



PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV2026/RIP/5146

Date: 02 October 2026



RIPLEY VALLEY STATE HIGH SCHOOL

TRAFFIC IMPACT ASSESSMENT

21 SEPTEMBER 2026

PREPARED FOR
DEPARTMENT OF EDUCATION

Traffic Impact Assessment will require
amendments for development past stage 1
as per compliance assessment conditions

AMENDED IN RED

By: Andrew Edwards

Date: 02 October 2026



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TABLE OF CONTENTS

1.0 INTRODUCTION	1
1.1 Background	1
1.2 Aim	2
1.3 Scope of Report	2
2.0 EXISTING CONDITIONS	3
2.1 Subject Site	3
2.2 Surrounding Transport Network	5
2.3 Traffic Volumes	7
2.4 Intersection Operations	9
3.0 PROPOSED DEVELOPMENT	12
3.1 Site Layout	12
3.2 Travel Behaviour	13
3.3 Access Arrangements	13
3.4 Parking	17
3.5 Active and Public Transport	19
3.6 Service Vehicles	21
4.0 TRAFFIC OPERATIONS	22
4.1 Development Staging	22
4.2 Traffic Generation	22
4.3 Scenario 1: 2029 Opening Year, Council Upgrade Completed	23
4.4 Scenario 2: 2029 Opening Year: No Council Upgrade	28
4.5 Scenario 3: 2032 Ultimate School Opening Year	31
5.0 CONCLUSIONS AND RECOMMENDATIONS	33
5.1 Conclusions	33
5.2 Recommendations	34

APPENDIX A: TRAFFIC COUNT DATA

APPENDIX B: INTERSECTION ANALYSES

APPENDIX C: PLANS OF DEVELOPMENT

APPENDIX D: PTT SWEEP PATH DRAWINGS

APPENDIX E: TURNING MOVEMENT FORECASTS

1.0 INTRODUCTION

1.1 BACKGROUND

This Traffic Impact Assessment has been prepared on behalf of the State of Queensland, represented by the Department of Education (Applicant), in support of a Priority Development Area (PDA) development application over part of land at 54 Wensley Road, and 581 – 617 Ripley Road, Ripley QLD 4306 and described as Lots 190 and 191 on SL18 (site). This PDA development application seeks approval from the MEDQ for a development permit for a material change of use for educational establishment, community facility, indoor sport and recreation, and outdoor sport and recreation.

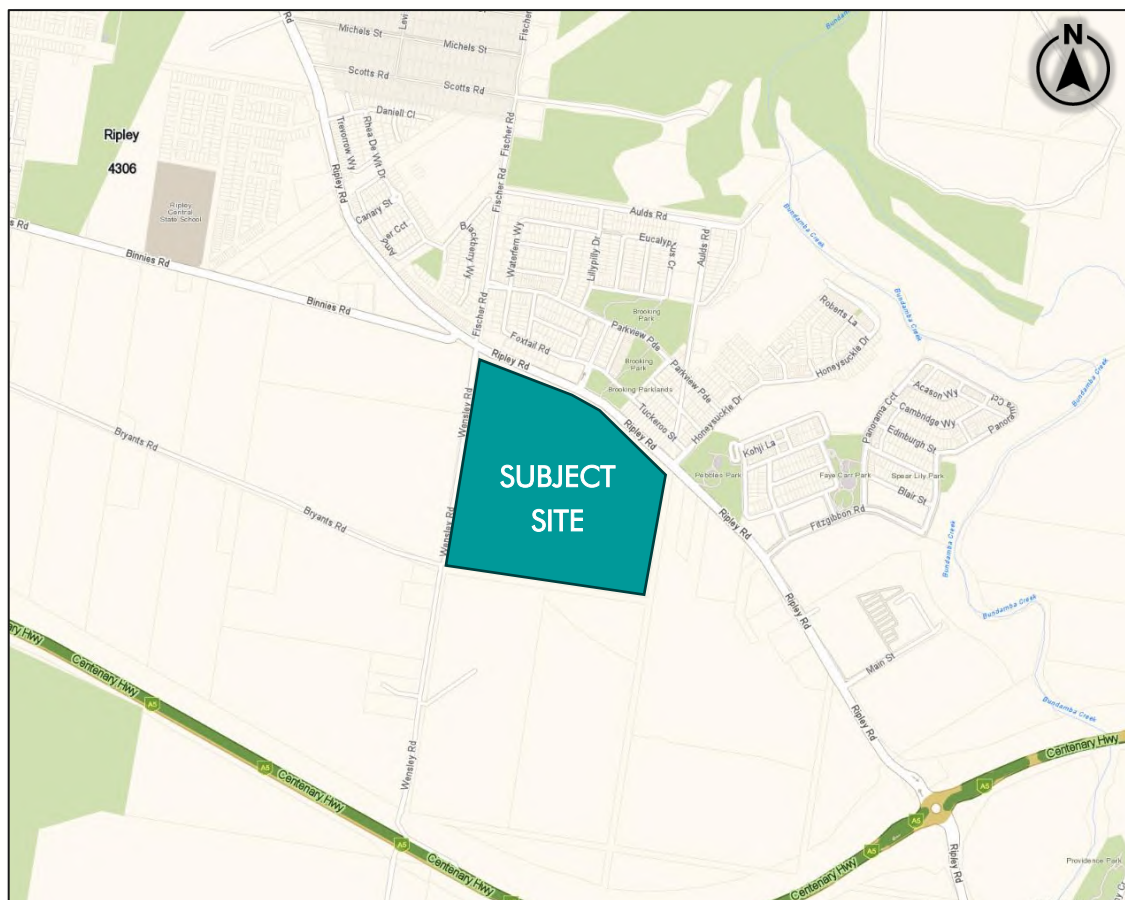
The Applicant proposes a State secondary school for Years 7–12, delivered in stages as follows:

- Stage 1 opening in 2029 with capacity for 917 enrolments
- Stage 2 opening in 2031 with a cumulative enrolment capacity of 1,813
- Further undefined stage to provide a cumulative enrolment capacity of 2,043

Please note, community facility, indoor sport and recreation, and outdoor sport and recreation have only been included to ensure the school facilities can be hired to external user groups (if necessary), consistent with common practice at schools throughout Queensland”.

The location of the proposed secondary school is indicated in Figure 1.1.

Figure 1.1: SITE LOCALITY



1.2 AIM

The aim of this assessment is to evaluate the proposed development in terms of its access arrangements, parking provision and design, pedestrian / cyclist facilities, likely peak hour traffic generation and impact on the surrounding road network.

1.3 SCOPE OF REPORT

This report begins by summarising the characteristics of the existing and future road network (Chapter 2), followed by a description of the scope and scale of the proposed development, including the access, parking and servicing arrangements (Chapter 3). The predicted peak hour traffic generation of the development is estimated along with a consideration of its likely traffic impact on the surrounding road network (Chapter 4). The report concludes with a summary of key findings and recommendations (Chapter 5).

2.0 EXISTING CONDITIONS

2.1 SUBJECT SITE

The site is located at 54 Wensley Road, and 581 – 617 Ripley Road, Ripley and is formally described as Lots 190 and 191 on SL18. Under the Ripley Valley Priority Development Area (PDA) Development Scheme the site is zoned as Urban Core Zone and Urban Code Frame.

Lot 191 is currently improved by a dwelling house and associated structures within the southwestern part of the site. Vehicle access is gained via Wensley Road. Lot 190 is currently vacant and has no formal point of vehicle access. An aerial view of the subject site is shown in Figure 2.1

Figure 2.1: SUBJECT SITE

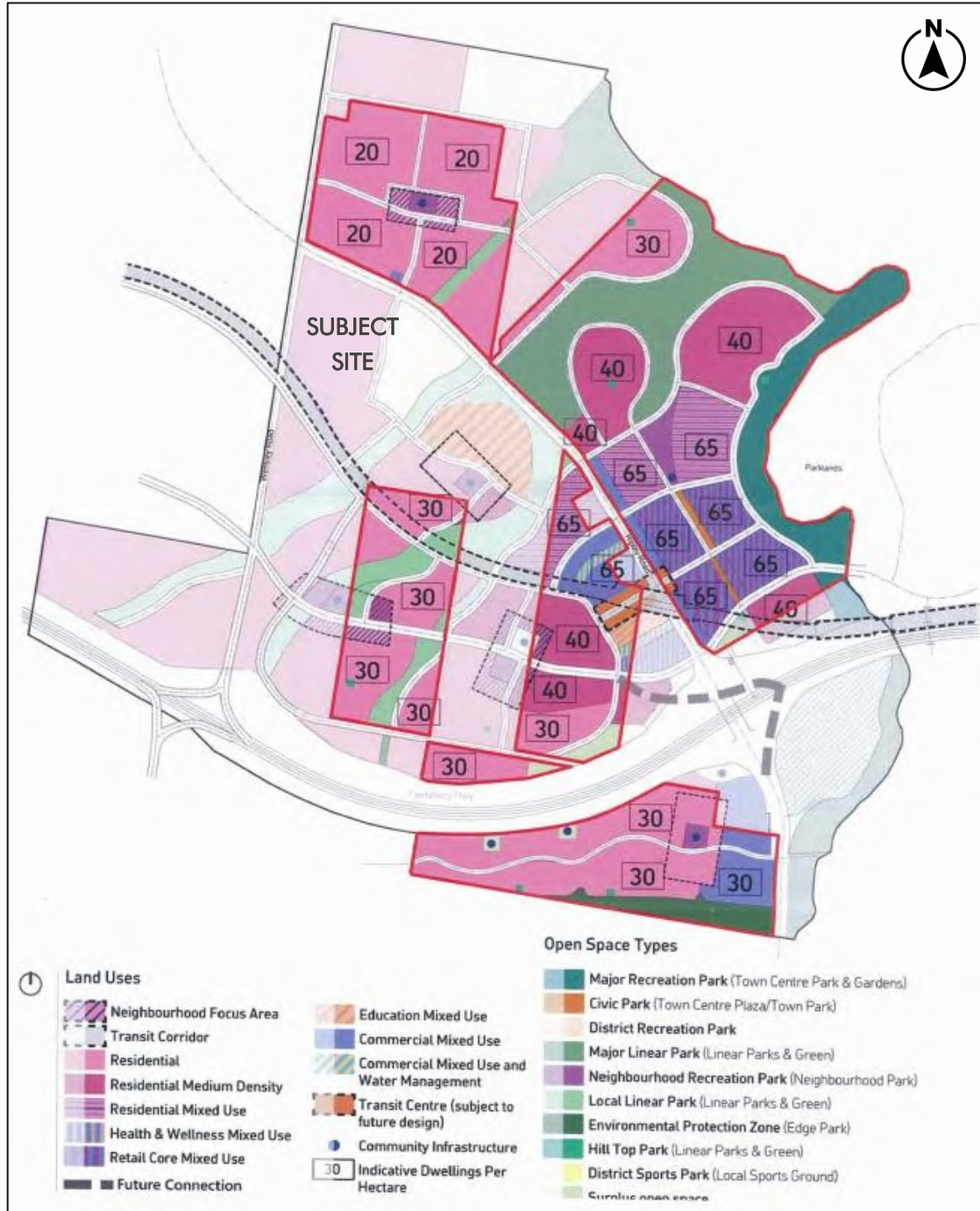


The site is bounded to the north by Ripley Road, to the west by Wensley Road and to the south and east by unformed road reserve. The surrounding land is expected to accommodate a range of

future uses, as indicated in the endorsed Land Use Context Plan (approved as part of Ipswich City Council development application reference 5840/2019/MAPDA), shown in Figure 2.2.

As shown in Figure 2.2, the subject site is bisected by a rail corridor associated with the Ipswich–Springfield Public Transport Corridor.

Figure 2.2: ENDORSED CONTEXT PLAN



The Ripley Valley area was previously declared a Priority Development Area (PDA) by the Department of Local Government and Planning under control of Economic Development Queensland (EDQ) in October 2010. In September 2013 the development assessment and relevant administration powers were delegated back to Ipswich City Council.

2.2 SURROUNDING TRANSPORT NETWORK

2.2.1 Existing Transport Network

Ripley Road is classified as an arterial road according to Ipswich City Council. In the vicinity of the subject site, it is currently a two-way / two-lane road, with a posted speed limit of 70km/h.

Wensley Road is currently an unsealed two-way / two-lane road, which provides access to around 15 rural residential properties. It runs in a north-south direction and forms the southern leg of a four-way priority-controlled intersection at Ripley Road and Fisher Road, as shown in Figure 2.1. The Wensley Road corridor terminates at the south-west corner of the site at the Centenary Highway corridor. The Ripley Road / Fisher Road / Wensley Road intersection is a four-way priority-controlled intersection and accommodates all turn movements.

Brooking Rise is classified a local access road. It meets Ripley Road at a priority-controlled T-intersection where it forms the minor approach. The Ripley Road / Brooking Rise intersection currently accommodates all turn movements.

2.2.2 Future Road Network

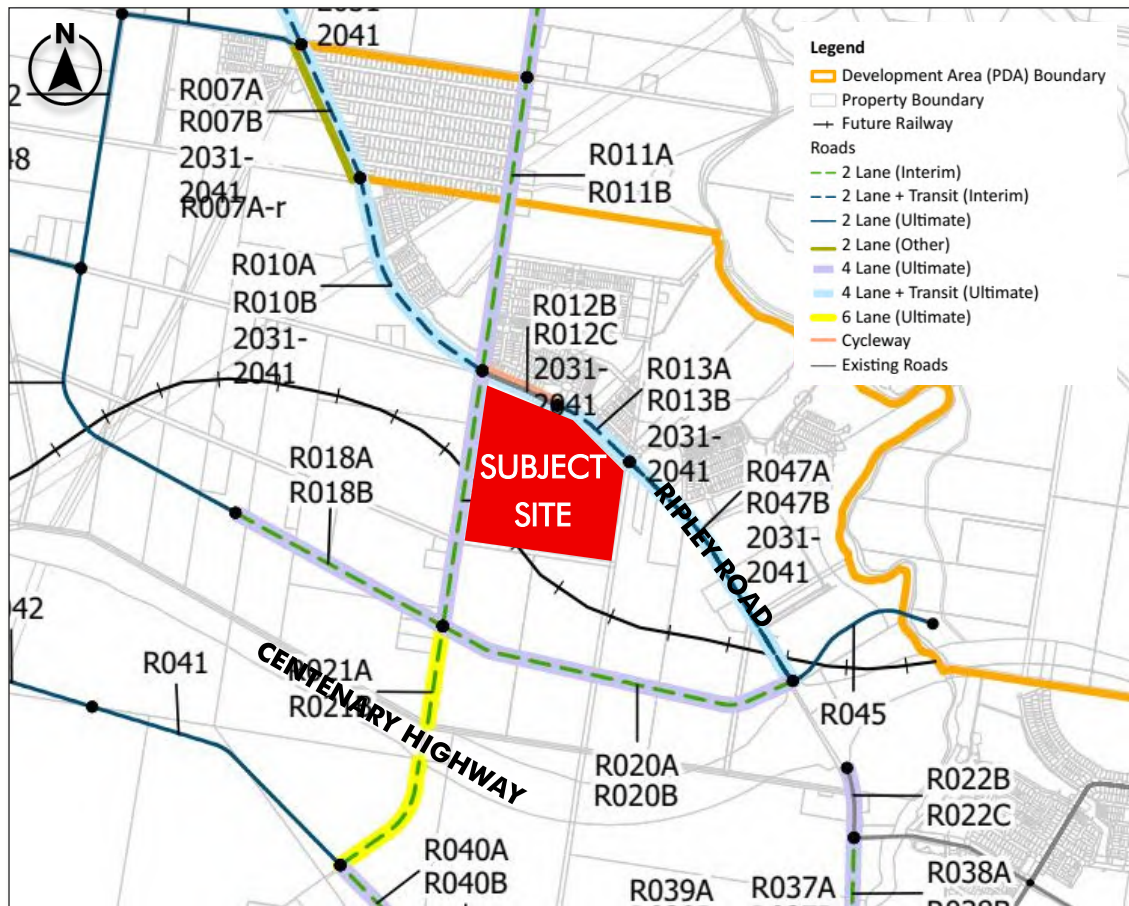
Figure 2.3 shows the indicative road network hierarchy plan for the Ripley Valley PDA. The road hierarchy plan nominates the following:

- Ripley Road to be a four-lane road, with provision for transit
- Wensley Road to be a four to six-lane road

It is understood that the upgrade of Wensley Road to an arterial road with four to six lanes is contingent upon the delivery of a new grade-separated interchange at the intersection of Wensley Road and the Centenary Highway. However, the Department of Transport and Main Roads (TMR) does not currently have any approved planning for an interchange at this location on the Centenary Highway.

The endorsed movement network for the Ripley Valley Urban Core is shown in Figure 2.4 (extracted from Ipswich City Council development application reference 5840/2019/MAPDA). The movement plan identifies a new neighbourhood collector road forming the southern approach to the Ripley Road / Brooking Rise intersection. This collector road is shown extending in a south-easterly direction through the subject site, establishing a connection within the broader transport network. An arterial-standard “ring road” is proposed to the south of the subject site, providing a future connection between Wensley Road and Ripley Road to the east.

Figure 2.3: RIPLEY VALLEY PDA INDICATIVE ROAD NETWORK



2.2.3 Approved Ipswich City Council Road Upgrades

Ipswich City Council has approved planning to upgrade Ripley Road from the Cunningham Highway Interchange to Fischer Road. Key components of this project include the following:

- the signalisation of the Ripley Road / Fischer Road / Wensley Road intersection
- the Ripley Road / Brooking Rise intersection to be converted to left-in / left-out operations
- Wensley Road to be upgraded (ie sealed) for a distance of approximately 80m back from Ripley Road
- the existing bus stop on the southern side of Ripley Road along the site frontage to be relocated to the western side of the Fischer Road / Wensley Road intersection
- a 1.5m wide footpath and a 2.5m wide cyclepath along the site frontage with Ripley Road
- Ripley Road to be median divided with two-lanes of traffic in each direction, tapering back down to a two-way / two-lane road east of the Ripley Road / Brooking Rise intersection

The upgrades in the vicinity of the subject site form Stage 2 of the Ipswich City Council project and are currently expected to be completed during the 2028/2029 financial year. The concept plan of the upgrade works is shown in Figure 2.5.

Figure 2.4: ENDORSED MOVEMENT NETWORK



2.3 TRAFFIC VOLUMES

To assist in the quantification of existing road network operations proximate to the site, turning movement surveys were conducted at the Ripley Road / Fischer Road / Wensley Road intersection and the Ripley Road / Brookling Rise intersection from 7:00am to 9:00am and 2:00pm to 6:00pm on Tuesday 3 February 2026. The peak periods for the above intersection are shown in Table 2.1, along with the key operational attributes. The volumes shown represent all vehicle movements through the intersection in the peak hour periods. The raw survey data is attached in Appendix A.

Figure 2.5: IPSWICH CITY COUNCIL RIPLEY ROAD UPGRADE PROJECT

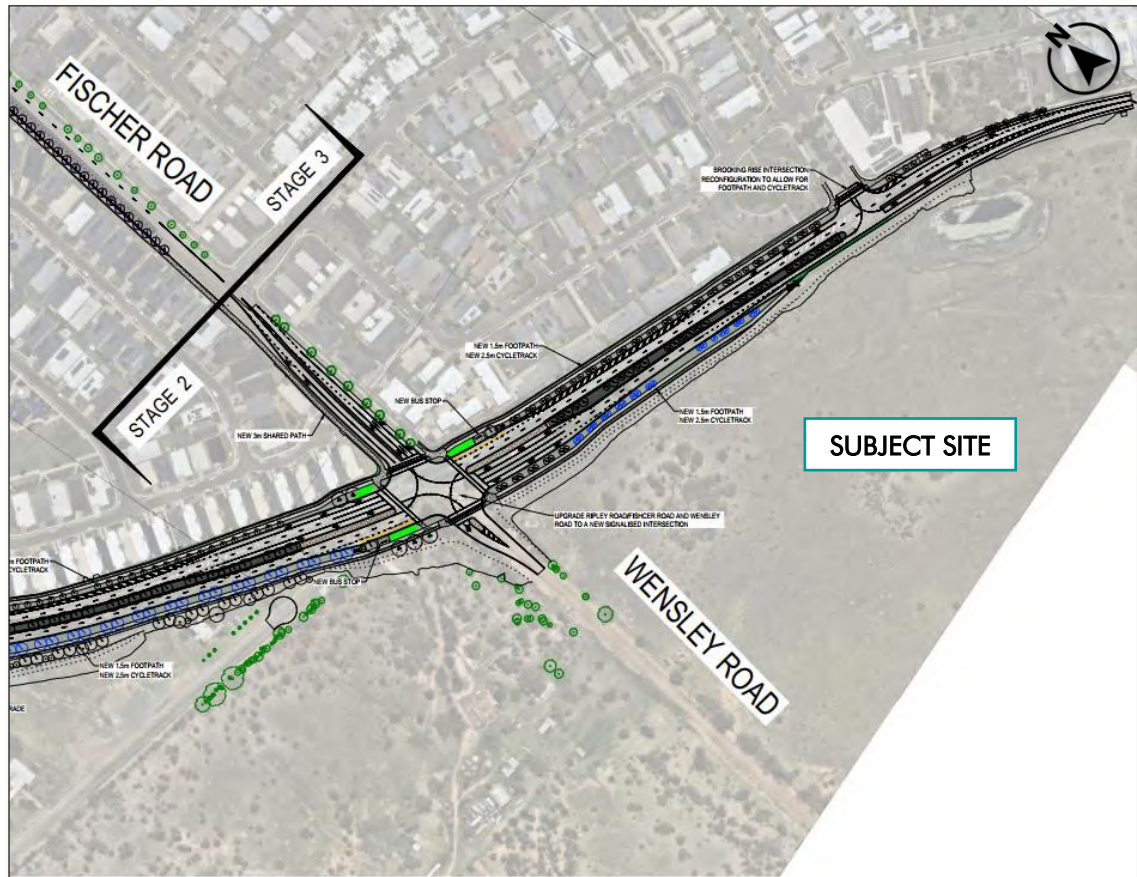


Table 2.1: INTERSECTION ATTRIBUTES

ATTRIBUTE	WEEKDAY MORNING PEAK	WEEKDAY AFTERNOON PEAK
Ripley Road / Fischer Road / Wensley Road		
Peak Hour	8:00am – 9:00am	2:45pm – 3:45pm
Volume (vph)	1,560	1,580
% Heavy Vehicles	7.5%	6.1%
Peak Flow Factor	96.4%	95.0%
Ripley Road / Brooking Rise		
Peak Hour	8:00am – 9:00am	2:45pm – 3:45pm
Volume (vph)	1,570	1,600
% Heavy Vehicles	7.3%	5.8%
Peak Flow Factor	95.3%	95.7%

2.4 INTERSECTION OPERATIONS

2.4.1 Intersection Assessment Parameters

A series of SIDRA analyses were conducted to quantify the existing traffic operations at the Ripley Road / Fischer Road / Wensley Road and the Ripley Road / Brooking Rise intersections. The analyses were based on the traffic count data presented in Appendix A, with:

- Peak Flow Factors (PFF), as detailed in Table 2.2
- the observed proportion of heavy vehicles (%HV) for each movement
- level of reduction with opposing flow rate factor set to "medium" for both intersections
- SIDRA default values for other parameters

The level of reduction with opposing flow rate factor is used to reflect the tendency of drivers to accept reduced gaps in circumstances where the opposing traffic volume is high. The adopted value of "medium" for the intersections is consistent with guidance published in the SIDRA User Manual and is expected to accurately reflect the operations under existing, pre and post development scenarios.

The results are presented in terms of the degree of saturation (DOS), 95th percentile vehicle queues, and critical movement at each intersection. The DOS for a movement is defined as the ratio of traffic demand to the capacity of the movement. The critical movement relates to the approach or movement with the highest DOS. Table 2.2 is an extract from the SIDRA manual and defines the operational rating and level of service for all intersection types.

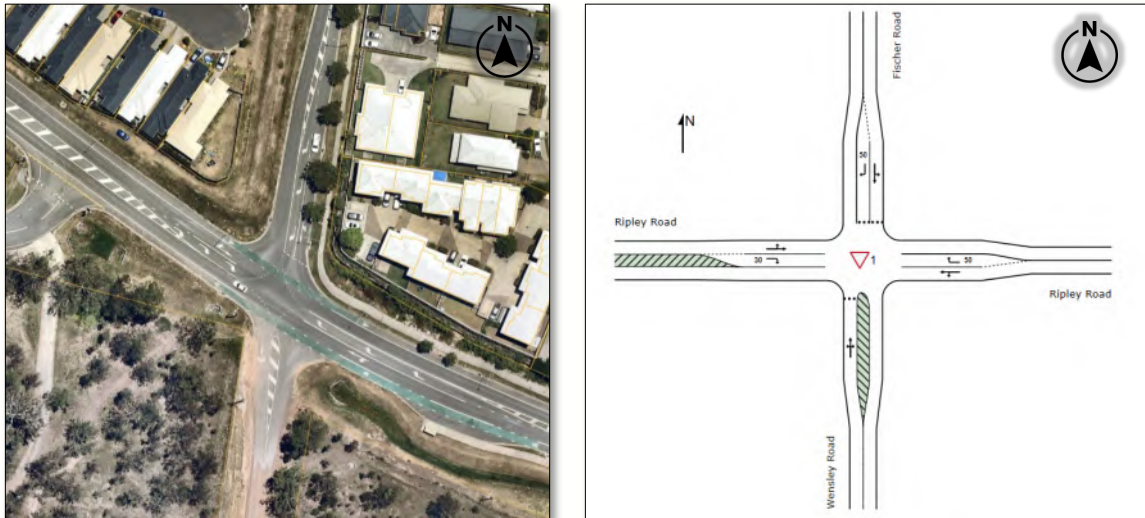
Table 2.2: SIDRA INTERSECTION RATINGS

LEVEL OF SERVICE	DEGREE OF SATURATION		
	SIGNALS	ROUNDBABOUT	PRIORITY
LOS A	$x \leq 60\%$	$x \leq 60\%$	$x \leq 60\%$
LOS B	$60\% < x \leq 70\%$	$60\% < x \leq 70\%$	$60\% < x \leq 70\%$
LOS C	$70\% < x \leq 90\%$	$70\% < x \leq 85\%$	$70\% < x \leq 80\%$
LOS D	$90\% < x \leq 95\%$	$85\% < x \leq 95\%$	$80\% < x \leq 90\%$
LOS E	$95\% < x \leq 100\%$	$95\% < x \leq 100\%$	$90\% < x \leq 100\%$
LOS F	$100\% < x$	$100\% < x$	$100\% < x$

2.4.2 Ripley Road / Fischer Road / Wensley Road Intersection

The existing layout of the Ripley Road / Fischer Road / Wensley Road priority-controlled intersection and equivalent SIDRA representation are shown in Figure 2.6.

Figure 2.6: RIPLEY ROAD / FISCHER ROAD / WENSLEY ROAD INTERSECTION LAYOUT



The results of the intersection analyses are summarised in Table 2.3 and included in Appendix B. The results indicate that the intersection currently experiences LOS A operations under existing weekday morning and weekday afternoon peak hour conditions. However, the predicted delay for the right turn movements on both Wensley Road and Fischer Road exceeds the desirable threshold (ie 42 seconds or the LOS C / D threshold), which suggests that signalisation of the intersection should be considered for safety reasons.

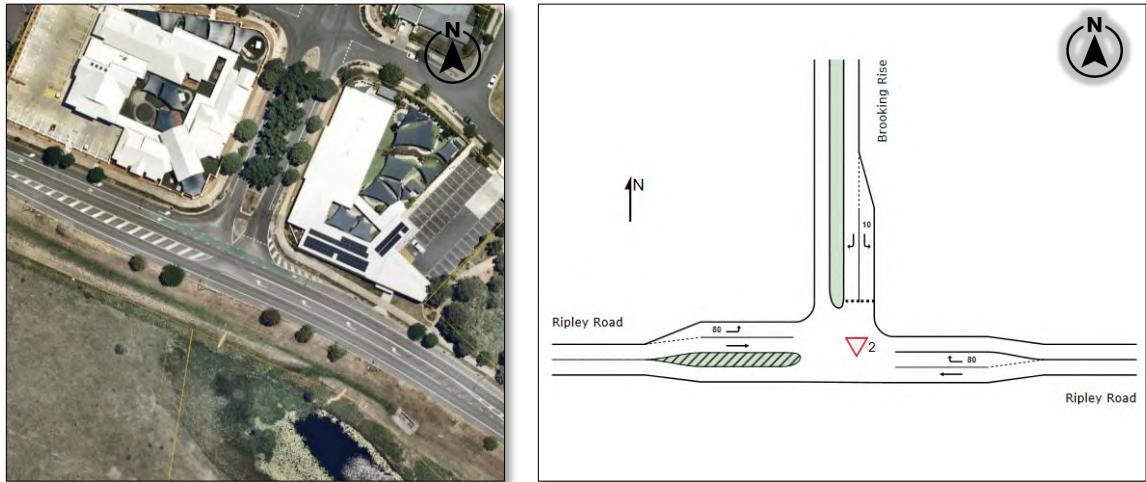
Table 2.3: RIPLEY ROAD / FISCHER ROAD / WENSLEY ROAD OPERATIONS

PEAK HOUR	DOS	AVG DELAY	95% QUEUE	CRITICAL MOVEMENT
Weekday Morning	35%	2.9s	0.9 veh	East: Ripley Road
Weekday Afternoon	45%	3.3s	1.3 veh	North: Fischer Road

2.4.3 Ripley Road / Brooking Rise Intersection

The existing layout of the Ripley Road / Brooking Rise priority-controlled T-intersection and equivalent SIDRA representation are shown in Figure 2.7. The results of the intersection analyses are summarised in Table 2.3 and included in Appendix B. The results indicate that the intersection currently experiences LOS A operations under existing weekday morning and weekday afternoon peak hour conditions. However, the predicted delay for the right turn movements on Brooking Rise exceeds the desirable threshold (ie 42 seconds or the LOS C / D threshold), which suggests that an upgrade of the intersection should be considered for safety reasons.

Figure 2.7: RIPLEY ROAD / BROOKING RISE INTERSECTION LAYOUT



The results of the intersection analyses are summarised in Table 2.4 and included in Appendix B. The results indicate that the intersection currently experiences LOS A operations under existing weekday morning and weekday afternoon peak hour conditions.

Table 2.4: RIPLEY ROAD / BROOKING RISE OPERATIONS

PEAK HOUR	DOS	AVG DELAY	95% QUEUE	CRITICAL MOVEMENT
Weekday Morning	48%	2.3s	1.4 veh	North: Brooking Rise
Weekday Afternoon	41%	1.4s	0.5 veh	West: Ripley Road

3.0 PROPOSED DEVELOPMENT

3.1 SITE LAYOUT

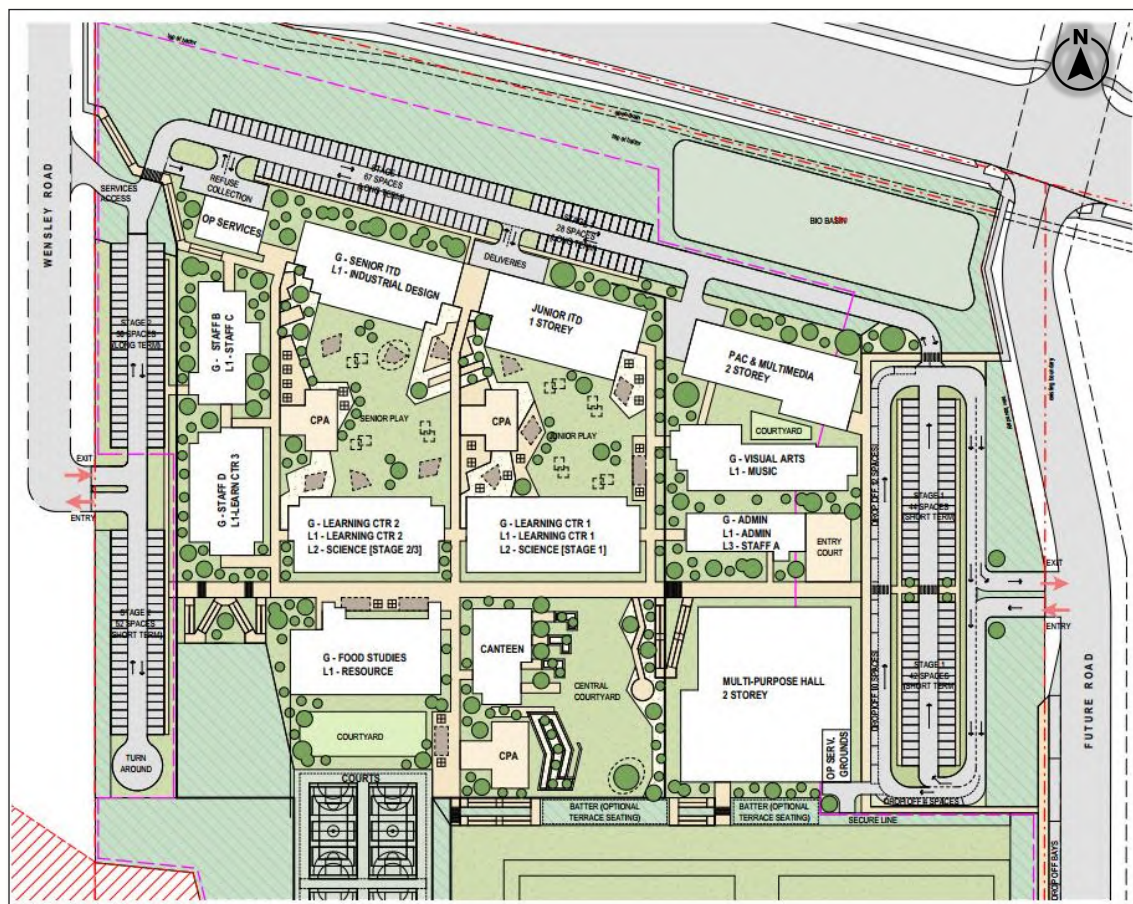
The proposal involves the development of a state secondary school to be delivered in three stages as follows:

- Stage 1: capacity for 917 enrolments, with 92 staff
- Stage 2: a cumulative enrolment capacity for 1,813, with 181 staff
- Stage 3: a cumulative enrolment capacity of 2,043, with 204 staff

The proposed secondary school would primarily be located on Lot 191, with part of Lot 190 used to construct a new public road that would provide access to the site. It is expected that the balance of Lot 190 will also accommodate a primary school and local park. However, these uses will be subject to a separate future application and have not been considered further in this assessment.

The proposed development masterplan layout is shown in Figure 3.1, with additional plans provided in Appendix C.

Figure 3.1: PROPOSED SCHOOL MASTERPLAN LAYOUT



3.2 TRAVEL BEHAVIOUR

3.2.1 Student Mode Share

PTT has previously provided traffic engineering advice for numerous existing primary, secondary and special schools in Queensland. At many of these schools, including at least 20 state secondary schools, student mode share surveys were undertaken to understand the travel behaviour of students.

For the purpose of this assessment, it has been assumed that the mode share of students at the proposed school will be consistent with the average mode share at existing state secondary schools surveyed by PTT. This is as follows:

- 43% of students travelling by private vehicle
- 33% by public transport (ie school bus)
- 24% by active transport (ie walking or cycling)

For students that travel to / from secondary schools by private vehicle, the survey data indicates an average occupancy of 1.52 students per vehicle. An average private vehicle occupancy of 1.5 students per vehicle has been adopted.

3.2.2 Staff Mode Share

The likely mode share of school staff has been forecast based on the Australian Bureau of Statistics' Journey to Work data for the Ipswich Inner Statistical Area (SA3). It is estimated that 88% of staff will travel by private vehicle. An average private vehicle occupancy of 1.05 staff per vehicle has been adopted. This is based on interrogation of the Department of Transport Main Roads' (TMR) Household Travel Survey (HTS) data, for trips to and from schools for employment purposes (at the school).

3.3 ACCESS ARRANGEMENTS

3.3.1 Location

The primary access for the school is proposed via a new public collector road, which would form the southern leg of the Ripley Road / Brooking Rise intersection. To accommodate the fourth leg and the traffic generated by the school, it is proposed that the intersection would be upgraded to traffic signals. This arrangement is discussed further in Section 4.4.

The school access driveway would be located on the western side of the new collector road, approximately 130m south of the Ripley Road intersection. This would serve the short-term car parking and drop-off / pick-up facilities, as well as provide access to the staff (long-term) car parking.

It is proposed that the new collector road will be constructed approximately 300m south of the Ripley Road intersection where it will terminate with a 30m diameter (15m radius) turn head. The design of the turn head is capable of accommodating a single radius turn of large rigid bus or heavy rigid vehicle. The new collector road would be designed as an "access major collector street" in accordance with the Ipswich City Council Standard Drawing SR.02, with a (minimum) road reserve width of 23m.

A secondary access is proposed via Wensley Road following the signalisation of the Ripley Road / Fischer Road / Wensley Road intersection via the Ipswich City Council Ripley Road Upgrade Project. In Stage 1 it is proposed that an access driveway be established on Wensley Road approximately 80m south of the Ripley Road intersection, within the section of Wensley Road proposed to be upgraded as part of the Ipswich City Council project. The upgrade is scheduled for completion in the 2028/2029 financial year and so is expected to coincide with the school opening year.

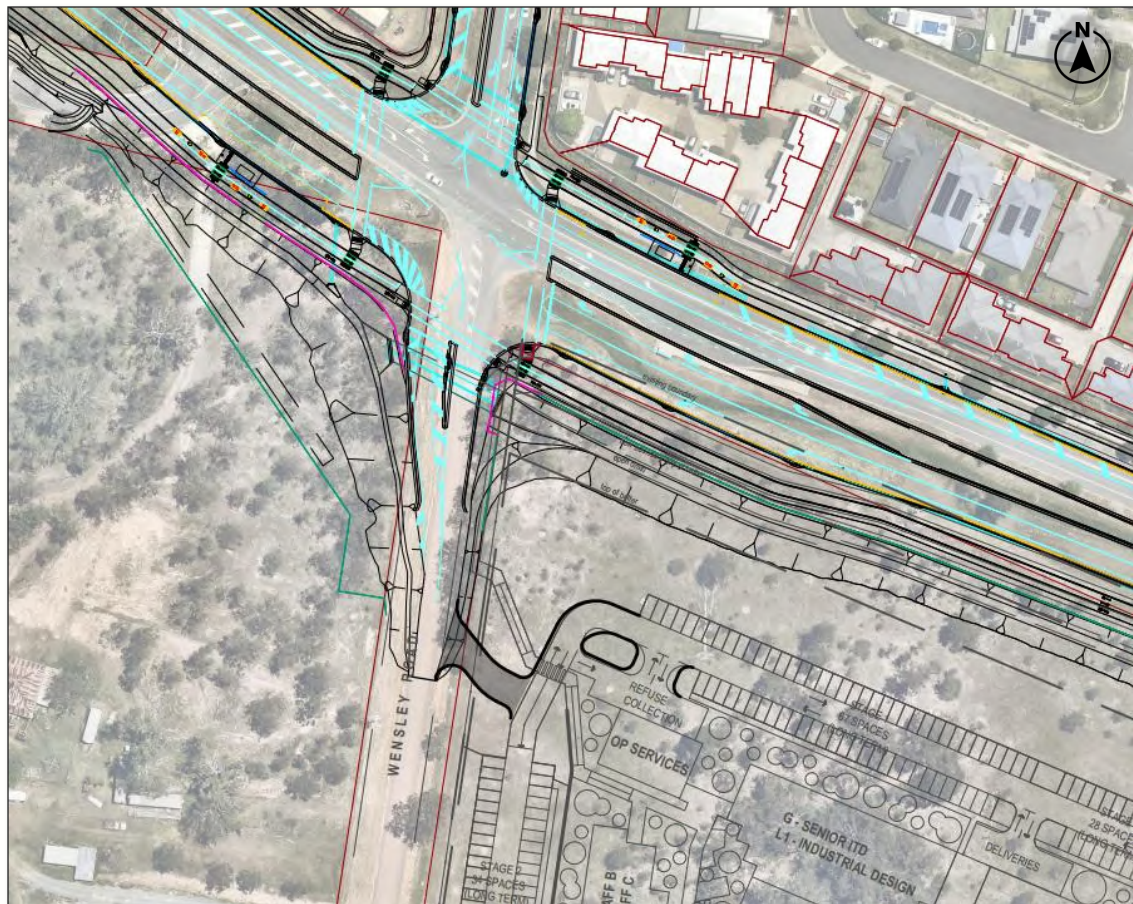
The access on Wensley Road would also reduce reliance on the new collector road by:

- providing a dedicated secondary access to the staff (long-term) parking area
- enabling service vehicles to access the school without traversing the pick-up/drop-off facilities and short-term parking areas

A concept layout of the Stage 1 access driveway on Wensley Road following the Ipswich City Council Ripley Road Upgrade Project and signalisation of the Ripley Road / Fischer Road / Wensley Road intersection is shown in Figure 3.2.

In the longer term, following the upgrade of Wensley Road (by others) the secondary access driveway could be relocated further south, as shown in Figure 3.1. This would allow connectivity to the short-term parking area proposed in the western side of the school campus in Stages 2 and 3 of the development.

Figure 3.2: STAGE 1 WENSLEY ROAD ACCESS FOLLOWING ICC UPGRADE



Subject to the ultimate design and function of Wensley Road, the access driveway may need to be limited to left-in / left-out operations.

3.3.2 Access Staging

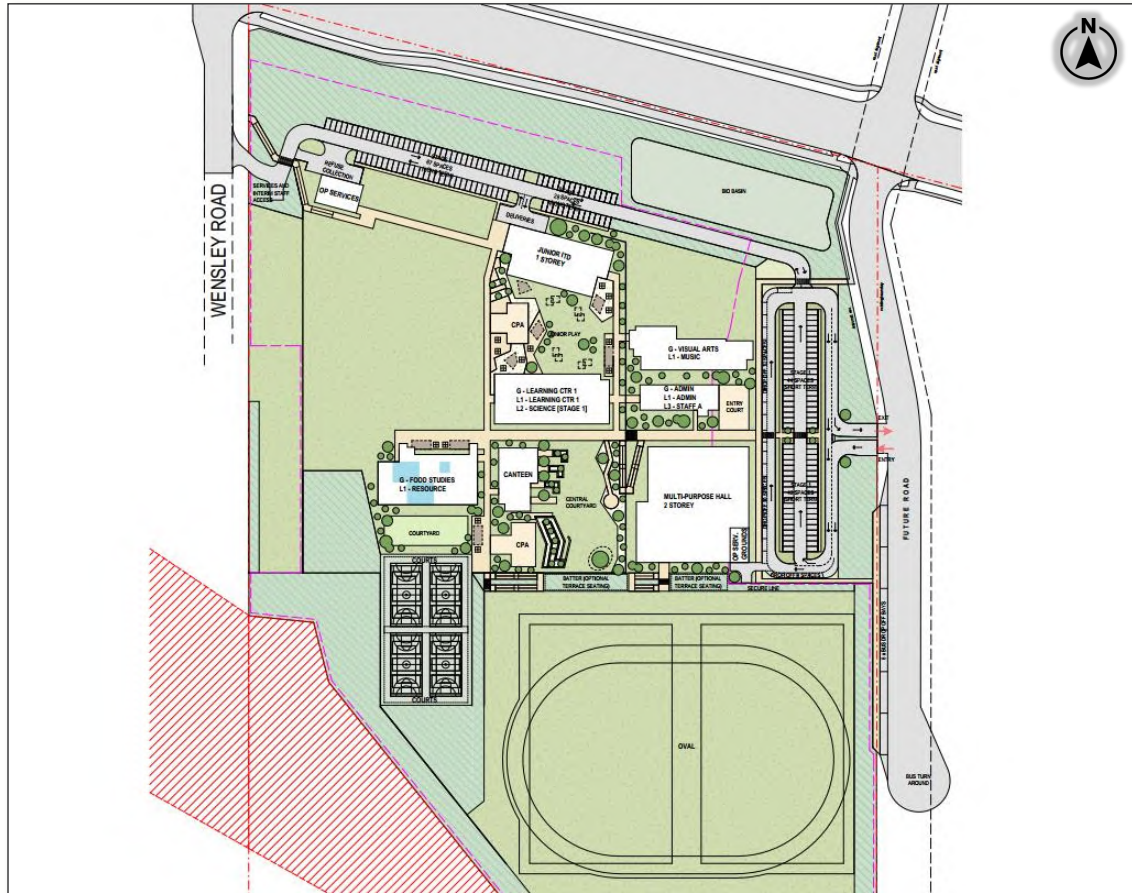
It is expected that the Ipswich City Council Ripley Road Upgrade Project will be completed in advance of the Stage 1 school opening with current program timings indicating that the works will be completed during the 2028/2029 financial year. However, should these works be delayed and the school open prior to its completion, all vehicular access for Stage 1 would be initially limited to the eastern driveway via the new public road. Accordingly, there are two potential Stage 1 options with respect to access as follows:

- Interim Stage 1 Layout: Prior to signalisation of the Ripley Road / Fischer Road / Wensley Road intersection as part of the Ipswich City Council Ripley Road Upgrade Project, all vehicular access would be via the eastern driveway on the new public road, as shown in Figure 3.3.
- Final Stage 1 Layout: Following completion of the Ipswich City Council Ripley Road Upgrade Project and the signalisation of the Ripley Road / Fischer Road / Wensley Road intersection the secondary vehicular access via Wensley Road would be constructed in addition to the eastern access on the new public road (as shown in Figure 3.4).

Figure 3.3: INTERIM STAGE 1 LAYOUT



Figure 3.4: FINAL STAGE 1 LAYOUT



The impacts of development traffic on the surrounding road network under both potential Stage 1 access scenarios have been considered in Section 4.4. In the scenario where the school opens prior to completion of the Ipswich City Council Ripley Road Upgrade Project, it has been assumed that the full Stage 1 traffic would be generated. In reality, it is expected that the school would be operating at a lower enrolment level during the initial period of opening and would progressively increase towards the full Stage 1 enrolment as the school establishes. Accordingly, the assessment represents a conservative scenario for the interim Stage 1 access arrangement.

3.3.3 Design

The access driveway on the new collector road would be designed in accordance with the Institute of Public Works Engineering Australasia (IPWEA) Standard Drawing RSD-102A (Heavy Duty Crossings) for commercial driveways. The proposed crossover would be dimensioned 15m wide at the property boundary, generally consistent with a Type C3 "General Wide Flared" driveway design incorporating a 7.5m wide entry width, a 1.5m wide centre island and a 6.0m wide exit width.

The design of the Stage 1 access driveway on Wensley Road is shown in Figure 3.2. The ultimate design of the access arrangement will depend on the future form and function of Wensley Road. Should Wensley Road ultimately be constructed as a four-lane arterial road, it is anticipated that the access would operate as a left-in / left-out arrangement incorporating an auxiliary deceleration lane. Alternatively, if Wensley Road is delivered as a two-way, two-lane road, all turn movements

could potentially be accommodated at the access, subject to future traffic volumes and operational considerations.

In the interim Stage 1 layout, the Wensley Road would provide access to staff car parking and service areas. However, under the ultimate layout (Stage 2 and 3), the Wensley Road access is proposed to serve a short-term parking area. This approach is consistent with TMR's Planning for Safe Transport Infrastructure at Schools (PSTIS) guidelines, which encourage school sites to utilise multiple frontage roads and access points to distribute traffic movements and reduce congestion at any single access location. In addition, it is noted that:

- there is scope to design a safe and efficient vehicular access on Wensley Road, irrespective of its ultimate form and function
- distributing access across multiple frontages would improve the overall operation and resilience of the site access arrangements
- the use of Wensley Road for short-term parking would reduce pressure on the primary pick-up and drop-off area during peak school period
- it is expected that use of the short-term parking area on Wensley Road would generally be limited to carers for whom this would provide a convenient access option
- the proposed arrangement would provide greater flexibility in managing traffic demand as the school expands through future stages of development

3.3.4 *Sight Distance*

The requirements for sight distance at the proposed access driveways on the new collector road have been determined in accordance with AS2890.1. Based on an expected posted speed of 50km/h, a minimum sight distance of 69m would be required at site access driveway. It is expected that the site access would comfortably achieve the required sight distance, taking into account its proposed horizontal and vertical alignment.

In relation to sight distance at the proposed accesses on Wensley Road, the interim driveway located approximately 80m south of Ripley Road provides adequate visibility in both directions (based on the current alignment). The available sight distance at the ultimate driveway location, further to the south, will need to be assessed as part of the detailed design process once the future upgrade to the vertical alignment of Wensley Road has been finalised.

3.4 PARKING

3.4.1 *Requirement*

The car parking requirement for the school has been determined based on the parking rates provided in TMR's PSTIS. As shown in Table 3.1, a total of 309 spaces, comprising 144 long-term, 137 short-term and 28 drop-off / pick-up bays, are required to support the ultimate school population of 2,043 students and 204 staff.

3.4.2 Provision

Staging plans for the school are attached in Appendix C. A total of 207 on-site car parking spaces are proposed in Stage 1, with 309 spaces in Stages 2 and 3. The on-site car parking comprises the following:

- **Stage 1: 207 spaces**
 - short-term parking area: 86 spaces
 - school drop-off pick-up: 26 bays
 - long-term (ie staff) parking area: 95 spaces
- **Stages 2 and 3: 309 spaces**
 - short-term parking area: 138 spaces
 - school drop-off pick-up: 26 bays
 - long-term (ie staff) parking area: 145 spaces

Accordingly, the proposed parking provision complies with TMR's PSTIS requirements in all stages.

Table 3.1: CAR PARKING REQUIREMENTS – STATE HIGH SCHOOL

USER	SCALE	RATE	REQUIREMENT
Stage 1			
Long-term Staff/Visitor	92 staff	0.7 spaces per staff	64
Short-term Parent/Guardian	917 students	1 space per 15 students	61
Drop-off/pick-up bays	61 spaces	20% of short-term	13
Total			138 spaces
Stage 2			
Long-term Staff/Visitor	182 staff	0.7 spaces per staff	127
Short-term Parent/Guardian	1,813 students	1 space per 15 students	121
Drop-off/pick-up bays	121 spaces	20% of short-term	25
Total			273 spaces
Stage 3			
Long-term Staff/Visitor	205 staff	0.7 spaces per staff	144
Short-term Parent/Guardian	2,043 students	1 space per 15 students	137
Drop-off/pick-up bays	137 spaces	20% of short-term	28
Total			309 spaces

3.4.3 Person with Disabilities (PWD) Parking

TMR's PSTIS requires that PWD parking be provided at a rate of one space per 100 ordinary car parking spaces, constructed in accordance with Australian Standards AS2890.6 (2009) Parking Facilities Part 6: Off-Street Parking for People with Disabilities. Based on an ultimate parking provision of 307 spaces, it is recommended that a minimum of three PWD spaces be provided on-site.

3.4.4 Design

It is recommended that the proposed on-site parking facilities be designed fully in accordance with the requirements of TMR's PSTIS and AS2890.1, in terms of minimum space and aisle dimensions. This is typified by:

- car parking spaces (short and long-term) dimensioned a minimum 2.6m wide by 5.4m long
- PWD parking spaces dimensioned 2.4m wide by 5.4m long (with an adjacent 2.4m wide shared area)
- minimum 6.2m wide parking aisles
- parallel drop-off / pick-up bays dimensioned a minimum 2.4m wide by 6.0m long and accessed via a 4.0m wide parking aisle

Swept path analysis of the parking areas has been undertaken as demonstrated in the drawings attached in Appendix D.

3.4.5 Queuing

The TMR's PSTIS provides guidance on the parking demands, size of drop-off / pick-up facilities, queuing requirements and internal layouts for schools. In the case of the proposed school, queuing for a minimum of 10 vehicles (ie 60m) would be required, measured from the property boundary at the entry crossover to the first internal conflict point.

The proposed layout incorporates over 100m of on-site queuing space from the property boundary and the first internal conflict point, which is in accordance with TMR's PSTIS. In addition the site layout accommodates a queuing lane to the short-term parking area and drop-off / pick-up bays, which doubles the potential queuing space.

3.5 ACTIVE AND PUBLIC TRANSPORT

3.5.1 Pedestrians

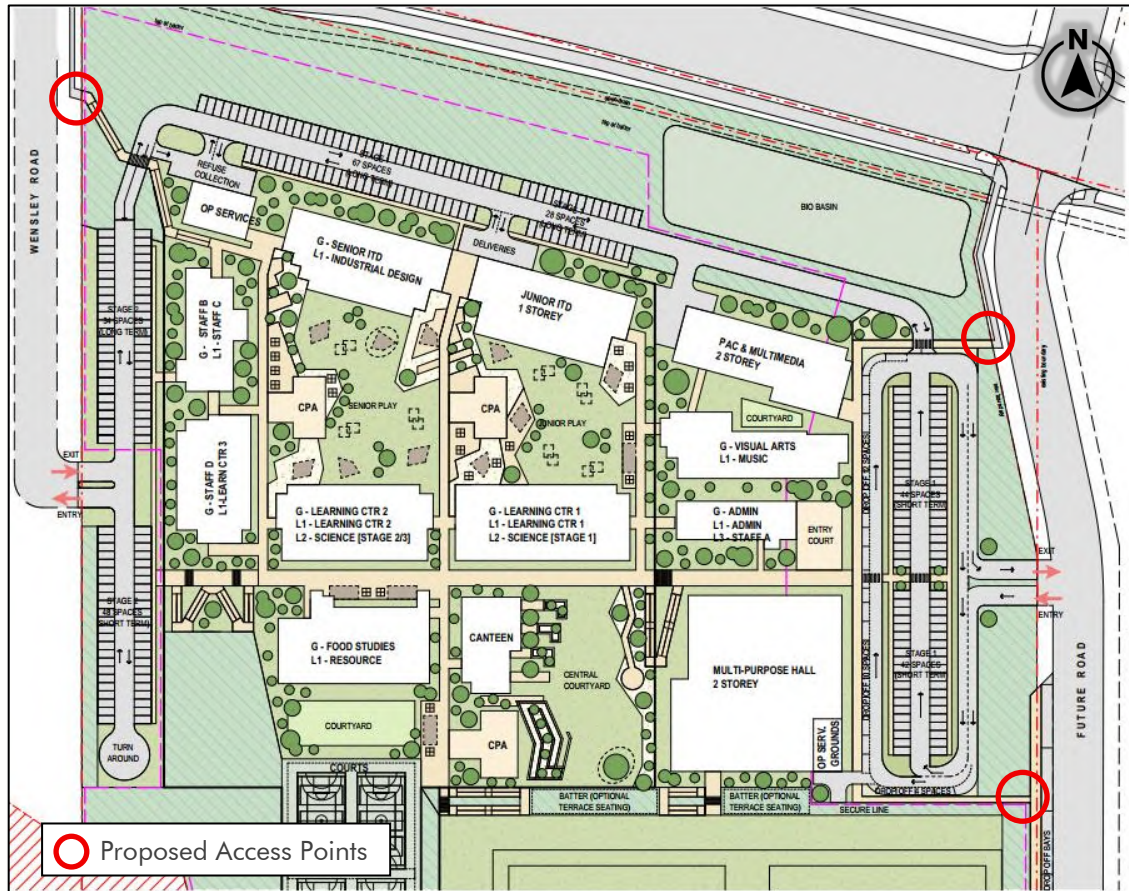
Pedestrian access points have been identified as part of the school master planning, shown in Figure 3.5. Pedestrian paths and crossings are to be incorporated into the design of the internal layout with connections to the proposed footpaths on the surrounding street network.

3.5.2 Cyclists

The bicycle parking requirement for the proposed school has been determined in accordance with the rates provided in TMR's PSTIS. A minimum of 247 bicycle spaces are required to support the ultimate school population, as shown in Table 3.2.

In addition to bicycle parking, there should be provision for scooter parking (say 50 spaces) and a minimum of one skateboard parking rack. It is recommended these bicycle / scooter / skateboard parking areas be located an area with high passive surveillance.

Figure 3.5: PEDESTRIAN ACCESS LOCATIONS



3.5.3 Public Transport

It is proposed to provide an on-street indented bus bay on the western side of the new collector road along the site frontage, to cater for public (ie Translink) school bus services. It is expected that the bus bay would be capable of accommodating up to six 14.5m long buses.

Based on the anticipated student mode share, the school is expected to generate demand for up to nine buses. However, it is noted that:

- a portion of this demand would be accommodated by existing and planned bus services operating along Ripley Road, which is proposed to include dedicated transit infrastructure, with bus stops on both sides of the road located in close proximity to the school
- staggered bus arrival and departure times could be implemented (as is common practice at many schools) to reduce the number of buses using the bus bay at any one time.

The indented bay would be designed in accordance with Translink's Public Transport Infrastructure Manual (PTIM), as follows:

- a minimum bay width of 3.0m between the kerb and through lane
- a minimum bay length of approximately 100m to accommodate up to six buses
- maximum tapers of 1:7 on entry and 1:5 on exit

To allow buses to turn around at the southern end of new collector road, a cul-de-sac turn head is proposed with a 15m radius (30m diameter).

Table 3.2: BICYCLE PARKING REQUIREMENT

USER	SCALE	RATE	REQUIREMENT
Stage 1			
Staff	92 staff	1 per 10 staff	10
Student	917 students	1 per 10 students	92
Visitors		10% of student parking	10
Total			112 spaces
Stage 2			
Staff	182 staff	1 per 10 staff	18
Student	1,813 students	1 per 10 students	181
Visitors		10% of student parking	18
Total			217 spaces
Stage 3			
Staff	205 staff	1 per 10 staff	21
Student	2,043 students	1 per 10 students	205
Visitors		10% of student parking	21
Total			247 spaces

To allow buses to turn around at the southern end of new collector road, a cul-de-sac turn head is proposed with a 15m radius (30m diameter).

3.6 SERVICE VEHICLES

The design service vehicle specified in the Ipswich City Council's Planning Scheme for an educational facility is a Heavy Rigid Vehicle (HRV). In addition, the proposed development will generate demand for a dental van and a Refuse Collection Vehicle (RCV). It is understood that the dental van may visit the site a few times per year, remaining on-site for several days / weeks at a time.

Swept path analysis of the service area has been undertaken with the drawings attached in Appendix D. These indicate that the internal layout and service areas have been designed to accommodate access and manoeuvring by an HRV.

4.0 TRAFFIC OPERATIONS

4.1 DEVELOPMENT STAGING

4.1.1 Timing

Stage 1 of the development is proposed to be operational by 2029, with Stage 2 and 3 expected to be fully operational by 2032. Therefore, the following development staging has been adopted:

■	traffic data:	2026
■	development application:	2026
■	opening year (Stage 1):	2029
■	opening year (Stage 3):	2032

4.1.2 Assessment Scenarios

The following assessment scenarios have been considered:

- opening year (2029) pre-development
- opening year (2029) post-development (Stage 1)
- opening year (2032) pre-development
- opening year (2032) post-development (Stage 3)

In terms of the 2029 opening year scenario, it is expected that the Ipswich City Council Ripley Road Upgrade Project will be completed in advance of the Stage 1 school opening with current program timings indicating that the works will be completed during the 2028/2029 financial year. However, a sensitivity test has been undertaken to assess the implications should the upgrade project be delayed and the school open prior to its completion.

A 10-year (post opening) design horizon scenario has not been undertaken, due to the considerable uncertainty around the future configuration of the surrounding road network. In particular, it is expected that Wensley Road will be upgraded further to the south and the new collector road will be extended to the south-east, as contemplated in the endorsed movement network plan (see Figure 2.4). In addition, it is unlikely that background traffic volumes on Ripley Road will continue to grow at the currently observed rates over a 15-year timeframe.

4.1.3 Background Traffic Growth

Ripley Road has experienced significant historic traffic growth in recent years, which is expected to continue in the short to medium term. Accordingly, a background traffic growth rate of 10% per annum has been adopted to forecast future year through traffic volumes on Ripley Road. This growth rate has also been applied to Fischer Road and Wensley Road. The application of this rate equates to a 177% increase in background traffic volumes over the eight-year period from 2026 to 2032.

4.2 TRAFFIC GENERATION

The likely peak hour traffic generation of the proposed development has been determined based on the forecast student and staff mode share, as outlined in Section 3.2. Analysis of TMR's HTS data indicates that approximately 70% of trips to / from schools in the morning and afternoon peak periods (ie 7:00am – 9:00am and 2:00pm – 5:00pm) are undertaken during the peak hour

periods. Therefore, it has been assumed that 70% of student and staff trips will occur in the peak hours. The following in:out splits have been adopted:

- 100:0 for staff trips in the morning, with the reverse in the afternoon
- 50:50 for student trips during both peak hours

Table 4.1 and Table 4.2 summarises the forecast weekday morning peak hour traffic generation of the site, following completion of Stage 1 and the ultimate (Stage 3) development respectively. As shown, the proposal is expected to generate additional traffic movements as follows:

- Stage 1: 422 vehicle trips (238 in and 184 out) during the weekday morning peak hour (with the reverse in the afternoon)
- Ultimate (Stage 3): 940 vehicle trips (530 in and 410 out) during the weekday morning peak hour (with the reverse in the afternoon)

Table 4.1: FORECAST STAGE 1 TRAFFIC GENERATION – MORNING PEAK HOUR

USER	SCALE	% BY PRIV VEH	AVERAGE OCCUPANCY	% IN PEAK HOUR	TRIPS	IN : OUT
Staff	92 FTE staff	88%	1.05 / vehicle	70%	54	54 : 0
Students	917 students	43%	1.5 / vehicle	70%	368	184 : 184
Total					422	238 : 184

Table 4.2: FORECAST ULTIMATE TRAFFIC GENERATION – MORNING PEAK HOUR

USER	SCALE	% BY PRIV VEH	AVERAGE OCCUPANCY	% IN PEAK HOUR	TRIPS	IN : OUT
Staff	205 FTE staff	88%	1.05 / vehicle	70%	120	120 : 0
Students	2,043 students	43%	1.5 / vehicle	70%	820	410 : 410
Total					940	530 : 410

4.3 SCENARIO 1: 2029 OPENING YEAR, COUNCIL UPGRADE COMPLETED

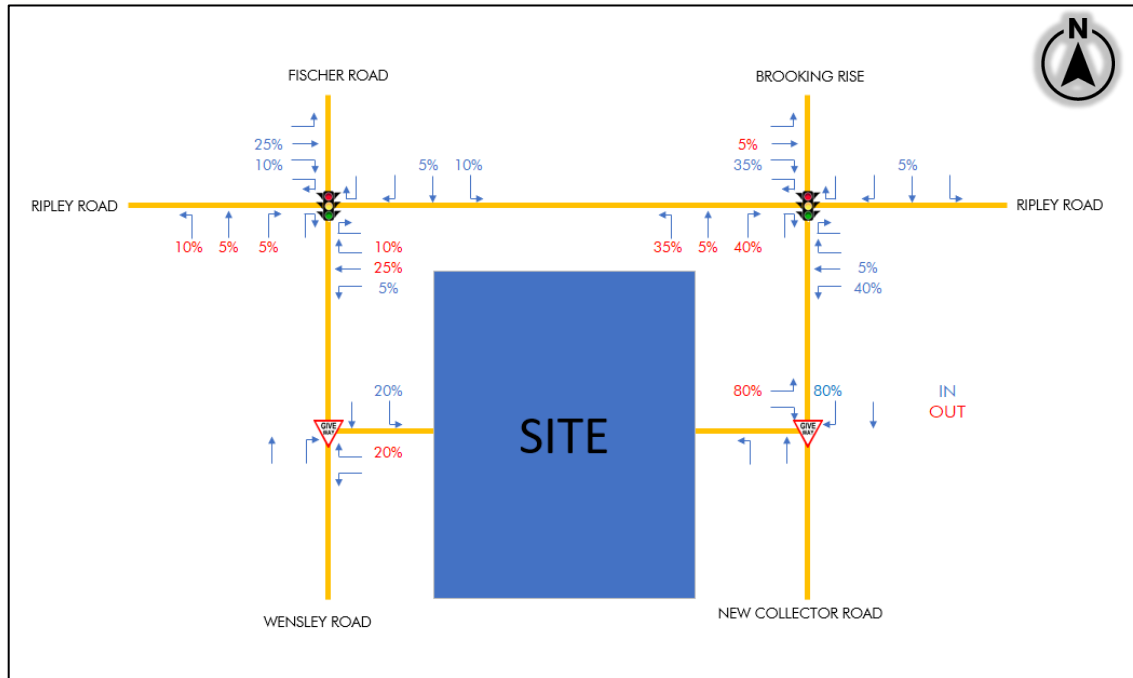
4.3.1 Traffic Distribution

The distribution of development generated traffic on the surrounding road network has been estimated based on the directional distributions inherent in traffic count survey data and a high-level review of the distribution of residential catchments in (and surrounding) Ripley.

Under this scenario, it has been assumed that a secondary school access will be provided via Wensley Road, which would be partially upgraded (for a distance of 80m south of the Ripley Road intersection) as part of the Ipswich City Council Ripley Road Upgrade Project. The Wensley Road access will cater for staff movements to and from the school under the Stage 1 layout.

The resulting directional distribution under the Option 1 scenario is shown in Figure 4.1 for both the morning and afternoon peak hours.

Figure 4.1: OPTION 1 DEVELOPMENT TRAFFIC DISTRIBUTION



4.3.2 Intersection Operations

The likely impact of the proposed development under Scenario 1 on the operation of the surrounding road network has been assessed using SIDRA. The analyses are based on the Stage 1 Option 1 peak hour turning movement forecasts presented in Appendix E.

Ripley Road / Fischer Road / Wensley Road Intersection

Under this scenario, the adopted 2029 intersection layout for the Ripley Road / Fischer Road / Wensley Road intersection is based on the Ipswich City Council project, which would signalise intersection and provide capacity upgrades to the Ripley Road and Fischer Road approaches. The corresponding SIDRA layout of the upgraded intersection configuration and assumed signal phasing is presented in Figure 4.2.

The results of the analyses of the Ripley Road / Fischer Road / Wensley Road intersection are summarised in Table 4.3 and attached in Appendix B.

Figure 4.2: RIPLEY ROAD / FISCHER ROAD / WENSLEY ROAD INTERSECTION SIDRA

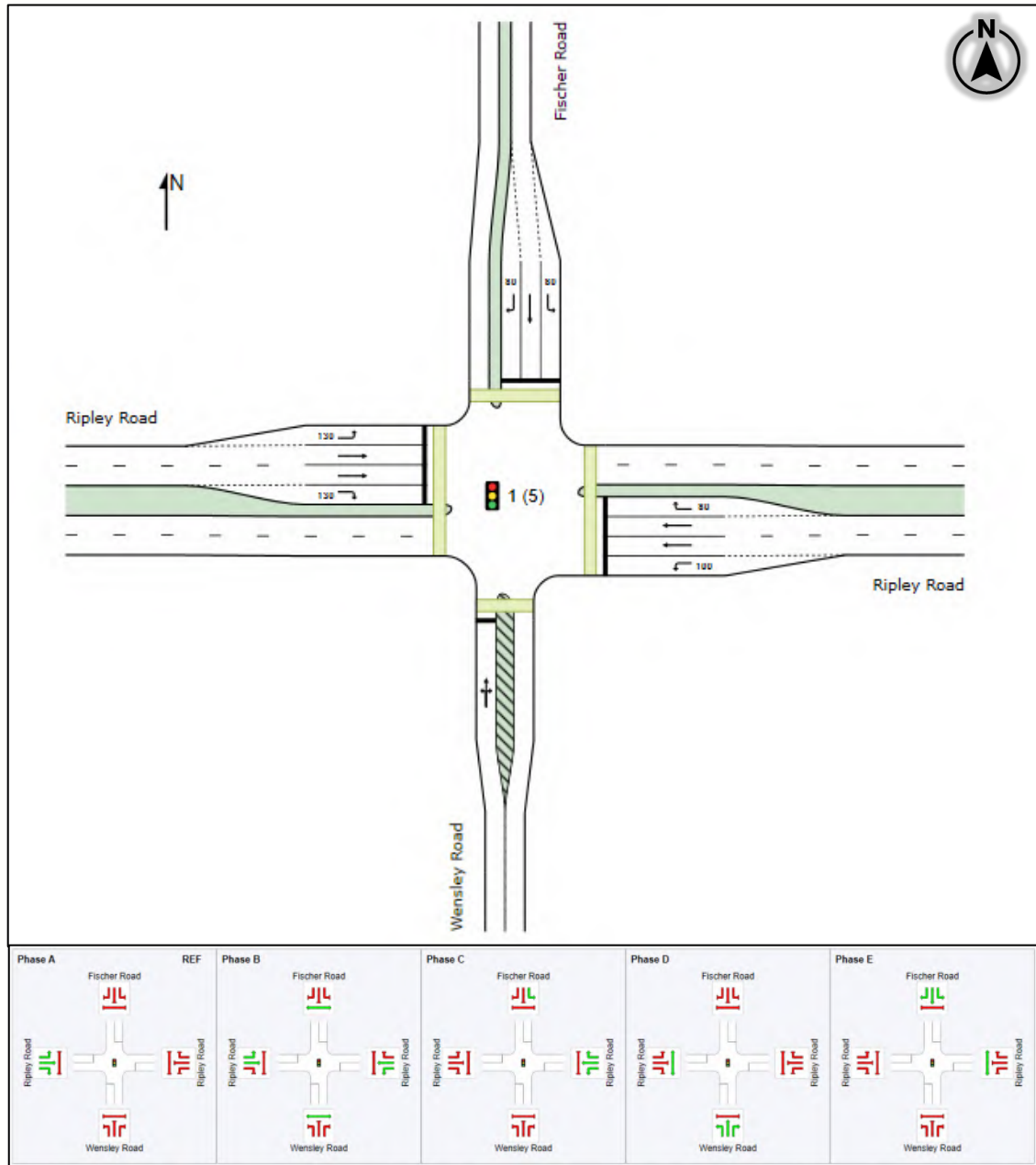


Table 4.3: RIPLEY ROAD / FISCHER ROAD / WENSLEY ROAD OPERATIONS

PEAK HOUR & SCENARIO	DOS	CYCLE TIME	AVG DELAY	95% QUEUE	CRITICAL MOVEMENT
Weekday Morning					
2029 Pre Development	61%	120s	29.0s	18 vehs	West: Ripley Road
2029 Post Development	66%	120s	30.6s	20 vehs	West: Ripley Road
Weekday Afternoon					
2029 Pre Development	54%	120s	23.9s	16 vehs	West: Ripley Road
2029 Post Development	60%	120s	26.1s	18 vehs	West: Ripley Road

As shown, the results indicate that the intersection is expected to experience LOS C operations during the morning and afternoon peak hour under 2029 pre and post development scenarios. The addition of development generated traffic results in a moderate increase in DOS and minor increases in 95th percentile vehicle queue lengths and average delay. However, the intersection is expected to operate within the desirable standards of service (ie 90% for a signalised intersection). Therefore, the addition of development traffic is not considered to warrant upgrades at this intersection.

Ripley Road / Brooking Rise / New Collector Road Intersection

In this scenario, the layout for the Ripley Road / Brooking Rise / New Collector Road intersection in this scenario has been based on the following parameters:

- upgrade to traffic signals with all turn movements permitted
- Ripley Road upgraded to two lanes in each direction, transitioning back to a two-way / two-lane road approximately 200m east of the intersection
- dedicated right turn lanes on both the Ripley Road approaches
- a westbound left turn lane on Ripley Road
- two stand-up lanes on the new collector road
- pedestrian crossing facilities on all approaches

The corresponding SIDRA layout of the upgraded intersection configuration and assumed phasing is presented in Figure 4.3. The results of the analyses of the Ripley Road / Brooking Rise / New Collector Road intersection are summarised in Table 4.4 and attached in Appendix B. Only the post-development results have been presented due to the limited value in comparing with the interim left-in / left-out configuration proposed under the Ipswich City Council upgrade project.

Figure 4.3: RIPLEY ROAD / BROOKING RISE / NEW COLLECTOR ROAD SIDRA

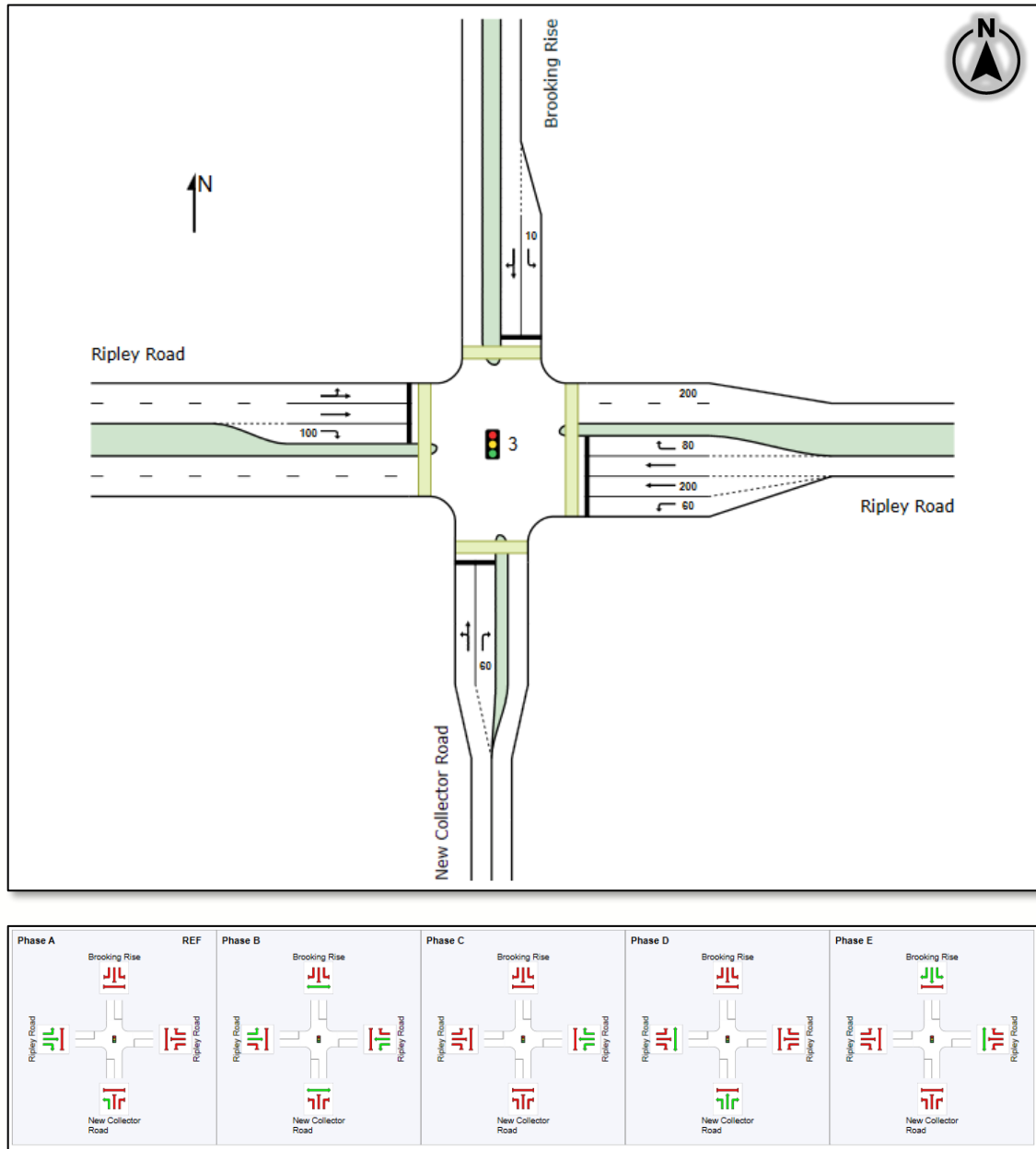


Table 4.4: RIPLEY ROAD / BROOKING RISE / NEW COLLECTOR ROAD OPERATIONS

PEAK HOUR & SCENARIO	DOS	CYCLE TIME	AVG DELAY	95% QUEUE	CRITICAL MOVEMENT
2029 Morning Peak Hour	52%	140s	23.9s	17 vehs	East: Ripley Road
2029 Afternoon Peak Hour	50%	140s	21.2s	16 vehs	West: Ripley Road

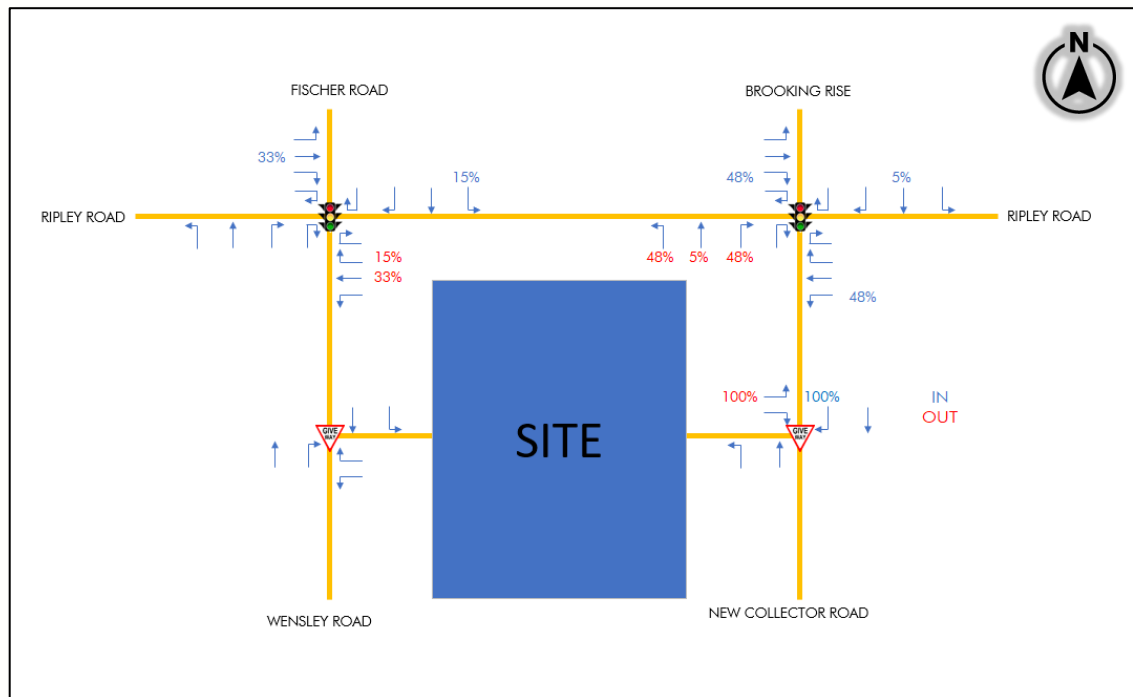
As shown, the results indicate that the intersection is expected to experience LOS C operations during the morning and afternoon school peak hours in the 2029 post development scenario. The intersection is expected to operate within the desirable standards of service (ie 90% for a signalised intersection).

4.4 SCENARIO 2: 2029 OPENING YEAR: NO COUNCIL UPGRADE

4.4.1 Traffic Distribution

Should the school open prior to completion of the Ipswich City Council Ripley Road Upgrade Project, it has been assumed that access via Wensley Road would not be available, with all traffic instead directed to the school via the new public road. The distribution of development-generated traffic on the surrounding road network has been revised accordingly, with the resulting directional distribution under the Option 2 scenario shown in Figure 4.4 for both the morning and afternoon peak hours.

Figure 4.4: OPTION 2 DEVELOPMENT TRAFFIC DISTRIBUTION



4.4.2 Intersection Operations

The likely impact of the proposed development under Scenario 2 on the operation of the surrounding road network has been assessed using SIDRA. The analyses are based on the Stage 1 Option 2 peak hour turning movement forecasts presented in Appendix E.

Ripley Road / Fischer Road / Wensley Road Intersection

In this scenario it has been assumed that the intersection would remain in its priority-controlled form as per the SIDRA intersection layout shown in Section 2.4 of this report. The results of the analyses of the Ripley Road / Fischer Road / Wensley Road intersection are summarised in Table 4.5 and attached in Appendix B.

Table 4.5: RIPLEY ROAD / FISCHER ROAD / WENSLEY ROAD OPERATIONS

PEAK HOUR & SCENARIO	DOS	AVG DELAY	95% QUEUE	CRITICAL MOVEMENT
Weekday Morning				
2029 Pre Development	120%	8.1s	5.8 vehs	North: Fischer Road
2029 Post Development	155%	12.4s	5.8 vehs	North: Fischer Road
Weekday Afternoon				
2029 Pre Development	166%	17.7s	13.4 vehs	North: Fischer Road
2029 Post Development	216%	26.1s	17.4 vehs	North: Fischer Road

As shown, the results indicate that the intersection is expected to experience LOS F operations during the morning and afternoon peak hours under 2029 pre and post development scenarios.

The intersection is predicted to fail in all scenarios due to the right turn movements from Fischer Road to Ripley Road. As the two-way traffic volumes on Ripley Road increase, there are fewer available gaps for vehicles turning right from the minor road approaches, reducing the ability for these movements to be accommodated safely. This indicates that the intersection should be upgraded to traffic signals for safety reasons. However, it is noted that:

- all other movements at the intersection are expected to operate within acceptable limits
- the proposed school will not increase right-turn demand from the minor road approaches to Ripley Road
- this arrangement would only be in place for a short period of time until the upgrade project has been completed

According, it is not considered necessary for the Ripley Road / Fischer Road / Wensley Road intersection to be upgraded as part of the school development.

Ripley Road / Brooking Rise / New Collector Road Intersection

The layout for the Ripley Road / Brooking Rise / New Collector Road intersection has been based on the following parameters:

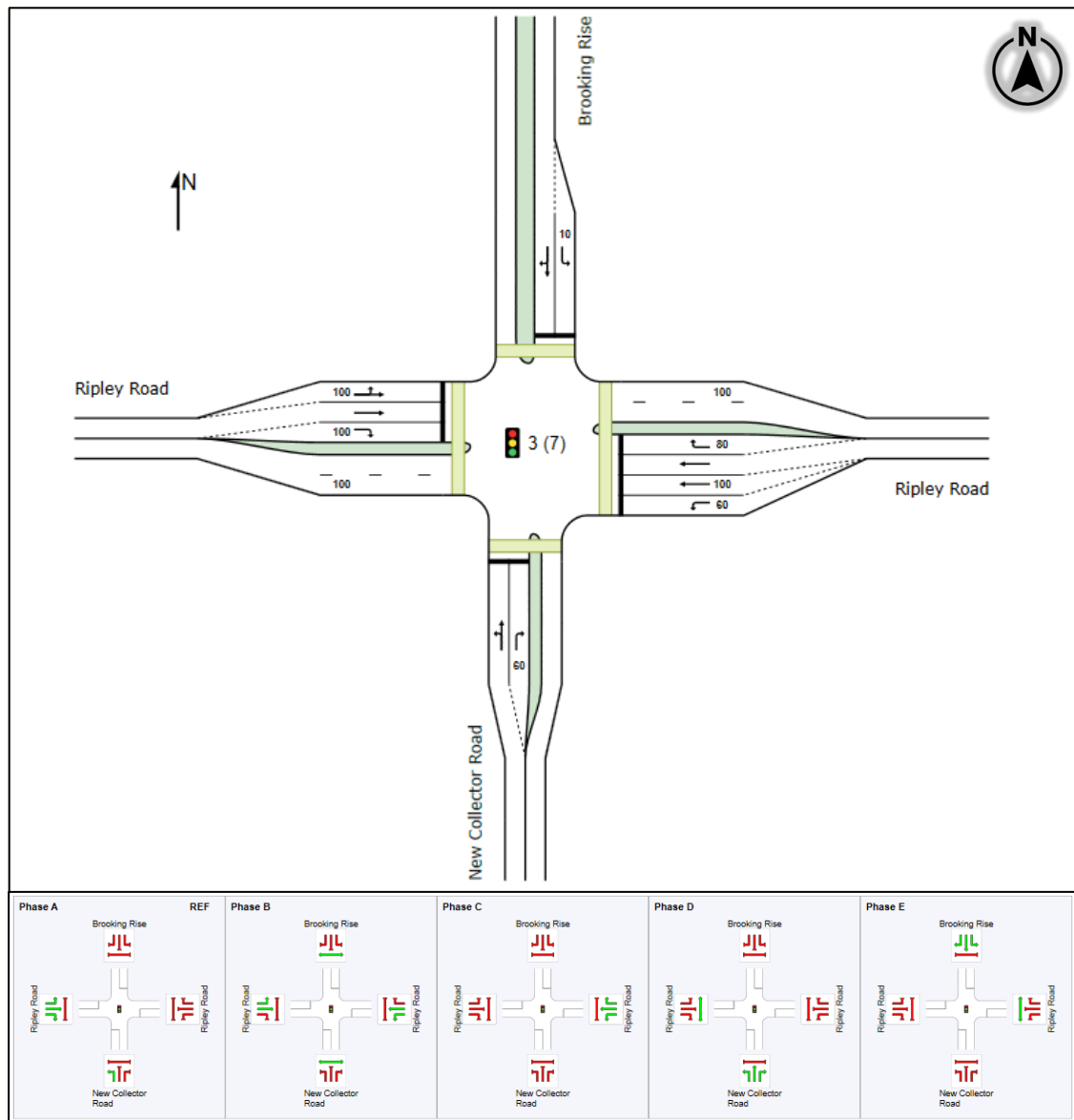
- upgrade to traffic signals with all turn movements permitted
- additional short approach and departure lanes on Ripley Road in each direction, transitioning back to a two-way / two-lane road to the east and west of the intersection
- dedicated right turn lanes on both the Ripley Road approaches
- a westbound left turn lane on Ripley Road
- two stand-up lanes on the new collector road
- pedestrian crossing facilities on all approaches

The corresponding SIDRA layout of the upgraded intersection configuration and assumed phasing is presented in Figure 4.5. The results of the analyses of the Ripley Road / Brooking Rise / New Collector Road intersection are summarised in Table 4.6 and attached in Appendix B. Only the post-development results have been presented due to the limited value in comparing with the existing unsignalised arrangement.

Table 4.6: RIPLEY ROAD / BROOKING RISE / NEW COLLECTOR ROAD OPERATIONS

PEAK HOUR & SCENARIO	DOS	CYCLE TIME	AVG DELAY	95% QUEUE	CRITICAL MOVEMENT
2029 Morning Peak Hour	67%	140s	26.9s	24 vehs	West: Ripley Road
2029 Afternoon Peak Hour	64%	140s	22.9s	22 vehs	East: Ripley Road

Figure 4.5: RIPLEY ROAD / BROOKING RISE / NEW COLLECTOR ROAD SIDRA



As shown, the results indicate that the intersection is expected to experience LOS C operations during the morning and afternoon school peak hours in the 2029 post development scenario. The intersection is expected to operate within the desirable standards of service (ie 90% for a signalised intersection).

4.5 SCENARIO 3: 2032 ULTIMATE SCHOOL OPENING YEAR

4.5.1 Traffic Distribution

The adopted distribution of development-generated traffic on the surrounding road network for the ultimate school (Stage 3) scenario is shown in Figure 4.1 for both the morning and afternoon peak hours.

4.5.2 Intersection Operations

The likely impact of the proposed development under Scenario 3 on the operation of the surrounding road network has been assessed using SIDRA. The analyses are based on the Stage 3 peak hour turning movement forecasts presented in Appendix E.

Ripley Road / Fischer Road / Wensley Road Intersection

The adopted 2032 intersection layout for the Ripley Road / Fischer Road / Wensley Road intersection is based on the SIDRA layout of the upgraded intersection configuration and assumed signal phasing presented in Figure 4.2. The results of the analyses of the Ripley Road / Fischer Road / Wensley Road intersection are summarised in Table 4.7 and attached in Appendix B.

Table 4.7: RIPLEY ROAD / FISCHER ROAD / WENSLEY ROAD OPERATIONS

PEAK HOUR & SCENARIO	DOS	CYCLE TIME	AVG DELAY	95% QUEUE	CRITICAL MOVEMENT
Weekday Morning					
2032 Pre Development	77%	120s	31.2s	27 vehs	West: Ripley Road
2032 Post Development	90%	120s	44.7s	39 vehs	West: Ripley Road
Weekday Afternoon					
2032 Pre Development	68%	120s	23.9s	23 vehs	West: Ripley Road
2032 Post Development	79%	120s	29.2s	30 vehs	West: Ripley Road

As shown, the results indicate that the intersection is expected to experience LOS D operations during the morning school peak hour and LOS C in the afternoon peak hour under 2032 pre and post development scenarios. The addition of development generated traffic results in a moderate increase in DOS and minor increases in 95th percentile vehicle queue lengths and average delay. However, the intersection is expected to operate within the desirable standards of service (ie 90% for a signalised intersection). Therefore, the addition of development traffic is not considered to warrant upgrades at this intersection.

The intersection modelling indicates that, should background traffic continue to grow on Ripley Road at 10% per annum as forecast in the analysis, the ultimate upgrade to six lanes would be required to accommodate the expected traffic volumes soon after 2032 in order to maintain acceptable intersection operations.

4.5.3 Ripley Road / Brooking Rise / New Collector Road Intersection

The layout for the Ripley Road / Brooking Rise / New Collector Road intersection has been based on the upgraded intersection configuration and assumed phasing presented in Figure 4.3. The results of the analyses of the Ripley Road / Brooking Rise / New Collector Road intersection are summarised in Table 4.8 and attached in Appendix B.

Table 4.8: RIPLEY ROAD / BROOKING RISE / NEW COLLECTOR ROAD OPERATIONS

PEAK HOUR & SCENARIO	DOS	CYCLE TIME	AVG DELAY	95% QUEUE	CRITICAL MOVEMENT
2032 Morning Peak Hour	83%	140s	44.3s	38 vehs	East: Ripley Road
2032 Afternoon Peak Hour	79%	140s	37.0s	35 vehs	West: Ripley Road

As shown, the results indicate that the intersection is expected to experience LOS D operations during the morning and afternoon school peak hours in the 2032 post development scenario. The intersection is expected to operate within the desirable standards of service (ie 90% for a signalised intersection).

The intersection modelling indicates that, should background traffic continue to grow on Ripley Road at 10% per annum as forecast in the analysis, the ultimate upgrade to six lanes would be required to accommodate the expected traffic volumes soon after 2032 in order to maintain acceptable intersection operations.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSIONS

The proposed Ripley Valley state secondary school has been evaluated in terms of its site access arrangements, parking provision, servicing arrangements, public transport infrastructure, pedestrian / cyclist facilities and likely traffic impact. The main points to note are:

- the proposal involves a new state secondary school, to be delivered over three stages as follows:
 - Stage 1: capacity for 917 enrolments, with 92 staff
 - Stage 2: a cumulative enrolment capacity for 1,813, with 182 staff
 - Stage 3: a cumulative enrolment capacity of 2,043, with 205 staff
- the primary vehicular access for the school is proposed via a new public collector road, which would form the southern leg of the Ripley Road / Brooking Rise intersection
- a secondary access is proposed via Wensley Road following the signalisation of the Ripley Road / Fischer Road / Wensley Road intersection via the Ipswich City Council Ripley Road Upgrade Project
- the secondary access on Wensley Road would be staged as follows:
 - Interim Stage 1: No access to Wensley Road would be provided prior to the signalisation of the Ripley Road / Fischer Road / Wensley Road intersection via the Ipswich City Council Ripley Road Upgrade Project
 - Ultimate Stage 1: Following the signalisation of the Ripley Road / Fischer Road / Wensley Road intersection via the Ipswich City Council Ripley Road Upgrade Project, an access would be constructed on Wensley Road, located approximately 80m south of the Ripley Road intersection
 - Stage 2 and 3: The secondary Wensley Road access would be relocated further south, approximately 170m south of the Ripley Road intersection
- to accommodate the fourth leg at the Ripley Road / Brooking Rise intersection and the traffic generated by the school, it is proposed that the intersection would be upgraded to traffic signals
- the new collector road would be designed in accordance with Ipswich City Council Standard Drawing SR.02 and constructed for a length of approximately 300m south of Ripley Road, where it would terminate in a 30 m diameter cul-de-sac turn head
- the proposal seeks to provide on-site parking in accordance with TMR's PSTIS requirements, with a total of 307 on-site spaces proposed in Stages 2 and 3
- an on-street bus set-down / pick-up zone with capacity for six 14.5m long buses is proposed on the new collector road along the site frontage
- the internal layout and service areas have been designed to accommodate access and manoeuvring by an HRV
- dedicated pedestrian site entrances are proposed on the new collector road and Wensley Road
- the development is expected to result in traffic generation as follows:
 - Stage 1: 422 vehicle trips (238 in and 184 out) during the morning peak hour, with the reverse in the afternoon

- Ultimate: 940 vehicle trips (530 in and 410 out) during the morning peak hour, with the reverse in the afternoon
- the addition of development traffic is not expected to have a significant adverse impact on the operation of the surrounding road network

5.2 RECOMMENDATIONS

Based on our analysis it is recommended that:

- the design of the ultimate Wensley Road access be based on the (currently unknown) form and function of the upgraded road
- the site access on the new collector road be designed in accordance with a Type C3 “General Wide Flared” driveway design incorporating a 7.5m wide entry width, a 1.5m wide centre island and a 6.0m wide exit width, as per IPWEA Standard Drawing RSD-102A
- the proposed indented on-street bus set-down / pick-up zone be designed in accordance with TMR’s PSTIS and Translink requirements (as outlined in Section 3.4.3)
- a minimum of 247 bicycle parking spaces be provided to support the ultimate school population, with scooter parking (say 50 spaces) and a minimum of one skateboard parking rack spaces

APPENDIX A: TRAFFIC COUNT DATA

AUSTRAFFIC VIDEO INTERSECTION COUNT

Site No.: 1 **Weather:** Fine

Location: Ripley Road/Wensley Road/Fischer Road, Ripley

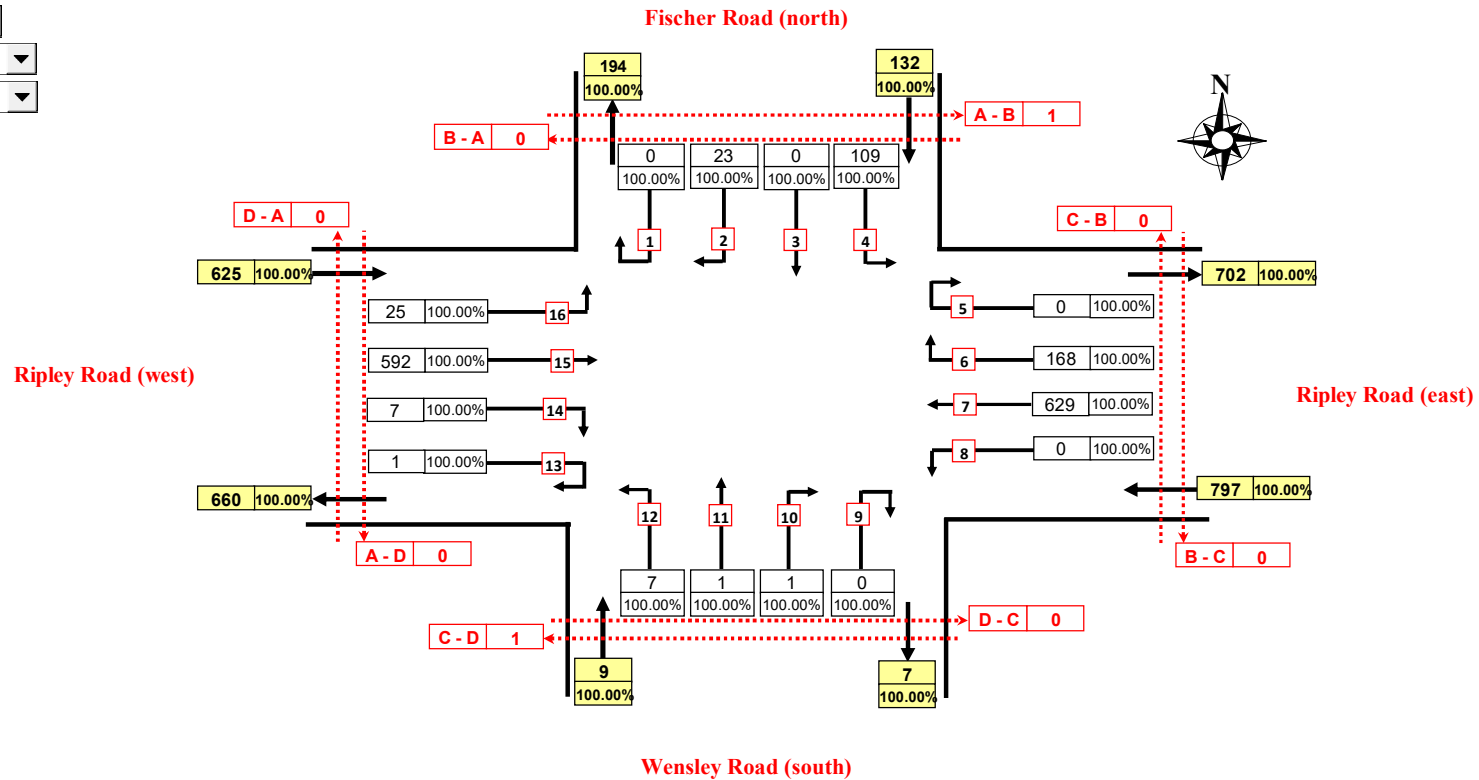
Day/Date: Tuesday, 3 February 2026

Summary: AM Peak : *Hour ending - 9:00 AM*
PM Peak : *Hour ending - 3:45 PM*

Hour Ending: 9:00 AM

On-road classification: Total Vehicles

Off-road classification: Total Ped & Cyclists



Note: 3.28% = proportion of selected vehicle classification as a percentage of total vehicles

AUSTRAFFIC VIDEO INTERSECTION COUNT

Site No.: 1 Weather: Fine

Location: Ripley Road/Wensley Road/Fischer Road, Ripley

Day/Date: Tuesday, 3 February 2026

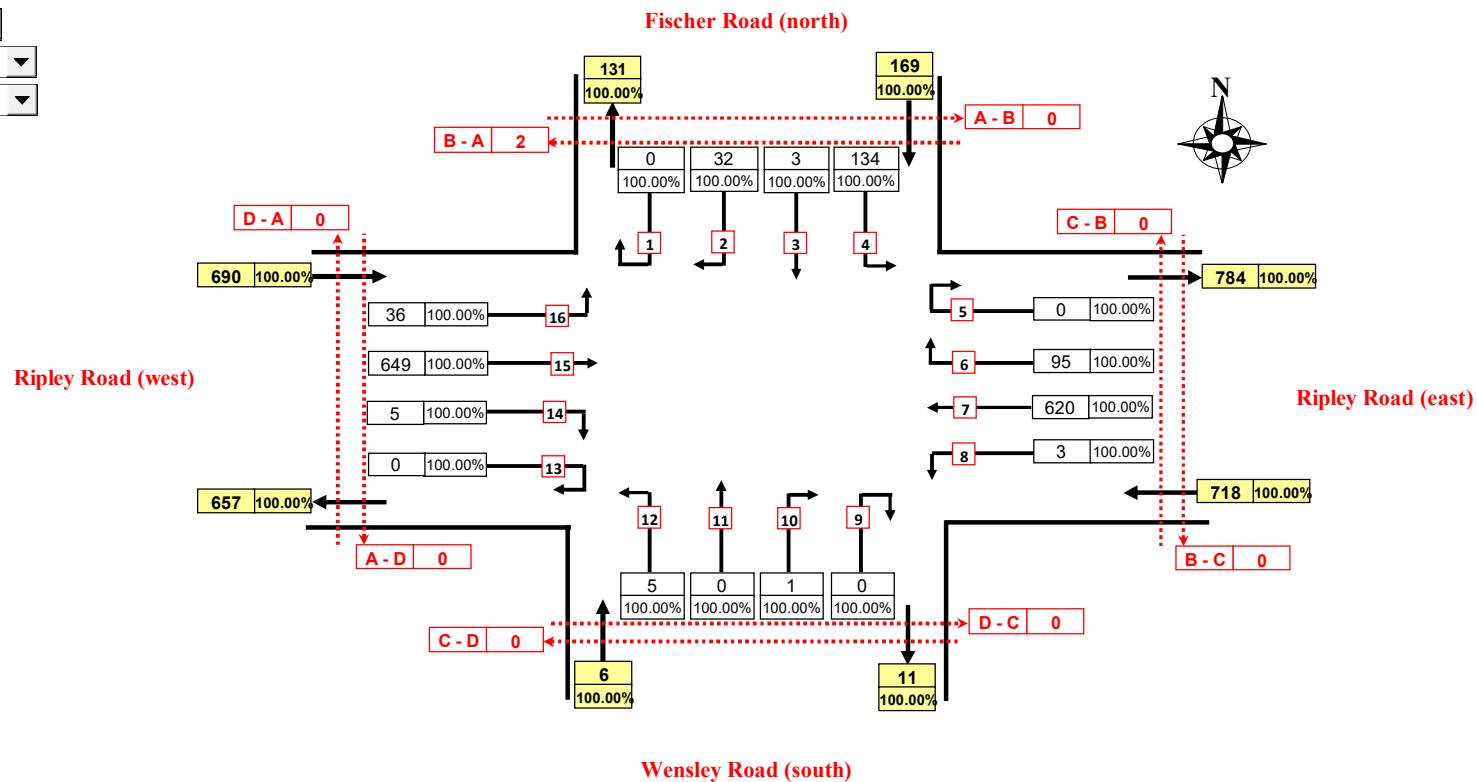
Summary: AM Peak : Hour ending - 9:00 AM

PM Peak : Hour ending - 3:45 PM

Hour Ending: 3:45 PM

On-road classification: Total Vehicles

Off-road classification: Total Ped & Cyclists



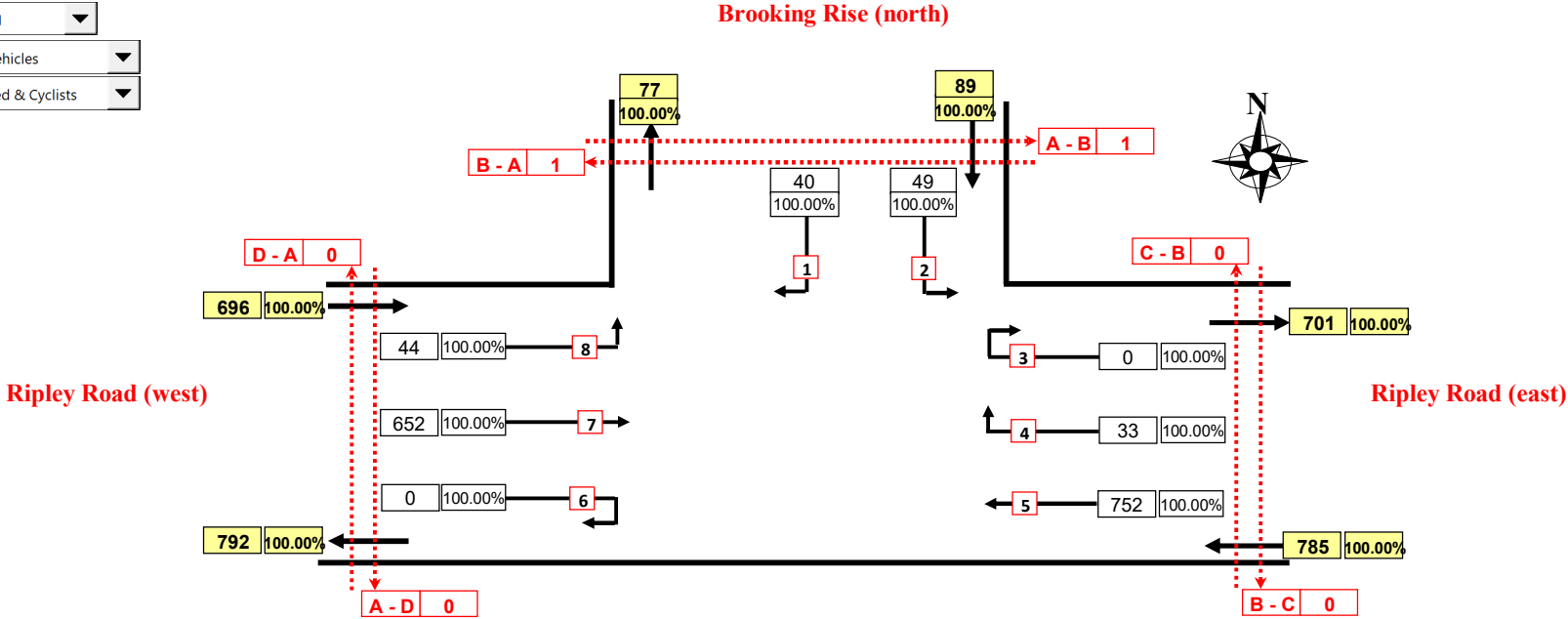
Note: 3.28% = proportion of selected vehicle classification as a percentage of total vehicles

AUSTRAFFIC VIDEO INTERSECTION COUNT



Site No.: 2 Weather: Fine
Location: Ripley Road/Brooking Rise, Ripley
Day/Date: Tuesday, 3 February 2026
Summary: AM Peak : Hour ending - 9:00 AM
PM Peak : Hour ending - 3:45 PM

Hour Ending: 9:00 AM
On-road classification: Total Vehicles
Off-road classification: Total Ped & Cyclists



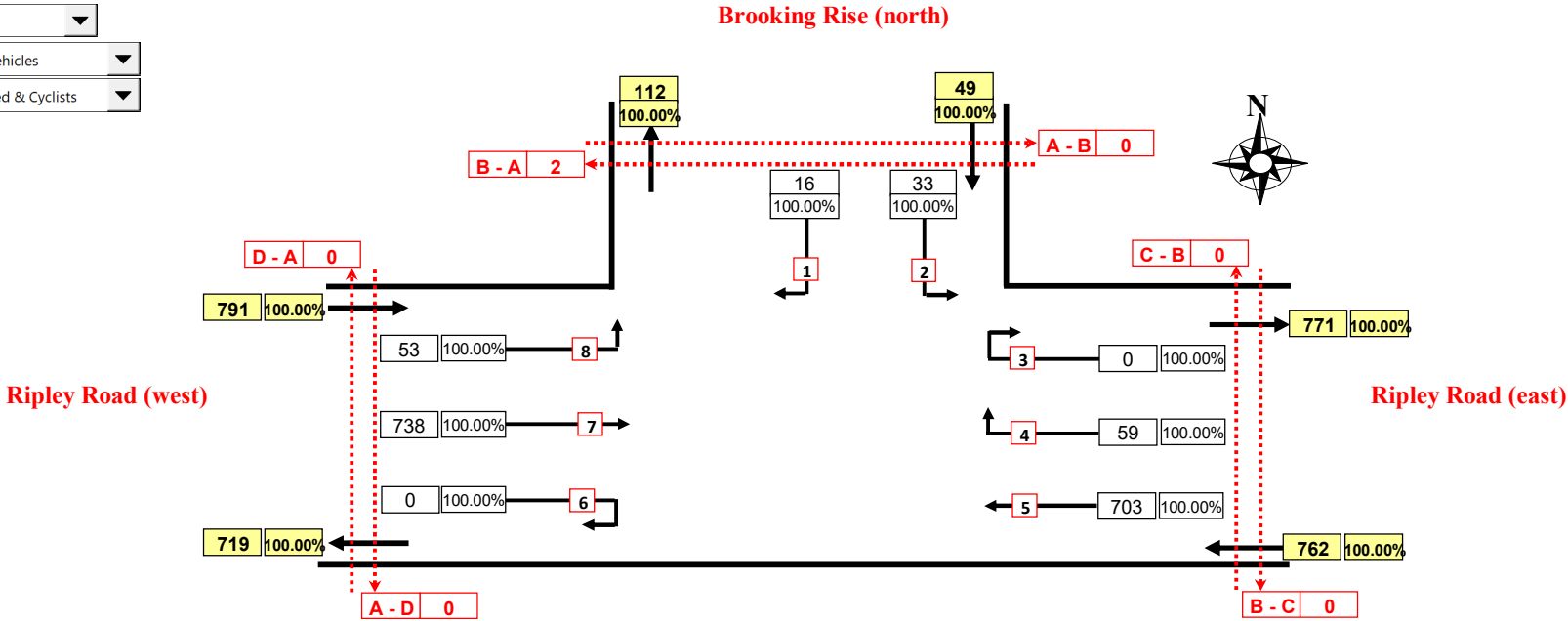
Note: 3.28% = proportion of selected vehicle classification as a percentage of total vehicles

AUSTRAFFIC VIDEO INTERSECTION COUNT



Site No.: 2 Weather: Fine
Location: Ripley Road/Brooking Rise, Ripley
Day/Date: Tuesday, 3 February 2026
Summary: AM Peak : Hour ending - 9:00 AM
PM Peak : Hour ending - 3:45 PM

Hour Ending: 3:45 PM
On-road classification: Total Vehicles
Off-road classification: Total Ped & Cyclists



Note: 3.28% = proportion of selected vehicle classification as a percentage of total vehicles

APPENDIX B: INTERSECTION ANALYSES

SITE LAYOUT

▽ Site: [1] 2026 AM Existing (Ripley / Wensley / Fischer)

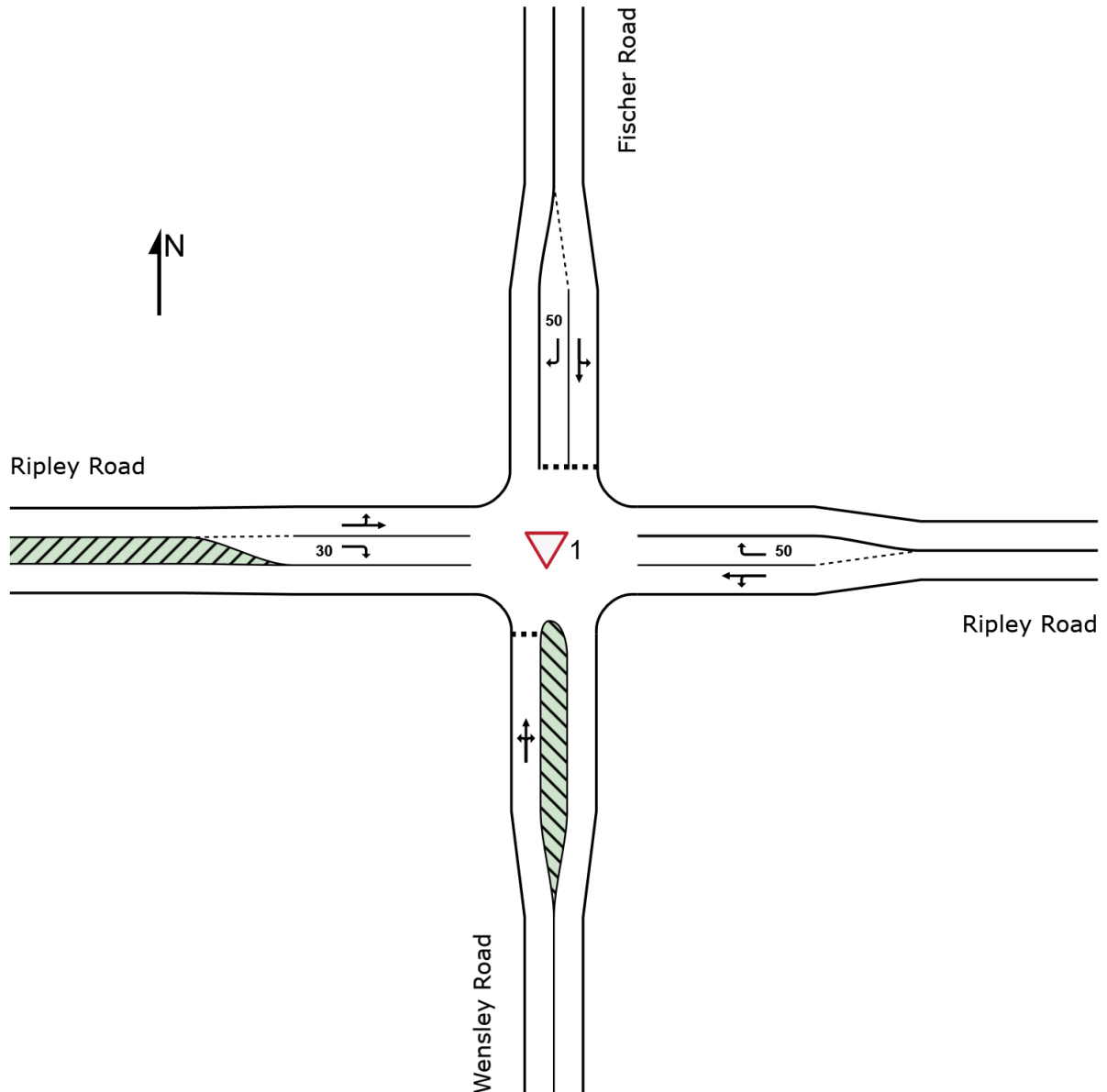
New Site

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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Organisation: PEKOL TRAFFIC AND TRANSPORT | Licence: NETWORK / 1PC | Created: Thursday, 11 June 2026 6:14:54 PM

Project: P:\2024-25\25-730 Ripley Valley SHS\Calcs\Brooking Rise.sipx

MOVEMENT SUMMARY

 **Site: [1] 2026 AM Existing** (Ripley / Wensley / Fischer)
Output produced by SIDRA INTERSECTION Version: 10.0.9.250

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed
			[Total HV]	[Total HV]	[Total HV]	[Total HV]				[Veh. veh	Dist] m				km/h
South: Wensley Road															
1	L2	All MCs	7	7.5	7	7.5	0.040	9.5	LOS A	0.1	0.8	0.75	0.86	0.75	44.1
2	T1	All MCs	1	7.5	1	7.5	0.040	39.5	LOS E	0.1	0.8	0.75	0.86	0.75	44.4
3	R2	All MCs	1	7.5	1	7.5	0.040	64.6	LOS F	0.1	0.8	0.75	0.86	0.75	44.1
Approach			9	7.5	9	7.5	0.040	19.0	LOS C	0.1	0.8	0.75	0.86	0.75	44.1
East: Ripley Road															
4	L2	All MCs	1	7.5	1	7.5	0.352	5.7	LOS A	0.0	0.0	0.00	0.00	0.00	56.9
5	T1	All MCs	652	7.5	652	7.5	0.352	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
6	R2	All MCs	174	7.5	174	7.5	0.197	8.9	LOS A	0.8	6.0	0.60	0.80	0.60	50.1
Approach			828	7.5	828	7.5	0.352	2.0	NA	0.8	6.0	0.13	0.17	0.13	57.4
North: Fischer Road															
7	L2	All MCs	113	7.5	113	7.5	0.186	9.7	LOS A	0.6	4.7	0.58	0.82	0.58	49.5
8	T1	All MCs	1	7.5	1	7.5	0.186	44.1	LOS E	0.6	4.7	0.58	0.82	0.58	49.9
9	R2	All MCs	24	7.5	24	7.5	0.329	62.5	LOS F	0.9	6.5	0.95	1.01	1.08	28.9
Approach			138	7.5	138	7.5	0.329	19.1	LOS C	0.9	6.5	0.64	0.85	0.66	44.0
West: Ripley Road															
10	L2	All MCs	26	7.5	26	7.5	0.345	5.7	LOS A	0.0	0.0	0.00	0.02	0.00	56.8
11	T1	All MCs	614	7.5	614	7.5	0.345	0.1	LOS A	0.0	0.0	0.00	0.02	0.00	59.6
12	R2	All MCs	8	7.5	8	7.5	0.010	8.4	LOS A	0.0	0.3	0.56	0.66	0.56	50.4
Approach			648	7.5	648	7.5	0.345	0.4	NA	0.0	0.3	0.01	0.03	0.01	59.3
All Vehicles			1623	7.5	1623	7.5	0.352	2.9	NA	0.9	6.5	0.13	0.18	0.13	56.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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.

MOVEMENT SUMMARY

Site: [1 (3)] 2029 AM Pre Development (Ripley / Wensley / Fischer)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop of Rate	Number of Cycles to Depart	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				km/h
South: Wensley Road															
1	L2	All MCs	9	7.5	9	7.5	0.103	12.5	LOS B	0.2	1.6	0.88	0.95	0.88	39.9
2	T1	All MCs	1	7.5	1	7.5	0.103	81.0	LOS F	0.2	1.6	0.88	0.95	0.88	40.1
3	R2	All MCs	1	7.5	1	7.5	0.103	111.9	LOS F	0.2	1.6	0.88	0.95	0.88	39.9
Approach			11	7.5	11	7.5	0.103	27.8	LOS D	0.2	1.6	0.88	0.95	0.88	39.9
East: Ripley Road															
4	L2	All MCs	1	7.5	1	7.5	0.468	5.8	LOS A	0.0	0.0	0.00	0.00	0.00	56.8
5	T1	All MCs	868	7.5	868	7.5	0.468	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.6
6	R2	All MCs	232	7.5	232	7.5	0.340	11.8	LOS B	1.7	12.4	0.72	0.94	0.90	48.1
Approach			1102	7.5	1102	7.5	0.468	2.7	NA	1.7	12.4	0.15	0.20	0.19	56.8
North: Fischer Road															
7	L2	All MCs	150	7.5	150	7.5	0.329	13.2	LOS B	1.3	9.6	0.73	0.94	0.91	47.0
8	T1	All MCs	1	7.5	1	7.5	0.329	96.5	LOS F	1.3	9.6	0.73	0.94	0.91	47.4
9	R2	All MCs	32	7.5	32	7.5	1.207	361.0	LOS F	5.8	42.9	1.00	1.46	3.05	9.8
Approach			184	7.5	184	7.5	1.207	74.6	LOS F	5.8	42.9	0.78	1.03	1.28	28.2
West: Ripley Road															
10	L2	All MCs	34	7.5	34	7.5	0.459	5.8	LOS A	0.0	0.0	0.00	0.02	0.00	56.6
11	T1	All MCs	817	7.5	817	7.5	0.459	0.2	LOS A	0.0	0.0	0.00	0.02	0.00	59.4
12	R2	All MCs	10	7.5	10	7.5	0.017	10.4	LOS B	0.1	0.4	0.66	0.77	0.66	49.1
Approach			862	7.5	862	7.5	0.459	0.5	NA	0.1	0.4	0.01	0.03	0.01	59.2
All Vehicles			2159	7.5	2159	7.5	1.207	8.1	NA	5.8	42.9	0.15	0.21	0.21	52.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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.

MOVEMENT SUMMARY

Site: [1 (8)] 2029 AM Post Development - Scenario 2 (Ripley / Wensley / Fischer)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop of Rate	Number of Cycles to Depart	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				km/h
South: Wensley Road															
1	L2	All MCs	9	7.5	9	7.5	0.161	14.5	LOS B	0.3	2.2	0.92	0.97	0.94	37.2
2	T1	All MCs	1	7.5	1	7.5	0.161	90.6	LOS F	0.3	2.2	0.92	0.97	0.94	37.4
3	R2	All MCs	1	7.5	1	7.5	0.161	157.9	LOS F	0.3	2.2	0.92	0.97	0.94	37.2
Approach			11	7.5	11	7.5	0.161	34.4	LOS D	0.3	2.2	0.92	0.97	0.94	37.2
East: Ripley Road															
4	L2	All MCs	1	7.5	1	7.5	0.501	5.8	LOS A	0.0	0.0	0.00	0.00	0.00	56.8
5	T1	All MCs	930	7.5	930	7.5	0.501	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.6
6	R2	All MCs	260	7.5	260	7.5	0.435	13.9	LOS B	2.2	16.7	0.78	1.01	1.11	46.9
Approach			1192	7.5	1192	7.5	0.501	3.2	NA	2.2	16.7	0.17	0.22	0.24	56.2
North: Fischer Road															
7	L2	All MCs	188	7.5	188	7.5	0.474	16.3	LOS C	2.0	15.0	0.81	1.02	1.17	45.3
8	T1	All MCs	1	7.5	1	7.5	0.474	111.5	LOS F	2.0	15.0	0.81	1.02	1.17	45.6
9	R2	All MCs	32	7.5	32	7.5	1.548	666.1	LOS F	9.3	69.5	1.00	1.59	3.70	7.0
Approach			221	7.5	221	7.5	1.548	111.3	LOS F	9.3	69.5	0.84	1.11	1.54	25.2
West: Ripley Road															
10	L2	All MCs	34	7.5	34	7.5	0.502	5.8	LOS A	0.0	0.0	0.00	0.02	0.00	56.6
11	T1	All MCs	897	7.5	897	7.5	0.502	0.2	LOS A	0.0	0.0	0.00	0.02	0.00	59.4
12	R2	All MCs	10	7.5	10	7.5	0.019	11.2	LOS B	0.1	0.4	0.70	0.80	0.70	48.5
Approach			942	7.5	942	7.5	0.502	0.5	NA	0.1	0.4	0.01	0.03	0.01	59.1
All Vehicles			2366	7.5	2366	7.5	1.548	12.4	NA	9.3	69.5	0.17	0.23	0.27	51.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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.

MOVEMENT SUMMARY

Site: [1 (9)] 2029 PM Pre Development (Ripley / Wensley / Fischer)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop of Rate	Number of Cycles to Depart	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				km/h
South: Wensley Road															
1	L2	All MCs	7	6.1	7	6.1	0.099	12.2	LOS B	0.2	1.6	0.89	0.95	0.89	38.4
2	T1	All MCs	1	6.1	1	6.1	0.099	80.6	LOS F	0.2	1.6	0.89	0.95	0.89	38.7
3	R2	All MCs	1	6.1	1	6.1	0.099	116.0	LOS F	0.2	1.6	0.89	0.95	0.89	38.4
Approach			9	6.1	9	6.1	0.099	31.3	LOS D	0.2	1.6	0.89	0.95	0.89	38.5
East: Ripley Road															
4	L2	All MCs	4	6.1	4	6.1	0.465	5.8	LOS A	0.0	0.0	0.00	0.00	0.00	56.9
5	T1	All MCs	868	6.1	868	6.1	0.465	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.6
6	R2	All MCs	133	6.1	133	6.1	0.225	12.0	LOS B	0.9	6.6	0.73	0.90	0.78	48.1
Approach			1005	6.1	1005	6.1	0.465	1.8	NA	0.9	6.6	0.10	0.12	0.10	57.8
North: Fischer Road															
7	L2	All MCs	187	6.1	187	6.1	0.531	17.2	LOS C	2.3	16.9	0.84	1.06	1.30	44.1
8	T1	All MCs	4	6.1	4	6.1	0.531	101.5	LOS F	2.3	16.9	0.84	1.06	1.30	44.4
9	R2	All MCs	45	6.1	45	6.1	1.664	729.3	LOS F	13.4	98.8	1.00	1.90	5.04	6.9
Approach			237	6.1	237	6.1	1.664	154.8	LOS F	13.4	98.8	0.87	1.22	2.01	21.8
West: Ripley Road															
10	L2	All MCs	51	6.1	51	6.1	0.513	5.8	LOS A	0.0	0.0	0.00	0.03	0.00	56.6
11	T1	All MCs	909	6.1	909	6.1	0.513	0.2	LOS A	0.0	0.0	0.00	0.03	0.00	59.3
12	R2	All MCs	7	6.1	7	6.1	0.012	10.2	LOS B	0.0	0.3	0.66	0.74	0.66	49.2
Approach			967	6.1	967	6.1	0.513	0.6	NA	0.0	0.3	0.00	0.04	0.00	59.0
All Vehicles			2219	6.1	2219	6.1	1.664	17.7	NA	13.4	98.8	0.14	0.21	0.27	49.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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.

MOVEMENT SUMMARY

▼ Site: [1 (10)] 2029 PM Post Development - Scenario 2 (Ripley / Wensley / Fischer)
Output produced by SIDRA INTERSECTION Version: 10.0.9.250

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop of Rate	Number of Cycles to Depart	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				km/h
South: Wensley Road															
1	L2	All MCs	7	6.1	7	6.1	0.160	14.7	LOS B	0.3	2.2	0.93	0.98	0.95	34.9
2	T1	All MCs	1	6.1	1	6.1	0.160	96.0	LOS F	0.3	2.2	0.93	0.98	0.95	35.1
3	R2	All MCs	1	6.1	1	6.1	0.160	169.1	LOS F	0.3	2.2	0.93	0.98	0.95	34.9
Approach			9	6.1	9	6.1	0.160	40.9	LOS E	0.3	2.2	0.93	0.98	0.95	34.9
East: Ripley Road															
4	L2	All MCs	4	6.1	4	6.1	0.509	5.8	LOS A	0.0	0.0	0.00	0.00	0.00	56.8
5	T1	All MCs	951	6.1	951	6.1	0.509	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.5
6	R2	All MCs	171	6.1	171	6.1	0.325	14.0	LOS B	1.4	10.3	0.79	0.97	0.97	46.9
Approach			1125	6.1	1125	6.1	0.509	2.3	NA	1.4	10.3	0.12	0.15	0.15	57.2
North: Fischer Road															
7	L2	All MCs	217	6.1	217	6.1	0.713	22.9	LOS C	3.5	25.6	0.91	1.20	1.77	41.2
8	T1	All MCs	4	6.1	4	6.1	0.713	125.1	LOS F	3.5	25.6	0.91	1.20	1.77	41.5
9	R2	All MCs	45	6.1	45	6.1	2.162	1200.7	LOS F	17.4	128.3	1.00	1.83	4.82	5.5
Approach			266	6.1	266	6.1	2.162	224.7	LOS F	17.4	128.3	0.93	1.31	2.29	19.5
West: Ripley Road															
10	L2	All MCs	51	6.1	51	6.1	0.547	5.8	LOS A	0.0	0.0	0.00	0.03	0.00	56.5
11	T1	All MCs	973	6.1	973	6.1	0.547	0.3	LOS A	0.0	0.0	0.00	0.03	0.00	59.2
12	R2	All MCs	7	6.1	7	6.1	0.013	11.2	LOS B	0.0	0.3	0.70	0.79	0.70	48.6
Approach			1031	6.1	1031	6.1	0.547	0.6	NA	0.0	0.3	0.01	0.03	0.01	59.0
All Vehicles			2432	6.1	2432	6.1	2.162	26.1	NA	17.4	128.3	0.16	0.23	0.32	47.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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.

SITE LAYOUT

 **Site: [1 (11)] 2029 AM Pre Dev (Ripley / Wensley / Fischer)**

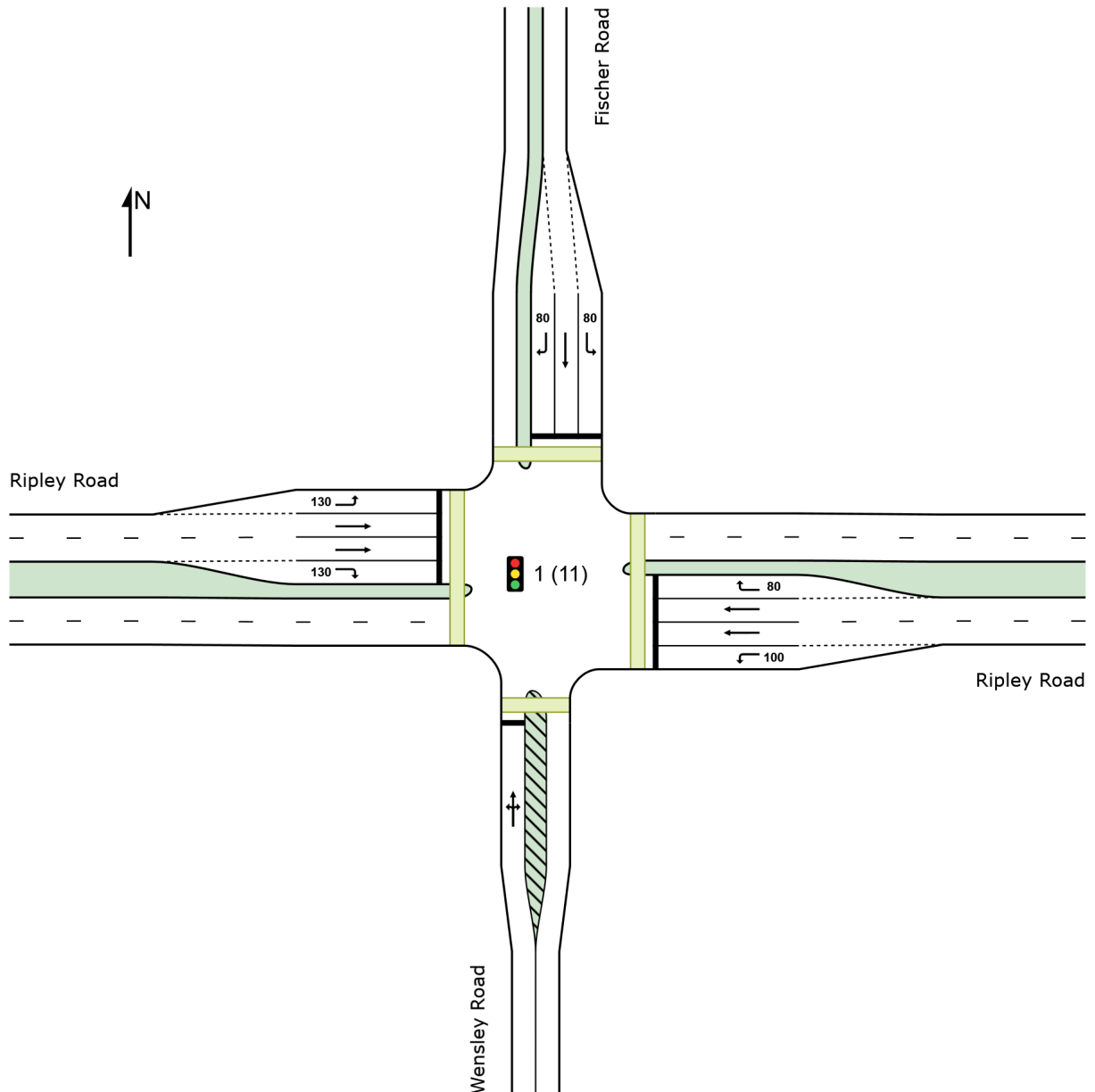
New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated

Site Scenario: 1 | Local Volumes

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



MOVEMENT SUMMARY

 **Site: [1 (11)] 2029 AM Pre Dev (Ripley / Wensley / Fischer)**
Output produced by SIDRA INTERSECTION Version: 10.0.9.250

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

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop of Rate	Number of Cycles to Depart	Aver. Speed
			[Total HV]		[Total HV]					[Veh. veh	Dist] m				km/h
			veh/h	%	veh/h	%	v/c	sec							
South: Wensley Road															
1	L2	All MCs	9	7.5	9	7.5	0.052	56.8	LOS E	0.6	4.3	0.91	0.68	0.91	30.4
2	T1	All MCs	1	7.5	1	7.5	* 0.052	51.2	LOS D	0.6	4.3	0.91	0.68	0.91	31.2
3	R2	All MCs	1	7.5	1	7.5	0.052	56.8	LOS E	0.6	4.3	0.91	0.68	0.91	30.5
Approach			11	7.5	11	7.5	0.052	56.3	LOS E	0.6	4.3	0.91	0.68	0.91	30.5
East: Ripley Road															
4	L2	All MCs	1	7.5	1	7.5	0.002	29.1	LOS C	0.0	0.3	0.63	0.60	0.63	39.3
5	T1	All MCs	868	7.5	868	7.5	0.603	24.1	LOS C	17.8	132.3	0.75	0.66	0.75	43.0
6	R2	All MCs	232	7.5	232	7.5	* 0.611	52.1	LOS D	12.5	92.9	0.96	0.83	0.96	31.7
Approach			1102	7.5	1102	7.5	0.611	30.0	LOS C	17.8	132.3	0.80	0.70	0.80	40.0
North: Fischer Road															
7	L2	All MCs	150	7.5	150	7.5	* 0.255	23.0	LOS C	4.3	31.9	0.77	1.13	0.77	31.9
8	T1	All MCs	1	7.5	1	7.5	0.005	49.9	LOS D	0.1	0.4	0.90	0.54	0.90	33.1
9	R2	All MCs	33	7.5	33	7.5	0.159	58.0	LOS E	1.8	13.3	0.93	0.72	0.93	30.2
Approach			185	7.5	185	7.5	0.255	29.5	LOS C	4.3	31.9	0.80	1.06	0.80	31.6
West: Ripley Road															
10	L2	All MCs	34	7.5	34	7.5	0.054	32.2	LOS C	1.3	9.6	0.68	0.70	0.68	38.1
11	T1	All MCs	817	7.5	817	7.5	* 0.611	26.9	LOS C	17.6	130.8	0.79	0.69	0.79	41.7
12	R2	All MCs	10	7.5	10	7.5	0.034	49.8	LOS D	0.5	3.7	0.86	0.68	0.86	32.2
Approach			862	7.5	862	7.5	0.611	27.3	LOS C	17.6	130.8	0.78	0.69	0.78	41.4
All Vehicles			2159	7.5	2159	7.5	0.611	29.0	LOS C	17.8	132.3	0.79	0.72	0.79	39.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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)

MOVEMENT SUMMARY

 **Site: [1 (12)] 2029 AM Post Dev - Scenario 1 (Ripley / Wensley / Fischer)**

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

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

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed
			[Total HV]	[Total HV]	[Total HV]	[Total HV]				[Veh. veh	Dist] m				km/h
South: Wensley Road															
1	L2	All MCs	28	7.5	28	7.5	0.236	58.6	LOS E	2.7	20.3	0.94	0.74	0.94	30.2
2	T1	All MCs	11	7.5	11	7.5	* 0.236	53.0	LOS D	2.7	20.3	0.94	0.74	0.94	31.0
3	R2	All MCs	11	7.5	11	7.5	0.236	58.7	LOS E	2.7	20.3	0.94	0.74	0.94	30.3
Approach			50	7.5	50	7.5	0.236	57.4	LOS E	2.7	20.3	0.94	0.74	0.94	30.4
East: Ripley Road															
4	L2	All MCs	12	7.5	12	7.5	0.018	29.6	LOS C	0.4	3.3	0.64	0.66	0.64	39.1
5	T1	All MCs	916	7.5	916	7.5	0.643	25.1	LOS C	19.5	145.1	0.78	0.69	0.78	42.7
6	R2	All MCs	251	7.5	251	7.5	* 0.658	53.1	LOS D	13.6	101.5	0.97	0.83	0.97	31.6
Approach			1179	7.5	1179	7.5	0.658	31.1	LOS C	19.5	145.1	0.82	0.72	0.82	39.5
North: Fischer Road															
7	L2	All MCs	175	7.5	175	7.5	* 0.297	23.3	LOS C	5.1	37.7	0.78	1.13	0.78	31.7
8	T1	All MCs	12	7.5	12	7.5	0.056	51.1	LOS D	0.7	4.9	0.92	0.63	0.92	32.8
9	R2	All MCs	33	7.5	33	7.5	0.159	58.0	LOS E	1.8	13.3	0.93	0.72	0.93	30.2
Approach			221	7.5	221	7.5	0.297	30.0	LOS C	5.1	37.7	0.81	1.04	0.81	31.5
West: Ripley Road															
10	L2	All MCs	34	7.5	34	7.5	0.054	32.2	LOS C	1.3	9.6	0.68	0.70	0.68	38.0
11	T1	All MCs	879	7.5	879	7.5	* 0.658	27.5	LOS C	19.5	145.4	0.82	0.72	0.82	41.4
12	R2	All MCs	34	7.5	34	7.5	0.109	50.5	LOS D	1.7	12.6	0.87	0.72	0.87	32.0
Approach			947	7.5	947	7.5	0.658	28.5	LOS C	19.5	145.4	0.81	0.72	0.81	40.8
All Vehicles			2398	7.5	2398	7.5	0.658	30.6	LOS C	19.5	145.4	0.82	0.75	0.82	38.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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)

MOVEMENT SUMMARY

 **Site: [1 (13)] 2029 PM Pre Dev (Ripley / Wensley / Fischer)**
Output produced by SIDRA INTERSECTION Version: 10.0.9.250

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

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop of Rate	Number of Cycles to Depart	Aver. Speed
			[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				km/h
South: Wensley Road															
1	L2	All MCs	7	6.1	7	6.1	0.042	56.6	LOS E	0.5	3.5	0.91	0.67	0.91	30.5
2	T1	All MCs	1	6.1	1	6.1	* 0.042	51.0	LOS D	0.5	3.5	0.91	0.67	0.91	31.3
3	R2	All MCs	1	6.1	1	6.1	0.042	56.7	LOS E	0.5	3.5	0.91	0.67	0.91	30.6
Approach			9	6.1	9	6.1	0.042	56.0	LOS E	0.5	3.5	0.91	0.67	0.91	30.6
East: Ripley Road															
4	L2	All MCs	4	6.1	4	6.1	0.006	26.6	LOS C	0.1	1.0	0.60	0.63	0.60	40.4
5	T1	All MCs	856	6.1	856	6.1	0.540	20.2	LOS C	15.6	114.9	0.67	0.59	0.67	45.1
6	R2	All MCs	131	6.1	131	6.1	* 0.543	59.3	LOS E	7.4	54.2	0.98	0.80	0.98	29.8
Approach			991	6.1	991	6.1	0.543	25.4	LOS C	15.6	114.9	0.71	0.62	0.71	42.2
North: Fischer Road															
7	L2	All MCs	185	6.1	185	6.1	* 0.408	29.2	LOS C	6.4	47.1	0.88	1.07	0.88	29.7
8	T1	All MCs	4	6.1	4	6.1	0.019	50.4	LOS D	0.2	1.6	0.91	0.59	0.91	33.0
9	R2	All MCs	45	6.1	45	6.1	0.211	58.5	LOS E	2.4	17.8	0.94	0.74	0.94	30.1
Approach			233	6.1	233	6.1	0.408	35.2	LOS D	6.4	47.1	0.89	1.00	0.89	29.8
West: Ripley Road															
10	L2	All MCs	50	6.1	50	6.1	0.064	26.0	LOS C	1.6	12.1	0.60	0.70	0.60	40.7
11	T1	All MCs	896	6.1	896	6.1	* 0.543	18.6	LOS B	15.8	116.0	0.65	0.57	0.65	46.0
12	R2	All MCs	7	6.1	7	6.1	0.029	53.7	LOS D	0.4	2.7	0.89	0.66	0.89	31.1
Approach			953	6.1	953	6.1	0.543	19.3	LOS B	15.8	116.0	0.65	0.58	0.65	45.5
All Vehicles			2186	6.1	2186	6.1	0.543	23.9	LOS C	15.8	116.0	0.71	0.64	0.71	41.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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)

MOVEMENT SUMMARY

 **Site: [1 (14)] 2029 PM Post Dev - Scenario 1 (Ripley / Wensley / Fischer)**

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

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

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop of Rate	Number of Cycles to Depart	Aver. Speed
			[Total HV]		[Total HV]										
			veh/h	%	veh/h	%	v/c	sec			[Veh. veh	Dist] m			km/h
South: Wensley Road															
1	L2	All MCs	30	6.1	30	6.1	0.248	58.7	LOS E	2.9	21.3	0.95	0.74	0.95	30.2
2	T1	All MCs	12	6.1	12	6.1	* 0.248	53.1	LOS D	2.9	21.3	0.95	0.74	0.95	31.0
3	R2	All MCs	11	6.1	11	6.1	0.248	58.7	LOS E	2.9	21.3	0.95	0.74	0.95	30.3
Approach			53	6.1	53	6.1	0.248	57.4	LOS E	2.9	21.3	0.95	0.74	0.95	30.4
East: Ripley Road															
4	L2	All MCs	13	6.1	13	6.1	0.018	27.4	LOS C	0.5	3.3	0.61	0.66	0.61	40.1
5	T1	All MCs	924	6.1	924	6.1	0.595	21.5	LOS C	17.9	131.9	0.72	0.63	0.72	44.4
6	R2	All MCs	156	6.1	156	6.1	* 0.598	58.7	LOS E	8.8	64.5	0.99	0.81	0.99	30.0
Approach			1093	6.1	1093	6.1	0.598	26.9	LOS C	17.9	131.9	0.75	0.66	0.75	41.5
North: Fischer Road															
7	L2	All MCs	204	6.1	204	6.1	* 0.433	28.7	LOS C	7.0	51.6	0.88	1.07	0.88	29.8
8	T1	All MCs	13	6.1	13	6.1	0.061	51.1	LOS D	0.7	5.2	0.92	0.64	0.92	32.8
9	R2	All MCs	45	6.1	45	6.1	0.211	58.5	LOS E	2.4	17.8	0.94	0.74	0.94	30.1
Approach			262	6.1	262	6.1	0.433	34.9	LOS C	7.0	51.6	0.89	0.99	0.89	30.0
West: Ripley Road															
10	L2	All MCs	50	6.1	50	6.1	0.065	26.8	LOS C	1.7	12.4	0.61	0.70	0.61	40.3
11	T1	All MCs	963	6.1	963	6.1	* 0.598	20.2	LOS C	18.2	133.8	0.70	0.62	0.70	45.1
12	R2	All MCs	26	6.1	26	6.1	0.098	53.7	LOS D	1.3	9.8	0.90	0.71	0.90	31.2
Approach			1038	6.1	1038	6.1	0.598	21.3	LOS C	18.2	133.8	0.70	0.62	0.70	44.4
All Vehicles			2447	6.1	2447	6.1	0.598	26.1	LOS C	18.2	133.8	0.75	0.68	0.75	40.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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)

MOVEMENT SUMMARY

 **Site: [1 (4)] 2032 AM Pre Dev (Ripley / Wensley / Fischer)**
Output produced by SIDRA INTERSECTION Version: 10.0.9.250

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

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed
			[Total HV]		[Total HV]										
			veh/h	%	veh/h	%	v/c	sec			[Veh. veh	Dist] m			km/h
South: Wensley Road															
1	L2	All MCs	12	7.5	12	7.5	0.076	57.1	LOS E	0.8	6.3	0.92	0.69	0.92	30.4
2	T1	All MCs	2	7.5	2	7.5	* 0.076	51.5	LOS D	0.8	6.3	0.92	0.69	0.92	31.2
3	R2	All MCs	2	7.5	2	7.5	0.076	57.1	LOS E	0.8	6.3	0.92	0.69	0.92	30.5
Approach			16	7.5	16	7.5	0.076	56.4	LOS E	0.8	6.3	0.92	0.69	0.92	30.5
East: Ripley Road															
4	L2	All MCs	1	7.5	1	7.5	0.001	32.1	LOS C	0.0	0.3	0.60	0.60	0.60	40.0
5	T1	All MCs	1156	7.5	1156	7.5	0.804	31.8	LOS C	29.6	220.4	0.86	0.79	0.89	41.7
6	R2	All MCs	309	7.5	309	7.5	* 0.813	64.6	LOS E	18.6	138.8	1.00	0.92	1.13	29.9
Approach			1466	7.5	1466	7.5	0.813	38.7	LOS D	29.6	220.4	0.89	0.82	0.94	36.5
North: Fischer Road															
7	L2	All MCs	200	7.5	200	7.5	* 0.340	23.6	LOS C	5.9	43.9	0.80	1.12	0.80	31.5
8	T1	All MCs	1	7.5	1	7.5	0.005	49.9	LOS D	0.1	0.4	0.90	0.54	0.90	33.1
9	R2	All MCs	45	7.5	45	7.5	0.213	58.5	LOS E	2.4	18.1	0.94	0.74	0.94	30.1
Approach			246	7.5	246	7.5	0.340	30.0	LOS C	5.9	43.9	0.82	1.05	0.82	31.2
West: Ripley Road															
10	L2	All MCs	46	7.5	46	7.5	0.072	32.4	LOS C	1.7	12.9	0.69	0.71	0.69	38.0
11	T1	All MCs	1088	7.5	1088	7.5	* 0.813	32.2	LOS C	28.2	210.2	0.92	0.85	0.96	39.3
12	R2	All MCs	15	7.5	15	7.5	0.053	52.5	LOS D	0.7	5.4	0.88	0.69	0.88	31.5
Approach			1148	7.5	1148	7.5	0.813	32.4	LOS C	28.2	210.2	0.91	0.84	0.95	39.1
All Vehicles			2876	7.5	2876	7.5	0.813	35.6	LOS D	29.6	220.4	0.89	0.85	0.93	36.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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)

MOVEMENT SUMMARY

 **Site: [1 (6)] 2032 PM Pre Dev (Ripley / Wensley / Fischer)**
Output produced by SIDRA INTERSECTION Version: 10.0.9.250

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

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed
			[Total HV]		[Total HV]										
			veh/h	%	veh/h	%	v/c	sec			[Veh. veh	Dist] m			km/h
South: Wensley Road															
1	L2	All MCs	9	6.1	9	6.1	0.057	56.8	LOS E	0.6	4.7	0.92	0.68	0.92	30.4
2	T1	All MCs	1	6.1	1	6.1	* 0.057	51.2	LOS D	0.6	4.7	0.92	0.68	0.92	31.2
3	R2	All MCs	2	6.1	2	6.1	0.057	56.9	LOS E	0.6	4.7	0.92	0.68	0.92	30.5
Approach			12	6.1	12	6.1	0.057	56.4	LOS E	0.6	4.7	0.92	0.68	0.92	30.5
East: Ripley Road															
4	L2	All MCs	5	6.1	5	6.1	0.007	26.6	LOS C	0.2	1.2	0.59	0.63	0.59	40.7
5	T1	All MCs	1139	6.1	1139	6.1	0.720	23.7	LOS C	24.5	180.7	0.78	0.69	0.78	44.3
6	R2	All MCs	174	6.1	174	6.1	* 0.723	66.0	LOS E	10.3	76.1	1.00	0.86	1.09	29.1
Approach			1318	6.1	1318	6.1	0.723	29.3	LOS C	24.5	180.7	0.80	0.72	0.82	40.4
North: Fischer Road															
7	L2	All MCs	246	6.1	246	6.1	* 0.543	30.2	LOS C	8.9	65.3	0.92	1.05	0.92	29.2
8	T1	All MCs	5	6.1	5	6.1	0.023	50.5	LOS D	0.3	2.0	0.91	0.60	0.91	32.9
9	R2	All MCs	59	6.1	59	6.1	0.280	59.0	LOS E	3.2	23.9	0.95	0.75	0.95	29.9
Approach			310	6.1	310	6.1	0.543	36.0	LOS D	8.9	65.3	0.92	0.98	0.92	29.4
West: Ripley Road															
10	L2	All MCs	66	6.1	66	6.1	0.085	26.2	LOS C	2.2	16.3	0.61	0.71	0.61	40.6
11	T1	All MCs	1193	6.1	1193	6.1	* 0.723	20.9	LOS C	24.9	183.1	0.77	0.69	0.77	44.7
12	R2	All MCs	9	6.1	9	6.1	0.040	55.1	LOS E	0.5	3.5	0.90	0.67	0.90	30.8
Approach			1269	6.1	1269	6.1	0.723	21.4	LOS C	24.9	183.1	0.77	0.69	0.77	44.3
All Vehicles			2909	6.1	2909	6.1	0.723	26.7	LOS C	24.9	183.1	0.80	0.74	0.81	40.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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)

MOVEMENT SUMMARY

 **Site: [1 (7)] 2032 PM Post Dev - Scenario 3 (Ripley / Wensley / Fischer)**

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

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

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop of Cycles Rate to Depart	Number of Cycles	Aver. Speed
			[Total HV]		[Total HV]										
			veh/h	%	veh/h	%	v/c	sec			[Veh. veh	Dist] m			km/h
South: Wensley Road															
1	L2	All MCs	61	6.1	61	6.1	0.510	60.8	LOS E	6.2	45.6	0.98	0.79	0.98	29.7
2	T1	All MCs	26	6.1	26	6.1	* 0.510	55.2	LOS E	6.2	45.6	0.98	0.79	0.98	30.4
3	R2	All MCs	22	6.1	22	6.1	0.510	60.9	LOS E	6.2	45.6	0.98	0.79	0.98	29.8
Approach			109	6.1	109	6.1	0.510	59.5	LOS E	6.2	45.6	0.98	0.79	0.98	29.9
East: Ripley Road															
4	L2	All MCs	26	6.1	26	6.1	0.033	31.6	LOS C	0.8	6.2	0.59	0.68	0.59	40.8
5	T1	All MCs	1301	6.1	1301	6.1	0.833	32.1	LOS C	33.4	245.8	0.86	0.81	0.90	42.3
6	R2	All MCs	228	6.1	228	6.1	* 0.834	73.1	LOS E	14.3	105.6	1.00	0.94	1.20	28.3
Approach			1555	6.1	1555	6.1	0.834	38.1	LOS D	33.4	245.8	0.87	0.83	0.94	36.8
North: Fischer Road															
7	L2	All MCs	288	6.1	288	6.1	* 0.595	29.4	LOS C	10.3	76.0	0.92	1.04	0.92	29.2
8	T1	All MCs	26	6.1	26	6.1	0.117	51.8	LOS D	1.4	10.2	0.93	0.67	0.93	32.6
9	R2	All MCs	59	6.1	59	6.1	0.280	59.0	LOS E	3.2	23.9	0.95	0.75	0.95	29.9
Approach			373	6.1	373	6.1	0.595	35.7	LOS D	10.3	76.0	0.93	0.97	0.93	29.5
West: Ripley Road															
10	L2	All MCs	66	6.1	66	6.1	0.088	28.1	LOS C	2.3	16.9	0.63	0.71	0.63	40.0
11	T1	All MCs	1317	6.1	1317	6.1	* 0.834	27.7	LOS C	33.2	244.4	0.89	0.83	0.93	41.5
12	R2	All MCs	51	6.1	51	6.1	0.231	58.5	LOS E	2.8	20.3	0.94	0.75	0.94	30.0
Approach			1435	6.1	1435	6.1	0.834	28.8	LOS C	33.2	244.4	0.88	0.83	0.92	40.7
All Vehicles			3472	6.1	3472	6.1	0.834	34.7	LOS C	33.4	245.8	0.89	0.84	0.93	37.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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)

MOVEMENT SUMMARY

Site: [2] 2026 AM Existing (Ripley / Brooking)
Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Ripley Road / Brooking Rise Intersection
Site Category: Existing Design
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand		Arrival		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop of Rate	Number of Cycles to Depart	Aver. Speed
			Flows		Flows					[Veh. Dist]					
			[Total HV] veh/h	%	[Total HV] veh/h	%				v/c	sec				
East: Ripley Road															
5	T1	All MCs	789	7.3	789	7.3	0.424	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
6	R2	All MCs	35	7.3	35	7.3	0.058	10.3	LOS B	0.2	1.5	0.60	0.80	0.60	49.3
Approach			824	7.3	824	7.3	0.424	0.6	NA	0.2	1.5	0.03	0.03	0.03	59.2
North: Brooking Rise															
7	L2	All MCs	51	7.3	51	7.3	0.089	10.1	LOS B	0.3	2.1	0.59	0.83	0.59	49.4
9	R2	All MCs	42	7.3	42	7.3	0.475	58.7	LOS F	1.4	10.1	0.95	1.04	1.20	29.9
Approach			93	7.3	93	7.3	0.475	32.0	LOS D	1.4	10.1	0.75	0.92	0.86	38.2
West: Ripley Road															
10	L2	All MCs	46	7.3	46	7.3	0.026	5.6	LOS A	0.0	0.0	0.00	0.57	0.00	52.6
11	T1	All MCs	684	7.3	684	7.3	0.367	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			730	7.3	730	7.3	0.367	0.5	NA	0.0	0.0	0.00	0.04	0.00	59.2
All Vehicles			1647	7.3	1647	7.3	0.475	2.3	NA	1.4	10.1	0.06	0.09	0.06	57.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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.

MOVEMENT SUMMARY

Site: [2 (2)] 2026 PM Existing (Ripley / Brooking)
Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Ripley Road / Brooking Rise Intersection
Site Category: Existing Design
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand		Arrival		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop of Rate	Number of Cycles to Depart	Aver. Speed
			Flows		Flows					[Veh. Dist]					
			[Total HV]	[Total HV]	[Total HV]	[Total HV]				veh	m				
			veh/h	%	veh/h	%	v/c	sec							
East: Ripley Road															
5	T1	All MCs	735	5.8	735	5.8	0.391	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
6	R2	All MCs	62	5.8	62	5.8	0.116	11.4	LOS B	0.4	2.9	0.67	0.86	0.67	48.6
Approach			796	5.8	796	5.8	0.391	1.0	NA	0.4	2.9	0.05	0.07	0.05	58.7
North: Brooking Rise															
7	L2	All MCs	34	5.8	34	5.8	0.067	10.9	LOS B	0.2	1.5	0.63	0.84	0.63	48.9
9	R2	All MCs	17	5.8	17	5.8	0.190	47.5	LOS E	0.5	3.6	0.93	0.98	0.98	32.9
Approach			51	5.8	51	5.8	0.190	22.8	LOS C	0.5	3.6	0.73	0.89	0.75	42.2
West: Ripley Road															
10	L2	All MCs	55	5.8	55	5.8	0.031	5.6	LOS A	0.0	0.0	0.00	0.57	0.00	52.6
11	T1	All MCs	771	5.8	771	5.8	0.410	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
Approach			827	5.8	827	5.8	0.410	0.5	NA	0.0	0.0	0.00	0.04	0.00	59.2
All Vehicles			1674	5.8	1674	5.8	0.410	1.4	NA	0.5	3.6	0.05	0.08	0.05	58.2

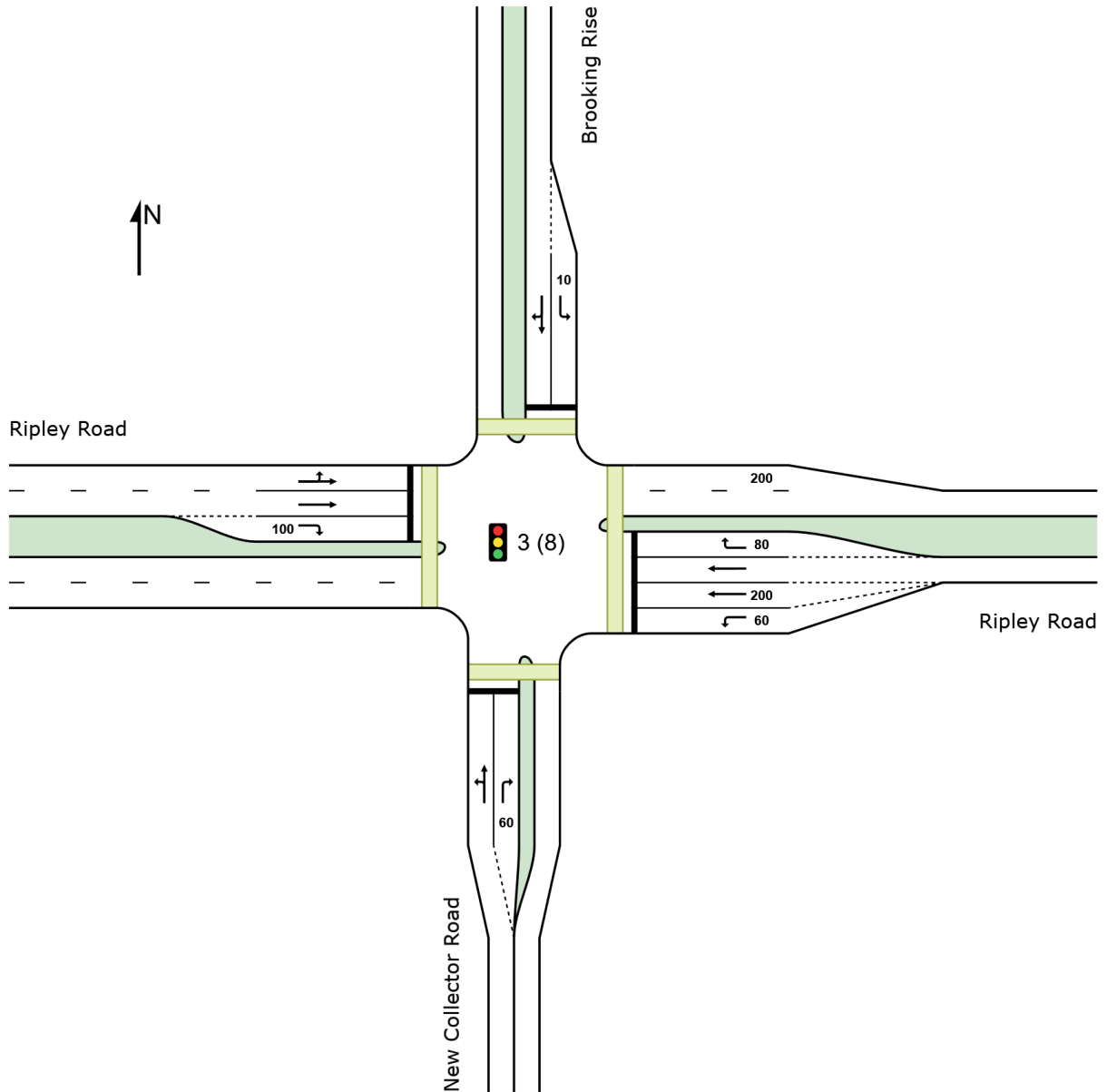
Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of 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.

SITE LAYOUT

 **Site: [3 (8)] 2029 AM Stage 1 Post Dev - Scenario 1** (Ripley / Brooking)

Ripley Road / Brooking Rise / New Road Intersection
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated
Site Scenario: 1 | Local Volumes

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



MOVEMENT SUMMARY

 **Site: [3 (8)] 2029 AM Stage 1 Post Dev - Scenario 1** (Ripley / Brooking)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Ripley Road / Brooking Rise / New Road Intersection
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 140.0 seconds (Site User-Given Cycle Time)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop of Cycles Rate to Depart	Number of Cycles	Aver. Speed
			[Total HV]		[Total HV]										
			veh/h	%	veh/h	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: New Collector Road															
1	L2	All MCs	64	7.3	64	7.3	0.264	36.4	LOS D	3.2	24.1	0.92	1.04	0.92	27.1
2	T1	All MCs	9	7.3	9	7.3	0.264	59.9	LOS E	3.2	24.1	0.92	1.04	0.92	27.7
3	R2	All MCs	74	7.3	74	7.3	* 0.429	72.0	LOS E	4.9	36.6	0.98	0.77	0.98	27.1
Approach			147	7.3	147	7.3	0.429	55.8	LOS E	4.9	36.6	0.95	0.90	0.95	27.1
East: Ripley Road															
4	L2	All MCs	95	7.3	95	7.3	0.101	23.8	LOS C	3.1	23.3	0.52	0.70	0.52	42.2
5	T1	All MCs	1013	7.3	1013	7.3	* 0.517	13.4	LOS B	15.8	117.4	0.50	0.44	0.50	49.6
6	R2	All MCs	33	7.3	33	7.3	0.128	62.1	LOS E	2.0	14.7	0.90	0.72	0.90	29.1
Approach			1141	7.3	1141	7.3	0.517	15.7	LOS B	15.8	117.4	0.51	0.47	0.51	47.5
North: Brooking Rise															
7	L2	All MCs	49	7.3	49	7.3	0.319	86.2	LOS F	3.2	23.9	0.96	0.75	0.96	27.3
8	T1	All MCs	12	7.3	12	7.3	* 0.340	80.5	LOS F	3.4	25.4	0.97	0.75	0.97	28.2
9	R2	All MCs	40	7.3	40	7.3	0.340	86.2	LOS F	3.4	25.4	0.97	0.75	0.97	27.7
Approach			101	7.3	101	7.3	0.340	85.5	LOS F	3.4	25.4	0.96	0.75	0.96	24.6
West: Ripley Road															
10	L2	All MCs	44	7.3	44	7.3	0.511	23.4	LOS C	16.8	124.7	0.58	0.54	0.58	44.4
11	T1	All MCs	877	7.3	877	7.3	0.511	17.6	LOS B	16.8	124.7	0.58	0.52	0.58	46.6
12	R2	All MCs	83	7.3	83	7.3	* 0.517	73.5	LOS E	5.6	41.8	1.00	0.78	1.00	26.7
Approach			1004	7.3	1004	7.3	0.517	22.4	LOS C	16.8	124.7	0.61	0.54	0.61	43.8
All Vehicles			2393	7.3	2393	7.3	0.517	23.9	LOS C	16.8	124.7	0.60	0.54	0.60	42.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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)

MOVEMENT SUMMARY

 **Site: [3 (6)] 2029 AM Stage 1 Post Dev - Scenario 2 (Ripley / Brooking)**

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Ripley Road / Brooking Rise / New Road Intersection
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 140.0 seconds (Site User-Given Cycle Time)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed
			[Total HV]		[Total HV]					[Veh.]	[Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: New Collector Road															
1	L2	All MCs	87	7.3	87	7.3	0.328	37.5	LOS D	4.3	31.9	0.93	1.04	0.93	27.1
2	T1	All MCs	9	7.3	9	7.3	* 0.328	61.8	LOS E	4.3	31.9	0.93	1.04	0.93	27.7
3	R2	All MCs	87	7.3	87	7.3	0.504	72.6	LOS E	5.8	43.4	0.99	0.78	0.99	27.0
Approach			183	7.3	183	7.3	0.504	55.4	LOS E	5.8	43.4	0.96	0.92	0.96	27.1
East: Ripley Road															
4	L2	All MCs	113	7.3	113	7.3	0.122	23.3	LOS C	3.8	28.4	0.54	0.71	0.54	41.9
5	T1	All MCs	1001	7.3	1001	7.3	* 0.663	16.6	LOS B	24.0	178.4	0.54	0.49	0.54	48.9
6	R2	All MCs	33	7.3	33	7.3	0.126	65.2	LOS E	2.0	14.7	0.90	0.72	0.90	29.2
Approach			1147	7.3	1147	7.3	0.663	18.6	LOS B	24.0	178.4	0.55	0.51	0.55	45.9
North: Brooking Rise															
7	L2	All MCs	49	7.3	49	7.3	0.319	86.4	LOS F	3.2	23.9	0.96	0.75	0.96	27.3
8	T1	All MCs	12	7.3	12	7.3	* 0.340	80.5	LOS F	3.4	25.4	0.97	0.75	0.97	28.2
9	R2	All MCs	40	7.3	40	7.3	0.340	86.4	LOS F	3.4	25.4	0.97	0.75	0.97	27.7
Approach			101	7.3	101	7.3	0.340	85.7	LOS F	3.4	25.4	0.96	0.75	0.96	24.6
West: Ripley Road															
10	L2	All MCs	44	7.3	44	7.3	0.369	23.0	LOS C	10.8	80.4	0.52	0.49	0.52	44.8
11	T1	All MCs	868	7.3	868	7.3	0.666	19.0	LOS B	24.3	180.4	0.62	0.57	0.62	46.0
12	R2	All MCs	113	7.3	113	7.3	* 0.663	75.1	LOS E	7.8	58.1	1.00	0.83	1.05	26.5
Approach			1025	7.3	1025	7.3	0.666	25.4	LOS C	24.3	180.4	0.66	0.59	0.66	42.3
All Vehicles			2456	7.3	2456	7.3	0.666	26.9	LOS C	24.3	180.4	0.64	0.59	0.65	40.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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)

MOVEMENT SUMMARY

 **Site: [3] 2032 AM Stage 2 Post Dev - Scenario 3 (Ripley / Brooking)**

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Ripley Road / Brooking Rise / New Road Intersection
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 140.0 seconds (Site User-Given Cycle Time)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop of Cycles	Number of Cycles Rate to Depart	Aver. Speed
			[Total HV]	[Total HV]						[Veh.]	[Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: New Collector Road															
1	L2	All MCs	160	7.3	160	7.3	0.518	32.9	LOS C	7.6	56.6	0.95	1.03	0.95	27.5
2	T1	All MCs	20	7.3	20	7.3	* 0.518	62.1	LOS E	7.6	56.6	0.95	1.03	0.95	28.1
3	R2	All MCs	160	7.3	160	7.3	0.767	75.7	LOS E	11.3	83.9	1.00	0.89	1.12	26.5
Approach			340	7.3	340	7.3	0.767	54.7	LOS D	11.3	83.9	0.97	0.96	1.03	27.0
East: Ripley Road															
4	L2	All MCs	181	7.3	181	7.3	0.220	45.1	LOS D	7.2	53.8	0.63	0.74	0.63	39.3
5	T1	All MCs	1358	7.3	1358	7.3	* 0.858	43.8	LOS D	41.3	307.1	0.85	0.81	0.89	41.1
6	R2	All MCs	33	7.3	33	7.3	0.090	69.2	LOS E	1.8	13.5	0.84	0.72	0.84	31.2
Approach			1572	7.3	1572	7.3	0.858	44.5	LOS D	41.3	307.1	0.82	0.80	0.86	34.6
North: Brooking Rise															
7	L2	All MCs	49	7.3	49	7.3	0.336	96.8	LOS F	3.2	24.0	0.96	0.75	0.96	27.2
8	T1	All MCs	26	7.3	26	7.3	* 0.450	91.1	LOS F	4.4	32.8	0.98	0.76	0.98	28.2
9	R2	All MCs	40	7.3	40	7.3	0.450	96.8	LOS F	4.4	32.8	0.98	0.76	0.98	27.6
Approach			115	7.3	115	7.3	0.450	95.5	LOS F	4.4	32.8	0.97	0.76	0.97	23.2
West: Ripley Road															
10	L2	All MCs	44	7.3	44	7.3	0.851	40.5	LOS D	38.8	288.8	0.92	0.87	0.97	36.8
11	T1	All MCs	1181	7.3	1181	7.3	0.851	39.9	LOS D	38.8	288.8	0.91	0.86	0.96	38.1
12	R2	All MCs	207	7.3	207	7.3	* 0.858	86.9	LOS F	15.3	114.1	1.00	0.95	1.22	25.7
Approach			1432	7.3	1432	7.3	0.858	46.7	LOS D	38.8	288.8	0.92	0.87	1.00	34.1
All Vehicles			3459	7.3	3459	7.3	0.858	48.1	LOS D	41.3	307.1	0.88	0.84	0.94	32.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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)

MOVEMENT SUMMARY

 **Site: [3 (9)] 2029 PM Stage 1 Post Dev - Scenario 1 (Ripley / Brooking)**

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Ripley Road / Brooking Rise / New Road Intersection
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 140.0 seconds (Site User-Given Cycle Time)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed
			[Total HV]		[Total HV]					[Veh.]	[Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: New Collector Road															
1	L2	All MCs	83	5.8	83	5.8	0.314	34.7	LOS C	4.1	30.2	0.92	1.04	0.92	27.3
2	T1	All MCs	12	5.8	12	5.8	0.314	59.4	LOS E	4.1	30.2	0.92	1.04	0.92	28.0
3	R2	All MCs	95	5.8	95	5.8	* 0.501	71.4	LOS E	6.3	46.4	0.99	0.78	0.99	27.3
Approach			190	5.8	190	5.8	0.501	54.6	LOS D	6.3	46.4	0.96	0.91	0.96	27.3
East: Ripley Road															
4	L2	All MCs	74	5.8	74	5.8	0.082	25.1	LOS C	2.5	18.5	0.54	0.70	0.54	41.6
5	T1	All MCs	945	5.8	945	5.8	0.497	15.1	LOS B	15.5	113.7	0.52	0.46	0.52	48.4
6	R2	All MCs	59	5.8	59	5.8	* 0.501	77.2	LOS E	4.1	30.1	1.00	0.76	1.00	26.0
Approach			1078	5.8	1078	5.8	0.501	19.2	LOS B	15.5	113.7	0.55	0.50	0.55	45.4
North: Brooking Rise															
7	L2	All MCs	33	5.8	33	5.8	* 0.171	68.3	LOS E	2.1	15.3	0.94	0.73	0.94	27.8
8	T1	All MCs	9	5.8	9	5.8	0.127	61.7	LOS E	1.6	11.5	0.94	0.70	0.94	29.1
9	R2	All MCs	16	5.8	16	5.8	0.127	67.4	LOS E	1.6	11.5	0.94	0.70	0.94	28.4
Approach			58	5.8	58	5.8	0.171	67.0	LOS E	2.1	15.3	0.94	0.72	0.94	28.1
West: Ripley Road															
10	L2	All MCs	53	5.8	53	5.8	0.501	17.2	LOS B	15.0	110.6	0.47	0.45	0.47	48.1
11	T1	All MCs	991	5.8	991	5.8	* 0.501	11.4	LOS B	15.0	110.6	0.45	0.42	0.45	50.6
12	R2	All MCs	64	5.8	64	5.8	0.343	70.0	LOS E	4.2	30.7	0.97	0.76	0.97	27.4
Approach			1108	5.8	1108	5.8	0.501	15.1	LOS B	15.0	110.6	0.48	0.44	0.48	48.1
All Vehicles			2434	5.8	2434	5.8	0.501	21.2	LOS C	15.5	113.7	0.56	0.51	0.56	43.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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)

MOVEMENT SUMMARY

 **Site: [3 (7)] 2029 PM Stage 1 Post Dev - Scenario 2 (Ripley / Brooking)**

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Ripley Road / Brooking Rise / New Road Intersection
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 140.0 seconds (Site User-Given Cycle Time)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed
			[Total HV]	[Total HV]						[Veh.]	[Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: New Collector Road															
1	L2	All MCs	113	7.3	113	7.3	0.402	37.0	LOS D	5.6	41.6	0.93	1.03	0.93	27.1
2	T1	All MCs	12	7.3	12	7.3	* 0.402	60.9	LOS E	5.6	41.6	0.93	1.03	0.93	27.7
3	R2	All MCs	113	7.3	113	7.3	0.577	71.4	LOS E	7.6	56.2	1.00	0.79	1.00	27.2
Approach			238	7.3	238	7.3	0.577	54.5	LOS D	7.6	56.2	0.96	0.92	0.96	27.2
East: Ripley Road															
4	L2	All MCs	87	7.3	87	7.3	0.095	23.7	LOS C	2.9	21.9	0.54	0.70	0.54	41.8
5	T1	All MCs	936	7.3	936	7.3	0.632	16.2	LOS B	22.1	164.2	0.54	0.48	0.54	48.5
6	R2	All MCs	59	7.3	59	7.3	* 0.635	83.3	LOS F	4.2	31.6	1.00	0.80	1.08	25.3
Approach			1082	7.3	1082	7.3	0.635	20.4	LOS C	22.1	164.2	0.56	0.52	0.57	44.9
North: Brooking Rise															
7	L2	All MCs	33	7.3	33	7.3	* 0.172	68.7	LOS E	2.1	15.5	0.94	0.73	0.94	27.7
8	T1	All MCs	9	7.3	9	7.3	0.128	61.8	LOS E	1.6	11.7	0.94	0.70	0.94	29.0
9	R2	All MCs	16	7.3	16	7.3	0.128	67.6	LOS E	1.6	11.7	0.94	0.70	0.94	28.4
Approach			58	7.3	58	7.3	0.172	67.3	LOS E	2.1	15.5	0.94	0.72	0.94	28.1
West: Ripley Road															
10	L2	All MCs	53	7.3	53	7.3	0.352	15.9	LOS B	9.0	66.7	0.39	0.40	0.39	48.7
11	T1	All MCs	982	7.3	982	7.3	* 0.635	11.2	LOS B	21.2	157.4	0.47	0.44	0.47	50.8
12	R2	All MCs	87	7.3	87	7.3	0.535	73.5	LOS E	5.9	43.8	1.00	0.78	1.00	26.7
Approach			1122	7.3	1122	7.3	0.635	16.2	LOS B	21.2	157.4	0.51	0.47	0.51	47.4
All Vehicles			2500	7.3	2500	7.3	0.635	22.9	LOS C	22.1	164.2	0.59	0.54	0.59	42.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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)

MOVEMENT SUMMARY

 **Site: [3 (2)] 2032 PM Stage 2 Post Dev - Scenario 3 (Ripley / Brooking)**

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Ripley Road / Brooking Rise / New Road Intersection
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 140.0 seconds (Site User-Given Cycle Time)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop of Cycles Rate to Depart	Number of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				km/h
South: New Collector Road															
1	L2	All MCs	207	5.8	207	5.8	0.569	31.9	LOS C	9.8	72.2	0.94	1.03	0.94	27.6
2	T1	All MCs	26	5.8	26	5.8	* 0.569	57.4	LOS E	9.8	72.2	0.94	1.03	0.94	28.2
3	R2	All MCs	182	5.8	182	5.8	0.638	67.0	LOS E	11.8	87.0	0.99	0.82	0.99	28.4
Approach			415	5.8	415	5.8	0.638	48.9	LOS D	11.8	87.0	0.96	0.94	0.96	28.0
East: Ripley Road															
4	L2	All MCs	140	5.8	140	5.8	0.175	45.4	LOS D	5.6	41.2	0.63	0.73	0.63	39.0
5	T1	All MCs	1265	5.8	1265	5.8	* 0.812	39.9	LOS D	34.7	255.0	0.82	0.75	0.83	42.1
6	R2	All MCs	59	5.8	59	5.8	0.334	83.4	LOS F	3.9	28.4	0.97	0.76	0.97	27.3
Approach			1464	5.8	1464	5.8	0.812	42.1	LOS D	34.7	255.0	0.81	0.75	0.82	35.3
North: Brooking Rise															
7	L2	All MCs	33	5.8	33	5.8	0.171	69.3	LOS E	2.1	15.3	0.94	0.73	0.94	27.8
8	T1	All MCs	20	5.8	20	5.8	* 0.181	62.3	LOS E	2.3	16.7	0.94	0.71	0.94	29.2
9	R2	All MCs	16	5.8	16	5.8	0.181	67.9	LOS E	2.3	16.7	0.94	0.71	0.94	28.6
Approach			69	5.8	69	5.8	0.181	67.0	LOS E	2.3	16.7	0.94	0.72	0.94	28.4
West: Ripley Road															
10	L2	All MCs	53	5.8	53	5.8	0.806	29.1	LOS C	36.4	267.7	0.82	0.76	0.82	41.7
11	T1	All MCs	1327	5.8	1327	5.8	0.806	27.6	LOS C	36.4	267.7	0.81	0.74	0.81	43.4
12	R2	All MCs	161	5.8	161	5.8	* 0.813	84.1	LOS F	11.7	85.6	1.00	0.91	1.18	25.9
Approach			1541	5.8	1541	5.8	0.813	33.6	LOS C	36.4	267.7	0.83	0.76	0.85	39.0
All Vehicles			3489	5.8	3489	5.8	0.813	39.7	LOS D	36.4	267.7	0.84	0.78	0.85	35.5

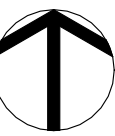
Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: 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)

APPENDIX C: PLANS OF DEVELOPMENT



Amendments		
Issue	Description	Date
A	FINAL CMP ISSUE	02/04/2026
B	ISSUE FOR PLANNING APPROVAL	07/04/2026
C	REVISED ISSUE FOR PLANNING APPROVAL	15/05/2026



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Consultant Details

Client
PC BUNDLE - RIPLEY VALLEY
Client Details

GROUP GSA

Group GSA Pty Ltd ABN 76 002 113 779
Level 07, 260 Queen St Brisbane QLD
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www.groupgsa.com

T +617 3112 3079

architecture interior design urban design landscape
nom architect Lisa-Maree Carrigan 5696

Project Title
RIPLEY VALLEY SHS

Drawing Title

90% CMP OVERALL

Scale 1 : 1200

Drawing Created (date) AUGUST 2025

Drawing Created (by) GM

Plotted and checked by GM

Verified LM

Approved LM

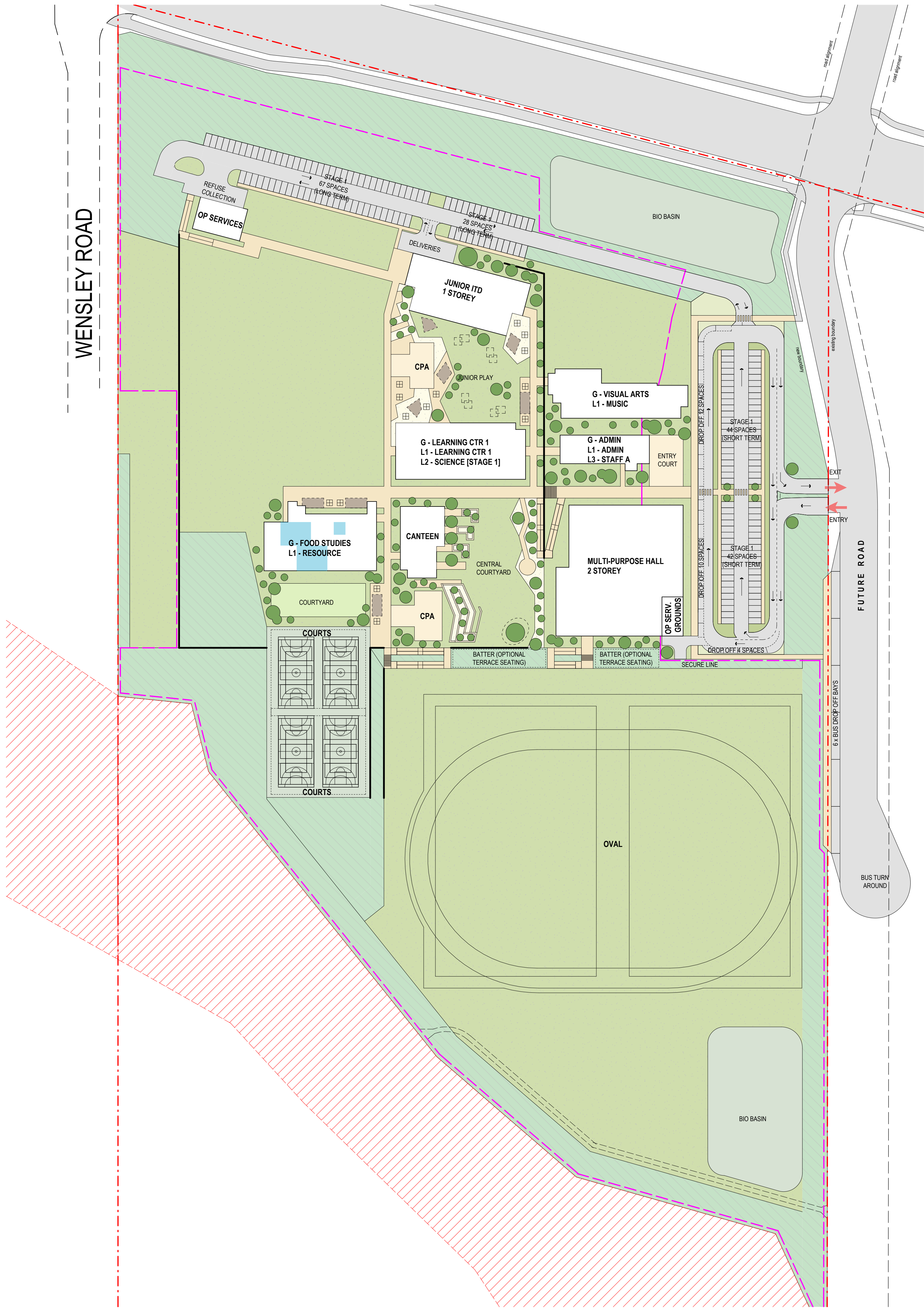
Project No Drawing No Issue

A252264 A1150

C

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15/05/2026 12:47:22 PM



Amendments		
Issue	Description	Date
A	REVISED ISSUE FOR PLANNING APPROVAL	18/09/2026

PRELIMINARY

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PC BUNDLE - RIPLEY VALLEY

Client Details

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architecture interior design urban design landscape
nom architect Lisa-Maree Carrigan 5696
Project Title

RIPLEY VALLEY SHS

Drawing Title

90% CMP STAGE 1 (INTERIM)

Scale

1 : 1000

Drawing Created (date)

AUGUST 2025

Drawing Created (by)

GM

Plotted and checked by

GM

Verified

LM

Approved

LM

Project No

Drawing No

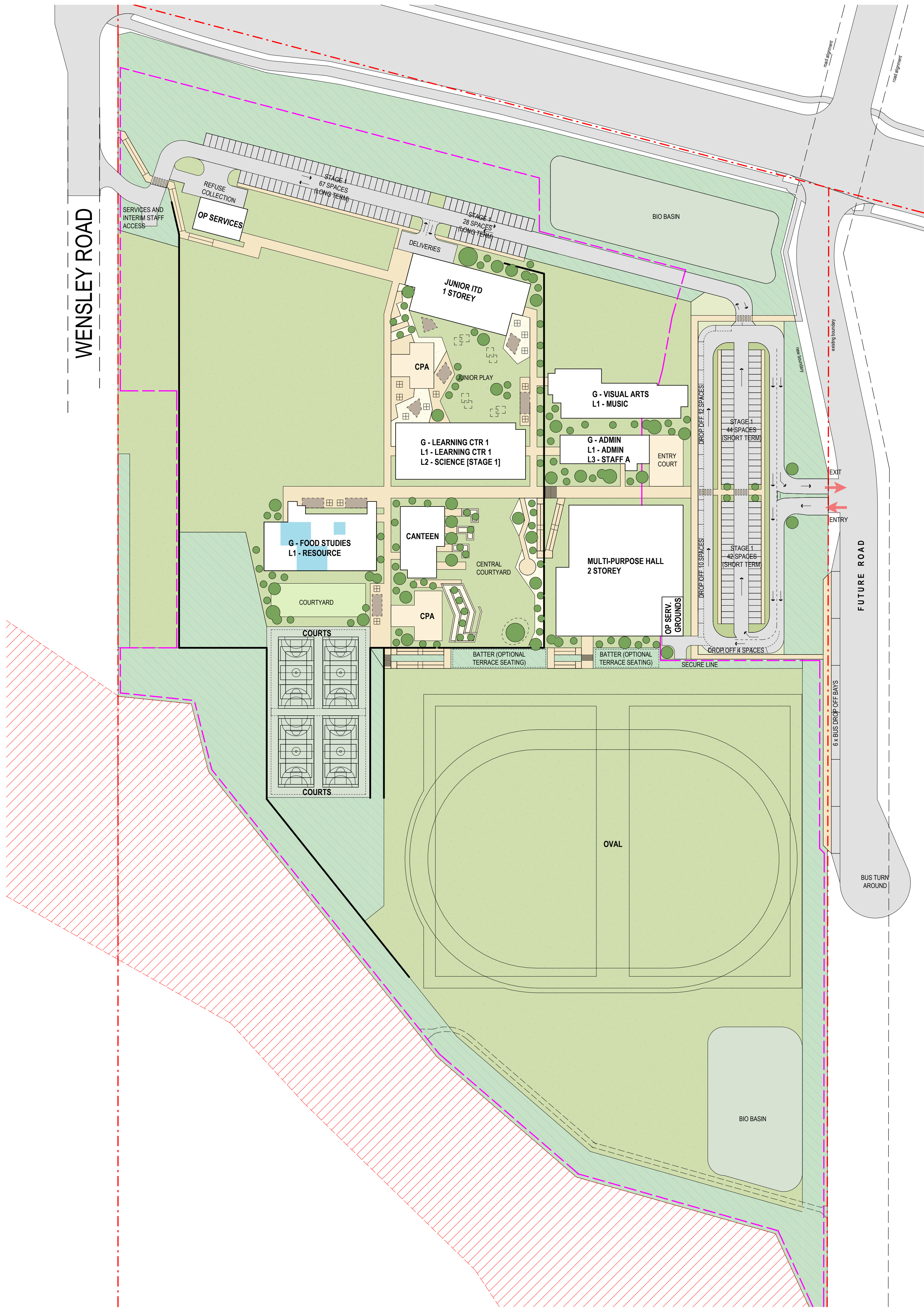
Issue

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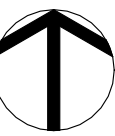
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21/09/2026 8:03:19 AM



Amendments		
Issue	Description	Date
A	FINAL CMP ISSUE	02/04/2026
B	ISSUE FOR PLANNING APPROVAL	07/04/2026
C	REVISED ISSUE FOR PLANNING APPROVAL	15/05/2026



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nom architect Lisa-Maree Carrigan 5696

Project Title

RIPLEY VALLEY SHS

Drawing Title

90% CMP STAGE 1

Scale 1 : 1000

Drawing Created (date) AUGUST 2025

Drawing Created (by) GM

Plotted and checked by GM

Verified LM

Approved LM

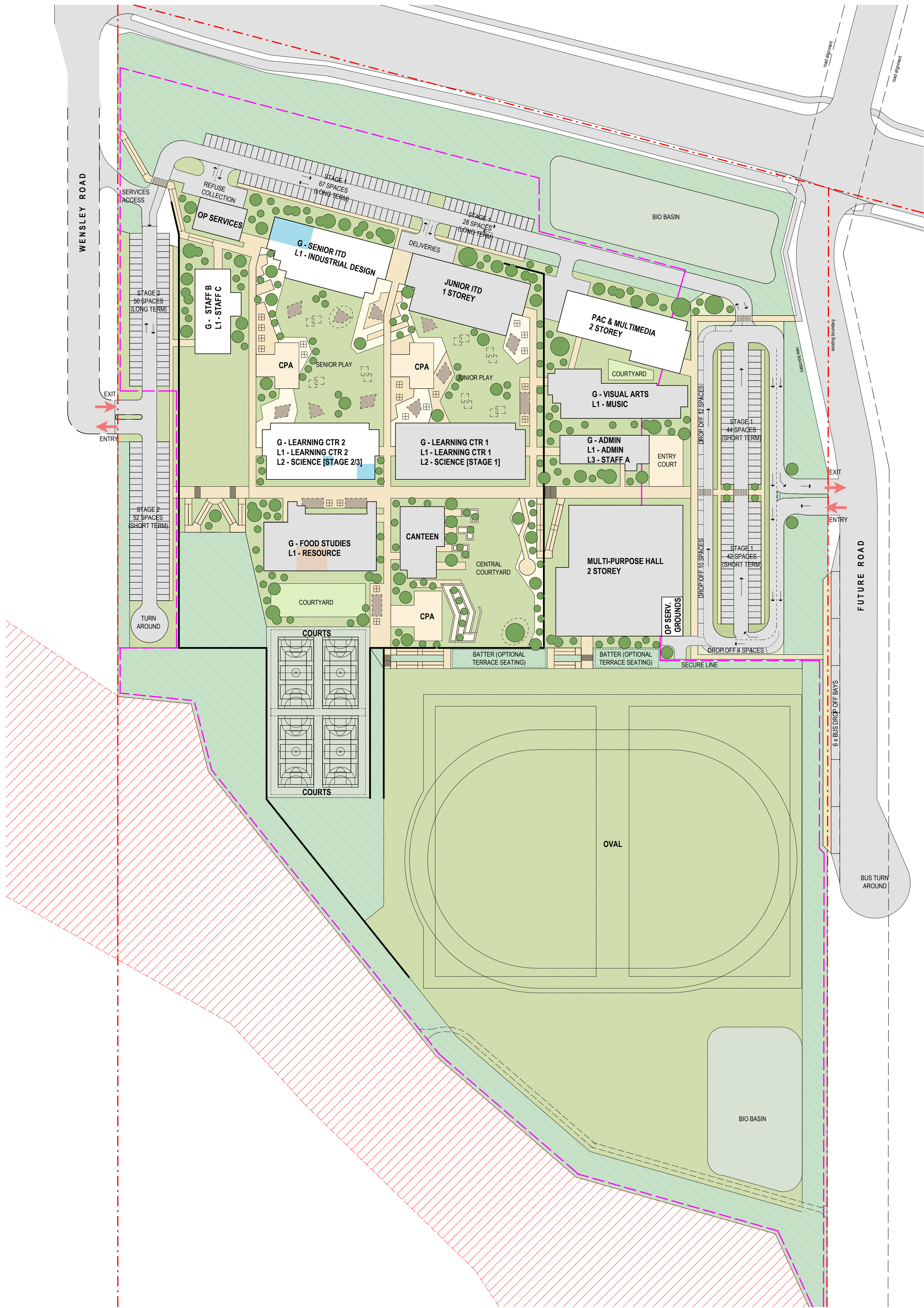
Project No Drawing No Issue

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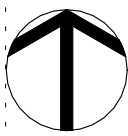
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15/05/2026 12:47:25 PM



Amendments		
Issue	Description	Date
A	FINAL CMP ISSUE	02/04/2026
B	ISSUE FOR PLANNING APPROVAL	07/04/2026
C	REVISED ISSUE FOR PLANNING APPROVAL	15/05/2026



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nom architect Lisa-Maree Carrigan 5696
Project Title

RIPLEY VALLEY SHS

Drawing Title

90% CMP STAGE 2

Scale 1 : 1000

Drawing Created (date) AUGUST 2025

Drawing Created (by) GM

Plotted and checked by GM

Verified LM

Approved LM

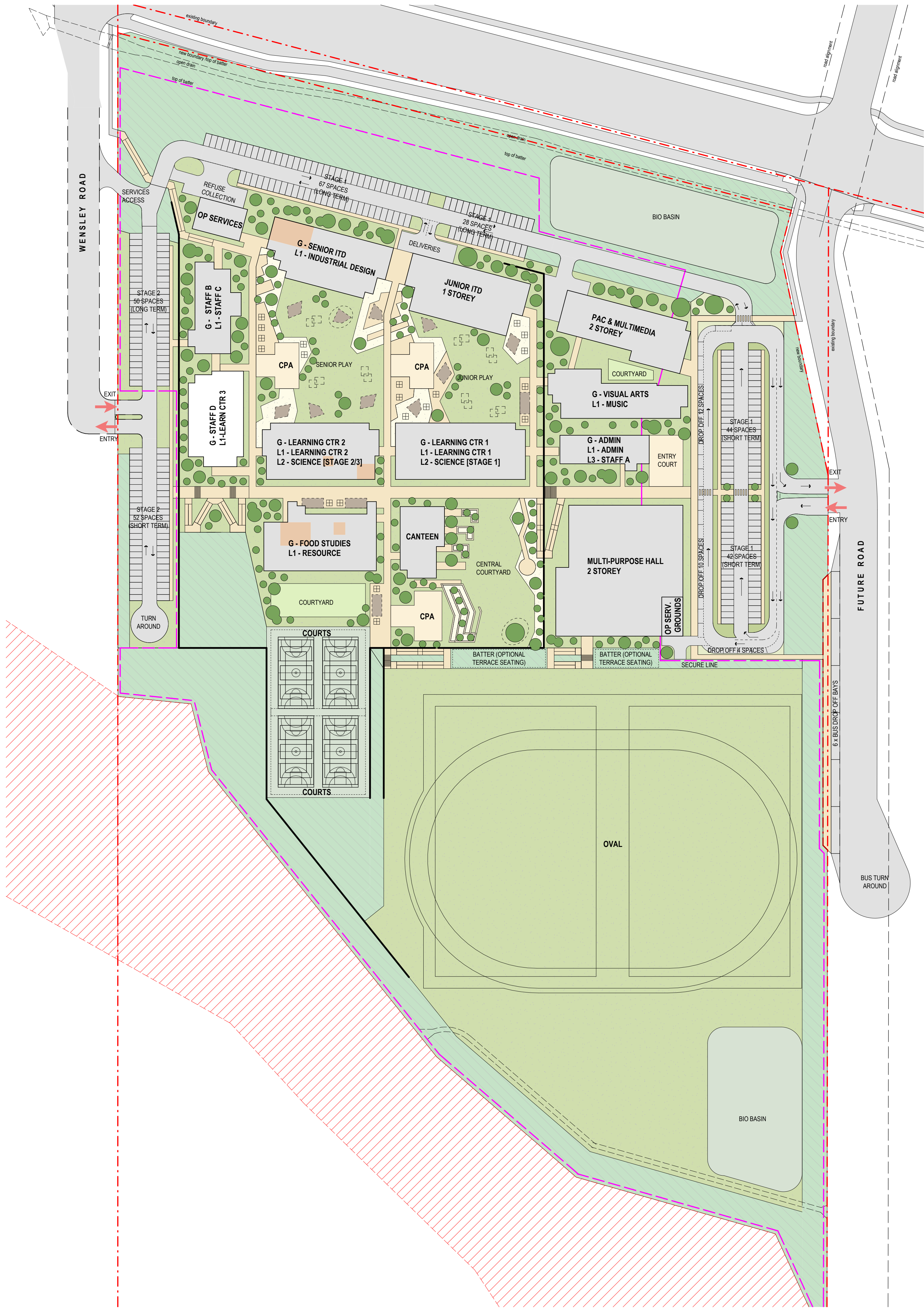
Project No Drawing No Issue

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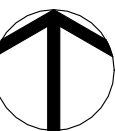
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Amendments		
Issue	Description	Date
A	FINAL CMP ISSUE	02/04/2026
B	ISSUE FOR PLANNING APPROVAL	07/04/2026
C	REVISED ISSUE FOR PLANNING APPROVAL	15/05/2026



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nom architect Lisa-Maree Carrigan 5696
Project Title

RIPLEY VALLEY SHS

Drawing Title

90% CMP STAGE 3

Scale 1 : 1000

Drawing Created (date) AUGUST 2025

Drawing Created (by) GM

Plotted and checked by GM

Verified LM

Approved LM

Project No Drawing No Issue

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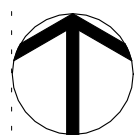
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15/05/2026 12:47:39 PM



Amendments		
Issue	Description	Date
A	FINAL CMP ISSUE	02/04/2026
B	ISSUE FOR PLANNING APPROVAL	07/04/2026
C	REVISED ISSUE FOR PLANNING APPROVAL	15/05/2026



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GROUP GSA

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nom architect Lisa-Maree Carrigan 5696
Project Title

RIPLEY VALLEY SHS

Drawing Title

**90% CMP STAGE
OVERALL GROUND**

Scale 1 : 1200

Drawing Created (date) AUGUST 2025

Drawing Created (by) GM

Plotted and checked by GM

Verified LM

Approved LM

Project No Drawing No Issue

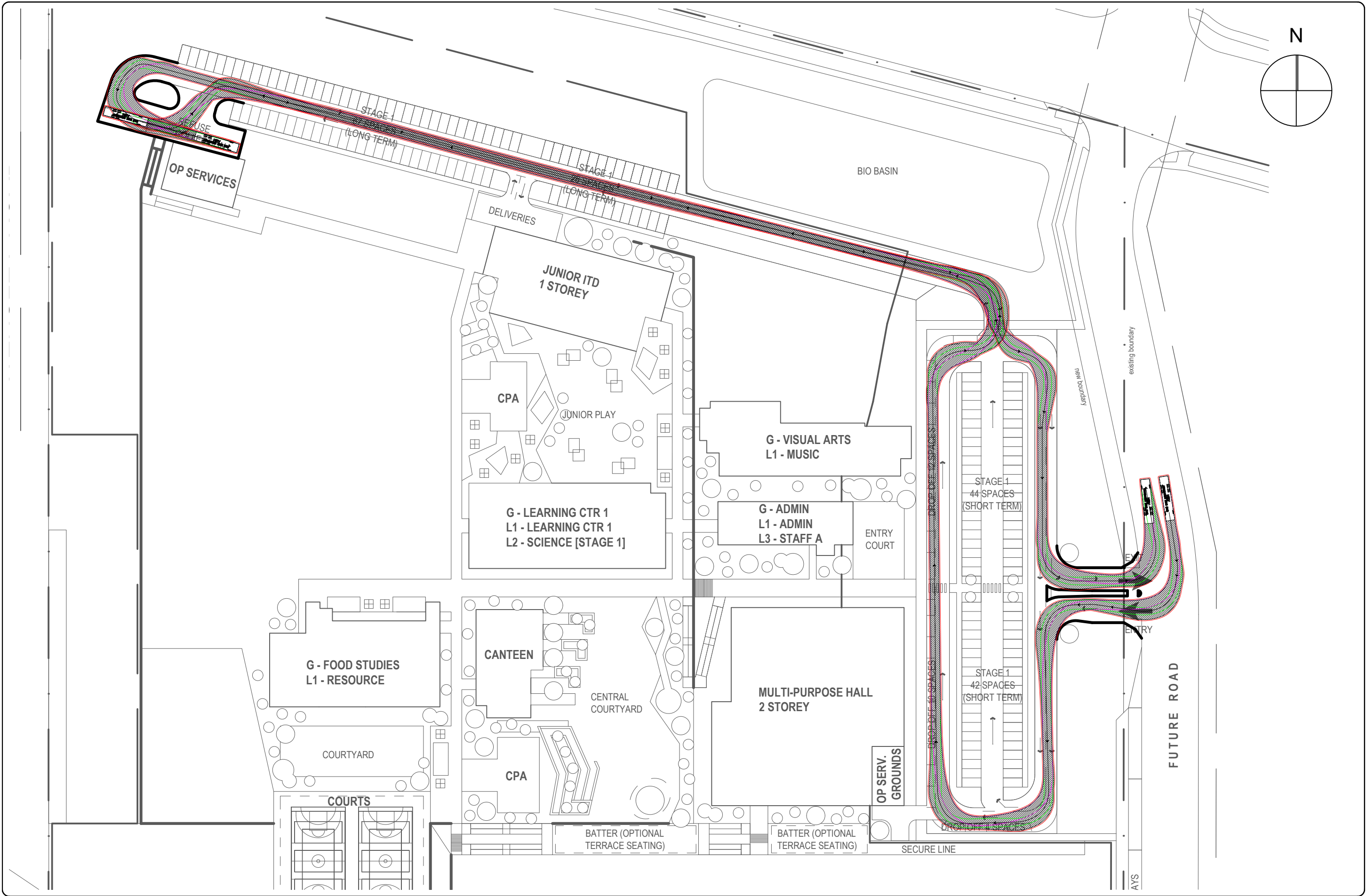
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15/05/2026 12:47:34 PM

APPENDIX D: PTT SWEPT PATH DRAWINGS





PTT

TRAFFIC & TRANSPORT ENGINEERING

ABN 96 067 593 962

P 07 3839 6771 WWW.PTT.COM.AU

Level 2, 62 Astor Tce, Spring Hill QLD 4000

A	INITIAL ISSUE	CB	21/09/26
REV	DESCRIPTION	DRN	DATE

DRAWING TITLE:
HRV SWEEP PATHS INTERIM STAGE 1

PROJECT TITLE:
RIPLEY SHS

DRAWING NO:
24-570-003

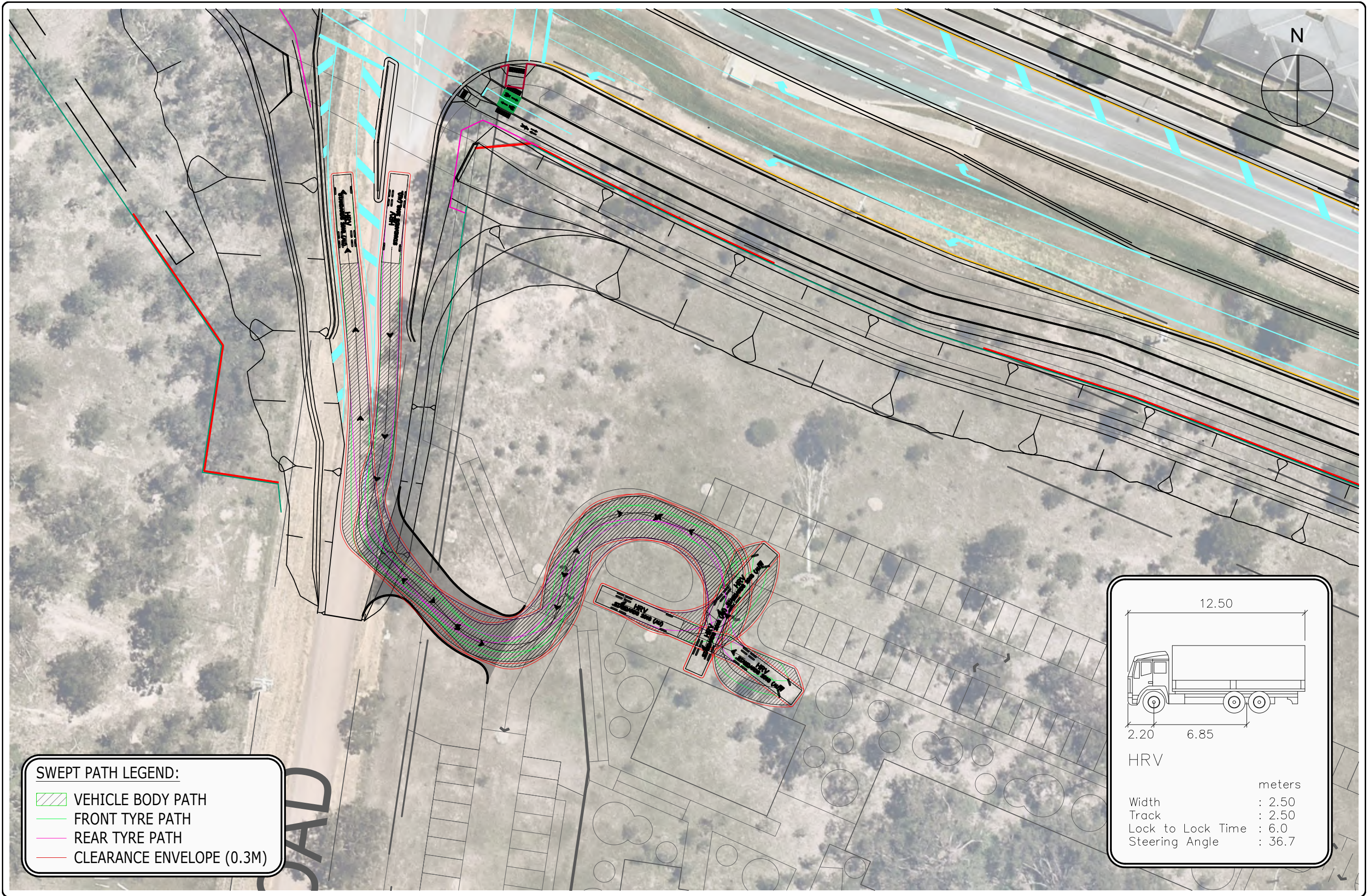
REV:
A

SCALE:
1:1,000 @ A3

CLIENT:
DOE

APPROVED BY:
CB
(RPEQ 32895)



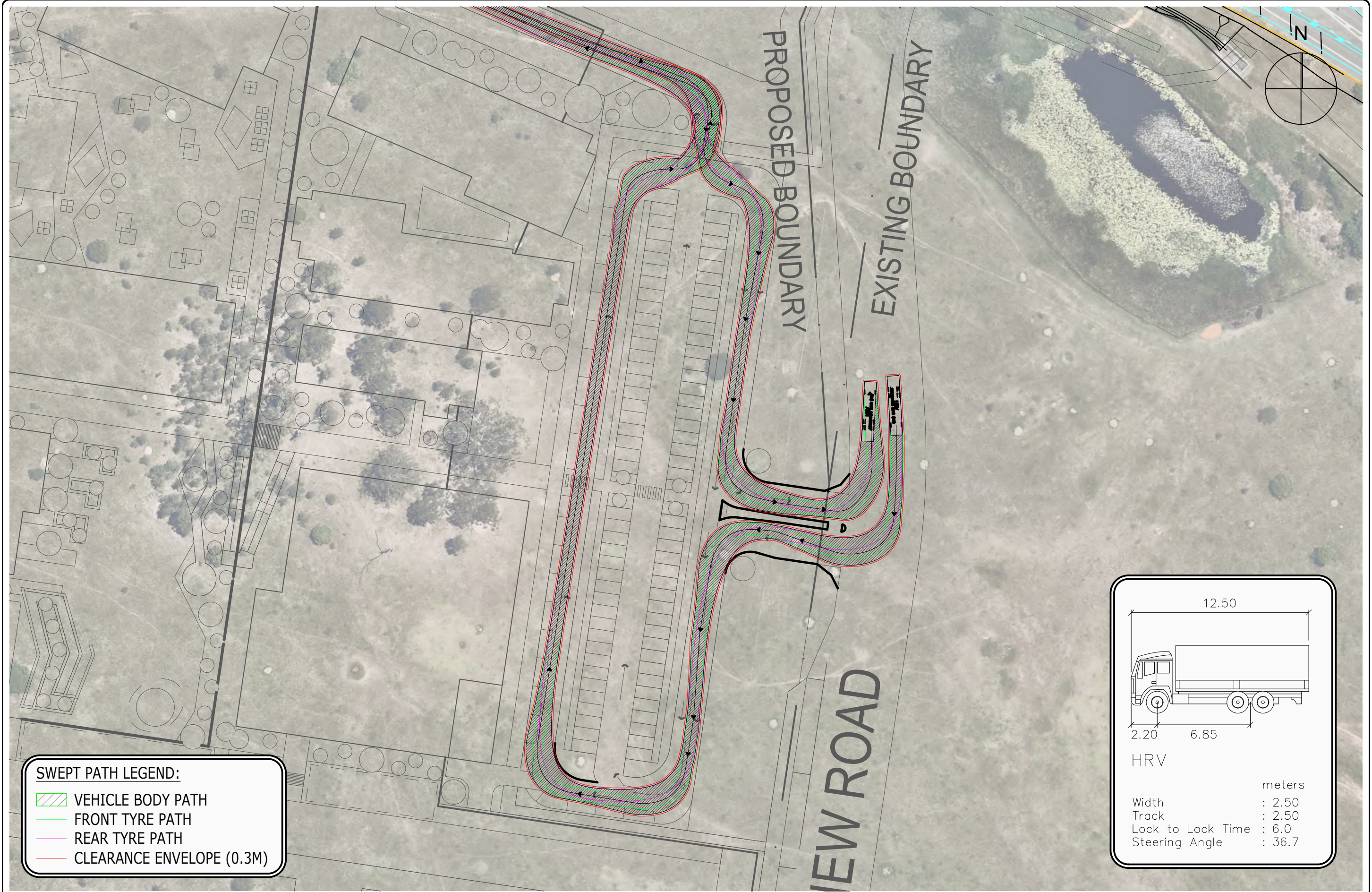


SWEPT PATH LEGEND:

-  VEHICLE BODY PATH
-  FRONT TYRE PATH
-  REAR TYRE PATH
-  CLEARANCE ENVELOPE (0.3M)

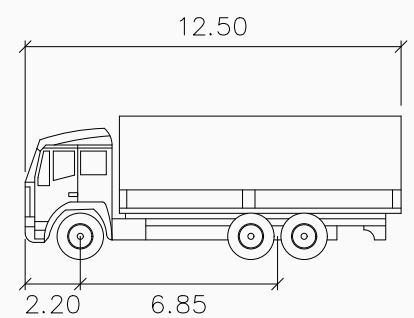
A	INITIAL ISSUE	CB	10/06/26
REV	DESCRIPTION	DRN	DATE

DRAWING TITLE: HRV SWEPT PATHS	DRAWING NO: 24-570-001	REV: A	SCALE: 1:500 @ A3	APPROVED BY: CB (RPEQ 32895)
PROJECT TITLE: RIPLEY SHS	CLIENT: DOE			



SWEPT PATH LEGEND:

-  VEHICLE BODY PATH
-  FRONT TYRE PATH
-  REAR TYRE PATH
-  CLEARANCE ENVELOPE (0.3M)



HRV

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.7

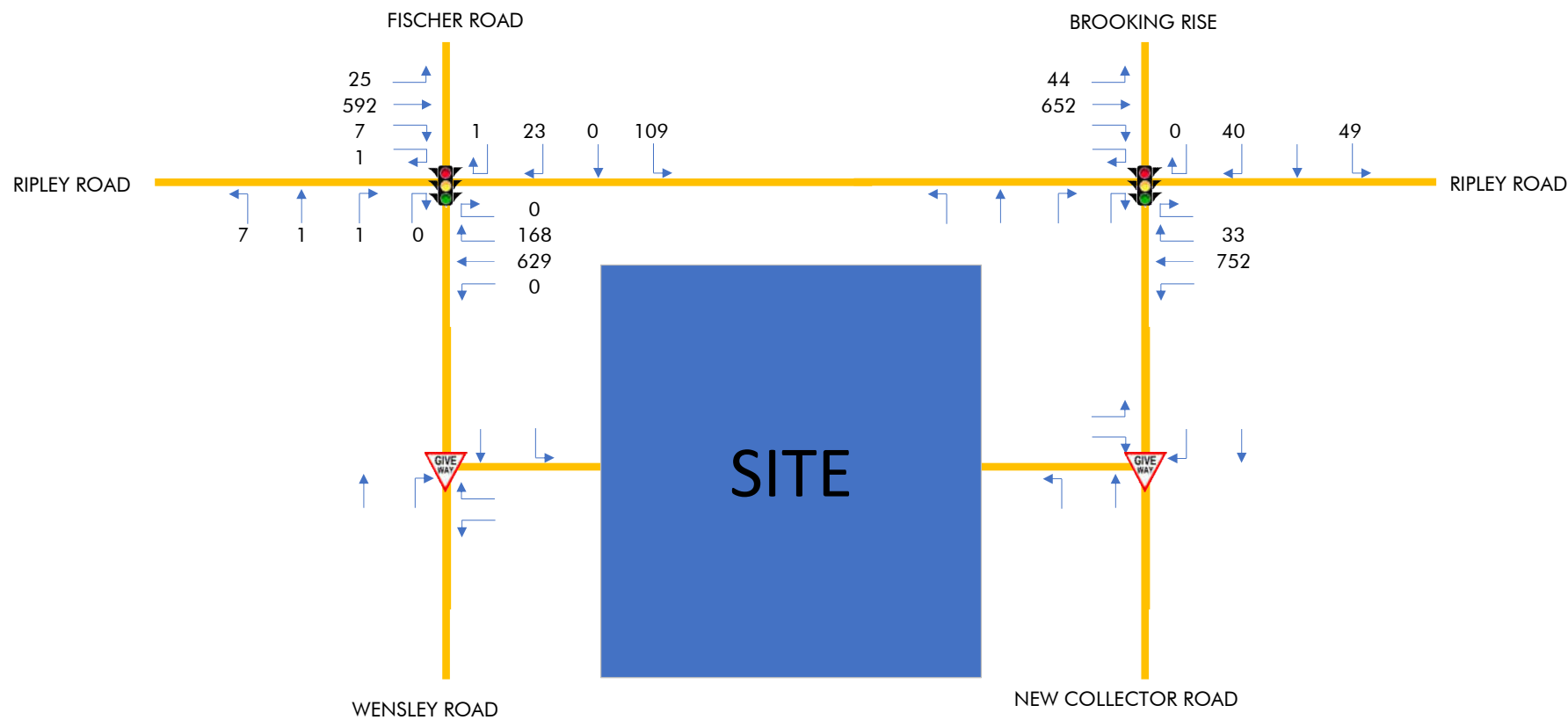
PTT
TRAFFIC & TRANSPORT ENGINEERING

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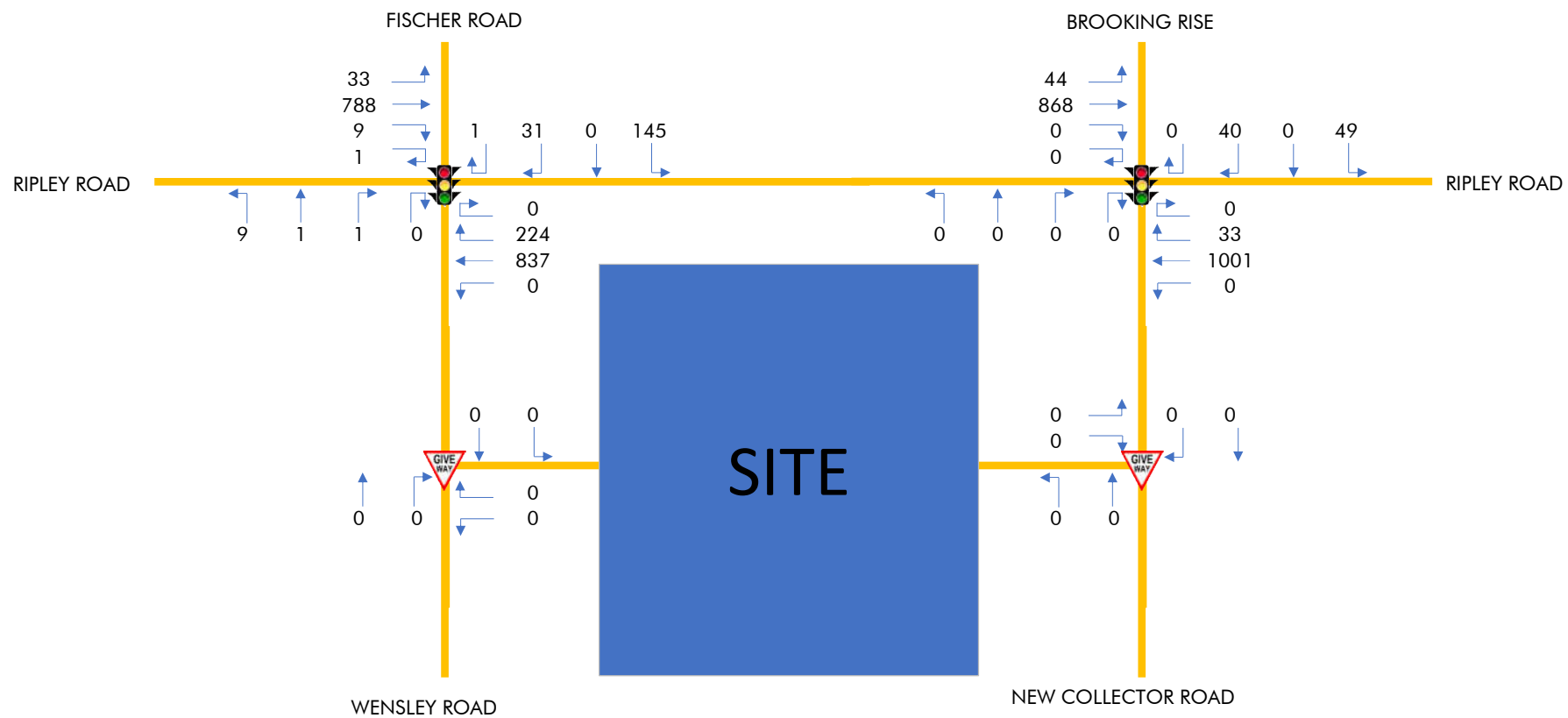
A	INITIAL ISSUE	CB	10/06/26
REV	DESCRIPTION	DRN	DATE

DRAWING TITLE: HRV SWEPT PATHS	DRAWING NO: 24-570-002	REV: A	SCALE: 1:750 @ A3	APPROVED BY: CB (RPEQ 32895)
PROJECT TITLE: RIPLEY SHS	CLIENT: DOE			

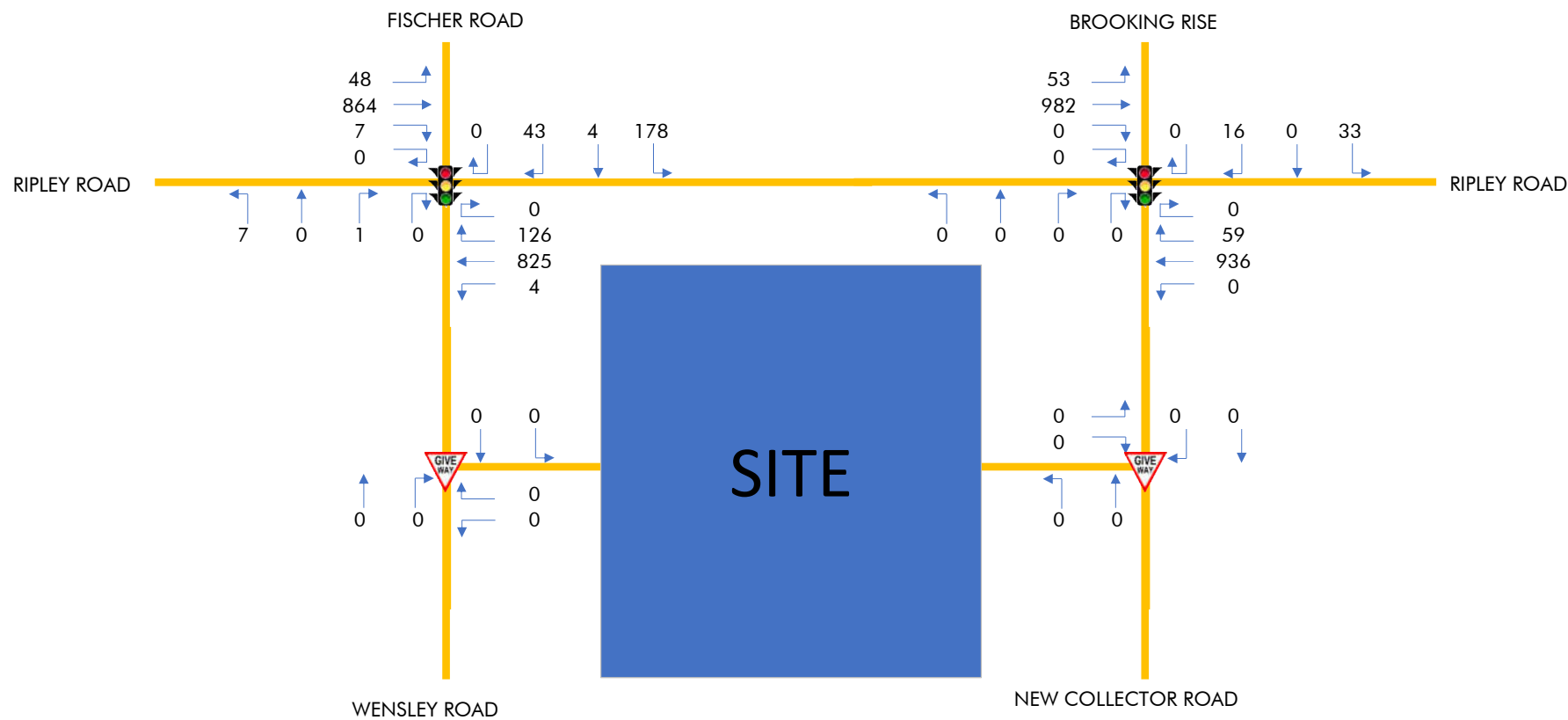
APPENDIX E:
TURNING MOVEMENT FORECASTS



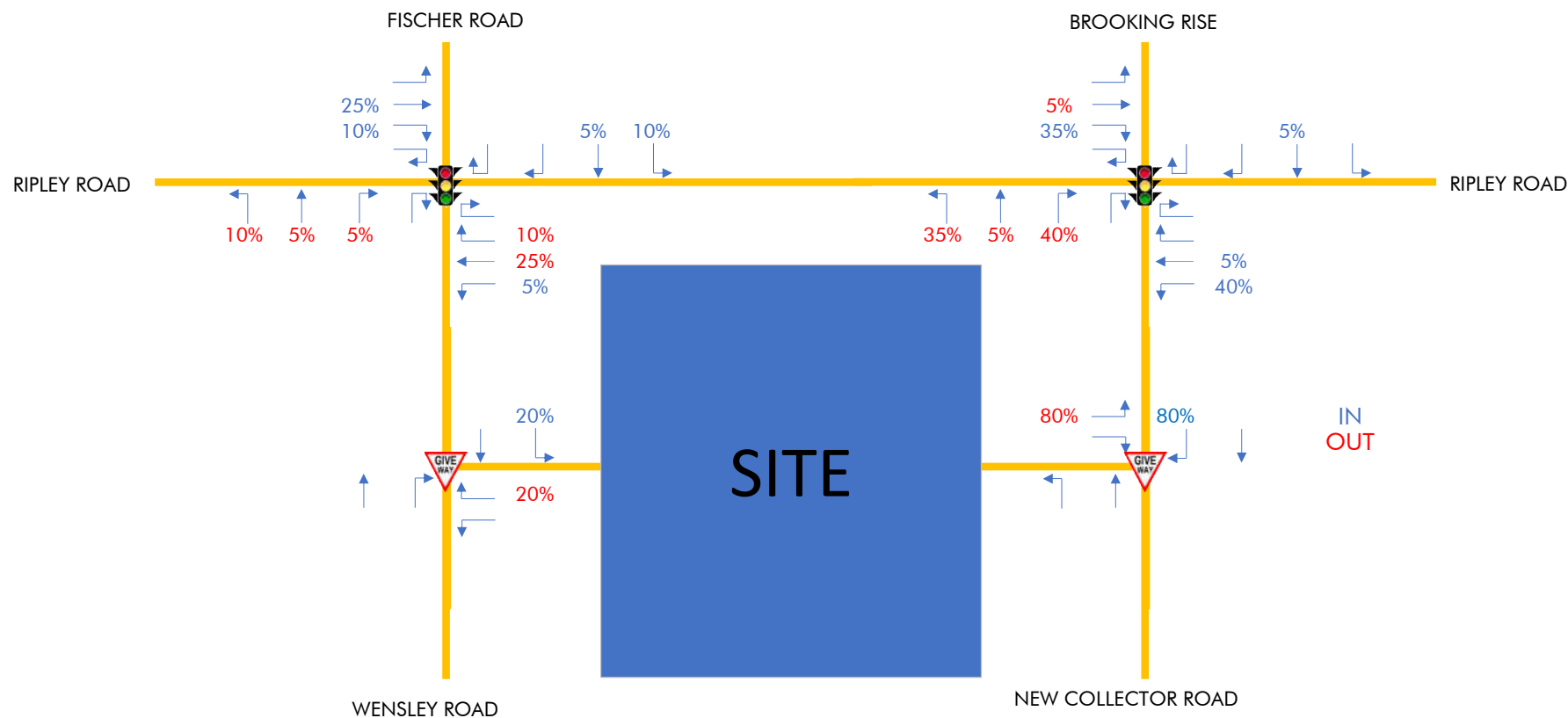
Client		DOE	Project		Ripley Valley SHS: Scenario 1
Date	13/02/2026	Figure	Figure 1	Job No.	25-730
2026 Existing Morning Peak Hour					



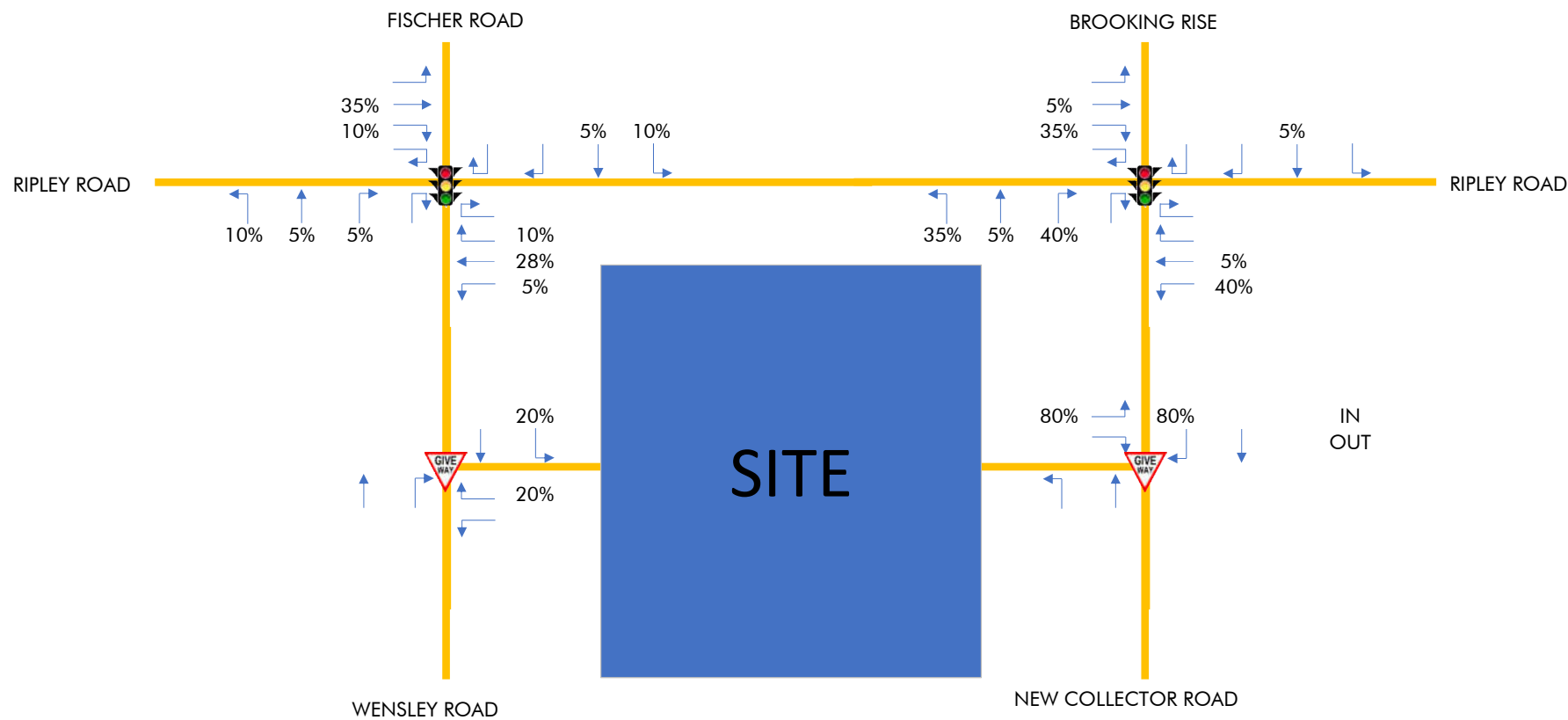
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Date	13/02/2026	Figure	Figure 3	Job No.	25-730
2029 Pre-Development Morning Peak Hour					



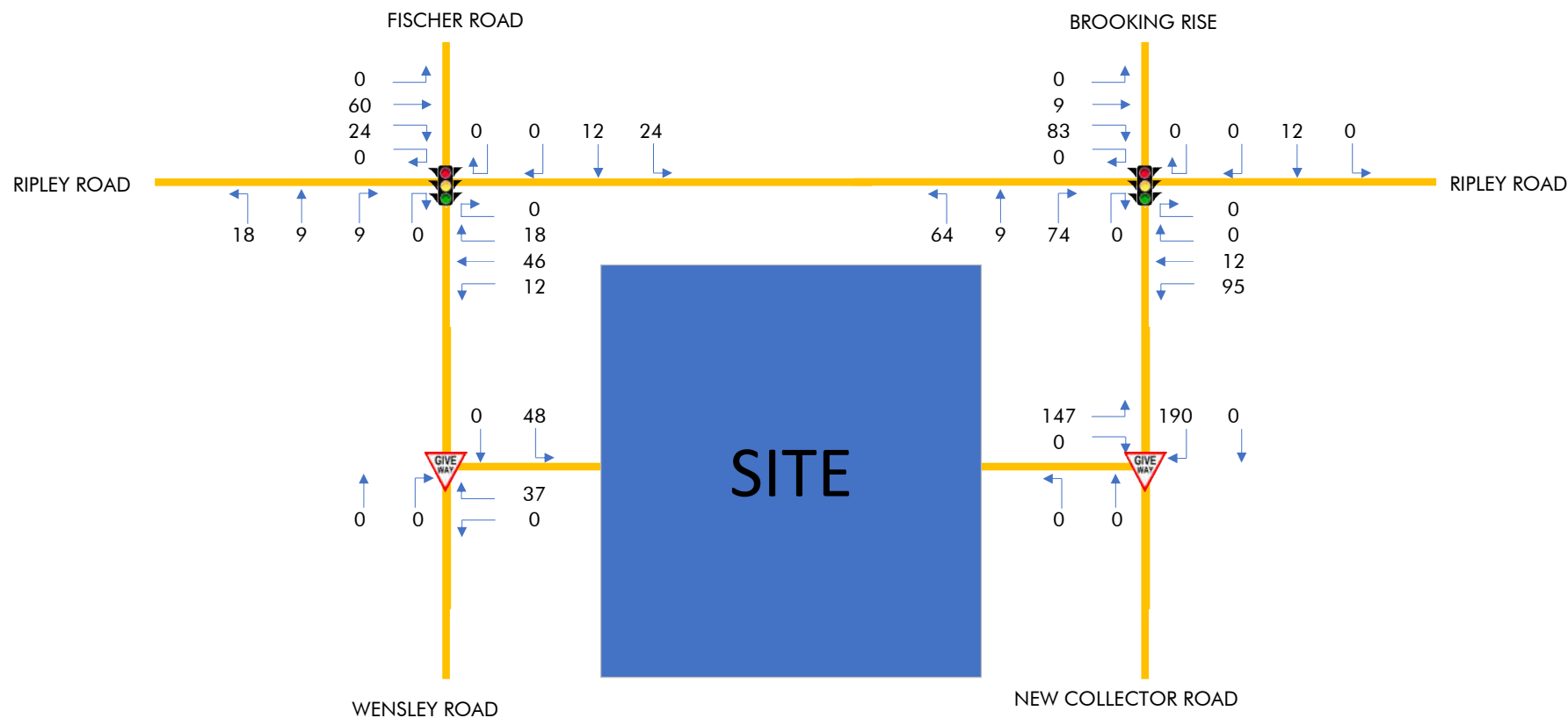
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Date	13/02/2026	Figure	Figure 4	Job No.	25-730
2029 Pre-Development Evening Peak Hour					

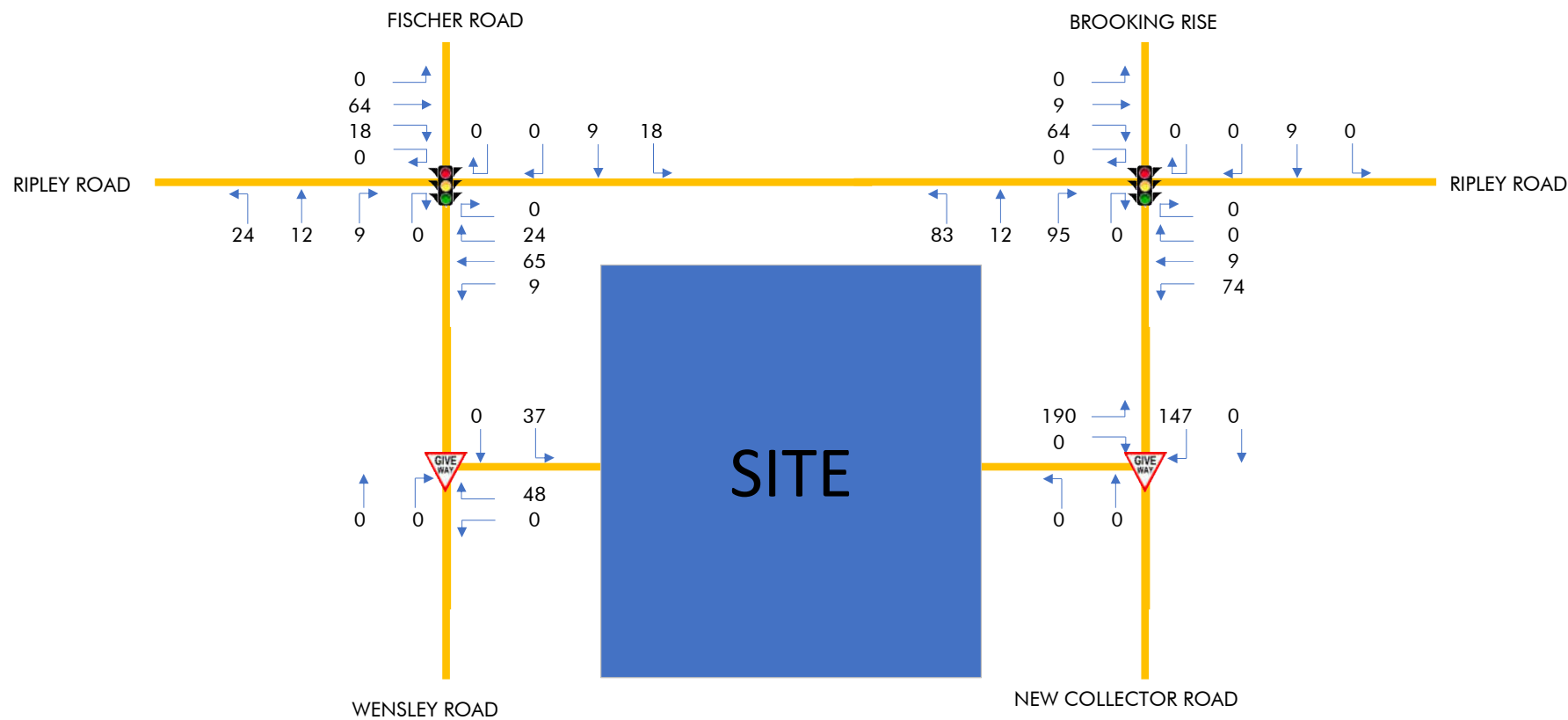


Client		DOE	Project		Ripley Valley SHS: Scenario 1
Date	13/02/2026	Figure	Figure 5	Job No.	25-730
Development Traffic Distribution - Morning Peak Hour					

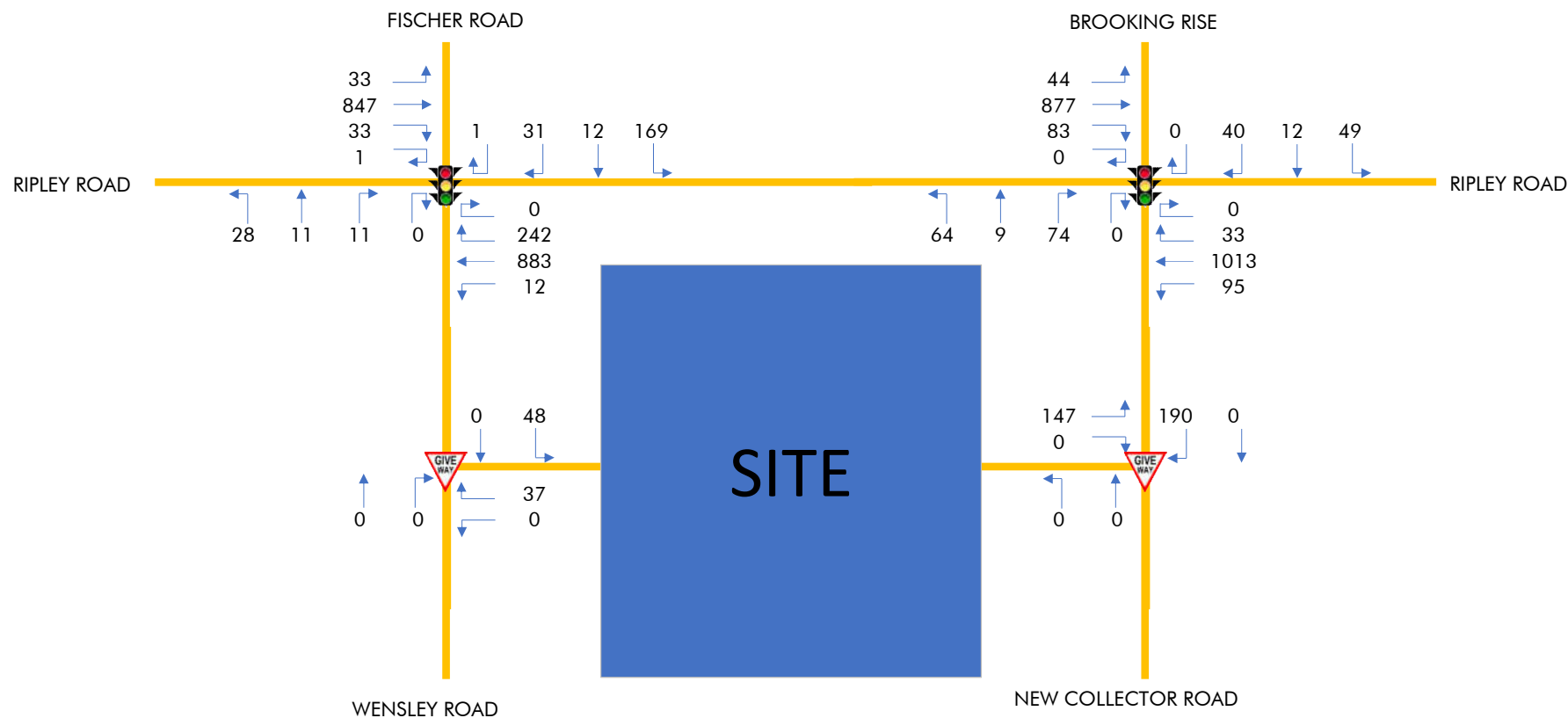


Client		DOE	Project		Ripley Valley SHS: Scenario 1
Date	13/02/2026	Figure	Figure 6	Job No.	25-730
Development Traffic Distribution - Evening Peak Hour					

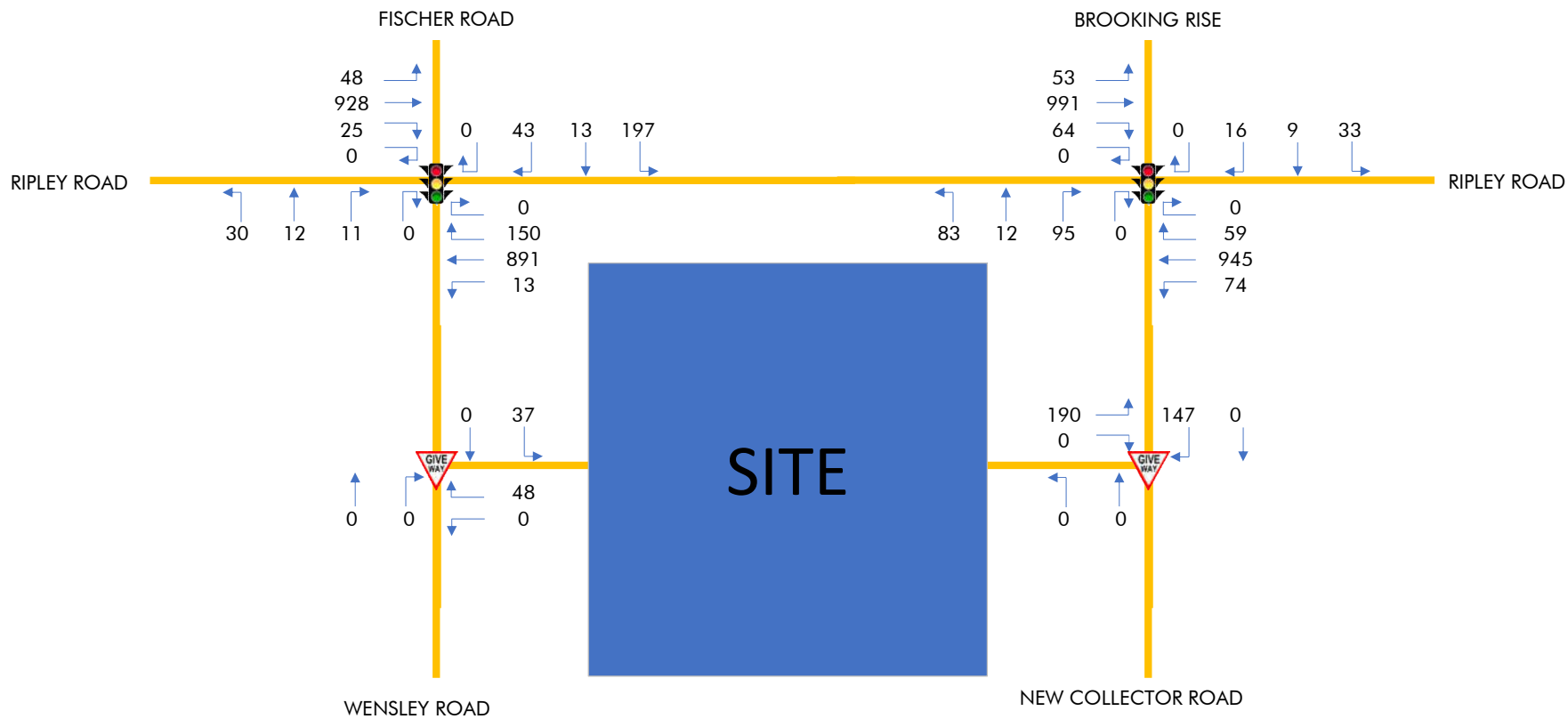




Client		DOE	Project		Ripley Valley SHS: Scenario 1
Date	13/02/2026	Figure	Figure 8	Job No.	25-730
Development Traffic Generation - Evening Peak Hour					

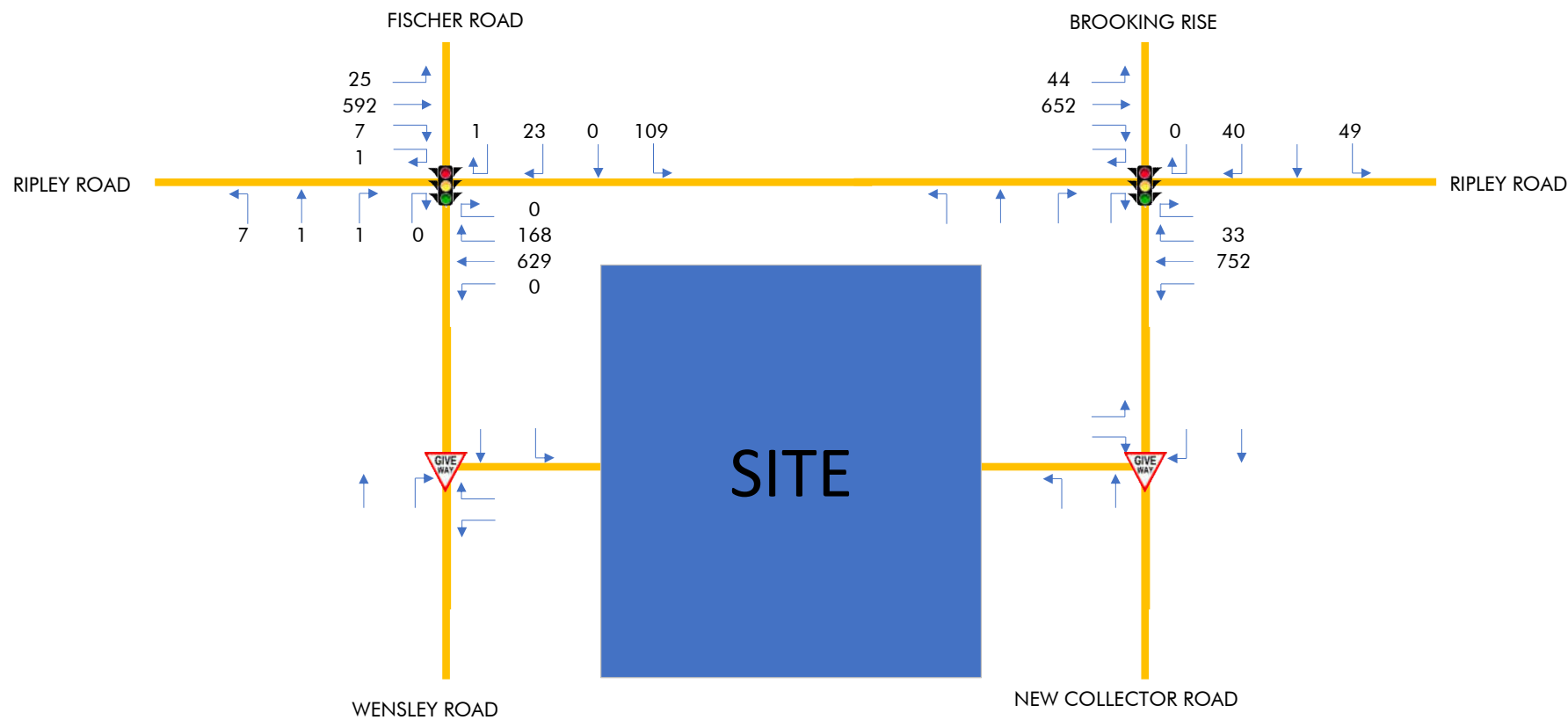


Client		DOE	Project		Ripley Valley SHS: Scenario 1
Date	13/02/2026	Figure	Figure 9	Job No.	25-730
2029 Post-Development Morning Peak Hour					

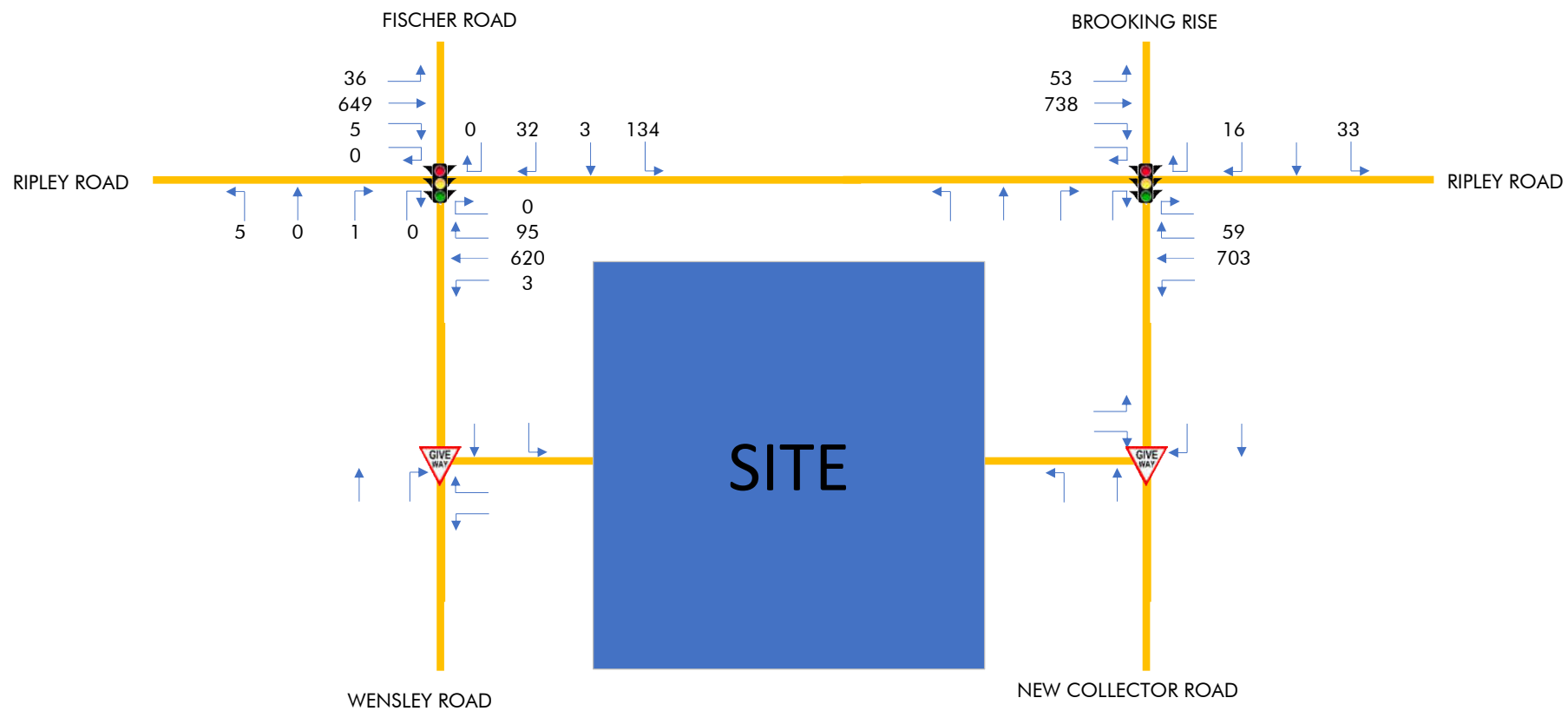


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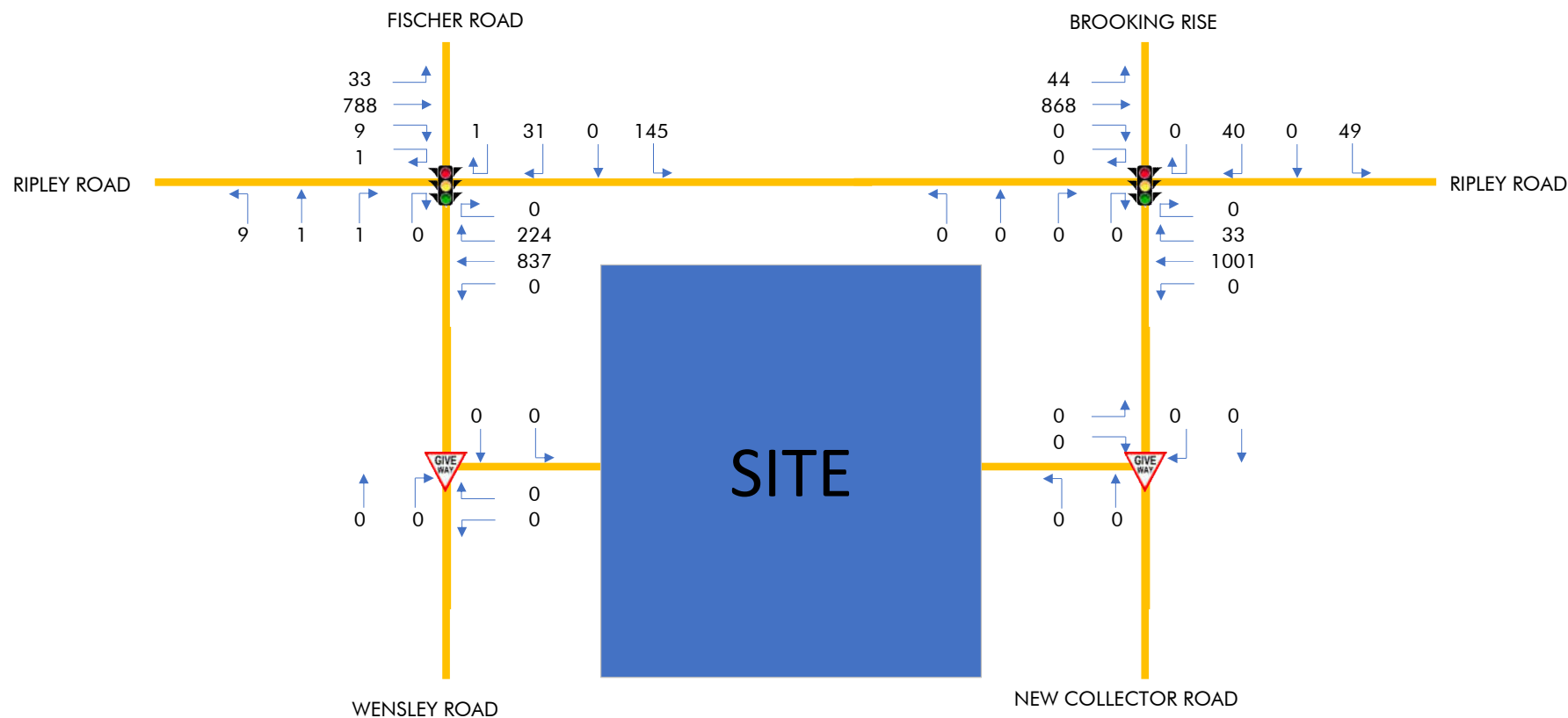
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Date	13/02/2026	Figure	Figure 10	Job No.	25-730
2029 Post-Development Evening Peak Hour					



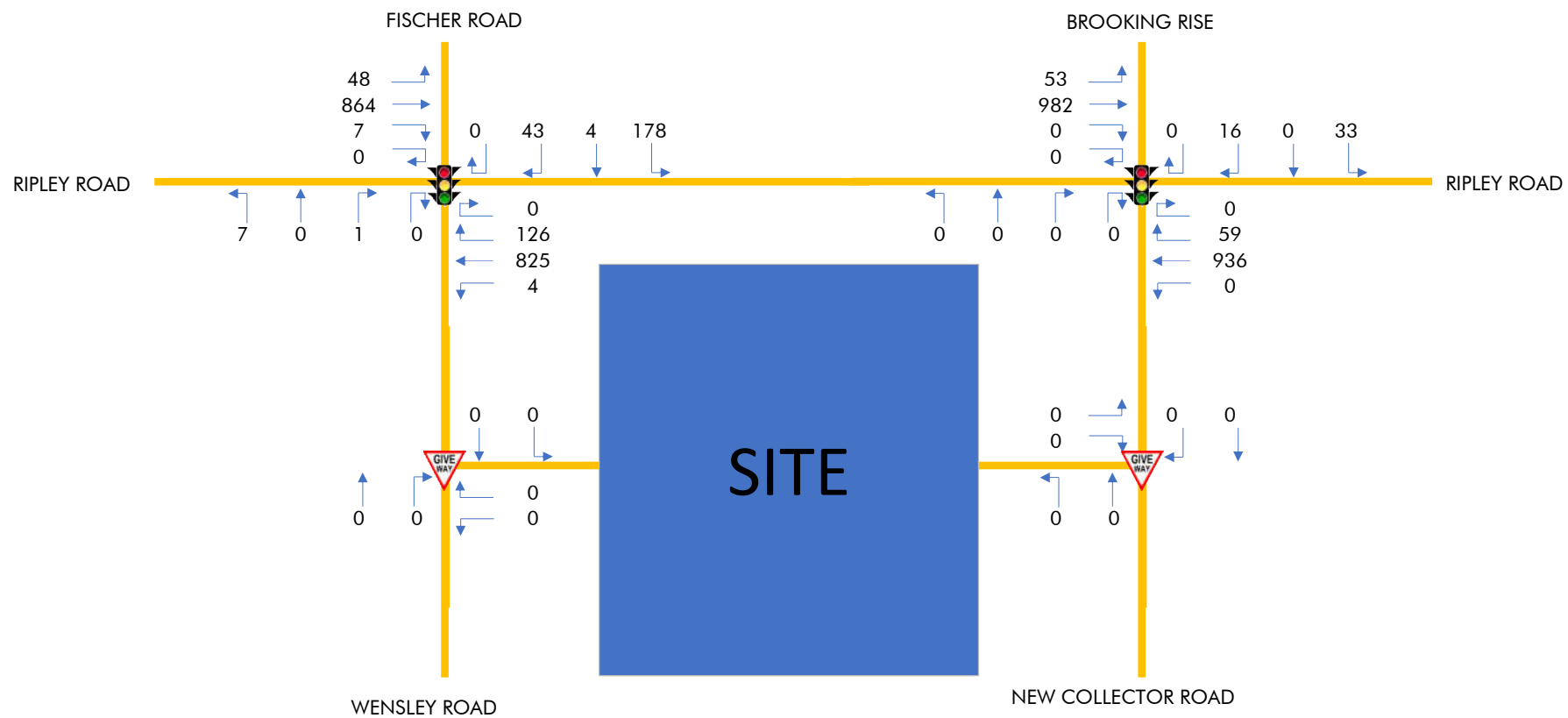
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Date	13/02/2026	Figure	Figure 1	Job No.	25-730
2026 Existing Morning Peak Hour					



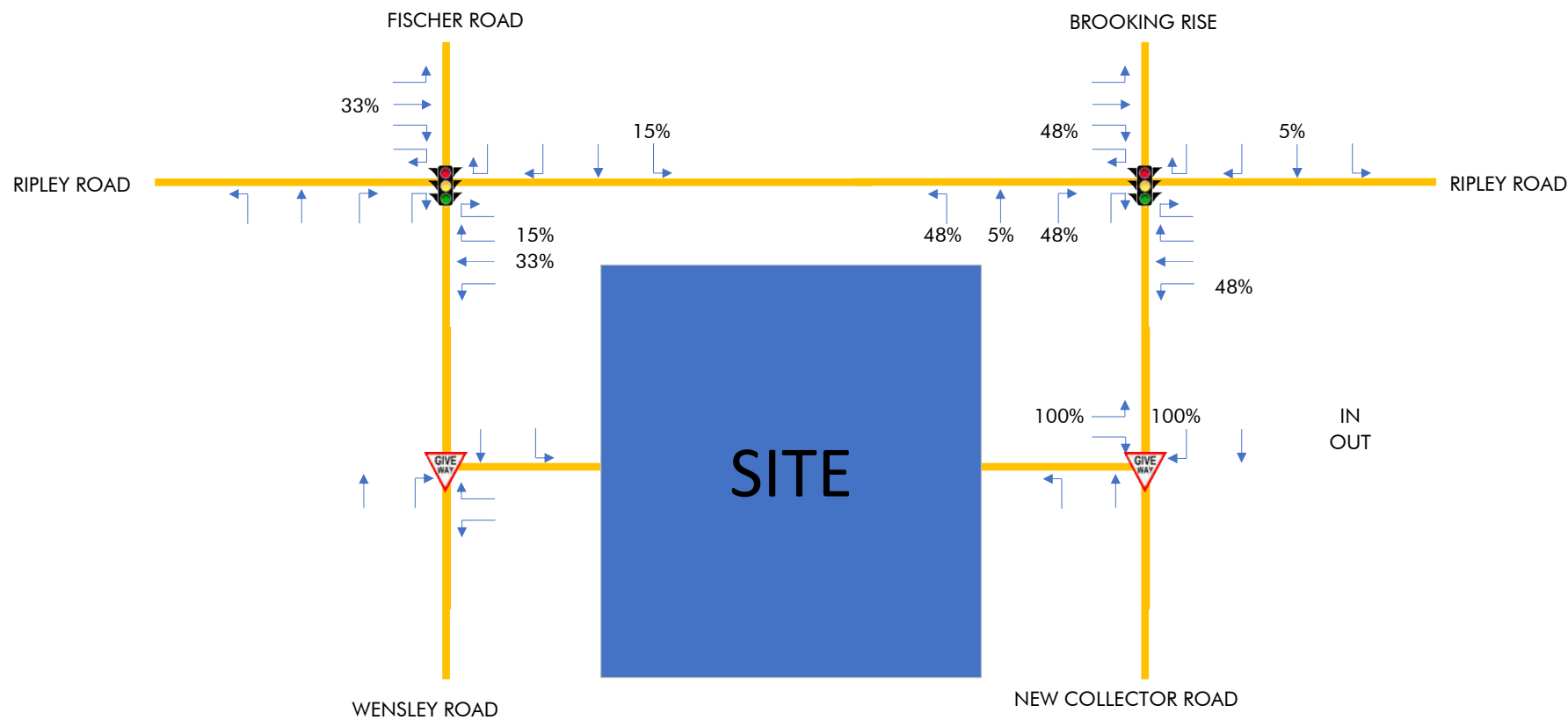
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Date	13/02/2026	Figure	Figure 2	Job No.	25-730
2026 Existing Evening Peak Hour					



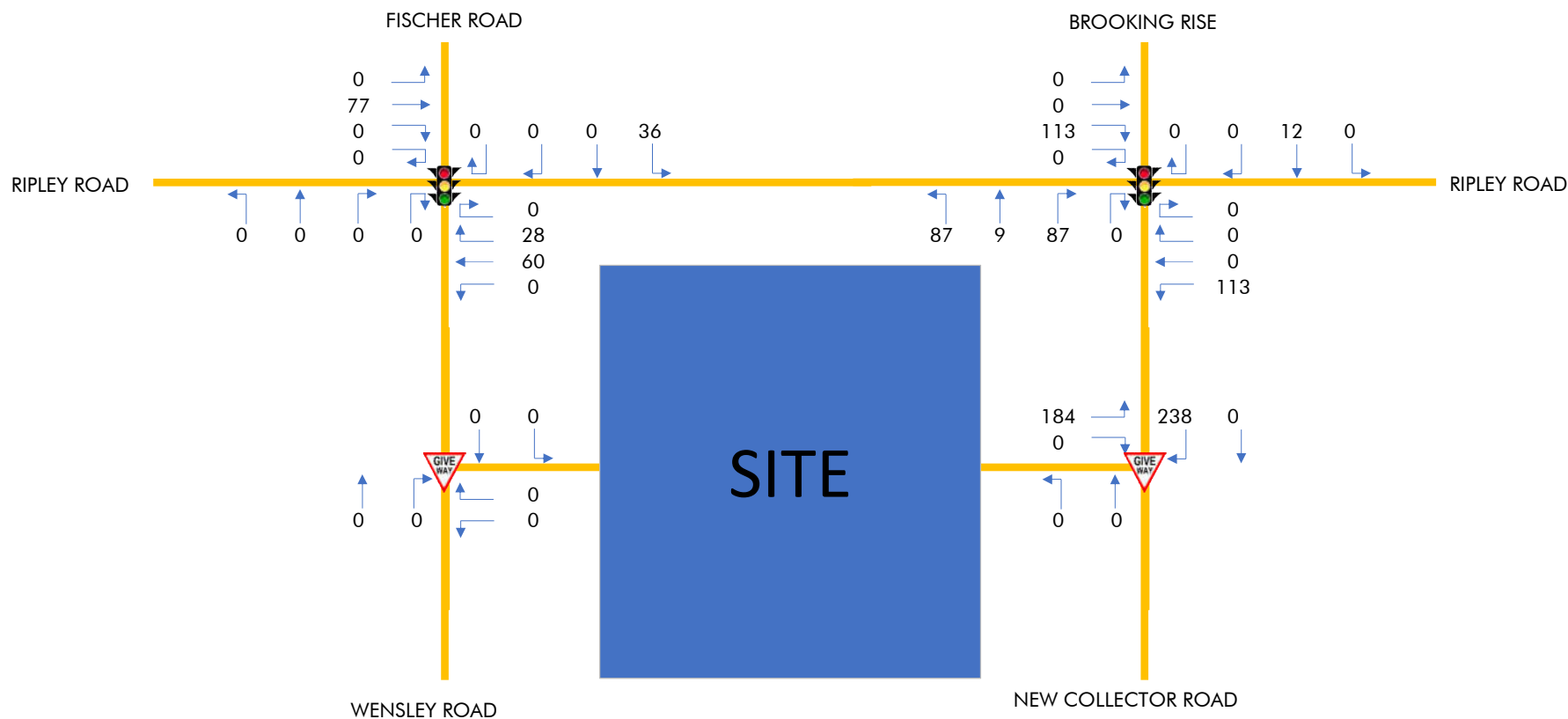
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Date	13/02/2026	Figure	Figure 3	Job No.	25-730
2029 Pre-Development Morning Peak Hour					



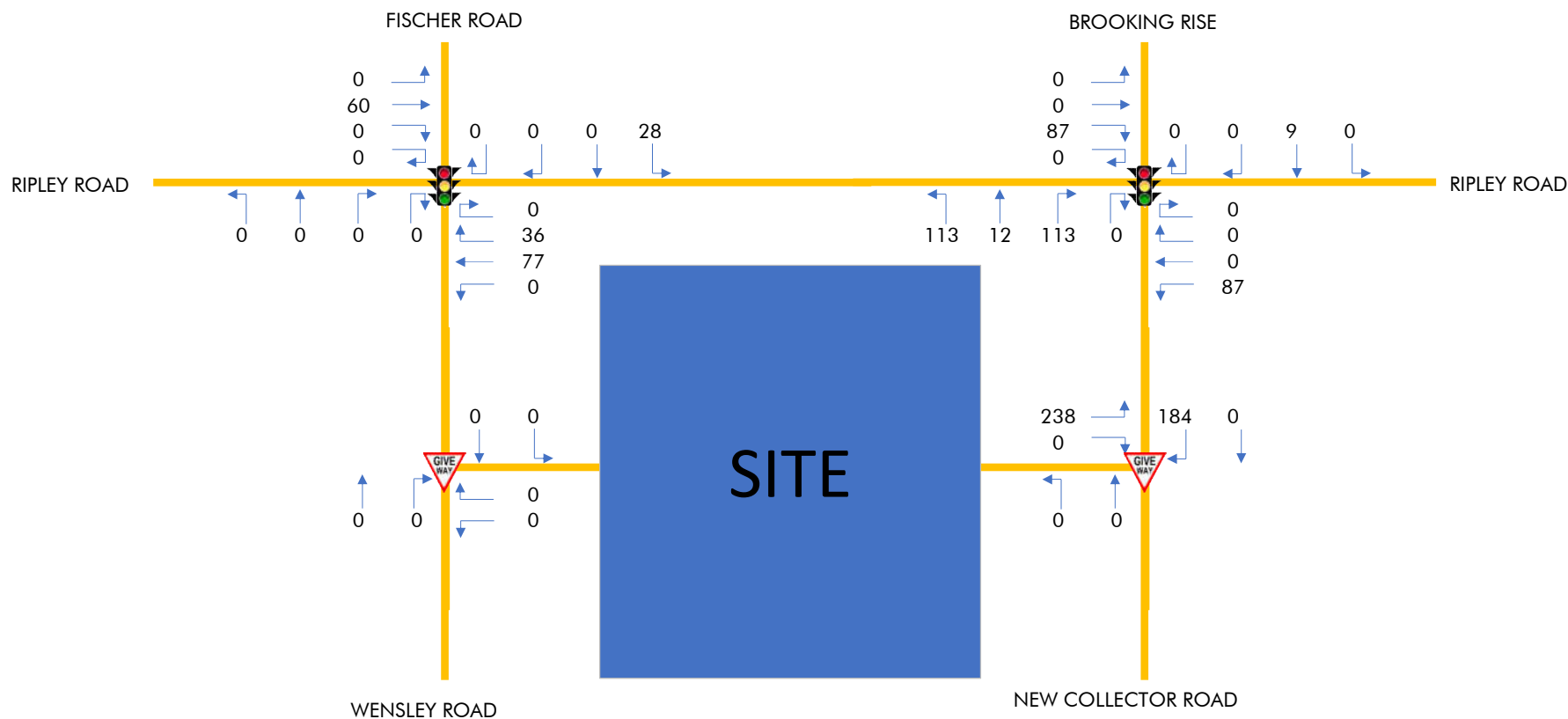
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Date	13/02/2026	Figure	Figure 4	Job No.	25-730
2029 Pre-Development Evening Peak Hour					



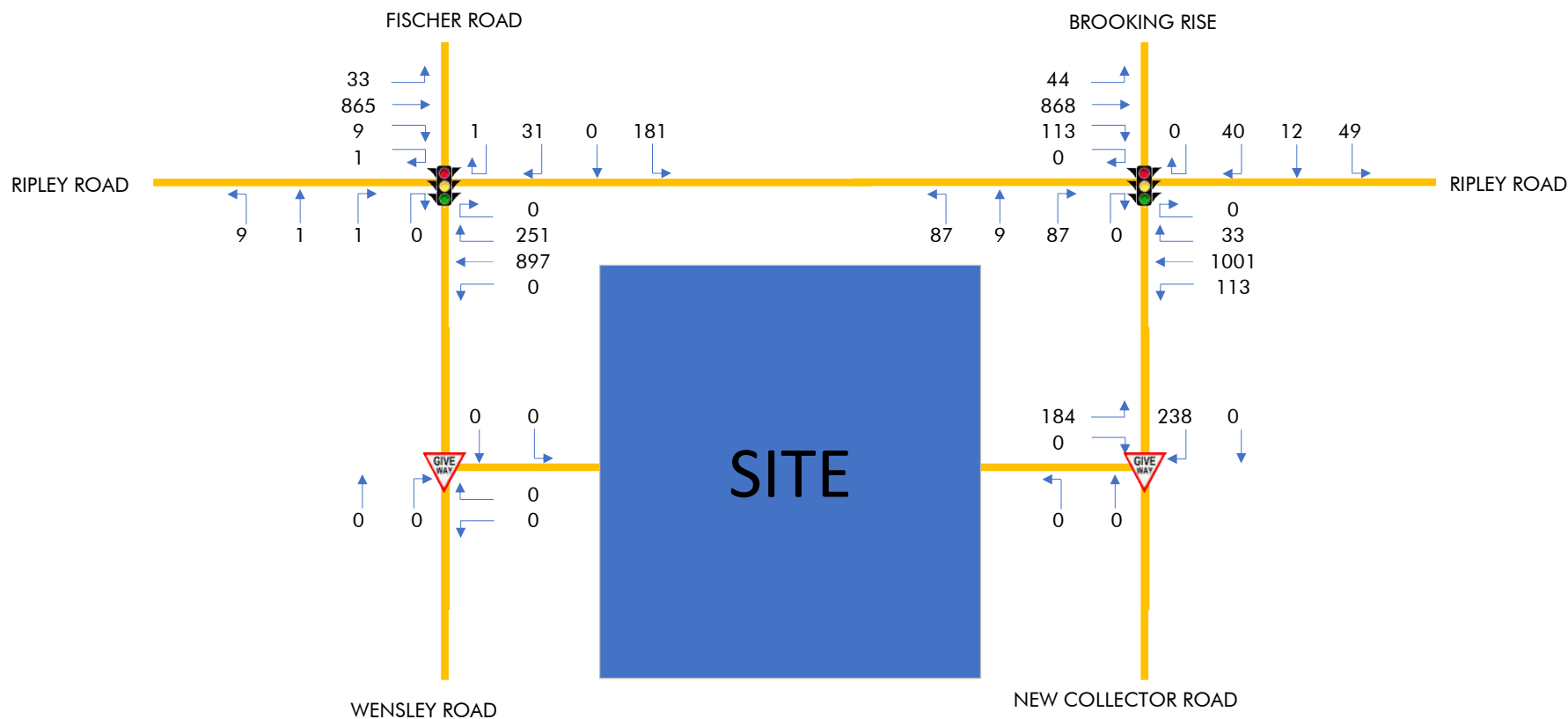
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Date	13/02/2026	Figure	Figure 6	Job No.	25-730
Development Traffic Distribution - Evening Peak Hour					



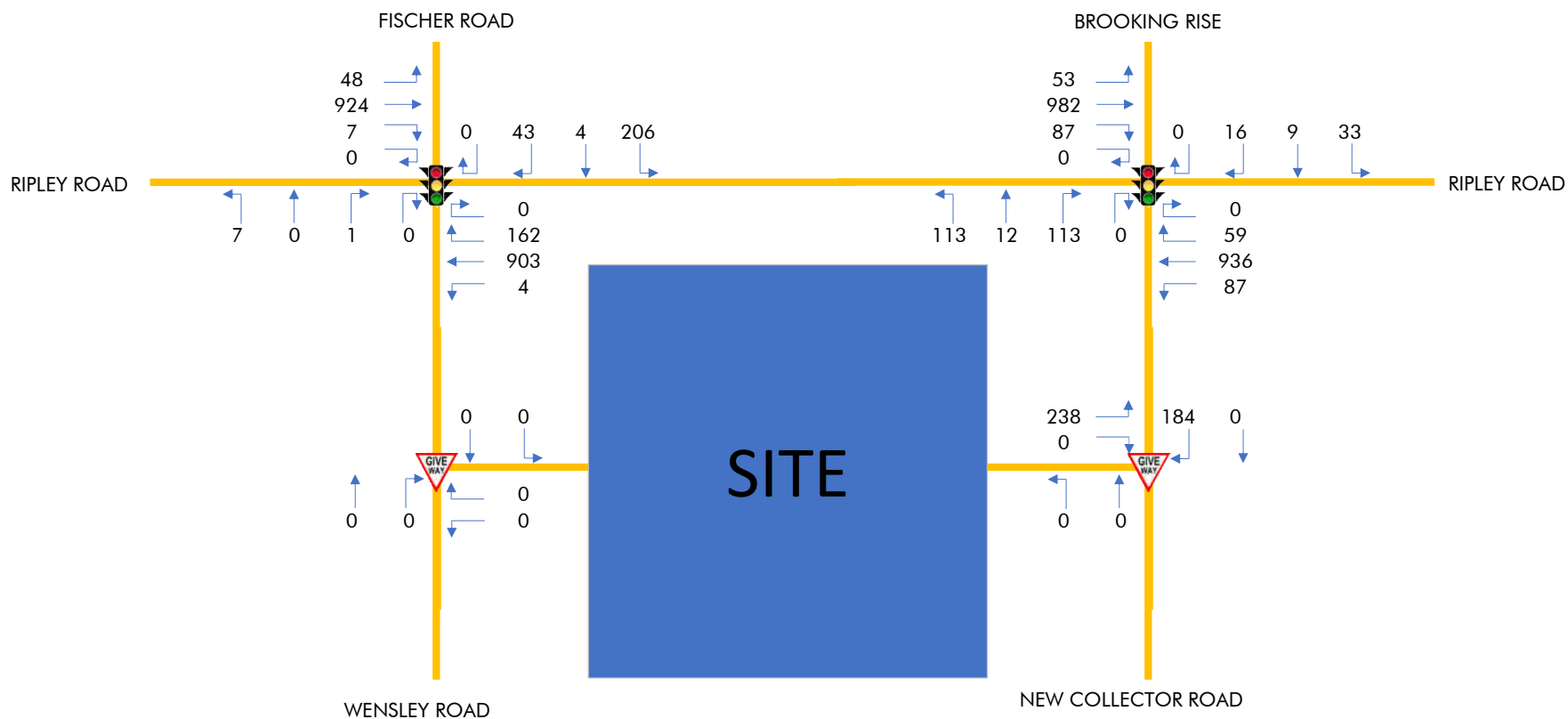
Client		DOE	Project		Ripley Valley SHS: Scenario 2
Date	13/02/2026	Figure	Figure 7	Job No.	25-730
Development Traffic Generation - Morning Peak Hour					



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Date	13/02/2026	Figure	Figure 8	Job No.	25-730
Development Traffic Generation - Evening Peak Hour					

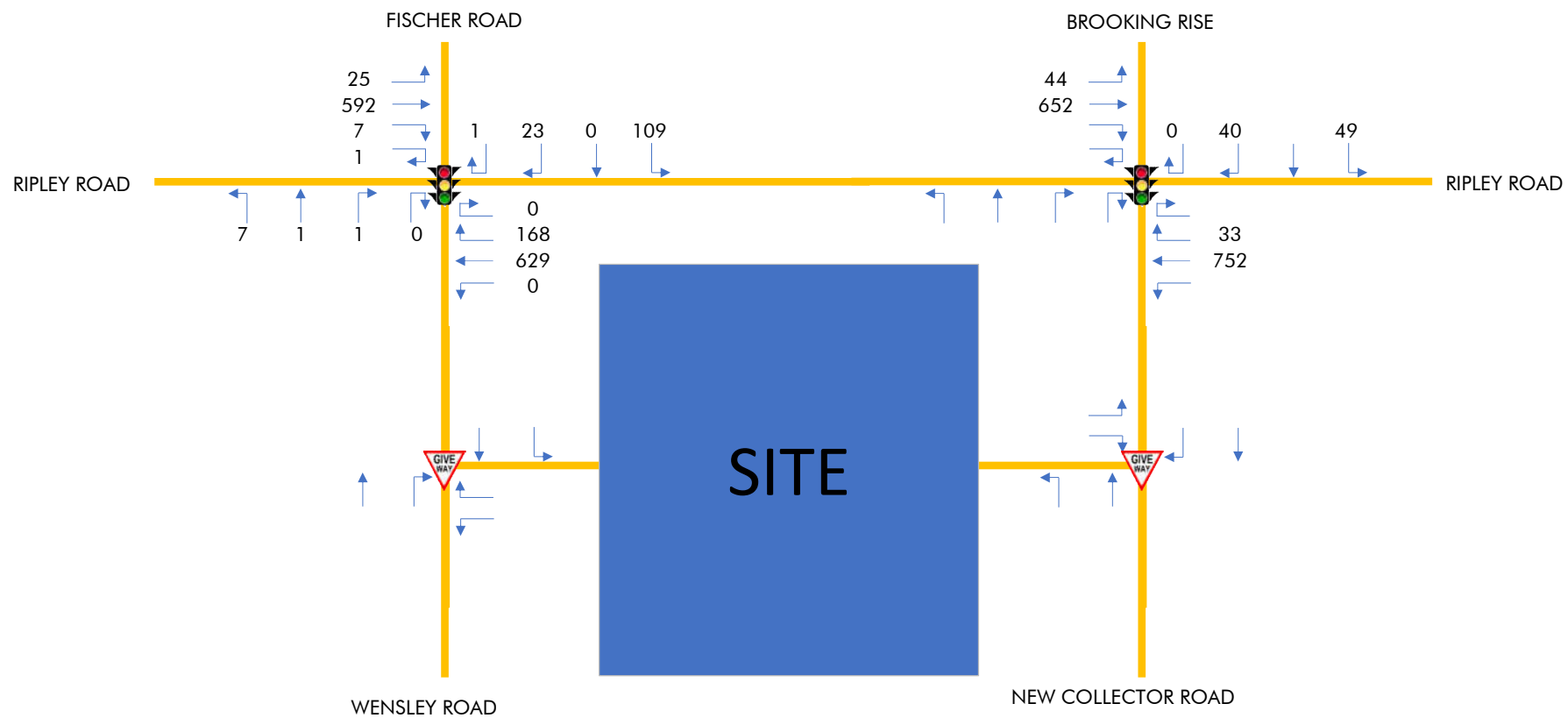


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Date	13/02/2026	Figure	Figure 9	Job No.	25-730
2029 Post-Development Morning Peak Hour					

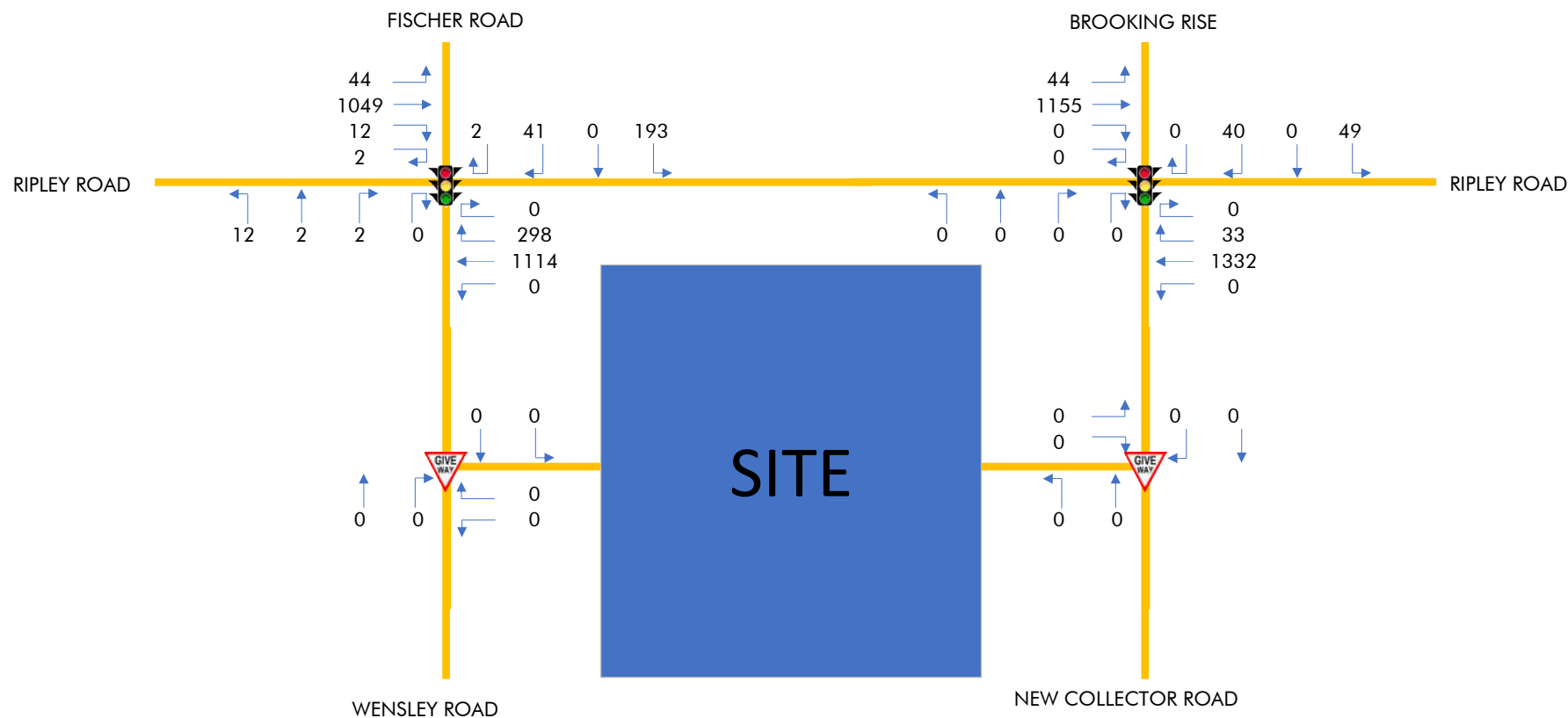


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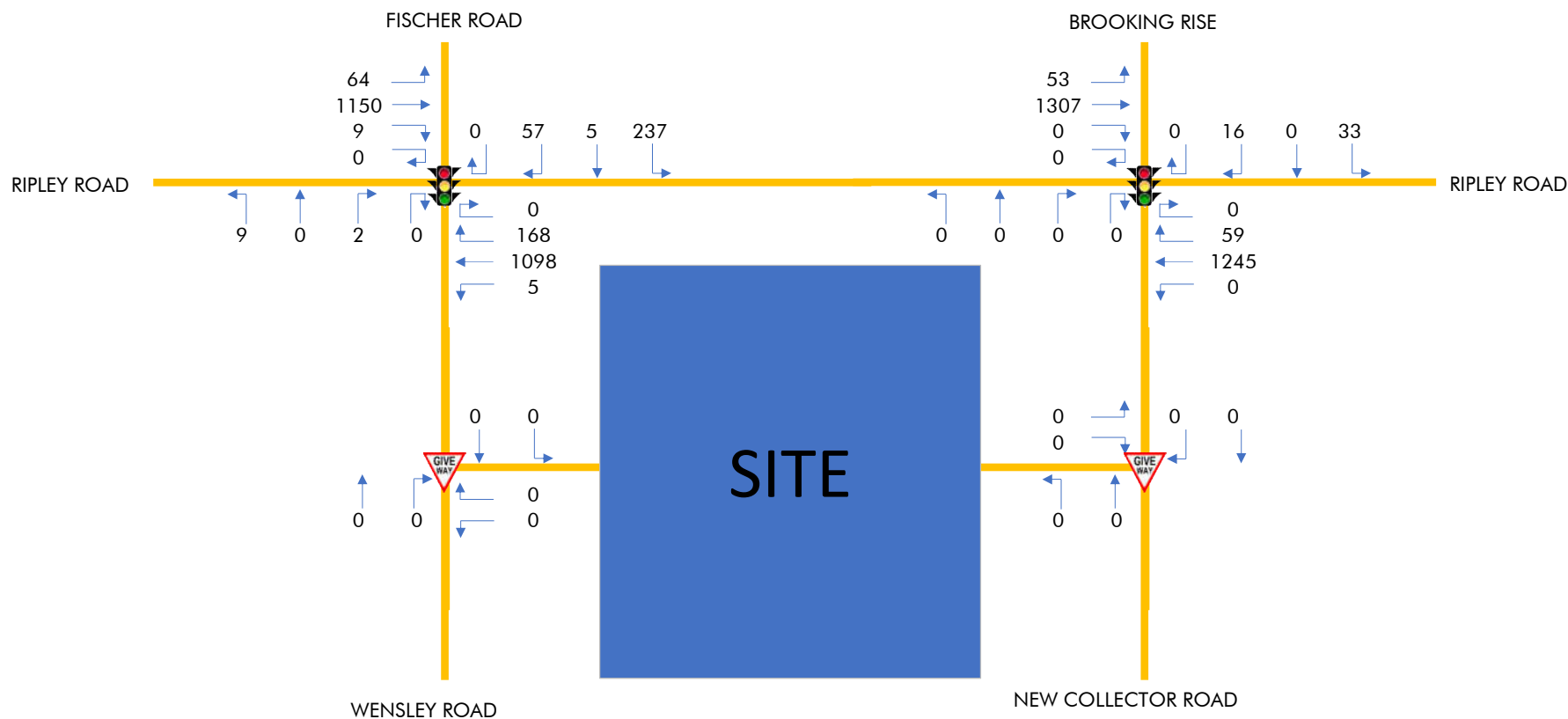
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Date	13/02/2026	Figure	Figure 10	Job No.	25-730
2029 Post-Development Evening Peak Hour					



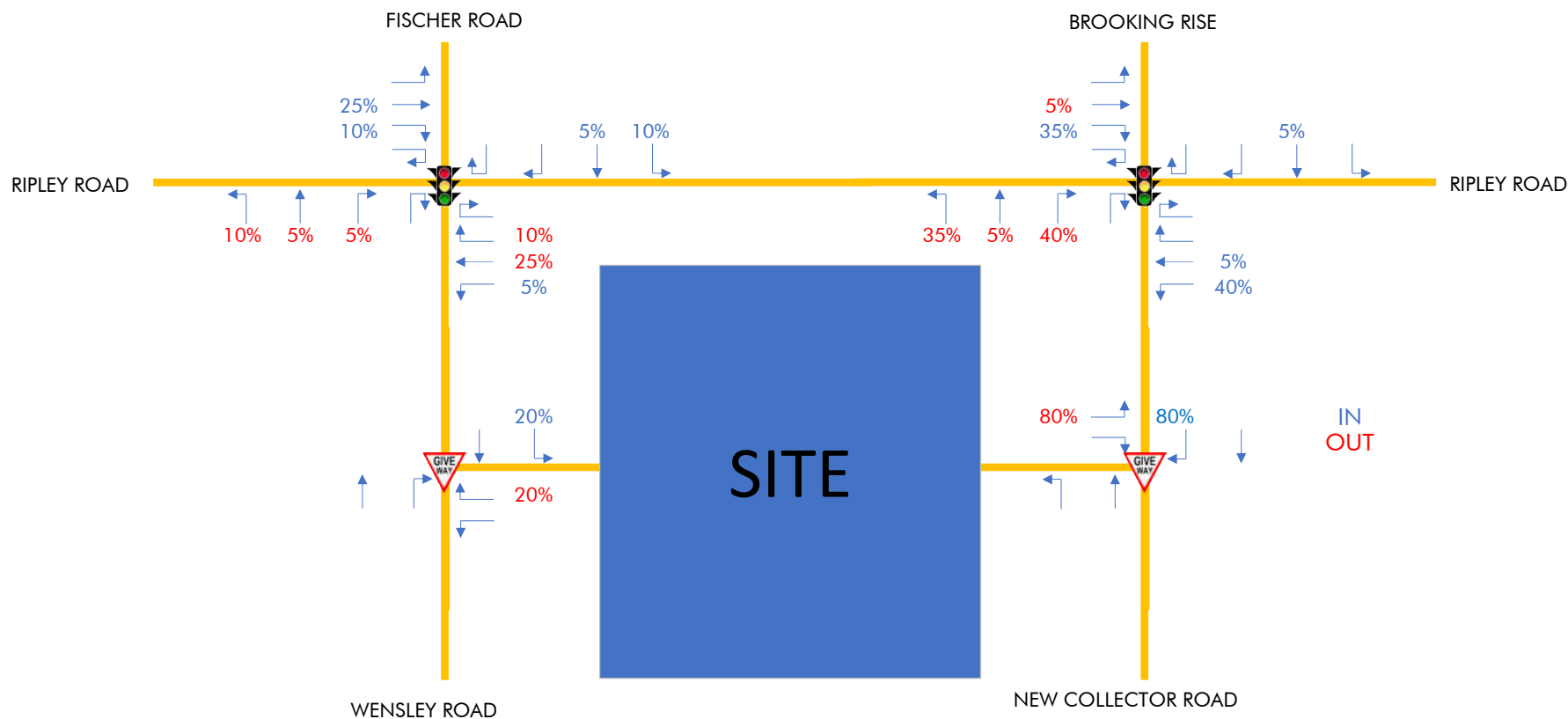
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Date	13/02/2026	Figure	Figure 1	Job No.	25-730
2026 Existing Morning Peak Hour					



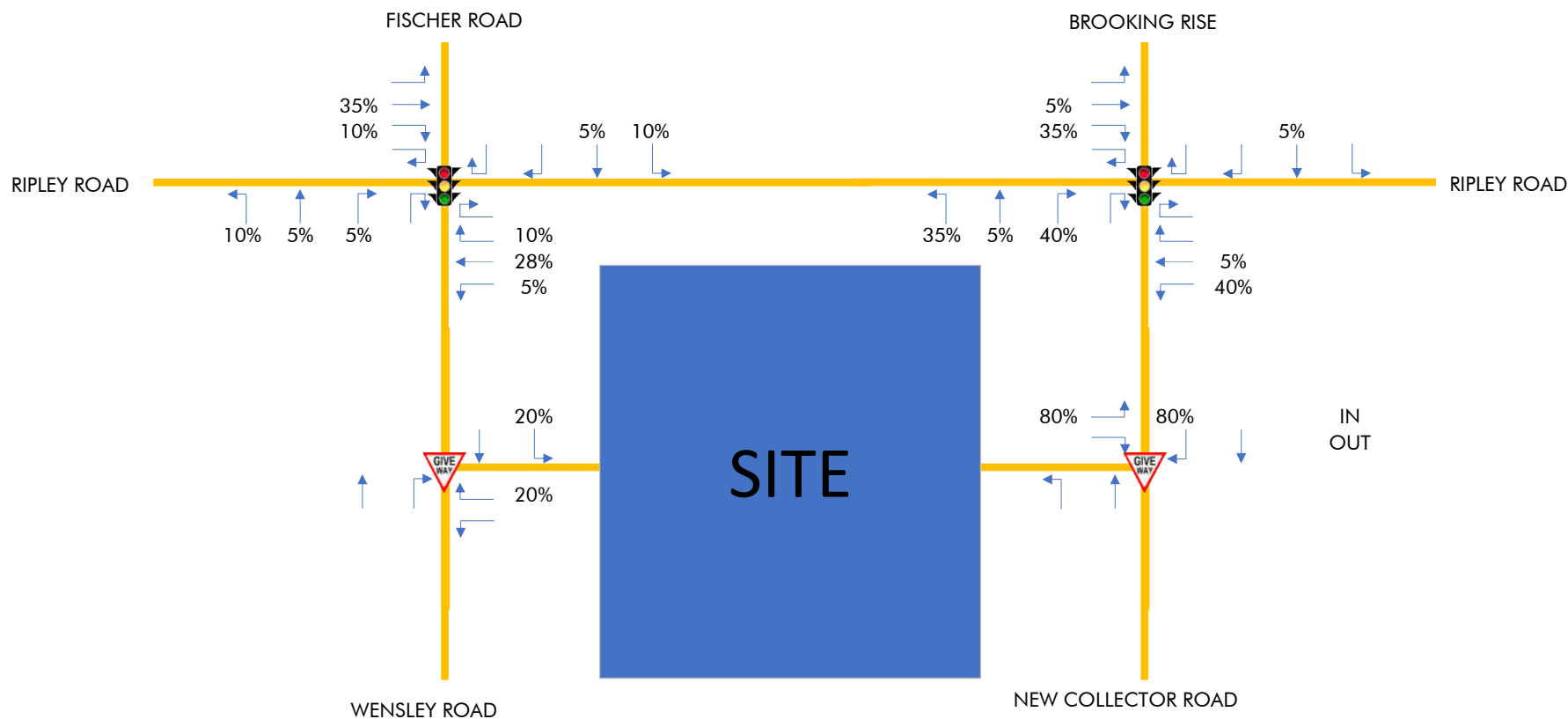
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Date	13/02/2026	Figure	Figure 3	Job No.	25-730
2032 Pre-Development Morning Peak Hour					



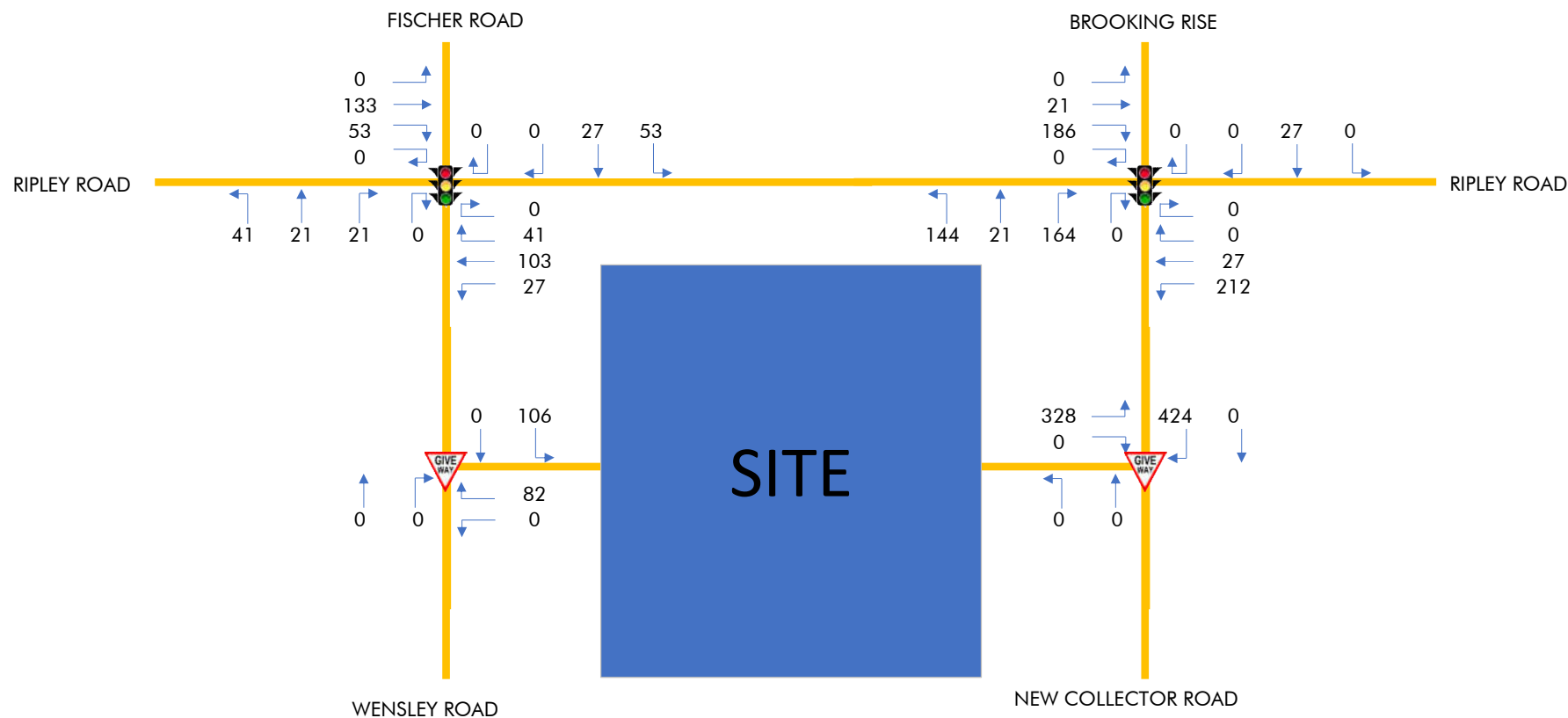
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Date	13/02/2026	Figure	Figure 4	Job No.	25-730
2032 Pre-Development Evening Peak Hour					



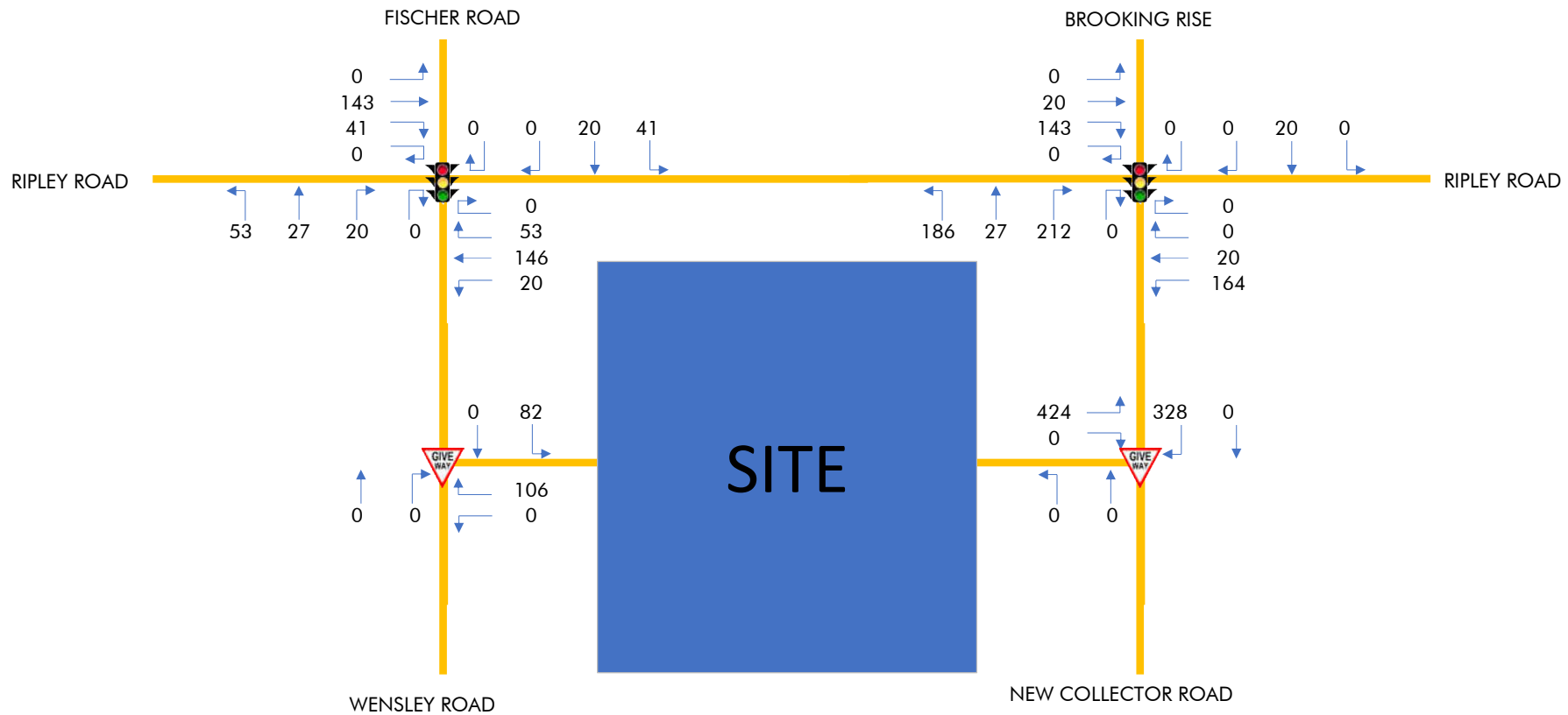
Client		DOE	Project		Ripley Valley SHS: Scenario 3
Date	13/02/2026	Figure	Figure 5	Job No.	25-730
Development Traffic Distribution - Morning Peak Hour					



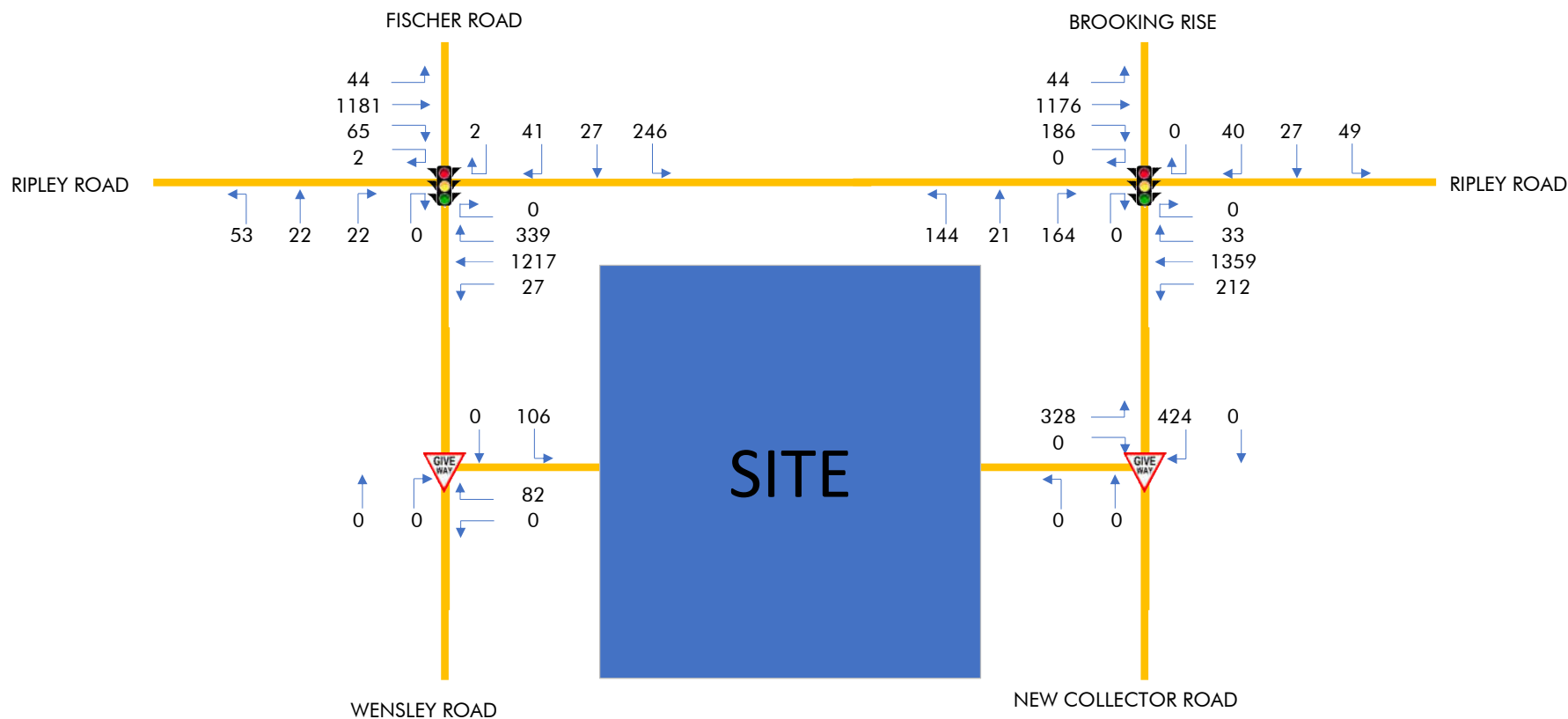
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Date	13/02/2026	Figure	Figure 6	Job No.	25-730
Development Traffic Distribution - Evening Peak Hour					



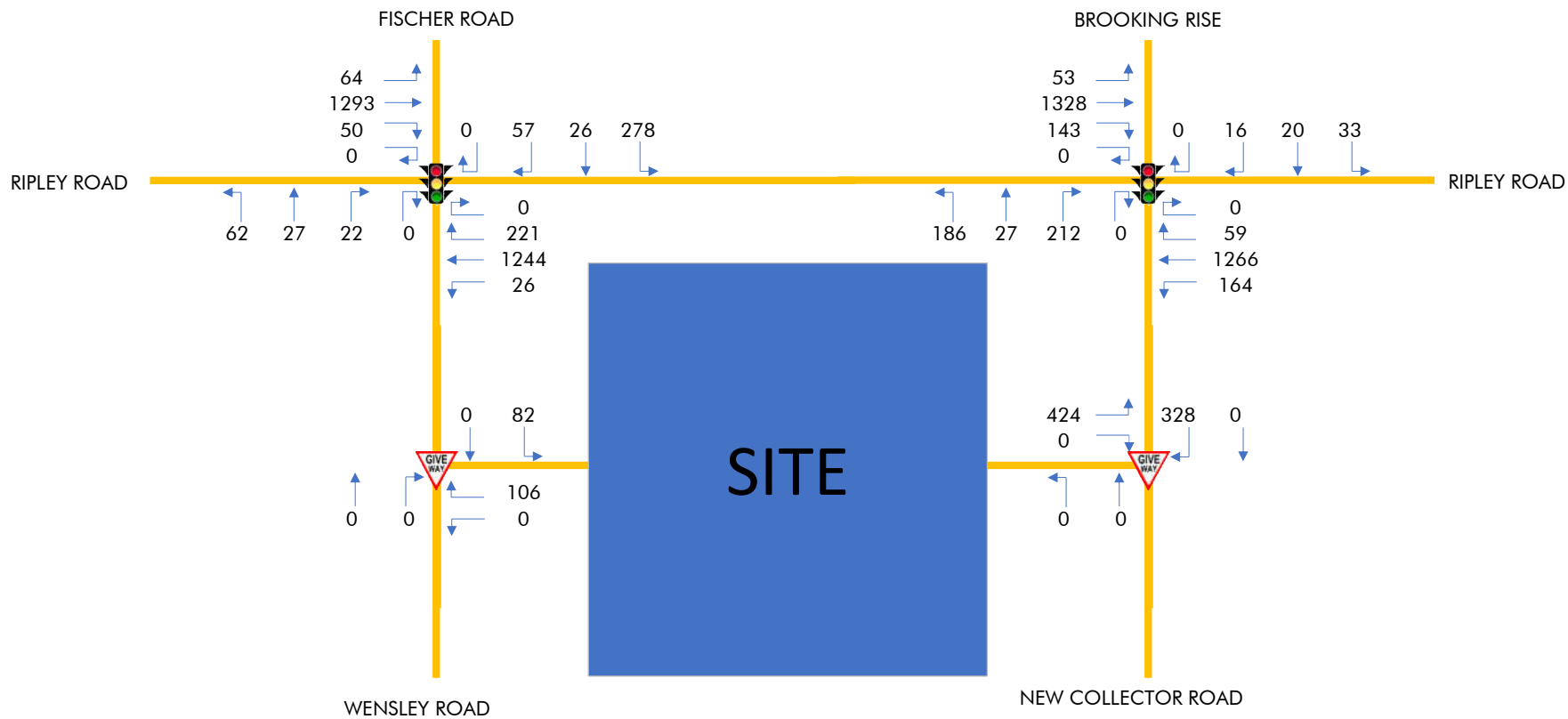
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Date	13/02/2026	Figure	Figure 7	Job No.	25-730
Development Traffic Generation - Morning Peak Hour					



Client		DOE	Project		Ripley Valley SHS: Scenario 3
Date	13/02/2026	Figure	Figure 8	Job No.	25-730
Development Traffic Generation - Evening Peak Hour					



Client		DOE	Project		Ripley Valley SHS: Scenario 3
Date	13/02/2026	Figure	Figure 9	Job No.	25-730
2032 Post-Development Morning Peak Hour					



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Client		DOE	Project		Ripley Valley SHS: Scenario 3
Date	13/02/2026	Figure	Figure 10	Job No.	25-730
2032 Post-Development Evening Peak Hour					