIMINARY ADVICE ONLY
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A	29-04-26	ORIGINAL ISSUE	AS	JK	DW

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SCALE 1:400 AT ORIGINAL SIZE

NORTH

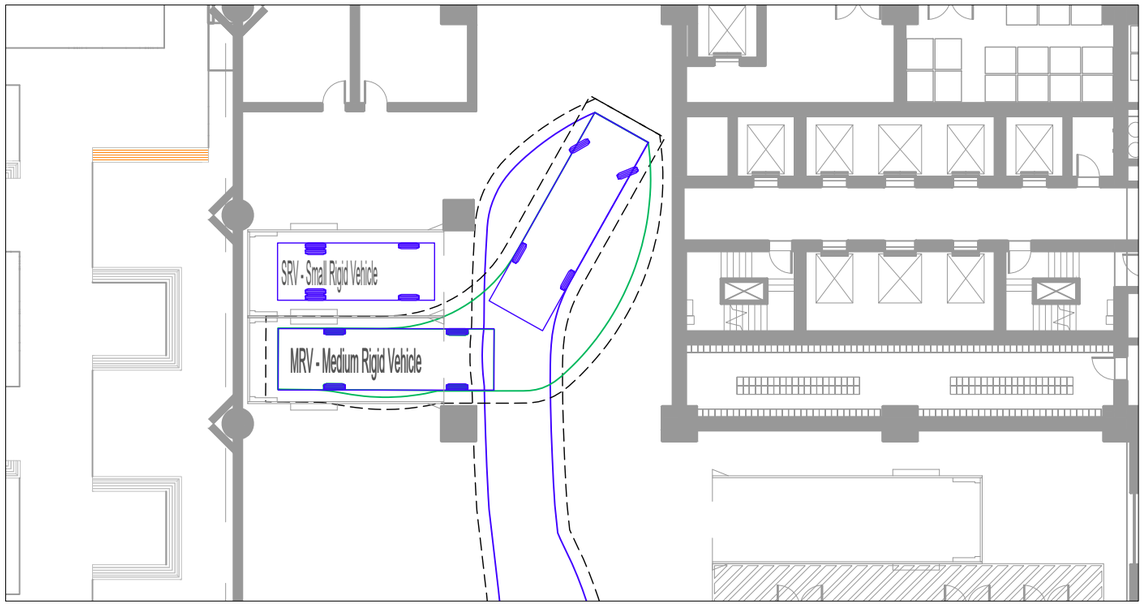
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Philip Usher

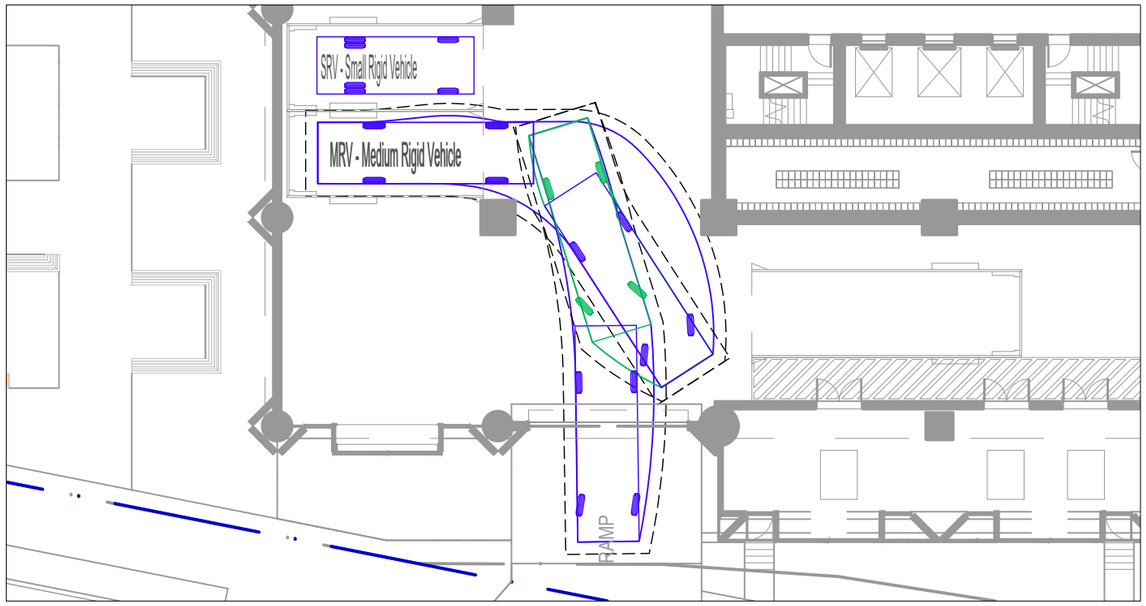
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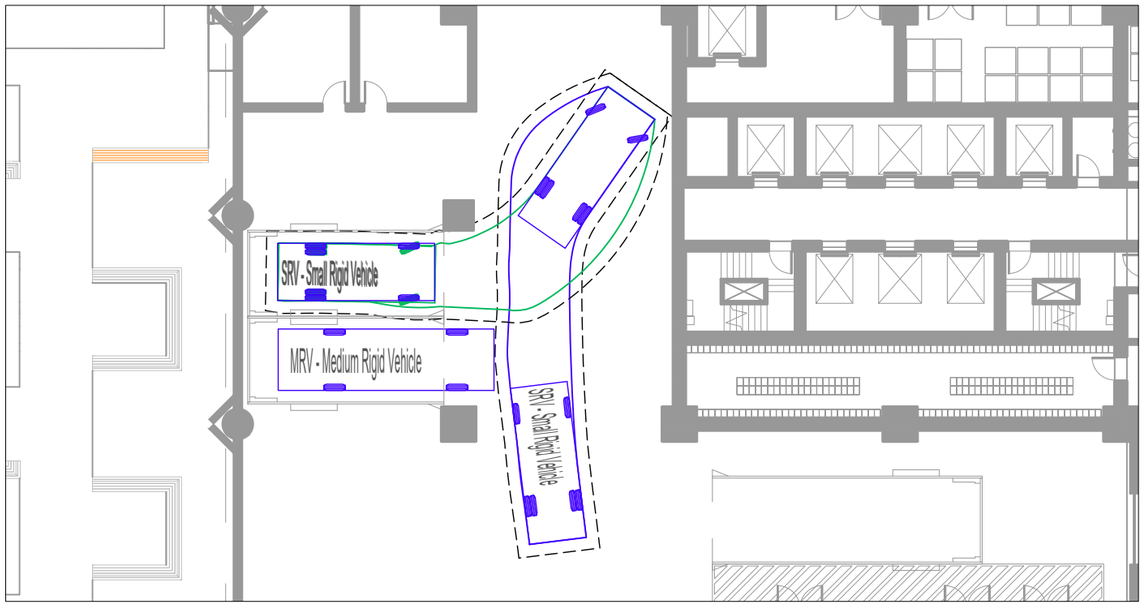
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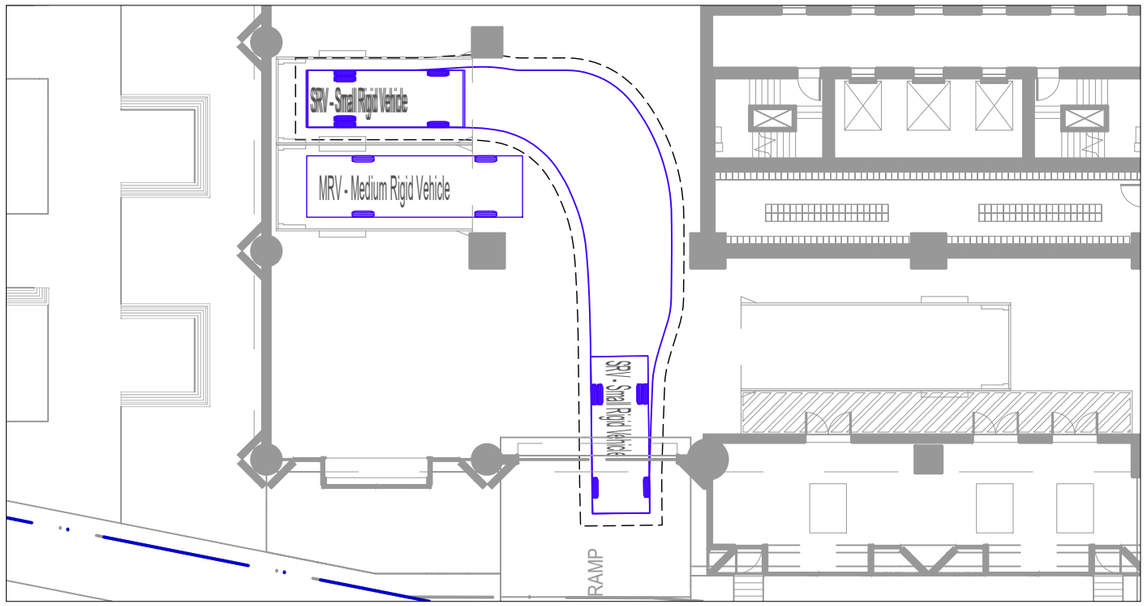
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SWEPT PATH ANALYSIS
Lower Ground - B85 V B99 Circulation

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ORIGINAL SIZE	A3
DRAWING NUMBER	23BRT0331- 03
REVISION	A
DATE	29 Apr 2026
SHEET	2 OF 4

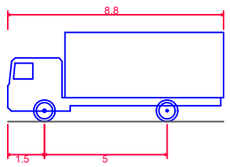






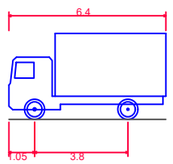


VEHICLE PROFILES



MRV - Medium Rigid Vehicle

Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.500m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	10.000m
Design Speed Forward	5.0km/h
Clearance Envelope	0.5m



SRV - Small Rigid Vehicle

Overall Length	6.400m
Overall Width	2.330m
Overall Body Height	3.500m
Min Body Ground Clearance	0.398m
Track Width	2.330m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	7.100m
Design Speed Forward	5.0km/h
Clearance Envelope	0.5m

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A	29-04-26	ORIGINAL ISSUE	AS	JK	DW

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SCALE 1:400 AT ORIGINAL SIZE

NORTH

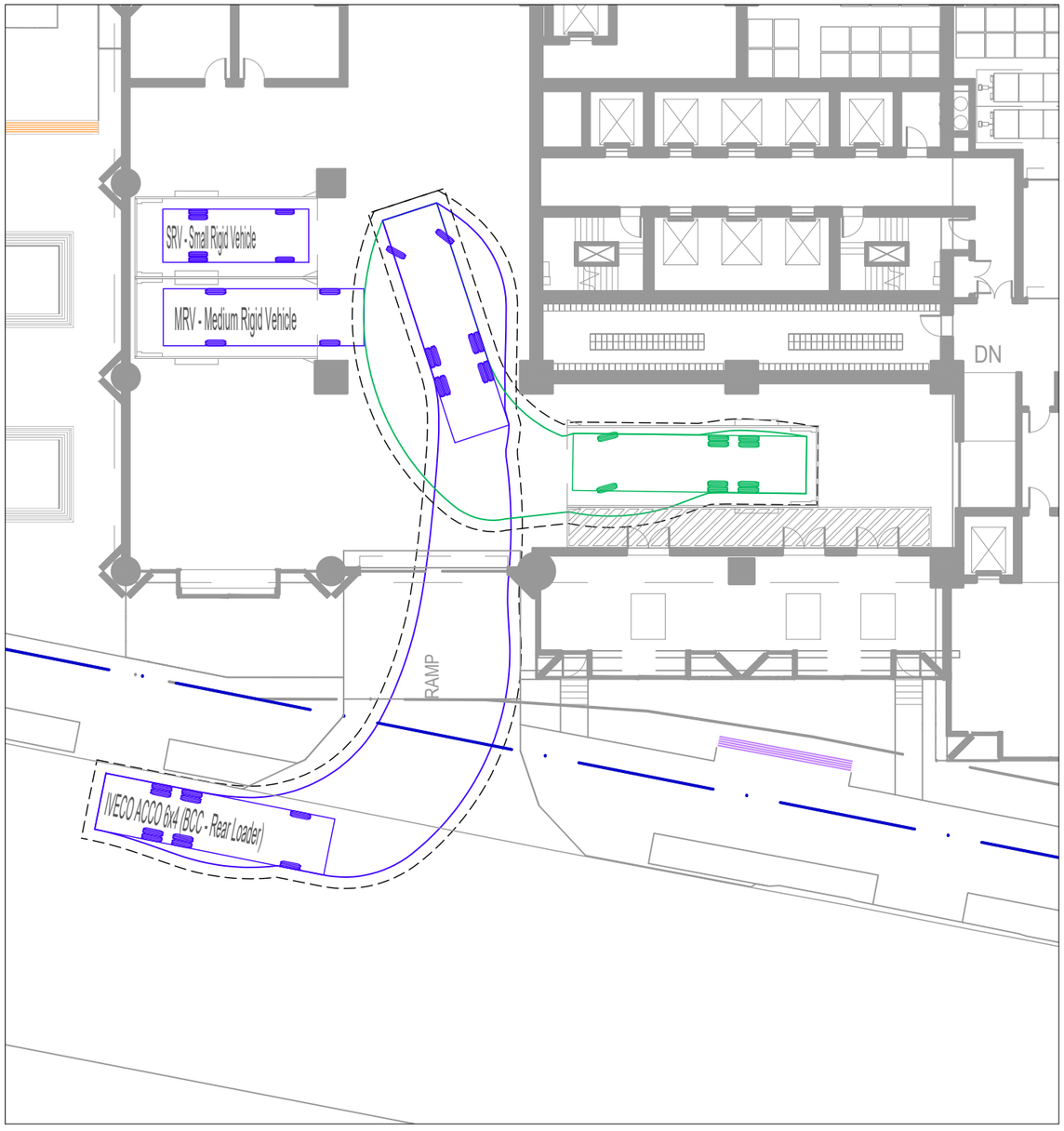
CLIENT: Philip Usher

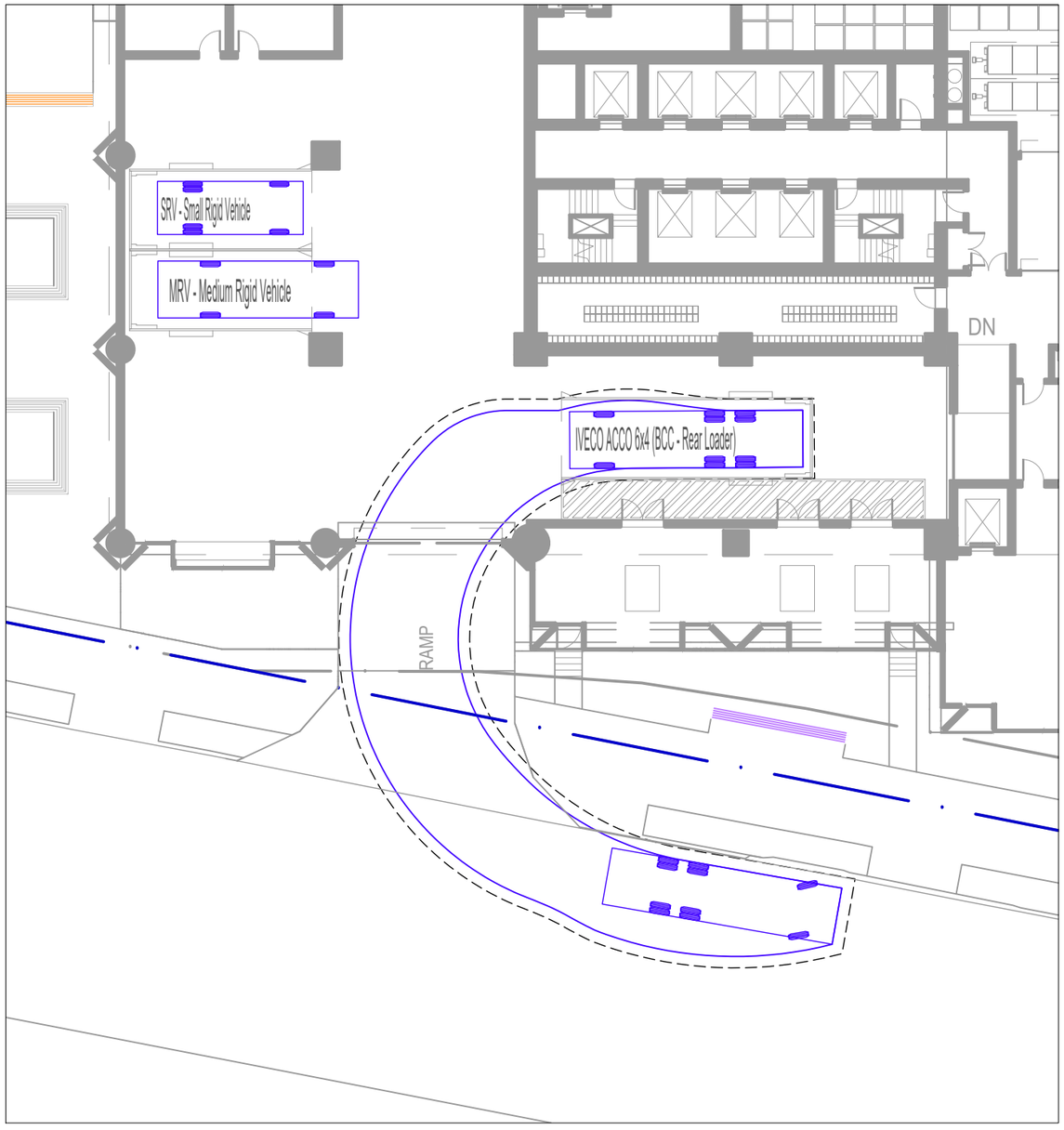
Colliers International Engineering & Design (TTMC) Pty Ltd
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E: ttmbris@ttmgroup.com.au W: www.ttmgroup.com.au

PROJECT: **Vulture St - Main Street Precinct, Kangaroo Point**

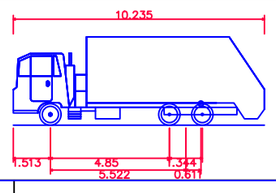
DRAWING TITLE: **SWEPT PATH ANALYSIS**
Lower Ground - MRV & SRV Access/ Egress

PROJECT NUMBER	23BRT0331
ORIGINAL SIZE	A3
DRAWING NUMBER	23BRT0331- 03
REVISION	A
DATE	29 Apr 2026
SHEET	3 OF 4





VEHICLE PROFILES



IVECO ACCO 6x4 (BCC – Rear Loader)

Overall Length	10.235m
Overall Width	2.500m
Overall Body Height	3.600m
Min Body Ground Clearance	0.260m
Track Width	2.500m
Lock–to–lock time	6.00s
Curb to Curb Turning Radius	9.757m

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A	29-04-26	ORIGINAL ISSUE	AS	JK	DW

SCALE 0 4 8 12 16 20m

SCALE 1:400 AT ORIGINAL SIZE

NORTH

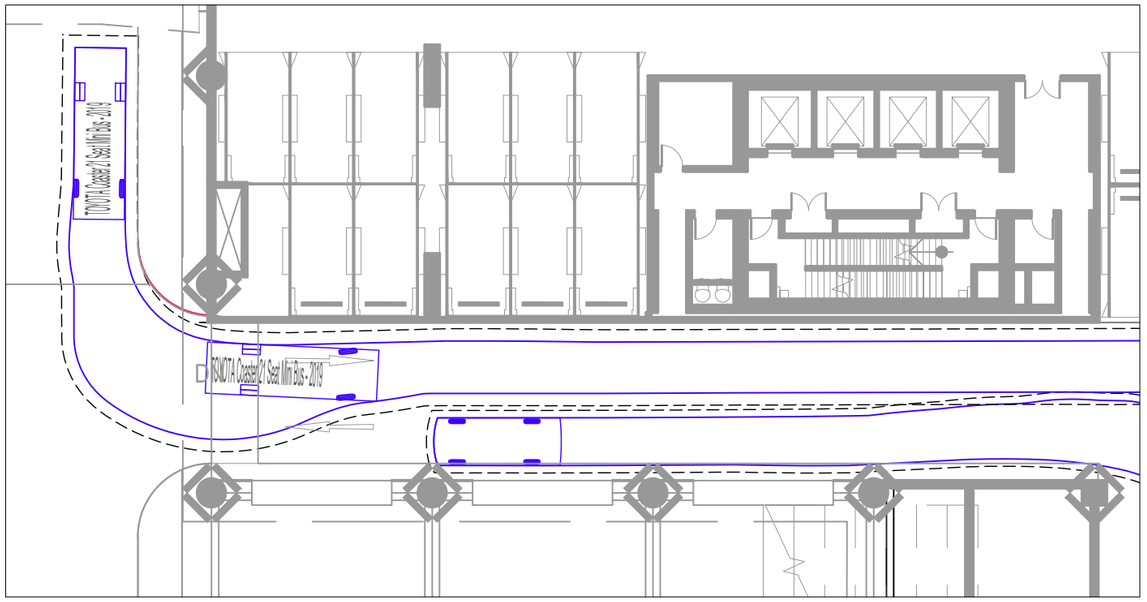
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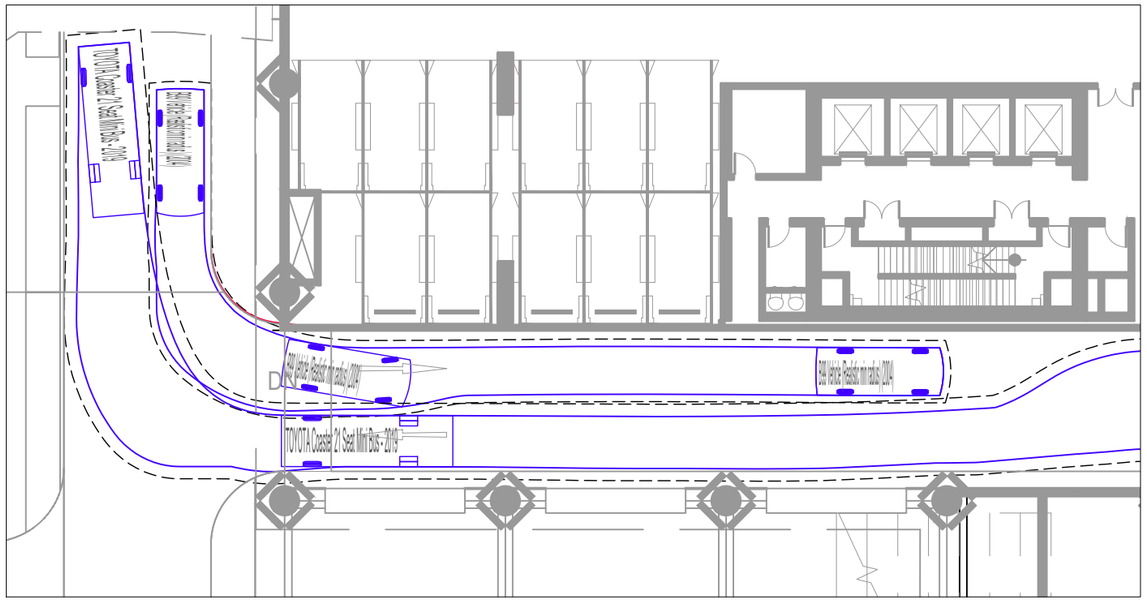
PROJECT: **Vulture St - Main Street Precinct, Kangaroo Point**

DRAWING TITLE: **SWEPT PATH ANALYSIS**
Lower Ground - RCV Access/ Eggress

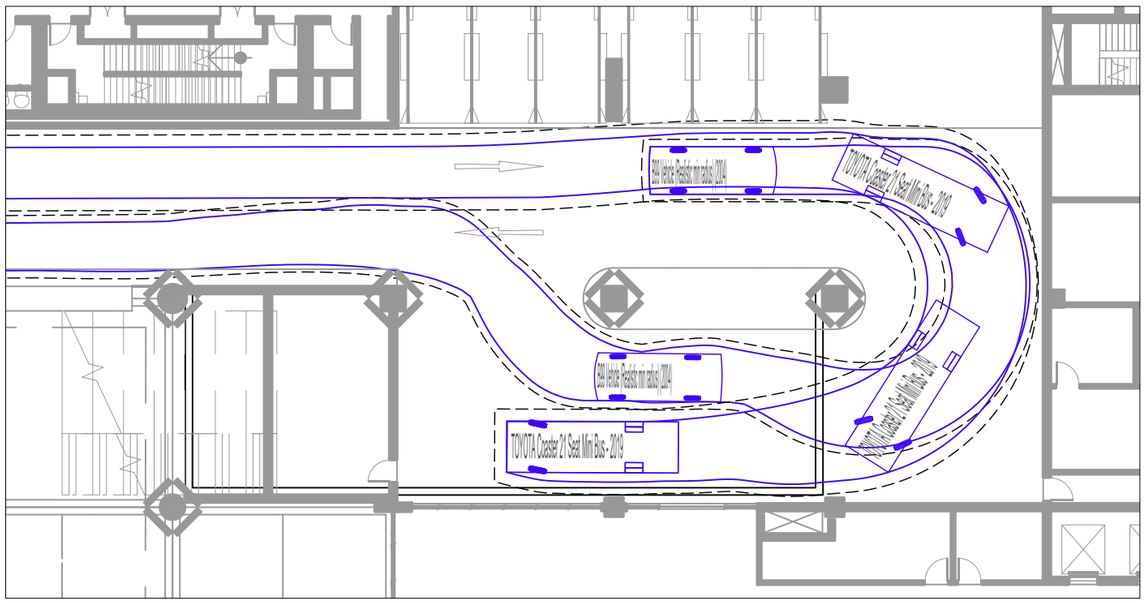
PROJECT NUMBER	23BRT0331
ORIGINAL SIZE	A3
DRAWING NUMBER	23BRT0331- 03
REVISION	A
DATE	29 Apr 2026
SHEET	4 OF 4



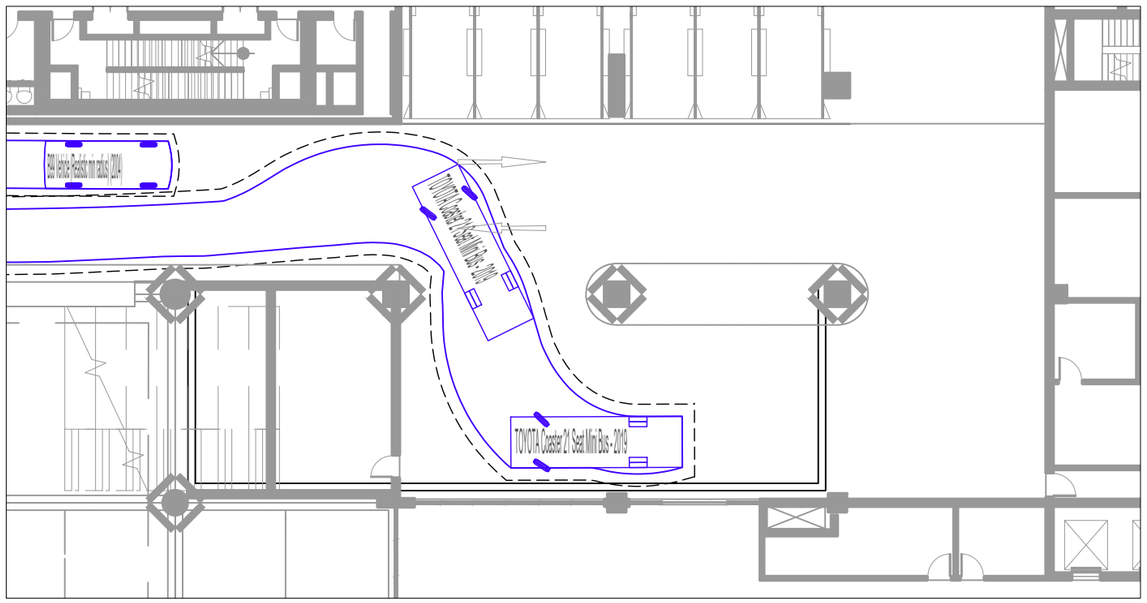
SHUTTLE BUS - ACCESS



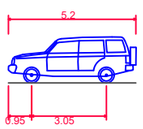
SHUTTLE BUS - EGGRESS



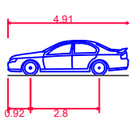
SHUTTLE BUS - PORTE COCHERE ACCESS



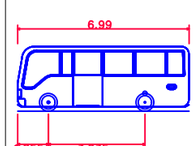
SHUTTLE BUS - PORTE COCHERR EGGRESS



B99 Vehicle (Realistic min radius) (2004)	
Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	1.878m
Min Body Ground Clearance	0.272m
Track Width	1.840m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6.250m
Design Speed Forward	5.0km/h
Clearance Envelope	0.300m



B85 Vehicle (Realistic min radius) (2004)	
Overall Length	4.910m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5.750m
Design Speed Forward	5.0km/h
Clearance Envelope	0.300m



TOYOTA Coaster 21 Seat Mini Bus – 2019	
Overall Length	6.990m
Overall Width	2.080m
Overall Body Height	2.635m
Min Body Ground Clearance	0.175m
Track Width	2.080m
Lock–to–lock time	4.00s
Curb to Curb Turning Radius	7.200m

PRELIMINARY ADVICE ONLY

29 April 2026

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
A	29-04-26	ORIGINAL ISSUE	AS	JK	DW

SCALE 0 4 8 12 16 20m

SCALE 1:400 AT ORIGINAL SIZE

NORTH

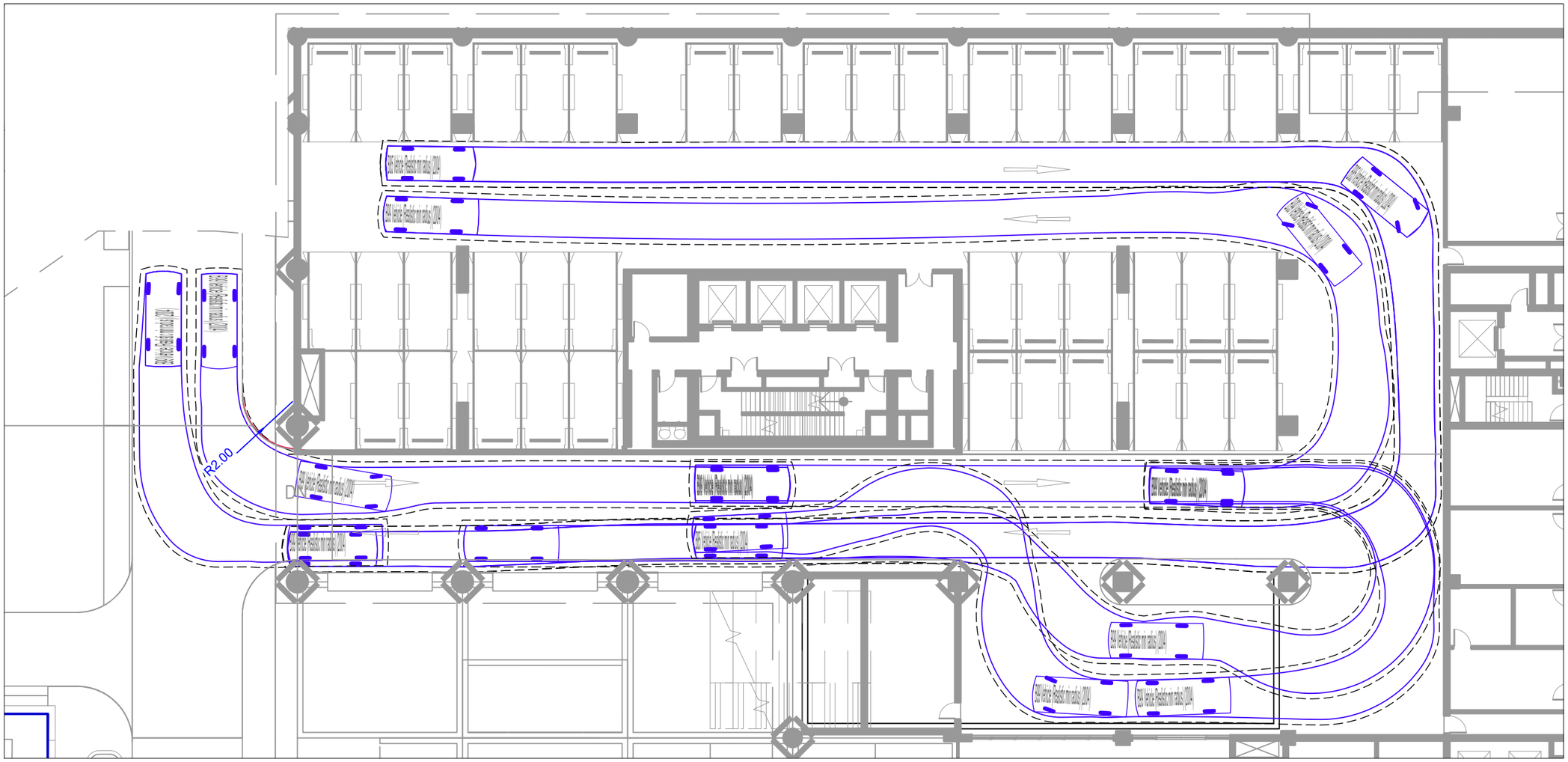
CLIENT: Philip Usher

Colliers International Engineering & Design (TTMC) Pty Ltd
ABN 65 010 868 621
LEVEL 8, 369 Ann Street, BRISBANE QLD 4000
P.O. BOX 12015, BRISBANE QLD 4003
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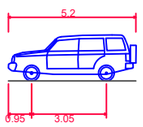
PROJECT: **Vulture St - Main Street Precinct, Kangaroo Point**

DRAWING TITLE: **SWEPT PATH ANALYSIS**
Plaza - Porte Cochere

PROJECT NUMBER	23BRT0331
ORIGINAL SIZE	A3
DRAWING NUMBER	23BRT0331- 04
REVISION	A
DATE	29 Apr 2026
SHEET	3 OF 3

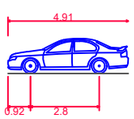


VEHICLE PROFILES



B99 Vehicle (Realistic min radius) (2004)

Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	1.878m
Min Body Ground Clearance	0.272m
Track Width	1.840m
Lock-to-lock time	4.00s
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Overall Length	4.910m
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Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
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Curb to Curb Turning Radius	5.750m
Design Speed Forward	5.0km/h
Clearance Envelope	0.300m

PRELIMINARY ADVICE ONLY

29 April 2026

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A	29-04-26	ORIGINAL ISSUE	AS	JK	DW

SCALE 0 4 8 12 16 20m

SCALE 1:400 AT ORIGINAL SIZE

NORTH

CLIENT

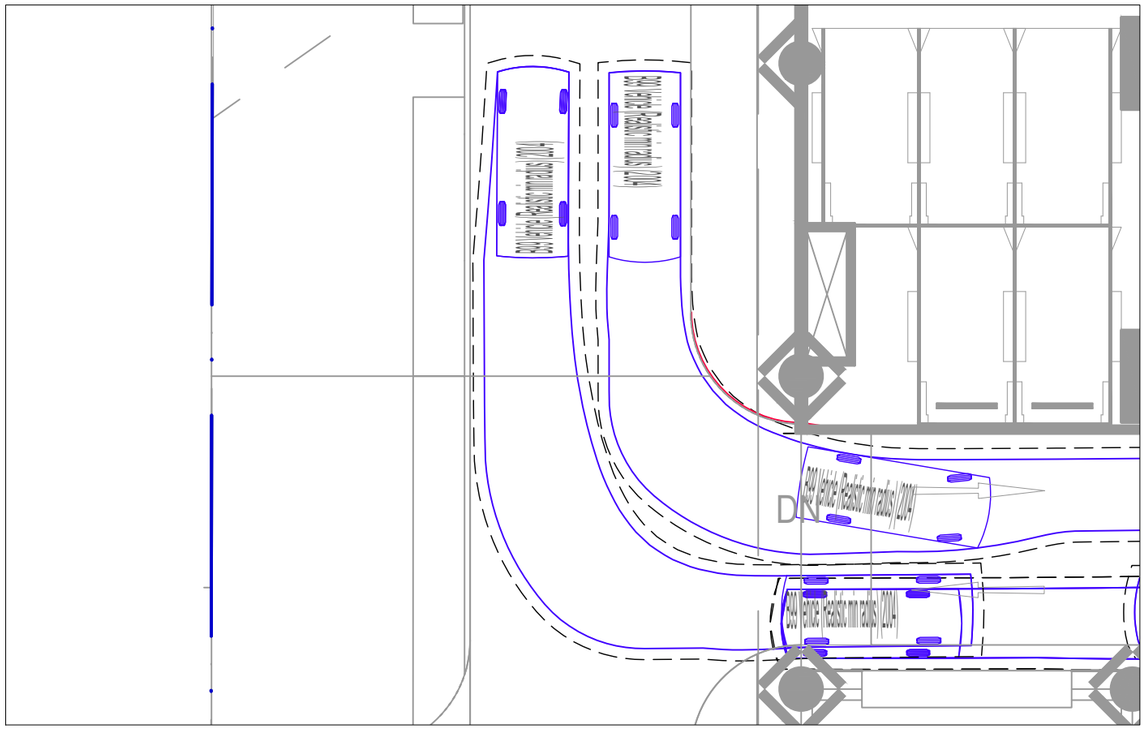
Philip Usher

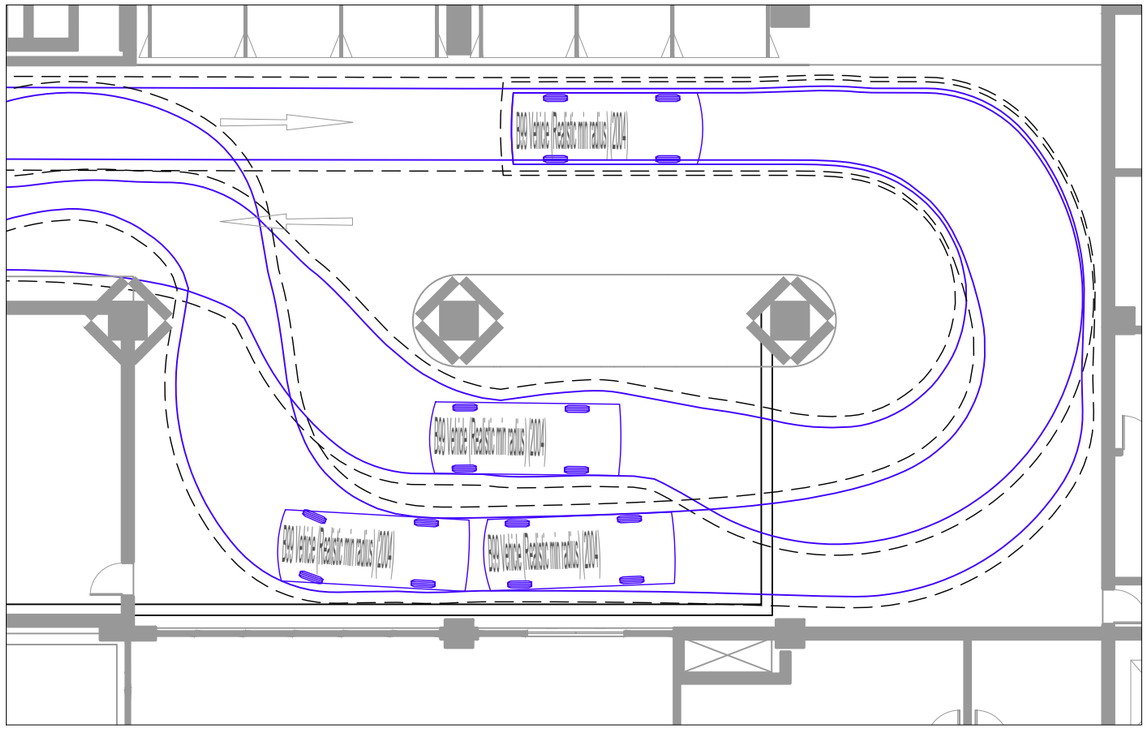
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PROJECT
Vulture St - Main Street Precinct, Kangaroo Point

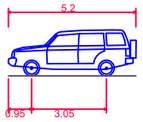
DRAWING TITLE
SWEPT PATH ANALYSIS
Plaza - Porte Cochere

PROJECT NUMBER	23BRT0331
ORIGINAL SIZE	A3
DRAWING NUMBER	23BRT0331- 04
REVISION	A
DATE	29 Apr 2026
SHEET	1 OF 3



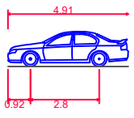


VEHICLE PROFILES



B99 Vehicle (Realistic min radius) (2004)

Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	1.878m
Min Body Ground Clearance	0.272m
Track Width	1.840m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6.250m
Design Speed Forward	5.0km/h
Clearance Envelope	0.300m



B85 Vehicle (Realistic min radius) (2004)

Overall Length	4.910m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5.750m
Design Speed Forward	5.0km/h
Clearance Envelope	0.300m

PRELIMINARY ADVICE ONLY
29 April 2026

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
A	29-04-26	ORIGINAL ISSUE	AS	JK	DW

SCALE 0 4 8 12 16 20m
SCALE 1:400 AT ORIGINAL SIZE

NORTH

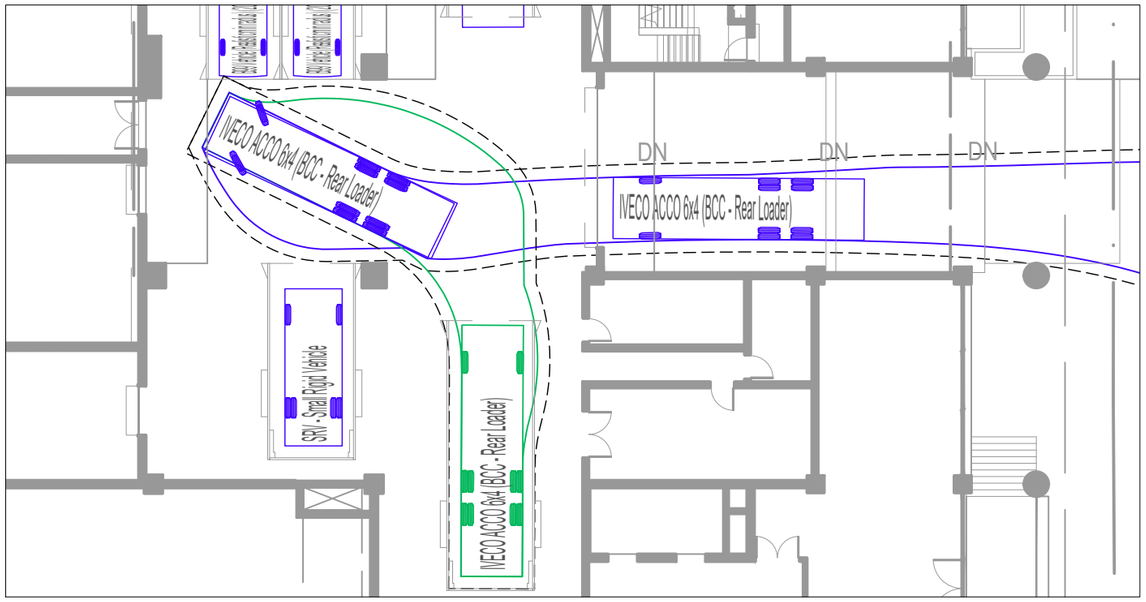
CLIENT
Philip Usher

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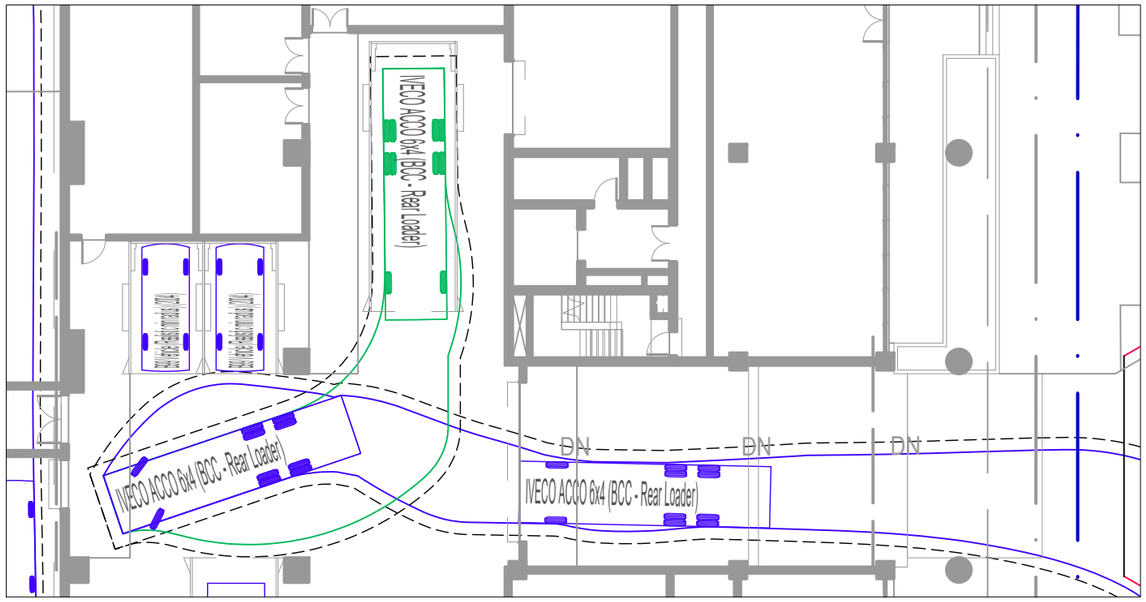
PROJECT
Vulture St - Main Street Precinct, Kangaroo Point

DRAWING TITLE
SWEPT PATH ANALYSIS
Plaza - Porte Cochere

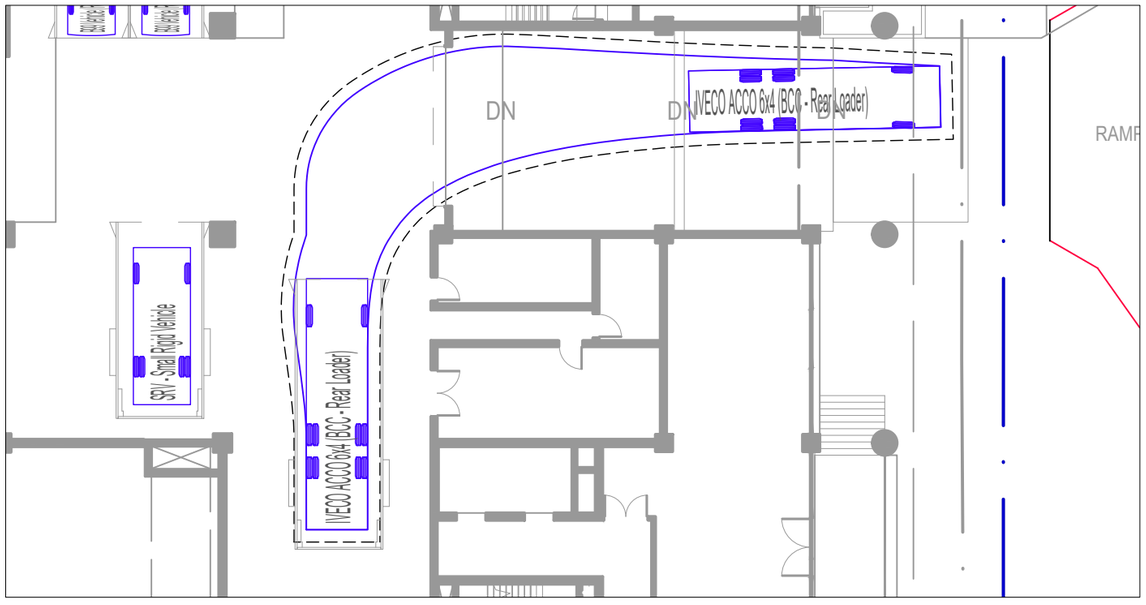
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ORIGINAL SIZE	A3
DRAWING NUMBER	23BRT0331- 04
REVISION	A
DATE	29 Apr 2026
SHEET	2 OF 3



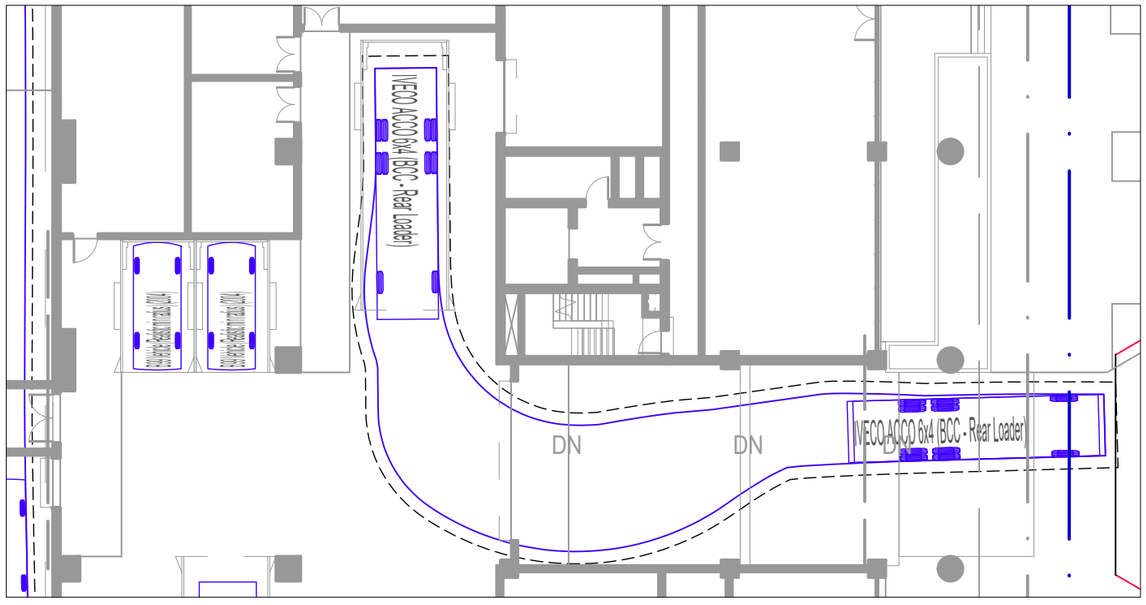
SOUTHERN BAY - RCV REAR ENTRY



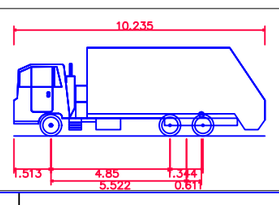
NORTHERN BAY - RCV REAR ENTRY



SOUTHERN BAY - RCV FORWARD EXIT

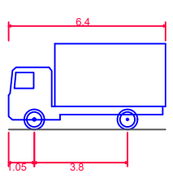


NORTHERN BAY - RCV FORWARD EXIT



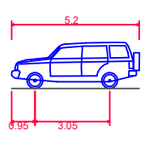
IVECO ACCO 6x4 (BCC – Rear Loader)

Overall Length	10.235m
Overall Width	2.500m
Overall Body Height	3.600m
Min Body Ground Clearance	0.260m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	9.757m



SRV - Small Rigid Vehicle

Overall Length	6.400m
Overall Width	2.330m
Overall Body Height	3.500m
Min Body Ground Clearance	0.398m
Track Width	2.330m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	7.100m
Design Speed Forward	5.0km/h
Clearance Envelope	0.XXXm



B99 Vehicle (Realistic min radius) (2004)

Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	1.878m
Min Body Ground Clearance	0.272m
Track Width	1.840m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6.250m
Design Speed Forward	5.0km/h
Clearance Envelope	0.300m

PRELIMINARY ADVICE ONLY

29 April 2026

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
A	29-04-26	ORIGINAL ISSUE	AS	JK	DW

0 4 8 12 16 20m

SCALE 1:400 AT ORIGINAL SIZE

NORTH

CLIENT

Philip Usher

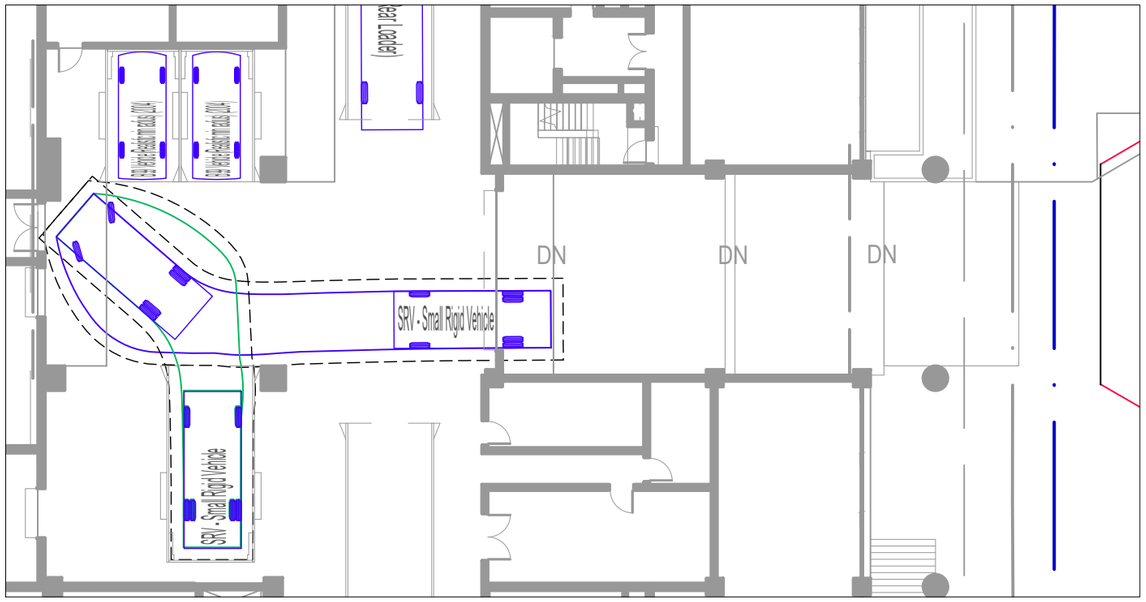
Colliers International Engineering & Design (TTMC) Pty Ltd
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Vulture St - Main Street Precinct, Kangaroo Point

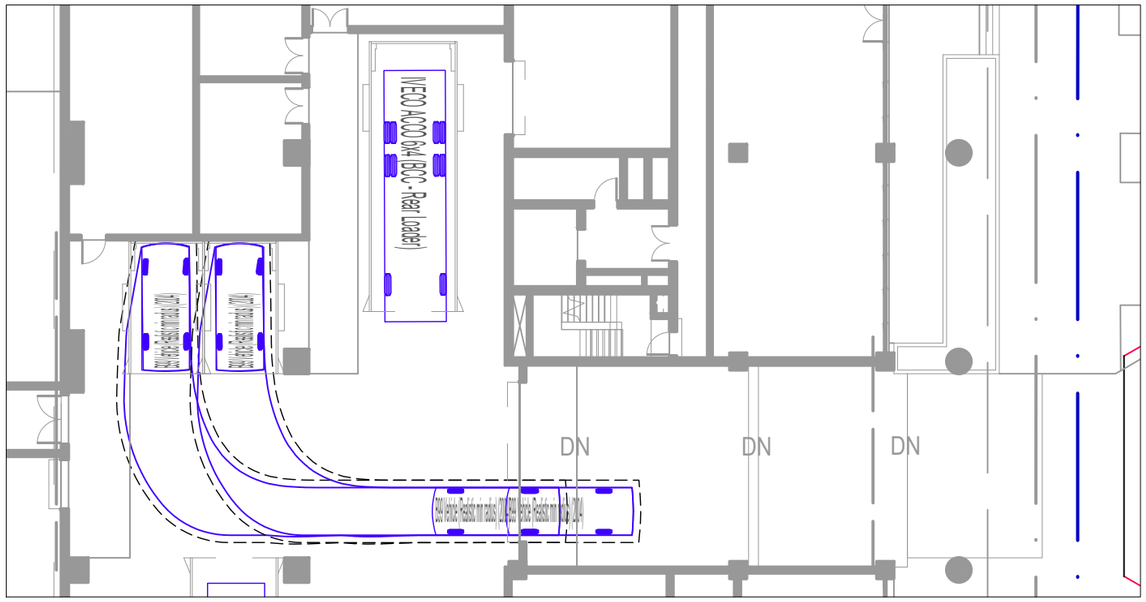
DRAWING TITLE

SWEPT PATH ANALYSIS
UPPER GROUND

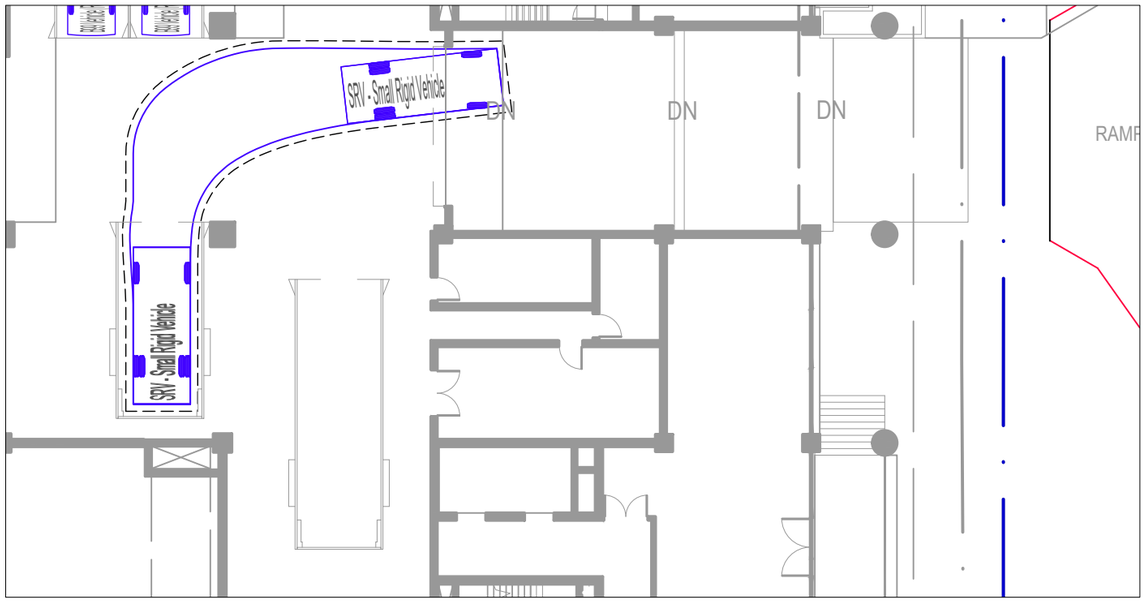
23BRT0331	A3
DRAWING NUMBER 23BRT0331- 05	REVISION A
DATE 29 Apr 2026	SHEET 1 OF 3



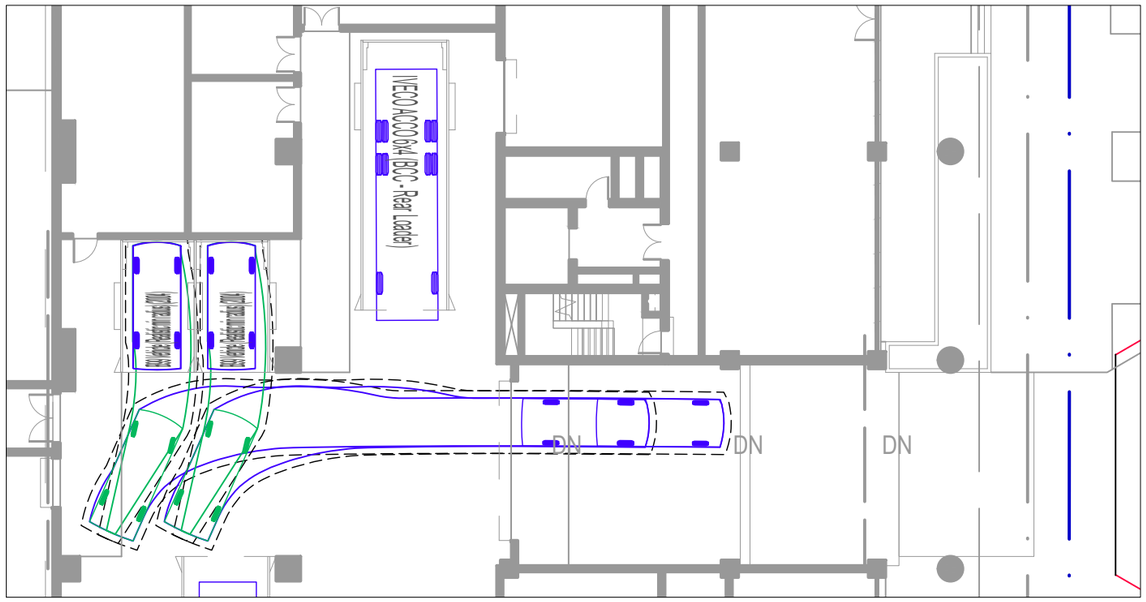
SRV BAY - REAR ENTRY



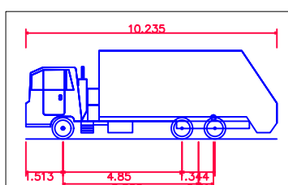
VAN BAYS - FORWARD ENTRY



SRV BAY - FORWARD EXIT

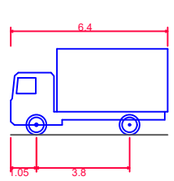


VAN BAYS - REVERSE EXIT



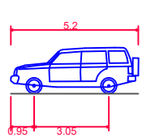
IVECO ACCO 6x4 (BCC – Rear Loader)

Overall Length	10.235m
Overall Width	2.500m
Overall Body Height	3.600m
Min Body Ground Clearance	0.260m
Track Width	2.500m
Lock–to–lock time	6.00s
Curb to Curb Turning Radius	9.757m



SRV - Small Rigid Vehicle

Overall Length	6.400m
Overall Width	2.330m
Overall Body Height	3.500m
Min Body Ground Clearance	0.398m
Track Width	2.330m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	7.100m
Design Speed Forward	5.0km/h
Clearance Envelope	0.XXXm



B99 Vehicle (Realistic min radius) (2004)

Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	1.878m
Min Body Ground Clearance	0.272m
Track Width	1.840m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6.250m
Design Speed Forward	5.0km/h
Clearance Envelope	0.300m

PRELIMINARY ADVICE ONLY

29 April 2026

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
A	29-04-26	ORIGINAL ISSUE	AS	JK	DW

0 4 8 12 16 20m

SCALE 1:400 AT ORIGINAL SIZE

NORTH

CLIENT

Philip Usher

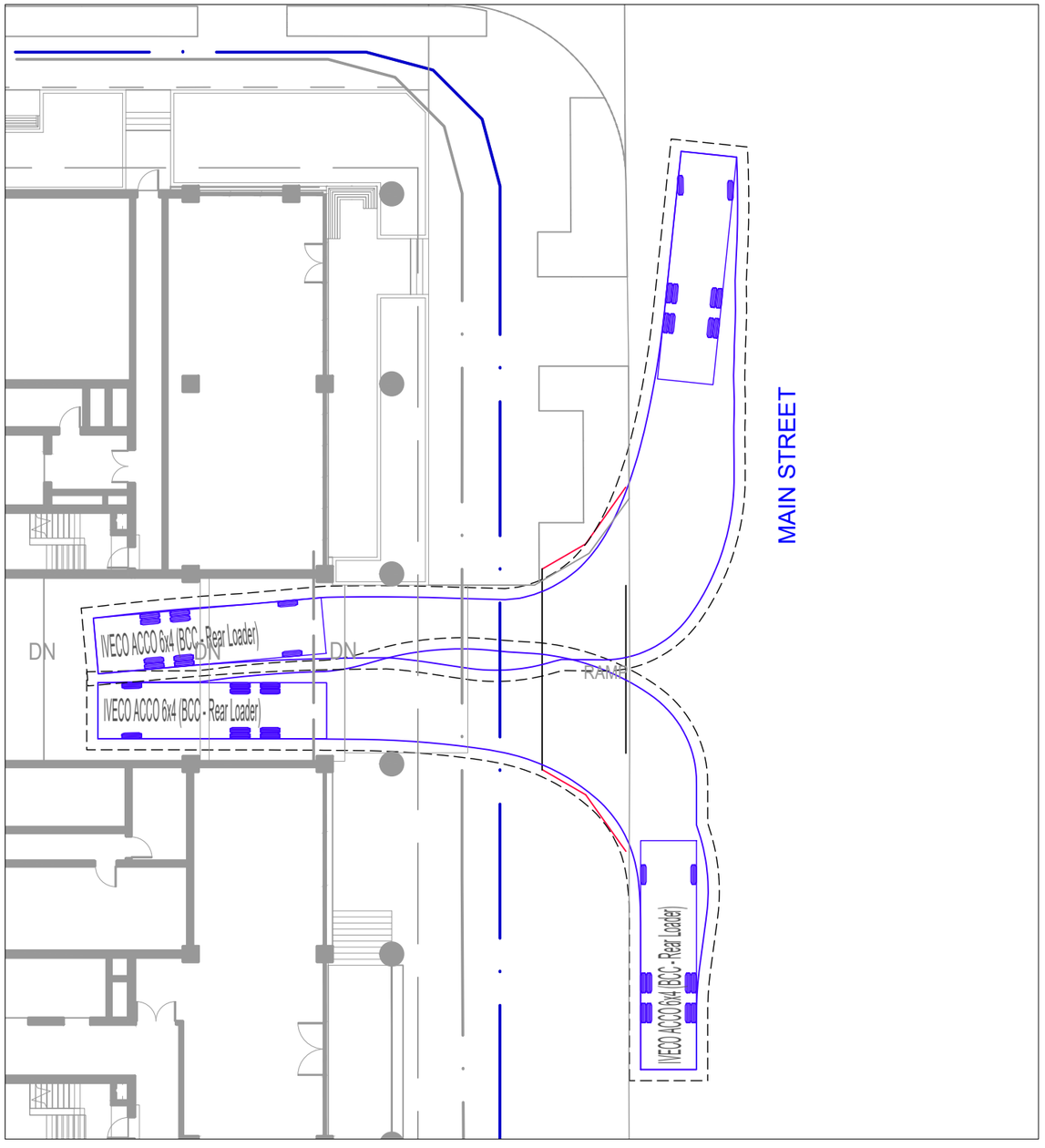
Colliers International Engineering & Design (TTMC) Pty Ltd
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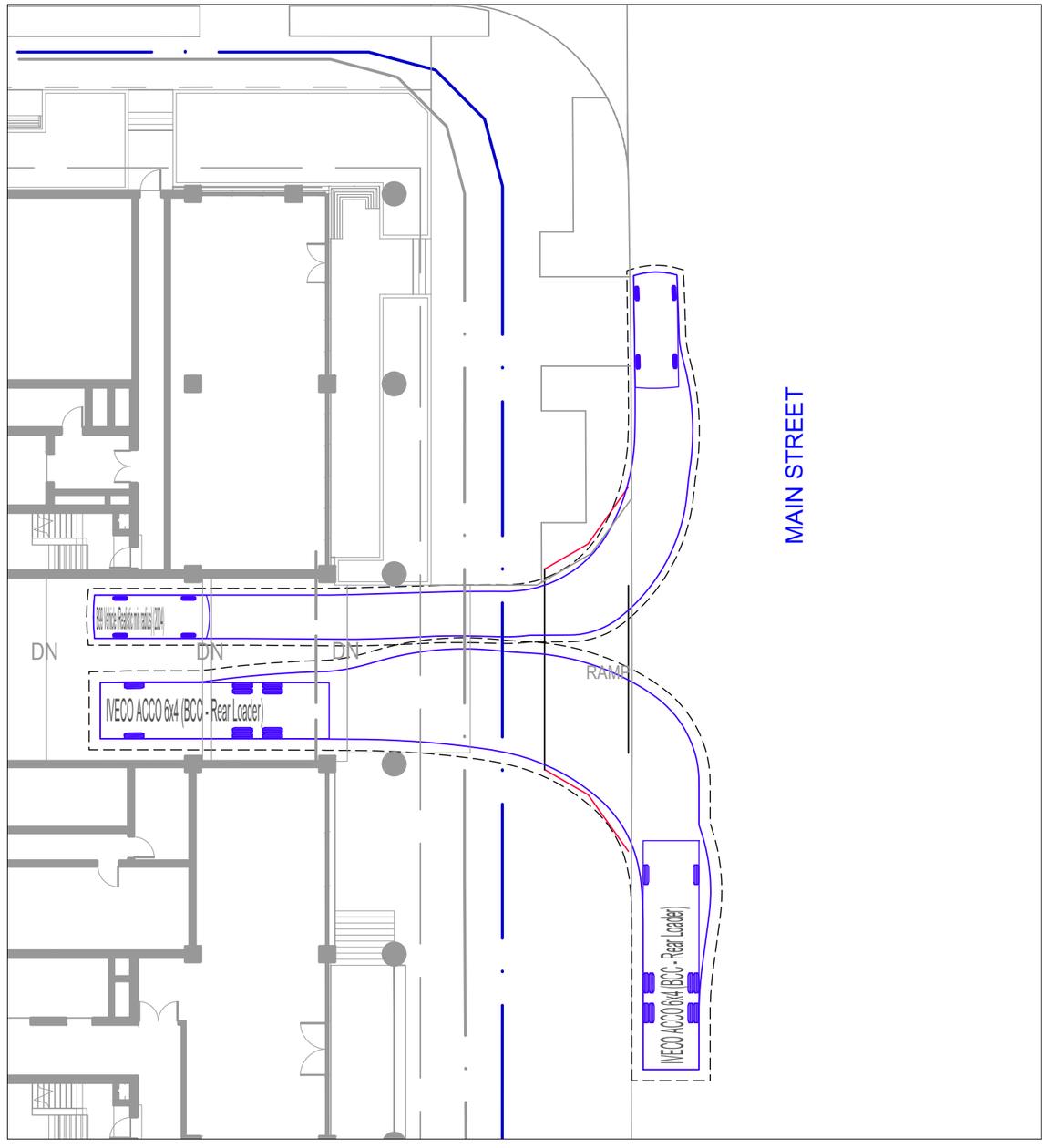
Vulture St - Main Street Precinct, Kangaroo Point

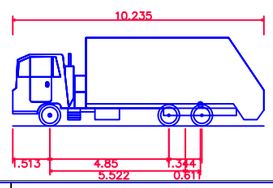
DRAWING TITLE

SWEPT PATH ANALYSIS
UPPER GROUND

23BRT0331	A3
DRAWING NUMBER 23BRT0331- 05	REVISION A
DATE 29 Apr 2026	SHEET 2 OF 3

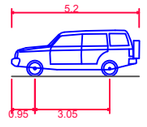






IVECO ACCO 6x4 (BCC – Rear Loader)

Overall Length	10.235m
Overall Width	2.500m
Overall Body Height	3.600m
Min Body Ground Clearance	0.260m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	9.757m



B99 Vehicle (Realistic min radius) (2004)

Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	1.878m
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PRELIMINARY ADVICE ONLY
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0 4 8 12 16 20m
SCALE 1:400 AT ORIGINAL SIZE

NORTH

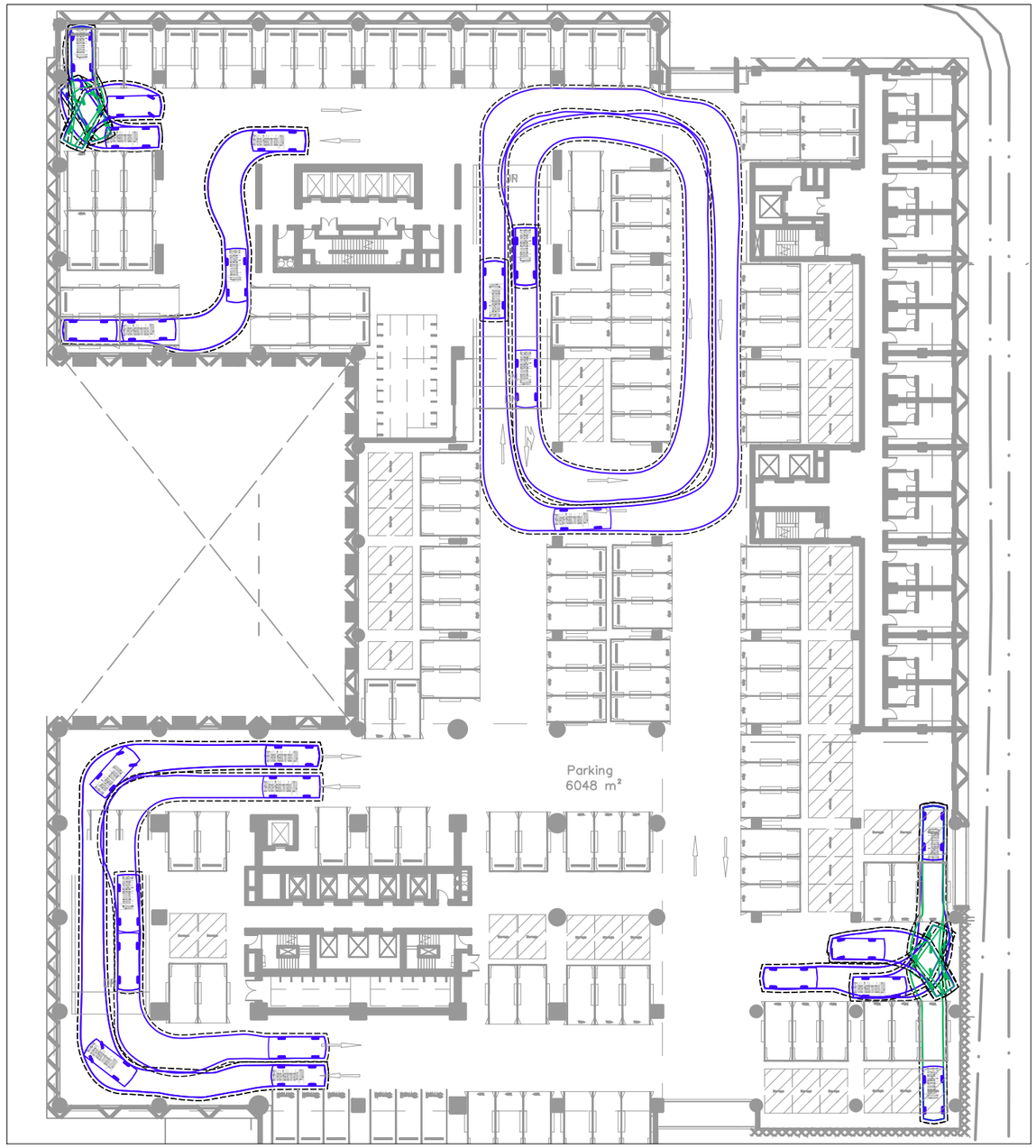
CLIENT
Philip Usher

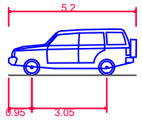
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Vulture St - Main Street Precinct, Kangaroo Point

DRAWING TITLE
SWEPT PATH ANALYSIS
UPPER GROUND

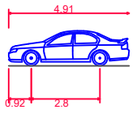
23BRT0331	A3
DRAWING NUMBER 23BRT0331- 05	REVISION A
DATE 29 Apr 2026	SHEET 3 OF 3





B99 Vehicle (Realistic min radius) (2004)

Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	1.878m
Min Body Ground Clearance	0.272m
Track Width	1.840m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6.250m
Design Speed Forward	5.0km/h
Clearance Envelope	0.300m



B85 Vehicle (Realistic min radius) (2004)

Overall Length	4.910m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5.750m
Design Speed Forward	5.0km/h
Clearance Envelope	0.300m

PRELIMINARY ADVICE ONLY
29 April 2026

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
A	29-04-26	ORIGINAL ISSUE	AS	JK	DW

0 4 8 12 16 20m
SCALE 1:400 AT ORIGINAL SIZE

NORTH

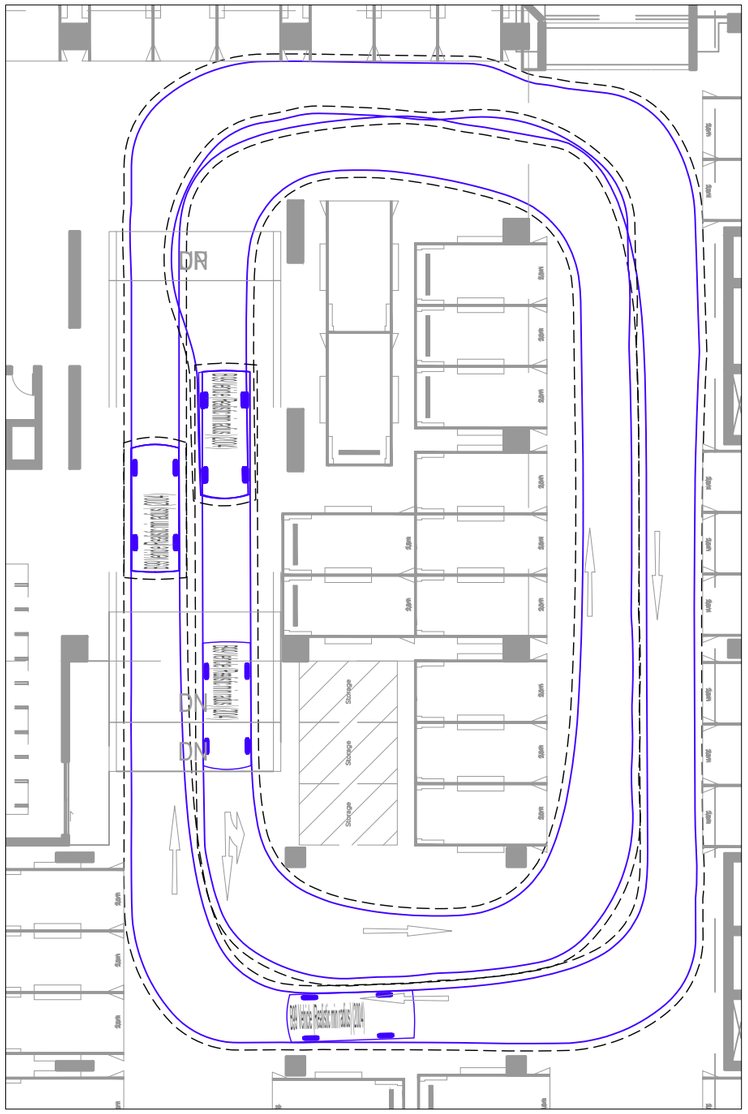
CLIENT
Philip Usher

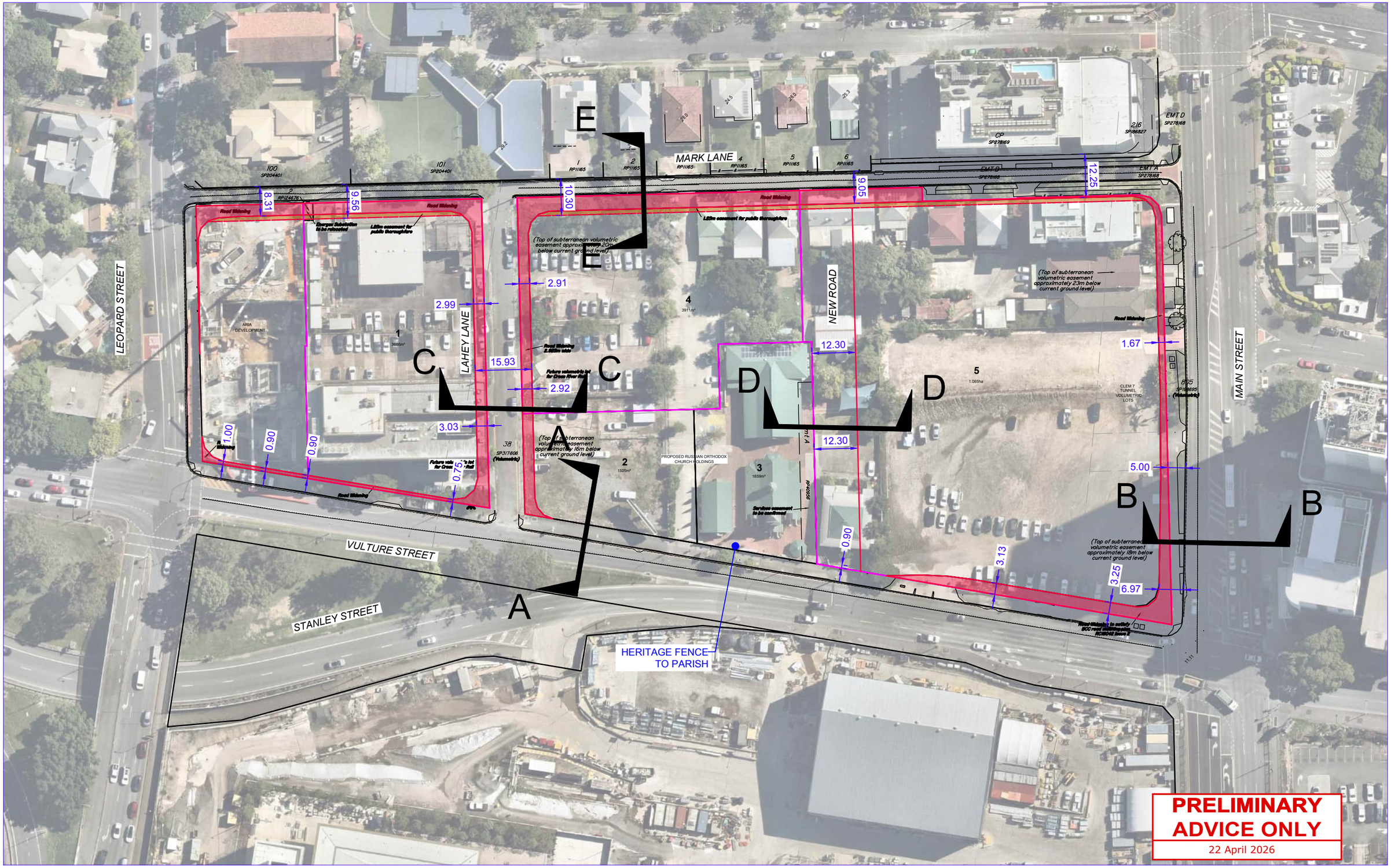
Colliers International Engineering & Design (TTMC) Pty Ltd
ABN 65 010 868 621
LEVEL 8, 369 Ann Street, BRISBANE QLD 4000
P.O. BOX 12015, BRISBANE QLD 4003
T: (07) 3327 9500 F: (07) 3327 9501
E: ttmbris@ttmgroup.com.au W: www.ttmgroup.com.au

Vulture St - Main Street Precinct, Kangaroo Point

DRAWING TITLE
SWEPT PATH ANALYSIS
PODIUM LEVEL 01-03

23BRT0331	A3
DRAWING NUMBER 23BRT0331- 06	REVISION A
DATE 29 Apr 2026	SHEET 1 OF 2


DR
DN
DN
Storage
Storage
Storage



PRELIMINARY ADVICE ONLY
22 April 2026

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
B	22-04-26	REVISED ROAD RESERVE WIDTHS	DSF	JK	DW
A	16-04-26	ORIGINAL ISSUE	DSF	JK	DW

SCALE 0 10 20 30 40 50m
SCALE 1:1000 AT ORIGINAL SIZE

NORTH

CLIENT
PHILIP USHER CONSTRUCTIONS

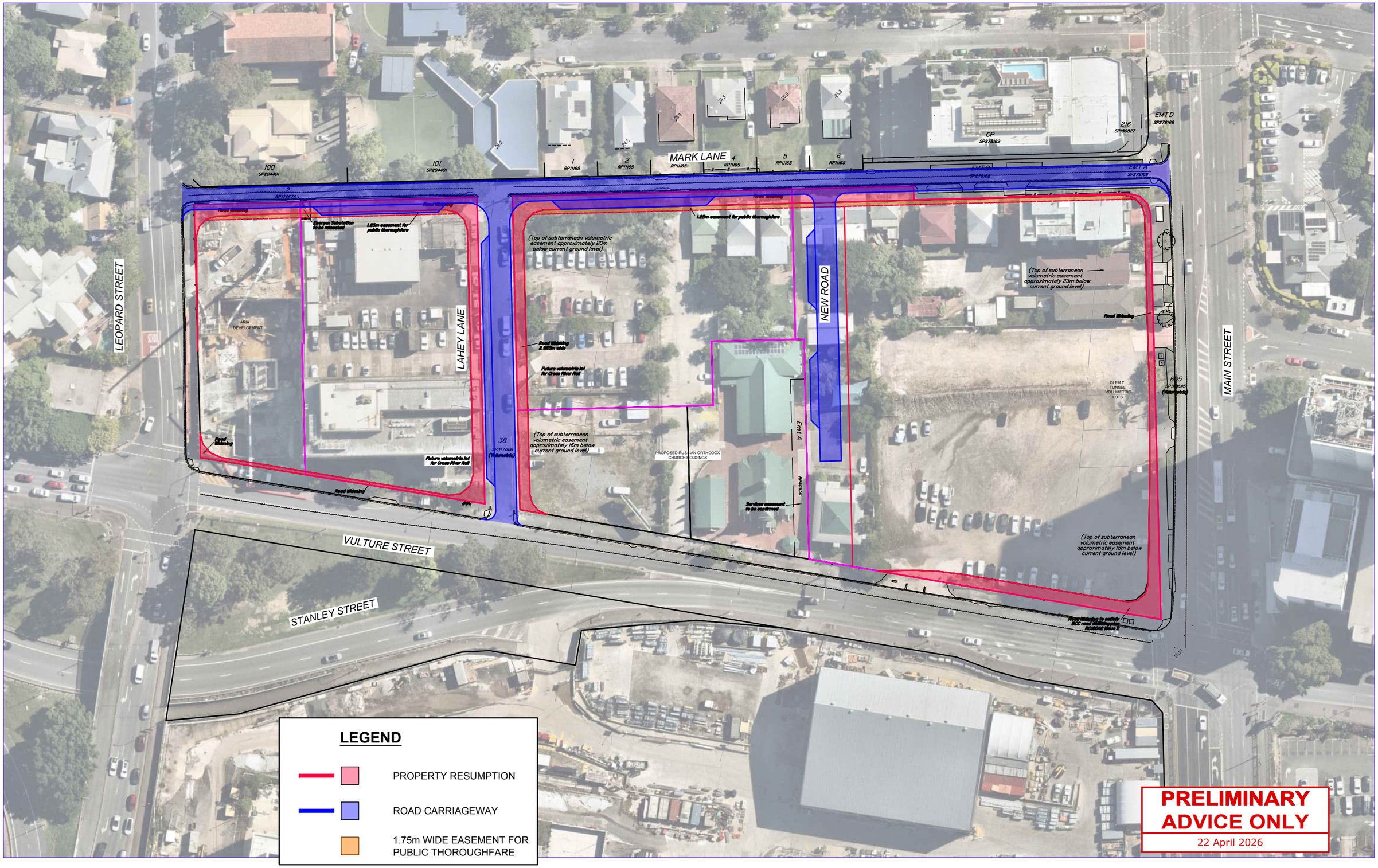
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E: ttmbris@ttmgroup.com.au W: www.ttmgroup.com.au

PROJECT
MARK LANE PRECINCT ONE

DRAWING TITLE
TRAFFIC MASTERPLAN
PROPOSED PROPERTY BOUNDARIES

PROJECT NUMBER	23BRT0331
ORIGINAL SIZE	A3
DRAWING NUMBER	23BRT0331-40.01
REVISION	B
DATE	22 Apr 2026
SHEET	1 OF 1

23BRT0331-F07-V00 MASTERPLAN.DWG



REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
B	22-04-26	REVISED ROAD RESERVE WIDTHS	DSF	JK	DW
A	16-04-26	ORIGINAL ISSUE	DSF	JK	DW

SCALE 0 10 20 30 40 50m
SCALE 1:1000 AT ORIGINAL SIZE

NORTH

CLIENT
PHILIP USHER CONSTRUCTIONS

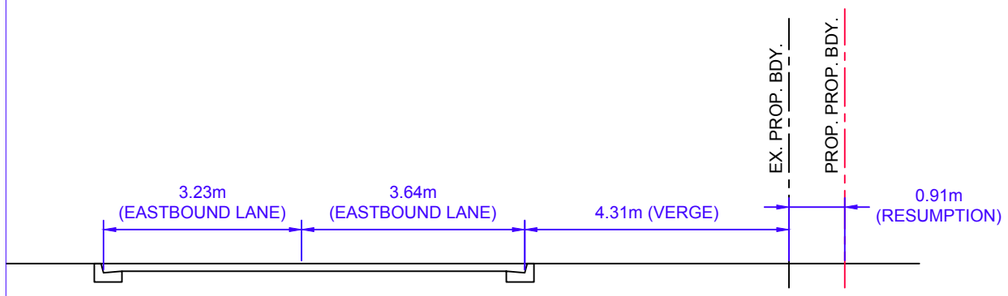
Colliers International Engineering & Design (TTMC) Pty Ltd
ABN 65 010 868 621
LEVEL 8, 369 Ann Street, BRISBANE QLD 4000
P.O. BOX 12015, BRISBANE QLD 4003
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E: ttmbris@ttmgroup.com.au W: www.ttmgroup.com.au

PROJECT
MARK LANE PRECINCT ONE

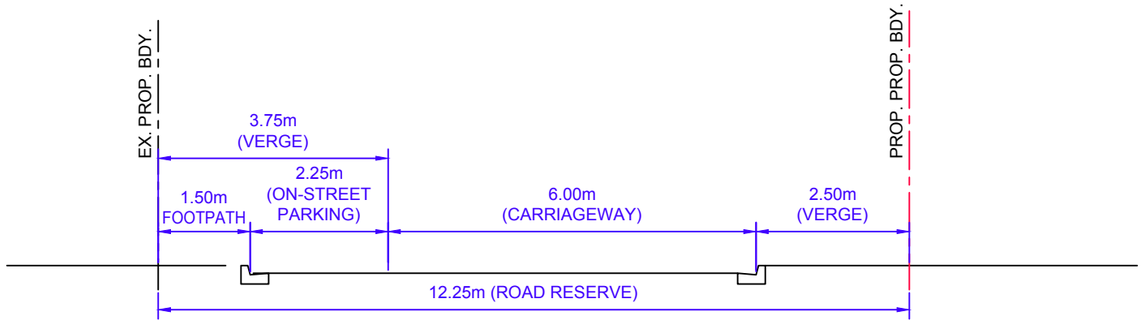
DRAWING TITLE
TRAFFIC MASTERPLAN
PROPOSED ROAD CORRIDOR CONFIGURATION

PROJECT NUMBER	ORIGINAL SIZE
23BRT0331	A3
DRAWING NUMBER	REVISION
23BRT0331-40.02	B
DATE	SHEET
22 Apr 2026	1 OF 1

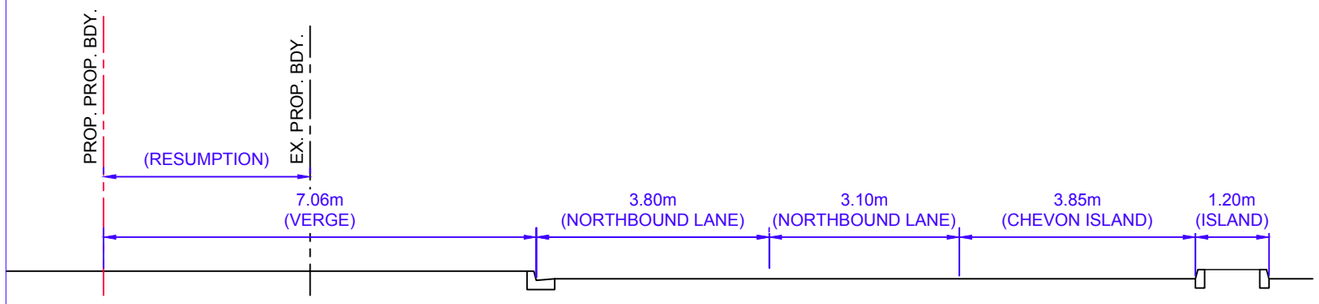
23BRT0331-F07-V00 MASTERPLAN.DWG



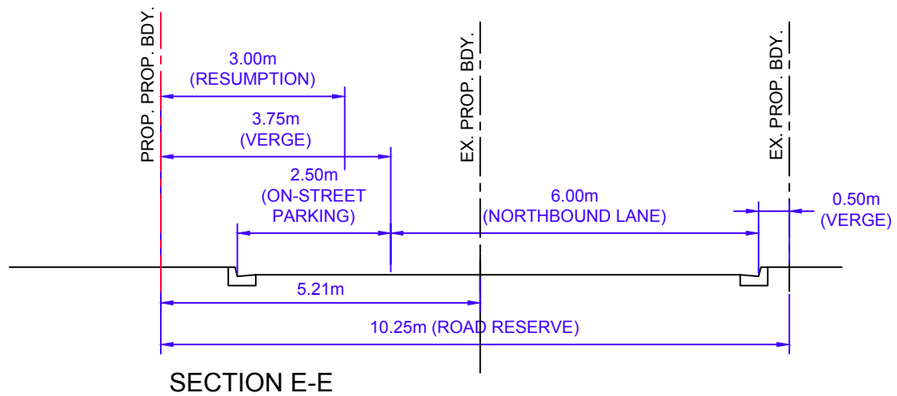
SECTION A-A
VULTURE STREET



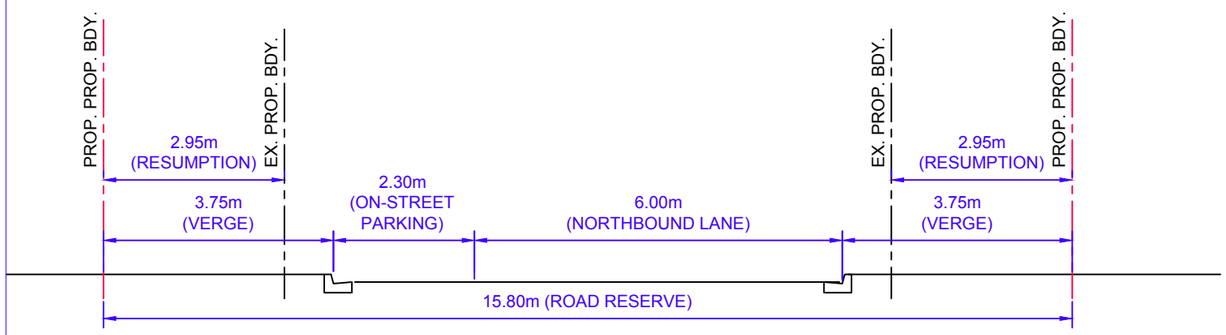
SECTION D-D
NEW ROAD



SECTION B-B
MAIN STREET



SECTION E-E
MARK LANE



SECTION C-C
LAHEY STREET

PRELIMINARY
ADVICE ONLY
22 April 2026

23BRT0331-F07-V00 MASTERPLAN.DWG

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
B	22-04-26	REVISED ROAD RESERVE WIDTHS	DSF	JK	DW
A	16-04-26	ORIGINAL ISSUE	DSF	JK	DW

SCALE 0 1 2 3 4 5m
SCALE 1:100 AT ORIGINAL SIZE

NORTH

CLIENT
PHILIP USHER
CONSTRUCTIONS

Colliers International Engineering & Design (TTMC) Pty Ltd
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T: (07) 3327 9500 F: (07) 3327 9501
E: ttmbris@ttmgroup.com.au W: www.ttmgroup.com.au

PROJECT
MARK LANE PRECINCT ONE

DRAWING TITLE
TRAFFIC MASTERPLAN
PROPOSED CROSS SECTIONS

PROJECT NUMBER	ORIGINAL SIZE
23BRT0331	A3
DRAWING NUMBER	REVISION
23BRT0331-40.03	B
DATE	SHEET
22 Apr 2026	1 OF 1

Appendix C Traffic Network Diagrams

2031 Base vs 2031 Development

1. Vulture Street / Leopard Street Intersection

Leg	Movement	Volumes	B	B+D	B (Vs)	B+D (Vs)	+/- %
Weekday AM Peak							
S	T	1	59.9	59.9	59.9	59.9	0.0%
	R	1	65.6	65.6	65.6	65.6	0.0%
N	L	22	32.7	32.7	719.4	719.4	0.0%
	T	772	28.0	28.0	21,616.0	21,616.0	0.0%
W	L	719	8.0	8.0	5,752.0	5,752.0	0.0%
	T	727	30.3	31.4	22,028.1	22,827.8	3.6%
	R	521	39.6	40.8	20,631.6	21,256.8	3.0%
TOTAL		**2,763**			**70,872.6**	**72,297.5**	**2.0%**

Leg	Movement	Volumes	B	B+D	B (Vs)	B+D (Vs)	+/- %
Weekday PM Peak							
S	T	1	59.9	59.9	59.9	59.9	0.0%
	R	1	68.6	65.6	68.6	65.6	-4.4%
N	L	21	59.9	52.2	1,257.9	1,096.2	-12.9%
	T	506	55.2	47.4	27,931.2	23,984.4	-14.1%
W	L	833	8.3	8.3	6,913.9	6,913.9	0.0%
	T	1,366	20.2	19.5	27,593.2	26,637.0	-3.5%
	R	753	19.2	23.8	14,457.6	17,921.4	24.0%
TOTAL		**3,481**			**78,282.3**	**76,678.4**	**-2.0%**

Total		**6,244**	**-**	**-**	**149,154.9**	**148,975.9**	**-0.1%**

5. Vulture Street / Main Street Intersection

Leg	Movement	Volumes	B	B+D	B (Vs)	B+D (Vs)	+/- %
Weekday AM Peak							
S	L	996	19.0	19.4	18,924.0	19,322.4	2.1%
	R	210	70.1	70.3	14,721.0	14,763.0	0.3%
	U	7	68.4	68.5	478.8	479.5	0.1%
N	L	101	28.4	27.4	2,868.4	2,767.4	-3.5%
	T	1,122	29.8	30.0	33,435.6	33,660.0	0.7%
W	L	69	11.5	35.5	793.5	2,449.5	208.7%
	T	1,093	21.0	40.8	22,953.0	44,594.4	94.3%
	R	368	57.4	56.9	21,123.2	20,939.2	-0.9%
TOTAL		**3,966**			**115,297.5**	**138,975.4**	**20.5%**

Leg	Movement	Volumes	B	B+D	B (Vs)	B+D (Vs)	+/- %
Weekday PM Peak							
S	L	978	35.4	36.3	34,621.2	35,501.4	2.5%
	R	157	87.8	88.2	13,784.6	13,847.4	0.5%
	U	1	82.1	82.1	82.1	82.1	0.0%
N	L	305	44.6	43.5	13,603.0	13,267.5	-2.5%
	T	1,178	74.3	75.0	87,525.4	88,350.0	0.9%
W	L	108	10.6	25.0	1,144.8	2,700.0	135.8%
	T	2,339	51.1	70.2	119,522.9	164,197.8	37.4%
	R	348	53.6	53.6	18,652.8	18,652.8	0.0%
TOTAL		**5,414**			**288,936.8**	**336,599.0**	**16.5%**

Total		**9,380**	**-**	**-**	**404,234.3**	**475,574.4**	**17.6%**

Total					**553,389.2**	**624,550.3**	**12.9%**

Traffic Generation - Residential / Hotel

Precinct	Stage	Assumed year of opening	Applicable Lane Use	Yield	AM Peak						PM Peak					
					Traffic Generation Rate	% Inbound	% Outbound	Inbound	Outbound	Total	affic Generation Ra	% Inbound	% Outbound	Inbound	Outbound	Total
1	Church DA MCU / ROL	2028	Multiple Dwelling - 15 units	15 units	0.3 vph	25%	75%	1	4	5	0.3 vph	75%	25%	4	1	5
1	Stage 1 - Tower 1	2029	Multiple Dwelling - 250 units	635 parking spaces	0.134P + 4.9 vph/spaces	25%	75%	23	68	90	0.2P vph/spac	75%	25%	95	32	127
1	Stage 3 - Tower 2	2031	Multiple Dwelling - 676 units	367 parking spaces	0.134P + 4.9 vph/spaces	25%	75%	14	41	55	0.2P vph/spac	75%	25%	56	19	74
1	Stage 2 - Hotel	2030	Multiple Dwelling - 182 units	43 parking spaces	0.134P + 4.9 vph/spaces	25%	75%	3	8	11	0.2P vph/spac	75%	25%	7	2	9

Checks:

AM IN	AM Out	PM IN	PM Out
1	4	4	1
23	68	95	32
14	41	56	19
3	8	7	2

Traffic Generation - Child Care

Precinct	Stage	Assumed year of opening	Applicable Lane Use	Yield	AM Peak										
					Traffic Generation Rate	Base Trips	Discount	Trips	% New	Trips	Staff In	Staff Out	New Trips In	New Trips Out	Drop in Trips In	Drop in Trips Out
1	Stage 1	2029	Child Care	100 child places	0.81 vph/child	81	40%	49	50%	24	4	0	16	12	12	12

Precinct	Stage	Assumed year of opening	Applicable Lane Use	Yield	PM Peak										
					Traffic Generation Rate	Base Trips	Discount	Trips	% New	Trips	Staff In	Staff Out	New Trips In	New Trips Out	Drop in Trips In	Drop in Trips Out
1	Stage 1	2029	Child Care	100 child places	0.8 vph/child	80	40%	48	50%	24	0	4	12	16	12	12

Child Care

AM				PM			
New Trips		Drop-In Trips		New Trips		Drop-In Trips	
IN	OUT	IN	OUT	IN	OUT	IN	OUT
16	12	12	12	12	16	12	12

Non-traffic generating uses:

Precinct	Stage	Assumed year of opening	Applicable Lane Use	Yield	AM Peak						PM Peak					
					Traffic Generation Rate	% Inbound	% Outbound	Inbound	Outbound	Total	affic Generation Ra	% Inbound	% Outbound	Inbound	Outbound	Total
1	Stage 2	2029	Library	1,506 m2 GFA	- assumed ancillary											
1	Stage 2	2029	Retail	838 m2 GFA	- assumed ancillary											

Inbound
Outbound

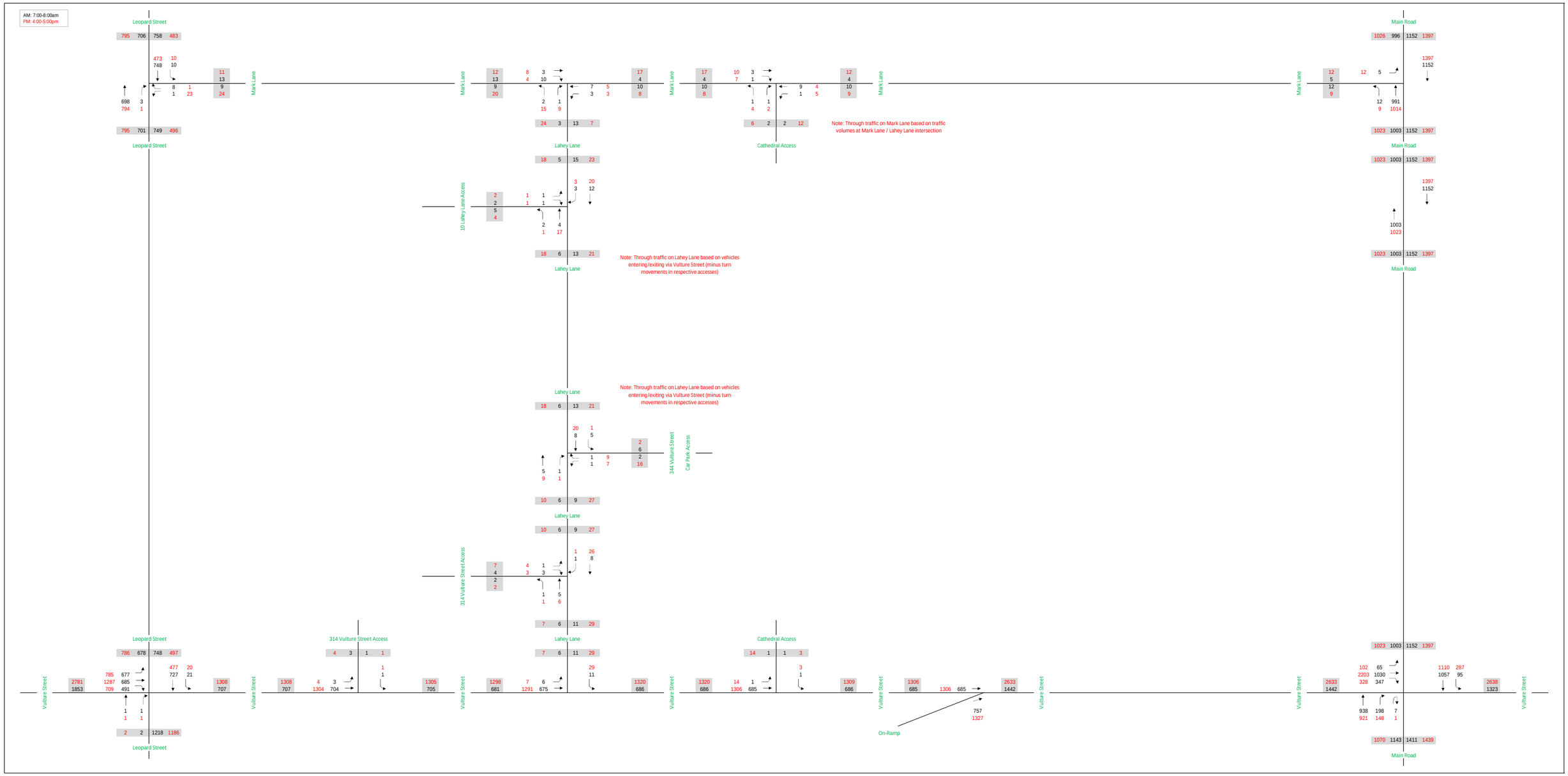
Allocation	Level	Count	Type
Child Care			
Child Care	Lower Ground	21	
Total		21	
Hotel			
Hotel	Plaza - P1	38	
Hotel	Plaza - P1	5	Tandem
Total		43	
Tower 1			
Tower 1	Basement 02 - P1	136	
Tower 1	Basement 01 - P1	55	
Tower 1	Basement 01 - P1	13	Tandem
Tower 1	Level 01 - P1	2	
Tower 1	Level 01 - P1	81	
Tower 1	Level 02 - P1	81	
Tower 1	Level 03 - P1	81	
Tower 1	Level 04 - P1	2	
Tower 1	Level 04 - P1	81	
Total		532	
Tower 2			
Tower 2	Basement 02 - P1	40	
Tower 2	Basement 02 - P1	11	Tandem
Tower 2	Basement 01 - P1	37	
Tower 2	Basement 01 - P1	11	Tandem
Tower 2	Lower Ground - P1	32	
Tower 2	Lower Ground - P1	11	Tandem
Tower 2	Level 01 - P1	34	
Tower 2	Level 01 - P1	12	Tandem
Tower 2	Level 02 - P1	34	
Tower 2	Level 02 - P1	12	Tandem
Tower 2	Level 03 - P1	34	
Tower 2	Level 03 - P1	12	Tandem
Tower 2	Level 04 - P1	34	
Tower 2	Level 04 - P1	12	Tandem
Total		326	
Visitor T1			
Visitor T1	Basement 01 - P1	103	
Total		103	
Visitor T2			
Visitor T2	Lower Ground - P1	41	
Total		41	

Grand Total 1,066

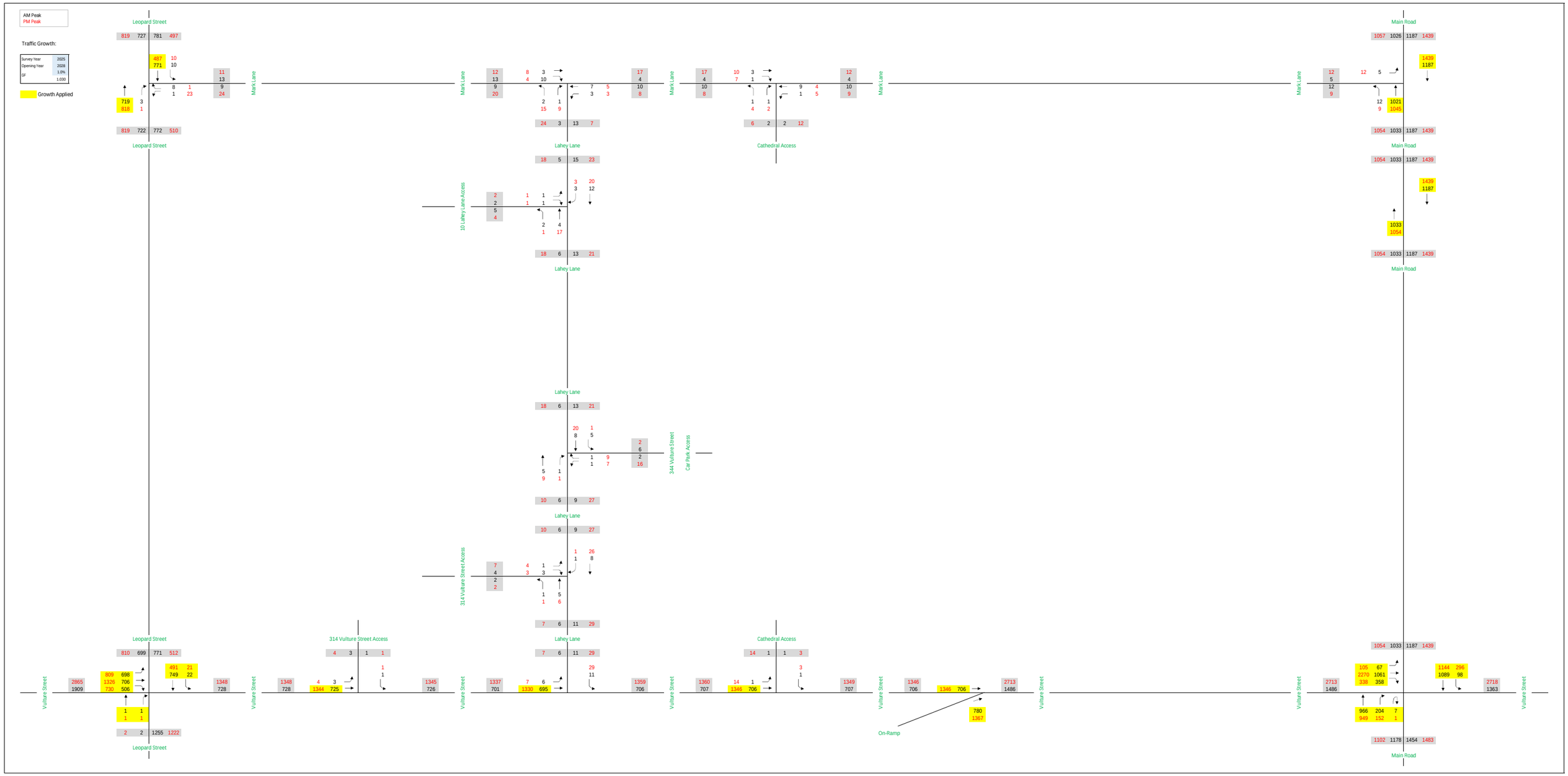
	B2	B1	LG	Plaza	P1	P2	P3	P4	TOTAL	Access: Mark Lane	Access: New Lane Nth	Access: New Lane Sth
Child Care			21						21			100%
Hotel				43					43		100%	
Tower 1	136	68			83	81	81	83	532	62%		38%
Tower 2	51	48	43		46	46	46	46	326	56%		44%
Visitor Tower 1		103							103	100%		
Visitor Tower 2			41						41	100%		
TOTAL									1,066			

TRAFFIC NETWORK DIAGRAM 1

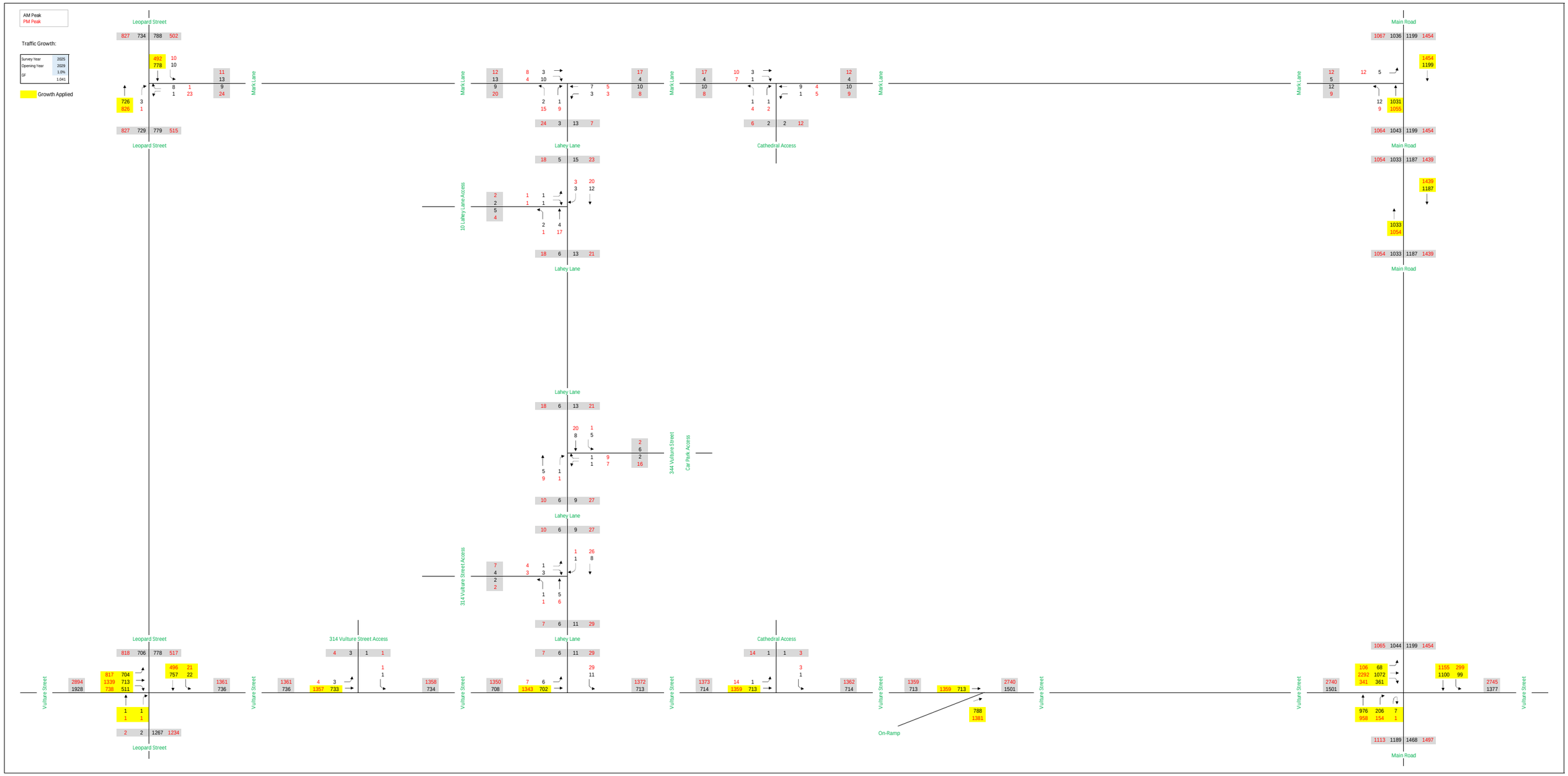
2025 SURVY VOLUMES



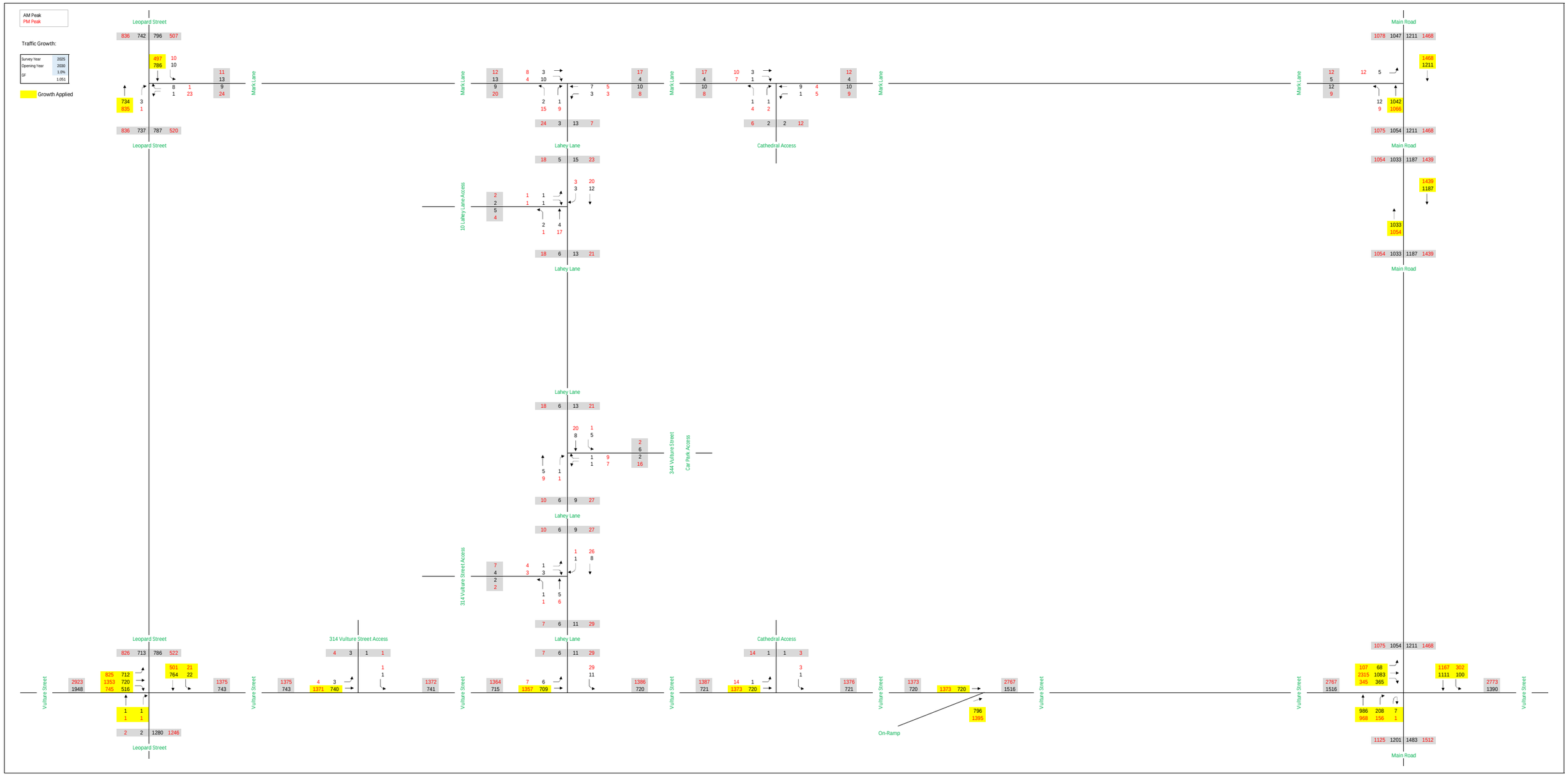
TRAFFIC NETWORK DIAGRAM 2
2028 BASE TRAFFIC VOLUMES



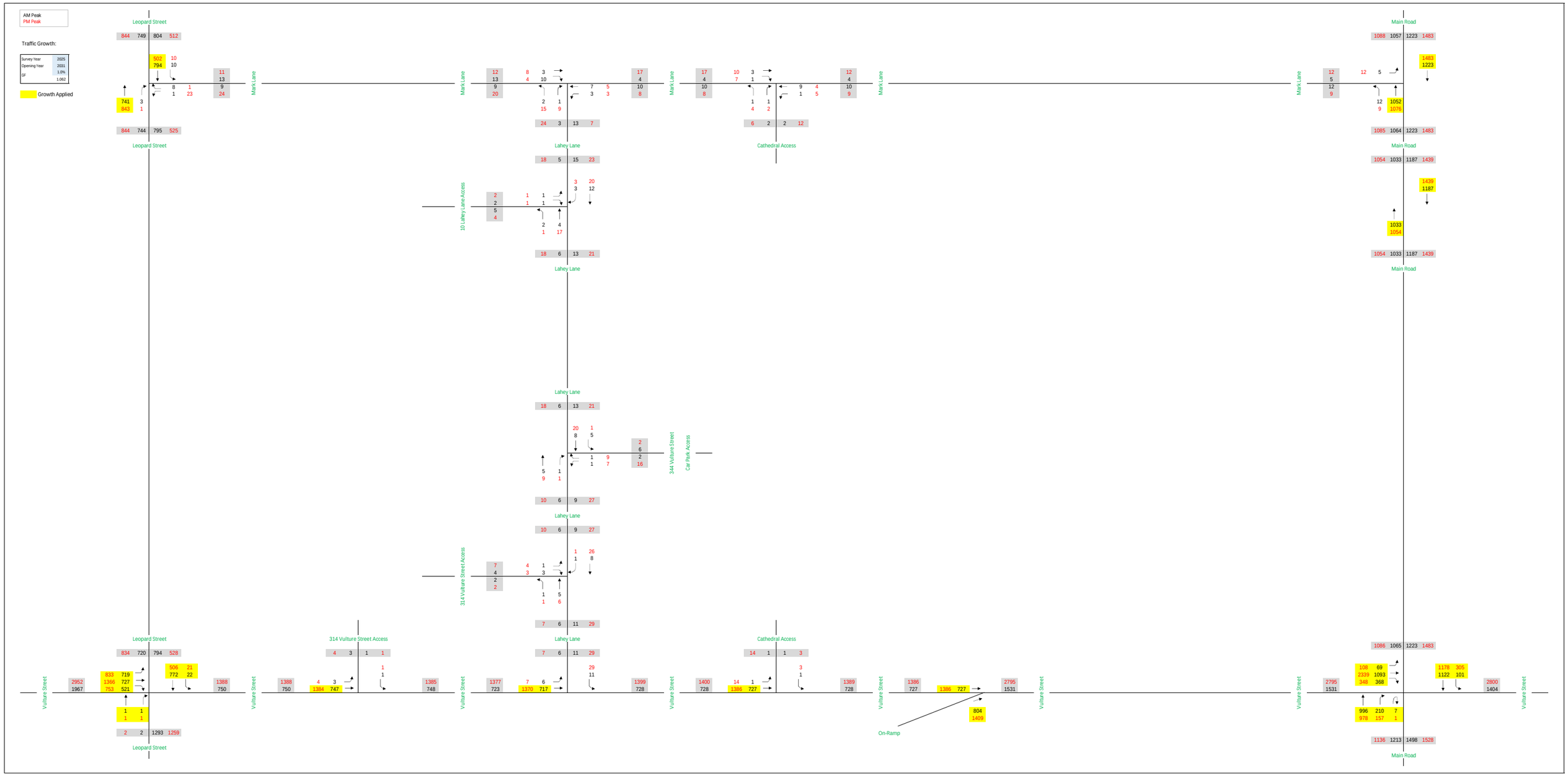
TRAFFIC NETWORK DIAGRAM 3
2029 BASE TRAFFIC VOLUMES



TRAFFIC NETWORK DIAGRAM 4
2030 BASE TRAFFIC VOLUMES

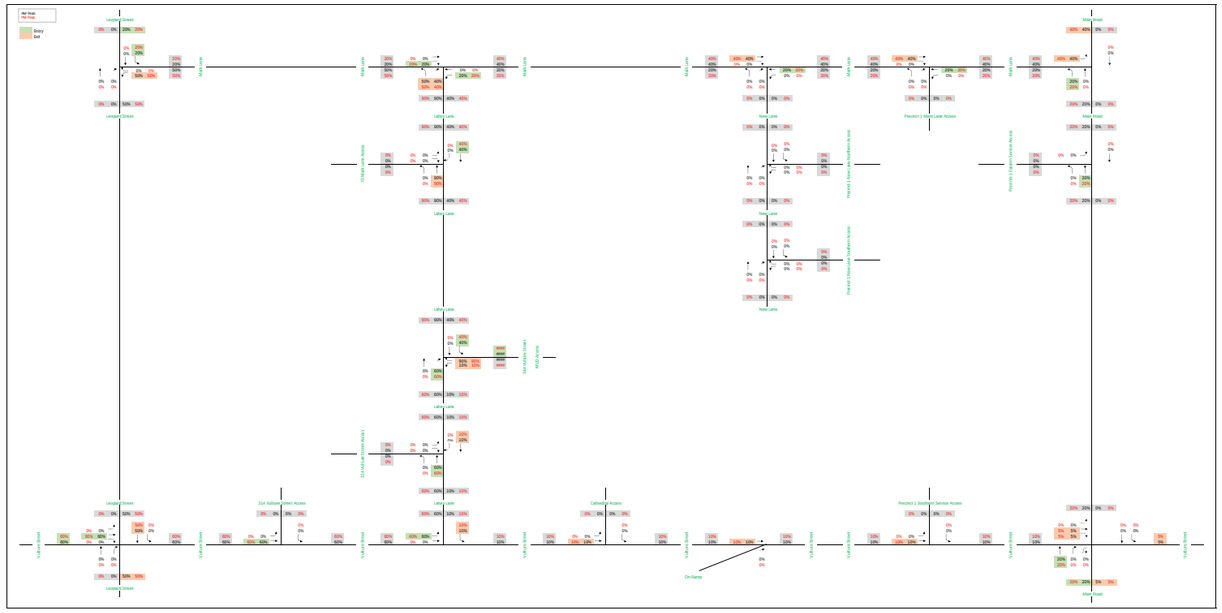


TRAFFIC NETWORK DIAGRAM 5
2031 BASE TRAFFIC VOLUMES



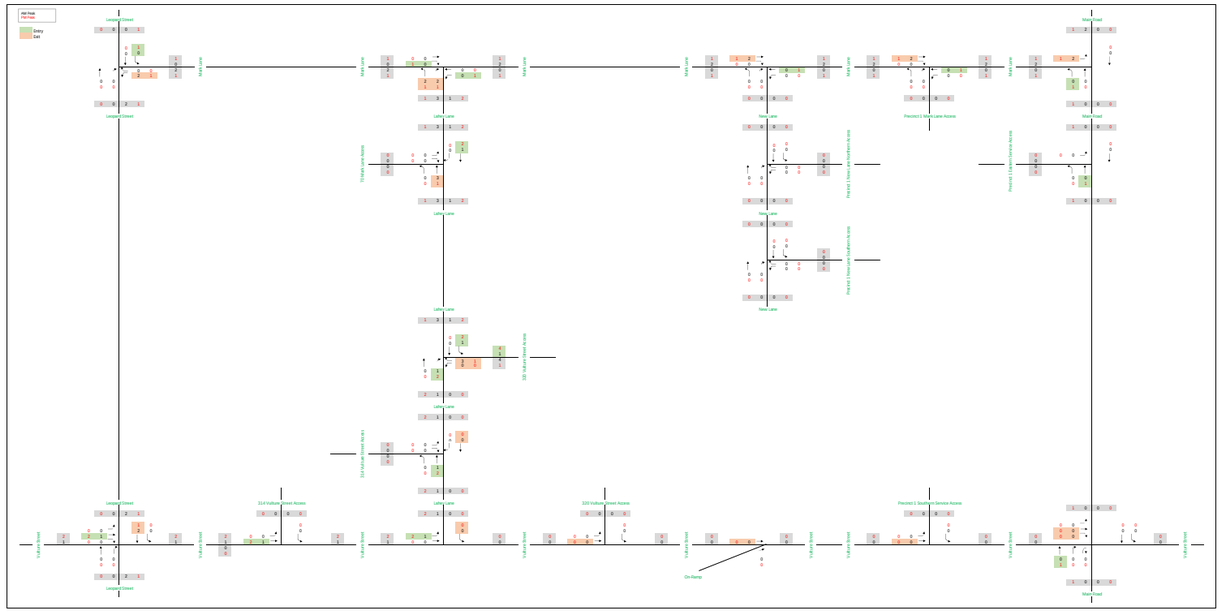
TRAFFIC NETWORK DIAGRAM 6A

DEVELOPMENT TRAFFIC DISTRIBUTION (%) - COMMITTED DEVELOPMENT TRAFFIC (RUSSIAN ORTHODOX CHURCH)

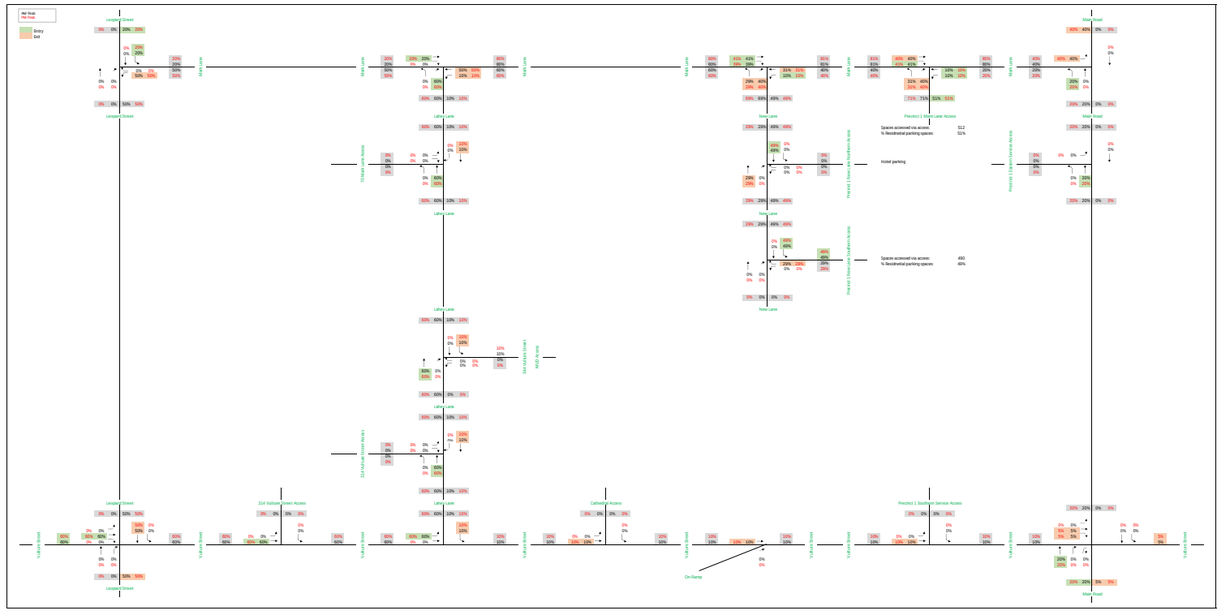


TRAFFIC NETWORK DIAGRAM 6B

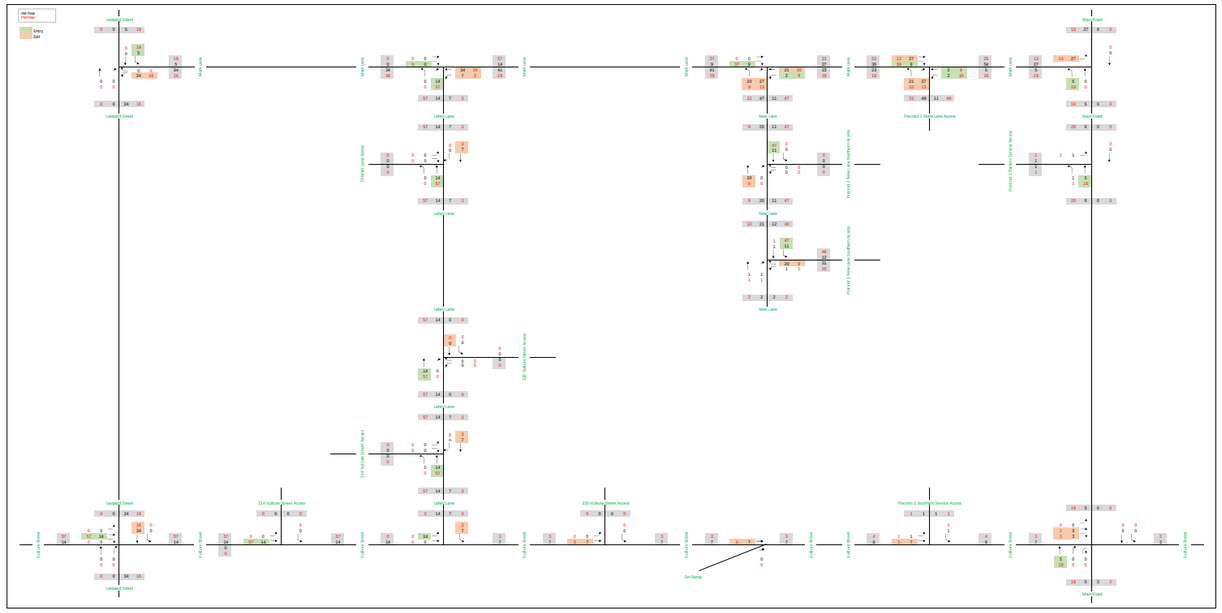
DEVELOPMENT TRAFFIC VOLUMES (vpd) - COMMITTED DEVELOPMENT TRAFFIC (RUSSIAN ORTHODOX CHURCH)



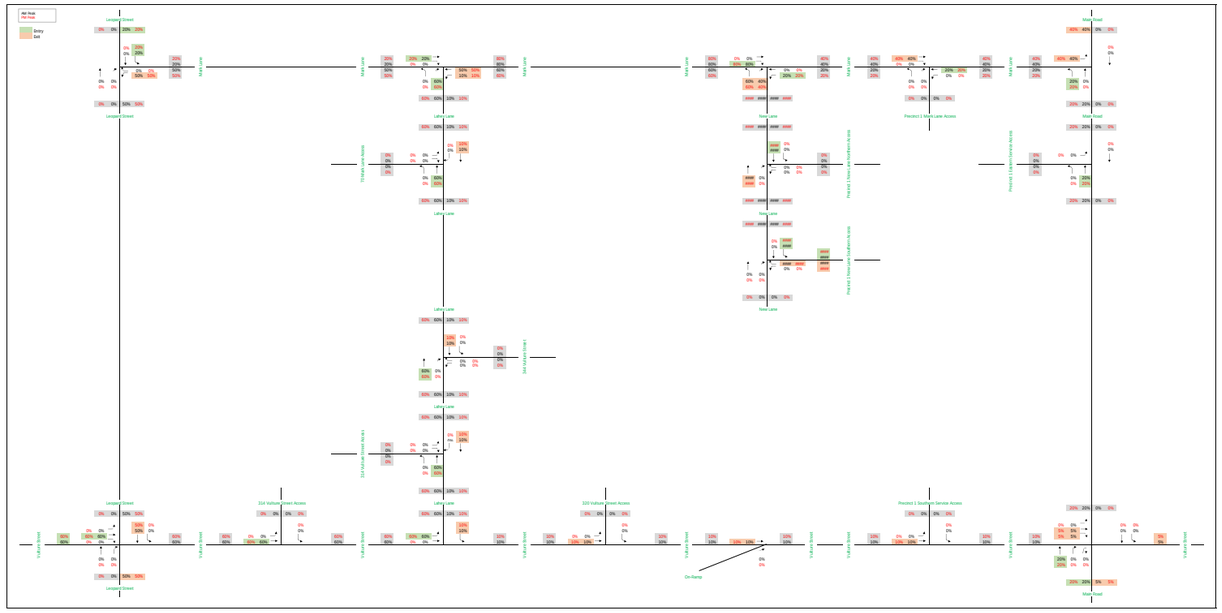
TRAFFIC NETWORK DIAGRAM 7A
DEVELOPMENT TRAFFIC DISTRIBUTION (%) - TOWER 1 (250 UNITS)



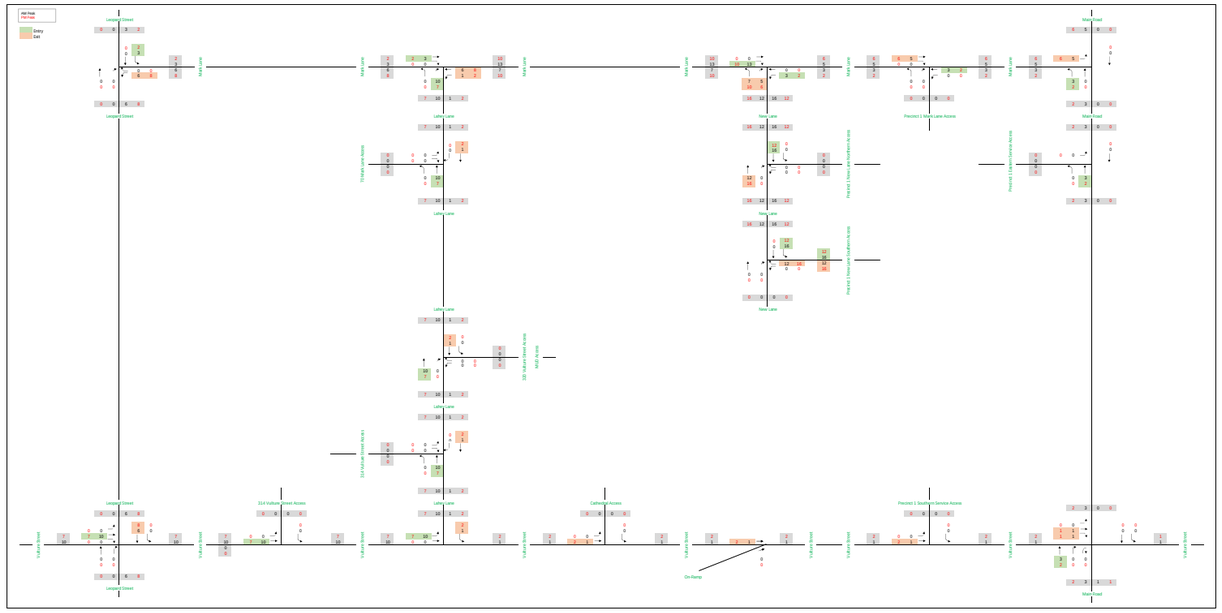
TRAFFIC NETWORK DIAGRAM 7B
DEVELOPMENT TRAFFIC VOLUMES (vph) - TOWER 1



TRAFFIC NETWORK DIAGRAM 8A
DEVELOPMENT TRAFFIC DISTRIBUTION (%) - CHILD CARE (NEW TRIPS)

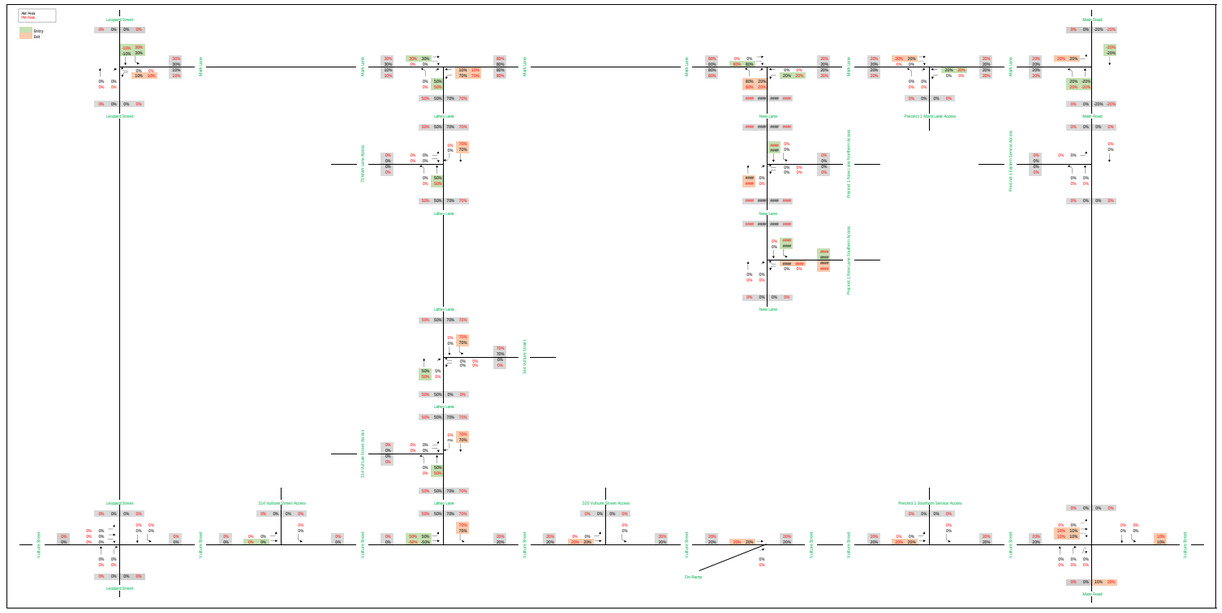


TRAFFIC NETWORK DIAGRAM 8B
DEVELOPMENT TRAFFIC VOLUMES (vpd) - CHILD CARE (NEW TRIPS)



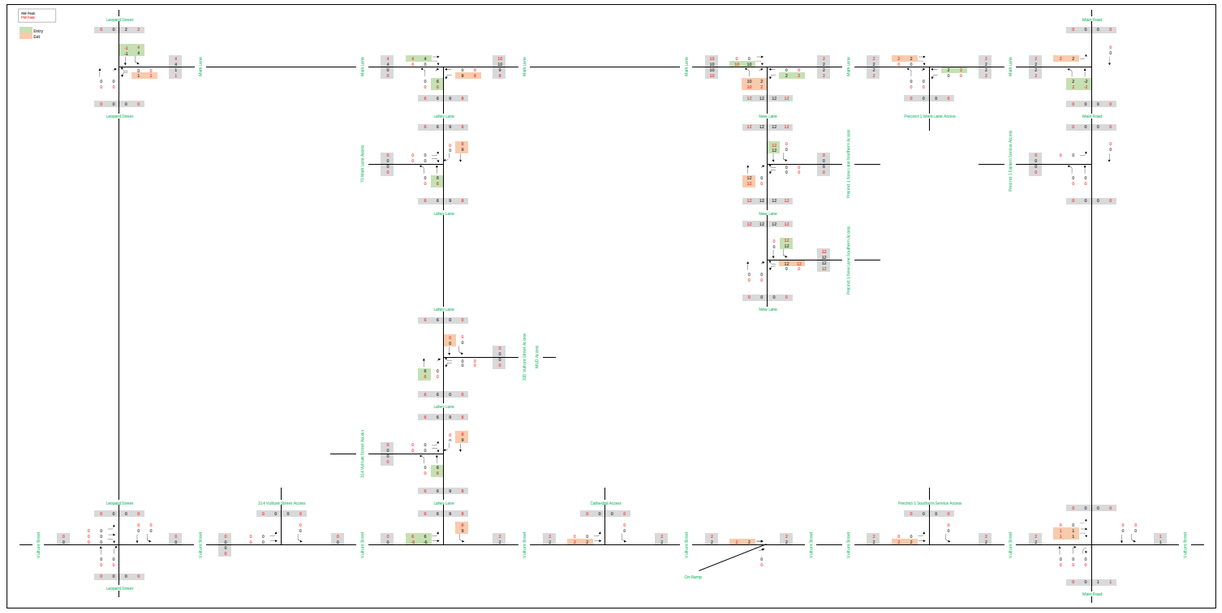
TRAFFIC NETWORK DIAGRAM 9A

DEVELOPMENT TRAFFIC DISTRIBUTION (%) - CHILD CARE (DROP-IN TRIPS)

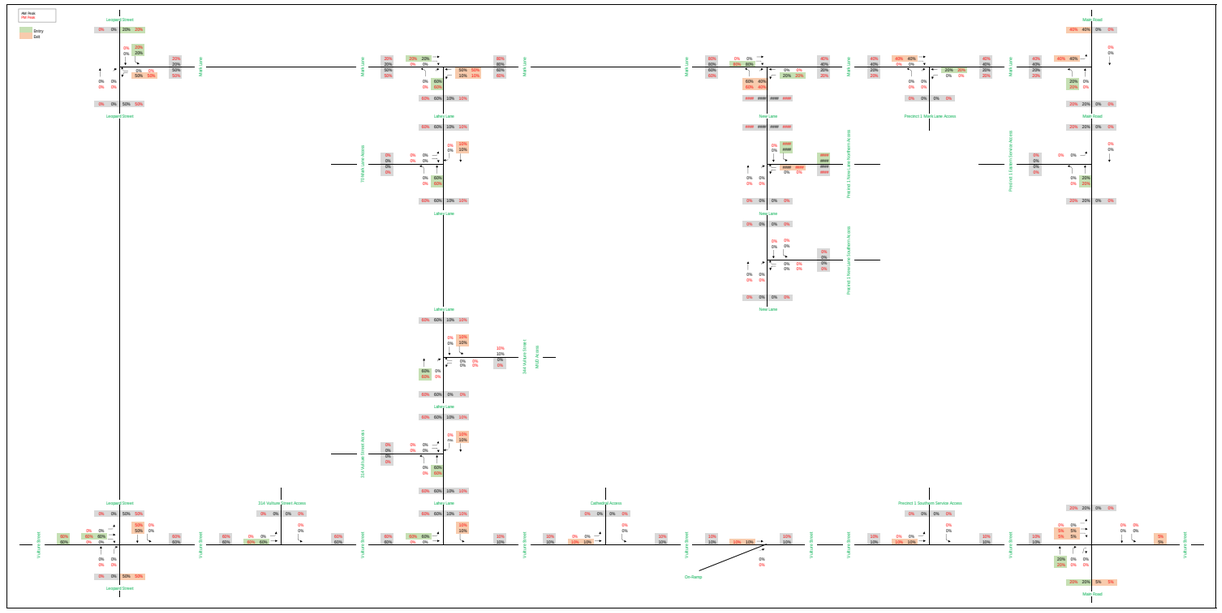


TRAFFIC NETWORK DIAGRAM 9B

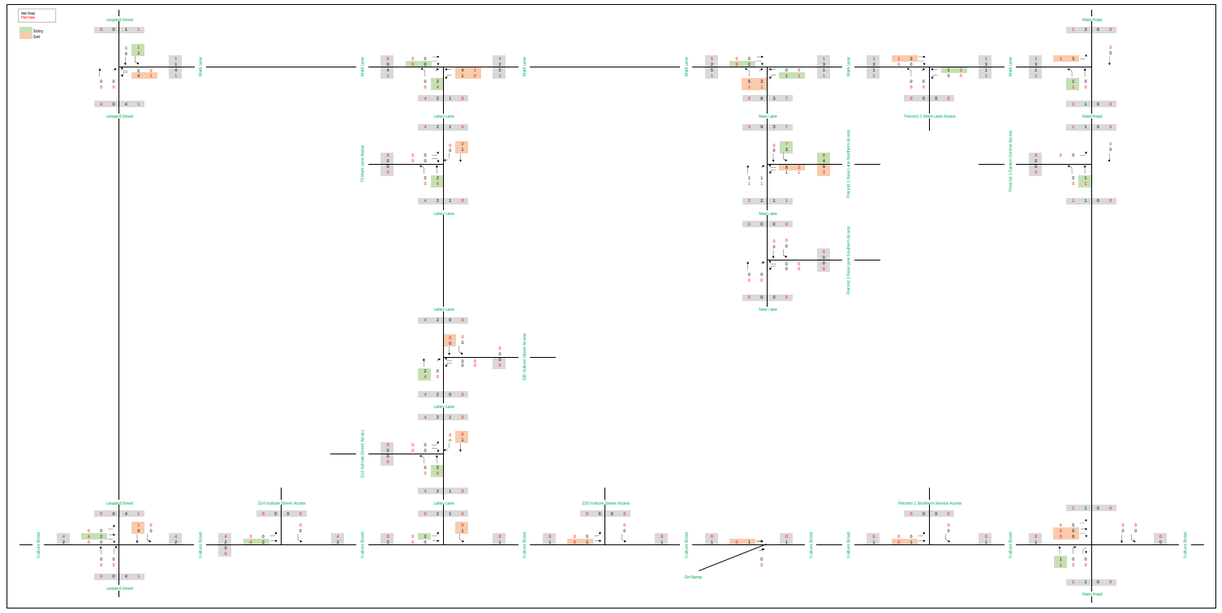
DEVELOPMENT TRAFFIC VOLUMES (vpd) - CHILD CARE (DROP-IN TRIPS)



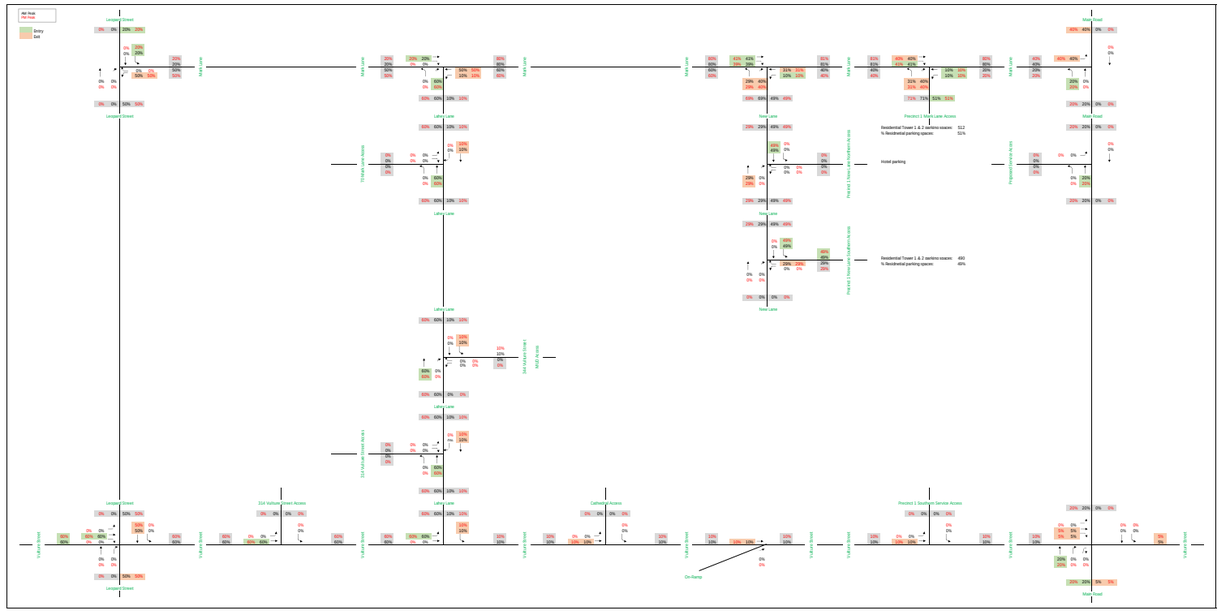
TRAFFIC NETWORK DIAGRAM 10A
DEVELOPMENT TRAFFIC DISTRIBUTION (%) - HOTEL (182 UNITS)



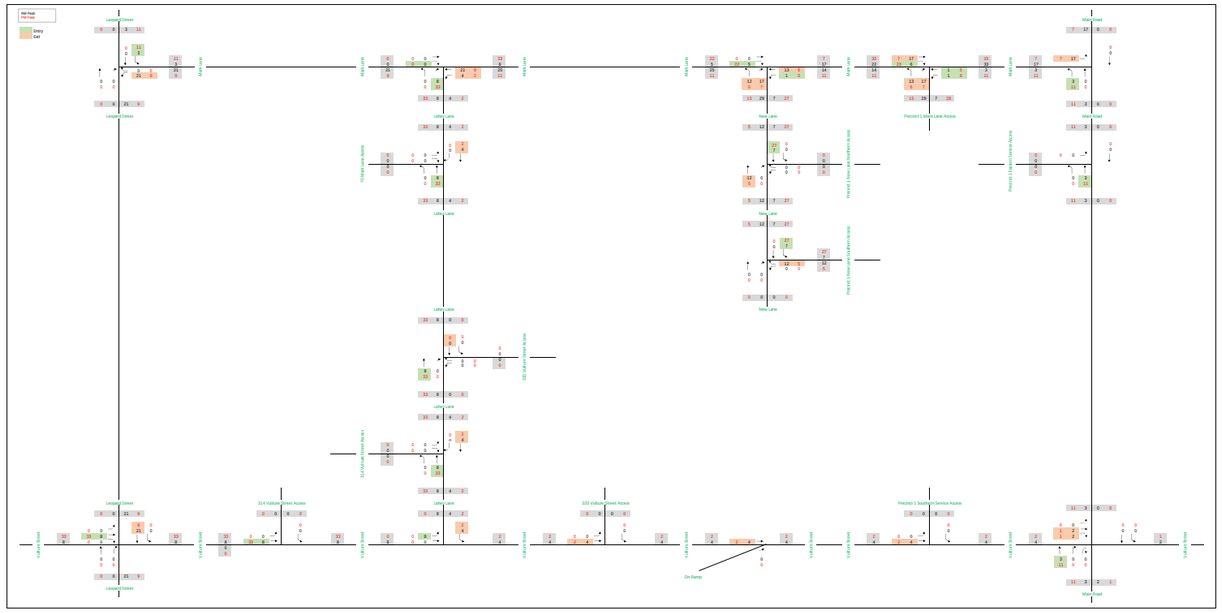
TRAFFIC NETWORK DIAGRAM 10B
DEVELOPMENT TRAFFIC VOLUMES (vph) - HOTEL (182 UNITS)



TRAFFIC NETWORK DIAGRAM 11A
DEVELOPMENT TRAFFIC DISTRIBUTION (%) - TOWER 2

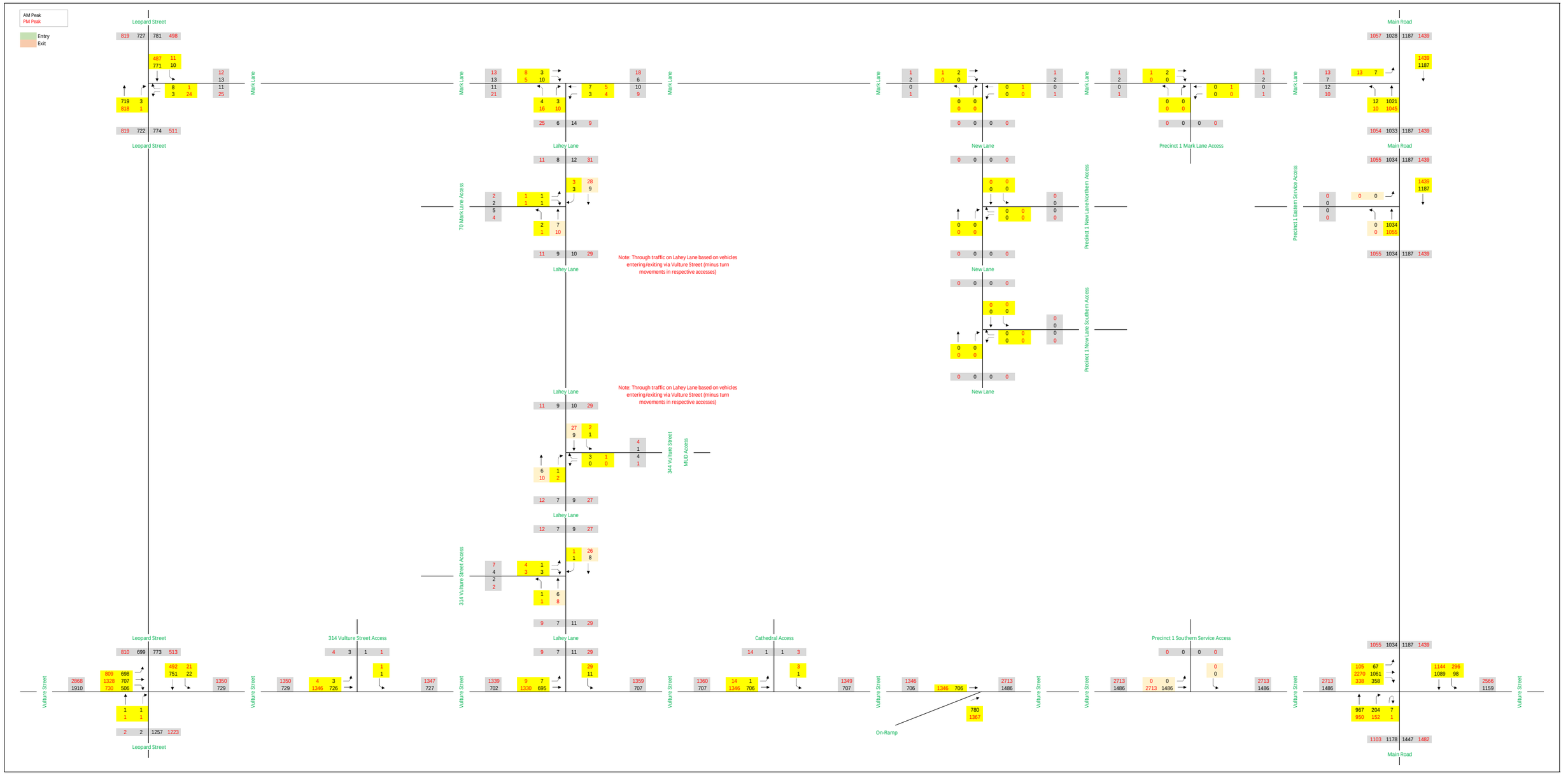


TRAFFIC NETWORK DIAGRAM 11B
DEVELOPMENT TRAFFIC VOLUMES (vph) - TOWER 2

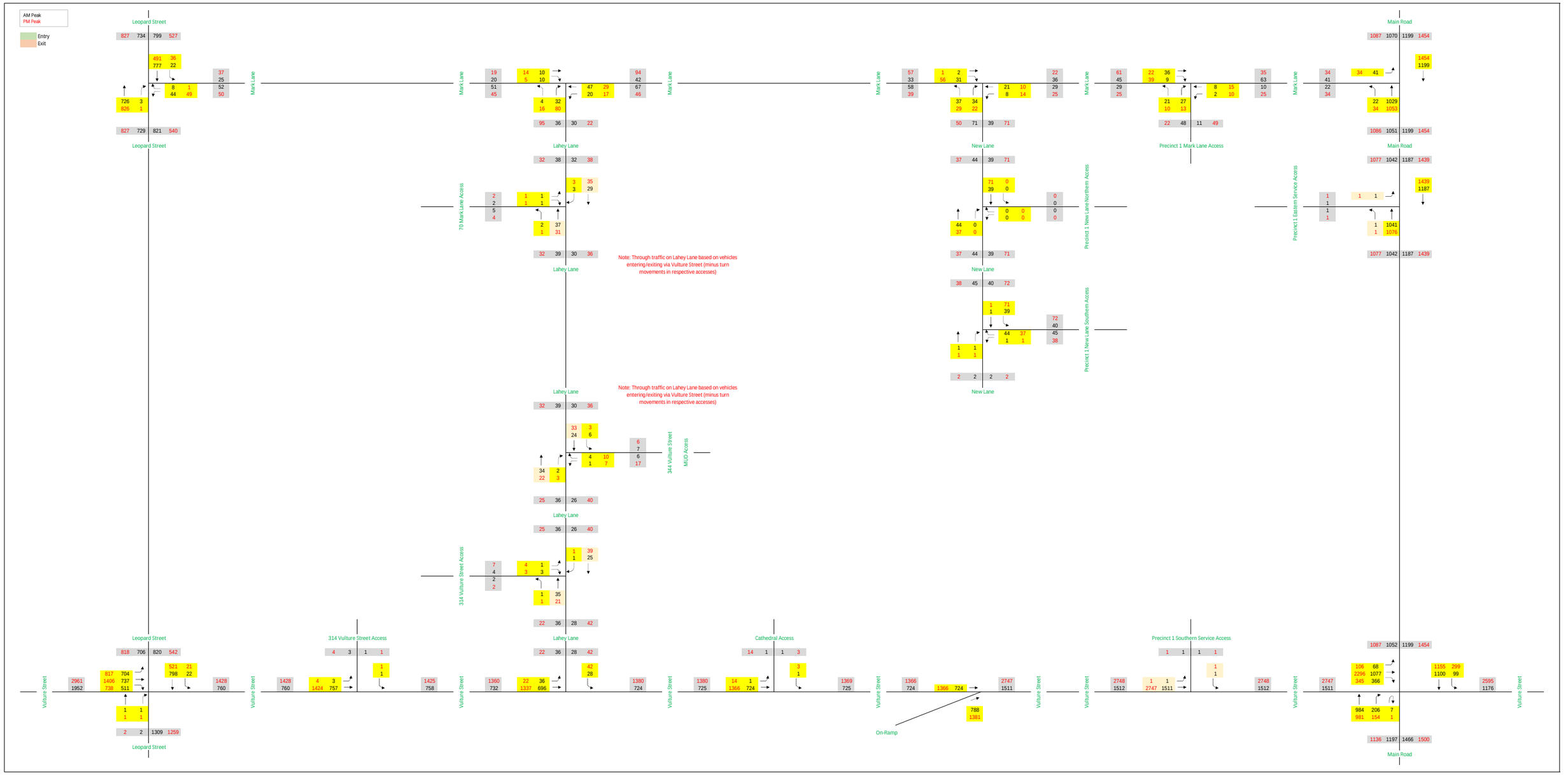


TRAFFIC NETWORK DIAGRAM 12

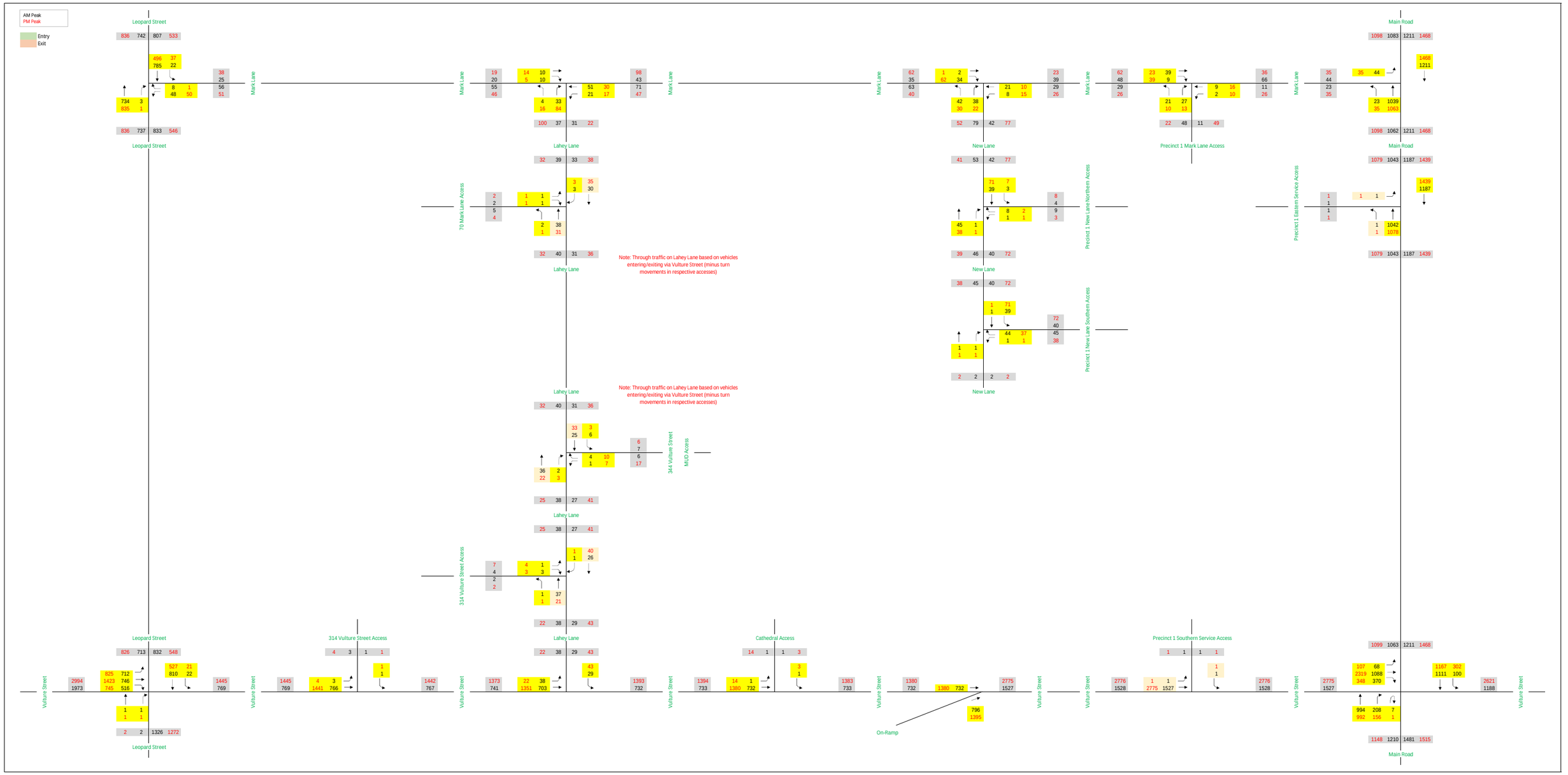
2028 BASE + COMMITTED DEVELOPMENT TRAFFIC (RUSSIAN ORTHODOX CHURCH)



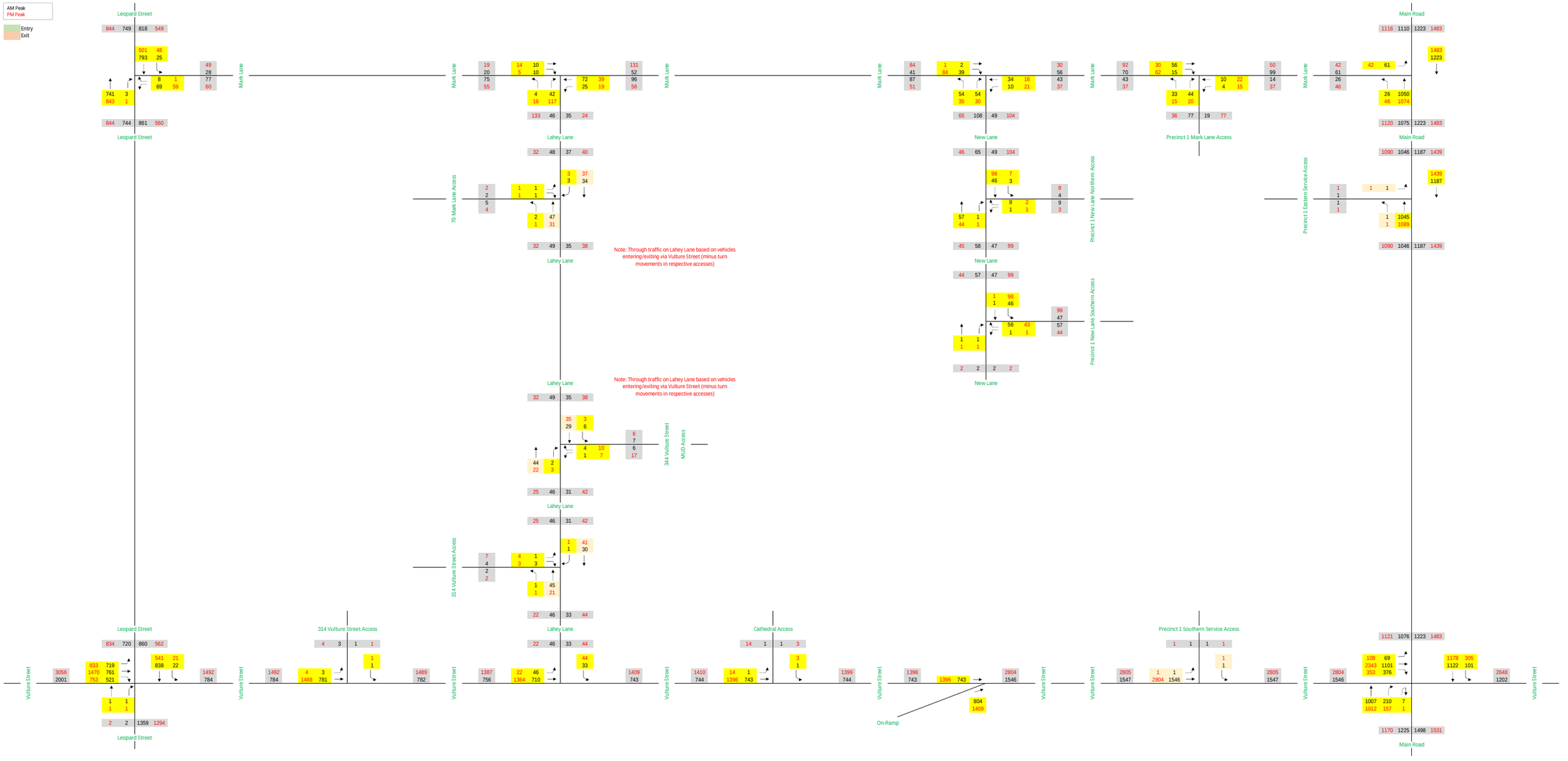
TRAFFIC NETWORK DIAGRAM 13
2029 DEVELOPMENT SCENARIO



TRAFFIC NETWORK DIAGRAM 14
2030 DEVELOPMENT SCENARIO



TRAFFIC NETWORK DIAGRAM 15
2031 DEVELOPMENT SCENARIO



Appendix D SIDRA Output Reports

MOVEMENT SUMMARY

Site: [1_2031DP] Site1 - PM Peak - Vulture Street / Leopard Street (2031 Development)

Network: [16] PM Peak - 2031 Development (2031 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 1 - Vulture Street / Leopard Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	1	0.0	1	0.0	* 0.011	59.9	LOS E	0.1	0.4	0.97	0.57	0.97	6.9
3	R2	All MCs	1	0.0	1	0.0	0.012	65.6	LOS E	0.1	0.4	0.97	0.59	0.97	6.1
Approach			2	0.0	2	0.0	0.012	62.7	LOS E	0.1	0.4	0.97	0.58	0.97	6.5
North: Leopard Street															
7	L2	All MCs	22	0.0	22	0.0	0.704	52.2	LOS D	16.3[N8]	117.2[N8]	0.98	0.84	1.00	6.1
8	T1	All MCs	569	3.5	569	3.5	* 0.704	47.4	LOS D	16.3[N8]	117.6[N8]	0.98	0.84	1.00	12.1
Approach			592	3.4	592	3.4	0.704	47.6	LOS D	16.3[N8]	117.6[N8]	0.98	0.84	1.00	11.9
West: Vulture Street															
10	L2	All MCs	877	0.9	877	0.9	0.559	8.3	LOS A	14.3	101.1	0.31	0.68	0.31	34.5
11	T1	All MCs	1547	0.8	1547	0.8	* 0.705	19.5	LOS B	32.4	228.7	0.77	0.71	0.77	22.3
12	R2	All MCs	793	0.7	793	0.7	0.463	23.8	LOS C	13.2	93.0	0.62	0.77	0.62	25.5
Approach			3217	0.8	3217	0.8	0.705	17.5	LOS B	32.4	228.7	0.61	0.71	0.61	24.8
All Vehicles			3811	1.2	3811	1.2	0.705	22.2	LOS C	32.4[N8]	228.7[N8]	0.67	0.73	0.67	21.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)
N8 The Percentile Back of Queue extends to upstream Site lanes.

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Leopard Street											
P1	Full	11	54.2	LOS E	0.0	0.0	0.95	0.95	208.0	200.0	0.96
East: Vulture Street											
P2	Full	63	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

North: Leopard Street										
P3 Full	63	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
All Pedestrians	137	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

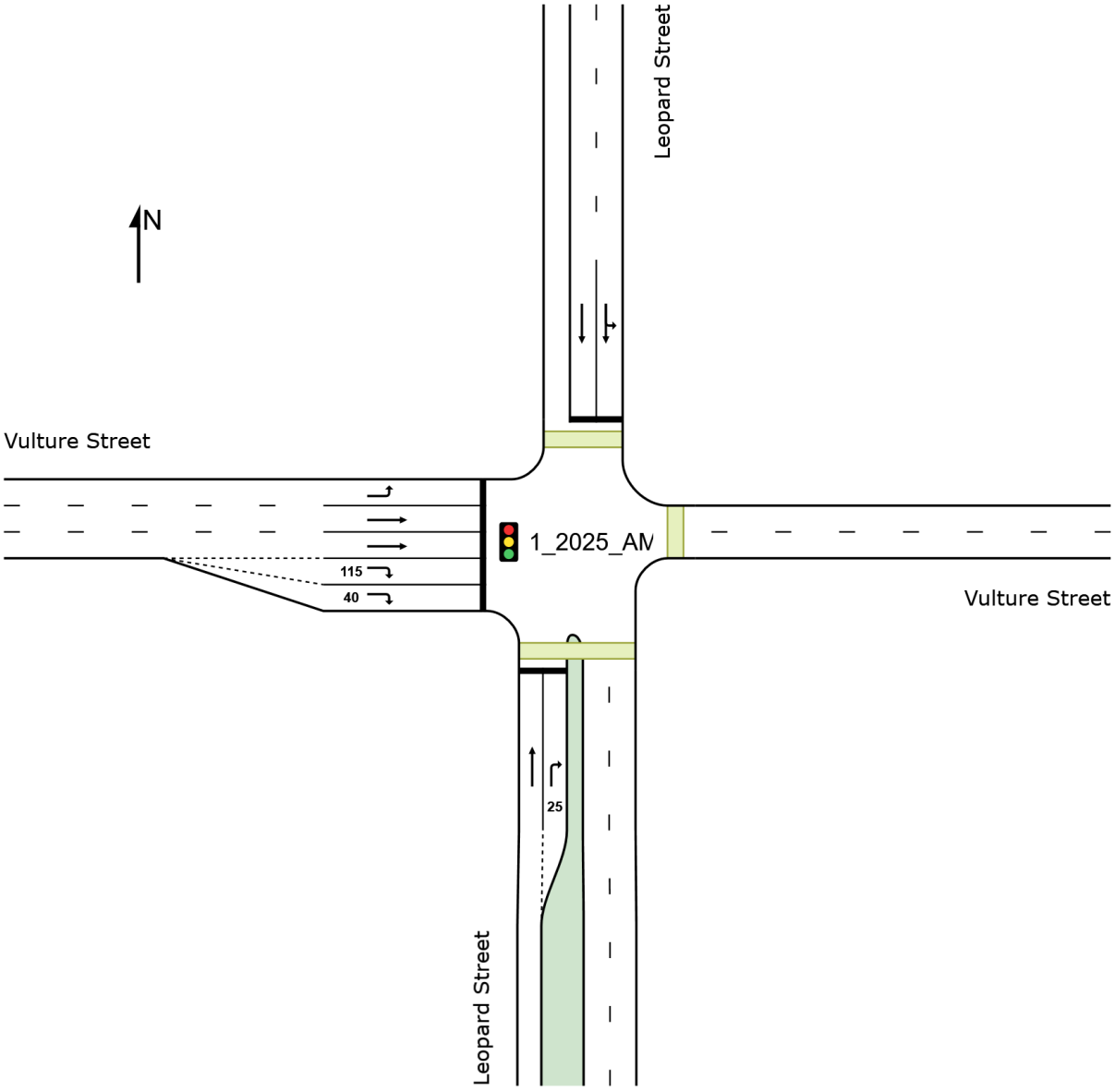
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Project: C:\Users\Josh.Harrison\OneDrive - Colliers International\23BRT0331 Vulture St – Main St Precinct, Kangaroo Point – Masterplan\6 - Analysis\Transport\JH Analysis - March 2026\23BRT0331_SA02_D.sipx

SITE LAYOUT

Site: [1_2025_AM] Site1 - AM Peak - Vulture Street / Leopard Street (2025 Survey)

Site 1 - Vulture Street / Leopard Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated
Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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MOVEMENT SUMMARY

Site: [1_2025_AM] Site1 - AM Peak - Vulture Street / Leopard Street (2025 Survey)

Network: [17] AM Peak - Existing Network 2025 (2025 Existing)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 1 - Vulture Street / Leopard Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	1	0.0	1	0.0	* 0.011	59.9	LOS E	0.1	0.4	0.97	0.57	0.97	6.9
3	R2	All MCs	1	0.0	1	0.0	0.012	65.6	LOS E	0.1	0.4	0.97	0.59	0.97	6.1
Approach			2	0.0	2	0.0	0.012	62.7	LOS E	0.1	0.4	0.97	0.58	0.97	6.5
North: Leopard Street															
7	L2	All MCs	22	4.8	22	4.8	0.491	32.3	LOS C	16.8[N8]	118.4[N8]	0.79	0.69	0.79	9.7
8	T1	All MCs	765	1.0	765	1.0	* 0.491	27.5	LOS C	16.8[N8]	118.7[N8]	0.79	0.69	0.79	18.1
Approach			787	1.1	787	1.1	0.491	27.7	LOS C	16.8[N8]	118.7[N8]	0.79	0.69	0.79	17.9
West: Vulture Street															
10	L2	All MCs	713	1.8	713	1.8	0.457	7.9	LOS A	10.0	71.0	0.27	0.67	0.27	35.2
11	T1	All MCs	721	3.8	721	3.8	* 0.491	29.9	LOS C	15.9	114.8	0.81	0.70	0.81	16.4
12	R2	All MCs	517	3.3	517	3.3	0.412	37.1	LOS D	11.0	79.3	0.78	0.79	0.78	19.2
Approach			1951	2.9	1951	2.9	0.491	23.7	LOS C	15.9	114.8	0.60	0.71	0.60	20.7
All Vehicles			2740	2.4	2740	2.4	0.491	24.9	LOS C	16.8[N8]	118.7[N8]	0.66	0.71	0.66	19.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)
N8 The Percentile Back of Queue extends to upstream Site lanes.

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Leopard Street											
P1	Full	11	54.2	LOS E	0.0	0.0	0.95	0.95	208.0	200.0	0.96
East: Vulture Street											
P2	Full	21	54.2	LOS E	0.1	0.1	0.95	0.95	208.0	200.0	0.96

North: Leopard Street										
P3 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
All Pedestrians	84	54.2	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [1_2028BA] Site1 - AM Peak - Vulture Street / Leopard Street (2028 Base)

Network: [1] AM Peak - 2028 Base (2028 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 1 - Vulture Street / Leopard Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	1	0.0	1	0.0	* 0.011	59.9	LOS E	0.1	0.4	0.97	0.57	0.97	6.9
3	R2	All MCs	1	0.0	1	0.0	0.012	65.6	LOS E	0.1	0.4	0.97	0.59	0.97	6.1
Approach			2	0.0	2	0.0	0.012	62.7	LOS E	0.1	0.4	0.97	0.58	0.97	6.5
North: Leopard Street															
7	L2	All MCs	23	4.8	23	4.8	0.506	32.5	LOS C	17.4 N8	123.1 N8	0.79	0.70	0.79	9.7
8	T1	All MCs	788	1.0	788	1.0	* 0.506	27.8	LOS C	17.5 N8	123.4 N8	0.79	0.70	0.79	18.0
Approach			812	1.1	812	1.1	0.506	27.9	LOS C	17.5 N8	123.4 N8	0.79	0.70	0.79	17.8
West: Vulture Street															
10	L2	All MCs	735	1.8	735	1.8	0.471	7.9	LOS A	10.5	74.7	0.27	0.67	0.27	35.1
11	T1	All MCs	743	3.8	743	3.8	* 0.506	30.1	LOS C	16.5	119.2	0.82	0.71	0.82	16.4
12	R2	All MCs	533	3.3	533	3.3	0.439	38.4	LOS D	11.5	82.8	0.79	0.80	0.79	19.0
Approach			2011	2.9	2011	2.9	0.506	24.2	LOS C	16.5	119.2	0.61	0.72	0.61	20.4
All Vehicles			2824	2.4	2824	2.4	0.506	25.3	LOS C	17.5 N8	123.4 N8	0.66	0.71	0.66	19.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)
N8 The Percentile Back of Queue extends to upstream Site lanes.

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Leopard Street											
P1	Full	11	54.2	LOS E	0.0	0.0	0.95	0.95	208.0	200.0	0.96
East: Vulture Street											
P2	Full	21	54.2	LOS E	0.1	0.1	0.95	0.95	208.0	200.0	0.96
North: Leopard Street											

P3 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
All Pedestrians	84	54.2	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [1_2028DA] Site1 - AM Peak - Vulture Street / Leopard Street (2028 Development)

Network: [9] AM Peak - 2028 Development (2028 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 1 - Vulture Street / Leopard Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	1	0.0	1	0.0	* 0.011	59.9	LOS E	0.1	0.4	0.97	0.57	0.97	6.9
3	R2	All MCs	1	0.0	1	0.0	0.012	65.6	LOS E	0.1	0.4	0.97	0.59	0.97	6.1
Approach			2	0.0	2	0.0	0.012	62.7	LOS E	0.1	0.4	0.97	0.58	0.97	6.5
North: Leopard Street															
7	L2	All MCs	23	4.8	23	4.8	0.507	32.5	LOS C	17.5[N8]	123.4[N8]	0.79	0.70	0.79	9.7
8	T1	All MCs	791	1.0	791	1.0	* 0.507	27.8	LOS C	17.5[N8]	123.7[N8]	0.79	0.70	0.79	18.0
Approach			814	1.1	814	1.1	0.507	27.9	LOS C	17.5[N8]	123.7[N8]	0.79	0.70	0.79	17.8
West: Vulture Street															
10	L2	All MCs	735	1.8	735	1.8	0.471	7.9	LOS A	10.5	74.7	0.27	0.67	0.27	35.1
11	T1	All MCs	744	3.8	744	3.8	* 0.507	30.1	LOS C	16.5	119.5	0.82	0.71	0.82	16.3
12	R2	All MCs	533	3.3	533	3.3	0.439	38.4	LOS D	11.5	82.9	0.79	0.80	0.79	19.0
Approach			2012	2.9	2012	2.9	0.507	24.2	LOS C	16.5	119.5	0.61	0.72	0.61	20.4
All Vehicles			2827	2.4	2827	2.4	0.507	25.3	LOS C	17.5[N8]	123.7[N8]	0.66	0.71	0.66	19.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)
N8 The Percentile Back of Queue extends to upstream Site lanes.

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Leopard Street											
P1	Full	11	54.2	LOS E	0.0	0.0	0.95	0.95	208.0	200.0	0.96
East: Vulture Street											
P2	Full	21	54.2	LOS E	0.1	0.1	0.95	0.95	208.0	200.0	0.96

North: Leopard Street										
P3 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
All Pedestrians	84	54.2	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [1_2029BA] Site1 - AM Peak - Vulture Street / Leopard Street (2029 Base)

Network: [3] AM Peak - 2029 Base (2029 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 1 - Vulture Street / Leopard Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	1	0.0	1	0.0	*0.011	59.9	LOS E	0.1	0.4	0.97	0.57	0.97	6.9
3	R2	All MCs	1	0.0	1	0.0	0.012	65.6	LOS E	0.1	0.4	0.97	0.59	0.97	6.1
Approach			2	0.0	2	0.0	0.012	62.7	LOS E	0.1	0.4	0.97	0.58	0.97	6.5
North: Leopard Street															
7	L2	All MCs	23	4.8	23	4.8	0.512	32.6	LOS C	17.6[N8]	124.7[N8]	0.80	0.70	0.80	9.6
8	T1	All MCs	797	1.0	797	1.0	*0.512	27.8	LOS C	17.7[N8]	125.0[N8]	0.80	0.70	0.80	18.0
Approach			820	1.1	820	1.1	0.512	28.0	LOS C	17.7[N8]	125.0[N8]	0.80	0.70	0.80	17.8
West: Vulture Street															
10	L2	All MCs	741	1.8	741	1.8	0.475	7.9	LOS A	10.7	75.8	0.27	0.67	0.27	35.1
11	T1	All MCs	751	3.8	751	3.8	*0.512	30.2	LOS C	16.7	120.7	0.82	0.71	0.82	16.3
12	R2	All MCs	538	3.3	538	3.3	0.448	38.8	LOS D	11.7	84.1	0.79	0.80	0.79	19.0
Approach			2029	2.9	2029	2.9	0.512	24.3	LOS C	16.7	120.7	0.61	0.72	0.61	20.4
All Vehicles			2852	2.4	2852	2.4	0.512	25.4	LOS C	17.7[N8]	125.0[N8]	0.67	0.71	0.67	19.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)
N8 The Percentile Back of Queue extends to upstream Site lanes.

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Leopard Street											
P1	Full	11	54.2	LOS E	0.0	0.0	0.95	0.95	208.0	200.0	0.96
East: Vulture Street											
P2	Full	21	54.2	LOS E	0.1	0.1	0.95	0.95	208.0	200.0	0.96
North: Leopard Street											

P3 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
All Pedestrians	84	54.2	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [1_2029DA] Site1 - AM Peak - Vulture Street / Leopard Street (2029 Development)

Network: [11] AM Peak - 2029 Development (2029 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 1 - Vulture Street / Leopard Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	1	0.0	1	0.0	* 0.011	59.9	LOS E	0.1	0.4	0.97	0.57	0.97	6.9
3	R2	All MCs	1	0.0	1	0.0	0.012	65.6	LOS E	0.1	0.4	0.97	0.59	0.97	6.1
Approach			2	0.0	2	0.0	0.012	62.7	LOS E	0.1	0.4	0.97	0.58	0.97	6.5
North: Leopard Street															
7	L2	All MCs	23	4.8	23	4.8	0.533	32.6	LOS C	18.7[N8]	132.2[N8]	0.80	0.71	0.80	9.6
8	T1	All MCs	840	0.9	840	0.9	* 0.533	27.9	LOS C	18.8[N8]	132.5[N8]	0.80	0.71	0.80	18.0
Approach			863	1.0	863	1.0	0.533	28.0	LOS C	18.8[N8]	132.5[N8]	0.80	0.71	0.80	17.8
West: Vulture Street															
10	L2	All MCs	741	1.8	741	1.8	0.475	7.9	LOS A	10.7	75.8	0.27	0.67	0.27	35.1
11	T1	All MCs	776	3.7	776	3.7	* 0.533	30.8	LOS C	17.5	126.5	0.83	0.72	0.83	16.1
12	R2	All MCs	538	3.3	538	3.3	0.455	39.4	LOS D	11.8	84.7	0.80	0.80	0.80	18.9
Approach			2055	2.9	2055	2.9	0.533	24.8	LOS C	17.5	126.5	0.62	0.72	0.62	20.1
All Vehicles			2920	2.3	2920	2.3	0.533	25.8	LOS C	18.8[N8]	132.5[N8]	0.68	0.72	0.68	19.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)
N8 The Percentile Back of Queue extends to upstream Site lanes.

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Leopard Street											
P1	Full	11	54.2	LOS E	0.0	0.0	0.95	0.95	208.0	200.0	0.96
East: Vulture Street											
P2	Full	21	54.2	LOS E	0.1	0.1	0.95	0.95	208.0	200.0	0.96

North: Leopard Street										
P3 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
All Pedestrians	84	54.2	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [1_2030BA] Site1 - AM Peak - Vulture Street / Leopard Street (2030 Base)

Network: [5] AM Peak - 2030 Base (2030 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 1 - Vulture Street / Leopard Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	1	0.0	1	0.0	*0.011	59.9	LOS E	0.1	0.4	0.97	0.57	0.97	6.9
3	R2	All MCs	1	0.0	1	0.0	0.012	65.6	LOS E	0.1	0.4	0.97	0.59	0.97	6.1
Approach			2	0.0	2	0.0	0.012	62.7	LOS E	0.1	0.4	0.97	0.58	0.97	6.5
North: Leopard Street															
7	L2	All MCs	23	4.8	23	4.8	0.516	32.7	LOS C	17.8[N8]	126.1[N8]	0.80	0.71	0.80	9.6
8	T1	All MCs	804	1.0	804	1.0	*0.516	27.9	LOS C	17.9[N8]	126.5[N8]	0.80	0.70	0.80	18.0
Approach			827	1.1	827	1.1	0.516	28.0	LOS C	17.9[N8]	126.5[N8]	0.80	0.70	0.80	17.8
West: Vulture Street															
10	L2	All MCs	749	1.8	749	1.8	0.481	8.0	LOS A	10.9	77.2	0.28	0.67	0.28	35.0
11	T1	All MCs	758	3.8	758	3.8	*0.516	30.2	LOS C	16.9	122.2	0.82	0.71	0.82	16.3
12	R2	All MCs	543	3.3	543	3.3	0.456	39.2	LOS D	11.8	85.2	0.80	0.80	0.80	19.0
Approach			2051	2.9	2051	2.9	0.516	24.5	LOS C	16.9	122.2	0.61	0.72	0.61	20.3
All Vehicles			2880	2.4	2880	2.4	0.516	25.5	LOS C	17.9[N8]	126.5[N8]	0.67	0.72	0.67	19.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)
N8 The Percentile Back of Queue extends to upstream Site lanes.

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Leopard Street											
P1	Full	11	54.2	LOS E	0.0	0.0	0.95	0.95	208.0	200.0	0.96
East: Vulture Street											
P2	Full	21	54.2	LOS E	0.1	0.1	0.95	0.95	208.0	200.0	0.96
North: Leopard Street											

P3 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
All Pedestrians	84	54.2	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [1_2030DA] Site1 - AM Peak - Vulture Street / Leopard Street (2030 Development)

Network: [13] AM Peak - 2030 Development (2030 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 1 - Vulture Street / Leopard Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	1	0.0	1	0.0	* 0.011	59.9	LOS E	0.1	0.4	0.97	0.57	0.97	6.9
3	R2	All MCs	1	0.0	1	0.0	0.012	65.6	LOS E	0.1	0.4	0.97	0.59	0.97	6.1
Approach			2	0.0	2	0.0	0.012	62.7	LOS E	0.1	0.4	0.97	0.58	0.97	6.5
North: Leopard Street															
7	L2	All MCs	23	4.8	23	4.8	0.541	32.7	LOS C	19.0[N8]	134.6[N8]	0.81	0.71	0.81	9.6
8	T1	All MCs	853	0.9	853	0.9	* 0.541	27.9	LOS C	19.1[N8]	134.9[N8]	0.81	0.71	0.81	18.0
Approach			876	1.0	876	1.0	0.541	28.1	LOS C	19.1[N8]	134.9[N8]	0.81	0.71	0.81	17.8
West: Vulture Street															
10	L2	All MCs	749	1.8	749	1.8	0.481	8.0	LOS A	10.9	77.2	0.28	0.67	0.28	35.0
11	T1	All MCs	785	3.7	785	3.7	* 0.541	30.9	LOS C	17.8	128.5	0.83	0.73	0.83	16.0
12	R2	All MCs	543	3.3	543	3.3	0.464	39.9	LOS D	12.0	86.0	0.80	0.80	0.80	18.8
Approach			2078	2.9	2078	2.9	0.541	25.0	LOS C	17.8	128.5	0.62	0.73	0.62	20.0
All Vehicles			2956	2.3	2956	2.3	0.541	25.9	LOS C	19.1[N8]	134.9[N8]	0.68	0.72	0.68	19.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)
N8 The Percentile Back of Queue extends to upstream Site lanes.

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Leopard Street											
P1	Full	11	54.2	LOS E	0.0	0.0	0.95	0.95	208.0	200.0	0.96
East: Vulture Street											
P2	Full	21	54.2	LOS E	0.1	0.1	0.95	0.95	208.0	200.0	0.96

North: Leopard Street										
P3 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
All Pedestrians	84	54.2	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [1_2031BA] Site1 - AM Peak - Vulture Street / Leopard Street (2031 Base)

Network: [7] AM Peak - 2031 Base (2031 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 1 - Vulture Street / Leopard Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	1	0.0	1	0.0	* 0.011	59.9	LOS E	0.1	0.4	0.97	0.57	0.97	6.9
3	R2	All MCs	1	0.0	1	0.0	0.012	65.6	LOS E	0.1	0.4	0.97	0.59	0.97	6.1
Approach			2	0.0	2	0.0	0.012	62.7	LOS E	0.1	0.4	0.97	0.58	0.97	6.5
North: Leopard Street															
7	L2	All MCs	23	4.8	23	4.8	0.521	32.7	LOS C	18.1 N8	127.8 N8	0.80	0.71	0.80	9.6
8	T1	All MCs	813	1.0	813	1.0	* 0.521	28.0	LOS C	18.1 N8	128.1 N8	0.80	0.70	0.80	17.9
Approach			836	1.1	836	1.1	0.521	28.1	LOS C	18.1 N8	128.1 N8	0.80	0.71	0.80	17.7
West: Vulture Street															
10	L2	All MCs	757	1.8	757	1.8	0.486	8.0	LOS A	11.0	78.5	0.28	0.67	0.28	35.0
11	T1	All MCs	765	3.8	765	3.8	* 0.521	30.3	LOS C	17.1	123.7	0.82	0.72	0.82	16.3
12	R2	All MCs	548	3.3	548	3.3	0.465	39.6	LOS D	12.0	86.5	0.80	0.80	0.80	18.9
Approach			2071	2.9	2071	2.9	0.521	24.6	LOS C	17.1	123.7	0.62	0.72	0.62	20.2
All Vehicles			2908	2.4	2908	2.4	0.521	25.7	LOS C	18.1 N8	128.1 N8	0.67	0.72	0.67	19.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)
N8 The Percentile Back of Queue extends to upstream Site lanes.

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Leopard Street											
P1	Full	11	54.2	LOS E	0.0	0.0	0.95	0.95	208.0	200.0	0.96
East: Vulture Street											
P2	Full	21	54.2	LOS E	0.1	0.1	0.95	0.95	208.0	200.0	0.96
North: Leopard Street											

P3 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
All Pedestrians	84	54.2	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [1_2031DA] Site1 - AM Peak - Vulture Street / Leopard Street (2031 Development)

Network: [15] AM Peak - 2031 Development (2031 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 1 - Vulture Street / Leopard Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	1	0.0	1	0.0	* 0.011	59.9	LOS E	0.1	0.4	0.97	0.57	0.97	6.9
3	R2	All MCs	1	0.0	1	0.0	0.012	65.6	LOS E	0.1	0.4	0.97	0.59	0.97	6.1
Approach			2	0.0	2	0.0	0.012	62.7	LOS E	0.1	0.4	0.97	0.58	0.97	6.5
North: Leopard Street															
7	L2	All MCs	23	4.8	23	4.8	0.555	32.7	LOS C	19.8[N8]	139.8[N8]	0.81	0.72	0.81	9.6
8	T1	All MCs	882	0.9	882	0.9	* 0.555	28.0	LOS C	19.9[N8]	140.2[N8]	0.81	0.72	0.81	17.9
Approach			905	1.0	905	1.0	0.555	28.1	LOS C	19.9[N8]	140.2[N8]	0.81	0.72	0.81	17.8
West: Vulture Street															
10	L2	All MCs	757	1.8	757	1.8	0.486	8.0	LOS A	11.0	78.5	0.28	0.67	0.28	35.0
11	T1	All MCs	801	3.6	801	3.6	* 0.555	31.4	LOS C	18.3	132.4	0.84	0.74	0.84	15.9
12	R2	All MCs	548	3.3	548	3.3	0.478	40.8	LOS D	12.2	87.7	0.81	0.80	0.81	18.7
Approach			2106	2.9	2106	2.9	0.555	25.4	LOS C	18.3	132.4	0.63	0.73	0.63	19.8
All Vehicles			3014	2.3	3014	2.3	0.555	26.2	LOS C	19.9[N8]	140.2[N8]	0.68	0.73	0.68	19.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)
N8 The Percentile Back of Queue extends to upstream Site lanes.

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Leopard Street											
P1	Full	11	54.2	LOS E	0.0	0.0	0.95	0.95	208.0	200.0	0.96
East: Vulture Street											
P2	Full	21	54.2	LOS E	0.1	0.1	0.95	0.95	208.0	200.0	0.96

North: Leopard Street										
P3 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
All Pedestrians	84	54.2	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [1_2025_PM] Site1 - PM Peak - Vulture Street / Leopard Street (2025 Survey)

Network: [2025_PM] PM Peak - Existing Network 2025 (2025 Existing)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 1 - Vulture Street / Leopard Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	1	0.0	1	0.0	* 0.011	59.9	LOS E	0.1	0.4	0.97	0.57	0.97	6.9
3	R2	All MCs	1	0.0	1	0.0	0.012	65.6	LOS E	0.1	0.4	0.97	0.59	0.97	6.1
Approach			2	0.0	2	0.0	0.012	62.7	LOS E	0.1	0.4	0.97	0.58	0.97	6.5
North: Leopard Street															
7	L2	All MCs	21	0.0	21	0.0	0.609	50.0	LOS D	13.9	99.9	0.95	0.80	0.95	6.3
8	T1	All MCs	502	3.8	502	3.8	* 0.609	45.3	LOS D	13.9	100.4	0.95	0.80	0.95	12.5
Approach			523	3.6	523	3.6	0.609	45.5	LOS D	13.9	100.4	0.95	0.80	0.95	12.3
West: Vulture Street															
10	L2	All MCs	826	0.9	826	0.9	0.527	8.1	LOS A	12.8	90.5	0.30	0.68	0.30	34.7
11	T1	All MCs	1355	0.9	1355	0.9	* 0.609	17.7	LOS B	25.6	180.2	0.71	0.64	0.71	23.3
12	R2	All MCs	746	0.7	746	0.7	0.417	22.8	LOS C	12.1	85.1	0.60	0.76	0.60	25.6
Approach			2927	0.8	2927	0.8	0.609	16.3	LOS B	25.6	180.2	0.56	0.68	0.56	25.8
All Vehicles			3453	1.3	3453	1.3	0.609	20.8	LOS C	25.6	180.2	0.62	0.70	0.62	22.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Leopard Street											
P1	Full	11	54.2	LOS E	0.0	0.0	0.95	0.95	208.0	200.0	0.96
East: Vulture Street											
P2	Full	63	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
North: Leopard Street											

P3 Full	63	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
All Pedestrians	137	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [1_2028BP] Site1 - PM Peak - Vulture Street / Leopard Street (2028 Base)

Network: [2] PM Peak - 2028 Base (2028 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 1 - Vulture Street / Leopard Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	1	0.0	1	0.0	0.011	59.9	LOS E	0.1	0.4	0.97	0.57	0.97	6.9
3	R2	All MCs	1	0.0	1	0.0	*0.015	66.6	LOS E	0.1	0.4	0.97	0.59	0.97	6.0
Approach			2	0.0	2	0.0	0.015	63.2	LOS E	0.1	0.4	0.97	0.58	0.97	6.4
North: Leopard Street															
7	L2	All MCs	22	0.0	22	0.0	0.685	52.9	LOS D	14.8	106.8	0.98	0.83	0.99	6.0
8	T1	All MCs	517	3.8	517	3.8	*0.685	48.2	LOS D	14.9	107.3	0.98	0.83	0.99	11.9
Approach			539	3.6	539	3.6	0.685	48.4	LOS D	14.9	107.3	0.98	0.83	0.99	11.7
West: Vulture Street															
10	L2	All MCs	852	0.9	852	0.9	0.543	8.2	LOS A	13.6	95.7	0.30	0.68	0.30	34.6
11	T1	All MCs	1396	0.9	1396	0.9	*0.685	17.8	LOS B	31.1	219.2	0.74	0.68	0.74	23.3
12	R2	All MCs	768	0.7	768	0.7	0.413	21.3	LOS C	12.0	84.3	0.58	0.76	0.58	26.4
Approach			3016	0.8	3016	0.8	0.685	16.0	LOS B	31.1	219.2	0.58	0.70	0.58	26.1
All Vehicles			3557	1.2	3557	1.2	0.685	20.9	LOS C	31.1	219.2	0.64	0.72	0.64	22.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Leopard Street											
P1	Full	11	54.2	LOS E	0.0	0.0	0.95	0.95	208.0	200.0	0.96
East: Vulture Street											
P2	Full	63	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
North: Leopard Street											
P3	Full	63	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

All Pedestrians	137	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [1_2028DP] Site1 - PM Peak - Vulture Street / Leopard Street (2028 Development)

Network: [10] PM Peak - 2028 Development (2028 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 1 - Vulture Street / Leopard Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	1	0.0	1	0.0	* 0.011	59.9	LOS E	0.1	0.4	0.97	0.57	0.97	6.9
3	R2	All MCs	1	0.0	1	0.0	0.012	65.6	LOS E	0.1	0.4	0.97	0.59	0.97	6.1
Approach			2	0.0	2	0.0	0.012	62.7	LOS E	0.1	0.4	0.97	0.58	0.97	6.5
North: Leopard Street															
7	L2	All MCs	22	0.0	22	0.0	0.628	50.3	LOS D	14.4	103.7	0.96	0.81	0.96	6.3
8	T1	All MCs	518	3.8	518	3.8	* 0.628	45.5	LOS D	14.4	104.2	0.96	0.81	0.96	12.5
Approach			540	3.6	540	3.6	0.628	45.7	LOS D	14.4	104.2	0.96	0.81	0.96	12.2
West: Vulture Street															
10	L2	All MCs	852	0.9	852	0.9	0.543	8.2	LOS A	13.6	95.7	0.30	0.68	0.30	34.6
11	T1	All MCs	1398	0.9	1398	0.9	* 0.628	18.0	LOS B	26.8	189.2	0.72	0.66	0.72	23.1
12	R2	All MCs	768	0.7	768	0.7	0.443	23.6	LOS C	12.7	89.6	0.61	0.77	0.61	25.4
Approach			3018	0.8	3018	0.8	0.628	16.7	LOS B	26.8	189.2	0.58	0.69	0.58	25.5
All Vehicles			3560	1.2	3560	1.2	0.628	21.1	LOS C	26.8	189.2	0.63	0.71	0.63	22.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Leopard Street											
P1	Full	11	54.2	LOS E	0.0	0.0	0.95	0.95	208.0	200.0	0.96
East: Vulture Street											
P2	Full	63	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
North: Leopard Street											

P3 Full	63	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
All Pedestrians	137	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [1_2029BP] Site1 - PM Peak - Vulture Street / Leopard Street (2029 Base)

Network: [4] PM Peak - 2029 Base (2029 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 1 - Vulture Street / Leopard Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	1	0.0	1	0.0	0.011	59.9	LOS E	0.1	0.4	0.97	0.57	0.97	6.9
3	R2	All MCs	1	0.0	1	0.0	*0.020	67.8	LOS E	0.1	0.4	0.97	0.60	0.97	5.9
Approach			2	0.0	2	0.0	0.020	63.9	LOS E	0.1	0.4	0.97	0.58	0.97	6.4
North: Leopard Street															
7	L2	All MCs	22	0.0	22	0.0	0.752	56.8	LOS E	15.7	113.4	1.00	0.89	1.07	5.6
8	T1	All MCs	522	3.8	522	3.8	*0.752	52.1	LOS D	15.8	113.9	1.00	0.89	1.07	11.2
Approach			544	3.6	544	3.6	0.752	52.3	LOS D	15.8	113.9	1.00	0.89	1.07	11.0
West: Vulture Street															
10	L2	All MCs	860	0.9	860	0.9	0.548	8.2	LOS A	13.8	97.4	0.31	0.68	0.31	34.6
11	T1	All MCs	1409	0.9	1409	0.9	*0.752	18.0	LOS B	36.9	260.0	0.78	0.72	0.78	23.1
12	R2	All MCs	777	0.7	777	0.7	0.396	19.6	LOS B	11.5	81.2	0.55	0.75	0.55	27.2
Approach			3046	0.8	3046	0.8	0.752	15.7	LOS B	36.9	260.0	0.59	0.72	0.59	26.4
All Vehicles			3593	1.2	3593	1.2	0.752	21.2	LOS C	36.9	260.0	0.65	0.74	0.66	22.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Leopard Street											
P1	Full	11	54.2	LOS E	0.0	0.0	0.95	0.95	208.0	200.0	0.96
East: Vulture Street											
P2	Full	63	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
North: Leopard Street											
P3	Full	63	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

All Pedestrians	137	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [1_2029DP] Site1 - PM Peak - Vulture Street / Leopard Street (2029 Development)

Network: [12] PM Peak - 2029 Development (2029 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 1 - Vulture Street / Leopard Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	1	0.0	1	0.0	* 0.011	59.9	LOS E	0.1	0.4	0.97	0.57	0.97	6.9
3	R2	All MCs	1	0.0	1	0.0	0.012	65.6	LOS E	0.1	0.4	0.97	0.59	0.97	6.1
Approach			2	0.0	2	0.0	0.012	62.7	LOS E	0.1	0.4	0.97	0.58	0.97	6.5
North: Leopard Street															
7	L2	All MCs	22	0.0	22	0.0	0.668	50.9	LOS D	15.4	110.7	0.97	0.82	0.97	6.2
8	T1	All MCs	548	3.6	548	3.6	* 0.668	46.2	LOS D	15.4	111.2	0.97	0.82	0.97	12.3
Approach			571	3.5	571	3.5	0.668	46.4	LOS D	15.4	111.2	0.97	0.82	0.97	12.1
West: Vulture Street															
10	L2	All MCs	860	0.9	860	0.9	0.548	8.2	LOS A	13.8	97.4	0.31	0.68	0.31	34.6
11	T1	All MCs	1480	0.8	1480	0.8	* 0.669	18.8	LOS B	29.7	209.4	0.75	0.68	0.75	22.6
12	R2	All MCs	777	0.7	777	0.7	0.451	23.7	LOS C	12.9	90.9	0.62	0.77	0.62	25.4
Approach			3117	0.8	3117	0.8	0.669	17.1	LOS B	29.7	209.4	0.59	0.70	0.59	25.1
All Vehicles			3689	1.2	3689	1.2	0.669	21.7	LOS C	29.7	209.4	0.65	0.72	0.65	21.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Leopard Street											
P1	Full	11	54.2	LOS E	0.0	0.0	0.95	0.95	208.0	200.0	0.96
East: Vulture Street											
P2	Full	63	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
North: Leopard Street											

P3 Full	63	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
All Pedestrians	137	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [1_2030BP] Site1 - PM Peak - Vulture Street / Leopard Street (2030 Base)

Network: [6] PM Peak - 2030 Base (2030 Base)

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Site 1 - Vulture Street / Leopard Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	1	0.0	1	0.0	0.011	59.9	LOS E	0.1	0.4	0.97	0.57	0.97	6.9
3	R2	All MCs	1	0.0	1	0.0	* 0.023	68.6	LOS E	0.1	0.4	0.97	0.60	0.97	5.9
Approach			2	0.0	2	0.0	0.023	64.3	LOS E	0.1	0.4	0.97	0.59	0.97	6.3
North: Leopard Street															
7	L2	All MCs	22	0.0	22	0.0	0.792	59.5	LOS E	16.4[N8]	118.2[N8]	1.00	0.93	1.11	5.3
8	T1	All MCs	527	3.8	527	3.8	* 0.792	54.8	LOS D	16.4[N8]	118.7[N8]	1.00	0.93	1.11	10.7
Approach			549	3.6	549	3.6	0.792	55.0	LOS D	16.4[N8]	118.7[N8]	1.00	0.93	1.11	10.5
West: Vulture Street															
10	L2	All MCs	868	0.9	868	0.9	0.554	8.2	LOS A	14.1	99.3	0.31	0.68	0.31	34.5
11	T1	All MCs	1424	0.9	1424	0.9	* 0.792	19.8	LOS B	40.9	288.7	0.81	0.76	0.83	21.8
12	R2	All MCs	784	0.7	784	0.7	0.391	19.0	LOS B	11.4	80.3	0.54	0.75	0.54	27.6
Approach			3077	0.8	3077	0.8	0.792	16.3	LOS B	40.9	288.7	0.60	0.74	0.61	25.8
All Vehicles			3628	1.2	3628	1.2	0.792	22.2	LOS C	40.9[N8]	288.7[N8]	0.66	0.76	0.69	21.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)
N8 The Percentile Back of Queue extends to upstream Site lanes.

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Leopard Street											
P1	Full	11	54.2	LOS E	0.0	0.0	0.95	0.95	208.0	200.0	0.96
East: Vulture Street											
P2	Full	63	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
North: Leopard Street											

P3 Full	63	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
All Pedestrians	137	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [1_2030DP] Site1 - PM Peak - Vulture Street / Leopard Street (2030 Development)

Network: [14] PM Peak - 2030 Development (2030 Development)

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Site 1 - Vulture Street / Leopard Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	1	0.0	1	0.0	* 0.011	59.9	LOS E	0.1	0.4	0.97	0.57	0.97	6.9
3	R2	All MCs	1	0.0	1	0.0	0.012	65.6	LOS E	0.1	0.4	0.97	0.59	0.97	6.1
Approach			2	0.0	2	0.0	0.012	62.7	LOS E	0.1	0.4	0.97	0.58	0.97	6.5
North: Leopard Street															
7	L2	All MCs	22	0.0	22	0.0	0.677	51.1	LOS D	15.6	112.3	0.97	0.83	0.97	6.2
8	T1	All MCs	555	3.6	555	3.6	* 0.677	46.4	LOS D	15.6	112.8	0.97	0.82	0.97	12.3
Approach			577	3.4	577	3.4	0.677	46.6	LOS D	15.6	112.8	0.97	0.82	0.97	12.1
West: Vulture Street															
10	L2	All MCs	868	0.9	868	0.9	0.554	8.2	LOS A	14.1	99.3	0.31	0.68	0.31	34.5
11	T1	All MCs	1498	0.8	1498	0.8	* 0.679	19.0	LOS B	30.5	214.6	0.75	0.69	0.75	22.5
12	R2	All MCs	784	0.7	784	0.7	0.458	23.9	LOS C	13.1	92.2	0.62	0.77	0.62	25.4
Approach			3151	0.8	3151	0.8	0.679	17.3	LOS B	30.5	214.6	0.60	0.71	0.60	25.0
All Vehicles			3729	1.2	3729	1.2	0.679	21.8	LOS C	30.5	214.6	0.66	0.72	0.66	21.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Leopard Street											
P1	Full	11	54.2	LOS E	0.0	0.0	0.95	0.95	208.0	200.0	0.96
East: Vulture Street											
P2	Full	63	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
North: Leopard Street											

P3 Full	63	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
All Pedestrians	137	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [1_2031BP] Site1 - PM Peak - Vulture Street / Leopard Street (2031 Base)

Network: [8] PM Peak - 2031 Base (2031 Base)

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Site 1 - Vulture Street / Leopard Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	1	0.0	1	0.0	0.011	59.9	LOS E	0.1	0.4	0.97	0.57	0.97	6.9
3	R2	All MCs	1	0.0	1	0.0	* 0.023	68.6	LOS E	0.1	0.4	0.97	0.60	0.97	5.9
Approach			2	0.0	2	0.0	0.023	64.3	LOS E	0.1	0.4	0.97	0.59	0.97	6.3
North: Leopard Street															
7	L2	All MCs	22	0.0	22	0.0	0.800	59.9	LOS E	16.6[N8]	120.0[N8]	1.00	0.93	1.12	5.3
8	T1	All MCs	533	3.8	533	3.8	* 0.800	55.2	LOS E	16.7[N8]	120.5[N8]	1.00	0.93	1.12	10.7
Approach			555	3.6	555	3.6	0.800	55.4	LOS E	16.7[N8]	120.5[N8]	1.00	0.93	1.12	10.5
West: Vulture Street															
10	L2	All MCs	877	0.9	877	0.9	0.559	8.3	LOS A	14.3	101.1	0.31	0.68	0.31	34.5
11	T1	All MCs	1438	0.9	1438	0.9	* 0.800	20.2	LOS C	41.7	294.2	0.82	0.77	0.84	21.5
12	R2	All MCs	793	0.7	793	0.7	0.401	19.2	LOS B	11.6	81.8	0.55	0.75	0.55	27.5
Approach			3107	0.8	3107	0.8	0.800	16.6	LOS B	41.7	294.2	0.61	0.74	0.62	25.6
All Vehicles			3664	1.2	3664	1.2	0.800	22.5	LOS C	41.7[N8]	294.2[N8]	0.67	0.77	0.69	21.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)
N8 The Percentile Back of Queue extends to upstream Site lanes.

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Leopard Street											
P1	Full	11	54.2	LOS E	0.0	0.0	0.95	0.95	208.0	200.0	0.96
East: Vulture Street											
P2	Full	63	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
North: Leopard Street											

P3 Full	63	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
All Pedestrians	137	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

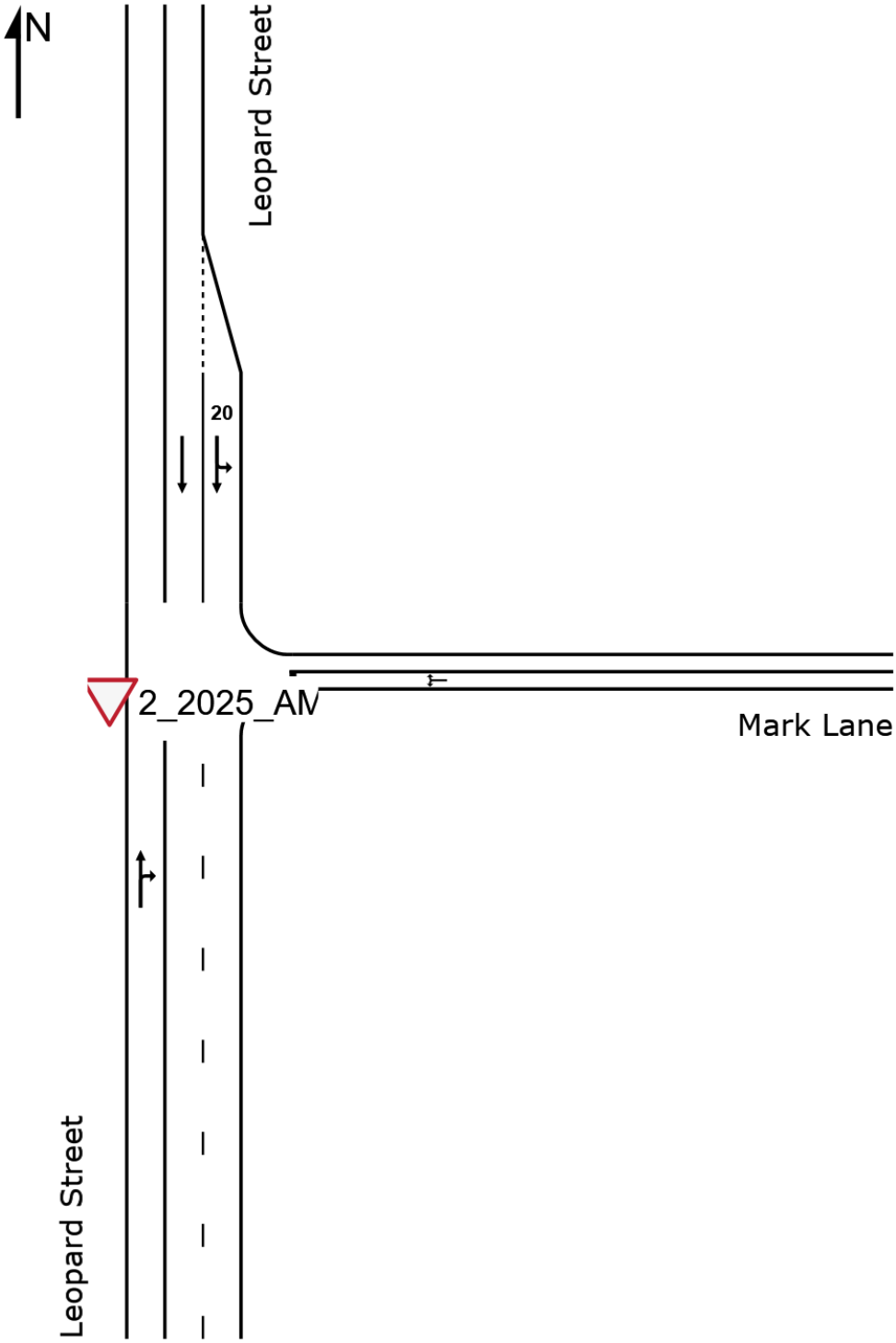
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SITE LAYOUT

Site: [2_2025_AM] Site 2 - AM Peak - Leopard Street / Mark Lane (2025 Survey)

Site 2 - Leopard Street / Mark Lane
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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MOVEMENT SUMMARY

Site: [2_2025_AM] Site 2 - AM Peak - Leopard Street / Mark Lane (2025 Survey)

Network: [17] AM Peak - Existing Network 2025 (2025 Existing)

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Site 2 - Leopard Street / Mark Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	735	2.3	735	2.3	0.388	0.0	LOS A	0.1	0.5	0.01	0.01	0.01	59.9
3	R2	All MCs	3	0.0	3	0.0	0.388	7.3	LOS A	0.1	0.5	0.01	0.01	0.01	59.3
Approach			738	2.3	738	2.3	0.388	0.1	NA	0.1	0.5	0.01	0.01	0.01	59.9
East: Mark Lane															
4	L2	All MCs	1	0.0	1	0.0	0.075	6.4	LOS A	0.2	1.4	0.87	0.95	0.87	9.4
6	R2	All MCs	8	0.0	8	0.0	0.075	32.8	LOS D	0.2	1.4	0.87	0.95	0.87	31.2
Approach			9	0.0	9	0.0	0.075	29.9	LOS D	0.2	1.4	0.87	0.95	0.87	29.9
North: Leopard Street															
7	L2	All MCs	11	0.0	11	0.0	0.207	5.6	LOS A	-[N7]	-[N7]	0.00	0.02	0.00	59.6
8	T1	All MCs	787	1.7	787	1.7	0.207	0.1	LOS A	-[N7]	-[N7]	0.00	0.01	0.00	59.8
Approach			798	1.7	798	1.7	0.207	0.1	NA	-[N7]	-[N7]	0.00	0.01	0.00	59.7
All Vehicles			1545	2.0	1545	2.0	0.388	0.3	NA	-[N7]	-[N7]	0.01	0.02	0.01	59.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

N7 The capacity reduction has been determined from the queue blockage probability based on the Percentile Back of Queue values of a Site further downstream.

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MOVEMENT SUMMARY

Site: [2_2028BA] Site 2 - AM Peak - Leopard Street / Mark Lane (2028 Base)

Network: [1] AM Peak - 2028 Base (2028 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 2 - Leopard Street / Mark Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	757	2.3	757	2.3	0.400	0.0	LOS A	0.1	0.5	0.01	0.01	0.01	59.9
3	R2	All MCs	3	0.0	3	0.0	0.400	7.5	LOS A	0.1	0.5	0.01	0.01	0.01	59.2
Approach			760	2.3	760	2.3	0.400	0.1	NA	0.1	0.5	0.01	0.01	0.01	59.9
East: Mark Lane															
4	L2	All MCs	1	0.0	1	0.0	0.082	6.5	LOS A	0.2	1.5	0.89	0.95	0.89	8.8
6	R2	All MCs	8	0.0	8	0.0	0.082	35.5	LOS E	0.2	1.5	0.89	0.95	0.89	30.2
Approach			9	0.0	9	0.0	0.082	32.3	LOS D	0.2	1.5	0.89	0.95	0.89	28.8
North: Leopard Street															
7	L2	All MCs	11	0.0	11	0.0	0.213	5.6	LOS A	-N7	-N7	0.00	0.02	0.00	59.6
8	T1	All MCs	812	1.7	812	1.7	0.213	0.1	LOS A	-N7	-N7	0.00	0.01	0.00	59.8
Approach			822	1.7	822	1.7	0.213	0.1	NA	-N7	-N7	0.00	0.01	0.00	59.7
All Vehicles			1592	2.0	1592	2.0	0.400	0.3	NA	-N7	-N7	0.01	0.02	0.01	59.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

N7 The capacity reduction has been determined from the queue blockage probability based on the Percentile Back of Queue values of a Site further downstream.

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MOVEMENT SUMMARY

Site: [2_2028DA] Site 2 - AM Peak - Leopard Street / Mark Lane (2028 Development)

Network: [9] AM Peak - 2028 Development (2028 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 2 - Leopard Street / Mark Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	757	2.3	757	2.3	0.400	0.0	LOS A	0.1	0.5	0.01	0.01	0.01	59.9
3	R2	All MCs	3	0.0	3	0.0	0.400	7.5	LOS A	0.1	0.5	0.01	0.01	0.01	59.2
Approach			760	2.3	760	2.3	0.400	0.1	NA	0.1	0.5	0.01	0.01	0.01	59.9
East: Mark Lane															
4	L2	All MCs	3	0.0	3	0.0	0.096	6.5	LOS A	0.2	1.6	0.84	0.94	0.84	10.1
6	R2	All MCs	8	0.0	8	0.0	0.096	35.8	LOS E	0.2	1.6	0.84	0.94	0.84	32.2
Approach			12	0.0	12	0.0	0.096	27.8	LOS D	0.2	1.6	0.84	0.94	0.84	28.7
North: Leopard Street															
7	L2	All MCs	11	0.0	11	0.0	0.213	5.6	LOS A	-N7	-N7	0.00	0.02	0.00	59.6
8	T1	All MCs	812	1.7	812	1.7	0.213	0.1	LOS A	-N7	-N7	0.00	0.01	0.00	59.8
Approach			822	1.7	822	1.7	0.213	0.1	NA	-N7	-N7	0.00	0.01	0.00	59.7
All Vehicles			1594	2.0	1594	2.0	0.400	0.3	NA	-N7	-N7	0.01	0.02	0.01	59.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

N7 The capacity reduction has been determined from the queue blockage probability based on the Percentile Back of Queue values of a Site further downstream.

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MOVEMENT SUMMARY

Site: [2_2029BA] Site 2 - AM Peak - Leopard Street / Mark Lane (2029 Base)

Network: [3] AM Peak - 2029 Base (2029 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 2 - Leopard Street / Mark Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	764	2.3	764	2.3	0.403	0.0	LOS A	0.1	0.5	0.01	0.01	0.01	59.9
3	R2	All MCs	3	0.0	3	0.0	0.403	7.5	LOS A	0.1	0.5	0.01	0.01	0.01	59.2
Approach			767	2.3	767	2.3	0.403	0.1	NA	0.1	0.5	0.01	0.01	0.01	59.9
East: Mark Lane															
4	L2	All MCs	1	0.0	1	0.0	0.084	6.5	LOS A	0.2	1.6	0.89	0.95	0.89	8.6
6	R2	All MCs	8	0.0	8	0.0	0.084	36.4	LOS E	0.2	1.6	0.89	0.95	0.89	29.8
Approach			9	0.0	9	0.0	0.084	33.1	LOS D	0.2	1.6	0.89	0.95	0.89	28.5
North: Leopard Street															
7	L2	All MCs	11	0.0	11	0.0	0.215	5.6	LOS A	-N7	-N7	0.00	0.02	0.00	59.6
8	T1	All MCs	819	1.7	819	1.7	0.215	0.1	LOS A	-N7	-N7	0.00	0.01	0.00	59.8
Approach			829	1.7	829	1.7	0.215	0.1	NA	-N7	-N7	0.00	0.01	0.00	59.7
All Vehicles			1606	2.0	1606	2.0	0.403	0.3	NA	-N7	-N7	0.01	0.02	0.01	59.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

N7 The capacity reduction has been determined from the queue blockage probability based on the Percentile Back of Queue values of a Site further downstream.

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MOVEMENT SUMMARY

Site: [2_2029DA] Site 2 - AM Peak - Leopard Street / Mark Lane (2029 Development)

Network: [11] AM Peak - 2029 Development (2029 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 2 - Leopard Street / Mark Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	764	2.3	764	2.3	0.404	0.0	LOS A	0.1	0.5	0.01	0.01	0.01	59.9
3	R2	All MCs	3	0.0	3	0.0	0.404	7.6	LOS A	0.1	0.5	0.01	0.01	0.01	59.2
Approach			767	2.3	767	2.3	0.404	0.1	NA	0.1	0.5	0.01	0.01	0.01	59.9
East: Mark Lane															
4	L2	All MCs	46	0.0	46	0.0	0.215	6.9	LOS A	0.4	3.1	0.70	0.76	0.75	19.1
6	R2	All MCs	8	0.0	8	0.0	0.215	41.6	LOS E	0.4	3.1	0.70	0.76	0.75	42.2
Approach			55	0.0	55	0.0	0.215	12.2	LOS B	0.4	3.1	0.70	0.76	0.75	26.9
North: Leopard Street															
7	L2	All MCs	23	0.0	23	0.0	0.218	5.6	LOS A	-[N7]	-[N7]	0.00	0.03	0.00	59.3
8	T1	All MCs	818	1.7	818	1.7	0.218	0.1	LOS A	-[N7]	-[N7]	0.00	0.02	0.00	59.6
Approach			841	1.7	841	1.7	0.218	0.2	NA	-[N7]	-[N7]	0.00	0.02	0.00	59.6
All Vehicles			1663	1.9	1663	1.9	0.404	0.5	NA	-[N7]	-[N7]	0.03	0.04	0.03	59.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

N7 The capacity reduction has been determined from the queue blockage probability based on the Percentile Back of Queue values of a Site further downstream.

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MOVEMENT SUMMARY

Site: [2_2030BA] Site 2 - AM Peak - Leopard Street / Mark Lane (2030 Base)

Network: [5] AM Peak - 2030 Base (2030 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 2 - Leopard Street / Mark Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	773	2.3	773	2.3	0.408	0.0	LOS A	0.1	0.6	0.01	0.01	0.01	59.9
3	R2	All MCs	3	0.0	3	0.0	0.408	7.6	LOS A	0.1	0.6	0.01	0.01	0.01	59.2
Approach			776	2.3	776	2.3	0.408	0.1	NA	0.1	0.6	0.01	0.01	0.01	59.9
East: Mark Lane															
4	L2	All MCs	1	0.0	1	0.0	0.087	6.5	LOS A	0.2	1.6	0.89	0.96	0.89	8.4
6	R2	All MCs	8	0.0	8	0.0	0.087	37.5	LOS E	0.2	1.6	0.89	0.96	0.89	29.4
Approach			9	0.0	9	0.0	0.087	34.1	LOS D	0.2	1.6	0.89	0.96	0.89	28.1
North: Leopard Street															
7	L2	All MCs	11	0.0	11	0.0	0.217	5.6	LOS A	-N7	-N7	0.00	0.02	0.00	59.6
8	T1	All MCs	827	1.7	827	1.7	0.217	0.1	LOS A	-N7	-N7	0.00	0.01	0.00	59.8
Approach			838	1.7	838	1.7	0.217	0.1	NA	-N7	-N7	0.00	0.01	0.00	59.7
All Vehicles			1623	2.0	1623	2.0	0.408	0.3	NA	-N7	-N7	0.01	0.02	0.01	59.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

N7 The capacity reduction has been determined from the queue blockage probability based on the Percentile Back of Queue values of a Site further downstream.

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MOVEMENT SUMMARY

Site: [2_2030DA] Site 2 - AM Peak - Leopard Street / Mark Lane (2030 Development)

Network: [13] AM Peak - 2030 Development (2030 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 2 - Leopard Street / Mark Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	773	2.3	773	2.3	0.408	0.0	LOS A	0.1	0.6	0.01	0.01	0.01	59.9
3	R2	All MCs	3	0.0	3	0.0	0.408	7.7	LOS A	0.1	0.6	0.01	0.01	0.01	59.2
Approach			776	2.3	776	2.3	0.408	0.1	NA	0.1	0.6	0.01	0.01	0.01	59.9
East: Mark Lane															
4	L2	All MCs	51	0.0	51	0.0	0.229	7.0	LOS A	-N7	-N7	0.70	0.77	0.76	19.2
6	R2	All MCs	8	0.0	8	0.0	0.229	43.3	LOS E	-N7	-N7	0.70	0.77	0.76	42.2
Approach			59	0.0	59	0.0	0.229	12.2	LOS B	-N7	-N7	0.70	0.77	0.76	26.6
North: Leopard Street															
7	L2	All MCs	23	0.0	23	0.0	0.221	5.6	LOS A	-N7	-N7	0.00	0.03	0.00	59.3
8	T1	All MCs	826	1.7	826	1.7	0.221	0.1	LOS A	-N7	-N7	0.00	0.02	0.00	59.6
Approach			849	1.7	849	1.7	0.221	0.2	NA	-N7	-N7	0.00	0.02	0.00	59.6
All Vehicles			1684	1.9	1684	1.9	0.408	0.6	NA	-N7	-N7	0.03	0.04	0.03	58.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

N7 The capacity reduction has been determined from the queue blockage probability based on the Percentile Back of Queue values of a Site further downstream.

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MOVEMENT SUMMARY

Site: [2_2031BA] Site 2 - AM Peak - Leopard Street / Mark Lane (2031 Base)

Network: [7] AM Peak - 2031 Base (2031 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 2 - Leopard Street / Mark Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	780	2.3	780	2.3	0.412	0.0	LOS A	0.1	0.6	0.01	0.01	0.01	59.9
3	R2	All MCs	3	0.0	3	0.0	0.412	7.6	LOS A	0.1	0.6	0.01	0.01	0.01	59.2
Approach			783	2.3	783	2.3	0.412	0.1	NA	0.1	0.6	0.01	0.01	0.01	59.9
East: Mark Lane															
4	L2	All MCs	1	0.0	1	0.0	0.090	6.6	LOS A	0.2	1.7	0.90	0.96	0.90	8.2
6	R2	All MCs	8	0.0	8	0.0	0.090	38.5	LOS E	0.2	1.7	0.90	0.96	0.90	29.1
Approach			9	0.0	9	0.0	0.090	35.0	LOS D	0.2	1.7	0.90	0.96	0.90	27.7
North: Leopard Street															
7	L2	All MCs	11	0.0	11	0.0	0.220	5.6	LOS A	-N7	-N7	0.00	0.01	0.00	59.6
8	T1	All MCs	836	1.7	836	1.7	0.220	0.1	LOS A	-N7	-N7	0.00	0.01	0.00	59.8
Approach			846	1.7	846	1.7	0.220	0.1	NA	-N7	-N7	0.00	0.01	0.00	59.7
All Vehicles			1639	2.0	1639	2.0	0.412	0.3	NA	-N7	-N7	0.01	0.02	0.01	59.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

N7 The capacity reduction has been determined from the queue blockage probability based on the Percentile Back of Queue values of a Site further downstream.

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MOVEMENT SUMMARY

Site: [2_2031DA] Site 2 - AM Peak - Leopard Street / Mark Lane (2031 Development)

Network: [15] AM Peak - 2031 Development (2031 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 2 - Leopard Street / Mark Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	780	2.3	780	2.3	0.412	0.0	LOS A	0.1	0.6	0.01	0.01	0.01	59.9
3	R2	All MCs	3	0.0	3	0.0	0.412	7.8	LOS A	0.1	0.6	0.01	0.01	0.01	59.1
Approach			783	2.3	783	2.3	0.412	0.1	NA	0.1	0.6	0.01	0.01	0.01	59.9
East: Mark Lane															
4	L2	All MCs	73	0.0	73	0.0	0.277	7.2	LOS A	-[N7]	-[N7]	0.68	0.77	0.77	20.2
6	R2	All MCs	8	0.0	8	0.0	0.277	46.6	LOS E	-[N7]	-[N7]	0.68	0.77	0.77	43.0
Approach			81	0.0	81	0.0	0.277	11.3	LOS B	-[N7]	-[N7]	0.68	0.77	0.77	26.0
North: Leopard Street															
7	L2	All MCs	26	0.0	26	0.0	0.224	5.6	LOS A	-[N7]	-[N7]	0.00	0.04	0.00	59.2
8	T1	All MCs	835	1.7	835	1.7	0.224	0.1	LOS A	-[N7]	-[N7]	0.00	0.02	0.00	59.6
Approach			861	1.7	861	1.7	0.224	0.2	NA	-[N7]	-[N7]	0.00	0.02	0.00	59.5
All Vehicles			1725	1.9	1725	1.9	0.412	0.7	NA	-[N7]	-[N7]	0.04	0.05	0.04	58.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

N7 The capacity reduction has been determined from the queue blockage probability based on the Percentile Back of Queue values of a Site further downstream.

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MOVEMENT SUMMARY

Site: [2_2025_PM] Site 2 - PM Peak - Leopard Street / Mark Lane (2025 Survey)

Network: [2025_PM] PM Peak - Existing Network 2025 (2025 Existing)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 2 - Leopard Street / Mark Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	836	0.9	836	0.9	0.432	0.0	LOS A	0.0	0.1	0.00	0.00	0.00	60.0
3	R2	All MCs	1	0.0	1	0.0	0.432	5.0	LOS A	0.0	0.1	0.00	0.00	0.00	59.8
Approach			837	0.9	837	0.9	0.432	0.0	NA	0.0	0.1	0.00	0.00	0.00	60.0
East: Mark Lane															
4	L2	All MCs	24	0.0	24	0.0	0.039	5.9	LOS A	0.1	0.6	0.38	0.57	0.38	27.5
6	R2	All MCs	1	0.0	1	0.0	0.039	26.4	LOS D	0.1	0.6	0.38	0.57	0.38	47.3
Approach			25	0.0	25	0.0	0.039	6.8	LOS A	0.1	0.6	0.38	0.57	0.38	30.2
North: Leopard Street															
7	L2	All MCs	11	0.0	11	0.0	0.213	5.6	LOS A	0.0	0.0	0.00	0.02	0.00	59.4
8	T1	All MCs	498	3.6	498	3.6	0.213	0.1	LOS A	0.0	0.0	0.00	0.01	0.00	59.6
Approach			508	3.5	508	3.5	0.213	0.2	NA	0.0	0.0	0.00	0.01	0.00	59.6
All Vehicles			1371	1.8	1371	1.8	0.432	0.2	NA	0.1	0.6	0.01	0.02	0.01	59.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [2_2028BP] Site 2 - PM Peak - Leopard Street / Mark Lane (2028 Base)

Network: [2] PM Peak - 2028 Base (2028 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 2 - Leopard Street / Mark Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	861	0.9	861	0.9	0.445	0.0	LOS A	0.0	0.1	0.00	0.00	0.00	60.0
3	R2	All MCs	1	0.0	1	0.0	0.445	5.0	LOS A	0.0	0.1	0.00	0.00	0.00	59.8
Approach			862	0.9	862	0.9	0.445	0.0	NA	0.0	0.1	0.00	0.00	0.00	60.0
East: Mark Lane															
4	L2	All MCs	24	0.0	24	0.0	0.042	6.0	LOS A	0.1	0.7	0.39	0.58	0.39	27.3
6	R2	All MCs	1	0.0	1	0.0	0.042	28.3	LOS D	0.1	0.7	0.39	0.58	0.39	47.1
Approach			25	0.0	25	0.0	0.042	6.9	LOS A	0.1	0.7	0.39	0.58	0.39	30.0
North: Leopard Street															
7	L2	All MCs	11	0.0	11	0.0	0.231	5.6	LOS A	0.0	0.0	0.00	0.02	0.00	59.4
8	T1	All MCs	513	3.6	513	3.6	0.231	0.1	LOS A	0.0	0.0	0.00	0.01	0.00	59.6
Approach			523	3.5	523	3.5	0.231	0.2	NA	0.0	0.0	0.00	0.01	0.00	59.6
All Vehicles			1411	1.8	1411	1.8	0.445	0.2	NA	0.1	0.7	0.01	0.02	0.01	59.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [2_2028DP] Site 2 - PM Peak - Leopard Street / Mark Lane (2028 Development)

Network: [10] PM Peak - 2028 Development (2028 Development)

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Site 2 - Leopard Street / Mark Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	861	0.9	861	0.9	0.445	0.0	LOS A	0.0	0.1	0.00	0.00	0.00	60.0
3	R2	All MCs	1	0.0	1	0.0	0.445	5.0	LOS A	0.0	0.1	0.00	0.00	0.00	59.8
Approach			862	0.9	862	0.9	0.445	0.0	NA	0.0	0.1	0.00	0.00	0.00	60.0
East: Mark Lane															
4	L2	All MCs	25	0.0	25	0.0	0.044	6.0	LOS A	0.1	0.7	0.39	0.58	0.39	27.3
6	R2	All MCs	1	0.0	1	0.0	0.044	28.4	LOS D	0.1	0.7	0.39	0.58	0.39	47.2
Approach			26	0.0	26	0.0	0.044	6.8	LOS A	0.1	0.7	0.39	0.58	0.39	29.9
North: Leopard Street															
7	L2	All MCs	12	0.0	12	0.0	0.232	5.6	LOS A	0.0	0.0	0.00	0.03	0.00	59.3
8	T1	All MCs	513	3.6	513	3.6	0.232	0.1	LOS A	0.0	0.0	0.00	0.01	0.00	59.6
Approach			524	3.5	524	3.5	0.232	0.2	NA	0.0	0.0	0.00	0.01	0.00	59.5
All Vehicles			1413	1.8	1413	1.8	0.445	0.2	NA	0.1	0.7	0.01	0.02	0.01	59.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [2_2029BP] Site 2 - PM Peak - Leopard Street / Mark Lane (2029 Base)

Network: [4] PM Peak - 2029 Base (2029 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 2 - Leopard Street / Mark Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	869	0.9	869	0.9	0.450	0.0	LOS A	0.0	0.1	0.00	0.00	0.00	60.0
3	R2	All MCs	1	0.0	1	0.0	0.450	5.0	LOS A	0.0	0.1	0.00	0.00	0.00	59.8
Approach			871	0.9	871	0.9	0.450	0.0	NA	0.0	0.1	0.00	0.00	0.00	60.0
East: Mark Lane															
4	L2	All MCs	24	0.0	24	0.0	0.043	6.0	LOS A	0.1	0.7	0.39	0.58	0.39	27.2
6	R2	All MCs	1	0.0	1	0.0	0.043	29.0	LOS D	0.1	0.7	0.39	0.58	0.39	47.1
Approach			25	0.0	25	0.0	0.043	6.9	LOS A	0.1	0.7	0.39	0.58	0.39	29.9
North: Leopard Street															
7	L2	All MCs	11	0.0	11	0.0	0.237	5.6	LOS A	0.0	0.0	0.00	0.02	0.00	59.3
8	T1	All MCs	518	3.6	518	3.6	0.237	0.1	LOS A	0.0	0.0	0.00	0.01	0.00	59.6
Approach			528	3.5	528	3.5	0.237	0.2	NA	0.0	0.0	0.00	0.01	0.00	59.6
All Vehicles			1424	1.8	1424	1.8	0.450	0.2	NA	0.1	0.7	0.01	0.02	0.01	59.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [2_2029DP] Site 2 - PM Peak - Leopard Street / Mark Lane (2029 Development)

Network: [12] PM Peak - 2029 Development (2029 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 2 - Leopard Street / Mark Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	869	0.9	869	0.9	0.450	0.0	LOS A	0.0	0.2	0.00	0.00	0.00	60.0
3	R2	All MCs	1	0.0	1	0.0	0.450	5.0	LOS A	0.0	0.2	0.00	0.00	0.00	59.8
Approach			871	0.9	871	0.9	0.450	0.0	NA	0.0	0.2	0.00	0.00	0.00	60.0
East: Mark Lane															
4	L2	All MCs	52	0.0	52	0.0	0.087	6.0	LOS A	0.2	1.3	0.37	0.59	0.37	28.0
6	R2	All MCs	1	0.0	1	0.0	0.087	30.9	LOS D	0.2	1.3	0.37	0.59	0.37	47.5
Approach			53	0.0	53	0.0	0.087	6.5	LOS A	0.2	1.3	0.37	0.59	0.37	29.3
North: Leopard Street															
7	L2	All MCs	38	0.0	38	0.0	0.268	5.7	LOS A	0.0	0.0	0.00	0.08	0.00	58.3
8	T1	All MCs	517	3.6	517	3.6	0.268	0.1	LOS A	0.0	0.0	0.00	0.04	0.00	59.0
Approach			555	3.4	555	3.4	0.268	0.5	NA	0.0	0.0	0.00	0.04	0.00	59.0
All Vehicles			1478	1.8	1478	1.8	0.450	0.4	NA	0.2	1.3	0.01	0.04	0.01	59.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [2_2030BP] Site 2 - PM Peak - Leopard Street / Mark Lane (2030 Base)

Network: [6] PM Peak - 2030 Base (2030 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 2 - Leopard Street / Mark Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	879	0.9	879	0.9	0.455	0.0	LOS A	0.0	0.1	0.00	0.00	0.00	60.0
3	R2	All MCs	1	0.0	1	0.0	0.455	5.0	LOS A	0.0	0.1	0.00	0.00	0.00	59.8
Approach			880	0.9	880	0.9	0.455	0.0	NA	0.0	0.1	0.00	0.00	0.00	60.0
East: Mark Lane															
4	L2	All MCs	24	0.0	24	0.0	0.044	6.0	LOS A	0.1	0.7	0.40	0.58	0.40	27.1
6	R2	All MCs	1	0.0	1	0.0	0.044	29.8	LOS D	0.1	0.7	0.40	0.58	0.40	47.1
Approach			25	0.0	25	0.0	0.044	7.0	LOS A	0.1	0.7	0.40	0.58	0.40	29.8
North: Leopard Street															
7	L2	All MCs	11	0.0	11	0.0	0.244	5.6	LOS A	0.0	0.0	0.00	0.02	0.00	59.3
8	T1	All MCs	523	3.6	523	3.6	0.244	0.1	LOS A	0.0	0.0	0.00	0.01	0.00	59.6
Approach			534	3.5	534	3.5	0.244	0.2	NA	0.0	0.0	0.00	0.01	0.00	59.5
All Vehicles			1439	1.8	1439	1.8	0.455	0.2	NA	0.1	0.7	0.01	0.02	0.01	59.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [2_2030DP] Site 2 - PM Peak - Leopard Street / Mark Lane (2030 Development)

Network: [14] PM Peak - 2030 Development (2030 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 2 - Leopard Street / Mark Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Queued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	879	0.9	879	0.9	0.455	0.0	LOS A	0.0	0.2	0.00	0.00	0.00	60.0
3	R2	All MCs	1	0.0	1	0.0	0.455	5.0	LOS A	0.0	0.2	0.00	0.00	0.00	59.8
Approach			880	0.9	880	0.9	0.455	0.0	NA	0.0	0.2	0.00	0.00	0.00	60.0
East: Mark Lane															
4	L2	All MCs	53	0.0	53	0.0	0.091	6.0	LOS A	0.2	1.3	0.37	0.59	0.37	27.9
6	R2	All MCs	1	0.0	1	0.0	0.091	31.9	LOS D	0.2	1.3	0.37	0.59	0.37	47.4
Approach			54	0.0	54	0.0	0.091	6.5	LOS A	0.2	1.3	0.37	0.59	0.37	29.3
North: Leopard Street															
7	L2	All MCs	39	0.0	39	0.0	0.277	5.7	LOS A	0.0	0.0	0.00	0.08	0.00	58.3
8	T1	All MCs	522	3.6	522	3.6	0.277	0.2	LOS A	0.0	0.0	0.00	0.04	0.00	59.0
Approach			561	3.4	561	3.4	0.277	0.5	NA	0.0	0.0	0.00	0.04	0.00	58.9
All Vehicles			1495	1.8	1495	1.8	0.455	0.4	NA	0.2	1.3	0.01	0.04	0.02	59.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [2_2031BP] Site 2 - PM Peak - Leopard Street / Mark Lane (2031 Base)

Network: [8] PM Peak - 2031 Base (2031 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 2 - Leopard Street / Mark Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	887	0.9	887	0.9	0.459	0.0	LOS A	0.0	0.2	0.00	0.00	0.00	60.0
3	R2	All MCs	1	0.0	1	0.0	0.459	5.0	LOS A	0.0	0.2	0.00	0.00	0.00	59.8
Approach			888	0.9	888	0.9	0.459	0.0	NA	0.0	0.2	0.00	0.00	0.00	60.0
East: Mark Lane															
4	L2	All MCs	24	0.0	24	0.0	0.046	6.0	LOS A	0.1	0.7	0.40	0.58	0.40	27.0
6	R2	All MCs	1	0.0	1	0.0	0.046	30.5	LOS D	0.1	0.7	0.40	0.58	0.40	47.0
Approach			25	0.0	25	0.0	0.046	7.0	LOS A	0.1	0.7	0.40	0.58	0.40	29.7
North: Leopard Street															
7	L2	All MCs	11	0.0	11	0.0	0.251	5.6	LOS A	0.0	0.0	0.00	0.02	0.00	59.3
8	T1	All MCs	528	3.6	528	3.6	0.251	0.1	LOS A	0.0	0.0	0.00	0.01	0.00	59.5
Approach			539	3.5	539	3.5	0.251	0.2	NA	0.0	0.0	0.00	0.01	0.00	59.5
All Vehicles			1453	1.8	1453	1.8	0.459	0.2	NA	0.1	0.7	0.01	0.02	0.01	59.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [2_2031DP] Site 2 - PM Peak - Leopard Street / Mark Lane (2031 Development)

Network: [16] PM Peak - 2031 Development (2031 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 2 - Leopard Street / Mark Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Queued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Leopard Street															
2	T1	All MCs	887	0.9	887	0.9	0.459	0.0	LOS A	0.0	0.2	0.00	0.00	0.00	60.0
3	R2	All MCs	1	0.0	1	0.0	0.459	5.0	LOS A	0.0	0.2	0.00	0.00	0.00	59.8
Approach			888	0.9	888	0.9	0.459	0.0	NA	0.0	0.2	0.00	0.00	0.00	60.0
East: Mark Lane															
4	L2	All MCs	62	0.0	62	0.0	0.108	6.0	LOS A	0.2	1.5	0.36	0.59	0.36	28.0
6	R2	All MCs	1	0.0	1	0.0	0.108	33.6	LOS D	0.2	1.5	0.36	0.59	0.36	47.5
Approach			63	0.0	63	0.0	0.108	6.4	LOS A	0.2	1.5	0.36	0.59	0.36	29.2
North: Leopard Street															
7	L2	All MCs	51	0.0	51	0.0	0.152	5.6	LOS A	-[N7]	-[N7]	0.00	0.10	0.00	58.0
8	T1	All MCs	527	3.6	527	3.6	0.152	0.0	LOS A	-[N7]	-[N7]	0.00	0.05	0.00	59.1
Approach			578	3.3	578	3.3	0.152	0.5	NA	-[N7]	-[N7]	0.00	0.05	0.00	59.0
All Vehicles			1529	1.8	1529	1.8	0.459	0.5	NA	-[N7]	-[N7]	0.02	0.05	0.02	59.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

N7 The capacity reduction has been determined from the queue blockage probability based on the Percentile Back of Queue values of a Site further downstream.

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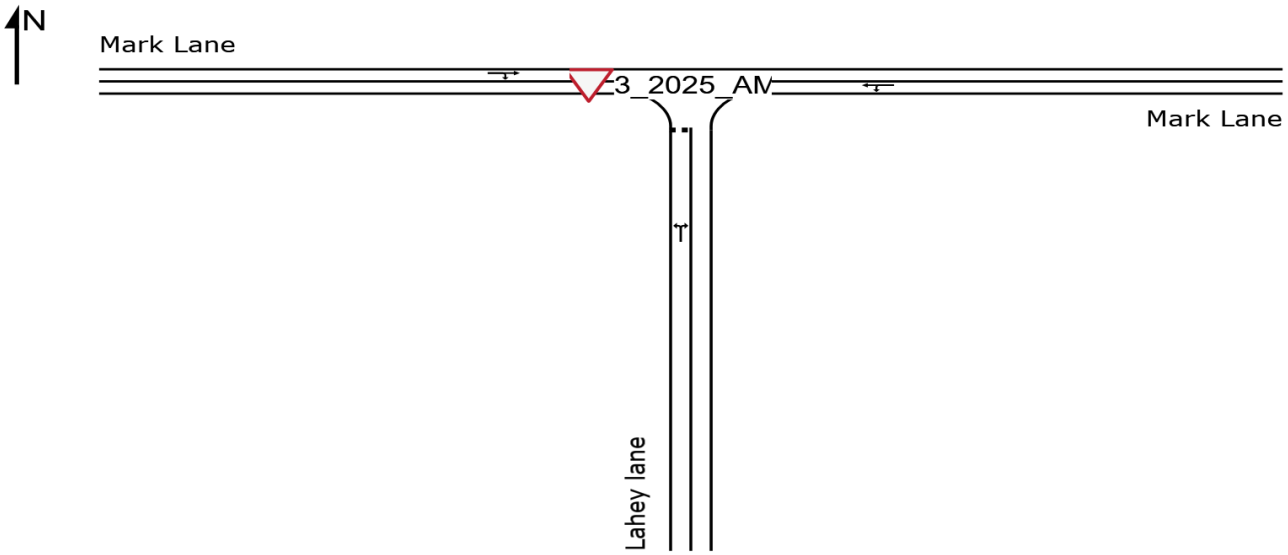
SITE LAYOUT

Site: [3_2025_AM] Site 3 - AM Peak - Mark Lane/ Lahey Lane

(2025 Survey)

Site 3 - Mark Lane/ Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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MOVEMENT SUMMARY

Site: [3_2025_AM] Site 3 - AM Peak - Mark Lane/ Lahey Lane (2025 Survey)

Network: [17] AM Peak - Existing Network 2025 (2025 Existing)

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Site 3 - Mark Lane/ Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Lahey lane															
1	L2	All MCs	2	0.0	2	0.0	0.002	2.3	LOS A	0.0	0.1	0.04	0.50	0.04	22.8
3	R2	All MCs	1	0.0	1	0.0	0.002	2.2	LOS A	0.0	0.1	0.04	0.50	0.04	22.8
Approach			3	0.0	3	0.0	0.002	2.3	LOS A	0.0	0.1	0.04	0.50	0.04	22.8
East: Mark Lane															
4	L2	All MCs	3	0.0	3	0.0	0.006	3.6	LOS A	0.0	0.0	0.00	0.17	0.00	45.1
5	T1	All MCs	7	0.0	7	0.0	0.006	0.0	LOS A	0.0	0.0	0.00	0.17	0.00	45.1
Approach			11	0.0	11	0.0	0.006	1.1	NA	0.0	0.0	0.00	0.17	0.00	45.1
West: Mark Lane															
11	T1	All MCs	3	0.0	3	0.0	0.008	0.0	LOS A	0.0	0.2	0.05	0.48	0.05	33.4
12	R2	All MCs	11	0.0	11	0.0	0.008	5.4	LOS A	0.0	0.2	0.05	0.48	0.05	33.4
Approach			14	0.0	14	0.0	0.008	4.2	NA	0.0	0.2	0.05	0.48	0.05	33.4
All Vehicles			27	0.0	27	0.0	0.008	2.8	NA	0.0	0.2	0.03	0.36	0.03	35.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [3_2028BA] Site 3 - AM Peak - Mark Lane/ Lahey Lane (2028 Base)

Network: [1] AM Peak - 2028 Base (2028 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 3 - Mark Lane/ Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Lahey lane															
1	L2	All MCs	2	0.0	2	0.0	0.002	2.3	LOS A	0.0	0.1	0.04	0.50	0.04	22.8
3	R2	All MCs	1	0.0	1	0.0	0.002	2.2	LOS A	0.0	0.1	0.04	0.50	0.04	22.8
Approach			3	0.0	3	0.0	0.002	2.3	LOS A	0.0	0.1	0.04	0.50	0.04	22.8
East: Mark Lane															
4	L2	All MCs	3	0.0	3	0.0	0.006	3.6	LOS A	0.0	0.0	0.00	0.17	0.00	45.1
5	T1	All MCs	7	0.0	7	0.0	0.006	0.0	LOS A	0.0	0.0	0.00	0.17	0.00	45.1
Approach			11	0.0	11	0.0	0.006	1.1	NA	0.0	0.0	0.00	0.17	0.00	45.1
West: Mark Lane															
11	T1	All MCs	3	0.0	3	0.0	0.008	0.0	LOS A	0.0	0.2	0.05	0.48	0.05	33.4
12	R2	All MCs	11	0.0	11	0.0	0.008	5.4	LOS A	0.0	0.2	0.05	0.48	0.05	33.4
Approach			14	0.0	14	0.0	0.008	4.2	NA	0.0	0.2	0.05	0.48	0.05	33.4
All Vehicles			27	0.0	27	0.0	0.008	2.8	NA	0.0	0.2	0.03	0.36	0.03	35.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [3_2028DA] Site 3 - AM Peak - Mark Lane/ Lahey Lane (2028 Development)

Network: [9] AM Peak - 2028 Development (2028 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 3 - Mark Lane/ Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Lahey lane															
1	L2	All MCs	4	0.0	4	0.0	0.005	2.3	LOS A	0.0	0.1	0.05	0.50	0.05	22.5
3	R2	All MCs	3	0.0	3	0.0	0.005	2.2	LOS A	0.0	0.1	0.05	0.50	0.05	22.5
Approach			7	0.0	7	0.0	0.005	2.3	LOS A	0.0	0.1	0.05	0.50	0.05	22.5
East: Mark Lane															
4	L2	All MCs	3	0.0	3	0.0	0.006	5.3	LOS A	0.0	0.0	0.00	0.18	0.00	46.9
5	T1	All MCs	7	0.0	7	0.0	0.006	0.0	LOS A	0.0	0.0	0.00	0.18	0.00	46.9
Approach			11	0.0	11	0.0	0.006	1.6	NA	0.0	0.0	0.00	0.18	0.00	46.9
West: Mark Lane															
11	T1	All MCs	3	0.0	3	0.0	0.008	0.0	LOS A	0.0	0.2	0.05	0.48	0.05	33.4
12	R2	All MCs	11	0.0	11	0.0	0.008	5.4	LOS A	0.0	0.2	0.05	0.48	0.05	33.4
Approach			14	0.0	14	0.0	0.008	4.2	NA	0.0	0.2	0.05	0.48	0.05	33.4
All Vehicles			32	0.0	32	0.0	0.008	2.9	NA	0.0	0.2	0.03	0.38	0.03	36.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [3_2029BA] Site 3 - AM Peak - Mark Lane/ Lahey Lane (2029 Base)

Network: [3] AM Peak - 2029 Base (2029 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 3 - Mark Lane/ Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Lahey lane															
1	L2	All MCs	2	0.0	2	0.0	0.002	2.3	LOS A	0.0	0.1	0.04	0.50	0.04	22.8
3	R2	All MCs	1	0.0	1	0.0	0.002	2.2	LOS A	0.0	0.1	0.04	0.50	0.04	22.8
Approach			3	0.0	3	0.0	0.002	2.3	LOS A	0.0	0.1	0.04	0.50	0.04	22.8
East: Mark Lane															
4	L2	All MCs	3	0.0	3	0.0	0.006	3.6	LOS A	0.0	0.0	0.00	0.17	0.00	45.1
5	T1	All MCs	7	0.0	7	0.0	0.006	0.0	LOS A	0.0	0.0	0.00	0.17	0.00	45.1
Approach			11	0.0	11	0.0	0.006	1.1	NA	0.0	0.0	0.00	0.17	0.00	45.1
West: Mark Lane															
11	T1	All MCs	3	0.0	3	0.0	0.008	0.0	LOS A	0.0	0.2	0.05	0.48	0.05	33.4
12	R2	All MCs	11	0.0	11	0.0	0.008	5.4	LOS A	0.0	0.2	0.05	0.48	0.05	33.4
Approach			14	0.0	14	0.0	0.008	4.2	NA	0.0	0.2	0.05	0.48	0.05	33.4
All Vehicles			27	0.0	27	0.0	0.008	2.8	NA	0.0	0.2	0.03	0.36	0.03	35.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [3_2029DA] Site 3 - AM Peak - Mark Lane/ Lahey Lane (2029 Development)

Network: [11] AM Peak - 2029 Development (2029 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 3 - Mark Lane/ Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Lahey lane															
1	L2	All MCs	4	0.0	4	0.0	0.031	2.4	LOS A	0.1	0.7	0.15	0.51	0.15	20.0
3	R2	All MCs	34	0.0	34	0.0	0.031	2.4	LOS A	0.1	0.7	0.15	0.51	0.15	20.0
Approach			38	0.0	38	0.0	0.031	2.4	LOS A	0.1	0.7	0.15	0.51	0.15	20.0
East: Mark Lane															
4	L2	All MCs	21	0.0	21	0.0	0.039	5.3	LOS A	0.0	0.0	0.00	0.18	0.00	47.0
5	T1	All MCs	49	0.0	49	0.0	0.039	0.0	LOS A	0.0	0.0	0.00	0.18	0.00	47.0
Approach			71	0.0	71	0.0	0.039	1.6	NA	0.0	0.0	0.00	0.18	0.00	47.0
West: Mark Lane															
11	T1	All MCs	11	0.0	11	0.0	0.012	0.1	LOS A	0.0	0.3	0.13	0.32	0.13	37.9
12	R2	All MCs	11	0.0	11	0.0	0.012	5.6	LOS A	0.0	0.3	0.13	0.32	0.13	37.9
Approach			21	0.0	21	0.0	0.012	2.8	NA	0.0	0.3	0.13	0.32	0.13	37.9
All Vehicles			129	0.0	129	0.0	0.039	2.0	NA	0.1	0.7	0.06	0.30	0.06	40.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [3_2030BA] Site 3 - AM Peak - Mark Lane/ Lahey Lane (2030 Base)

Network: [5] AM Peak - 2030 Base (2030 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 3 - Mark Lane/ Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Lahey lane															
1	L2	All MCs	2	0.0	2	0.0	0.002	2.3	LOS A	0.0	0.1	0.04	0.50	0.04	22.8
3	R2	All MCs	1	0.0	1	0.0	0.002	2.2	LOS A	0.0	0.1	0.04	0.50	0.04	22.8
Approach			3	0.0	3	0.0	0.002	2.3	LOS A	0.0	0.1	0.04	0.50	0.04	22.8
East: Mark Lane															
4	L2	All MCs	3	0.0	3	0.0	0.006	3.6	LOS A	0.0	0.0	0.00	0.17	0.00	45.1
5	T1	All MCs	7	0.0	7	0.0	0.006	0.0	LOS A	0.0	0.0	0.00	0.17	0.00	45.1
Approach			11	0.0	11	0.0	0.006	1.1	NA	0.0	0.0	0.00	0.17	0.00	45.1
West: Mark Lane															
11	T1	All MCs	3	0.0	3	0.0	0.008	0.0	LOS A	0.0	0.2	0.05	0.48	0.05	33.4
12	R2	All MCs	11	0.0	11	0.0	0.008	5.4	LOS A	0.0	0.2	0.05	0.48	0.05	33.4
Approach			14	0.0	14	0.0	0.008	4.2	NA	0.0	0.2	0.05	0.48	0.05	33.4
All Vehicles			27	0.0	27	0.0	0.008	2.8	NA	0.0	0.2	0.03	0.36	0.03	35.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [3_2030DA] Site 3 - AM Peak - Mark Lane/ Lahey Lane (2030 Development)

Network: [13] AM Peak - 2030 Development (2030 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 3 - Mark Lane/ Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Lahey lane															
1	L2	All MCs	4	0.0	4	0.0	0.032	2.4	LOS A	0.1	0.7	0.15	0.51	0.15	20.0
3	R2	All MCs	35	0.0	35	0.0	0.032	2.5	LOS A	0.1	0.7	0.15	0.51	0.15	20.0
Approach			39	0.0	39	0.0	0.032	2.5	LOS A	0.1	0.7	0.15	0.51	0.15	20.0
East: Mark Lane															
4	L2	All MCs	22	0.0	22	0.0	0.041	5.3	LOS A	0.0	0.0	0.00	0.17	0.00	47.2
5	T1	All MCs	54	0.0	54	0.0	0.041	0.0	LOS A	0.0	0.0	0.00	0.17	0.00	47.2
Approach			76	0.0	76	0.0	0.041	1.5	NA	0.0	0.0	0.00	0.17	0.00	47.2
West: Mark Lane															
11	T1	All MCs	11	0.0	11	0.0	0.012	0.1	LOS A	0.0	0.3	0.13	0.32	0.13	37.9
12	R2	All MCs	11	0.0	11	0.0	0.012	5.6	LOS A	0.0	0.3	0.13	0.32	0.13	37.9
Approach			21	0.0	21	0.0	0.012	2.9	NA	0.0	0.3	0.13	0.32	0.13	37.9
All Vehicles			136	0.0	136	0.0	0.041	2.0	NA	0.1	0.7	0.06	0.29	0.06	40.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [3_2031BA] Site 3 - AM Peak - Mark Lane/ Lahey Lane (2031 Base)

Network: [7] AM Peak - 2031 Base (2031 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 3 - Mark Lane/ Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Lahey lane															
1	L2	All MCs	2	0.0	2	0.0	0.002	2.3	LOS A	0.0	0.1	0.04	0.50	0.04	22.8
3	R2	All MCs	1	0.0	1	0.0	0.002	2.2	LOS A	0.0	0.1	0.04	0.50	0.04	22.8
Approach			3	0.0	3	0.0	0.002	2.3	LOS A	0.0	0.1	0.04	0.50	0.04	22.8
East: Mark Lane															
4	L2	All MCs	3	0.0	3	0.0	0.006	3.6	LOS A	0.0	0.0	0.00	0.17	0.00	45.1
5	T1	All MCs	7	0.0	7	0.0	0.006	0.0	LOS A	0.0	0.0	0.00	0.17	0.00	45.1
Approach			11	0.0	11	0.0	0.006	1.1	NA	0.0	0.0	0.00	0.17	0.00	45.1
West: Mark Lane															
11	T1	All MCs	3	0.0	3	0.0	0.008	0.0	LOS A	0.0	0.2	0.05	0.48	0.05	33.4
12	R2	All MCs	11	0.0	11	0.0	0.008	5.4	LOS A	0.0	0.2	0.05	0.48	0.05	33.4
Approach			14	0.0	14	0.0	0.008	4.2	NA	0.0	0.2	0.05	0.48	0.05	33.4
All Vehicles			27	0.0	27	0.0	0.008	2.8	NA	0.0	0.2	0.03	0.36	0.03	35.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [3_2031DA] Site 3 - AM Peak - Mark Lane/ Lahey Lane (2031 Development)

Network: [15] AM Peak - 2031 Development (2031 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 3 - Mark Lane/ Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Lahey lane															
1	L2	All MCs	4	0.0	4	0.0	0.040	2.5	LOS A	0.1	0.9	0.18	0.52	0.18	19.5
3	R2	All MCs	44	0.0	44	0.0	0.040	2.5	LOS A	0.1	0.9	0.18	0.52	0.18	19.5
Approach			48	0.0	48	0.0	0.040	2.5	LOS A	0.1	0.9	0.18	0.52	0.18	19.5
East: Mark Lane															
4	L2	All MCs	26	0.0	26	0.0	0.056	5.3	LOS A	0.0	0.0	0.00	0.15	0.00	48.4
5	T1	All MCs	76	0.0	76	0.0	0.056	0.0	LOS A	0.0	0.0	0.00	0.15	0.00	48.4
Approach			102	0.0	102	0.0	0.056	1.4	NA	0.0	0.0	0.00	0.15	0.00	48.4
West: Mark Lane															
11	T1	All MCs	11	0.0	11	0.0	0.012	0.2	LOS A	0.0	0.3	0.16	0.33	0.16	37.5
12	R2	All MCs	11	0.0	11	0.0	0.012	5.7	LOS A	0.0	0.3	0.16	0.33	0.16	37.5
Approach			21	0.0	21	0.0	0.012	2.9	NA	0.0	0.3	0.16	0.33	0.16	37.5
All Vehicles			172	0.0	172	0.0	0.056	1.9	NA	0.1	0.9	0.07	0.28	0.07	41.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [3_2025_PM] Site 3 - PM Peak - Mark Lane / Lahey Lane (2025 Survey)

Network: [2025_PM] PM Peak - Existing Network 2025 (2025 Existing)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 3 - Mark Lane/ Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Lahey lane															
1	L2	All MCs	16	0.0	16	0.0	0.017	2.3	LOS A	0.1	0.4	0.04	0.50	0.04	22.7
3	R2	All MCs	9	0.0	9	0.0	0.017	2.2	LOS A	0.1	0.4	0.04	0.50	0.04	22.7
Approach			25	0.0	25	0.0	0.017	2.2	LOS A	0.1	0.4	0.04	0.50	0.04	22.7
East: Mark Lane															
4	L2	All MCs	3	0.0	3	0.0	0.005	3.6	LOS A	0.0	0.0	0.00	0.21	0.00	42.5
5	T1	All MCs	5	0.0	5	0.0	0.005	0.0	LOS A	0.0	0.0	0.00	0.21	0.00	42.5
Approach			8	0.0	8	0.0	0.005	1.4	NA	0.0	0.0	0.00	0.21	0.00	42.5
West: Mark Lane															
11	T1	All MCs	8	0.0	8	0.0	0.007	0.0	LOS A	0.0	0.1	0.03	0.22	0.03	44.4
12	R2	All MCs	4	0.0	4	0.0	0.007	5.4	LOS A	0.0	0.1	0.03	0.22	0.03	44.4
Approach			13	0.0	13	0.0	0.007	1.8	NA	0.0	0.1	0.03	0.22	0.03	44.4
All Vehicles			46	0.0	46	0.0	0.017	2.0	NA	0.1	0.4	0.03	0.37	0.03	35.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [3_2028BP] Site 3 - PM Peak - Mark Lane / Lahey Lane (2028 Base)

Network: [2] PM Peak - 2028 Base (2028 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 3 - Mark Lane/ Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Lahey lane															
1	L2	All MCs	16	0.0	16	0.0	0.017	2.3	LOS A	0.1	0.4	0.04	0.50	0.04	22.7
3	R2	All MCs	9	0.0	9	0.0	0.017	2.2	LOS A	0.1	0.4	0.04	0.50	0.04	22.7
Approach			25	0.0	25	0.0	0.017	2.2	LOS A	0.1	0.4	0.04	0.50	0.04	22.7
East: Mark Lane															
4	L2	All MCs	3	0.0	3	0.0	0.005	3.6	LOS A	0.0	0.0	0.00	0.21	0.00	42.5
5	T1	All MCs	5	0.0	5	0.0	0.005	0.0	LOS A	0.0	0.0	0.00	0.21	0.00	42.5
Approach			8	0.0	8	0.0	0.005	1.4	NA	0.0	0.0	0.00	0.21	0.00	42.5
West: Mark Lane															
11	T1	All MCs	8	0.0	8	0.0	0.007	0.0	LOS A	0.0	0.1	0.03	0.22	0.03	44.4
12	R2	All MCs	4	0.0	4	0.0	0.007	5.4	LOS A	0.0	0.1	0.03	0.22	0.03	44.4
Approach			13	0.0	13	0.0	0.007	1.8	NA	0.0	0.1	0.03	0.22	0.03	44.4
All Vehicles			46	0.0	46	0.0	0.017	2.0	NA	0.1	0.4	0.03	0.37	0.03	35.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [3_2028DP] Site 3 - PM Peak - Mark Lane / Lahey Lane (2028 Development)

Network: [10] PM Peak - 2028 Development (2028 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 3 - Mark Lane/ Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Lahey lane															
1	L2	All MCs	17	0.0	17	0.0	0.019	2.3	LOS A	0.1	0.5	0.04	0.50	0.04	22.7
3	R2	All MCs	11	0.0	11	0.0	0.019	2.2	LOS A	0.1	0.5	0.04	0.50	0.04	22.7
Approach			27	0.0	27	0.0	0.019	2.2	LOS A	0.1	0.5	0.04	0.50	0.04	22.7
East: Mark Lane															
4	L2	All MCs	4	0.0	4	0.0	0.005	5.3	LOS A	0.0	0.0	0.00	0.26	0.00	42.6
5	T1	All MCs	5	0.0	5	0.0	0.005	0.0	LOS A	0.0	0.0	0.00	0.26	0.00	42.6
Approach			9	0.0	9	0.0	0.005	2.3	NA	0.0	0.0	0.00	0.26	0.00	42.6
West: Mark Lane															
11	T1	All MCs	8	0.0	8	0.0	0.008	0.0	LOS A	0.0	0.2	0.03	0.25	0.03	42.7
12	R2	All MCs	5	0.0	5	0.0	0.008	5.4	LOS A	0.0	0.2	0.03	0.25	0.03	42.7
Approach			14	0.0	14	0.0	0.008	2.1	NA	0.0	0.2	0.03	0.25	0.03	42.7
All Vehicles			51	0.0	51	0.0	0.019	2.2	NA	0.1	0.5	0.03	0.39	0.03	35.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [3_2029BP] Site 3 - PM Peak - Mark Lane / Lahey Lane (2029 Base)

Network: [4] PM Peak - 2029 Base (2029 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 3 - Mark Lane/ Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Lahey lane															
1	L2	All MCs	16	0.0	16	0.0	0.017	2.3	LOS A	0.1	0.4	0.04	0.50	0.04	22.7
3	R2	All MCs	9	0.0	9	0.0	0.017	2.2	LOS A	0.1	0.4	0.04	0.50	0.04	22.7
Approach			25	0.0	25	0.0	0.017	2.2	LOS A	0.1	0.4	0.04	0.50	0.04	22.7
East: Mark Lane															
4	L2	All MCs	3	0.0	3	0.0	0.005	3.6	LOS A	0.0	0.0	0.00	0.21	0.00	42.5
5	T1	All MCs	5	0.0	5	0.0	0.005	0.0	LOS A	0.0	0.0	0.00	0.21	0.00	42.5
Approach			8	0.0	8	0.0	0.005	1.4	NA	0.0	0.0	0.00	0.21	0.00	42.5
West: Mark Lane															
11	T1	All MCs	8	0.0	8	0.0	0.007	0.0	LOS A	0.0	0.1	0.03	0.22	0.03	44.4
12	R2	All MCs	4	0.0	4	0.0	0.007	5.4	LOS A	0.0	0.1	0.03	0.22	0.03	44.4
Approach			13	0.0	13	0.0	0.007	1.8	NA	0.0	0.1	0.03	0.22	0.03	44.4
All Vehicles			46	0.0	46	0.0	0.017	2.0	NA	0.1	0.4	0.03	0.37	0.03	35.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [3_2029DP] Site 3 - PM Peak - Mark Lane / Lahey Lane (2029 Development)

Network: [12] PM Peak - 2029 Development (2029 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 3 - Mark Lane/ Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Lahey lane															
1	L2	All MCs	17	0.0	17	0.0	0.079	2.4	LOS A	0.3	1.9	0.12	0.51	0.12	20.4
3	R2	All MCs	84	0.0	84	0.0	0.079	2.4	LOS A	0.3	1.9	0.12	0.51	0.12	20.4
Approach			101	0.0	101	0.0	0.079	2.4	LOS A	0.3	1.9	0.12	0.51	0.12	20.4
East: Mark Lane															
4	L2	All MCs	18	0.0	18	0.0	0.027	5.3	LOS A	0.0	0.0	0.00	0.22	0.00	44.7
5	T1	All MCs	31	0.0	31	0.0	0.027	0.0	LOS A	0.0	0.0	0.00	0.22	0.00	44.7
Approach			48	0.0	48	0.0	0.027	1.9	NA	0.0	0.0	0.00	0.22	0.00	44.7
West: Mark Lane															
11	T1	All MCs	15	0.0	15	0.0	0.011	0.0	LOS A	0.0	0.2	0.07	0.18	0.07	45.9
12	R2	All MCs	5	0.0	5	0.0	0.011	5.5	LOS A	0.0	0.2	0.07	0.18	0.07	45.9
Approach			20	0.0	20	0.0	0.011	1.5	NA	0.0	0.2	0.07	0.18	0.07	45.9
All Vehicles			169	0.0	169	0.0	0.079	2.2	NA	0.3	1.9	0.08	0.39	0.08	34.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [3_2030BP] Site 3 - PM Peak - Mark Lane / Lahey Lane (2030 Base)

Network: [6] PM Peak - 2030 Base (2030 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 3 - Mark Lane/ Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Lahey lane															
1	L2	All MCs	16	0.0	16	0.0	0.017	2.3	LOS A	0.1	0.4	0.04	0.50	0.04	22.7
3	R2	All MCs	9	0.0	9	0.0	0.017	2.2	LOS A	0.1	0.4	0.04	0.50	0.04	22.7
Approach			25	0.0	25	0.0	0.017	2.2	LOS A	0.1	0.4	0.04	0.50	0.04	22.7
East: Mark Lane															
4	L2	All MCs	3	0.0	3	0.0	0.005	3.6	LOS A	0.0	0.0	0.00	0.21	0.00	42.5
5	T1	All MCs	5	0.0	5	0.0	0.005	0.0	LOS A	0.0	0.0	0.00	0.21	0.00	42.5
Approach			8	0.0	8	0.0	0.005	1.4	NA	0.0	0.0	0.00	0.21	0.00	42.5
West: Mark Lane															
11	T1	All MCs	8	0.0	8	0.0	0.007	0.0	LOS A	0.0	0.1	0.03	0.22	0.03	44.4
12	R2	All MCs	4	0.0	4	0.0	0.007	5.4	LOS A	0.0	0.1	0.03	0.22	0.03	44.4
Approach			13	0.0	13	0.0	0.007	1.8	NA	0.0	0.1	0.03	0.22	0.03	44.4
All Vehicles			46	0.0	46	0.0	0.017	2.0	NA	0.1	0.4	0.03	0.37	0.03	35.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [3_2030DP] Site 3 - PM Peak - Mark Lane / Lahey Lane (2030 Development)

Network: [14] PM Peak - 2030 Development (2030 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 3 - Mark Lane/ Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Lahey lane															
1	L2	All MCs	17	0.0	17	0.0	0.083	2.4	LOS A	0.3	2.0	0.12	0.51	0.12	20.4
3	R2	All MCs	88	0.0	88	0.0	0.083	2.4	LOS A	0.3	2.0	0.12	0.51	0.12	20.4
Approach			105	0.0	105	0.0	0.083	2.4	LOS A	0.3	2.0	0.12	0.51	0.12	20.4
East: Mark Lane															
4	L2	All MCs	18	0.0	18	0.0	0.027	5.3	LOS A	0.0	0.0	0.00	0.21	0.00	45.0
5	T1	All MCs	32	0.0	32	0.0	0.027	0.0	LOS A	0.0	0.0	0.00	0.21	0.00	45.0
Approach			49	0.0	49	0.0	0.027	1.9	NA	0.0	0.0	0.00	0.21	0.00	45.0
West: Mark Lane															
11	T1	All MCs	15	0.0	15	0.0	0.011	0.0	LOS A	0.0	0.2	0.07	0.18	0.07	45.9
12	R2	All MCs	5	0.0	5	0.0	0.011	5.5	LOS A	0.0	0.2	0.07	0.18	0.07	45.9
Approach			20	0.0	20	0.0	0.011	1.5	NA	0.0	0.2	0.07	0.18	0.07	45.9
All Vehicles			175	0.0	175	0.0	0.083	2.1	NA	0.3	2.0	0.08	0.39	0.08	34.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [3_2031BP] Site 3 - PM Peak - Mark Lane / Lahey Lane (2031 Base)

Network: [8] PM Peak - 2031 Base (2031 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 3 - Mark Lane/ Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Lahey lane															
1	L2	All MCs	16	0.0	16	0.0	0.017	2.3	LOS A	0.1	0.4	0.04	0.50	0.04	22.7
3	R2	All MCs	9	0.0	9	0.0	0.017	2.2	LOS A	0.1	0.4	0.04	0.50	0.04	22.7
Approach			25	0.0	25	0.0	0.017	2.2	LOS A	0.1	0.4	0.04	0.50	0.04	22.7
East: Mark Lane															
4	L2	All MCs	3	0.0	3	0.0	0.005	3.6	LOS A	0.0	0.0	0.00	0.21	0.00	42.5
5	T1	All MCs	5	0.0	5	0.0	0.005	0.0	LOS A	0.0	0.0	0.00	0.21	0.00	42.5
Approach			8	0.0	8	0.0	0.005	1.4	NA	0.0	0.0	0.00	0.21	0.00	42.5
West: Mark Lane															
11	T1	All MCs	8	0.0	8	0.0	0.007	0.0	LOS A	0.0	0.1	0.03	0.22	0.03	44.4
12	R2	All MCs	4	0.0	4	0.0	0.007	5.4	LOS A	0.0	0.1	0.03	0.22	0.03	44.4
Approach			13	0.0	13	0.0	0.007	1.8	NA	0.0	0.1	0.03	0.22	0.03	44.4
All Vehicles			46	0.0	46	0.0	0.017	2.0	NA	0.1	0.4	0.03	0.37	0.03	35.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [3_2031DP] Site 3 - PM Peak - Mark Lane / Lahey Lane (2031 Development)

Network: [16] PM Peak - 2031 Development (2031 Development)

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Site 3 - Mark Lane/ Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Lahey lane															
1	L2	All MCs	17	0.0	17	0.0	0.112	2.4	LOS A	0.4	2.8	0.14	0.52	0.14	20.1
3	R2	All MCs	123	0.0	123	0.0	0.112	2.4	LOS A	0.4	2.8	0.14	0.52	0.14	20.1
Approach			140	0.0	140	0.0	0.112	2.4	LOS A	0.4	2.8	0.14	0.52	0.14	20.1
East: Mark Lane															
4	L2	All MCs	20	0.0	20	0.0	0.033	5.3	LOS A	0.0	0.0	0.00	0.19	0.00	46.0
5	T1	All MCs	41	0.0	41	0.0	0.033	0.0	LOS A	0.0	0.0	0.00	0.19	0.00	46.0
Approach			61	0.0	61	0.0	0.033	1.7	NA	0.0	0.0	0.00	0.19	0.00	46.0
West: Mark Lane															
11	T1	All MCs	15	0.0	15	0.0	0.011	0.1	LOS A	0.0	0.2	0.07	0.18	0.07	45.6
12	R2	All MCs	5	0.0	5	0.0	0.011	5.5	LOS A	0.0	0.2	0.07	0.18	0.07	45.6
Approach			20	0.0	20	0.0	0.011	1.5	NA	0.0	0.2	0.07	0.18	0.07	45.6
All Vehicles			221	0.0	221	0.0	0.112	2.2	NA	0.4	2.8	0.10	0.40	0.10	33.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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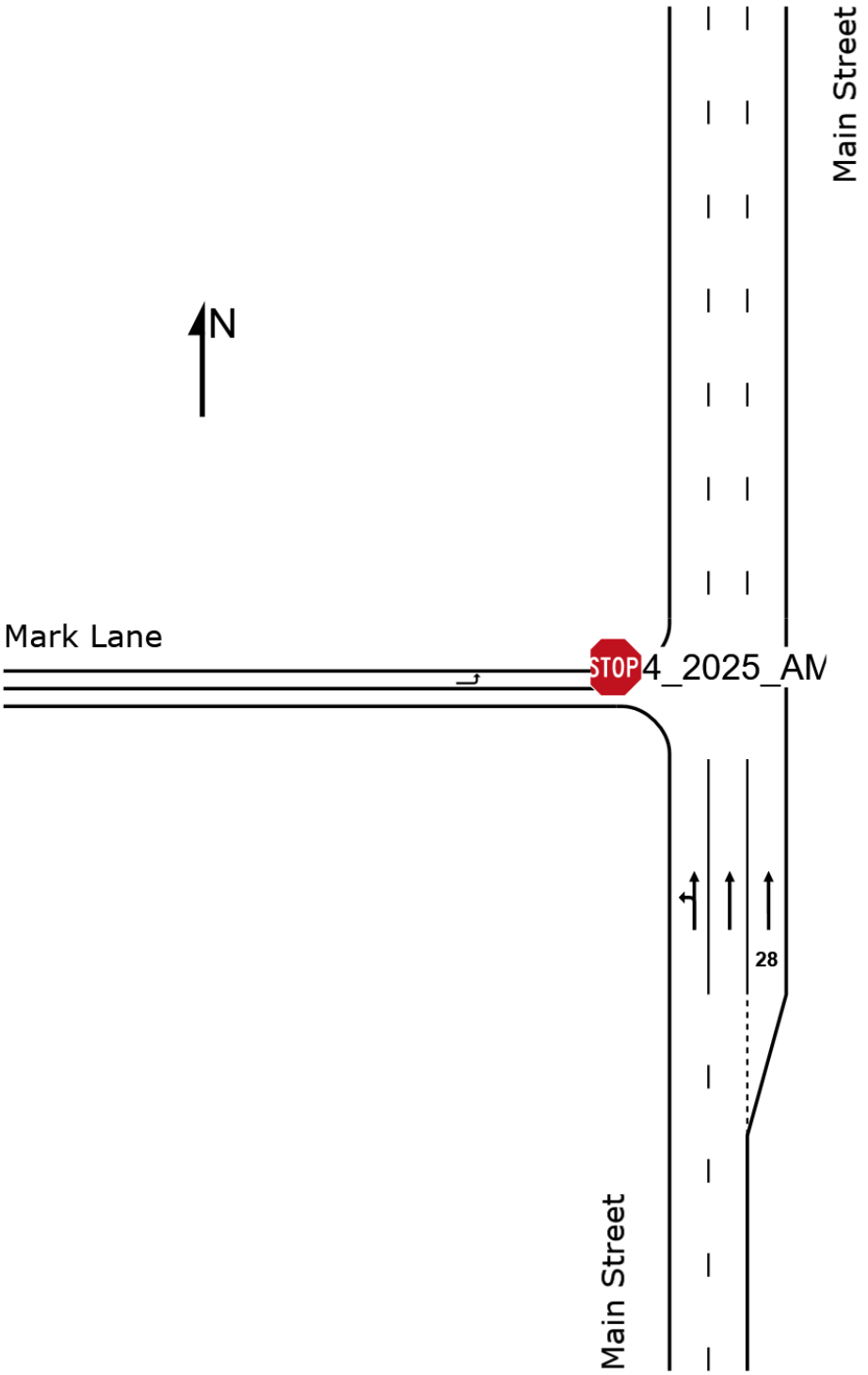
SITE LAYOUT

Site: [4_2025_AM] Site 4 - AM Peak - Mark Lane / Main Street

(2025 Survey)

Site 4 - Mark Lane / Main Street
Site Category: (None)
Stop (Two-Way)
Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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MOVEMENT SUMMARY

Site: [4_2025_AM] Site 4 - AM Peak - Mark Lane / Main Street (2025 Survey)

Network: [17] AM Peak - Existing Network 2025 (2025 Existing)

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Site 4 - Mark Lane / Main Street
Site Category: (None)
Stop (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Queued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
1	L2	All MCs	13	0.0	13	0.0	0.186	5.5	LOS A	0.0	0.0	0.00	0.02	0.00	58.4
2	T1	All MCs	1043	4.7	1043	4.7	0.186	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	59.5
Approach			1056	4.7	1056	4.7	0.186	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.5
West: Mark Lane															
10	L2	All MCs	5	0.0	5	0.0	0.005	9.4	LOS A	0.0	0.1	0.40	0.81	0.40	30.4
Approach			5	0.0	5	0.0	0.005	9.4	LOS A	0.0	0.1	0.40	0.81	0.40	30.4
All Vehicles			1061	4.7	1061	4.7	0.186	0.1	NA	0.0	0.1	0.00	0.01	0.00	59.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [4_2028BA] Site 4 - AM Peak - Mark Lane / Main Street (2028 Base)

Network: [1] AM Peak - 2028 Base (2028 Base)

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Site 4 - Mark Lane / Main Street
Site Category: (None)
Stop (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
1	L2	All MCs	13	0.0	13	0.0	0.192	5.5	LOS A	0.0	0.0	0.00	0.02	0.00	58.4
2	T1	All MCs	1075	4.7	1075	4.7	0.192	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	59.5
Approach			1087	4.7	1087	4.7	0.192	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.5
West: Mark Lane															
10	L2	All MCs	5	0.0	5	0.0	0.005	9.4	LOS A	0.0	0.1	0.40	0.80	0.40	30.4
Approach			5	0.0	5	0.0	0.005	9.4	LOS A	0.0	0.1	0.40	0.80	0.40	30.4
All Vehicles			1093	4.7	1093	4.7	0.192	0.1	NA	0.0	0.1	0.00	0.01	0.00	59.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [4_2028DA] Site 4 - AM Peak - Mark Lane / Main Street (2028 Development)

Network: [9] AM Peak - 2028 Development (2028 Development)

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Site 4 - Mark Lane / Main Street
Site Category: (None)
Stop (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Queued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
1	L2	All MCs	13	0.0	13	0.0	0.192	4.4	LOS A	0.0	0.0	0.00	0.02	0.00	57.7
2	T1	All MCs	1075	4.7	1075	4.7	0.192	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	59.4
Approach			1087	4.7	1087	4.7	0.192	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.4
West: Mark Lane															
10	L2	All MCs	7	0.0	7	0.0	0.007	7.6	LOS A	0.0	0.2	0.41	0.83	0.41	23.1
Approach			7	0.0	7	0.0	0.007	7.6	LOS A	0.0	0.2	0.41	0.83	0.41	23.1
All Vehicles			1095	4.7	1095	4.7	0.192	0.1	NA	0.0	0.2	0.00	0.01	0.00	58.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [4_2029BA] Site 4 - AM Peak - Mark Lane / Main Street
(2029 Base)

Network: [3] AM Peak - 2029 Base (2029 Base)

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Site 4 - Mark Lane / Main Street
Site Category: (None)
Stop (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
1	L2	All MCs	13	0.0	13	0.0	0.194	5.5	LOS A	0.0	0.0	0.00	0.02	0.00	58.4
2	T1	All MCs	1085	4.7	1085	4.7	0.194	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	59.5
Approach			1098	4.7	1098	4.7	0.194	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.5
West: Mark Lane															
10	L2	All MCs	5	0.0	5	0.0	0.005	9.5	LOS A	0.0	0.1	0.41	0.80	0.41	30.3
Approach			5	0.0	5	0.0	0.005	9.5	LOS A	0.0	0.1	0.41	0.80	0.41	30.3
All Vehicles			1103	4.7	1103	4.7	0.194	0.1	NA	0.0	0.1	0.00	0.01	0.00	59.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [4_2029DA] Site 4 - AM Peak - Mark Lane / Main Street (2029 Development)

Network: [11] AM Peak - 2029 Development (2029 Development)

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Site 4 - Mark Lane / Main Street
Site Category: (None)
Stop (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
1	L2	All MCs	23	0.0	23	0.0	0.195	4.4	LOS A	0.0	0.0	0.00	0.04	0.00	56.1
2	T1	All MCs	1083	4.8	1083	4.8	0.195	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	59.0
Approach			1106	4.7	1106	4.7	0.195	0.1	NA	0.0	0.0	0.00	0.01	0.00	58.9
West: Mark Lane															
10	L2	All MCs	43	0.0	43	0.0	0.043	7.7	LOS A	0.2	1.2	0.41	0.87	0.41	23.0
Approach			43	0.0	43	0.0	0.043	7.7	LOS A	0.2	1.2	0.41	0.87	0.41	23.0
All Vehicles			1149	4.5	1149	4.5	0.195	0.4	NA	0.2	1.2	0.02	0.04	0.02	55.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [4_2030BA] Site 4 - AM Peak - Mark Lane / Main Street (2030 Base)

Network: [5] AM Peak - 2030 Base (2030 Base)

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Site 4 - Mark Lane / Main Street
Site Category: (None)
Stop (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
1	L2	All MCs	13	0.0	13	0.0	0.196	5.5	LOS A	0.0	0.0	0.00	0.02	0.00	58.5
2	T1	All MCs	1097	4.7	1097	4.7	0.196	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	59.5
Approach			1109	4.7	1109	4.7	0.196	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.5
West: Mark Lane															
10	L2	All MCs	5	0.0	5	0.0	0.005	9.5	LOS A	0.0	0.2	0.41	0.80	0.41	30.3
Approach			5	0.0	5	0.0	0.005	9.5	LOS A	0.0	0.2	0.41	0.80	0.41	30.3
All Vehicles			1115	4.7	1115	4.7	0.196	0.1	NA	0.0	0.2	0.00	0.01	0.00	59.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [4_2030DA] Site 4 - AM Peak - Mark Lane / Main Street (2030 Development)

Network: [13] AM Peak - 2030 Development (2030 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 4 - Mark Lane / Main Street
Site Category: (None)
Stop (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Queued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
1	L2	All MCs	24	0.0	24	0.0	0.197	4.4	LOS A	0.0	0.0	0.00	0.04	0.00	56.0
2	T1	All MCs	1094	4.8	1094	4.8	0.197	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	58.9
Approach			1118	4.7	1118	4.7	0.197	0.1	NA	0.0	0.0	0.00	0.01	0.00	58.9
West: Mark Lane															
10	L2	All MCs	46	0.0	46	0.0	0.047	7.7	LOS A	0.2	1.2	0.42	0.87	0.42	23.0
Approach			46	0.0	46	0.0	0.047	7.7	LOS A	0.2	1.2	0.42	0.87	0.42	23.0
All Vehicles			1164	4.5	1164	4.5	0.197	0.4	NA	0.2	1.2	0.02	0.05	0.02	55.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [4_2031BA] Site 4 - AM Peak - Mark Lane / Main Street
(2031 Base)

Network: [7] AM Peak - 2031 Base (2031 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 4 - Mark Lane / Main Street
Site Category: (None)
Stop (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
1	L2	All MCs	13	0.0	13	0.0	0.197	5.5	LOS A	0.0	0.0	0.00	0.02	0.00	58.5
2	T1	All MCs	1107	4.7	1107	4.7	0.197	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	59.5
Approach			1120	4.7	1120	4.7	0.197	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.5
West: Mark Lane															
10	L2	All MCs	5	0.0	5	0.0	0.005	9.5	LOS A	0.0	0.2	0.41	0.80	0.41	30.3
Approach			5	0.0	5	0.0	0.005	9.5	LOS A	0.0	0.2	0.41	0.80	0.41	30.3
All Vehicles			1125	4.7	1125	4.7	0.197	0.1	NA	0.0	0.2	0.00	0.01	0.00	59.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [4_2031DA] Site 4 - AM Peak - Mark Lane / Main Street (2031 Development)

Network: [15] AM Peak - 2031 Development (2031 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 4 - Mark Lane / Main Street
Site Category: (None)
Stop (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Queued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
1	L2	All MCs	27	0.0	27	0.0	0.200	4.4	LOS A	0.0	0.0	0.00	0.04	0.00	55.6
2	T1	All MCs	1105	4.8	1105	4.8	0.200	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	58.8
Approach			1133	4.6	1133	4.6	0.200	0.1	NA	0.0	0.0	0.00	0.01	0.00	58.8
West: Mark Lane															
10	L2	All MCs	64	0.0	64	0.0	0.065	7.7	LOS A	0.3	1.8	0.42	0.88	0.42	22.9
Approach			64	0.0	64	0.0	0.065	7.7	LOS A	0.3	1.8	0.42	0.88	0.42	22.9
All Vehicles			1197	4.4	1197	4.4	0.200	0.5	NA	0.3	1.8	0.02	0.06	0.02	54.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [4_2025_PM] Site 4 - PM Peak - Mark Lane / Main Street (2025 Survey)

Network: [2025_PM] PM Peak - Existing Network 2025 (2025 Existing)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 4 - Mark Lane / Main Street
Site Category: (None)
Stop (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Queued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
1	L2	All MCs	9	0.0	9	0.0	0.188	5.5	LOS A	0.0	0.0	0.00	0.02	0.00	58.8
2	T1	All MCs	1067	3.6	1067	3.6	0.188	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	59.6
Approach			1077	3.6	1077	3.6	0.188	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.6
West: Mark Lane															
10	L2	All MCs	13	0.0	13	0.0	0.012	9.5	LOS A	0.1	0.4	0.41	0.81	0.41	30.3
Approach			13	0.0	13	0.0	0.012	9.5	LOS A	0.1	0.4	0.41	0.81	0.41	30.3
All Vehicles			1089	3.6	1089	3.6	0.188	0.2	NA	0.1	0.4	0.00	0.01	0.00	58.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [4_2028BP] Site 4 - PM Peak - Mark Lane / Main Street
(2028 Base)

Network: [2] PM Peak - 2028 Base (2028 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 4 - Mark Lane / Main Street
Site Category: (None)
Stop (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
1	L2	All MCs	9	0.0	9	0.0	0.194	5.5	LOS A	0.0	0.0	0.00	0.02	0.00	58.8
2	T1	All MCs	1100	3.6	1100	3.6	0.194	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	59.6
Approach			1109	3.6	1109	3.6	0.194	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.6
West: Mark Lane															
10	L2	All MCs	13	0.0	13	0.0	0.012	9.5	LOS A	0.1	0.4	0.41	0.81	0.41	30.3
Approach			13	0.0	13	0.0	0.012	9.5	LOS A	0.1	0.4	0.41	0.81	0.41	30.3
All Vehicles			1122	3.6	1122	3.6	0.194	0.2	NA	0.1	0.4	0.00	0.01	0.00	58.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [4_2028DP] Site 4 - PM Peak - Mark Lane / Main Street (2028 Development)

Network: [10] PM Peak - 2028 Development (2028 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 4 - Mark Lane / Main Street
Site Category: (None)
Stop (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Queued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
1	L2	All MCs	11	0.0	11	0.0	0.194	4.4	LOS A	0.0	0.0	0.00	0.02	0.00	58.1
2	T1	All MCs	1100	3.6	1100	3.6	0.194	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	59.5
Approach			1111	3.6	1111	3.6	0.194	0.0	NA	0.0	0.0	0.00	0.01	0.00	59.5
West: Mark Lane															
10	L2	All MCs	14	0.0	14	0.0	0.014	7.7	LOS A	0.1	0.4	0.41	0.84	0.41	23.0
Approach			14	0.0	14	0.0	0.014	7.7	LOS A	0.1	0.4	0.41	0.84	0.41	23.0
All Vehicles			1124	3.6	1124	3.6	0.194	0.1	NA	0.1	0.4	0.01	0.02	0.01	58.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [4_2029BP] Site 4 - PM Peak - Mark Lane / Main Street (2029 Base)

Network: [4] PM Peak - 2029 Base (2029 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 4 - Mark Lane / Main Street
Site Category: (None)
Stop (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
1	L2	All MCs	9	0.0	9	0.0	0.196	5.5	LOS A	0.0	0.0	0.00	0.02	0.00	58.8
2	T1	All MCs	1111	3.6	1111	3.6	0.196	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.6
Approach			1120	3.6	1120	3.6	0.196	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.6
West: Mark Lane															
10	L2	All MCs	13	0.0	13	0.0	0.012	9.5	LOS A	0.1	0.4	0.41	0.81	0.41	30.2
Approach			13	0.0	13	0.0	0.012	9.5	LOS A	0.1	0.4	0.41	0.81	0.41	30.2
All Vehicles			1133	3.6	1133	3.6	0.196	0.2	NA	0.1	0.4	0.00	0.01	0.00	58.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [4_2029DP] Site 4 - PM Peak - Mark Lane / Main Street (2029 Development)

Network: [12] PM Peak - 2029 Development (2029 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 4 - Mark Lane / Main Street
Site Category: (None)
Stop (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
1	L2	All MCs	36	0.0	36	0.0	0.200	4.4	LOS A	0.0	0.0	0.00	0.05	0.00	54.5
2	T1	All MCs	1108	3.7	1108	3.7	0.200	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	58.6
Approach			1144	3.5	1144	3.5	0.200	0.1	NA	0.0	0.0	0.00	0.02	0.00	58.5
West: Mark Lane															
10	L2	All MCs	36	0.0	36	0.0	0.036	7.7	LOS A	0.1	1.0	0.41	0.87	0.41	23.0
Approach			36	0.0	36	0.0	0.036	7.7	LOS A	0.1	1.0	0.41	0.87	0.41	23.0
All Vehicles			1180	3.4	1180	3.4	0.200	0.4	NA	0.1	1.0	0.01	0.04	0.01	56.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [4_2030BP] Site 4 - PM Peak - Mark Lane / Main Street (2030 Base)

Network: [6] PM Peak - 2030 Base (2030 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 4 - Mark Lane / Main Street
Site Category: (None)
Stop (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
1	L2	All MCs	9	0.0	9	0.0	0.198	5.5	LOS A	0.0	0.0	0.00	0.02	0.00	58.8
2	T1	All MCs	1122	3.6	1122	3.6	0.198	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.6
Approach			1132	3.6	1132	3.6	0.198	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.6
West: Mark Lane															
10	L2	All MCs	13	0.0	13	0.0	0.012	9.6	LOS A	0.1	0.4	0.42	0.81	0.42	30.2
Approach			13	0.0	13	0.0	0.012	9.6	LOS A	0.1	0.4	0.42	0.81	0.42	30.2
All Vehicles			1144	3.6	1144	3.6	0.198	0.2	NA	0.1	0.4	0.00	0.01	0.00	58.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [4_2030DP] Site 4 - PM Peak - Mark Lane / Main Street (2030 Development)

Network: [14] PM Peak - 2030 Development (2030 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 4 - Mark Lane / Main Street
Site Category: (None)
Stop (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Queued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
1	L2	All MCs	37	0.0	37	0.0	0.202	4.4	LOS A	0.0	0.0	0.00	0.06	0.00	54.4
2	T1	All MCs	1119	3.7	1119	3.7	0.202	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	58.5
Approach			1156	3.5	1156	3.5	0.202	0.1	NA	0.0	0.0	0.00	0.02	0.00	58.4
West: Mark Lane															
10	L2	All MCs	37	0.0	37	0.0	0.037	7.7	LOS A	0.1	1.0	0.41	0.87	0.41	23.0
Approach			37	0.0	37	0.0	0.037	7.7	LOS A	0.1	1.0	0.41	0.87	0.41	23.0
All Vehicles			1193	3.4	1193	3.4	0.202	0.4	NA	0.1	1.0	0.01	0.04	0.01	56.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [4_2031BP] Site 4 - PM Peak - Mark Lane / Main Street (2031 Base)

Network: [8] PM Peak - 2031 Base (2031 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 4 - Mark Lane / Main Street
Site Category: (None)
Stop (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
1	L2	All MCs	9	0.0	9	0.0	0.200	5.5	LOS A	0.0	0.0	0.00	0.01	0.00	58.8
2	T1	All MCs	1133	3.6	1133	3.6	0.200	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.6
Approach			1142	3.6	1142	3.6	0.200	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.6
West: Mark Lane															
10	L2	All MCs	13	0.0	13	0.0	0.012	9.6	LOS A	0.1	0.4	0.42	0.81	0.42	30.2
Approach			13	0.0	13	0.0	0.012	9.6	LOS A	0.1	0.4	0.42	0.81	0.42	30.2
All Vehicles			1155	3.6	1155	3.6	0.200	0.2	NA	0.1	0.4	0.00	0.01	0.00	58.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [4_2031DP] Site 4 - PM Peak - Mark Lane / Main Street (2031 Development)

Network: [16] PM Peak - 2031 Development (2031 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 4 - Mark Lane / Main Street
Site Category: (None)
Stop (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Queued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
1	L2	All MCs	48	0.0	48	0.0	0.207	4.4	LOS A	0.0	0.0	0.00	0.07	0.00	53.0
2	T1	All MCs	1131	3.7	1131	3.7	0.207	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	58.2
Approach			1179	3.5	1179	3.5	0.207	0.2	NA	0.0	0.0	0.00	0.02	0.00	58.0
West: Mark Lane															
10	L2	All MCs	44	0.0	44	0.0	0.044	7.7	LOS A	0.2	1.2	0.41	0.87	0.41	23.0
Approach			44	0.0	44	0.0	0.044	7.7	LOS A	0.2	1.2	0.41	0.87	0.41	23.0
All Vehicles			1223	3.4	1223	3.4	0.207	0.5	NA	0.2	1.2	0.01	0.05	0.01	55.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

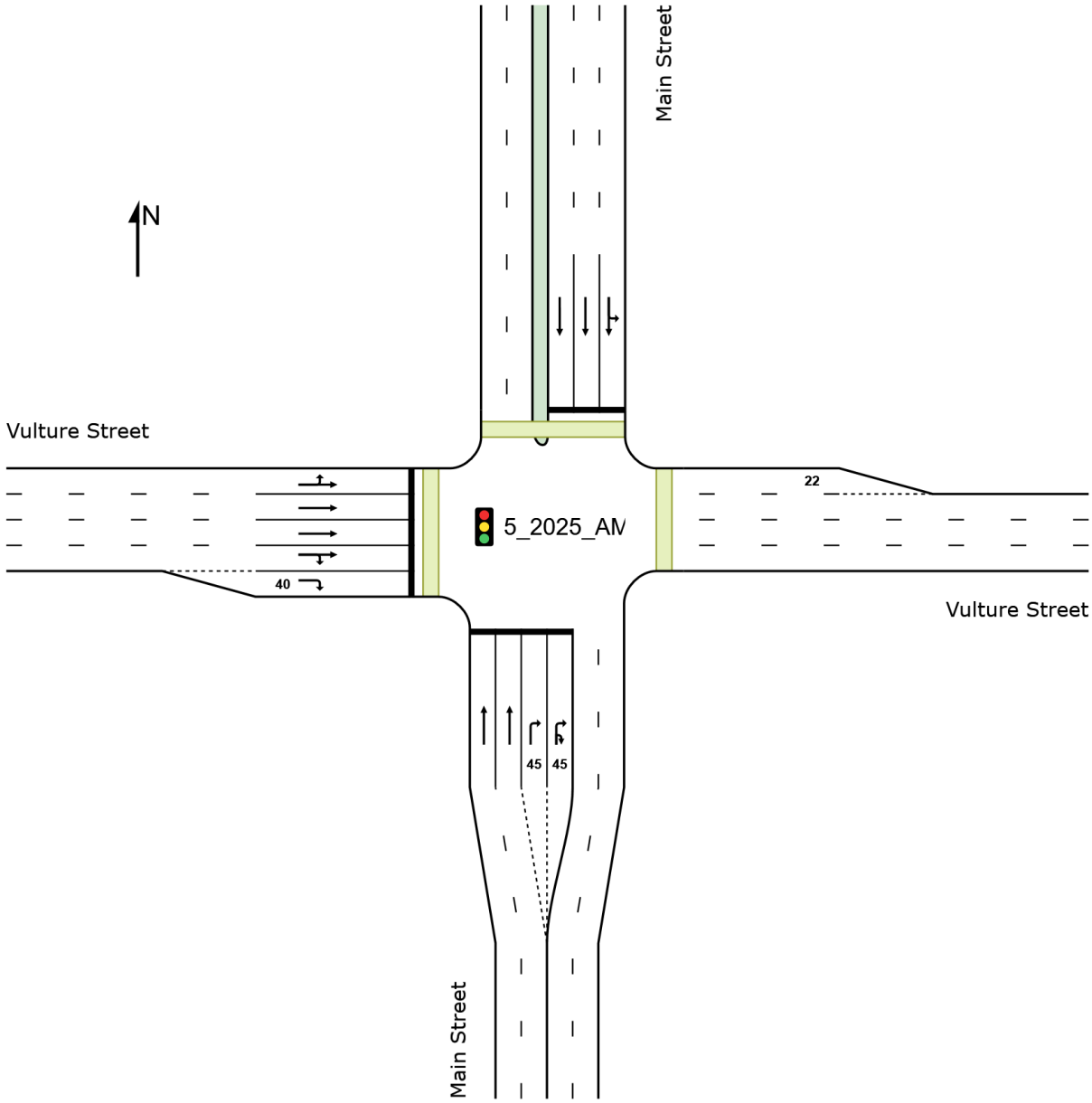
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SITE LAYOUT

Site: [5_2025_AM] Site 5 - AM Peak - Vulture Street / Main Street (2025 Survey)

Site 5 - Vulture Street / Main Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated
Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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MOVEMENT SUMMARY

Site: [5_2025_AM] Site 5 - AM Peak - Vulture Street / Main Street (2025 Survey)

Network: [17] AM Peak - Existing Network 2025 (2025 Existing)

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Site 5 - Vulture Street / Main Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
2	T1	All MCs	987	4.3	987	4.3	0.469	18.0	LOS B	17.1	124.3	0.63	0.56	0.63	25.9
3	R2	All MCs	208	5.1	208	5.1	*0.671	68.6	LOS E	6.6	48.0	1.00	0.83	1.08	22.5
3u	U	All MCs	7	0.0	7	0.0	0.671	67.4	LOS E	6.4	47.0	1.00	0.83	1.08	14.6
Approach			1203	4.4	1203	4.4	0.671	27.1	LOS C	17.1	124.3	0.69	0.61	0.71	23.0
North: Main Street															
7	L2	All MCs	100	2.1	100	2.1	0.134	28.1	LOS C	3.7	26.4	0.63	0.71	0.63	33.9
8	T1	All MCs	1113	4.2	1113	4.2	*0.671	28.9	LOS C	25.6	185.9	0.86	0.77	0.86	24.1
Approach			1213	4.0	1213	4.0	0.671	28.8	LOS C	25.6	185.9	0.84	0.76	0.84	25.2
West: Vulture Street															
10	L2	All MCs	68	10.8	68	10.8	0.163	11.4	LOS B	0.8	6.4	0.16	0.48	0.16	25.2
11	T1	All MCs	1084	3.8	1084	3.8	*0.670	20.4	LOS C	15.8	114.5	0.59	0.52	0.59	40.1
12	R2	All MCs	365	4.3	365	4.3	0.670	54.5	LOS D	15.3	111.0	0.92	0.83	0.92	16.9
Approach			1518	4.2	1518	4.2	0.670	28.2	LOS C	15.8	114.5	0.65	0.59	0.65	31.2
All Vehicles			3934	4.2	3934	4.2	0.671	28.1	LOS C	25.6	185.9	0.72	0.65	0.73	27.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
East: Vulture Street											
P2	Full	21	54.2	LOS E	0.1	0.1	0.95	0.95	208.0	200.0	0.96
North: Main Street											
P3	Full	74	54.3	LOS E	0.2	0.2	0.95	0.95	208.2	200.0	0.96

West: Vulture Street										
P4 Full	105	54.4	LOS E	0.3	0.3	0.95	0.95	208.2	200.0	0.96
All Pedestrians	200	54.3	LOS E	0.3	0.3	0.95	0.95	208.2	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [5_2028BA] Site 5 - AM Peak - Vulture Street / Main Street (2028 Base)

Network: [1] AM Peak - 2028 Base (2028 Base)

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Site 5 - Vulture Street / Main Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
2	T1	All MCs	1017	4.3	1017	4.3	0.486	18.5	LOS B	18.0	130.5	0.64	0.57	0.64	25.7
3	R2	All MCs	215	5.1	215	5.1	* 0.693	69.3	LOS E	6.8	49.7	1.00	0.84	1.10	22.4
3u	U	All MCs	7	0.0	7	0.0	0.693	67.8	LOS E	6.7	48.7	1.00	0.84	1.10	14.5
Approach			1239	4.4	1239	4.4	0.693	27.6	LOS C	18.0	130.5	0.70	0.62	0.72	22.7
North: Main Street															
7	L2	All MCs	103	2.1	103	2.1	0.139	28.2	LOS C	3.8	27.3	0.64	0.71	0.64	33.8
8	T1	All MCs	1146	4.2	1146	4.2	* 0.693	29.4	LOS C	26.8	194.3	0.87	0.78	0.87	23.8
Approach			1249	4.0	1249	4.0	0.693	29.3	LOS C	26.8	194.3	0.85	0.77	0.85	24.9
West: Vulture Street															
10	L2	All MCs	71	10.8	71	10.8	0.169	11.5	LOS B	0.9	6.7	0.17	0.48	0.17	25.1
11	T1	All MCs	1117	3.8	1117	3.8	* 0.692	20.7	LOS C	17.0	122.6	0.60	0.53	0.60	40.0
12	R2	All MCs	377	4.3	377	4.3	0.692	55.8	LOS E	15.8	114.6	0.93	0.83	0.94	16.8
Approach			1564	4.2	1564	4.2	0.692	28.7	LOS C	17.0	122.6	0.66	0.60	0.66	30.9
All Vehicles			4053	4.2	4053	4.2	0.693	28.6	LOS C	26.8	194.3	0.73	0.66	0.74	27.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
East: Vulture Street											
P2	Full	21	54.2	LOS E	0.1	0.1	0.95	0.95	208.0	200.0	0.96
North: Main Street											
P3	Full	74	54.3	LOS E	0.2	0.2	0.95	0.95	208.2	200.0	0.96
West: Vulture Street											

P4 Full	105	54.4	LOS E	0.3	0.3	0.95	0.95	208.2	200.0	0.96
All Pedestrians	200	54.3	LOS E	0.3	0.3	0.95	0.95	208.2	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [5_2028DA] Site 5 - AM Peak - Vulture Street / Main Street (2028 Development)

Network: [9] AM Peak - 2028 Development (2028 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 5 - Vulture Street / Main Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
2	T1	All MCs	1018	4.3	1018	4.3	0.486	18.5	LOS B	18.0	130.7	0.64	0.57	0.64	25.7
3	R2	All MCs	215	5.1	215	5.1	* 0.693	69.3	LOS E	6.8	49.7	1.00	0.84	1.10	22.4
3u	U	All MCs	7	0.0	7	0.0	0.693	67.8	LOS E	6.7	48.7	1.00	0.84	1.10	14.5
Approach			1240	4.4	1240	4.4	0.693	27.6	LOS C	18.0	130.7	0.70	0.62	0.72	22.7
North: Main Street															
7	L2	All MCs	103	2.1	103	2.1	0.139	27.1	LOS C	3.8	27.3	0.64	0.71	0.64	32.9
8	T1	All MCs	1146	4.2	1146	4.2	* 0.693	29.4	LOS C	26.8[N8]	194.3[N8]	0.87	0.78	0.87	20.9
Approach			1249	4.0	1249	4.0	0.693	29.2	LOS C	26.8[N8]	194.3[N8]	0.85	0.77	0.85	22.2
West: Vulture Street															
10	L2	All MCs	71	10.8	71	10.8	0.169	35.6	LOS D	4.1	30.5	0.75	0.71	0.75	8.0
11	T1	All MCs	1117	3.8	1117	3.8	* 0.692	40.3	LOS D	21.9[N8]	158.5[N8]	0.93	0.81	0.93	28.9
12	R2	All MCs	377	4.3	377	4.3	0.692	55.0	LOS D	15.9[N8]	114.8[N8]	0.93	0.83	0.94	15.7
Approach			1564	4.2	1564	4.2	0.692	43.6	LOS D	21.9[N8]	158.5[N8]	0.92	0.81	0.92	24.0
All Vehicles			4054	4.2	4054	4.2	0.693	34.3	LOS C	26.8[N8]	194.3[N8]	0.83	0.74	0.84	23.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)
N8 The Percentile Back of Queue extends to upstream Site lanes.

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
East: Vulture Street											
P2	Full	21	54.2	LOS E	0.1	0.1	0.95	0.95	208.0	200.0	0.96
North: Main Street											
P3	Full	74	54.3	LOS E	0.2	0.2	0.95	0.95	208.2	200.0	0.96

West: Vulture Street										
P4 Full	105	54.4	LOS E	0.3	0.3	0.95	0.95	208.2	200.0	0.96
All Pedestrians	200	54.3	LOS E	0.3	0.3	0.95	0.95	208.2	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [5_2029BA] Site 5 - AM Peak - Vulture Street / Main Street
(2029 Base)

Network: [3] AM Peak - 2029 Base (2029 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 5 - Vulture Street / Main Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
2	T1	All MCs	1027	4.3	1027	4.3	0.491	18.7	LOS B	18.3	132.7	0.64	0.57	0.64	25.6
3	R2	All MCs	217	5.1	217	5.1	* 0.700	69.5	LOS E	6.9	50.2	1.00	0.84	1.11	22.3
3u	U	All MCs	7	0.0	7	0.0	0.700	68.0	LOS E	6.8	49.2	1.00	0.84	1.11	14.5
Approach			1252	4.4	1252	4.4	0.700	27.8	LOS C	18.3	132.7	0.70	0.62	0.72	22.6
North: Main Street															
7	L2	All MCs	104	2.1	104	2.1	0.140	28.3	LOS C	3.9	27.6	0.64	0.71	0.64	33.8
8	T1	All MCs	1158	4.2	1158	4.2	* 0.700	29.5	LOS C	27.2	197.3	0.88	0.78	0.88	23.7
Approach			1262	4.0	1262	4.0	0.700	29.4	LOS C	27.2	197.3	0.86	0.78	0.86	24.9
West: Vulture Street															
10	L2	All MCs	72	10.8	72	10.8	0.171	11.4	LOS B	0.9	6.8	0.16	0.48	0.16	25.2
11	T1	All MCs	1128	3.8	1128	3.8	* 0.699	20.8	LOS C	17.4	125.4	0.61	0.54	0.61	39.9
12	R2	All MCs	380	4.3	380	4.3	0.699	56.3	LOS E	16.0	116.1	0.93	0.84	0.94	16.7
Approach			1580	4.2	1580	4.2	0.699	28.9	LOS C	17.4	125.4	0.67	0.61	0.67	30.8
All Vehicles			4094	4.2	4094	4.2	0.700	28.7	LOS C	27.2	197.3	0.74	0.66	0.74	26.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
East: Vulture Street											
P2	Full	21	54.2	LOS E	0.1	0.1	0.95	0.95	208.0	200.0	0.96
North: Main Street											
P3	Full	74	54.3	LOS E	0.2	0.2	0.95	0.95	208.2	200.0	0.96
West: Vulture Street											

P4 Full	105	54.4	LOS E	0.3	0.3	0.95	0.95	208.2	200.0	0.96
All Pedestrians	200	54.3	LOS E	0.3	0.3	0.95	0.95	208.2	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [5_2029DA] Site 5 - AM Peak - Vulture Street / Main Street (2029 Development)

Network: [11] AM Peak - 2029 Development (2029 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 5 - Vulture Street / Main Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
2	T1	All MCs	1036	4.2	1036	4.2	0.497	18.9	LOS B	18.6	134.8	0.65	0.58	0.65	25.4
3	R2	All MCs	217	5.1	217	5.1	* 0.702	69.7	LOS E	6.9	50.3	1.00	0.84	1.11	22.3
3u	U	All MCs	7	0.0	7	0.0	0.702	68.1	LOS E	6.8	49.3	1.00	0.84	1.11	14.5
Approach			1260	4.3	1260	4.3	0.702	28.0	LOS C	18.6	134.8	0.71	0.62	0.73	22.5
North: Main Street															
7	L2	All MCs	104	2.1	104	2.1	0.140	27.2	LOS C	3.9	27.6	0.64	0.71	0.64	32.8
8	T1	All MCs	1158	4.2	1158	4.2	* 0.702	29.7	LOS C	27.3[N8]	197.7[N8]	0.88	0.79	0.88	20.8
Approach			1262	4.0	1262	4.0	0.702	29.5	LOS C	27.3[N8]	197.7[N8]	0.86	0.78	0.86	22.1
West: Vulture Street															
10	L2	All MCs	72	10.8	72	10.8	0.171	35.5	LOS D	4.1	31.1	0.75	0.71	0.75	8.0
11	T1	All MCs	1134	3.8	1134	3.8	* 0.702	40.4	LOS D	22.5[N8]	162.2[N8]	0.93	0.82	0.93	28.9
12	R2	All MCs	385	4.3	385	4.3	0.702	55.7	LOS E	16.2[N8]	117.3[N8]	0.94	0.84	0.95	15.6
Approach			1591	4.2	1591	4.2	0.702	43.9	LOS D	22.5[N8]	162.2[N8]	0.92	0.82	0.93	23.9
All Vehicles			4113	4.2	4113	4.2	0.702	34.6	LOS C	27.3[N8]	197.7[N8]	0.84	0.75	0.85	23.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)
N8 The Percentile Back of Queue extends to upstream Site lanes.

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
East: Vulture Street											
P2	Full	21	54.2	LOS E	0.1	0.1	0.95	0.95	208.0	200.0	0.96
North: Main Street											
P3	Full	74	54.3	LOS E	0.2	0.2	0.95	0.95	208.2	200.0	0.96

West: Vulture Street										
P4 Full	105	54.4	LOS E	0.3	0.3	0.95	0.95	208.2	200.0	0.96
All Pedestrians	200	54.3	LOS E	0.3	0.3	0.95	0.95	208.2	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [5_2030BA] Site 5 - AM Peak - Vulture Street / Main Street
(2030 Base)

Network: [5] AM Peak - 2030 Base (2030 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 5 - Vulture Street / Main Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
2	T1	All MCs	1038	4.3	1038	4.3	0.497	18.9	LOS B	18.6	134.9	0.64	0.58	0.64	25.5
3	R2	All MCs	219	5.1	219	5.1	* 0.708	69.8	LOS E	7.0	50.8	1.00	0.85	1.11	22.3
3u	U	All MCs	7	0.0	7	0.0	0.708	68.2	LOS E	6.8	49.8	1.00	0.85	1.12	14.5
Approach			1264	4.4	1264	4.4	0.708	28.0	LOS C	18.6	134.9	0.71	0.62	0.73	22.5
North: Main Street															
7	L2	All MCs	105	2.1	105	2.1	0.142	28.3	LOS C	3.9	27.9	0.64	0.71	0.64	33.8
8	T1	All MCs	1169	4.2	1169	4.2	* 0.708	29.7	LOS C	27.6	200.2	0.88	0.79	0.88	23.7
Approach			1275	4.0	1275	4.0	0.708	29.6	LOS C	27.6	200.2	0.86	0.78	0.86	24.8
West: Vulture Street															
10	L2	All MCs	72	10.8	72	10.8	0.172	11.5	LOS B	0.9	7.0	0.17	0.48	0.17	25.1
11	T1	All MCs	1140	3.8	1140	3.8	* 0.707	20.9	LOS C	17.7	128.2	0.61	0.54	0.61	39.9
12	R2	All MCs	384	4.3	384	4.3	0.707	56.8	LOS E	16.2	117.5	0.94	0.84	0.95	16.6
Approach			1596	4.2	1596	4.2	0.707	29.1	LOS C	17.7	128.2	0.67	0.61	0.67	30.7
All Vehicles			4135	4.2	4135	4.2	0.708	28.9	LOS C	27.6	200.2	0.74	0.67	0.75	26.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
East: Vulture Street											
P2	Full	21	54.2	LOS E	0.1	0.1	0.95	0.95	208.0	200.0	0.96
North: Main Street											
P3	Full	74	54.3	LOS E	0.2	0.2	0.95	0.95	208.2	200.0	0.96
West: Vulture Street											

P4 Full	105	54.4	LOS E	0.3	0.3	0.95	0.95	208.2	200.0	0.96
All Pedestrians	200	54.3	LOS E	0.3	0.3	0.95	0.95	208.2	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [5_2030DA] Site 5 - AM Peak - Vulture Street / Main Street (2030 Development)

Network: [13] AM Peak - 2030 Development (2030 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 5 - Vulture Street / Main Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
2	T1	All MCs	1046	4.2	1046	4.2	0.503	19.1	LOS B	18.9	137.0	0.65	0.58	0.65	25.3
3	R2	All MCs	219	5.1	219	5.1	*0.710	70.0	LOS E	7.0	50.9	1.00	0.85	1.12	22.3
3u	U	All MCs	7	0.0	7	0.0	0.710	68.3	LOS E	6.8	49.8	1.00	0.85	1.12	14.5
Approach			1273	4.3	1273	4.3	0.710	28.1	LOS C	18.9	137.0	0.71	0.63	0.73	22.4
North: Main Street															
7	L2	All MCs	105	2.1	105	2.1	0.142	27.3	LOS C	3.9	28.0	0.64	0.71	0.64	32.8
8	T1	All MCs	1169	4.2	1169	4.2	*0.710	29.8	LOS C	27.7[N8]	200.7[N8]	0.88	0.79	0.88	20.7
Approach			1275	4.0	1275	4.0	0.710	29.6	LOS C	27.7[N8]	200.7[N8]	0.86	0.78	0.86	22.0
West: Vulture Street															
10	L2	All MCs	72	10.8	72	10.8	0.173	35.5	LOS D	4.2	31.5	0.75	0.71	0.75	8.0
11	T1	All MCs	1145	3.8	1145	3.8	*0.709	40.6	LOS D	22.8[N8]	164.6[N8]	0.93	0.82	0.94	28.8
12	R2	All MCs	389	4.3	389	4.3	0.709	56.2	LOS E	16.4[N8]	119.0[N8]	0.94	0.84	0.96	15.5
Approach			1606	4.2	1606	4.2	0.709	44.2	LOS D	22.8[N8]	164.6[N8]	0.93	0.82	0.93	23.8
All Vehicles			4154	4.2	4154	4.2	0.710	34.8	LOS C	27.7[N8]	200.7[N8]	0.84	0.75	0.85	23.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)
N8 The Percentile Back of Queue extends to upstream Site lanes.

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
East: Vulture Street											
P2	Full	21	54.2	LOS E	0.1	0.1	0.95	0.95	208.0	200.0	0.96
North: Main Street											
P3	Full	74	54.3	LOS E	0.2	0.2	0.95	0.95	208.2	200.0	0.96

West: Vulture Street										
P4 Full	105	54.4	LOS E	0.3	0.3	0.95	0.95	208.2	200.0	0.96
All Pedestrians	200	54.3	LOS E	0.3	0.3	0.95	0.95	208.2	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [5_2031BA] Site 5 - AM Peak - Vulture Street / Main Street
(2031 Base)

Network: [7] AM Peak - 2031 Base (2031 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 5 - Vulture Street / Main Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
2	T1	All MCs	1048	4.3	1048	4.3	0.503	19.0	LOS B	18.9	137.1	0.65	0.58	0.65	25.4
3	R2	All MCs	221	5.1	221	5.1	* 0.715	70.1	LOS E	7.0	51.4	1.00	0.85	1.12	22.3
3u	U	All MCs	7	0.0	7	0.0	0.715	68.4	LOS E	6.9	50.4	1.00	0.85	1.12	14.4
Approach			1277	4.4	1277	4.4	0.715	28.1	LOS C	18.9	137.1	0.71	0.63	0.73	22.4
North: Main Street															
7	L2	All MCs	106	2.1	106	2.1	0.143	28.4	LOS C	4.0	28.2	0.64	0.72	0.64	33.8
8	T1	All MCs	1181	4.2	1181	4.2	* 0.715	29.8	LOS C	28.0	203.2	0.88	0.79	0.88	23.6
Approach			1287	4.0	1287	4.0	0.715	29.7	LOS C	28.0	203.2	0.86	0.79	0.86	24.7
West: Vulture Street															
10	L2	All MCs	73	10.8	73	10.8	0.174	11.5	LOS B	0.9	7.0	0.17	0.48	0.17	25.2
11	T1	All MCs	1151	3.8	1151	3.8	* 0.714	21.0	LOS C	18.1	130.9	0.62	0.55	0.62	39.8
12	R2	All MCs	387	4.3	387	4.3	0.714	57.4	LOS E	16.4	118.9	0.94	0.85	0.96	16.5
Approach			1611	4.2	1611	4.2	0.714	29.3	LOS C	18.1	130.9	0.67	0.62	0.68	30.7
All Vehicles			4175	4.2	4175	4.2	0.715	29.1	LOS C	28.0	203.2	0.74	0.67	0.75	26.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
East: Vulture Street											
P2	Full	21	54.2	LOS E	0.1	0.1	0.95	0.95	208.0	200.0	0.96
North: Main Street											
P3	Full	74	54.3	LOS E	0.2	0.2	0.95	0.95	208.2	200.0	0.96
West: Vulture Street											

P4 Full	105	54.4	LOS E	0.3	0.3	0.95	0.95	208.2	200.0	0.96
All Pedestrians	200	54.3	LOS E	0.3	0.3	0.95	0.95	208.2	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [5_2031DA] Site 5 - AM Peak - Vulture Street / Main Street (2031 Development)

Network: [15] AM Peak - 2031 Development (2031 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 5 - Vulture Street / Main Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
2	T1	All MCs	1060	4.2	1060	4.2	0.511	19.4	LOS B	19.3	140.2	0.65	0.59	0.65	25.2
3	R2	All MCs	221	5.1	221	5.1	* 0.718	70.3	LOS E	7.0	51.5	1.00	0.85	1.12	22.2
3u	U	All MCs	7	0.0	7	0.0	0.718	68.5	LOS E	6.9	50.5	1.00	0.85	1.13	14.4
Approach			1288	4.3	1288	4.3	0.718	28.4	LOS C	19.3	140.2	0.72	0.63	0.74	22.3
North: Main Street															
7	L2	All MCs	106	2.1	106	2.1	0.144	27.4	LOS C	4.0	28.3	0.64	0.71	0.64	32.7
8	T1	All MCs	1181	4.2	1181	4.2	* 0.718	30.0	LOS C	28.1[N8]	203.9[N8]	0.89	0.80	0.89	20.6
Approach			1287	4.0	1287	4.0	0.718	29.8	LOS C	28.1[N8]	203.9[N8]	0.87	0.79	0.87	21.9
West: Vulture Street															
10	L2	All MCs	73	10.8	73	10.8	0.175	35.5	LOS D	4.3	32.0	0.75	0.71	0.75	8.1
11	T1	All MCs	1159	3.8	1159	3.8	* 0.717	40.8	LOS D	23.2[N8]	167.7[N8]	0.94	0.83	0.94	28.7
12	R2	All MCs	396	4.2	396	4.2	0.717	56.9	LOS E	16.7[N8]	121.1[N8]	0.94	0.85	0.97	15.4
Approach			1627	4.2	1627	4.2	0.717	44.5	LOS D	23.2[N8]	167.7[N8]	0.93	0.83	0.94	23.7
All Vehicles			4203	4.2	4203	4.2	0.718	35.1	LOS D	28.1[N8]	203.9[N8]	0.84	0.76	0.86	22.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)
N8 The Percentile Back of Queue extends to upstream Site lanes.

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
East: Vulture Street											
P2	Full	21	54.2	LOS E	0.1	0.1	0.95	0.95	208.0	200.0	0.96
North: Main Street											
P3	Full	74	54.3	LOS E	0.2	0.2	0.95	0.95	208.2	200.0	0.96

West: Vulture Street										
P4 Full	105	54.4	LOS E	0.3	0.3	0.95	0.95	208.2	200.0	0.96
All Pedestrians	200	54.3	LOS E	0.3	0.3	0.95	0.95	208.2	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [5_2025_PM] Site 5 - PM Peak - Vulture Street / Main Street (2025 Survey)

Network: [2025_PM] PM Peak - Existing Network 2025 (2025 Existing)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 5 - Vulture Street / Main Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
2	T1	All MCs	969	3.8	969	3.8	0.613	34.0	LOS C	22.6	163.3	0.83	0.74	0.83	17.9
3	R2	All MCs	156	2.0	156	2.0	* 0.859	82.9	LOS F	5.2	37.0	1.00	0.94	1.40	20.5
3u	U	All MCs	1	0.0	1	0.0	0.859	77.9	LOS E	5.2	36.9	1.00	0.94	1.40	13.1
Approach			1126	3.6	1126	3.6	0.859	40.8	LOS D	22.6	163.3	0.85	0.76	0.91	16.8
North: Main Street															
7	L2	All MCs	302	1.0	302	1.0	0.493	43.4	LOS D	14.1	99.5	0.85	0.82	0.85	28.4
8	T1	All MCs	1168	2.2	1168	2.2	* 0.914	56.0	LOS E	38.9	277.0	1.00	1.08	1.21	15.4
Approach			1471	1.9	1471	1.9	0.914	53.4	LOS D	38.9	277.0	0.97	1.03	1.13	18.2
West: Vulture Street															
10	L2	All MCs	107	2.0	107	2.0	0.223	10.8	LOS B	2.1	14.8	0.20	0.42	0.20	27.8
11	T1	All MCs	2319	1.2	2319	1.2	* 0.914	33.9	LOS C	47.8 N8	338.0 N8	0.84	0.88	0.97	33.6
12	R2	All MCs	345	2.7	345	2.7	0.635	50.0	LOS D	15.4	110.5	0.81	0.81	0.81	20.5
Approach			2772	1.4	2772	1.4	0.914	35.0	LOS D	47.8 N8	338.0 N8	0.81	0.85	0.92	29.4
All Vehicles			5368	2.0	5368	2.0	0.914	41.3	LOS D	47.8 N8	338.0 N8	0.86	0.88	0.98	23.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)
N8 The Percentile Back of Queue extends to upstream Site lanes.

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
East: Vulture Street											
P2	Full	63	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
North: Main Street											
P3	Full	84	54.3	LOS E	0.3	0.3	0.95	0.95	208.2	200.0	0.96

West: Vulture Street										
P4 Full	137	54.5	LOS E	0.4	0.4	0.96	0.96	208.3	200.0	0.96
All Pedestrians	284	54.4	LOS E	0.4	0.4	0.95	0.95	208.2	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [5_2028BP] Site 5 - PM Peak - Vulture Street / Main Street (2028 Base)

Network: [2] PM Peak - 2028 Base (2028 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 5 - Vulture Street / Main Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
2	T1	All MCs	999	3.8	999	3.8	0.633	34.7	LOS C	23.6	170.6	0.84	0.75	0.84	17.8
3	R2	All MCs	160	2.0	160	2.0	* 0.882	84.7	LOS F	5.4	38.5	1.00	0.96	1.45	20.3
3u	U	All MCs	1	0.0	1	0.0	0.882	79.4	LOS E	5.4	38.4	1.00	0.96	1.45	12.9
Approach			1160	3.6	1160	3.6	0.882	41.6	LOS D	23.6	170.6	0.86	0.77	0.92	16.6
North: Main Street															
7	L2	All MCs	312	1.0	312	1.0	0.509	43.9	LOS D	14.6	103.4	0.86	0.82	0.86	28.3
8	T1	All MCs	1204	2.2	1204	2.2	* 0.943	63.6	LOS E	42.8	305.4	1.00	1.15	1.28	14.0
Approach			1516	1.9	1516	1.9	0.943	59.6	LOS E	42.8	305.4	0.97	1.08	1.19	16.9
West: Vulture Street															
10	L2	All MCs	111	2.0	111	2.0	0.230	10.7	LOS B	2.1	15.1	0.19	0.42	0.19	28.0
11	T1	All MCs	2389	1.2	2389	1.2	* 0.943	40.9	LOS D	54.7[N8]	386.6[N8]	0.89	0.97	1.07	30.5
12	R2	All MCs	356	2.7	356	2.7	0.675	51.6	LOS D	16.4	117.2	0.84	0.82	0.84	20.2
Approach			2856	1.4	2856	1.4	0.943	41.1	LOS D	54.7[N8]	386.6[N8]	0.86	0.93	1.01	27.0
All Vehicles			5532	2.0	5532	2.0	0.943	46.3	LOS D	54.7[N8]	386.6[N8]	0.89	0.94	1.04	22.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)
N8 The Percentile Back of Queue extends to upstream Site lanes.

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
East: Vulture Street											
P2	Full	63	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
North: Main Street											
P3	Full	84	54.3	LOS E	0.3	0.3	0.95	0.95	208.2	200.0	0.96

West: Vulture Street										
P4 Full	137	54.5	LOS E	0.4	0.4	0.96	0.96	208.3	200.0	0.96
All Pedestrians	284	54.4	LOS E	0.4	0.4	0.95	0.95	208.2	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [5_2028DP] Site 5 - PM Peak - Vulture Street / Main Street (2028 Development)

Network: [10] PM Peak - 2028 Development (2028 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 5 - Vulture Street / Main Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
2	T1	All MCs	1000	3.8	1000	3.8	0.633	34.7	LOS C	23.6	170.8	0.84	0.75	0.84	17.8
3	R2	All MCs	160	2.0	160	2.0	* 0.882	84.7	LOS F	5.4	38.5	1.00	0.96	1.45	20.3
3u	U	All MCs	1	0.0	1	0.0	0.882	79.4	LOS E	5.4	38.4	1.00	0.96	1.45	12.9
Approach			1161	3.5	1161	3.5	0.882	41.6	LOS D	23.6	170.8	0.86	0.78	0.92	16.6
North: Main Street															
7	L2	All MCs	312	1.0	312	1.0	0.509	42.8	LOS D	14.6[N8]	103.4[N8]	0.86	0.82	0.86	27.2
8	T1	All MCs	1204	2.2	1204	2.2	* 0.943	63.6	LOS E	42.8[N8]	305.4[N8]	1.00	1.15	1.28	11.9
Approach			1516	1.9	1516	1.9	0.943	59.3	LOS E	42.8[N8]	305.4[N8]	0.97	1.08	1.19	14.9
West: Vulture Street															
10	L2	All MCs	111	2.0	111	2.0	0.230	24.9	LOS C	7.0	49.3	0.63	0.65	0.63	11.4
11	T1	All MCs	2389	1.2	2389	1.2	* 0.943	58.4	LOS E	58.9[N8]	416.4[N8]	0.99	1.11	1.21	23.9
12	R2	All MCs	356	2.7	356	2.7	0.675	50.8	LOS D	16.4[N8]	117.2[N8]	0.84	0.82	0.84	19.1
Approach			2856	1.4	2856	1.4	0.943	56.1	LOS E	58.9[N8]	416.4[N8]	0.95	1.05	1.14	21.7
All Vehicles			5533	2.0	5533	2.0	0.943	54.0	LOS D	58.9[N8]	416.4[N8]	0.94	1.00	1.11	19.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)
N8 The Percentile Back of Queue extends to upstream Site lanes.

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
East: Vulture Street											
P2	Full	63	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
North: Main Street											
P3	Full	84	54.3	LOS E	0.3	0.3	0.95	0.95	208.2	200.0	0.96

West: Vulture Street										
P4 Full	137	54.5	LOS E	0.4	0.4	0.96	0.96	208.3	200.0	0.96
All Pedestrians	284	54.4	LOS E	0.4	0.4	0.95	0.95	208.2	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [5_2029BP] Site 5 - PM Peak - Vulture Street / Main Street (2029 Base)

Network: [4] PM Peak - 2029 Base (2029 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 5 - Vulture Street / Main Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
2	T1	All MCs	1008	3.8	1008	3.8	0.639	34.9	LOS C	23.9	173.0	0.84	0.75	0.84	17.7
3	R2	All MCs	162	2.0	162	2.0	* 0.893	85.8	LOS F	5.5	39.3	1.00	0.97	1.48	20.1
3u	U	All MCs	1	0.0	1	0.0	0.893	80.4	LOS F	5.5	39.2	1.00	0.97	1.48	12.8
Approach			1172	3.6	1172	3.6	0.893	42.0	LOS D	23.9	173.0	0.87	0.78	0.93	16.5
North: Main Street															
7	L2	All MCs	315	1.0	315	1.0	0.514	44.1	LOS D	14.8	104.7	0.86	0.82	0.86	28.3
8	T1	All MCs	1216	2.2	1216	2.2	* 0.953	66.7	LOS E	44.3	315.8	1.00	1.18	1.30	13.5
Approach			1531	1.9	1531	1.9	0.953	62.0	LOS E	44.3	315.8	0.97	1.10	1.21	16.4
West: Vulture Street															
10	L2	All MCs	112	2.0	112	2.0	0.232	10.7	LOS B	2.1	15.2	0.19	0.42	0.19	28.0
11	T1	All MCs	2413	1.2	2413	1.2	* 0.953	43.8	LOS D	57.2[N8]	404.4[N8]	0.91	1.01	1.11	29.3
12	R2	All MCs	359	2.7	359	2.7	0.687	52.1	LOS D	16.7	119.3	0.84	0.82	0.84	20.1
Approach			2883	1.4	2883	1.4	0.953	43.6	LOS D	57.2[N8]	404.4[N8]	0.87	0.96	1.05	26.1
All Vehicles			5585	2.0	5585	2.0	0.953	48.3	LOS D	57.2[N8]	404.4[N8]	0.90	0.96	1.07	21.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)
N8 The Percentile Back of Queue extends to upstream Site lanes.

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
East: Vulture Street											
P2	Full	63	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
North: Main Street											
P3	Full	84	54.3	LOS E	0.3	0.3	0.95	0.95	208.2	200.0	0.96

West: Vulture Street										
P4 Full	137	54.5	LOS E	0.4	0.4	0.96	0.96	208.3	200.0	0.96
All Pedestrians	284	54.4	LOS E	0.4	0.4	0.95	0.95	208.2	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [5_2029DP] Site 5 - PM Peak - Vulture Street / Main Street (2029 Development)

Network: [12] PM Peak - 2029 Development (2029 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 5 - Vulture Street / Main Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
2	T1	All MCs	1033	3.7	1033	3.7	0.655	35.5	LOS D	24.8	178.9	0.85	0.76	0.85	17.6
3	R2	All MCs	162	2.0	162	2.0	* 0.893	86.1	LOS F	5.5	39.3	1.00	0.97	1.48	20.1
3u	U	All MCs	1	0.0	1	0.0	0.893	80.4	LOS F	5.5	39.2	1.00	0.97	1.48	12.8
Approach			1196	3.5	1196	3.5	0.893	42.4	LOS D	24.8	178.9	0.87	0.79	0.94	16.3
North: Main Street															
7	L2	All MCs	315	1.0	315	1.0	0.515	43.1	LOS D	14.8[N8]	104.7[N8]	0.86	0.82	0.86	27.2
8	T1	All MCs	1216	2.2	1216	2.2	* 0.954	67.2	LOS E	44.5[N8]	317.0[N8]	1.00	1.18	1.31	11.4
Approach			1531	1.9	1531	1.9	0.954	62.2	LOS E	44.5[N8]	317.0[N8]	0.97	1.11	1.22	14.4
West: Vulture Street															
10	L2	All MCs	112	2.0	112	2.0	0.233	24.9	LOS C	7.1	50.1	0.64	0.65	0.64	11.4
11	T1	All MCs	2417	1.2	2417	1.2	* 0.954	62.1	LOS E	61.6[N8]	435.9[N8]	0.99	1.14	1.24	23.0
12	R2	All MCs	363	2.7	363	2.7	0.698	51.5	LOS D	17.0[N8]	121.7[N8]	0.85	0.83	0.85	18.9
Approach			2892	1.4	2892	1.4	0.954	59.3	LOS E	61.6[N8]	435.9[N8]	0.96	1.08	1.17	21.0
All Vehicles			5618	2.0	5618	2.0	0.954	56.5	LOS E	61.6[N8]	435.9[N8]	0.94	1.03	1.13	18.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)
N8 The Percentile Back of Queue extends to upstream Site lanes.

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
East: Vulture Street											
P2	Full	63	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
North: Main Street											
P3	Full	84	54.3	LOS E	0.3	0.3	0.95	0.95	208.2	200.0	0.96

West: Vulture Street										
P4 Full	137	54.5	LOS E	0.4	0.4	0.96	0.96	208.3	200.0	0.96
All Pedestrians	284	54.4	LOS E	0.4	0.4	0.95	0.95	208.2	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [5_2030BP] Site 5 - PM Peak - Vulture Street / Main Street (2030 Base)

Network: [6] PM Peak - 2030 Base (2030 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 5 - Vulture Street / Main Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
2	T1	All MCs	1019	3.8	1019	3.8	0.647	35.1	LOS D	24.3	175.7	0.85	0.75	0.85	17.7
3	R2	All MCs	164	2.0	164	2.0	* 0.905	87.0	LOS F	5.6	40.2	1.00	0.98	1.50	20.0
3u	U	All MCs	1	0.0	1	0.0	0.905	81.5	LOS F	5.6	40.0	1.00	0.98	1.50	12.6
Approach			1184	3.6	1184	3.6	0.905	42.4	LOS D	24.3	175.7	0.87	0.78	0.94	16.4
North: Main Street															
7	L2	All MCs	318	1.0	318	1.0	0.520	44.3	LOS D	15.0	105.9	0.86	0.82	0.86	28.3
8	T1	All MCs	1228	2.2	1228	2.2	* 0.963	70.3	LOS E	46.0	327.7	1.00	1.21	1.33	13.0
Approach			1546	1.9	1546	1.9	0.963	65.0	LOS E	46.0	327.7	0.97	1.13	1.24	15.9
West: Vulture Street															
10	L2	All MCs	113	2.0	113	2.0	0.235	10.7	LOS B	2.2	15.4	0.19	0.42	0.19	28.1
11	T1	All MCs	2437	1.2	2437	1.2	* 0.963	47.3	LOS D	60.0[N8]	424.7[N8]	0.92	1.05	1.16	28.1
12	R2	All MCs	363	2.7	363	2.7	0.703	52.7	LOS D	17.0	122.1	0.85	0.83	0.85	20.0
Approach			2913	1.4	2913	1.4	0.963	46.6	LOS D	60.0[N8]	424.7[N8]	0.89	1.00	1.08	25.2
All Vehicles			5643	2.0	5643	2.0	0.963	50.7	LOS D	60.0[N8]	424.7[N8]	0.91	0.99	1.09	20.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)
N8 The Percentile Back of Queue extends to upstream Site lanes.

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
East: Vulture Street											
P2	Full	63	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
North: Main Street											
P3	Full	84	54.3	LOS E	0.3	0.3	0.95	0.95	208.2	200.0	0.96

West: Vulture Street										
P4 Full	137	54.5	LOS E	0.4	0.4	0.96	0.96	208.3	200.0	0.96
All Pedestrians	284	54.4	LOS E	0.4	0.4	0.95	0.95	208.2	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [5_2030DP] Site 5 - PM Peak - Vulture Street / Main Street (2030 Development)

Network: [14] PM Peak - 2030 Development (2030 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 5 - Vulture Street / Main Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
2	T1	All MCs	1044	3.7	1044	3.7	0.663	35.7	LOS D	25.2	181.9	0.86	0.76	0.86	17.5
3	R2	All MCs	164	2.0	164	2.0	* 0.905	87.3	LOS F	5.6	40.2	1.00	0.98	1.50	20.0
3u	U	All MCs	1	0.0	1	0.0	0.905	81.5	LOS F	5.6	40.0	1.00	0.98	1.50	12.6
Approach			1209	3.5	1209	3.5	0.905	42.8	LOS D	25.2	181.9	0.88	0.79	0.95	16.2
North: Main Street															
7	L2	All MCs	318	1.0	318	1.0	0.521	43.3	LOS D	15.0[N8]	106.0[N8]	0.86	0.82	0.86	27.1
8	T1	All MCs	1228	2.2	1228	2.2	* 0.964	70.9	LOS E	46.1[N8]	329.0[N8]	1.00	1.21	1.34	10.9
Approach			1546	1.9	1546	1.9	0.964	65.2	LOS E	46.1[N8]	329.0[N8]	0.97	1.13	1.24	13.9
West: Vulture Street															
10	L2	All MCs	113	2.0	113	2.0	0.235	25.0	LOS C	7.1	50.7	0.64	0.65	0.64	11.4
11	T1	All MCs	2441	1.2	2441	1.2	* 0.964	66.0	LOS E	64.3[N8]	454.8[N8]	0.99	1.17	1.27	22.1
12	R2	All MCs	367	2.7	367	2.7	0.714	52.3	LOS D	17.5[N8]	125.2[N8]	0.86	0.83	0.87	18.7
Approach			2921	1.4	2921	1.4	0.964	62.7	LOS E	64.3[N8]	454.8[N8]	0.96	1.11	1.19	20.2
All Vehicles			5677	2.0	5677	2.0	0.964	59.2	LOS E	64.3[N8]	454.8[N8]	0.94	1.05	1.15	17.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)
N8 The Percentile Back of Queue extends to upstream Site lanes.

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
East: Vulture Street											
P2	Full	63	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
North: Main Street											
P3	Full	84	54.3	LOS E	0.3	0.3	0.95	0.95	208.2	200.0	0.96

West: Vulture Street										
P4 Full	137	54.5	LOS E	0.4	0.4	0.96	0.96	208.3	200.0	0.96
All Pedestrians	284	54.4	LOS E	0.4	0.4	0.95	0.95	208.2	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [5_2031BP] Site 5 - PM Peak - Vulture Street / Main Street (2031 Base)

Network: [8] PM Peak - 2031 Base (2031 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 5 - Vulture Street / Main Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
2	T1	All MCs	1029	3.8	1029	3.8	0.654	35.4	LOS D	24.7	178.5	0.85	0.76	0.85	17.6
3	R2	All MCs	165	2.0	165	2.0	* 0.910	87.8	LOS F	5.7	40.6	1.00	0.98	1.52	19.9
3u	U	All MCs	1	0.0	1	0.0	0.910	82.1	LOS F	5.7	40.5	1.00	0.98	1.52	12.6
Approach			1196	3.6	1196	3.6	0.910	42.7	LOS D	24.7	178.5	0.87	0.79	0.94	16.3
North: Main Street															
7	L2	All MCs	321	1.0	321	1.0	0.525	44.6	LOS D	15.2	107.3	0.86	0.82	0.86	28.2
8	T1	All MCs	1240	2.2	1240	2.2	* 0.973	74.3	LOS E	47.7	339.9	1.00	1.24	1.36	12.4
Approach			1561	1.9	1561	1.9	0.973	68.2	LOS E	47.7	339.9	0.97	1.15	1.26	15.3
West: Vulture Street															
10	L2	All MCs	114	2.0	114	2.0	0.237	10.6	LOS B	2.2	15.5	0.19	0.42	0.19	28.1
11	T1	All MCs	2462	1.2	2462	1.2	* 0.973	51.1	LOS D	63.1 N8	446.1 N8	0.94	1.10	1.20	26.8
12	R2	All MCs	366	2.7	366	2.7	0.715	53.6	LOS D	17.5	125.2	0.86	0.83	0.87	19.8
Approach			2942	1.4	2942	1.4	0.973	49.9	LOS D	63.1 N8	446.1 N8	0.90	1.04	1.12	24.2
All Vehicles			5699	2.0	5699	2.0	0.973	53.4	LOS D	63.1 N8	446.1 N8	0.92	1.02	1.12	20.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)
N8 The Percentile Back of Queue extends to upstream Site lanes.

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
East: Vulture Street											
P2	Full	63	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
North: Main Street											
P3	Full	84	54.3	LOS E	0.3	0.3	0.95	0.95	208.2	200.0	0.96

West: Vulture Street										
P4 Full	137	54.5	LOS E	0.4	0.4	0.96	0.96	208.3	200.0	0.96
All Pedestrians	284	54.4	LOS E	0.4	0.4	0.95	0.95	208.2	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [5_2031DP] Site 5 - PM Peak - Vulture Street / Main Street (2031 Development)

Network: [16] PM Peak - 2031 Development (2031 Development)

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Site 5 - Vulture Street / Main Street
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120.0 seconds (Network User-Given Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Main Street															
2	T1	All MCs	1065	3.7	1065	3.7	0.677	36.3	LOS D	25.9	187.3	0.86	0.77	0.86	17.4
3	R2	All MCs	165	2.0	165	2.0	* 0.910	88.2	LOS F	5.7	40.6	1.00	0.98	1.52	19.9
3u	U	All MCs	1	0.0	1	0.0	0.910	82.1	LOS F	5.7	40.5	1.00	0.98	1.52	12.6
Approach			1232	3.4	1232	3.4	0.910	43.3	LOS D	25.9	187.3	0.88	0.80	0.95	16.1
North: Main Street															
7	L2	All MCs	321	1.0	321	1.0	0.526	43.5	LOS D	15.2[N8]	107.4[N8]	0.86	0.82	0.86	27.1
8	T1	All MCs	1240	2.2	1240	2.2	* 0.974	75.0	LOS E	47.9[N8]	341.4[N8]	1.00	1.24	1.37	10.4
Approach			1561	1.9	1561	1.9	0.974	68.6	LOS E	47.9[N8]	341.4[N8]	0.97	1.16	1.27	13.4
West: Vulture Street															
10	L2	All MCs	114	2.0	114	2.0	0.237	25.0	LOS C	7.2	51.3	0.64	0.65	0.64	11.4
11	T1	All MCs	2466	1.2	2466	1.2	* 0.974	70.2	LOS E	67.1[N8]	474.8[N8]	0.99	1.20	1.30	21.2
12	R2	All MCs	372	2.7	372	2.7	0.728	53.6	LOS D	18.1[N8]	129.6[N8]	0.87	0.84	0.89	18.4
Approach			2952	1.4	2952	1.4	0.974	66.4	LOS E	67.1[N8]	474.8[N8]	0.96	1.14	1.22	19.5
All Vehicles			5744	2.0	5744	2.0	0.974	62.0	LOS E	67.1[N8]	474.8[N8]	0.95	1.07	1.18	17.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)
N8 The Percentile Back of Queue extends to upstream Site lanes.

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
East: Vulture Street											
P2	Full	63	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
North: Main Street											
P3	Full	84	54.3	LOS E	0.3	0.3	0.95	0.95	208.2	200.0	0.96

West: Vulture Street										
P4 Full	137	54.5	LOS E	0.4	0.4	0.96	0.96	208.3	200.0	0.96
All Pedestrians	284	54.4	LOS E	0.4	0.4	0.95	0.95	208.2	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

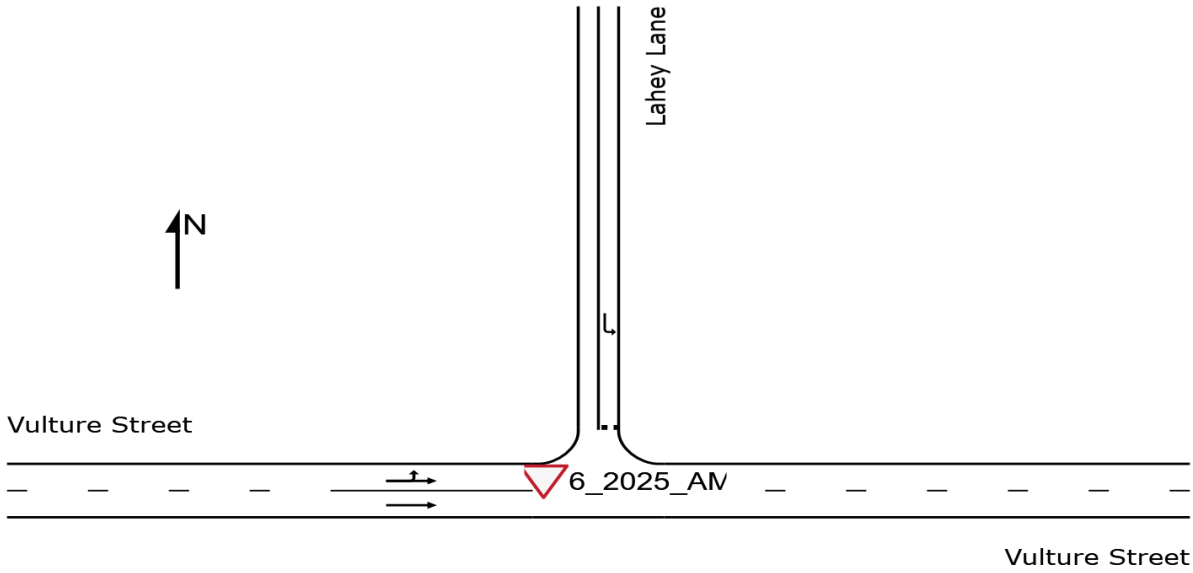
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SITE LAYOUT

Site: [6_2025_AM] Site 6 - AM Peak - Vulture Street / Lahey Lane (2025 Survey)

Site 6 - Vulture Street / Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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MOVEMENT SUMMARY

Site: [6_2025_AM] Site 6 - AM Peak - Vulture Street / Lahey Lane (2025 Survey)

Network: [17] AM Peak - Existing Network 2025 (2025 Existing)

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Site 6 - Vulture Street / Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
North: Lahey Lane															
7	L2	All MCs	12	0.0	12	0.0	0.010	3.5	LOS A	0.0	0.3	0.39	0.53	0.39	18.9
Approach			12	0.0	12	0.0	0.010	3.5	LOS A	0.0	0.3	0.39	0.53	0.39	18.9
West: Vulture Street															
10	L2	All MCs	6	0.0	6	0.0	0.189	3.5	LOS A	0.0	0.0	0.00	0.01	0.00	58.6
11	T1	All MCs	711	4.6	711	4.6	0.189	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.3
Approach			717	4.6	717	4.6	0.189	0.0	NA	0.0	0.0	0.00	0.01	0.00	59.3
All Vehicles			728	4.5	728	4.5	0.189	0.1	NA	0.0	0.3	0.01	0.01	0.01	58.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [6_2028BA] Site 6 - AM Peak - Vulture Street / Lahey Lane (2028 Base)

Network: [1] AM Peak - 2028 Base (2028 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 6 - Vulture Street / Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
North: Lahey Lane															
7	L2	All MCs	12	0.0	12	0.0	0.010	3.5	LOS A	0.0	0.3	0.39	0.53	0.39	18.8
Approach			12	0.0	12	0.0	0.010	3.5	LOS A	0.0	0.3	0.39	0.53	0.39	18.8
West: Vulture Street															
10	L2	All MCs	6	0.0	6	0.0	0.195	3.5	LOS A	0.0	0.0	0.00	0.01	0.00	58.7
11	T1	All MCs	732	4.6	732	4.6	0.195	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.3
Approach			738	4.6	738	4.6	0.195	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.3
All Vehicles			749	4.5	749	4.5	0.195	0.1	NA	0.0	0.3	0.01	0.01	0.01	58.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [6_2028DA] Site 6 - AM Peak - Vulture Street / Lahey Lane (2028 Development)

Network: [9] AM Peak - 2028 Development (2028 Development)

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Site 6 - Vulture Street / Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
North: Lahey Lane															
7	L2	All MCs	12	0.0	12	0.0	0.010	3.5	LOS A	0.0	0.3	0.39	0.53	0.39	18.8
Approach			12	0.0	12	0.0	0.010	3.5	LOS A	0.0	0.3	0.39	0.53	0.39	18.8
West: Vulture Street															
10	L2	All MCs	7	0.0	7	0.0	0.195	3.5	LOS A	0.0	0.0	0.00	0.01	0.00	58.5
11	T1	All MCs	732	4.6	732	4.6	0.195	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	59.2
Approach			739	4.5	739	4.5	0.195	0.0	NA	0.0	0.0	0.00	0.01	0.00	59.2
All Vehicles			751	4.5	751	4.5	0.195	0.1	NA	0.0	0.3	0.01	0.01	0.01	58.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [6_2029BA] Site 6 - AM Peak - Vulture Street / Lahey Lane (2029 Base)

Network: [3] AM Peak - 2029 Base (2029 Base)

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Site 6 - Vulture Street / Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
North: Lahey Lane															
7	L2	All MCs	12	0.0	12	0.0	0.010	3.5	LOS A	0.0	0.3	0.40	0.53	0.40	18.7
Approach			12	0.0	12	0.0	0.010	3.5	LOS A	0.0	0.3	0.40	0.53	0.40	18.7
West: Vulture Street															
10	L2	All MCs	6	0.0	6	0.0	0.197	3.5	LOS A	0.0	0.0	0.00	0.01	0.00	58.7
11	T1	All MCs	739	4.6	739	4.6	0.197	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.3
Approach			745	4.6	745	4.6	0.197	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.3
All Vehicles			757	4.5	757	4.5	0.197	0.1	NA	0.0	0.3	0.01	0.01	0.01	58.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [6_2029DA] Site 6 - AM Peak - Vulture Street / Lahey Lane (2029 Development)

Network: [11] AM Peak - 2029 Development (2029 Development)

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Site 6 - Vulture Street / Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
North: Lahey Lane															
7	L2	All MCs	29	0.0	29	0.0	0.025	3.5	LOS A	0.1	0.7	0.39	0.55	0.39	18.9
Approach			29	0.0	29	0.0	0.025	3.5	LOS A	0.1	0.7	0.39	0.55	0.39	18.9
West: Vulture Street															
10	L2	All MCs	38	0.0	38	0.0	0.204	3.5	LOS A	0.0	0.0	0.00	0.06	0.00	53.6
11	T1	All MCs	733	4.6	733	4.6	0.204	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	56.7
Approach			771	4.4	771	4.4	0.204	0.2	NA	0.0	0.0	0.00	0.03	0.00	56.5
All Vehicles			800	4.2	800	4.2	0.204	0.3	NA	0.1	0.7	0.01	0.05	0.01	54.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [6_2030BA] Site 6 - AM Peak - Vulture Street / Lahey Lane (2030 Base)

Network: [5] AM Peak - 2030 Base (2030 Base)

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Site 6 - Vulture Street / Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
North: Lahey Lane															
7	L2	All MCs	12	0.0	12	0.0	0.010	3.5	LOS A	0.0	0.3	0.40	0.53	0.40	18.7
Approach			12	0.0	12	0.0	0.010	3.5	LOS A	0.0	0.3	0.40	0.53	0.40	18.7
West: Vulture Street															
10	L2	All MCs	6	0.0	6	0.0	0.199	3.5	LOS A	0.0	0.0	0.00	0.01	0.00	58.7
11	T1	All MCs	746	4.6	746	4.6	0.199	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.3
Approach			753	4.6	753	4.6	0.199	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.3
All Vehicles			764	4.5	764	4.5	0.199	0.1	NA	0.0	0.3	0.01	0.01	0.01	58.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [6_2030DA] Site 6 - AM Peak - Vulture Street / Lahey Lane (2030 Development)

Network: [13] AM Peak - 2030 Development (2030 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 6 - Vulture Street / Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
North: Lahey Lane															
7	L2	All MCs	31	0.0	31	0.0	0.026	3.5	LOS A	0.1	0.7	0.39	0.55	0.39	18.8
Approach			31	0.0	31	0.0	0.026	3.5	LOS A	0.1	0.7	0.39	0.55	0.39	18.8
West: Vulture Street															
10	L2	All MCs	40	0.0	40	0.0	0.206	3.5	LOS A	0.0	0.0	0.00	0.06	0.00	53.3
11	T1	All MCs	740	4.6	740	4.6	0.206	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	56.6
Approach			780	4.4	780	4.4	0.206	0.2	NA	0.0	0.0	0.00	0.03	0.00	56.4
All Vehicles			811	4.2	811	4.2	0.206	0.3	NA	0.1	0.7	0.01	0.05	0.01	54.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [6_2031BA] Site 6 - AM Peak - Vulture Street / Lahey Lane (2031 Base)

Network: [7] AM Peak - 2031 Base (2031 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 6 - Vulture Street / Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
North: Lahey Lane															
7	L2	All MCs	12	0.0	12	0.0	0.010	3.6	LOS A	0.0	0.3	0.40	0.53	0.40	18.6
Approach			12	0.0	12	0.0	0.010	3.6	LOS A	0.0	0.3	0.40	0.53	0.40	18.6
West: Vulture Street															
10	L2	All MCs	6	0.0	6	0.0	0.201	3.5	LOS A	0.0	0.0	0.00	0.01	0.00	58.7
11	T1	All MCs	755	4.6	755	4.6	0.201	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.3
Approach			761	4.6	761	4.6	0.201	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.3
All Vehicles			773	4.5	773	4.5	0.201	0.1	NA	0.0	0.3	0.01	0.01	0.01	58.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [6_2031DA] Site 6 - AM Peak - Vulture Street / Lahey Lane (2031 Development)

Network: [15] AM Peak - 2031 Development (2031 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 6 - Vulture Street / Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
North: Lahey Lane															
7	L2	All MCs	35	0.0	35	0.0	0.029	3.5	LOS A	0.1	0.8	0.39	0.55	0.39	18.8
Approach			35	0.0	35	0.0	0.029	3.5	LOS A	0.1	0.8	0.39	0.55	0.39	18.8
West: Vulture Street															
10	L2	All MCs	48	0.0	48	0.0	0.210	3.5	LOS A	0.0	0.0	0.00	0.07	0.00	52.3
11	T1	All MCs	747	4.6	747	4.6	0.210	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	56.0
Approach			796	4.4	796	4.4	0.210	0.2	NA	0.0	0.0	0.00	0.03	0.00	55.8
All Vehicles			831	4.2	831	4.2	0.210	0.4	NA	0.1	0.8	0.02	0.06	0.02	53.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [6_2025_PM] Site 6 - PM Peak - Vulture Street / Lahey Lane (2025 Survey)

Network: [2025_PM] PM Peak - Existing Network 2025 (2025 Existing)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 6 - Vulture Street / Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
North: Lahey Lane															
7	L2	All MCs	31	0.0	31	0.0	0.038	5.3	LOS A	0.1	1.0	0.55	0.69	0.55	13.8
Approach			31	0.0	31	0.0	0.038	5.3	LOS A	0.1	1.0	0.55	0.69	0.55	13.8
West: Vulture Street															
10	L2	All MCs	7	0.0	7	0.0	0.352	3.5	LOS A	0.0	0.0	0.00	0.01	0.00	59.0
11	T1	All MCs	1359	0.9	1359	0.9	0.352	0.0	LOS A	-[N7]	-[N7]	0.00	0.00	0.00	59.4
Approach			1366	0.8	1366	0.8	0.352	0.0	NA	-[N7]	-[N7]	0.00	0.00	0.00	59.4
All Vehicles			1397	0.8	1397	0.8	0.352	0.1	NA	-[N7]	-[N7]	0.01	0.02	0.01	57.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

N7 The capacity reduction has been determined from the queue blockage probability based on the Percentile Back of Queue values of a Site further downstream.

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MOVEMENT SUMMARY

Site: [6_2028BP] Site 6 - PM Peak - Vulture Street / Lahey Lane (2028 Base)

Network: [2] PM Peak - 2028 Base (2028 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 6 - Vulture Street / Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
North: Lahey Lane															
7	L2	All MCs	31	0.0	31	0.0	0.039	5.5	LOS A	0.1	1.0	0.56	0.70	0.56	13.5
Approach			31	0.0	31	0.0	0.039	5.5	LOS A	0.1	1.0	0.56	0.70	0.56	13.5
West: Vulture Street															
10	L2	All MCs	7	0.0	7	0.0	0.363	3.5	LOS A	0.0	0.0	0.00	0.01	0.00	59.0
11	T1	All MCs	1400	0.9	1400	0.9	0.363	0.0	LOS A	-N9	-N9	0.00	0.00	0.00	59.4
Approach			1407	0.8	1407	0.8	0.363	0.0	NA	-N9	-N9	0.00	0.00	0.00	59.4
All Vehicles			1438	0.8	1438	0.8	0.363	0.1	NA	-N9	-N9	0.01	0.02	0.01	57.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

N9 Refer to the full Percentile Back of Queue value given for the queue formed at the originating downstream Site.

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MOVEMENT SUMMARY

Site: [6_2028DP] Site 6 - PM Peak - Vulture Street / Lahey Lane (2028 Development)

Network: [10] PM Peak - 2028 Development (2028 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 6 - Vulture Street / Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
North: Lahey Lane															
7	L2	All MCs	31	0.0	31	0.0	0.039	5.5	LOS A	0.1	1.0	0.56	0.70	0.56	13.5
Approach			31	0.0	31	0.0	0.039	5.5	LOS A	0.1	1.0	0.56	0.70	0.56	13.5
West: Vulture Street															
10	L2	All MCs	9	0.0	9	0.0	0.364	3.5	LOS A	0.0	0.0	0.00	0.01	0.00	58.8
11	T1	All MCs	1400	0.9	1400	0.9	0.364	0.0	LOS A	-N9	-N9	0.00	0.00	0.00	59.3
Approach			1409	0.8	1409	0.8	0.364	0.0	NA	-N9	-N9	0.00	0.00	0.00	59.3
All Vehicles			1440	0.8	1440	0.8	0.364	0.2	NA	-N9	-N9	0.01	0.02	0.01	57.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

N9 Refer to the full Percentile Back of Queue value given for the queue formed at the originating downstream Site.

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MOVEMENT SUMMARY

Site: [6_2029BP] Site 6 - PM Peak - Vulture Street / Lahey Lane (2029 Base)

Network: [4] PM Peak - 2029 Base (2029 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 6 - Vulture Street / Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
North: Lahey Lane															
7	L2	All MCs	31	0.0	31	0.0	0.040	5.6	LOS A	0.1	1.0	0.56	0.70	0.56	13.4
Approach			31	0.0	31	0.0	0.040	5.6	LOS A	0.1	1.0	0.56	0.70	0.56	13.4
West: Vulture Street															
10	L2	All MCs	7	0.0	7	0.0	0.366	3.5	LOS A	0.0	0.0	0.00	0.01	0.00	59.0
11	T1	All MCs	1414	0.9	1414	0.9	0.366	0.0	LOS A	-N9	-N9	0.00	0.00	0.00	59.4
Approach			1421	0.8	1421	0.8	0.366	0.0	NA	-N9	-N9	0.00	0.00	0.00	59.4
All Vehicles			1452	0.8	1452	0.8	0.366	0.1	NA	-N9	-N9	0.01	0.02	0.01	57.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

N9 Refer to the full Percentile Back of Queue value given for the queue formed at the originating downstream Site.

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MOVEMENT SUMMARY

Site: [6_2029DP] Site 6 - PM Peak - Vulture Street / Lahey Lane (2029 Development)

Network: [12] PM Peak - 2029 Development (2029 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 6 - Vulture Street / Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
North: Lahey Lane															
7	L2	All MCs	44	0.0	44	0.0	0.057	5.5	LOS A	0.2	1.4	0.56	0.72	0.56	13.5
Approach			44	0.0	44	0.0	0.057	5.5	LOS A	0.2	1.4	0.56	0.72	0.56	13.5
West: Vulture Street															
10	L2	All MCs	24	0.0	24	0.0	0.369	3.5	LOS A	0.0	0.0	0.00	0.02	0.00	57.5
11	T1	All MCs	1407	0.9	1407	0.9	0.369	0.0	LOS A	-[N9]	-[N9]	0.00	0.01	0.00	58.6
Approach			1432	0.8	1432	0.8	0.369	0.1	NA	-[N9]	-[N9]	0.00	0.01	0.00	58.6
All Vehicles			1476	0.8	1476	0.8	0.369	0.2	NA	-[N9]	-[N9]	0.02	0.03	0.02	55.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

N9 Refer to the full Percentile Back of Queue value given for the queue formed at the originating downstream Site.

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MOVEMENT SUMMARY

Site: [6_2030BP] Site 6 - PM Peak - Vulture Street / Lahey Lane (2030 Base)

Network: [6] PM Peak - 2030 Base (2030 Base)

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Site 6 - Vulture Street / Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
North: Lahey Lane															
7	L2	All MCs	31	0.0	31	0.0	0.040	5.6	LOS A	0.1	1.0	0.56	0.71	0.56	13.3
Approach			31	0.0	31	0.0	0.040	5.6	LOS A	0.1	1.0	0.56	0.71	0.56	13.3
West: Vulture Street															
10	L2	All MCs	7	0.0	7	0.0	0.370	3.5	LOS A	0.0	0.0	0.00	0.01	0.00	59.1
11	T1	All MCs	1428	0.9	1428	0.9	0.370	0.0	LOS A	-N9	-N9	0.00	0.00	0.00	59.4
Approach			1436	0.8	1436	0.8	0.370	0.0	NA	-N9	-N9	0.00	0.00	0.00	59.4
All Vehicles			1466	0.8	1466	0.8	0.370	0.1	NA	-N9	-N9	0.01	0.02	0.01	57.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

N9 Refer to the full Percentile Back of Queue value given for the queue formed at the originating downstream Site.

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MOVEMENT SUMMARY

Site: [6_2030DP] Site 6 - PM Peak - Vulture Street / Lahey Lane (2030 Development)

Network: [14] PM Peak - 2030 Development (2030 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 6 - Vulture Street / Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
North: Lahey Lane															
7	L2	All MCs	45	0.0	45	0.0	0.059	5.6	LOS A	0.2	1.5	0.56	0.72	0.56	13.4
Approach			45	0.0	45	0.0	0.059	5.6	LOS A	0.2	1.5	0.56	0.72	0.56	13.4
West: Vulture Street															
10	L2	All MCs	24	0.0	24	0.0	0.373	3.5	LOS A	0.0	0.0	0.00	0.02	0.00	57.5
11	T1	All MCs	1422	0.9	1422	0.9	0.373	0.0	LOS A	-[N9]	-[N9]	0.00	0.01	0.00	58.6
Approach			1446	0.8	1446	0.8	0.373	0.1	NA	-[N9]	-[N9]	0.00	0.01	0.00	58.6
All Vehicles			1492	0.8	1492	0.8	0.373	0.2	NA	-[N9]	-[N9]	0.02	0.03	0.02	55.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

N9 Refer to the full Percentile Back of Queue value given for the queue formed at the originating downstream Site.

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MOVEMENT SUMMARY

Site: [6_2031BP] Site 6 - PM Peak - Vulture Street / Lahey Lane (2031 Base)

Network: [8] PM Peak - 2031 Base (2031 Base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 6 - Vulture Street / Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
North: Lahey Lane															
7	L2	All MCs	31	0.0	31	0.0	0.041	5.7	LOS A	0.1	1.0	0.56	0.71	0.56	13.2
Approach			31	0.0	31	0.0	0.041	5.7	LOS A	0.1	1.0	0.56	0.71	0.56	13.2
West: Vulture Street															
10	L2	All MCs	7	0.0	7	0.0	0.374	3.5	LOS A	0.0	0.0	0.00	0.01	0.00	59.1
11	T1	All MCs	1442	0.9	1442	0.9	0.374	0.0	LOS A	-N9	-N9	0.00	0.00	0.00	59.4
Approach			1449	0.8	1449	0.8	0.374	0.0	NA	-N9	-N9	0.00	0.00	0.00	59.4
All Vehicles			1480	0.8	1480	0.8	0.374	0.1	NA	-N9	-N9	0.01	0.02	0.01	57.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

N9 Refer to the full Percentile Back of Queue value given for the queue formed at the originating downstream Site.

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MOVEMENT SUMMARY

Site: [6_2031DP] Site 6 - PM Peak - Vulture Street / Lahey Lane (2031 Development)

Network: [16] PM Peak - 2031 Development (2031 Development)

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Site 6 - Vulture Street / Lahey Lane
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
North: Lahey Lane															
7	L2	All MCs	46	0.0	46	0.0	0.061	5.7	LOS A	0.2	1.5	0.56	0.73	0.56	13.3
Approach			46	0.0	46	0.0	0.061	5.7	LOS A	0.2	1.5	0.56	0.73	0.56	13.3
West: Vulture Street															
10	L2	All MCs	24	0.0	24	0.0	0.377	3.5	LOS A	0.0	0.0	0.00	0.02	0.00	57.5
11	T1	All MCs	1436	0.9	1436	0.9	0.377	0.0	LOS A	-[N9]	-[N9]	0.00	0.01	0.00	58.6
Approach			1460	0.8	1460	0.8	0.377	0.1	NA	-[N9]	-[N9]	0.00	0.01	0.00	58.6
All Vehicles			1506	0.8	1506	0.8	0.377	0.2	NA	-[N9]	-[N9]	0.02	0.03	0.02	55.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

N9 Refer to the full Percentile Back of Queue value given for the queue formed at the originating downstream Site.

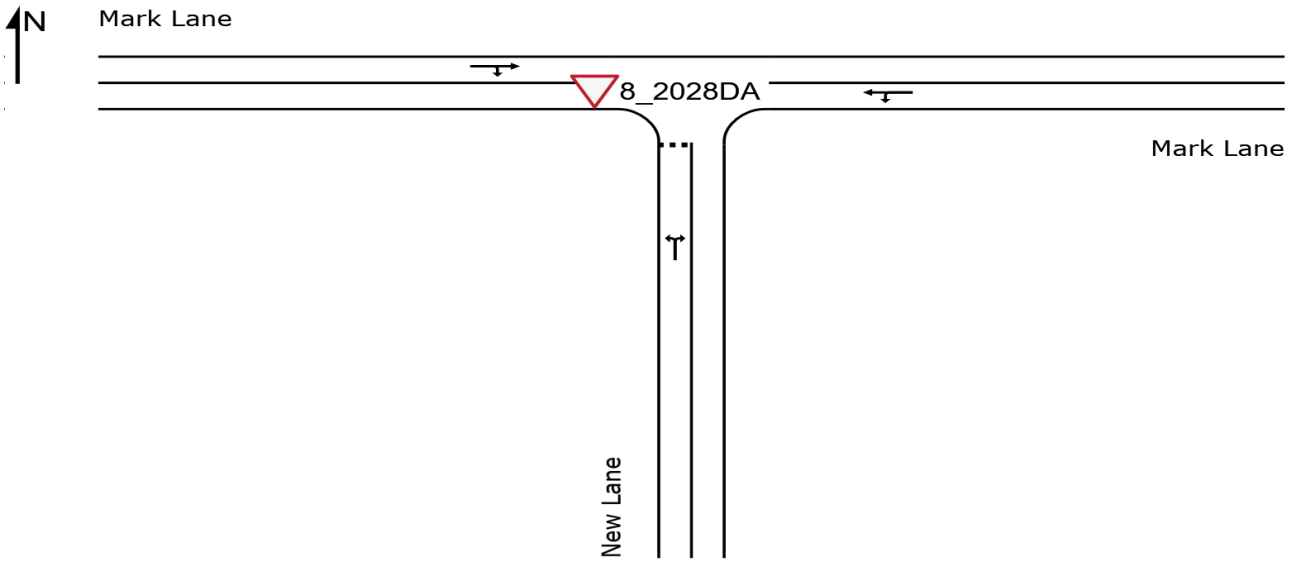
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SITE LAYOUT

Site: [8_2028DA] Site 8 - AM Peak - Mark Lane / New Laneway (new site) (2028 Development)

Site 8 - Mark Lane / New Laneway (new site)
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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MOVEMENT SUMMARY

Site: [8_2028DA] Site 8 - AM Peak - Mark Lane / New Laneway (new site) (2028 Development)

Network: [9] AM Peak - 2028 Development (2028 Development)

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Site 8 - Mark Lane / New Laneway (new site)
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: New Lane															
1	L2	All MCs	1	0.0	1	0.0	0.001	3.1	LOS A	0.0	0.0	0.02	0.53	0.02	27.6
3	R2	All MCs	1	0.0	1	0.0	0.001	2.9	LOS A	0.0	0.0	0.02	0.53	0.02	27.6
Approach			2	0.0	2	0.0	0.001	3.0	LOS A	0.0	0.0	0.02	0.53	0.02	27.6
East: Mark Lane															
4	L2	All MCs	1	0.0	1	0.0	0.001	3.8	LOS A	0.0	0.0	0.00	0.28	0.00	39.3
5	T1	All MCs	1	0.0	1	0.0	0.001	0.0	LOS A	0.0	0.0	0.00	0.28	0.00	39.3
Approach			2	0.0	2	0.0	0.001	1.9	NA	0.0	0.0	0.00	0.28	0.00	39.3
West: Mark Lane															
11	T1	All MCs	2	0.0	2	0.0	0.002	0.0	LOS A	0.0	0.0	0.01	0.20	0.01	45.4
12	R2	All MCs	1	0.0	1	0.0	0.002	5.2	LOS A	0.0	0.0	0.01	0.20	0.01	45.4
Approach			3	0.0	3	0.0	0.002	1.7	NA	0.0	0.0	0.01	0.20	0.01	45.4
All Vehicles			7	0.0	7	0.0	0.002	2.1	NA	0.0	0.0	0.01	0.32	0.01	39.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [8_2029DA] Site 8 - AM Peak - Mark Lane / New Laneway (new site) (2029 Development)

Network: [11] AM Peak - 2029 Development (2029 Development)

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Site 8 - Mark Lane / New Laneway (new site)
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: New Lane															
1	L2	All MCs	39	0.0	39	0.0	0.053	3.2	LOS A	0.2	1.4	0.09	0.51	0.09	26.7
3	R2	All MCs	36	0.0	36	0.0	0.053	3.1	LOS A	0.2	1.4	0.09	0.51	0.09	26.7
Approach			75	0.0	75	0.0	0.053	3.1	LOS A	0.2	1.4	0.09	0.51	0.09	26.7
East: Mark Lane															
4	L2	All MCs	8	0.0	8	0.0	0.016	3.8	LOS A	0.0	0.0	0.00	0.16	0.00	46.3
5	T1	All MCs	22	0.0	22	0.0	0.016	0.0	LOS A	0.0	0.0	0.00	0.16	0.00	46.3
Approach			31	0.0	31	0.0	0.016	1.1	NA	0.0	0.0	0.00	0.16	0.00	46.3
West: Mark Lane															
11	T1	All MCs	2	0.0	2	0.0	0.020	0.1	LOS A	0.1	0.6	0.10	0.53	0.10	30.9
12	R2	All MCs	33	0.0	33	0.0	0.020	5.3	LOS A	0.1	0.6	0.10	0.53	0.10	30.9
Approach			35	0.0	35	0.0	0.020	5.0	NA	0.1	0.6	0.10	0.53	0.10	30.9
All Vehicles			140	0.0	140	0.0	0.053	3.1	NA	0.2	1.4	0.07	0.44	0.07	31.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [8_2030DA] Site 8 - AM Peak - Mark Lane / New Laneway (new site) (2030 Development)

Network: [13] AM Peak - 2030 Development (2030 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 8 - Mark Lane / New Laneway (new site)
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: New Lane															
1	L2	All MCs	44	0.0	44	0.0	0.060	3.2	LOS A	0.2	1.5	0.09	0.51	0.09	26.7
3	R2	All MCs	40	0.0	40	0.0	0.060	3.1	LOS A	0.2	1.5	0.09	0.51	0.09	26.7
Approach			84	0.0	84	0.0	0.060	3.1	LOS A	0.2	1.5	0.09	0.51	0.09	26.7
East: Mark Lane															
4	L2	All MCs	8	0.0	8	0.0	0.016	3.8	LOS A	0.0	0.0	0.00	0.16	0.00	46.3
5	T1	All MCs	22	0.0	22	0.0	0.016	0.0	LOS A	0.0	0.0	0.00	0.16	0.00	46.3
Approach			31	0.0	31	0.0	0.016	1.1	NA	0.0	0.0	0.00	0.16	0.00	46.3
West: Mark Lane															
11	T1	All MCs	2	0.0	2	0.0	0.022	0.1	LOS A	0.1	0.7	0.10	0.53	0.10	30.9
12	R2	All MCs	36	0.0	36	0.0	0.022	5.3	LOS A	0.1	0.7	0.10	0.53	0.10	30.9
Approach			38	0.0	38	0.0	0.022	5.0	NA	0.1	0.7	0.10	0.53	0.10	30.9
All Vehicles			153	0.0	153	0.0	0.060	3.2	NA	0.2	1.5	0.08	0.45	0.08	31.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [8_2031DA] Site 8 - AM Peak - Mark Lane / New Laneway (new site) (2031 Development)

Network: [15] AM Peak - 2031 Development (2031 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Site 8 - Mark Lane / New Laneway (new site)
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: New Lane															
1	L2	All MCs	57	0.0	57	0.0	0.083	3.2	LOS A	0.3	2.2	0.13	0.51	0.13	26.3
3	R2	All MCs	57	0.0	57	0.0	0.083	3.2	LOS A	0.3	2.2	0.13	0.51	0.13	26.3
Approach			114	0.0	114	0.0	0.083	3.2	LOS A	0.3	2.2	0.13	0.51	0.13	26.3
East: Mark Lane															
4	L2	All MCs	11	0.0	11	0.0	0.024	3.8	LOS A	0.0	0.0	0.00	0.13	0.00	48.2
5	T1	All MCs	36	0.0	36	0.0	0.024	0.0	LOS A	0.0	0.0	0.00	0.13	0.00	48.2
Approach			46	0.0	46	0.0	0.024	0.9	NA	0.0	0.0	0.00	0.13	0.00	48.2
West: Mark Lane															
11	T1	All MCs	2	0.0	2	0.0	0.025	0.1	LOS A	0.1	0.8	0.13	0.53	0.13	30.5
12	R2	All MCs	41	0.0	41	0.0	0.025	5.4	LOS A	0.1	0.8	0.13	0.53	0.13	30.5
Approach			43	0.0	43	0.0	0.025	5.1	NA	0.1	0.8	0.13	0.53	0.13	30.5
All Vehicles			203	0.0	203	0.0	0.083	3.1	NA	0.3	2.2	0.10	0.43	0.10	31.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [8_2028DP] Site 8 - PM Peak - Mark Lane / New Laneway (new site) (2028 Development)

Network: [10] PM Peak - 2028 Development (2028 Development)

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Site 8 - Mark Lane / New Laneway (new site)
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: New Lane															
1	L2	All MCs	1	0.0	1	0.0	0.001	3.1	LOS A	0.0	0.0	0.01	0.53	0.01	27.6
3	R2	All MCs	1	0.0	1	0.0	0.001	2.9	LOS A	0.0	0.0	0.01	0.53	0.01	27.6
Approach			2	0.0	2	0.0	0.001	3.0	LOS A	0.0	0.0	0.01	0.53	0.01	27.6
East: Mark Lane															
4	L2	All MCs	1	0.0	1	0.0	0.001	3.8	LOS A	0.0	0.0	0.00	0.28	0.00	39.3
5	T1	All MCs	1	0.0	1	0.0	0.001	0.0	LOS A	0.0	0.0	0.00	0.28	0.00	39.3
Approach			2	0.0	2	0.0	0.001	1.9	NA	0.0	0.0	0.00	0.28	0.00	39.3
West: Mark Lane															
11	T1	All MCs	1	0.0	1	0.0	0.001	0.0	LOS A	0.0	0.0	0.02	0.30	0.02	40.6
12	R2	All MCs	1	0.0	1	0.0	0.001	5.2	LOS A	0.0	0.0	0.02	0.30	0.02	40.6
Approach			2	0.0	2	0.0	0.001	2.6	NA	0.0	0.0	0.02	0.30	0.02	40.6
All Vehicles			6	0.0	6	0.0	0.001	2.5	NA	0.0	0.0	0.01	0.37	0.01	36.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [8_2029DP] Site 8 - PM Peak - Mark Lane / New Laneway (new site) (2029 Development)

Network: [12] PM Peak - 2029 Development (2029 Development)

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Site 8 - Mark Lane / New Laneway (new site)
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: New Lane															
1	L2	All MCs	31	0.0	31	0.0	0.038	3.1	LOS A	0.1	1.0	0.06	0.51	0.06	27.1
3	R2	All MCs	23	0.0	23	0.0	0.038	3.1	LOS A	0.1	1.0	0.06	0.51	0.06	27.1
Approach			54	0.0	54	0.0	0.038	3.1	LOS A	0.1	1.0	0.06	0.51	0.06	27.1
East: Mark Lane															
4	L2	All MCs	15	0.0	15	0.0	0.013	3.8	LOS A	0.0	0.0	0.00	0.33	0.00	37.3
5	T1	All MCs	11	0.0	11	0.0	0.013	0.0	LOS A	0.0	0.0	0.00	0.33	0.00	37.3
Approach			25	0.0	25	0.0	0.013	2.2	NA	0.0	0.0	0.00	0.33	0.00	37.3
West: Mark Lane															
11	T1	All MCs	1	0.0	1	0.0	0.035	0.1	LOS A	0.2	1.1	0.09	0.56	0.09	30.4
12	R2	All MCs	60	0.0	60	0.0	0.035	5.3	LOS A	0.2	1.1	0.09	0.56	0.09	30.4
Approach			61	0.0	61	0.0	0.035	5.2	NA	0.2	1.1	0.09	0.56	0.09	30.4
All Vehicles			140	0.0	140	0.0	0.038	3.9	NA	0.2	1.1	0.06	0.50	0.06	30.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [8_2030DP] Site 8 - PM Peak - Mark Lane / New Laneway (new site) (2030 Development)

Network: [14] PM Peak - 2030 Development (2030 Development)

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Site 8 - Mark Lane / New Laneway (new site)
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: New Lane															
1	L2	All MCs	32	0.0	32	0.0	0.039	3.1	LOS A	0.1	1.0	0.06	0.51	0.06	27.1
3	R2	All MCs	23	0.0	23	0.0	0.039	3.1	LOS A	0.1	1.0	0.06	0.51	0.06	27.1
Approach			55	0.0	55	0.0	0.039	3.1	LOS A	0.1	1.0	0.06	0.51	0.06	27.1
East: Mark Lane															
4	L2	All MCs	17	0.0	17	0.0	0.014	3.8	LOS A	0.0	0.0	0.00	0.35	0.00	36.6
5	T1	All MCs	11	0.0	11	0.0	0.014	0.0	LOS A	0.0	0.0	0.00	0.35	0.00	36.6
Approach			27	0.0	27	0.0	0.014	2.3	NA	0.0	0.0	0.00	0.35	0.00	36.6
West: Mark Lane															
11	T1	All MCs	1	0.0	1	0.0	0.038	0.1	LOS A	0.2	1.2	0.09	0.56	0.09	30.3
12	R2	All MCs	65	0.0	65	0.0	0.038	5.3	LOS A	0.2	1.2	0.09	0.56	0.09	30.3
Approach			66	0.0	66	0.0	0.038	5.2	NA	0.2	1.2	0.09	0.56	0.09	30.3
All Vehicles			148	0.0	148	0.0	0.039	3.9	NA	0.2	1.2	0.07	0.50	0.07	30.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [8_2031DP] Site 8 - PM Peak - Mark Lane / New Laneway (new site) (2031 Development)

Network: [16] PM Peak - 2031 Development (2031 Development)

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Site 8 - Mark Lane / New Laneway (new site)
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: New Lane															
1	L2	All MCs	38	0.0	38	0.0	0.051	3.1	LOS A	0.2	1.3	0.09	0.51	0.09	26.8
3	R2	All MCs	32	0.0	32	0.0	0.051	3.3	LOS A	0.2	1.3	0.09	0.51	0.09	26.8
Approach			69	0.0	69	0.0	0.051	3.2	LOS A	0.2	1.3	0.09	0.51	0.09	26.8
East: Mark Lane															
4	L2	All MCs	22	0.0	22	0.0	0.021	3.8	LOS A	0.0	0.0	0.00	0.32	0.00	37.6
5	T1	All MCs	17	0.0	17	0.0	0.021	0.0	LOS A	0.0	0.0	0.00	0.32	0.00	37.6
Approach			39	0.0	39	0.0	0.021	2.2	NA	0.0	0.0	0.00	0.32	0.00	37.6
West: Mark Lane															
11	T1	All MCs	1	0.0	1	0.0	0.051	0.1	LOS A	0.2	1.7	0.12	0.55	0.12	30.0
12	R2	All MCs	88	0.0	88	0.0	0.051	5.3	LOS A	0.2	1.7	0.12	0.55	0.12	30.0
Approach			89	0.0	89	0.0	0.051	5.3	NA	0.2	1.7	0.12	0.55	0.12	30.0
All Vehicles			198	0.0	198	0.0	0.051	3.9	NA	0.2	1.7	0.08	0.49	0.08	30.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

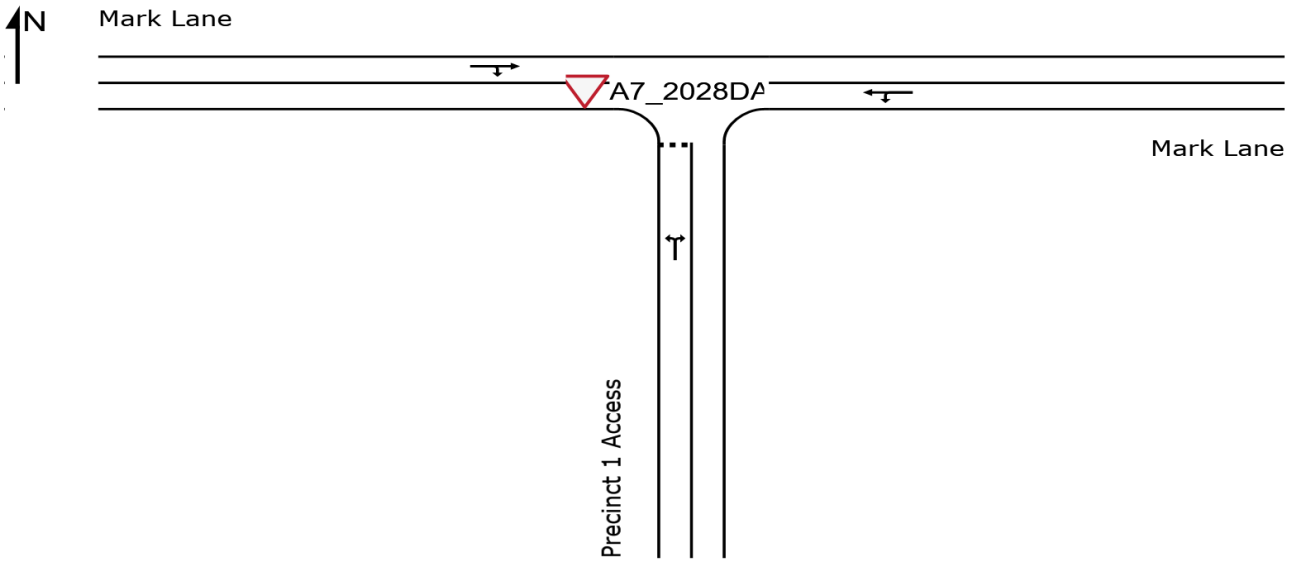
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SITE LAYOUT

Site: [A7_2028DA] Access 7 - AM Peak - Mark Lane / Precinct 1 Access (new site) (2028 Development)

Access 7 - Mark Lane / Precinct 1 Access
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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MOVEMENT SUMMARY

Site: [A7_2028DA] Access 7 - AM Peak - Mark Lane / Precinct 1 Access (new site) (2028 Development)

Network: [9] AM Peak - 2028 Development (2028 Development)

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Access 7 - Mark Lane / Precinct 1 Access
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Precinct 1 Access															
1	L2	All MCs	1	0.0	1	0.0	0.001	5.5	LOS A	0.0	0.0	0.02	0.58	0.02	50.8
3	R2	All MCs	1	0.0	1	0.0	0.001	5.4	LOS A	0.0	0.0	0.02	0.58	0.02	50.8
Approach			2	0.0	2	0.0	0.001	5.5	LOS A	0.0	0.0	0.02	0.58	0.02	50.8
East: Mark Lane															
4	L2	All MCs	1	0.0	1	0.0	0.001	3.8	LOS A	0.0	0.0	0.00	0.28	0.00	52.8
5	T1	All MCs	1	0.0	1	0.0	0.001	0.0	LOS A	0.0	0.0	0.00	0.28	0.00	39.3
Approach			2	0.0	2	0.0	0.001	1.9	NA	0.0	0.0	0.00	0.28	0.00	51.1
West: Mark Lane															
11	T1	All MCs	2	0.0	2	0.0	0.002	0.0	LOS A	0.0	0.0	0.01	0.19	0.01	44.1
12	R2	All MCs	1	0.0	1	0.0	0.002	3.7	LOS A	0.0	0.0	0.01	0.19	0.01	53.2
Approach			3	0.0	3	0.0	0.002	1.2	NA	0.0	0.0	0.01	0.19	0.01	51.4
All Vehicles			7	0.0	7	0.0	0.002	2.6	NA	0.0	0.0	0.01	0.33	0.01	51.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [A7_2029DA] Access 7 - AM Peak - Mark Lane / Precinct 1 Access (new site) (2029 Development)

Network: [11] AM Peak - 2029 Development (2029 Development)

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Access 7 - Mark Lane / Precinct 1 Access
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Precinct 1 Access															
1	L2	All MCs	22	0.0	22	0.0	0.037	5.6	LOS A	0.1	0.9	0.06	0.57	0.06	50.6
3	R2	All MCs	28	0.0	28	0.0	0.037	5.6	LOS A	0.1	0.9	0.06	0.57	0.06	50.6
Approach			51	0.0	51	0.0	0.037	5.6	LOS A	0.1	0.9	0.06	0.57	0.06	50.6
East: Mark Lane															
4	L2	All MCs	2	0.0	2	0.0	0.005	3.8	LOS A	0.0	0.0	0.00	0.12	0.00	54.5
5	T1	All MCs	8	0.0	8	0.0	0.005	0.0	LOS A	0.0	0.0	0.00	0.12	0.00	49.3
Approach			11	0.0	11	0.0	0.005	0.8	NA	0.0	0.0	0.00	0.12	0.00	52.8
West: Mark Lane															
11	T1	All MCs	38	0.0	38	0.0	0.025	0.0	LOS A	0.0	0.3	0.02	0.12	0.02	48.9
12	R2	All MCs	9	0.0	9	0.0	0.025	3.7	LOS A	0.0	0.3	0.02	0.12	0.02	53.9
Approach			47	0.0	47	0.0	0.025	0.7	NA	0.0	0.3	0.02	0.12	0.02	52.3
All Vehicles			108	0.0	108	0.0	0.037	3.0	NA	0.1	0.9	0.04	0.33	0.04	51.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [A7_2030DA] Access 7 - AM Peak - Mark Lane / Precinct 1 Access (new site) (2030 Development)

Network: [13] AM Peak - 2030 Development (2030 Development)

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Access 7 - Mark Lane / Precinct 1 Access
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Queued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Precinct 1 Access															
1	L2	All MCs	22	0.0	22	0.0	0.037	5.6	LOS A	0.1	0.9	0.07	0.56	0.07	50.6
3	R2	All MCs	28	0.0	28	0.0	0.037	5.6	LOS A	0.1	0.9	0.07	0.56	0.07	50.6
Approach			51	0.0	51	0.0	0.037	5.6	LOS A	0.1	0.9	0.07	0.56	0.07	50.6
East: Mark Lane															
4	L2	All MCs	2	0.0	2	0.0	0.006	3.8	LOS A	0.0	0.0	0.00	0.10	0.00	54.6
5	T1	All MCs	9	0.0	9	0.0	0.006	0.0	LOS A	0.0	0.0	0.00	0.10	0.00	50.1
Approach			12	0.0	12	0.0	0.006	0.7	NA	0.0	0.0	0.00	0.10	0.00	53.1
West: Mark Lane															
11	T1	All MCs	41	0.0	41	0.0	0.027	0.0	LOS A	0.0	0.3	0.02	0.11	0.02	49.4
12	R2	All MCs	9	0.0	9	0.0	0.027	3.7	LOS A	0.0	0.3	0.02	0.11	0.02	54.0
Approach			51	0.0	51	0.0	0.027	0.7	NA	0.0	0.3	0.02	0.11	0.02	52.5
All Vehicles			113	0.0	113	0.0	0.037	2.9	NA	0.1	0.9	0.04	0.31	0.04	51.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [A7_2031DA] Access 7 - AM Peak - Mark Lane / Precinct 1 Access (new site) (2031 Development)

Network: [15] AM Peak - 2031 Development (2031 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Access 7 - Mark Lane / Precinct 1 Access
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Queued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Precinct 1 Access															
1	L2	All MCs	35	0.0	35	0.0	0.060	5.6	LOS A	0.2	1.5	0.07	0.56	0.07	50.5
3	R2	All MCs	46	0.0	46	0.0	0.060	5.7	LOS A	0.2	1.5	0.07	0.56	0.07	50.5
Approach			81	0.0	81	0.0	0.060	5.6	LOS A	0.2	1.5	0.07	0.56	0.07	50.5
East: Mark Lane															
4	L2	All MCs	4	0.0	4	0.0	0.008	3.8	LOS A	0.0	0.0	0.00	0.16	0.00	54.0
5	T1	All MCs	11	0.0	11	0.0	0.008	0.0	LOS A	0.0	0.0	0.00	0.16	0.00	45.9
Approach			15	0.0	15	0.0	0.008	1.1	NA	0.0	0.0	0.00	0.16	0.00	52.1
West: Mark Lane															
11	T1	All MCs	59	0.0	59	0.0	0.039	0.0	LOS A	0.1	0.6	0.03	0.12	0.03	48.2
12	R2	All MCs	16	0.0	16	0.0	0.039	3.7	LOS A	0.1	0.6	0.03	0.12	0.03	53.8
Approach			75	0.0	75	0.0	0.039	0.8	NA	0.1	0.6	0.03	0.12	0.03	52.1
All Vehicles			171	0.0	171	0.0	0.060	3.1	NA	0.2	1.5	0.05	0.34	0.05	50.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [A7_2028DP] Access 7 - PM Peak - Mark Lane / Precinct 1 Access (new site) (2028 Development)

Network: [10] PM Peak - 2028 Development (2028 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Access 7 - Mark Lane / Precinct 1 Access
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Queued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Precinct 1 Access															
1	L2	All MCs	1	0.0	1	0.0	0.001	5.5	LOS A	0.0	0.0	0.01	0.58	0.01	50.8
3	R2	All MCs	1	0.0	1	0.0	0.001	5.4	LOS A	0.0	0.0	0.01	0.58	0.01	50.8
Approach			2	0.0	2	0.0	0.001	5.5	LOS A	0.0	0.0	0.01	0.58	0.01	50.8
East: Mark Lane															
4	L2	All MCs	1	0.0	1	0.0	0.001	3.8	LOS A	0.0	0.0	0.00	0.28	0.00	52.8
5	T1	All MCs	1	0.0	1	0.0	0.001	0.0	LOS A	0.0	0.0	0.00	0.28	0.00	39.3
Approach			2	0.0	2	0.0	0.001	1.9	NA	0.0	0.0	0.00	0.28	0.00	51.1
West: Mark Lane															
11	T1	All MCs	1	0.0	1	0.0	0.001	0.0	LOS A	0.0	0.0	0.02	0.29	0.02	39.0
12	R2	All MCs	1	0.0	1	0.0	0.001	3.7	LOS A	0.0	0.0	0.02	0.29	0.02	52.4
Approach			2	0.0	2	0.0	0.001	1.8	NA	0.0	0.0	0.02	0.29	0.02	50.7
All Vehicles			6	0.0	6	0.0	0.001	3.1	NA	0.0	0.0	0.01	0.38	0.01	50.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [A7_2029DP] Access 7 - PM Peak - Mark Lane / Precinct 1 Access (new site) (2029 Development)

Network: [12] PM Peak - 2029 Development (2029 Development)

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Access 7 - Mark Lane / Precinct 1 Access
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Precinct 1 Access															
1	L2	All MCs	11	0.0	11	0.0	0.018	5.6	LOS A	0.1	0.4	0.09	0.56	0.09	50.5
3	R2	All MCs	14	0.0	14	0.0	0.018	5.7	LOS A	0.1	0.4	0.09	0.56	0.09	50.5
Approach			24	0.0	24	0.0	0.018	5.7	LOS A	0.1	0.4	0.09	0.56	0.09	50.5
East: Mark Lane															
4	L2	All MCs	11	0.0	11	0.0	0.014	3.8	LOS A	0.0	0.0	0.00	0.23	0.00	53.4
5	T1	All MCs	16	0.0	16	0.0	0.014	0.0	LOS A	0.0	0.0	0.00	0.23	0.00	42.1
Approach			26	0.0	26	0.0	0.014	1.5	NA	0.0	0.0	0.00	0.23	0.00	51.5
West: Mark Lane															
11	T1	All MCs	23	0.0	23	0.0	0.036	0.1	LOS A	0.2	1.1	0.08	0.36	0.08	34.5
12	R2	All MCs	41	0.0	41	0.0	0.036	3.7	LOS A	0.2	1.1	0.08	0.36	0.08	51.5
Approach			64	0.0	64	0.0	0.036	2.4	NA	0.2	1.1	0.08	0.36	0.08	50.1
All Vehicles			115	0.0	115	0.0	0.036	2.9	NA	0.2	1.1	0.06	0.37	0.06	50.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [A7_2030DP] Access 7 - PM Peak - Mark Lane / Precinct 1 Access (new site) (2030 Development)

Network: [14] PM Peak - 2030 Development (2030 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Access 7 - Mark Lane / Precinct 1 Access
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Precinct 1 Access															
1	L2	All MCs	11	0.0	11	0.0	0.018	5.6	LOS A	0.1	0.4	0.09	0.56	0.09	50.4
3	R2	All MCs	14	0.0	14	0.0	0.018	5.7	LOS A	0.1	0.4	0.09	0.56	0.09	50.4
Approach			24	0.0	24	0.0	0.018	5.7	LOS A	0.1	0.4	0.09	0.56	0.09	50.4
East: Mark Lane															
4	L2	All MCs	11	0.0	11	0.0	0.014	3.8	LOS A	0.0	0.0	0.00	0.22	0.00	53.5
5	T1	All MCs	17	0.0	17	0.0	0.014	0.0	LOS A	0.0	0.0	0.00	0.22	0.00	42.6
Approach			27	0.0	27	0.0	0.014	1.5	NA	0.0	0.0	0.00	0.22	0.00	51.5
West: Mark Lane															
11	T1	All MCs	24	0.0	24	0.0	0.036	0.1	LOS A	0.2	1.1	0.08	0.35	0.08	34.7
12	R2	All MCs	41	0.0	41	0.0	0.036	3.7	LOS A	0.2	1.1	0.08	0.35	0.08	51.5
Approach			65	0.0	65	0.0	0.036	2.4	NA	0.2	1.1	0.08	0.35	0.08	50.1
All Vehicles			117	0.0	117	0.0	0.036	2.8	NA	0.2	1.1	0.07	0.36	0.07	50.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [A7_2031DP] Access 7 - PM Peak - Mark Lane / Precinct 1 Access (new site) (2031 Development)

Network: [16] PM Peak - 2031 Development (2031 Development)

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Access 7 - Mark Lane / Precinct 1 Access
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Queued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Precinct 1 Access															
1	L2	All MCs	16	0.0	16	0.0	0.028	5.6	LOS A	0.1	0.7	0.11	0.56	0.11	50.3
3	R2	All MCs	21	0.0	21	0.0	0.028	5.9	LOS A	0.1	0.7	0.11	0.56	0.11	50.3
Approach			37	0.0	37	0.0	0.028	5.8	LOS A	0.1	0.7	0.11	0.56	0.11	50.3
East: Mark Lane															
4	L2	All MCs	16	0.0	16	0.0	0.020	3.8	LOS A	0.0	0.0	0.00	0.23	0.00	53.3
5	T1	All MCs	23	0.0	23	0.0	0.020	0.0	LOS A	0.0	0.0	0.00	0.23	0.00	41.9
Approach			39	0.0	39	0.0	0.020	1.5	NA	0.0	0.0	0.00	0.23	0.00	51.4
West: Mark Lane															
11	T1	All MCs	32	0.0	32	0.0	0.054	0.1	LOS A	0.2	1.7	0.11	0.38	0.11	33.4
12	R2	All MCs	65	0.0	65	0.0	0.054	3.8	LOS A	0.2	1.7	0.11	0.38	0.11	51.2
Approach			97	0.0	97	0.0	0.054	2.6	NA	0.2	1.7	0.11	0.38	0.11	49.9
All Vehicles			173	0.0	173	0.0	0.054	3.0	NA	0.2	1.7	0.08	0.38	0.08	50.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

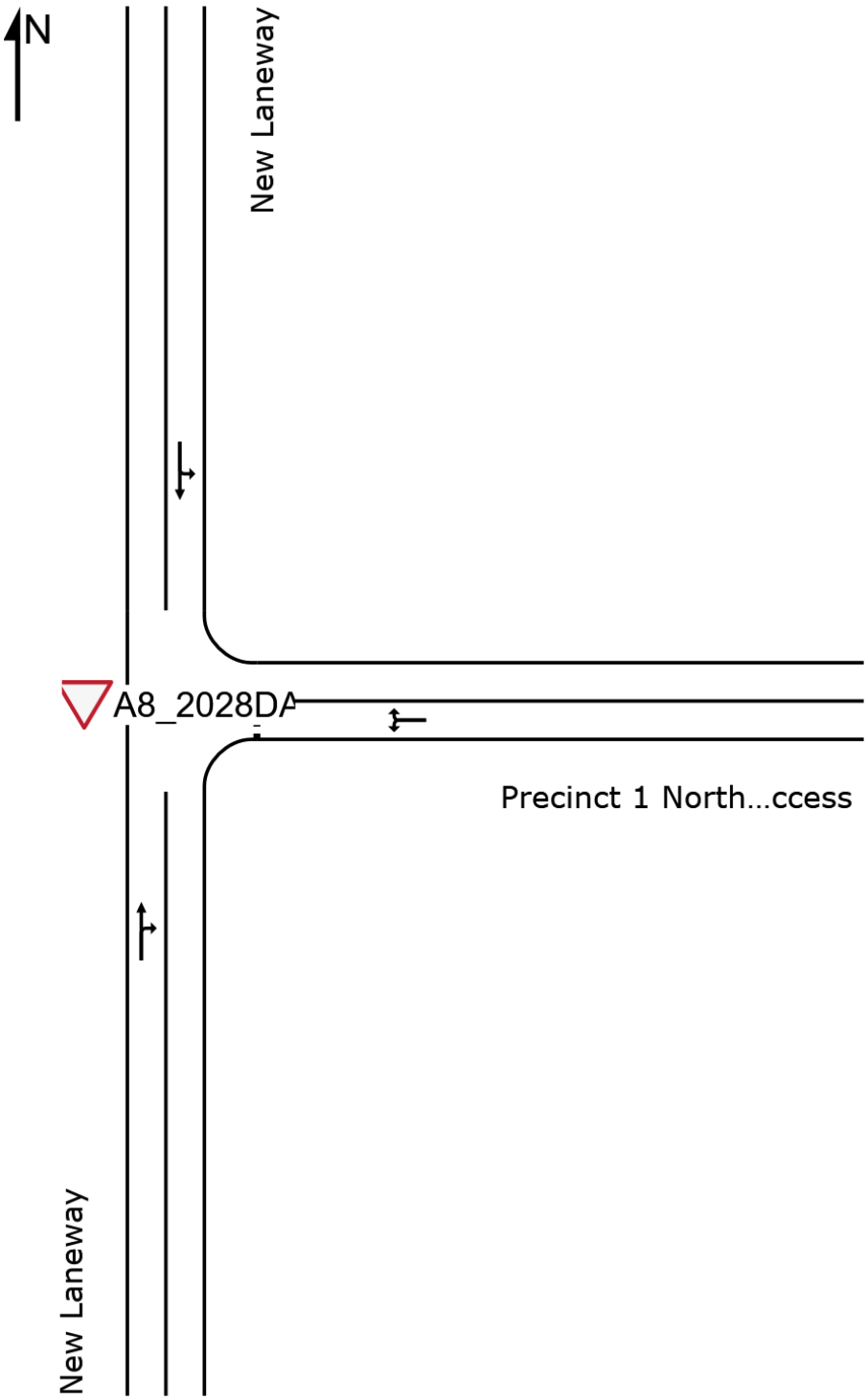
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SITE LAYOUT

Site: [A8_2028DA] Access 8 - AM Peak - New Laneway / Precinct 1 Northern Access (new site) (2028 Development)

Access 8 - New Laneway / Precinct 1 Northern Access
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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MOVEMENT SUMMARY

Site: [A8_2028DA] Access 8 - AM Peak - New Laneway / Precinct 1 Northern Access (new site) (2028 Development)

Network: [9] AM Peak - 2028 Development (2028 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Access 8 - New Laneway / Precinct 1 Northern Access
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: New Laneway															
2	T1	All MCs	1	0.0	1	0.0	0.001	0.0	LOS A	0.0	0.0	0.02	0.28	0.02	38.4
3	R2	All MCs	1	0.0	1	0.0	0.001	3.3	LOS A	0.0	0.0	0.02	0.28	0.02	52.5
Approach			2	0.0	2	0.0	0.001	1.7	NA	0.0	0.0	0.02	0.28	0.02	50.9
East: Precinct 1 Northern Access															
4	L2	All MCs	1	0.0	1	0.0	0.001	5.5	LOS A	0.0	0.0	0.01	0.58	0.01	50.8
6	R2	All MCs	1	0.0	1	0.0	0.001	5.4	LOS A	0.0	0.0	0.01	0.58	0.01	50.8
Approach			2	0.0	2	0.0	0.001	5.5	LOS A	0.0	0.0	0.01	0.58	0.01	50.8
North: New Laneway															
7	L2	All MCs	1	0.0	1	0.0	0.001	3.1	LOS A	0.0	0.0	0.00	0.28	0.00	53.2
8	T1	All MCs	1	0.0	1	0.0	0.001	0.0	LOS A	0.0	0.0	0.00	0.28	0.00	37.5
Approach			2	0.0	2	0.0	0.001	1.5	NA	0.0	0.0	0.00	0.28	0.00	51.6
All Vehicles			6	0.0	6	0.0	0.001	2.9	NA	0.0	0.0	0.01	0.38	0.01	51.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [A8_2029DA] Access 8 - AM Peak - New Laneway / Precinct 1 Northern Access (new site) (2029 Development)

Network: [11] AM Peak - 2029 Development (2029 Development)

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Access 8 - New Laneway / Precinct 1 Northern Access
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: New Laneway															
2	T1	All MCs	46	0.0	46	0.0	0.024	0.0	LOS A	0.0	0.0	0.01	0.01	0.01	58.3
3	R2	All MCs	1	0.0	1	0.0	0.024	3.3	LOS A	0.0	0.0	0.01	0.01	0.01	54.9
Approach			47	0.0	47	0.0	0.024	0.1	NA	0.0	0.0	0.01	0.01	0.01	57.6
East: Precinct 1 Northern Access															
4	L2	All MCs	1	0.0	1	0.0	0.002	5.6	LOS A	0.0	0.0	0.13	0.54	0.13	50.2
6	R2	All MCs	1	0.0	1	0.0	0.002	5.7	LOS A	0.0	0.0	0.13	0.54	0.13	50.2
Approach			2	0.0	2	0.0	0.002	5.7	LOS A	0.0	0.0	0.13	0.54	0.13	50.2
North: New Laneway															
7	L2	All MCs	1	0.0	1	0.0	0.022	3.1	LOS A	0.0	0.0	0.00	0.01	0.00	55.3
8	T1	All MCs	41	0.0	41	0.0	0.022	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	58.1
Approach			42	0.0	42	0.0	0.022	0.1	NA	0.0	0.0	0.00	0.01	0.00	57.4
All Vehicles			92	0.0	92	0.0	0.024	0.2	NA	0.0	0.0	0.01	0.03	0.01	56.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [A8_2030DA] Access 8 - AM Peak - New Laneway / Precinct 1 Northern Access (new site) (2030 Development)

Network: [13] AM Peak - 2030 Development (2030 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Access 8 - New Laneway / Precinct 1 Northern Access
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Queued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: New Laneway															
2	T1	All MCs	47	0.0	47	0.0	0.025	0.0	LOS A	0.0	0.0	0.01	0.01	0.01	58.3
3	R2	All MCs	1	0.0	1	0.0	0.025	3.3	LOS A	0.0	0.0	0.01	0.01	0.01	54.9
Approach			48	0.0	48	0.0	0.025	0.1	NA	0.0	0.0	0.01	0.01	0.01	57.6
East: Precinct 1 Northern Access															
4	L2	All MCs	1	0.0	1	0.0	0.008	5.6	LOS A	0.0	0.2	0.15	0.56	0.15	50.2
6	R2	All MCs	8	0.0	8	0.0	0.008	5.7	LOS A	0.0	0.2	0.15	0.56	0.15	50.2
Approach			9	0.0	9	0.0	0.008	5.7	LOS A	0.0	0.2	0.15	0.56	0.15	50.2
North: New Laneway															
7	L2	All MCs	3	0.0	3	0.0	0.023	3.1	LOS A	0.0	0.0	0.00	0.04	0.00	55.1
8	T1	All MCs	41	0.0	41	0.0	0.023	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	55.0
Approach			44	0.0	44	0.0	0.023	0.2	NA	0.0	0.0	0.00	0.04	0.00	55.1
All Vehicles			102	0.0	102	0.0	0.025	0.7	NA	0.0	0.2	0.02	0.08	0.02	53.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [A8_2031DA] Access 8 - AM Peak - New Laneway / Precinct 1 Northern Access (new site) (2031 Development)

Network: [15] AM Peak - 2031 Development (2031 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Access 8 - New Laneway / Precinct 1 Northern Access
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Queued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: New Laneway															
2	T1	All MCs	60	0.0	60	0.0	0.031	0.0	LOS A	0.0	0.0	0.01	0.01	0.01	58.6
3	R2	All MCs	1	0.0	1	0.0	0.031	3.3	LOS A	0.0	0.0	0.01	0.01	0.01	54.9
Approach			61	0.0	61	0.0	0.031	0.1	NA	0.0	0.0	0.01	0.01	0.01	58.0
East: Precinct 1 Northern Access															
4	L2	All MCs	1	0.0	1	0.0	0.008	5.7	LOS A	0.0	0.2	0.17	0.56	0.17	50.1
6	R2	All MCs	8	0.0	8	0.0	0.008	5.8	LOS A	0.0	0.2	0.17	0.56	0.17	50.1
Approach			9	0.0	9	0.0	0.008	5.8	LOS A	0.0	0.2	0.17	0.56	0.17	50.1
North: New Laneway															
7	L2	All MCs	3	0.0	3	0.0	0.027	3.1	LOS A	0.0	0.0	0.00	0.03	0.00	55.2
8	T1	All MCs	48	0.0	48	0.0	0.027	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	55.6
Approach			52	0.0	52	0.0	0.027	0.2	NA	0.0	0.0	0.00	0.03	0.00	55.4
All Vehicles			122	0.0	122	0.0	0.031	0.6	NA	0.0	0.2	0.02	0.06	0.02	53.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [A8_2028DP] Access 8 - PM Peak - New Laneway / Precinct 1 Northern Access (new site) (2028 Development)

Network: [10] PM Peak - 2028 Development (2028 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Access 8 - New Laneway / Precinct 1 Northern Access
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Queued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: New Laneway															
2	T1	All MCs	1	0.0	1	0.0	0.001	0.0	LOS A	0.0	0.0	0.02	0.28	0.02	38.4
3	R2	All MCs	1	0.0	1	0.0	0.001	3.3	LOS A	0.0	0.0	0.02	0.28	0.02	52.5
Approach			2	0.0	2	0.0	0.001	1.7	NA	0.0	0.0	0.02	0.28	0.02	50.9
East: Precinct 1 Northern Access															
4	L2	All MCs	1	0.0	1	0.0	0.001	5.5	LOS A	0.0	0.0	0.01	0.58	0.01	50.8
6	R2	All MCs	1	0.0	1	0.0	0.001	5.4	LOS A	0.0	0.0	0.01	0.58	0.01	50.8
Approach			2	0.0	2	0.0	0.001	5.5	LOS A	0.0	0.0	0.01	0.58	0.01	50.8
North: New Laneway															
7	L2	All MCs	1	0.0	1	0.0	0.001	3.1	LOS A	0.0	0.0	0.00	0.28	0.00	53.2
8	T1	All MCs	1	0.0	1	0.0	0.001	0.0	LOS A	0.0	0.0	0.00	0.28	0.00	37.5
Approach			2	0.0	2	0.0	0.001	1.5	NA	0.0	0.0	0.00	0.28	0.00	51.6
All Vehicles			6	0.0	6	0.0	0.001	2.9	NA	0.0	0.0	0.01	0.38	0.01	51.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [A8_2029DP] Access 8 - PM Peak - New Laneway / Precinct 1 Northern Access (new site) (2029 Development)

Network: [12] PM Peak - 2029 Development (2029 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Access 8 - New Laneway / Precinct 1 Northern Access
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Queued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: New Laneway															
2	T1	All MCs	40	0.0	40	0.0	0.021	0.0	LOS A	0.0	0.0	0.01	0.02	0.01	57.9
3	R2	All MCs	1	0.0	1	0.0	0.021	3.4	LOS A	0.0	0.0	0.01	0.02	0.01	54.8
Approach			41	0.0	41	0.0	0.021	0.1	NA	0.0	0.0	0.01	0.02	0.01	57.2
East: Precinct 1 Northern Access															
4	L2	All MCs	1	0.0	1	0.0	0.002	5.7	LOS A	0.0	0.0	0.17	0.54	0.17	50.0
6	R2	All MCs	1	0.0	1	0.0	0.002	5.8	LOS A	0.0	0.0	0.17	0.54	0.17	50.0
Approach			2	0.0	2	0.0	0.002	5.8	LOS A	0.0	0.0	0.17	0.54	0.17	50.0
North: New Laneway															
7	L2	All MCs	1	0.0	1	0.0	0.039	3.1	LOS A	0.0	0.0	0.00	0.01	0.00	55.4
8	T1	All MCs	75	0.0	75	0.0	0.039	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	58.9
Approach			76	0.0	76	0.0	0.039	0.0	NA	0.0	0.0	0.00	0.01	0.00	58.3
All Vehicles			119	0.0	119	0.0	0.039	0.2	NA	0.0	0.0	0.01	0.02	0.01	56.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [A8_2030DP] Access 8 - PM Peak - New Laneway / Precinct 1 Northern Access (new site) (2030 Development)

Network: [14] PM Peak - 2030 Development (2030 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Access 8 - New Laneway / Precinct 1 Northern Access
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Queued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: New Laneway															
2	T1	All MCs	41	0.0	41	0.0	0.022	0.0	LOS A	0.0	0.0	0.01	0.02	0.01	57.9
3	R2	All MCs	1	0.0	1	0.0	0.022	3.4	LOS A	0.0	0.0	0.01	0.02	0.01	54.8
Approach			42	0.0	42	0.0	0.022	0.1	NA	0.0	0.0	0.01	0.02	0.01	57.2
East: Precinct 1 Northern Access															
4	L2	All MCs	1	0.0	1	0.0	0.002	5.7	LOS A	0.0	0.1	0.17	0.54	0.17	50.0
6	R2	All MCs	2	0.0	2	0.0	0.002	5.8	LOS A	0.0	0.1	0.17	0.54	0.17	50.0
Approach			3	0.0	3	0.0	0.002	5.8	LOS A	0.0	0.1	0.17	0.54	0.17	50.0
North: New Laneway															
7	L2	All MCs	7	0.0	7	0.0	0.042	3.1	LOS A	0.0	0.0	0.00	0.05	0.00	55.0
8	T1	All MCs	75	0.0	75	0.0	0.042	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	53.8
Approach			82	0.0	82	0.0	0.042	0.3	NA	0.0	0.0	0.00	0.05	0.00	54.5
All Vehicles			127	0.0	127	0.0	0.042	0.4	NA	0.0	0.1	0.01	0.05	0.01	54.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [A8_2031DP] Access 8 - PM Peak - New Laneway / Precinct 1 Northern Access (new site) (2031 Development)

Network: [16] PM Peak - 2031 Development (2031 Development)

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Access 8 - New Laneway / Precinct 1 Northern Access
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: New Laneway															
2	T1	All MCs	46	0.0	46	0.0	0.024	0.0	LOS A	0.0	0.0	0.01	0.01	0.01	58.1
3	R2	All MCs	1	0.0	1	0.0	0.024	3.4	LOS A	0.0	0.0	0.01	0.01	0.01	54.8
Approach			47	0.0	47	0.0	0.024	0.1	NA	0.0	0.0	0.01	0.01	0.01	57.4
East: Precinct 1 Northern Access															
4	L2	All MCs	1	0.0	1	0.0	0.003	5.8	LOS A	0.0	0.1	0.20	0.54	0.20	49.9
6	R2	All MCs	2	0.0	2	0.0	0.003	5.9	LOS A	0.0	0.1	0.20	0.54	0.20	49.9
Approach			3	0.0	3	0.0	0.003	5.9	LOS A	0.0	0.1	0.20	0.54	0.20	49.9
North: New Laneway															
7	L2	All MCs	7	0.0	7	0.0	0.057	3.1	LOS A	0.0	0.0	0.00	0.04	0.00	55.1
8	T1	All MCs	103	0.0	103	0.0	0.057	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	55.3
Approach			111	0.0	111	0.0	0.057	0.2	NA	0.0	0.0	0.00	0.04	0.00	55.2
All Vehicles			161	0.0	161	0.0	0.057	0.3	NA	0.0	0.1	0.01	0.04	0.01	54.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

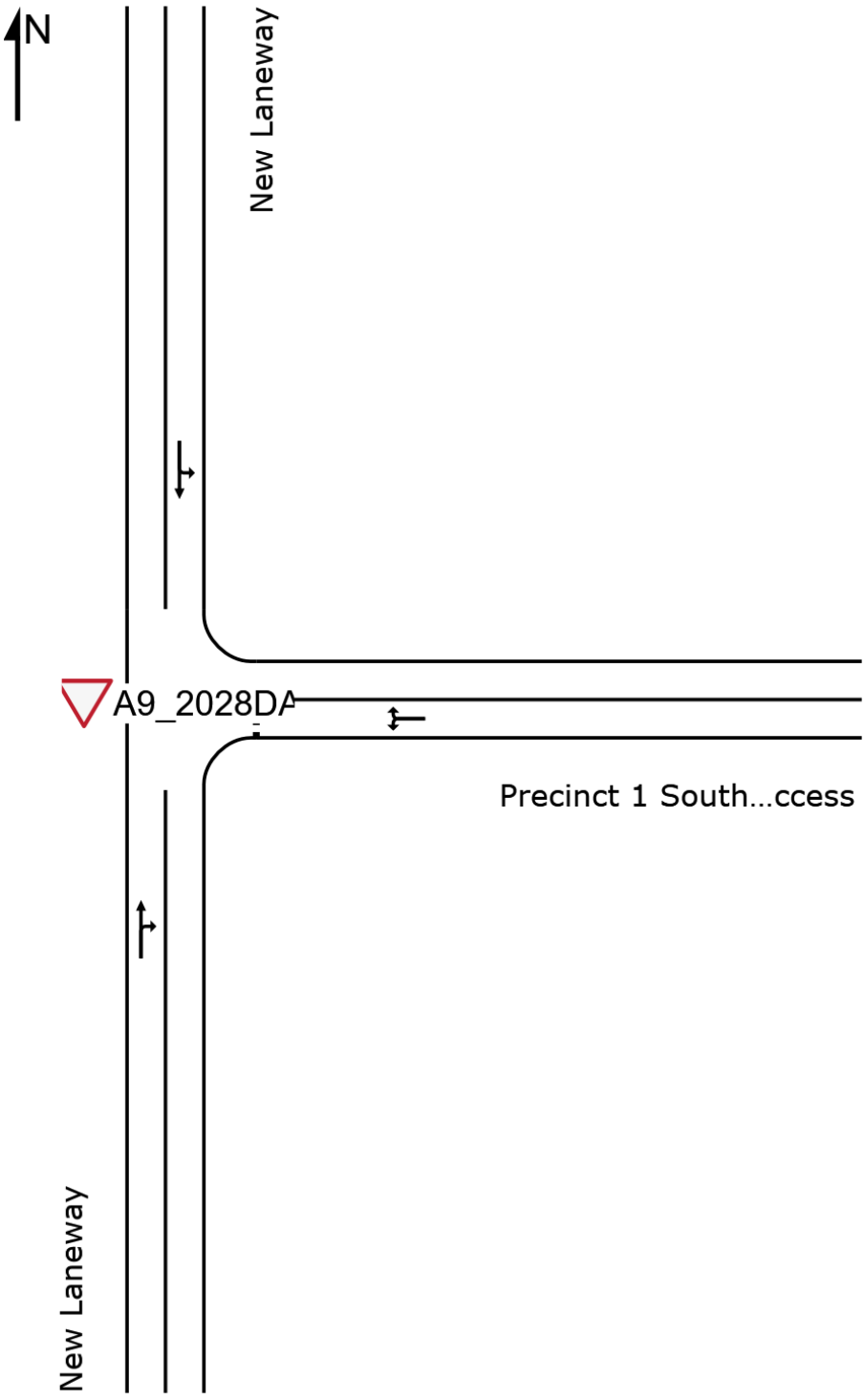
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SITE LAYOUT

Site: [A9_2028DA] Access 9 - AM Peak - New Laneway / Precinct 1 Southern Access (new site) (2028 Development)

Access 9 - New Laneway / Precinct 1 Southern Access
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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MOVEMENT SUMMARY

Site: [A9_2028DA] Access 9 - AM Peak - New Laneway / Precinct 1 Southern Access (new site) (2028 Development)

Network: [9] AM Peak - 2028 Development (2028 Development)

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Access 9 - New Laneway / Precinct 1 Southern Access
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: New Laneway															
2	T1	All MCs	1	0.0	1	0.0	0.001	0.0	LOS A	0.0	0.0	0.02	0.26	0.02	34.3
3	R2	All MCs	1	0.0	1	0.0	0.001	2.2	LOS A	0.0	0.0	0.02	0.26	0.02	53.0
Approach			2	0.0	2	0.0	0.001	1.1	NA	0.0	0.0	0.02	0.26	0.02	51.8
East: Precinct 1 Southern Access															
4	L2	All MCs	1	0.0	1	0.0	0.001	5.5	LOS A	0.0	0.0	0.01	0.58	0.01	49.4
6	R2	All MCs	1	0.0	1	0.0	0.001	5.4	LOS A	0.0	0.0	0.01	0.58	0.01	50.8
Approach			2	0.0	2	0.0	0.001	5.5	LOS A	0.0	0.0	0.01	0.58	0.01	50.1
North: New Laneway															
7	L2	All MCs	1	0.0	1	0.0	0.001	3.5	LOS A	0.0	0.0	0.00	0.28	0.00	53.0
8	T1	All MCs	1	0.0	1	0.0	0.001	0.0	LOS A	0.0	0.0	0.00	0.28	0.00	41.9
Approach			2	0.0	2	0.0	0.001	1.8	NA	0.0	0.0	0.00	0.28	0.00	51.5
All Vehicles			6	0.0	6	0.0	0.001	2.8	NA	0.0	0.0	0.01	0.37	0.01	50.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [A9_2029DA] Access 9 - AM Peak - New Laneway / Precinct 1 Southern Access (new site) (2029 Development)

Network: [11] AM Peak - 2029 Development (2029 Development)

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Access 9 - New Laneway / Precinct 1 Southern Access
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: New Laneway															
2	T1	All MCs	1	0.0	1	0.0	0.001	0.1	LOS A	0.0	0.0	0.09	0.26	0.09	32.8
3	R2	All MCs	1	0.0	1	0.0	0.001	2.3	LOS A	0.0	0.0	0.09	0.26	0.09	52.9
Approach			2	0.0	2	0.0	0.001	1.2	NA	0.0	0.0	0.09	0.26	0.09	51.4
East: Precinct 1 Southern Access															
4	L2	All MCs	1	0.0	1	0.0	0.037	5.5	LOS A	0.1	0.8	0.06	0.58	0.06	49.3
6	R2	All MCs	46	0.0	46	0.0	0.037	5.5	LOS A	0.1	0.8	0.06	0.58	0.06	50.6
Approach			47	0.0	47	0.0	0.037	5.5	LOS A	0.1	0.8	0.06	0.58	0.06	50.6
North: New Laneway															
7	L2	All MCs	41	0.0	41	0.0	0.023	3.5	LOS A	0.0	0.0	0.00	0.53	0.00	50.8
8	T1	All MCs	1	0.0	1	0.0	0.023	0.0	LOS A	0.0	0.0	0.00	0.53	0.00	33.2
Approach			42	0.0	42	0.0	0.023	3.4	NA	0.0	0.0	0.00	0.53	0.00	50.7
All Vehicles			92	0.0	92	0.0	0.037	4.4	NA	0.1	0.8	0.03	0.55	0.03	50.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [A9_2030DA] Access 9 - AM Peak - New Laneway / Precinct 1 Southern Access (new site) (2030 Development)

Network: [13] AM Peak - 2030 Development (2030 Development)

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Access 9 - New Laneway / Precinct 1 Southern Access
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: New Laneway															
2	T1	All MCs	1	0.0	1	0.0	0.001	0.1	LOS A	0.0	0.0	0.09	0.26	0.09	32.8
3	R2	All MCs	1	0.0	1	0.0	0.001	2.3	LOS A	0.0	0.0	0.09	0.26	0.09	52.9
Approach			2	0.0	2	0.0	0.001	1.2	NA	0.0	0.0	0.09	0.26	0.09	51.4
East: Precinct 1 Southern Access															
4	L2	All MCs	1	0.0	1	0.0	0.037	5.5	LOS A	0.1	0.8	0.06	0.58	0.06	49.3
6	R2	All MCs	46	0.0	46	0.0	0.037	5.5	LOS A	0.1	0.8	0.06	0.58	0.06	50.6
Approach			47	0.0	47	0.0	0.037	5.5	LOS A	0.1	0.8	0.06	0.58	0.06	50.6
North: New Laneway															
7	L2	All MCs	41	0.0	41	0.0	0.023	3.5	LOS A	0.0	0.0	0.00	0.53	0.00	50.8
8	T1	All MCs	1	0.0	1	0.0	0.023	0.0	LOS A	0.0	0.0	0.00	0.53	0.00	33.2
Approach			42	0.0	42	0.0	0.023	3.4	NA	0.0	0.0	0.00	0.53	0.00	50.7
All Vehicles			92	0.0	92	0.0	0.037	4.4	NA	0.1	0.8	0.03	0.55	0.03	50.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [A9_2031DA] Access 9 - AM Peak - New Laneway / Precinct 1 Southern Access (new site) (2031 Development)

Network: [15] AM Peak - 2031 Development (2031 Development)

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Access 9 - New Laneway / Precinct 1 Southern Access
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Queued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: New Laneway															
2	T1	All MCs	1	0.0	1	0.0	0.001	0.1	LOS A	0.0	0.0	0.10	0.26	0.10	32.6
3	R2	All MCs	1	0.0	1	0.0	0.001	2.3	LOS A	0.0	0.0	0.10	0.26	0.10	52.8
Approach			2	0.0	2	0.0	0.001	1.2	NA	0.0	0.0	0.10	0.26	0.10	51.4
East: Precinct 1 Southern Access															
4	L2	All MCs	1	0.0	1	0.0	0.048	5.5	LOS A	0.2	1.1	0.07	0.58	0.07	49.2
6	R2	All MCs	59	0.0	59	0.0	0.048	5.5	LOS A	0.2	1.1	0.07	0.58	0.07	50.6
Approach			60	0.0	60	0.0	0.048	5.5	LOS A	0.2	1.1	0.07	0.58	0.07	50.6
North: New Laneway															
7	L2	All MCs	48	0.0	48	0.0	0.027	3.5	LOS A	0.0	0.0	0.00	0.53	0.00	50.7
8	T1	All MCs	1	0.0	1	0.0	0.027	0.0	LOS A	0.0	0.0	0.00	0.53	0.00	33.1
Approach			49	0.0	49	0.0	0.027	3.4	NA	0.0	0.0	0.00	0.53	0.00	50.7
All Vehicles			112	0.0	112	0.0	0.048	4.5	NA	0.2	1.1	0.04	0.55	0.04	50.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [A9_2028DP] Access 9 - PM Peak - New Laneway / Precinct 1 Southern Access (new site) (2028 Development)

Network: [10] PM Peak - 2028 Development (2028 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Access 9 - New Laneway / Precinct 1 Southern Access
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Queued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: New Laneway															
2	T1	All MCs	1	0.0	1	0.0	0.001	0.0	LOS A	0.0	0.0	0.02	0.26	0.02	34.3
3	R2	All MCs	1	0.0	1	0.0	0.001	2.2	LOS A	0.0	0.0	0.02	0.26	0.02	53.0
Approach			2	0.0	2	0.0	0.001	1.1	NA	0.0	0.0	0.02	0.26	0.02	51.8
East: Precinct 1 Southern Access															
4	L2	All MCs	1	0.0	1	0.0	0.001	5.5	LOS A	0.0	0.0	0.01	0.58	0.01	49.4
6	R2	All MCs	1	0.0	1	0.0	0.001	5.4	LOS A	0.0	0.0	0.01	0.58	0.01	50.8
Approach			2	0.0	2	0.0	0.001	5.5	LOS A	0.0	0.0	0.01	0.58	0.01	50.1
North: New Laneway															
7	L2	All MCs	1	0.0	1	0.0	0.001	3.5	LOS A	0.0	0.0	0.00	0.28	0.00	53.0
8	T1	All MCs	1	0.0	1	0.0	0.001	0.0	LOS A	0.0	0.0	0.00	0.28	0.00	41.9
Approach			2	0.0	2	0.0	0.001	1.8	NA	0.0	0.0	0.00	0.28	0.00	51.5
All Vehicles			6	0.0	6	0.0	0.001	2.8	NA	0.0	0.0	0.01	0.37	0.01	50.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [A9_2029DP] Access 9 - PM Peak - New Laneway / Precinct 1 Southern Access (new site) (2029 Development)

Network: [12] PM Peak - 2029 Development (2029 Development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Access 9 - New Laneway / Precinct 1 Southern Access
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: New Laneway															
2	T1	All MCs	1	0.0	1	0.0	0.001	0.1	LOS A	0.0	0.0	0.13	0.26	0.13	32.1
3	R2	All MCs	1	0.0	1	0.0	0.001	2.4	LOS A	0.0	0.0	0.13	0.26	0.13	52.8
Approach			2	0.0	2	0.0	0.001	1.3	NA	0.0	0.0	0.13	0.26	0.13	51.3
East: Precinct 1 Southern Access															
4	L2	All MCs	1	0.0	1	0.0	0.033	5.5	LOS A	0.1	0.7	0.07	0.58	0.07	49.2
6	R2	All MCs	40	0.0	40	0.0	0.033	5.6	LOS A	0.1	0.7	0.07	0.58	0.07	50.6
Approach			41	0.0	41	0.0	0.033	5.6	LOS A	0.1	0.7	0.07	0.58	0.07	50.6
North: New Laneway															
7	L2	All MCs	75	0.0	75	0.0	0.041	3.5	LOS A	0.0	0.0	0.00	0.53	0.00	50.7
8	T1	All MCs	1	0.0	1	0.0	0.041	0.0	LOS A	0.0	0.0	0.00	0.53	0.00	33.0
Approach			76	0.0	76	0.0	0.041	3.5	NA	0.0	0.0	0.00	0.53	0.00	50.7
All Vehicles			119	0.0	119	0.0	0.041	4.1	NA	0.1	0.7	0.03	0.54	0.03	50.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [A9_2030DP] Access 9 - PM Peak - New Laneway / Precinct 1 Southern Access (new site) (2030 Development)

Network: [14] PM Peak - 2030 Development (2030 Development)

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Access 9 - New Laneway / Precinct 1 Southern Access
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: New Laneway															
2	T1	All MCs	1	0.0	1	0.0	0.001	0.1	LOS A	0.0	0.0	0.13	0.26	0.13	32.1
3	R2	All MCs	1	0.0	1	0.0	0.001	2.4	LOS A	0.0	0.0	0.13	0.26	0.13	52.8
Approach			2	0.0	2	0.0	0.001	1.3	NA	0.0	0.0	0.13	0.26	0.13	51.3
East: Precinct 1 Southern Access															
4	L2	All MCs	1	0.0	1	0.0	0.033	5.5	LOS A	0.1	0.7	0.07	0.58	0.07	49.2
6	R2	All MCs	40	0.0	40	0.0	0.033	5.6	LOS A	0.1	0.7	0.07	0.58	0.07	50.6
Approach			41	0.0	41	0.0	0.033	5.6	LOS A	0.1	0.7	0.07	0.58	0.07	50.6
North: New Laneway															
7	L2	All MCs	75	0.0	75	0.0	0.041	3.5	LOS A	0.0	0.0	0.00	0.53	0.00	50.7
8	T1	All MCs	1	0.0	1	0.0	0.041	0.0	LOS A	0.0	0.0	0.00	0.53	0.00	33.0
Approach			76	0.0	76	0.0	0.041	3.5	NA	0.0	0.0	0.00	0.53	0.00	50.7
All Vehicles			119	0.0	119	0.0	0.041	4.1	NA	0.1	0.7	0.03	0.54	0.03	50.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [A9_2031DP] Access 9 - PM Peak - New Laneway / Precinct 1 Southern Access (new site) (2031 Development)

Network: [16] PM Peak - 2031 Development (2031 Development)

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Access 9 - New Laneway / Precinct 1 Southern Access
Site Category: (None)
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: New Laneway															
2	T1	All MCs	1	0.0	1	0.0	0.001	0.2	LOS A	0.0	0.0	0.16	0.26	0.16	31.4
3	R2	All MCs	1	0.0	1	0.0	0.001	2.5	LOS A	0.0	0.0	0.16	0.26	0.16	52.7
Approach			2	0.0	2	0.0	0.001	1.3	NA	0.0	0.0	0.16	0.26	0.16	51.1
East: Precinct 1 Southern Access															
4	L2	All MCs	1	0.0	1	0.0	0.037	5.5	LOS A	0.1	0.8	0.08	0.57	0.08	49.2
6	R2	All MCs	45	0.0	45	0.0	0.037	5.6	LOS A	0.1	0.8	0.08	0.57	0.08	50.5
Approach			46	0.0	46	0.0	0.037	5.6	LOS A	0.1	0.8	0.08	0.57	0.08	50.5
North: New Laneway															
7	L2	All MCs	103	0.0	103	0.0	0.056	3.5	LOS A	0.0	0.0	0.00	0.54	0.00	50.7
8	T1	All MCs	1	0.0	1	0.0	0.056	0.0	LOS A	0.0	0.0	0.00	0.54	0.00	33.0
Approach			104	0.0	104	0.0	0.056	3.5	NA	0.0	0.0	0.00	0.54	0.00	50.7
All Vehicles			153	0.0	153	0.0	0.056	4.1	NA	0.1	0.8	0.03	0.54	0.03	50.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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Appendix E Codes

State code 6: Protection of state transport networks

Table 6.2 Development in general

Performance outcomes	Acceptable outcomes	Response
Network impacts		
PO1 Development does not compromise the safety of users of the **state-controlled road** network.	No acceptable outcome is prescribed.	Complies with PO Refer to Colliers Transport Report for details on the operation of the access arrangement and trip generation.
PO2 Development does not adversely impact the structural integrity or physical condition of a **state-controlled road** or **road transport infrastructure**.	No acceptable outcome is prescribed.	Complies with PO Basement levels works within the parameters of the road infrastructure – Tunnels. Refer to Transport, Architect Plans and Structural report.
PO3 Development ensures **no net worsening** of the operating performance the **state-controlled road** network.	No acceptable outcome is prescribed.	Complies with PO Refer to Colliers Transport Report for details on the operation of the access arrangement and trip generation.
PO4 Traffic movements are not directed onto a **state-controlled road** where they can be accommodated on the **local road** network.	No acceptable outcome is prescribed.	Complies with PO Refer to Colliers Transport Report for details on the operation of the access arrangement and trip generation.
PO5 Development involving haulage exceeding 10,000 tonnes per year does not damage the pavement of a **state-controlled road**.	No acceptable outcome is prescribed.	N/A – non-traffic/transport engineering-related item.
PO6 Development does not require a new **railway** level crossing.	No acceptable outcome is prescribed.	Complies with PO – No new level crossing is proposed.
PO7 Development does not adversely impact the operating performance of an existing **railway crossing**.	No acceptable outcome is prescribed.	Complies with PO Refer to Colliers Transport Report for details on the operation of the access arrangement and trip generation.
PO8 Development does not adversely impact on the safety of an existing **railway crossing**.	No acceptable outcome is prescribed.	N/A - Refer to the traffic report for further details.

Performance outcomes	Acceptable outcomes	Response
PO9 Development is designed and constructed to allow for on-site circulation to ensure vehicles do not queue in a **railway crossing**.	No acceptable outcome is prescribed.	N/A - Refer to the traffic report for further details.
PO10 Development does not create a safety hazard within the **railway corridor**.	No acceptable outcome is prescribed.	N/A – non-traffic/transport engineering-related
PO11 Development does not adversely impact the operating performance of the **railway corridor**.	No acceptable outcome is prescribed.	N/A - Refer to the traffic report for further details.
PO12 Development does not interfere with or obstruct the **railway transport infrastructure** or **other rail infrastructure**.	No acceptable outcome is prescribed.	N/A - Refer to the traffic report for further details.
PO13 Development does not adversely impact the structural integrity or physical condition of a **railway corridor** or **rail transport infrastructure**.	No acceptable outcome is prescribed.	N/A – non-traffic/transport engineering-related item.
Stormwater and overland flow		
PO14 Stormwater run-off or overland flow from the development site does not create or exacerbate a safety hazard for users of a **state transport corridor** or **state transport infrastructure**.	No acceptable outcome is prescribed.	N/A – non-traffic/transport engineering-related item.
PO15 Stormwater run-off or overland flow from the development site does not result in a material worsening of operating performance of a **state transport corridor** or **state transport infrastructure**.	No acceptable outcome is prescribed.	N/A – non-traffic/transport engineering-related item.
PO16 Stormwater run-off or overland flow from the development site does not interfere with the structural integrity or physical condition of the **state transport corridor** or **state transport infrastructure**.	No acceptable outcome is prescribed.	N/A – non-traffic/transport engineering-related item.
PO17 Development associated with a **state-controlled road** or **road transport infrastructure** ensures that stormwater is lawfully discharged.	**AO17.1** Development does not create any new points of discharge to a **state transport corridor** or **state transport infrastructure**. AND	N/A – non-traffic/transport engineering-related item.

Performance outcomes	Acceptable outcomes	Response
	AO17.2 Development does not concentrate flows to a **state transport corridor**. AND **AO17.3** Stormwater run-off is discharged to a **lawful point of discharge**. AND **AO17.4** Development does not worsen the condition of an existing **lawful point of discharge** to a **state transport corridor** or **state transport infrastructure**.	
Flooding		
PO18 Development does not result in a material worsening of flooding impacts within a **state transport corridor** or **state transport infrastructure**	*For a **state-controlled road** or **road transport infrastructure**, all of the following apply:* **AO18.1** For all flood events up to 1% **annual exceedance probability**, development ensures there are negligible impacts (within +/- 10mm) to existing flood levels within a **state transport corridor**. AND **AO18.2** For all flood events up to 1% **annual exceedance probability**, development ensures there are negligible impacts (up to a 10% increase) to existing peak velocities within a **state transport corridor**. AND **AO18.3** For all flood events up to 1% annual exceedance probability, development ensures there are negligible impacts (up to a 10%	N/A – non-traffic/transport engineering-related item.

Performance outcomes	Acceptable outcomes	Response
	increase) to existing time of submergence of a **state transport corridor**. *No acceptable outcome is prescribed for a **railway corridor** or **rail transport infrastructure**.*	
Drainage infrastructure		
PO19 Drainage infrastructure does not create a safety hazard in a **state transport corridor**.	*For a **state-controlled road** environment, both of the following apply:* **AO19.1** Drainage infrastructure associated with, or in a **state-controlled road** is wholly contained within the development site, except at the **lawful point of discharge**. AND **AO19.2** Drainage infrastructure can be maintained without requiring access to a **state transport corridor**. *For a **railway** environment both of the following apply:* **AO19.3** Drainage infrastructure associated with a **railway corridor** or **rail transport infrastructure** is wholly contained within the development site. AND **AO19.4** Drainage infrastructure can be maintained without requiring access to a **state transport corridor**.	N/A – non-traffic/transport engineering-related item.
PO20 Drainage infrastructure associated with, or in a **state-controlled road** or **road transport infrastructure** is constructed and designed to ensure the structural integrity and physical	No acceptable outcome is prescribed.	N/A – non-traffic/transport engineering-related item.

Performance outcomes	Acceptable outcomes	Response
condition of existing drainage infrastructure and the surrounding drainage network is maintained.		
Planned upgrades		
PO21 Development does not impede delivery of **planned upgrades** of **state transport infrastructure**.	No acceptable outcome is prescribed.	Complies with PO Refer to Colliers Transport Report for details on planned upgrades as part of the development plans.

Table 6.3 Public passenger transport infrastructure and active transport

Performance outcomes	Acceptable outcomes	Response
PO22 Development does not damage or interfere with **public passenger transport infrastructure**, **active transport infrastructure** or **public passenger services**.	No acceptable outcome is prescribed.	Complies with PO – Refer to Colliers Transport Report for details on planned upgrades to public passenger services, Bus Stop on Main Street, and upgrades as part of the wider development plans.
PO23 Development does not compromise the safety of **public passenger transport infrastructure**, **public passenger services** and **active transport infrastructure**.	No acceptable outcome is prescribed.	Complies with PO – Refer to Colliers Transport Report for details on planned upgrades to public passenger services, Bus Stop on Main Street, and upgrades as part of the wider development plans.
PO24 Development does not adversely impact the operating performance of **public passenger transport infrastructure, public passenger services** and **active transport infrastructure**.	No acceptable outcome is prescribed.	Complies with PO – Refer to Colliers Transport Report for details on planned upgrades to public passenger services, Bus Stop on Main Street, and upgrades as part of the wider development plans.
PO25 Development does not adversely impact the structural integrity or physical condition of **public passenger transport infrastructure** and **active transport infrastructure**.	No acceptable outcome is prescribed.	Complies with PO – Refer to Colliers Transport Report for details on planned upgrades to public passenger services, Bus Stop on Main Street, and upgrades as part of the wider development plans. .

Performance outcomes	Acceptable outcomes	Response
PO26 Upgraded or new **public passenger transport infrastructure** and **active transport infrastructure** is provided to accommodate the demand for **public passenger transport** and **active transport** generated by the development.	No acceptable outcome is prescribed.	Complies with PO – Refer to Colliers Transport Report for details on planned upgrades to public passenger services, Bus Stop on Main Street, and upgrades as part of the wider development plans.
PO27 Development is designed to ensure the location of **public passenger transport infrastructure** prioritises and enables efficient **public passenger services**.	No acceptable outcome is prescribed.	Complies with PO – Refer to Colliers Transport Report for details on planned upgrades to public passenger services, Bus Stop on Main Street, and upgrades as part of the wider development plans. .
PO28 Development enables the provision or extension of **public passenger services**, **public passenger transport infrastructure** and **active transport infrastructure** to the development and avoids creating indirect or inefficient routes for **public passenger services**.	No acceptable outcome is prescribed.	Complies with PO – Refer to Colliers Transport Report for details on planned upgrades to public passenger services, Bus Stop on Main Street, and upgrades as part of the wider development plans.
PO29 New or modified road networks are designed to enable development to be serviced by **public passenger services**.	**AO29.1** Roads catering for buses are arterial or **sub-arterial roads**, collector or their equivalent. AND **AO29.2** Roads intended to accommodate buses are designed and constructed in accordance with: 1. Road Planning and Design Manual, 2nd Edition, Volume 3 – Guide to Road Design; Department of Transport and Main Roads; 2. Supplement to Austroads Guide to Road Design (Parts 3, 4-4C and 6), Department of Transport and Main Roads; 3. Austroads Guide to Road Design (Parts 3, 4-4C and 6); 4. Austroads Design Vehicles and Turning Path Templates; 5. Queensland Manual of Uniform Traffic Control Devices, Part 13: Local Area Traffic Management and AS 1742.13-2009 Manual	Complies with PO Refer to Colliers Transport Report for details on planned upgrades as part of the development plans.

Performance outcomes	Acceptable outcomes	Response
	of Uniform Traffic Control Devices – Local Area Traffic Management; AND **AO29.3** Traffic calming devices are not installed on roads used for buses in accordance with section 2.3.2 Bus Route Infrastructure, Public Transport Infrastructure Manual, Department of Transport and Main Roads, 2015.	
PO30 Development provides safe, direct and convenient access to existing and future **public passenger transport infrastructure** and **active transport infrastructure**.	No acceptable outcome is prescribed.	Complies with PO Refer to Colliers Transport Report for details on planned upgrades as part of the development plans.
PO31 On-site vehicular circulation ensures the safety of both **public passenger transport services** and pedestrians.	No acceptable outcome is prescribed.	N/A – No public passenger transport services are accommodated on-site.
PO32 Taxi facilities are provided to accommodate the demand generated by the development.	No acceptable outcome is prescribed.	N/A – No dedicated taxi facilities are proposed on-site Refer to Colliers Transport Report for details
PO33 Facilities are provided to accommodate the demand generated by the development for community transport services, courtesy transport services, and **booked hire services** other than taxis.	No acceptable outcome is prescribed.	N/A – No dedicated community transport services, courtesy transport services, and booked hire services are anticipated.

Performance outcomes	Acceptable outcomes	Response
PO34 Taxi facilities are located and designed to provide convenient, safe and equitable access for passengers.	**AO34.1** A **taxi facility** is provided parallel to the kerb and adjacent to the main entrance. AND **AO34.2 Taxi facilities** are designed in accordance with: 1. AS2890.5–1993 Parking facilities – on-street parking and AS1428.1–2009 Design for access and mobility – general requirements for access – new building work; 2. AS1742.11–1999 Parking controls – manual of uniform traffic control devices 3. AS/NZS 2890.6–2009 Parking facilities –off street parking for people with disabilities; 4. Disability standards for accessible public 5. transport 2002 made under section 31(1) of the Disability Discrimination Act 1992; 6. AS/NZS 1158.3.1 – Lighting for roads and public spaces, Part 3.1: Pedestrian area (category P) lighting – Performance and design requirements; 7. Chapter 7 Taxi Facilities, Public Transport Infrastructure Manual, Department of Transport and Main Roads, 2015.	N/A – No dedicated taxi facilities are proposed on-site
PO35 Educational establishments are designed to ensure the safe and efficient operation of **public passenger services**, pedestrian and cyclist access and **active transport infrastructure**.	**AO35.1** Educational establishments are designed in accordance with the provisions of the Planning for Safe Transport Infrastructure at Schools, Department of Transport and Main Roads, 2011.	N/A – The development does not include any educational establishment.