Berkeley Strategic

LAND WEST OF WORTHING ROAD. SOUTHWATER

Neighbourhood Plan Highway Capacity Assessment

JANUARY 2020

PUBLIC

Berkeley Strategic

LAND WEST OF WORTHING ROAD. SOUTHWATER

Neighbourhood Plan Highway Capacity Assessment

TYPE OF DOCUMENT (VERSION) PUBLIC

PROJECT NO. 70016993

DATE: JANUARY 2020

Berkeley Strategic

LAND WEST OF WORTHING ROAD. SOUTHWATER

Neighbourhood Plan Highway Capacity Assessment

WSP

Mountbatten House
Basing View
Basingstoke, Hampshire
RG21 4HJ

Phone: +44 1256 318 800

Fax: +44 1256 318 700

WSP.com

QUALITY CONTROL

Issue/revision	Revision 1	Revision 2	Revision 3	Revision 4
Remarks				Figure 1 updated
Date	03.01.19	03.10.19	14.10.19	08.01.20
Prepared by	Adam Coleman	Adam Coleman	Adam Coleman	Adam Coleman
Signature				
Checked by	Allan Norcutt	Allan Norcutt	Allan Norcutt	Allan Norcutt
Signature				
Authorised by	Allan Norcutt	Allan Norcutt	Allan Norcutt	Allan Norcutt
Signature				
Project number	70016993	70016993	70016993	70016993
Report number	Revision 1	Revision 2	Revision 3	Revision 4
File reference				

CONTENTS

TABLES

APPENDICES

1. INTRODUCTION

1.1. BACKGROUND

1.1.1. WSP has been commissioned by Berkeley Strategic to assess the highway impacts of the development of land to the west of Worthing Road, Southwater for circa. 450 homes as is proposed in the draft Southwater Neighbourhood Plan published in September 2018.

1.1.2. The proposed neighbourhood plan development is located to the north and west of the existing Broadacres development which received planning consent for 540 dwellings and 54 Retirement Living dwellings and is currently under construction, with 39 dwellings occupied as of October 2018.

1.1.3. The main access to the Broadacres development is via a four-arm roundabout with Worthing Road / Cedar Drive (the design for which is shown on **Drawing Number 0398/SK/07**), with a secondary access provided via a simple priority controlled junction just south of the Cedar Drive roundabout.

1.1.4. In order to accommodate the Broadacres development there was an obligation for improvements to be delivered at the A24 Hop Oast Roundabout, which principally related to a free-flow left turn lane from Worthing Road on to the A24. These improvements were delivered in the late summer of 2018, resulting in the layout illustrated on **Drawing Number 0398/SK/014**.

1.1.5. It is proposed that the Neighbourhood plan development is accessed via the existing Broadacres development spine road via the two existing access points on Worthing Road.

1.2. WEST SUSSEX COUNTY COUNCIL LIAISON

1.2.1. An earlier version of this report (3 January 2019) was submitted to Southwater Parish Council (SPC) and forwarded on to West Sussex County Council (WSCC) for review. Following their review, WSCC lodged an objection on highway grounds citing a need to reconsider a number of aspects of the assessment.

1.2.2. Following a meeting between WSP, Berkeley and WSCC on 30 August 2019, clarity on the further work / evidence required were set out by WSCC, with these related to the traffic growth assumptions made and breaking out the distribution of the education trips rather than applying census data to all trips generated by the development.

1.2.3. A technical note (Transport Technical Note 3 Rev C) was subsequently prepared by WSP, setting out a revised approach to these aspects of the assessment and was submitted to WSCC for approval. WSCC confirmed agreement to the proposed methodology on 26 September 2019 and this report has therefore been updated to account for the revised approach.

1.3. REPORT STRUCTURE

1.3.1. The structure of this report is as follows:

- Chapter 2 - Baseline Traffic Flows: Details how the baseline flows have been derived;
- Chapter 3 - Development Trip Generation: Details how the trip generation for the development has been derived;
- Chapter 4 – Trip Assignment;
- Chapter 5 - Assessment of Site Access Junctions;
- Chapter 6 - Assessment of Off-Site Junctions; and
- Chapter 7 - Summary and Conclusions.

2. BASELINE TRAFFIC FLOWS

2.1. 2018 OBSERVED FLOWS

2.1.1. The following junctions were surveyed after completion of the improvement works to Hop Oast roundabout which are referred to in Chapter 1:

- Hop Oast Roundabout (A24/Worthing Road)
- A24 / Mill Straight Pollards Hill Roundabout
- Worthing Road / Cedar Drive Roundabout
- Worthing Road site access (priority junction)
- Worthing Road / Fairbank Road Signal Junction
- A272 / A24 / Cowfold Road signal controlled junction

2.1.2. These surveys were undertaken on Tuesday 9 October 2018 between the periods 07:00 to 10:00 and 16:00 to 19:00 and the locations of the junctions are illustrated on **Figure 1**.

2.1.3. Analysis of the survey data identified the AM and PM peak hours to be:

- 07:30 to 08:30 for the A24 Corridor
- 08:00 to 09:00 for the Worthing Road Corridor
- 17:00 to 18:00 for both the A24 and Worthing Road Corridors.

2.1.4. The difference between the 07:30 to 08:30 and 08:00 to 09:00 flows are only small (for example, the total flows at the Hop Oast junction are 3,410 as compared to 3,290). For robustness, the A24 corridor assessment work has been completed for the period 07:30 to 08:30.

2.2. TRAFFIC GROWTH

2.2.1. For the original assessment work, the Tempro Database (Version 7.2) was interrogated to derive baseline traffic growth factors from the base year of 2018 to a future year of 2036, which represents the life of the emerging Horsham Local Plan. The observed year 2018 peak hour flows along the A24 corridor are illustrated on **Figures 2** and **3** for the AM and PM peak hours respectively.

2.2.2. It should be noted that all traffic flow data presented within this report and the associated assessment work are based on Passenger Car Unit (PCU) values. A PCU factor of 2.0 for the OGV1, OGV2 and Bus classifications has been used.

2.2.3. The TEMPRO growth rates that were derived for the Horsham 009 output area, within which the site and Southwater is located, are summarised in the following table:

Table 1 - Growth Rates, 2018 to 2036 (Tempro 7.2, Horsham 009)

Period	Trunk Roads	Principal Roads
AM Peak	1.1632	1.1529
PM Peak	1.1729	1.1626

2.2.4. WSCC subsequently requested that the growth rate assumptions be revisited such that an allowance was made for traffic generated by the following committed development sites, with the Tempro growth rates set out in Table 1 then adjusted to account for these accordingly.

- West of Worthing Road / Broadacres: This site has consent for 540 homes, with 39 homes being occupied at the time of the traffic surveys in October 2018;
- Land East of the A24, West of Horsham: This site has consent for 1,106 homes. In October 2018, when the traffic surveys were undertaken, 495 homes were occupied;
- Land North of Horsham: This site has consent for 2,750 homes and 46,450 sqm of employment use. Construction had not commenced in October 2018 when the traffic surveys were undertaken;
- Mulberry Fields, Mill Straight: This site has consent for 193 homes although it is unknown how many were occupied at the time of the traffic being undertaken in October 2018

2.2.5. The forecast flows from these three consented development sites have been obtained from the Transport Assessments that were completed in support of the individual planning applications, as discussed below.

West of Worthing Road / Broadacres

2.2.6. This site has consent for 540 homes and, at the time of the traffic surveys that were completed in October 2018, 39 homes were occupied.

2.2.7. The full development flows along the A24 corridor, as obtained from the Transport Assessment (TA) that supported the planning application, are illustrated on **Figures 4** and **5** for the AM and PM peak hours respectively.

2.2.8. The adjusted flows, with the removal of the 39 homes that were occupied at the time of the 2018 traffic surveys, are illustrated on **Figures 6** and **7**.

Land East of the A24, West of Horsham

2.2.9. This site has consent for 1,106 homes and, at the time of the traffic surveys that were completed in October 2018, 495 homes were occupied.

2.2.10. The TA which supported the planning application did not provide turning movements at Hop Oast Roundabout as the assessment of that scheme did not extend that far along the A24 corridor. It has therefore been assumed that all trips which travel via the A24(S) from the West of Horsham site reach Hop Oast Roundabout. From here it has been assumed that they continue on the A24 until they reach the Cowfold "Buck Barn" junction where they will distribute as per existing turning movements.

2.2.11. The resultant development flows along the A24 corridor are illustrated on **Figures 8** and **9** for the AM and PM peak hours respectively. The adjusted flows, with the removal of the 495 homes that were occupied at the time of the 2018 traffic surveys, are illustrated on **Figures 10** and **11**.

Land North of Horsham

2.2.12. This site has consent for 2,750 homes and 46,450 sqm of employment use. Construction of the development had not commenced at the time the traffic surveys were undertaken in October in 2018 or indeed since.

2.2.13. The full development flows along the A24 corridor, as obtained from the TA that supported the planning application, are illustrated on **Figures 12** and **13** for the AM and PM peak hours respectively. The movements which are attributed via the A24(S) of the Hop Oast Roundabout are assumed to continue on the A24 until they reach the Cowfold "Buck Barn" junction where they will distribute as per existing turning movements.

Mulberry Fields, Mill Straight

2.2.14. This site has consent for 193 homes. The full development flows along the A24 corridor, as obtained from the TA that supported the planning application, are illustrated on **Figures 14** and **15** for the AM and PM peak hours respectively. The movements which are attributed via the A24(S) of the Hop Oast Roundabout are assumed to continue on the A24 until they reach the Cowfold "Buck Barn" junction where they will distribute as per existing turning movements.

2.2.15. Currently it has been assumed that none of the 193 homes were occupied at the time of the surveys being undertaken in October 2018. However, it is considered that a number of homes were probably occupied at the time and therefore no discounting of trips represents a very robust assessment.

Total Committed Development Flows

2.2.16. The total committed development trips that are forecast to be generated by the above sites along the A24 corridor are illustrated on **Figures 16** and **17** for the AM and PM peak hours respectively. These flow totals discount the homes that were complete / occupied at those sites in October 2018.

Background Growth

2.2.17. The addition of the committed development flows to the observed year 2018 flows at the Hop Oast Roundabout results in total junction flow increases of 13.4% and 12.8% during the AM and PM peak hours respectively.

2.2.18. The addition of trips from the proposed development would result in further increases at Hop Oast Roundabout. For example, assuming 450 homes are built within the plan period and using the trip rates and assignment details adopted in our earlier assessment work, there would be an additional increase of circa 185 and 170 movements through Hop Oast Roundabout during the AM and PM peak hours respectively and this, along with the committed development flows discussed above, would result in a 18% and 17% increase to the observed 2018 baseline flows during the AM and PM peak hours.

2.2.19. As part of the assessment work completed by WSP for the "Neighbourhood Plan Highway Capacity Assessment", the following unadjusted growth rates were obtained from the Tempro database, with these being for urban roads within the Horsham 009 MSOA for the period 2018 to 2036.

Table 2 – Tempro Growth Rates, 2018 to 2036 (Horsham 009)

Period	Trunk Roads	Principal Roads	Minor Roads	All Roads
AM Peak	1.1632	1.1529	1.1614	1.1581
PM Peak	1.1729	1.1626	1.1711	1.1678

2.2.20. As the four identified committed development sites result in a level of traffic growth commensurate with the above rates, WSP originally proposed that no additional background traffic growth be applied. However, following discussions with WSCC, it has been agreed that an additional level of background growth be applied to the A24 through-flows to account for trips from committed development sites from the wider area, including outside of the district.

2.2.21. The methodology agreed with WSCC for this was to derive unadjusted Tempro rates for the entire Horsham District and Horsham 009 MSOA, with the difference between these two sets of rates applied to the A24 through-movements along the A24 corridor. This was completed for the 'rural principal roads' category within the Tempro database and the rates are summarised in the following table.

Table 3 – Tempro Growth Rates, 2018 to 2036 (Rural, Principal Roads)

Area	AM	PM
Horsham District	1.1998	1.2029
Horsham 009 MSOA	1.1762	1.1860
Difference	**0.0236**	**0.0169**

2.2.22. It can be seen from the above table that this methodology provides AM and PM peak growth rates of 2.36% and 1.69% respectively and it has therefore been agreed with WSCC that an average figure of 2% is adopted across the two peak hour periods.

2.2.23. It has also been agreed with WSCC that no additional growth, other than from the identified committed development trips, is applied to the Worthing Road corridor as the volume of trips from the proposed development accounts for the identified growth and, other than the committed development trips and the land west of Worthing proposal, there is not considered to be an attraction for the use of this corridor away from the A24.

2.2.24. The resultant year 2036 baseline (Do-Minimum) flows for the A24 corridor are illustrated on **Figures 18** and **19** for the AM and PM peak hours respectively, with these accounting for the total committed development trips and a 2% growth rate applied to the A24 corridor flows observed in 2018. Detail on the Worthing Road corridor flows is provided later.

3. TRIP GENERATION

3.1. INTRODUCTION

3.1.1. This chapter provides detail on how the trip generation forecasts for the development have been derived.

3.2. RESIDENTIAL ELEMENT

3.2.1. The TRICS Database (Version 7.5.3) had been interrogated to derive rates for the residential element. The 'Houses, Privately Owned' section of the database was reviewed, with the following site characteristics selected:

- All UK sites (excluding Northern Ireland and Greater London were selected) with a dwelling range of between 200 and 2,000 dwellings located in Suburban and Edge of Town locations.
- Population within 5 miles of the development sites between 50,000 and 100,000 and between 5,000 to 15,000 within 1 mile.

3.2.2. The rates that were derived from the search are provided in the following table for the 450 homes proposed in the draft Southwater Neighbourhood Plan.

Table 4 - Residential Trip Rates & Generation

Period	Trip Rates (per home)			Trip Generation (450 homes)		
	Arrival	Departure	Total	Arrival	Departure	Total
AM (0800-0900)	0.144	0.411	0.555	65	185	245
PM (1700-1800)	0.345	0.157	0.502	155	71	226

3.2.3. The above rates are considered appropriate and should be robust in that:

- The 'Private Housing' sub-land use has been used rather than the 'Mixed Private and Affordable Housing' category; and
- A number of sites included within the TRICS analysis would not have a Travel Plan in place

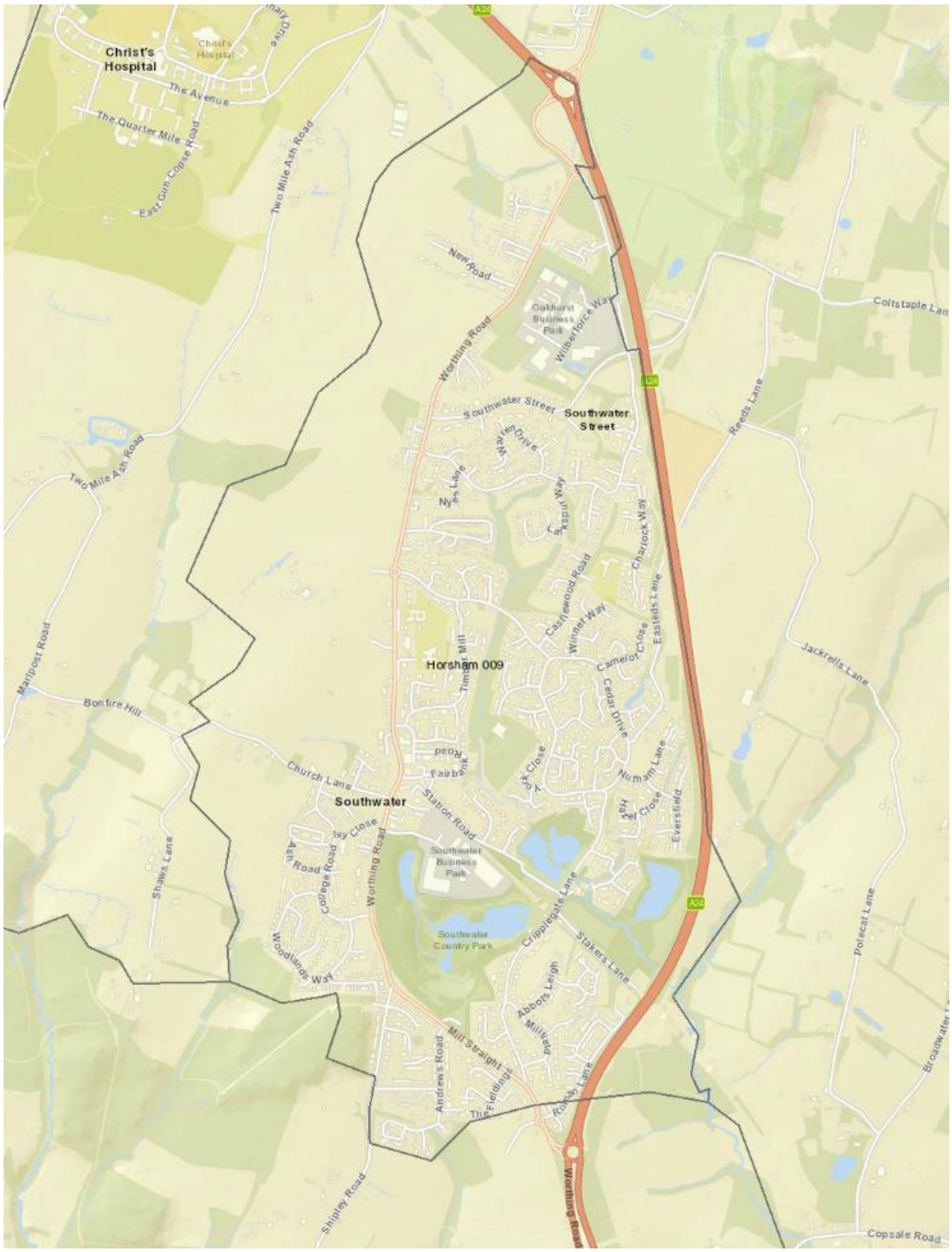
3.2.4. As a cross-check to the above a search of all sites within the 'Private Housing' sub-land use that are located within West Sussex has been undertaken. This identified five sites which collectively generated AM and PM peak two-way trip rates of 0.552 and 0.496 respectively which are comparative to the values presented above. Consequently, it is considered that the trip rates used in Table 4 represent a good basis for the analysis.

3.2.5. The trip rates shown in Table 4 are lower than those which were used in the planning application for the consented Broadacres development but reflect data which is within the latest version of the TRICS database, thereby including more recently completed developments, etc. which are therefore likely to be more reflective of the development once it is built out. Once the proposals proceed to application stage, and depending on the scale of the Broadacres development which has been built out at that time, additional surveys of the site access and thus site-specific trip rates could be determined and compared with those outlined above.

4. TRIP ASSIGNMENT & FUTURE YEAR FLOWS

4.1. RESIDENTIAL TRIPS

4.1.1. The assignment of residential trips from the development has been based on Journey to Work data from the 2011 Census for the Horsham 009 Middle Super Output Area (MSOA). As illustrated below, the Horsham 009 MSOA covers Southwater. This assignment has been applied to all residential trips.



4.1.2. The resultant assignment of residential trips is summarised in the following table and illustrated on **Figure 20**.

Table 5 - Residential Trip Assignment

Route No.	Route Description	Proportion
1	Worthing Road (N) / Horsham	24%
2	A24 (E) / Crawley	24%
3	A24 (W) / Warnham	19%
4	A264 / Broadbridge Heath	7%
5	A272 (W)	5%
6	A24 (S)	7%
7	A272 (E)	8%
8	Southwater Street	6%
Total		**100%**

4.2. EDUCATIONAL TRIPS

4.2.1. Within the assessment work previously undertaken, all of the development trips (as set out within Table 4) were distributed in accordance with Census data, which is based on Journey to Work statistics, and consequently all trips were attributable to that journey purpose.

4.2.2. At the aforementioned meeting, WSCC requested that the education trips be split out such that they can be distributed more appropriately, albeit this affects the morning peak hour only. Therefore, in order to break out education trips consideration has been given to the proportion of trips which take place in the morning peak hour which are attributable to that journey purpose.

4.2.3. Table NTS0502 of the National Travel Survey (NTS) for 2018 provides details of the start time of trips by journey purpose. It shows that between 8am and 9am, 29% relate to education trips and 22% relate to escort education trips.

4.2.4. However, this relates to all trips and not just car driver trips. Therefore, in order to understand what proportion of the car driver trips associated with the development identified in Chapter 3 relate to education, it is necessary to determine what the multi-modal trips associated with the development might be. To do this use has been made at this stage of the work undertaken in support of the consented Broadacres development (i.e. the Transport Assessment which was prepared in support of that application).

4.2.5. The car driver mode share from that assessment was 77% and consequently applying this to the vehicular trip rates identified in Chapter 3 would give the following all person trip rates for the development:

Table 6 – Person Trip Generation from 450 Homes

Period	Arrivals	Departures
AM Peak	84	240
PM Peak	201	92

4.2.6. Going back to the National Travel Survey it can be reasonably interpreted that an escort education trip relates to a parent or carer walking / accompanying a child to school or driving the child to school, whilst an education trip suggests that the trip is being undertaken independently, which would therefore exclude car borne trips (given that both primary and secondary school children are below the legal age to drive).

4.2.7. There are both primary and junior schools within Southwater, with the closest primary and junior school (Southwater Junior Academy) being circa 300m from the centre of the site. There is also a second primary school (Castlewood Primary School) circa 500m from the centre of the site.

4.2.8. Given their distance from the site it is considered that the opportunity for children of the proposed development to walk or cycle to school (either independently or escorted) is excellent and highly likely and the layout of the development will be such that the opportunity for residents to walk and cycle safely to key local destinations is extremely attractive.

4.2.9. As a result, it is considered that very few primary / junior school children would be driven to school from the development and even if they were these would, in all likelihood, constitute linked trips associated with parents dropping their child off at school on the way to work.

4.2.10. As a result, for robustness it is assumed that all 22% Escort Education trips could relate to secondary school trips given that there is currently no secondary school provision in Southwater, with the closest state schools being in Horsham:

- Tanbridge House School (mixed) – 3.7km (circa 2.3 miles)
- Millais School (girls) – 5km (circa 3 miles)
- The Forest School (boys) – 4.7km (circa 3 miles)

4.2.11. As a result, the person trips attributable to Escort Education would be as follows:

Table 7 – Person Trip Generation – Escort Education Trips; i.e. Secondary School

Period	Arrivals	Departures
AM Peak	18	53
PM Peak	0	0

4.2.12. Based on an average distance to the above secondary schools from the site (circa 2.8 miles) and National Travel Survey Table NTS0614, it is considered that circa 36% of secondary school pupils might be driven to school, albeit again a proportion of these would be linked trips. There are both public and scheduled school bus services provided between Southwater and the secondary schools

within Horsham which would cater for those pupils wishing to travel to the secondary schools by bus, which based on NTS0614 would be circa 48%.

4.2.13. Consequently, it is considered robust to assume that of the 22% escort education trips, 36% could be by car to secondary schools in Horsham either as a sole purpose trip or as part of a linked trip; i.e. on the way to work. For the purposes of this assessment a worst-case assessment has been undertaken based on none of these trips being linked and all of them being car driver (i.e. no vehicle has more than one secondary school pupil).

4.2.14. This approach results in the following Escort Education car trips:

Table 8 – Vehicular Trip Generation – Escort Education Trips; i.e. Secondary School

Period	Arrivals	Departures
AM Peak	6	19
PM Peak	0	0

4.2.15. As a result, the revised vehicular trips associated with non-education related trips are as follows; i.e. the trips in Table 4 minus the trips in Table 8.

Table 9 – Vehicular Trip Generation – Non-Education Trips

Period	Arrivals	Departures
AM Peak	59	166
PM Peak	155	71

4.2.16. It has been assumed that whilst the non-education trips are made up of a number of journey purposes during the peak hours, such as work, leisure, shopping, visiting friends, etc. that these are distributed as per the census data for ease of assessment and robustness at this stage.

4.2.17. As a result, the trips identified in Table 9 would distribute on to the highway network as set out in Section 4.1 of this report.

4.2.18. As set out above, the “Escort Education Trips” have been attributed to secondary school trips, with three secondary schools identified as being the most likely destination for those trips. Given the location of these schools, and assuming equal attendance at each, it is considered that all of the trips would travel through Hop Oast Roundabout, with two-thirds using the B2237 Worthing Road into Horsham (towards Millais School and The Forest School) and the remaining third travelling along the A24 west of Hop Oast Roundabout towards Tanbridge House School.

4.2.19. The resultant assignment of the development generated trips are illustrated on the following figures:

- **Figure 20**: AM Non-Educational Trips
- **Figure 21**: AM Educational Trips
- **Figure 22**: AM Total Development Trips
- **Figure 23**: PM Total Development Trips

4.3. FUTURE YEAR FLOWS

4.3.1. The future year flows for the A24 corridor are illustrated on the following figures:

- **Figures 24/25**: Year AM/PM 2036 Do-Something Flows (These flows are the baseline flows with the addition of the development generated trips).

5. ASSESSMENT OF SITE ACCESS JUNCTIONS

5.1. INTRODUCTION

5.1.1. This chapter assesses the operation of the existing site access junction to the Broadacres development, modelling the observed 2018 flows and the future year 2036 flows with and without the 450 homes identified within the Neighbourhood Plan allocation. It should be noted that for the future year assessments, no background growth other than the identified committed development trips has been applied to the Worthing Road corridor as the proposed development and committed development trips will account for the identified level of growth to 2036. This approach has been agreed with WSCC.

5.1.2. The traffic flows used in the assessment work are illustrated on the following figures:

- **Figures 26/27**: Year 2018 AM/PM Observed Flows
- **Figures 28/29**: AM/PM Committed Development Trips
- **Figures 30/31**: AM/PM Development Flows (450 Homes)
- **Figures 32/33**: AM/PM Do-Minimum Flows
- **Figures 34/35**: AM/PM Do-Something Flows

5.1.3. With the exception of the Broadacres development, the committed development trip detail provided within the individual TA's only extends as far as the Hop Oast and / or Pollards Hill junctions along the A24 corridor, with no detail provided on assignment routes through Southwater. Therefore, as a worst-case scenario, it has been assumed that all trips entering and exiting Worthing Road (as illustrated on Figures 10 to 15) are assumed to pass through the site access junctions.

5.1.4. The Worthing Road / Cedar Drive site access roundabout and the secondary site access junction immediately to the south of the site have been modelled in the Junction 9 software.

5.2. 2018 ASSESSMENT (OBSERVED FLOWS)

5.2.1. The operation of the two site access junctions in the existing situation based on the surveys undertaken in October 2018 are set out below. The Junction 9 result files for the site access junctions are attached within **Appendix A**.

Table 10 - Worthing Road / Cedar Drive / Site Access Roundabout: 2018 Baseline

Arm	AM		PM	
	RFC	Queue	RFC	Queue
Worthing Road (N)	0.29	0	0.62	2
Cedar Drive	0.40	1	0.17	0
Worthing Road (S)	0.43	1	0.39	1
Site Access	0.04	0	0.03	0

Table 11 - Worthing Road Secondary Site Access: 2018 Baseline

Arm	AM		PM	
	RFC	Queue	RFC	Queue
Worthing Road (S)	0.00	0	0.00	0
Site Access	0.02	0	0.00	0

5.2.2. The results presented above are representative of the existing operation of the junctions based on the queue length surveys that were completed at the same time as the traffic count surveys.

5.3. 2036 DO-MINIMUM ASSESSMENTS

5.3.1. As previously discussed, it is considered that the trips that are forecast to be generated by the proposed Broadacres development and the identified committed development sites will account for the level of future year growth to 2036, and therefore no additional background growth has been added to the observed year 2018 flows along the Worthing Road corridor.

5.3.2. The junction assessments have been completed with a flat vehicle arrival profile throughout the peak hour as it is considered that this will best represent the flow characteristics in 2036. This accounts for wider area traffic conditions and congestion across the much wider highway network, that will result in 'peak spreading' (i.e. people starting their journey earlier or later or not making it at all).

5.3.3. This is further supported by the fact that the results of the October 2018 surveys demonstrate how the flow profile on the local highway network is already flat during the peak hours, with this demonstrated by the flow volumes recorded at the Hop Oast junction, as summarised below:

Table 12 – Hop Oast Flow Volumes / Flow Profile

Period	Total Flow	%
07:30	830	24.34%
07:45	870	25.51%
08:00	835	24.49%
08:15	875	25.66%
17:00	971	25.86%
17:15	977	26.02%
17:30	908	24.18%
17:45	899	23.94%

5.3.4. The results of the site access junction assessments are summarised in the following tables.

Table 13 - Worthing Road / Cedar Drive / Site Access Roundabout: 2036 Do-Minimum

Arm	AM		PM	
	RFC	Queue	RFC	Queue
Worthing Road (N)	0.33	1	0.73	3
Cedar Drive	0.38	1	0.18	0
Worthing Road (S)	0.53	2	0.46	1
Site Access	0.27	0	0.13	0

Table 14 - Worthing Road Secondary Site Access: 2036 Do-Minimum

Arm	AM		PM	
	RFC	Queue	RFC	Queue
Site Access	0.04	0	0.02	0
Worthing Road (N)	0.02	0	0.02	0

5.3.5. From the above result summaries, it can be seen that the site access junctions continue to operate within capacity with the 2036 Do Minimum scenario.

5.3.6. The above results have been completed on the worst-case assumption that all the identified committed development trips travelling via Worthing Road pass through the site access junctions, whereas in reality it is considered that the majority of trips would have origins / destinations further to the north of Southwater and therefore not travel past the site.

5.4. 2036 DO-SOMETHING ASSESSMENTS

5.4.1. For the Do-Something tests, the following assignment of assumptions for the trips generated by the proposed 450 homes at Land West of Worthing Road has been assumed:

- For trips that route via the north, 75% would use the Cedar Drive Roundabout and 25% the secondary priority access; and
- For trips that route via the south, 25% would use the Cedar Drive Roundabout and 75% the secondary priority access.

5.4.2. The results of the assessment are summarised in the following tables.

Table 15 - Worthing Road / Cedar Drive / Site Access Roundabout: 2036 Do-Something

Arm	AM		PM	
	RFC	Queue	RFC	Queue
Worthing Road (N)	0.37	1	0.83	5
Cedar Drive	0.40	1	0.20	0
Worthing Road (S)	0.58	2	0.52	2
Site Access	0.45	1	0.19	0

Table 16 - Worthing Road Secondary Site Access: 2036 Do-Something

Arm	AM		PM	
	RFC	Queue	RFC	Queue
Site Access	0.14	1	0.06	0
Worthing Road (N)	0.06	0	0.10	0

5.4.3. The results show that the site access junctions operate within capacity with the year 2036 Do-Something scenario flows.

5.4.4. Again, the above results have been completed on the worst-case assumption that all the identified committed development trips pass through the site access junctions.

6. ASSESSMENT OF OFF-SITE JUNCTIONS

6.1. INTRODUCTION

6.1.1. An assessment of the impact of the 450 homes on the wider highway network has been undertaken, with the following junctions modelled:

- Worthing Road / Fairbank Road Signal Junction;
- A24 Hop Oast Roundabout;
- A24 / Mill Straight / Pollards Hill Roundabout; and
- A272 / A24 / Cowfold Road signal controlled junction.

6.1.2. As previously discussed, the AM peak period for the A24 corridor is 07:30 to 08:30, with the flows observed for this period being used within the assessment work presented within this chapter. For these assessments, no adjustment has been made to the development trip rates, which cover the period 08:00 to 09:00. Therefore, the results presented below represent an absolute worst-case scenario and will over-represent the likely trips which would take place during that period.

6.2. WORTHING ROAD / FAIRBANK ROAD

6.2.1. The Worthing Road / Fairbank Road signalised junction has been assessed with the Do-Minimum and Do-Something flows and the results are summarised below. The Linsig result files for the Worthing Road / Fairbank Road junction are attached within **Appendix B**.

Table 17 - Worthing Road / Fairbank Road Signal Junction: 2036 Do-Minimum

Arm	AM		PM	
	Degree of Saturation	Mean Max Queue	Degree of Saturation	Mean Max Queue
Worthing Road (N)	59.4%	8	79.5%	12
Fairbank Road	49.4%	4	81.4%	8
Worthing Road (S)	72.5%	12	69.8%	9
PRC	24.1%		10.6%	

Table 18 - Worthing Road / Fairbank Road Signal Junction: 2036 Do-Something

Arm	AM		PM	
	Degree of Saturation	Mean Max Queue	Degree of Saturation	Mean Max Queue
Worthing Road (N)	63.7%	9	81.8%	13
Fairbank Road	49.4%	4	81.4%	8
Worthing Road (S)	74.1%	12	74.2%	12
PRC	**21.5%**		**10.1%**	

6.2.2. It can be seen from the above results that the existing Worthing Road / Fairbank Road signalised junction operates within its theoretical operational capacity in 2036 when subjected to the demand from the 450 homes and that the associated impact on the operation of the junction is insignificant.

6.3. HOP OAST JUNCTION

EXISTING HOP OAST JUNCTION

6.3.1. The existing Hop Oast Roundabout arrangement (as reconfigured in the late summer of 2018) has been assessed with the 2018 Do-Minimum flows. The Junction 9 result files are attached within **Appendix C** with the results provided below.

Table 19 - Hop Oast Roundabout: 2018 Do-Minimum

Arm	AM		PM	
	RFC	Queue	RFC	Queue
B237 Worthing Road	0.24	1	0.71	2
A24 (S)	0.76	3	0.51	1
Worthing Road	0.23	1	0.19	1
A24 (N)	0.51	1	0.68	2

6.3.2. The results presented above show how the junction is forecast to be operating within capacity during both the AM and PM peak periods, with maximum RFC values of 0.76 and 0.71 respectively.

HOP OAST ROUNDABOUT IMPROVEMENT SCHEME

6.3.3. The TA completed for the consented North Horsham site identified that improvements to the junction, in addition to the works completed towards the end of 2018, were required to accommodate the development proposals associated with that site. The identified improvements are illustrated on PBA Drawing Number 25216-5506-016A, a copy of which is attached within **Appendix D**.

6.3.4. The proposed improvements consist of an increase in entry width on both the A24 approaches and the northern Worthing Road arm to allow for an additional lane and two-lane exits. This allows for a dedicated left turn lane on each approach.

6.3.5. The results of the junction assessments with the improvements as identified through the North Horsham application are presented in the following tables for the Do-Minimum and Do-Something scenarios, with the Junctions 9 results files attached within **Appendix E**.

Table 20 - Hop Oast Roundabout Improvement: 2036 Do-Minimum

Arm	AM		PM	
	RFC	Queue	RFC	Queue
B237 Worthing Road	0.20	1	0.62	2
A24 (S)	0.66	2	0.45	1
Worthing Road	0.41	1	0.25	1
A24 (N)	0.53	1	0.73	3

Table 21 - Hop Oast Roundabout Improvement: 2036 Do-Something

Arm	AM		PM	
	RFC	Queue	RFC	Queue
B237 Worthing Road	0.21	1	0.69	2
A24 (S)	0.67	2	0.47	1
Worthing Road	0.49	1	0.27	1
A24 (N)	0.56	1	0.77	3

6.3.6. The results presented above show that the proposed improvements identified for the junction result in an improved position in 2036 as compared to the results of the 2018 assessment with the current junction layout.

6.3.7. The improved junction arrangement is forecast to operate within capacity during both the AM and PM peak periods with the 2036 Do-Something scenario flows, with maximum RFC values of 0.67 and 0.77 respectively. The impact of the trips generated by the 450 homes from the land west of Worthing Road has a marginal impact on the operation of the junction and therefore no further improvement works are considered necessary.

Delivery of Hop Oast Improvements / Potential Interim Scheme

6.3.8. WSCC has confirmed that the Hop Oast junction improvements as identified on PBA Drawing Number 25216-5506-016A are to be implemented by the occupation of the 2,200th home at the North Horsham development.

6.3.9. WSCC has also confirmed that Horsham District Council expect just 450 occupations at North Horsham by April 2024 based on their planning performance agreement. There is therefore potential that the homes at the Land West of Worthing Road site will be delivered ahead of 2,200 homes being occupied at North Horsham and therefore also ahead of the identified Hop Oast improvement works.

6.3.10. WSP has therefore completed sensitivity testing to understand the improvement works that would be necessary to suitably accommodate the Land West of Worthing Road development in isolation. The results presented in the following table show how the junction would operate with the year 2036 Do-Something flows with only the improvements identified for the Worthing Road (N) arm being

implemented (this includes the widening of the circulating carriageway by adjusting the central island).

Table 22 - Hop Oast Roundabout Improvement (Interim Scheme): 2036 Do-Something

Arm	AM		PM	
	RFC	Queue	RFC	Queue
B237 Worthing Road	0.21	2	0.69	2
A24 (S)	0.89	14	0.64	2
Worthing Road	0.49	7	0.27	1
A24 (N)	0.62	4	0.85	5

6.3.11. The results presented above show that only improvements to the Worthing Road (N) arm would be necessary to accommodate the trips associated with the Land West of Worthing Road site. Although the junction is operating with RFC values at / slightly above 0.85, the queues are not excessive and are experienced on the A24 approaches, which will both be improved when 2,200 homes are delivered at North Horsham.

6.3.12. As a result, if the phased delivery of Land West of Worthing Road site triggers the need for mitigation at Hop Oast Roundabout prior to the delivery of 2,200 homes at North Horsham, then there is an interim improvement scheme which could be implemented to mitigate those impacts. Similarly, if the 2,200 homes are occupied at North Horsham prior to the Land West of Worthing Road development triggering the need for improvements at Hop Oast then the full improvement scheme associated with the North Horsham scheme will have been implemented anyway.

6.4. A24 / MILL STRAIGHT / POLLARDS HILL ROUNDABOUT

6.4.1. The existing A24 / Mill Straight / Pollards Hill roundabout arrangement has been assessed with the results summarised in the following tables. This represents a worst-case assessment as it is understood that there are some improvements proposed at this junction, with the Wates development at Mill Straight (Planning Application Ref. DC/14/2582) to provide a financial contribution of 50% towards widening of the northbound and southbound A24 approaches to the roundabout (as set out within the S106 Agreement which accompanies that scheme).

6.4.2. The Junction 9 result files for the A24 / Mill Straight / Pollards Hill roundabout are attached within **Appendix F**.

Table 23 - A24 / Mill Straight / Pollards Hill Roundabout: 2036 Do-Minimum

Arm	AM		PM	
	RFC	Queue	RFC	Queue
A24 (N)	0.51	1	0.85	6
A24 (S)	0.76	4	0.56	2
Mill Straight	0.57	2	0.19	1

Table 24 - A24 / Mill Straight / Pollards Hill Roundabout: 2036 Do-Something

Arm	AM		PM	
	RFC	Queue	RFC	Queue
A24 (N)	0.52	2	0.85	6
A24 (S)	0.77	4	0.57	2
Mill Straight	0.59	2	0.20	1

6.4.3. It can be seen from the above that with the year 2036 Do-Minimum flows the junction is forecast to operate with a maximum RFC value of 0.85, with this on the southbound A24 approach during the PM peak. The addition of the development generated trips has a negligible impact on the operation of the junction, with the maximum RFC value remaining at 0.85, with maximum RFC increases on the other arms being just 0.02.

6.5. A272 / A24 / COWFOLD ROAD JUNCTION (BUCK BARN)

6.5.1. The existing A272 / A24 / Cowfold Road signalised junction has been assessed with the results presented below. The junction is currently operating at practical capacity and the results of the following scenarios are presented below:

- 2018 Observed Flows;
- 2036 Do-Minimum Flows;
- 2036 Do-Something Flows.

6.5.2. The Linsig result files for the A24 / A272 / Cowfold Road Junction are attached within **Appendix G**.

Table 25 – A24 Worthing Road / A272 Cowfold Road: 2018 Observed Flows

Arm	AM		PM	
	DoS	Queue	DoS	Queue
A24 Worthing Rd (N)	78.5%	11	95.6%	33
A272 Cowfold Rd (E)	71.8%	8	89.6%	16
A24 Worthing Rd (S)	78.9%	14	94.1%	18
A272 Cowfold Rd (W)	79.0%	9	95.2%	16
Practical Reserve Capacity	14.0%		-6.2%	

Table 26 – A24 Worthing Road / A272 Cowfold Road: 2036 Do-Minimum

Arm	AM		PM	
	DoS	Queue	DoS	Queue
A24 Worthing Rd (N)	91.1%	17	99.1%	39
A272 Cowfold Rd (E)	90.6%	13	90.8%	17
A24 Worthing Rd (S)	93.6%	18	97.9%	27
A272 Cowfold Rd (W)	85.4%	11	95.2%	16
Practical Reserve Capacity	-4.0%		-10.1%	

Table 27 – A24 Worthing Road / A272 Cowfold Road: 2036 Do-Something

Arm	AM		PM	
	DoS	Queue	DoS	Queue
A24 Worthing Rd (N)	92.3%	17	99.5%	40
A272 Cowfold Rd (E)	91.8%	14	90.9%	17
A24 Worthing Rd (S)	93.6%	18	97.9%	27
A272 Cowfold Rd (W)	85.4%	1	95.2%	16
Practical Reserve Capacity	-4.0%		-10.5%	

6.5.3. From the results presented above it can be seen that the junction is forecast to be operating above its theoretical operational capacity in all scenarios, including current day. However, the impact of the Land West of Worthing Road development generated trips is considered insignificant.

6.5.4. For example, during the AM peak hour in 2036, the introduction of an additional 450 homes associated with the potential Neighbourhood Plan allocation leads to the degrees of saturation and queue lengths remaining fairly stable, with maximum increases of 1.2% and 1 vehicle respectively, with the practical reserve capacity of the junction remaining at -4.0%. The results are similar during the PM peak hour, with a maximum degree of saturation increase of 0.4% and a deterioration in the practical reserve capacity of just 0.4%.

6.5.5. The insignificant impact that the additional development trips has on the operation of the junction are as expected considering the negligible increase in the volume of flows on individual links and turning movements as compared to existing flow volumes. The trips generated by the 450 homes results in an overall increase in trips through the junction of less than 1% for both the AM and PM peak hours.

6.5.6. It is therefore considered that the development proposals do not result in a severe impact upon the operation of the junction.

7. SUMMARY AND CONCLUSIONS

7.1. SUMMARY

7.1.1. This report has considered the impact that the delivery of 450 homes on land to the west of Worthing Road would have on the local highway network.

7.1.2. The assumptions that have been adopted for the assessment work have been discussed and agreed with WSCC.

7.2. CONCLUSIONS

7.2.1. The analysis set out in this report has concluded that the 450 homes as identified within the Neighbourhood Plan allocation could be delivered via the existing site access arrangement to the consented Broadacres development.

7.2.2. The assessment work has identified that off-site mitigation is required at the Hop Oast junction to deliver the future year traffic flow forecasts, although this is necessary with or without the land west of Worthing Road development coming forward.

7.2.3. Improvements to the Hop Oast roundabout are to be delivered as part of the mitigation associated with the North Horsham committed development site, with the layout for this attached within **Appendix D**. The assessment results have shown that this layout can also accommodate the trips that would be generated by 450 homes at land west of Worthing Road and that the associated impact is insignificant.

7.2.4. However, it is noted that the identified improvement works to Hop Oast are to only be delivered once 2,200 homes have been occupied at North Horsham. Sensitivity testing has therefore been completed to identify the improvement works that would be necessary to accommodate the Land West of Worthing Road development in isolation. This shows that only improvements to the Worthing Road (N) arm and the eastern kerbline of the central island of the roundabout would be necessary to mitigate the impact of trips generated by the Land West of Worthing Road site.

7.2.5. As a result, if the phased delivery of Land West of Worthing Road site triggers the need for mitigation at Hop Oast Roundabout prior to the delivery of 2,200 homes at North Horsham, then there is an interim improvement scheme which could be implemented to mitigate those impacts. Similarly, if the 2,200 homes are occupied at North Horsham prior to the Land West of Worthing Road development triggering the need for improvements at Hop Oast then the full improvement scheme associated with the North Horsham scheme will have been implemented anyway.

7.2.6. The results demonstrate that 450 homes at the land west of Worthing Road site would have a negligible impact on the operation of both the A24 / Mill Straight (Pollards Hill) and A24 / A272 (Buck Barn) signalised junction.

7.2.7. It is understood that improvements have been identified for the Pollards Hill roundabout as part of the Mulberry Fields planning application.

7.2.8. It is considered that the introduction of 450 new homes at Land West of Worthing Road, Southwater would not have a severe impact upon the operation of the highway network, with traffic flows associated with the development able to be accommodated within the existing highway network without the need for mitigation beyond that already proposed at Hop Oast Roundabout as a result of the North Horsham scheme.

DO NOT SCALE

KEY

43m STOPPING SIGHT DISTANCE

HIGHWAY BOUNDARY PROVIDED BY WSCC

WSP DESIGN HAS BEEN BASED ON TOPOGRAPHICAL SURVEY DATA AND DESIGNED TO THE EDGE OF THE EXISTING PAVEMENT. HIGHWAY BOUNDARY DATA HAS BEEN PROVIDED BY WSCC ON OS MAPPING. THE TWO SETS OF MAPPING DO NOT ALIGN, THE HIGHWAY BOUNDARY THEREFORE NEEDS TO BE CONFIRMED WITH WSCC IN RELATION TO THE TOPO SURVEY

6

REV	DATE	BY	DESCRIPTION	CHK	APD
C	24/10/14	PM	REISSUED BASED ON INCLUDED NOTE	SA	KK
B	13/10/14	PM	HIGHWAY BOUNDARY DATA AND SITE BOUNDARY ADDED	SA	KK
A	12/02/14	AJT	FIRST ISSUE	KK	KK

DRAWING STATUS: FOR INFORMATION ONLY

WSP

Mountbatten House, Basing View, Basingstoke, Hampshire RG21 4HJ
Tel: +44 (0)1256 318800 Fax: +44 (0)1256 318700
http://www.wspgroup.com

CLIENT: BERKELEY HOMES (SOUTHERN)

ARCHITECT: JTP

PROJECT: LINTOT PARK, SOUTHWATER

TITLE: NORTHERN ROUNDABOUT DESIGN

SCALE @ A3:	CHECKED:	APPROVED:
1:500	SA	KK
CAD FILE: 0398-SK-07 C.DWG	DESIGN-DRAWN: PM	DATE: October 14
PROJECT No: 70000398	DRAWING No: 0398/SK/07	REV: C

S:\70000398 - Lintot Park, Southwater Ph 2\E Models and Drawings\Development\AUTOCAD\SK Sketches\0398-SK-07 C.dwg 24 October 2014 09:20:57 Moss, Philip

DO NOT SCALE

REV	DATE	BY	DESCRIPTION	CHK	APD
A	10/03/14	LEW	FIRST ISSUE	SA	KK

DRAWING STATUS:
FOR INFORMATION ONLY

WSP
Mountbatten House, Basing View, Basingstoke, Hampshire RG21 4HJ
Tel: +44 (0)1256 318800 Fax: +44 (0)1256 318700
http://www.wspgroup.com

CLIENT:
BERKELEY HOMES (SOUTHERN)

ARCHITECT:
JTP

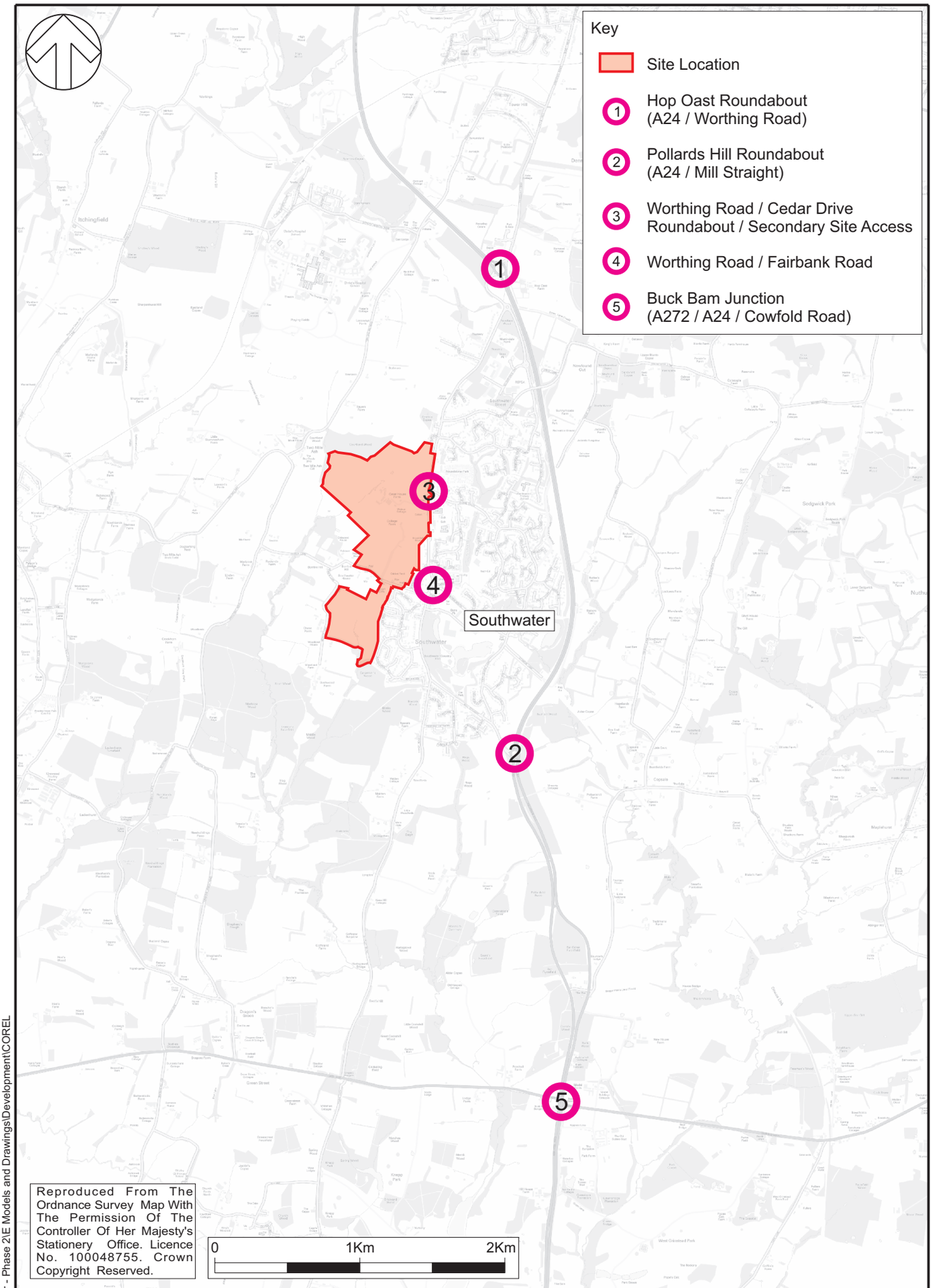
PROJECT:
LINTOT PARK, SOUTHWATER

TITLE:
HOP OAST ROUNDABOUT -
PROPOSED JUNCTION IMPROVEMENTS

SCALE @ A3:	CHECKED:	APPROVED:
1:1000	SA	KK
CAD FILE:	DESIGN-DRAWN:	DATE:
0398-SK-14	LEW	March 2014

PROJECT No:	DRAWING No:	REV:
70000398	0398/SK/014	A

S:\70000398 - Lintot Park, Southwater Ph 2\E Models and Drawings\Development\AUTOCAD\SK Sketches\0398-SK-14.dwg 10/03/2014 11:44:54 Walton, Lewis



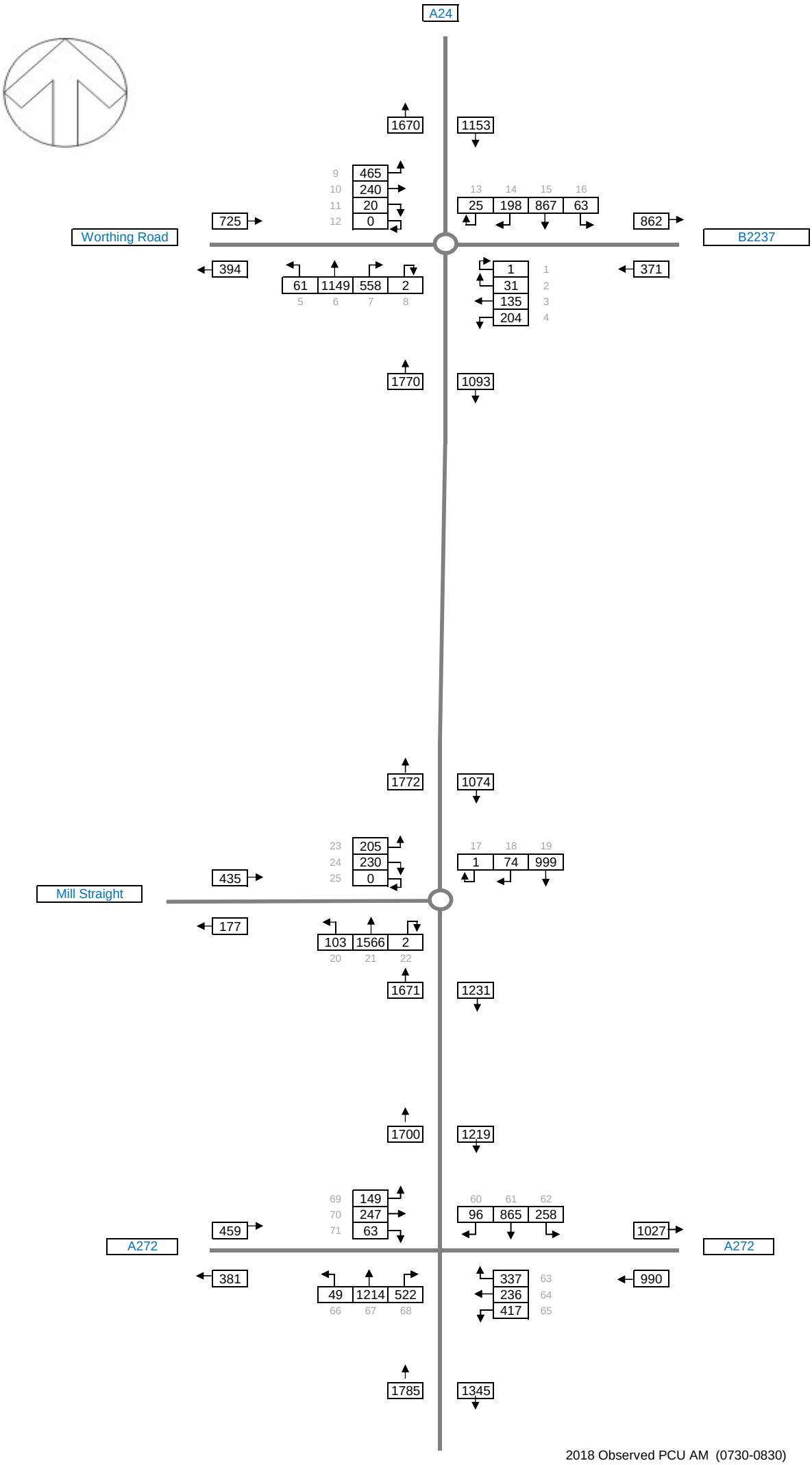
TITLE:

Study Area Junctions

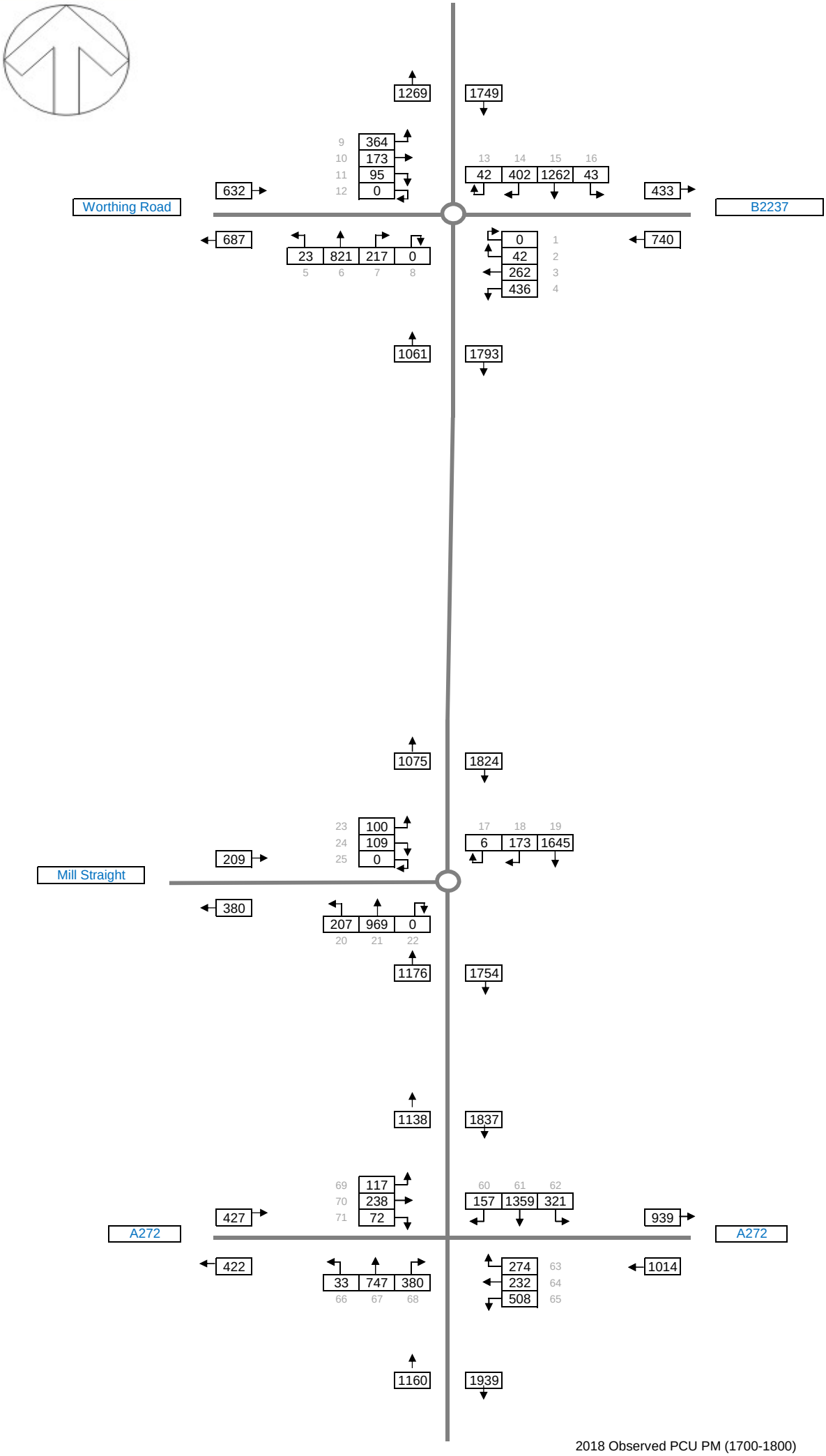
FIGURE No:

1

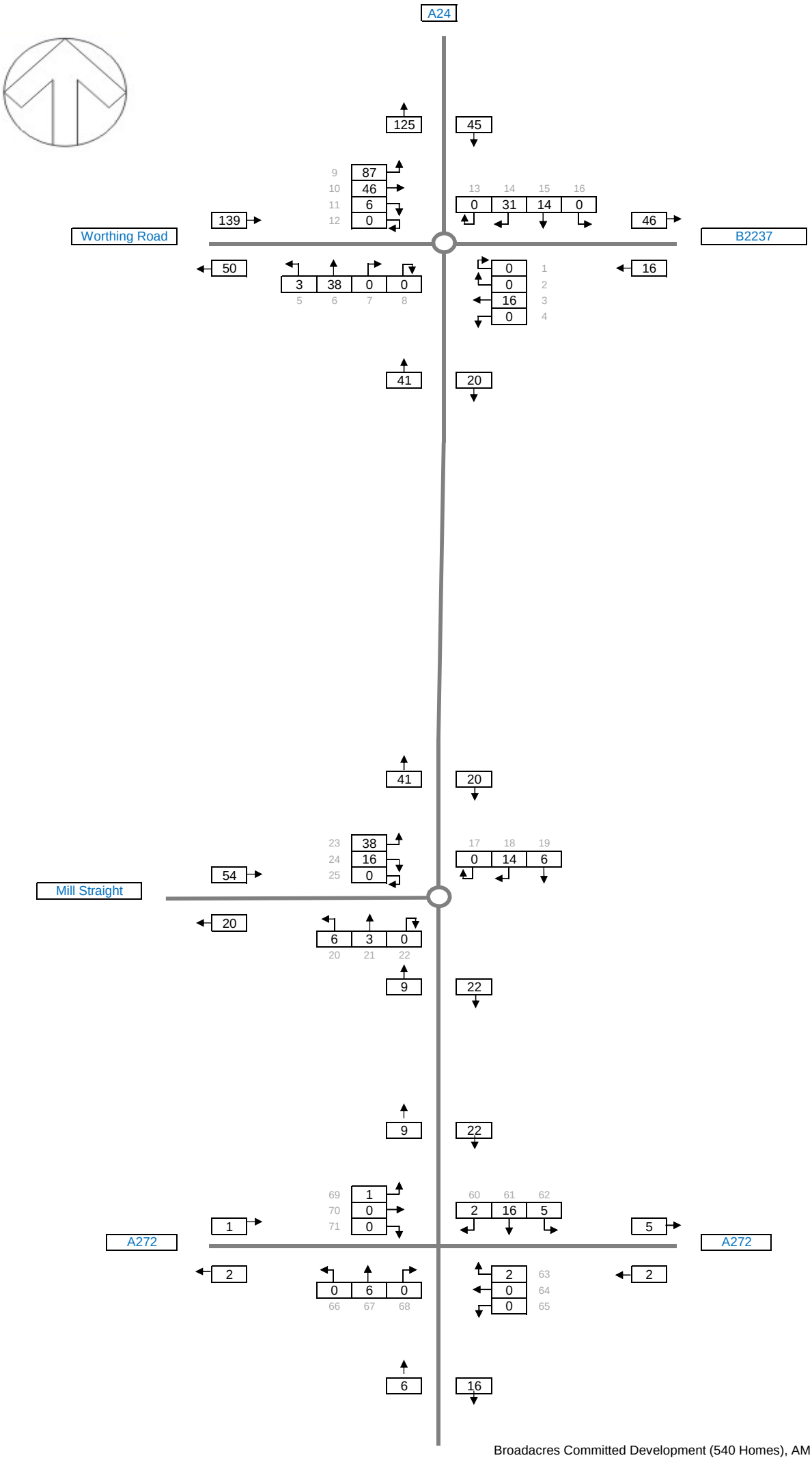
S:\70016993 - Southwater - Phase 2\E Models and Drawings\Development\COREL



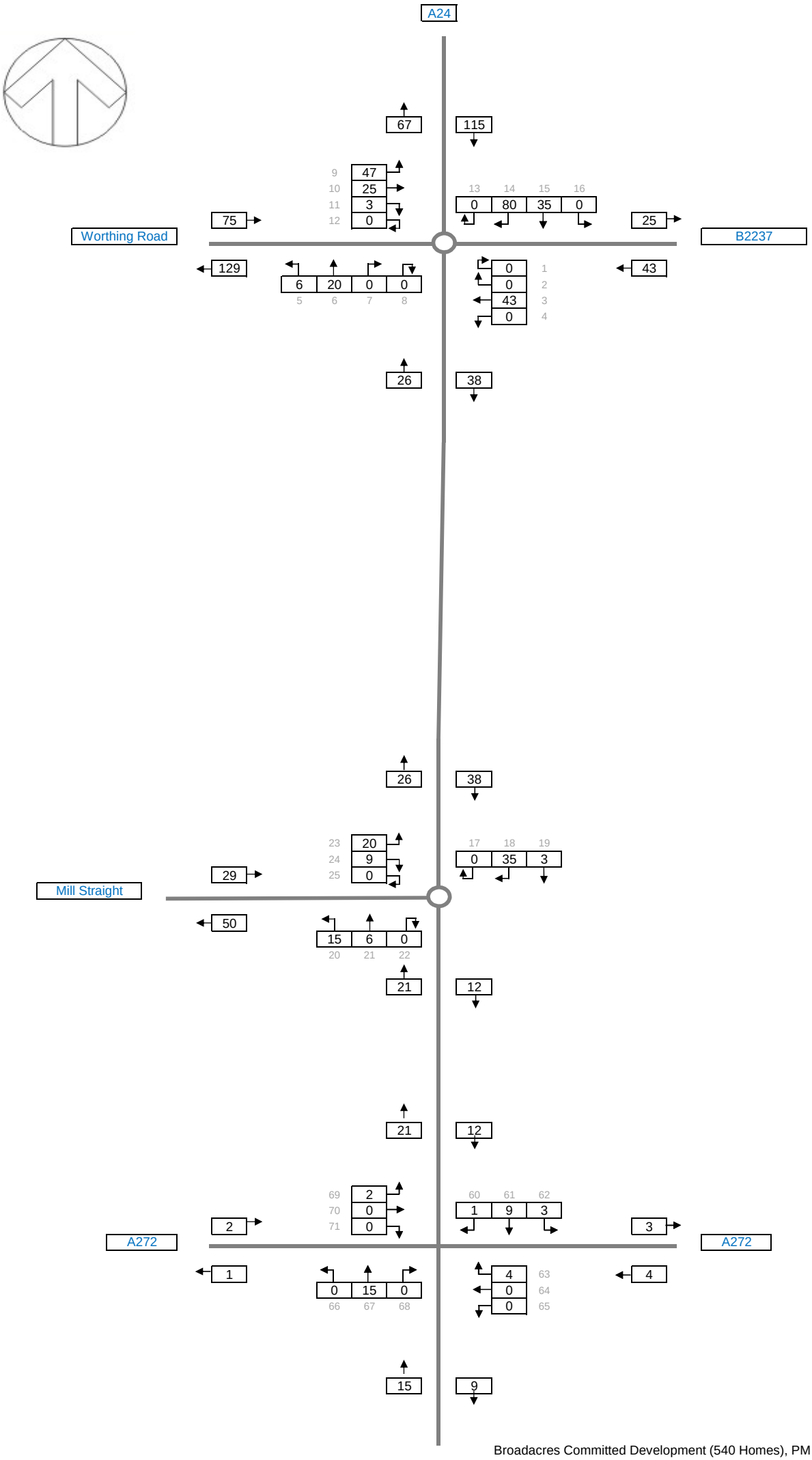
2018 Observed PCU AM (0730-0830)
Figure 2



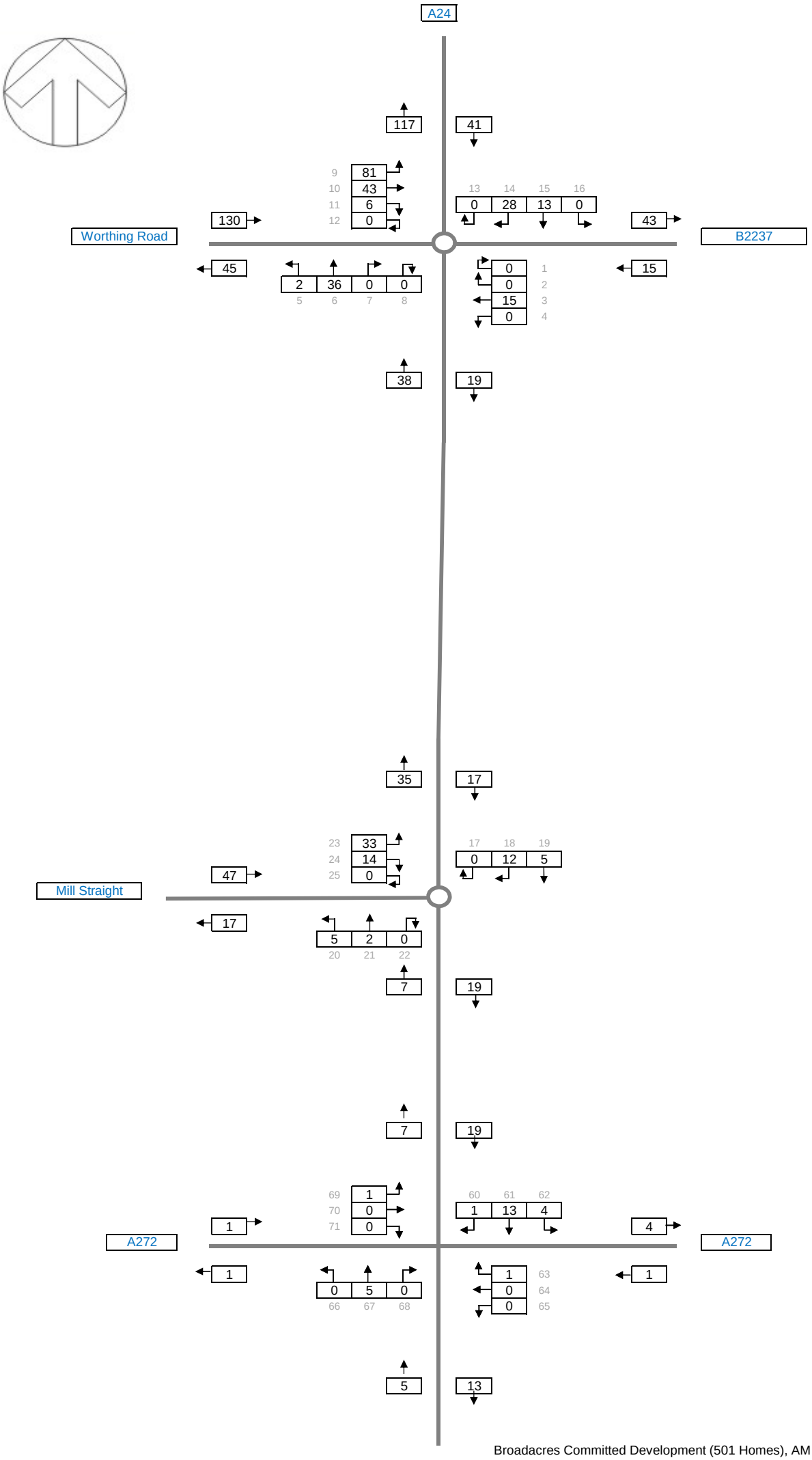
2018 Observed PCU PM (1700-1800)
Figure 3



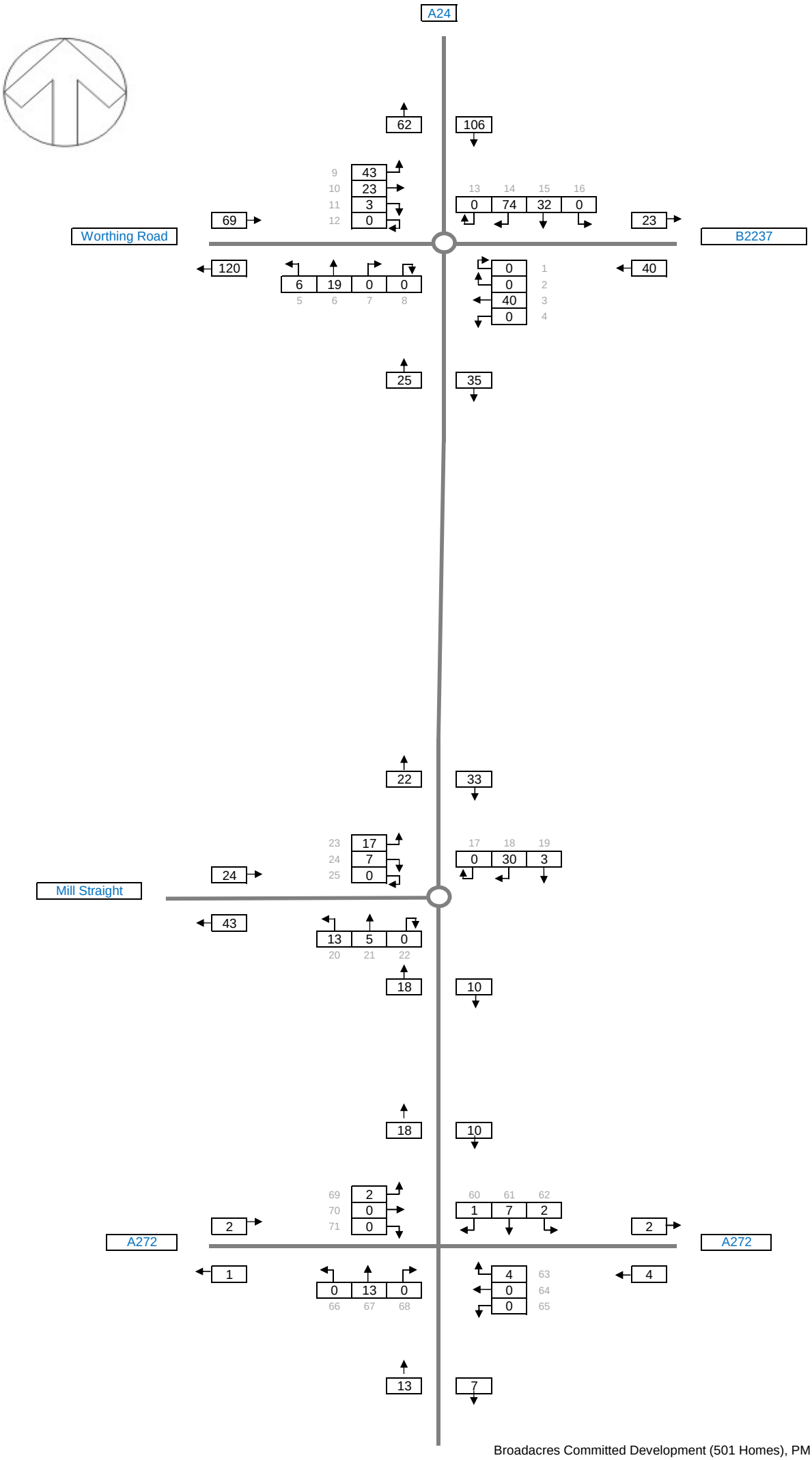
Broadacres Committed Development (540 Homes), AM
Figure 4



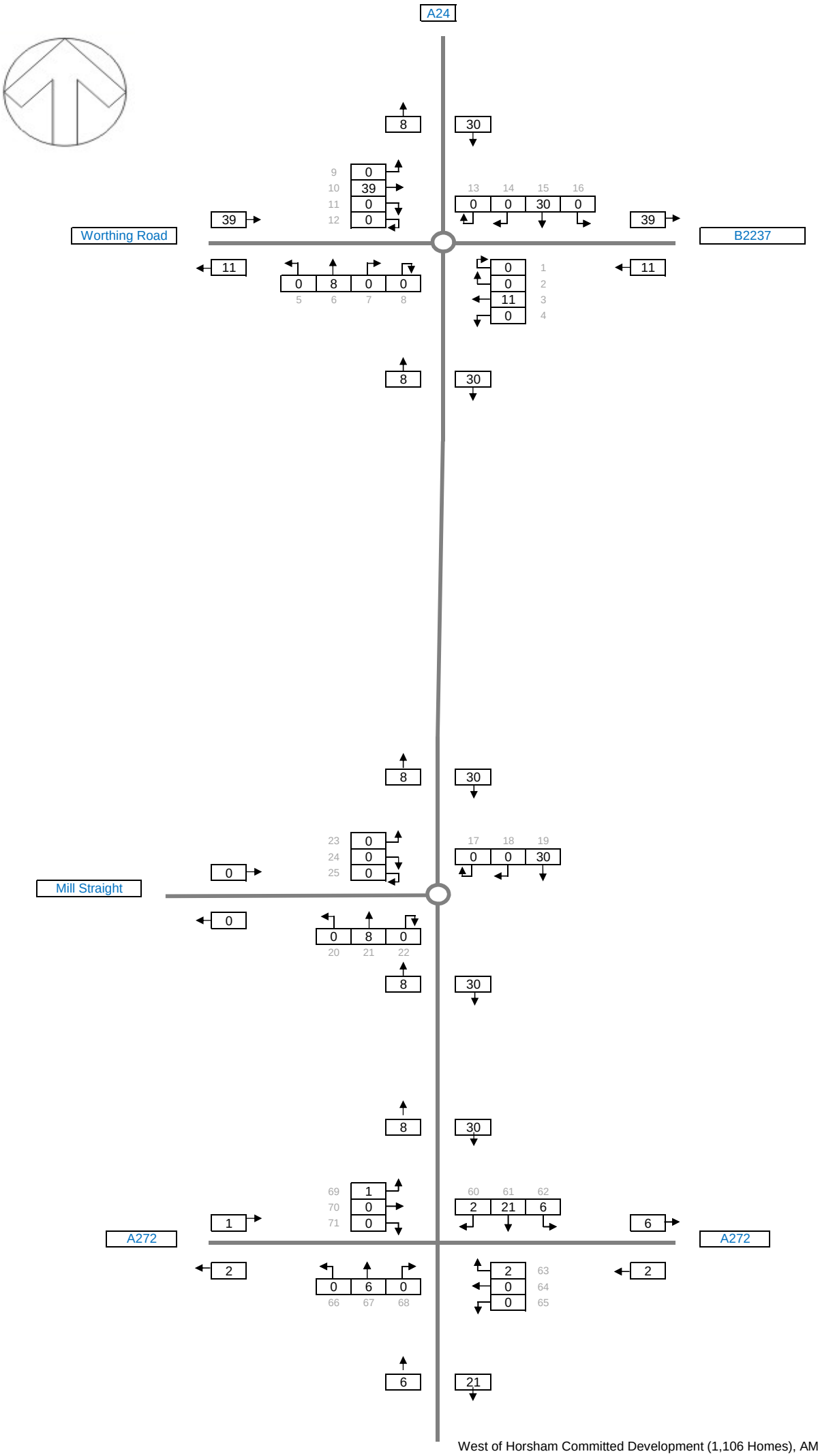
Broadacres Committed Development (540 Homes), PM
Figure 5



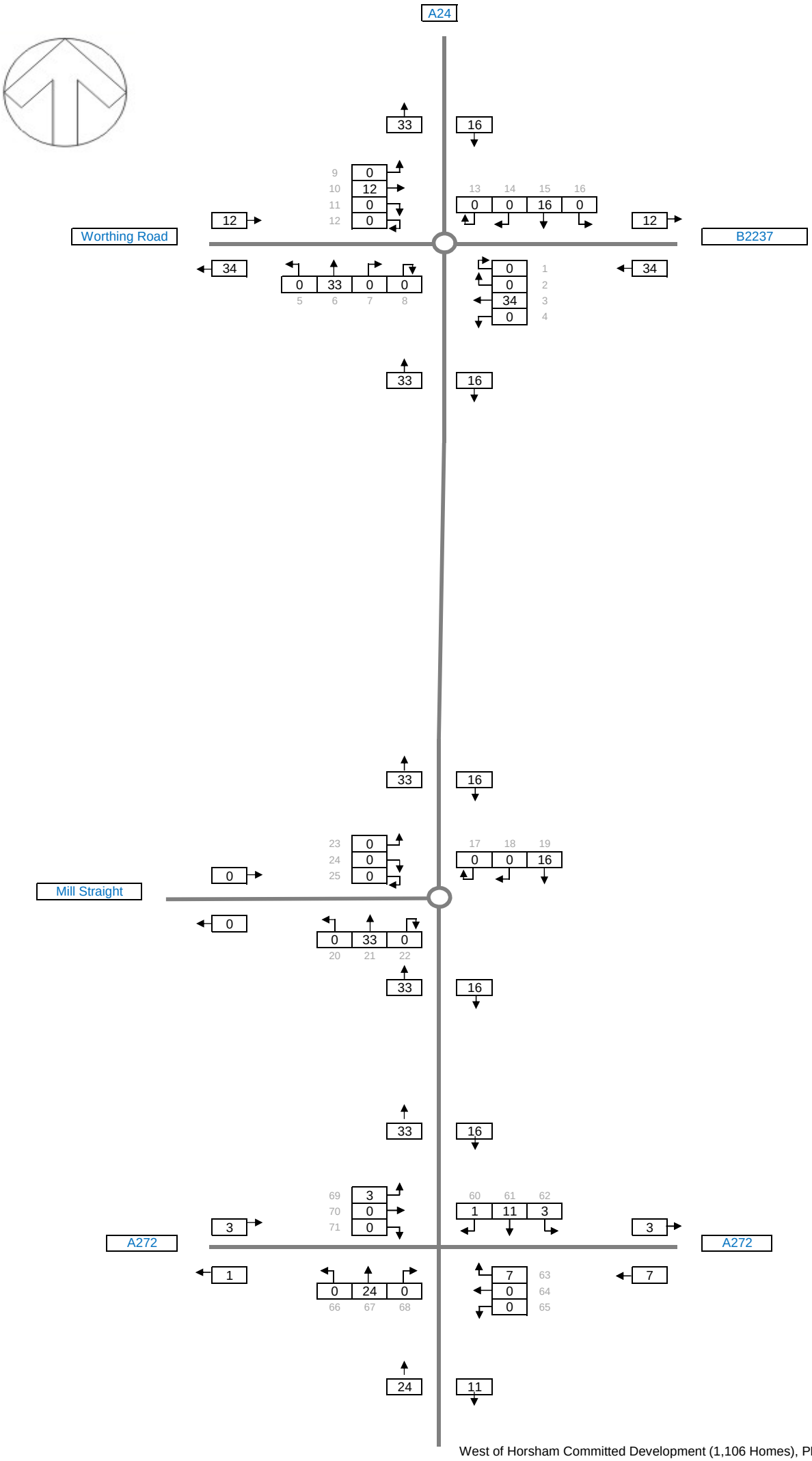
Broadacres Committed Development (501 Homes), AM
Figure 6



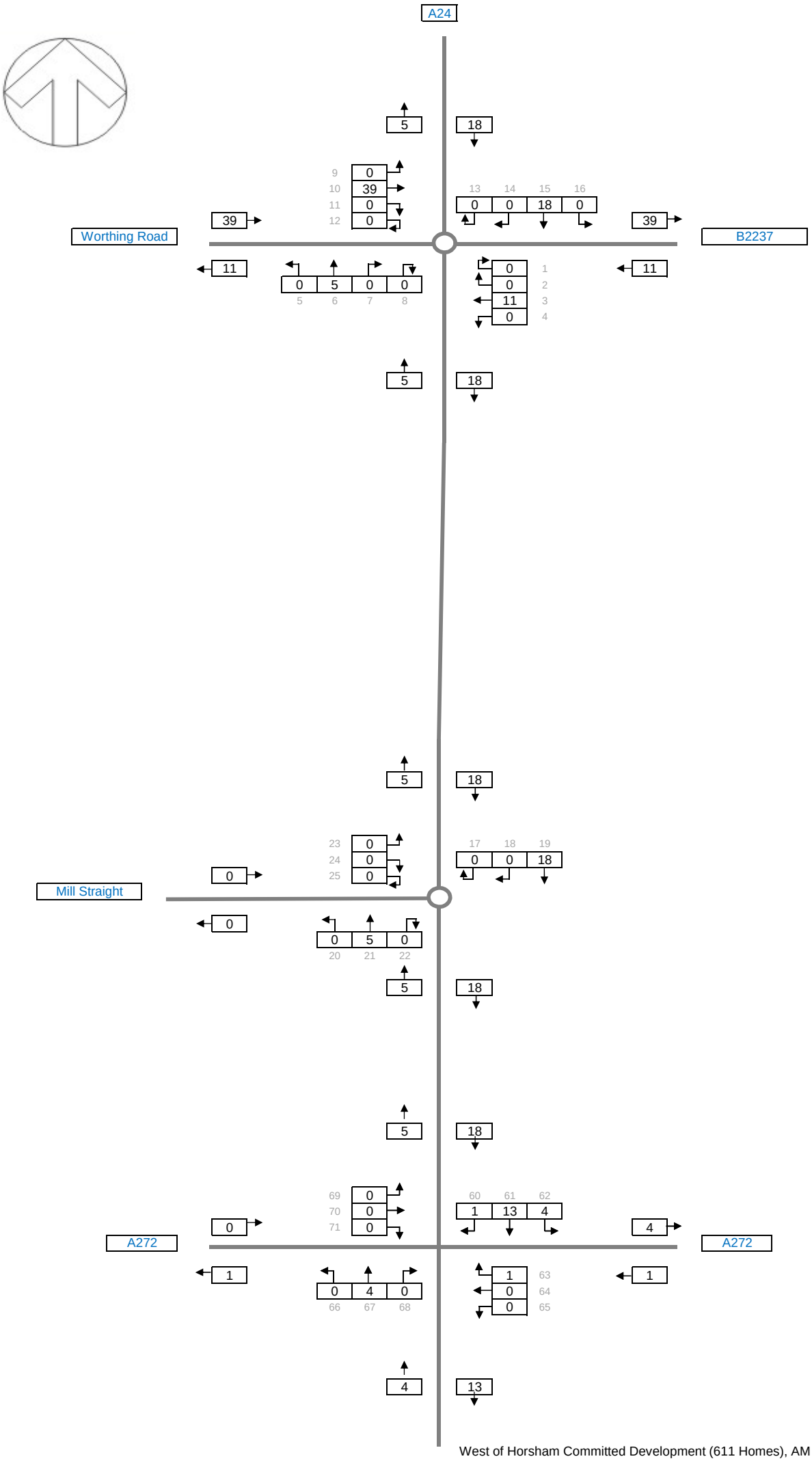
Broadacres Committed Development (501 Homes), PM
Figure 7



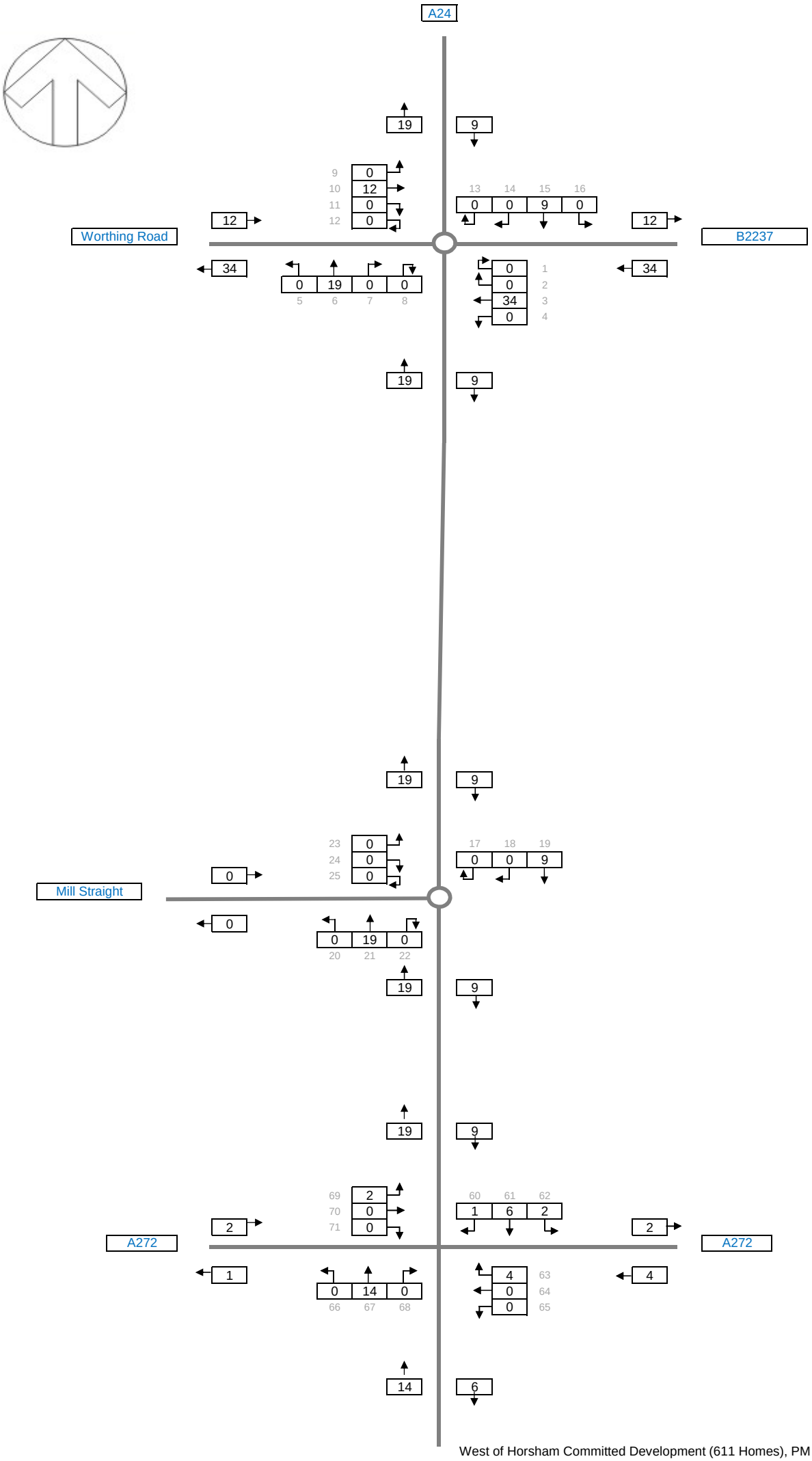
West of Horsham Committed Development (1,106 Homes), AM
Figure 8



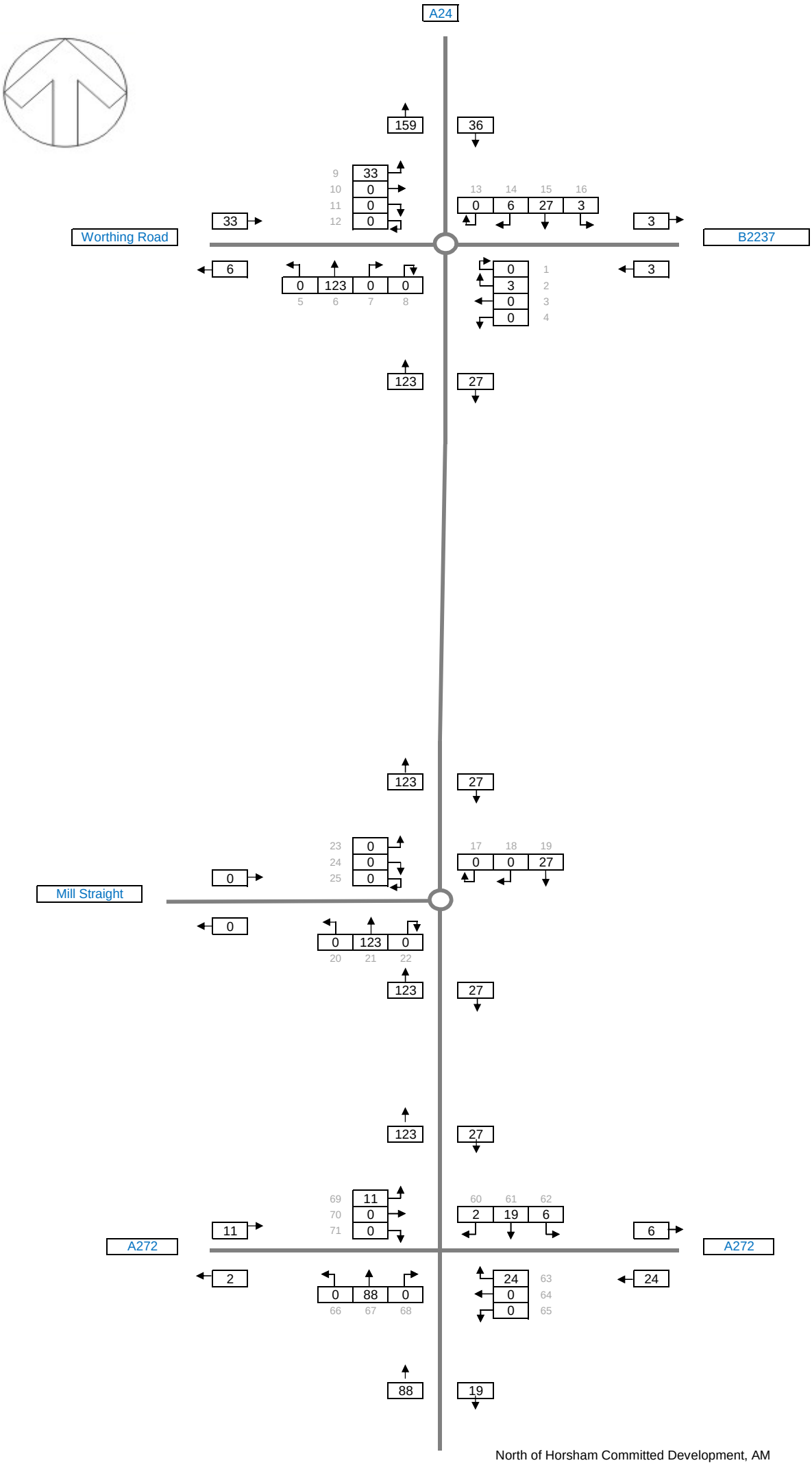
West of Horsham Committed Development (1,106 Homes), PM
Figure 9



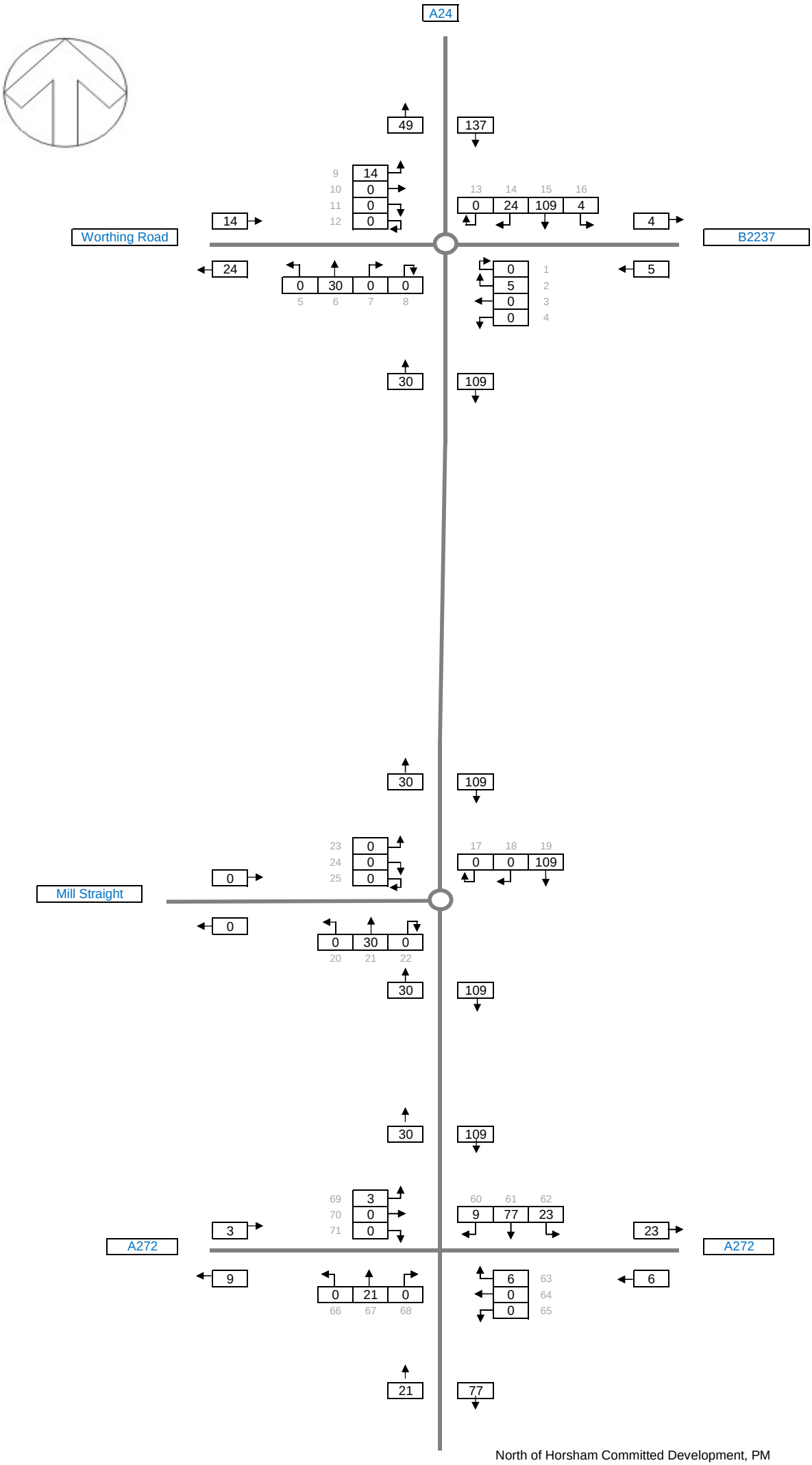
West of Horsham Committed Development (611 Homes), AM
Figure 10



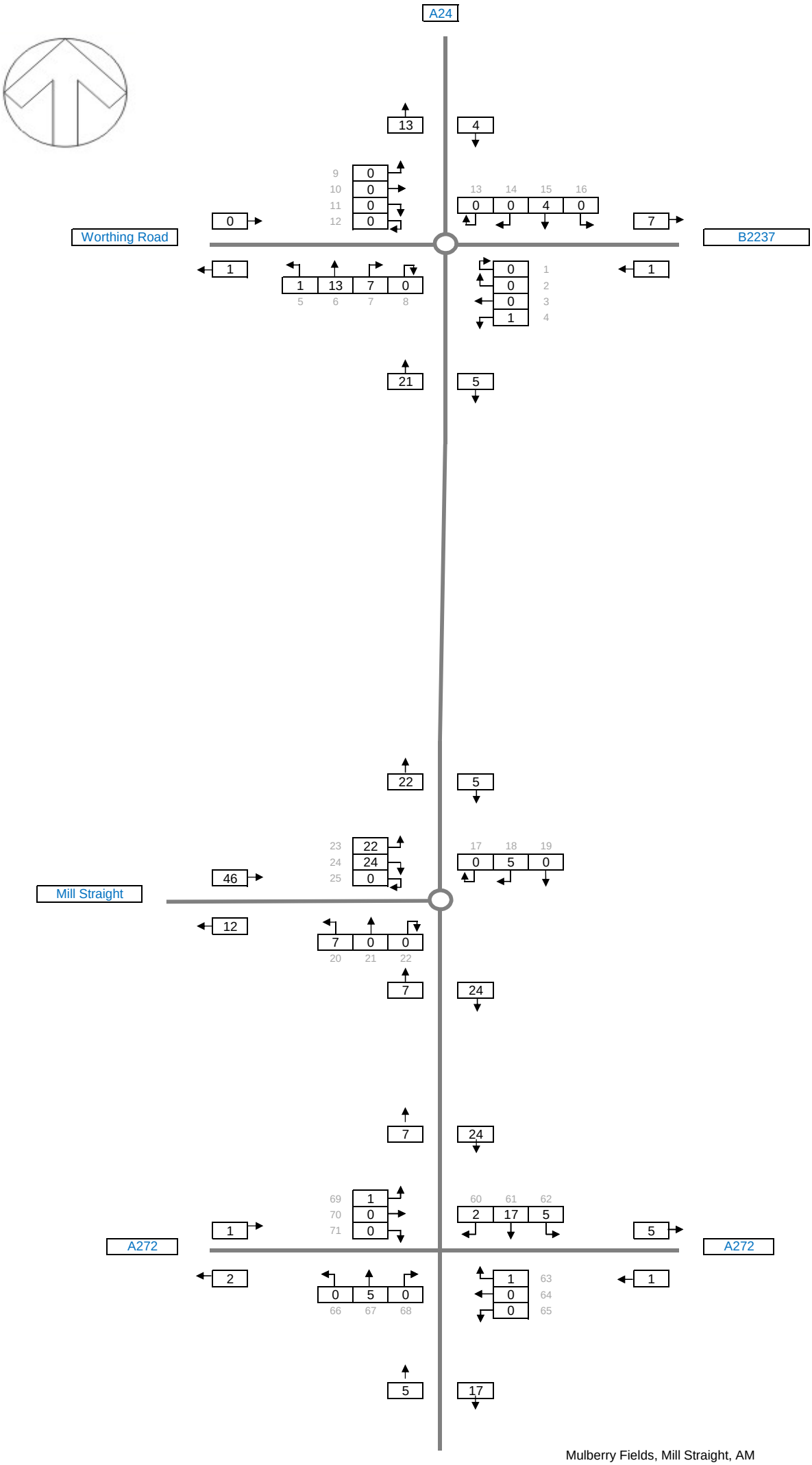
West of Horsham Committed Development (611 Homes), PM
Figure 11



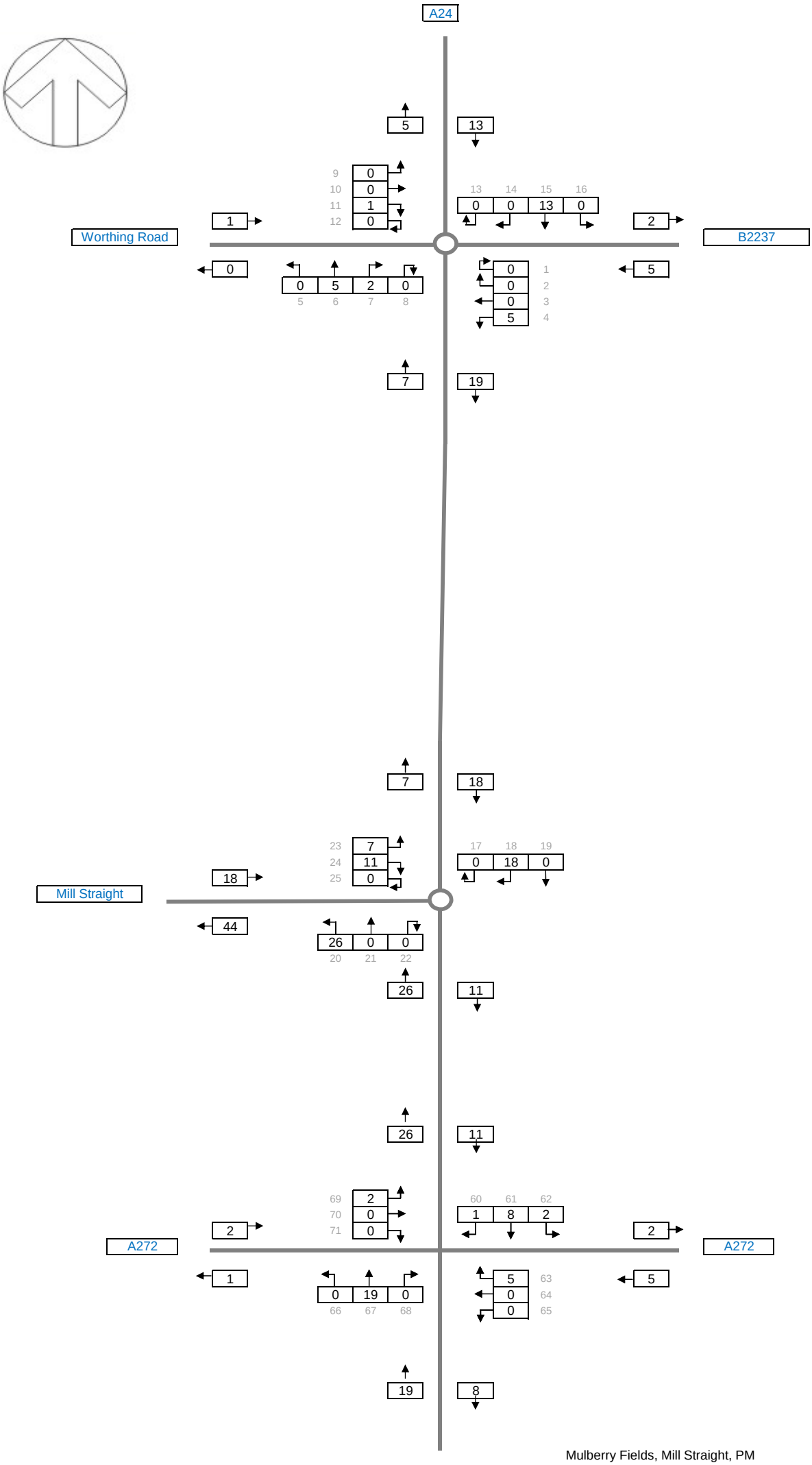
North of Horsham Committed Development, AM
Figure 12



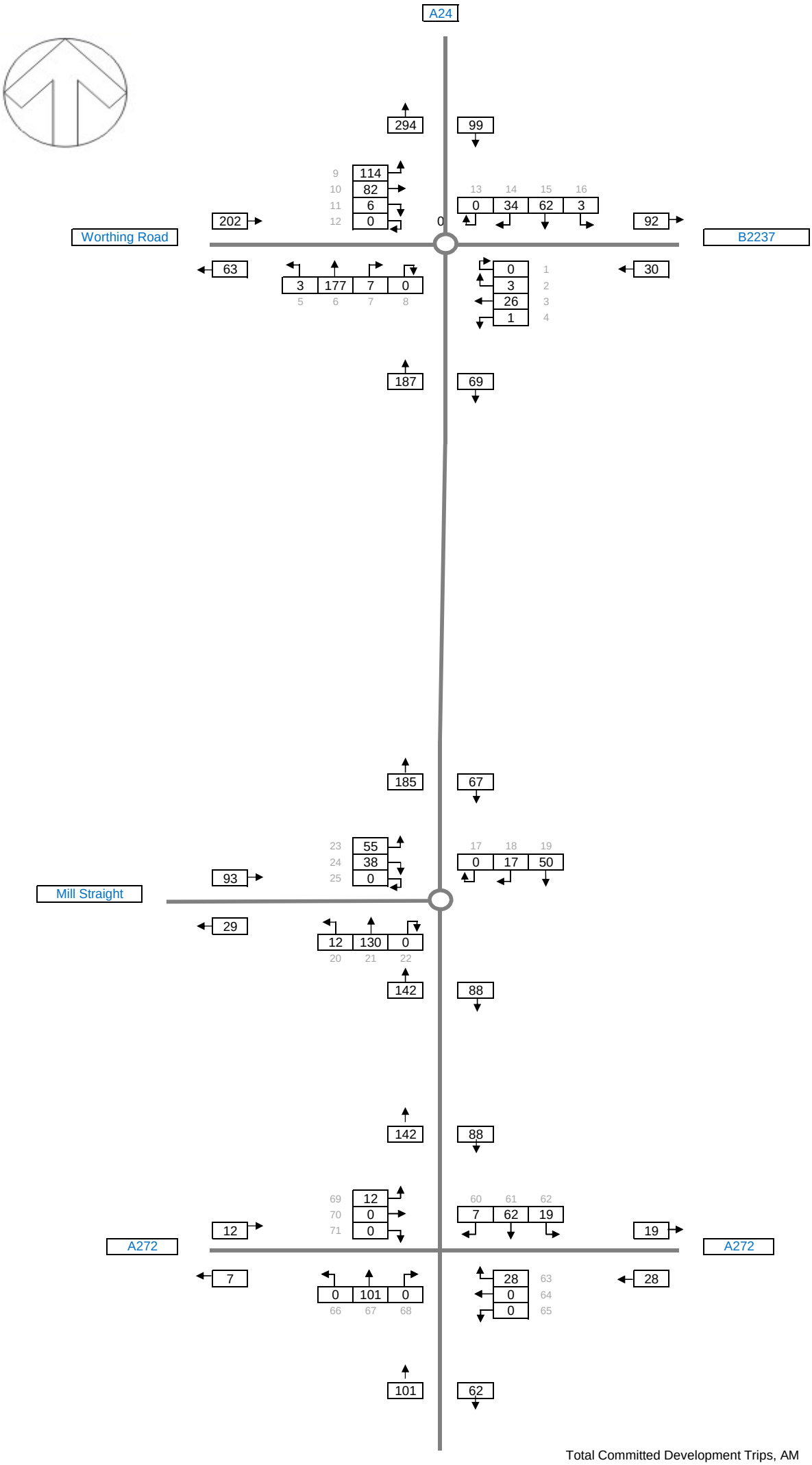
North of Horsham Committed Development, PM
Figure 13



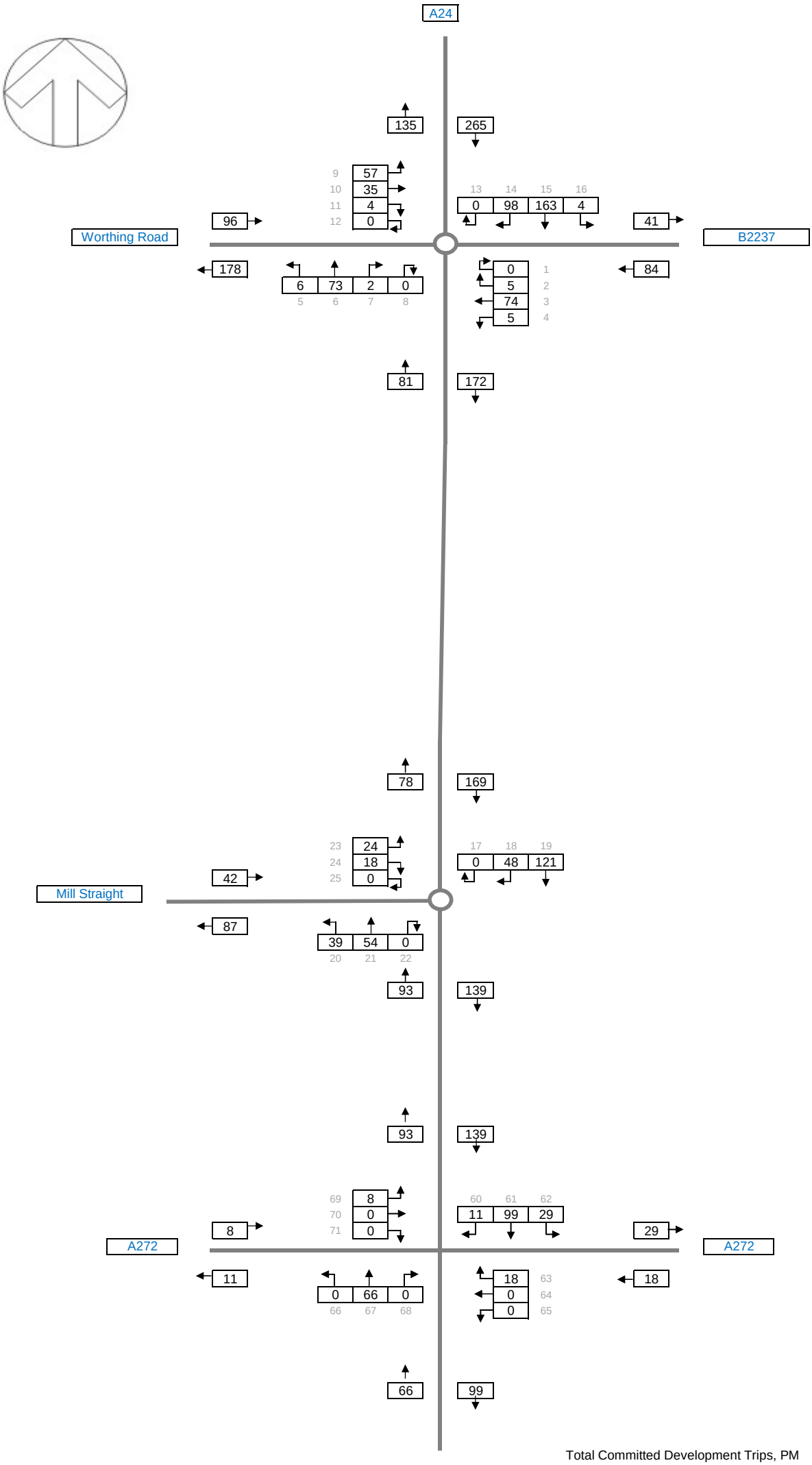
Mulberry Fields, Mill Straight, AM
Figure 14



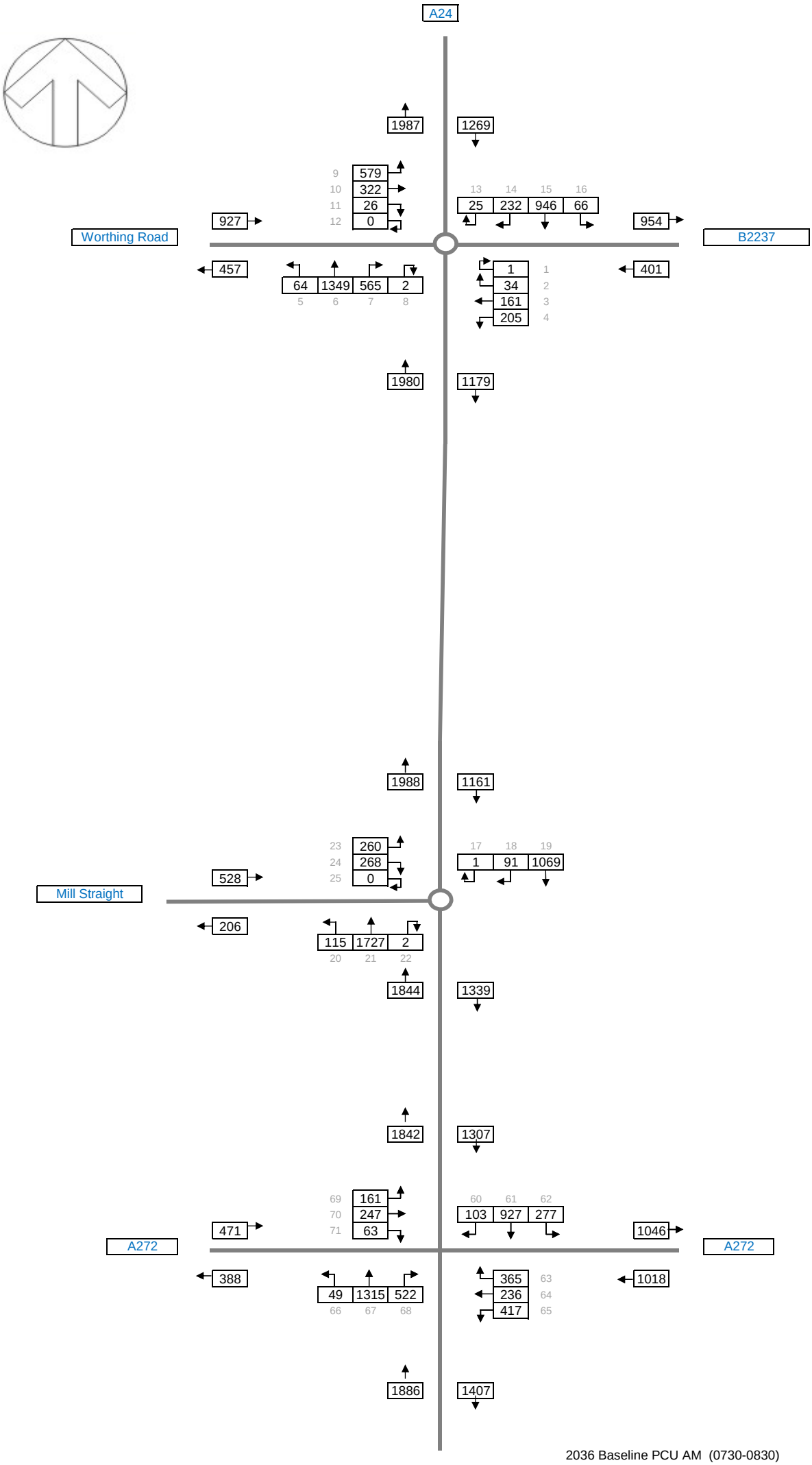
Mulberry Fields, Mill Straight, PM
Figure 15



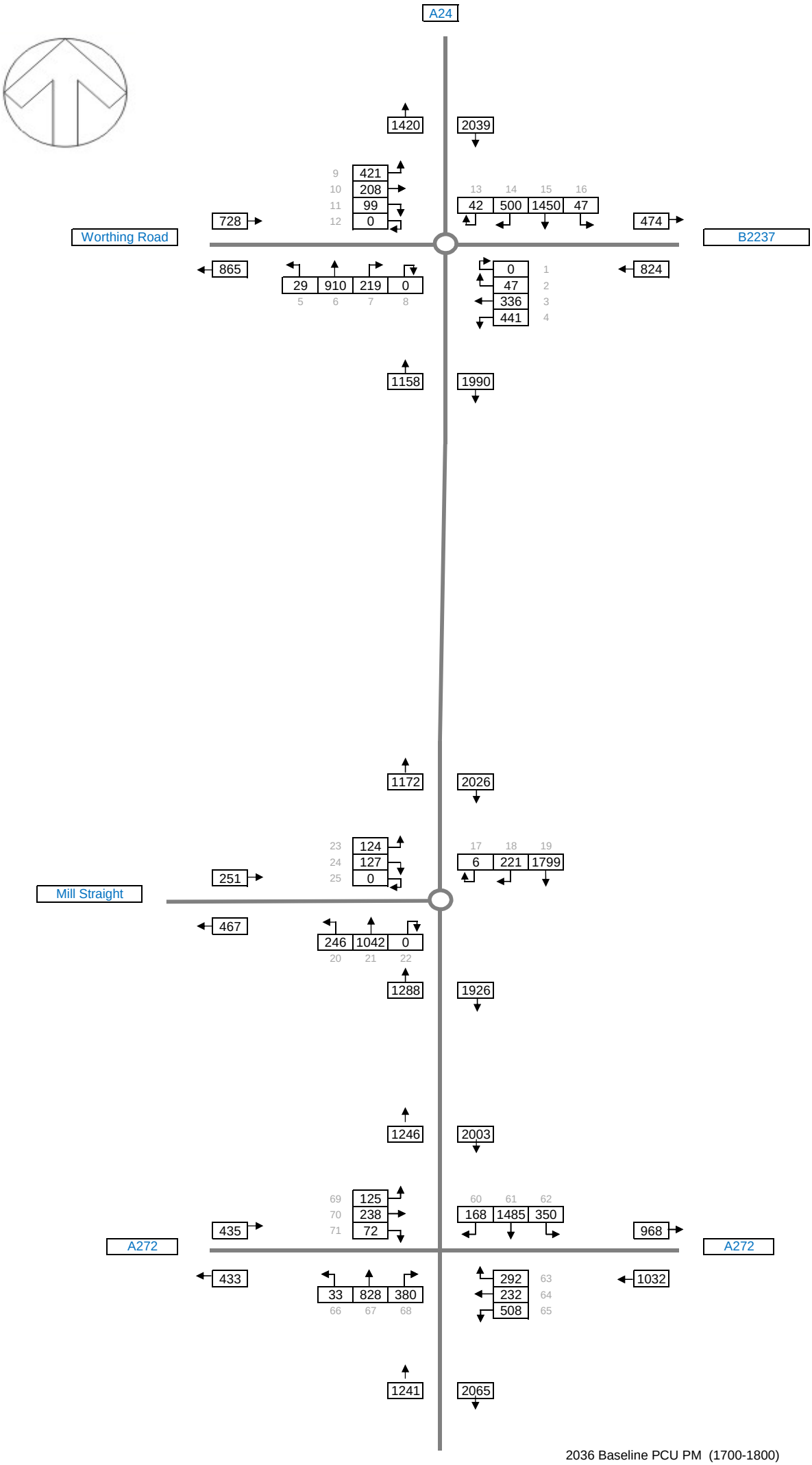
Total Committed Development Trips, AM
Figure 16



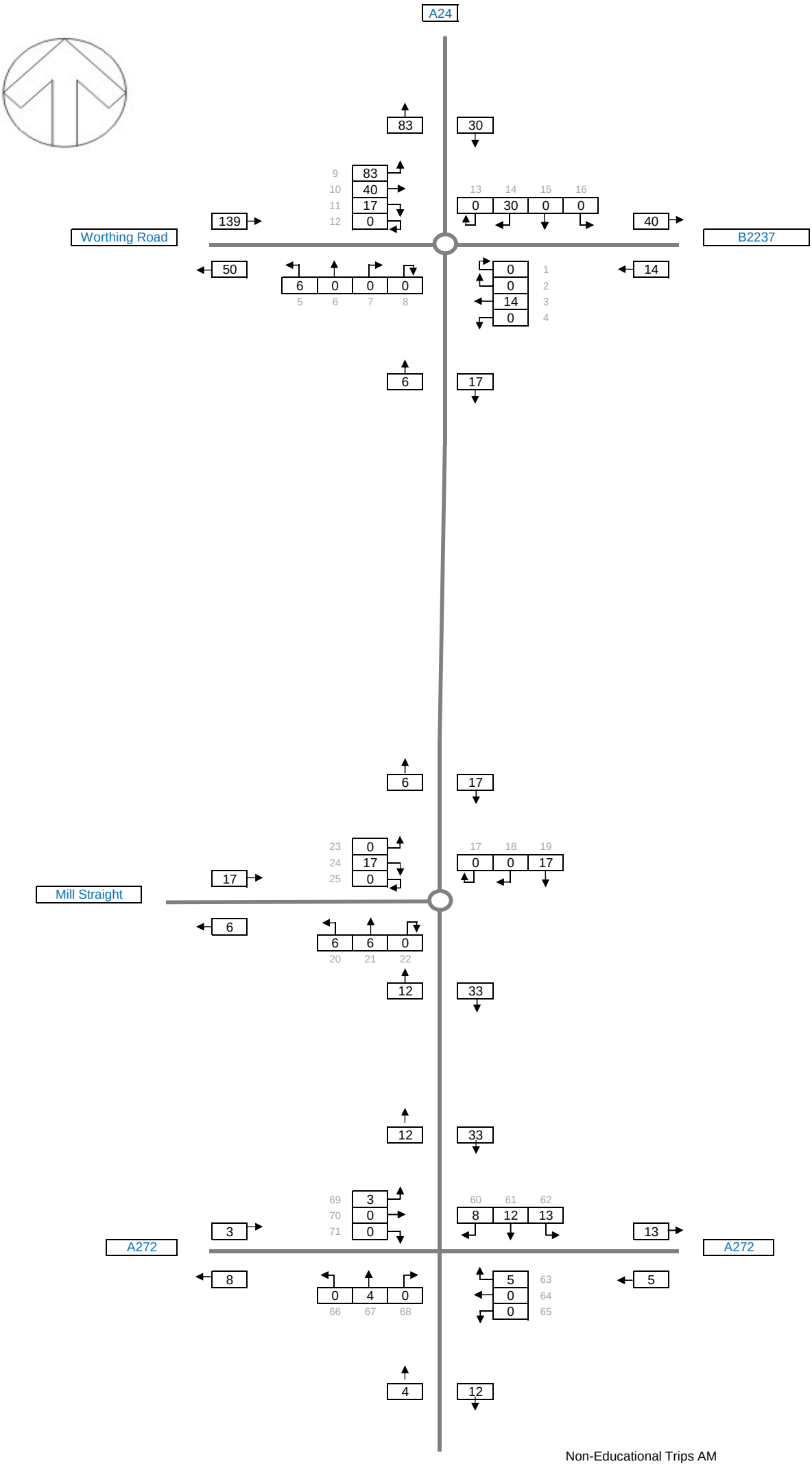
Total Committed Development Trips, PM
Figure 17



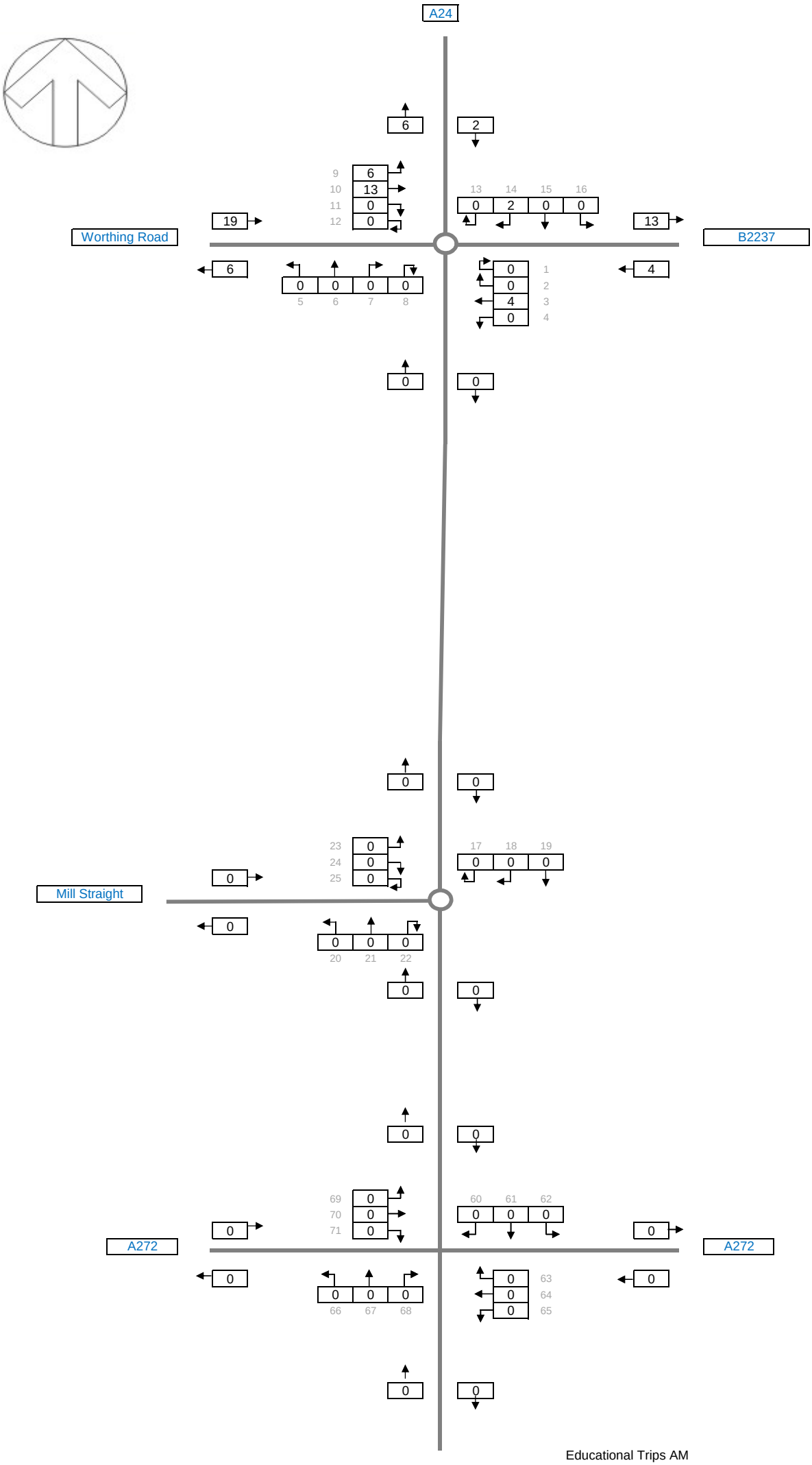
2036 Baseline PCU AM (0730-0830)
Figure 18



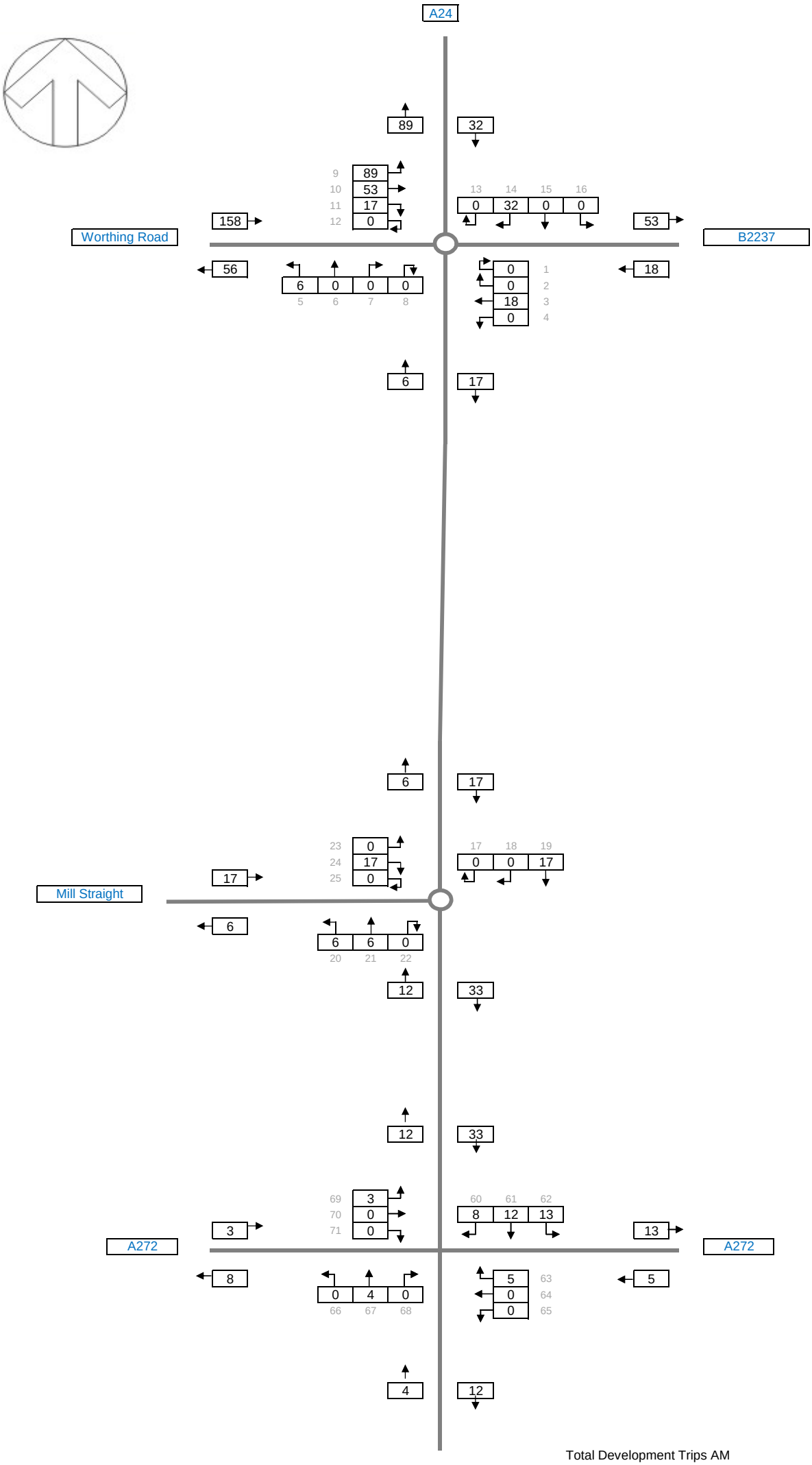
2036 Baseline PCU PM (1700-1800)
Figure 19



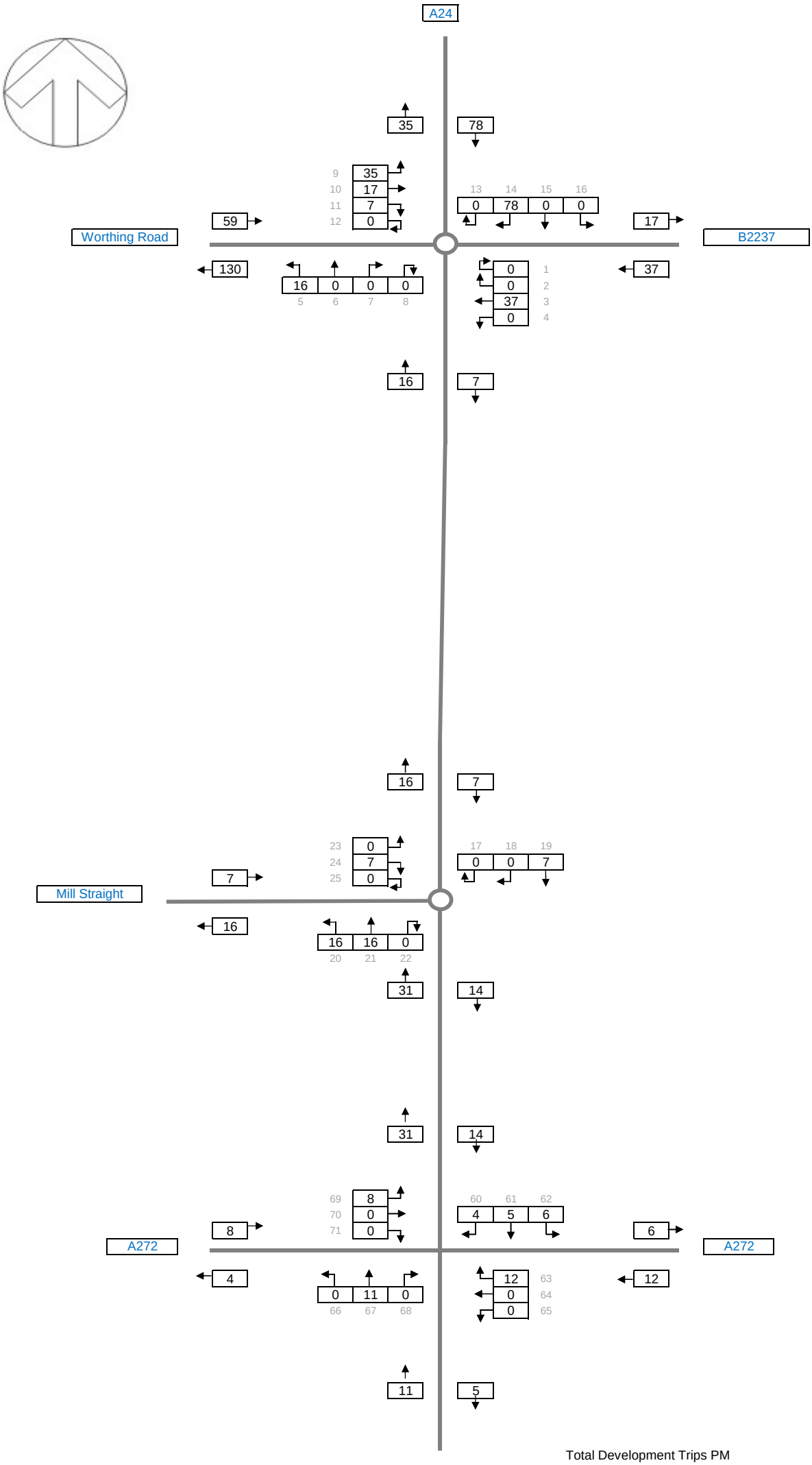
Non-Educational Trips AM
Figure 20



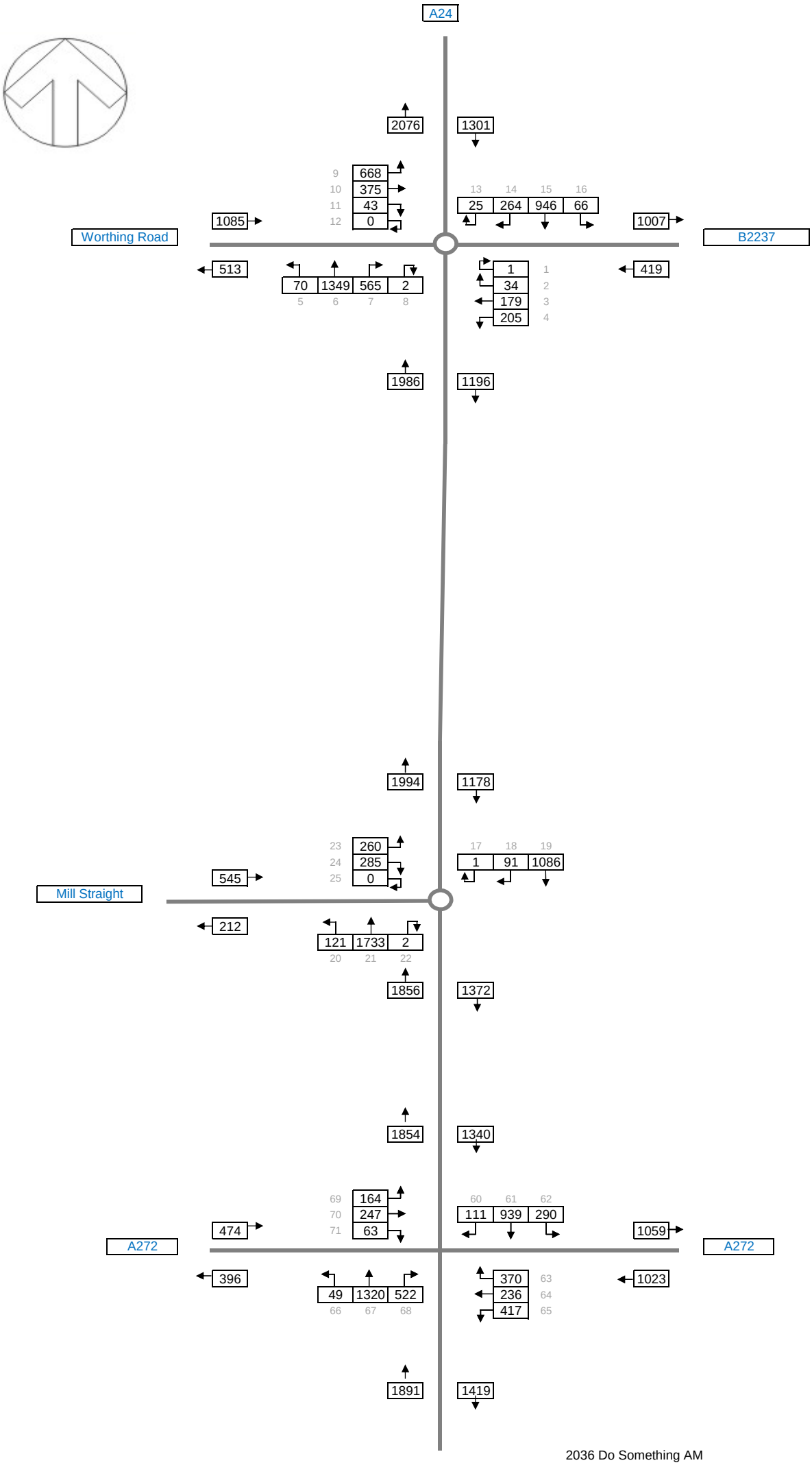
Educational Trips AM
Figure 21



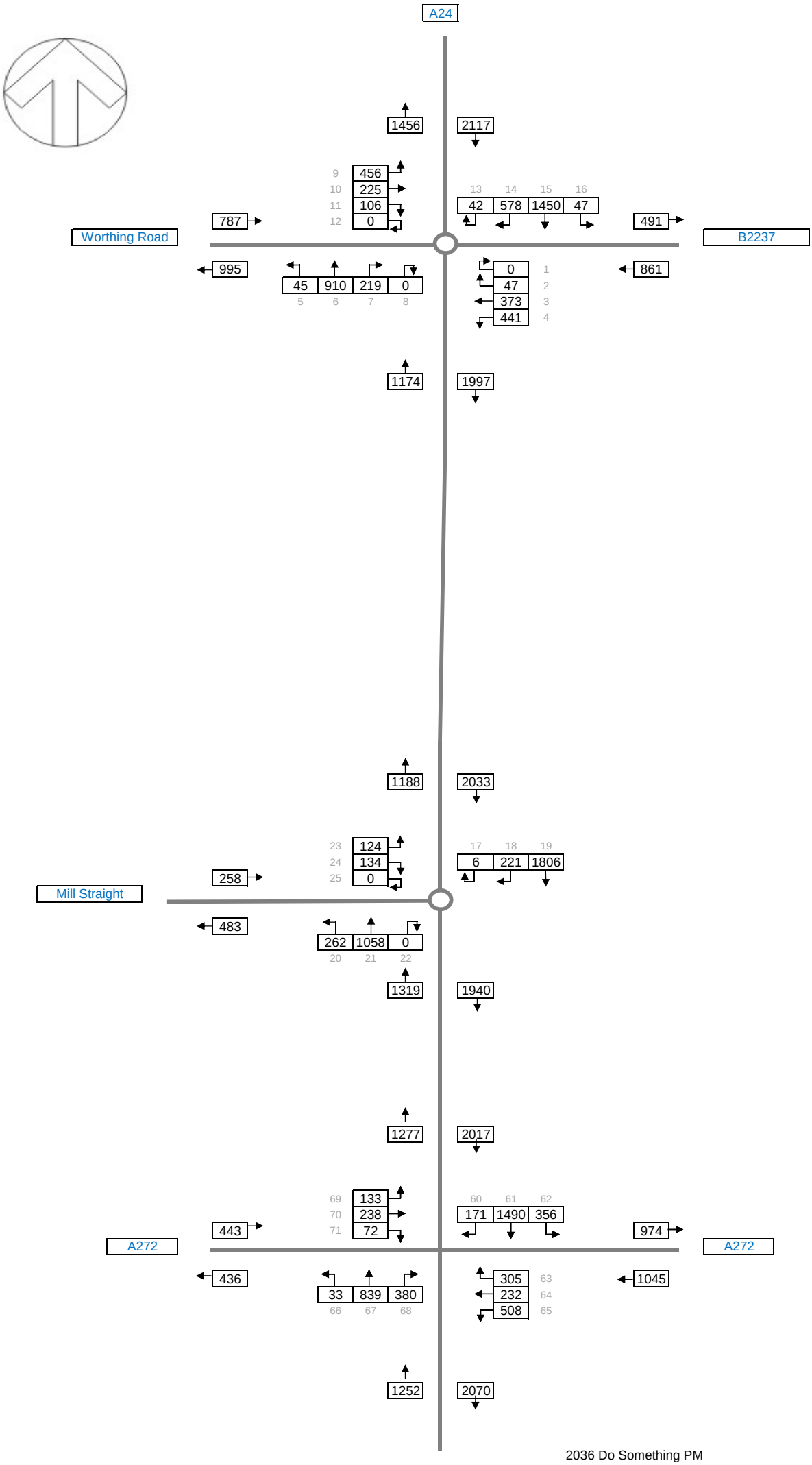
Total Development Trips AM
Figure 22



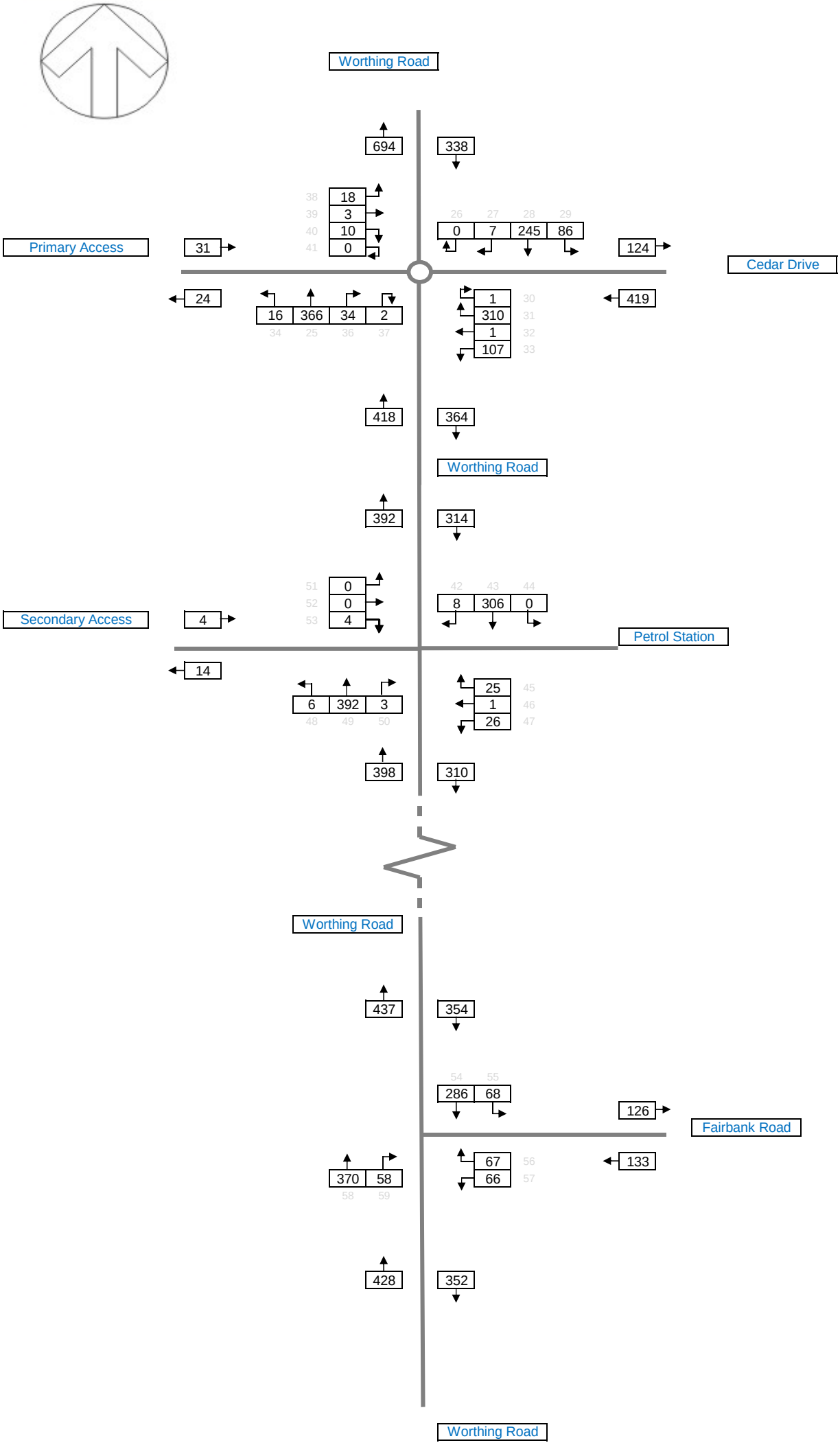
Total Development Trips PM
Figure 23



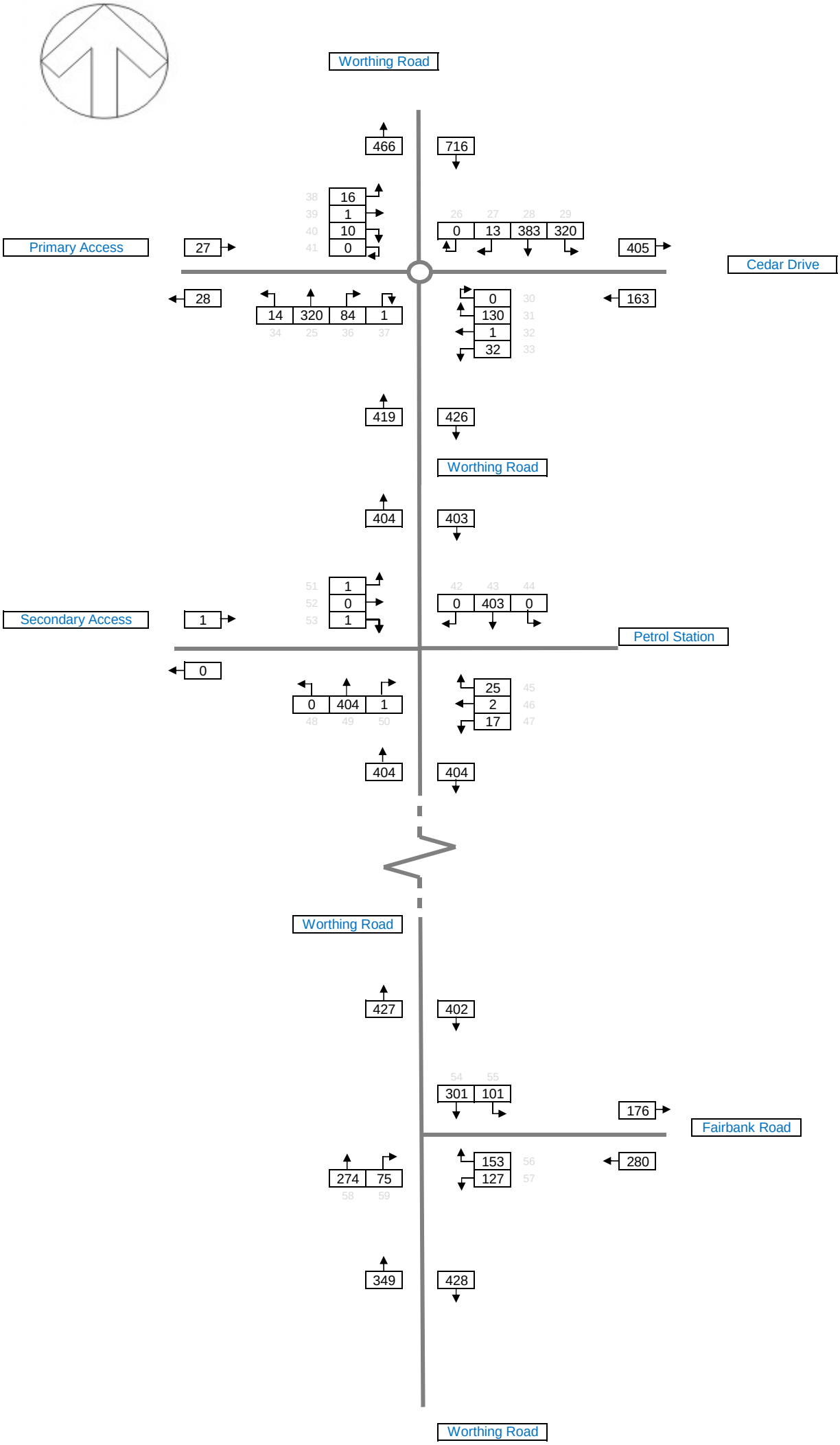
2036 Do Something AM
Figure 24



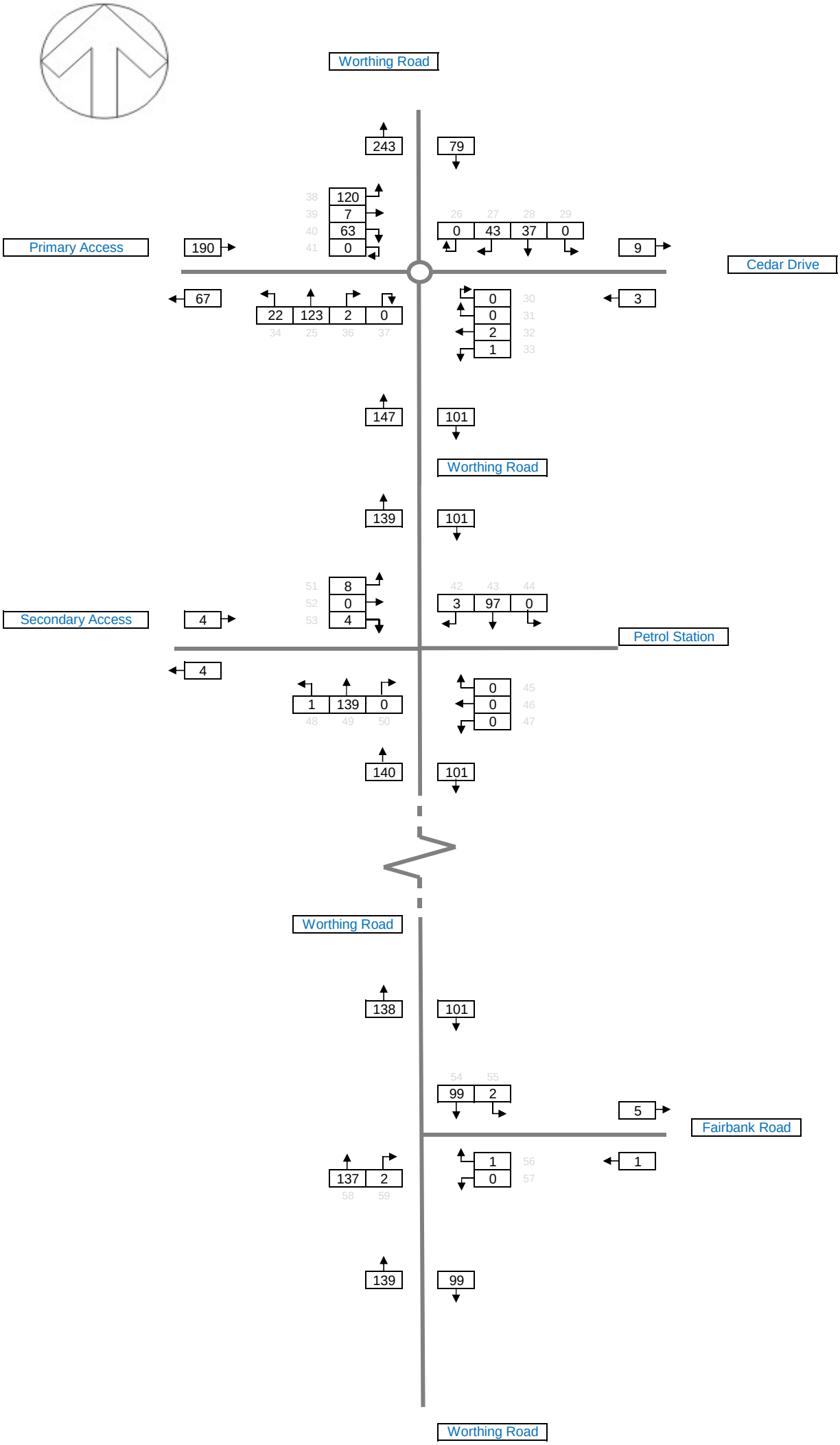
2036 Do Something PM
Figure 25



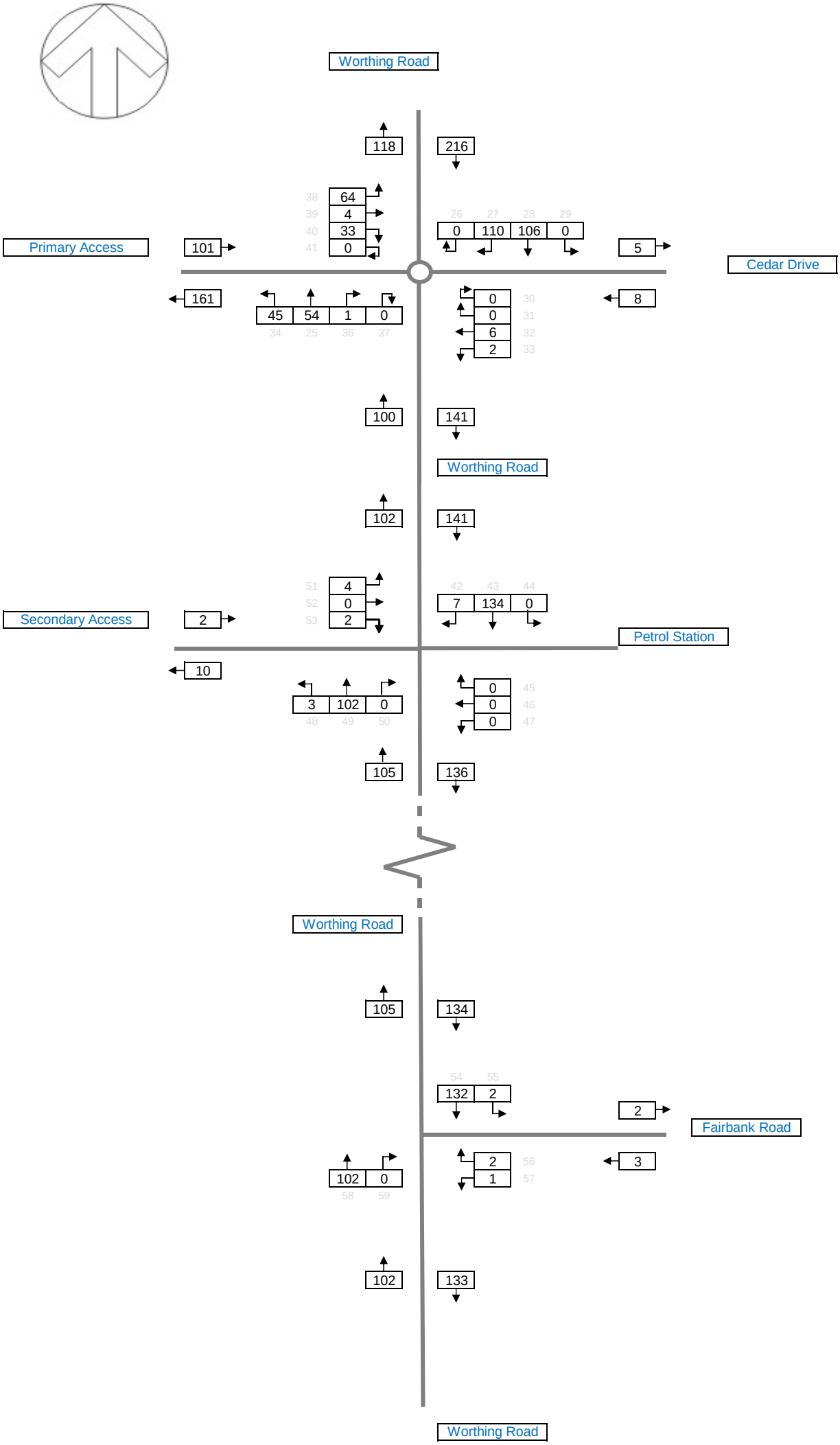
2018 Observed Flows AM (PCU)
Figure 26



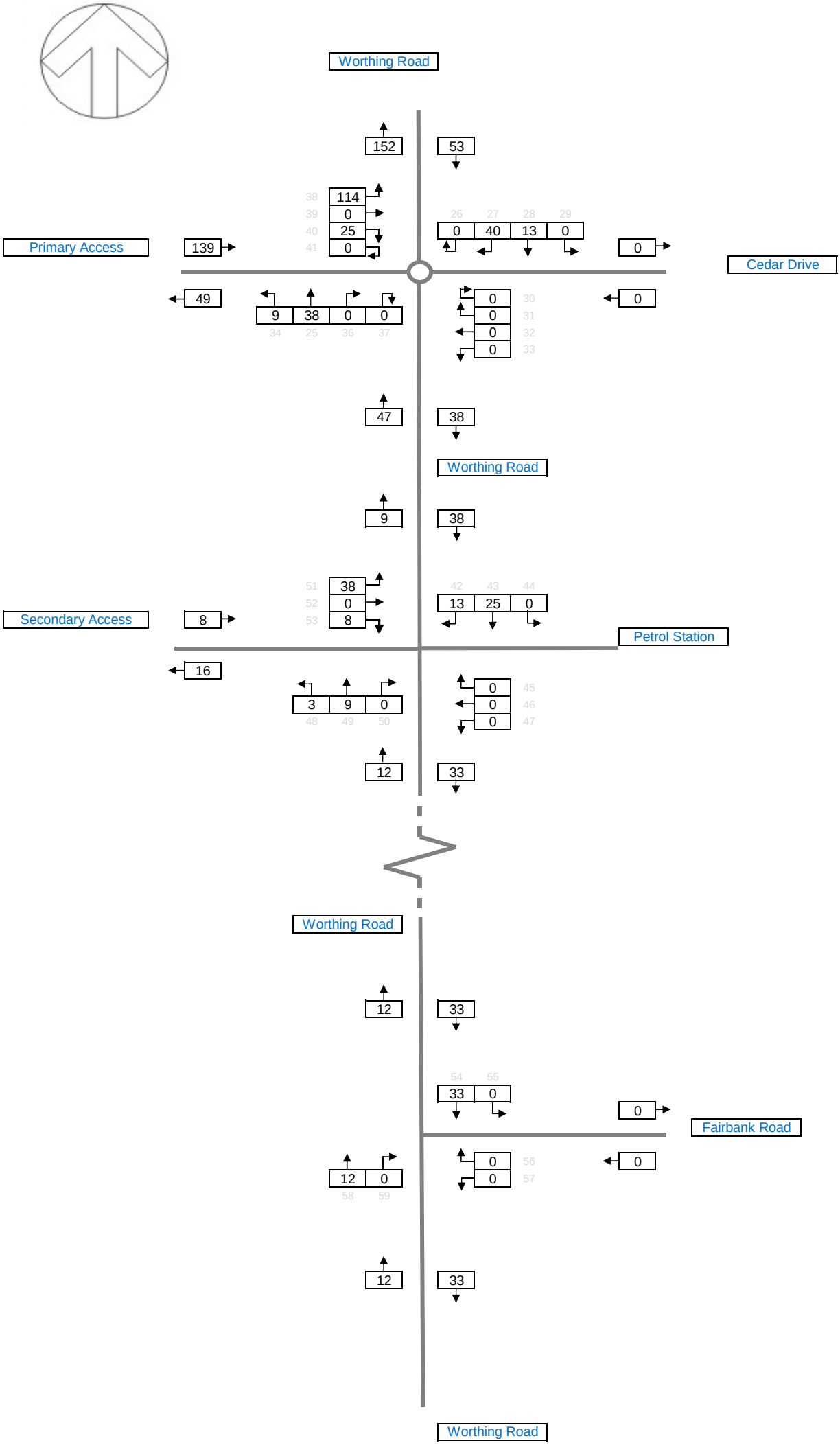
2018 Observed Flows PM (PCU)
Figure 27



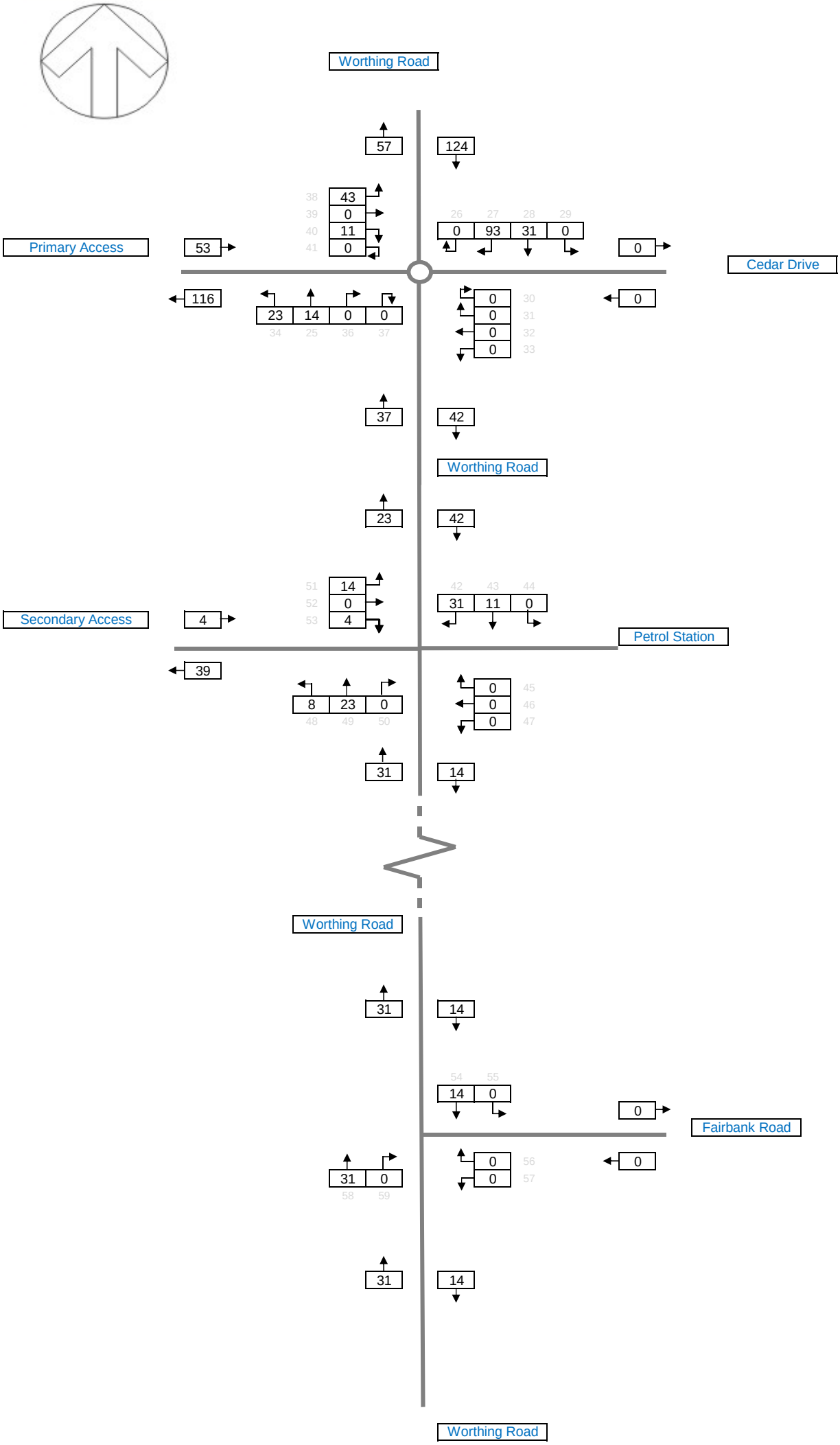
Total Committed Development Trips AM
Figure 28



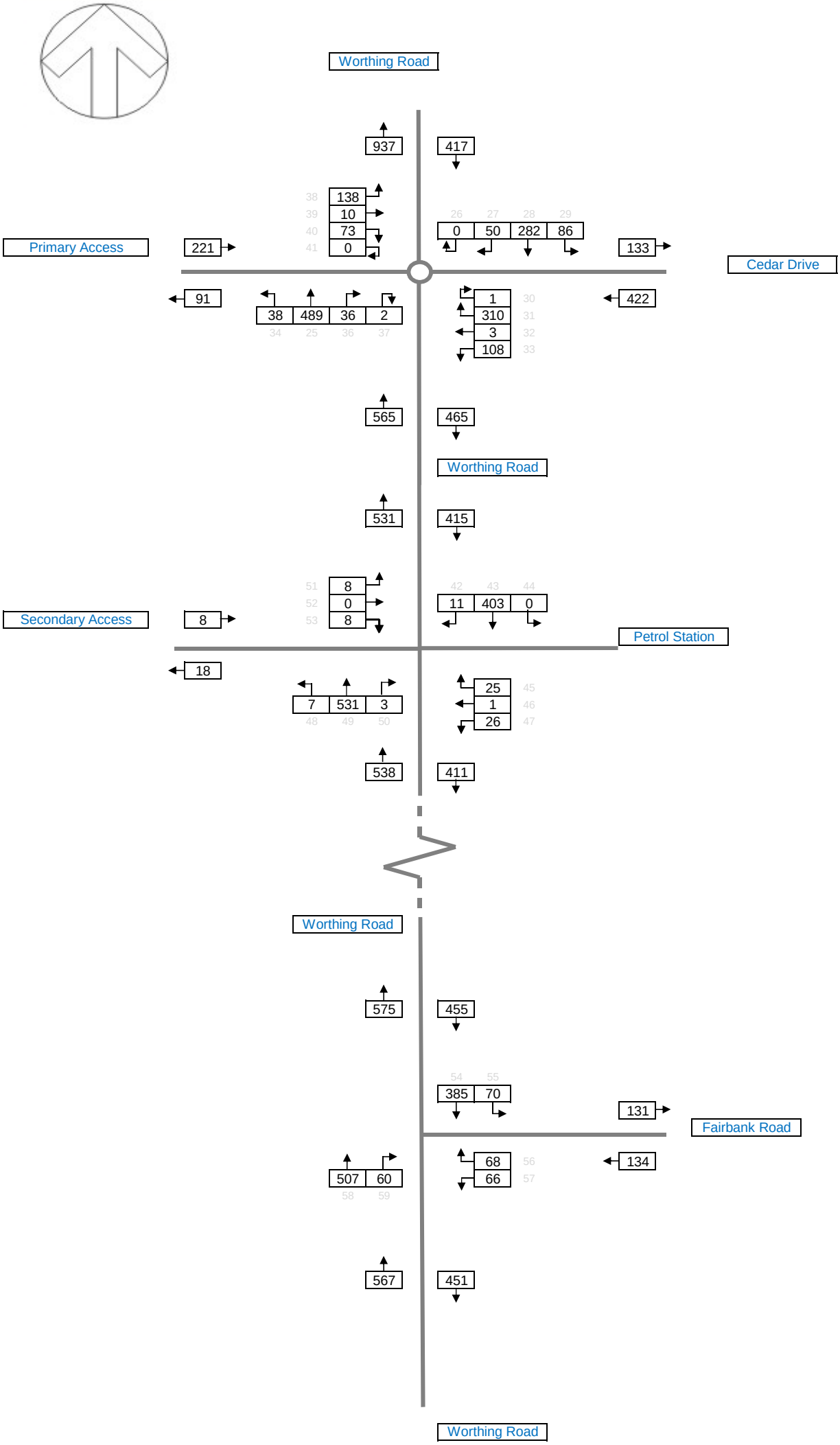
Total Committed Development Trips PM
Figure 29



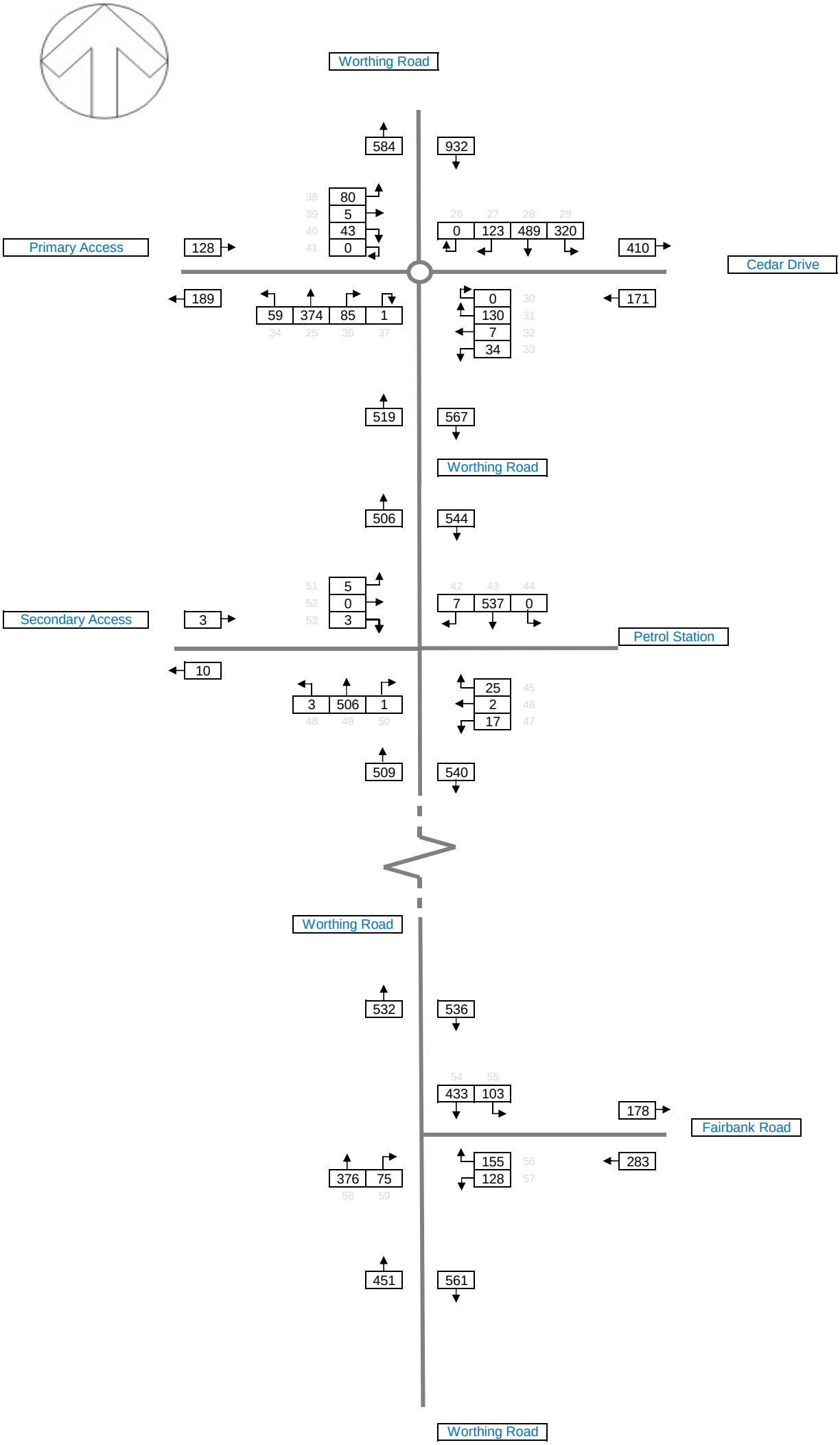
Development Trips AM
Figure 30



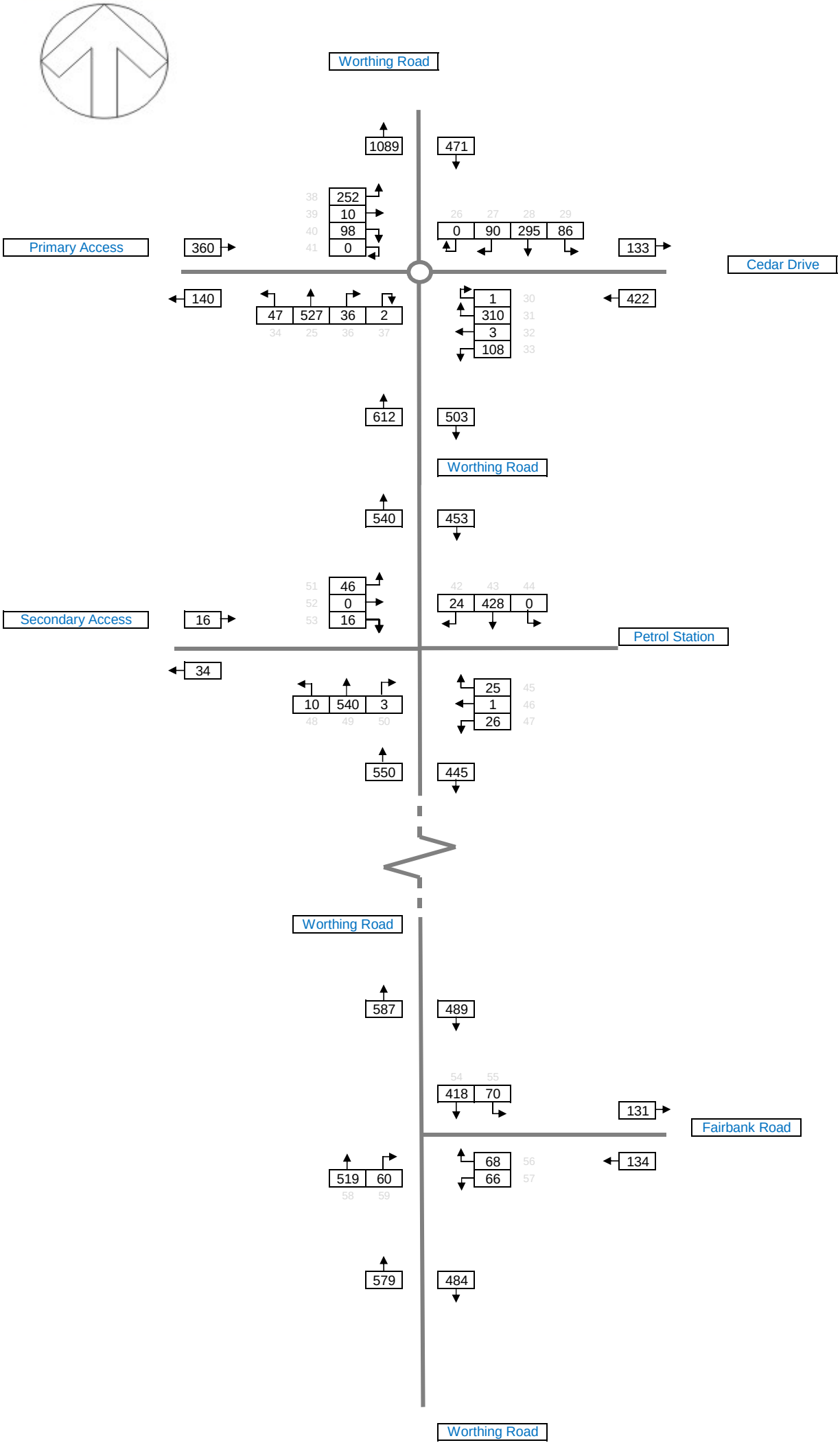
Development Trips PM
Figure 31



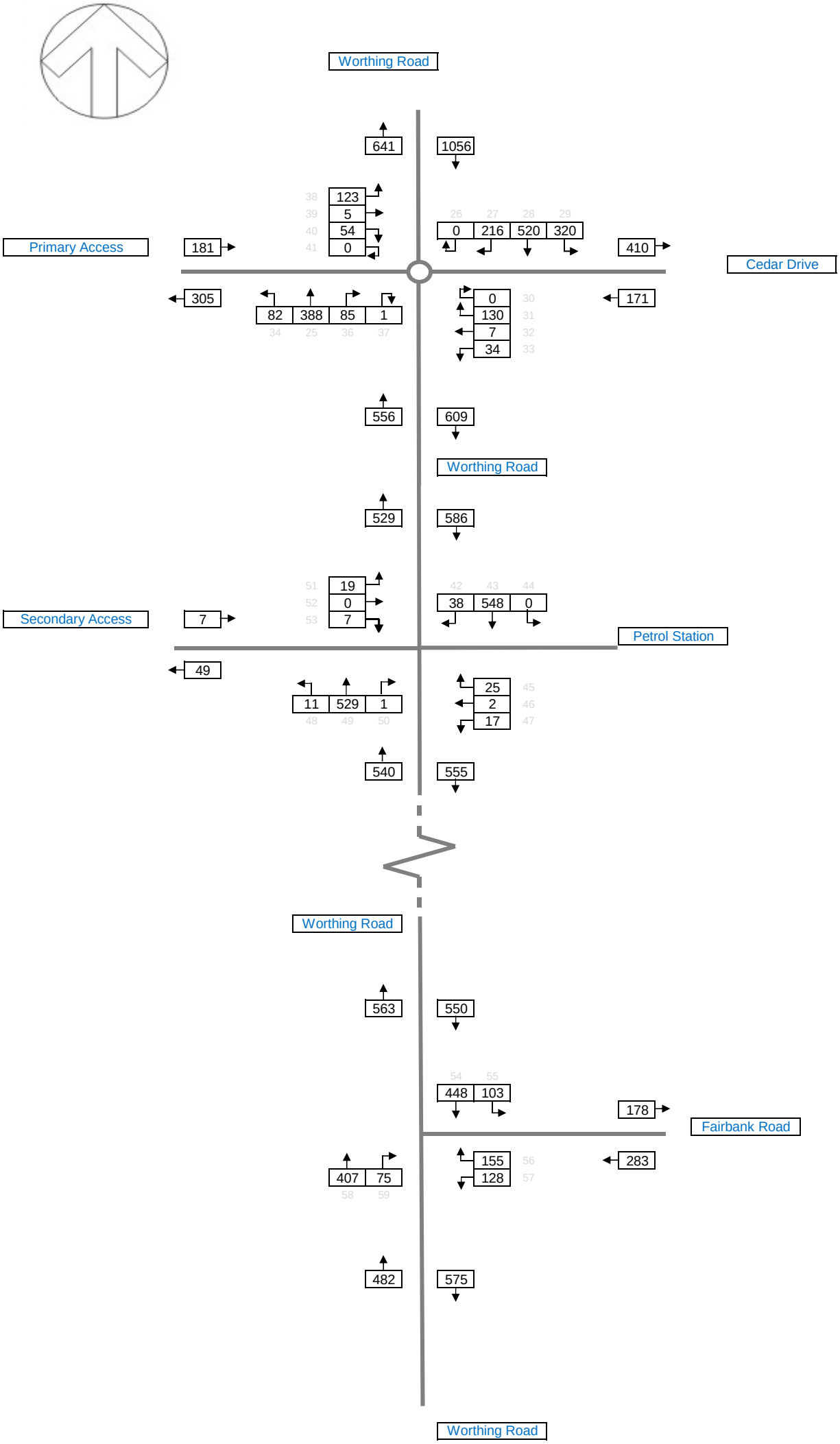
Do-Minimum AM
Figure 32



Do-Minimum PM
Figure 33



Do-Something AM
Figure 34



Do-Something PM
Figure 35

Appendix A

SITE ACCESS JUNCTIONS: ASSESSMENT RESULT FILES

Junctions 9

ARCADY 9 - Roundabout Module

Filename: Worthing Road - Cedar Dr Roundabout_Oct19.j9
Path: S:\70016993 - Southwater - Phase 2\D Design and Analysis\Development\JUNCTION ASSESSMENTS\Worthing Rd-Cedar Dr RBT
Report generation date: 02/10/2019 09:48:44

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
Proposed Roundabout - 2018 Observed								
A - Worthing Road (SB)	0.4	3.83	0.29	A	1.6	7.41	0.62	A
B - Cedar Drive	0.7	5.13	0.40	A	0.2	4.05	0.17	A
C - Worthing Road (NB)	0.7	5.87	0.43	A	0.6	5.01	0.39	A
D - Site Access	0.0	4.42	0.04	A	0.0	3.87	0.03	A
Proposed Roundabout - 2036 Do Minimum								
A - Worthing Road (SB)	0.5	4.18	0.33	A	2.7	10.59	0.73	B
B - Cedar Drive	0.6	5.31	0.38	A	0.2	4.59	0.18	A
C - Worthing Road (NB)	1.1	7.12	0.53	A	0.8	5.89	0.46	A
D - Site Access	0.4	5.99	0.27	A	0.2	4.29	0.13	A
Proposed Roundabout - 2036 Do Something								
A - Worthing Road (SB)	0.6	4.54	0.37	A	5.0	17.15	0.83	C
B - Cedar Drive	0.7	5.69	0.40	A	0.2	5.11	0.20	A
C - Worthing Road (NB)	1.4	8.27	0.58	A	1.1	6.91	0.52	A
D - Site Access	0.8	8.18	0.45	A	0.2	4.63	0.19	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	Worthing Road - Cedar Drive Roundabout
Location	Worthing Road, Southwater
Site number	
Date	01/10/2019
Version	
Status	
Identifier	
Client	
Jobnumber	70016993
Enumerator	ukddd001 [ZW0465BAS1UK]
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2018 Observed	AM	ONE HOUR	07:45	09:15		15	✓
D2	2018 Observed	PM	ONE HOUR	16:45	18:15		15	✓
D3	2036 Do Minimum	AM	FLAT	07:45	09:15	90	15	✓
D4	2036 Do Minimum	PM	FLAT	16:45	18:15	90	15	✓
D5	2036 Do Something	AM	FLAT	07:45	09:15	90	15	✓
D6	2036 Do Something	PM	FLAT	16:45	18:15	90	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Proposed Roundabout	✓	100.000	100.000

Proposed Roundabout - 2018 Observed, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	5.00	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	Worthing Road (SB)	
B	Cedar Drive	
C	Worthing Road (NB)	
D	Site Access	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A - Worthing Road (SB)	3.00	4.80	14.8	20.0	34.0	19.0	
B - Cedar Drive	3.65	4.80	5.6	13.5	34.0	18.5	
C - Worthing Road (NB)	3.20	5.10	5.7	15.0	34.0	18.0	
D - Site Access	3.00	4.80	10.9	15.0	34.0	14.5	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Worthing Road (SB)	0.594	1351
B - Cedar Drive	0.585	1338
C - Worthing Road (NB)	0.576	1280
D - Site Access	0.586	1313

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018 Observed	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Worthing Road (SB)		ONE HOUR	✓	345	100.000
B - Cedar Drive		ONE HOUR	✓	419	100.000
C - Worthing Road (NB)		ONE HOUR	✓	418	100.000
D - Site Access		ONE HOUR	✓	31	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Worthing Road (SB)	B - Cedar Drive	C - Worthing Road (NB)	D - Site Access
From	A - Worthing Road (SB)	7	86	245	7
	B - Cedar Drive	310	1	107	1
	C - Worthing Road (NB)	366	34	2	16
	D - Site Access	18	3	10	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Worthing Road (SB)	B - Cedar Drive	C - Worthing Road (NB)	D - Site Access
From	A - Worthing Road (SB)	0	0	0	0
	B - Cedar Drive	0	0	0	0
	C - Worthing Road (NB)	0	0	0	0
	D - Site Access	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Worthing Road (SB)	0.29	3.83	0.4	A	317	475
B - Cedar Drive	0.40	5.13	0.7	A	384	577
C - Worthing Road (NB)	0.43	5.87	0.7	A	384	575
D - Site Access	0.04	4.42	0.0	A	28	43

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	260	65	37	1329	0.195	259	525	0.0	0.2	3.360	A
B - Cedar Drive	315	79	203	1219	0.259	314	93	0.0	0.3	3.973	A
C - Worthing Road (NB)	315	79	244	1139	0.276	313	273	0.0	0.4	4.350	A
D - Site Access	23	6	540	997	0.023	23	18	0.0	0.0	3.696	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	310	78	45	1325	0.234	310	629	0.2	0.3	3.547	A
B - Cedar Drive	377	94	243	1195	0.315	376	111	0.3	0.5	4.392	A
C - Worthing Road (NB)	376	94	293	1111	0.338	375	327	0.4	0.5	4.888	A
D - Site Access	28	7	646	934	0.030	28	22	0.0	0.0	3.970	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	380	95	55	1319	0.288	379	770	0.3	0.4	3.830	A
B - Cedar Drive	461	115	298	1164	0.396	461	136	0.5	0.7	5.116	A
C - Worthing Road (NB)	460	115	358	1074	0.429	459	400	0.5	0.7	5.852	A
D - Site Access	34	9	791	850	0.040	34	26	0.0	0.0	4.414	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	380	95	55	1319	0.288	380	772	0.4	0.4	3.833	A
B - Cedar Drive	461	115	298	1163	0.397	461	137	0.7	0.7	5.127	A
C - Worthing Road (NB)	460	115	359	1073	0.429	460	401	0.7	0.7	5.872	A
D - Site Access	34	9	793	849	0.040	34	26	0.0	0.0	4.419	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	310	78	45	1325	0.234	311	632	0.4	0.3	3.550	A
B - Cedar Drive	377	94	244	1195	0.315	377	112	0.7	0.5	4.406	A
C - Worthing Road (NB)	376	94	294	1111	0.338	377	328	0.7	0.5	4.911	A
D - Site Access	28	7	649	933	0.030	28	22	0.0	0.0	3.976	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	260	65	38	1329	0.195	260	529	0.3	0.2	3.367	A
B - Cedar Drive	315	79	204	1218	0.259	316	93	0.5	0.4	3.990	A
C - Worthing Road (NB)	315	79	246	1138	0.276	315	274	0.5	0.4	4.375	A
D - Site Access	23	6	543	995	0.023	23	18	0.0	0.0	3.706	A

Proposed Roundabout - 2018 Observed, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	6.17	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2018 Observed	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Worthing Road (SB)		ONE HOUR	✓	729	100.000
B - Cedar Drive		ONE HOUR	✓	163	100.000
C - Worthing Road (NB)		ONE HOUR	✓	419	100.000
D - Site Access		ONE HOUR	✓	27	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Worthing Road (SB)	B - Cedar Drive	C - Worthing Road (NB)	D - Site Access
From	A - Worthing Road (SB)	13	320	383	13
	B - Cedar Drive	130	0	32	1
	C - Worthing Road (NB)	320	84	1	14
	D - Site Access	16	1	10	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Worthing Road (SB)	B - Cedar Drive	C - Worthing Road (NB)	D - Site Access
From	A - Worthing Road (SB)	0	0	0	0
	B - Cedar Drive	0	0	0	0
	C - Worthing Road (NB)	0	0	0	0
	D - Site Access	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Worthing Road (SB)	0.62	7.41	1.6	A	669	1003
B - Cedar Drive	0.17	4.05	0.2	A	150	224
C - Worthing Road (NB)	0.39	5.01	0.6	A	384	577
D - Site Access	0.03	3.87	0.0	A	25	37

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	549	137	72	1309	0.419	546	359	0.0	0.7	4.704	A
B - Cedar Drive	123	31	315	1154	0.106	122	303	0.0	0.1	3.487	A
C - Worthing Road (NB)	315	79	118	1212	0.260	314	319	0.0	0.3	4.003	A
D - Site Access	20	5	411	1073	0.019	20	21	0.0	0.0	3.420	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	655	164	86	1300	0.504	654	430	0.7	1.0	5.563	A
B - Cedar Drive	147	37	377	1117	0.131	146	363	0.1	0.2	3.706	A
C - Worthing Road (NB)	377	94	141	1199	0.314	376	382	0.3	0.5	4.375	A
D - Site Access	24	6	492	1025	0.024	24	25	0.0	0.0	3.596	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	803	201	106	1289	0.623	800	527	1.0	1.6	7.334	A
B - Cedar Drive	179	45	461	1068	0.168	179	445	0.2	0.2	4.048	A
C - Worthing Road (NB)	461	115	173	1180	0.391	461	468	0.5	0.6	4.995	A
D - Site Access	30	7	602	960	0.031	30	31	0.0	0.0	3.868	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	803	201	106	1289	0.623	803	527	1.6	1.6	7.405	A
B - Cedar Drive	179	45	462	1067	0.168	179	446	0.2	0.2	4.053	A
C - Worthing Road (NB)	461	115	173	1180	0.391	461	469	0.6	0.6	5.006	A
D - Site Access	30	7	603	960	0.031	30	31	0.0	0.0	3.870	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	655	164	86	1300	0.504	658	431	1.6	1.0	5.628	A
B - Cedar Drive	147	37	379	1116	0.131	147	365	0.2	0.2	3.715	A
C - Worthing Road (NB)	377	94	141	1198	0.314	377	384	0.6	0.5	4.388	A
D - Site Access	24	6	494	1024	0.024	24	25	0.0	0.0	3.600	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	549	137	72	1308	0.420	550	361	1.0	0.7	4.756	A
B - Cedar Drive	123	31	317	1153	0.106	123	306	0.2	0.1	3.498	A
C - Worthing Road (NB)	315	79	118	1212	0.260	316	321	0.5	0.4	4.021	A
D - Site Access	20	5	413	1071	0.019	20	21	0.0	0.0	3.427	A

Proposed Roundabout - 2036 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	5.74	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2036 Do Minimum	AM	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Worthing Road (SB)		FLAT	✓	418	100.000
B - Cedar Drive		FLAT	✓	422	100.000
C - Worthing Road (NB)		FLAT	✓	565	100.000
D - Site Access		FLAT	✓	221	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Worthing Road (SB)	B - Cedar Drive	C - Worthing Road (NB)	D - Site Access
From	A - Worthing Road (SB)	0	86	282	50
	B - Cedar Drive	310	1	108	3
	C - Worthing Road (NB)	489	36	2	38
	D - Site Access	138	10	73	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Worthing Road (SB)	B - Cedar Drive	C - Worthing Road (NB)	D - Site Access
From	A - Worthing Road (SB)	0	0	0	0
	B - Cedar Drive	0	0	0	0
	C - Worthing Road (NB)	0	0	0	0
	D - Site Access	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Worthing Road (SB)	0.33	4.18	0.5	A	418	627
B - Cedar Drive	0.38	5.31	0.6	A	422	633
C - Worthing Road (NB)	0.53	7.12	1.1	A	565	848
D - Site Access	0.27	5.99	0.4	A	221	332

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	418	105	121	1279	0.327	416	930	0.0	0.5	4.161	A
B - Cedar Drive	422	106	405	1101	0.383	420	132	0.0	0.6	5.263	A
C - Worthing Road (NB)	565	141	362	1071	0.527	561	463	0.0	1.1	6.990	A
D - Site Access	221	55	832	826	0.268	220	90	0.0	0.4	5.925	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	418	105	122	1279	0.327	418	937	0.5	0.5	4.181	A
B - Cedar Drive	422	106	407	1100	0.384	422	133	0.6	0.6	5.310	A
C - Worthing Road (NB)	565	141	364	1070	0.528	565	465	1.1	1.1	7.123	A
D - Site Access	221	55	838	822	0.269	221	91	0.4	0.4	5.987	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	418	105	122	1279	0.327	418	937	0.5	0.5	4.181	A
B - Cedar Drive	422	106	407	1100	0.384	422	133	0.6	0.6	5.310	A
C - Worthing Road (NB)	565	141	364	1070	0.528	565	465	1.1	1.1	7.123	A
D - Site Access	221	55	838	822	0.269	221	91	0.4	0.4	5.987	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	418	105	122	1279	0.327	418	937	0.5	0.5	4.181	A
B - Cedar Drive	422	106	407	1100	0.384	422	133	0.6	0.6	5.310	A
C - Worthing Road (NB)	565	141	364	1070	0.528	565	465	1.1	1.1	7.123	A
D - Site Access	221	55	838	822	0.269	221	91	0.4	0.4	5.987	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	418	105	122	1279	0.327	418	937	0.5	0.5	4.181	A
B - Cedar Drive	422	106	407	1100	0.384	422	133	0.6	0.6	5.310	A
C - Worthing Road (NB)	565	141	364	1070	0.528	565	465	1.1	1.1	7.123	A
D - Site Access	221	55	838	822	0.269	221	91	0.4	0.4	5.987	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	418	105	122	1279	0.327	418	937	0.5	0.5	4.181	A
B - Cedar Drive	422	106	407	1100	0.384	422	133	0.6	0.6	5.310	A
C - Worthing Road (NB)	565	141	364	1070	0.528	565	465	1.1	1.1	7.123	A
D - Site Access	221	55	838	822	0.269	221	91	0.4	0.4	5.987	A

Proposed Roundabout - 2036 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	8.15	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	2036 Do Minimum	PM	FLAT	16:45	18:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Worthing Road (SB)		FLAT	✓	932	100.000
B - Cedar Drive		FLAT	✓	171	100.000
C - Worthing Road (NB)		FLAT	✓	519	100.000
D - Site Access		FLAT	✓	128	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Worthing Road (SB)	B - Cedar Drive	C - Worthing Road (NB)	D - Site Access
From	A - Worthing Road (SB)	0	320	489	123
	B - Cedar Drive	130	0	34	7
	C - Worthing Road (NB)	374	85	1	59
	D - Site Access	80	5	43	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Worthing Road (SB)	B - Cedar Drive	C - Worthing Road (NB)	D - Site Access
From	A - Worthing Road (SB)	0	0	0	0
	B - Cedar Drive	0	0	0	0
	C - Worthing Road (NB)	0	0	0	0
	D - Site Access	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Worthing Road (SB)	0.73	10.59	2.7	B	932	1398
B - Cedar Drive	0.18	4.59	0.2	A	171	257
C - Worthing Road (NB)	0.46	5.89	0.8	A	519	779
D - Site Access	0.13	4.29	0.2	A	128	192

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	932	233	133	1272	0.733	921	581	0.0	2.6	9.989	A
B - Cedar Drive	171	43	649	958	0.178	170	406	0.0	0.2	4.562	A
C - Worthing Road (NB)	519	130	258	1131	0.459	516	561	0.0	0.8	5.816	A
D - Site Access	128	32	586	970	0.132	127	187	0.0	0.2	4.271	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	932	233	134	1272	0.733	932	584	2.6	2.7	10.572	B
B - Cedar Drive	171	43	656	954	0.179	171	410	0.2	0.2	4.594	A
C - Worthing Road (NB)	519	130	260	1130	0.459	519	567	0.8	0.8	5.889	A
D - Site Access	128	32	590	968	0.132	128	189	0.2	0.2	4.287	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	932	233	134	1272	0.733	932	584	2.7	2.7	10.584	B
B - Cedar Drive	171	43	656	954	0.179	171	410	0.2	0.2	4.595	A
C - Worthing Road (NB)	519	130	260	1130	0.459	519	567	0.8	0.8	5.889	A
D - Site Access	128	32	590	968	0.132	128	189	0.2	0.2	4.287	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	932	233	134	1272	0.733	932	584	2.7	2.7	10.588	B
B - Cedar Drive	171	43	656	954	0.179	171	410	0.2	0.2	4.595	A
C - Worthing Road (NB)	519	130	260	1130	0.459	519	567	0.8	0.8	5.889	A
D - Site Access	128	32	590	968	0.132	128	189	0.2	0.2	4.287	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	932	233	134	1272	0.733	932	584	2.7	2.7	10.591	B
B - Cedar Drive	171	43	656	954	0.179	171	410	0.2	0.2	4.595	A
C - Worthing Road (NB)	519	130	260	1130	0.459	519	567	0.8	0.8	5.889	A
D - Site Access	128	32	590	968	0.132	128	189	0.2	0.2	4.287	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	932	233	134	1272	0.733	932	584	2.7	2.7	10.593	B
B - Cedar Drive	171	43	656	954	0.179	171	410	0.2	0.2	4.595	A
C - Worthing Road (NB)	519	130	260	1130	0.459	519	567	0.8	0.8	5.889	A
D - Site Access	128	32	590	968	0.132	128	189	0.2	0.2	4.287	A

Proposed Roundabout - 2036 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	6.73	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D5	2036 Do Something	AM	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Worthing Road (SB)		FLAT	✓	471	100.000
B - Cedar Drive		FLAT	✓	422	100.000
C - Worthing Road (NB)		FLAT	✓	612	100.000
D - Site Access		FLAT	✓	360	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Worthing Road (SB)	B - Cedar Drive	C - Worthing Road (NB)	D - Site Access
From	A - Worthing Road (SB)	0	86	295	90
	B - Cedar Drive	310	1	108	3
	C - Worthing Road (NB)	527	36	2	47
	D - Site Access	252	10	98	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Worthing Road (SB)	B - Cedar Drive	C - Worthing Road (NB)	D - Site Access
From	A - Worthing Road (SB)	0	0	0	0
	B - Cedar Drive	0	0	0	0
	C - Worthing Road (NB)	0	0	0	0
	D - Site Access	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Worthing Road (SB)	0.37	4.54	0.6	A	471	707
B - Cedar Drive	0.40	5.69	0.7	A	422	633
C - Worthing Road (NB)	0.58	8.27	1.4	A	612	918
D - Site Access	0.45	8.18	0.8	A	360	540

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	471	118	146	1265	0.372	469	1080	0.0	0.6	4.510	A
B - Cedar Drive	422	106	482	1056	0.400	419	132	0.0	0.7	5.634	A
C - Worthing Road (NB)	612	153	402	1049	0.584	607	500	0.0	1.4	8.045	A
D - Site Access	360	90	869	804	0.448	357	139	0.0	0.8	7.995	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	471	118	147	1264	0.373	471	1089	0.6	0.6	4.539	A
B - Cedar Drive	422	106	485	1054	0.400	422	133	0.7	0.7	5.693	A
C - Worthing Road (NB)	612	153	404	1047	0.584	612	503	1.4	1.4	8.265	A
D - Site Access	360	90	876	800	0.450	360	140	0.8	0.8	8.180	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	471	118	147	1264	0.373	471	1089	0.6	0.6	4.539	A
B - Cedar Drive	422	106	485	1054	0.400	422	133	0.7	0.7	5.693	A
C - Worthing Road (NB)	612	153	404	1047	0.584	612	503	1.4	1.4	8.268	A
D - Site Access	360	90	876	800	0.450	360	140	0.8	0.8	8.182	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	471	118	147	1264	0.373	471	1089	0.6	0.6	4.539	A
B - Cedar Drive	422	106	485	1054	0.400	422	133	0.7	0.7	5.693	A
C - Worthing Road (NB)	612	153	404	1047	0.584	612	503	1.4	1.4	8.270	A
D - Site Access	360	90	876	800	0.450	360	140	0.8	0.8	8.183	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	471	118	147	1264	0.373	471	1089	0.6	0.6	4.539	A
B - Cedar Drive	422	106	485	1054	0.400	422	133	0.7	0.7	5.693	A
C - Worthing Road (NB)	612	153	404	1047	0.584	612	503	1.4	1.4	8.270	A
D - Site Access	360	90	876	800	0.450	360	140	0.8	0.8	8.183	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	471	118	147	1264	0.373	471	1089	0.6	0.6	4.539	A
B - Cedar Drive	422	106	485	1054	0.400	422	133	0.7	0.7	5.693	A
C - Worthing Road (NB)	612	153	404	1047	0.584	612	503	1.4	1.4	8.270	A
D - Site Access	360	90	876	800	0.450	360	140	0.8	0.8	8.183	A

Proposed Roundabout - 2036 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	12.05	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D6	2036 Do Something	PM	FLAT	16:45	18:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Worthing Road (SB)		FLAT	✓	1056	100.000
B - Cedar Drive		FLAT	✓	171	100.000
C - Worthing Road (NB)		FLAT	✓	556	100.000
D - Site Access		FLAT	✓	182	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Worthing Road (SB)	B - Cedar Drive	C - Worthing Road (NB)	D - Site Access
From	A - Worthing Road (SB)	0	320	520	216
	B - Cedar Drive	130	0	34	7
	C - Worthing Road (NB)	388	85	1	82
	D - Site Access	123	5	54	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Worthing Road (SB)	B - Cedar Drive	C - Worthing Road (NB)	D - Site Access
From	A - Worthing Road (SB)	0	0	0	0
	B - Cedar Drive	0	0	0	0
	C - Worthing Road (NB)	0	0	0	0
	D - Site Access	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Worthing Road (SB)	0.83	17.15	5.0	C	1056	1584
B - Cedar Drive	0.20	5.11	0.2	A	171	257
C - Worthing Road (NB)	0.52	6.91	1.1	A	556	834
D - Site Access	0.19	4.63	0.2	A	182	273

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	1056	264	144	1266	0.834	1038	637	0.0	4.6	14.794	B
B - Cedar Drive	171	43	778	883	0.194	170	404	0.0	0.2	5.043	A
C - Worthing Road (NB)	556	139	349	1079	0.515	552	600	0.0	1.0	6.774	A
D - Site Access	182	46	600	962	0.189	181	301	0.0	0.2	4.604	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	1056	264	145	1265	0.835	1055	641	4.6	4.8	16.950	C
B - Cedar Drive	171	43	790	876	0.195	171	410	0.2	0.2	5.107	A
C - Worthing Road (NB)	556	139	353	1077	0.516	556	609	1.0	1.1	6.912	A
D - Site Access	182	46	604	959	0.190	182	305	0.2	0.2	4.630	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	1056	264	145	1265	0.835	1056	641	4.8	4.9	17.070	C
B - Cedar Drive	171	43	791	876	0.195	171	410	0.2	0.2	5.109	A
C - Worthing Road (NB)	556	139	353	1077	0.516	556	609	1.1	1.1	6.913	A
D - Site Access	182	46	604	959	0.190	182	305	0.2	0.2	4.630	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	1056	264	145	1265	0.835	1056	641	4.9	4.9	17.113	C
B - Cedar Drive	171	43	791	875	0.195	171	410	0.2	0.2	5.109	A
C - Worthing Road (NB)	556	139	353	1077	0.516	556	609	1.1	1.1	6.913	A
D - Site Access	182	46	604	959	0.190	182	305	0.2	0.2	4.630	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	1056	264	145	1265	0.835	1056	641	4.9	4.9	17.137	C
B - Cedar Drive	171	43	791	875	0.195	171	410	0.2	0.2	5.109	A
C - Worthing Road (NB)	556	139	353	1077	0.516	556	609	1.1	1.1	6.913	A
D - Site Access	182	46	604	959	0.190	182	305	0.2	0.2	4.630	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Worthing Road (SB)	1056	264	145	1265	0.835	1056	641	4.9	5.0	17.152	C
B - Cedar Drive	171	43	791	875	0.195	171	410	0.2	0.2	5.109	A
C - Worthing Road (NB)	556	139	353	1077	0.516	556	609	1.1	1.1	6.913	A
D - Site Access	182	46	604	959	0.190	182	305	0.2	0.2	4.630	A

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: 201910_Worthing Rd Priority Access_Oct19.j9
Path: S:\70016993 - Southwater - Phase 2\D Design and Analysis\Development\JUNCTION ASSESSMENTS\Worthing Rd-Secondary Site access\Existing T-junction
Report generation date: 03/10/2019 13:51:44

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2018 Observed							
Stream B-AC	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-AB	0.0	4.64	0.02	A	0.0	0.00	0.00	A
	2036 Do Minimum							
Stream B-AC	0.0	9.74	0.04	A	0.0	9.07	0.02	A
Stream C-AB	0.0	4.37	0.02	A	0.0	3.89	0.02	A
	2036 Do Something							
Stream B-AC	0.2	9.81	0.14	A	0.1	9.22	0.06	A
Stream C-AB	0.1	4.44	0.06	A	0.2	4.23	0.10	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	Worthing Road Access 2019 Inner Spine Road
Location	Worthing Road, Southwater
Site number	
Date	01/10/2019
Version	
Status	
Identifier	
Client	
Jobnumber	70016993
Enumerator	ukddd001 [ZW0465BAS1UK]
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2018 Observed	AM	ONE HOUR	07:45	09:15		15	✓
D2	2018 Observed	PM	ONE HOUR	16:45	18:15		15	✓
D3	2036 Do Minimum	AM	FLAT	07:45	09:15	90	15	✓
D4	2036 Do Minimum	PM	FLAT	16:45	18:15	90	15	✓
D5	2036 Do Something	AM	FLAT	07:45	09:15	90	15	✓
D6	2036 Do Something	PM	FLAT	16:45	18:15	90	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2018 Observed, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	0.08	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Worthing Road (NB)		Major
B	Site Access		Minor
C	Worthing Road (SB)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Worthing Road (SB)	6.00			250.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Site Access	One lane	3.00	24	20

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	495	0.090	0.228	0.143	0.326
1	B-C	637	0.098	0.247	-	-
1	C-B	719	0.278	0.278	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018 Observed	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Worthing Road (NB)		ONE HOUR	✓	398	100.000
B - Site Access		ONE HOUR	✓	4	100.000
C - Worthing Road (SB)		ONE HOUR	✓	314	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Worthing Road (NB)	B - Site Access	C - Worthing Road (SB)
From	A - Worthing Road (NB)	0	6	392
	B - Site Access	4	0	0
	C - Worthing Road (SB)	306	8	0

Proportions

		To		
		A - Worthing Road (NB)	B - Site Access	C - Worthing Road (SB)
From	A - Worthing Road (NB)	0.00	0.02	0.98
	B - Site Access	1.00	0.00	0.00
	C - Worthing Road (SB)	0.97	0.03	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Worthing Road (NB)	B - Site Access	C - Worthing Road (SB)
From	A - Worthing Road (NB)	0	0	0
	B - Site Access	0	0	0
	C - Worthing Road (SB)	0	0	0

Average PCU Per Veh

		To		
		A - Worthing Road (NB)	B - Site Access	C - Worthing Road (SB)
From	A - Worthing Road (NB)	1.000	1.000	1.000
	B - Site Access	1.000	1.000	1.000
	C - Worthing Road (SB)	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:45-08:00	A - Worthing Road (NB)	300	300
	B - Site Access	0	0
	C - Worthing Road (SB)	236	236
08:00-08:15	A - Worthing Road (NB)	358	358
	B - Site Access	0	0
	C - Worthing Road (SB)	282	282
08:15-08:30	A - Worthing Road (NB)	438	438
	B - Site Access	0	0
	C - Worthing Road (SB)	346	346
08:30-08:45	A - Worthing Road (NB)	438	438
	B - Site Access	0	0
	C - Worthing Road (SB)	346	346
08:45-09:00	A - Worthing Road (NB)	358	358
	B - Site Access	0	0
	C - Worthing Road (SB)	282	282
09:00-09:15	A - Worthing Road (NB)	300	300
	B - Site Access	0	0
	C - Worthing Road (SB)	236	236

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.00	0.00	0.0	A	0	0
C-AB	0.02	4.64	0.0	A	11	17
C-A					277	415
A-B					6	8
A-C					360	540

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	0	0	463	0.000	0	0.0	0.0	0.000	A
C-AB	9	2	784	0.011	8	0.0	0.0	4.639	A
C-A	228	57			228				
A-B	5	1			5				
A-C	295	74			295				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	0	0	444	0.000	0	0.0	0.0	0.000	A
C-AB	11	3	800	0.014	11	0.0	0.0	4.564	A
C-A	271	68			271				
A-B	5	1			5				
A-C	352	88			352				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	0	0	418	0.000	0	0.0	0.0	0.000	A
C-AB	15	4	822	0.018	15	0.0	0.0	4.460	A
C-A	331	83			331				
A-B	7	2			7				
A-C	432	108			432				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	0	0	418	0.000	0	0.0	0.0	0.000	A
C-AB	15	4	822	0.018	15	0.0	0.0	4.460	A
C-A	331	83			331				
A-B	7	2			7				
A-C	432	108			432				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	0	0	444	0.000	0	0.0	0.0	0.000	A
C-AB	11	3	800	0.014	11	0.0	0.0	4.564	A
C-A	271	68			271				
A-B	5	1			5				
A-C	352	88			352				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	0	0	463	0.000	0	0.0	0.0	0.000	A
C-AB	9	2	784	0.011	9	0.0	0.0	4.639	A
C-A	228	57			228				
A-B	5	1			5				
A-C	295	74			295				

2018 Observed, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	0.00	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2018 Observed	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Worthing Road (NB)		ONE HOUR	✓	405	100.000
B - Site Access		ONE HOUR	✓	2	100.000
C - Worthing Road (SB)		ONE HOUR	✓	403	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Worthing Road (NB)	B - Site Access	C - Worthing Road (SB)
From	A - Worthing Road (NB)	0	1	404
	B - Site Access	1	0	1
	C - Worthing Road (SB)	403	0	0

Proportions

		To		
		A - Worthing Road (NB)	B - Site Access	C - Worthing Road (SB)
From	A - Worthing Road (NB)	0.00	0.00	1.00
	B - Site Access	0.50	0.00	0.50
	C - Worthing Road (SB)	1.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Worthing Road (NB)	B - Site Access	C - Worthing Road (SB)
From	A - Worthing Road (NB)	0	0	0
	B - Site Access	0	0	0
	C - Worthing Road (SB)	0	0	0

Average PCU Per Veh

		To		
		A - Worthing Road (NB)	B - Site Access	C - Worthing Road (SB)
From	A - Worthing Road (NB)	1.000	1.000	1.000
	B - Site Access	1.000	1.000	1.000
	C - Worthing Road (SB)	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A - Worthing Road (NB)	305	305
	B - Site Access	0	0
	C - Worthing Road (SB)	303	303
17:00-17:15	A - Worthing Road (NB)	364	364
	B - Site Access	0	0
	C - Worthing Road (SB)	362	362
17:15-17:30	A - Worthing Road (NB)	446	446
	B - Site Access	0	0
	C - Worthing Road (SB)	444	444
17:30-17:45	A - Worthing Road (NB)	446	446
	B - Site Access	0	0
	C - Worthing Road (SB)	444	444
17:45-18:00	A - Worthing Road (NB)	364	364
	B - Site Access	0	0
	C - Worthing Road (SB)	362	362
18:00-18:15	A - Worthing Road (NB)	305	305
	B - Site Access	0	0
	C - Worthing Road (SB)	303	303

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.00	0.00	0.0	A	0	0
C-AB	0.00	0.00	0.0	A	0	0
C-A					370	555
A-B					0.92	1
A-C					371	556

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	0	0	455	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	634	0.000	0	0.0	0.0	0.000	A
C-A	303	76			303				
A-B	0.75	0.19			0.75				
A-C	304	76			304				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	0	0	434	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	617	0.000	0	0.0	0.0	0.000	A
C-A	362	91			362				
A-B	0.90	0.22			0.90				
A-C	363	91			363				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	0	0	406	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	595	0.000	0	0.0	0.0	0.000	A
C-A	444	111			444				
A-B	1	0.28			1				
A-C	445	111			445				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	0	0	406	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	595	0.000	0	0.0	0.0	0.000	A
C-A	444	111			444				
A-B	1	0.28			1				
A-C	445	111			445				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	0	0	434	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	617	0.000	0	0.0	0.0	0.000	A
C-A	362	91			362				
A-B	0.90	0.22			0.90				
A-C	363	91			363				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	0	0	455	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	634	0.000	0	0.0	0.0	0.000	A
C-A	303	76			303				
A-B	0.75	0.19			0.75				
A-C	304	76			304				

2036 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	0.26	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2036 Do Minimum	AM	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Worthing Road (NB)		FLAT	✓	538	100.000
B - Site Access		FLAT	✓	16	100.000
C - Worthing Road (SB)		FLAT	✓	414	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Worthing Road (NB)	B - Site Access	C - Worthing Road (SB)
From	A - Worthing Road (NB)	0	7	531
	B - Site Access	8	0	8
	C - Worthing Road (SB)	403	11	0

Proportions

		To		
		A - Worthing Road (NB)	B - Site Access	C - Worthing Road (SB)
From	A - Worthing Road (NB)	0.00	0.01	0.99
	B - Site Access	0.50	0.00	0.50
	C - Worthing Road (SB)	0.97	0.03	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Worthing Road (NB)	B - Site Access	C - Worthing Road (SB)
From	A - Worthing Road (NB)	0	0	0
	B - Site Access	0	0	0
	C - Worthing Road (SB)	0	0	0

Average PCU Per Veh

		To		
		A - Worthing Road (NB)	B - Site Access	C - Worthing Road (SB)
From	A - Worthing Road (NB)	1.000	1.000	1.000
	B - Site Access	1.000	1.000	1.000
	C - Worthing Road (SB)	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:45-08:00	A - Worthing Road (NB)	538	538
	B - Site Access	16	16
	C - Worthing Road (SB)	414	414
08:00-08:15	A - Worthing Road (NB)	538	538
	B - Site Access	16	16
	C - Worthing Road (SB)	414	414
08:15-08:30	A - Worthing Road (NB)	538	538
	B - Site Access	16	16
	C - Worthing Road (SB)	414	414
08:30-08:45	A - Worthing Road (NB)	538	538
	B - Site Access	16	16
	C - Worthing Road (SB)	414	414
08:45-09:00	A - Worthing Road (NB)	538	538
	B - Site Access	16	16
	C - Worthing Road (SB)	414	414
09:00-09:15	A - Worthing Road (NB)	538	538
	B - Site Access	16	16
	C - Worthing Road (SB)	414	414

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.04	9.74	0.0	A	16	24
C-AB	0.02	4.37	0.0	A	21	32
C-A					393	589
A-B					7	11
A-C					531	797

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	16	4	386	0.041	16	0.0	0.0	9.727	A
C-AB	21	5	845	0.025	21	0.0	0.0	4.371	A
C-A	393	98			393				
A-B	7	2			7				
A-C	531	133			531				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	16	4	386	0.041	16	0.0	0.0	9.735	A
C-AB	21	5	845	0.025	21	0.0	0.0	4.371	A
C-A	393	98			393				
A-B	7	2			7				
A-C	531	133			531				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	16	4	386	0.041	16	0.0	0.0	9.735	A
C-AB	21	5	845	0.025	21	0.0	0.0	4.373	A
C-A	393	98			393				
A-B	7	2			7				
A-C	531	133			531				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	16	4	386	0.041	16	0.0	0.0	9.735	A
C-AB	21	5	845	0.025	21	0.0	0.0	4.373	A
C-A	393	98			393				
A-B	7	2			7				
A-C	531	133			531				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	16	4	386	0.041	16	0.0	0.0	9.735	A
C-AB	21	5	845	0.025	21	0.0	0.0	4.371	A
C-A	393	98			393				
A-B	7	2			7				
A-C	531	133			531				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	16	4	386	0.041	16	0.0	0.0	9.735	A
C-AB	21	5	845	0.025	21	0.0	0.0	4.371	A
C-A	393	98			393				
A-B	7	2			7				
A-C	531	133			531				

2036 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	0.13	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	2036 Do Minimum	PM	FLAT	16:45	18:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Worthing Road (NB)		FLAT	✓	509	100.000
B - Site Access		FLAT	✓	8	100.000
C - Worthing Road (SB)		FLAT	✓	544	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Worthing Road (NB)	B - Site Access	C - Worthing Road (SB)
From	A - Worthing Road (NB)	0	3	506
	B - Site Access	3	0	5
	C - Worthing Road (SB)	537	7	0

Proportions

		To		
		A - Worthing Road (NB)	B - Site Access	C - Worthing Road (SB)
From	A - Worthing Road (NB)	0.00	0.01	0.99
	B - Site Access	0.38	0.00	0.63
	C - Worthing Road (SB)	0.99	0.01	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Worthing Road (NB)	B - Site Access	C - Worthing Road (SB)
From	A - Worthing Road (NB)	0	0	0
	B - Site Access	0	0	0
	C - Worthing Road (SB)	0	0	0

Average PCU Per Veh

		To		
		A - Worthing Road (NB)	B - Site Access	C - Worthing Road (SB)
From	A - Worthing Road (NB)	1.000	1.000	1.000
	B - Site Access	1.000	1.000	1.000
	C - Worthing Road (SB)	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A - Worthing Road (NB)	509	509
	B - Site Access	8	8
	C - Worthing Road (SB)	544	544
17:00-17:15	A - Worthing Road (NB)	509	509
	B - Site Access	8	8
	C - Worthing Road (SB)	544	544
17:15-17:30	A - Worthing Road (NB)	509	509
	B - Site Access	8	8
	C - Worthing Road (SB)	544	544
17:30-17:45	A - Worthing Road (NB)	509	509
	B - Site Access	8	8
	C - Worthing Road (SB)	544	544
17:45-18:00	A - Worthing Road (NB)	509	509
	B - Site Access	8	8
	C - Worthing Road (SB)	544	544
18:00-18:15	A - Worthing Road (NB)	509	509
	B - Site Access	8	8
	C - Worthing Road (SB)	544	544

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.02	9.07	0.0	A	8	12
C-AB	0.02	3.89	0.0	A	16	24
C-A					528	792
A-B					3	5
A-C					506	759

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	8	2	405	0.020	8	0.0	0.0	9.069	A
C-AB	16	4	942	0.017	16	0.0	0.0	3.889	A
C-A	528	132			528				
A-B	3	0.75			3				
A-C	506	127			506				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	8	2	405	0.020	8	0.0	0.0	9.074	A
C-AB	16	4	942	0.017	16	0.0	0.0	3.889	A
C-A	528	132			528				
A-B	3	0.75			3				
A-C	506	127			506				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	8	2	405	0.020	8	0.0	0.0	9.074	A
C-AB	16	4	942	0.017	16	0.0	0.0	3.889	A
C-A	528	132			528				
A-B	3	0.75			3				
A-C	506	127			506				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	8	2	405	0.020	8	0.0	0.0	9.074	A
C-AB	16	4	942	0.017	16	0.0	0.0	3.890	A
C-A	528	132			528				
A-B	3	0.75			3				
A-C	506	127			506				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	8	2	405	0.020	8	0.0	0.0	9.074	A
C-AB	16	4	942	0.017	16	0.0	0.0	3.890	A
C-A	528	132			528				
A-B	3	0.75			3				
A-C	506	127			506				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	8	2	405	0.020	8	0.0	0.0	9.074	A
C-AB	16	4	942	0.017	16	0.0	0.0	3.889	A
C-A	528	132			528				
A-B	3	0.75			3				
A-C	506	127			506				

2036 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	0.77	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D5	2036 Do Something	AM	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Worthing Road (NB)		FLAT	✓	550	100.000
B - Site Access		FLAT	✓	62	100.000
C - Worthing Road (SB)		FLAT	✓	452	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Worthing Road (NB)	B - Site Access	C - Worthing Road (SB)
From	A - Worthing Road (NB)	0	10	540
	B - Site Access	16	0	46
	C - Worthing Road (SB)	428	24	0

Proportions

		To		
		A - Worthing Road (NB)	B - Site Access	C - Worthing Road (SB)
From	A - Worthing Road (NB)	0.00	0.02	0.98
	B - Site Access	0.26	0.00	0.74
	C - Worthing Road (SB)	0.95	0.05	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Worthing Road (NB)	B - Site Access	C - Worthing Road (SB)
From	A - Worthing Road (NB)	0	0	0
	B - Site Access	0	0	0
	C - Worthing Road (SB)	0	0	0

Average PCU Per Veh

		To		
		A - Worthing Road (NB)	B - Site Access	C - Worthing Road (SB)
From	A - Worthing Road (NB)	1.000	1.000	1.000
	B - Site Access	1.000	1.000	1.000
	C - Worthing Road (SB)	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:45-08:00	A - Worthing Road (NB)	550	550
	B - Site Access	62	62
	C - Worthing Road (SB)	452	452
08:00-08:15	A - Worthing Road (NB)	550	550
	B - Site Access	62	62
	C - Worthing Road (SB)	452	452
08:15-08:30	A - Worthing Road (NB)	550	550
	B - Site Access	62	62
	C - Worthing Road (SB)	452	452
08:30-08:45	A - Worthing Road (NB)	550	550
	B - Site Access	62	62
	C - Worthing Road (SB)	452	452
08:45-09:00	A - Worthing Road (NB)	550	550
	B - Site Access	62	62
	C - Worthing Road (SB)	452	452
09:00-09:15	A - Worthing Road (NB)	550	550
	B - Site Access	62	62
	C - Worthing Road (SB)	452	452

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.14	9.81	0.2	A	62	93
C-AB	0.06	4.44	0.1	A	48	72
C-A					404	606
A-B					10	15
A-C					540	810

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	62	16	429	0.145	61	0.0	0.2	9.776	A
C-AB	48	12	859	0.056	47	0.0	0.1	4.435	A
C-A	404	101			404				
A-B	10	3			10				
A-C	540	135			540				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	62	16	429	0.145	62	0.2	0.2	9.811	A
C-AB	48	12	859	0.056	48	0.1	0.1	4.440	A
C-A	404	101			404				
A-B	10	3			10				
A-C	540	135			540				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	62	16	429	0.145	62	0.2	0.2	9.811	A
C-AB	48	12	859	0.056	48	0.1	0.1	4.440	A
C-A	404	101			404				
A-B	10	3			10				
A-C	540	135			540				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	62	16	429	0.145	62	0.2	0.2	9.811	A
C-AB	48	12	859	0.056	48	0.1	0.1	4.438	A
C-A	404	101			404				
A-B	10	3			10				
A-C	540	135			540				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	62	16	429	0.145	62	0.2	0.2	9.811	A
C-AB	48	12	859	0.056	48	0.1	0.1	4.438	A
C-A	404	101			404				
A-B	10	3			10				
A-C	540	135			540				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	62	16	429	0.145	62	0.2	0.2	9.811	A
C-AB	48	12	859	0.056	48	0.1	0.1	4.440	A
C-A	404	101			404				
A-B	10	3			10				
A-C	540	135			540				

2036 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	0.54	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D6	2036 Do Something	PM	FLAT	16:45	18:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Worthing Road (NB)		FLAT	✓	540	100.000
B - Site Access		FLAT	✓	26	100.000
C - Worthing Road (SB)		FLAT	✓	586	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Worthing Road (NB)	B - Site Access	C - Worthing Road (SB)
From	A - Worthing Road (NB)	0	11	529
	B - Site Access	7	0	19
	C - Worthing Road (SB)	548	38	0

Proportions

		To		
		A - Worthing Road (NB)	B - Site Access	C - Worthing Road (SB)
From	A - Worthing Road (NB)	0.00	0.02	0.98
	B - Site Access	0.27	0.00	0.73
	C - Worthing Road (SB)	0.94	0.06	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Worthing Road (NB)	B - Site Access	C - Worthing Road (SB)
From	A - Worthing Road (NB)	0	0	0
	B - Site Access	0	0	0
	C - Worthing Road (SB)	0	0	0

Average PCU Per Veh

		To		
		A - Worthing Road (NB)	B - Site Access	C - Worthing Road (SB)
From	A - Worthing Road (NB)	1.000	1.000	1.000
	B - Site Access	1.000	1.000	1.000
	C - Worthing Road (SB)	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A - Worthing Road (NB)	540	540
	B - Site Access	26	26
	C - Worthing Road (SB)	586	586
17:00-17:15	A - Worthing Road (NB)	540	540
	B - Site Access	26	26
	C - Worthing Road (SB)	586	586
17:15-17:30	A - Worthing Road (NB)	540	540
	B - Site Access	26	26
	C - Worthing Road (SB)	586	586
17:30-17:45	A - Worthing Road (NB)	540	540
	B - Site Access	26	26
	C - Worthing Road (SB)	586	586
17:45-18:00	A - Worthing Road (NB)	540	540
	B - Site Access	26	26
	C - Worthing Road (SB)	586	586
18:00-18:15	A - Worthing Road (NB)	540	540
	B - Site Access	26	26
	C - Worthing Road (SB)	586	586

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.06	9.22	0.1	A	26	39
C-AB	0.10	4.23	0.2	A	91	137
C-A					495	742
A-B					11	17
A-C					529	794

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	26	7	417	0.062	26	0.0	0.1	9.202	A
C-AB	91	23	943	0.096	90	0.0	0.2	4.218	A
C-A	495	124			495				
A-B	11	3			11				
A-C	529	132			529				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	26	7	417	0.062	26	0.1	0.1	9.215	A
C-AB	91	23	944	0.097	91	0.2	0.2	4.227	A
C-A	495	124			495				
A-B	11	3			11				
A-C	529	132			529				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	26	7	417	0.062	26	0.1	0.1	9.215	A
C-AB	91	23	944	0.097	91	0.2	0.2	4.226	A
C-A	495	124			495				
A-B	11	3			11				
A-C	529	132			529				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	26	7	417	0.062	26	0.1	0.1	9.215	A
C-AB	91	23	944	0.097	91	0.2	0.2	4.226	A
C-A	495	124			495				
A-B	11	3			11				
A-C	529	132			529				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	26	7	417	0.062	26	0.1	0.1	9.215	A
C-AB	91	23	944	0.097	91	0.2	0.2	4.226	A
C-A	495	124			495				
A-B	11	3			11				
A-C	529	132			529				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	26	7	417	0.062	26	0.1	0.1	9.215	A
C-AB	91	23	944	0.097	91	0.2	0.2	4.227	A
C-A	495	124			495				
A-B	11	3			11				
A-C	529	132			529				

Appendix B

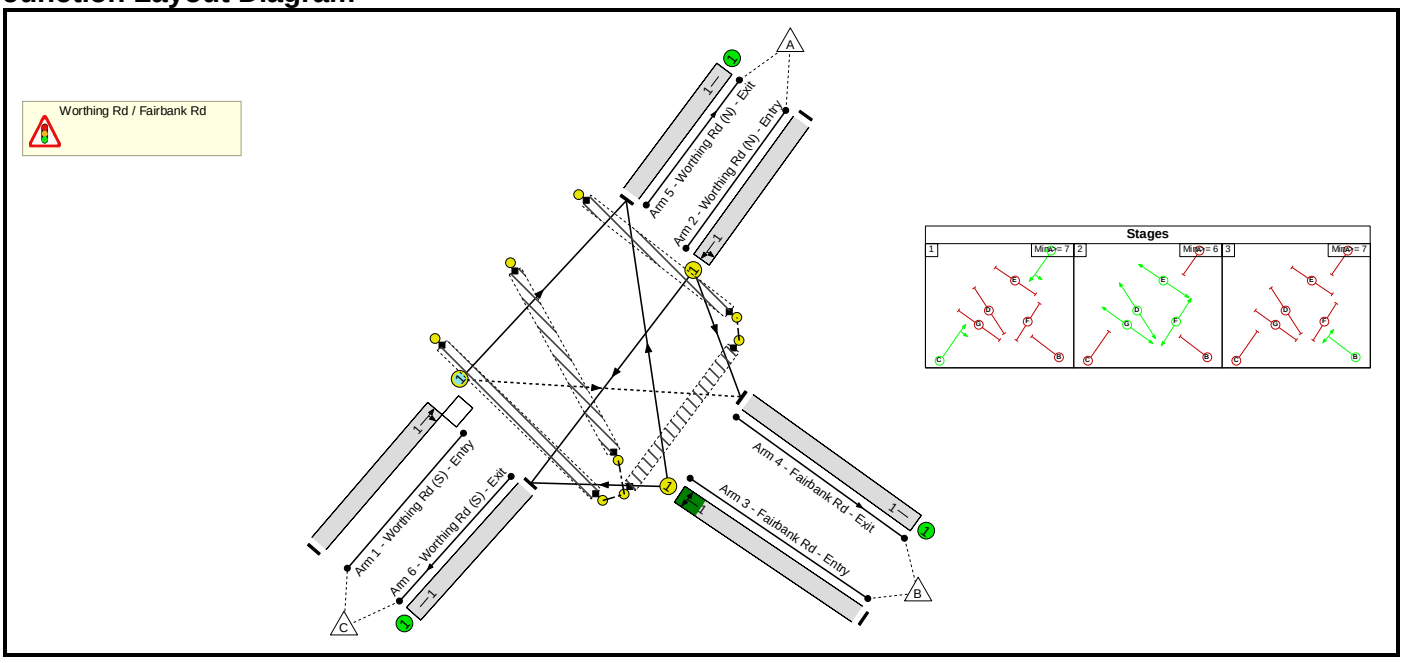
WORTHING ROAD / FAIRBANK: ASSESSMENT RESULT FILES

TA Report

User and Project Details

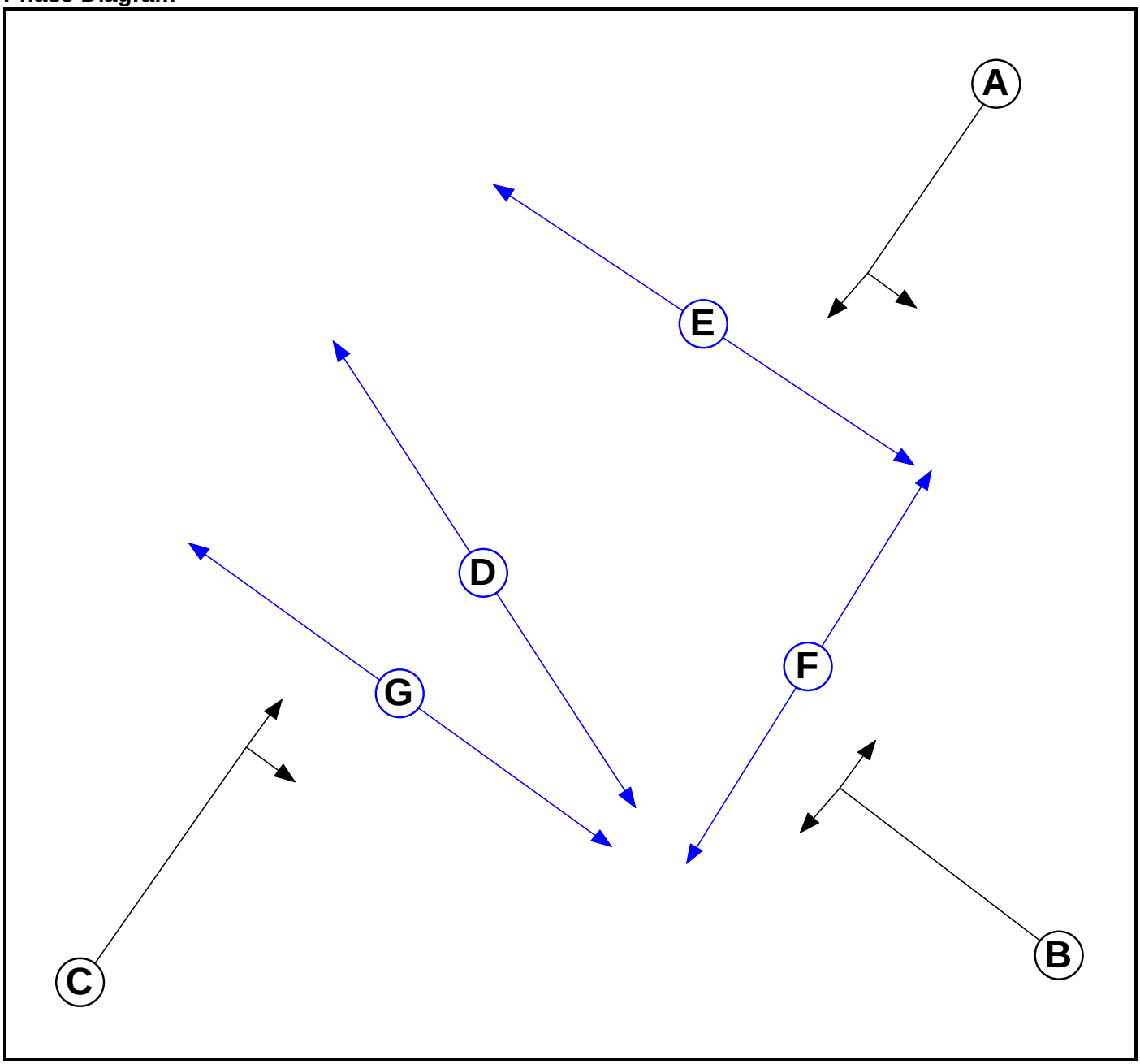
Project:	**Southwater Junction Modelling**
Title:	**Worthing Rd / Fairbank Rd**
Location:	Horsham, Uk
Additional detail:	Existing Junction
File name:	Worthing-Fairbank Rd Jn_v1.lsg3x
Author:	Jairam R
Company:	WSP
Address:	Noida, India

Junction Layout Diagram



TA Report

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Pedestrian		6	6
E	Pedestrian		6	6
F	Pedestrian		6	6
G	Pedestrian		6	6

Phase Intergreens Matrix

		Starting Phase						
		A	B	C	D	E	F	G
Terminating Phase	A		5	-	8	5	8	8
	B	5		5	7	9	5	8
	C	-	5		6	8	9	5
	D	16	16	16		-	-	-
	E	9	9	9	-		-	-
	F	9	9	9	-	-		-
	G	9	9	9	-	-	-	

Scenario 1: '2018 Base AM' (FG1: '2018 Base AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Actual

Actual Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	68	286	354
	B	67	0	66	133
	C	370	58	0	428
	Tot.	437	126	352	915

Phase Timings

Phase Name	Description	Phase	Green Period 1		
			Total Green	Start Time	End Time
A	Worthing Rd (N) - Entry Left Ahead	Traffic	34	5	39
B	Fairbank Rd - Entry Right Left	Traffic	7	70	0
C	Worthing Rd (S) - Entry Right Ahead	Traffic	34	5	39
D	Pedestrians across	Pedestrian	7	47	54
E	Pedestrians across	Pedestrian	7	47	54
F	Pedestrians across	Pedestrian	6	48	54
G	Pedestrians across	Pedestrian	7	47	54

TA Report

Link Results

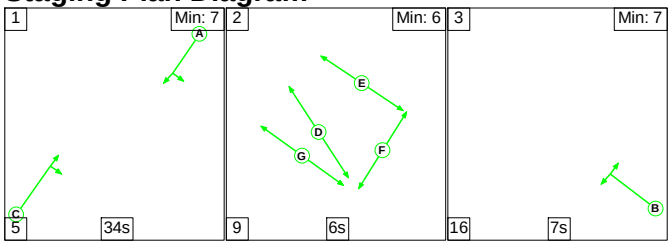
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Worthing Rd / Fairbank Rd	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**54.7%**
Worthing Rd / Fairbank Rd	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**54.7%**
1/1	Worthing Rd (S) - Entry Right Ahead	O	N/A	N/A	C		1	34	-	428	1720	782	54.7%
2/1	Worthing Rd (N) - Entry Left Ahead	U	N/A	N/A	A		1	34	-	354	1685	766	46.2%
3/1	Fairbank Rd - Entry Right Left	U	N/A	N/A	B		1	7	-	133	1739	271	49.1%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	F		1	6	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	D		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	G		1	7	-	0	-	0	0.0%

TA Report

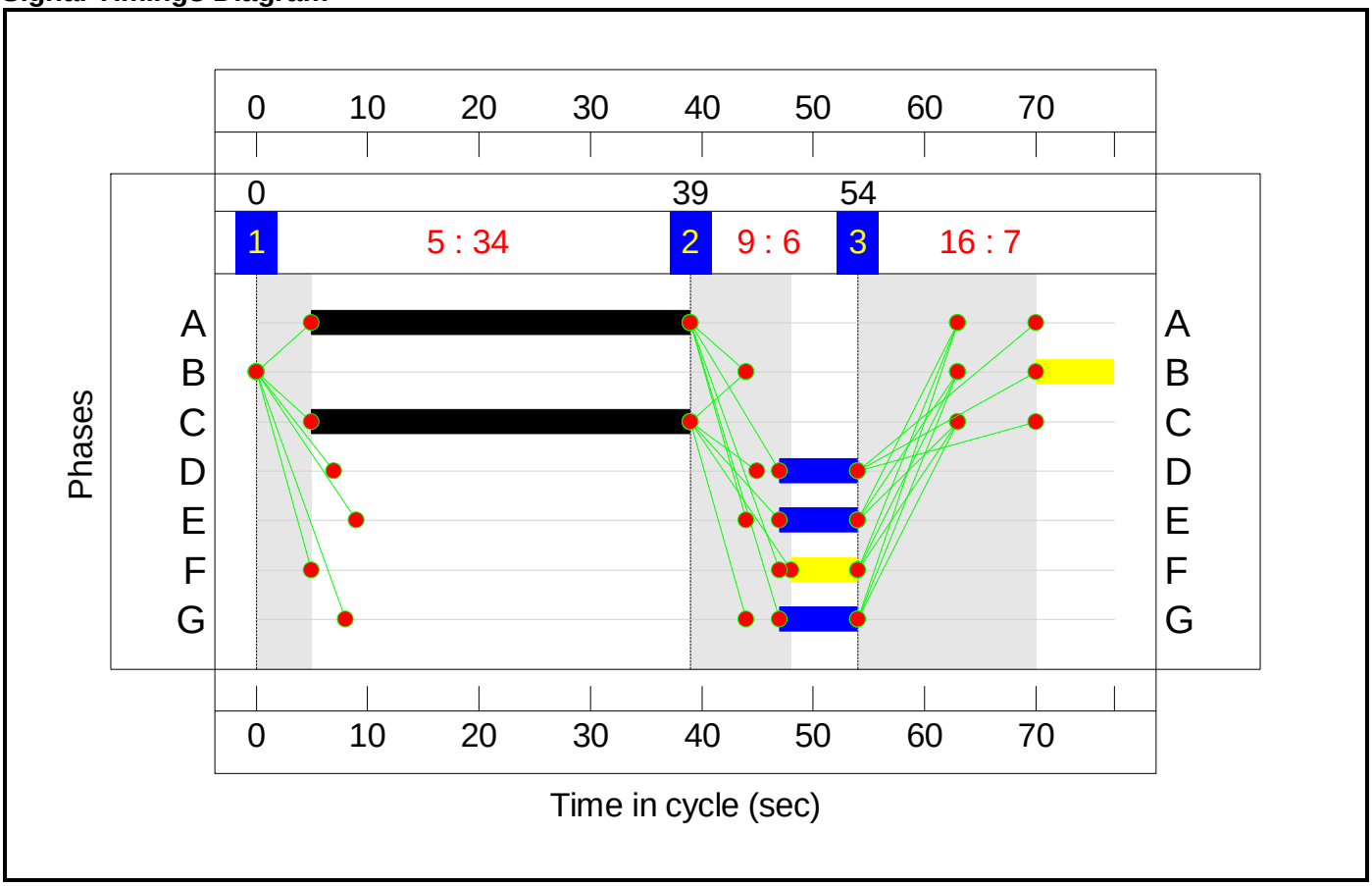
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Worthing Rd / Fairbank Rd	**-**	**-**	**58**	**0**	**0**	**4.3**	**1.5**	**0.1**	**5.9**	**-**	**-**	**-**	**-**
Worthing Rd / Fairbank Rd	**-**	**-**	**58**	**0**	**0**	**4.3**	**1.5**	**0.1**	**5.9**	**-**	**-**	**-**	**-**
1/1	428	428	58	0	0	1.8	0.6	0.1	2.5	20.9	6.5	0.6	7.1
2/1	354	354	-	-	-	1.4	0.4	-	1.9	18.9	5.2	0.4	5.6
3/1	133	133	-	-	-	1.1	0.5	-	1.6	42.7	2.6	0.5	3.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 64.4 Total Delay for Signalled Lanes (pcuHr): 5.92 Cycle Time (s): 77
PRC Over All Lanes (%): 64.4 Total Delay Over All Lanes(pcuHr): 5.92

Staging Plan Diagram



Signal Timings Diagram



Scenario 2: '2018 Base PM' (FG2: '2018 Base PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Actual

Actual Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	101	301	402
	B	153	0	127	280
	C	274	75	0	349
	Tot.	427	176	428	1031

Phase Timings

Phase Name	Description	Phase	Green Period 1		
			Total Green	Start Time	End Time
A	Worthing Rd (N) - Entry Left Ahead	Traffic	26	5	31
B	Fairbank Rd - Entry Right Left	Traffic	13	62	0
C	Worthing Rd (S) - Entry Right Ahead	Traffic	26	5	31
D	Pedestrians across	Pedestrian	7	39	46
E	Pedestrians across	Pedestrian	7	39	46
F	Pedestrians across	Pedestrian	6	40	46
G	Pedestrians across	Pedestrian	7	39	46

Link Results

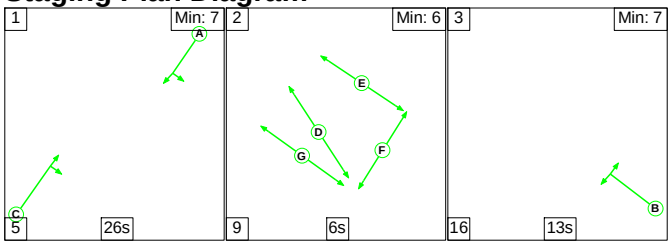
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Worthing Rd / Fairbank Rd	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**67.1%**
Worthing Rd / Fairbank Rd	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**67.1%**
1/1	Worthing Rd (S) - Entry Right Ahead	O	N/A	N/A	C		1	26	-	349	1720	584	59.7%
2/1	Worthing Rd (N) - Entry Left Ahead	U	N/A	N/A	A		1	26	-	402	1685	607	66.3%
3/1	Fairbank Rd - Entry Right Left	U	N/A	N/A	B		1	13	-	280	1739	417	67.1%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	F		1	6	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	D		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	G		1	7	-	0	-	0	0.0%

TA Report

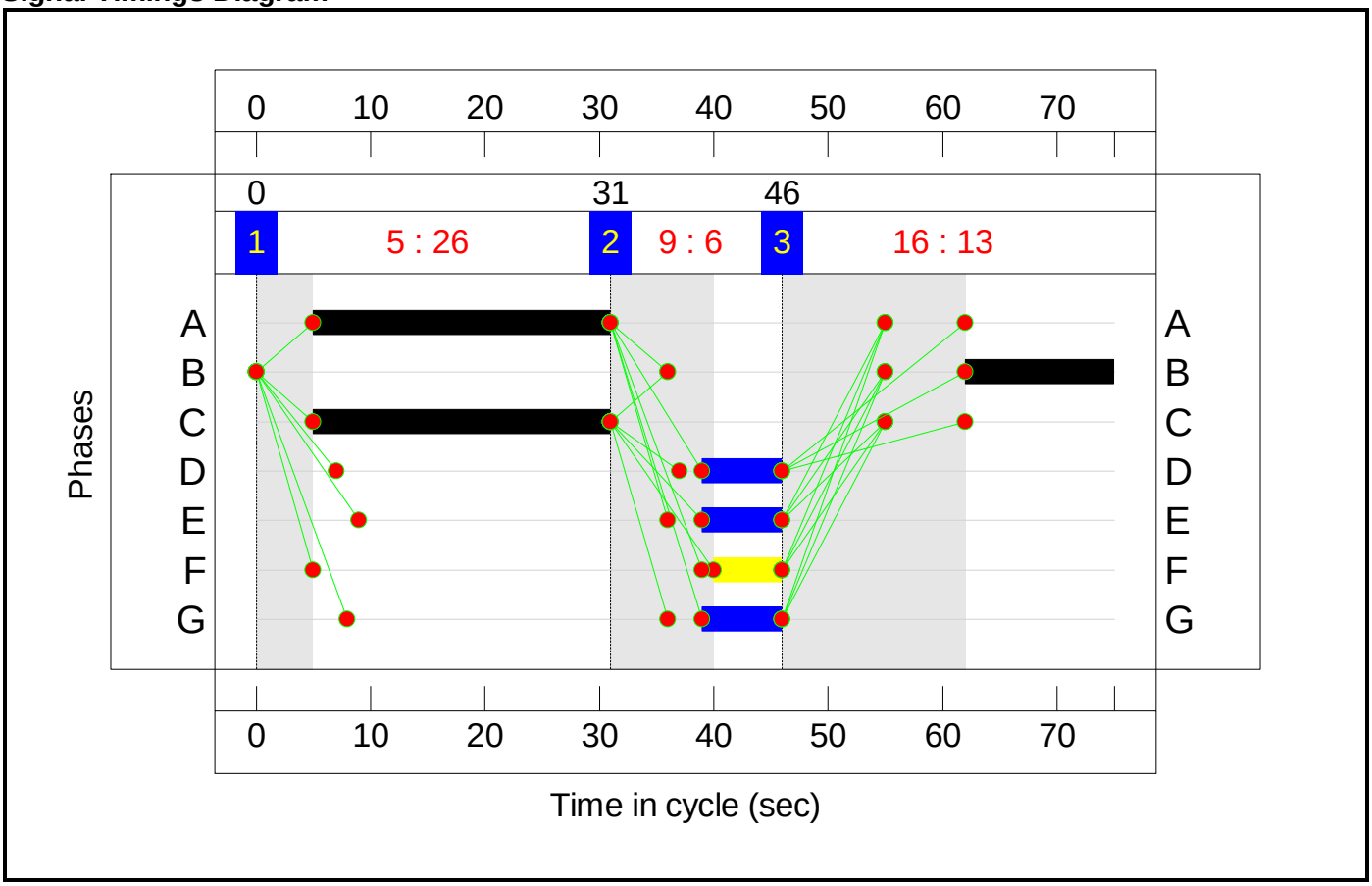
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Worthing Rd / Fairbank Rd	**-**	**-**	**75**	**0**	**0**	**6.1**	**2.7**	**0.2**	**9.0**	**-**	**-**	**-**	**-**
Worthing Rd / Fairbank Rd	**-**	**-**	**75**	**0**	**0**	**6.1**	**2.7**	**0.2**	**9.0**	**-**	**-**	**-**	**-**
1/1	349	349	75	0	0	1.9	0.7	0.2	2.8	28.9	5.8	0.7	6.6
2/1	402	402	-	-	-	2.3	1.0	-	3.2	28.9	7.0	1.0	8.0
3/1	280	280	-	-	-	2.0	1.0	-	3.0	38.7	5.2	1.0	6.2
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 34.2 Total Delay for Signalled Lanes (pcuHr): 9.04 Cycle Time (s): 75
PRC Over All Lanes (%): 34.2 Total Delay Over All Lanes(pcuHr): 9.04

Staging Plan Diagram



Signal Timings Diagram



Scenario 3: '2036 Do Minimum AM' (FG3: '2036 Do Minimum AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Actual

Actual Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	70	385	455
	B	68	0	66	134
	C	507	60	0	567
	Tot.	575	130	451	1156

Phase Timings

Phase Name	Description	Phase	Green Period 1		
			Total Green	Start Time	End Time
A	Worthing Rd (N) - Entry Left Ahead	Traffic	34	5	39
B	Fairbank Rd - Entry Right Left	Traffic	7	70	0
C	Worthing Rd (S) - Entry Right Ahead	Traffic	34	5	39
D	Pedestrians across	Pedestrian	7	47	54
E	Pedestrians across	Pedestrian	7	47	54
F	Pedestrians across	Pedestrian	6	48	54
G	Pedestrians across	Pedestrian	7	47	54

Link Results

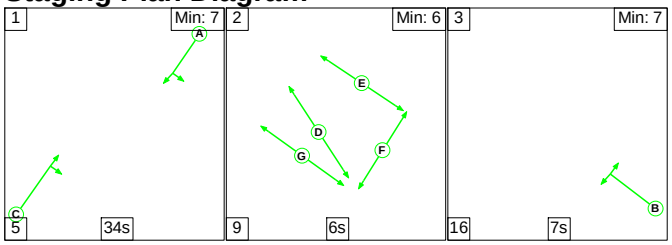
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Worthing Rd / Fairbank Rd	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**72.5%**
Worthing Rd / Fairbank Rd	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**72.5%**
1/1	Worthing Rd (S) - Entry Right Ahead	O	N/A	N/A	C		1	34	-	567	1720	782	72.5%
2/1	Worthing Rd (N) - Entry Left Ahead	U	N/A	N/A	A		1	34	-	455	1685	766	59.4%
3/1	Fairbank Rd - Entry Right Left	U	N/A	N/A	B		1	7	-	134	1739	271	49.4%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	F		1	6	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	D		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	G		1	7	-	0	-	0	0.0%

TA Report

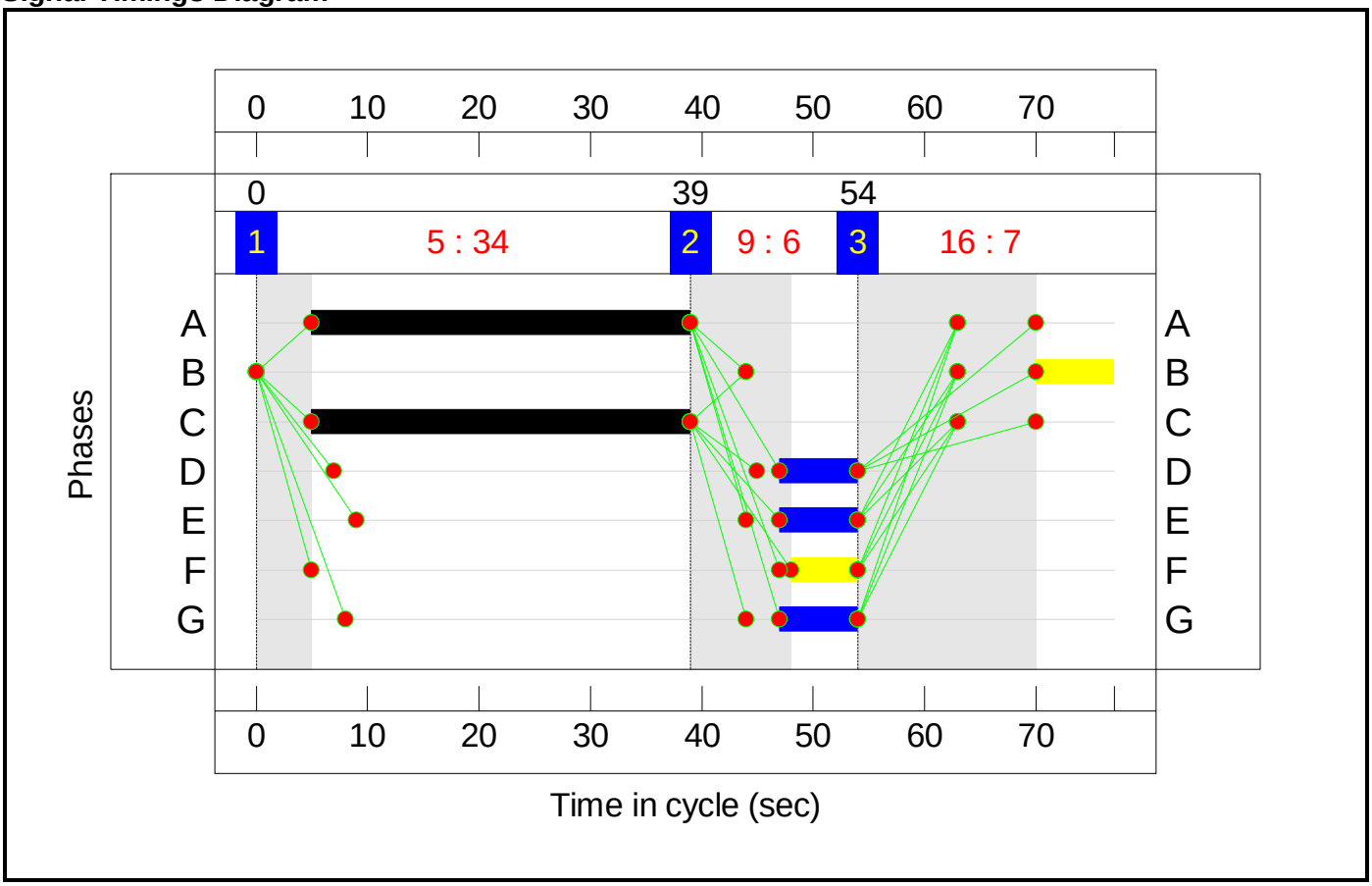
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Worthing Rd / Fairbank Rd	**-**	**-**	**60**	**0**	**0**	**5.8**	**2.5**	**0.1**	**8.4**	**-**	**-**	**-**	**-**
Worthing Rd / Fairbank Rd	**-**	**-**	**60**	**0**	**0**	**5.8**	**2.5**	**0.1**	**8.4**	**-**	**-**	**-**	**-**
1/1	567	567	60	0	0	2.7	1.3	0.1	4.1	26.0	9.8	1.3	11.1
2/1	455	455	-	-	-	2.0	0.7	-	2.7	21.5	7.2	0.7	7.9
3/1	134	134	-	-	-	1.1	0.5	-	1.6	42.8	2.6	0.5	3.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 24.1 Total Delay for Signalled Lanes (pcuHr): 8.40 Cycle Time (s): 77
PRC Over All Lanes (%): 24.1 Total Delay Over All Lanes(pcuHr): 8.40

Staging Plan Diagram



Signal Timings Diagram



Scenario 4: '2036 Do Minimum PM' (FG4: '2036 Do Minimum PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Actual

Actual Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	103	433	536
	B	155	0	128	283
	C	376	75	0	451
	Tot.	531	178	561	1270

Phase Timings

Phase Name	Description	Phase	Green Period 1		
			Total Green	Start Time	End Time
A	Worthing Rd (N) - Entry Left Ahead	Traffic	29	5	34
B	Fairbank Rd - Entry Right Left	Traffic	10	65	0
C	Worthing Rd (S) - Entry Right Ahead	Traffic	29	5	34
D	Pedestrians across	Pedestrian	7	42	49
E	Pedestrians across	Pedestrian	7	42	49
F	Pedestrians across	Pedestrian	6	43	49
G	Pedestrians across	Pedestrian	7	42	49

TA Report

Link Results

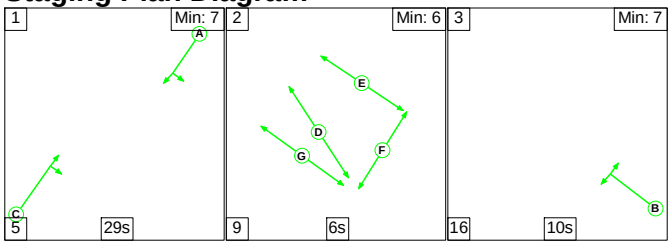
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Worthing Rd / Fairbank Rd	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**81.4%**
Worthing Rd / Fairbank Rd	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**81.4%**
1/1	Worthing Rd (S) - Entry Right Ahead	O	N/A	N/A	C		1	29	-	451	1720	646	69.8%
2/1	Worthing Rd (N) - Entry Left Ahead	U	N/A	N/A	A		1	29	-	536	1685	674	79.5%
3/1	Fairbank Rd - Entry Right Left	U	N/A	N/A	B		1	10	-	283	1739	348	81.4%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	F		1	6	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	D		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	G		1	7	-	0	-	0	0.0%

TA Report

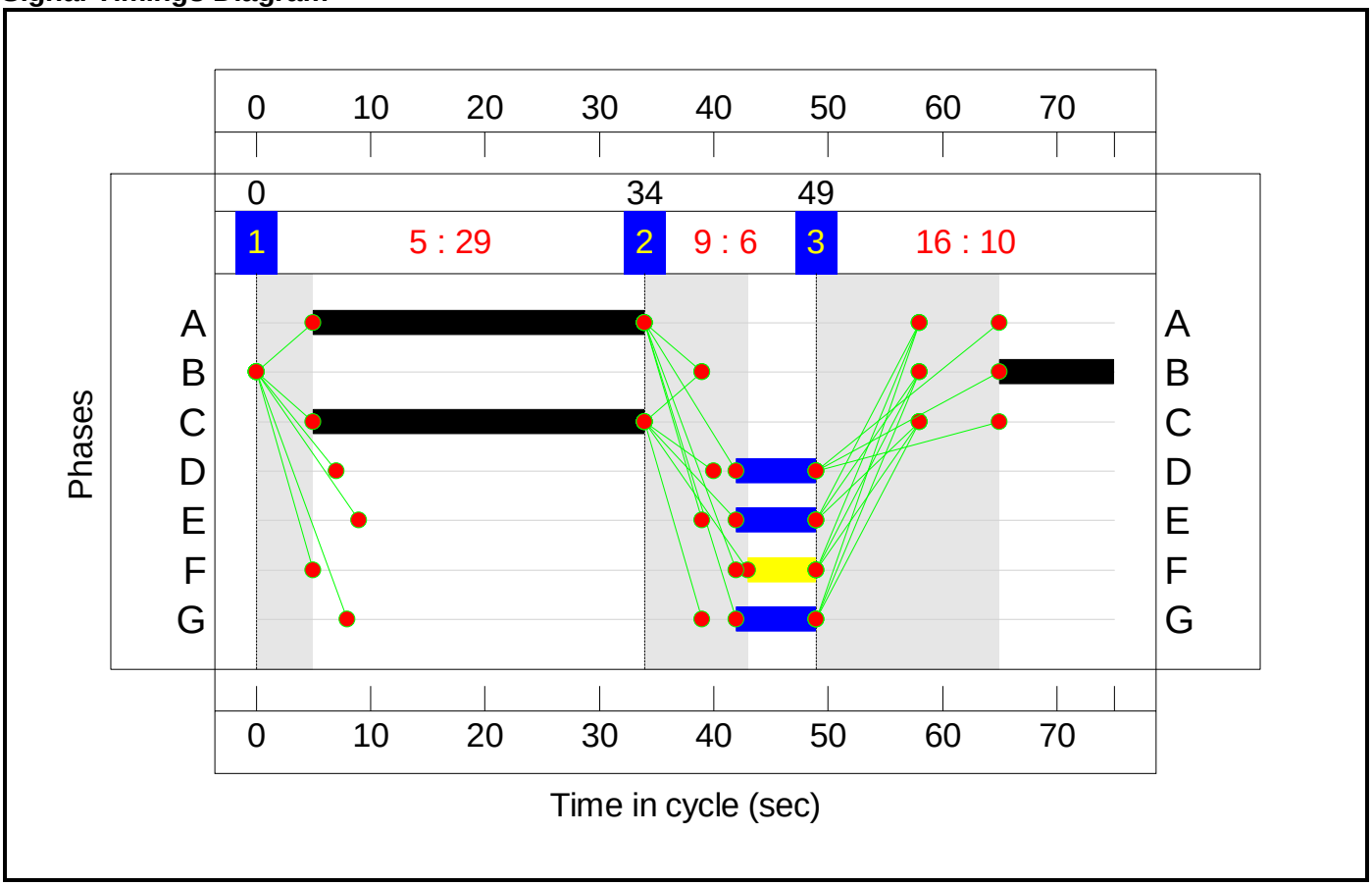
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Worthing Rd / Fairbank Rd	**-**	**-**	**75**	**0**	**0**	**7.5**	**5.1**	**0.3**	**12.9**	**-**	**-**	**-**	**-**
Worthing Rd / Fairbank Rd	**-**	**-**	**75**	**0**	**0**	**7.5**	**5.1**	**0.3**	**12.9**	**-**	**-**	**-**	**-**
1/1	451	451	75	0	0	2.3	1.1	0.3	3.7	29.7	7.5	1.1	8.7
2/1	536	536	-	-	-	2.9	1.9	-	4.8	32.5	9.7	1.9	11.6
3/1	283	283	-	-	-	2.3	2.1	-	4.3	54.8	5.6	2.1	7.6
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 10.6 Total Delay for Signalled Lanes (pcuHr): 12.86 Cycle Time (s): 75
PRC Over All Lanes (%): 10.6 Total Delay Over All Lanes(pcuHr): 12.86

Staging Plan Diagram



Signal Timings Diagram



Scenario 5: '2036 Do Something AM' (FG5: '2036 Do Something AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Actual

Actual Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	70	418	488
	B	68	0	66	134
	C	519	60	0	579
	Tot.	587	130	484	1201

Phase Timings

Phase Name	Description	Phase	Green Period 1		
			Total Green	Start Time	End Time
A	Worthing Rd (N) - Entry Left Ahead	Traffic	34	5	39
B	Fairbank Rd - Entry Right Left	Traffic	7	70	0
C	Worthing Rd (S) - Entry Right Ahead	Traffic	34	5	39
D	Pedestrians across	Pedestrian	7	47	54
E	Pedestrians across	Pedestrian	7	47	54
F	Pedestrians across	Pedestrian	6	48	54
G	Pedestrians across	Pedestrian	7	47	54

TA Report

Link Results

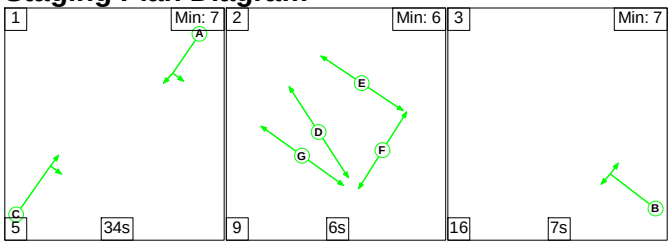
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Worthing Rd / Fairbank Rd	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**74.1%**
Worthing Rd / Fairbank Rd	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**74.1%**
1/1	Worthing Rd (S) - Entry Right Ahead	O	N/A	N/A	C		1	34	-	579	1720	782	74.1%
2/1	Worthing Rd (N) - Entry Left Ahead	U	N/A	N/A	A		1	34	-	488	1685	766	63.7%
3/1	Fairbank Rd - Entry Right Left	U	N/A	N/A	B		1	7	-	134	1739	271	49.4%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	F		1	6	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	D		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	G		1	7	-	0	-	0	0.0%

TA Report

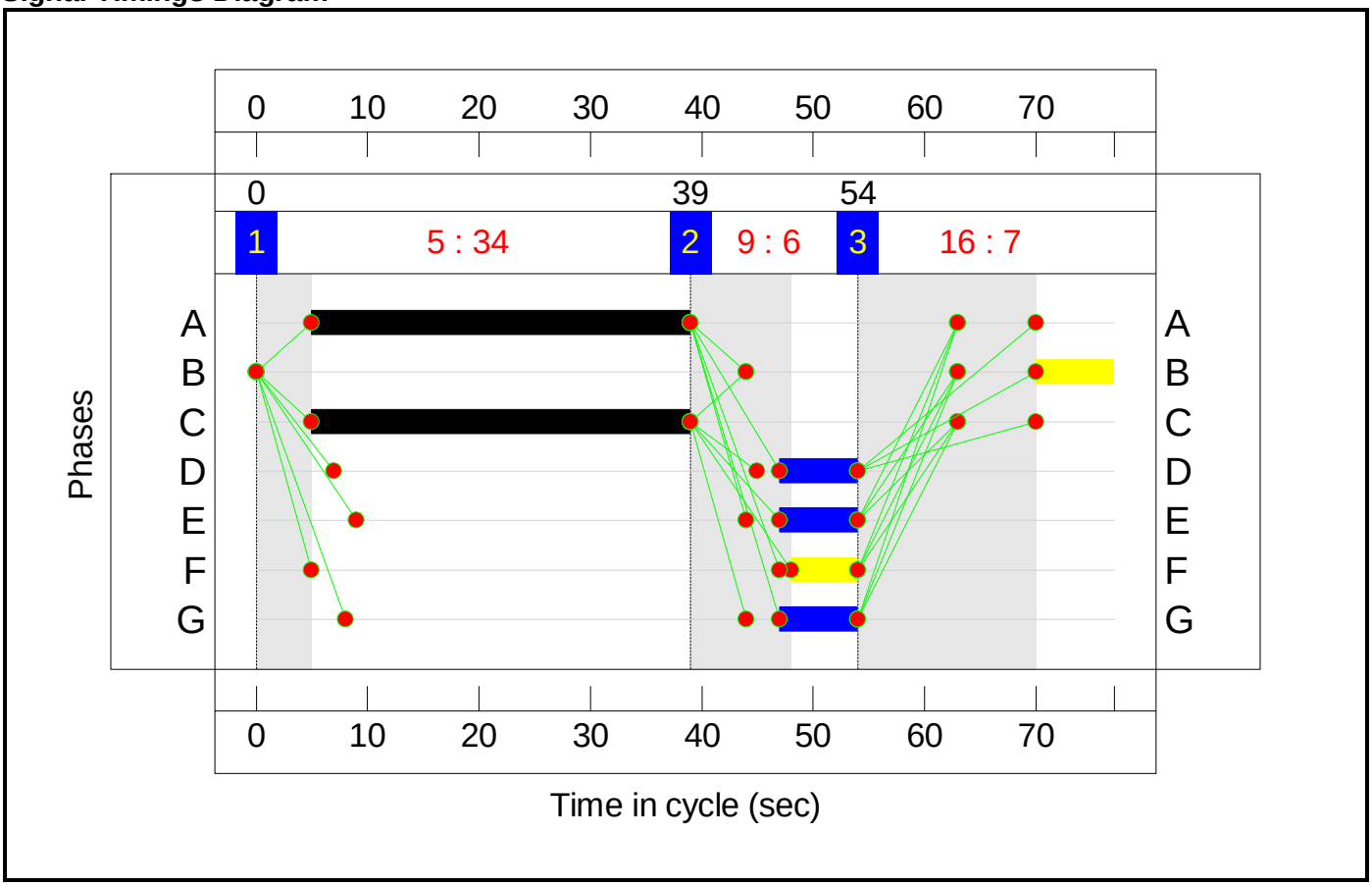
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Worthing Rd / Fairbank Rd	**-**	**-**	**60**	**0**	**0**	**6.1**	**2.8**	**0.1**	**9.0**	**-**	**-**	**-**	**-**
Worthing Rd / Fairbank Rd	**-**	**-**	**60**	**0**	**0**	**6.1**	**2.8**	**0.1**	**9.0**	**-**	**-**	**-**	**-**
1/1	579	579	60	0	0	2.8	1.4	0.1	4.3	26.8	10.1	1.4	11.5
2/1	488	488	-	-	-	2.2	0.9	-	3.1	22.6	8.0	0.9	8.9
3/1	134	134	-	-	-	1.1	0.5	-	1.6	42.8	2.6	0.5	3.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 21.5 Total Delay for Signalled Lanes (pcuHr): 8.95 Cycle Time (s): 77
PRC Over All Lanes (%): 21.5 Total Delay Over All Lanes(pcuHr): 8.95

Staging Plan Diagram



Signal Timings Diagram



Scenario 6: '2036 Do Something PM' (FG6: '2036 Do Something PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Actual

Actual Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	103	448	551
	B	155	0	128	283
	C	407	75	0	482
	Tot.	562	178	576	1316

Phase Timings

Phase Name	Description	Phase	Green Period 1		
			Total Green	Start Time	End Time
A	Worthing Rd (N) - Entry Left Ahead	Traffic	29	5	34
B	Fairbank Rd - Entry Right Left	Traffic	10	65	0
C	Worthing Rd (S) - Entry Right Ahead	Traffic	29	5	34
D	Pedestrians across	Pedestrian	7	42	49
E	Pedestrians across	Pedestrian	7	42	49
F	Pedestrians across	Pedestrian	6	43	49
G	Pedestrians across	Pedestrian	7	42	49

TA Report

Link Results

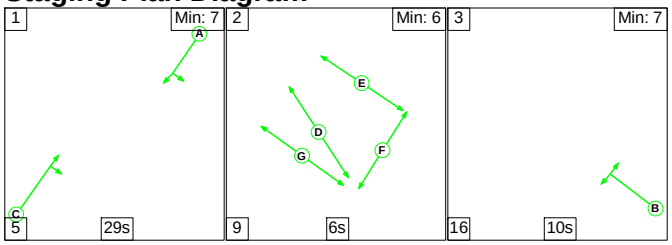
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Worthing Rd / Fairbank Rd	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**81.8%**
Worthing Rd / Fairbank Rd	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**81.8%**
1/1	Worthing Rd (S) - Entry Right Ahead	O	N/A	N/A	C		1	29	-	482	1720	650	74.2%
2/1	Worthing Rd (N) - Entry Left Ahead	U	N/A	N/A	A		1	29	-	551	1685	674	81.8%
3/1	Fairbank Rd - Entry Right Left	U	N/A	N/A	B		1	10	-	283	1739	348	81.4%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	F		1	6	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	D		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	G		1	7	-	0	-	0	0.0%

TA Report

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Worthing Rd / Fairbank Rd	**-**	**-**	**75**	**0**	**0**	**7.8**	**5.6**	**0.3**	**13.8**	**-**	**-**	**-**	**-**
Worthing Rd / Fairbank Rd	**-**	**-**	**75**	**0**	**0**	**7.8**	**5.6**	**0.3**	**13.8**	**-**	**-**	**-**	**-**
1/1	482	482	75	0	0	2.5	1.4	0.3	4.2	31.5	8.3	1.4	9.7
2/1	551	551	-	-	-	3.1	2.2	-	5.2	34.2	10.1	2.2	12.3
3/1	283	283	-	-	-	2.3	2.1	-	4.3	54.8	5.6	2.1	7.6
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

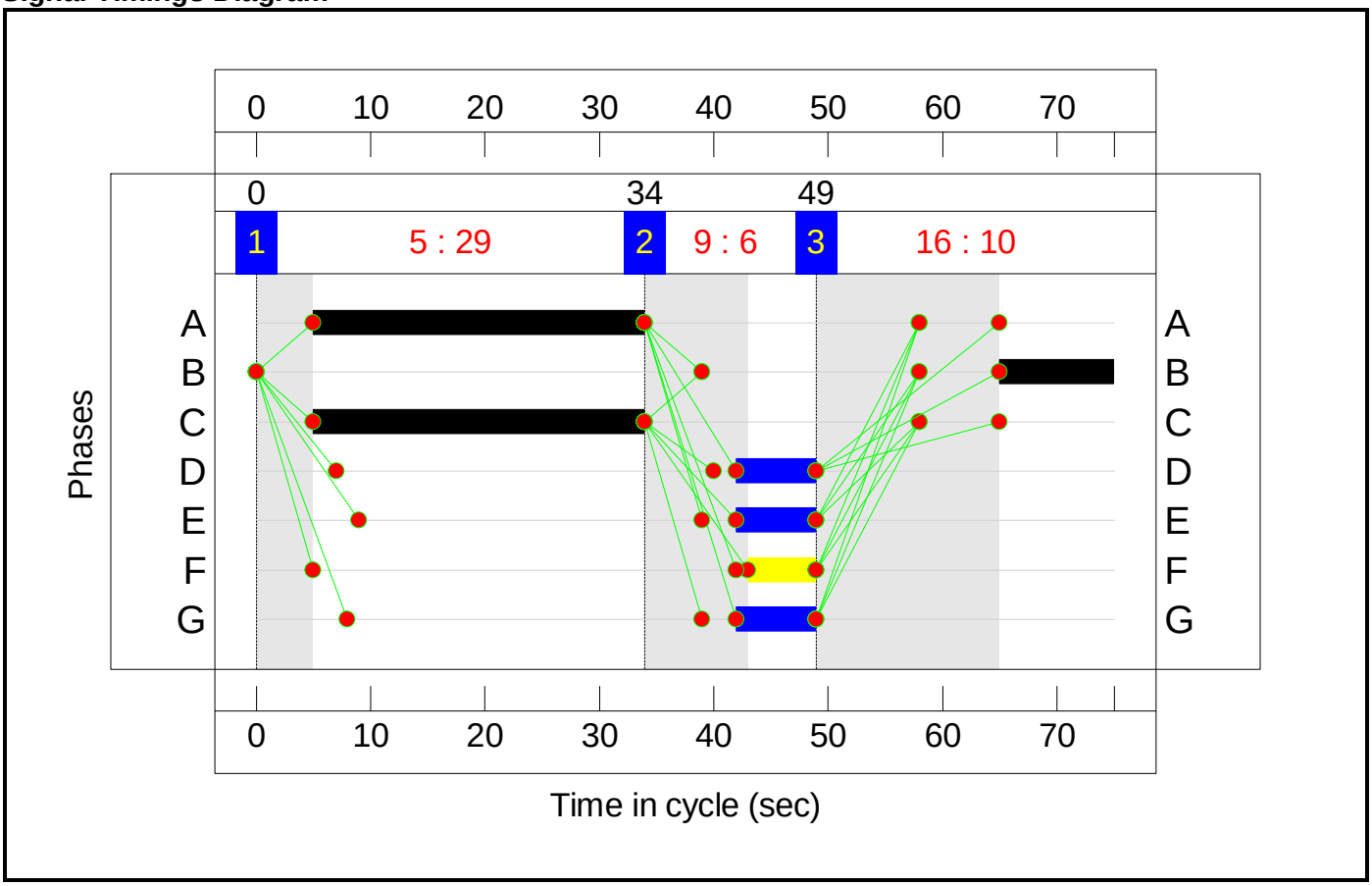
C1 PRC for Signalled Lanes (%): 10.1 Total Delay for Signalled Lanes (pcuHr): 13.76 Cycle Time (s): 75
PRC Over All Lanes (%): 10.1 Total Delay Over All Lanes(pcuHr): 13.76

Staging Plan Diagram



TA Report

Signal Timings Diagram



Appendix C

HOP OAST EXISTING LAYOUT: ASSESSMENT RESULT FILES

Junctions 9

ARCADY 9 - Roundabout Module

Filename: 201910_Hop Oast Roundabout Existing.j9
Path: S:\70016993 - Southwater - Phase 2\D Design and Analysis\Development\JUNCTION ASSESSMENTS\Hop Oast RBT\Improvements
Report generation date: 03/10/2019 13:45:25

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2018 Existing - 2018 Observed								
A - Worthing Road (N)	0.3	3.14	0.24	A	2.4	11.65	0.71	B
B - A24 (E)	3.2	6.46	0.76	A	1.1	3.60	0.51	A
C - Worthing Road (S)	0.3	4.24	0.23	A	0.2	3.05	0.19	A
D - A24 (W)	1.0	3.25	0.51	A	2.2	4.44	0.68	A
2018 Existing - 2036 Do Minimum								
A - Worthing Road (N)	0.4	3.48	0.28	A	19.3	88.19	0.97	F
B - A24 (E)	6.5	11.93	0.87	B	1.5	4.67	0.60	A
C - Worthing Road (S)	0.5	5.53	0.35	A	0.3	3.30	0.22	A
D - A24 (W)	1.4	3.97	0.58	A	4.2	7.43	0.81	A
2018 Existing - 2036 Do Something								
A - Worthing Road (N)	0.4	3.66	0.30	A	107.4	456.83	1.08	F
B - A24 (E)	7.5	13.91	0.89	B	1.7	5.20	0.63	A
C - Worthing Road (S)	0.7	6.20	0.42	A	0.3	3.37	0.24	A
D - A24 (W)	1.6	4.43	0.62	A	5.4	9.34	0.85	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	Hop Oast Roundabout AM Peak (ODTab) Proposed Junction
Location	Southwater
Site number	
Date	01/10/2019
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2018 Observed	AM	FLAT	07:45	09:15	90	15	✓
D2	2018 Observed	PM	FLAT	16:45	18:15	90	15	✓
D3	2036 Do Minimum	AM	FLAT	07:45	09:15	90	15	✓
D4	2036 Do Minimum	PM	FLAT	16:45	18:15	90	15	✓
D5	2036 Do Something	AM	FLAT	07:45	09:15	90	15	✓
D6	2036 Do Something	PM	FLAT	16:45	18:15	90	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	2018 Existing	✓	100.000	100.000

2018 Existing - 2018 Observed, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Worthing Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	C - Worthing Road (S) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	4.83	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	Worthing Road (N)	
B	A24 (E)	
C	Worthing Road (S)	
D	A24 (W)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A - Worthing Road (N)	3.40	7.00	90.0	60.0	62.0	0.0	
B - A24 (E)	7.00	8.50	15.0	28.0	58.0	16.0	
C - Worthing Road (S)	3.55	6.70	45.0	23.0	90.0	4.0	
D - A24 (W)	7.30	9.00	26.0	65.0	50.0	1.0	

Bypass

Arm	Arm has bypass	Bypass utilisation (%)
A - Worthing Road (N)		
B - A24 (E)		
C - Worthing Road (S)	✓	100
D - A24 (W)		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Worthing Road (N)	0.678	2270
B - A24 (E)	0.747	2620
C - Worthing Road (S)	0.524	2035
D - A24 (W)	0.892	2993

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2018 Observed	AM	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Worthing Road (N)		FLAT	✓	371	100.000
B - A24 (E)		FLAT	✓	1770	100.000
C - Worthing Road (S)		FLAT	✓	725	100.000
D - A24 (W)		FLAT	✓	1153	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	1	204	135	31
	B - A24 (E)	558	2	61	1149
	C - Worthing Road (S)	240	20	0	465
	D - A24 (W)	63	867	198	25

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	0	0	0	0
	B - A24 (E)	0	0	0	0
	C - Worthing Road (S)	0	0	0	0
	D - A24 (W)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Worthing Road (N)	0.24	3.14	0.3	A	371	557
B - A24 (E)	0.76	6.46	3.2	A	1770	2655
C - Worthing Road (S)	0.23	4.24	0.3	A	725	390
D - A24 (W)	0.51	3.25	1.0	A	1153	1730

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	371	371	93	0	0	1108	1519	0.244	370	857	0.0	0.3	3.130	A
B - A24 (E)	1770	1770	443	0	0	389	2329	0.760	1758	1089	0.0	3.1	6.182	A
C - Worthing Road (S)	725	260	65	465	0	1754	1115	0.233	259	392	0.0	0.3	4.199	A
D - A24 (W)	1153	1153	288	0	465	816	2265	0.509	1149	1197	0.0	1.0	3.213	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	371	371	93	0	0	1112	1516	0.245	371	862	0.3	0.3	3.142	A
B - A24 (E)	1770	1770	443	0	0	390	2328	0.760	1770	1093	3.1	3.1	6.450	A
C - Worthing Road (S)	725	260	65	465	0	1766	1109	0.235	260	394	0.3	0.3	4.242	A
D - A24 (W)	1153	1153	288	0	465	821	2261	0.510	1153	1205	1.0	1.0	3.249	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	371	371	93	0	0	1112	1516	0.245	371	862	0.3	0.3	3.142	A
B - A24 (E)	1770	1770	443	0	0	390	2328	0.760	1770	1093	3.1	3.1	6.455	A
C - Worthing Road (S)	725	260	65	465	0	1766	1108	0.235	260	394	0.3	0.3	4.242	A
D - A24 (W)	1153	1153	288	0	465	821	2261	0.510	1153	1205	1.0	1.0	3.249	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	371	371	93	0	0	1112	1516	0.245	371	862	0.3	0.3	3.142	A
B - A24 (E)	1770	1770	443	0	0	390	2328	0.760	1770	1093	3.1	3.2	6.456	A
C - Worthing Road (S)	725	260	65	465	0	1766	1108	0.235	260	394	0.3	0.3	4.242	A
D - A24 (W)	1153	1153	288	0	465	821	2260	0.510	1153	1205	1.0	1.0	3.249	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	371	371	93	0	0	1112	1516	0.245	371	862	0.3	0.3	3.142	A
B - A24 (E)	1770	1770	443	0	0	390	2328	0.760	1770	1093	3.2	3.2	6.458	A
C - Worthing Road (S)	725	260	65	465	0	1766	1108	0.235	260	394	0.3	0.3	4.242	A
D - A24 (W)	1153	1153	288	0	465	821	2260	0.510	1153	1205	1.0	1.0	3.249	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	371	371	93	0	0	1112	1516	0.245	371	862	0.3	0.3	3.142	A
B - A24 (E)	1770	1770	443	0	0	390	2328	0.760	1770	1093	3.2	3.2	6.458	A
C - Worthing Road (S)	725	260	65	465	0	1766	1108	0.235	260	394	0.3	0.3	4.242	A
D - A24 (W)	1153	1153	288	0	465	821	2260	0.510	1153	1205	1.0	1.0	3.249	A

2018 Existing - 2018 Observed, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Worthing Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	C - Worthing Road (S) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	5.29	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D2	2018 Observed	PM	FLAT	16:45	18:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Worthing Road (N)		FLAT	✓	740	100.000
B - A24 (E)		FLAT	✓	1061	100.000
C - Worthing Road (S)		FLAT	✓	632	100.000
D - A24 (W)		FLAT	✓	1749	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	0	436	262	42
	B - A24 (E)	217	0	23	821
	C - Worthing Road (S)	173	95	0	364
	D - A24 (W)	43	1262	402	42

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	0	0	0	0
	B - A24 (E)	0	0	0	0
	C - Worthing Road (S)	0	0	0	0
	D - A24 (W)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Worthing Road (N)	0.71	11.65	2.4	B	740	1110
B - A24 (E)	0.51	3.60	1.1	A	1061	1592
C - Worthing Road (S)	0.19	3.05	0.2	A	632	402
D - A24 (W)	0.68	4.44	2.2	A	1749	2624

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	740	740	185	0	0	1792	1055	0.701	731	431	0.0	2.3	10.839	
B - A24 (E)	1061	1061	265	0	0	742	2065	0.514	1057	1781	0.0	1.0	3.557	
C - Worthing Road (S)	632	268	67	364	0	1117	1449	0.185	267	682	0.0	0.2	3.045	
D - A24 (W)	1749	1749	437	0	364	483	2562	0.683	1741	901	0.0	2.1	4.341	

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	740	740	185	0	0	1801	1049	0.705	740	433	2.3	2.3	11.615	
B - A24 (E)	1061	1061	265	0	0	748	2061	0.515	1061	1793	1.0	1.1	3.600	
C - Worthing Road (S)	632	268	67	364	0	1122	1446	0.185	268	687	0.2	0.2	3.054	
D - A24 (W)	1749	1749	437	0	364	485	2560	0.683	1749	905	2.1	2.1	4.437	

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	740	740	185	0	0	1801	1049	0.705	740	433	2.3	2.4	11.637	
B - A24 (E)	1061	1061	265	0	0	748	2060	0.515	1061	1793	1.1	1.1	3.600	
C - Worthing Road (S)	632	268	67	364	0	1122	1446	0.185	268	687	0.2	0.2	3.054	
D - A24 (W)	1749	1749	437	0	364	485	2560	0.683	1749	905	2.1	2.1	4.437	

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	740	740	185	0	0	1801	1049	0.705	740	433	2.4	2.4	11.644	
B - A24 (E)	1061	1061	265	0	0	748	2060	0.515	1061	1793	1.1	1.1	3.600	
C - Worthing Road (S)	632	268	67	364	0	1122	1446	0.185	268	687	0.2	0.2	3.054	
D - A24 (W)	1749	1749	437	0	364	485	2560	0.683	1749	905	2.1	2.1	4.437	

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	740	740	185	0	0	1801	1049	0.705	740	433	2.4	2.4	11.647	
B - A24 (E)	1061	1061	265	0	0	748	2060	0.515	1061	1793	1.1	1.1	3.600	
C - Worthing Road (S)	632	268	67	364	0	1122	1446	0.185	268	687	0.2	0.2	3.054	
D - A24 (W)	1749	1749	437	0	364	485	2560	0.683	1749	905	2.1	2.1	4.437	

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	740	740	185	0	0	1801	1049	0.705	740	433	2.4	2.4	11.649	
B - A24 (E)	1061	1061	265	0	0	748	2060	0.515	1061	1793	1.1	1.1	3.601	
C - Worthing Road (S)	632	268	67	364	0	1122	1446	0.185	268	687	0.2	0.2	3.054	
D - A24 (W)	1749	1749	437	0	364	485	2560	0.683	1749	905	2.1	2.2	4.437	

2018 Existing - 2036 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Worthing Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	C - Worthing Road (S) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	7.69	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2036 Do Minimum	AM	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Worthing Road (N)		FLAT	✓	401	100.000
B - A24 (E)		FLAT	✓	1980	100.000
C - Worthing Road (S)		FLAT	✓	927	100.000
D - A24 (W)		FLAT	✓	1269	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	1	205	161	34
	B - A24 (E)	565	2	64	1349
	C - Worthing Road (S)	322	26	0	579
	D - A24 (W)	66	946	232	25

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	0	0	0	0
	B - A24 (E)	0	0	0	0
	C - Worthing Road (S)	0	0	0	0
	D - A24 (W)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Worthing Road (N)	0.28	3.48	0.4	A	401	602
B - A24 (E)	0.87	11.93	6.5	B	1980	2970
C - Worthing Road (S)	0.35	5.53	0.5	A	927	522
D - A24 (W)	0.58	3.97	1.4	A	1269	1904

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	401	401	100	0	0	1226	1439	0.279	399	945	0.0	0.4	3.458	
B - A24 (E)	1980	1980	495	0	0	451	2282	0.868	1956	1174	0.0	6.0	10.376	
C - Worthing Road (S)	927	348	87	579	0	1953	1011	0.344	346	455	0.0	0.5	5.400	
D - A24 (W)	1269	1269	317	0	579	907	2184	0.581	1264	1391	0.0	1.4	3.889	

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	401	401	100	0	0	1231	1436	0.279	401	954	0.4	0.4	3.478	
B - A24 (E)	1980	1980	495	0	0	453	2281	0.868	1979	1179	6.0	6.3	11.809	
C - Worthing Road (S)	927	348	87	579	0	1975	999	0.348	348	457	0.5	0.5	5.530	
D - A24 (W)	1269	1269	317	0	579	916	2176	0.583	1269	1407	1.4	1.4	3.968	

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	401	401	100	0	0	1231	1436	0.279	401	954	0.4	0.4	3.478	
B - A24 (E)	1980	1980	495	0	0	453	2281	0.868	1980	1179	6.3	6.4	11.881	
C - Worthing Road (S)	927	348	87	579	0	1976	999	0.349	348	457	0.5	0.5	5.533	
D - A24 (W)	1269	1269	317	0	579	916	2176	0.583	1269	1408	1.4	1.4	3.969	

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	401	401	100	0	0	1231	1436	0.279	401	954	0.4	0.4	3.478	
B - A24 (E)	1980	1980	495	0	0	453	2281	0.868	1980	1179	6.4	6.4	11.907	
C - Worthing Road (S)	927	348	87	579	0	1976	998	0.349	348	457	0.5	0.5	5.534	
D - A24 (W)	1269	1269	317	0	579	916	2176	0.583	1269	1408	1.4	1.4	3.969	

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	401	401	100	0	0	1231	1436	0.279	401	954	0.4	0.4	3.478	
B - A24 (E)	1980	1980	495	0	0	453	2281	0.868	1980	1179	6.4	6.5	11.919	
C - Worthing Road (S)	927	348	87	579	0	1976	998	0.349	348	457	0.5	0.5	5.534	
D - A24 (W)	1269	1269	317	0	579	916	2176	0.583	1269	1408	1.4	1.4	3.969	

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	401	401	100	0	0	1231	1436	0.279	401	954	0.4	0.4	3.478	
B - A24 (E)	1980	1980	495	0	0	453	2281	0.868	1980	1179	6.5	6.5	11.928	
C - Worthing Road (S)	927	348	87	579	0	1976	998	0.349	348	457	0.5	0.5	5.534	
D - A24 (W)	1269	1269	317	0	579	916	2176	0.583	1269	1408	1.4	1.4	3.969	

2018 Existing - 2036 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Worthing Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	C - Worthing Road (S) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	20.13	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	2036 Do Minimum	PM	FLAT	16:45	18:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Worthing Road (N)		FLAT	✓	824	100.000
B - A24 (E)		FLAT	✓	1158	100.000
C - Worthing Road (S)		FLAT	✓	728	100.000
D - A24 (W)		FLAT	✓	2039	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	0	441	336	47
	B - A24 (E)	219	0	29	910
	C - Worthing Road (S)	208	99	0	421
	D - A24 (W)	47	1450	500	42

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	0	0	0	0
	B - A24 (E)	0	0	0	0
	C - Worthing Road (S)	0	0	0	0
	D - A24 (W)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Worthing Road (N)	0.97	88.19	19.3	F	824	1236
B - A24 (E)	0.60	4.67	1.5	A	1158	1737
C - Worthing Road (S)	0.22	3.30	0.3	A	728	461
D - A24 (W)	0.81	7.43	4.2	A	2039	3059

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	824	824	206	0	0	2075	864	0.954	784	472	0.0	9.9	35.864	
B - A24 (E)	1158	1158	290	0	0	902	1945	0.595	1152	1957	0.0	1.5	4.508	
C - Worthing Road (S)	728	307	77	421	0	1210	1400	0.219	306	845	0.0	0.3	3.287	
D - A24 (W)	2039	2039	510	0	421	524	2526	0.807	2023	992	0.0	4.0	6.956	

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	824	824	206	0	0	2091	853	0.966	810	474	9.9	13.5	61.618	
B - A24 (E)	1158	1158	290	0	0	918	1933	0.599	1158	1982	1.5	1.5	4.641	
C - Worthing Road (S)	728	307	77	421	0	1217	1396	0.220	307	859	0.3	0.3	3.303	
D - A24 (W)	2039	2039	510	0	421	526	2524	0.808	2039	998	4.0	4.1	7.407	

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	824	824	206	0	0	2091	853	0.966	815	474	13.5	15.7	72.317	
B - A24 (E)	1158	1158	290	0	0	921	1931	0.600	1158	1985	1.5	1.5	4.655	
C - Worthing Road (S)	728	307	77	421	0	1217	1396	0.220	307	861	0.3	0.3	3.304	
D - A24 (W)	2039	2039	510	0	421	526	2524	0.808	2039	998	4.1	4.1	7.419	

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	824	824	206	0	0	2091	853	0.966	818	474	15.7	17.2	79.219	
B - A24 (E)	1158	1158	290	0	0	922	1930	0.600	1158	1987	1.5	1.5	4.660	
C - Worthing Road (S)	728	307	77	421	0	1218	1396	0.220	307	862	0.3	0.3	3.304	
D - A24 (W)	2039	2039	510	0	421	526	2524	0.808	2039	999	4.1	4.2	7.422	

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	824	824	206	0	0	2091	853	0.966	819	474	17.2	18.4	84.266	
B - A24 (E)	1158	1158	290	0	0	923	1930	0.600	1158	1987	1.5	1.5	4.664	
C - Worthing Road (S)	728	307	77	421	0	1218	1396	0.220	307	863	0.3	0.3	3.304	
D - A24 (W)	2039	2039	510	0	421	526	2524	0.808	2039	999	4.2	4.2	7.425	

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	824	824	206	0	0	2091	853	0.966	820	474	18.4	19.3	88.193	
B - A24 (E)	1158	1158	290	0	0	923	1929	0.600	1158	1988	1.5	1.5	4.666	
C - Worthing Road (S)	728	307	77	421	0	1218	1396	0.220	307	863	0.3	0.3	3.305	
D - A24 (W)	2039	2039	510	0	421	526	2524	0.808	2039	999	4.2	4.2	7.425	

2018 Existing - 2036 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Worthing Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	C - Worthing Road (S) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	8.69	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D5	2036 Do Something	AM	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Worthing Road (N)		FLAT	✓	419	100.000
B - A24 (E)		FLAT	✓	1986	100.000
C - Worthing Road (S)		FLAT	✓	1086	100.000
D - A24 (W)		FLAT	✓	1301	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	1	205	179	34
	B - A24 (E)	565	2	70	1349
	C - Worthing Road (S)	375	43	0	668
	D - A24 (W)	66	946	264	25

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	0	0	0	0
	B - A24 (E)	0	0	0	0
	C - Worthing Road (S)	0	0	0	0
	D - A24 (W)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Worthing Road (N)	0.30	3.66	0.4	A	419	629
B - A24 (E)	0.89	13.91	7.5	B	1986	2979
C - Worthing Road (S)	0.42	6.20	0.7	A	1086	627
D - A24 (W)	0.62	4.43	1.6	A	1301	1952

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	419	419	105	0	0	1274	1407	0.298	417	996	0.0	0.4	3.632	
B - A24 (E)	1986	1986	497	0	0	501	2245	0.885	1959	1190	0.0	6.8	11.639	
C - Worthing Road (S)	1086	418	105	668	0	1949	1012	0.413	415	510	0.0	0.7	6.002	
D - A24 (W)	1301	1301	325	0	668	975	2123	0.613	1295	1389	0.0	1.6	4.317	

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	419	419	105	0	0	1280	1403	0.299	419	1006	0.4	0.4	3.659	
B - A24 (E)	1986	1986	497	0	0	503	2244	0.885	1984	1196	6.8	7.2	13.682	
C - Worthing Road (S)	1086	418	105	668	0	1974	999	0.418	418	513	0.7	0.7	6.194	
D - A24 (W)	1301	1301	325	0	668	985	2114	0.615	1301	1407	1.6	1.6	4.428	

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	419	419	105	0	0	1280	1402	0.299	419	1007	0.4	0.4	3.659	
B - A24 (E)	1986	1986	497	0	0	503	2244	0.885	1985	1196	7.2	7.4	13.816	
C - Worthing Road (S)	1086	418	105	668	0	1975	999	0.419	418	513	0.7	0.7	6.199	
D - A24 (W)	1301	1301	325	0	668	986	2114	0.616	1301	1408	1.6	1.6	4.430	

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	419	419	105	0	0	1280	1402	0.299	419	1007	0.4	0.4	3.659	
B - A24 (E)	1986	1986	497	0	0	503	2244	0.885	1986	1196	7.4	7.5	13.866	
C - Worthing Road (S)	1086	418	105	668	0	1976	998	0.419	418	513	0.7	0.7	6.201	
D - A24 (W)	1301	1301	325	0	668	986	2113	0.616	1301	1408	1.6	1.6	4.430	

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	419	419	105	0	0	1280	1402	0.299	419	1007	0.4	0.4	3.659	
B - A24 (E)	1986	1986	497	0	0	503	2244	0.885	1986	1196	7.5	7.5	13.893	
C - Worthing Road (S)	1086	418	105	668	0	1976	998	0.419	418	513	0.7	0.7	6.201	
D - A24 (W)	1301	1301	325	0	668	986	2113	0.616	1301	1408	1.6	1.6	4.431	

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	419	419	105	0	0	1280	1402	0.299	419	1007	0.4	0.4	3.659	
B - A24 (E)	1986	1986	497	0	0	503	2244	0.885	1986	1196	7.5	7.5	13.907	
C - Worthing Road (S)	1086	418	105	668	0	1976	998	0.419	418	513	0.7	0.7	6.202	
D - A24 (W)	1301	1301	325	0	668	986	2113	0.616	1301	1408	1.6	1.6	4.431	

2018 Existing - 2036 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Worthing Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	C - Worthing Road (S) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	85.41	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D6	2036 Do Something	PM	FLAT	16:45	18:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Worthing Road (N)		FLAT	✓	861	100.000
B - A24 (E)		FLAT	✓	1174	100.000
C - Worthing Road (S)		FLAT	✓	787	100.000
D - A24 (W)		FLAT	✓	2117	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	0	441	373	47
	B - A24 (E)	219	0	45	910
	C - Worthing Road (S)	225	106	0	456
	D - A24 (W)	47	1450	578	42

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	0	0	0	0
	B - A24 (E)	0	0	0	0
	C - Worthing Road (S)	0	0	0	0
	D - A24 (W)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Worthing Road (N)	1.08	456.83	107.4	F	861	1292
B - A24 (E)	0.63	5.20	1.7	A	1174	1761
C - Worthing Road (S)	0.24	3.37	0.3	A	787	497
D - A24 (W)	0.85	9.34	5.4	A	2117	3176

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	861	861	215	0	0	2156	809	1.064	774	488	0.0	21.9	64.568	
B - A24 (E)	1174	1174	294	0	0	991	1879	0.625	1167	1938	0.0	1.6	5.016	
C - Worthing Road (S)	787	331	83	456	0	1207	1402	0.236	330	952	0.0	0.3	3.355	
D - A24 (W)	2117	2117	529	0	456	548	2504	0.845	2096	989	0.0	5.1	8.444	

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	861	861	215	0	0	2175	795	1.082	789	491	21.9	39.8	153.786	
B - A24 (E)	1174	1174	294	0	0	1005	1869	0.628	1174	1960	1.6	1.7	5.180	
C - Worthing Road (S)	787	331	83	456	0	1214	1398	0.237	331	965	0.3	0.3	3.373	
D - A24 (W)	2117	2117	529	0	456	550	2502	0.846	2116	995	5.1	5.3	9.285	

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	861	861	215	0	0	2176	795	1.083	792	491	39.8	57.0	230.734	
B - A24 (E)	1174	1174	294	0	0	1006	1867	0.629	1174	1962	1.7	1.7	5.191	
C - Worthing Road (S)	787	331	83	456	0	1214	1398	0.237	331	966	0.3	0.3	3.373	
D - A24 (W)	2117	2117	529	0	456	550	2502	0.846	2117	995	5.3	5.4	9.317	

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	861	861	215	0	0	2176	795	1.083	793	491	57.0	73.9	306.441	
B - A24 (E)	1174	1174	294	0	0	1007	1867	0.629	1174	1962	1.7	1.7	5.194	
C - Worthing Road (S)	787	331	83	456	0	1214	1398	0.237	331	967	0.3	0.3	3.373	
D - A24 (W)	2117	2117	529	0	456	550	2502	0.846	2117	995	5.4	5.4	9.326	

17:45 - 18:00

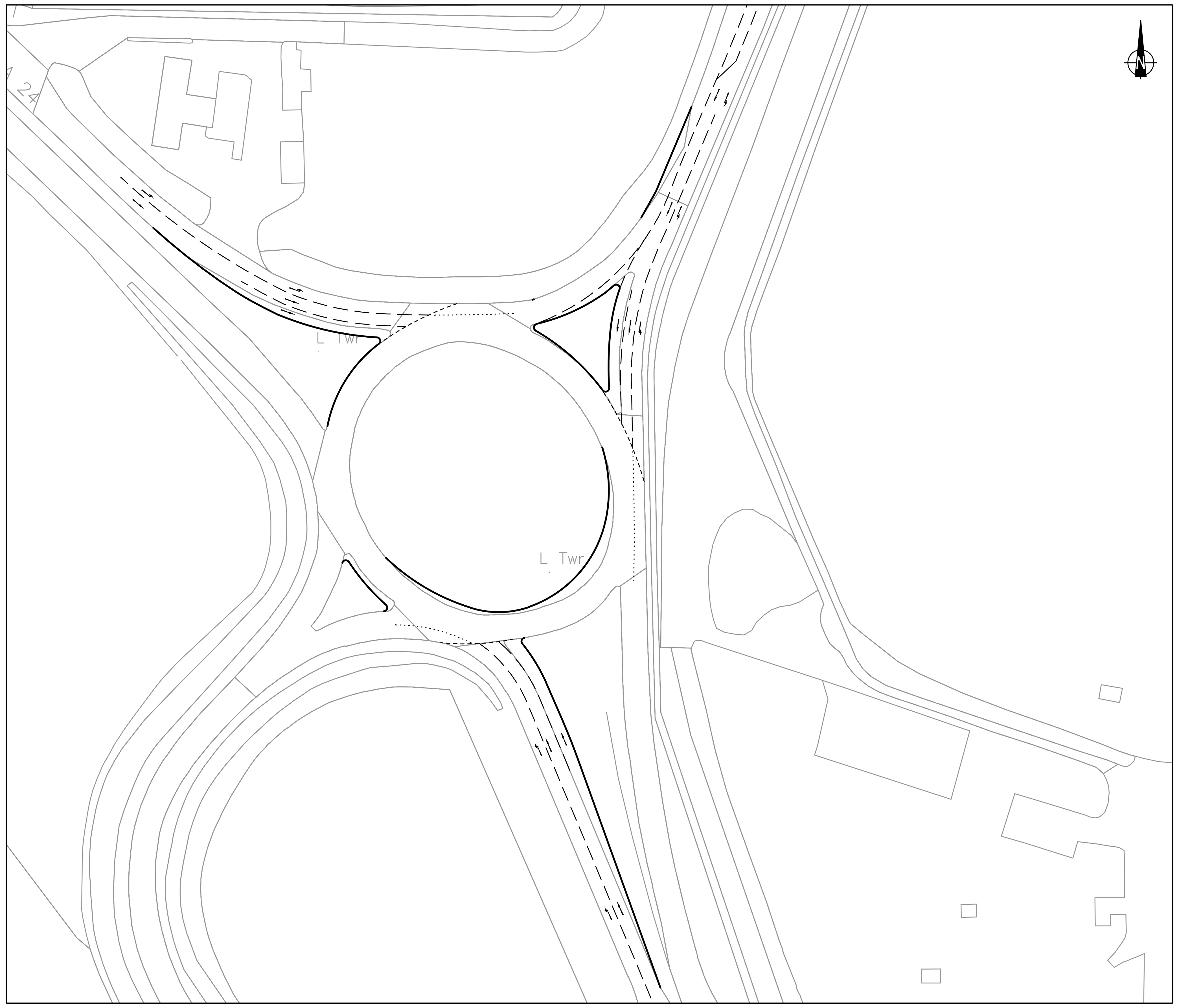
Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	861	861	215	0	0	2176	795	1.083	794	491	73.9	90.7	381.734	
B - A24 (E)	1174	1174	294	0	0	1007	1867	0.629	1174	1963	1.7	1.7	5.196	
C - Worthing Road (S)	787	331	83	456	0	1214	1398	0.237	331	967	0.3	0.3	3.373	
D - A24 (W)	2117	2117	529	0	456	550	2502	0.846	2117	995	5.4	5.4	9.331	

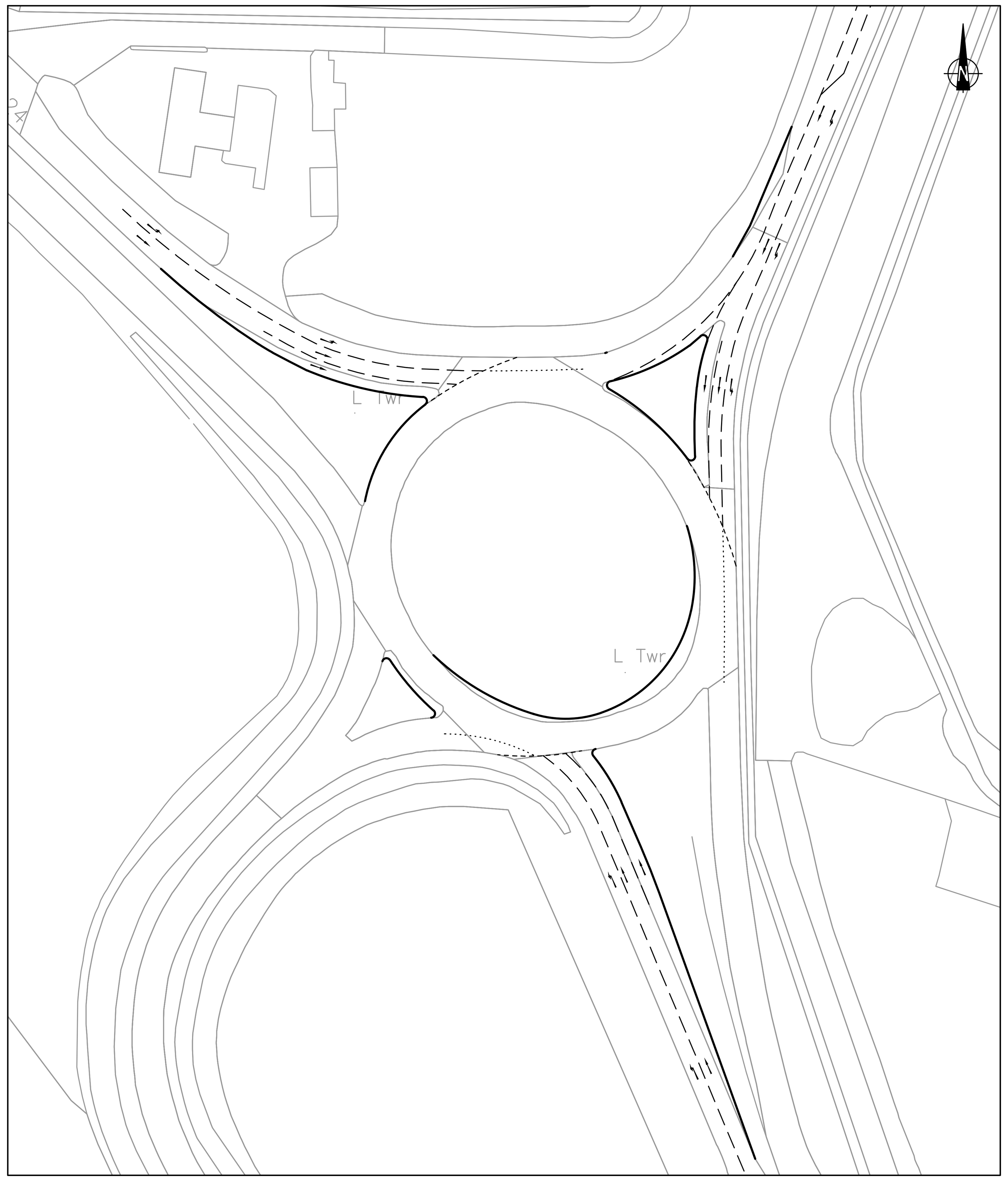
18:00 - 18:15

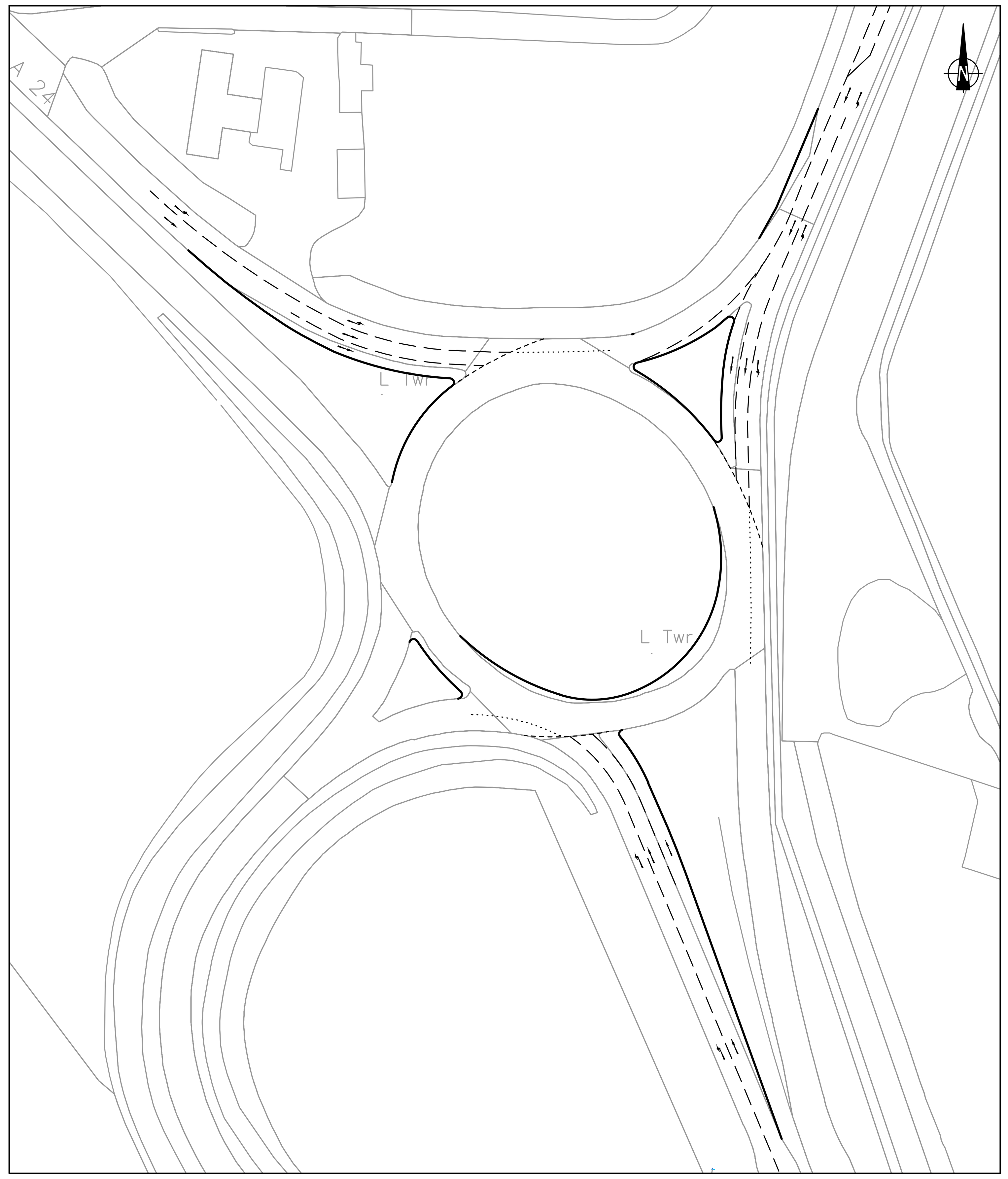
Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	861	861	215	0	0	2176	795	1.083	794	491	90.7	107.4	456.830	
B - A24 (E)	1174	1174	294	0	0	1007	1867	0.629	1174	1963	1.7	1.7	5.197	
C - Worthing Road (S)	787	331	83	456	0	1214	1398	0.237	331	967	0.3	0.3	3.373	
D - A24 (W)	2117	2117	529	0	456	550	2502	0.846	2117	995	5.4	5.4	9.335	

Appendix D

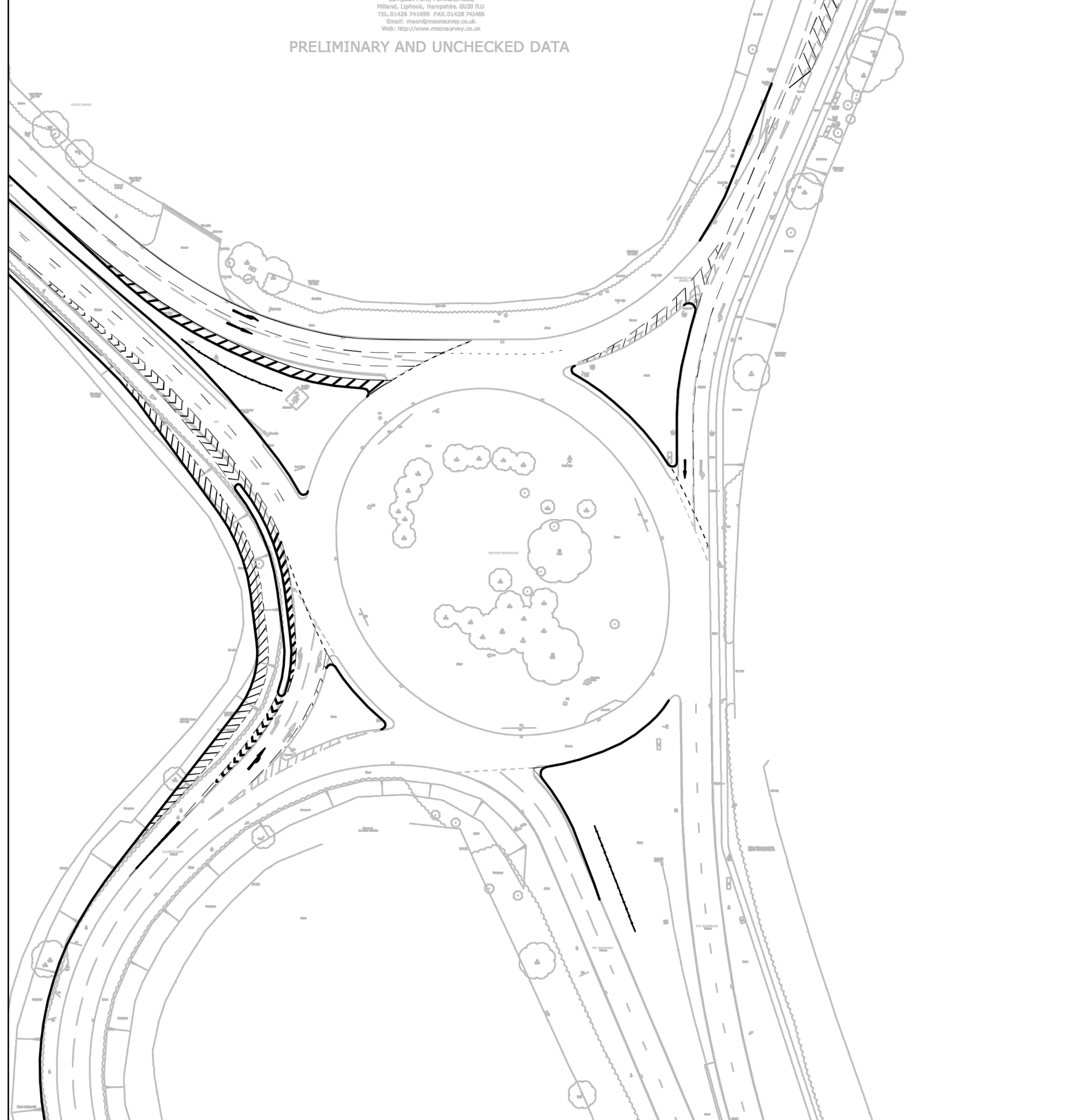
HOP OAST IMPROVEMENT (DRAWING NUMBER 25216-5506-016A)







Committed Scheme



DO NOT SCALE

REV	DATE	BY	DESCRIPTION	CHK	APP
A	10/03/14	LEW	FIRST ISSUE	SA	KK

DRAWING STATUS: FOR INFORMATION ONLY

WSP
Mountbatten House, Basing View, Basingstoke, Hampshire RG21 4HJ
Tel: +44 (0)1256 318800 Fax: +44 (0)1256 318700
http://www.wspgroup.com

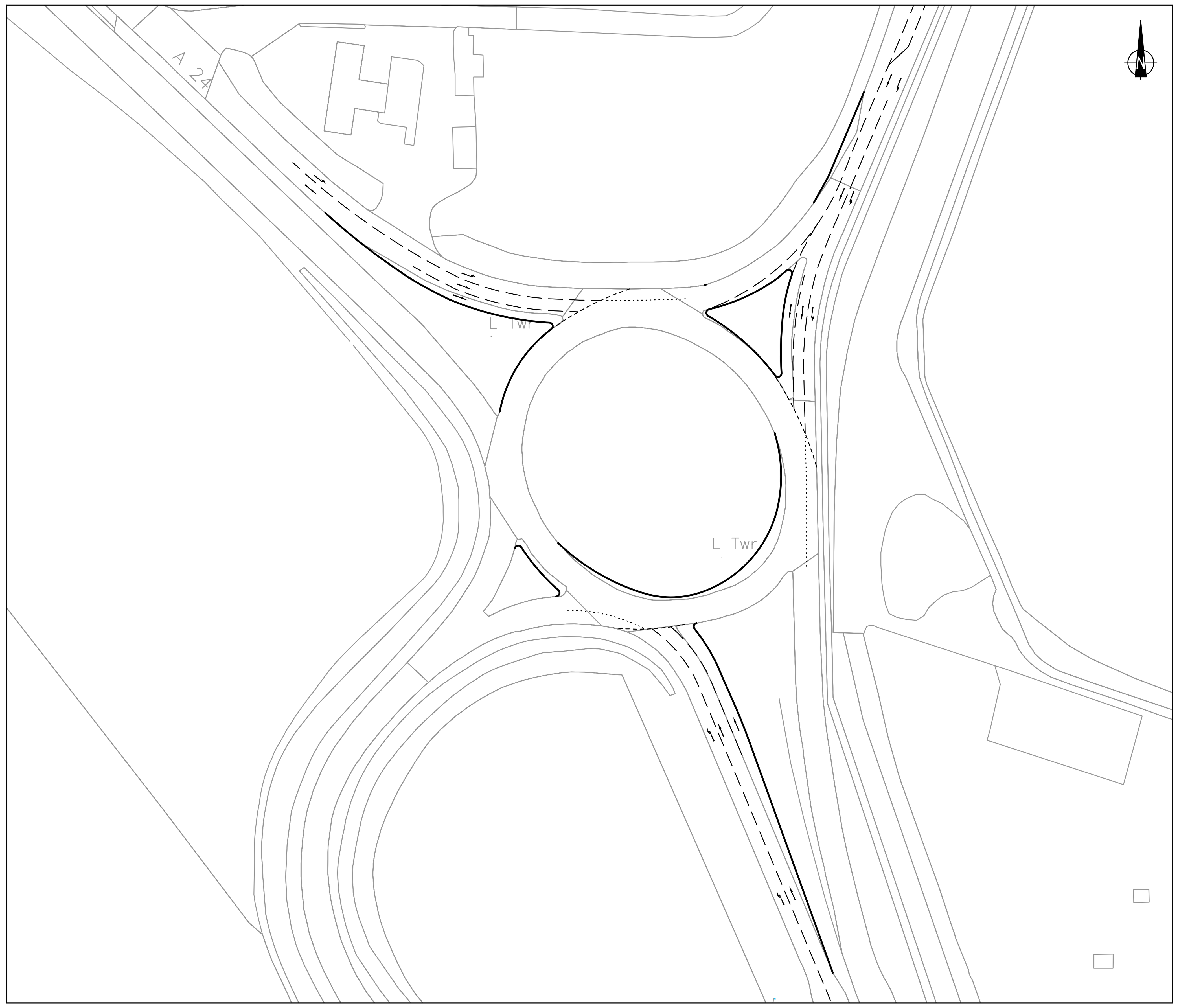
CLIENT: BERKELEY HOMES (SOUTHERN)

ARCHITECT: JTP

PROJECT: LINTOT PARK, SOUTHWATER

TITLE: HOP OAST ROUNDABOUT - PROPOSED JUNCTION IMPROVEMENTS

SCALE @ A3: 1:1000	CHECKED: SA	APPROVED: KK
CAD FILE: 0398-SK-14	DESIGN-DRAWN: LEW	DATE: March 2014
PROJECT No: 70000398	DRAWING No: 0398/SK/014	REV: A



Mark	Revision	Date	Drawn	Chkd	Appd
A	Updated based on WSCC Comments	29.07.15	PR	DH	SM

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.

UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Drawing Issue Status: FOR PLANNING

Land North of Horsham, Highway Mitigation Scheme, Hop Oast

Client: LIBERTY PROPERTY TRUST

Date of 1st Issue	Designed	Drawn
22.05.2015	PR	PR
A1 Scale: 1:1000	Checked: DH	Approved: SM

Drawing Number: 25216/5506/016 — Revision: A

peterbrett
Offices throughout the UK and Europe
www.peterbrett.com

READING
Tel: 0118 950 0761

user name: ryan cox

File Location: j:\25216 north horsham\transport\2014 transport assessment\drawings, gis, photos and video\cad\dwgs\5506\25216-5506-016a.dwg

Appendix E

HOP OAST, NORTH HORSHAM IMPROVEMENT: ASSESSMENT RESULT FILES

Junctions 9

ARCADY 9 - Roundabout Module

Filename: 201910_Hop Oast Roundabout Improvement_PBA.j9
Path: S:\70016993 - Southwater - Phase 2\D Design and Analysis\Development\JUNCTION ASSESSMENTS\Hop Oast RBT\Improvements
Report generation date: 10/10/2019 10:24:01

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	PBA Arrangement - 2036 Do Minimum							
A - Worthing Road (N)	0.2	2.24	0.20	A	1.6	7.23	0.62	A
B - A24 (E)	2.0	3.57	0.66	A	0.8	2.54	0.45	A
C - Worthing Road (S)	0.7	6.08	0.41	A	0.3	3.44	0.25	A
D - A24 (W)	1.1	3.16	0.53	A	2.8	4.88	0.73	A
	PBA Arrangement - 2036 Do Something							
A - Worthing Road (N)	0.3	2.32	0.21	A	2.2	9.15	0.69	A
B - A24 (E)	2.1	3.76	0.67	A	0.9	2.77	0.47	A
C - Worthing Road (S)	0.9	7.01	0.49	A	0.4	3.53	0.27	A
D - A24 (W)	1.2	3.45	0.56	A	3.3	5.65	0.77	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	Hop Oast Roundabout PBA Design
Location	Southwater
Site number	
Date	01/10/2019
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2036 Do Minimum	AM	FLAT	07:45	09:15	90	15	✓
D4	2036 Do Minimum	PM	FLAT	16:45	18:15	90	15	✓
D5	2036 Do Something	AM	FLAT	07:45	09:15	90	15	✓
D6	2036 Do Something	PM	FLAT	16:45	18:15	90	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	PBA Arrangement	✓	100.000	100.000

PBA Arrangement - 2036 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Worthing Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	B - A24 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	C - Worthing Road (S) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	D - A24 (W) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	3.85	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	Worthing Road (N)	
B	A24 (E)	
C	Worthing Road (S)	
D	A24 (W)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A - Worthing Road (N)	6.50	9.30	37.5	60.0	62.0	3.0	
B - A24 (E)	7.00	11.70	57.4	28.0	58.0	22.0	
C - Worthing Road (S)	3.55	6.70	45.0	23.0	90.0	4.0	
D - A24 (W)	7.30	10.00	55.0	65.0	50.0	5.0	

Bypass

Arm	Arm has bypass	Bypass utilisation (%)
A - Worthing Road (N)		
B - A24 (E)		
C - Worthing Road (S)	✓	90
D - A24 (W)		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Worthing Road (N)	0.797	2989
B - A24 (E)	0.877	3385
C - Worthing Road (S)	0.524	2035
D - A24 (W)	0.940	3271

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2036 Do Minimum	AM	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Worthing Road (N)		FLAT	✓	401	100.000
B - A24 (E)		FLAT	✓	1980	100.000
C - Worthing Road (S)		FLAT	✓	927	100.000
D - A24 (W)		FLAT	✓	1269	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	1	205	161	34
	B - A24 (E)	565	2	64	1349
	C - Worthing Road (S)	322	26	0	579
	D - A24 (W)	66	946	232	25

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	0	0	0	0
	B - A24 (E)	0	0	0	0
	C - Worthing Road (S)	0	0	0	0
	D - A24 (W)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Worthing Road (N)	0.20	2.24	0.2	A	401	602
B - A24 (E)	0.66	3.57	2.0	A	1980	2970
C - Worthing Road (S)	0.41	6.08	0.7	A	927	609
D - A24 (W)	0.53	3.16	1.1	A	1269	1904

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	401	401	100	0	0	1227	2011	0.199	400	949	0.0	0.2	2.233	A
B - A24 (E)	1980	1980	495	0	0	452	2989	0.662	1972	1175	0.0	1.9	3.514	A
C - Worthing Road (S)	927	406	101	521	0	1968	1002	0.405	403	456	0.0	0.7	5.983	A
D - A24 (W)	1269	1269	317	0	521	911	2414	0.526	1265	1460	0.0	1.1	3.121	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	401	401	100	0	0	1231	2008	0.200	401	954	0.2	0.2	2.239	A
B - A24 (E)	1980	1980	495	0	0	453	2988	0.663	1980	1179	1.9	2.0	3.571	A
C - Worthing Road (S)	927	406	101	521	0	1976	998	0.407	406	457	0.7	0.7	6.075	A
D - A24 (W)	1269	1269	317	0	521	916	2410	0.527	1269	1466	1.1	1.1	3.155	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	401	401	100	0	0	1231	2008	0.200	401	954	0.2	0.2	2.239	A
B - A24 (E)	1980	1980	495	0	0	453	2988	0.663	1980	1179	2.0	2.0	3.571	A
C - Worthing Road (S)	927	406	101	521	0	1976	998	0.407	406	457	0.7	0.7	6.076	A
D - A24 (W)	1269	1269	317	0	521	916	2409	0.527	1269	1466	1.1	1.1	3.155	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	401	401	100	0	0	1231	2008	0.200	401	954	0.2	0.2	2.239	A
B - A24 (E)	1980	1980	495	0	0	453	2988	0.663	1980	1179	2.0	2.0	3.571	A
C - Worthing Road (S)	927	406	101	521	0	1976	998	0.407	406	457	0.7	0.7	6.076	A
D - A24 (W)	1269	1269	317	0	521	916	2409	0.527	1269	1466	1.1	1.1	3.155	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	401	401	100	0	0	1231	2008	0.200	401	954	0.2	0.2	2.239	A
B - A24 (E)	1980	1980	495	0	0	453	2988	0.663	1980	1179	2.0	2.0	3.571	A
C - Worthing Road (S)	927	406	101	521	0	1976	998	0.407	406	457	0.7	0.7	6.076	A
D - A24 (W)	1269	1269	317	0	521	916	2409	0.527	1269	1466	1.1	1.1	3.155	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	401	401	100	0	0	1231	2008	0.200	401	954	0.2	0.2	2.239	A
B - A24 (E)	1980	1980	495	0	0	453	2988	0.663	1980	1179	2.0	2.0	3.571	A
C - Worthing Road (S)	927	406	101	521	0	1976	998	0.407	406	457	0.7	0.7	6.076	A
D - A24 (W)	1269	1269	317	0	521	916	2409	0.527	1269	1466	1.1	1.1	3.155	A

PBA Arrangement - 2036 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Worthing Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	B - A24 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	C - Worthing Road (S) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	D - A24 (W) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	4.50	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	2036 Do Minimum	PM	FLAT	16:45	18:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Worthing Road (N)		FLAT	✓	824	100.000
B - A24 (E)		FLAT	✓	1158	100.000
C - Worthing Road (S)		FLAT	✓	728	100.000
D - A24 (W)		FLAT	✓	2039	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	0	441	336	47
	B - A24 (E)	219	0	29	910
	C - Worthing Road (S)	208	99	0	421
	D - A24 (W)	47	1450	500	42

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	0	0	0	0
	B - A24 (E)	0	0	0	0
	C - Worthing Road (S)	0	0	0	0
	D - A24 (W)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Worthing Road (N)	0.62	7.23	1.6	A	824	1236
B - A24 (E)	0.45	2.54	0.8	A	1158	1737
C - Worthing Road (S)	0.25	3.44	0.3	A	728	524
D - A24 (W)	0.73	4.88	2.8	A	2039	3059

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	824	824	206	0	0	2080	1331	0.619	818	472	0.0	1.6	6.932	A
B - A24 (E)	1158	1158	290	0	0	919	2579	0.449	1155	1979	0.0	0.8	2.523	A
C - Worthing Road (S)	728	349	87	379	0	1214	1398	0.250	348	860	0.0	0.3	3.423	A
D - A24 (W)	2039	2039	510	0	379	524	2778	0.734	2028	1038	0.0	2.7	4.736	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	824	824	206	0	0	2091	1322	0.623	824	474	1.6	1.6	7.219	A
B - A24 (E)	1158	1158	290	0	0	925	2574	0.450	1158	1990	0.8	0.8	2.542	A
C - Worthing Road (S)	728	349	87	379	0	1218	1396	0.250	349	865	0.3	0.3	3.438	A
D - A24 (W)	2039	2039	510	0	379	526	2776	0.734	2039	1041	2.7	2.7	4.880	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	824	824	206	0	0	2091	1322	0.623	824	474	1.6	1.6	7.225	A
B - A24 (E)	1158	1158	290	0	0	925	2574	0.450	1158	1990	0.8	0.8	2.542	A
C - Worthing Road (S)	728	349	87	379	0	1218	1396	0.250	349	865	0.3	0.3	3.438	A
D - A24 (W)	2039	2039	510	0	379	526	2776	0.734	2039	1041	2.7	2.7	4.882	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	824	824	206	0	0	2091	1322	0.623	824	474	1.6	1.6	7.226	A
B - A24 (E)	1158	1158	290	0	0	925	2574	0.450	1158	1990	0.8	0.8	2.542	A
C - Worthing Road (S)	728	349	87	379	0	1218	1396	0.250	349	865	0.3	0.3	3.438	A
D - A24 (W)	2039	2039	510	0	379	526	2776	0.734	2039	1041	2.7	2.8	4.882	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	824	824	206	0	0	2091	1322	0.623	824	474	1.6	1.6	7.226	A
B - A24 (E)	1158	1158	290	0	0	925	2574	0.450	1158	1990	0.8	0.8	2.542	A
C - Worthing Road (S)	728	349	87	379	0	1218	1396	0.250	349	865	0.3	0.3	3.438	A
D - A24 (W)	2039	2039	510	0	379	526	2776	0.734	2039	1041	2.8	2.8	4.882	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	824	824	206	0	0	2091	1322	0.623	824	474	1.6	1.6	7.226	A
B - A24 (E)	1158	1158	290	0	0	925	2574	0.450	1158	1990	0.8	0.8	2.542	A
C - Worthing Road (S)	728	349	87	379	0	1218	1396	0.250	349	865	0.3	0.3	3.438	A
D - A24 (W)	2039	2039	510	0	379	526	2776	0.734	2039	1041	2.8	2.8	4.882	A

PBA Arrangement - 2036 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Worthing Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	B - A24 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	C - Worthing Road (S) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	D - A24 (W) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	4.29	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D5	2036 Do Something	AM	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Worthing Road (N)		FLAT	✓	419	100.000
B - A24 (E)		FLAT	✓	1986	100.000
C - Worthing Road (S)		FLAT	✓	1086	100.000
D - A24 (W)		FLAT	✓	1301	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	1	205	179	34
	B - A24 (E)	565	2	70	1349
	C - Worthing Road (S)	375	43	0	668
	D - A24 (W)	66	946	264	25

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	0	0	0	0
	B - A24 (E)	0	0	0	0
	C - Worthing Road (S)	0	0	0	0
	D - A24 (W)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Worthing Road (N)	0.21	2.32	0.3	A	419	629
B - A24 (E)	0.67	3.76	2.1	A	1986	2979
C - Worthing Road (S)	0.49	7.01	0.9	A	1086	727
D - A24 (W)	0.56	3.45	1.2	A	1301	1952

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	419	419	105	0	0	1275	1973	0.212	418	1002	0.0	0.3	2.314	A
B - A24 (E)	1986	1986	497	0	0	501	2945	0.674	1978	1192	0.0	2.0	3.690	A
C - Worthing Road (S)	1086	485	121	601	0	1968	1003	0.484	481	511	0.0	0.9	6.857	A
D - A24 (W)	1301	1301	325	0	601	980	2349	0.554	1296	1469	0.0	1.2	3.405	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	419	419	105	0	0	1280	1969	0.213	419	1007	0.3	0.3	2.322	A
B - A24 (E)	1986	1986	497	0	0	503	2944	0.675	1986	1196	2.0	2.1	3.757	A
C - Worthing Road (S)	1086	485	121	601	0	1976	998	0.486	485	513	0.9	0.9	7.009	A
D - A24 (W)	1301	1301	325	0	601	986	2344	0.555	1301	1475	1.2	1.2	3.451	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	419	419	105	0	0	1280	1969	0.213	419	1007	0.3	0.3	2.322	A
B - A24 (E)	1986	1986	497	0	0	503	2944	0.675	1986	1196	2.1	2.1	3.757	A
C - Worthing Road (S)	1086	485	121	601	0	1976	998	0.486	485	513	0.9	0.9	7.009	A
D - A24 (W)	1301	1301	325	0	601	986	2344	0.555	1301	1475	1.2	1.2	3.451	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	419	419	105	0	0	1280	1969	0.213	419	1007	0.3	0.3	2.322	A
B - A24 (E)	1986	1986	497	0	0	503	2944	0.675	1986	1196	2.1	2.1	3.757	A
C - Worthing Road (S)	1086	485	121	601	0	1976	998	0.486	485	513	0.9	0.9	7.009	A
D - A24 (W)	1301	1301	325	0	601	986	2344	0.555	1301	1475	1.2	1.2	3.451	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	419	419	105	0	0	1280	1969	0.213	419	1007	0.3	0.3	2.322	A
B - A24 (E)	1986	1986	497	0	0	503	2944	0.675	1986	1196	2.1	2.1	3.757	A
C - Worthing Road (S)	1086	485	121	601	0	1976	998	0.486	485	513	0.9	0.9	7.009	A
D - A24 (W)	1301	1301	325	0	601	986	2344	0.555	1301	1475	1.2	1.2	3.451	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	419	419	105	0	0	1280	1969	0.213	419	1007	0.3	0.3	2.322	A
B - A24 (E)	1986	1986	497	0	0	503	2944	0.675	1986	1196	2.1	2.1	3.757	A
C - Worthing Road (S)	1086	485	121	601	0	1976	998	0.486	485	513	0.9	0.9	7.009	A
D - A24 (W)	1301	1301	325	0	601	986	2344	0.555	1301	1475	1.2	1.2	3.451	A

PBA Arrangement - 2036 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Worthing Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	B - A24 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	C - Worthing Road (S) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	D - A24 (W) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	5.24	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D6	2036 Do Something	PM	FLAT	16:45	18:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Worthing Road (N)		FLAT	✓	861	100.000
B - A24 (E)		FLAT	✓	1174	100.000
C - Worthing Road (S)		FLAT	✓	787	100.000
D - A24 (W)		FLAT	✓	2117	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	0	441	373	47
	B - A24 (E)	219	0	45	910
	C - Worthing Road (S)	225	106	0	456
	D - A24 (W)	47	1450	578	42

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	0	0	0	0
	B - A24 (E)	0	0	0	0
	C - Worthing Road (S)	0	0	0	0
	D - A24 (W)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Worthing Road (N)	0.69	9.15	2.2	A	861	1292
B - A24 (E)	0.47	2.77	0.9	A	1174	1761
C - Worthing Road (S)	0.27	3.53	0.4	A	787	565
D - A24 (W)	0.77	5.65	3.3	A	2117	3176

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	861	861	215	0	0	2163	1265	0.681	853	489	0.0	2.1	8.575	A
B - A24 (E)	1174	1174	294	0	0	1032	2480	0.473	1170	1983	0.0	0.9	2.743	A
C - Worthing Road (S)	787	377	94	410	0	1214	1398	0.269	375	989	0.0	0.4	3.515	A
D - A24 (W)	2117	2117	529	0	410	548	2756	0.768	2104	1041	0.0	3.2	5.423	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	861	861	215	0	0	2176	1254	0.686	861	491	2.1	2.1	9.129	A
B - A24 (E)	1174	1174	294	0	0	1040	2473	0.475	1174	1997	0.9	0.9	2.770	A
C - Worthing Road (S)	787	377	94	410	0	1218	1396	0.270	377	996	0.4	0.4	3.531	A
D - A24 (W)	2117	2117	529	0	410	550	2754	0.769	2117	1045	3.2	3.3	5.649	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	861	861	215	0	0	2176	1254	0.686	861	491	2.1	2.2	9.143	A
B - A24 (E)	1174	1174	294	0	0	1040	2473	0.475	1174	1997	0.9	0.9	2.771	A
C - Worthing Road (S)	787	377	94	410	0	1218	1396	0.270	377	996	0.4	0.4	3.531	A
D - A24 (W)	2117	2117	529	0	410	550	2754	0.769	2117	1045	3.3	3.3	5.651	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	861	861	215	0	0	2176	1254	0.686	861	491	2.2	2.2	9.148	A
B - A24 (E)	1174	1174	294	0	0	1040	2473	0.475	1174	1997	0.9	0.9	2.771	A
C - Worthing Road (S)	787	377	94	410	0	1218	1396	0.270	377	996	0.4	0.4	3.531	A
D - A24 (W)	2117	2117	529	0	410	550	2754	0.769	2117	1045	3.3	3.3	5.653	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	861	861	215	0	0	2176	1254	0.686	861	491	2.2	2.2	9.150	A
B - A24 (E)	1174	1174	294	0	0	1040	2473	0.475	1174	1997	0.9	0.9	2.771	A
C - Worthing Road (S)	787	377	94	410	0	1218	1396	0.270	377	996	0.4	0.4	3.531	A
D - A24 (W)	2117	2117	529	0	410	550	2754	0.769	2117	1045	3.3	3.3	5.653	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	861	861	215	0	0	2176	1254	0.686	861	491	2.2	2.2	9.150	A
B - A24 (E)	1174	1174	294	0	0	1040	2473	0.475	1174	1997	0.9	0.9	2.771	A
C - Worthing Road (S)	787	377	94	410	0	1218	1396	0.270	377	996	0.4	0.4	3.531	A
D - A24 (W)	2117	2117	529	0	410	550	2754	0.769	2117	1045	3.3	3.3	5.653	A

Junctions 9

ARCADY 9 - Roundabout Module

Filename: 201910_Hop Oast Roundabout Improvement_PBAInterim.j9
Path: S:\70016993 - Southwater - Phase 2\D Design and Analysis\Development\JUNCTION ASSESSMENTS\Hop Oast RBT\Improvements
Report generation date: 11/10/2019 15:34:33

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
PBA Interim Arrangement - 2036 Do Minimum								
A - Worthing Road (N)	0.2	2.24	0.20	A	1.6	7.23	0.62	A
B - A24 (E)	6.5	11.93	0.87	B	1.5	4.67	0.60	A
C - Worthing Road (S)	0.7	6.08	0.41	A	0.3	3.44	0.25	A
D - A24 (W)	1.4	3.97	0.58	A	4.2	7.43	0.81	A
PBA Interim Arrangement - 2036 Do Something								
A - Worthing Road (N)	0.3	2.32	0.21	A	2.2	9.15	0.69	A
B - A24 (E)	7.5	13.91	0.89	B	1.8	5.39	0.64	A
C - Worthing Road (S)	0.9	7.01	0.49	A	0.4	3.53	0.27	A
D - A24 (W)	1.6	4.43	0.62	A	5.4	9.34	0.85	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	Hop Oast Roundabout PBA Design
Location	Southwater
Site number	
Date	01/10/2019
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2036 Do Minimum	AM	FLAT	07:45	09:15	90	15	✓
D4	2036 Do Minimum	PM	FLAT	16:45	18:15	90	15	✓
D5	2036 Do Something	AM	FLAT	07:45	09:15	90	15	✓
D6	2036 Do Something	PM	FLAT	16:45	18:15	90	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	PBA Interim Arrangement	✓	100.000	100.000

PBA Interim Arrangement - 2036 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Worthing Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	C - Worthing Road (S) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	7.69	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	Worthing Road (N)	
B	A24 (E)	
C	Worthing Road (S)	
D	A24 (W)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A - Worthing Road (N)	6.50	9.30	37.5	60.0	62.0	3.0	
B - A24 (E)	7.00	8.50	15.0	28.0	58.0	16.0	
C - Worthing Road (S)	3.55	6.70	45.0	23.0	90.0	4.0	
D - A24 (W)	7.30	9.00	26.0	65.0	50.0	1.0	

Bypass

Arm	Arm has bypass	Bypass utilisation (%)
A - Worthing Road (N)		
B - A24 (E)		
C - Worthing Road (S)	✓	90
D - A24 (W)		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Worthing Road (N)	0.797	2989
B - A24 (E)	0.747	2620
C - Worthing Road (S)	0.524	2035
D - A24 (W)	0.892	2993

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2036 Do Minimum	AM	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Worthing Road (N)		FLAT	✓	401	100.000
B - A24 (E)		FLAT	✓	1980	100.000
C - Worthing Road (S)		FLAT	✓	927	100.000
D - A24 (W)		FLAT	✓	1269	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	1	205	161	34
	B - A24 (E)	565	2	64	1349
	C - Worthing Road (S)	322	26	0	579
	D - A24 (W)	66	946	232	25

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	0	0	0	0
	B - A24 (E)	0	0	0	0
	C - Worthing Road (S)	0	0	0	0
	D - A24 (W)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Worthing Road (N)	0.20	2.24	0.2	A	401	602
B - A24 (E)	0.87	11.93	6.5	B	1980	2970
C - Worthing Road (S)	0.41	6.08	0.7	A	927	609
D - A24 (W)	0.58	3.97	1.4	A	1269	1904

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	401	401	100	0	0	1226	2012	0.199	400	945	0.0	0.2	2.232	
B - A24 (E)	1980	1980	495	0	0	451	2282	0.868	1956	1174	0.0	6.0	10.380	
C - Worthing Road (S)	927	406	101	521	0	1953	1011	0.402	403	455	0.0	0.7	5.901	
D - A24 (W)	1269	1269	317	0	521	907	2184	0.581	1264	1449	0.0	1.4	3.888	

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	401	401	100	0	0	1231	2008	0.200	401	954	0.2	0.2	2.239	
B - A24 (E)	1980	1980	495	0	0	453	2281	0.868	1979	1179	6.0	6.3	11.809	
C - Worthing Road (S)	927	406	101	521	0	1975	999	0.406	406	457	0.7	0.7	6.070	
D - A24 (W)	1269	1269	317	0	521	916	2176	0.583	1269	1465	1.4	1.4	3.968	

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	401	401	100	0	0	1231	2008	0.200	401	954	0.2	0.2	2.239	
B - A24 (E)	1980	1980	495	0	0	453	2281	0.868	1980	1179	6.3	6.4	11.881	
C - Worthing Road (S)	927	406	101	521	0	1976	999	0.407	406	457	0.7	0.7	6.074	
D - A24 (W)	1269	1269	317	0	521	916	2176	0.583	1269	1466	1.4	1.4	3.969	

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	401	401	100	0	0	1231	2008	0.200	401	954	0.2	0.2	2.239	
B - A24 (E)	1980	1980	495	0	0	453	2281	0.868	1980	1179	6.4	6.4	11.907	
C - Worthing Road (S)	927	406	101	521	0	1976	998	0.407	406	457	0.7	0.7	6.075	
D - A24 (W)	1269	1269	317	0	521	916	2176	0.583	1269	1466	1.4	1.4	3.969	

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	401	401	100	0	0	1231	2008	0.200	401	954	0.2	0.2	2.239	
B - A24 (E)	1980	1980	495	0	0	453	2281	0.868	1980	1179	6.4	6.5	11.919	
C - Worthing Road (S)	927	406	101	521	0	1976	998	0.407	406	457	0.7	0.7	6.075	
D - A24 (W)	1269	1269	317	0	521	916	2176	0.583	1269	1466	1.4	1.4	3.969	

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	401	401	100	0	0	1231	2008	0.200	401	954	0.2	0.2	2.239	
B - A24 (E)	1980	1980	495	0	0	453	2281	0.868	1980	1179	6.5	6.5	11.928	
C - Worthing Road (S)	927	406	101	521	0	1976	998	0.407	406	457	0.7	0.7	6.075	
D - A24 (W)	1269	1269	317	0	521	916	2176	0.583	1269	1466	1.4	1.4	3.969	

PBA Interim Arrangement - 2036 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Worthing Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	C - Worthing Road (S) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	6.11	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	2036 Do Minimum	PM	FLAT	16:45	18:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Worthing Road (N)		FLAT	✓	824	100.000
B - A24 (E)		FLAT	✓	1158	100.000
C - Worthing Road (S)		FLAT	✓	728	100.000
D - A24 (W)		FLAT	✓	2039	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	0	441	336	47
	B - A24 (E)	219	0	29	910
	C - Worthing Road (S)	208	99	0	421
	D - A24 (W)	47	1450	500	42

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	0	0	0	0
	B - A24 (E)	0	0	0	0
	C - Worthing Road (S)	0	0	0	0
	D - A24 (W)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Worthing Road (N)	0.62	7.23	1.6	A	824	1236
B - A24 (E)	0.60	4.67	1.5	A	1158	1737
C - Worthing Road (S)	0.25	3.44	0.3	A	728	524
D - A24 (W)	0.81	7.43	4.2	A	2039	3059

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	824	824	206	0	0	2075	1335	0.617	818	472	0.0	1.6	6.879	A
B - A24 (E)	1158	1158	290	0	0	918	1934	0.599	1152	1975	0.0	1.5	4.574	A
C - Worthing Road (S)	728	349	87	379	0	1212	1399	0.249	348	858	0.0	0.3	3.419	A
D - A24 (W)	2039	2039	510	0	379	524	2526	0.807	2023	1036	0.0	4.0	6.955	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	824	824	206	0	0	2091	1322	0.623	824	474	1.6	1.6	7.216	A
B - A24 (E)	1158	1158	290	0	0	925	1928	0.601	1158	1990	1.5	1.5	4.673	A
C - Worthing Road (S)	728	349	87	379	0	1218	1396	0.250	349	865	0.3	0.3	3.438	A
D - A24 (W)	2039	2039	510	0	379	526	2524	0.808	2039	1041	4.0	4.1	7.407	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	824	824	206	0	0	2091	1322	0.623	824	474	1.6	1.6	7.225	A
B - A24 (E)	1158	1158	290	0	0	925	1928	0.601	1158	1990	1.5	1.5	4.673	A
C - Worthing Road (S)	728	349	87	379	0	1218	1396	0.250	349	865	0.3	0.3	3.438	A
D - A24 (W)	2039	2039	510	0	379	526	2524	0.808	2039	1041	4.1	4.1	7.419	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	824	824	206	0	0	2091	1322	0.623	824	474	1.6	1.6	7.225	A
B - A24 (E)	1158	1158	290	0	0	925	1928	0.601	1158	1990	1.5	1.5	4.673	A
C - Worthing Road (S)	728	349	87	379	0	1218	1396	0.250	349	865	0.3	0.3	3.438	A
D - A24 (W)	2039	2039	510	0	379	526	2524	0.808	2039	1041	4.1	4.2	7.422	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	824	824	206	0	0	2091	1322	0.623	824	474	1.6	1.6	7.226	A
B - A24 (E)	1158	1158	290	0	0	925	1928	0.601	1158	1990	1.5	1.5	4.673	A
C - Worthing Road (S)	728	349	87	379	0	1218	1396	0.250	349	865	0.3	0.3	3.438	A
D - A24 (W)	2039	2039	510	0	379	526	2524	0.808	2039	1041	4.2	4.2	7.425	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	824	824	206	0	0	2091	1322	0.623	824	474	1.6	1.6	7.226	A
B - A24 (E)	1158	1158	290	0	0	925	1928	0.601	1158	1990	1.5	1.5	4.673	A
C - Worthing Road (S)	728	349	87	379	0	1218	1396	0.250	349	865	0.3	0.3	3.438	A
D - A24 (W)	2039	2039	510	0	379	526	2524	0.808	2039	1041	4.2	4.2	7.425	A

PBA Interim Arrangement - 2036 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Worthing Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	C - Worthing Road (S) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	8.76	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D5	2036 Do Something	AM	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Worthing Road (N)		FLAT	✓	419	100.000
B - A24 (E)		FLAT	✓	1986	100.000
C - Worthing Road (S)		FLAT	✓	1086	100.000
D - A24 (W)		FLAT	✓	1301	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	1	205	179	34
	B - A24 (E)	565	2	70	1349
	C - Worthing Road (S)	375	43	0	668
	D - A24 (W)	66	946	264	25

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	0	0	0	0
	B - A24 (E)	0	0	0	0
	C - Worthing Road (S)	0	0	0	0
	D - A24 (W)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Worthing Road (N)	0.21	2.32	0.3	A	419	629
B - A24 (E)	0.89	13.91	7.5	B	1986	2979
C - Worthing Road (S)	0.49	7.01	0.9	A	1086	727
D - A24 (W)	0.62	4.43	1.6	A	1301	1952

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	419	419	105	0	0	1274	1974	0.212	418	996	0.0	0.3	2.313	
B - A24 (E)	1986	1986	497	0	0	501	2245	0.885	1959	1191	0.0	6.8	11.646	
C - Worthing Road (S)	1086	485	121	601	0	1949	1012	0.479	481	510	0.0	0.9	6.733	
D - A24 (W)	1301	1301	325	0	601	975	2123	0.613	1295	1456	0.0	1.6	4.315	

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	419	419	105	0	0	1280	1969	0.213	419	1006	0.3	0.3	2.322	
B - A24 (E)	1986	1986	497	0	0	503	2244	0.885	1984	1196	6.8	7.2	13.682	
C - Worthing Road (S)	1086	485	121	601	0	1974	999	0.485	485	513	0.9	0.9	6.996	
D - A24 (W)	1301	1301	325	0	601	985	2114	0.615	1301	1474	1.6	1.6	4.428	

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	419	419	105	0	0	1280	1969	0.213	419	1007	0.3	0.3	2.322	
B - A24 (E)	1986	1986	497	0	0	503	2244	0.885	1985	1196	7.2	7.4	13.816	
C - Worthing Road (S)	1086	485	121	601	0	1975	999	0.485	485	513	0.9	0.9	7.005	
D - A24 (W)	1301	1301	325	0	601	986	2114	0.616	1301	1474	1.6	1.6	4.430	

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	419	419	105	0	0	1280	1969	0.213	419	1007	0.3	0.3	2.322	
B - A24 (E)	1986	1986	497	0	0	503	2244	0.885	1986	1196	7.4	7.5	13.866	
C - Worthing Road (S)	1086	485	121	601	0	1976	998	0.486	485	513	0.9	0.9	7.007	
D - A24 (W)	1301	1301	325	0	601	986	2113	0.616	1301	1475	1.6	1.6	4.430	

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	419	419	105	0	0	1280	1969	0.213	419	1007	0.3	0.3	2.322	
B - A24 (E)	1986	1986	497	0	0	503	2244	0.885	1986	1196	7.5	7.5	13.893	
C - Worthing Road (S)	1086	485	121	601	0	1976	998	0.486	485	513	0.9	0.9	7.008	
D - A24 (W)	1301	1301	325	0	601	986	2113	0.616	1301	1475	1.6	1.6	4.431	

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	L
A - Worthing Road (N)	419	419	105	0	0	1280	1969	0.213	419	1007	0.3	0.3	2.322	
B - A24 (E)	1986	1986	497	0	0	503	2244	0.885	1986	1196	7.5	7.5	13.909	
C - Worthing Road (S)	1086	485	121	601	0	1976	998	0.486	485	513	0.9	0.9	7.008	
D - A24 (W)	1301	1301	325	0	601	986	2113	0.616	1301	1475	1.6	1.6	4.431	

PBA Interim Arrangement - 2036 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Worthing Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	C - Worthing Road (S) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	7.44	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D6	2036 Do Something	PM	FLAT	16:45	18:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Worthing Road (N)		FLAT	✓	861	100.000
B - A24 (E)		FLAT	✓	1174	100.000
C - Worthing Road (S)		FLAT	✓	787	100.000
D - A24 (W)		FLAT	✓	2117	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	0	441	373	47
	B - A24 (E)	219	0	45	910
	C - Worthing Road (S)	225	106	0	456
	D - A24 (W)	47	1450	578	42

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Worthing Road (N)	B - A24 (E)	C - Worthing Road (S)	D - A24 (W)
From	A - Worthing Road (N)	0	0	0	0
	B - A24 (E)	0	0	0	0
	C - Worthing Road (S)	0	0	0	0
	D - A24 (W)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Worthing Road (N)	0.69	9.15	2.2	A	861	1292
B - A24 (E)	0.64	5.39	1.8	A	1174	1761
C - Worthing Road (S)	0.27	3.53	0.4	A	787	565
D - A24 (W)	0.85	9.34	5.4	A	2117	3176

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	861	861	215	0	0	2155	1271	0.678	853	488	0.0	2.0	8.459	A
B - A24 (E)	1174	1174	294	0	0	1030	1850	0.635	1167	1978	0.0	1.7	5.223	A
C - Worthing Road (S)	787	377	94	410	0	1211	1400	0.269	375	987	0.0	0.4	3.509	A
D - A24 (W)	2117	2117	529	0	410	547	2504	0.845	2096	1038	0.0	5.1	8.442	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	861	861	215	0	0	2175	1255	0.686	861	491	2.0	2.1	9.114	A
B - A24 (E)	1174	1174	294	0	0	1040	1843	0.637	1174	1996	1.7	1.7	5.382	A
C - Worthing Road (S)	787	377	94	410	0	1218	1396	0.270	377	996	0.4	0.4	3.530	A
D - A24 (W)	2117	2117	529	0	410	550	2502	0.846	2116	1044	5.1	5.3	9.285	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	861	861	215	0	0	2176	1255	0.686	861	491	2.1	2.2	9.140	A
B - A24 (E)	1174	1174	294	0	0	1040	1842	0.637	1174	1997	1.7	1.7	5.386	A
C - Worthing Road (S)	787	377	94	410	0	1218	1396	0.270	377	996	0.4	0.4	3.531	A
D - A24 (W)	2117	2117	529	0	410	550	2502	0.846	2117	1045	5.3	5.4	9.315	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	861	861	215	0	0	2176	1254	0.686	861	491	2.2	2.2	9.146	A
B - A24 (E)	1174	1174	294	0	0	1040	1842	0.637	1174	1997	1.7	1.7	5.386	A
C - Worthing Road (S)	787	377	94	410	0	1218	1396	0.270	377	996	0.4	0.4	3.531	A
D - A24 (W)	2117	2117	529	0	410	550	2502	0.846	2117	1045	5.4	5.4	9.326	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	861	861	215	0	0	2176	1254	0.686	861	491	2.2	2.2	9.147	A
B - A24 (E)	1174	1174	294	0	0	1040	1842	0.637	1174	1997	1.7	1.8	5.386	A
C - Worthing Road (S)	787	377	94	410	0	1218	1396	0.270	377	996	0.4	0.4	3.531	A
D - A24 (W)	2117	2117	529	0	410	550	2502	0.846	2117	1045	5.4	5.4	9.331	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LO
A - Worthing Road (N)	861	861	215	0	0	2176	1254	0.686	861	491	2.2	2.2	9.149	A
B - A24 (E)	1174	1174	294	0	0	1040	1842	0.637	1174	1997	1.8	1.8	5.386	A
C - Worthing Road (S)	787	377	94	410	0	1218	1396	0.270	377	996	0.4	0.4	3.531	A
D - A24 (W)	2117	2117	529	0	410	550	2502	0.846	2117	1045	5.4	5.4	9.335	A

Appendix F

A24 / MILL STRAIGHT / POLLARDS HILL ROUNDABOUT: ASSESSMENT RESULT FILES

Junctions 9

ARCADY 9 - Roundabout Module

Filename: 201910_A24 Pollards Hill Roundabout.j9
Path: S:\70016993 - Southwater - Phase 2\D Design and Analysis\Development\JUNCTION ASSESSMENTS\Pollards Hill RBT
Report generation date: 02/10/2019 14:15:43

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2018 Observed							
1 - A24 North	1.1	3.22	0.51	A	5.1	9.33	0.84	A
2 - A24 South	3.1	6.22	0.76	A	1.2	3.45	0.55	A
3 - Mill Straight	1.1	8.06	0.52	A	0.2	3.32	0.18	A
	2036 Do Minimum							
1 - A24 North	1.0	3.19	0.51	A	5.5	9.95	0.85	A
2 - A24 South	3.2	6.35	0.76	A	1.2	3.49	0.56	A
3 - Mill Straight	1.3	9.09	0.57	A	0.2	3.34	0.19	A
	2036 Do Something							
1 - A24 North	1.1	3.27	0.52	A	5.7	10.29	0.85	B
2 - A24 South	3.3	6.48	0.77	A	1.3	3.60	0.57	A
3 - Mill Straight	1.4	9.59	0.59	A	0.2	3.39	0.20	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	18/12/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CORP\UKRJM015
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D1	2018 Observed	AM	ONE HOUR	07:45	09:15		15
D2	2018 Observed	PM	ONE HOUR	16:45	18:15		15
D3	2036 Do Minimum	AM	FLAT	07:45	09:15	90	15
D4	2036 Do Minimum	PM	FLAT	16:45	18:15	90	15
D5	2036 Do Something	AM	FLAT	07:45	09:15	90	15
D6	2036 Do Something	PM	FLAT	16:45	18:15	90	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2018 Observed, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3	5.46	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A24 North	
2	A24 South	
3	Mill Straight	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A24 North	7.30	7.30	0.0	30.0	65.0	0.5	
2 - A24 South	7.30	7.30	0.0	30.0	65.0	0.5	
3 - Mill Straight	3.10	7.10	30.0	30.0	65.0	8.5	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A24 North	0.687	2474
2 - A24 South	0.687	2474
3 - Mill Straight	0.594	1951

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2018 Observed	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A24 North		✓	1074	100.000
2 - A24 South		✓	1671	100.000
3 - Mill Straight		✓	435	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A24 North	2 - A24 South	3 - Mill Straight
From	1 - A24 North	1	999	74
	2 - A24 South	1566	2	103
	3 - Mill Straight	205	230	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A24 North	2 - A24 South	3 - Mill Straight
From	1 - A24 North	0	0	0
	2 - A24 South	0	0	0
	3 - Mill Straight	0	0	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:45-08:00	1 - A24 North	809	809
	2 - A24 South	1258	1258
	3 - Mill Straight	327	327
08:00-08:15	1 - A24 North	966	966
	2 - A24 South	1502	1502
	3 - Mill Straight	391	391
08:15-08:30	1 - A24 North	1182	1182
	2 - A24 South	1840	1840
	3 - Mill Straight	479	479
08:30-08:45	1 - A24 North	1182	1182
	2 - A24 South	1840	1840
	3 - Mill Straight	479	479
08:45-09:00	1 - A24 North	966	966
	2 - A24 South	1502	1502
	3 - Mill Straight	391	391
09:00-09:15	1 - A24 North	809	809
	2 - A24 South	1258	1258
	3 - Mill Straight	327	327

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A24 North	0.51	3.22	1.1	A
2 - A24 South	0.76	6.22	3.1	A
3 - Mill Straight	0.52	8.06	1.1	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	809	174	2355	0.343	806	0.5	2.322	A
2 - A24 South	1258	56	2436	0.516	1254	1.1	3.034	A
3 - Mill Straight	327	1177	1252	0.262	326	0.4	3.881	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	966	208	2331	0.414	965	0.7	2.633	A
2 - A24 South	1502	67	2428	0.619	1500	1.6	3.869	A
3 - Mill Straight	391	1408	1115	0.351	390	0.5	4.962	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	1182	254	2300	0.514	1181	1.1	3.214	A
2 - A24 South	1840	82	2418	0.761	1834	3.1	6.104	A
3 - Mill Straight	479	1722	929	0.516	477	1.0	7.929	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	1182	255	2299	0.514	1182	1.1	3.223	A
2 - A24 South	1840	83	2418	0.761	1840	3.1	6.224	A
3 - Mill Straight	479	1727	926	0.517	479	1.1	8.056	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	966	210	2330	0.414	967	0.7	2.642	A
2 - A24 South	1502	68	2428	0.619	1508	1.6	3.938	A
3 - Mill Straight	391	1416	1110	0.352	393	0.5	5.032	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	809	175	2354	0.343	809	0.5	2.331	A
2 - A24 South	1258	57	2436	0.517	1260	1.1	3.070	A
3 - Mill Straight	327	1183	1249	0.262	328	0.4	3.915	A

2018 Observed, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3	6.78	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2018 Observed	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A24 North		✓	1824	100.000
2 - A24 South		✓	1176	100.000
3 - Mill Straight		✓	209	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A24 North	2 - A24 South	3 - Mill Straight
From	1 - A24 North	6	1645	173
	2 - A24 South	969	0	207
	3 - Mill Straight	100	109	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A24 North	2 - A24 South	3 - Mill Straight
From	1 - A24 North	0	0	0
	2 - A24 South	0	0	0
	3 - Mill Straight	0	0	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:45-17:00	1 - A24 North	1373	1373
	2 - A24 South	885	885
	3 - Mill Straight	157	157
17:00-17:15	1 - A24 North	1640	1640
	2 - A24 South	1057	1057
	3 - Mill Straight	188	188
17:15-17:30	1 - A24 North	2008	2008
	2 - A24 South	1295	1295
	3 - Mill Straight	230	230
17:30-17:45	1 - A24 North	2008	2008
	2 - A24 South	1295	1295
	3 - Mill Straight	230	230
17:45-18:00	1 - A24 North	1640	1640
	2 - A24 South	1057	1057
	3 - Mill Straight	188	188
18:00-18:15	1 - A24 North	1373	1373
	2 - A24 South	885	885
	3 - Mill Straight	157	157

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A24 North	0.84	9.33	5.1	A
2 - A24 South	0.55	3.45	1.2	A
3 - Mill Straight	0.18	3.32	0.2	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	1373	82	2418	0.568	1368	1.3	3.411	A
2 - A24 South	885	134	2382	0.372	883	0.6	2.394	A
3 - Mill Straight	157	732	1517	0.104	157	0.1	2.647	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	1640	98	2407	0.681	1637	2.1	4.652	A
2 - A24 South	1057	161	2364	0.447	1056	0.8	2.752	A
3 - Mill Straight	188	876	1431	0.131	188	0.2	2.894	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	2008	120	2392	0.840	1997	4.9	8.865	A
2 - A24 South	1295	196	2340	0.553	1293	1.2	3.433	A
3 - Mill Straight	230	1072	1315	0.175	230	0.2	3.318	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	2008	120	2392	0.840	2008	5.1	9.331	A
2 - A24 South	1295	197	2339	0.554	1295	1.2	3.446	A
3 - Mill Straight	230	1073	1314	0.175	230	0.2	3.320	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	1640	98	2407	0.681	1651	2.2	4.836	A
2 - A24 South	1057	162	2363	0.447	1059	0.8	2.765	A
3 - Mill Straight	188	878	1430	0.131	188	0.2	2.898	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	1373	82	2418	0.568	1377	1.3	3.470	A
2 - A24 South	885	135	2382	0.372	886	0.6	2.410	A
3 - Mill Straight	157	735	1515	0.104	157	0.1	2.653	A

2036 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3	5.72	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D3	2036 Do Minimum	AM	FLAT	07:45	09:15	90	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A24 North		✓	1161	100.000
2 - A24 South		✓	1844	100.000
3 - Mill Straight		✓	528	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A24 North	2 - A24 South	3 - Mill Straight
From	1 - A24 North	1	1069	91
	2 - A24 South	1727	2	115
	3 - Mill Straight	260	268	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A24 North	2 - A24 South	3 - Mill Straight
From	1 - A24 North	0	0	0
	2 - A24 South	0	0	0
	3 - Mill Straight	0	0	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:45-08:00	1 - A24 North	1161	1161
	2 - A24 South	1844	1844
	3 - Mill Straight	528	528
08:00-08:15	1 - A24 North	1161	1161
	2 - A24 South	1844	1844
	3 - Mill Straight	528	528
08:15-08:30	1 - A24 North	1161	1161
	2 - A24 South	1844	1844
	3 - Mill Straight	528	528
08:30-08:45	1 - A24 North	1161	1161
	2 - A24 South	1844	1844
	3 - Mill Straight	528	528
08:45-09:00	1 - A24 North	1161	1161
	2 - A24 South	1844	1844
	3 - Mill Straight	528	528
09:00-09:15	1 - A24 North	1161	1161
	2 - A24 South	1844	1844
	3 - Mill Straight	528	528

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A24 North	0.51	3.19	1.0	A
2 - A24 South	0.76	6.35	3.2	A
3 - Mill Straight	0.57	9.09	1.3	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	1161	267	2291	0.507	1157	1.0	3.163	A
2 - A24 South	1844	92	2411	0.765	1831	3.2	6.081	A
3 - Mill Straight	528	1718	931	0.567	523	1.3	8.715	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	1161	270	2289	0.507	1161	1.0	3.190	A
2 - A24 South	1844	92	2411	0.765	1844	3.2	6.339	A
3 - Mill Straight	528	1730	924	0.571	528	1.3	9.078	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	1161	270	2289	0.507	1161	1.0	3.191	A
2 - A24 South	1844	92	2411	0.765	1844	3.2	6.344	A
3 - Mill Straight	528	1730	924	0.571	528	1.3	9.088	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	1161	270	2289	0.507	1161	1.0	3.191	A
2 - A24 South	1844	92	2411	0.765	1844	3.2	6.344	A
3 - Mill Straight	528	1730	924	0.571	528	1.3	9.087	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	1161	270	2289	0.507	1161	1.0	3.191	A
2 - A24 South	1844	92	2411	0.765	1844	3.2	6.346	A
3 - Mill Straight	528	1730	924	0.571	528	1.3	9.089	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	1161	270	2289	0.507	1161	1.0	3.191	A
2 - A24 South	1844	92	2411	0.765	1844	3.2	6.346	A
3 - Mill Straight	528	1730	924	0.571	528	1.3	9.089	A

2036 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3	7.15	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D4	2036 Do Minimum	PM	FLAT	16:45	18:15	90	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A24 North		✓	2026	100.000
2 - A24 South		✓	1288	100.000
3 - Mill Straight		✓	251	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A24 North	2 - A24 South	3 - Mill Straight
From	1 - A24 North	6	1799	221
	2 - A24 South	1042	0	246
	3 - Mill Straight	124	127	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A24 North	2 - A24 South	3 - Mill Straight
From	1 - A24 North	0	0	0
	2 - A24 South	0	0	0
	3 - Mill Straight	0	0	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:45-17:00	1 - A24 North	2026	2026
	2 - A24 South	1288	1288
	3 - Mill Straight	251	251
17:00-17:15	1 - A24 North	2026	2026
	2 - A24 South	1288	1288
	3 - Mill Straight	251	251
17:15-17:30	1 - A24 North	2026	2026
	2 - A24 South	1288	1288
	3 - Mill Straight	251	251
17:30-17:45	1 - A24 North	2026	2026
	2 - A24 South	1288	1288
	3 - Mill Straight	251	251
17:45-18:00	1 - A24 North	2026	2026
	2 - A24 South	1288	1288
	3 - Mill Straight	251	251
18:00-18:15	1 - A24 North	2026	2026
	2 - A24 South	1288	1288
	3 - Mill Straight	251	251

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A24 North	0.85	9.95	5.5	A
2 - A24 South	0.56	3.49	1.2	A
3 - Mill Straight	0.19	3.34	0.2	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	2026	127	2387	0.849	2005	5.2	8.977	A
2 - A24 South	1288	225	2320	0.555	1283	1.2	3.454	A
3 - Mill Straight	251	1044	1331	0.189	250	0.2	3.325	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	2026	127	2387	0.849	2025	5.4	9.898	A
2 - A24 South	1288	227	2318	0.556	1288	1.2	3.492	A
3 - Mill Straight	251	1048	1329	0.189	251	0.2	3.338	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	2026	127	2387	0.849	2026	5.5	9.931	A
2 - A24 South	1288	227	2318	0.556	1288	1.2	3.492	A
3 - Mill Straight	251	1048	1329	0.189	251	0.2	3.338	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	2026	127	2387	0.849	2026	5.5	9.944	A
2 - A24 South	1288	227	2318	0.556	1288	1.2	3.492	A
3 - Mill Straight	251	1048	1329	0.189	251	0.2	3.338	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	2026	127	2387	0.849	2026	5.5	9.950	A
2 - A24 South	1288	227	2318	0.556	1288	1.2	3.492	A
3 - Mill Straight	251	1048	1329	0.189	251	0.2	3.338	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	2026	127	2387	0.849	2026	5.5	9.954	A
2 - A24 South	1288	227	2318	0.556	1288	1.2	3.492	A
3 - Mill Straight	251	1048	1329	0.189	251	0.2	3.338	A

2036 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3	5.90	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D5	2036 Do Something	AM	FLAT	07:45	09:15	90	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A24 North		✓	1178	100.000
2 - A24 South		✓	1856	100.000
3 - Mill Straight		✓	545	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A24 North	2 - A24 South	3 - Mill Straight
From	1 - A24 North	1	1086	91
	2 - A24 South	1733	2	121
	3 - Mill Straight	260	285	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A24 North	2 - A24 South	3 - Mill Straight
From	1 - A24 North	0	0	0
	2 - A24 South	0	0	0
	3 - Mill Straight	0	0	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:45-08:00	1 - A24 North	1178	1178
	2 - A24 South	1856	1856
	3 - Mill Straight	545	545
08:00-08:15	1 - A24 North	1178	1178
	2 - A24 South	1856	1856
	3 - Mill Straight	545	545
08:15-08:30	1 - A24 North	1178	1178
	2 - A24 South	1856	1856
	3 - Mill Straight	545	545
08:30-08:45	1 - A24 North	1178	1178
	2 - A24 South	1856	1856
	3 - Mill Straight	545	545
08:45-09:00	1 - A24 North	1178	1178
	2 - A24 South	1856	1856
	3 - Mill Straight	545	545
09:00-09:15	1 - A24 North	1178	1178
	2 - A24 South	1856	1856
	3 - Mill Straight	545	545

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A24 North	0.52	3.27	1.1	A
2 - A24 South	0.77	6.48	3.3	A
3 - Mill Straight	0.59	9.59	1.4	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	1178	284	2279	0.517	1174	1.1	3.245	A
2 - A24 South	1856	92	2411	0.770	1843	3.2	6.200	A
3 - Mill Straight	545	1724	928	0.588	539	1.4	9.148	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	1178	287	2277	0.517	1178	1.1	3.274	A
2 - A24 South	1856	92	2411	0.770	1856	3.3	6.476	A
3 - Mill Straight	545	1736	921	0.592	545	1.4	9.573	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	1178	287	2277	0.517	1178	1.1	3.274	A
2 - A24 South	1856	92	2411	0.770	1856	3.3	6.481	A
3 - Mill Straight	545	1736	920	0.592	545	1.4	9.583	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	1178	287	2277	0.517	1178	1.1	3.274	A
2 - A24 South	1856	92	2411	0.770	1856	3.3	6.481	A
3 - Mill Straight	545	1736	920	0.592	545	1.4	9.585	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	1178	287	2277	0.517	1178	1.1	3.274	A
2 - A24 South	1856	92	2411	0.770	1856	3.3	6.483	A
3 - Mill Straight	545	1736	920	0.592	545	1.4	9.585	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	1178	287	2277	0.517	1178	1.1	3.274	A
2 - A24 South	1856	92	2411	0.770	1856	3.3	6.483	A
3 - Mill Straight	545	1736	920	0.592	545	1.4	9.587	A

2036 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3	7.35	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D6	2036 Do Something	PM	FLAT	16:45	18:15	90	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A24 North		✓	2033	100.000
2 - A24 South		✓	1320	100.000
3 - Mill Straight		✓	258	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A24 North	2 - A24 South	3 - Mill Straight
From	1 - A24 North	6	1806	221
	2 - A24 South	1058	0	262
	3 - Mill Straight	124	134	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A24 North	2 - A24 South	3 - Mill Straight
From	1 - A24 North	0	0	0
	2 - A24 South	0	0	0
	3 - Mill Straight	0	0	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:45-17:00	1 - A24 North	2033	2033
	2 - A24 South	1320	1320
	3 - Mill Straight	258	258
17:00-17:15	1 - A24 North	2033	2033
	2 - A24 South	1320	1320
	3 - Mill Straight	258	258
17:15-17:30	1 - A24 North	2033	2033
	2 - A24 South	1320	1320
	3 - Mill Straight	258	258
17:30-17:45	1 - A24 North	2033	2033
	2 - A24 South	1320	1320
	3 - Mill Straight	258	258
17:45-18:00	1 - A24 North	2033	2033
	2 - A24 South	1320	1320
	3 - Mill Straight	258	258
18:00-18:15	1 - A24 North	2033	2033
	2 - A24 South	1320	1320
	3 - Mill Straight	258	258

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A24 North	0.85	10.29	5.7	B
2 - A24 South	0.57	3.60	1.3	A
3 - Mill Straight	0.20	3.39	0.2	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	2033	133	2383	0.853	2011	5.4	9.219	A
2 - A24 South	1320	225	2320	0.569	1315	1.3	3.562	A
3 - Mill Straight	258	1060	1322	0.195	257	0.2	3.377	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	2033	134	2382	0.853	2032	5.6	10.224	B
2 - A24 South	1320	227	2318	0.569	1320	1.3	3.604	A
3 - Mill Straight	258	1064	1320	0.196	258	0.2	3.390	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	2033	134	2382	0.853	2033	5.7	10.263	B
2 - A24 South	1320	227	2318	0.569	1320	1.3	3.604	A
3 - Mill Straight	258	1064	1320	0.196	258	0.2	3.390	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	2033	134	2382	0.853	2033	5.7	10.277	B
2 - A24 South	1320	227	2318	0.569	1320	1.3	3.604	A
3 - Mill Straight	258	1064	1320	0.196	258	0.2	3.390	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	2033	134	2382	0.853	2033	5.7	10.283	B
2 - A24 South	1320	227	2318	0.569	1320	1.3	3.604	A
3 - Mill Straight	258	1064	1320	0.196	258	0.2	3.390	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A24 North	2033	134	2382	0.853	2033	5.7	10.289	B
2 - A24 South	1320	227	2318	0.569	1320	1.3	3.604	A
3 - Mill Straight	258	1064	1320	0.196	258	0.2	3.390	A

Appendix G

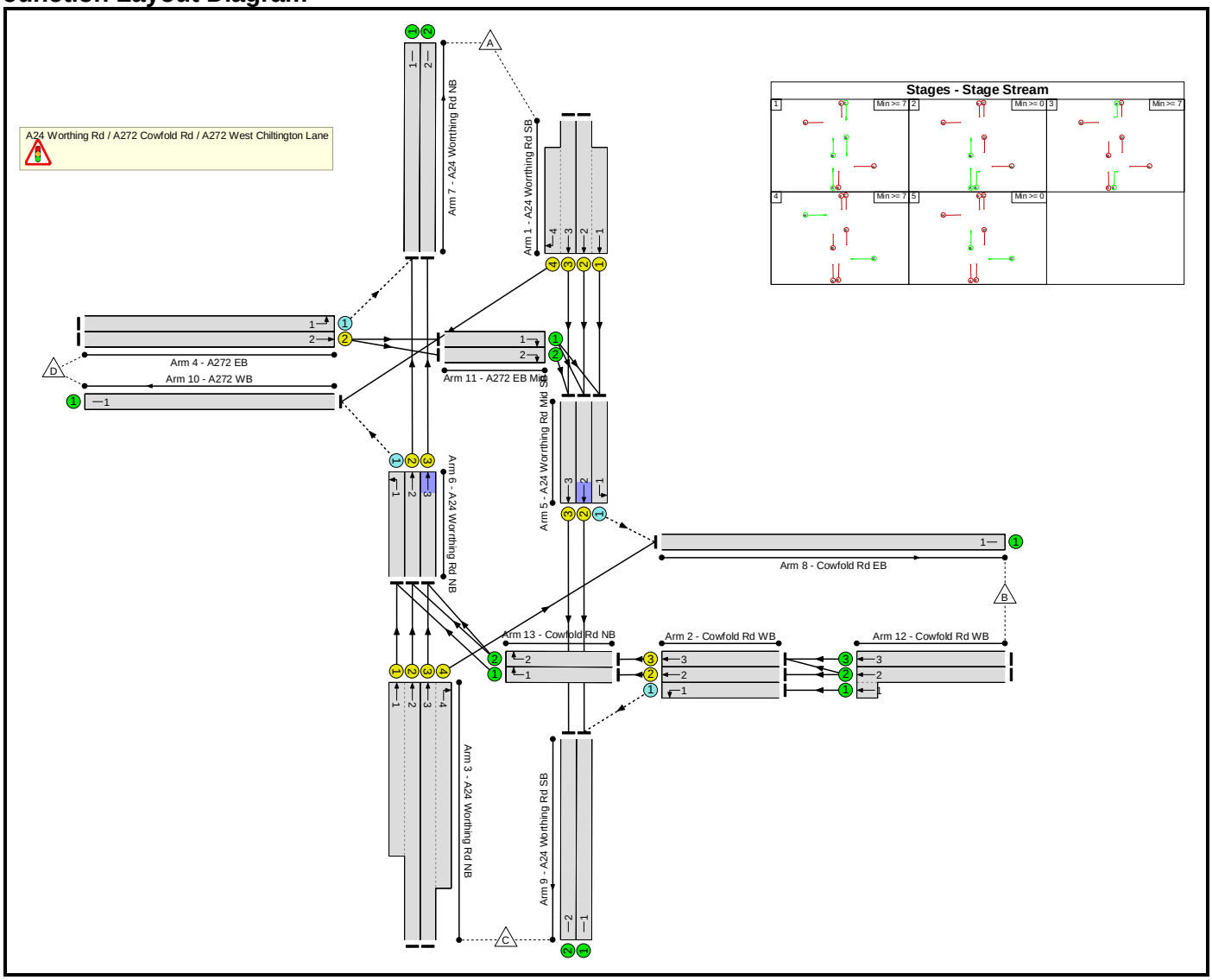
COWFOLD JUNCTION: ASSESSMENT RESULT FILES

TA Report

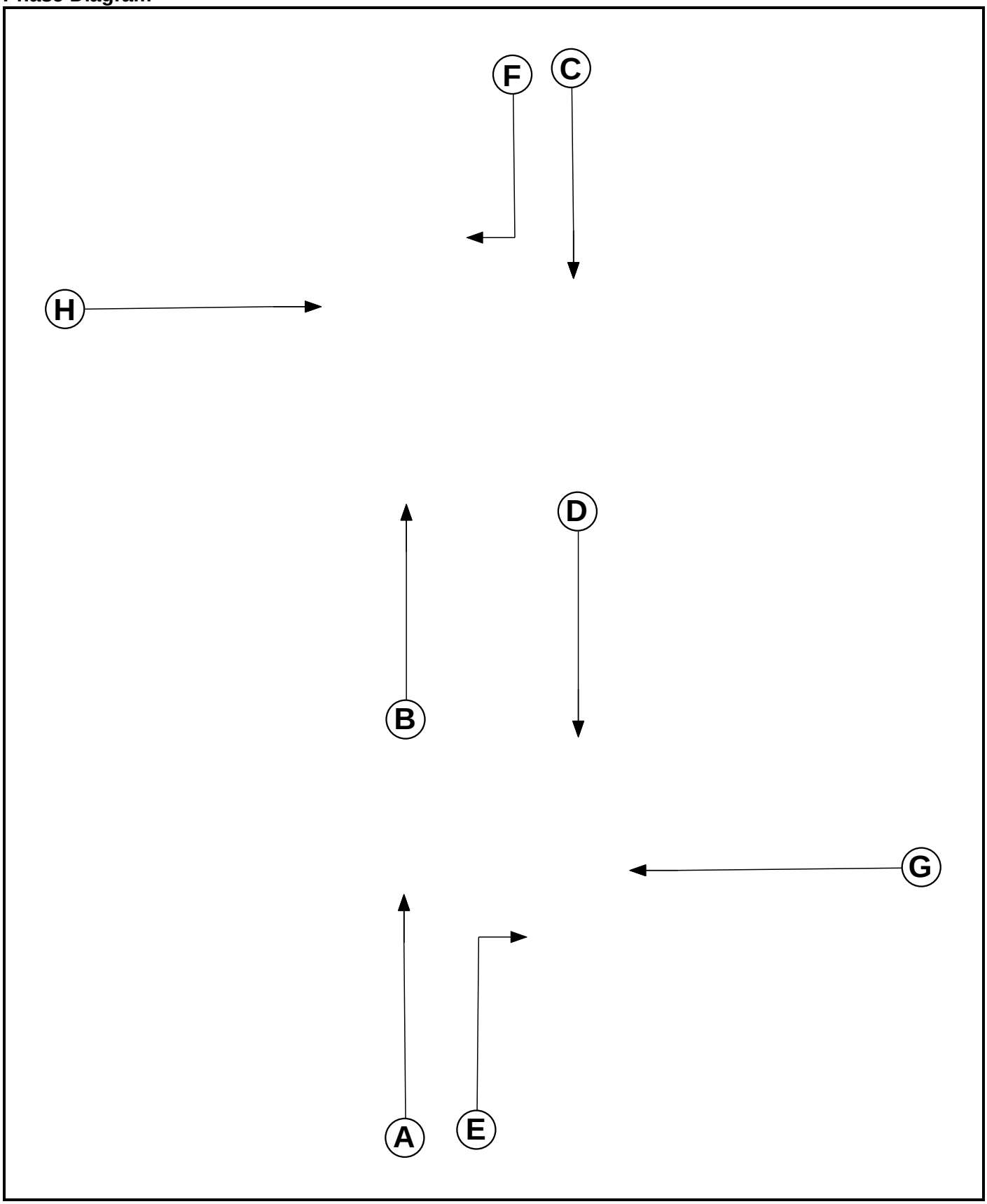
User and Project Details

Project:	**Southwater Junction Modelling**
Title:	**Worthing Rd / A272 Cowfold Rd / A272 West Chiltington Lane**
Location:	Horsham, UK
Additional detail:	Existing Junction
File name:	A24 Worthing Rd-A272 Cowfold Rd-West Chilinton Ln_v2 20191002.lsg3x
Author:	Anita Manda
Company:	WSP
Address:	Noida, India

Junction Layout Diagram



Phase Diagram



TA Report

Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		-9999	7
B	Traffic	1		-9999	7
C	Traffic	1		-9999	7
D	Traffic	1		-9999	7
E	Traffic	1		-9999	7
F	Traffic	1		-9999	7
G	Traffic	1		-9999	7
H	Traffic	1		-9999	7

Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H
A		-	-	-	-	-	7	-
B	-		-	-	-	7	-	7
C	-	-		-	-	-	-	7
D	-	-	-		7	-	7	-
E	-	-	5	5		-	5	-
F	5	5	-	-	-		-	5
G	5	-	5	5	5	-		-
H	5	5	7	-	-	7	-	

Scenario 1: '2018 Base AM' (FG1: '2018 Base AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Actual

Actual Flow :

Origin \ Destination	A	B	C	D	Tot.
A	0	218	754	115	1087
B	301	0	395	239	935
C	1106	440	0	49	1595
D	176	235	66	0	477
Tot.	1583	893	1215	403	4094

Phase Timings

Phase Name	Description	Phase	Stage Stream	Green Period 1		
				Total Green	Start Time	End Time
A	A24 Worthing Rd NB Ahead	Traffic	1	40	5	45
B	A24 Worrthing Rd NB Ahead	Traffic	1	48	0	48
C	A24 Worrthing Rd SB Ahead	Traffic	1	20	5	25
D	A24 Worrthing Rd Mid SB Ahead	Traffic	1	23	5	28
E	A24 Worthing Rd NB Right	Traffic	1	27	35	62
F	A24 Worrthing Rd SB Right	Traffic	1	7	55	62
G	Cowfold Rd WB Ahead	Traffic	1	25	67	0
H	A272 EB Ahead	Traffic	1	20	67	87

TA Report

Link Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Worthing Rd / A272 Cowfold Rd / A272 West Chiltington Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**79.0%**
A24 Worthing Rd / A272 Cowfold Rd / A272 West Chiltington Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**79.0%**
1/2+1/1	A24 Worrthing Rd SB Ahead	U	1	N/A	C		1	20	-	585	2156:1954	490+291	74.9 : 74.9%
1/3+1/4	A24 Worrthing Rd SB Ahead Right	U	1	N/A	C F		1	20:7	-	502	2161:2046	493+178	78.5 : 64.6%
2/1	Cowfold Rd WB Left	O	N/A	N/A	-		-	-	-	395	Inf	631	62.6%
2/2	Cowfold Rd WB Ahead	U	1	N/A	G		1	25	-	239	1832	518	46.2%
2/3	Cowfold Rd WB Ahead	U	1	N/A	G		1	25	-	301	1483	419	71.8%
3/2+3/1	A24 Worthing Rd NB Ahead	U	1	N/A	A		1	40	-	649	1870:1870	829+68	72.4 : 72.4%
3/3+3/4	A24 Worthing Rd NB Ahead Right	U	1	N/A	A E		1	40:27	-	946	2069:1833	922+558	54.9 : 78.9%
4/1	A272 EB Left	O	N/A	N/A	-		-	-	-	176	1940	561	31.4%
4/2	A272 EB Ahead	U	1	N/A	H		1	20	-	301	1670	381	79.0%
5/1	A24 Worrthing Rd Mid SB Left	O	N/A	N/A	-		-	-	-	453	1940	618	73.3%
5/2	A24 Worrthing Rd Mid SB Ahead	U	1	N/A	D		1	23	-	381	2021	527	72.3%
5/3	A24 Worrthing Rd Mid SB Ahead	U	1	N/A	D		1	23	-	439	2338	610	72.0%
6/1	A24 Worrthing Rd NB Left	O	N/A	N/A	-		-	-	-	288	1940	690	41.8%

6/2	A24 Worrthing Rd NB Ahead	U	1	N/A	B		1	48	-	699	2017	1074	65.1%
6/3	A24 Worrthing Rd NB Ahead	U	1	N/A	B		1	48	-	708	2380	1268	55.9%
11/1	A272 EB Mid Right	U	N/A	N/A	-		-	-	-	249	1940	1940	12.8%
11/2	A272 EB Mid Right	U	N/A	N/A	-		-	-	-	52	2080	2080	2.5%
12/2+12/1	Cowfold Rd WB Ahead	U	N/A	N/A	-		-	-	-	635	1940:1940	733+1207	32.7 : 32.7%
12/3	Cowfold Rd WB Ahead	U	N/A	N/A	-		-	-	-	300	2080	2080	14.4%
13/1	Cowfold Rd NB Right	U	N/A	N/A	-		-	-	-	239	1940	1940	12.3%
13/2	Cowfold Rd NB Right	U	N/A	N/A	-		-	-	-	301	2080	2080	14.5%

TA Report

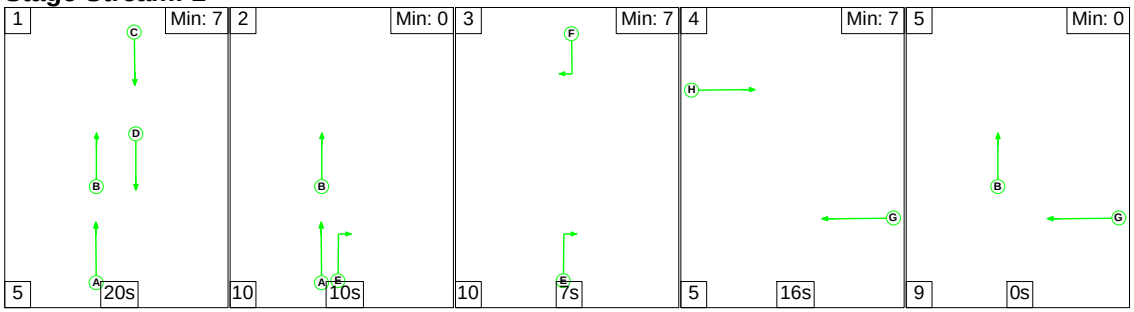
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Worthing Rd / A272 Cowfold Rd / A272 West Chiltington Lane	**-**	**-**	**206**	**1106**	**0**	**30.0**	**16.0**	**0.0**	**46.0**	**-**	**-**	**-**	**-**
A24 Worthing Rd / A272 Cowfold Rd / A272 West Chiltington Lane	**-**	**-**	**206**	**1106**	**0**	**30.0**	**16.0**	**0.0**	**46.0**	**-**	**-**	**-**	**-**
1/2+1/1	585	585	-	-	-	5.2	1.5	-	6.7	41.3	8.7	1.5	10.1
1/3+1/4	502	502	-	-	-	4.9	1.5	-	6.3	45.5	9.2	1.5	10.7
2/1	395	395	99	296	0	0.1	0.8	-	0.9	8.1	2.4	0.8	3.2
2/2	239	239	-	-	-	1.8	0.4	-	2.2	33.7	5.0	0.4	5.4
2/3	301	301	-	-	-	2.5	1.2	-	3.7	44.6	6.9	1.2	8.1
3/2+3/1	649	649	-	-	-	3.7	1.3	-	5.0	27.5	12.5	1.3	13.8
3/3+3/4	946	946	-	-	-	6.2	0.9	-	7.1	27.0	10.3	0.9	11.1
4/1	176	176	94	82	0	0.0	0.2	-	0.2	4.7	0.0	0.2	0.2
4/2	301	301	-	-	-	2.8	1.8	-	4.6	54.9	7.2	1.8	9.0
5/1	453	453	14	439	0	1.0	1.3	-	2.3	18.3	11.5	1.3	12.8
5/2	381	381	-	-	-	0.1	1.3	-	1.4	13.1	0.4	1.3	1.7
5/3	439	439	-	-	-	0.3	1.3	-	1.5	12.5	1.4	1.3	2.6
6/1	288	288	0	288	0	0.5	0.4	-	0.8	10.3	6.7	0.4	7.1
6/2	699	699	-	-	-	0.3	0.9	-	1.3	6.4	2.5	0.9	3.4
6/3	708	708	-	-	-	0.7	0.6	-	1.4	6.9	6.0	0.6	6.6
11/1	249	249	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
11/2	52	52	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0
12/2+12/1	635	635	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
12/3	300	300	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
13/1	239	239	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
13/2	301	301	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1

TA Report

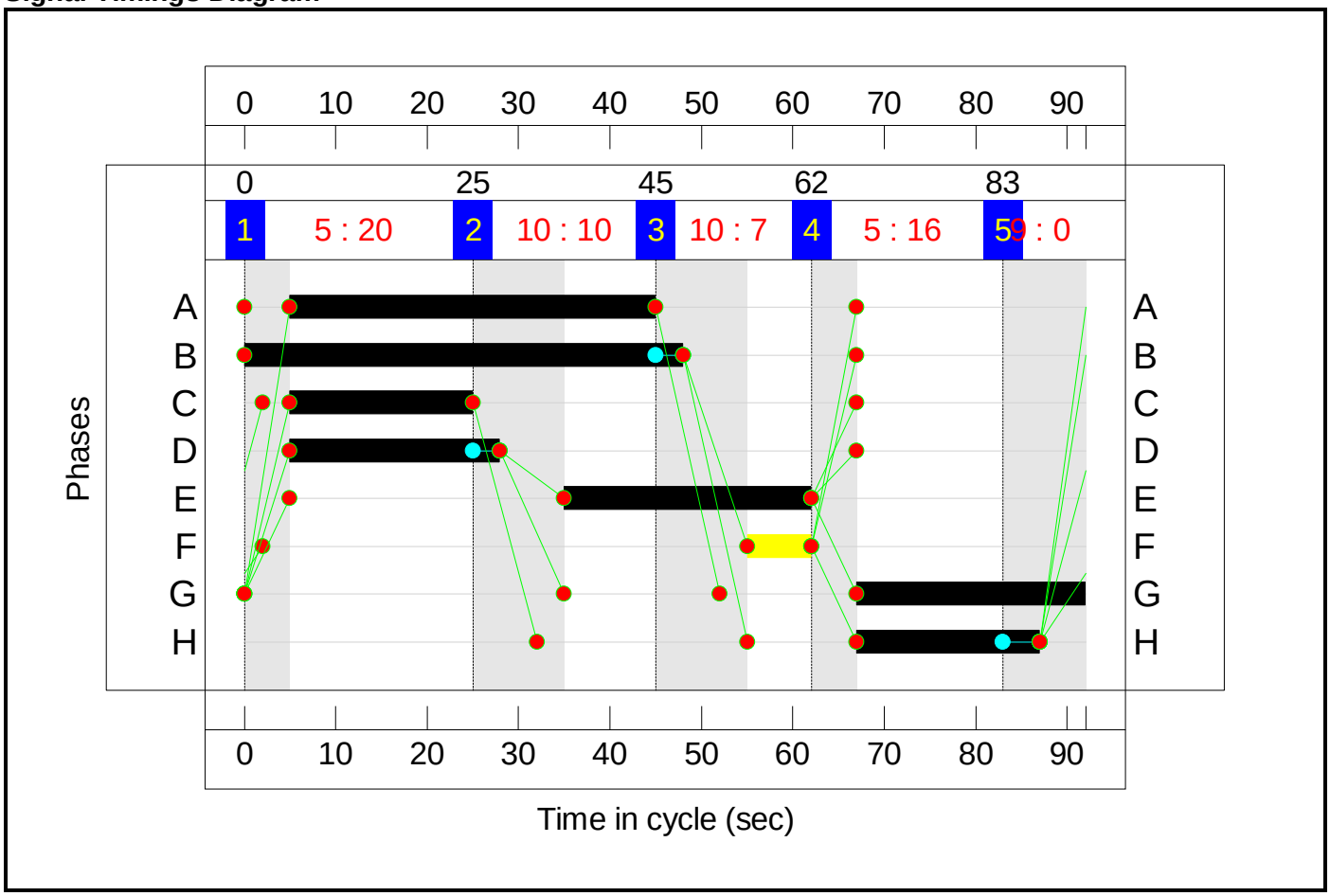
C1	Stream: 1	PRC for Signalled Lanes (%):	14.0	Total Delay for Signalled Lanes (pcuHr):	41.18	Cycle Time (s):	92
		PRC Over All Lanes (%):	14.0	Total Delay Over All Lanes(pcuHr):	46.00		

Staging Plan Diagram

Stage Stream: 1



Signal Timings Diagram



Scenario 2: '2018 Base PM' (FG2: '2018 Base PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Actual

Actual Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	321	1359	157	1837
	B	274	0	508	232	1014
	C	747	380	0	33	1160
	D	117	238	72	0	427
	Tot.	1138	939	1939	422	4438

Phase Timings

Phase Name	Description	Phase	Stage Stream	Green Period 1		
				Total Green	Start Time	End Time
A	A24 Worthing Rd NB Ahead	Traffic	1	61	5	66
B	A24 Worrthing Rd NB Ahead	Traffic	1	69	0	69
C	A24 Worrthing Rd SB Ahead	Traffic	1	46	5	51
D	A24 Worrthing Rd Mid SB Ahead	Traffic	1	49	5	54
E	A24 Worthing Rd NB Right	Traffic	1	25	61	86
F	A24 Worrthing Rd SB Right	Traffic	1	10	76	86
G	Cowfold Rd WB Ahead	Traffic	1	27	91	0
H	A272 EB Ahead	Traffic	1	22	91	113

TA Report

Link Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Worthing Rd / A272 Cowfold Rd / A272 West Chiltington Lane	-	-	**N/A**	-	-		-	-	-	-	-	-	**95.6%**
A24 Worthing Rd / A272 Cowfold Rd / A272 West Chiltington Lane	-	-	**N/A**	-	-		-	-	-	-	-	-	**95.6%**
1/2+1/1	A24 Worrthing Rd SB Ahead	U	1	N/A	C		1	46	-	982	2156:1954	692+336	95.6 : 95.6%
1/3+1/4	A24 Worrthing Rd SB Ahead Right	U	1	N/A	C F		1	46:10	-	855	2161:2046	792+191	88.1 : 82.3%
2/1	Cowfold Rd WB Left	O	N/A	N/A	-		-	-	-	508	Inf	567	89.6%
2/2	Cowfold Rd WB Ahead	U	1	N/A	G		1	27	-	232	1832	435	53.4%
2/3	Cowfold Rd WB Ahead	U	1	N/A	G		1	27	-	274	1483	352	77.9%
3/2+3/1	A24 Worthing Rd NB Ahead	U	1	N/A	A		1	61	-	358	1870:1870	946+96	34.4 : 34.4%
3/3+3/4	A24 Worthing Rd NB Ahead Right	U	1	N/A	A E		1	61:25	-	802	2069:1833	707+404	59.7 : 94.1%
4/1	A272 EB Left	O	N/A	N/A	-		-	-	-	117	1940	618	18.9%
4/2	A272 EB Ahead	U	1	N/A	H		1	22	-	310	1670	326	95.2%
5/1	A24 Worrthing Rd Mid SB Left	O	N/A	N/A	-		-	-	-	559	1940	631	88.5%
5/2	A24 Worrthing Rd Mid SB Ahead	U	1	N/A	D		1	49	-	674	2021	856	78.7%
5/3	A24 Worrthing Rd Mid SB Ahead	U	1	N/A	D		1	49	-	757	2338	991	76.4%
6/1	A24 Worrthing Rd NB Left	O	N/A	N/A	-		-	-	-	265	1940	680	38.9%

6/2	A24 Worrthing Rd NB Ahead	U	1	N/A	B		1	69	-	443	2017	1197	37.0%
6/3	A24 Worrthing Rd NB Ahead	U	1	N/A	B		1	69	-	578	2380	1412	40.9%
11/1	A272 EB Mid Right	U	N/A	N/A	-		-	-	-	251	1940	1940	12.9%
11/2	A272 EB Mid Right	U	N/A	N/A	-		-	-	-	59	2080	2080	2.8%
12/2+12/1	Cowfold Rd WB Ahead	U	N/A	N/A	-		-	-	-	742	1940:1940	612+1328	38.2 : 38.2%
12/3	Cowfold Rd WB Ahead	U	N/A	N/A	-		-	-	-	272	2080	2080	13.1%
13/1	Cowfold Rd NB Right	U	N/A	N/A	-		-	-	-	232	1940	1940	12.0%
13/2	Cowfold Rd NB Right	U	N/A	N/A	-		-	-	-	274	2080	2080	13.2%

TA Report

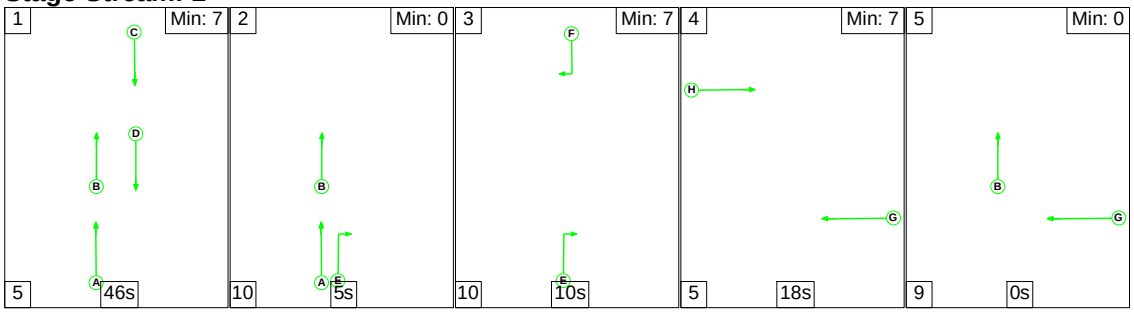
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Worthing Rd / A272 Cowfold Rd / A272 West Chiltington Lane	**-**	**-**	**271**	**1178**	**0**	**40.1**	**33.1**	**0.0**	**73.2**	**-**	**-**	**-**	**-**
A24 Worthing Rd / A272 Cowfold Rd / A272 West Chiltington Lane	**-**	**-**	**271**	**1178**	**0**	**40.1**	**33.1**	**0.0**	**73.2**	**-**	**-**	**-**	**-**
1/2+1/1	982	982	-	-	-	8.5	8.0	-	16.5	60.3	24.9	8.0	32.9
1/3+1/4	855	855	-	-	-	8.4	3.2	-	11.6	48.9	22.1	3.2	25.3
2/1	508	508	154	354	0	0.8	3.8	-	4.7	33.0	11.6	3.8	15.4
2/2	232	232	-	-	-	2.5	0.6	-	3.1	48.1	6.6	0.6	7.2
2/3	274	274	-	-	-	3.2	1.7	-	4.9	64.3	8.4	1.7	10.1
3/2+3/1	358	358	-	-	-	1.6	0.3	-	1.8	18.5	6.0	0.3	6.3
3/3+3/4	802	802	-	-	-	6.7	1.3	-	8.0	36.0	12.2	1.3	13.5
4/1	117	117	69	48	0	0.0	0.1	-	0.1	3.6	0.0	0.1	0.1
4/2	310	310	-	-	-	4.0	5.7	-	9.8	113.6	10.0	5.7	15.7
5/1	559	559	47	512	0	2.1	3.5	-	5.7	36.4	18.0	3.5	21.5
5/2	674	674	-	-	-	0.1	1.8	-	2.0	10.4	4.2	1.8	6.0
5/3	757	757	-	-	-	0.3	1.6	-	1.9	9.0	4.6	1.6	6.2
6/1	265	265	0	265	0	0.6	0.3	-	1.0	13.1	8.1	0.3	8.4
6/2	443	443	-	-	-	0.4	0.3	-	0.7	5.8	3.8	0.3	4.1
6/3	578	578	-	-	-	0.6	0.3	-	0.9	5.8	5.5	0.3	5.8
11/1	251	251	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
11/2	59	59	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0
12/2+12/1	742	742	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
12/3	272	272	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
13/1	232	232	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
13/2	274	274	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1

TA Report

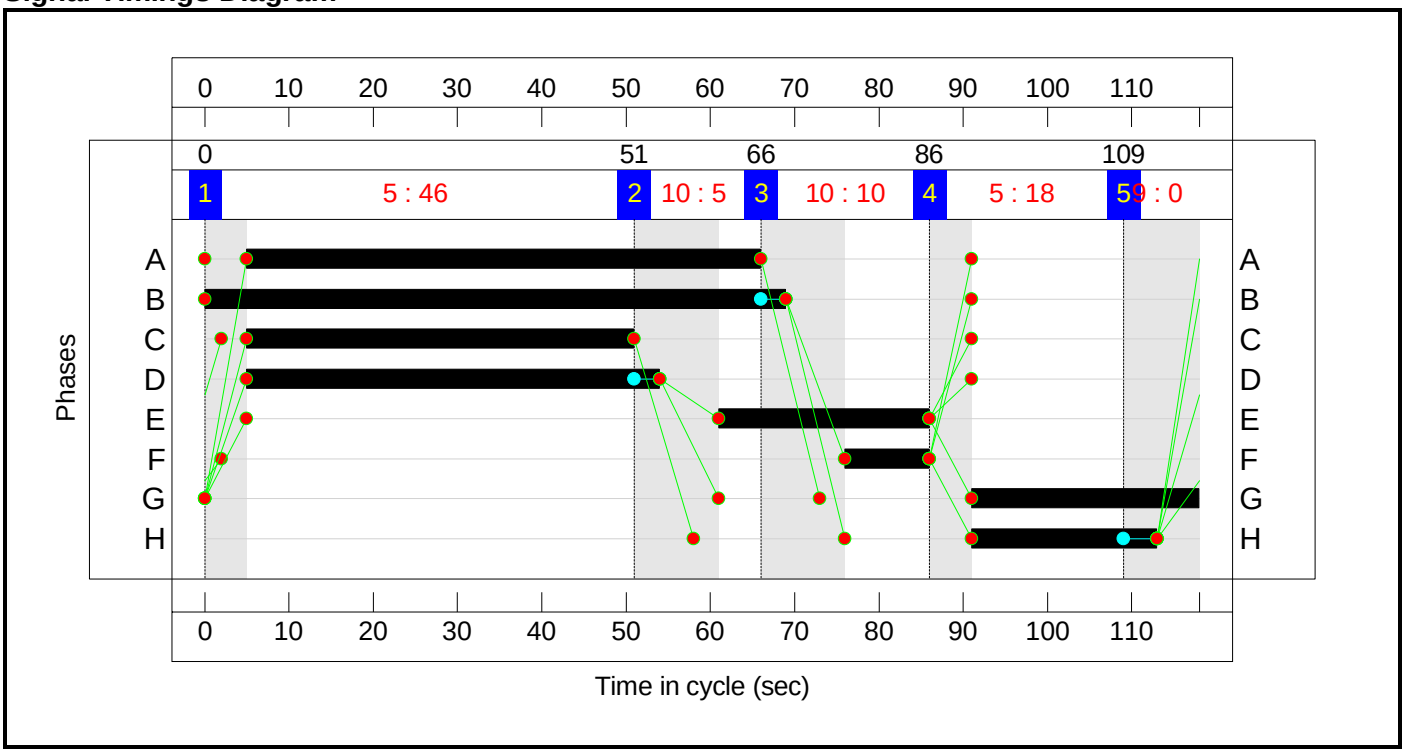
C1	Stream: 1	PRC for Signalled Lanes (%):	-6.2	Total Delay for Signalled Lanes (pcuHr):	61.21	Cycle Time (s):	118
		PRC Over All Lanes (%):	-6.2	Total Delay Over All Lanes(pcuHr):	73.21		

Staging Plan Diagram

Stage Stream: 1



Signal Timings Diagram



Scenario 3: '2036 Base AM' (FG3: '2036 Do Minimum AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Actual

Actual Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	277	927	103	1307
	B	365	0	417	236	1018
	C	1315	522	0	49	1886
	D	161	247	63	0	471
	Tot.	1841	1046	1407	388	4682

Phase Timings

Phase Name	Description	Phase	Stage Stream	Green Period 1		
				Total Green	Start Time	End Time
A	A24 Worthing Rd NB Ahead	Traffic	1	41	5	46
B	A24 Worrthing Rd NB Ahead	Traffic	1	49	0	49
C	A24 Worrthing Rd SB Ahead	Traffic	1	21	5	26
D	A24 Worrthing Rd Mid SB Ahead	Traffic	1	24	5	29
E	A24 Worthing Rd NB Right	Traffic	1	27	36	63
F	A24 Worrthing Rd SB Right	Traffic	1	7	56	63
G	Cowfold Rd WB Ahead	Traffic	1	24	68	0
H	A272 EB Ahead	Traffic	1	19	68	87

TA Report

Link Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Worthing Rd / A272 Cowfold Rd / A272 West Chiltington Lane	-	-	**N/A**	-	-		-	-	-	-	-	-	**93.6%**
A24 Worthing Rd / A272 Cowfold Rd / A272 West Chiltington Lane	-	-	**N/A**	-	-		-	-	-	-	-	-	**93.6%**
1/2+1/1	A24 Worrthing Rd SB Ahead	U	1	N/A	C		1	21	-	733	2156:1954	504+306	90.5 : 90.5%
1/3+1/4	A24 Worrthing Rd SB Ahead Right	U	1	N/A	C F		1	21:7	-	574	2161:2046	517+113	91.1 : 91.1%
2/1	Cowfold Rd WB Left	O	N/A	N/A	-		-	-	-	417	Inf	612	68.2%
2/2	Cowfold Rd WB Ahead	U	1	N/A	G		1	24	-	236	1832	498	47.4%
2/3	Cowfold Rd WB Ahead	U	1	N/A	G		1	24	-	365	1483	403	90.6%
3/2+3/1	A24 Worthing Rd NB Ahead	U	1	N/A	A		1	41	-	648	1870:1870	847+69	70.7 : 70.7%
3/3+3/4	A24 Worthing Rd NB Ahead Right	U	1	N/A	A E		1	41:27	-	1238	2069:1833	945+558	75.8 : 93.6%
4/1	A272 EB Left	O	N/A	N/A	-		-	-	-	161	1940	549	29.3%
4/2	A272 EB Ahead	U	1	N/A	H		1	19	-	310	1670	363	85.4%
5/1	A24 Worrthing Rd Mid SB Left	O	N/A	N/A	-		-	-	-	524	1940	600	87.3%
5/2	A24 Worrthing Rd Mid SB Ahead	U	1	N/A	D		1	24	-	469	2021	549	85.4%
5/3	A24 Worrthing Rd Mid SB Ahead	U	1	N/A	D		1	24	-	521	2338	635	82.0%
6/1	A24 Worrthing Rd NB Left	O	N/A	N/A	-		-	-	-	285	1940	692	41.2%

6/2	A24 Worrthing Rd NB Ahead	U	1	N/A	B		1	49	-	756	2017	1096	69.0%
6/3	A24 Worrthing Rd NB Ahead	U	1	N/A	B		1	49	-	924	2380	1293	71.4%
11/1	A272 EB Mid Right	U	N/A	N/A	-		-	-	-	260	1940	1940	13.4%
11/2	A272 EB Mid Right	U	N/A	N/A	-		-	-	-	50	2080	2080	2.4%
12/2+12/1	Cowfold Rd WB Ahead	U	N/A	N/A	-		-	-	-	654	1940:1940	703+1237	33.7 : 33.7%
12/3	Cowfold Rd WB Ahead	U	N/A	N/A	-		-	-	-	364	2080	2080	17.5%
13/1	Cowfold Rd NB Right	U	N/A	N/A	-		-	-	-	236	1940	1940	12.2%
13/2	Cowfold Rd NB Right	U	N/A	N/A	-		-	-	-	365	2080	2080	17.5%

TA Report

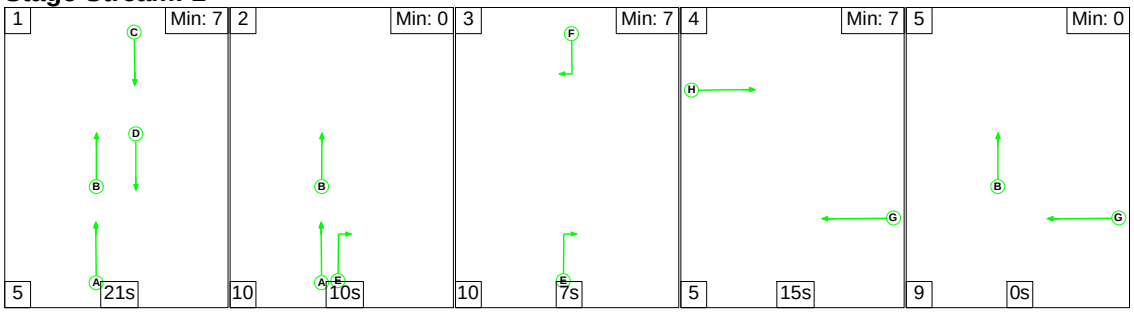
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Worthing Rd / A272 Cowfold Rd / A272 West Chiltington Lane	**-**	**-**	**260**	**1127**	**0**	**36.3**	**32.0**	**0.0**	**68.3**	**-**	**-**	**-**	**-**
A24 Worthing Rd / A272 Cowfold Rd / A272 West Chiltington Lane	**-**	**-**	**260**	**1127**	**0**	**36.3**	**32.0**	**0.0**	**68.3**	**-**	**-**	**-**	**-**
1/2+1/1	733	733	-	-	-	6.7	4.3	-	11.0	53.9	11.1	4.3	15.5
1/3+1/4	574	574	-	-	-	5.6	4.4	-	10.1	63.0	11.6	4.4	16.1
2/1	417	417	88	329	0	0.1	1.1	-	1.2	10.3	3.4	1.1	4.4
2/2	236	236	-	-	-	1.8	0.4	-	2.3	34.9	5.0	0.4	5.4
2/3	365	365	-	-	-	3.3	4.0	-	7.3	71.5	8.9	4.0	12.9
3/2+3/1	648	648	-	-	-	3.5	1.2	-	4.7	26.2	12.1	1.2	13.3
3/3+3/4	1238	1238	-	-	-	8.6	2.3	-	10.9	31.8	15.1	2.3	17.4
4/1	161	161	87	73	0	0.0	0.2	-	0.2	4.6	0.0	0.2	0.2
4/2	310	310	-	-	-	3.0	2.7	-	5.6	65.4	7.6	2.7	10.2
5/1	524	524	85	439	0	1.7	3.2	-	4.9	33.7	13.3	3.2	16.5
5/2	469	469	-	-	-	0.1	2.7	-	2.9	22.1	1.9	2.7	4.7
5/3	521	521	-	-	-	0.2	2.2	-	2.4	16.8	1.3	2.2	3.5
6/1	285	285	0	285	0	0.5	0.3	-	0.8	10.3	6.6	0.3	7.0
6/2	756	756	-	-	-	0.4	1.1	-	1.5	7.3	4.0	1.1	5.1
6/3	924	924	-	-	-	0.6	1.2	-	1.9	7.2	6.2	1.2	7.4
11/1	260	260	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
11/2	50	50	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0
12/2+12/1	654	654	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
12/3	364	364	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
13/1	236	236	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
13/2	365	365	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1

TA Report

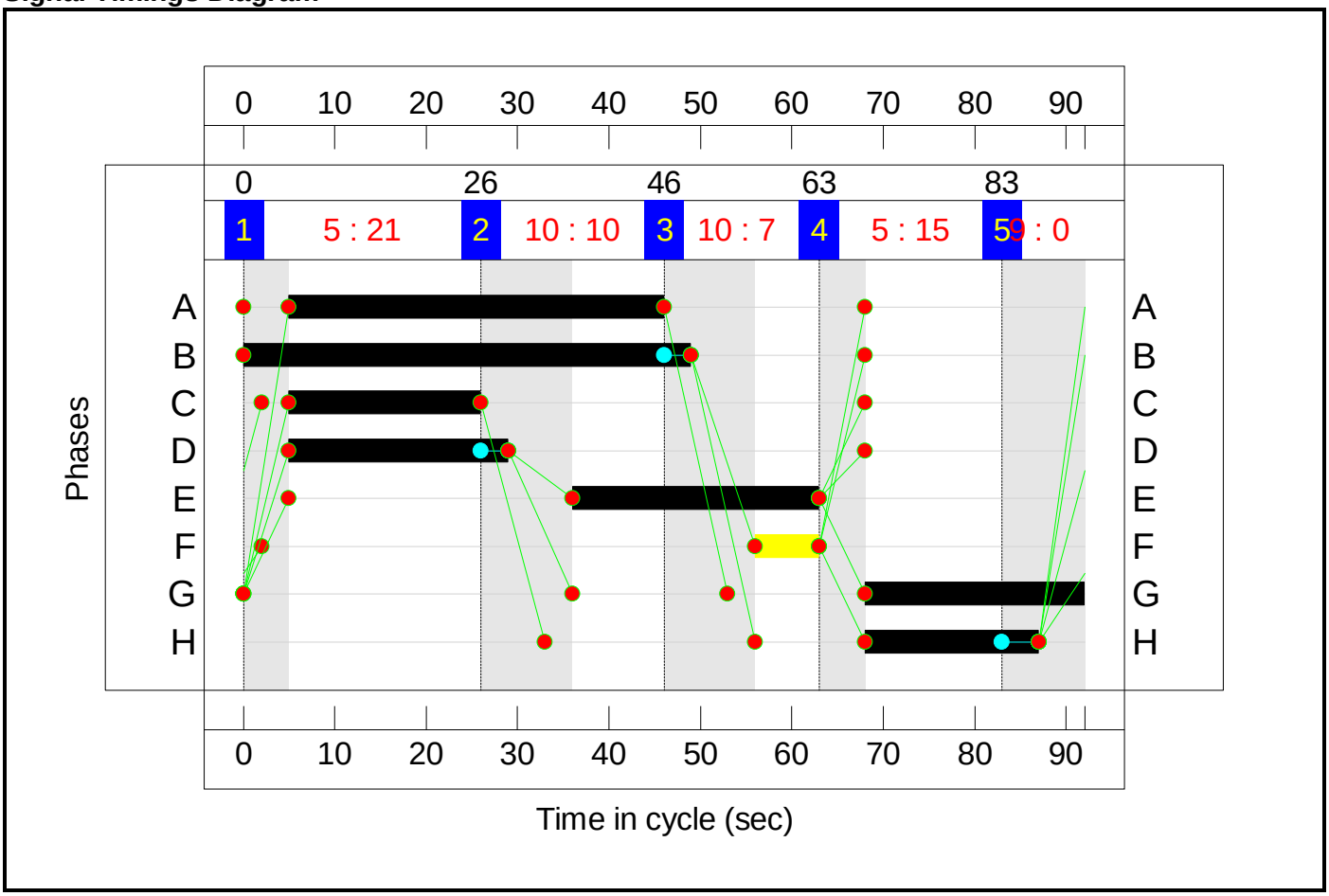
C1	Stream: 1	PRC for Signalled Lanes (%):	-4.0	Total Delay for Signalled Lanes (pcuHr):	60.56	Cycle Time (s):	92
		PRC Over All Lanes (%):	-4.0	Total Delay Over All Lanes(pcuHr):	68.31		

Staging Plan Diagram

Stage Stream: 1



Signal Timings Diagram



Scenario 4: '2036 Base PM' (FG4: '2036 Do Minimum PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Actual

Actual Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	350	1485	168	2003
	B	292	0	508	232	1032
	C	828	380	0	33	1241
	D	125	238	72	0	435
	Tot.	1245	968	2065	433	4711

Phase Timings

Phase Name	Description	Phase	Stage Stream	Green Period 1		
				Total Green	Start Time	End Time
A	A24 Worthing Rd NB Ahead	Traffic	1	61	5	66
B	A24 Worrthing Rd NB Ahead	Traffic	1	69	0	69
C	A24 Worrthing Rd SB Ahead	Traffic	1	47	5	52
D	A24 Worrthing Rd Mid SB Ahead	Traffic	1	50	5	55
E	A24 Worthing Rd NB Right	Traffic	1	24	62	86
F	A24 Worrthing Rd SB Right	Traffic	1	10	76	86
G	Cowfold Rd WB Ahead	Traffic	1	27	91	0
H	A272 EB Ahead	Traffic	1	22	91	113

TA Report

Link Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Worthing Rd / A272 Cowfold Rd / A272 West Chiltington Lane	-	-	**N/A**	-	-		-	-	-	-	-	-	**99.1%**
A24 Worthing Rd / A272 Cowfold Rd / A272 West Chiltington Lane	-	-	**N/A**	-	-		-	-	-	-	-	-	**99.1%**
1/2+1/1	A24 Worrthing Rd SB Ahead	U	1	N/A	C		1	47	-	1030	2156:1954	697+359	97.6 : 97.6%
1/3+1/4	A24 Worrthing Rd SB Ahead Right	U	1	N/A	C F		1	47:10	-	973	2161:2046	812+191	99.1 : 88.1%
2/1	Cowfold Rd WB Left	O	N/A	N/A	-		-	-	-	508	Inf	559	90.8%
2/2	Cowfold Rd WB Ahead	U	1	N/A	G		1	27	-	232	1832	435	53.4%
2/3	Cowfold Rd WB Ahead	U	1	N/A	G		1	27	-	292	1483	352	83.0%
3/2+3/1	A24 Worthing Rd NB Ahead	U	1	N/A	A		1	61	-	861	1870:1870	971+39	85.2 : 85.2%
3/3+3/4	A24 Worthing Rd NB Ahead Right	U	1	N/A	A E		1	61:24	-	380	2069:1833	0+388	0.0 : 97.9%
4/1	A272 EB Left	O	N/A	N/A	-		-	-	-	125	1940	521	24.0%
4/2	A272 EB Ahead	U	1	N/A	H		1	22	-	310	1670	326	95.2%
5/1	A24 Worrthing Rd Mid SB Left	O	N/A	N/A	-		-	-	-	588	1940	631	93.1%
5/2	A24 Worrthing Rd Mid SB Ahead	U	1	N/A	D		1	50	-	708	2021	873	81.1%
5/3	A24 Worrthing Rd Mid SB Ahead	U	1	N/A	D		1	50	-	849	2338	1010	84.0%
6/1	A24 Worrthing Rd NB Left	O	N/A	N/A	-		-	-	-	265	1940	678	39.1%

6/2	A24 Worrthing Rd NB Ahead	U	1	N/A	B		1	69	-	881	2017	1197	73.6%
6/3	A24 Worrthing Rd NB Ahead	U	1	N/A	B		1	69	-	239	2380	1412	16.9%
11/1	A272 EB Mid Right	U	N/A	N/A	-		-	-	-	266	1940	1940	13.7%
11/2	A272 EB Mid Right	U	N/A	N/A	-		-	-	-	44	2080	2080	2.1%
12/2+12/1	Cowfold Rd WB Ahead	U	N/A	N/A	-		-	-	-	740	1940:1940	608+1332	38.1 : 38.1%
12/3	Cowfold Rd WB Ahead	U	N/A	N/A	-		-	-	-	292	2080	2080	14.0%
13/1	Cowfold Rd NB Right	U	N/A	N/A	-		-	-	-	232	1940	1940	12.0%
13/2	Cowfold Rd NB Right	U	N/A	N/A	-		-	-	-	292	2080	2080	14.0%

TA Report

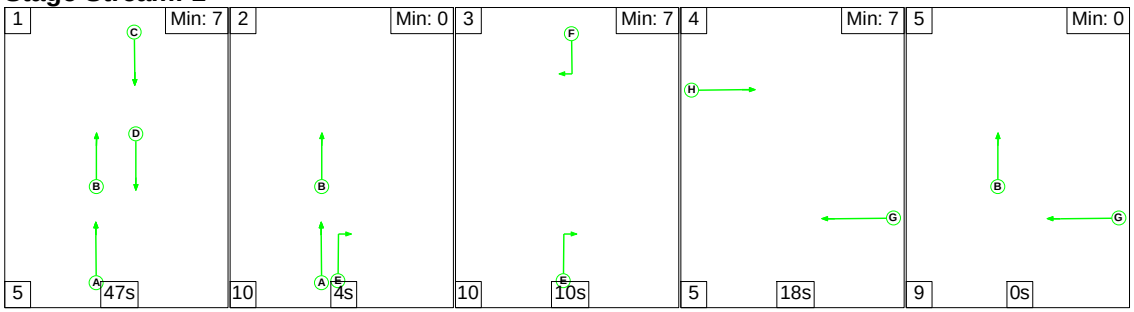
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Worthing Rd / A272 Cowfold Rd / A272 West Chiltington Lane	**-**	**-**	**295**	**1191**	**0**	**45.1**	**56.8**	**0.0**	**101.9**	**-**	**-**	**-**	**-**
A24 Worthing Rd / A272 Cowfold Rd / A272 West Chiltington Lane	**-**	**-**	**295**	**1191**	**0**	**45.1**	**56.8**	**0.0**	**101.9**	**-**	**-**	**-**	**-**
1/2+1/1	1030	1030	-	-	-	8.9	10.9	-	19.7	69.0	26.6	10.9	37.5
1/3+1/4	973	973	-	-	-	10.0	9.8	-	19.8	73.2	28.6	9.8	38.4
2/1	508	508	153	355	0	0.9	4.3	-	5.2	36.8	12.4	4.3	16.7
2/2	232	232	-	-	-	2.5	0.6	-	3.1	48.1	6.6	0.6	7.2
2/3	292	292	-	-	-	3.5	2.3	-	5.7	70.7	9.1	2.3	11.4
3/2+3/1	861	861	-	-	-	5.6	2.8	-	8.4	35.2	23.4	2.8	26.2
3/3+3/4	380	380	-	-	-	4.9	7.9	-	12.8	120.9	12.4	7.9	20.2
4/1	125	125	74	51	0	0.0	0.2	-	0.2	4.5	0.0	0.2	0.2
4/2	310	310	-	-	-	4.0	5.7	-	9.8	113.6	10.0	5.7	15.7
5/1	588	588	68	520	0	2.5	5.4	-	7.9	48.4	19.0	5.4	24.4
5/2	708	708	-	-	-	0.2	2.1	-	2.3	11.7	4.1	2.1	6.2
5/3	849	849	-	-	-	0.2	2.5	-	2.8	11.9	1.5	2.5	4.1
6/1	265	265	0	265	0	0.6	0.3	-	1.0	13.1	8.1	0.3	8.4
6/2	881	881	-	-	-	0.2	1.4	-	1.6	6.4	1.7	1.4	3.1
6/3	239	239	-	-	-	1.0	0.1	-	1.1	16.0	7.8	0.1	7.9
11/1	266	266	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
11/2	44	44	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0
12/2+12/1	740	740	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
12/3	292	292	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
13/1	232	232	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
13/2	292	292	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1

TA Report

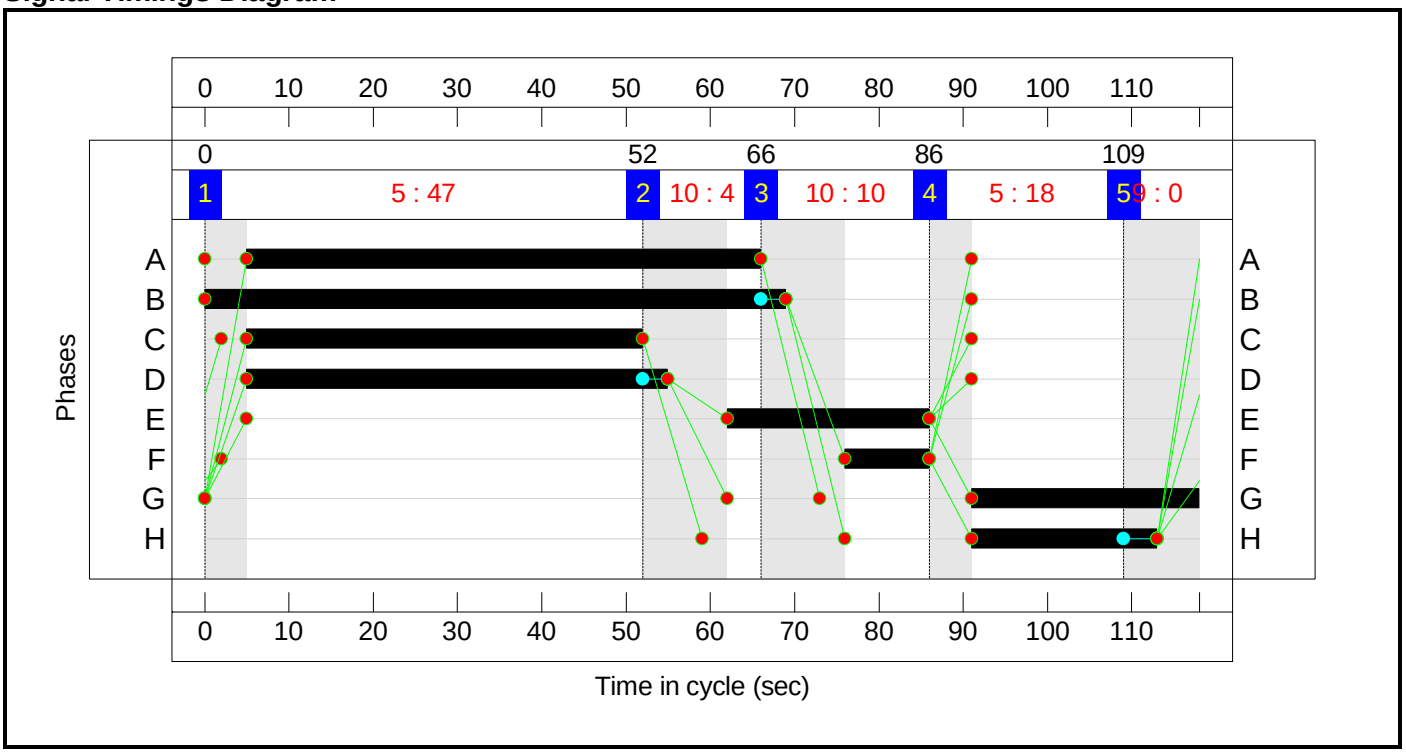
C1	Stream: 1	PRC for Signalled Lanes (%):	-10.1	Total Delay for Signalled Lanes (pcuHr):	87.03	Cycle Time (s):	118
		PRC Over All Lanes (%):	-10.1	Total Delay Over All Lanes(pcuHr):	101.89		

Staging Plan Diagram

Stage Stream: 1



Signal Timings Diagram



Scenario 5: '2036 Do Something AM' (FG5: '2036 Do Something AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Actual

Actual Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	290	939	111	1340
	B	370	0	417	236	1023
	C	1320	522	0	49	1891
	D	164	247	63	0	474
	Tot.	1854	1059	1419	396	4728

Phase Timings

Phase Name	Description	Phase	Stage Stream	Green Period 1		
				Total Green	Start Time	End Time
A	A24 Worthing Rd NB Ahead	Traffic	1	41	5	46
B	A24 Worrthing Rd NB Ahead	Traffic	1	49	0	49
C	A24 Worrthing Rd SB Ahead	Traffic	1	21	5	26
D	A24 Worrthing Rd Mid SB Ahead	Traffic	1	24	5	29
E	A24 Worthing Rd NB Right	Traffic	1	27	36	63
F	A24 Worrthing Rd SB Right	Traffic	1	7	56	63
G	Cowfold Rd WB Ahead	Traffic	1	24	68	0
H	A272 EB Ahead	Traffic	1	19	68	87

TA Report

Link Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Worthing Rd / A272 Cowfold Rd / A272 West Chiltington Lane	-	-	**N/A**	-	-		-	-	-	-	-	-	**93.6%**
A24 Worthing Rd / A272 Cowfold Rd / A272 West Chiltington Lane	-	-	**N/A**	-	-		-	-	-	-	-	-	**93.6%**
1/2+1/1	A24 Worrthing Rd SB Ahead	U	1	N/A	C		1	21	-	752	2156:1954	503+316	91.8 : 91.8%
1/3+1/4	A24 Worrthing Rd SB Ahead Right	U	1	N/A	C F		1	21:7	-	588	2161:2046	517+120	92.3 : 92.3%
2/1	Cowfold Rd WB Left	O	N/A	N/A	-		-	-	-	417	Inf	611	68.3%
2/2	Cowfold Rd WB Ahead	U	1	N/A	G		1	24	-	236	1832	498	47.4%
2/3	Cowfold Rd WB Ahead	U	1	N/A	G		1	24	-	370	1483	403	91.8%
3/2+3/1	A24 Worthing Rd NB Ahead	U	1	N/A	A		1	41	-	655	1870:1870	847+69	71.5 : 71.5%
3/3+3/4	A24 Worthing Rd NB Ahead Right	U	1	N/A	A E		1	41:27	-	1236	2069:1833	945+558	75.6 : 93.6%
4/1	A272 EB Left	O	N/A	N/A	-		-	-	-	164	1940	547	30.0%
4/2	A272 EB Ahead	U	1	N/A	H		1	19	-	310	1670	363	85.4%
5/1	A24 Worrthing Rd Mid SB Left	O	N/A	N/A	-		-	-	-	537	1940	600	89.5%
5/2	A24 Worrthing Rd Mid SB Ahead	U	1	N/A	D		1	24	-	473	2021	549	86.1%
5/3	A24 Worrthing Rd Mid SB Ahead	U	1	N/A	D		1	24	-	529	2338	635	83.3%
6/1	A24 Worrthing Rd NB Left	O	N/A	N/A	-		-	-	-	285	1940	691	41.3%

6/2	A24 Worrthing Rd NB Ahead	U	1	N/A	B		1	49	-	764	2017	1096	69.7%
6/3	A24 Worrthing Rd NB Ahead	U	1	N/A	B		1	49	-	926	2380	1293	71.6%
11/1	A272 EB Mid Right	U	N/A	N/A	-		-	-	-	258	1940	1940	13.3%
11/2	A272 EB Mid Right	U	N/A	N/A	-		-	-	-	52	2080	2080	2.5%
12/2+12/1	Cowfold Rd WB Ahead	U	N/A	N/A	-		-	-	-	653	1940:1940	701+1239	33.7 : 33.7%
12/3	Cowfold Rd WB Ahead	U	N/A	N/A	-		-	-	-	370	2080	2080	17.8%
13/1	Cowfold Rd NB Right	U	N/A	N/A	-		-	-	-	236	1940	1940	12.2%
13/2	Cowfold Rd NB Right	U	N/A	N/A	-		-	-	-	370	2080	2080	17.8%

TA Report

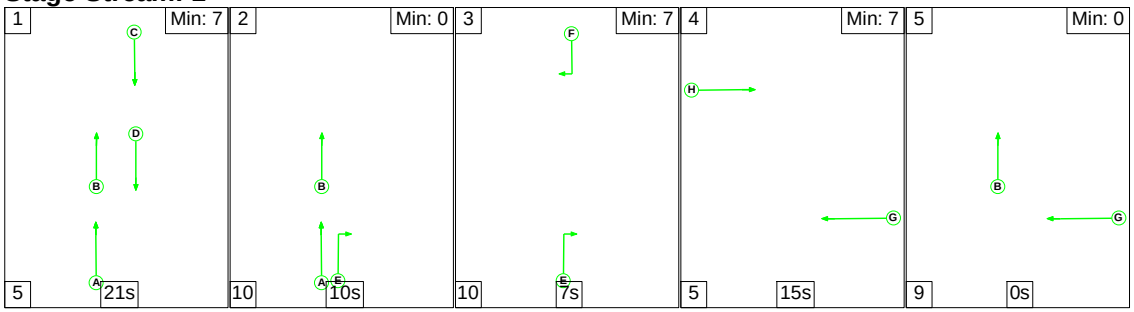
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Worthing Rd / A272 Cowfold Rd / A272 West Chiltington Lane	**-**	**-**	**273**	**1130**	**0**	**36.9**	**34.6**	**0.0**	**71.6**	**-**	**-**	**-**	**-**
A24 Worthing Rd / A272 Cowfold Rd / A272 West Chiltington Lane	**-**	**-**	**273**	**1130**	**0**	**36.9**	**34.6**	**0.0**	**71.6**	**-**	**-**	**-**	**-**
1/2+1/1	752	752	-	-	-	6.9	4.9	-	11.8	56.3	11.4	4.9	16.3
1/3+1/4	588	588	-	-	-	5.8	5.0	-	10.8	65.9	11.8	5.0	16.8
2/1	417	417	86	331	0	0.1	1.1	-	1.2	10.3	3.5	1.1	4.5
2/2	236	236	-	-	-	1.8	0.4	-	2.3	34.9	5.0	0.4	5.4
2/3	370	370	-	-	-	3.3	4.4	-	7.8	75.5	9.1	4.4	13.6
3/2+3/1	655	655	-	-	-	3.6	1.2	-	4.8	26.5	12.3	1.2	13.5
3/3+3/4	1236	1236	-	-	-	8.6	2.3	-	10.9	31.8	15.1	2.3	17.4
4/1	164	164	89	75	0	0.0	0.2	-	0.2	4.7	0.0	0.2	0.2
4/2	310	310	-	-	-	3.0	2.7	-	5.6	65.4	7.6	2.7	10.2
5/1	537	537	98	439	0	1.9	3.8	-	5.7	38.1	13.6	3.8	17.4
5/2	473	473	-	-	-	0.1	2.9	-	3.0	23.0	2.3	2.9	5.1
5/3	529	529	-	-	-	0.3	2.4	-	2.6	17.9	1.4	2.4	3.8
6/1	285	285	0	285	0	0.5	0.4	-	0.8	10.3	6.6	0.4	7.0
6/2	764	764	-	-	-	0.4	1.1	-	1.6	7.4	4.0	1.1	5.2
6/3	926	926	-	-	-	0.6	1.3	-	1.9	7.3	6.3	1.3	7.5
11/1	258	258	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
11/2	52	52	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0
12/2+12/1	653	653	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
12/3	370	370	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
13/1	236	236	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
13/2	370	370	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1

TA Report

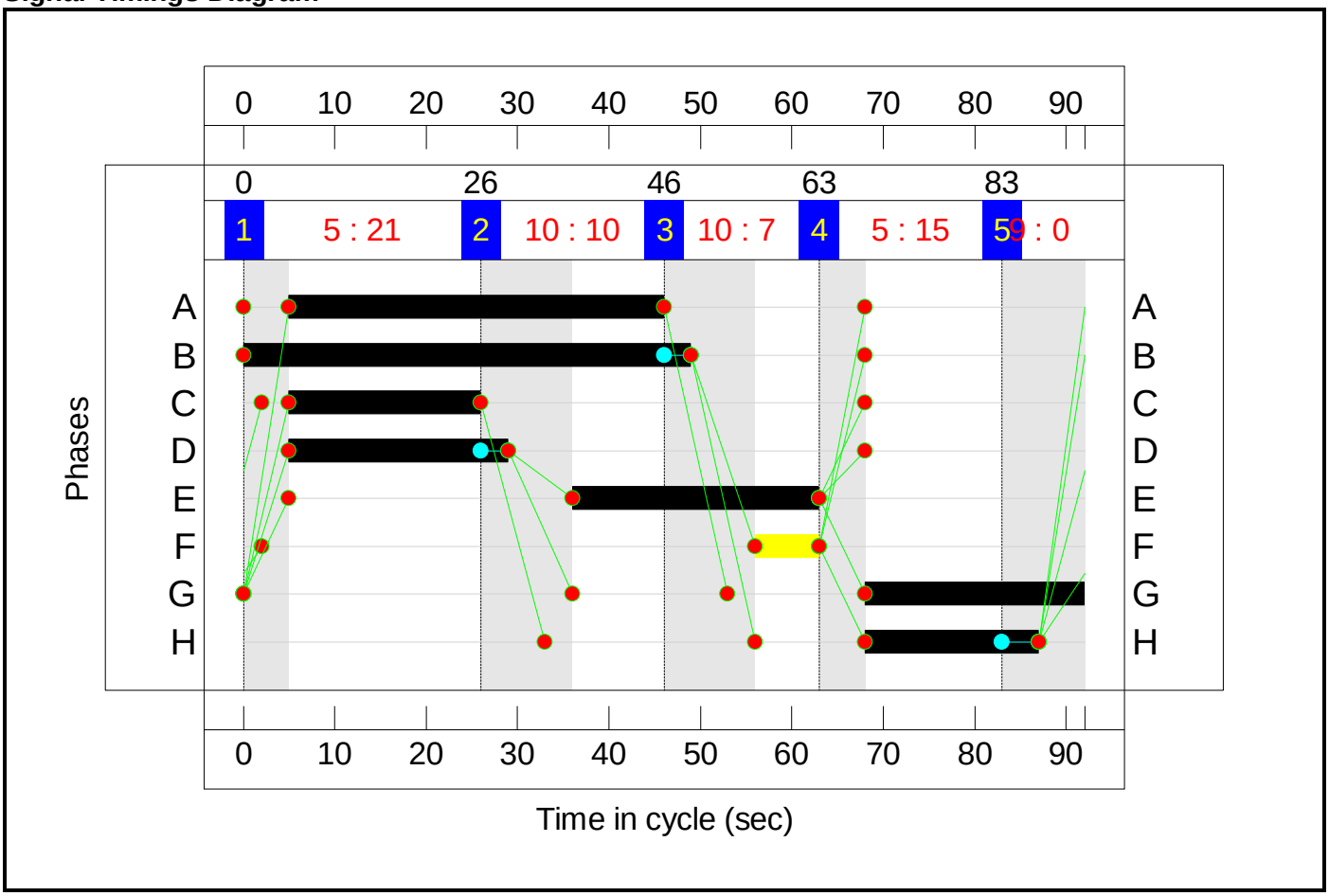
C1	Stream: 1	PRC for Signalled Lanes (%):	-4.0	Total Delay for Signalled Lanes (pcuHr):	63.03	Cycle Time (s):	92
		PRC Over All Lanes (%):	-4.0	Total Delay Over All Lanes(pcuHr):	71.57		

Staging Plan Diagram

Stage Stream: 1



Signal Timings Diagram



Scenario 6: '2036 Do Something PM' (FG6: '2036 Do Something PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Actual

Actual Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	356	1490	171	2017
	B	305	0	508	232	1045
	C	839	380	0	33	1252
	D	133	238	72	0	443
	Tot.	1277	974	2070	436	4757

Phase Timings

Phase Name	Description	Phase	Stage Stream	Green Period 1		
				Total Green	Start Time	End Time
A	A24 Worthing Rd NB Ahead	Traffic	1	61	5	66
B	A24 Worrthing Rd NB Ahead	Traffic	1	69	0	69
C	A24 Worrthing Rd SB Ahead	Traffic	1	47	5	52
D	A24 Worrthing Rd Mid SB Ahead	Traffic	1	50	5	55
E	A24 Worthing Rd NB Right	Traffic	1	24	62	86
F	A24 Worrthing Rd SB Right	Traffic	1	10	76	86
G	Cowfold Rd WB Ahead	Traffic	1	27	91	0
H	A272 EB Ahead	Traffic	1	22	91	113

TA Report

Link Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Worthing Rd / A272 Cowfold Rd / A272 West Chiltington Lane	-	-	**N/A**	-	-		-	-	-	-	-	-	**99.5%**
A24 Worthing Rd / A272 Cowfold Rd / A272 West Chiltington Lane	-	-	**N/A**	-	-		-	-	-	-	-	-	**99.5%**
1/2+1/1	A24 Worrthing Rd SB Ahead	U	1	N/A	C		1	47	-	1039	2156:1954	695+362	98.2 : 98.2%
1/3+1/4	A24 Worrthing Rd SB Ahead Right	U	1	N/A	C F		1	47:10	-	978	2161:2046	811+191	99.5 : 89.7%
2/1	Cowfold Rd WB Left	O	N/A	N/A	-		-	-	-	508	Inf	559	90.9%
2/2	Cowfold Rd WB Ahead	U	1	N/A	G		1	27	-	232	1832	435	53.4%
2/3	Cowfold Rd WB Ahead	U	1	N/A	G		1	27	-	305	1483	352	86.7%
3/2+3/1	A24 Worthing Rd NB Ahead	U	1	N/A	A		1	61	-	872	1870:1870	972+38	86.4 : 86.4%
3/3+3/4	A24 Worthing Rd NB Ahead Right	U	1	N/A	A E		1	61:24	-	380	2069:1833	0+388	0.0 : 97.9%
4/1	A272 EB Left	O	N/A	N/A	-		-	-	-	133	1940	518	25.7%
4/2	A272 EB Ahead	U	1	N/A	H		1	22	-	310	1670	326	95.2%
5/1	A24 Worrthing Rd Mid SB Left	O	N/A	N/A	-		-	-	-	594	1940	631	94.1%
5/2	A24 Worrthing Rd Mid SB Ahead	U	1	N/A	D		1	50	-	711	2021	873	81.4%
5/3	A24 Worrthing Rd Mid SB Ahead	U	1	N/A	D		1	50	-	851	2338	1010	84.2%
6/1	A24 Worrthing Rd NB Left	O	N/A	N/A	-		-	-	-	265	1940	677	39.1%

6/2	A24 Worrthing Rd NB Ahead	U	1	N/A	B		1	69	-	894	2017	1197	74.7%
6/3	A24 Worrthing Rd NB Ahead	U	1	N/A	B		1	69	-	250	2380	1412	17.7%
11/1	A272 EB Mid Right	U	N/A	N/A	-		-	-	-	266	1940	1940	13.7%
11/2	A272 EB Mid Right	U	N/A	N/A	-		-	-	-	44	2080	2080	2.1%
12/2+12/1	Cowfold Rd WB Ahead	U	N/A	N/A	-		-	-	-	755	1940:1940	635+1305	38.9 : 38.9%
12/3	Cowfold Rd WB Ahead	U	N/A	N/A	-		-	-	-	290	2080	2080	13.9%
13/1	Cowfold Rd NB Right	U	N/A	N/A	-		-	-	-	232	1940	1940	12.0%
13/2	Cowfold Rd NB Right	U	N/A	N/A	-		-	-	-	305	2080	2080	14.7%

TA Report

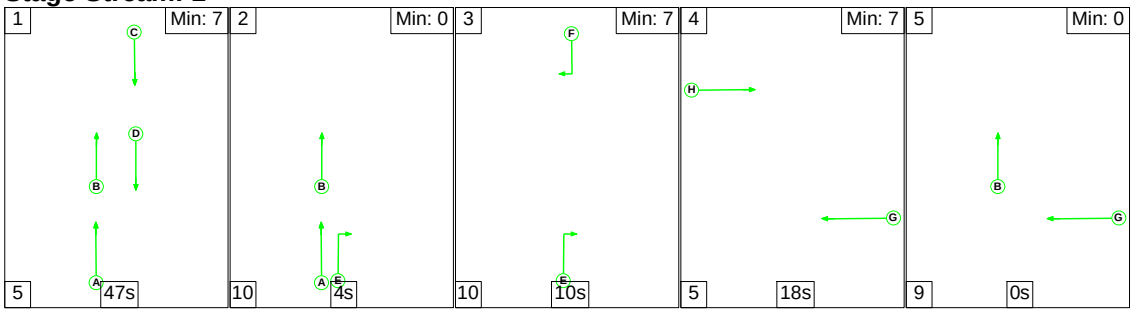
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Worthing Rd / A272 Cowfold Rd / A272 West Chiltington Lane	**-**	**-**	**299**	**1201**	**0**	**45.7**	**60.7**	**0.0**	**106.4**	**-**	**-**	**-**	**-**
A24 Worthing Rd / A272 Cowfold Rd / A272 West Chiltington Lane	**-**	**-**	**299**	**1201**	**0**	**45.7**	**60.7**	**0.0**	**106.4**	**-**	**-**	**-**	**-**
1/2+1/1	1039	1039	-	-	-	9.0	12.1	-	21.1	72.9	26.8	12.1	38.9
1/3+1/4	978	978	-	-	-	10.1	10.7	-	20.8	76.6	28.7	10.7	39.4
2/1	508	508	153	355	0	0.9	4.3	-	5.2	37.1	12.6	4.3	16.9
2/2	232	232	-	-	-	2.5	0.6	-	3.1	48.1	6.6	0.6	7.2
2/3	305	305	-	-	-	3.7	2.9	-	6.6	77.4	9.6	2.9	12.5
3/2+3/1	872	872	-	-	-	5.8	3.0	-	8.8	36.3	24.0	3.0	27.0
3/3+3/4	380	380	-	-	-	4.9	7.9	-	12.8	120.9	12.4	7.9	20.2
4/1	133	133	79	54	0	0.0	0.2	-	0.2	4.7	0.0	0.2	0.2
4/2	310	310	-	-	-	4.0	5.7	-	9.8	113.6	10.0	5.7	15.7
5/1	594	594	68	526	0	2.6	6.0	-	8.6	52.0	19.2	6.0	25.2
5/2	711	711	-	-	-	0.2	2.1	-	2.3	11.9	4.1	2.1	6.3
5/3	851	851	-	-	-	0.3	2.6	-	2.8	12.0	1.6	2.6	4.1
6/1	265	265	0	265	0	0.6	0.3	-	1.0	13.1	8.1	0.3	8.4
6/2	894	894	-	-	-	0.2	1.5	-	1.6	6.6	1.8	1.5	3.2
6/3	250	250	-	-	-	1.0	0.1	-	1.1	15.8	8.2	0.1	8.3
11/1	266	266	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
11/2	44	44	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0
12/2+12/1	755	755	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
12/3	290	290	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
13/1	232	232	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
13/2	305	305	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1

TA Report

C1	Stream: 1	PRC for Signalled Lanes (%):	-10.5	Total Delay for Signalled Lanes (pcuHr):	90.79	Cycle Time (s):	118
		PRC Over All Lanes (%):	-10.5	Total Delay Over All Lanes(pcuHr):	106.39		

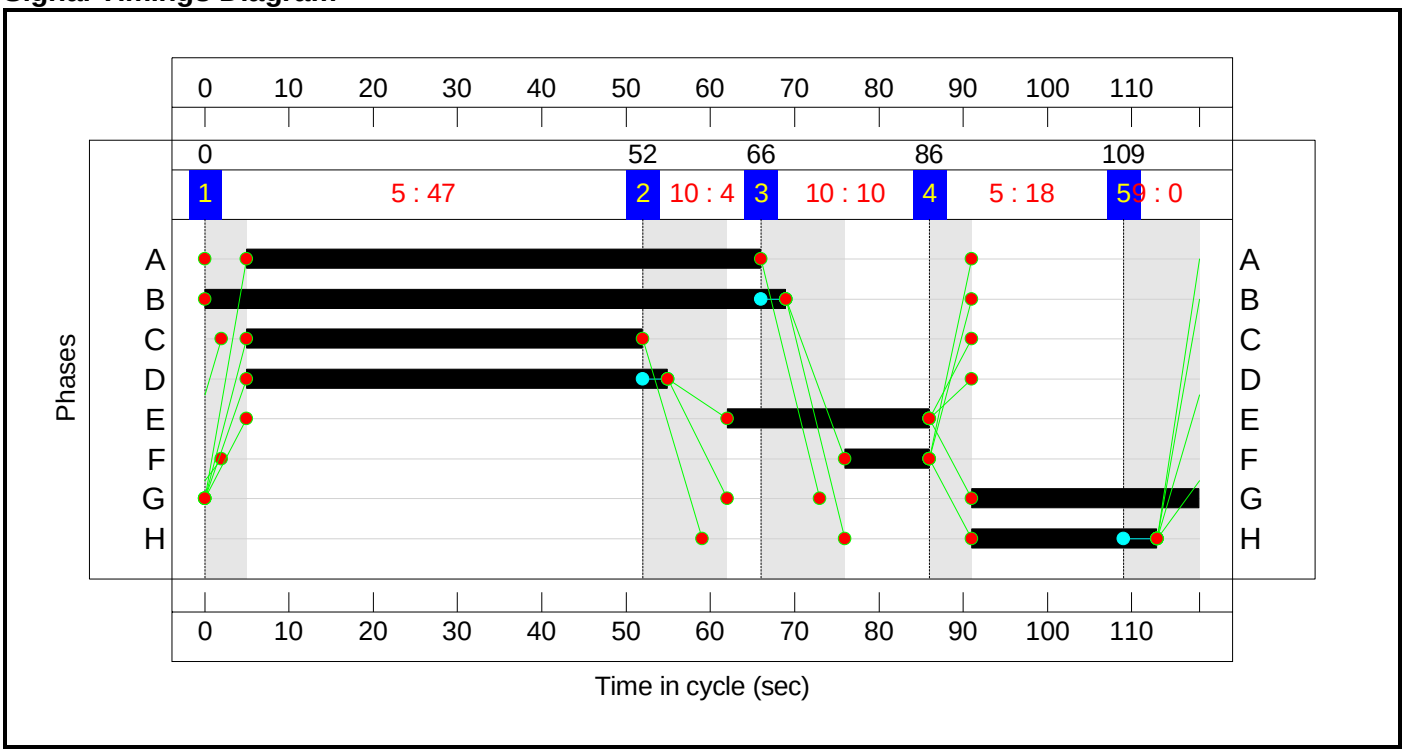
Staging Plan Diagram

Stage Stream: 1



TA Report

Signal Timings Diagram



Mountbatten House
Basing View
Basingstoke, Hampshire
RG21 4HJ

wsp.com