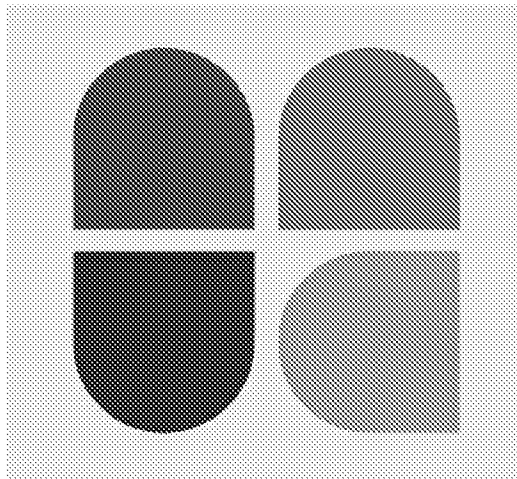




B R I G H T P L A N

HAMPTON PARK, LITTLEHAMPTON

TRAFFIC IMPACT OF ADDITIONAL 100 DWELLINGS ON LOCAL HIGHWAY

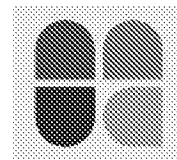
Technical Note

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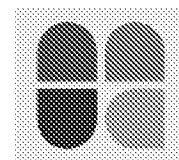
04/05/2020

Status:

Issue	Date	Status	Issued by
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2.	06/05/2020	Final	EJD
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6.			

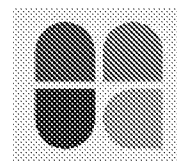
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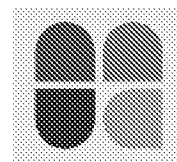
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1 INTRODUCTION

- 1.1.1 This Technical Note (TN) has been prepared by Bright Plan Ltd on behalf of Persimmon Homes in relation to a consented development at Hampton Park, Littlehampton (planning ref: LU/47/11) – it is designed to demonstrate the capacity sensitivity of an additional 100 dwellings on the local highway network.
- 1.1.2 This report has been requested by the Local Highway Authority in response to a request by Persimmon Homes to increase the number of occupied new homes at its development at Hampton Park, Littlehampton, prior to the completion of the southern section of the Lyminster bypass and bridge works.

1.2 Section 106 Requirements

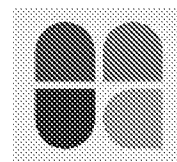
- 1.2.1 Schedule 10 of the development's Section 106 agreement outlines the required Highway Works to be undertaken in conjunction with the proposed development, including scheduling of works relating to occupation of the development. The schedule restricts the developer from occupying more than 350 dwellings prior to the construction of Lyminster Bypass.
- 1.2.2 Persimmon Homes are seeking to allow occupation of a further 100 dwellings prior to completion of the bypass, including the bridge over the railway line.
- 1.2.3 Persimmon Homes consulted with WSCC which requested that additional assessment work be undertaken to demonstrate that the additional dwellings would not have a material impact on the operation of the local road network.

1.3 Report Context

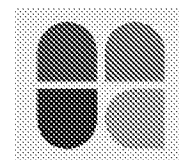
- 1.3.1 This report has been prepared in March/April 2020 during the Coronavirus pandemic in the UK which has resulted in a substantial reduction in traffic on the road network. As such, representative traffic surveys which would have been undertaken to inform this report could not be undertaken. The junction capacity modelling assessments in this report therefore rely on traffic data submitted as part of the original planning application.
- 1.3.2 The Transport Assessment (TA) accompanying the original application was undertaken by Mayer Brown (dated February 2011). A Transport Assessment Addendum, also prepared by Mayer Brown, was subsequently submitted in October 2011. The addendum addressed comments from WSCC and included a number of improvements/changes to the local junctions.
- 1.3.3 Mayer Brown's TA and TA Addendum used surveys undertaken in 2008 to determine baseline traffic flows and included a range of modelling scenarios for a design year of 2016. This report builds on Mayer Brown's most up-to-date assessment work within the TA Addendum, by applying growth factors to the 2016 traffic flows to provide 2020 flows.

1.4 Scope of Report

- 1.4.1 This report assesses the impact of the additional 100 dwellings on the local road network, prior to the construction of the Lyminster bypass, supported by junction capacity modelling assessments.
- 1.4.2 The remainder of this report comprises the following sections:
 - i. **Section 2** provides a calculation of the anticipated vehicle trips associated with the residential dwellings as per the Mayer Brown report, as well the distribution of these trips onto the local road network.



- ii. **Section 3** reviews the results of the junction capacity modelling undertaken as the basis for the report on key junctions on the local road network.
- iii. **Section 4** provides a summary of conclusions drawn from the above assessment.



2 VEHICLE TRIP GENERATION AND DISTRIBUTION

2.1 Vehicle Trip Generation

- 2.1.1 The vehicle trips generated by the additional dwellings have been determined by applying the residential trip rates established within the development's original Transport Assessment, prepared by Mayer Brown, to 100 dwellings. The anticipated number of vehicle trips generated by the additional 100 dwellings are demonstrated in **Figure 2.1**.

Vehicle Trip Rate (per Dwelling)			
Time Period	Arrivals	Departures	Two-Way
AM Peak Hour	0.071	0.288	0.358
PM Peak Hour	0.213	0.097	0.309
Vehicle Trip Generation (100 Dwellings)			
AM Peak Hour	7	29	36
PM Peak Hour	21	10	31

Figure 2.1: Anticipated Vehicle Trips – 100 Dwellings

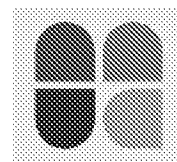
- 2.1.2 As shown in **Figure 2.1**, the additional occupation of 100 dwellings would be expected to generate an additional 36 vehicle trips in the AM peak hour and 31 movements in the PM peak hour.

2.2 Vehicle Trip Distribution

- 2.2.1 Mayer Brown's TA Addendum used 2001 census data to distribute development traffic on the local road network. Following this method, distribution of the additional residential trips has been based on updated data contained within the 2011 census.
- 2.2.2 The trips have been distributed using data gathered from the 2011 census 'Location of usual residence and place of work' dataset. Data has been gathered for existing residents of the Arun 004D and Arun 004E lower layer super output areas. The census data is attached at **Appendix A**.
- 2.2.3 Using the census data, trips to/from the site have been assigned to key traffic routes based on typical journey times as calculated using Geographic Information System (GIS) algorithms. The distribution of residential traffic is represented as a percentage in **Appendix B**.
- 2.2.4 The percentage distribution has been applied to the residential vehicle trips in **Figure 2.1** to establish the number of vehicle trips on the key routes associated with the additional 100 dwellings and in order to identify junctions for assessment in this report. Traffic assignment models demonstrating the distribution of these vehicle trips in the AM and PM peak traffic hours are attached at **Appendix C**.

2.3 Key Junctions

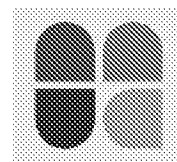
- 2.3.1 The traffic assignment models reveal the number of additional vehicle movements expected through local junctions. The increase in vehicle trips at local junctions are summarised in **Figure 2.2**.



Junction	AM Peak Hour	PM Peak Hour
A284 / Mill Lane	36	31
Wick Roundabout	19	16
A259 / Highdown Drive	10	8
Body Shop Roundabout	10	8

Figure 2.2: Increase in Vehicle Trips at Local Junctions

- 2.3.2 As shown in **Figure 2.2**, the largest increase in vehicle trips is seen at A284 / Mill Lane junction, and the Wick roundabout.
- 2.3.3 The junction of A284 / Mill Lane for example would experience only an increase in development related traffic of around 1 movement every 2 minutes, only when all 100 dwellings are occupied, which would take time. Whilst this increase is not material on face-value, this report examines which junctions are sensitive under the Mayer Brown assessment and thus under the level of additional traffic associated with 100 dwellings at the junctions.



3 JUNCTION CAPACITY MODELLING

3.1 Background

- 3.1.1 There is currently a high level of traffic on the local road network, in particular on the A259. This traffic would be eased following the construction of the Lyminster Bypass, connecting the A259 in Littlehampton to the A27 to the north.

3.2 Assessment Overview

- 3.2.1 To assess the traffic impact associated with an additional 100 dwellings, junction capacity modelling assessments have been undertaken at key junctions as identified in **Section 2** using PICADY, ARCADY and LINSIG modelling software.
- 3.2.2 The assessments consider the A284/Mill Lane junction, the Wick roundabout and the Body Shop roundabout for the following scenarios:
- 2020 Base Flows + 350 Dwellings
 - 2020 Base Flows + 450 Dwellings
- 3.2.3 Building on the TA addendum prepared by Mayer Brown, the A284/Mill Lane junction has been modelled using PICADY, the Wick roundabout with ARCADY, and the Body Shop roundabout with LINSIG.

3.3 Flow Diagrams

- 3.3.1 To determine the vehicle flows for each assessment, a number of flow diagrams have been prepared as follows:
- 2016 Base Flows** – Mayer Brown's TA Addendum provided base flows for a 2016 scenario. These flows have been displayed diagrammatically at **Appendix D**.
 - 2016 Base HGV Flows** – Mayer Brown's TA Addendum also provided base HGV flows for a 2016 scenario. These flows have been used to determine the percentage of traffic associated with HGVs. The flows are displayed diagrammatically at **Appendix E**.
 - 2020 Base Flows** – the 2016 base flows have been growthed to using TEMPro to anticipate the flows in 2020. The TEMPro output is attached at **Appendix F** and the 2020 base flows are displayed diagrammatically at **Appendix G**.
 - 2020 Base Flows + 350 Dwellings** – the 2020 base flows have been summed with the flows associated with 350 dwellings. The resulting flows are displayed diagrammatically at **Appendix H**.
 - 2020 Base Flows + 450 Dwellings** – the 2020 base flows have been summed with the flows associated with 450 dwellings. The resulting flows are displayed diagrammatically at **Appendix I**.

3.4 A284 / Mill Lane

- 3.4.1 The A284 / Mill Lane junction layout is shown in **Figure 5.1**. Summaries of the modelling results for AM and PM peak hours are provided in **Figures 5.2** and **5.3** respectively, and the full PICADY report is attached at **Appendix J**.

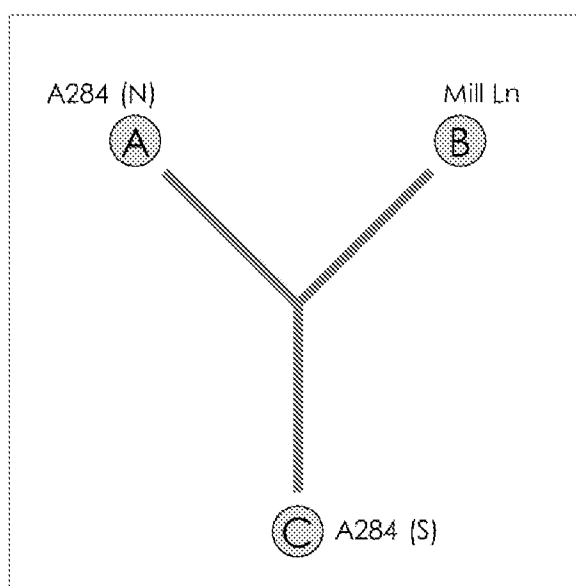
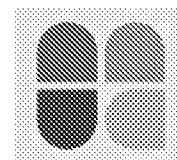


Figure 5.1: A284 / Mill Lane Junction Layout

Modelling Scenario	Stream	Queue (Veh)	RFC
2020 Base + 350 Dwellings	B - AC (Mill Lane)	3.9	0.82
	C - AB (A284 (S) - Mill Lane)	0.1	0.11
2020 Base + 450 Dwellings	B - AC (Mill Lane)	7.1	0.92
	C - AB (A284 (S) - Mill Lane)	0.1	0.11
Net Change	B - AC (Mill Lane)	+ 3.2	+ 0.10
	C - AB (A284 (S) - Mill Lane)	+ 0.0	+ 0.00

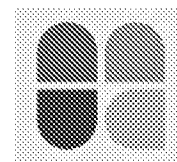
Figure 5.2: Summary of PICADY Results – AM Peak Hour

- 3.4.2 As shown in **Figure 5.2**, the A284/Mill Lane junction would continue to operate within capacity with the additional 100 dwellings during the AM peak hour, with a maximum RFC of 0.92 on Arm B (Mill Lane). The additional dwellings would result in an increase in the mean maximum queue from 3.9 vehicles to 7.1 vehicles (3 PCU Increase). The results demonstrate that the additional dwellings would have a negligible impact on the operation of the junction in the AM peak hour.

Modelling Scenario	Stream	Queue (Veh)	RFC
2020 Base + 350 Dwellings	B - AC (Mill Lane)	1.8	0.66
	C - AB (A284 (S) - Mill Lane)	0.4	0.28
2020 Base + 450 Dwellings	B - AC (Mill Lane)	2.2	0.70
	C - AB (A284 (S) - Mill Lane)	0.4	0.31
Net Change	B - AC (Mill Lane)	+ 0.4	+ 0.04
	C - AB (A284 (S) - Mill Lane)	+ 0.0	+ 0.03

Figure 5.3: Summary of PICADY Results – PM Peak Hour

- 3.4.3 As shown in **Figure 5.3**, the A284/Mill Lane junction would continue to operate within capacity with the additional 100 dwellings during the PM peak hour, with a maximum RFC of 0.70 on Arm B (Mill Lane). The additional dwellings would result in a negligible increase in the mean maximum queue from 1.8 vehicles to 2.2 vehicles (less than 1 vehicle). The results demonstrate that the additional dwellings would have a negligible impact on the operation of the junction in the PM peak hour.



3.5 Wick Roundabout

3.5.1 The Wick roundabout layout is shown in **Figure 5.4**, summaries of the modelling results for AM and PM peak hours are provided in **Figures 5.5** and **5.6** respectively, and the full ARCADY report is attached at **Appendix K**.

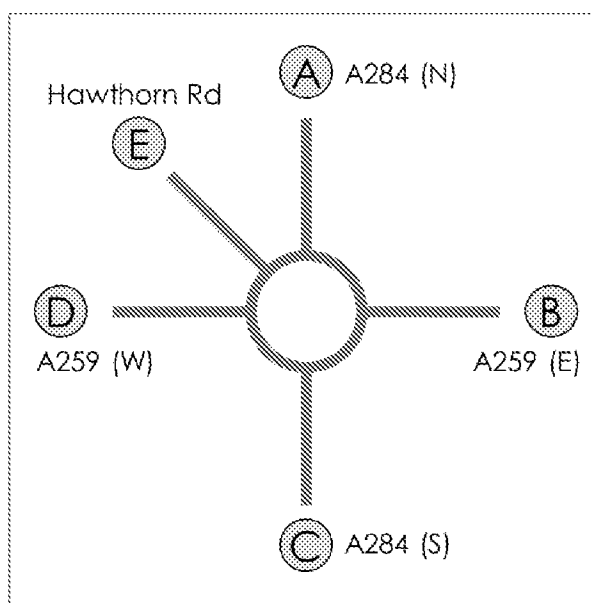
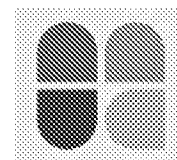


Figure 5.4: Wick Roundabout Layout

Modelling Scenario	Arm	Queue (Veh)	RFC
2020 Base + 350 Dwellings	Arm A (A284 North)	1.6	0.62
	Arm B (A259 East)	2.4	0.71
	Arm C (A284 South)	0.6	0.38
	Arm D (A259 West)	1.6	0.61
	Arm E (Hawthorn Rd)	0.0	0.01
2020 Base + 450 Dwellings	Arm A (A284 North)	1.7	0.63
	Arm B (A259 East)	2.4	0.71
	Arm C (A284 South)	0.6	0.38
	Arm D (A259 West)	1.6	0.62
	Arm E (Hawthorn Rd)	0.0	0.01
Net Change	Arm A (A284 North)	+ 0.1	+ 0.01
	Arm B (A259 East)	+ 0.0	+ 0.00
	Arm C (A284 South)	+ 0.0	+ 0.00
	Arm D (A259 West)	+ 0.0	+ 0.01
	Arm E (Hawthorn Rd)	+ 0.0	+ 0.00

Figure 5.5: Summary of ARCADY Results – Wick Roundabout – AM Peak Hour

3.5.2 As shown in **Figure 5.5**, the Wick roundabout would continue to operate within capacity with the additional 100 dwellings during the AM peak hour, with a maximum Ratio of Flow to Capacity of 0.71 on Arm B (A259 East), equating to a queue of 2.4 vehicles. The additional dwellings would result in a negligible increase in the mean maximum queue (less than 1 vehicle) on all arms. The results demonstrate that the additional dwellings would have a negligible impact on the operation of the roundabout in the AM peak hour.



Modelling Scenario	Arm	Queue (Veh)	RFC
2020 Base + 350 Dwellings	Arm A (A284 North)	2.0	0.67
	Arm B (A259 East)	2.2	0.69
	Arm C (A284 South)	0.8	0.45
	Arm D (A259 West)	5.0	0.84
	Arm E (Hawthorn Rd)	0.5	0.31
2020 Base + 450 Dwellings	Arm A (A284 North)	2.1	0.68
	Arm B (A259 East)	2.2	0.69
	Arm C (A284 South)	0.8	0.46
	Arm D (A259 West)	5.2	0.85
	Arm E (Hawthorn Rd)	0.5	0.32
Net Change	Arm A (A284 North)	+ 0.1	+ 0.01
	Arm B (A259 East)	+ 0.0	+ 0.00
	Arm C (A284 South)	+ 0.0	+ 0.01
	Arm D (A259 West)	+ 0.2	+ 0.01
	Arm E (Hawthorn Rd)	+ 0.0	+ 0.01

Figure 5.6: Summary of ARCADY Results – Wick Roundabout – PM Peak Hour

3.5.3 As shown in **Figure 5.6**, the Wick roundabout would continue to operate within capacity with the additional 100 dwellings during the PM peak hour, with a maximum Ratio of Flow to Capacity of 0.85 on Arm D (A259 West), equating to a queue of 5.2 vehicles. The additional dwellings would result in a negligible increase in the mean maximum queue (less than 1 vehicle) on all arms. The results demonstrate that the additional dwellings would have a negligible impact on the operation of the roundabout in the PM peak hour.

3.6 Body Shop Roundabout

3.6.1 The Body Shop roundabout layout is shown in **Figure 5.7**, summaries of the modelling results for AM and PM peak hours are provided in **Figures 5.8** and **5.9** respectively, and the full LINSIG report is attached at **Appendix L**.

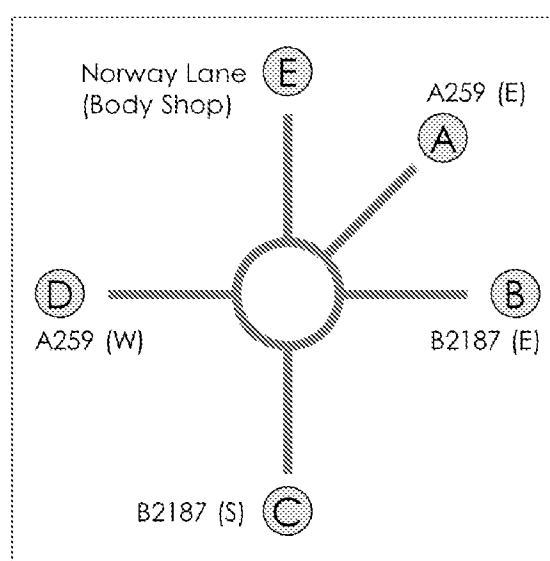
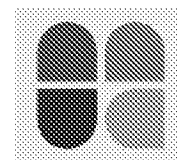


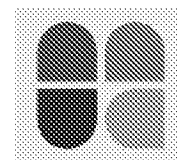
Figure 5.7: Body Shop Roundabout Layout



Modelling Scenario	Arm/Movement	Queue (PCUs)	Deg Sat (%)
2020 Base + 350 Dwellings	Arm (A) Rustington Bypass Left Ahead	1.0	66.4%
	Arm (A) Rustington Bypass Ahead	1.0	66.2%
	Arm (B) Worthing Road Left Ahead	0.5	50.8%
	Arm (C) Horsham Road Left Ahead	1.2	71.1%
	Arm (D) Worthing Road Left Ahead	1.0	66.4%
	Arm (D) Worthing Road Ahead	1.3	72.7%
	Arm (E) Bodyshop Access Left Ahead	0.1	11.7%
2020 Base + 450 Dwellings	Arm (A) Rustington Bypass Left Ahead	1.0	66.6%
	Arm (A) Rustington Bypass Ahead	1.0	66.4%
	Arm (B) Worthing Road Left Ahead	0.5	50.9%
	Arm (C) Horsham Road Left Ahead	1.2	71.2%
	Arm (D) Worthing Road Left Ahead	1.0	66.9%
	Arm (D) Worthing Road Ahead	1.3	73.1%
	Arm (E) Bodyshop Access Left Ahead	0.1	11.8%
Net Change	Arm (A) Rustington Bypass Left Ahead	+ 0.0	+ 0.2%
	Arm (A) Rustington Bypass Ahead	+ 0.0	+ 0.2%
	Arm (B) Worthing Road Left Ahead	+ 0.0	+ 0.1%
	Arm (C) Horsham Road Left Ahead	+ 0.0	+ 0.1%
	Arm (D) Worthing Road Left Ahead	+ 0.0	+ 0.5%
	Arm (D) Worthing Road Ahead	+ 0.0	+ 0.4%
	Arm (E) Bodyshop Access Left Ahead	+ 0.0	+ 0.1%

Figure 5.8: Summary of LINSIG Results – Body Shop Roundabout – AM Peak Hour

3.6.2 As shown in **Figure 5.8**, the Body Shop roundabout would continue to operate within capacity with the additional 100 dwellings during the AM peak hour, with a maximum Degree of Saturation of 73.1% on Arm D (Worthing Road). The model estimates no increase in queueing resulting from the additional dwellings. The results demonstrate that the additional dwellings would have a negligible impact on the operation of the roundabout in the AM peak hour.



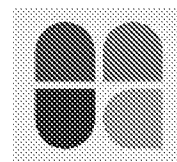
Modelling Scenario	Movement	Queue (PCUs)	Deg Sat (%)
2020 Base + 350 Dwellings	Arm (A) Rustington Bypass Left Ahead	1.8	79.1%
	Arm (A) Rustington Bypass Ahead	1.9	79.8%
	Arm (B) Worthing Road Left Ahead	0.9	63.2%
	Arm (C) Horsham Road Left Ahead	1.7	77.5%
	Arm (D) Worthing Road Left Ahead	1.2	71.2%
	Arm (D) Worthing Road Ahead	1.8	78.9%
	Arm (E) Bodyshop Access Left Ahead	0.7	58.2%
2020 Base + 450 Dwellings	Arm (A) Rustington Bypass Left Ahead	1.9	79.6%
	Arm (A) Rustington Bypass Ahead	2.0	80.1%
	Arm (B) Worthing Road Left Ahead	0.9	63.3%
	Arm (C) Horsham Road Left Ahead	1.7	77.9%
	Arm (D) Worthing Road Left Ahead	1.2	71.5%
	Arm (D) Worthing Road Ahead	1.9	79.0%
	Arm (E) Bodyshop Access Left Ahead	0.7	58.4%
Net Change	Arm (A) Rustington Bypass Left Ahead	+ 0.1	+ 0.5%
	Arm (A) Rustington Bypass Ahead	+ 0.1	+ 0.3%
	Arm (B) Worthing Road Left Ahead	+ 0.0	+ 0.1%
	Arm (C) Horsham Road Left Ahead	+ 0.0	+ 0.4%
	Arm (D) Worthing Road Left Ahead	+ 0.0	+ 0.3%
	Arm (D) Worthing Road Ahead	+ 0.1	+ 0.1%
	Arm (E) Bodyshop Access Left Ahead	+ 0.0	+ 0.2%

Figure 5.9: Summary of LINSIG Results – Body Shop Roundabout – PM Peak Hour

- 3.6.3 As shown in **Figure 5.6**, the Body Shop roundabout would continue to operate within capacity with the additional 100 dwellings during the PM peak hour, with a maximum Degree of Saturation of 80.1% on Arm A (A259 East, Rustington Bypass). The additional dwellings would result in a negligible increase in the mean maximum queue (less than 1 vehicle) on all arms. The results demonstrate that the additional dwellings would have a negligible impact on the operation of the roundabout in the PM peak hour.

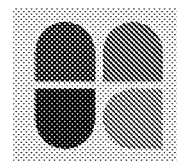
3.7 Summary

- 3.7.1 All junctions would continue to operate within capacity with additional traffic generated by the additional 100 dwellings above the 350 dwelling limit set out in the S106 agreement. Further, the construction of the Lyminster Bypass would ease congestion on the local road network meaning that the small increases in queueing at junctions would be temporary.

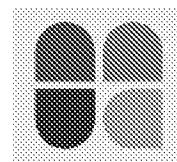


4 CONCLUSIONS

- 4.1.1 This report has been prepared to assess the impact of an additional 100 dwellings (above the 350 dwelling limit set out in the S106 agreement) on the local road network, prior to the construction of the Lyminster bypass, supported by junction capacity modelling assessments. The findings from this report are as follows:
- i. The additional 100 dwellings would result in an additional 36 two-way movements during the network's AM peak traffic hour, and 31 two-way movements in the PM peak traffic hour. Which is not material in absolute terms, and as the report identifies is not material to the capacity of the junctions.
 - ii. Further, once completed, the bypass will ease congestion within Littlehampton meaning that any increase in queueing at local junctions resulting from the additional 100 dwellings would be temporary.
- 4.1.2 It is therefore concluded that the additional 100 dwellings above the 350 dwelling limit set out in the S106 would have a negligible impact on the operation of the local road network. In light of conclusions, the LHA is urged to allow the occupation of a further 100 dwellings prior to the completion of the Lyminster Bypass.



APPENDICES

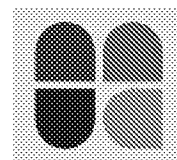


Appendix A 2011 Census Data

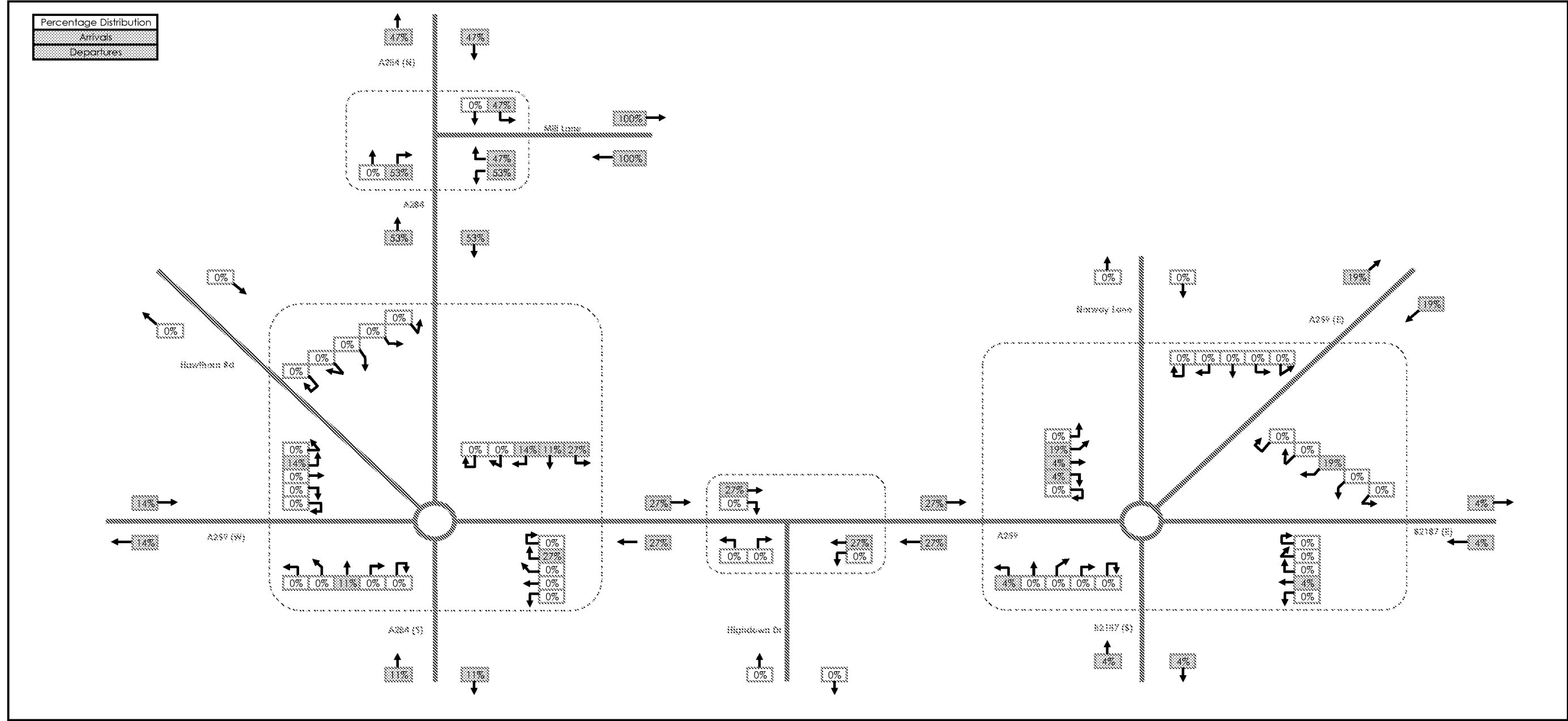
WF01BEW - Location of usual residence and place of work (OA level)

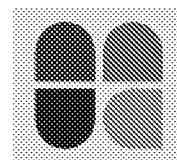
population	All usual residents ages 16 and over in employment the week before the census
units	Persons
date	2011

currently residing in				Traffic Assignment							Traffic Assignment (Percentage)						
Lower Layer	E01031467 : Arun 004D	E01031468 : Arun 004E	%	A284 (North)	A259 (West)	A284 (South)	B2187 (South)	B2187 (East)	A259 (East)	Norway Lane	A284 (North)	A259 (West)	A284 (South)	B2187 (South)	B2187 (East)	A259 (East)	Norway Lane
E01031467 : Arun 004D	93	10	1.4%														
E01031468 : Arun 004E	20	48	4.3%														
E01031427 : Arun 004A	27	35	3.9%		1							3.9%					
E01031429 : Arun 004B	8	16	1.1%		1							1.5%					
E01031430 : Arun 004C	6	11	0.6%			1							1.1%				
E01031386 : Arun 002A	2	7	0.6%						1							0.6%	
E01031387 : Arun 002B	1	1	0.1%						1							0.1%	
E01031425 : Arun 002C	0	0	0.0%	1													
E01031426 : Arun 002D	2	4	0.4%	1								0.4%					
E01031393 : Arun 003A	5	7	0.8%		1							0.8%					
E01031394 : Arun 003B	1	3	0.3%									0.3%					
E01031395 : Arun 003C	0	0	0.0%														
E01031396 : Arun 003D	1	1	0.1%	1								0.1%					
E01031397 : Arun 003E	6	1	0.4%	1								0.4%					
E01031466 : Arun 003F	3	7	0.6%									0.6%					
E01031407 : Arun 007A	0	1	0.1%					1								0.1%	
E01031408 : Arun 007B	0	4	0.3%					1								0.3%	
E01031410 : Arun 007C	1	0	0.1%				1										
E01031462 : Arun 007D	4	5	0.6%					1						0.1%		0.6%	
E01031463 : Arun 007E	7	18	1.6%					1								1.6%	
E01031464 : Arun 007F	4	21	1.6%					1								1.6%	
E01031411 : Arun 010A	3	4	0.4%						1								0.4%
E01031413 : Arun 010B	3	1	0.3%						1								0.3%
E01031457 : Arun 010C	2	11	0.8%						1								0.8%
E01031458 : Arun 010D	3	3	0.4%						1								0.4%
E01031460 : Arun 010E	1	4	0.3%					1							0.3%		
Lower Layer Total	90	165	21.8%														
Mid Layer																	
E02006545 : Arun 004	26	13	2.2%														
E02006546 : Arun 005	2	1	0.2%														
E02006544 : Arun 006	2	1	0.2%														
E02006548 : Arun 007	12	49	4.1%														
E02006551 : Arun 010	12	23	2.3%														
E02006542 : Arun 001	32	24	3.5%	1								3.5%					
E02006546 : Arun 005	34	48	5.2%						1							5.2%	
E02006547 : Arun 006	23	31	3.4%		1												
E02006549 : Arun 008	3	8	0.7%						1				3.4%				
E02006550 : Arun 009	23	47	4.4%				1									0.7%	
E02006552 : Arun 011	68	92	10.1%			1		1									
E02006553 : Arun 012	4	3	0.4%		1									10.1%	4.4%		
E02006554 : Arun 013	0	1	0.1%		1										0.4%		
E02006555 : Arun 014	5	9	0.9%		1										0.1%		
E02006556 : Arun 015	2	3	0.3%		1										0.9%		
E02006557 : Arun 016	5	3	0.5%		1										0.3%		
E02006558 : Arun 017	14	15	1.8%		1										0.5%		
E02006559 : Arun 018	3	0	0.2%		1										1.8%		
E02006560 : Arun 019	1	1	0.1%		1										0.2%		
E02006621 : Worthing 001	5	6	0.7%	1								0.7%					
E02006622 : Worthing 002	2	2	0.3%	1								0.3%					
E02006623 : Worthing 003	13	19	2.0%	1								2.0%					
E02006624 : Worthing 004	4	5	0.6%	1								0.6%					
E02006625 : Worthing 005	7	24	1.9%	1								1.9%					
E02006626 : Worthing 006	12	10	1.4%	1								1.4%					
E02006627 : Worthing 007	5	13	1.1%						1								1.1%
E02006628 : Worthing 008	4	5	0.6%	1											0.6%		
E02006629 : Worthing 009	11	5	1.0%	1								1.0%					
E02006630 : Worthing 010	6	9	0.9%						1							0.9%	
E02006631 : Worthing 011	27	57	5.3%						1							5.3%	
E02006632 : Worthing 012	1	5	0.4%						1							0.4%	
E02006633 : Worthing 013	18	21	2.5%						1							2.5%	
Mid Layer Total	332	466	50.2%														
merged local authority																	
Adur	340	608	84.8%														
Brighton	113	181	16.2%														
Chichester	62	91	9.6%	1												9.6%	
Horsham	34	50	5.3%	1												5.3%	
Brighton and Hove	15	28	2.7%	1												2.7%	
Crawley	10	29	2.5%	1												2.5%	
Adur	13	23	2.3%	1												2.3%	
Mid Sussex	10	11	1.3%	1												1.3%	
Lewes	6	5	0.7%	1												0.7%	
Portsmouth	4	5	0.6%	1												0.6%	
Reigate and Banstead	4	5	0.6%	1												0.6%	
Havant	2	5	0.4%	1												0.4%	
Westminster, City of London	3	3	0.4%	1												0.4%	
Kingston upon Thames	2	3	0.3%	1												0.3%	
Slough	3	2	0.3%	1												0.3%	
Waverley	3	2	0.3%	1												0.3%	
Woking	4	1	0.3%	1												0.3%	
Tower Hamlets	1	3	0.3%	1												0.3%	
Dartford	1	3	0.3%	1												0.3%	
Mole Valley	2	2	0.3%	1												0.3%	
Birmingham	0	3	0.2%	1												0.2%	
Luton	0	3	0.2%	1												0.2%	
Brent	2	1	0.2%	1												0.2%	
Croydon	1	2	0.2%	1												0.2%	
Hillingdon	1	2	0.2%	1												0.2%	
Southampton	1	2	0.2%	1												0.2%	
East Hampshire	3	0	0.2%	1												0.2%	
Epsom and Ewell	2	1	0.2%	1												0.2%	
Tamworth	0	2	0.1%	1												0.1%	
Bexley	1	1	0.1%	1												0.1%	
Camden	0	2	0.1%	1												0.1%	
Hounslow	1	1	0.1%	1												0.1%	
Islington	1	1	0.1%	1												0.1%	
Merion	1	1	0.1%	1												0.1%	
Southwark	2	0	0.1%	1												0.1%	
Basingstoke and Deane	2	0	0.1%	1												0.1%	
Fareham	1	1	0.1%	1												0.1%	
Gosport	1	1	0.1%	1												0.1%	
Tunbridge Wells	0	2	0.1%	1												0.1%	
Guildford	1	1	0.1%	1												0.1%	
Bournemouth	2	0	0.1%	1												0.1%	
North Tyneside	0	1	0.1%	1												0.1%	
Warrington	1	0	0.1%	1												0.1%	
Rotherham	1	0	0.1%	1												0.1%	
Derby	1	0	0.1%	1												0.1%	
Amber Valley	0	1	0.1%	1												0.1%	
Derbyshire Dales	0	1	0.1%	1												0.1%	
North West Leicestershire	1	0	0.1%	1												0.1%	
Northampton	1	0	0.1%	1												0.1%	
Telford and Wrekin	0	1	0.1%	1												0.1%	
Stafford	0	1	0.1%	1												0.1%	
Wychavon	0	1	0.1%	1												0.1%	
Solihull	0	1	0.1%	1												0.1%	
Fenland	1	0	0.1%	1												0.1%	
Stevenage	0	1	0.1%	1												0.1%	
Breckland	0	1	0.1%	1												0.1%	
Lewisham	1	0	0.1%	1												0.1%	
Sutton	0	1	0.1%	1												0.1%	
Waltham Forest	0	1	0.1%	1												0.1%	
Reading	1	0	0.1%	1												0.1%	
Wycombe	1	0	0.1%	1												0.1%	
Rother	0	1	0.														



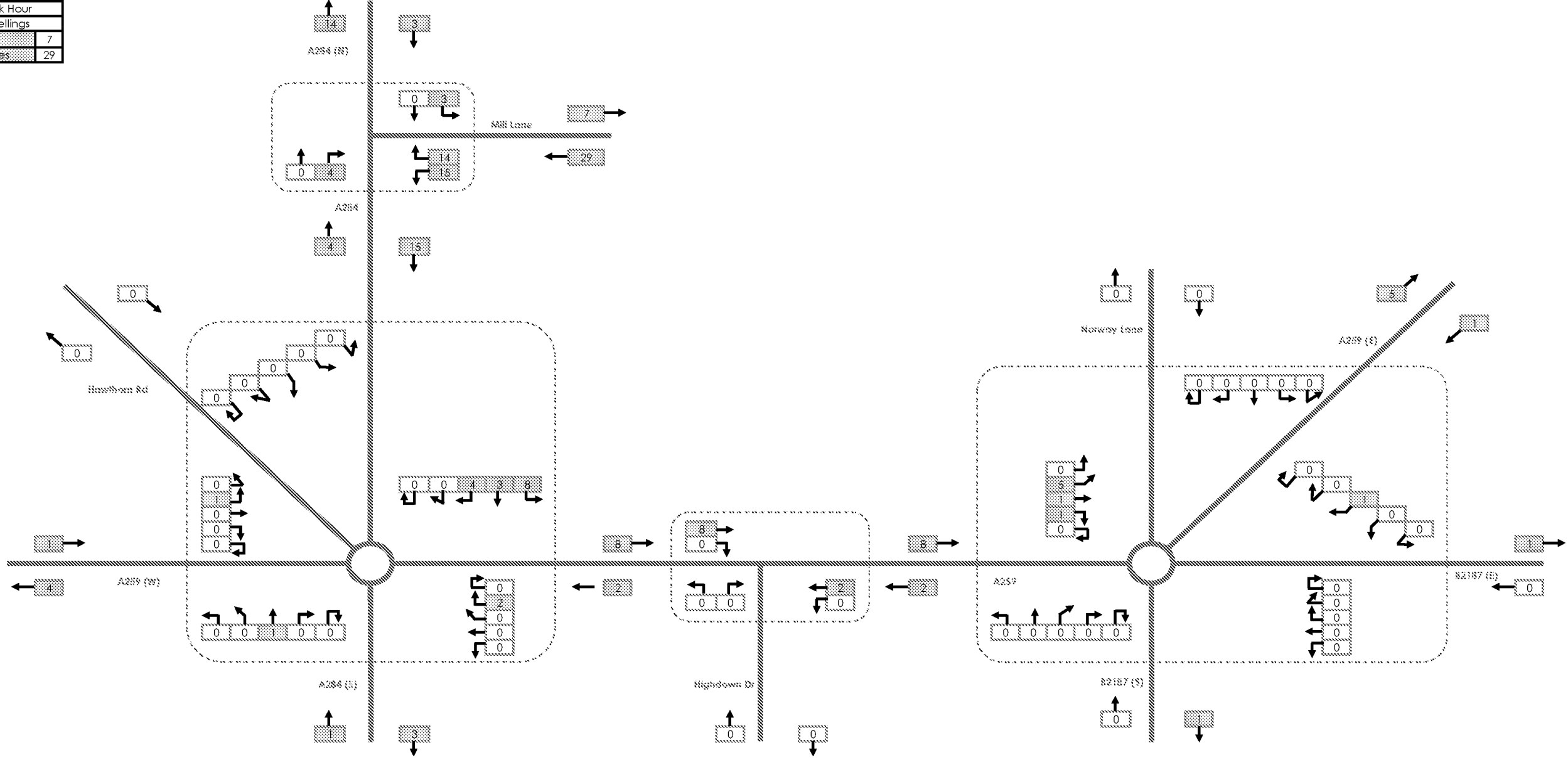
Appendix B Percentage Distribution



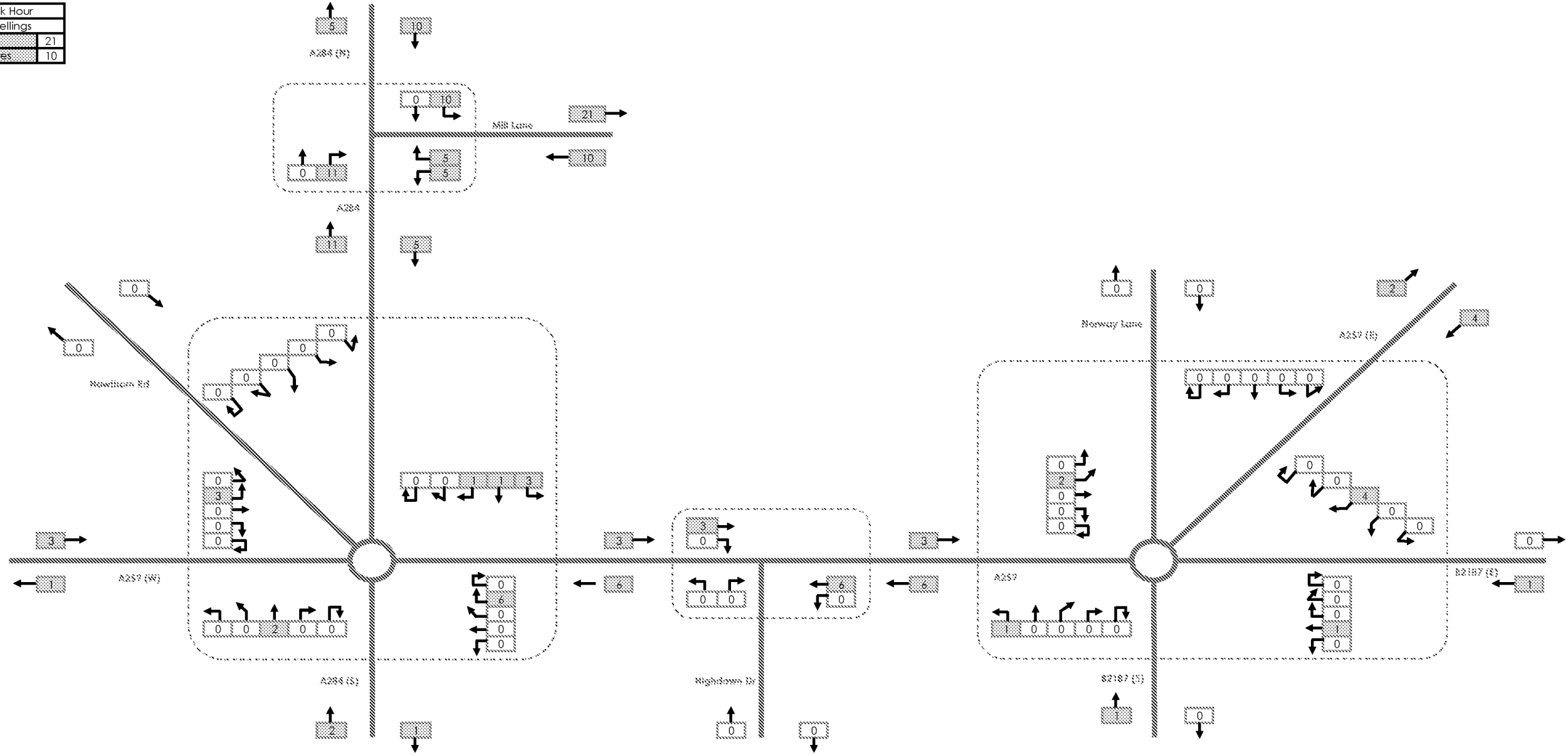


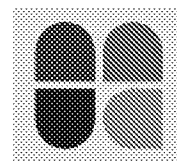
Appendix C Flow Diagrams - 100 Dwellings

AM Peak Hour	
100 Dwellings	
Arrivals	7
Departures	29



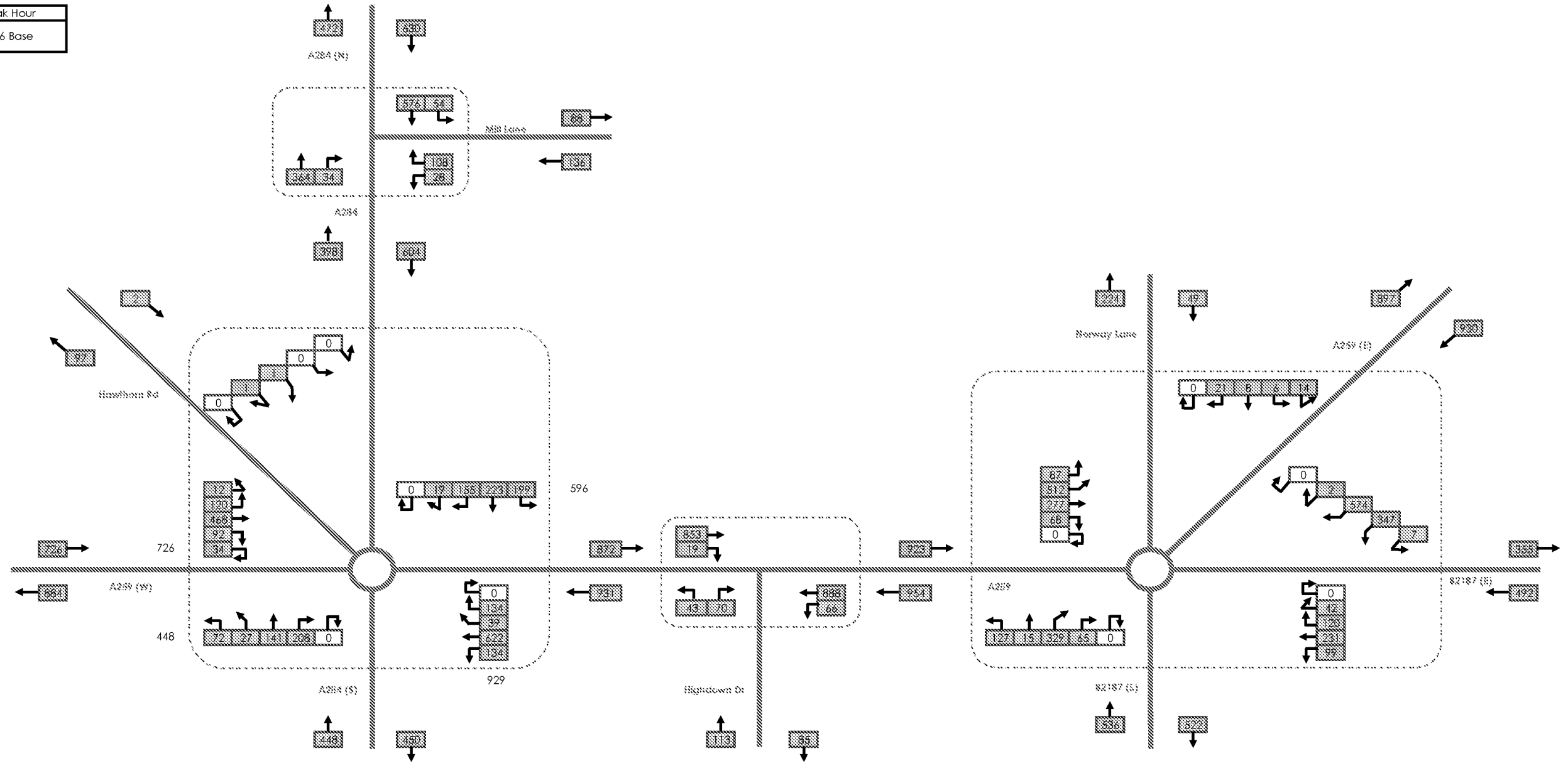
PM Peak Hour	
100 Dwellings	
Arrivals	21
Departures	10



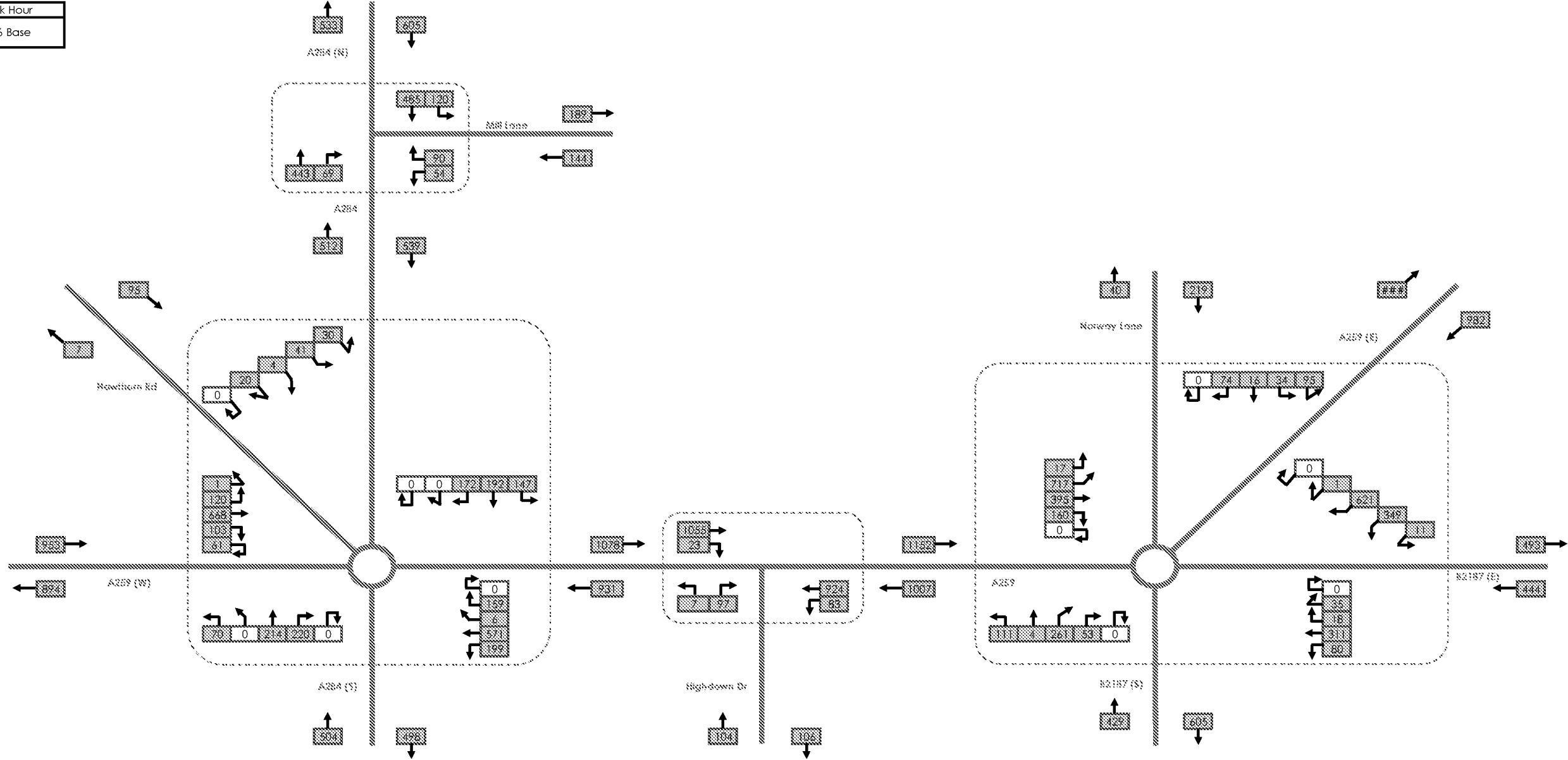


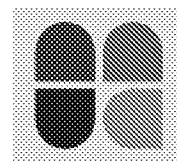
Appendix D Flow Diagrams - 2016 Base Flows

AM Peak Hour
MB 2016 Base

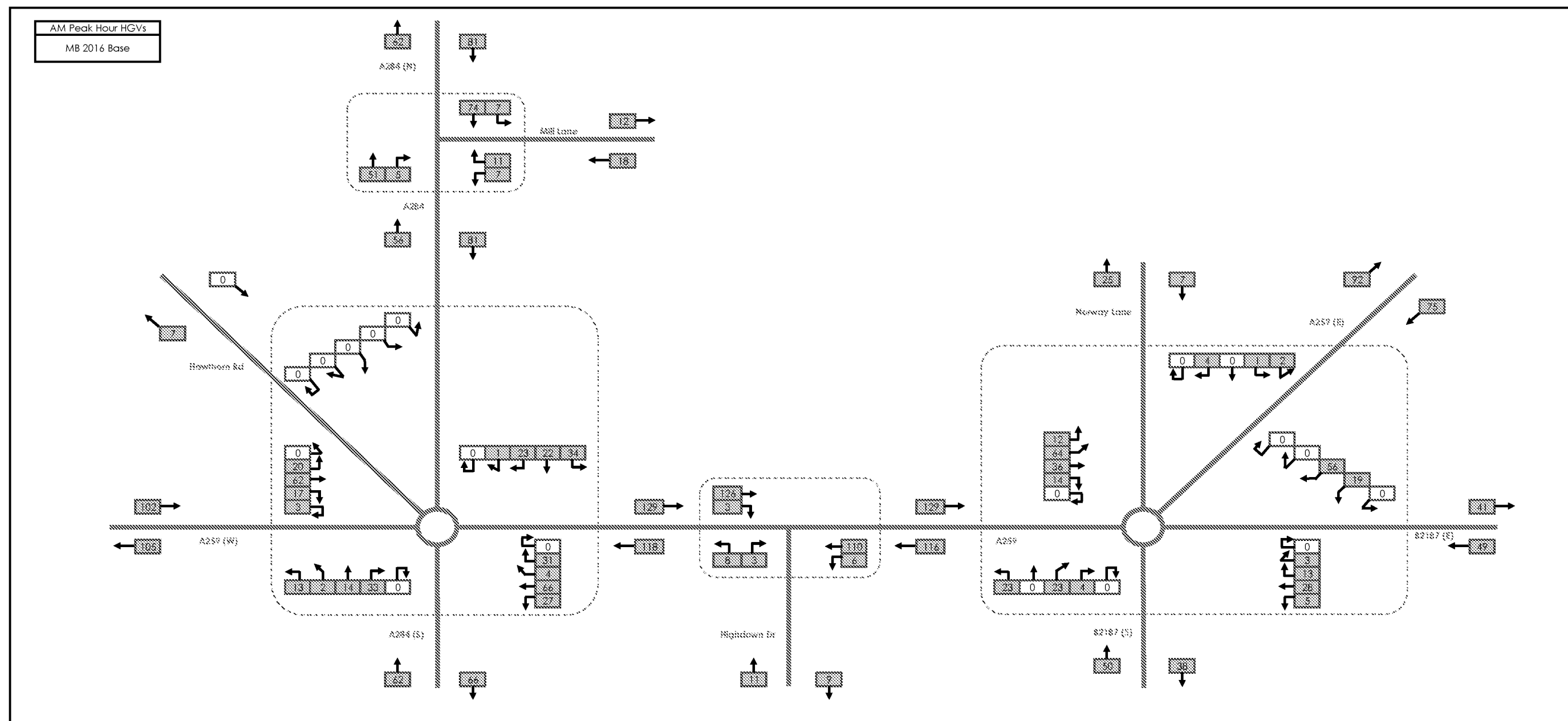


PM Peak Hour
MB 2016 Base

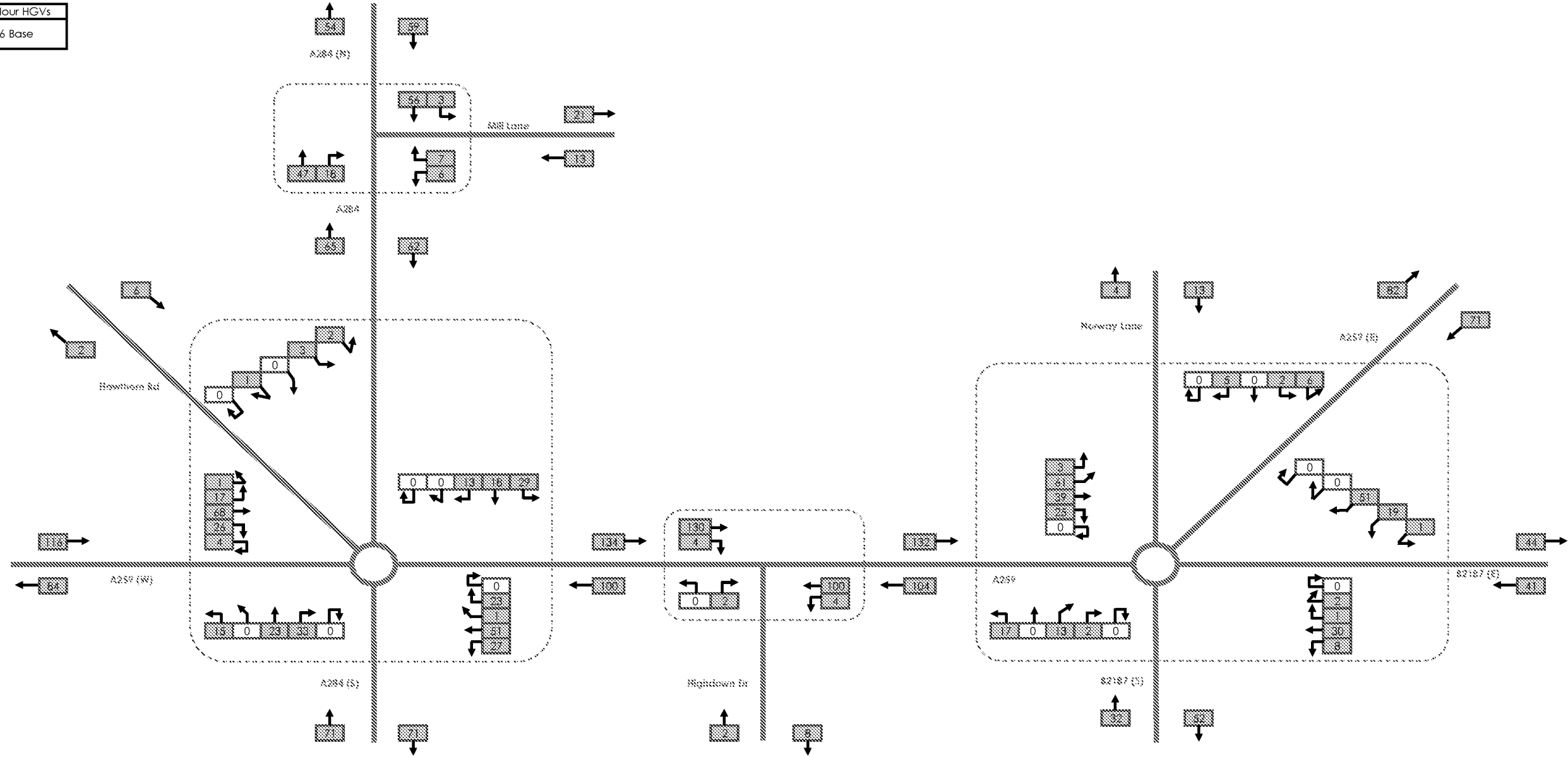


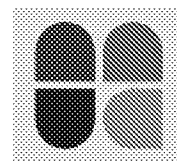


Appendix E Flow Diagrams - 2016 HGV Flows



PM Peak Hour HGVs
MB 2016 Base





Appendix F TEMPro Output

Base Year 2016

Future Year 2020

AM 1.0397

NTM Traffic Growth Calculations

1. Select NTM Dataset:

NTM Dataset Description	From	To
RTF 2018 Scenario 1 - Reference	2015	2030
NTM AF15 Dataset	2010	2040

2. Select Areas to make up the geographic region:

3. Select area type:

4. Select road type:

5. Select which area it serves:

Calculate the adjusted local growth figure

Results

Level	Area	Local Growth figure
D32035245	Arun 004	1.0397

PM 1.0355

NTM Traffic Growth Calculations

1. Select NTM Dataset:

NTM Dataset Description	From	To
RTF 2018 Scenario 1 - Reference	2015	2030
NTM AF15 Dataset	2010	2040

2. Select Areas to make up the geographic region:

3. Select area type:

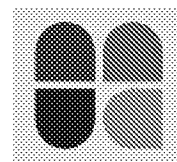
4. Select road type:

5. Select which area it serves:

Calculate the adjusted local growth figure

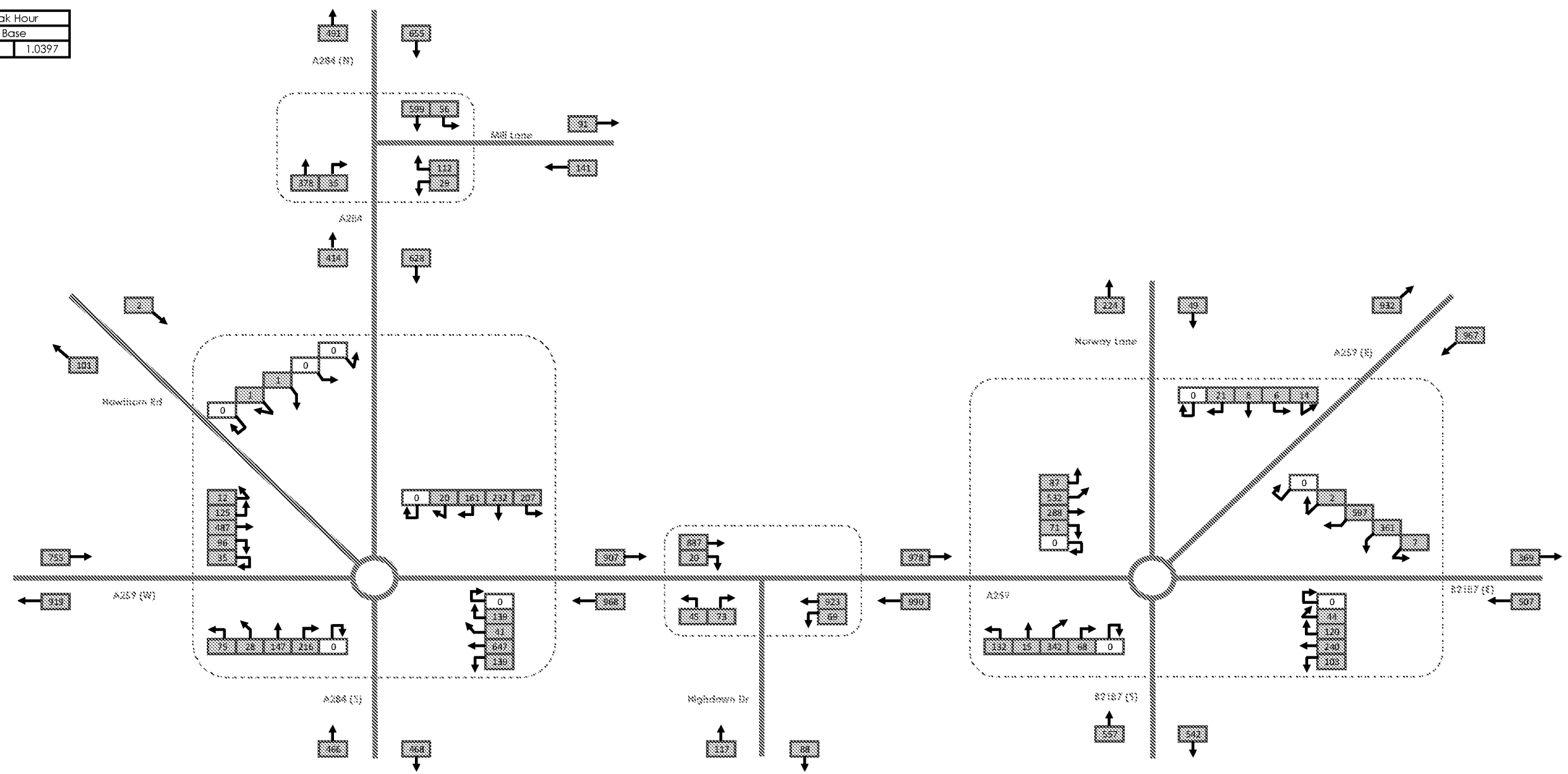
Results

Level	Area	Local Growth figure
EC2006545	Arun 004	1.0355

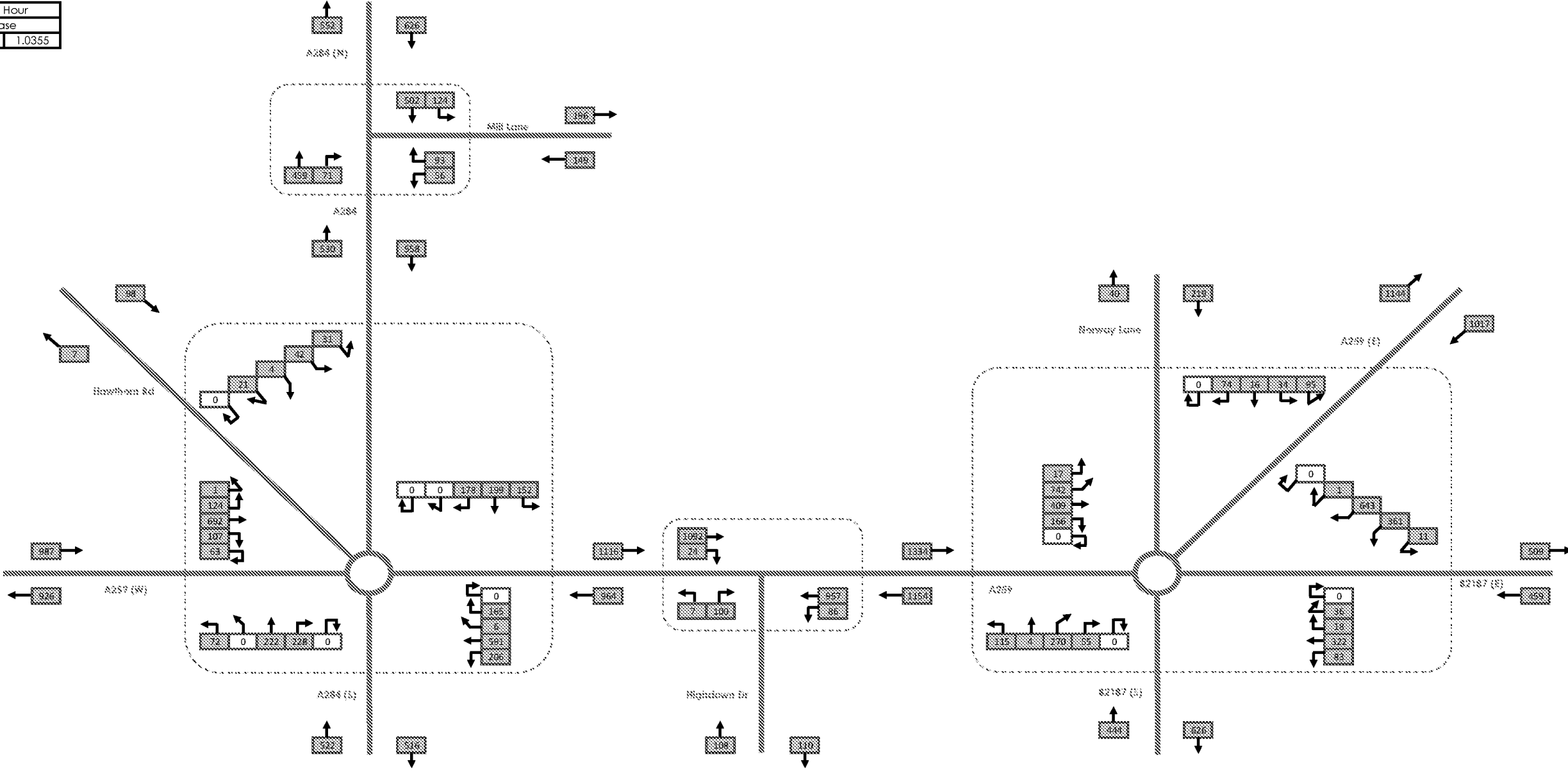


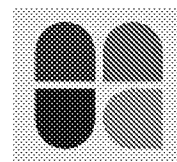
Appendix G Flow Diagrams - 2020 Base Flows

AM Peak Hour	
2020 Base	
Growth	1.0397



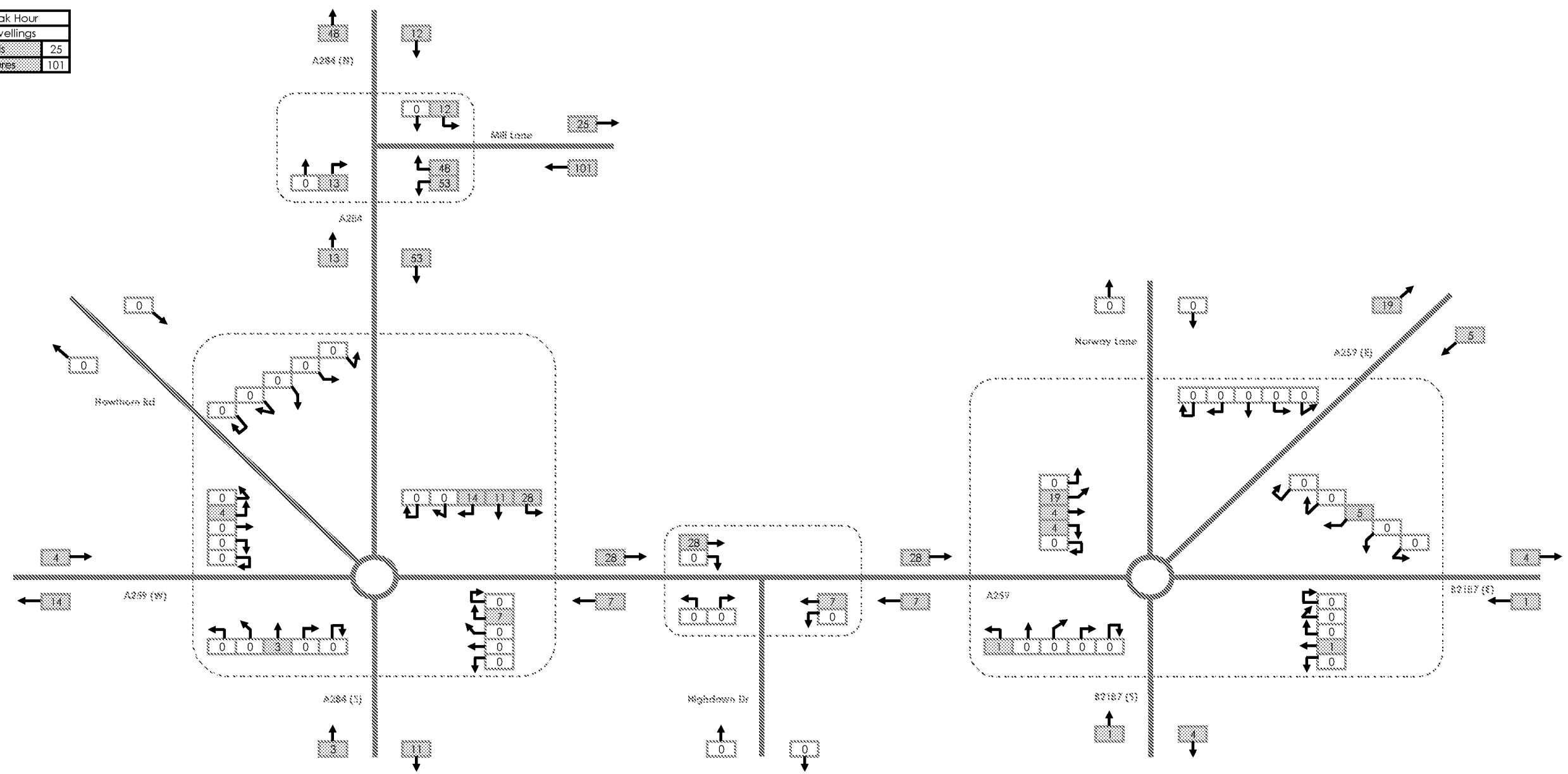
PM Peak Hour	
2020 Base	
Growth	1.0355



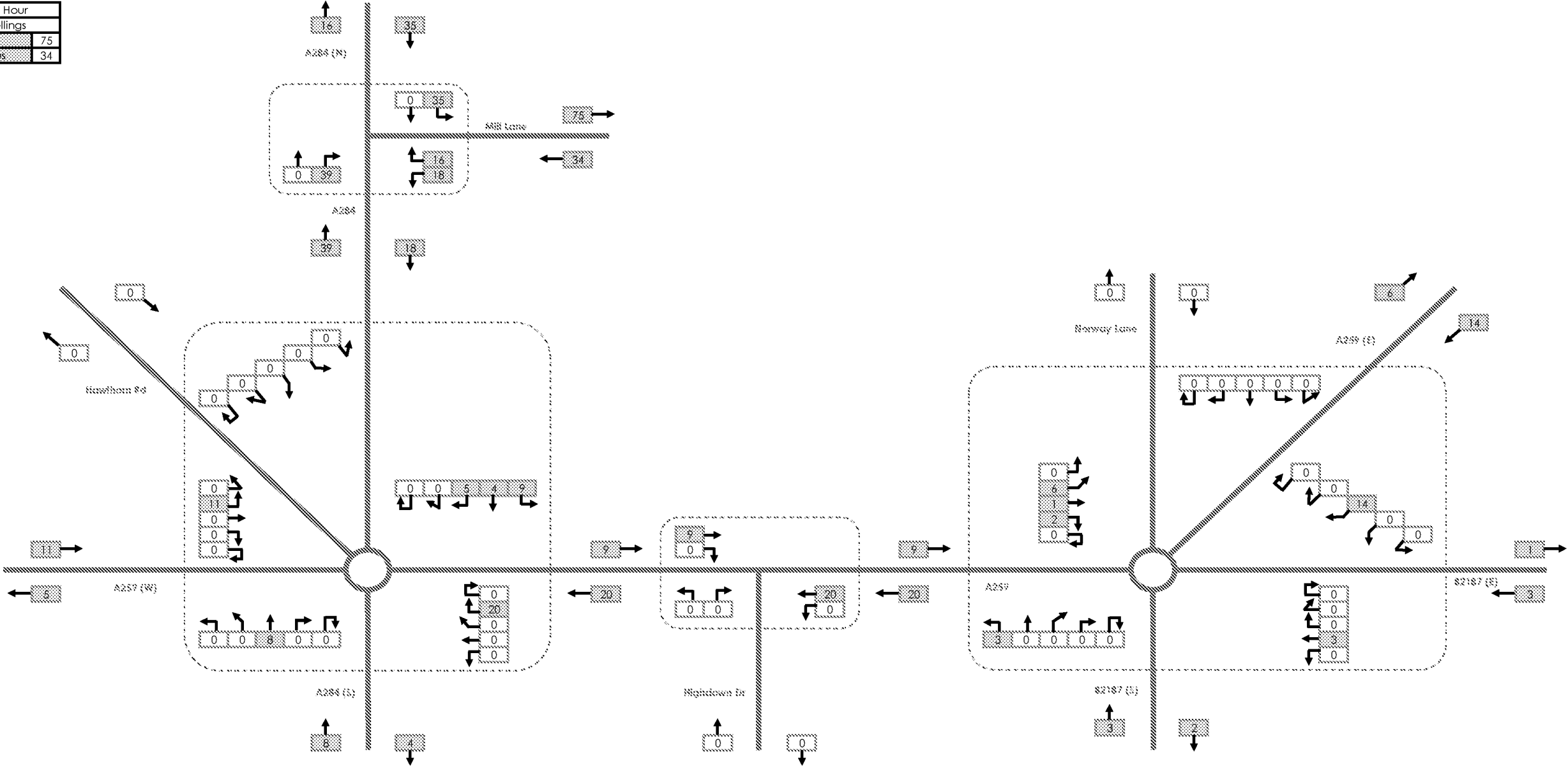


Appendix H Flow Diagrams - 2020 Base + 350 Dwellings

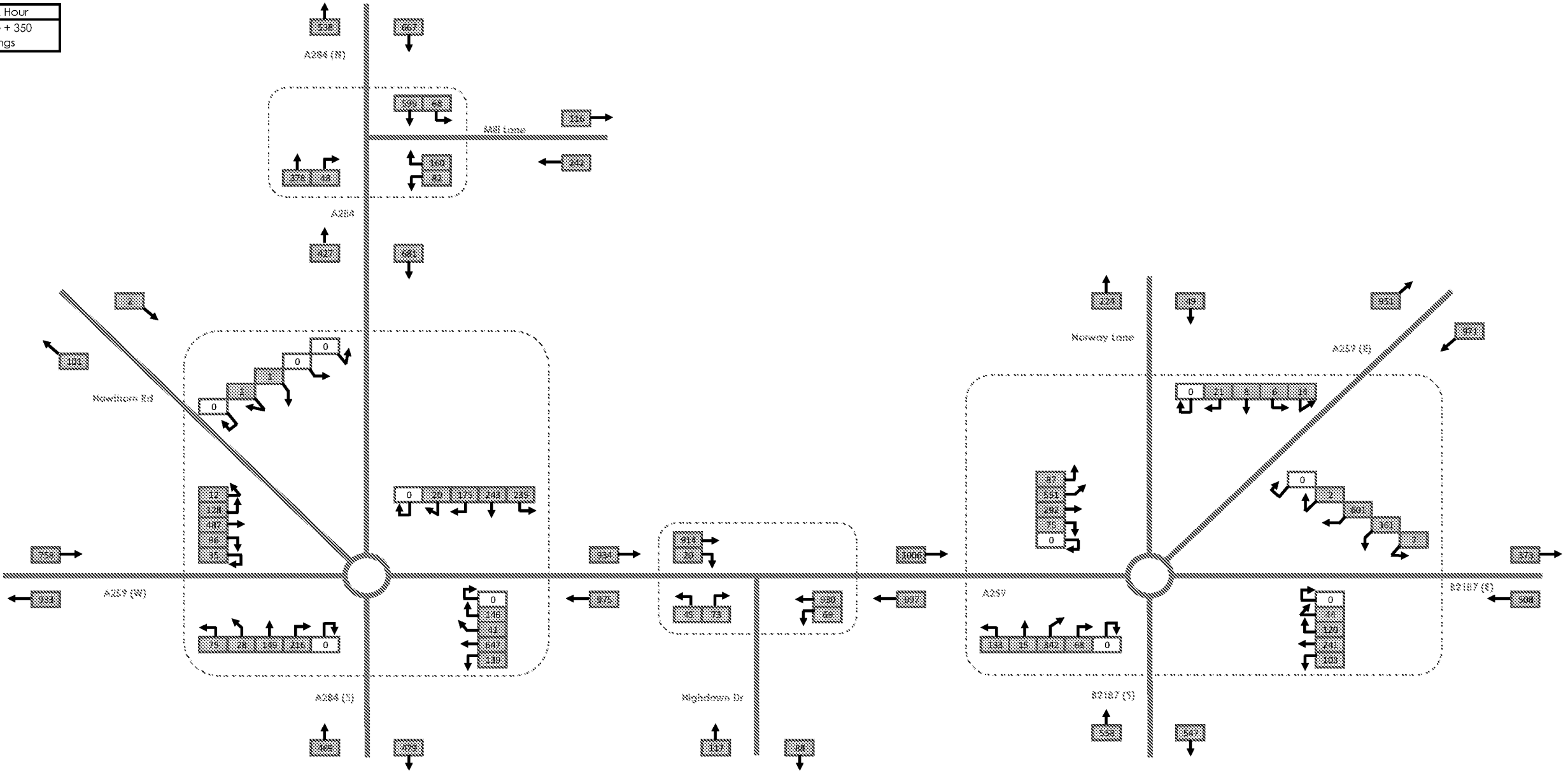
AM Peak Hour	
350 Dwellings	
Arrivals	25
Departures	101



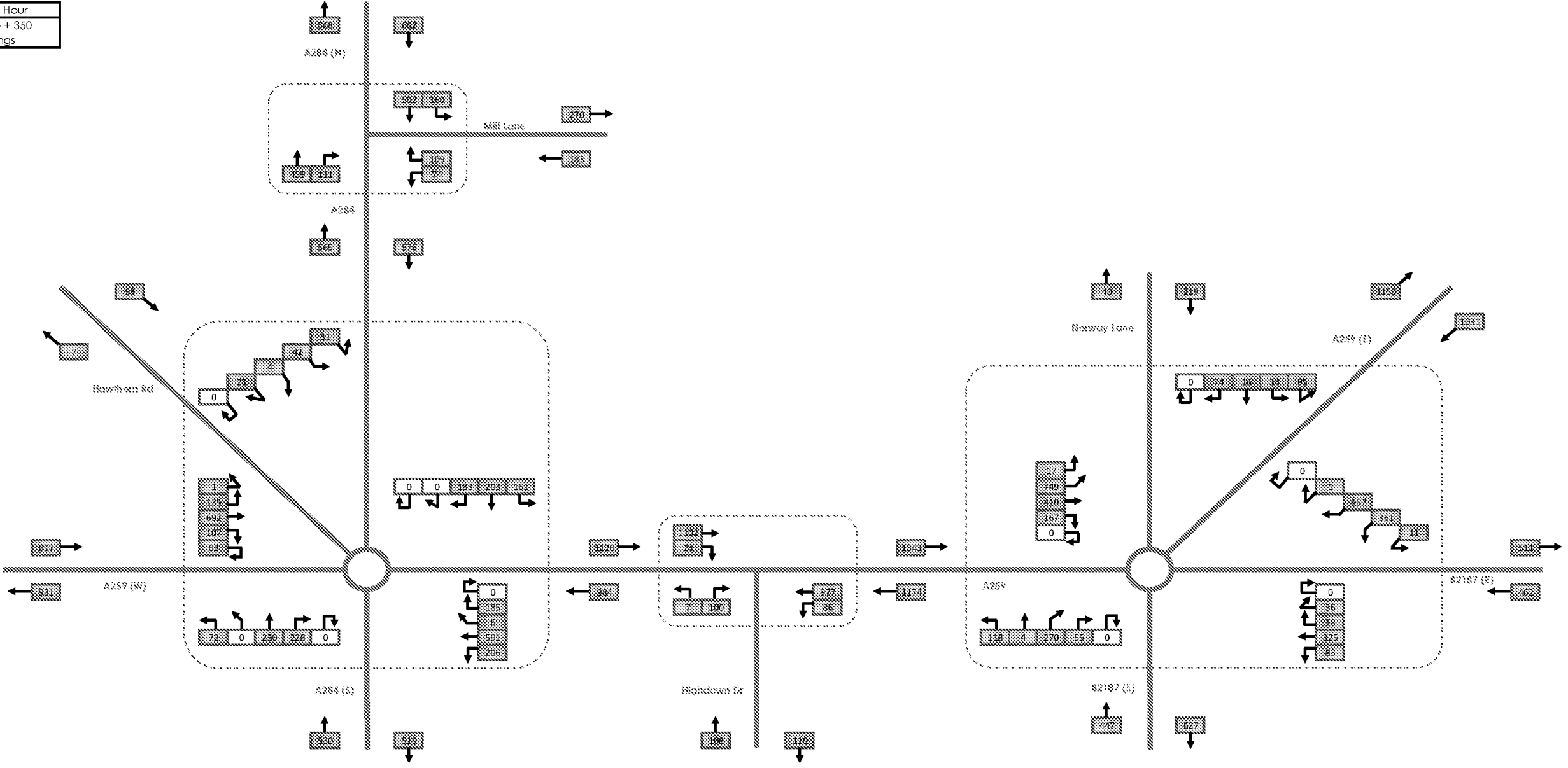
PM Peak Hour	
350 Dwellings	
Arrivals	75
Departures	34

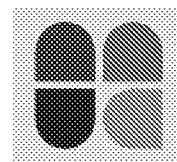


AM Peak Hour
2020 Base + 350
Dwellings



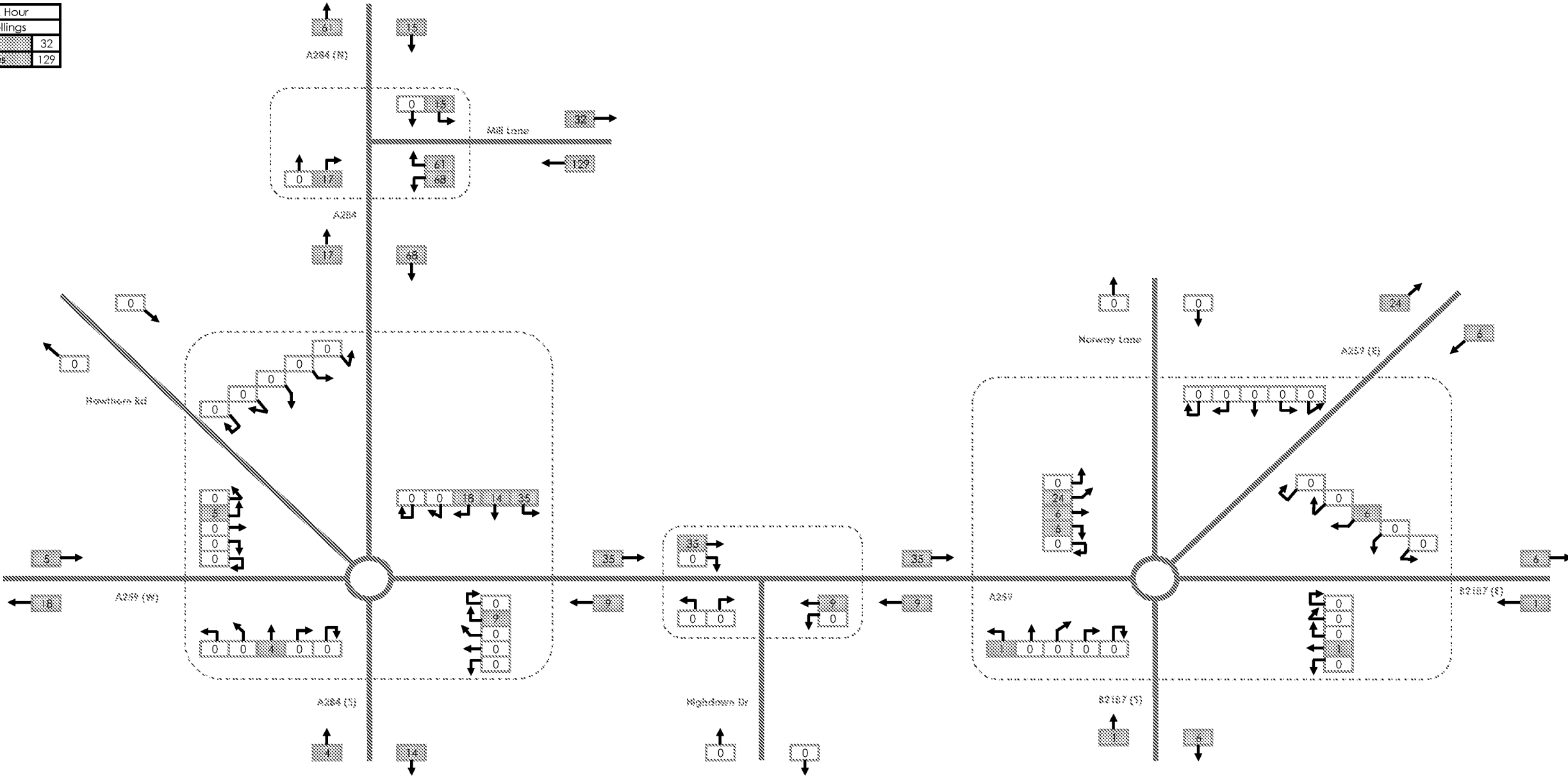
PM Peak Hour
2020 Base + 350
Dwellings



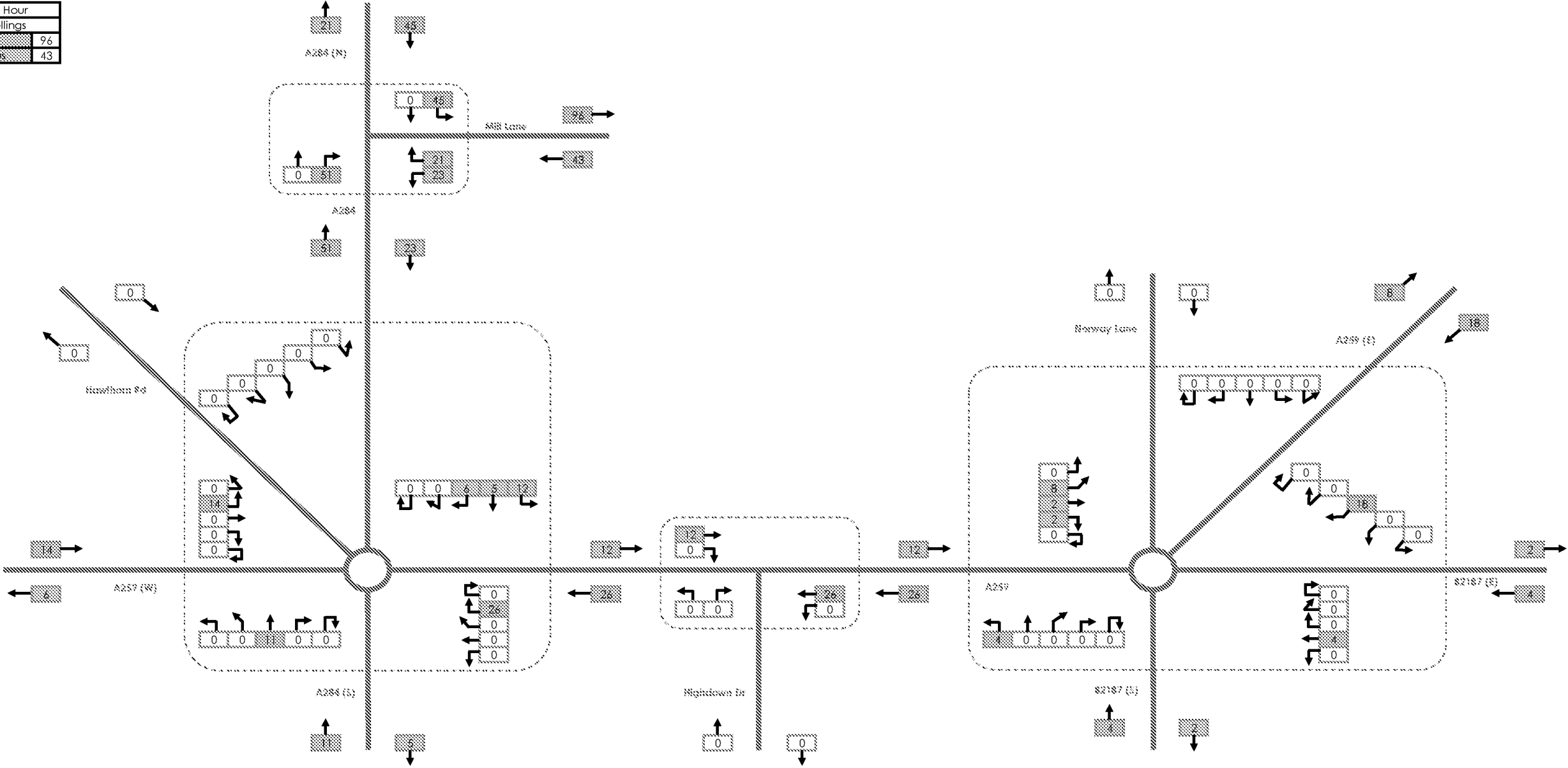


Appendix I Flow Diagrams - 2020 Base + 450 Dwellings

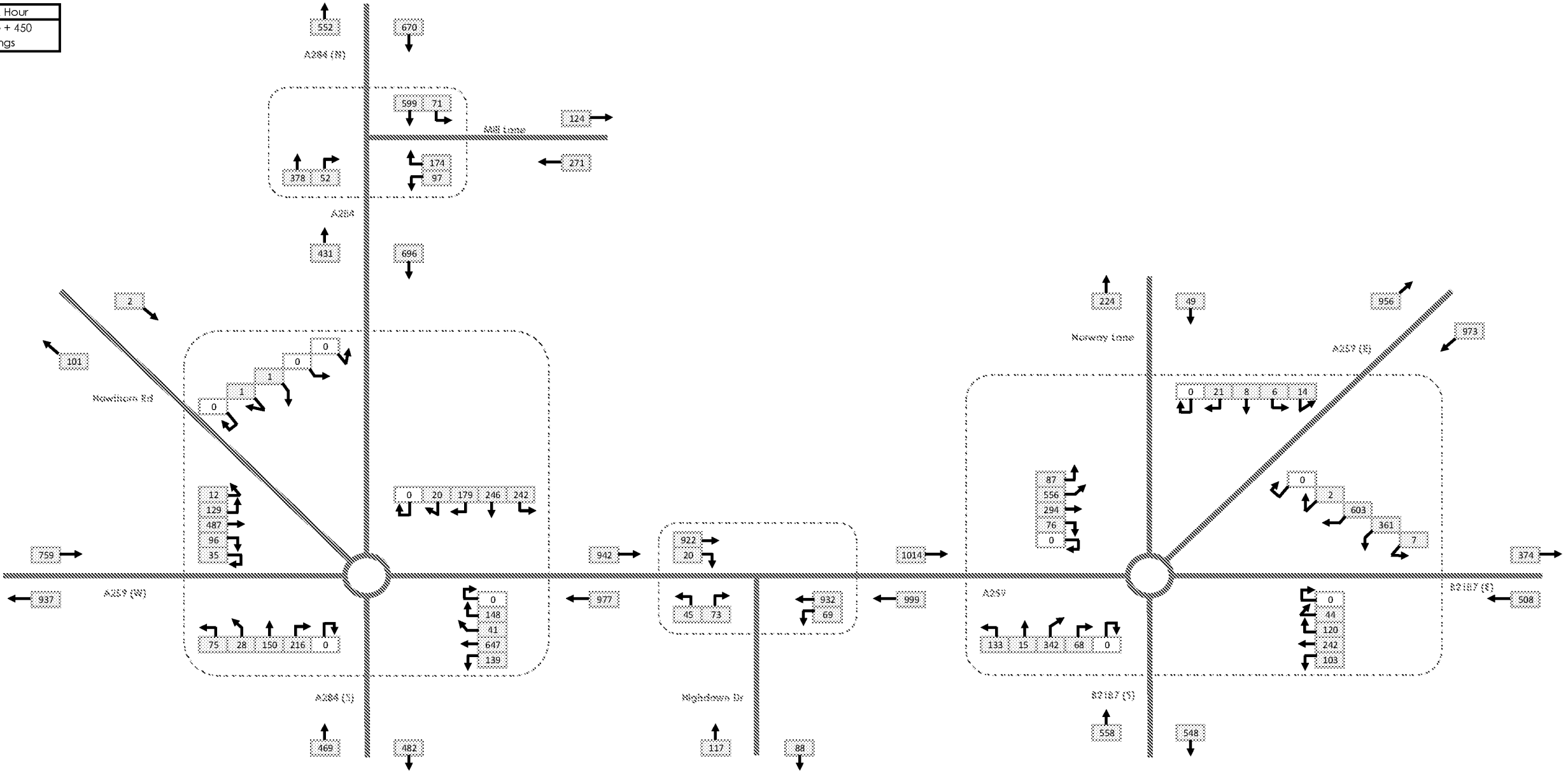
AM Peak Hour	
450 Dwellings	
Arrivals	32
Departures	129



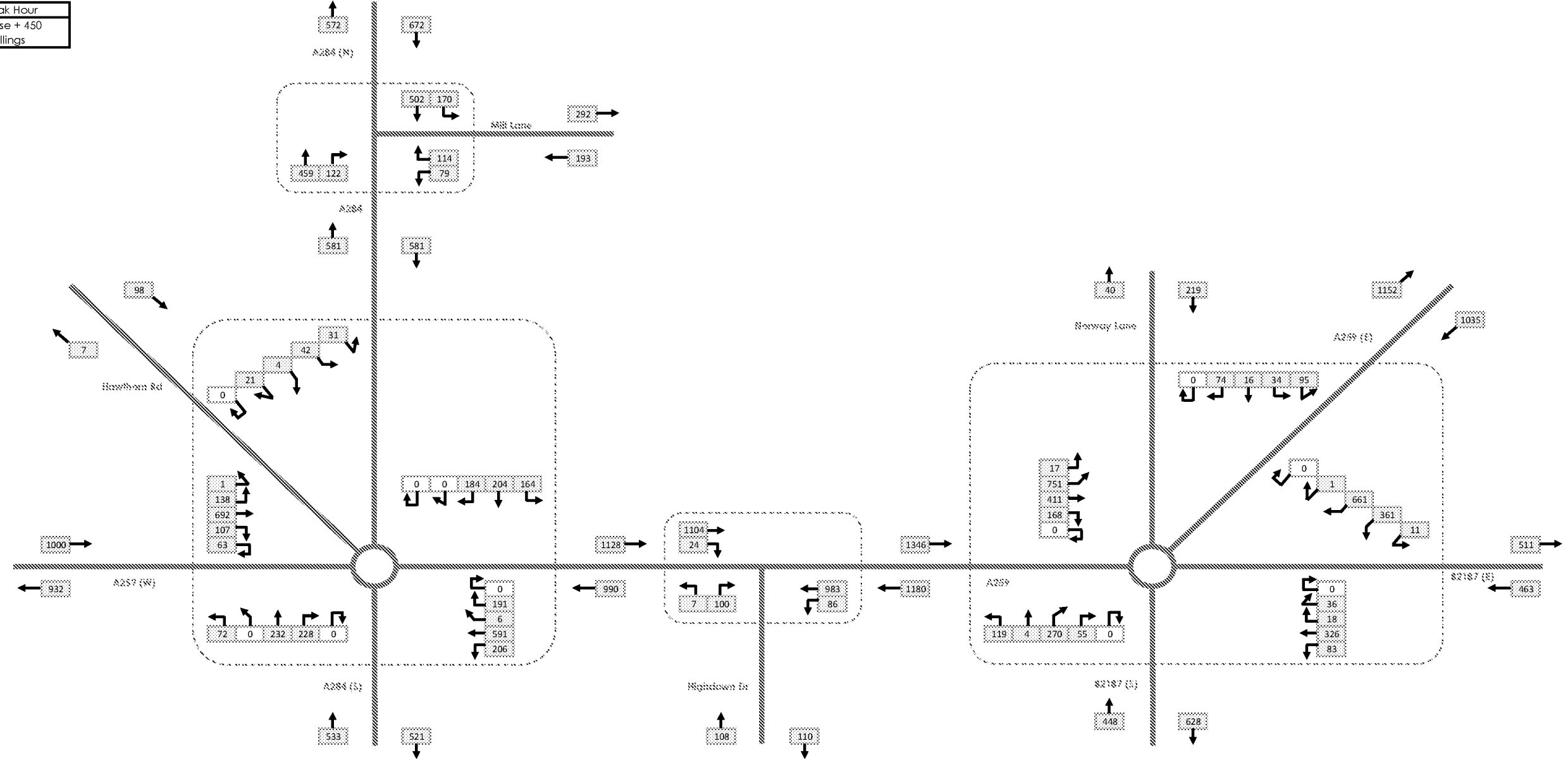
PM Peak Hour	
450 Dwellings	
Arrivals	96
Departures	43

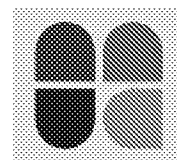


AM Peak Hour
2020 Base + 450
Dwellings



PM Peak Hour
2020 Base + 450
Dwellings





Appendix J PICADY Report

Junctions 9	
PICADY 9 - Priority Intersection Module	
Version: 9.5.0.6896 © Copyright TRL Limited, 2018	
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution	

Filename: A284 - Mill Road RTL PICADY 22-04-2020.j9

Path: P:\Planning\2019 Projects (6101-6200)\6161 Hampton Park, Littlehampton\Technical Assessments\Junction Modelling\A284 - Mill Lane\PICADY

Report generation date: 28/04/2020 16:46:58

- »2020 + 350 Dwellings, AM
- »2020 + 350 Dwellings, PM
- »2020 + 450 Dwellings, AM
- »2020 + 450 Dwellings, PM

Summary of junction performance

	AM					PM				
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)
	2020 + 350 Dwellings									
Stream B-AC	3.9	58.19	0.82	F	10.72	1.8	31.89	0.66	D	5.20
Stream C-AB	0.1	7.73	0.11	A		0.4	10.62	0.28	B	
	2020 + 450 Dwellings									
Stream B-AC	7.1	92.76	0.92	F	18.55	2.2	36.80	0.70	E	6.11
Stream C-AB	0.1	7.80	0.11	A		0.4	11.08	0.31	B	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

File summary

File Description

Title	
Location	
Site number	
Date	23/04/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	BP-RAT-01\RemotePC
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	Veh	Veh	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 segment length (min)	Run automatically
D1	2020 + 350 Dwellings	AM	ONE HOUR	08:00	09:30	15	✓
D2	2020 + 350 Dwellings	PM	ONE HOUR	17:00	18:30	15	✓
D3	2020 + 450 Dwellings	AM	ONE HOUR	08:00	09:30	15	✓
D4	2020 + 450 Dwellings	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

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

2020 + 350 Dwellings, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		10.72	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A284 North		Major
B	Mill Lane		Minor
C	A284 South		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	9.00		✓	4.50	100.0	✓	5.00

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	One lane	3.80	100	100

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	606	0.096	0.242	0.153	0.346
1	B-C	742	0.099	0.250	-	-
1	C-B	790	0.266	0.266	-	-

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	2020 + 350 Dwellings	AM	ONE HOUR	08:00	09:30	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 (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	680	100.000
B		ONE HOUR	✓	238	100.000
C		ONE HOUR	✓	440	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A	B	C
	A	0	69	611
	B	165	0	73
	C	389	51	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	15	13
	B	10	0	32
	C	14	8	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.82	58.19	3.9	F	218	328
C-AB	0.11	7.73	0.1	A	47	70
C-A					357	535
AB					63	95
AC					561	841

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	179	45	396	0.452	176	0.0	0.8	16.140	C
C-AB	38	10	588	0.065	38	0.0	0.1	6.549	A
C-A	293	73			293				
AB	52	13			52				
AC	460	115			460				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	214	53	364	0.588	212	0.8	1.3	23.300	C
C-AB	46	11	560	0.082	46	0.1	0.1	7.000	A
C-A	350	87			350				
A-B	62	16			62				
A-C	549	137			549				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	262	66	319	0.821	253	1.3	3.5	49.233	E
C-AB	56	14	522	0.108	56	0.1	0.1	7.724	A
C-A	428	107			428				
A-B	76	19			76				
A-C	673	168			673				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	262	66	319	0.821	260	3.5	3.9	58.187	F
C-AB	56	14	522	0.108	56	0.1	0.1	7.728	A
C-A	428	107			428				
A-B	76	19			76				
A-C	673	168			673				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	214	53	364	0.588	224	3.9	1.5	27.177	D
C-AB	46	11	560	0.082	46	0.1	0.1	7.003	A
C-A	350	87			350				
A-B	62	16			62				
A-C	549	137			549				

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	179	45	396	0.453	182	1.5	0.9	17.013	D
C-AB	38	10	588	0.065	38	0.1	0.1	6.558	A
C-A	293	73			293				
A-B	52	13			52				
A-C	460	115			460				

2020 + 350 Dwellings, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		5.20	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	2020 + 350 Dwellings	PM	ONE HOUR	17:00	18:30	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 (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	685	100.000
B		ONE HOUR	✓	193	100.000
C		ONE HOUR	✓	585	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A	B	C
From	A	0	158	527
	B	116	0	77
	C	465	120	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
From	A	0	3	11
	B	9	0	16
	C	11	22	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.66	31.89	1.8	D	177	266
C-AB	0.28	10.62	0.4	B	110	166
C-A					426	640
A-B					145	217
A-C					484	725

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	145	36	412	0.353	143	0.0	0.5	13.298	B
C-AB	90	23	526	0.172	90	0.0	0.2	8.230	A
C-A	350	88			350				
A-B	119	30			119				
A-C	397	99			397				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	174	43	376	0.462	172	0.5	0.8	17.585	D
C-AB	108	27	503	0.215	108	0.2	0.3	9.108	A
C-A	418	104			418				
A-B	142	36			142				
A-C	474	118			474				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	212	53	324	0.655	209	0.8	1.7	30.223	D
C-AB	133	33	472	0.282	132	0.3	0.4	10.589	B
C-A	511	128			511				
A-B	174	43			174				
A-C	580	145			580				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	212	53	324	0.655	212	1.7	1.8	31.891	D
C-AB	133	33	472	0.282	133	0.4	0.4	10.618	B
C-A	511	128			511				
A-B	174	43			174				
A-C	580	145			580				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	174	43	376	0.462	177	1.8	0.9	18.464	C
C-AB	108	27	503	0.215	108	0.4	0.3	9.141	A
C-A	418	104			418				
A-B	142	36			142				
A-C	474	118			474				

18:15 - 18:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	145	36	412	0.353	147	0.9	0.6	13.658	B
C-AB	90	23	526	0.172	91	0.3	0.2	8.273	A
C-A	350	88			350				
A-B	119	30			119				
A-C	397	99			397				

2020 + 450 Dwellings, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		18.55	D

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
D3	2020 + 450 Dwellings	AM	ONE HOUR	08:00	09:30	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 (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	683	100.000
B		ONE HOUR	✓	267	100.000
C		ONE HOUR	✓	443	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
From		A	B	C
	A	0	72	611
	B	179	0	88
	C	389	54	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		A	B	C
	A	0	15	13
	B	10	0	32
	C	14	8	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.32	32.76	7.1	F	245	368
C-AB	0.11	7.80	0.1	A	50	74
C-A					357	535
A-B					66	99
A-C					561	841

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	201	50	397	0.506	197	0.0	1.0	17.675	C
C-AB	41	10	587	0.069	40	0.0	0.1	6.583	A
C-A	293	73			293				
A-B	54	14			54				
A-C	460	115			460				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	240	60	365	0.657	237	1.0	1.8	27.389	D
C-AB	49	12	559	0.087	48	0.1	0.1	7.047	A
C-A	350	87			350				
A-B	65	16			65				
A-C	549	137			549				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	294	73	320	0.918	278	1.8	5.7	33.348	F
C-AB	59	15	521	0.114	59	0.1	0.1	7.794	A
C-A	428	107			428				
A-B	79	20			79				
A-C	673	168			673				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	294	73	320	0.918	289	5.7	7.1	32.763	F
C-AB	59	15	521	0.114	59	0.1	0.1	7.798	A
C-A	428	107			428				
A-B	79	20			79				
A-C	673	168			673				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	240	60	365	0.658	260	7.1	2.1	39.022	E
C-AB	49	12	559	0.087	49	0.1	0.1	7.051	A
C-A	350	87			350				
A-B	65	16			65				
A-C	549	137			549				

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	201	50	397	0.506	205	2.1	1.1	19.144	C
C-AB	41	10	587	0.069	41	0.1	0.1	6.591	A
C-A	293	73			293				
A-B	54	14			54				
A-C	460	115			460				

2020 + 450 Dwellings, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		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 segment length (min)	Run automatically
D4	2020 + 450 Dwellings	PM	ONE HOUR	17:00	18:30	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 (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	696	100.000
B		ONE HOUR	✓	203	100.000
C		ONE HOUR	✓	596	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A	B	C
From	A	0	169	527
	B	121	0	82
	C	465	131	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
From	A	0	3	11
	B	9	0	16
	C	11	22	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.70	36.80	2.2	E	186	279
C-AB	0.31	11.08	0.4	B	121	181
C-A					426	639
A-B					155	233
A-C					484	725

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	153	38	409	0.373	151	0.0	0.6	13.789	E
C-AB	99	25	524	0.188	98	0.0	0.2	8.422	A
C-A	350	88			350				
A-B	127	32			127				
A-C	397	99			397				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	182	46	372	0.490	181	0.6	0.9	18.673	D
C-AB	118	30	501	0.236	118	0.2	0.3	9.386	A
C-A	418	104			418				
A-B	152	38			152				
A-C	474	118			474				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	224	56	320	0.699	219	0.9	2.1	34.180	D
C-AB	146	36	471	0.309	145	0.3	0.4	11.039	B
C-A	511	128			511				
A-B	186	47			186				
A-C	580	145			580				

17:45 - 18:00

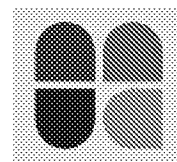
Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	224	56	320	0.699	223	2.1	2.2	36.788	E
C-AB	146	36	471	0.309	145	0.4	0.4	11.076	B
C-A	511	128			511				
A-B	186	47			186				
A-C	580	145			580				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	182	46	372	0.490	187	2.2	1.0	19.920	C
C-AB	118	30	501	0.236	119	0.4	0.3	9.428	A
C-A	418	104			418				
A-B	152	38			152				
A-C	474	118			474				

18:15 - 18:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	153	38	409	0.374	154	1.0	0.6	14.225	B
C-AB	99	25	524	0.188	99	0.3	0.2	8.470	A
C-A	350	88			350				
A-B	127	32			127				
A-C	397	99			397				



Appendix K ARCADY Report

Junctions 9	
ARCADY 9 - Roundabout Module	
Version: 9.5.0.6896 © Copyright TRL Limited, 2018	
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution	

Filename: Wick Roundabout ARCADY 22-04-2020.j9

Path: P:\Planning\2019 Projects (6101-6200)\6161 Hampton Park, Littlehampton\Technical Assessments\Junction Modelling

Report generation date: 22/04/2020 15:41:18

- »2020 Baseline + 350 Dwellings, AM
- »2020 Baseline + 350 Dwellings, PM
- »2020 Baseline + 450 Dwellings, AM
- »2020 Baseline + 450 Dwellings, PM

Summary of junction performance

	AM					PM				
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)
	2020 Baseline + 350 Dwellings									
Arm A	1.6	7.79	0.62	A	6.81	2.0	11.29	0.67	B	10.43
Arm B	2.4	7.49	0.71	A		2.2	7.01	0.69	A	
Arm C	0.6	4.15	0.38	A		0.8	4.61	0.45	A	
Arm D	1.6	6.67	0.61	A		5.0	16.25	0.84	C	
Arm E	0.0	6.20	0.01	A		0.5	13.98	0.31	B	
	2020 Baseline + 450 Dwellings									
Arm A	1.7	8.14	0.63	A	6.94	2.1	11.53	0.68	B	10.74
Arm B	2.4	7.55	0.71	A		2.2	7.13	0.69	A	
Arm C	0.6	4.18	0.38	A		0.8	4.66	0.46	A	
Arm D	1.6	6.75	0.62	A		5.2	16.92	0.85	C	
Arm E	0.0	6.24	0.01	A		0.5	14.37	0.32	B	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

File summary

File Description

Title	Wick Roundabout
Location	
Site number	
Date	24/03/2020
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	BP-RAT-01\RemotePC
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	Veh	Veh	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 segment length (min)
D1	2020 Baseline + 350 Dwellings	AM	ONE HOUR	08:00	09:30	15
D2	2020 Baseline + 350 Dwellings	PM	ONE HOUR	17:00	18:30	15
D3	2020 Baseline + 450 Dwellings	AM	ONE HOUR	08:00	09:30	15
D4	2020 Baseline + 450 Dwellings	PM	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2020 Baseline + 350 Dwellings, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	6.81	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	Lyminster Road	
B	Worthing Road	
C	A284 Wick Street	
D	A259	
E	Hawthorn Road	

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	5.00	9.00	10.0	30.0	55.5	31.3	
B	4.50	9.50	26.0	35.0	55.5	32.5	
C	5.00	9.50	26.0	105.0	55.5	15.0	
D	4.50	8.00	28.0	22.5	55.5	37.5	
E	5.00	6.00	2.0	20.0	55.5	35.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.652	2071
B	0.699	2330
C	0.772	2612
D	0.644	2077
E	0.559	1603

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	2020 Baseline + 350 Dwellings	AM	ONE HOUR	08:00	09:30	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 (Veh/hr)	Scaling Factor (%)
A		✓	680	100.000
B		✓	1043	100.000
C		✓	478	100.000
D		✓	773	100.000
E		✓	5	100.000

Origin-Destination Data

Demand (Veh/hr)

	To					
		A	B	C	D	E
From	A	0	233	250	176	21
	B	158	0	161	674	50
	C	148	222	0	80	28
	D	132	491	103	36	11
	E	0	3	1	1	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		A	B	C	D	E
From	A	0	17	10	15	5
	B	16	0	16	11	6
	C	9	14	0	14	4
	D	17	13	18	0	18
	E	0	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
A	0.62	7.79	1.6	A
B	0.71	7.49	2.4	A
C	0.38	4.15	0.6	A
D	0.61	6.67	1.6	A
E	0.01	6.20	0.0	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	512	643	1406	0.364	510	0.6	4.007	A
B	785	441	1773	0.443	782	0.8	3.620	A
C	360	837	1696	0.212	359	0.3	2.689	A
D	582	470	1530	0.380	580	0.6	3.778	A
E	4	967	825	0.005	4	0.0	4.383	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	611	769	1324	0.462	610	0.8	5.036	A
B	938	528	1712	0.548	936	1.2	4.629	A
C	430	1002	1569	0.274	429	0.4	3.159	A
D	695	563	1472	0.472	694	0.9	4.622	A
E	4	1158	724	0.006	4	0.0	5.000	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	749	941	1212	0.618	746	1.6	7.668	A
B	1148	645	1630	0.705	1144	2.3	7.341	A
C	526	1224	1397	0.377	525	0.6	4.123	A
D	851	689	1392	0.611	848	1.5	6.592	A
E	6	1416	588	0.009	5	0.0	6.179	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	749	944	1211	0.618	749	1.6	7.787	A
B	1148	647	1628	0.705	1148	2.4	7.495	A
C	526	1229	1394	0.378	526	0.6	4.148	A
D	851	690	1391	0.612	851	1.6	6.665	A
E	6	1420	586	0.009	6	0.0	6.201	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	611	773	1321	0.463	614	0.9	5.110	A
B	938	531	1710	0.548	942	1.2	4.718	A
C	430	1008	1564	0.275	431	0.4	3.181	A
D	695	565	1470	0.473	698	0.9	4.675	A
E	4	1164	721	0.006	5	0.0	5.023	A

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	512	646	1404	0.365	513	0.6	4.048	A
B	785	444	1771	0.443	787	0.8	3.666	A
C	360	842	1692	0.213	360	0.3	2.704	A
D	582	473	1529	0.381	583	0.6	3.810	A
E	4	973	822	0.005	4	0.0	4.398	A

2020 Baseline + 350 Dwellings, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	10.43	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 segment length (min)
D2	2020 Baseline + 350 Dwellings	PM	ONE HOUR	17:00	18:30	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 (Veh/hr)	Scaling Factor (%)
A		✓	588	100.000
B		✓	1024	100.000
C		✓	586	100.000
D		✓	1039	100.000
E		✓	107	100.000

Origin-Destination Data

Demand (Veh/hr)

	To					
		A	B	C	D	E
From	A	0	181	215	192	0
	B	190	2	212	611	9
	C	232	271	0	83	0
	D	141	714	125	58	1
	E	31	52	4	20	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		A	B	C	D	E
From	A	0	17	9	9	0
	B	12	0	12	9	11
	C	11	14	0	14	0
	D	15	10	19	0	100
	E	10	6	50	11	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
A	0.67	11.29	2.0	E
B	0.69	7.01	2.2	A
C	0.45	4.61	0.8	A
D	0.84	16.25	5.0	E
E	0.31	13.98	0.5	B

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	443	933	1250	0.354	440	0.5	4.435	A
B	771	460	1792	0.430	768	0.7	3.505	A
C	441	811	1710	0.258	440	0.3	2.832	A
D	782	528	1523	0.514	778	1.0	4.807	A
E	81	1299	721	0.112	80	0.1	5.613	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	529	1117	1131	0.468	527	0.9	5.953	A
B	921	551	1728	0.533	919	1.1	4.440	A
C	527	971	1591	0.331	526	0.5	3.380	A
D	934	632	1455	0.642	931	1.8	6.832	A
E	96	1554	576	0.167	96	0.2	7.493	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	647	1360	972	0.666	643	1.9	10.802	B
B	1127	671	1644	0.686	1123	2.1	6.860	A
C	645	1186	1430	0.451	644	0.8	4.571	A
D	1144	773	1363	0.839	1132	4.7	14.850	E
E	118	1894	382	0.308	117	0.4	13.512	B

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	647	1371	965	0.671	647	2.0	11.291	B
B	1127	676	1641	0.687	1127	2.2	7.008	A
C	645	1191	1426	0.452	645	0.8	4.608	A
D	1144	775	1362	0.840	1143	5.0	16.245	C
E	118	1907	375	0.314	118	0.5	13.982	B

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	529	1132	1121	0.472	533	0.9	6.166	A
B	921	557	1724	0.534	925	1.2	4.529	A
C	527	978	1585	0.332	528	0.5	3.408	A
D	934	635	1454	0.643	947	1.8	7.271	A
E	96	1572	566	0.170	97	0.2	7.698	A

18:15 - 18:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	443	941	1245	0.356	444	0.6	4.503	A
B	771	464	1789	0.431	773	0.8	3.545	A
C	441	817	1706	0.259	442	0.4	2.848	A
D	782	531	1521	0.514	785	1.1	4.911	A
E	81	1309	716	0.113	81	0.1	5.671	A

2020 Baseline + 450 Dwellings, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	6.94	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)
D3	2020 Baseline + 450 Dwellings	AM	ONE HOUR	08:00	09:30	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 (Veh/hr)	Scaling Factor (%)
A		✓	697	100.000
B		✓	1045	100.000
C		✓	479	100.000
D		✓	774	100.000
E		✓	5	100.000

Origin-Destination Data

Demand (Veh/hr)

	To					
		A	B	C	D	E
From	A	0	241	254	181	21
	B	160	0	161	674	50
	C	149	222	0	80	28
	D	133	491	103	36	11
	E	0	3	1	1	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		A	B	C	D	E
From	A	0	17	10	15	5
	B	16	0	15	10	6
	C	9	14	0	14	4
	D	17	13	18	0	18
	E	0	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
A	0.63	8.14	1.7	A
B	0.71	7.55	2.4	A
C	0.38	4.18	0.6	A
D	0.62	6.75	1.6	A
E	0.01	6.24	0.0	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	525	643	1405	0.373	522	0.6	4.068	A
B	787	447	1775	0.443	784	0.8	3.620	A
C	361	842	1690	0.213	360	0.3	2.703	A
D	583	473	1526	0.382	580	0.6	3.799	A
E	4	970	822	0.005	4	0.0	4.397	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	627	769	1323	0.474	625	0.9	5.155	A
B	939	536	1712	0.549	938	1.2	4.638	A
C	431	1008	1563	0.276	430	0.4	3.179	A
D	696	566	1467	0.474	695	0.9	4.657	A
E	4	1162	721	0.006	4	0.0	5.022	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	767	941	1211	0.634	764	1.7	8.002	A
B	1151	655	1629	0.706	1146	2.3	7.390	A
C	527	1232	1391	0.379	526	0.6	4.159	A
D	852	692	1387	0.615	850	1.6	6.669	A
E	6	1421	584	0.009	5	0.0	6.221	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	767	944	1209	0.635	767	1.7	8.140	A
B	1151	657	1627	0.707	1150	2.4	7.551	A
C	527	1236	1388	0.380	527	0.6	4.185	A
D	852	694	1386	0.615	852	1.6	6.746	A
E	6	1425	582	0.009	6	0.0	6.243	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	627	773	1320	0.475	630	0.9	5.239	A
B	939	539	1710	0.549	944	1.2	4.727	A
C	431	1014	1557	0.276	432	0.4	3.199	A
D	696	568	1465	0.475	698	0.9	4.713	A
E	4	1167	718	0.006	5	0.0	5.043	A

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	525	646	1403	0.374	526	0.6	4.113	A
B	787	450	1772	0.444	788	0.8	3.664	A
C	361	847	1686	0.214	361	0.3	2.720	A
D	583	475	1524	0.382	584	0.6	3.835	A
E	4	976	819	0.005	4	0.0	4.412	A

2020 Baseline + 450 Dwellings, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	10.74	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 segment length (min)
D4	2020 Baseline + 450 Dwellings	PM	ONE HOUR	17:00	18:30	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 (Veh/hr)	Scaling Factor (%)
A		✓	594	100.000
B		✓	1030	100.000
C		✓	588	100.000
D		✓	1042	100.000
E		✓	107	100.000

Origin-Destination Data

Demand (Veh/hr)

	To					
		A	B	C	D	E
From	A	0	184	216	194	0
	B	196	2	212	611	9
	C	234	271	0	83	0
	D	144	714	125	58	1
	E	31	52	4	20	0

Vehicle Mix

Heavy Vehicle Percentages

From	To					
		A	B	C	D	E
	A	0	17	9	9	0
	B	12	0	12	9	11
	C	11	14	0	14	0
	D	15	10	19	0	100
	E	10	6	50	11	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
A	0.68	11.53	2.1	B
B	0.69	7.13	2.2	A
C	0.46	4.66	0.8	A
D	0.85	16.92	5.2	C
E	0.32	14.37	0.5	B

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	447	933	1250	0.358	445	0.6	4.460	A
B	775	462	1790	0.433	772	0.8	3.527	A
C	443	817	1705	0.260	441	0.3	2.846	A
D	784	534	1519	0.516	780	1.1	4.848	A
E	81	1307	717	0.112	80	0.1	5.645	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	534	1117	1130	0.472	533	0.9	6.008	A
B	926	553	1726	0.536	924	1.1	4.481	A
C	529	978	1585	0.333	528	0.5	3.403	A
D	937	639	1451	0.646	934	1.8	6.929	A
E	96	1564	570	0.169	96	0.2	7.582	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	654	1360	973	0.672	650	2.0	11.001	B
B	1134	674	1642	0.691	1130	2.2	6.975	A
C	647	1195	1424	0.455	646	0.8	4.622	A
D	1147	782	1358	0.845	1135	4.9	15.356	C
E	118	1906	376	0.314	117	0.4	13.850	B

17:45 - 18:00

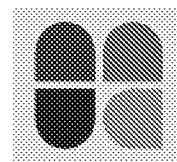
Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	654	1371	965	0.678	654	2.1	11.531	B
B	1134	679	1638	0.692	1134	2.2	7.133	A
C	647	1200	1420	0.456	647	0.8	4.661	A
D	1147	784	1356	0.846	1146	5.2	16.916	C
E	118	1919	368	0.320	118	0.5	14.367	B

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	534	1133	1120	0.477	539	0.9	6.233	A
B	926	560	1721	0.538	930	1.2	4.572	A
C	529	986	1580	0.335	530	0.5	3.435	A
D	937	642	1449	0.647	950	1.9	7.403	A
E	96	1583	560	0.172	97	0.2	7.801	A

18:15 - 18:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	447	941	1245	0.359	449	0.6	4.528	A
B	775	466	1787	0.434	777	0.8	3.567	A
C	443	823	1701	0.260	443	0.4	2.864	A
D	784	537	1517	0.517	788	1.1	4.957	A
E	81	1317	711	0.113	81	0.1	5.717	A



Appendix L LINSIG Report

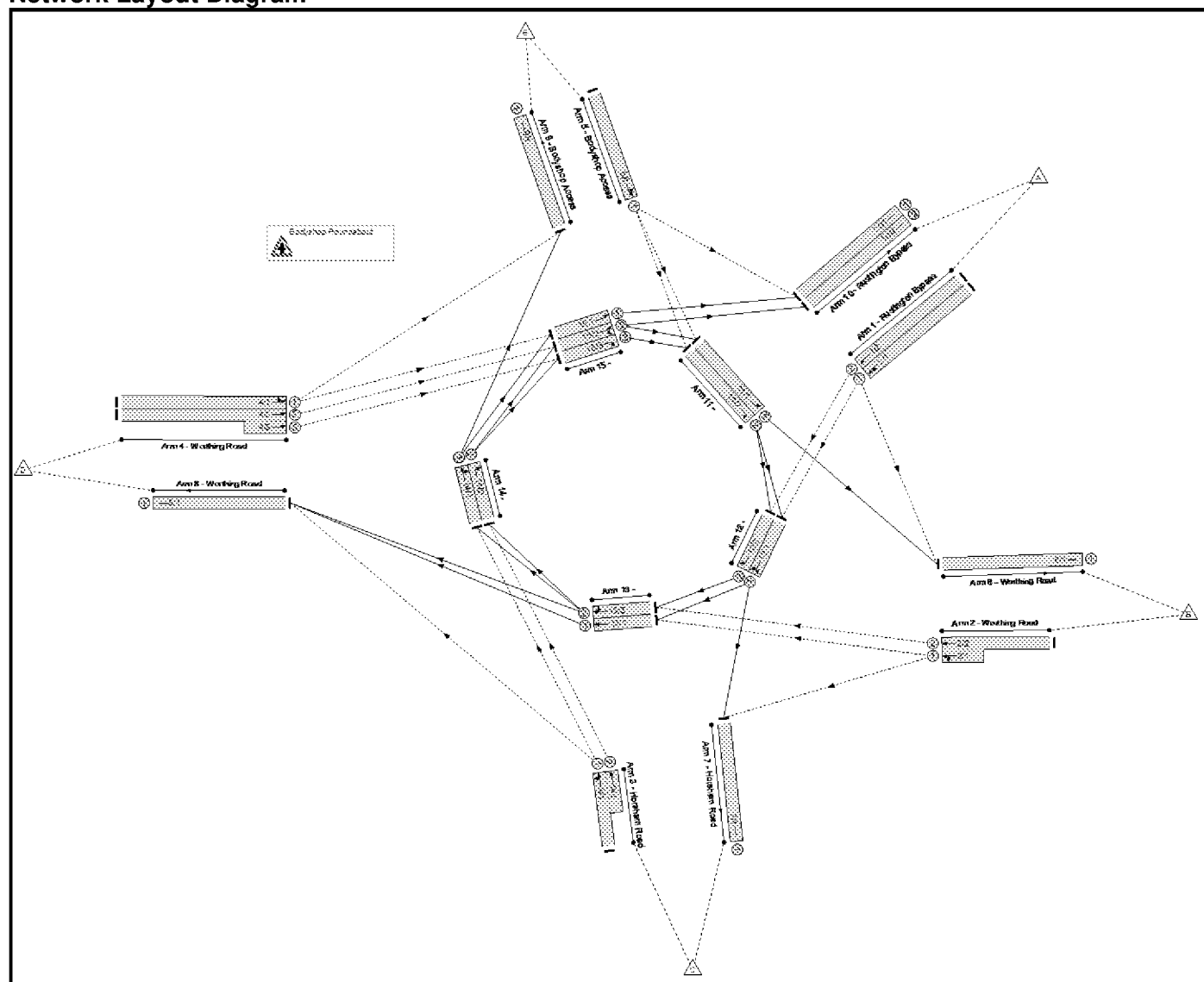
Full Input Data And Results

Full Input Data And Results

User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	Body Shop Roundabout LinSig.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Full Input Data And Results

Give-Way Lane Input Data

Junction: Bodyshop Roundabout											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/1 (Rustington Bypass)	6/1 (Left)	1000	0	11/1	0.33	All	-	-	-	-	-
	12/1 (Ahead)	1000	0	11/1	0.33	All					
				11/2	0.33	All					
1/2 (Rustington Bypass)	12/2 (Ahead)	1000	0	11/1	0.33	All	-	-	-	-	-
				11/2	0.33	All					
2/1 (Worthing Road)	7/1 (Left)	1000	0	12/1	0.33	All	-	-	-	-	-
	13/1 (Ahead)	1000	0	12/1	0.33	All					
2/2 (Worthing Road)	13/2 (Ahead)	1000	0	12/1	0.33	All	-	-	-	-	-
				12/2	0.33	All					
3/1 (Horsham Road)	8/1 (Left)	1000	0	13/1	0.33	All	-	-	-	-	-
				13/2	0.33	All					
	14/1 (Ahead)	1000	0	13/1	0.33	All					
				13/2	0.33	All					
3/2 (Horsham Road)	14/2 (Ahead)	1000	0	13/1	0.33	All	-	-	-	-	-
				13/2	0.33	All					
4/1 (Worthing Road)	9/1 (Left)	1000	0	14/1	0.33	All	-	-	-	-	-
				14/2	0.33	All					
	15/1 (Ahead)	1000	0	14/1	0.33	All					
				14/2	0.33	All					
4/2 (Worthing Road)	15/2 (Ahead)	1000	0	14/1	0.33	All	-	-	-	-	-
				14/2	0.33	All					
4/3 (Worthing Road)	15/3 (Ahead)	1000	0	14/1	0.33	All	-	-	-	-	-
				14/2	0.33	All					

Full Input Data And Results

5/1 (Bodyshop Access)	10/1 (Left)	1000	0	15/1	0.33	All	-	-	-	-	-
				15/2	0.33	All					
	11/1 (Ahead)	1000	0	15/1	0.33	All					
				15/2	0.33	All					
				15/3	0.33	All					
	11/2 (Ahead)	1000	0	15/1	0.33	All					
				15/2	0.33	All					
				15/3	0.33	All					

Full Input Data And Results

Lane Input Data

Junction: Bodyshop Roundabout												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Rustington Bypass)	O		2	3	60.0	Geom	-	5.00	0.00	Y	Arm 6 Left	27.50
											Arm 12 Ahead	100.00
1/2 (Rustington Bypass)	O		2	3	60.0	Geom	-	5.00	0.00	Y	Arm 12 Ahead	100.00
2/1 (Worthing Road)	O		2	3	5.0	Geom	-	4.00	0.00	Y	Arm 7 Left	30.00
											Arm 13 Ahead	Inf
2/2 (Worthing Road)	O		2	3	60.0	Geom	-	3.25	0.00	Y	Arm 13 Ahead	100.00
3/1 (Horsham Road)	O		2	3	60.0	Geom	-	4.00	0.00	Y	Arm 8 Left	60.00
											Arm 14 Ahead	100.00
3/2 (Horsham Road)	O		2	3	5.0	Geom	-	3.50	0.00	Y	Arm 14 Ahead	100.00
4/1 (Worthing Road)	O		2	3	60.0	Geom	-	4.00	0.00	Y	Arm 9 Left	40.00
											Arm 15 Ahead	45.00
4/2 (Worthing Road)	O		2	3	60.0	Geom	-	4.00	0.00	Y	Arm 15 Ahead	45.00
4/3 (Worthing Road)	O		2	3	5.0	Geom	-	3.50	0.00	Y	Arm 15 Ahead	45.00
5/1 (Bodyshop Access)	O		2	3	60.0	Geom	-	5.00	0.00	Y	Arm 10 Left	30.00
											Arm 11 Ahead	45.00
6/1 (Worthing Road)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Horsham Road)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (Worthing Road)	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

9/1 (Bodyshop Access)	U		2	3	60.0	Inf	-	-	-	-	-	-
10/1 (Rustington Bypass)	U		2	3	60.0	Inf	-	-	-	-	-	-
10/2 (Rustington Bypass)	U		2	3	60.0	Inf	-	-	-	-	-	-
11/1	U		2	3	60.0	Geom	-	4.50	0.00	Y	Arm 6 Left	40.00
11/2	U		2	3	60.0	Geom	-	4.00	0.00	N	Arm 12 Right	40.00
12/1	U		2	3	60.0	Geom	-	4.50	0.00	Y	Arm 7 Ahead	40.00
											Arm 13 Right	40.00
12/2	U		2	3	60.0	Geom	-	4.50	0.00	Y	Arm 13 Right	40.00
13/1	U		2	3	60.0	Geom	-	4.50	0.00	Y	Arm 8 Ahead	40.00
13/2	U		2	3	60.0	Geom	-	4.50	0.00	Y	Arm 8 Ahead	Inf
											Arm 14 Right	40.00
14/1	U		2	3	60.0	Geom	-	3.50	0.00	Y	Arm 9 Ahead	40.00
											Arm 15 Right	Inf
14/2	U		2	3	60.0	Geom	-	3.00	0.00	Y	Arm 15 Right	40.00
15/1	U		2	3	60.0	Geom	-	4.00	0.00	Y	Arm 10 Ahead	45.00
15/2	U		2	3	60.0	Geom	-	3.70	0.00	Y	Arm 10 Ahead	45.00
											Arm 11 Right	40.00
15/3	U		2	3	60.0	Geom	-	3.50	0.00	Y	Arm 11 Right	Inf

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'Am 2020 + 350 Dwellings'	08:00	09:00	01:00	
2: 'PM 2020 + 350 Dwellings'	17:00	18:00	01:00	
3: 'AM 2020 + 450 Dwellings'	08:00	09:00	01:00	
4: 'PM 2020 + 450 Dwellings'	17:00	18:00	01:00	

Scenario 1: 'Scenario 1' (FG1: 'Am 2020 + 350 Dwellings', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
Origin		A	B	C	D	E	Tot.
	A	0	9	383	668	2	1062
	B	48	0	112	280	137	577
	C	361	68	0	169	0	598
	D	645	359	135	204	104	1447
	E	15	7	10	24	0	56
	Tot.	1069	443	640	1345	243	3740

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: Scenario 1
Junction: Bodyshop Roundabout	
1/1	532
1/2	530
2/1 (short)	392
2/2 (with short)	577(In) 185(Out)
3/1 (with short)	598(In) 439(Out)
3/2 (short)	159
4/1	529
4/2 (with short)	714(In) 579(Out)
4/3 (short)	135
5/1	56
6/1	443
7/1	640
8/1	1141
9/1	243
10/1	748
10/2	321
11/1	434
11/2	169
12/1	692
12/2	530
13/1	444
13/2	715

Full Input Data And Results

14/1	447
14/2	169
15/1	733
15/2	748
15/3	135

Lane Saturation Flows

Junction: Bodyslop Roundabout								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Rustington Bypass)	5.00	0.00	Y	Arm 6 Left	27.50	1.7 %	2082	2082
				Arm 12 Ahead	100.00	98.3 %		
1/2 (Rustington Bypass)	5.00	0.00	Y	Arm 12 Ahead	100.00	100.0 %	2084	2084
2/1 (Worthing Road)	4.00	0.00	Y	Arm 7 Left	30.00	28.6 %	1987	1987
				Arm 13 Ahead	Inf	71.4 %		
2/2 (Worthing Road)	3.25	0.00	Y	Arm 13 Ahead	100.00	100.0 %	1911	1911
3/1 (Horsham Road)	4.00	0.00	Y	Arm 8 Left	60.00	38.5 %	1978	1978
				Arm 14 Ahead	100.00	61.5 %		
3/2 (Horsham Road)	3.50	0.00	Y	Arm 14 Ahead	100.00	100.0 %	1936	1936
4/1 (Worthing Road)	4.00	0.00	Y	Arm 9 Left	40.00	19.7 %	1948	1948
				Arm 15 Ahead	45.00	80.3 %		
4/2 (Worthing Road)	4.00	0.00	Y	Arm 15 Ahead	45.00	100.0 %	1950	1950
4/3 (Worthing Road)	3.50	0.00	Y	Arm 15 Ahead	45.00	100.0 %	1902	1902
5/1 (Bodyshop Access)	5.00	0.00	Y	Arm 10 Left	30.00	26.8 %	2038	2038
				Arm 11 Ahead	45.00	73.2 %		
6/1 (Worthing Road Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Horsham Road Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Worthing Road Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

9/1 (Bodyshop Access Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (Rustington Bypass Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (Rustington Bypass Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1	4.50	0.00	Y	Arm 6 Left	40.00	100.0 %	1990	1990
11/2	4.00	0.00	N	Arm 12 Right	40.00	100.0 %	2077	2077
12/1	4.50	0.00	Y	Arm 7 Ahead	40.00	76.3 %	1990	1990
				Arm 13 Right	40.00	23.7 %		
12/2	4.50	0.00	Y	Arm 13 Right	40.00	100.0 %	1990	1990
13/1	4.50	0.00	Y	Arm 8 Ahead	40.00	100.0 %	1990	1990
13/2	4.50	0.00	Y	Arm 8 Ahead	Inf	73.8 %	2045	2045
				Arm 14 Right	40.00	26.2 %		
14/1	3.50	0.00	Y	Arm 9 Ahead	40.00	31.1 %	1942	1942
				Arm 15 Right	Inf	68.9 %		
14/2	3.00	0.00	Y	Arm 15 Right	40.00	100.0 %	1846	1846
15/1	4.00	0.00	Y	Arm 10 Ahead	45.00	100.0 %	1950	1950
15/2	3.70	0.00	Y	Arm 10 Ahead	45.00	42.9 %	1917	1917
				Arm 11 Right	40.00	57.1 %		
15/3	3.50	0.00	Y	Arm 11 Right	Inf	100.0 %	1965	1965

Full Input Data And Results

Scenario 2: 'Scenario 2' (FG2: 'PM 2020 + 350 Dwellings', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
Origin		A	B	C	D	E	Tot.
	A	0	11	388	730	2	1131
	B	39	0	86	380	20	525
	C	309	64	0	184	0	557
	D	807	459	222	54	20	1562
	E	104	34	17	79	0	234
	Tot.	1259	568	713	1427	42	4009

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: Scenario 2
Junction: Bodyshop Roundabout	
1/1	564
1/2	567
2/1 (short)	453
2/2 (with short)	525(In) 72(Out)
3/1 (with short)	557(In) 455(Out)
3/2 (short)	102
4/1	610
4/2 (with short)	898(In) 676(Out)
4/3 (short)	222
5/1	234
6/1	568
7/1	713
8/1	1373
9/1	42
10/1	1000
10/2	259
11/1	557
11/2	318
12/1	857
12/2	581
13/1	597
13/2	653

Full Input Data And Results

14/1	328
14/2	106
15/1	896
15/2	782
15/3	222

Lane Saturation Flows

Junction: Bodyshop Roundabout								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Rustington Bypass)	5.00	0.00	Y	Arm 6 Left	27.50	2.0 %	2082	2082
				Arm 12 Ahead	100.00	98.0 %		
1/2 (Rustington Bypass)	5.00	0.00	Y	Arm 12 Ahead	100.00	100.0 %	2084	2084
2/1 (Worthing Road)	4.00	0.00	Y	Arm 7 Left	30.00	19.0 %	1996	1996
				Arm 13 Ahead	Inf	81.0 %		
2/2 (Worthing Road)	3.25	0.00	Y	Arm 13 Ahead	100.00	100.0 %	1911	1911
3/1 (Horsham Road)	4.00	0.00	Y	Arm 8 Left	60.00	40.4 %	1977	1977
				Arm 14 Ahead	100.00	59.6 %		
3/2 (Horsham Road)	3.50	0.00	Y	Arm 14 Ahead	100.00	100.0 %	1936	1936
4/1 (Worthing Road)	4.00	0.00	Y	Arm 9 Left	40.00	3.3 %	1950	1950
				Arm 15 Ahead	45.00	96.7 %		
4/2 (Worthing Road)	4.00	0.00	Y	Arm 15 Ahead	45.00	100.0 %	1950	1950
4/3 (Worthing Road)	3.50	0.00	Y	Arm 15 Ahead	45.00	100.0 %	1902	1902
5/1 (Bodyshop Access)	5.00	0.00	Y	Arm 10 Left	30.00	44.4 %	2032	2032
				Arm 11 Ahead	45.00	55.6 %		
6/1 (Worthing Road Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Horsham Road Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Worthing Road Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

9/1 (Bodyshop Access Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (Rustington Bypass Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (Rustington Bypass Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1	4.50	0.00	Y	Arm 6 Left	40.00	100.0 %	1990	1990
11/2	4.00	0.00	N	Arm 12 Right	40.00	100.0 %	2077	2077
12/1	4.50	0.00	Y	Arm 7 Ahead	40.00	73.2 %	1990	1990
				Arm 13 Right	40.00	26.8 %		
12/2	4.50	0.00	Y	Arm 13 Right	40.00	100.0 %	1990	1990
13/1	4.50	0.00	Y	Arm 8 Ahead	40.00	100.0 %	1990	1990
13/2	4.50	0.00	Y	Arm 8 Ahead	Inf	90.7 %	2058	2058
				Arm 14 Right	40.00	9.3 %		
14/1	3.50	0.00	Y	Arm 9 Ahead	40.00	6.7 %	1960	1960
				Arm 15 Right	Inf	93.3 %		
14/2	3.00	0.00	Y	Arm 15 Right	40.00	100.0 %	1846	1846
15/1	4.00	0.00	Y	Arm 10 Ahead	45.00	100.0 %	1950	1950
15/2	3.70	0.00	Y	Arm 10 Ahead	45.00	33.1 %	1916	1916
				Arm 11 Right	40.00	66.9 %		
15/3	3.50	0.00	Y	Arm 11 Right	Inf	100.0 %	1965	1965

Full Input Data And Results

Scenario 3: 'Scenario 3' (FG3: 'AM 2020 + 450 Dwellings', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
Origin		A	B	C	D	E	Tot.
	A	0	9	383	670	2	1064
	B	48	0	112	280	137	577
	C	361	68	0	169	0	598
	D	650	361	137	204	104	1456
	E	15	7	10	24	0	56
	Tot.	1074	445	642	1347	243	3751

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: Scenario 3
Junction: Bodyshop Roundabout	
1/1	533
1/2	531
2/1 (short)	392
2/2 (with short)	577(In) 185(Out)
3/1 (with short)	598(In) 439(Out)
3/2 (short)	159
4/1	533
4/2 (with short)	719(In) 582(Out)
4/3 (short)	137
5/1	56
6/1	445
7/1	642
8/1	1143
9/1	243
10/1	752
10/2	322
11/1	436
11/2	171
12/1	695
12/2	531
13/1	445
13/2	716

Full Input Data And Results

14/1	447
14/2	169
15/1	737
15/2	751
15/3	137

Lane Saturation Flows

Junction: Bodyslop Roundabout								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Rustington Bypass)	5.00	0.00	Y	Arm 6 Left	27.50	1.7 %	2082	2082
				Arm 12 Ahead	100.00	98.3 %		
1/2 (Rustington Bypass)	5.00	0.00	Y	Arm 12 Ahead	100.00	100.0 %	2084	2084
2/1 (Worthing Road)	4.00	0.00	Y	Arm 7 Left	30.00	28.6 %	1987	1987
				Arm 13 Ahead	Inf	71.4 %		
2/2 (Worthing Road)	3.25	0.00	Y	Arm 13 Ahead	100.00	100.0 %	1911	1911
3/1 (Horsham Road)	4.00	0.00	Y	Arm 8 Left	60.00	38.5 %	1978	1978
				Arm 14 Ahead	100.00	61.5 %		
3/2 (Horsham Road)	3.50	0.00	Y	Arm 14 Ahead	100.00	100.0 %	1936	1936
4/1 (Worthing Road)	4.00	0.00	Y	Arm 9 Left	40.00	19.5 %	1948	1948
				Arm 15 Ahead	45.00	80.5 %		
4/2 (Worthing Road)	4.00	0.00	Y	Arm 15 Ahead	45.00	100.0 %	1950	1950
4/3 (Worthing Road)	3.50	0.00	Y	Arm 15 Ahead	45.00	100.0 %	1902	1902
5/1 (Bodyshop Access)	5.00	0.00	Y	Arm 10 Left	30.00	26.8 %	2038	2038
				Arm 11 Ahead	45.00	73.2 %		
6/1 (Worthing Road Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Horsham Road Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Worthing Road Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

9/1 (Bodyshop Access Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (Rustington Bypass Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (Rustington Bypass Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1	4.50	0.00	Y	Arm 6 Left	40.00	100.0 %	1990	1990
11/2	4.00	0.00	N	Arm 12 Right	40.00	100.0 %	2077	2077
12/1	4.50	0.00	Y	Arm 7 Ahead	40.00	76.3 %	1990	1990
				Arm 13 Right	40.00	23.7 %		
12/2	4.50	0.00	Y	Arm 13 Right	40.00	100.0 %	1990	1990
13/1	4.50	0.00	Y	Arm 8 Ahead	40.00	100.0 %	1990	1990
13/2	4.50	0.00	Y	Arm 8 Ahead	Inf	73.9 %	2045	2045
				Arm 14 Right	40.00	26.1 %		
14/1	3.50	0.00	Y	Arm 9 Ahead	40.00	31.1 %	1942	1942
				Arm 15 Right	Inf	68.9 %		
14/2	3.00	0.00	Y	Arm 15 Right	40.00	100.0 %	1846	1846
15/1	4.00	0.00	Y	Arm 10 Ahead	45.00	100.0 %	1950	1950
15/2	3.70	0.00	Y	Arm 10 Ahead	45.00	42.9 %	1917	1917
				Arm 11 Right	40.00	57.1 %		
15/3	3.50	0.00	Y	Arm 11 Right	Inf	100.0 %	1965	1965

Full Input Data And Results

Scenario 4: 'Scenario 4' (FG4: 'PM 2020 + 450 Dwellings', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
Origin		A	B	C	D	E	Tot.
	A	0	11	388	735	2	1136
	B	39	0	86	381	20	526
	C	309	64	0	185	0	558
	D	809	460	223	54	20	1566
	E	104	34	17	79	0	234
	Tot.	1261	569	714	1434	42	4020

Traffic Lane Flows

Lane	Scenario 4: Scenario 4
Junction: Bodyshop Roundabout	
1/1	567
1/2	569
2/1 (short)	453
2/2 (with short)	526(In) 73(Out)
3/1 (with short)	558(In) 456(Out)
3/2 (short)	102
4/1	612
4/2 (with short)	900(In) 677(Out)
4/3 (short)	223
5/1	234
6/1	569
7/1	714
8/1	1380
9/1	42
10/1	1002
10/2	259
11/1	558
11/2	319
12/1	861
12/2	583
13/1	600
13/2	656

Full Input Data And Results

14/1	328
14/2	106
15/1	898
15/2	783
15/3	223

Lane Saturation Flows

Junction: Bodyshop Roundabout								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Rustington Bypass)	5.00	0.00	Y	Arm 6 Left	27.50	1.9 %	2082	2082
				Arm 12 Ahead	100.00	98.1 %		
1/2 (Rustington Bypass)	5.00	0.00	Y	Arm 12 Ahead	100.00	100.0 %	2084	2084
2/1 (Worthing Road)	4.00	0.00	Y	Arm 7 Left	30.00	19.0 %	1996	1996
				Arm 13 Ahead	Inf	81.0 %		
2/2 (Worthing Road)	3.25	0.00	Y	Arm 13 Ahead	100.00	100.0 %	1911	1911
3/1 (Horsham Road)	4.00	0.00	Y	Arm 8 Left	60.00	40.6 %	1977	1977
				Arm 14 Ahead	100.00	59.4 %		
3/2 (Horsham Road)	3.50	0.00	Y	Arm 14 Ahead	100.00	100.0 %	1936	1936
4/1 (Worthing Road)	4.00	0.00	Y	Arm 9 Left	40.00	3.3 %	1950	1950
				Arm 15 Ahead	45.00	96.7 %		
4/2 (Worthing Road)	4.00	0.00	Y	Arm 15 Ahead	45.00	100.0 %	1950	1950
4/3 (Worthing Road)	3.50	0.00	Y	Arm 15 Ahead	45.00	100.0 %	1902	1902
5/1 (Bodyshop Access)	5.00	0.00	Y	Arm 10 Left	30.00	44.4 %	2032	2032
				Arm 11 Ahead	45.00	55.6 %		
6/1 (Worthing Road Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Horsham Road Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Worthing Road Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

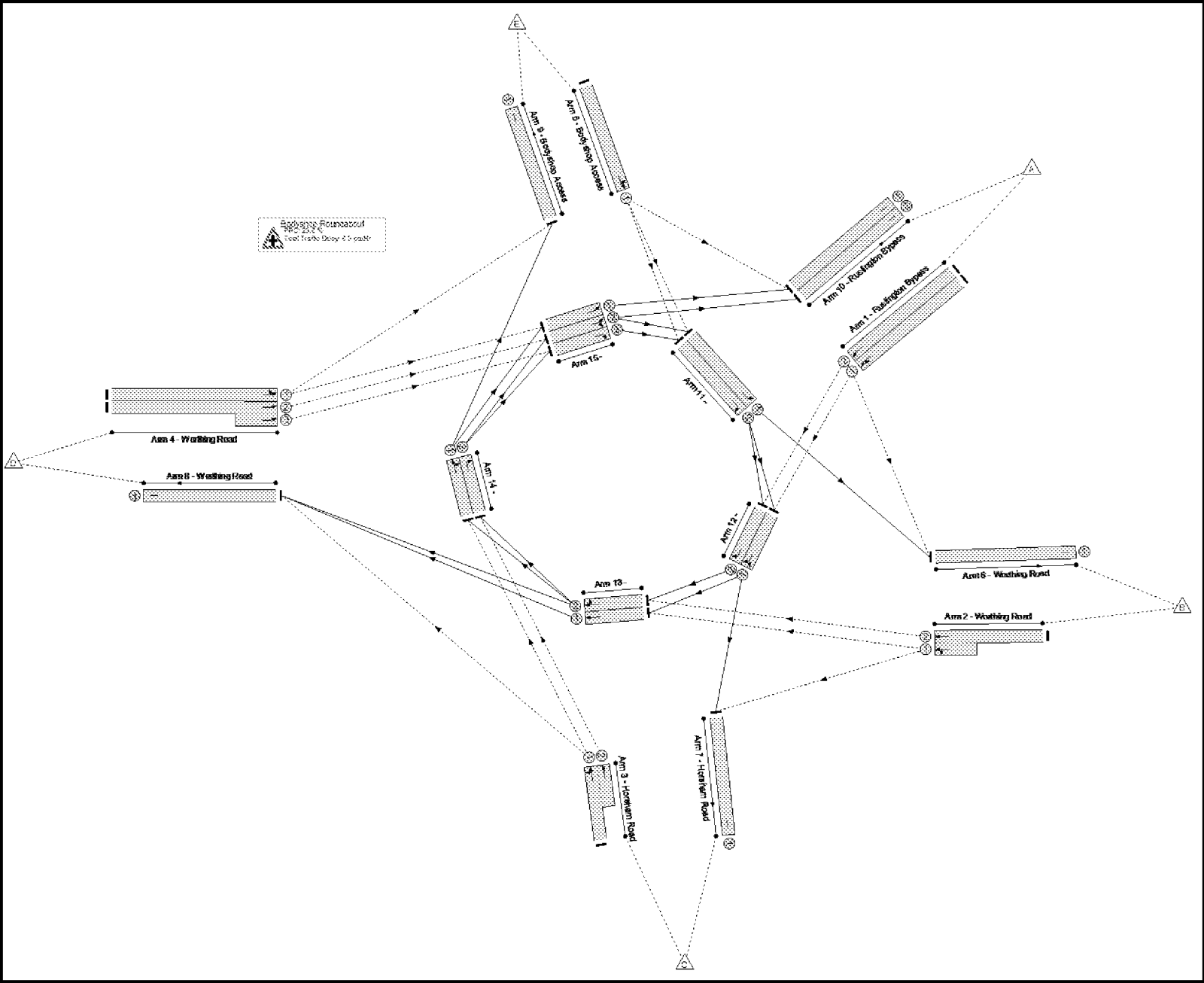
9/1 (Bodyshop Access Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (Rustington Bypass Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (Rustington Bypass Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1	4.50	0.00	Y	Arm 6 Left	40.00	100.0 %	1990	1990
11/2	4.00	0.00	N	Arm 12 Right	40.00	100.0 %	2077	2077
12/1	4.50	0.00	Y	Arm 7 Ahead	40.00	72.9 %	1990	1990
				Arm 13 Right	40.00	27.1 %		
12/2	4.50	0.00	Y	Arm 13 Right	40.00	100.0 %	1990	1990
13/1	4.50	0.00	Y	Arm 8 Ahead	40.00	100.0 %	1990	1990
13/2	4.50	0.00	Y	Arm 8 Ahead	Inf	90.7 %	2058	2058
				Arm 14 Right	40.00	9.3 %		
14/1	3.50	0.00	Y	Arm 9 Ahead	40.00	6.7 %	1960	1960
				Arm 15 Right	Inf	93.3 %		
14/2	3.00	0.00	Y	Arm 15 Right	40.00	100.0 %	1846	1846
15/1	4.00	0.00	Y	Arm 10 Ahead	45.00	100.0 %	1950	1950
15/2	3.70	0.00	Y	Arm 10 Ahead	45.00	33.1 %	1916	1916
				Arm 11 Right	40.00	66.9 %		
15/3	3.50	0.00	Y	Arm 11 Right	Inf	100.0 %	1965	1965

Scenario 1: 'Scenario 1' (FG1: 'Am 2020 + 350 Dwellings', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network 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	-	-	N/A	-	-		-	-	-	-	-	-	72.7%
Bodyshop Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	72.7%
1/1	Rustington Bypass Left Ahead	O	N/A	N/A	-		-	-	-	532	2082	802	66.4%
1/2	Rustington Bypass Ahead	O	N/A	N/A	-		-	-	-	530	2084	801	66.2%
2/2+2/1	Worthing Road Left Ahead	O	N/A	N/A	-		-	-	-	577	1911:1987	364+771	50.8 : 50.8%
3/1+3/2	Horsham Road Left Ahead	O	N/A	N/A	-		-	-	-	598	1978:1936	617+224	71.1 : 71.1%
4/1	Worthing Road Left Ahead	O	N/A	N/A	-		-	-	-	529	1948	796	66.4%
4/2+4/3	Worthing Road Ahead	O	N/A	N/A	-		-	-	-	714	1950:1902	796+186	72.7 : 72.7%
5/1	Bodyshop Access Left Ahead	O	N/A	N/A	-		-	-	-	56	2038	478	11.7%
6/1	Worthing Road	U	N/A	N/A	-		-	-	-	443	Inf	Inf	0.0%
7/1	Horsham Road	U	N/A	N/A	-		-	-	-	640	Inf	Inf	0.0%
8/1	Worthing Road	U	N/A	N/A	-		-	-	-	1141	Inf	Inf	0.0%
9/1	Bodyshop Access	U	N/A	N/A	-		-	-	-	243	Inf	Inf	0.0%
10/1	Rustington Bypass	U	N/A	N/A	-		-	-	-	748	Inf	Inf	0.0%
10/2	Rustington Bypass	U	N/A	N/A	-		-	-	-	321	Inf	Inf	0.0%
11/1	Left	U	N/A	N/A	-		-	-	-	434	1990	1990	21.8%
11/2	Right	U	N/A	N/A	-		-	-	-	169	2077	2077	8.1%
12/1	Ahead Right	U	N/A	N/A	-		-	-	-	692	1990	1990	34.8%
12/2	Right	U	N/A	N/A	-		-	-	-	530	1990	1990	26.6%
13/1	Ahead	U	N/A	N/A	-		-	-	-	444	1990	1990	22.3%

Full Input Data And Results

13/2	Ahead Right	U	N/A	N/A	-		-	-	-	715	2045	2045	35.0%
14/1	Ahead Right	U	N/A	N/A	-		-	-	-	447	1942	1942	23.0%
14/2	Right	U	N/A	N/A	-		-	-	-	169	1846	1846	9.2%
15/1	Ahead	U	N/A	N/A	-		-	-	-	733	1950	1950	37.6%
15/2	Ahead Right	U	N/A	N/A	-		-	-	-	748	1917	1917	39.0%
15/3	Right	U	N/A	N/A	-		-	-	-	135	1965	1965	6.9%

Full Input Data And Results

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	-	-	5425	0	0	0.0	8.0	0.0	8.0	-	-	-	-
Bodyshop Roundabout	-	-	5425	0	0	0.0	8.0	0.0	8.0	-	-	-	-
1/1	532	532	532	0	0	0.0	1.0	-	1.0	6.6	0.0	1.0	1.0
1/2	530	530	530	0	0	0.0	1.0	-	1.0	6.6	0.0	1.0	1.0
2/2+2/1	577	577	1154	0	0	0.0	0.5	-	0.5	3.2	0.0	0.5	0.5
3/1+3/2	598	598	1196	0	0	0.0	1.2	-	1.2	7.3	0.0	1.2	1.2
4/1	529	529	529	0	0	0.0	1.0	-	1.0	6.7	0.0	1.0	1.0
4/2+4/3	714	714	1428	0	0	0.0	1.3	-	1.3	6.6	0.0	1.3	1.3
5/1	56	56	56	0	0	0.0	0.1	-	0.1	4.3	0.0	0.1	0.1
6/1	443	443	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	640	640	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	1141	1141	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	243	243	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	748	748	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	321	321	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	434	434	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
11/2	169	169	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0
12/1	692	692	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
12/2	530	530	-	-	-	0.0	0.2	-	0.2	1.2	0.0	0.2	0.2
13/1	444	444	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
13/2	715	715	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
14/1	447	447	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
14/2	169	169	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
15/1	733	733	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
15/2	748	748	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
15/3	135	135	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0

Full Input Data And Results

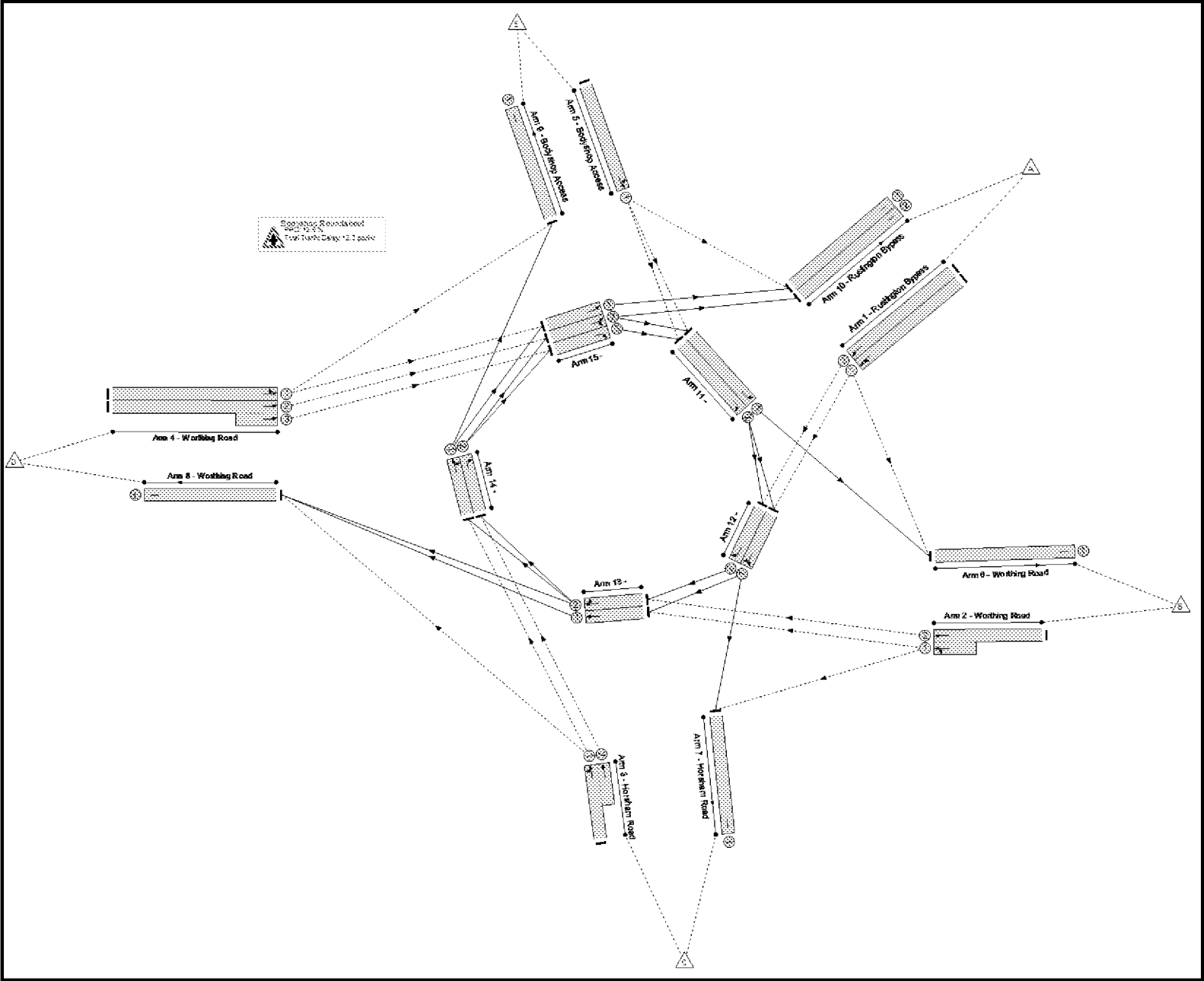
C1	PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	90
	PRC Over All Lanes (%):	23.8	Total Delay Over All Lanes(pcuHr):	7.95		

Full Input Data And Results

Scenario 2: 'Scenario 2' (FG2: 'PM 2020 + 350 Dwellings', Plan 1: 'Network Control Plan 1')

Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network 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	-	-	N/A	-	-		-	-	-	-	-	-	79.8%
Bodyshop Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	79.8%
1/1	Rustington Bypass Left Ahead	O	N/A	N/A	-		-	-	-	564	2082	713	79.1%
1/2	Rustington Bypass Ahead	O	N/A	N/A	-		-	-	-	567	2084	711	79.8%
2/2+2/1	Worthing Road Left Ahead	O	N/A	N/A	-		-	-	-	525	1911:1996	114+717	63.2 : 63.2%
3/1+3/2	Horsham Road Left Ahead	O	N/A	N/A	-		-	-	-	557	1977:1936	587+132	77.5 : 77.5%
4/1	Worthing Road Left Ahead	O	N/A	N/A	-		-	-	-	610	1950	856	71.2%
4/2+4/3	Worthing Road Ahead	O	N/A	N/A	-		-	-	-	898	1950:1902	856+281	78.9 : 78.9%
5/1	Bodyshop Access Left Ahead	O	N/A	N/A	-		-	-	-	234	2032	402	58.2%
6/1	Worthing Road	U	N/A	N/A	-		-	-	-	568	Inf	Inf	0.0%
7/1	Horsham Road	U	N/A	N/A	-		-	-	-	713	Inf	Inf	0.0%
8/1	Worthing Road	U	N/A	N/A	-		-	-	-	1373	Inf	Inf	0.0%
9/1	Bodyshop Access	U	N/A	N/A	-		-	-	-	42	Inf	Inf	0.0%
10/1	Rustington Bypass	U	N/A	N/A	-		-	-	-	1000	Inf	Inf	0.0%
10/2	Rustington Bypass	U	N/A	N/A	-		-	-	-	259	Inf	Inf	0.0%
11/1	Left	U	N/A	N/A	-		-	-	-	557	1990	1990	28.0%
11/2	Right	U	N/A	N/A	-		-	-	-	318	2077	2077	15.3%
12/1	Ahead Right	U	N/A	N/A	-		-	-	-	857	1990	1990	43.1%
12/2	Right	U	N/A	N/A	-		-	-	-	581	1990	1990	29.2%
13/1	Ahead	U	N/A	N/A	-		-	-	-	597	1990	1990	30.0%

Full Input Data And Results

13/2	Ahead Right	U	N/A	N/A	-		-	-	-	653	2058	2058	31.7%
14/1	Ahead Right	U	N/A	N/A	-		-	-	-	328	1960	1960	16.7%
14/2	Right	U	N/A	N/A	-		-	-	-	106	1846	1846	5.7%
15/1	Ahead	U	N/A	N/A	-		-	-	-	896	1950	1950	45.9%
15/2	Ahead Right	U	N/A	N/A	-		-	-	-	782	1916	1916	40.8%
15/3	Right	U	N/A	N/A	-		-	-	-	222	1965	1965	11.3%

Full Input Data And Results

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	-	-	5935	0	0	0.0	12.3	0.0	12.3	-	-	-	-
Bodyshop Roundabout	-	-	5935	0	0	0.0	12.3	0.0	12.3	-	-	-	-
1/1	564	564	564	0	0	0.0	1.8	-	1.8	11.8	0.0	1.8	1.8
1/2	567	567	567	0	0	0.0	1.9	-	1.9	12.2	0.0	1.9	1.9
2/2+2/1	525	525	1050	0	0	0.0	0.9	-	0.9	5.9	0.0	0.9	0.9
3/1+3/2	557	557	1114	0	0	0.0	1.7	-	1.7	10.9	0.0	1.7	1.7
4/1	610	610	610	0	0	0.0	1.2	-	1.2	7.2	0.0	1.2	1.2
4/2+4/3	898	898	1796	0	0	0.0	1.8	-	1.8	7.4	0.0	1.8	1.8
5/1	234	234	234	0	0	0.0	0.7	-	0.7	10.6	0.0	0.7	0.7
6/1	568	568	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	713	713	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	1373	1373	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	42	42	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	1000	1000	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	259	259	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	557	557	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
11/2	318	318	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
12/1	857	857	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
12/2	581	581	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
13/1	597	597	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
13/2	653	653	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
14/1	328	328	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
14/2	106	106	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
15/1	896	896	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
15/2	782	782	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3
15/3	222	222	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1

Full Input Data And Results

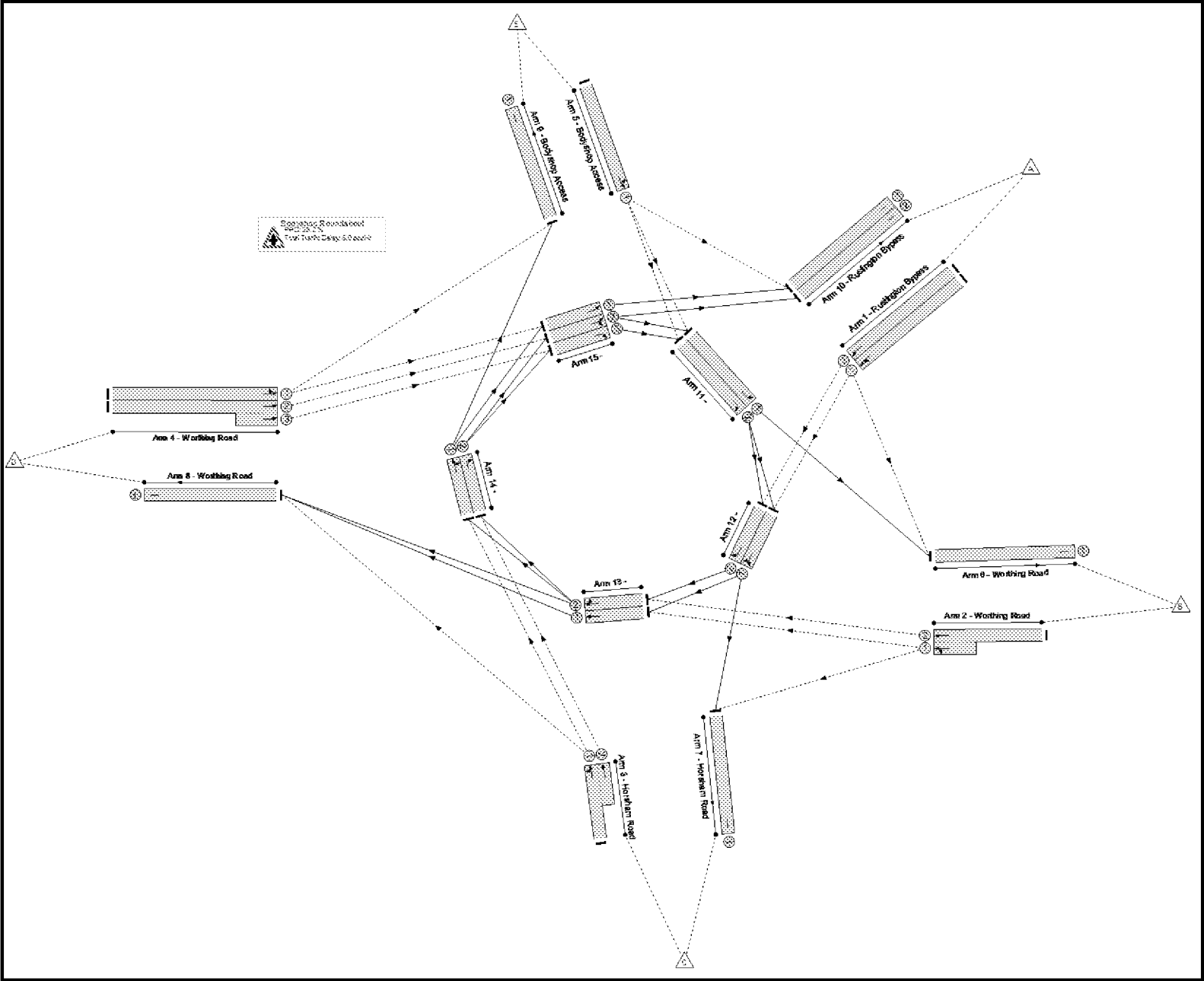
C1	PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	90
	PRC Over All Lanes (%):	12.9	Total Delay Over All Lanes(pcuHr):	12.35		

Full Input Data And Results

Scenario 3: 'Scenario 3' (FG3: 'AM 2020 + 450 Dwellings', Plan 1: 'Network Control Plan 1')

Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network 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	-	-	N/A	-	-		-	-	-	-	-	-	73.1%
Bodyshop Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	73.1%
1/1	Rustington Bypass Left Ahead	O	N/A	N/A	-		-	-	-	533	2082	800	66.6%
1/2	Rustington Bypass Ahead	O	N/A	N/A	-		-	-	-	531	2084	799	66.4%
2/2+2/1	Worthing Road Left Ahead	O	N/A	N/A	-		-	-	-	577	1911:1987	364+770	50.9 : 50.9%
3/1+3/2	Horsham Road Left Ahead	O	N/A	N/A	-		-	-	-	598	1978:1936	617+223	71.2 : 71.2%
4/1	Worthing Road Left Ahead	O	N/A	N/A	-		-	-	-	533	1948	796	66.9%
4/2+4/3	Worthing Road Ahead	O	N/A	N/A	-		-	-	-	719	1950:1902	796+187	73.1 : 73.1%
5/1	Bodyshop Access Left Ahead	O	N/A	N/A	-		-	-	-	56	2038	475	11.8%
6/1	Worthing Road	U	N/A	N/A	-		-	-	-	445	Inf	Inf	0.0%
7/1	Horsham Road	U	N/A	N/A	-		-	-	-	642	Inf	Inf	0.0%
8/1	Worthing Road	U	N/A	N/A	-		-	-	-	1143	Inf	Inf	0.0%
9/1	Bodyshop Access	U	N/A	N/A	-		-	-	-	243	Inf	Inf	0.0%
10/1	Rustington Bypass	U	N/A	N/A	-		-	-	-	752	Inf	Inf	0.0%
10/2	Rustington Bypass	U	N/A	N/A	-		-	-	-	322	Inf	Inf	0.0%
11/1	Left	U	N/A	N/A	-		-	-	-	436	1990	1990	21.9%
11/2	Right	U	N/A	N/A	-		-	-	-	171	2077	2077	8.2%
12/1	Ahead Right	U	N/A	N/A	-		-	-	-	695	1990	1990	34.9%
12/2	Right	U	N/A	N/A	-		-	-	-	531	1990	1990	26.7%
13/1	Ahead	U	N/A	N/A	-		-	-	-	445	1990	1990	22.4%

Full Input Data And Results

13/2	Ahead Right	U	N/A	N/A	-		-	-	-	716	2045	2045	35.0%
14/1	Ahead Right	U	N/A	N/A	-		-	-	-	447	1942	1942	23.0%
14/2	Right	U	N/A	N/A	-		-	-	-	169	1846	1846	9.2%
15/1	Ahead	U	N/A	N/A	-		-	-	-	737	1950	1950	37.8%
15/2	Ahead Right	U	N/A	N/A	-		-	-	-	751	1917	1917	39.2%
15/3	Right	U	N/A	N/A	-		-	-	-	137	1965	1965	7.0%

Full Input Data And Results

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	-	-	5441	0	0	0.0	8.0	0.0	8.0	-	-	-	-
Bodyshop Roundabout	-	-	5441	0	0	0.0	8.0	0.0	8.0	-	-	-	-
1/1	533	533	533	0	0	0.0	1.0	-	1.0	6.7	0.0	1.0	1.0
1/2	531	531	531	0	0	0.0	1.0	-	1.0	6.7	0.0	1.0	1.0
2/2+2/1	577	577	1154	0	0	0.0	0.5	-	0.5	3.2	0.0	0.5	0.5
3/1+3/2	598	598	1196	0	0	0.0	1.2	-	1.2	7.4	0.0	1.2	1.2
4/1	533	533	533	0	0	0.0	1.0	-	1.0	6.8	0.0	1.0	1.0
4/2+4/3	719	719	1438	0	0	0.0	1.3	-	1.3	6.7	0.0	1.3	1.3
5/1	56	56	56	0	0	0.0	0.1	-	0.1	4.3	0.0	0.1	0.1
6/1	445	445	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	642	642	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	1143	1143	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	243	243	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	752	752	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	322	322	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	436	436	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
11/2	171	171	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0
12/1	695	695	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
12/2	531	531	-	-	-	0.0	0.2	-	0.2	1.2	0.0	0.2	0.2
13/1	445	445	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
13/2	716	716	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
14/1	447	447	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
14/2	169	169	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
15/1	737	737	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
15/2	751	751	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
15/3	137	137	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0

Full Input Data And Results

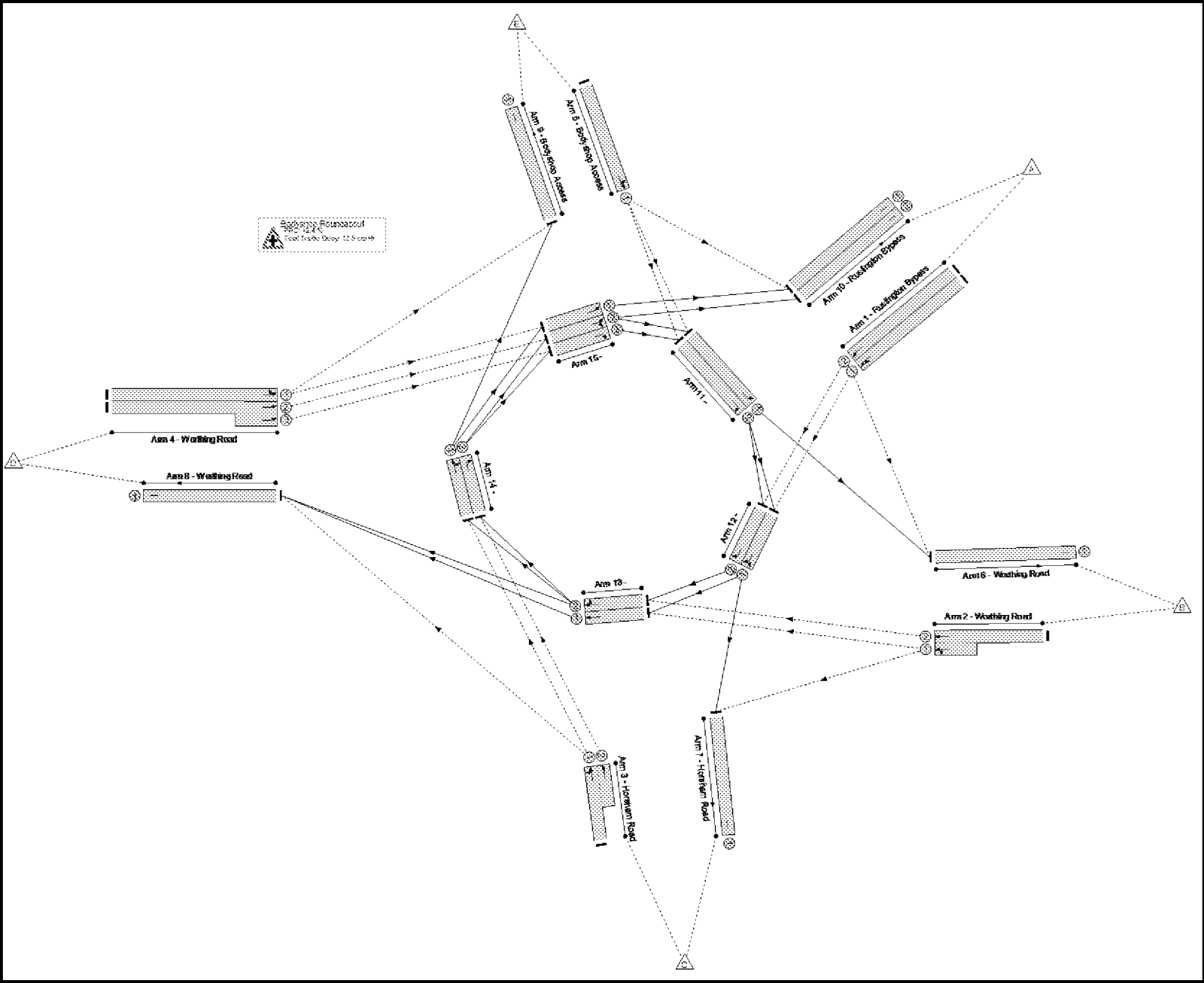
C1	PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	90
	PRC Over All Lanes (%):	23.2	Total Delay Over All Lanes(pcuHr):	8.04		

Full Input Data And Results

Scenario 4: 'Scenario 4' (FG4: 'PM 2020 + 450 Dwellings', Plan 1: 'Network Control Plan 1')

Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network 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	-	-	N/A	-	-		-	-	-	-	-	-	80.1%
Bodyshop Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	80.1%
1/1	Rustington Bypass Left Ahead	O	N/A	N/A	-		-	-	-	567	2082	712	79.6%
1/2	Rustington Bypass Ahead	O	N/A	N/A	-		-	-	-	569	2084	710	80.1%
2/2+2/1	Worthing Road Left Ahead	O	N/A	N/A	-		-	-	-	526	1911:1996	115+716	63.3 : 63.3%
3/1+3/2	Horsham Road Left Ahead	O	N/A	N/A	-		-	-	-	558	1977:1936	585+131	77.9 : 77.9%
4/1	Worthing Road Left Ahead	O	N/A	N/A	-		-	-	-	612	1950	856	71.5%
4/2+4/3	Worthing Road Ahead	O	N/A	N/A	-		-	-	-	900	1950:1902	856+282	79.0 : 79.0%
5/1	Bodyshop Access Left Ahead	O	N/A	N/A	-		-	-	-	234	2032	401	58.4%
6/1	Worthing Road	U	N/A	N/A	-		-	-	-	563	Inf	Inf	0.0%
7/1	Horsham Road	U	N/A	N/A	-		-	-	-	714	Inf	Inf	0.0%
8/1	Worthing Road	U	N/A	N/A	-		-	-	-	1380	Inf	Inf	0.0%
9/1	Bodyshop Access	U	N/A	N/A	-		-	-	-	42	Inf	Inf	0.0%
10/1	Rustington Bypass	U	N/A	N/A	-		-	-	-	1002	Inf	Inf	0.0%
10/2	Rustington Bypass	U	N/A	N/A	-		-	-	-	253	Inf	Inf	0.0%
11/1	Left	U	N/A	N/A	-		-	-	-	558	1990	1990	28.0%
11/2	Right	U	N/A	N/A	-		-	-	-	319	2077	2077	15.4%
12/1	Ahead Right	U	N/A	N/A	-		-	-	-	861	1990	1990	43.3%
12/2	Right	U	N/A	N/A	-		-	-	-	583	1990	1990	29.3%
13/1	Ahead	U	N/A	N/A	-		-	-	-	600	1990	1990	30.2%

Full Input Data And Results

13/2	Ahead Right	U	N/A	N/A	-		-	-	-	656	2058	2058	31.9%
14/1	Ahead Right	U	N/A	N/A	-		-	-	-	328	1960	1960	16.7%
14/2	Right	U	N/A	N/A	-		-	-	-	106	1846	1846	5.7%
15/1	Ahead	U	N/A	N/A	-		-	-	-	898	1950	1950	46.1%
15/2	Ahead Right	U	N/A	N/A	-		-	-	-	783	1916	1916	40.9%
15/3	Right	U	N/A	N/A	-		-	-	-	223	1965	1965	11.3%

Full Input Data And Results

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	-	-	5950	0	0	0.0	12.5	0.0	12.5	-	-	-	-
Bodyshop Roundabout	-	-	5950	0	0	0.0	12.5	0.0	12.5	-	-	-	-
1/1	567	567	567	0	0	0.0	1.9	-	1.9	12.1	0.0	1.9	1.9
1/2	569	569	569	0	0	0.0	2.0	-	2.0	12.4	0.0	2.0	2.0
2/2+2/1	526	526	1052	0	0	0.0	0.9	-	0.9	5.9	0.0	0.9	0.9
3/1+3/2	558	558	1116	0	0	0.0	1.7	-	1.7	11.1	0.0	1.7	1.7
4/1	612	612	612	0	0	0.0	1.2	-	1.2	7.3	0.0	1.2	1.2
4/2+4/3	900	900	1800	0	0	0.0	1.9	-	1.9	7.4	0.0	1.9	1.9
5/1	234	234	234	0	0	0.0	0.7	-	0.7	10.7	0.0	0.7	0.7
6/1	569	569	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	714	714	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	1380	1380	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	42	42	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	1002	1002	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	259	259	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	558	558	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
11/2	319	319	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
12/1	861	861	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
12/2	583	583	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
13/1	600	600	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
13/2	656	656	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
14/1	328	328	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
14/2	106	106	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
15/1	898	898	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
15/2	783	783	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3
15/3	223	223	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1

Full Input Data And Results

C1	PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	90
	PRC Over All Lanes (%):	12.4	Total Delay Over All Lanes(pcuHr):	12.53		