



# Appendix D Detailed SIDRA results

## 2026 AM – the WNSLR / Lenore Drive intersection – Preliminary layout

| MOVEMENT SUMMARY                                                                             |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
|----------------------------------------------------------------------------------------------|--------|-----------------------------|------|------------------|----------------------|------------------|-----------------------------------|---------------|-------------|--------------------------------|-----------------------|
| Site: 2026AM_Leonore Drive / NorthSouth Link Rd                                              |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
| Lockwood Road Base AM                                                                        |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
| Signals - Fixed Time Isolated Cycle Time = 125 seconds (Optimum Cycle Time - Minimum Delay)  |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
| Movement Performance - Vehicles                                                              |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
| Mov ID                                                                                       | OD Mov | Demand Flows<br>Total veh/h | HV % | Deg. Satn<br>v/c | Average Delay<br>sec | Level of Service | 95% Back of Queue<br>Vehicles veh | Distance<br>m | Prop Queued | Effective Stop Rate<br>per veh | Average Speed<br>km/h |
| South: North South Link Rd                                                                   |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
| 1                                                                                            | L2     | 128                         | 15.0 | 0.097            | 8.1                  | LOS A            | 0.6                               | 4.8           | 0.14        | 0.64                           | 60.5                  |
| 2                                                                                            | T1     | 26                          | 15.0 | 0.815            | 55.3                 | LOS D            | 19.3                              | 152.7         | 1.00        | 0.91                           | 34.1                  |
| 3                                                                                            | R2     | 587                         | 15.0 | 0.815            | 62.8                 | LOS E            | 19.3                              | 152.7         | 1.00        | 0.91                           | 31.9                  |
| Approach                                                                                     |        | 742                         | 15.0 | 0.815            | 53.1                 | LOS D            | 19.3                              | 152.7         | 0.85        | 0.86                           | 34.8                  |
| East: Leonore Drive                                                                          |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
| 4                                                                                            | L2     | 608                         | 15.0 | 0.711            | 20.0                 | LOS B            | 21.5                              | 170.1         | 0.71        | 0.82                           | 50.6                  |
| 5                                                                                            | T1     | 108                         | 15.0 | 0.636            | 68.6                 | LOS E            | 3.5                               | 28.0          | 1.00        | 0.78                           | 32.1                  |
| 6                                                                                            | R2     | 42                          | 15.0 | 0.241            | 64.5                 | LOS E            | 2.4                               | 19.3          | 0.96        | 0.74                           | 31.1                  |
| Approach                                                                                     |        | 759                         | 15.0 | 0.711            | 29.4                 | LOS C            | 21.5                              | 170.1         | 0.77        | 0.81                           | 45.3                  |
| North: North South Link Rd                                                                   |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
| 7                                                                                            | L2     | 16                          | 15.0 | 0.148            | 38.7                 | LOS C            | 0.9                               | 6.8           | 0.92        | 0.69                           | 41.2                  |
| 8                                                                                            | T1     | 16                          | 15.0 | 0.148            | 51.1                 | LOS D            | 0.9                               | 6.8           | 0.96        | 0.68                           | 36.7                  |
| 9                                                                                            | R2     | 3                           | 15.0 | 0.148            | 72.6                 | LOS F            | 0.8                               | 6.1           | 0.99        | 0.68                           | 30.6                  |
| Approach                                                                                     |        | 35                          | 15.0 | 0.148            | 47.4                 | LOS D            | 0.9                               | 6.8           | 0.94        | 0.69                           | 37.9                  |
| West: Leonore Drive                                                                          |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
| 10                                                                                           | L2     | 24                          | 15.0 | 0.018            | 8.1                  | LOS A            | 0.1                               | 0.9           | 0.14        | 0.63                           | 60.4                  |
| 11                                                                                           | T1     | 388                         | 15.0 | 0.253            | 24.0                 | LOS B            | 7.5                               | 58.9          | 0.68        | 0.57                           | 52.5                  |
| 12                                                                                           | R2     | 679                         | 15.0 | 0.829            | 40.1                 | LOS C            | 37.4                              | 295.2         | 0.93        | 0.91                           | 39.4                  |
| Approach                                                                                     |        | 1092                        | 15.0 | 0.829            | 33.7                 | LOS C            | 37.4                              | 295.2         | 0.82        | 0.78                           | 43.6                  |
| All Vehicles                                                                                 |        | 2627                        | 15.0 | 0.829            | 38.1                 | LOS C            | 37.4                              | 295.2         | 0.82        | 0.81                           | 41.0                  |
| Level of Service (LOS) Method: Delay (RTA NSW)                                               |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
| Vehicle movement LOS values are based on average delay per movement                          |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
| Intersection and Approach LOS values are based on average delay for all vehicle movements.   |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
| SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.                  |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
| Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).                                       |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
| HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |

## 2026 AM – the WNSLR / Lockwood Road intersection

| MOVEMENT SUMMARY                                                                             |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
|----------------------------------------------------------------------------------------------|--------|-----------------------------|------|------------------|----------------------|------------------|-----------------------------------|---------------|-------------|--------------------------------|-----------------------|
| Site: 2026AM_Lockwood Rd / North South Link Rd                                               |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
| Lockwood Road Base AM                                                                        |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
| Signals - Fixed Time Isolated Cycle Time = 60 seconds (Practical Cycle Time)                 |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
| Movement Performance - Vehicles                                                              |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
| Mov ID                                                                                       | OD Mov | Demand Flows<br>Total veh/h | HV % | Deg. Satn<br>v/c | Average Delay<br>sec | Level of Service | 95% Back of Queue<br>Vehicles veh | Distance<br>m | Prop Queued | Effective Stop Rate<br>per veh | Average Speed<br>km/h |
| South: North South Link Rd                                                                   |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
| 1                                                                                            | L2     | 32                          | 15.0 | 0.421            | 16.1                 | LOS B            | 7.0                               | 55.2          | 0.68        | 0.60                           | 49.2                  |
| 2                                                                                            | T1     | 715                         | 15.0 | 0.421            | 10.3                 | LOS A            | 7.0                               | 55.4          | 0.68        | 0.59                           | 51.1                  |
| 3                                                                                            | R2     | 35                          | 15.0 | 0.207            | 34.6                 | LOS C            | 1.0                               | 8.0           | 0.95        | 0.72                           | 37.4                  |
| Approach                                                                                     |        | 781                         | 15.0 | 0.421            | 11.7                 | LOS A            | 7.0                               | 55.4          | 0.69        | 0.60                           | 50.2                  |
| East: RoadName                                                                               |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
| 4                                                                                            | L2     | 11                          | 15.0 | 0.075            | 33.8                 | LOS C            | 0.4                               | 2.8           | 0.93        | 0.67                           | 38.0                  |
| 5                                                                                            | T1     | 2                           | 15.0 | 0.075            | 28.1                 | LOS B            | 0.4                               | 2.8           | 0.93        | 0.67                           | 39.1                  |
| 6                                                                                            | R2     | 15                          | 15.0 | 0.081            | 33.7                 | LOS C            | 0.4                               | 3.3           | 0.93        | 0.68                           | 37.7                  |
| Approach                                                                                     |        | 27                          | 15.0 | 0.081            | 33.3                 | LOS C            | 0.4                               | 3.3           | 0.93        | 0.68                           | 38.0                  |
| North: North South Link Rd                                                                   |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
| 7                                                                                            | L2     | 79                          | 15.0 | 0.724            | 19.5                 | LOS B            | 15.4                              | 121.8         | 0.84        | 0.79                           | 46.9                  |
| 8                                                                                            | T1     | 1188                        | 15.0 | 0.724            | 13.7                 | LOS A            | 15.4                              | 121.8         | 0.84        | 0.78                           | 48.6                  |
| 9                                                                                            | R2     | 29                          | 15.0 | 0.176            | 34.4                 | LOS C            | 0.9                               | 6.7           | 0.95        | 0.71                           | 37.4                  |
| Approach                                                                                     |        | 1297                        | 15.0 | 0.724            | 14.5                 | LOS A            | 15.4                              | 121.8         | 0.84        | 0.78                           | 48.3                  |
| West: Lockwood Road                                                                          |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
| 10                                                                                           | L2     | 9                           | 15.0 | 0.062            | 33.7                 | LOS C            | 0.3                               | 2.3           | 0.93        | 0.67                           | 37.9                  |
| 11                                                                                           | T1     | 1                           | 15.0 | 0.062            | 28.0                 | LOS B            | 0.3                               | 2.3           | 0.93        | 0.67                           | 38.9                  |
| 12                                                                                           | R2     | 21                          | 15.0 | 0.117            | 33.9                 | LOS C            | 0.6                               | 4.7           | 0.94        | 0.70                           | 37.6                  |
| Approach                                                                                     |        | 32                          | 15.0 | 0.117            | 33.7                 | LOS C            | 0.6                               | 4.7           | 0.94        | 0.69                           | 37.8                  |
| All Vehicles                                                                                 |        | 2137                        | 15.0 | 0.724            | 14.0                 | LOS A            | 15.4                              | 121.8         | 0.79        | 0.71                           | 48.6                  |
| Level of Service (LOS) Method: Delay (RTA NSW)                                               |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
| Vehicle movement LOS values are based on average delay per movement                          |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
| Intersection and Approach LOS values are based on average delay for all vehicle movements.   |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
| SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.                  |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
| Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).                                       |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |
| HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation |        |                             |      |                  |                      |                  |                                   |               |             |                                |                       |

## 2026 AM – the WNSLR / Oakdale West Access Road intersection

### MOVEMENT SUMMARY

**Site: 2026AM\_Estate Road No. 2 / North South Link Rd**

Lockwood Road Base AM

Signals - Fixed Time Isolated Cycle Time = 50 seconds (Practical Cycle Time)

| Movement Performance - Vehicles |        |                                |         |                  |                         |                     |                                      |               |                 |                                   |                          |
|---------------------------------|--------|--------------------------------|---------|------------------|-------------------------|---------------------|--------------------------------------|---------------|-----------------|-----------------------------------|--------------------------|
| Mov ID                          | OD Mov | Demand Flows<br>Total<br>veh/h | HV<br>% | Deg. Satn<br>v/c | Average<br>Delay<br>sec | Level of<br>Service | 95% Back of Queue<br>Vehicles<br>veh | Distance<br>m | Prop.<br>Queued | Effective<br>Stop Rate<br>per veh | Average<br>Speed<br>km/h |
| South: North South Link Rd      |        |                                |         |                  |                         |                     |                                      |               |                 |                                   |                          |
| 1                               | L2     | 100                            | 15.0    | 0.704            | 23.7                    | LOS B               | 9.3                                  | 73.1          | 0.93            | 0.86                              | 44.1                     |
| 2                               | T1     | 695                            | 15.0    | 0.704            | 18.0                    | LOS B               | 9.4                                  | 74.1          | 0.93            | 0.86                              | 45.9                     |
| Approach                        |        | 795                            | 15.0    | 0.704            | 18.7                    | LOS B               | 9.4                                  | 74.1          | 0.93            | 0.86                              | 45.7                     |
| North: North South Link Rd      |        |                                |         |                  |                         |                     |                                      |               |                 |                                   |                          |
| 8                               | T1     | 967                            | 15.0    | 0.425            | 4.8                     | LOS A               | 5.9                                  | 46.6          | 0.53            | 0.47                              | 55.6                     |
| 9                               | R2     | 249                            | 15.0    | 0.743            | 29.5                    | LOS C               | 6.5                                  | 51.6          | 0.99            | 0.91                              | 39.2                     |
| Approach                        |        | 1217                           | 15.0    | 0.743            | 9.9                     | LOS A               | 6.5                                  | 51.6          | 0.62            | 0.56                              | 51.2                     |
| West: Estate Road No.2          |        |                                |         |                  |                         |                     |                                      |               |                 |                                   |                          |
| 10                              | L2     | 74                             | 15.0    | 0.307            | 24.3                    | LOS B               | 2.3                                  | 18.3          | 0.88            | 0.76                              | 41.7                     |
| 12                              | R2     | 34                             | 15.0    | 0.307            | 24.3                    | LOS B               | 2.3                                  | 18.3          | 0.88            | 0.76                              | 41.6                     |
| Approach                        |        | 107                            | 15.0    | 0.307            | 24.3                    | LOS B               | 2.3                                  | 18.3          | 0.88            | 0.76                              | 41.7                     |
| All Vehicles                    |        | 2119                           | 15.0    | 0.748            | 13.9                    | LOS A               | 9.4                                  | 74.1          | 0.75            | 0.68                              | 48.4                     |

Level of Service (LOS) Method: Delay (RTA NSW).

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

Intersection and Approach LOS values are based on average delay for all vehicle movements.

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

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

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

## 2026 AM – the WNSLR / SLR intersection

### MOVEMENT SUMMARY

**Site: 2026AM\_Southern Link Road -NorthSouth Link Rd**

Lockwood Road Base AM

Signals - Fixed Time Isolated Cycle Time = 90 seconds (Optimum Cycle Time - Minimum Delay)

| Movement Performance - Vehicles |        |                                |         |                  |                         |                     |                                      |               |                 |                                   |                          |
|---------------------------------|--------|--------------------------------|---------|------------------|-------------------------|---------------------|--------------------------------------|---------------|-----------------|-----------------------------------|--------------------------|
| Mov ID                          | OD Mov | Demand Flows<br>Total<br>veh/h | HV<br>% | Deg. Satn<br>v/c | Average<br>Delay<br>sec | Level of<br>Service | 95% Back of Queue<br>Vehicles<br>veh | Distance<br>m | Prop.<br>Queued | Effective<br>Stop Rate<br>per veh | Average<br>Speed<br>km/h |
| South: RoadName                 |        |                                |         |                  |                         |                     |                                      |               |                 |                                   |                          |
| 1                               | L2     | 4                              | 15.0    | 0.044            | 28.5                    | LOS C               | 0.2                                  | 1.6           | 0.92            | 0.64                              | 41.4                     |
| 2                               | T1     | 3                              | 15.0    | 0.044            | 22.7                    | LOS B               | 0.2                                  | 1.6           | 0.92            | 0.64                              | 42.2                     |
| 3                               | R2     | 3                              | 15.0    | 0.028            | 50.0                    | LOS D               | 0.1                                  | 1.1           | 0.96            | 0.63                              | 32.5                     |
| Approach                        |        | 11                             | 15.0    | 0.044            | 33.2                    | LOS C               | 0.2                                  | 1.6           | 0.93            | 0.63                              | 38.5                     |
| East: Southern Link Road        |        |                                |         |                  |                         |                     |                                      |               |                 |                                   |                          |
| 4                               | L2     | 12                             | 15.0    | 0.009            | 6.3                     | LOS A               | 0.0                                  | 0.3           | 0.15            | 0.57                              | 53.2                     |
| 5                               | T1     | 329                            | 15.0    | 0.288            | 24.7                    | LOS B               | 5.4                                  | 43.0          | 0.79            | 0.65                              | 42.8                     |
| 6                               | R2     | 148                            | 15.0    | 0.796            | 54.1                    | LOS D               | 7.1                                  | 56.5          | 1.00            | 0.93                              | 31.4                     |
| Approach                        |        | 489                            | 15.0    | 0.796            | 33.2                    | LOS C               | 7.1                                  | 56.5          | 0.84            | 0.73                              | 38.7                     |
| North: North South Link Rd      |        |                                |         |                  |                         |                     |                                      |               |                 |                                   |                          |
| 7                               | L2     | 377                            | 15.0    | 0.398            | 11.8                    | LOS A               | 6.7                                  | 53.3          | 0.52            | 0.72                              | 49.3                     |
| 8                               | T1     | 23                             | 15.0    | 0.056            | 29.0                    | LOS C               | 0.6                                  | 5.3           | 0.81            | 0.59                              | 40.6                     |
| 9                               | R2     | 602                            | 15.0    | 0.769            | 44.4                    | LOS D               | 13.4                                 | 106.2         | 0.99            | 0.90                              | 34.2                     |
| Approach                        |        | 1002                           | 15.0    | 0.769            | 31.8                    | LOS C               | 13.4                                 | 106.2         | 0.81            | 0.83                              | 38.9                     |
| West: Southern Link Road        |        |                                |         |                  |                         |                     |                                      |               |                 |                                   |                          |
| 10                              | L2     | 643                            | 15.0    | 0.485            | 7.8                     | LOS A               | 6.6                                  | 52.5          | 0.37            | 0.67                              | 52.1                     |
| 11                              | T1     | 899                            | 15.0    | 0.785            | 33.3                    | LOS C               | 19.3                                 | 152.9         | 0.97            | 0.92                              | 38.9                     |
| 12                              | R2     | 15                             | 15.0    | 0.079            | 45.7                    | LOS D               | 0.6                                  | 4.8           | 0.93            | 0.69                              | 33.5                     |
| Approach                        |        | 1557                           | 15.0    | 0.785            | 22.9                    | LOS B               | 19.3                                 | 152.9         | 0.72            | 0.81                              | 43.4                     |
| All Vehicles                    |        | 3059                           | 15.0    | 0.796            | 27.5                    | LOS B               | 19.3                                 | 152.9         | 0.77            | 0.80                              | 41.0                     |

Level of Service (LOS) Method: Delay (RTA NSW).

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

Intersection and Approach LOS values are based on average delay for all vehicle movements.

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

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

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

## 2026 PM – the WNSLR / Lenore Drive intersection– Preliminary layout

| MOVEMENT SUMMARY                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |                                |      |                  |                         |                     |                                      |               |              |                                   |                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------------------------|------|------------------|-------------------------|---------------------|--------------------------------------|---------------|--------------|-----------------------------------|--------------------------|
| Site: 2026PM_Leonore Drive / NorthSouth Link Rd                                                                                                                                                                                                                                                                                                                                                                                                                 |        |                                |      |                  |                         |                     |                                      |               |              |                                   |                          |
| Lockwood Road Base AM                                                                                                                                                                                                                                                                                                                                                                                                                                           |        |                                |      |                  |                         |                     |                                      |               |              |                                   |                          |
| Signals - Fixed Time Isolated Cycle Time = 85 seconds (Optimum Cycle Time - Minimum Delay)                                                                                                                                                                                                                                                                                                                                                                      |        |                                |      |                  |                         |                     |                                      |               |              |                                   |                          |
| Movement Performance - Vehicles                                                                                                                                                                                                                                                                                                                                                                                                                                 |        |                                |      |                  |                         |                     |                                      |               |              |                                   |                          |
| Mov ID                                                                                                                                                                                                                                                                                                                                                                                                                                                          | OD Mov | Demand Flows<br>Total<br>veh/h | HV % | Deg. Satn<br>w/c | Average<br>Delay<br>sec | Level of<br>Service | 95% Back of Queue<br>Vehicles<br>veh | Distance<br>m | Prop. Queued | Effective<br>Stop Rate<br>per veh | Average<br>Speed<br>km/h |
| South: North South Link Rd                                                                                                                                                                                                                                                                                                                                                                                                                                      |        |                                |      |                  |                         |                     |                                      |               |              |                                   |                          |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                               | L2     | 597                            | 15.0 | 0.542            | 11.5                    | LOS A               | 9.3                                  | 73.4          | 0.51         | 0.75                              | 57.1                     |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                               | T1     | 4                              | 15.0 | 0.787            | 31.8                    | LOS C               | 17.9                                 | 141.7         | 0.87         | 0.91                              | 43.3                     |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                               | R2     | 866                            | 15.0 | 0.787            | 39.3                    | LOS C               | 17.9                                 | 141.7         | 0.97         | 0.91                              | 39.9                     |
| Approach                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        | 1467                           | 15.0 | 0.787            | 28.0                    | LOS B               | 17.9                                 | 141.7         | 0.78         | 0.84                              | 45.5                     |
| East: Leonore Drive                                                                                                                                                                                                                                                                                                                                                                                                                                             |        |                                |      |                  |                         |                     |                                      |               |              |                                   |                          |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                               | L2     | 641                            | 15.0 | 0.500            | 9.9                     | LOS A               | 7.1                                  | 56.1          | 0.41         | 0.73                              | 58.6                     |
| 5                                                                                                                                                                                                                                                                                                                                                                                                                                                               | T1     | 566                            | 15.0 | 0.797            | 40.0                    | LOS C               | 12.4                                 | 96.2          | 1.00         | 0.93                              | 42.8                     |
| 6                                                                                                                                                                                                                                                                                                                                                                                                                                                               | R2     | 14                             | 15.0 | 0.116            | 49.7                    | LOS D               | 0.6                                  | 4.5           | 0.96         | 0.69                              | 35.6                     |
| Approach                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        | 1221                           | 15.0 | 0.797            | 24.3                    | LOS B               | 12.4                                 | 96.2          | 0.69         | 0.82                              | 49.7                     |
| North: North South Link Rd                                                                                                                                                                                                                                                                                                                                                                                                                                      |        |                                |      |                  |                         |                     |                                      |               |              |                                   |                          |
| 7                                                                                                                                                                                                                                                                                                                                                                                                                                                               | L2     | 71                             | 15.0 | 0.346            | 24.6                    | LOS B               | 2.0                                  | 15.8          | 0.89         | 0.75                              | 48.7                     |
| 8                                                                                                                                                                                                                                                                                                                                                                                                                                                               | T1     | 54                             | 15.0 | 0.346            | 33.6                    | LOS C               | 2.0                                  | 15.8          | 0.95         | 0.74                              | 44.5                     |
| 9                                                                                                                                                                                                                                                                                                                                                                                                                                                               | R2     | 9                              | 15.0 | 0.346            | 51.1                    | LOS D               | 1.8                                  | 14.4          | 0.99         | 0.73                              | 37.3                     |
| Approach                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        | 134                            | 15.0 | 0.346            | 30.1                    | LOS C               | 2.0                                  | 15.8          | 0.92         | 0.74                              | 45.9                     |
| West: Leonore Drive                                                                                                                                                                                                                                                                                                                                                                                                                                             |        |                                |      |                  |                         |                     |                                      |               |              |                                   |                          |
| 10                                                                                                                                                                                                                                                                                                                                                                                                                                                              | L2     | 2                              | 15.0 | 0.002            | 8.0                     | LOS A               | 0.0                                  | 0.0           | 0.14         | 0.61                              | 60.4                     |
| 11                                                                                                                                                                                                                                                                                                                                                                                                                                                              | T1     | 123                            | 15.0 | 0.140            | 27.2                    | LOS B               | 2.0                                  | 15.9          | 0.82         | 0.63                              | 50.2                     |
| 12                                                                                                                                                                                                                                                                                                                                                                                                                                                              | R2     | 146                            | 15.0 | 0.741            | 51.0                    | LOS D               | 6.5                                  | 51.2          | 1.00         | 0.87                              | 35.3                     |
| Approach                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        | 272                            | 15.0 | 0.741            | 39.6                    | LOS C               | 6.5                                  | 51.2          | 0.91         | 0.76                              | 40.9                     |
| All Vehicles                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        | 3094                           | 15.0 | 0.797            | 27.7                    | LOS B               | 17.9                                 | 141.7         | 0.76         | 0.82                              | 46.6                     |
| Level of Service (LOS) Method: Delay (RTA NSW).<br>Vehicle movement LOS values are based on average delay per movement.<br>Intersection and Approach LOS values are based on average delay for all vehicle movements.<br>SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.<br>Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).<br>HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation. |        |                                |      |                  |                         |                     |                                      |               |              |                                   |                          |

## 2026 PM – the WNSLR / Lockwood Road intersection

| MOVEMENT SUMMARY                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |                                |      |                  |                         |                     |                                      |               |              |                                   |                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------------------------|------|------------------|-------------------------|---------------------|--------------------------------------|---------------|--------------|-----------------------------------|--------------------------|
| Site: 2026PM_Lockwood Rd / North South Link Rd                                                                                                                                                                                                                                                                                                                                                                                                                  |        |                                |      |                  |                         |                     |                                      |               |              |                                   |                          |
| Lockwood Road Base AM                                                                                                                                                                                                                                                                                                                                                                                                                                           |        |                                |      |                  |                         |                     |                                      |               |              |                                   |                          |
| Signals - Fixed Time Isolated Cycle Time = 60 seconds (Practical Cycle Time)                                                                                                                                                                                                                                                                                                                                                                                    |        |                                |      |                  |                         |                     |                                      |               |              |                                   |                          |
| Movement Performance - Vehicles                                                                                                                                                                                                                                                                                                                                                                                                                                 |        |                                |      |                  |                         |                     |                                      |               |              |                                   |                          |
| Mov ID                                                                                                                                                                                                                                                                                                                                                                                                                                                          | OD Mov | Demand Flows<br>Total<br>veh/h | HV % | Deg. Satn<br>w/c | Average<br>Delay<br>sec | Level of<br>Service | 95% Back of Queue<br>Vehicles<br>veh | Distance<br>m | Prop. Queued | Effective<br>Stop Rate<br>per veh | Average<br>Speed<br>km/h |
| South: North South Link Rd                                                                                                                                                                                                                                                                                                                                                                                                                                      |        |                                |      |                  |                         |                     |                                      |               |              |                                   |                          |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                               | L2     | 43                             | 15.0 | 0.765            | 21.2                    | LOS B               | 17.6                                 | 139.0         | 0.87         | 0.84                              | 46.1                     |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                               | T1     | 1311                           | 15.0 | 0.765            | 15.4                    | LOS B               | 17.6                                 | 139.0         | 0.87         | 0.84                              | 47.8                     |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                               | R2     | 4                              | 15.0 | 0.025            | 33.3                    | LOS C               | 0.1                                  | 0.9           | 0.92         | 0.64                              | 37.9                     |
| Approach                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        | 1358                           | 15.0 | 0.765            | 15.7                    | LOS B               | 17.6                                 | 139.0         | 0.87         | 0.84                              | 47.7                     |
| East: RoadName                                                                                                                                                                                                                                                                                                                                                                                                                                                  |        |                                |      |                  |                         |                     |                                      |               |              |                                   |                          |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                               | L2     | 35                             | 15.0 | 0.219            | 34.6                    | LOS C               | 1.1                                  | 8.5           | 0.95         | 0.72                              | 37.5                     |
| 5                                                                                                                                                                                                                                                                                                                                                                                                                                                               | T1     | 2                              | 15.0 | 0.219            | 28.9                    | LOS C               | 1.1                                  | 8.5           | 0.95         | 0.72                              | 38.5                     |
| 6                                                                                                                                                                                                                                                                                                                                                                                                                                                               | R2     | 81                             | 15.0 | 0.603            | 38.6                    | LOS C               | 2.6                                  | 20.4          | 1.00         | 0.60                              | 35.9                     |
| Approach                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        | 118                            | 15.0 | 0.603            | 37.2                    | LOS C               | 2.6                                  | 20.4          | 0.99         | 0.77                              | 36.4                     |
| North: North South Link Rd                                                                                                                                                                                                                                                                                                                                                                                                                                      |        |                                |      |                  |                         |                     |                                      |               |              |                                   |                          |
| 7                                                                                                                                                                                                                                                                                                                                                                                                                                                               | L2     | 11                             | 15.0 | 0.464            | 16.4                    | LOS B               | 7.9                                  | 62.7          | 0.70         | 0.61                              | 49.2                     |
| 8                                                                                                                                                                                                                                                                                                                                                                                                                                                               | T1     | 813                            | 15.0 | 0.464            | 10.6                    | LOS A               | 7.9                                  | 62.8          | 0.70         | 0.61                              | 51.0                     |
| 9                                                                                                                                                                                                                                                                                                                                                                                                                                                               | R2     | 9                              | 15.0 | 0.056            | 33.6                    | LOS C               | 0.3                                  | 2.1           | 0.93         | 0.67                              | 37.7                     |
| Approach                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        | 833                            | 15.0 | 0.464            | 11.0                    | LOS A               | 7.9                                  | 62.8          | 0.70         | 0.61                              | 50.8                     |
| West: Lockwood Road                                                                                                                                                                                                                                                                                                                                                                                                                                             |        |                                |      |                  |                         |                     |                                      |               |              |                                   |                          |
| 10                                                                                                                                                                                                                                                                                                                                                                                                                                                              | L2     | 75                             | 15.0 | 0.451            | 35.6                    | LOS C               | 2.3                                  | 18.0          | 0.98         | 0.76                              | 37.0                     |
| 11                                                                                                                                                                                                                                                                                                                                                                                                                                                              | T1     | 1                              | 15.0 | 0.451            | 29.9                    | LOS C               | 2.3                                  | 18.0          | 0.98         | 0.76                              | 38.0                     |
| 12                                                                                                                                                                                                                                                                                                                                                                                                                                                              | R2     | 36                             | 15.0 | 0.220            | 35.6                    | LOS C               | 1.1                                  | 8.4           | 0.97         | 0.72                              | 37.0                     |
| Approach                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        | 112                            | 15.0 | 0.451            | 35.6                    | LOS C               | 2.3                                  | 18.0          | 0.98         | 0.75                              | 37.0                     |
| All Vehicles                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        | 2420                           | 15.0 | 0.765            | 16.0                    | LOS B               | 17.6                                 | 139.0         | 0.82         | 0.75                              | 47.3                     |
| Level of Service (LOS) Method: Delay (RTA NSW).<br>Vehicle movement LOS values are based on average delay per movement.<br>Intersection and Approach LOS values are based on average delay for all vehicle movements.<br>SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.<br>Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).<br>HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation. |        |                                |      |                  |                         |                     |                                      |               |              |                                   |                          |

## 2026 PM – the WNSLR / Oakdale West Access Road intersection

### MOVEMENT SUMMARY

**Site: 2026PM\_Estate Road No. 2 / North South Link Rd**

Lockwood Road Base AM

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Practical Cycle Time)

#### Movement Performance - Vehicles

| Mov ID                     | OD Mov | Demand Flows<br>Total<br>veh/h | HV<br>% | Deg. Satn<br>v/c | Average<br>Delay<br>sec | Level of<br>Service | 95% Back of Queue<br>Vehicles<br>veh | Distance<br>m | Prop.<br>Queued | Effective<br>Stop Rate<br>per veh | Average<br>Speed<br>km/h |
|----------------------------|--------|--------------------------------|---------|------------------|-------------------------|---------------------|--------------------------------------|---------------|-----------------|-----------------------------------|--------------------------|
| South: North South Link Rd |        |                                |         |                  |                         |                     |                                      |               |                 |                                   |                          |
| 1                          | L2     | 43                             | 15.0    | 0.764            | 25.6                    | LOS B               | 16.6                                 | 130.8         | 0.93            | 0.91                              | 43.6                     |
| 2                          | T1     | 1115                           | 15.0    | 0.784            | 19.9                    | LOS B               | 16.6                                 | 131.3         | 0.93            | 0.91                              | 45.0                     |
| Approach                   |        | 1158                           | 15.0    | 0.784            | 20.1                    | LOS B               | 16.6                                 | 131.3         | 0.93            | 0.91                              | 45.0                     |
| North: North South Link Rd |        |                                |         |                  |                         |                     |                                      |               |                 |                                   |                          |
| 8                          | T1     | 835                            | 15.0    | 0.381            | 6.2                     | LOS A               | 6.1                                  | 48.6          | 0.54            | 0.47                              | 54.4                     |
| 9                          | R2     | 47                             | 15.0    | 0.282            | 34.9                    | LOS C               | 1.4                                  | 11.0          | 0.96            | 0.74                              | 37.1                     |
| Approach                   |        | 882                            | 15.0    | 0.381            | 7.8                     | LOS A               | 6.1                                  | 48.6          | 0.56            | 0.48                              | 53.1                     |
| West: Estate Rd No.2       |        |                                |         |                  |                         |                     |                                      |               |                 |                                   |                          |
| 10                         | L2     | 238                            | 15.0    | 0.789            | 32.7                    | LOS C               | 10.7                                 | 84.3          | 0.99            | 0.94                              | 38.1                     |
| 12                         | R2     | 101                            | 15.0    | 0.789            | 32.6                    | LOS C               | 10.7                                 | 84.3          | 0.99            | 0.94                              | 38.0                     |
| Approach                   |        | 339                            | 15.0    | 0.789            | 32.6                    | LOS C               | 10.7                                 | 84.3          | 0.99            | 0.94                              | 38.1                     |
| All Vehicles               |        | 2379                           | 15.0    | 0.789            | 17.3                    | LOS B               | 16.6                                 | 131.3         | 0.80            | 0.76                              | 46.4                     |

Level of Service (LOS) Method: Delay (RTA NSW)

Vehicle movement LOS values are based on average delay per movement

Intersection and Approach LOS values are based on average delay for all vehicle movements.

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

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

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

## 2026 PM – the WNSLR / SLR intersection

### MOVEMENT SUMMARY

**Site: 2026PM\_Southern Link Road -NorthSouth Link Rd**

Lockwood Road Base AM

Signals - Fixed Time Isolated Cycle Time = 115 seconds (Optimum Cycle Time - Minimum Delay)

#### Movement Performance - Vehicles

| Mov ID                     | OD Mov | Demand Flows<br>Total<br>veh/h | HV<br>% | Deg. Satn<br>v/c | Average<br>Delay<br>sec | Level of<br>Service | 95% Back of Queue<br>Vehicles<br>veh | Distance<br>m | Prop.<br>Queued | Effective<br>Stop Rate<br>per veh | Average<br>Speed<br>km/h |
|----------------------------|--------|--------------------------------|---------|------------------|-------------------------|---------------------|--------------------------------------|---------------|-----------------|-----------------------------------|--------------------------|
| South: North South Link Rd |        |                                |         |                  |                         |                     |                                      |               |                 |                                   |                          |
| 1                          | L2     | 26                             | 15.0    | 0.187            | 32.6                    | LOS C               | 1.1                                  | 8.6           | 0.93            | 0.71                              | 39.1                     |
| 2                          | T1     | 6                              | 15.0    | 0.187            | 26.9                    | LOS B               | 1.1                                  | 8.6           | 0.93            | 0.71                              | 39.8                     |
| 3                          | R2     | 11                             | 15.0    | 0.120            | 65.2                    | LOS E               | 0.6                                  | 4.7           | 0.98            | 0.68                              | 28.6                     |
| Approach                   |        | 45                             | 15.0    | 0.187            | 39.1                    | LOS C               | 1.1                                  | 8.6           | 0.94            | 0.70                              | 36.2                     |
| East: Southern Link Road   |        |                                |         |                  |                         |                     |                                      |               |                 |                                   |                          |
| 4                          | L2     | 4                              | 15.0    | 0.003            | 6.1                     | LOS A               | 0.0                                  | 0.1           | 0.11            | 0.56                              | 53.3                     |
| 5                          | T1     | 1067                           | 15.0    | 0.796            | 33.7                    | LOS C               | 29.5                                 | 232.7         | 0.91            | 0.85                              | 38.8                     |
| 6                          | R2     | 331                            | 15.0    | 0.809            | 55.3                    | LOS D               | 19.0                                 | 150.3         | 1.00            | 0.92                              | 31.1                     |
| Approach                   |        | 1402                           | 15.0    | 0.809            | 38.7                    | LOS C               | 29.5                                 | 232.7         | 0.93            | 0.87                              | 36.7                     |
| North: North South Link Rd |        |                                |         |                  |                         |                     |                                      |               |                 |                                   |                          |
| 7                          | L2     | 215                            | 15.0    | 0.175            | 7.0                     | LOS A               | 1.7                                  | 13.6          | 0.22            | 0.61                              | 52.7                     |
| 8                          | T1     | 1                              | 15.0    | 0.002            | 32.2                    | LOS C               | 0.0                                  | 0.3           | 0.75            | 0.45                              | 39.4                     |
| 9                          | R2     | 723                            | 15.0    | 0.799            | 52.4                    | LOS D               | 20.3                                 | 160.7         | 0.99            | 0.91                              | 31.9                     |
| Approach                   |        | 939                            | 15.0    | 0.799            | 42.0                    | LOS C               | 20.3                                 | 160.7         | 0.82            | 0.84                              | 35.1                     |
| West: Southern Link Road   |        |                                |         |                  |                         |                     |                                      |               |                 |                                   |                          |
| 10                         | L2     | 823                            | 15.0    | 0.750            | 14.0                    | LOS A               | 23.3                                 | 183.9         | 0.66            | 0.78                              | 47.9                     |
| 11                         | T1     | 298                            | 15.0    | 0.371            | 40.9                    | LOS C               | 7.1                                  | 56.3          | 0.89            | 0.73                              | 36.0                     |
| 12                         | R2     | 2                              | 15.0    | 0.021            | 62.3                    | LOS E               | 0.1                                  | 0.9           | 0.96            | 0.62                              | 29.1                     |
| Approach                   |        | 1123                           | 15.0    | 0.750            | 21.2                    | LOS B               | 23.3                                 | 183.9         | 0.72            | 0.77                              | 44.0                     |
| All Vehicles               |        | 3509                           | 15.0    | 0.809            | 34.0                    | LOS C               | 29.5                                 | 232.7         | 0.83            | 0.83                              | 38.2                     |

Level of Service (LOS) Method: Delay (RTA NSW)

Vehicle movement LOS values are based on average delay per movement

Intersection and Approach LOS values are based on average delay for all vehicle movements.

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

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

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

The results of iterative calculations indicate a somewhat unstable solution. See the Diagnostics section in the Detailed Output report.

## 2036 AM – the WNSLR / Lenore Drive intersection– Preliminary layout

### MOVEMENT SUMMARY

**Site: 2036AM\_Leonore Drive / NorthSouth Link Rd**

Lockwood Road Base AM

Signals - Fixed Time Isolated Cycle Time = 95 seconds (Optimum Cycle Time - Minimum Delay)

#### Movement Performance - Vehicles

| Mov ID                     | OD Mov | Demand Flows<br>Total<br>veh/h | HV<br>% | Req. Satn<br>v/c | Average<br>Delay<br>sec | Level of<br>Service | 95% Back of Queue<br>Vehicles<br>veh | Distance<br>m | Prop. Queued | Effective<br>Stop Rate<br>per veh | Average<br>Speed<br>km/h |
|----------------------------|--------|--------------------------------|---------|------------------|-------------------------|---------------------|--------------------------------------|---------------|--------------|-----------------------------------|--------------------------|
| South: North South Link Rd |        |                                |         |                  |                         |                     |                                      |               |              |                                   |                          |
| 1                          | L2     | 166                            | 15.0    | 0.132            | 8.4                     | LOS A               | 0.9                                  | 7.1           | 0.20         | 0.65                              | 60.1                     |
| 2                          | T1     | 27                             | 15.0    | 1.139            | 189.4                   | LOS F               | 37.3                                 | 295.1         | 1.00         | 1.50                              | 15.2                     |
| 3                          | R2     | 658                            | 15.0    | 1.139            | 196.9                   | LOS F               | 37.3                                 | 295.1         | 1.00         | 1.46                              | 14.7                     |
| Approach                   |        | 852                            | 15.0    | 1.139            | 159.6                   | LOS F               | 37.3                                 | 295.1         | 0.84         | 1.31                              | 17.3                     |
| East: Leonore Drive        |        |                                |         |                  |                         |                     |                                      |               |              |                                   |                          |
| 4                          | L2     | 1101                           | 15.0    | 1.177            | 214.9                   | LOS F               | 135.9                                | 1073.5        | 1.00         | 1.57                              | 13.8                     |
| 5                          | T1     | 169                            | 15.0    | 0.566            | 48.2                    | LOS D               | 4.0                                  | 31.9          | 1.00         | 0.78                              | 39.0                     |
| 6                          | R2     | 36                             | 15.0    | 0.290            | 55.1                    | LOS D               | 1.7                                  | 13.3          | 0.98         | 0.73                              | 33.8                     |
| Approach                   |        | 1306                           | 15.0    | 1.177            | 188.9                   | LOS F               | 135.9                                | 1073.5        | 1.00         | 1.44                              | 15.3                     |
| North: North South Link Rd |        |                                |         |                  |                         |                     |                                      |               |              |                                   |                          |
| 7                          | L2     | 31                             | 15.0    | 0.091            | 19.8                    | LOS B               | 0.6                                  | 4.8           | 0.71         | 0.69                              | 51.3                     |
| 8                          | T1     | 11                             | 15.0    | 0.091            | 35.6                    | LOS C               | 0.6                                  | 4.8           | 0.88         | 0.67                              | 43.1                     |
| 9                          | R2     | 3                              | 15.0    | 0.091            | 55.2                    | LOS D               | 0.5                                  | 3.7           | 0.97         | 0.66                              | 35.6                     |
| Approach                   |        | 44                             | 15.0    | 0.091            | 26.1                    | LOS B               | 0.6                                  | 4.8           | 0.77         | 0.68                              | 47.7                     |
| West: Leonore Drive        |        |                                |         |                  |                         |                     |                                      |               |              |                                   |                          |
| 10                         | L2     | 16                             | 15.0    | 0.012            | 8.2                     | LOS A               | 0.1                                  | 0.5           | 0.17         | 0.63                              | 60.3                     |
| 11                         | T1     | 446                            | 15.0    | 0.291            | 18.8                    | LOS B               | 6.7                                  | 52.9          | 0.69         | 0.58                              | 56.7                     |
| 12                         | R2     | 812                            | 15.0    | 1.149            | 200.1                   | LOS F               | 94.2                                 | 743.9         | 1.00         | 1.44                              | 14.5                     |
| Approach                   |        | 1274                           | 15.0    | 1.149            | 134.2                   | LOS F               | 94.2                                 | 743.9         | 0.88         | 1.13                              | 19.9                     |
| All Vehicles               |        | 3476                           | 15.0    | 1.177            | 159.6                   | LOS F               | 135.9                                | 1073.5        | 0.92         | 1.28                              | 17.4                     |

Level of Service (LOS) Method: Delay (RTA NSW).

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

Intersection and Approach LOS values are based on average delay for all vehicle movements.

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

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

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

## 2036 AM – the WNSLR / Lenore Drive intersection– Proposed layout

### MOVEMENT SUMMARY

**Site: 2036AM\_Leonore Drive / NorthSouth Link Rd\_Dual EB RT+Dual WB LT**

Lockwood Road Base AM

Signals - Fixed Time Isolated Cycle Time = 110 seconds (Optimum Cycle Time - Minimum Delay)

#### Movement Performance - Vehicles

| Mov ID                     | OD Mov | Demand Flows<br>Total<br>veh/h | HV<br>% | Req. Satn<br>v/c | Average<br>Delay<br>sec | Level of<br>Service | 95% Back of Queue<br>Vehicles<br>veh | Distance<br>m | Prop. Queued | Effective<br>Stop Rate<br>per veh | Average<br>Speed<br>km/h |
|----------------------------|--------|--------------------------------|---------|------------------|-------------------------|---------------------|--------------------------------------|---------------|--------------|-----------------------------------|--------------------------|
| South: North South Link Rd |        |                                |         |                  |                         |                     |                                      |               |              |                                   |                          |
| 1                          | L2     | 166                            | 15.0    | 0.128            | 8.3                     | LOS A               | 0.9                                  | 7.2           | 0.17         | 0.65                              | 60.3                     |
| 2                          | T1     | 27                             | 15.0    | 0.723            | 39.7                    | LOS C               | 17.1                                 | 135.3         | 0.96         | 0.86                              | 39.8                     |
| 3                          | R2     | 658                            | 15.0    | 0.723            | 47.3                    | LOS D               | 17.1                                 | 135.3         | 0.96         | 0.86                              | 37.0                     |
| Approach                   |        | 852                            | 15.0    | 0.723            | 39.5                    | LOS C               | 17.1                                 | 135.3         | 0.81         | 0.82                              | 40.1                     |
| East: Leonore Drive        |        |                                |         |                  |                         |                     |                                      |               |              |                                   |                          |
| 4                          | L2     | 1101                           | 15.0    | 0.785            | 27.7                    | LOS B               | 19.7                                 | 155.5         | 0.93         | 0.88                              | 45.8                     |
| 5                          | T1     | 169                            | 15.0    | 0.350            | 47.7                    | LOS D               | 4.2                                  | 33.6          | 0.95         | 0.74                              | 39.2                     |
| 6                          | R2     | 36                             | 15.0    | 0.391            | 65.6                    | LOS E               | 2.0                                  | 15.8          | 1.00         | 0.73                              | 30.8                     |
| Approach                   |        | 1306                           | 15.0    | 0.785            | 31.3                    | LOS C               | 19.7                                 | 155.5         | 0.93         | 0.86                              | 44.3                     |
| North: North South Link Rd |        |                                |         |                  |                         |                     |                                      |               |              |                                   |                          |
| 7                          | L2     | 31                             | 15.0    | 0.089            | 26.0                    | LOS B               | 0.9                                  | 7.1           | 0.80         | 0.71                              | 47.4                     |
| 8                          | T1     | 11                             | 15.0    | 0.089            | 37.6                    | LOS C               | 0.9                                  | 7.1           | 0.89         | 0.68                              | 41.9                     |
| 9                          | R2     | 3                              | 15.0    | 0.089            | 63.7                    | LOS E               | 0.5                                  | 3.6           | 0.98         | 0.66                              | 32.9                     |
| Approach                   |        | 44                             | 15.0    | 0.089            | 31.5                    | LOS C               | 0.9                                  | 7.1           | 0.83         | 0.70                              | 44.6                     |
| West: Leonore Drive        |        |                                |         |                  |                         |                     |                                      |               |              |                                   |                          |
| 10                         | L2     | 16                             | 15.0    | 0.012            | 8.1                     | LOS A               | 0.1                                  | 0.5           | 0.14         | 0.63                              | 60.4                     |
| 11                         | T1     | 446                            | 15.0    | 0.321            | 25.0                    | LOS B               | 8.3                                  | 65.6          | 0.74         | 0.63                              | 51.8                     |
| 12                         | R2     | 812                            | 15.0    | 0.783            | 47.9                    | LOS D               | 21.1                                 | 166.5         | 0.97         | 0.89                              | 36.3                     |
| Approach                   |        | 1274                           | 15.0    | 0.783            | 39.4                    | LOS C               | 21.1                                 | 166.5         | 0.88         | 0.80                              | 40.8                     |
| All Vehicles               |        | 3476                           | 15.0    | 0.785            | 36.3                    | LOS C               | 21.1                                 | 166.5         | 0.88         | 0.82                              | 41.9                     |

Level of Service (LOS) Method: Delay (RTA NSW).

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

Intersection and Approach LOS values are based on average delay for all vehicle movements.

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

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

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

## 2036 AM – the WNSLR / Lockwood Road intersection

| MOVEMENT SUMMARY                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |                          |      |               |                   |                  |                                |            |              |                             |                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------------------|------|---------------|-------------------|------------------|--------------------------------|------------|--------------|-----------------------------|--------------------|
| <b>Site: 2036AM_Lockwood Rd / North South Link Rd</b><br>Lockwood Road Base AM<br>Signals - Fixed Time Isolated Cycle Time = 80 seconds (Practical Cycle Time)                                                                                                                                                                                                                                                                                                  |        |                          |      |               |                   |                  |                                |            |              |                             |                    |
| Movement Performance - Vehicles                                                                                                                                                                                                                                                                                                                                                                                                                                 |        |                          |      |               |                   |                  |                                |            |              |                             |                    |
| Mov ID                                                                                                                                                                                                                                                                                                                                                                                                                                                          | OD Mov | Demand Flows Total veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
| South: North South Link Rd                                                                                                                                                                                                                                                                                                                                                                                                                                      |        |                          |      |               |                   |                  |                                |            |              |                             |                    |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                               | L2     | 49                       | 15.0 | 0.392         | 13.7              | LOS A            | 8.3                            | 65.9       | 0.53         | 0.50                        | 50.7               |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                               | T1     | 819                      | 15.0 | 0.392         | 8.0               | LOS A            | 8.4                            | 66.4       | 0.53         | 0.48                        | 52.8               |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                               | R2     | 27                       | 15.0 | 0.218         | 46.0              | LOS D            | 1.1                            | 8.5        | 0.97         | 0.71                        | 33.4               |
| Approach                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        | 896                      | 15.0 | 0.392         | 9.5               | LOS A            | 8.4                            | 66.4       | 0.55         | 0.49                        | 51.8               |
| East: RoadName                                                                                                                                                                                                                                                                                                                                                                                                                                                  |        |                          |      |               |                   |                  |                                |            |              |                             |                    |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                               | L2     | 8                        | 15.0 | 0.075         | 45.0              | LOS D            | 0.4                            | 2.9        | 0.96         | 0.67                        | 34.0               |
| 5                                                                                                                                                                                                                                                                                                                                                                                                                                                               | T1     | 1                        | 15.0 | 0.075         | 39.3              | LOS C            | 0.4                            | 2.9        | 0.96         | 0.67                        | 34.8               |
| 6                                                                                                                                                                                                                                                                                                                                                                                                                                                               | R2     | 17                       | 15.0 | 0.129         | 45.4              | LOS D            | 0.7                            | 5.2        | 0.96         | 0.69                        | 33.7               |
| Approach                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        | 26                       | 15.0 | 0.129         | 45.0              | LOS D            | 0.7                            | 5.2        | 0.96         | 0.68                        | 33.8               |
| North: North South Link Rd                                                                                                                                                                                                                                                                                                                                                                                                                                      |        |                          |      |               |                   |                  |                                |            |              |                             |                    |
| 7                                                                                                                                                                                                                                                                                                                                                                                                                                                               | L2     | 62                       | 15.0 | 0.868         | 27.2              | LOS B            | 37.2                           | 293.7      | 0.89         | 0.93                        | 42.8               |
| 8                                                                                                                                                                                                                                                                                                                                                                                                                                                               | T1     | 1844                     | 15.0 | 0.868         | 21.4              | LOS B            | 37.2                           | 293.7      | 0.88         | 0.92                        | 44.3               |
| 9                                                                                                                                                                                                                                                                                                                                                                                                                                                               | R2     | 24                       | 15.0 | 0.192         | 45.9              | LOS D            | 1.0                            | 7.5        | 0.97         | 0.71                        | 33.5               |
| Approach                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        | 1931                     | 15.0 | 0.868         | 21.9              | LOS B            | 37.2                           | 293.7      | 0.88         | 0.92                        | 44.0               |
| West: Lockwood Road                                                                                                                                                                                                                                                                                                                                                                                                                                             |        |                          |      |               |                   |                  |                                |            |              |                             |                    |
| 10                                                                                                                                                                                                                                                                                                                                                                                                                                                              | L2     | 15                       | 15.0 | 0.125         | 45.4              | LOS D            | 0.6                            | 4.9        | 0.96         | 0.69                        | 33.7               |
| 11                                                                                                                                                                                                                                                                                                                                                                                                                                                              | T1     | 1                        | 15.0 | 0.125         | 39.7              | LOS C            | 0.6                            | 4.9        | 0.96         | 0.69                        | 34.6               |
| 12                                                                                                                                                                                                                                                                                                                                                                                                                                                              | R2     | 77                       | 15.0 | 0.568         | 47.7              | LOS D            | 3.2                            | 25.0       | 1.00         | 0.78                        | 33.0               |
| Approach                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        | 93                       | 15.0 | 0.568         | 47.3              | LOS D            | 3.2                            | 25.0       | 0.99         | 0.77                        | 33.1               |
| All Vehicles                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        | 2945                     | 15.0 | 0.868         | 19.1              | LOS B            | 37.2                           | 293.7      | 0.78         | 0.78                        | 45.5               |
| Level of Service (LOS) Method: Delay (RTA NSW).<br>Vehicle movement LOS values are based on average delay per movement.<br>Intersection and Approach LOS values are based on average delay for all vehicle movements.<br>SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.<br>Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).<br>HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation. |        |                          |      |               |                   |                  |                                |            |              |                             |                    |

## 2036 AM – the WNSLR / Oakdale West Access Road intersection

| MOVEMENT SUMMARY                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |                          |      |               |                   |                  |                                |            |              |                             |                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------------------|------|---------------|-------------------|------------------|--------------------------------|------------|--------------|-----------------------------|--------------------|
| <b>Site: 2036AM_Estate Road No. 2 / North South Link Rd</b><br>Lockwood Road Base AM<br>Signals - Fixed Time Isolated Cycle Time = 50 seconds (Practical Cycle Time)                                                                                                                                                                                                                                                                                            |        |                          |      |               |                   |                  |                                |            |              |                             |                    |
| Movement Performance - Vehicles                                                                                                                                                                                                                                                                                                                                                                                                                                 |        |                          |      |               |                   |                  |                                |            |              |                             |                    |
| Mov ID                                                                                                                                                                                                                                                                                                                                                                                                                                                          | OD Mov | Demand Flows Total veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
| South: North South Link Rd                                                                                                                                                                                                                                                                                                                                                                                                                                      |        |                          |      |               |                   |                  |                                |            |              |                             |                    |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                               | L2     | 20                       | 15.0 | 0.786         | 27.2              | LOS B            | 10.9                           | 86.0       | 0.97         | 0.96                        | 42.8               |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                               | T1     | 817                      | 15.0 | 0.786         | 21.5              | LOS B            | 10.9                           | 86.2       | 0.97         | 0.96                        | 44.2               |
| Approach                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        | 837                      | 15.0 | 0.786         | 21.6              | LOS B            | 10.9                           | 86.2       | 0.97         | 0.96                        | 44.2               |
| North: North South Link Rd                                                                                                                                                                                                                                                                                                                                                                                                                                      |        |                          |      |               |                   |                  |                                |            |              |                             |                    |
| 8                                                                                                                                                                                                                                                                                                                                                                                                                                                               | T1     | 1647                     | 15.0 | 0.763         | 8.8               | LOS A            | 16.6                           | 131.2      | 0.73         | 0.71                        | 52.4               |
| 9                                                                                                                                                                                                                                                                                                                                                                                                                                                               | R2     | 278                      | 15.0 | 0.753         | 29.0              | LOS C            | 7.3                            | 57.4       | 0.99         | 0.92                        | 39.4               |
| Approach                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        | 1925                     | 15.0 | 0.763         | 11.7              | LOS A            | 16.6                           | 131.2      | 0.77         | 0.74                        | 50.0               |
| West: Oakdale West Access Road                                                                                                                                                                                                                                                                                                                                                                                                                                  |        |                          |      |               |                   |                  |                                |            |              |                             |                    |
| 10                                                                                                                                                                                                                                                                                                                                                                                                                                                              | L2     | 76                       | 15.0 | 0.484         | 27.0              | LOS B            | 3.3                            | 25.9       | 0.94         | 0.79                        | 40.5               |
| 12                                                                                                                                                                                                                                                                                                                                                                                                                                                              | R2     | 63                       | 15.0 | 0.484         | 27.0              | LOS B            | 3.3                            | 25.9       | 0.94         | 0.79                        | 40.3               |
| Approach                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        | 139                      | 15.0 | 0.484         | 27.0              | LOS B            | 3.3                            | 25.9       | 0.94         | 0.79                        | 40.4               |
| All Vehicles                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        | 2901                     | 15.0 | 0.786         | 15.3              | LOS B            | 16.6                           | 131.2      | 0.83         | 0.81                        | 47.7               |
| Level of Service (LOS) Method: Delay (RTA NSW).<br>Vehicle movement LOS values are based on average delay per movement.<br>Intersection and Approach LOS values are based on average delay for all vehicle movements.<br>SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.<br>Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).<br>HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation. |        |                          |      |               |                   |                  |                                |            |              |                             |                    |

## 2036 AM – the WNSLR / SLR intersection

### MOVEMENT SUMMARY

 Site: 2036AM\_Southern Link Road -NorthSouth Link Rd

Lockwood Road Base AM

Signals - Fixed Time Isolated Cycle Time = 130 seconds (Optimum Cycle Time - Minimum Delay)

| Movement Performance - Vehicles |        |                                |      |                 |                         |                     |                                      |               |              |                                   |                          |
|---------------------------------|--------|--------------------------------|------|-----------------|-------------------------|---------------------|--------------------------------------|---------------|--------------|-----------------------------------|--------------------------|
| Mov ID                          | OD Mov | Demand Flows<br>Total<br>veh/h | HV % | Reg Satn<br>v/c | Average<br>Delay<br>sec | Level of<br>Service | 95% Back in Queue<br>Vehicles<br>veh | Distance<br>m | Prop. Queued | Effective<br>Stop Rate<br>per veh | Average<br>Speed<br>km/h |
| South: RoadName                 |        |                                |      |                 |                         |                     |                                      |               |              |                                   |                          |
| 1                               | L2     | 5                              | 15.0 | 0.098           | 40.1                    | LOS C               | 0.4                                  | 3.1           | 0.96         | 0.66                              | 36.8                     |
| 2                               | T1     | 5                              | 15.0 | 0.098           | 34.3                    | LOS C               | 0.4                                  | 3.1           | 0.96         | 0.66                              | 37.4                     |
| 3                               | R2     | 9                              | 15.0 | 0.122           | 73.7                    | LOS F               | 0.6                                  | 4.8           | 0.99         | 0.67                              | 26.8                     |
| Approach                        |        | 20                             | 15.0 | 0.122           | 54.5                    | LOS D               | 0.6                                  | 4.8           | 0.97         | 0.67                              | 31.4                     |
| East: Southern Link Road        |        |                                |      |                 |                         |                     |                                      |               |              |                                   |                          |
| 4                               | L2     | 2                              | 15.0 | 0.002           | 6.1                     | LOS A               | 0.0                                  | 0.1           | 0.10         | 0.55                              | 53.3                     |
| 5                               | T1     | 498                            | 15.0 | 0.455           | 38.9                    | LOS C               | 12.7                                 | 100.2         | 0.86         | 0.73                              | 36.7                     |
| 6                               | R2     | 63                             | 15.0 | 0.816           | 81.4                    | LOS F               | 4.5                                  | 35.3          | 1.00         | 0.89                              | 25.5                     |
| Approach                        |        | 563                            | 15.0 | 0.816           | 43.6                    | LOS D               | 12.7                                 | 100.2         | 0.87         | 0.74                              | 35.0                     |
| North: North South Link Rd.     |        |                                |      |                 |                         |                     |                                      |               |              |                                   |                          |
| 7                               | L2     | 444                            | 15.0 | 0.433           | 15.8                    | LOS B               | 12.9                                 | 102.1         | 0.55         | 0.73                              | 46.8                     |
| 8                               | T1     | 18                             | 15.0 | 0.024           | 23.5                    | LOS B               | 0.7                                  | 5.2           | 0.61         | 0.45                              | 43.4                     |
| 9                               | R2     | 1241                           | 15.0 | 0.890           | 55.8                    | LOS D               | 42.3                                 | 334.2         | 1.00         | 0.97                              | 31.0                     |
| Approach                        |        | 1703                           | 15.0 | 0.890           | 45.1                    | LOS D               | 42.3                                 | 334.2         | 0.88         | 0.90                              | 34.1                     |
| West: Southern Link Road        |        |                                |      |                 |                         |                     |                                      |               |              |                                   |                          |
| 10                              | L2     | 769                            | 15.0 | 0.524           | 6.9                     | LOS A               | 7.5                                  | 58.9          | 0.26         | 0.63                              | 52.7                     |
| 11                              | T1     | 878                            | 15.0 | 0.805           | 48.0                    | LOS D               | 27.0                                 | 213.6         | 0.99         | 0.92                              | 33.7                     |
| 12                              | R2     | 8                              | 15.0 | 0.109           | 73.5                    | LOS F               | 0.5                                  | 4.3           | 0.98         | 0.67                              | 26.7                     |
| Approach                        |        | 1656                           | 15.0 | 0.805           | 29.0                    | LOS C               | 27.0                                 | 213.6         | 0.65         | 0.79                              | 40.4                     |
| All Vehicles                    |        | 3942                           | 15.0 | 0.890           | 38.2                    | LOS C               | 42.3                                 | 334.2         | 0.78         | 0.83                              | 36.6                     |

Level of Service (LOS) Method: Delay (RTA NSW).

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

Intersection and Approach LOS values are based on average delay for all vehicle movements.

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

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

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

The results of iterative calculations indicate a somewhat unstable solution. See the Diagnostics section in the Detailed Output report.

## 2036 PM – the WNSLR / Lenore Drive intersection– Preliminary layout

| MOVEMENT SUMMARY                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |                    |            |               |                   |                  |                                |            |              |                             |                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------------|------------|---------------|-------------------|------------------|--------------------------------|------------|--------------|-----------------------------|--------------------|
| Site: 2036PM_Lenore Drive / NorthSouth Link Rd                                                                                                                                                                                                                                                                                                                                                                                                                  |        |                    |            |               |                   |                  |                                |            |              |                             |                    |
| Lockwood Road Base AM                                                                                                                                                                                                                                                                                                                                                                                                                                           |        |                    |            |               |                   |                  |                                |            |              |                             |                    |
| Signals - Fixed Time Isolated Cycle Time = 85 seconds (Optimum Cycle Time - Minimum Delay)                                                                                                                                                                                                                                                                                                                                                                      |        |                    |            |               |                   |                  |                                |            |              |                             |                    |
| Movement Performance - Vehicles                                                                                                                                                                                                                                                                                                                                                                                                                                 |        |                    |            |               |                   |                  |                                |            |              |                             |                    |
| Mov ID                                                                                                                                                                                                                                                                                                                                                                                                                                                          | OD Mov | Demand Total veh/h | Flows HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
| South: North South Link Rd                                                                                                                                                                                                                                                                                                                                                                                                                                      |        |                    |            |               |                   |                  |                                |            |              |                             |                    |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                               | L2     | 517                | 15.0       | 0.430         | 10.1              | LOS A            | 5.9                            | 46.9       | 0.40         | 0.72                        | 58.5               |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                               | T1     | 11                 | 15.0       | 0.728         | 22.8              | LOS B            | 18.4                           | 145.2      | 0.89         | 0.86                        | 48.5               |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                               | R2     | 1024               | 15.0       | 0.728         | 30.3              | LOS C            | 18.4                           | 145.2      | 0.89         | 0.86                        | 44.3               |
| Approach                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        | 1552               | 15.0       | 0.728         | 23.5              | LOS B            | 18.4                           | 145.2      | 0.73         | 0.82                        | 48.2               |
| East: Lenore Drive                                                                                                                                                                                                                                                                                                                                                                                                                                              |        |                    |            |               |                   |                  |                                |            |              |                             |                    |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                               | L2     | 1029               | 15.0       | 0.783         | 9.9               | LOS A            | 14.0                           | 110.4      | 0.55         | 0.78                        | 58.5               |
| 5                                                                                                                                                                                                                                                                                                                                                                                                                                                               | T1     | 403                | 15.0       | 0.742         | 40.8              | LOS C            | 8.7                            | 68.7       | 1.00         | 0.88                        | 42.3               |
| 6                                                                                                                                                                                                                                                                                                                                                                                                                                                               | R2     | 15                 | 15.0       | 0.124         | 49.8              | LOS D            | 0.8                            | 4.8        | 0.97         | 0.69                        | 35.5               |
| Approach                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        | 1447               | 15.0       | 0.783         | 19.0              | LOS B            | 14.0                           | 110.4      | 0.68         | 0.81                        | 52.6               |
| North: North South Link Rd                                                                                                                                                                                                                                                                                                                                                                                                                                      |        |                    |            |               |                   |                  |                                |            |              |                             |                    |
| 7                                                                                                                                                                                                                                                                                                                                                                                                                                                               | L2     | 83                 | 15.0       | 0.305         | 22.3              | LOS B            | 1.9                            | 14.8       | 0.84         | 0.75                        | 49.8               |
| 8                                                                                                                                                                                                                                                                                                                                                                                                                                                               | T1     | 37                 | 15.0       | 0.305         | 31.6              | LOS C            | 1.9                            | 14.8       | 0.93         | 0.73                        | 44.9               |
| 9                                                                                                                                                                                                                                                                                                                                                                                                                                                               | R2     | 16                 | 15.0       | 0.305         | 50.9              | LOS D            | 1.6                            | 12.5       | 0.98         | 0.72                        | 36.8               |
| Approach                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        | 136                | 15.0       | 0.305         | 28.2              | LOS B            | 1.9                            | 14.8       | 0.88         | 0.74                        | 46.6               |
| West: Lenore Drive                                                                                                                                                                                                                                                                                                                                                                                                                                              |        |                    |            |               |                   |                  |                                |            |              |                             |                    |
| 10                                                                                                                                                                                                                                                                                                                                                                                                                                                              | L2     | 5                  | 15.0       | 0.004         | 8.1               | LOS A            | 0.0                            | 0.1        | 0.16         | 0.62                        | 60.4               |
| 11                                                                                                                                                                                                                                                                                                                                                                                                                                                              | T1     | 265                | 15.0       | 0.488         | 37.0              | LOS C            | 5.2                            | 41.5       | 0.96         | 0.77                        | 44.3               |
| 12                                                                                                                                                                                                                                                                                                                                                                                                                                                              | R2     | 89                 | 15.0       | 0.756         | 55.1              | LOS D            | 4.1                            | 32.5       | 1.00         | 0.86                        | 33.9               |
| Approach                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        | 360                | 15.0       | 0.756         | 41.1              | LOS C            | 5.2                            | 41.5       | 0.96         | 0.79                        | 41.3               |
| All Vehicles                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        | 3495               | 15.0       | 0.783         | 23.6              | LOS B            | 18.4                           | 145.2      | 0.74         | 0.81                        | 49.0               |
| Level of Service (LOS) Method: Delay (RTA NSW).<br>Vehicle movement LOS values are based on average delay per movement.<br>Intersection and Approach LOS values are based on average delay for all vehicle movements.<br>SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.<br>Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).<br>HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation. |        |                    |            |               |                   |                  |                                |            |              |                             |                    |

## 2036 PM – the WNSLR / Lenore Drive intersection– Proposed layout

| MOVEMENT SUMMARY                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |                    |            |               |                   |                  |                                |            |              |                             |                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------------|------------|---------------|-------------------|------------------|--------------------------------|------------|--------------|-----------------------------|--------------------|
| Site: 2036PM_Lenore Drive / NorthSouth Link Rd_Dual EB RT+Dual WB LT                                                                                                                                                                                                                                                                                                                                                                                            |        |                    |            |               |                   |                  |                                |            |              |                             |                    |
| Lockwood Road Base AM                                                                                                                                                                                                                                                                                                                                                                                                                                           |        |                    |            |               |                   |                  |                                |            |              |                             |                    |
| Signals - Fixed Time Isolated Cycle Time = 100 seconds (Optimum Cycle Time - Minimum Delay)                                                                                                                                                                                                                                                                                                                                                                     |        |                    |            |               |                   |                  |                                |            |              |                             |                    |
| Movement Performance - Vehicles                                                                                                                                                                                                                                                                                                                                                                                                                                 |        |                    |            |               |                   |                  |                                |            |              |                             |                    |
| Mov ID                                                                                                                                                                                                                                                                                                                                                                                                                                                          | OD Mov | Demand Total veh/h | Flows HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
| South: North South Link Rd                                                                                                                                                                                                                                                                                                                                                                                                                                      |        |                    |            |               |                   |                  |                                |            |              |                             |                    |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                               | L2     | 517                | 15.0       | 0.428         | 10.1              | LOS A            | 6.5                            | 51.7       | 0.37         | 0.71                        | 58.5               |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                               | T1     | 11                 | 15.0       | 0.717         | 25.3              | LOS B            | 20.9                           | 164.9      | 0.89         | 0.86                        | 46.9               |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                               | R2     | 1024               | 15.0       | 0.717         | 32.9              | LOS C            | 20.9                           | 164.9      | 0.89         | 0.86                        | 43.1               |
| Approach                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        | 1552               | 15.0       | 0.717         | 25.3              | LOS B            | 20.9                           | 164.9      | 0.71         | 0.81                        | 47.3               |
| East: Lenore Drive                                                                                                                                                                                                                                                                                                                                                                                                                                              |        |                    |            |               |                   |                  |                                |            |              |                             |                    |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                               | L2     | 1029               | 15.0       | 0.479         | 12.7              | LOS A            | 6.7                            | 53.3       | 0.56         | 0.76                        | 56.3               |
| 5                                                                                                                                                                                                                                                                                                                                                                                                                                                               | T1     | 403                | 15.0       | 0.540         | 38.7              | LOS C            | 9.0                            | 70.8       | 0.94         | 0.76                        | 43.4               |
| 6                                                                                                                                                                                                                                                                                                                                                                                                                                                               | R2     | 15                 | 15.0       | 0.146         | 58.4              | LOS E            | 0.7                            | 5.8        | 0.98         | 0.69                        | 32.8               |
| Approach                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        | 1447               | 15.0       | 0.540         | 20.4              | LOS B            | 9.0                            | 70.8       | 0.67         | 0.77                        | 51.7               |
| North: North South Link Rd                                                                                                                                                                                                                                                                                                                                                                                                                                      |        |                    |            |               |                   |                  |                                |            |              |                             |                    |
| 7                                                                                                                                                                                                                                                                                                                                                                                                                                                               | L2     | 83                 | 15.0       | 0.359         | 24.9              | LOS B            | 2.1                            | 16.7       | 0.85         | 0.75                        | 48.2               |
| 8                                                                                                                                                                                                                                                                                                                                                                                                                                                               | T1     | 37                 | 15.0       | 0.359         | 37.9              | LOS C            | 2.1                            | 16.7       | 0.93         | 0.74                        | 41.6               |
| 9                                                                                                                                                                                                                                                                                                                                                                                                                                                               | R2     | 16                 | 15.0       | 0.359         | 59.9              | LOS E            | 1.9                            | 14.9       | 1.00         | 0.73                        | 34.0               |
| Approach                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        | 136                | 15.0       | 0.359         | 32.5              | LOS C            | 2.1                            | 16.7       | 0.89         | 0.75                        | 44.2               |
| West: Lenore Drive                                                                                                                                                                                                                                                                                                                                                                                                                                              |        |                    |            |               |                   |                  |                                |            |              |                             |                    |
| 10                                                                                                                                                                                                                                                                                                                                                                                                                                                              | L2     | 5                  | 15.0       | 0.004         | 8.0               | LOS A            | 0.0                            | 0.1        | 0.13         | 0.62                        | 60.5               |
| 11                                                                                                                                                                                                                                                                                                                                                                                                                                                              | T1     | 265                | 15.0       | 0.355         | 37.0              | LOS C            | 5.6                            | 44.4       | 0.90         | 0.73                        | 44.3               |
| 12                                                                                                                                                                                                                                                                                                                                                                                                                                                              | R2     | 89                 | 15.0       | 0.444         | 60.3              | LOS E            | 2.3                            | 18.0       | 1.00         | 0.74                        | 32.4               |
| Approach                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        | 360                | 15.0       | 0.444         | 42.3              | LOS C            | 5.6                            | 44.4       | 0.91         | 0.73                        | 40.7               |
| All Vehicles                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        | 3495               | 15.0       | 0.717         | 25.3              | LOS B            | 20.9                           | 164.9      | 0.72         | 0.76                        | 48.0               |
| Level of Service (LOS) Method: Delay (RTA NSW).<br>Vehicle movement LOS values are based on average delay per movement.<br>Intersection and Approach LOS values are based on average delay for all vehicle movements.<br>SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.<br>Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).<br>HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation. |        |                    |            |               |                   |                  |                                |            |              |                             |                    |

## 2036 PM – the WNSLR / Lockwood Road intersection

### MOVEMENT SUMMARY

 Site: 2036PM\_Lockwood Rd / North South Link Rd

Lockwood Road Base AM

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Practical Cycle Time)

| Movement Performance - Vehicles |        |                                |      |                  |                         |                     |                                      |               |                |                                   |                          |
|---------------------------------|--------|--------------------------------|------|------------------|-------------------------|---------------------|--------------------------------------|---------------|----------------|-----------------------------------|--------------------------|
| Mov ID                          | OD Mov | Demand Flows<br>Total<br>veh/h | HV % | Deg. Satn<br>v/c | Average<br>Delay<br>sec | Level of<br>Service | 95% Back of Queue<br>Vehicles<br>veh | Distance<br>m | Prop<br>Queued | Effective<br>Stop Rate<br>per veh | Average<br>Speed<br>km/h |
| South: North South Link Rd      |        |                                |      |                  |                         |                     |                                      |               |                |                                   |                          |
| 1                               | L2     | 21                             | 15.0 | 0.814            | 24.1                    | LOS B               | 20.8                                 | 164.6         | 0.91           | 0.92                              | 44.5                     |
| 2                               | T1     | 1421                           | 15.0 | 0.814            | 18.4                    | LOS B               | 20.8                                 | 164.6         | 0.91           | 0.92                              | 46.0                     |
| 3                               | R2     | 4                              | 15.0 | 0.025            | 33.3                    | LOS C               | 0.1                                  | 0.9           | 0.92           | 0.64                              | 37.9                     |
| Approach                        |        | 1446                           | 15.0 | 0.814            | 18.5                    | LOS B               | 20.8                                 | 164.6         | 0.91           | 0.92                              | 46.0                     |
| East: RoadName                  |        |                                |      |                  |                         |                     |                                      |               |                |                                   |                          |
| 4                               | L2     | 42                             | 15.0 | 0.257            | 34.8                    | LOS C               | 1.3                                  | 10.0          | 0.96           | 0.73                              | 37.3                     |
| 5                               | T1     | 1                              | 15.0 | 0.257            | 29.1                    | LOS C               | 1.3                                  | 10.0          | 0.96           | 0.73                              | 38.3                     |
| 6                               | R2     | 83                             | 15.0 | 0.524            | 36.9                    | LOS C               | 2.6                                  | 20.3          | 1.00           | 0.77                              | 36.5                     |
| Approach                        |        | 126                            | 15.0 | 0.524            | 36.1                    | LOS C               | 2.6                                  | 20.3          | 0.98           | 0.76                              | 36.8                     |
| North: North South Link Rd      |        |                                |      |                  |                         |                     |                                      |               |                |                                   |                          |
| 7                               | L2     | 21                             | 15.0 | 0.632            | 17.7                    | LOS B               | 12.2                                 | 96.1          | 0.78           | 0.70                              | 48.3                     |
| 8                               | T1     | 1100                           | 15.0 | 0.632            | 12.0                    | LOS A               | 12.2                                 | 96.3          | 0.78           | 0.70                              | 50.1                     |
| 9                               | R2     | 13                             | 15.0 | 0.075            | 33.8                    | LOS C               | 0.4                                  | 2.8           | 0.93           | 0.68                              | 37.7                     |
| Approach                        |        | 1134                           | 15.0 | 0.632            | 12.3                    | LOS A               | 12.2                                 | 96.3          | 0.79           | 0.70                              | 49.8                     |
| West: Lockwood Road             |        |                                |      |                  |                         |                     |                                      |               |                |                                   |                          |
| 10                              | L2     | 41                             | 15.0 | 0.251            | 34.8                    | LOS C               | 1.2                                  | 9.7           | 0.96           | 0.73                              | 37.3                     |
| 11                              | T1     | 1                              | 15.0 | 0.251            | 29.0                    | LOS C               | 1.2                                  | 9.7           | 0.96           | 0.73                              | 38.3                     |
| 12                              | R2     | 46                             | 15.0 | 0.287            | 35.9                    | LOS C               | 1.4                                  | 10.7          | 0.97           | 0.73                              | 36.9                     |
| Approach                        |        | 87                             | 15.0 | 0.287            | 35.3                    | LOS C               | 1.4                                  | 10.7          | 0.97           | 0.73                              | 37.1                     |
| All Vehicles                    |        | 2794                           | 15.0 | 0.814            | 17.3                    | LOS B               | 20.8                                 | 164.6         | 0.86           | 0.82                              | 46.6                     |

Level of Service (LOS) Method: Delay (RTA NSW).

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

Intersection and Approach LOS values are based on average delay for all vehicle movements.

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

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

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

## 2036 PM – the WNSLR / Oakdale West Access Road intersection

### MOVEMENT SUMMARY

 Site: 2036PM\_Estate Road No. 2 / North South Link Rd

Lockwood Road Base AM

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Practical Cycle Time)

| Movement Performance - Vehicles |        |                                |      |                  |                         |                     |                                      |               |                |                                   |                          |
|---------------------------------|--------|--------------------------------|------|------------------|-------------------------|---------------------|--------------------------------------|---------------|----------------|-----------------------------------|--------------------------|
| Mov ID                          | OD Mov | Demand Flows<br>Total<br>veh/h | HV % | Deg. Satn<br>v/c | Average<br>Delay<br>sec | Level of<br>Service | 95% Back of Queue<br>Vehicles<br>veh | Distance<br>m | Prop<br>Queued | Effective<br>Stop Rate<br>per veh | Average<br>Speed<br>km/h |
| South: North South Link Rd      |        |                                |      |                  |                         |                     |                                      |               |                |                                   |                          |
| 1                               | L2     | 17                             | 15.0 | 0.866            | 33.6                    | LOS C               | 20.2                                 | 159.9         | 0.99           | 1.08                              | 39.9                     |
| 2                               | T1     | 1162                           | 15.0 | 0.866            | 27.9                    | LOS B               | 20.3                                 | 160.1         | 0.99           | 1.08                              | 41.1                     |
| Approach                        |        | 1179                           | 15.0 | 0.866            | 28.0                    | LOS B               | 20.3                                 | 160.1         | 0.99           | 1.08                              | 41.0                     |
| North: North South Link Rd      |        |                                |      |                  |                         |                     |                                      |               |                |                                   |                          |
| 8                               | T1     | 1138                           | 15.0 | 0.549            | 8.3                     | LOS A               | 10.3                                 | 81.4          | 0.66           | 0.59                              | 52.8                     |
| 9                               | R2     | 56                             | 15.0 | 0.333            | 35.1                    | LOS C               | 1.7                                  | 13.1          | 0.97           | 0.74                              | 37.0                     |
| Approach                        |        | 1194                           | 15.0 | 0.549            | 9.6                     | LOS A               | 10.3                                 | 81.4          | 0.67           | 0.59                              | 51.7                     |
| West: Oakdale West Access Road  |        |                                |      |                  |                         |                     |                                      |               |                |                                   |                          |
| 10                              | L2     | 293                            | 15.0 | 0.834            | 34.1                    | LOS C               | 13.6                                 | 107.3         | 0.99           | 0.98                              | 37.5                     |
| 12                              | R2     | 117                            | 15.0 | 0.834            | 34.0                    | LOS C               | 13.6                                 | 107.3         | 0.99           | 0.98                              | 37.4                     |
| Approach                        |        | 409                            | 15.0 | 0.834            | 34.1                    | LOS C               | 13.6                                 | 107.3         | 0.99           | 0.98                              | 37.5                     |
| All Vehicles                    |        | 2782                           | 15.0 | 0.866            | 21.0                    | LOS B               | 20.3                                 | 160.1         | 0.85           | 0.86                              | 44.4                     |

Level of Service (LOS) Method: Delay (RTA NSW).

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

Intersection and Approach LOS values are based on average delay for all vehicle movements.

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

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

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

## 2036 PM – the WNSLR / SLR intersection

### MOVEMENT SUMMARY

**Site: 2036PM\_Southern Link Road -NorthSouth Link Rd**

Lockwood Road Base AM

Signals - Fixed Time Isolated Cycle Time = 140 seconds (Optimum Cycle Time - Minimum Delay)

| Movement Performance - Vehicles |        |                           |            |              |                   |                  |                                |            |              |                             |                     |
|---------------------------------|--------|---------------------------|------------|--------------|-------------------|------------------|--------------------------------|------------|--------------|-----------------------------|---------------------|
| Mov ID                          | OD Mov | Demand Flows Total Veh/hr | Flows HV % | Reg Satn V/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/hr |
| South: North South Link Rd      |        |                           |            |              |                   |                  |                                |            |              |                             |                     |
| 1                               | L2     | 28                        | 15.0       | 0.423        | 48.3              | LOS D            | 2.4                            | 19.1       | 1.00         | 0.75                        | 33.8                |
| 2                               | T1     | 19                        | 15.0       | 0.423        | 42.6              | LOS D            | 2.4                            | 19.1       | 1.00         | 0.75                        | 34.3                |
| 3                               | R2     | 9                         | 15.0       | 0.132        | 79.4              | LOS F            | 0.7                            | 5.2        | 0.99         | 0.67                        | 25.6                |
| Approach                        |        | 57                        | 15.0       | 0.423        | 51.6              | LOS D            | 2.4                            | 19.1       | 0.99         | 0.73                        | 32.3                |
| East: Southern Link Road        |        |                           |            |              |                   |                  |                                |            |              |                             |                     |
| 4                               | L2     | 7                         | 15.0       | 0.005        | 6.0               | LOS A            | 0.0                            | 0.2        | 0.09         | 0.56                        | 53.4                |
| 5                               | T1     | 1079                      | 15.0       | 0.858        | 49.0              | LOS D            | 39.0                           | 307.8      | 0.96         | 0.94                        | 33.4                |
| 6                               | R2     | 152                       | 15.0       | 0.436        | 58.3              | LOS E            | 9.1                            | 71.9       | 0.92         | 0.80                        | 30.3                |
| Approach                        |        | 1238                      | 15.0       | 0.858        | 49.9              | LOS D            | 39.0                           | 307.8      | 0.95         | 0.92                        | 33.0                |
| North: North South Link Rd      |        |                           |            |              |                   |                  |                                |            |              |                             |                     |
| 7                               | L2     | 159                       | 15.0       | 0.127        | 7.2               | LOS A            | 1.5                            | 11.7       | 0.20         | 0.60                        | 52.6                |
| 8                               | T1     | 6                         | 15.0       | 0.010        | 29.7              | LOS C            | 0.3                            | 2.1        | 0.66         | 0.45                        | 40.4                |
| 9                               | R2     | 1048                      | 15.0       | 0.858        | 57.4              | LOS E            | 36.3                           | 286.4      | 1.00         | 0.94                        | 30.5                |
| Approach                        |        | 1214                      | 15.0       | 0.858        | 50.7              | LOS D            | 36.3                           | 286.4      | 0.89         | 0.89                        | 32.4                |
| West: Southern Link Road        |        |                           |            |              |                   |                  |                                |            |              |                             |                     |
| 10                              | L2     | 1017                      | 15.0       | 0.805        | 9.2               | LOS A            | 23.0                           | 181.4      | 0.48         | 0.72                        | 51.1                |
| 11                              | T1     | 343                       | 15.0       | 0.451        | 51.8              | LOS D            | 10.2                           | 81.0       | 0.92         | 0.76                        | 32.5                |
| 12                              | R2     | 1                         | 15.0       | 0.015        | 77.2              | LOS F            | 0.1                            | 0.6        | 0.97         | 0.59                        | 26.0                |
| Approach                        |        | 1361                      | 15.0       | 0.805        | 19.9              | LOS B            | 23.0                           | 181.4      | 0.59         | 0.73                        | 44.6                |
| All Vehicles                    |        | 3869                      | 15.0       | 0.858        | 39.6              | LOS C            | 39.0                           | 307.8      | 0.81         | 0.84                        | 36.1                |

Level of Service (LOS) Method: Delay (RTANSW).

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

Intersection and Approach LOS values are based on average delay for all vehicle movements.

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

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

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

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Document Status

| Revision | Author    | Reviewer      |                                                                                     | Approved for Issue |                                                                                       |            |
|----------|-----------|---------------|-------------------------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------|------------|
|          |           | Name          | Signature                                                                           | Name               | Signature                                                                             | Date       |
| Rev 0    | Bill Chen | Graham McCabe |  | Graham McCabe      |  | 22/06/2016 |
|          |           |               |                                                                                     |                    |                                                                                       |            |
|          |           |               |                                                                                     |                    |                                                                                       |            |

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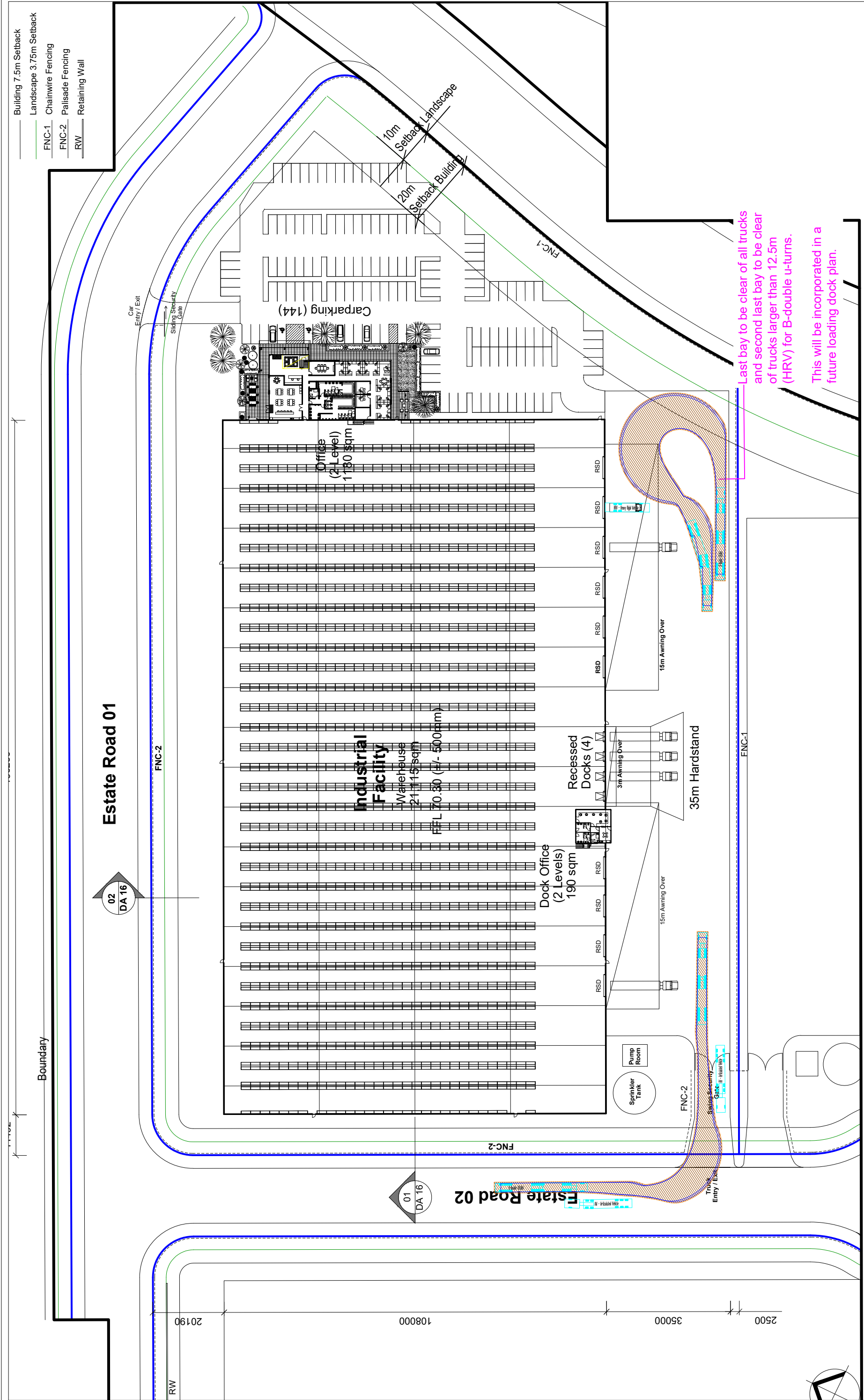


## Appendix D

### Swept Path Analysis







Last bay to be clear of all trucks and second last bay to be clear of trucks larger than 12.5m (HRV) for B-double u-turns.

This will be incorporated in a future loading dock plan.

Revision notes:

| Rev: | Date: | Notes: |
|------|-------|--------|
|      |       |        |
|      |       |        |

Drawn By:

KH

Project:

0129  
Oakdale West Industrial Estate (1A)

Date:

24-Mar-17

Rev:

Date:

Notes:

Client:

Goodman Property Services (Aust)

Drawing Title:

B-Double Entry, U-turn

Scale @ A3:

1:1000

Revision:

01

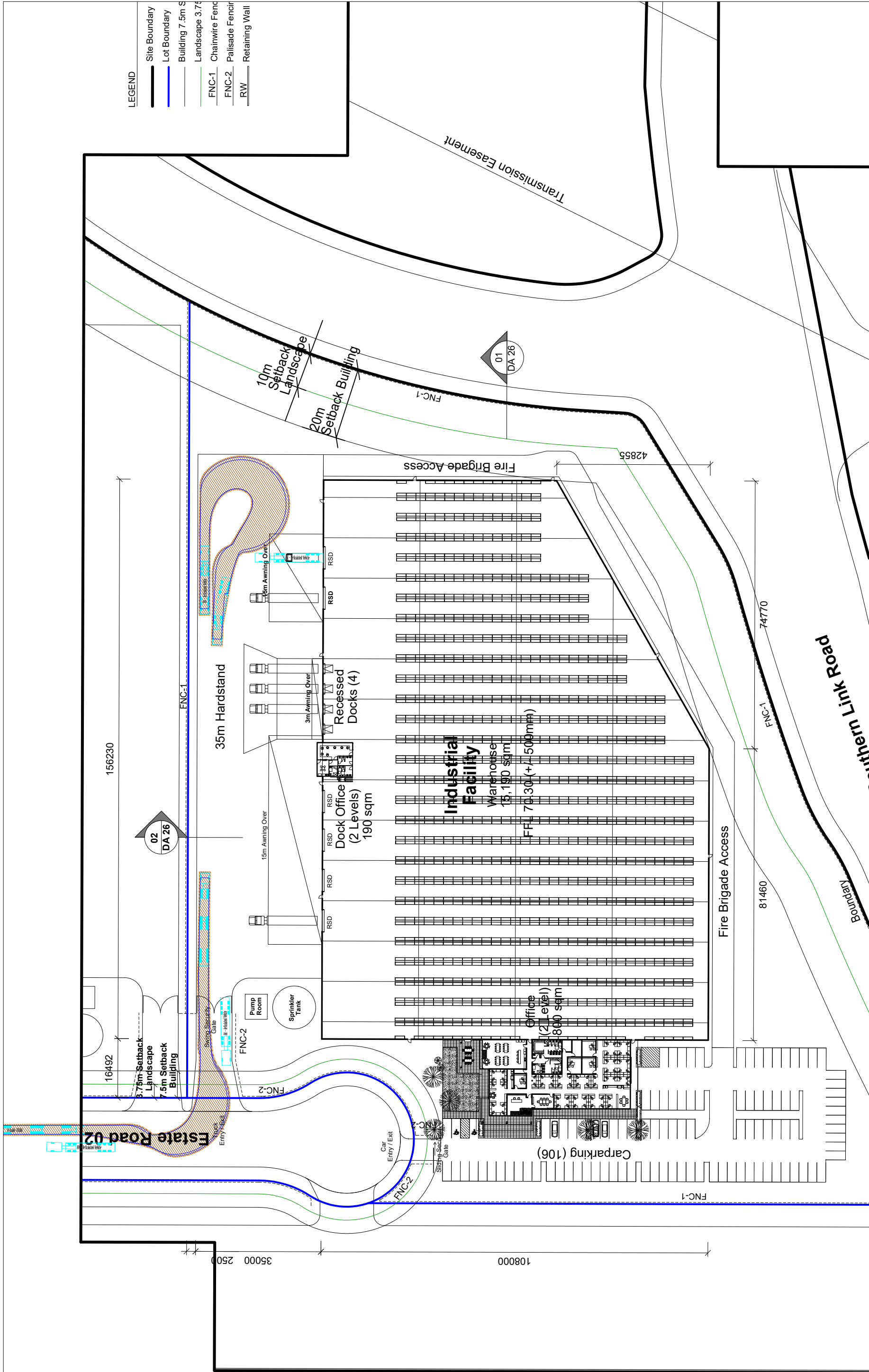
**asongroup**

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Revision notes:

Rev: Date:

Notes:

Drawn By:

KH

Project:

0129  
Oakdale West Industrial Estate (1B)

Date:

24-Mar-17

Scale @ A3:

1:1000

Revision:

01

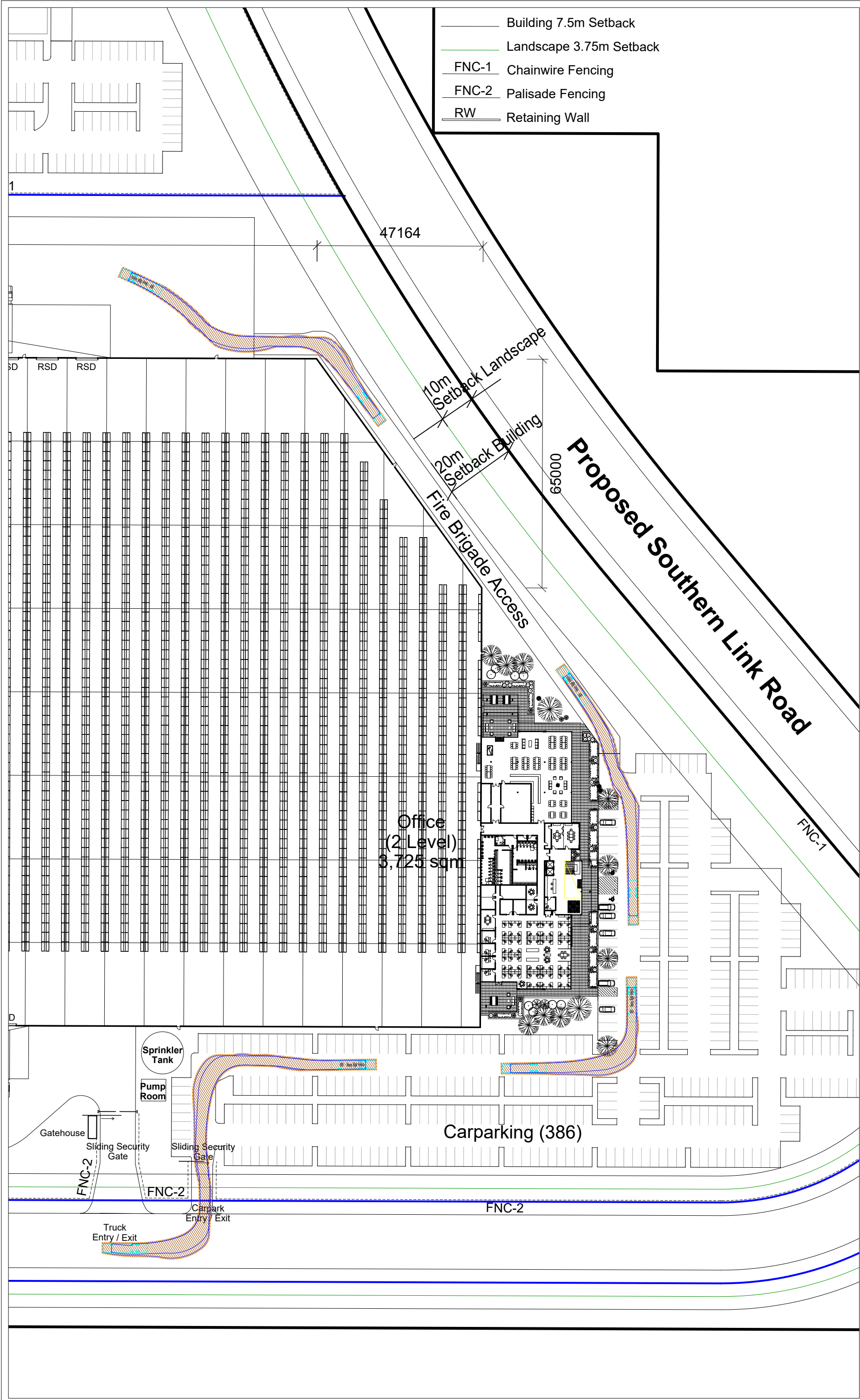
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Date:

24-Mar-17

Scale @ A3:

1:1000

Revision:

01

Project:

0129  
Oakdale West Industrial Estate (IC)

Drawing Title:

Fire Access 1

Drawn By:

KH

Client:

Goodman Property Services (Aust)

Revision notes:

Rev: Date: Notes:







Industrial Facility

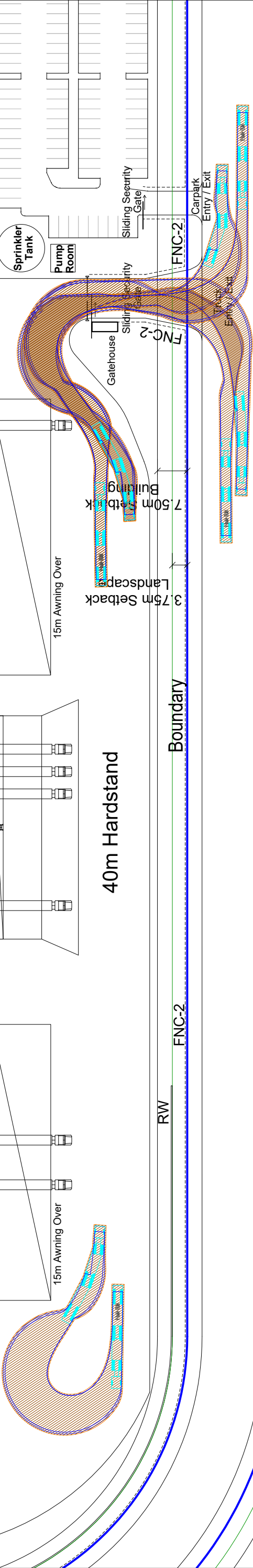
Warehouse  
75,255 sqm

FFL 70130 (+/-500mm)

Dock Office  
(2 Levels)  
190 sqm

Recessed  
Docks (10)

40m Hardstand



Revision notes:

Rev: Date:

Notes:

Drawn By:

KH

Project:

0129  
Oakdale West Industrial Estate (1C)

Date:

24-Mar-17

Scale @ A3:

1:1000

Revision:

01

Drawing Title:

B-double Access, West Access

Client:

Goodman Property Services (Aust)

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## Appendix E

### SIDRA Intersection Analysis

# LANE SUMMARY

 **Site: 101 [Bakers Ln x Mamre Rd - EX AM]**

Existing Scenario

AM Peak (8:00-9:00AM)

Signals - Fixed Time Isolated Cycle Time = 140 seconds (User-Given Cycle Time)

| Lane Use and Performance |                          |                  |                   |                     |                    |                         |                     |                    |                    |                |                     |                   |                      |
|--------------------------|--------------------------|------------------|-------------------|---------------------|--------------------|-------------------------|---------------------|--------------------|--------------------|----------------|---------------------|-------------------|----------------------|
|                          | Demand<br>Total<br>veh/h | Flows<br>HV<br>% | Cap.<br>veh/h     | Deg.<br>Satn<br>v/c | Lane<br>Util.<br>% | Average<br>Delay<br>sec | Level of<br>Service | 95% Back of<br>Veh | Queue<br>Dist<br>m | Lane<br>Config | Lane<br>Length<br>m | Cap.<br>Adj.<br>% | Prob.<br>Block.<br>% |
| South: Mamre Road        |                          |                  |                   |                     |                    |                         |                     |                    |                    |                |                     |                   |                      |
| Lane 1                   | 691                      | 7.8              | 1105 <sup>1</sup> | 0.625               | 100                | 18.4                    | LOS B               | 28.8               | 215.2              | Full           | 500                 | 0.0               | 0.0                  |
| Lane 2                   | 42                       | 2.5              | 78                | 0.541               | 100                | 83.0                    | LOS F               | 3.0                | 21.7               | Short          | 100                 | 0.0               | NA                   |
| Approach                 | 733                      | 7.5              |                   | 0.625               |                    | 22.1                    | LOS B               | 28.8               | 215.2              |                |                     |                   |                      |
| East: Bakers Lane        |                          |                  |                   |                     |                    |                         |                     |                    |                    |                |                     |                   |                      |
| Lane 1                   | 36                       | 2.9              | 754               | 0.047               | 100                | 32.5                    | LOS C               | 1.5                | 10.5               | Short          | 40                  | 0.0               | NA                   |
| Lane 2                   | 485                      | 4.8              | 535 <sup>1</sup>  | 0.906               | 100                | 70.0                    | LOS E               | 36.8               | 268.3              | Full           | 500                 | 0.0               | 0.0                  |
| Approach                 | 521                      | 4.6              |                   | 0.906               |                    | 67.4                    | LOS E               | 36.8               | 268.3              |                |                     |                   |                      |
| North: Mamre Road        |                          |                  |                   |                     |                    |                         |                     |                    |                    |                |                     |                   |                      |
| Lane 1                   | 639                      | 4.0              | 1590              | 0.402               | 100                | 8.9                     | LOS A               | 8.4                | 60.7               | Short          | 120                 | 0.0               | NA                   |
| Lane 2                   | 589                      | 16.8             | 639 <sup>1</sup>  | 0.922               | 100                | 51.4                    | LOS D               | 39.5               | 316.3              | Full           | 500                 | 0.0               | 0.0                  |
| Approach                 | 1228                     | 10.1             |                   | 0.922               |                    | 29.3                    | LOS C               | 39.5               | 316.3              |                |                     |                   |                      |
| Intersection             | 2482                     | 8.2              |                   | 0.922               |                    | 35.2                    | LOS C               | 39.5               | 316.3              |                |                     |                   |                      |

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

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

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

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

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

<sup>1</sup> Reduced capacity due to a short lane effect. Short lane queues may extend into the adjacent full-length lanes. Some upstream delays at entry to short lanes are not included.

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# LANE SUMMARY

 **Site: 101 [Bakers Ln x Mamre Rd - EX PM]**

Existing Scenario

PM Peak (8:00-9:00AM)

Signals - Fixed Time Isolated Cycle Time = 140 seconds (User-Given Cycle Time)

| Lane Use and Performance |                          |                  |                   |                     |                    |                         |                     |                    |                    |                |                     |                   |                      |
|--------------------------|--------------------------|------------------|-------------------|---------------------|--------------------|-------------------------|---------------------|--------------------|--------------------|----------------|---------------------|-------------------|----------------------|
|                          | Demand<br>Total<br>veh/h | Flows<br>HV<br>% | Cap.<br>veh/h     | Deg.<br>Satn<br>v/c | Lane<br>Util.<br>% | Average<br>Delay<br>sec | Level of<br>Service | 95% Back of<br>Veh | Queue<br>Dist<br>m | Lane<br>Config | Lane<br>Length<br>m | Cap.<br>Adj.<br>% | Prob.<br>Block.<br>% |
| South: Mamre Road        |                          |                  |                   |                     |                    |                         |                     |                    |                    |                |                     |                   |                      |
| Lane 1                   | 738                      | 8.6              | 1532              | 0.482               | 100                | 4.8                     | LOS A               | 16.0               | 119.9              | Full           | 500                 | 0.0               | 0.0                  |
| Lane 2                   | 2                        | 0.0              | 79                | 0.027               | 100                | 78.5                    | LOS F               | 0.1                | 1.0                | Short          | 100                 | 0.0               | NA                   |
| Approach                 | 740                      | 8.5              |                   | 0.482               |                    | 5.0                     | LOS A               | 16.0               | 119.9              |                |                     |                   |                      |
| East: Bakers Lane        |                          |                  |                   |                     |                    |                         |                     |                    |                    |                |                     |                   |                      |
| Lane 1                   | 17                       | 0.0              | 385               | 0.044               | 100                | 53.6                    | LOS D               | 0.9                | 6.4                | Short          | 40                  | 0.0               | NA                   |
| Lane 2                   | 131                      | 0.8              | 210               | 0.622               | 100                | 71.1                    | LOS F               | 8.8                | 61.8               | Full           | 500                 | 0.0               | 0.0                  |
| Approach                 | 147                      | 0.7              |                   | 0.622               |                    | 69.1                    | LOS E               | 8.8                | 61.8               |                |                     |                   |                      |
| North: Mamre Road        |                          |                  |                   |                     |                    |                         |                     |                    |                    |                |                     |                   |                      |
| Lane 1                   | 69                       | 6.1              | 1567              | 0.044               | 100                | 8.3                     | LOS A               | 0.6                | 4.5                | Short          | 120                 | 0.0               | NA                   |
| Lane 2                   | 819                      | 10.9             | 1294 <sup>1</sup> | 0.633               | 100                | 10.9                    | LOS A               | 28.4               | 217.4              | Full           | 500                 | 0.0               | 0.0                  |
| Approach                 | 888                      | 10.5             |                   | 0.633               |                    | 10.7                    | LOS A               | 28.4               | 217.4              |                |                     |                   |                      |
| Intersection             | 1776                     | 8.9              |                   | 0.633               |                    | 13.2                    | LOS A               | 28.4               | 217.4              |                |                     |                   |                      |

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

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

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

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

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

<sup>1</sup> Reduced capacity due to a short lane effect. Short lane queues may extend into the adjacent full-length lanes. Some upstream delays at entry to short lanes are not included.

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# LANE SUMMARY

 **Site: 101 [Bakers Ln x Mamre Rd - CON AM]**

With Construction Traffic

AM Peak (8:00-9:00AM)

Signals - Fixed Time Isolated Cycle Time = 140 seconds (User-Given Cycle Time)

| Lane Use and Performance |                          |                  |                   |                     |                    |                         |                     |                    |                    |                |                     |                   |                      |
|--------------------------|--------------------------|------------------|-------------------|---------------------|--------------------|-------------------------|---------------------|--------------------|--------------------|----------------|---------------------|-------------------|----------------------|
|                          | Demand<br>Total<br>veh/h | Flows<br>HV<br>% | Cap.<br>veh/h     | Deg.<br>Satn<br>v/c | Lane<br>Util.<br>% | Average<br>Delay<br>sec | Level of<br>Service | 95% Back of<br>Veh | Queue<br>Dist<br>m | Lane<br>Config | Lane<br>Length<br>m | Cap.<br>Adj.<br>% | Prob.<br>Block.<br>% |
| South: Mamre Road        |                          |                  |                   |                     |                    |                         |                     |                    |                    |                |                     |                   |                      |
| Lane 1                   | 691                      | 7.8              | 1090 <sup>1</sup> | 0.633               | 100                | 17.8                    | LOS B               | 28.3               | 211.3              | Full           | 500                 | 0.0               | 0.0                  |
| Lane 2                   | 68                       | 1.5              | 78                | 0.874               | 100                | 90.6                    | LOS F               | 5.3                | 37.5               | Short          | 100                 | 0.0               | NA                   |
| Approach                 | 759                      | 7.2              |                   | 0.874               |                    | 24.3                    | LOS B               | 28.3               | 211.3              |                |                     |                   |                      |
| East: Bakers Lane        |                          |                  |                   |                     |                    |                         |                     |                    |                    |                |                     |                   |                      |
| Lane 1                   | 36                       | 2.9              | 741               | 0.048               | 100                | 33.2                    | LOS C               | 1.5                | 10.6               | Short          | 40                  | 0.0               | NA                   |
| Lane 2                   | 485                      | 4.8              | 523 <sup>1</sup>  | 0.928               | 100                | 76.4                    | LOS F               | 38.7               | 281.8              | Full           | 500                 | 0.0               | 0.0                  |
| Approach                 | 521                      | 4.6              |                   | 0.928               |                    | 73.4                    | LOS F               | 38.7               | 281.8              |                |                     |                   |                      |
| North: Mamre Road        |                          |                  |                   |                     |                    |                         |                     |                    |                    |                |                     |                   |                      |
| Lane 1                   | 665                      | 3.8              | 1592              | 0.418               | 100                | 8.9                     | LOS A               | 8.9                | 64.5               | Short          | 120                 | 0.0               | NA                   |
| Lane 2                   | 589                      | 16.8             | 640 <sup>1</sup>  | 0.921               | 100                | 50.4                    | LOS D               | 39.0               | 312.3              | Full           | 500                 | 0.0               | 0.0                  |
| Approach                 | 1255                     | 9.9              |                   | 0.921               |                    | 28.4                    | LOS B               | 39.0               | 312.3              |                |                     |                   |                      |
| Intersection             | 2535                     | 8.0              |                   | 0.928               |                    | 36.4                    | LOS C               | 39.0               | 312.3              |                |                     |                   |                      |

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

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

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

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

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

<sup>1</sup> Reduced capacity due to a short lane effect. Short lane queues may extend into the adjacent full-length lanes. Some upstream delays at entry to short lanes are not included.

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# LANE SUMMARY

 **Site: 101 [Bakers Ln x Mamre Rd - CON PM]**

With Construction Traffic

PM Peak (5:00-6:00PM)

Signals - Fixed Time Isolated Cycle Time = 140 seconds (User-Given Cycle Time)

| Lane Use and Performance |                          |                  |                   |                     |                    |                         |                     |                    |                    |                |                     |                   |                      |
|--------------------------|--------------------------|------------------|-------------------|---------------------|--------------------|-------------------------|---------------------|--------------------|--------------------|----------------|---------------------|-------------------|----------------------|
|                          | Demand<br>Total<br>veh/h | Flows<br>HV<br>% | Cap.<br>veh/h     | Deg.<br>Satn<br>v/c | Lane<br>Util.<br>% | Average<br>Delay<br>sec | Level of<br>Service | 95% Back of<br>Veh | Queue<br>Dist<br>m | Lane<br>Config | Lane<br>Length<br>m | Cap.<br>Adj.<br>% | Prob.<br>Block.<br>% |
| South: Mamre Road        |                          |                  |                   |                     |                    |                         |                     |                    |                    |                |                     |                   |                      |
| Lane 1                   | 738                      | 8.6              | 1477              | 0.500               | 100                | 6.2                     | LOS A               | 18.3               | 137.1              | Full           | 500                 | 0.0               | 0.0                  |
| Lane 2                   | 2                        | 0.0              | 79                | 0.027               | 100                | 78.5                    | LOS F               | 0.1                | 1.0                | Short          | 100                 | 0.0               | NA                   |
| Approach                 | 740                      | 8.5              |                   | 0.500               |                    | 6.4                     | LOS A               | 18.3               | 137.1              |                |                     |                   |                      |
| East: Bakers Lane        |                          |                  |                   |                     |                    |                         |                     |                    |                    |                |                     |                   |                      |
| Lane 1                   | 43                       | 0.0              | 440               | 0.098               | 100                | 51.0                    | LOS D               | 2.3                | 16.1               | Short          | 40                  | 0.0               | NA                   |
| Lane 2                   | 161                      | 3.3              | 254 <sup>1</sup>  | 0.635               | 100                | 67.6                    | LOS E               | 10.6               | 76.1               | Full           | 500                 | 0.0               | 0.0                  |
| Approach                 | 204                      | 2.6              |                   | 0.635               |                    | 64.1                    | LOS E               | 10.6               | 76.1               |                |                     |                   |                      |
| North: Mamre Road        |                          |                  |                   |                     |                    |                         |                     |                    |                    |                |                     |                   |                      |
| Lane 1                   | 73                       | 10.1             | 1525              | 0.048               | 100                | 8.4                     | LOS A               | 0.6                | 4.9                | Short          | 120                 | 0.0               | NA                   |
| Lane 2                   | 819                      | 10.9             | 1231 <sup>1</sup> | 0.665               | 100                | 13.2                    | LOS A               | 31.3               | 239.3              | Full           | 500                 | 0.0               | 0.0                  |
| Approach                 | 892                      | 10.9             |                   | 0.665               |                    | 12.8                    | LOS A               | 31.3               | 239.3              |                |                     |                   |                      |
| Intersection             | 1836                     | 9.0              |                   | 0.665               |                    | 16.0                    | LOS B               | 31.3               | 239.3              |                |                     |                   |                      |

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

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

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

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

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

<sup>1</sup> Reduced capacity due to a short lane effect. Short lane queues may extend into the adjacent full-length lanes. Some upstream delays at entry to short lanes are not included.

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## **Appendix F**

### **SIDRA Performance Measures & Level of Service Explanatory Note**

# EXPLANATORY NOTE

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Reference: 0129tn01

## SIDRA Performance Output & Level of Service

SIDRA intersection modelling outputs a range of performance measures, in particular:

- **Degree of Saturation (DOS)** – The DOS is defined as the ratio of demand (arrival) flow to capacity. The DOS is used to measure the performance of intersections where a value of 1.0 represents an intersection at theoretical capacity, above 1.0 represent over-saturated conditions (demand flows exceed capacity) and degrees of saturation below 1.0 represent under-saturated conditions (demand flows are below capacity). As the performance of an intersection approaches DOS of 1.0, queue lengths and delays increase rapidly. It is usual to attempt to keep DOS to less than 0.9, with satisfactory intersection operation generally achieved with a DOS below 0.8.
- **Average Vehicle Delay (AVD)** – Delay represents the difference between interrupted and uninterrupted travel times through an intersection and is measured in seconds per vehicle. Delays include queued vehicles accelerating and decelerating from/to the intersection stop lines, as well as general delays to all vehicles travelling through the intersection. The AVD (or average delay per vehicle in seconds) for intersections also provides a measure of the operational performance of an intersection and is used to determine an intersection's Level of Service (see below). For signalised intersections, the AVD reported relates to the average of all vehicle movements through the intersection. For priority (Give Way, Stop & Roundabout controlled) intersections, the AVD reported is that for the movement with the highest AVD.
- **Level of Service (LOS)** – This is a comparative measure that provides an indication of the operating performance, based on AVD. For signalised and roundabout intersections, LOS is based on the average delay to all vehicles, while at priority controlled intersections LOS is based on the worst approach delay. The following table provides a recommended baseline for assessment as per the RMS Guidelines to Traffic Generating Developments (2002):

**Table 1: Traffic Modelling Performance Criteria**

| Level of Service | Average Delay per Vehicle (sec/veh) | Traffic Signals, Roundabout                                                                            | Give Way and Stop Signs                                            |
|------------------|-------------------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| <b>A</b>         | less than 14                        | Good operation                                                                                         | Good operation                                                     |
| <b>B</b>         | 15 to 28                            | Good with acceptable delays & spare capacity                                                           | Acceptable delays & spare capacity                                 |
| <b>C</b>         | 29 to 42                            | Satisfactory                                                                                           | Satisfactory, but accident study required                          |
| <b>D</b>         | 43 to 56                            | Operating near capacity                                                                                | Near capacity & accident study required                            |
| <b>E</b>         | 57 to 70                            | At capacity; at signals, incidents will cause excessive delays. Roundabouts require other control mode | At capacity, requires other control mode                           |
| <b>F</b>         | More than 70                        | Unsatisfactory and requires additional capacity.                                                       | Unsatisfactory and requires other control mode or major treatment. |