Appendix 17
TN11: Impacts at junctions along the A5076 corridor Technical Note

M1J15 NORTHAMPTON GATEWAY
STRATEGIC RAIL FREIGHT INTERCHANGE

TECHNICAL NOTE 11: IMPACTS AT JUNCTIONS ALONG THE A5076 CORRIDOR

ADC Infrastructure Limited
Western House
Western Street
Nottingham
NG1 3AZ

www.ADCinfrastructure.com

project number: ADC1475			report reference: ADC1475 TN11
version	date	author	comments
1	27/03/2018	Mark Higgins	internal draft
2	04/04/2018	Mark Higgins	issue to Transport Working Group

CONTENTS

DRAWINGS

ADC-1475-SK05 A – A5123/A5076 Danes Camp Way/Upton Valley Way Junction Improvement

APPENDICES

1.0 INTRODUCTION

1.1 ADC Infrastructure Ltd is commissioned by Roxhill (Junction 15) Ltd to provide transport advice with regards to their Nationally Significant Infrastructure Project (NSIP) for the development of a Strategic Rail Freight Interchange (SRFI) facility adjacent to M1 Junction 15 in Northamptonshire (known as Northampton Gateway SRFI).

1.2 It was agreed with the Transport Working Group (TWG) that the transport impacts of the Northampton Gateway SRFI development be modelled using the Northamptonshire Strategic Transport Model (NSTM2) which is maintained on Northamptonshire County Council's (NCC's) behalf by WSP.

1.3 Using the outputs of the NSTM2, ADC have produced a suite of Technical Notes which present the analysis of the highway network local to the development, detailing the evolution of the modelling and presenting appropriate mitigation proposals were the requirement is identified.

1.4 Technical Note 10 (ref. ADC1475 TN10 v4) (TN10) presents the analysis of the highway network north of the M1, including the impacts in Northampton and the A45 corridor between M1 Junction 15 and the A45/A509 gyratory at Wellingborough. The assessment is based on NSTM2 traffic data taken from the 2031 (D1) reference case and 2031 (J1d) development case assessment scenarios.

1.5 As part of the TN10 analysis, the development impact at the key junctions along the A5076 corridor (Danes Camp Way and Mere Way) was assessed and the conclusions summarised as follows:

Junction	Impact (PRC/RFC)		Mitigation Proposed
	AM	PM	
Queen Eleanor Interchange	+7.0%	+0.2%	Widening on the A5076 Mere Way approach.
A5076/Towcester Rd/Tesco gyratory	+5.1%	-21.7%	Widening on the A5076 Mere Way approach.
A5076/Hunsbury Hill Rd/ Hunsbarrow Rd roundabout	+4%	+1%	No mitigation proposed
A5123/A5076/Upton Valley Way gyratory	-1.6%	+0.8%	No mitigation proposed

1.6 TN10 concluded that the combined impacts of the development and the highway mitigation would result in a deterioration in junction performance at the A45 Queen Eleanor Interchange and the A5076 Danes Camp Way/Mere Way/Towcester Road gyratory. Appropriate improvement schemes, proportional to the scale of the impact, were identified to mitigate the development impact at both junctions. TN10 concluded that the impact at all other junctions considered was not severe and therefore no further mitigation proposals were presented.

1.7 NCC have subsequently agreed that the proposed improvement schemes at the A45 Queen Eleanor Interchange and the A5076 Danes Camp Way/Mere Way/Towcester Road gyratory are appropriate to the scale of the impact. Further, NCC agreed that it would be appropriate for them to seek a financial contribution equivalent to the cost of implementing the proposed improvement works at these junctions, to be used to deliver the proposed improvements, or as part of a wider package of improvements at the A45 Queen Eleanor Interchange and the A5076 corridor.

1.8 However, NCC stated at the TWG meeting held on 6 February 2018, and again at the TWG meeting of 20 March 2018, that they still had concerns relating to the development impact at the A5076/Hunsbury Hill Rd/ Hunsbarrow Rd roundabout and the A5076/Upton Valley

Way/A5123 gyratory. This Technical Note therefore seeks to address NCC's concerns regarding these two junctions.

1.9 Further to the above, after considering the detailed junction modelling presented in TN10, NCC highlighted in an email of 12 March 2018 that there are several turning movements at junctions within the TN10 study area which they consider materially differ from single day observed turning count data such that manual corrections should be made.

1.10 In response, Technical Note 10 Addendum (ref. ADC1475 TN10A v2) considers appropriate manual corrections to the anomalous turning movements highlighted by NCC and presents the findings of sensitivity capacity assessments at the effected junctions.

1.11 One of the junctions containing anomalous turning movements is the A5123/A5076/Upton Valley Way gyratory and therefore this report also presents analysis of the sensitivity assessment detailed at TN10A.

2.0 A5076 DANES CAMP WAY/HUNSBURY HILL AVENUE ROUNDABOUT

2.1 The A5076 Danes Camp Way/Hunsbury Hill Avenue/Hunsbarrow Road/Hunsbury Hill Road junction is a five-arm roundabout located southwest of Northampton Town Centre. The A5076 Danes Camp Way is part of the southern ring road, linking the A45 with the A5123 to the west, which provides access to M1 Junction 15a and the A43. Hunsbury Hill Avenue, Hunsbarrow Road and Hunsbury Hill Road provide access to residential areas north and south of the A5076 Danes Camp Way.

2.2 A Junctions 8 ARCADY model of the roundabout was provided in TN10. For convenience the outputs are provided at **Appendix A** and summarised in the table below.

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2031 D1							
Arm 1	9.68	17.04	0.91	C	8.61	17.27	0.90	C
Arm 2	120.13	459.18	1.35	F	4.93	30.76	0.85	D
Arm 3	274.04	399.28	1.21	F	135.86	180.68	1.12	F
Arm 4	1.85	15.28	0.65	C	1.35	10.15	0.58	B
Arm 5	66.18	670.78	1.35	F	258.09	1272.63	1.65	F
	A1 - 2031 J1d							
Arm 1	15.98	27.50	0.95	D	9.03	17.86	0.91	C
Arm 2	115.04	465.00	1.36	F	4.38	27.60	0.83	D
Arm 3	273.15	398.61	1.20	F	145.47	192.71	1.13	F
Arm 4	1.87	15.38	0.66	C	1.35	10.16	0.58	B
Arm 5	70.81	712.49	1.37	F	262.77	1306.10	1.66	F

Arm 1 = A5076 Danes Camp Way east, Arm 2 = Hunsbury Hill Road, Arm 3 = A5076 Danes Camp Way west, Arm 4 = Hunsbury Hill Avenue, Arm 5 = Hunsbarrow Road

2.3 As shown, the existing junction is forecast to be over capacity in all 2031 scenarios, without (2031 D1 scenario) and with the development (2031 J1d scenario) in place.

2.4 In the 2031 J1d development case morning peak hour, there is no impact on the ratio of flow to capacity (RFC) on the A5076 Danes Camp Road west and Hunsbury Hill Avenue approaches to the roundabout when compared to the 2031 D1 reference case scenario. The other changes at the roundabout in the morning peak hour are summarised as follows:

- on the A5076 Danes Camp Road east approach the RFC increases by 4%
- on the Hunsbarrow Road approach the RFC increases by 2%
- on the Hunsbury Hill Road approach the RFC increases by 1%.

2.5 In the evening peak hour, three of the five approaches see an increase in RFC of just 1% with no impact on the other two approaches.

2.6 Further to the above, the table below summarise the change in queueing on each approach to the roundabout for the 2031 D1 reference case and the 2031 J1d development case scenarios.

Queue Length (pcus)						
Approach	Morning Peak Hour			Evening Peak Hour		
	2031 D1	2031 J1d	Diference	2031 D1	2031 J1d	Diference
Danes Camp Way east	9.7	16.0	6.3	8.6	9.0	0.4
Hunsbury Hill Road	120.1	115.0	-5.1	4.9	4.4	-0.6
Danes Camp Way west	274.0	273.2	-0.9	135.9	145.5	9.6
Hunsbury Hill Avenue	1.9	1.9	0.0	1.4	1.4	0.0
Hunsbarrow Road	66.2	70.8	4.6	258.1	262.8	4.7
Total	471.9	476.9	5.0	408.8	423.0	14.2

2.7 The table shows that in the morning peak hour the largest increase in queueing occurs on the A5076 Danes Camp Way east approach to the roundabout, which increases by 6.3 pcus. There is also an increase of 4.6 pcus on the Hunsbarrow Road approach. However, reductions in the queue on the A5076 Danes Camp Way west and Hunsbury Hill Avenue approaches means that there is an increase in total queuing at the junction of just 5.0 pcus in the morning peak hour. This increase would be just 1% of the total queueing at the junction and is therefore not severe.

2.8 In the evening peak hour the largest increase in queueing occurs on the A5076 Danes Camp Way west approach to the roundabout, which increases by 9.6 pcus. There is also an increase of 4.7 pcus on the Hunsbarrow Road approach, with negligible changes in queuing on the other three approaches. There is an increase in total queuing at the junction of just 14.2 pcus in the evening peak hour. This increase would be just 3.4% of the total queueing at the junction and is therefore not severe.

2.9 The table below shows a comparison of the traffic flows on each approach to the roundabout for the 2031 D1 reference case and 2031 J1d development case scenarios. In the morning peak hour, the comparison shows that whilst there is an increase of 71 pcus on the A5076 Danes Camp Way east approach, there is also a reduction of 43 pcus on the Hunsbury Hill Road approach. Overall, the traffic flow at the roundabout increases by just 36 pcus during the morning peak hour, or 0.6%.

Traffic Flows (pcus)						
Approach	Morning Peak Hour			Evening Peak Hour		
	2031 D1	2031 J1d	Diference	2031 D1	2031 J1d	Diference
Danes Camp Way east	1950	2021	71	1713	1741	28
Hunsbury Hill Road	822	779	-43	556	548	-8
Danes Camp Way west	2712	2714	2	2159	2175	16
Hunsbury Hill Avenue	405	406	1	441	441	0
Hunsbarrow Road	402	407	5	887	890	3
Total	6291	6327	36	5756	5795	39

2.10 In the evening peak hour, the comparison shows that there are increases of 28 pcus and 16 pcus on the A5076 Danes Camp Way east and west approaches, respectively. There is also a reduction of 8 pcus on the Hunsbury Hill Road approach. Overall, the traffic flow at the roundabout increases by just 39 pcus during the morning peak hour, or 0.68%.

2.11 Therefore, the development has been shown to have a minimal impact on the operation of the junction, with only minor increases in RFC, queueing and traffic flow at the junction. The impact is not severe, and no mitigation measures are required.

3.0 A5123/A5076 DANES CAMP WAY/UPTON VALLEY WAY GYRATORY

3.1 The A5076 Danes Camp Way/A5123/Upton Valley Way/A5076 Upton Way junction is a four-arm signalised gyratory located to the north of M1 Junction 15a and southwest of Northampton Town Centre. The gyratory links the M1 Junction 15a with the ring road and provides access to the Swan Valley Industrial Estate to the southwest and further residential and employment areas to the north.

3.2 A LinSig model of the roundabout was provided in TN10. For convenience the outputs are provided at **Appendix B**.

3.3 The model results are summarised below and show that the junction would operate above its maximum capacity in the morning and evening peak hours for both the 2031 D1 reference case and 2031 J1d development case scenarios (practical reserve capacity (PRC) values are negative indicating that one or more links are operating above 90% of their capacity).

Summary Results			
Scenario	**Peak**	**PRC**	**Total Delay (pcuHr)**
2031 Reference Case (D1)	AM Peak	-62.8%	669.11
	PM Peak	-2.4%	51.46
2031 Development Case (J1d)	AM Peak	-61.2%	668.52
	PM Peak	-3.2%	48.88

3.4 In the morning peak hour, the PRC at the gyratory actually improves by 1.6% in the 2031 J1d development case scenario compared to the 2031 D1 reference case scenario, with a slight reduction in total delay. In the evening peak hour, the PRC deteriorates be 0.8% in the 2031 J1d development case scenario compared to the 2031 D1 reference case scenario, though the total delay at the junction is lower for the 2031 J1d development case scenario.

3.5 Further to the above, the table below summarise the change in queueing on each approach to the roundabout for the 2031 D1 reference case and the 2031 J1d development case scenarios.

Queue Length (pcus)						
Approach	**Morning Peak Hour**			**Evening Peak Hour**		
	2031 D1	**2031 J1d**	**Diference**	**2031 D1**	**2031 J1d**	**Diference**
A5076 Upton Way	177.0	167.7	-9.3	4.2	5.7	1.5
Danes Camp Way	247.2	266.7	19.5	14.9	12.3	-2.6
A5123	176.3	156.6	-19.7	17.6	17.7	0.1
Upton Valley Way	68.9	77.6	8.7	2.3	1.4	-0.9
Total	669.4	668.6	-0.8	39.0	37.1	-1.9

3.6 The table shows that in the morning peak hour the largest increase in queueing occurs on the A5076 Danes Camp Way approach to the gyratory, which increases by 19.5 pcus. There is also an increase of 8.7 pcus on the Upton Valley Way approach. However, the queue on the A5076 Upton Way approach reduces by 9.3 pcus and A5123 queue reduces by 19.7 pcus, giving a reduction in total queuing at the junction of 0.8 pcus in the morning peak hour.

3.7 In the evening peak hour there are no significant changes in queueing at the gyratory, with a decrease in total queuing at the junction in the 2031 J1d development case scenario of 1.9 pcus in the evening peak hour.

3.8 Therefore, the development has been shown to have a negligible impact on the operation of the gyratory, with total delay and queuing actually improving slightly in the 2031 J1d development case scenario for the morning and evening peak hours. Therefore, no mitigation measures are required at the junction.

Sensitivity test

3.9 As detailed in TN10A, the LinSig model has been run with the sensitivity traffic flow adjustments for the 2031 D1 reference case and 2031 J1d development case scenarios in the evening peak hour. The sensitivity model results, provided at **Appendix C** and summarised below, show that the junction would operate above its maximum capacity in the evening peak hour in both modelled sensitivity scenarios.

Summary Results			
Scenario	**Peak**	**PRC**	**Total Delay (pcuHr)**
2031 Reference Case (D1) sensitivity	PM Peak	-68.1%	414.90
2031 Development Case (J1d) sensitivity	PM Peak	-67.6%	423.98

3.10 The sensitivity model results summarised above show that, as for the non-sensitivity assessment, in terms of practical reserve capacity and total delay at the junction there would be no detrimental impact due to the proposed development in the evening peak hour.

3.11 However, consideration of the results in **Appendix C** shows that whilst the A5076 Danes Camp Way approach is the worst performing arm at the junction and its performance does not deteriorate in the 2031 J1d development case evening peak hour scenario, the performance of the right turn movement from the A5123 to the A5076 Danes Camp Way does deteriorate.

3.12 The sensitivity flow adjustment detailed in TN10A significantly increases the number of vehicles undertaking this right turn movement in the 2031 D1 reference case scenario, such that the degree of saturation is shown to be approaching 100%.

3.13 Traffic increases at the gyratory by 96 pcus in the morning peak and 149 pcus in the evening peak, largely due to the reassignment effects of the proposed mitigation strategy, with most of this increase occurring on the movement from the A5123 to A5076 Danes Camp Way.

3.14 This traffic increase is materially higher than at the A5076 Danes Camp Way/Hunsbury Hill roundabout. Further, as the increase is largely focused on a single movement which is already stressed in the 2031 D1 reference case and can currently only be undertaken in one lane, we see that the degree of saturation goes above 100% in the 2031 J1d development case scenario, resulting in a relatively large increase in the mean maximum queue (circa. 28 pcus).

3.15 It is therefore appropriate that the development proposals include measures to mitigate this specific impact in the sensitivity 2031 J1d development case scenario for the evening peak hour.

3.16 A scheme of improvements works has been identified and is shown on drawing **ADC1475/SK05 A**. The scheme provides widening of the circulating carriageway on the western side of the island and alterations to the lane allocations on three of the four approaches to improve lane usage and therefore capacity. This widening provides four circulating lanes and therefore a mast-arm would be required to carry a traffic signal head above the circulating carriageway

3.17 The LinSig modelling results provided at **Appendix D** and summarised in the table below show that the proposed scheme would deliver a significant improvement to junction

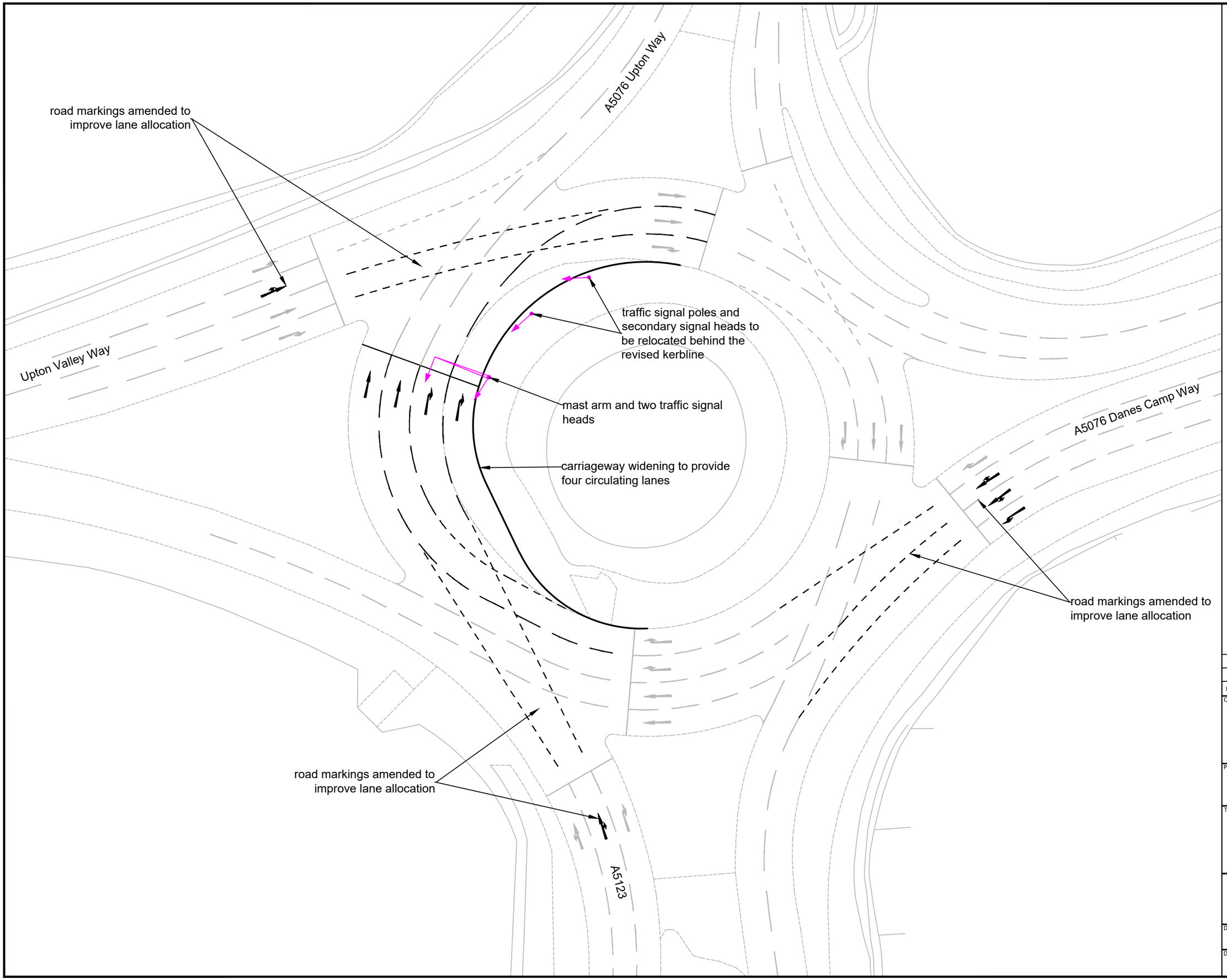
performance in both the morning and evening peak hours when compared to the 2031 D1 reference case (29.8% in the morning peak and 19.8% in the evening peak hour).

Summary Results			
Scenario	**Peak**	**PRC**	**Total Delay (pcuHr)**
2031 Reference Case (D1)	AM Peak	-62.8%	669.11
	PM Peak	-68.1%	414.90
2031 Development Case (J1d)	AM Peak	-62.8%	669.11
	PM Peak	-67.6%	423.98
2031 Mitigation Case (J1d)	AM Peak	-33.0%	363.89
	PM Peak	-48.3%	332.52

3.18 Further, the results presented in **Appendix D** show that as a result of the mitigation proposals the queue on the A5123 approach to the junction reduces when compared to the 2031 D1 reference case scenario. Therefore, the proposed scheme would deliver a better than nil-detriment improvement at the gyratory.

3.19 As detailed at paragraph 1.7 above, NCC have requested that a financial contribution, equivalent to the cost of implementing the improvement works, is made for the proposed schemes at the Queen Eleanor Interchange and the A5076 Danes Camp Way/Mere Way/Towcester Road gyratory.

3.20 Therefore, in keeping with the strategy at other junctions along the A5076 Ring Road, it is proposed that a S106 contribution is also agreed to cover the cost of implementing of the works shown on drawing **ADC1475/SK05 A**.



Rev	Description	Date

Client:

ROXHILL

Project:

Northampton Gateway Strategic Rail Freight Interchange

Title:

Potential A5123/A5076 Danes Camp Way/Upton Valley Way Junction Improvement Scheme

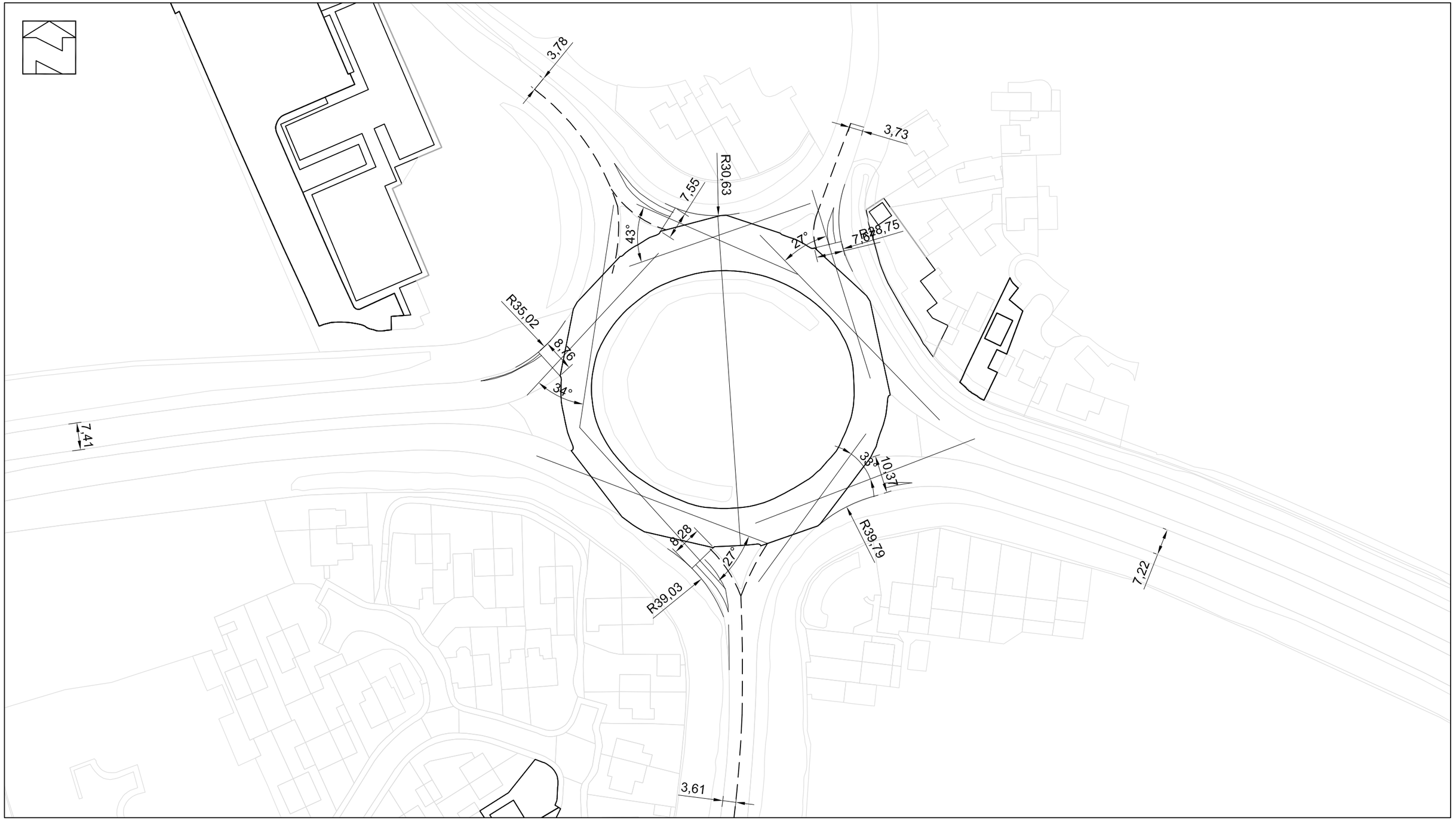
ADC INFRASTRUCTURE

Drg Size:	Scale:	Date:
A3	1:500	22/03/2018

Drg No:	Rev:
ADC1475/SK05	A

APPENDIX A

A5076 DANES CAMP WAY/HUNSBURY HILL AVENUE ROUNDABOUT ARCADY MODEL



Rev	Description	Date

Project:

Northampton Gateway SRFI

Title:

A5075 Danes Camp Way/Hunsbury Hill/Hunsbarrow Road roundabout Arcady Measurements

Client:

ROXHILL

ADC INFRASTRUCTURE

Drg Size:	Scale:	Date:
A3	1:1000	11/12/2017

Drg No:	Rev:
-	-

© ADC Infrastructure Limited

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]
© Copyright TRL Limited, 2018

For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk

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: 171108 A5076_Hunsbury Hill Road.arc8
Path: C:\Users\ADCteam\Dropbox\~ JN8 TEMP\ADC1475\A5076_Hunsbury Hill Road
Report generation date: 07/02/2018 12:27:49

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2031 D1							
Arm 1	9.68	17.04	0.91	C	8.61	17.27	0.90	C
Arm 2	120.13	459.18	1.35	F	4.93	30.76	0.85	D
Arm 3	274.04	399.28	1.21	F	135.86	180.68	1.12	F
Arm 4	1.85	15.28	0.65	C	1.35	10.15	0.58	B
Arm 5	66.18	670.78	1.35	F	258.09	1272.63	1.65	F
	A1 - 2031 J1d							
Arm 1	15.98	27.50	0.95	D	9.03	17.86	0.91	C
Arm 2	115.04	465.00	1.36	F	4.38	27.60	0.83	D
Arm 3	273.15	398.61	1.20	F	145.47	192.71	1.13	F
Arm 4	1.87	15.38	0.66	C	1.35	10.16	0.58	B
Arm 5	70.81	712.49	1.37	F	262.77	1306.10	1.66	F

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

"D1 - 2031 D1, AM " model duration: 07:45 - 09:15
"D2 - 2031 D1, PM" model duration: 16:45 - 18:15
"D3 - 2031 J1d, AM" model duration: 07:45 - 09:15
"D4 - 2031 J1d, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.4.487 at 07/02/2018 12:27:42

File summary

Title	A5076/Hunsbury Hill Roundabout
Location	Northampton
Site Number	
Date	08/11/2017
Version	v1
Status	(new file)
Identifier	MH
Client	Roxhill
Jobnumber	ADC1475
Enumerator	ADCteam
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

(Default Analysis Set) - 2031 D1, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2031 D1, AM	2031 D1	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4,5				280.83	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	A5076 Danes Camp Way	
2	2	Hunsbury Hill Road South	
3	3	A5076 Ring Road	
4	4	Hunsbury Hill Road North	
5	5	Hunsbarrow Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00
5	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	7.20	10.40	7.50	40.00	90.00	16.00	
2	3.60	8.30	15.80	39.00	90.00	14.00	
3	7.40	8.80	17.90	35.00	90.00	17.00	
4	3.80	7.60	21.30	31.00	90.00	21.00	
5	3.70	7.70	9.60	29.00	90.00	13.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.625	2780.780
2		(calculated)	(calculated)	0.511	1964.833
3		(calculated)	(calculated)	0.620	2752.035
4		(calculated)	(calculated)	0.506	1975.905
5		(calculated)	(calculated)	0.481	1762.200

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	1960.00	100.000
2	ONE HOUR	✓	822.00	100.000
3	ONE HOUR	✓	2712.00	100.000
4	ONE HOUR	✓	405.00	100.000
5	ONE HOUR	✓	402.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.000	73.000	1696.000	179.000	12.000
	2	258.000	0.000	555.000	9.000	0.000
	3	2331.000	215.000	0.000	154.000	12.000
	4	245.000	8.000	151.000	0.000	1.000
	5	31.000	13.000	340.000	18.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.00	0.04	0.87	0.09	0.01
	2	0.31	0.00	0.68	0.01	0.00
	3	0.86	0.08	0.00	0.06	0.00
	4	0.60	0.02	0.37	0.00	0.00
	5	0.08	0.03	0.85	0.04	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	1.000	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000	1.000
	5	1.000	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.0	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.91	17.04	9.68	C	1798.53	2697.80	390.86	8.69	4.34	390.89	8.69
2	1.35	459.18	120.13	F	754.28	1131.42	4204.21	222.95	46.71	4204.32	222.96
3	1.21	399.28	274.04	F	2488.58	3732.87	12036.86	193.47	133.74	12385.24	199.07
4	0.65	15.28	1.85	C	371.64	557.45	108.11	11.64	1.20	108.14	11.64
5	1.35	670.78	66.18	F	368.88	553.32	2962.59	321.25	32.92	3190.96	346.01

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1475.59	368.90	1469.49	2139.88	555.27	0.00	2433.59	2360.40	0.606	0.00	1.52	3.712	A
2	618.84	154.71	613.21	230.97	1793.79	0.00	1048.47	571.87	0.590	0.00	1.41	8.169	A
3	2041.74	510.43	2025.72	2051.24	355.76	0.00	2531.57	2488.25	0.807	0.00	4.00	6.914	A
4	304.91	76.23	302.90	269.33	2112.15	0.00	907.56	690.69	0.336	0.00	0.50	5.935	A
5	302.65	75.66	298.80	18.71	2396.35	0.00	609.61	220.94	0.496	0.00	0.96	11.447	B

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1762.00	440.50	1756.88	2517.76	648.21	0.00	2375.48	2360.39	0.742	1.52	2.80	5.771	A
2	738.96	184.74	725.94	272.27	2132.82	0.00	875.28	571.87	0.844	1.41	4.66	22.409	C
3	2438.03	609.51	2378.48	2436.35	422.41	0.00	2490.27	2488.25	0.979	4.00	18.89	24.426	C
4	364.09	91.02	362.09	318.86	2482.02	0.00	720.47	690.69	0.505	0.50	1.00	9.990	A
5	361.39	90.35	344.02	22.17	2821.94	0.00	404.90	220.94	0.893	0.96	5.30	49.654	E

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	2158.00	539.50	2133.50	2631.98	671.37	0.00	2360.99	2360.39	0.914	2.80	8.93	14.483	B
2	905.04	226.26	677.65	294.89	2509.98	0.00	682.61	571.87	1.326	4.66	61.51	189.875	F
3	2985.97	746.49	2473.85	2744.99	442.65	0.00	2477.73	2488.25	1.205	18.89	146.92	126.381	F
4	445.91	111.48	442.67	357.37	2559.13	0.00	681.47	690.69	0.654	1.00	1.81	14.874	B
5	442.61	110.65	326.65	25.10	2976.70	0.00	330.47	220.94	1.339	5.30	34.29	242.057	F

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	2158.00	539.50	2154.99	2634.83	674.04	0.00	2359.32	2360.39	0.915	8.93	9.68	17.043	C
2	905.04	226.26	670.56	296.08	2532.94	0.00	670.88	571.87	1.349	61.51	120.13	459.180	F
3	2985.97	746.49	2477.48	2761.01	442.49	0.00	2477.82	2488.25	1.205	146.92	274.04	309.750	F
4	445.91	111.48	445.74	359.52	2560.46	0.00	680.80	690.69	0.655	1.81	1.85	15.282	C
5	442.61	110.65	327.92	25.26	2980.94	0.00	328.43	220.94	1.348	34.29	62.96	539.630	F

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1762.00	440.50	1788.80	2624.82	660.11	0.00	2368.04	2360.39	0.744	9.68	2.98	6.491	A
2	738.96	184.74	849.62	279.71	2169.20	0.00	856.70	571.87	0.863	120.13	92.47	436.034	F
3	2438.03	609.51	2454.36	2552.93	465.90	0.00	2463.32	2488.25	0.990	274.04	269.96	399.277	F
4	364.09	91.02	366.52	327.64	2592.62	0.00	664.53	690.69	0.548	1.85	1.25	12.179	B
5	361.39	90.35	348.51	22.72	2936.42	0.00	349.84	220.94	1.033	62.96	66.18	670.776	F

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1475.59	368.90	1480.91	2623.24	643.84	0.00	2378.21	2360.40	0.620	2.98	1.65	4.036	A
2	618.84	154.71	981.03	266.68	1858.06	0.00	1015.64	571.87	0.609	92.47	1.92	165.142	F
3	2041.74	510.43	2446.16	2360.12	478.96	0.00	2455.22	2488.25	0.832	269.96	168.85	323.553	F
4	304.91	76.23	306.26	300.89	2624.24	0.00	648.54	690.69	0.470	1.25	0.91	10.562	B
5	302.65	75.66	357.22	20.65	2909.85	0.00	362.62	220.94	0.835	66.18	52.54	600.003	F

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	22.06	1.47	3.712	A	A
2	19.88	1.33	8.169	A	A
3	55.04	3.67	6.914	A	A
4	7.25	0.48	5.935	A	A
5	13.47	0.90	11.447	B	B

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	39.93	2.66	5.771	A	A
2	59.17	3.94	22.409	C	C
3	205.70	13.71	24.426	C	C
4	14.25	0.95	9.990	A	A
5	60.22	4.01	49.654	E	D

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	112.32	7.49	14.483	B	B
2	501.95	33.46	189.875	F	F
3	1247.61	83.17	126.381	F	F
4	25.18	1.68	14.874	B	B
5	300.25	20.02	242.057	F	F

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	140.63	9.38	17.043	C	B
2	1362.44	90.83	459.180	F	F
3	3157.37	210.49	309.750	F	F
4	27.54	1.84	15.282	C	B
5	729.60	48.64	539.630	F	F

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	50.24	3.35	6.491	A	A
2	1594.48	106.30	436.034	F	F
3	4080.03	272.00	399.277	F	F
4	19.72	1.31	12.179	B	B
5	968.63	64.58	670.776	F	F

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	25.69	1.71	4.036	A	A
2	666.30	44.42	165.142	F	F
3	3291.11	219.41	323.553	F	F
4	14.17	0.94	10.562	B	B
5	890.42	59.36	600.003	F	F

(Default Analysis Set) - 2031 D1, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2031 D1, PM	2031 D1	PM		ONE HOUR	16:45	18:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4,5				272.78	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	A5076 Danes Camp Way	
2	2	Hunsbury Hill Road South	
3	3	A5076 Ring Road	
4	4	Hunsbury Hill Road North	
5	5	Hunsbarrow Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00
5	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	7.20	10.40	7.50	40.00	90.00	16.00	
2	3.60	8.30	15.80	39.00	90.00	14.00	
3	7.40	8.80	17.90	35.00	90.00	17.00	
4	3.80	7.60	21.30	31.00	90.00	21.00	
5	3.70	7.70	9.60	29.00	90.00	13.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.625	2780.780
2		(calculated)	(calculated)	0.511	1964.833
3		(calculated)	(calculated)	0.620	2752.035
4		(calculated)	(calculated)	0.506	1975.905
5		(calculated)	(calculated)	0.481	1762.200

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	1713.00	100.000
2	ONE HOUR	✓	556.00	100.000
3	ONE HOUR	✓	2159.00	100.000
4	ONE HOUR	✓	441.00	100.000
5	ONE HOUR	✓	887.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.000	87.000	1070.000	509.000	47.000
	2	254.000	0.000	272.000	22.000	8.000
	3	1299.000	413.000	0.000	219.000	228.000
	4	326.000	12.000	90.000	0.000	13.000
	5	1.000	72.000	679.000	135.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.00	0.05	0.62	0.30	0.03
	2	0.46	0.00	0.49	0.04	0.01
	3	0.60	0.19	0.00	0.10	0.11
	4	0.74	0.03	0.20	0.00	0.03
	5	0.00	0.08	0.77	0.15	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	1.000	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000	1.000
	5	1.000	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.0	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.90	17.27	8.61	C	1571.88	2357.82	370.03	9.42	4.11	370.08	9.42
2	0.85	30.76	4.93	D	510.20	765.29	193.02	15.13	2.14	193.04	15.13
3	1.12	180.68	135.86	F	1981.14	2971.70	4100.04	82.78	45.56	4100.12	82.78
4	0.58	10.15	1.35	B	404.67	607.00	77.12	7.62	0.86	77.13	7.62
5	1.65	1272.63	258.09	F	813.93	1220.89	11020.60	541.60	122.45	13003.39	639.04

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1289.64	322.41	1283.57	1407.14	1041.77	0.00	2129.39	2138.93	0.606	0.00	1.52	4.226	A
2	418.59	104.65	415.74	436.63	1888.70	0.00	999.99	636.23	0.419	0.00	0.71	6.133	A
3	1625.41	406.35	1615.96	1575.48	728.96	0.00	2300.30	2079.61	0.707	0.00	2.36	5.191	A
4	332.01	83.00	330.34	661.76	1683.17	0.00	1124.54	849.39	0.295	0.00	0.42	4.524	A
5	667.78	166.95	656.98	221.59	1791.92	0.00	900.32	432.75	0.742	0.00	2.70	14.229	B

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1539.95	384.99	1534.27	1678.35	1170.81	0.00	2048.71	2138.93	0.752	1.52	2.94	6.923	A
2	499.83	124.96	497.05	514.71	2190.37	0.00	845.88	636.23	0.591	0.71	1.41	10.240	B
3	1940.90	485.22	1925.03	1827.19	860.23	0.00	2218.95	2079.61	0.875	2.36	6.33	11.664	B
4	396.45	99.11	395.34	779.18	2006.08	0.00	961.21	849.39	0.412	0.42	0.69	6.348	A
5	797.39	199.35	711.93	264.19	2137.22	0.00	734.24	432.75	1.086	2.70	24.07	85.149	F

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1886.05	471.51	1865.49	1903.63	1113.60	0.00	2084.48	2138.91	0.905	2.94	8.08	15.176	C
2	612.17	153.04	600.09	560.77	2418.32	0.00	729.44	636.23	0.839	1.41	4.43	25.757	D
3	2377.10	594.28	2113.65	2015.35	1003.06	0.00	2130.44	2079.61	1.116	6.33	72.19	74.695	F
4	485.55	121.39	483.07	883.50	2233.21	0.00	846.32	849.39	0.574	0.69	1.31	9.843	A
5	976.61	244.15	598.22	297.27	2419.02	0.00	598.70	432.75	1.631	24.07	118.66	442.905	F

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1886.05	471.51	1883.93	1915.23	1109.60	0.00	2086.98	2138.91	0.904	8.08	8.61	17.274	C
2	612.17	153.04	610.16	562.95	2430.58	0.00	723.17	636.23	0.847	4.43	4.93	30.760	D
3	2377.10	594.28	2122.43	2027.49	1013.24	0.00	2124.13	2079.61	1.119	72.19	135.86	180.685	F
4	485.55	121.39	485.41	889.32	2246.35	0.00	839.68	849.39	0.578	1.31	1.35	10.153	B
5	976.61	244.15	591.99	298.92	2432.84	0.00	592.05	432.75	1.650	118.66	214.82	983.512	F

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1539.95	384.99	1562.43	1853.51	1136.50	0.00	2070.16	2138.93	0.744	8.61	2.99	7.386	A
2	499.83	124.96	514.05	561.70	2137.23	0.00	873.03	636.23	0.573	4.93	1.37	10.407	B
3	1940.90	485.22	2199.98	1786.57	864.72	0.00	2216.17	2079.61	0.876	135.86	71.09	170.444	F
4	396.45	99.11	398.14	802.77	2261.92	0.00	831.80	849.39	0.477	1.35	0.93	8.335	A
5	797.39	199.35	624.28	294.33	2365.73	0.00	624.33	432.75	1.277	214.82	258.09	1272.634	F

Main results: (18:00-18:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1289.64	322.41	1294.36	1582.69	1226.11	0.00	2014.13	2138.93	0.640	2.99	1.81	5.035	A
2	418.59	104.65	420.78	502.03	2018.44	0.00	933.71	636.23	0.448	1.37	0.82	7.050	A
3	1625.41	406.35	1899.56	1684.48	754.75	0.00	2284.32	2079.61	0.712	71.09	2.55	19.737	C
4	332.01	83.00	333.69	713.63	1940.67	0.00	994.29	849.39	0.334	0.93	0.51	5.464	A
5	667.78	166.95	786.44	252.01	2022.35	0.00	789.49	432.75	0.846	258.09	228.43	1113.916	F

Queueing Delay Results for each time segment

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	21.89	1.46	4.226	A	A
2	10.26	0.68	6.133	A	A
3	33.51	2.23	5.191	A	A
4	6.07	0.40	4.524	A	A
5	36.06	2.40	14.229	B	B

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	41.47	2.76	6.923	A	A
2	19.91	1.33	10.240	B	B
3	83.41	5.56	11.664	B	B
4	10.08	0.67	6.348	A	A
5	216.81	14.45	85.149	F	F

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	102.71	6.85	15.176	C	B
2	55.81	3.72	25.757	D	C
3	605.73	40.38	74.695	F	E
4	18.66	1.24	9.843	A	A
5	1070.89	71.39	442.905	F	F

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	125.83	8.39	17.274	C	B
2	70.93	4.73	30.760	D	C
3	1560.99	104.07	180.685	F	F
4	20.04	1.34	10.153	B	B
5	2501.10	166.74	983.512	F	F

Queueing Delay results: (17:45-18:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	49.93	3.33	7.386	A	A
2	23.27	1.55	10.407	B	B
3	1552.11	103.47	170.444	F	F
4	14.45	0.96	8.335	A	A
5	3546.82	236.45	1272.634	F	F

Queueing Delay results: (18:00-18:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	28.21	1.88	5.035	A	A
2	12.84	0.86	7.050	A	A
3	264.29	17.62	19.737	C	B
4	7.82	0.52	5.464	A	A
5	3648.92	243.26	1113.916	F	F

(Default Analysis Set) - 2031 J1d, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2031 J1d, AM	2031 J1d	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4,5				283.84	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	A5076 Danes Camp Way	
2	2	Hunsbury Hill Road South	
3	3	A5076 Ring Road	
4	4	Hunsbury Hill Road North	
5	5	Hunsbarrow Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00
5	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	7.20	10.40	7.50	40.00	90.00	16.00	
2	3.60	8.30	15.80	39.00	90.00	14.00	
3	7.40	8.80	17.90	35.00	90.00	17.00	
4	3.80	7.60	21.30	31.00	90.00	21.00	
5	3.70	7.70	9.60	29.00	90.00	13.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.625	2780.780
2		(calculated)	(calculated)	0.511	1964.833
3		(calculated)	(calculated)	0.620	2752.035
4		(calculated)	(calculated)	0.506	1975.905
5		(calculated)	(calculated)	0.481	1762.200

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	2021.00	100.000
2	ONE HOUR	✓	779.00	100.000
3	ONE HOUR	✓	2714.00	100.000
4	ONE HOUR	✓	406.00	100.000
5	ONE HOUR	✓	407.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.000	65.000	1779.000	166.000	11.000
	2	268.000	0.000	502.000	9.000	0.000
	3	2281.000	256.000	0.000	164.000	13.000
	4	240.000	7.000	158.000	0.000	1.000
	5	28.000	14.000	344.000	21.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.00	0.03	0.88	0.08	0.01
	2	0.34	0.00	0.64	0.01	0.00
	3	0.84	0.09	0.00	0.06	0.00
	4	0.59	0.02	0.39	0.00	0.00
	5	0.07	0.03	0.85	0.05	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	1.000	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000	1.000
	5	1.000	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.0	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.95	27.50	15.98	D	1854.50	2781.76	550.79	11.88	6.12	550.83	11.88
2	1.36	465.00	115.04	F	714.82	1072.24	4007.89	224.27	44.53	4007.98	224.28
3	1.20	398.61	273.15	F	2490.41	3735.62	12024.69	193.14	133.61	12378.30	198.82
4	0.66	15.38	1.87	C	372.55	558.83	108.89	11.69	1.21	108.92	11.69
5	1.37	712.49	70.81	F	373.47	560.21	3164.76	338.96	35.16	3445.90	369.07

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1521.51	380.38	1514.73	2103.99	596.27	0.00	2407.95	2332.80	0.632	0.00	1.70	4.000	A
2	586.47	146.62	581.14	255.57	1855.43	0.00	1016.99	575.38	0.577	0.00	1.33	8.164	A
3	2043.24	510.81	2027.18	2081.66	354.91	0.00	2532.10	2491.67	0.807	0.00	4.01	6.925	A
4	305.66	76.41	303.65	269.23	2112.86	0.00	907.20	685.21	0.337	0.00	0.50	5.946	A
5	306.41	76.60	302.46	18.70	2397.80	0.00	608.91	217.95	0.503	0.00	0.99	11.605	B

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1816.84	454.21	1810.32	2475.37	695.22	0.00	2346.08	2332.80	0.774	1.70	3.33	6.639	A
2	700.31	175.08	688.06	300.91	2204.63	0.00	838.60	575.38	0.835	1.33	4.39	22.327	C
3	2439.83	609.96	2379.91	2471.57	421.12	0.00	2491.07	2491.67	0.979	4.01	19.00	24.517	C
4	364.99	91.25	362.98	318.37	2482.66	0.00	720.15	685.21	0.507	0.50	1.01	10.022	B
5	365.88	91.47	347.10	22.15	2823.49	0.00	404.16	217.95	0.905	0.99	5.68	52.068	F

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	2225.16	556.29	2184.11	2588.07	717.29	0.00	2332.28	2332.79	0.954	3.33	13.59	20.273	C
2	857.69	214.42	642.43	322.80	2578.60	0.00	647.56	575.38	1.325	4.39	58.21	190.482	F
3	2988.17	747.04	2477.64	2784.50	436.53	0.00	2481.52	2491.67	1.204	19.00	146.63	126.055	F
4	447.01	111.75	443.72	353.34	2560.82	0.00	680.61	685.21	0.657	1.01	1.83	14.986	B
5	448.12	112.03	325.66	24.85	2979.70	0.00	329.03	217.95	1.362	5.68	36.30	255.609	F

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	2225.16	556.29	2215.60	2589.60	720.31	0.00	2330.39	2332.79	0.955	13.59	15.98	27.499	D
2	857.69	214.42	630.39	324.34	2611.57	0.00	630.71	575.38	1.360	58.21	115.04	465.000	F
3	2988.17	747.04	2482.07	2806.88	435.08	0.00	2482.42	2491.67	1.204	146.63	273.15	308.479	F
4	447.01	111.75	446.85	356.13	2561.02	0.00	680.51	685.21	0.657	1.83	1.87	15.376	C
5	448.12	112.03	327.09	25.05	2982.82	0.00	327.52	217.95	1.368	36.30	66.55	569.598	F

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1816.84	454.21	1866.37	2579.54	705.66	0.00	2339.55	2332.80	0.777	15.98	3.60	8.364	A
2	700.31	175.08	802.21	309.82	2262.21	0.00	809.19	575.38	0.865	115.04	89.56	441.747	F
3	2439.83	609.96	2453.83	2597.71	466.71	0.00	2462.81	2491.67	0.991	273.15	269.65	398.613	F
4	364.99	91.25	367.46	328.85	2591.70	0.00	665.00	685.21	0.549	1.87	1.25	12.201	B
5	365.88	91.47	348.86	22.82	2936.34	0.00	349.88	217.95	1.046	66.55	70.81	712.486	F

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1521.51	380.38	1528.48	2581.03	687.31	0.00	2351.02	2332.80	0.647	3.60	1.86	4.412	A
2	586.47	146.62	937.80	297.06	1918.72	0.00	984.65	575.38	0.596	89.56	1.73	159.444	F
3	2043.24	510.81	2441.97	2370.78	485.74	0.00	2451.02	2491.67	0.834	269.65	169.97	324.696	F
4	305.66	76.41	307.01	302.35	2625.36	0.00	647.97	685.21	0.472	1.25	0.91	10.602	B
5	306.41	76.60	356.74	20.77	2911.60	0.00	361.78	217.95	0.847	70.81	58.23	652.550	F

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	24.45	1.63	4.000	A	A
2	18.84	1.26	8.164	A	A
3	55.17	3.68	6.925	A	A
4	7.28	0.49	5.946	A	A
5	13.81	0.92	11.605	B	B

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	46.85	3.12	6.639	A	A
2	56.00	3.73	22.327	C	C
3	206.59	13.77	24.517	C	C
4	14.33	0.96	10.022	B	B
5	63.63	4.24	52.068	F	D

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	157.57	10.50	20.273	C	C
2	475.33	31.69	190.482	F	F
3	1246.19	83.08	126.055	F	F
4	25.42	1.69	14.986	B	B
5	317.77	21.18	255.609	F	F

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	224.26	14.95	27.499	D	C
2	1299.49	86.63	465.000	F	F
3	3148.50	209.90	308.479	F	F
4	27.80	1.85	15.376	C	B
5	771.53	51.44	569.598	F	F

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	68.65	4.58	8.364	A	A
2	1534.49	102.30	441.747	F	F
3	4071.05	271.40	398.613	F	F
4	19.80	1.32	12.201	B	B
5	1030.25	68.68	712.486	F	F

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	29.01	1.93	4.412	A	A
2	623.75	41.58	159.444	F	F
3	3297.18	219.81	324.696	F	F
4	14.26	0.95	10.602	B	B
5	967.77	64.52	652.550	F	F

(Default Analysis Set) - 2031 J1d, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2031 J1d, PM	2031 J1d	PM		ONE HOUR	16:45	18:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4,5				281.67	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	A5076 Danes Camp Way	
2	2	Hunsbury Hill Road South	
3	3	A5076 Ring Road	
4	4	Hunsbury Hill Road North	
5	5	Hunsbarrow Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00
5	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	7.20	10.40	7.50	40.00	90.00	16.00	
2	3.60	8.30	15.80	39.00	90.00	14.00	
3	7.40	8.80	17.90	35.00	90.00	17.00	
4	3.80	7.60	21.30	31.00	90.00	21.00	
5	3.70	7.70	9.60	29.00	90.00	13.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.625	2780.780
2		(calculated)	(calculated)	0.511	1964.833
3		(calculated)	(calculated)	0.620	2752.035
4		(calculated)	(calculated)	0.506	1975.905
5		(calculated)	(calculated)	0.481	1762.200

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	1741.00	100.000
2	ONE HOUR	✓	548.00	100.000
3	ONE HOUR	✓	2175.00	100.000
4	ONE HOUR	✓	441.00	100.000
5	ONE HOUR	✓	890.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.000	103.000	1078.000	512.000	48.000
	2	252.000	0.000	265.000	22.000	9.000
	3	1329.000	400.000	0.000	219.000	227.000
	4	335.000	12.000	81.000	0.000	13.000
	5	17.000	77.000	661.000	135.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.00	0.06	0.62	0.29	0.03
	2	0.46	0.00	0.48	0.04	0.02
	3	0.61	0.18	0.00	0.10	0.10
	4	0.76	0.03	0.18	0.00	0.03
	5	0.02	0.09	0.74	0.15	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	1.000	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000	1.000
	5	1.000	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.0	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.91	17.86	9.03	C	1597.57	2396.36	382.53	9.58	4.25	382.57	9.58
2	0.83	27.60	4.38	D	502.85	754.28	176.83	14.07	1.96	176.85	14.07
3	1.13	192.71	145.47	F	1995.82	2993.73	4520.01	90.59	50.22	4520.10	90.59
4	0.58	10.16	1.35	B	404.67	607.00	77.76	7.69	0.86	77.77	7.69
5	1.66	1306.10	262.77	F	816.68	1225.02	11305.12	553.71	125.61	13568.81	664.58

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1310.72	327.68	1304.51	1446.58	1015.31	0.00	2145.94	2166.29	0.611	0.00	1.55	4.247	A
2	412.56	103.14	409.81	442.53	1877.30	0.00	1005.82	647.16	0.410	0.00	0.69	6.013	A
3	1637.45	409.36	1627.75	1555.93	731.18	0.00	2298.92	2072.59	0.712	0.00	2.43	5.290	A
4	332.01	83.00	330.33	663.93	1695.01	0.00	1118.55	847.01	0.297	0.00	0.42	4.558	A
5	670.04	167.51	658.88	222.32	1803.02	0.00	894.98	431.22	0.749	0.00	2.79	14.631	B

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1565.12	391.28	1559.33	1723.52	1134.30	0.00	2071.54	2166.29	0.756	1.55	3.00	6.949	A
2	492.64	123.16	490.08	520.72	2172.91	0.00	854.80	647.16	0.576	0.69	1.33	9.801	A
3	1955.28	488.82	1938.24	1800.94	862.05	0.00	2217.82	2072.59	0.882	2.43	6.68	12.195	B
4	396.45	99.11	395.32	780.80	2019.49	0.00	954.43	847.01	0.415	0.42	0.70	6.425	A
5	800.09	200.02	707.99	264.98	2149.82	0.00	728.18	431.22	1.099	2.79	25.81	90.387	F

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1916.88	479.22	1895.15	1942.36	1076.22	0.00	2107.85	2166.27	0.909	3.00	8.43	15.534	C
2	603.36	150.84	592.77	565.60	2405.77	0.00	735.85	647.16	0.820	1.33	3.97	23.610	C
3	2394.72	598.68	2113.45	1992.27	1006.27	0.00	2128.45	2072.59	1.125	6.68	77.00	78.960	F
4	485.55	121.39	483.09	884.50	2235.22	0.00	845.31	847.01	0.574	0.70	1.32	9.871	A
5	979.91	244.98	597.07	296.80	2421.51	0.00	597.50	431.22	1.640	25.81	121.53	457.375	F

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1916.88	479.22	1914.48	1952.65	1072.66	0.00	2110.08	2166.27	0.908	8.43	9.03	17.863	C
2	603.36	150.84	601.74	567.69	2419.45	0.00	728.86	647.16	0.828	3.97	4.38	27.603	D
3	2394.72	598.68	2120.83	2004.90	1016.28	0.00	2122.25	2072.59	1.128	77.00	145.47	192.710	F
4	485.55	121.39	485.42	890.45	2246.66	0.00	839.52	847.01	0.578	1.32	1.35	10.157	B
5	979.91	244.98	591.56	298.32	2433.76	0.00	591.61	431.22	1.656	121.53	218.61	1003.880	F

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1565.12	391.28	1589.03	1890.81	1100.10	0.00	2092.92	2166.29	0.748	9.03	3.05	7.466	A
2	492.64	123.16	504.94	563.38	2125.75	0.00	878.89	647.16	0.561	4.38	1.31	9.929	A
3	1955.28	488.82	2199.97	1764.24	866.45	0.00	2215.10	2072.59	0.883	145.47	84.30	188.764	F
4	396.45	99.11	398.14	803.66	2262.76	0.00	831.38	847.01	0.477	1.35	0.93	8.343	A
5	800.09	200.02	623.45	293.45	2367.46	0.00	623.50	431.22	1.283	218.61	262.77	1306.097	F

Main results: (18:00-18:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1310.72	327.68	1315.68	1658.80	1177.91	0.00	2044.27	2166.29	0.641	3.05	1.81	4.975	A
2	412.56	103.14	414.70	513.96	1979.62	0.00	953.54	647.16	0.433	1.31	0.77	6.706	A
3	1637.45	409.36	1964.13	1641.55	752.76	0.00	2285.55	2072.59	0.716	84.30	2.63	30.214	D
4	332.01	83.00	333.60	716.75	2000.15	0.00	964.21	847.01	0.344	0.93	0.53	5.724	A
5	670.04	167.51	760.87	257.91	2075.83	0.00	763.77	431.22	0.877	262.77	240.06	1189.847	F

Queueing Delay Results for each time segment

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	22.35	1.49	4.247	A	A
2	9.92	0.66	6.013	A	A
3	34.37	2.29	5.290	A	A
4	6.11	0.41	4.558	A	A
5	37.13	2.48	14.631	B	B

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	42.29	2.82	6.949	A	A
2	18.85	1.26	9.801	A	A
3	87.44	5.83	12.195	B	B
4	10.20	0.68	6.425	A	A
5	229.83	15.32	90.387	F	F

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	106.54	7.10	15.534	C	B
2	50.93	3.40	23.610	C	C
3	643.02	42.87	78.960	F	E
4	18.71	1.25	9.871	A	A
5	1105.43	73.70	457.375	F	F

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	131.72	8.78	17.863	C	B
2	63.33	4.22	27.603	D	C
3	1669.07	111.27	192.710	F	F
4	20.07	1.34	10.157	B	B
5	2551.06	170.07	1003.880	F	F

Queueing Delay results: (17:45-18:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	51.31	3.42	7.466	A	A
2	21.77	1.45	9.929	A	A
3	1723.30	114.89	188.764	F	F
4	14.46	0.96	8.343	A	A
5	3610.40	240.69	1306.097	F	F

Queueing Delay results: (18:00-18:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	28.31	1.89	4.975	A	A
2	12.02	0.80	6.706	A	A
3	362.81	24.19	30.214	D	C
4	8.20	0.55	5.724	A	A
5	3771.28	251.42	1189.847	F	F

APPENDIX B

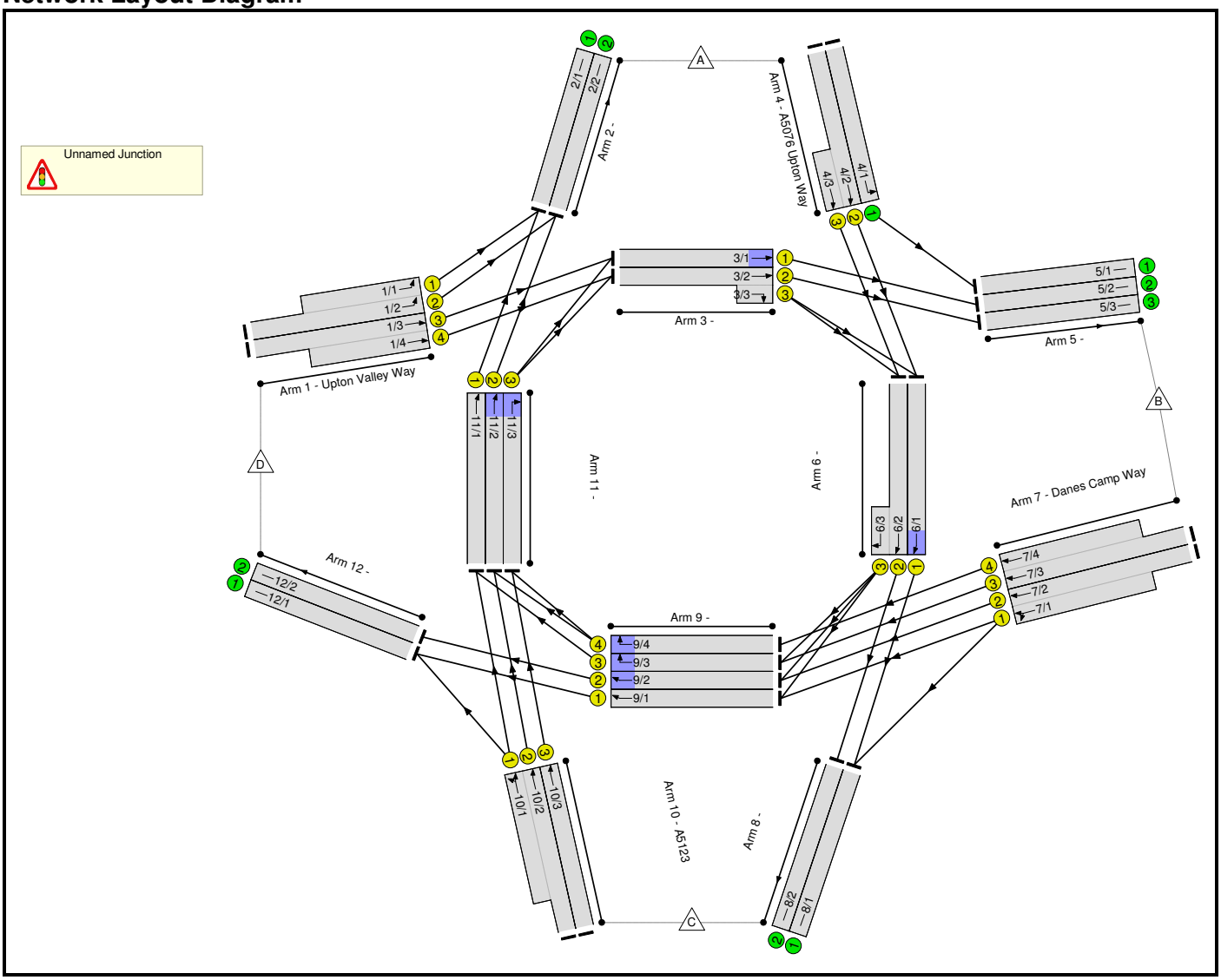
A5123/A5076 DANES CAMP WAY/UPTON VALLEY WAY GYRATORY LINSIG MODEL

Full Input Data And Results

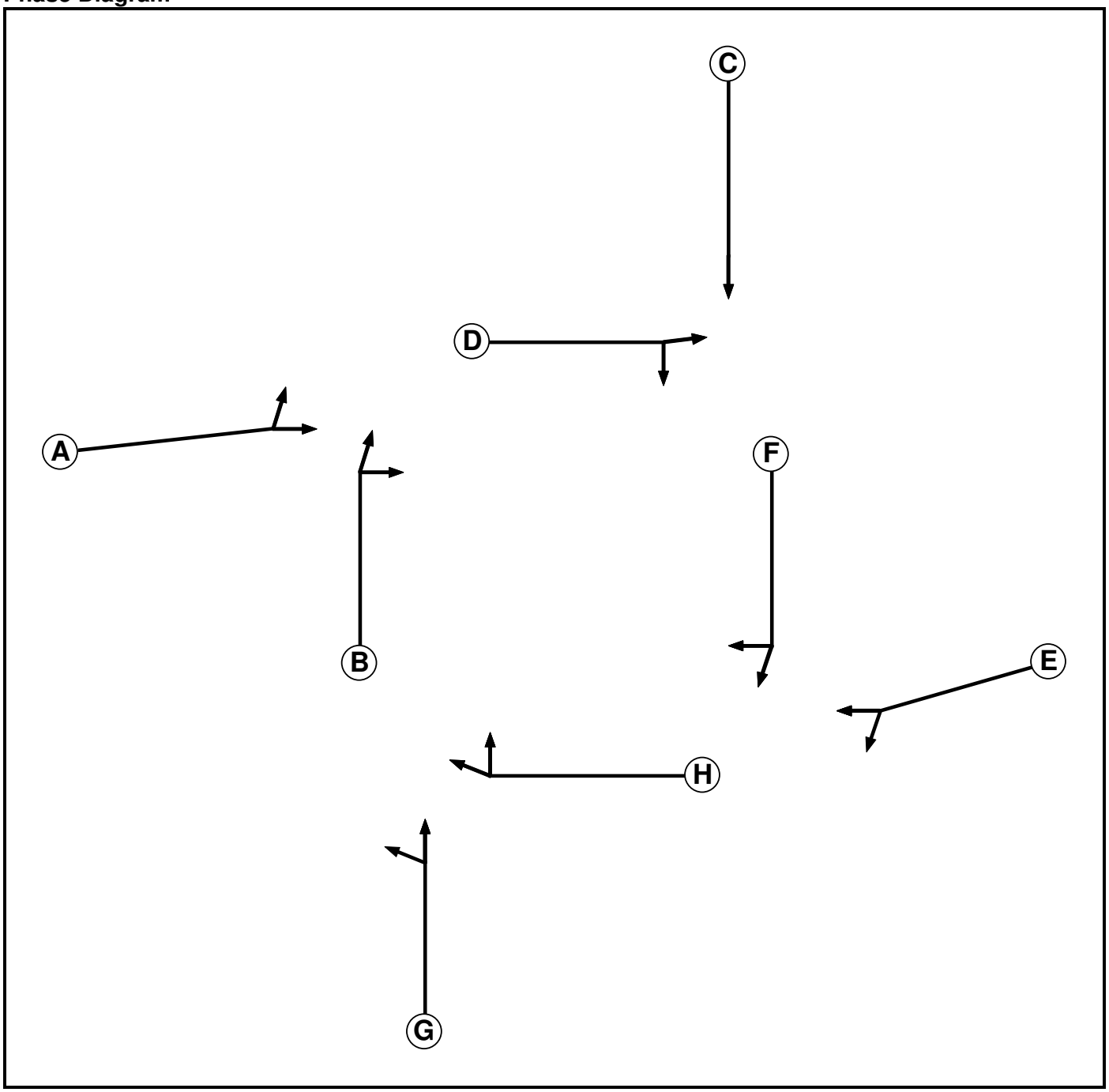
User and Project Details

Project:	**Northampton Gateway SRFI**
Title:	**A5123/Danes Camp Way Junction**
Location:	
File name:	180206 A5123_A5076 Base Model.lsg3x
Author:	Mark Higgins
Company:	ADC Infrastructure
Address:	Western Street, Nottingham
Notes:	

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Traffic	2		7	7
D	Traffic	2		7	7
E	Traffic	3		7	7
F	Traffic	3		7	7
G	Traffic	4		7	7
H	Traffic	4		7	7

Phase Intergreens Matrix

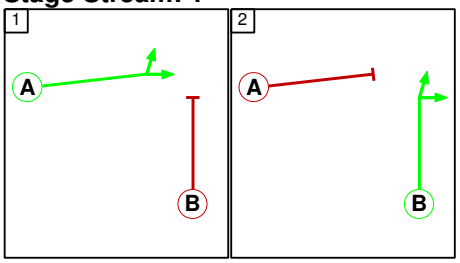
		Starting Phase							
		A	B	C	D	E	F	G	H
Terminating Phase	A		6	-	-	-	-	-	-
	B	6		-	-	-	-	-	-
	C	-	-		6	-	-	-	-
	D	-	-	6		-	-	-	-
	E	-	-	-	-		6	-	-
	F	-	-	-	-	6		-	-
	G	-	-	-	-	-	-		6
	H	-	-	-	-	-	-	6	

Phases in Stage

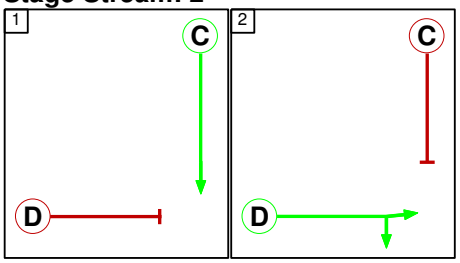
Stream	Stage No.	Phases in Stage
1	1	A
1	2	B
2	1	C
2	2	D
3	1	E
3	2	F
4	1	G
4	2	H

Stage Diagram

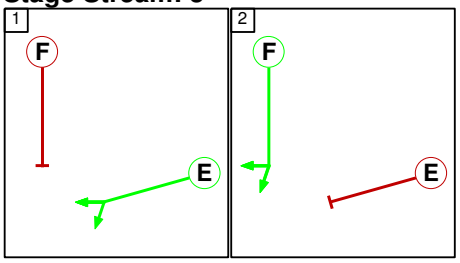
Stage Stream: 1



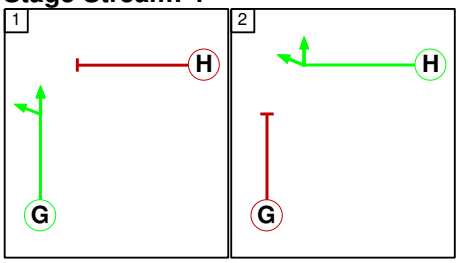
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 3

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 4

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

Stage Stream: 1

	To Stage		
		1	2
From Stage	1		6
	2	6	

Stage Stream: 2

	To Stage		
		1	2
From Stage	1		6
	2	6	

Stage Stream: 3

	To Stage		
		1	2
From Stage	1		6
	2	6	

Stage Stream: 4

	To Stage		
From Stage		1	2
	1		6
	2	6	

Lane Input Data

Junction: Unnamed Junction												
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 (Upton Valley Way)	U	A	2	3	10.0	Geom	-	3.55	0.00	Y	Arm 2 Left	Inf
1/2 (Upton Valley Way)	U	A	2	3	60.0	Geom	-	3.50	0.00	N	Arm 2 Left	Inf
1/3 (Upton Valley Way)	U	A	2	3	60.0	Geom	-	3.50	0.00	N	Arm 3 Ahead	Inf
1/4 (Upton Valley Way)	U	A	2	3	10.0	Geom	-	3.50	0.00	Y	Arm 3 Ahead	Inf
2/1	U		2	3	5.0	Inf	-	-	-	-	-	-
2/2	U		2	3	5.0	Inf	-	-	-	-	-	-
3/1	U	D	2	3	10.4	User	1900	-	-	-	-	-
3/2	U	D	2	3	10.4	User	1900	-	-	-	-	-
3/3	U	D	2	3	3.0	User	1900	-	-	-	-	-
4/1 (A5076 Upton Way)	U		2	3	60.0	Inf	-	-	-	-	-	-
4/2 (A5076 Upton Way)	U	C	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 6 Ahead	Inf
4/3 (A5076 Upton Way)	U	C	2	3	5.0	Geom	-	3.50	0.00	Y	Arm 6 Ahead	Inf
5/1	U		2	3	5.0	Inf	-	-	-	-	-	-
5/2	U		2	3	5.0	Inf	-	-	-	-	-	-
5/3	U		2	3	5.0	Inf	-	-	-	-	-	-
6/1	U	F	2	3	7.8	User	1900	-	-	-	-	-
6/2	U	F	2	3	7.8	User	1900	-	-	-	-	-
6/3	U	F	2	3	4.0	User	1900	-	-	-	-	-
7/1 (Danes Camp Way)	U	E	2	3	12.0	Geom	-	3.50	0.00	Y	Arm 8 Left Arm 9 Ahead	Inf Inf
7/2 (Danes Camp Way)	U	E	2	3	60.0	Geom	-	3.50	0.00	N	Arm 9 Ahead	Inf
7/3 (Danes Camp Way)	U	E	2	3	60.0	Geom	-	3.50	0.00	N	Arm 9 Ahead	Inf
7/4 (Danes Camp Way)	U	E	2	3	12.0	Geom	-	3.50	0.00	Y	Arm 9 Ahead	Inf
8/1	U		2	3	5.0	Inf	-	-	-	-	-	-

8/2	U		2	3	5.0	Inf	-	-	-	-	-	-
9/1	U	H	2	3	9.6	User	1900	-	-	-	-	-
9/2	U	H	2	3	9.6	User	1900	-	-	-	-	-
9/3	U	H	2	3	9.6	User	1900	-	-	-	-	-
9/4	U	H	2	3	9.6	User	1900	-	-	-	-	-
10/1 (A5123)	U	G	2	3	18.0	Geom	-	3.50	0.00	Y	Arm 11 Ahead	Inf
											Arm 12 Left	Inf
10/2 (A5123)	U	G	2	3	60.0	Geom	-	3.50	0.00	N	Arm 11 Ahead	Inf
10/3 (A5123)	U	G	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 11 Ahead	Inf
11/1	U	B	2	3	12.2	User	1900	-	-	-	-	-
11/2	U	B	2	3	12.2	User	1900	-	-	-	-	-
11/3	U	B	2	3	12.2	User	1900	-	-	-	-	-
12/1	U		2	3	5.0	Inf	-	-	-	-	-	-
12/2	U		2	3	5.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2031 D1 AM Peak'	08:00	09:00	01:00	
2: '2031 D1 PM Peak'	17:00	18:00	01:00	
3: '2031 J1d AM Peak'	08:00	09:00	01:00	
4: '2031 J1d PM Peak'	17:00	18:00	01:00	

Scenario 1: '2031 D1 AM Peak' (FG1: '2031 D1 AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	1214	783	183	2180
	B	1187	0	965	616	2768
	C	668	1057	0	32	1757
	D	327	371	285	5	988
	Tot.	2182	2642	2033	836	7693

Traffic Lane Flows

Lane	Scenario 1: 2031 D1 AM Peak
Junction: Unnamed Junction	
1/1 (short)	158
1/2 (with short)	327(In) 169(Out)
1/3 (with short)	661(In) 342(Out)
1/4 (short)	319
2/1	1086
2/2	1096
3/1	726
3/2 (with short)	992(In) 702(Out)
3/3 (short)	290
4/1	1214
4/2 (with short)	966(In) 381(Out)
4/3 (short)	585
5/1	1214
5/2	726
5/3	702
6/1	595
6/2 (with short)	661(In) 473(Out)
6/3 (short)	188
7/1 (short)	1191
7/2 (with short)	1581(In) 390(Out)
7/3 (with short)	1187(In) 594(Out)
7/4 (short)	593
8/1	1560
8/2	473
9/1	321
9/2	483
9/3	594
9/4	593
10/1 (short)	366
10/2 (with short)	700(In) 334(Out)
10/3	1057

11/1	928
11/2	927
11/3	1057
12/1	353
12/2	483

Lane Saturation Flows

Junction: Unnamed Junction

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 (Upton Valley Way)	3.55	0.00	Y	Arm 2 Left	Inf	100.0 %	1970	1970
1/2 (Upton Valley Way)	3.50	0.00	N	Arm 2 Left	Inf	100.0 %	2105	2105
1/3 (Upton Valley Way)	3.50	0.00	N	Arm 3 Ahead	Inf	100.0 %	2105	2105
1/4 (Upton Valley Way)	3.50	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1965	1965
2/1	Infinite Saturation Flow						Inf	Inf
2/2	Infinite Saturation Flow						Inf	Inf
3/1	This lane uses a directly entered Saturation Flow						1900	1900
3/2	This lane uses a directly entered Saturation Flow						1900	1900
3/3	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (A5076 Upton Way Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (A5076 Upton Way)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
4/3 (A5076 Upton Way)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
5/3	Infinite Saturation Flow						Inf	Inf
6/1	This lane uses a directly entered Saturation Flow						1900	1900
6/2	This lane uses a directly entered Saturation Flow						1900	1900
6/3	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (Danes Camp Way)	3.50	0.00	Y	Arm 8 Left	Inf	81.0 %	1965	1965
				Arm 9 Ahead	Inf	19.0 %		
7/2 (Danes Camp Way)	3.50	0.00	N	Arm 9 Ahead	Inf	100.0 %	2105	2105
7/3 (Danes Camp Way)	3.50	0.00	N	Arm 9 Ahead	Inf	100.0 %	2105	2105
7/4 (Danes Camp Way)	3.50	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1965	1965
8/1	Infinite Saturation Flow						Inf	Inf
8/2	Infinite Saturation Flow						Inf	Inf
9/1	This lane uses a directly entered Saturation Flow						1900	1900
9/2	This lane uses a directly entered Saturation Flow						1900	1900
9/3	This lane uses a directly entered Saturation Flow						1900	1900
9/4	This lane uses a directly entered Saturation Flow						1900	1900
10/1 (A5123)	3.50	0.00	Y	Arm 11 Ahead	Inf	91.3 %	1965	1965
				Arm 12 Left	Inf	8.7 %		

10/2 (A5123)	3.50	0.00	N	Arm 11 Ahead	Inf	100.0 %	2105	2105
10/3 (A5123)	3.50	0.00	Y	Arm 11 Ahead	Inf	100.0 %	1965	1965
11/1	This lane uses a directly entered Saturation Flow						1900	1900
11/2	This lane uses a directly entered Saturation Flow						1900	1900
11/3	This lane uses a directly entered Saturation Flow						1900	1900
12/1	Infinite Saturation Flow						Inf	Inf
12/2	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2031 J1d AM Peak' (FG3: '2031 J1d AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	1222	730	211	2163
	B	1127	0	1121	544	2792
	C	680	1083	0	34	1797
	D	358	387	288	4	1037
	Tot.	2165	2692	2139	793	7789

Traffic Lane Flows

Lane	Scenario 2: 2031 J1d AM Peak
Junction: Unnamed Junction	
1/1 (short)	173
1/2 (with short)	358(In) 185(Out)
1/3 (with short)	679(In) 351(Out)
1/4 (short)	328
2/1	1077
2/2	1088
3/1	789
3/2 (with short)	973(In) 681(Out)
3/3 (short)	292
4/1	1222
4/2 (with short)	941(In) 359(Out)
4/3 (short)	582
5/1	1222
5/2	789
5/3	681
6/1	556
6/2 (with short)	677(In) 462(Out)
6/3 (short)	215
7/1 (short)	1419
7/2 (with short)	1665(In) 246(Out)
7/3 (with short)	1127(In) 564(Out)
7/4 (short)	563
8/1	1677
8/2	462
9/1	405
9/2	354
9/3	564
9/4	563
10/1 (short)	374
10/2 (with short)	714(In) 340(Out)
10/3	1083

11/1	904
11/2	903
11/3	1083
12/1	439
12/2	354

Lane Saturation Flows

Junction: Unnamed Junction

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 (Upton Valley Way)	3.55	0.00	Y	Arm 2 Left	Inf	100.0 %	1970	1970
1/2 (Upton Valley Way)	3.50	0.00	N	Arm 2 Left	Inf	100.0 %	2105	2105
1/3 (Upton Valley Way)	3.50	0.00	N	Arm 3 Ahead	Inf	100.0 %	2105	2105
1/4 (Upton Valley Way)	3.50	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1965	1965
2/1	Infinite Saturation Flow						Inf	Inf
2/2	Infinite Saturation Flow						Inf	Inf
3/1	This lane uses a directly entered Saturation Flow						1900	1900
3/2	This lane uses a directly entered Saturation Flow						1900	1900
3/3	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (A5076 Upton Way Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (A5076 Upton Way)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
4/3 (A5076 Upton Way)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
5/3	Infinite Saturation Flow						Inf	Inf
6/1	This lane uses a directly entered Saturation Flow						1900	1900
6/2	This lane uses a directly entered Saturation Flow						1900	1900
6/3	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (Danes Camp Way)	3.50	0.00	Y	Arm 8 Left	Inf	79.0 %	1965	1965
				Arm 9 Ahead	Inf	21.0 %		
7/2 (Danes Camp Way)	3.50	0.00	N	Arm 9 Ahead	Inf	100.0 %	2105	2105
7/3 (Danes Camp Way)	3.50	0.00	N	Arm 9 Ahead	Inf	100.0 %	2105	2105
7/4 (Danes Camp Way)	3.50	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1965	1965
8/1	Infinite Saturation Flow						Inf	Inf
8/2	Infinite Saturation Flow						Inf	Inf
9/1	This lane uses a directly entered Saturation Flow						1900	1900
9/2	This lane uses a directly entered Saturation Flow						1900	1900
9/3	This lane uses a directly entered Saturation Flow						1900	1900
9/4	This lane uses a directly entered Saturation Flow						1900	1900
10/1 (A5123)	3.50	0.00	Y	Arm 11 Ahead	Inf	90.9 %	1965	1965
				Arm 12 Left	Inf	9.1 %		

10/2 (A5123)	3.50	0.00	N	Arm 11 Ahead	Inf	100.0 %	2105	2105
10/3 (A5123)	3.50	0.00	Y	Arm 11 Ahead	Inf	100.0 %	1965	1965
11/1	This lane uses a directly entered Saturation Flow						1900	1900
11/2	This lane uses a directly entered Saturation Flow						1900	1900
11/3	This lane uses a directly entered Saturation Flow						1900	1900
12/1	Infinite Saturation Flow						Inf	Inf
12/2	Infinite Saturation Flow						Inf	Inf

Scenario 3: '2031 D1 PM Peak' (FG2: '2031 D1 PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	1490	619	115	2224
	B	906	0	743	373	2022
	C	1253	556	0	216	2025
	D	130	161	33	6	330
	Tot.	2289	2207	1395	710	6601

Traffic Lane Flows

Lane	Scenario 3: 2031 D1 PM Peak
Junction: Unnamed Junction	
1/1 (short)	63
1/2 (with short)	130(In) 67(Out)
1/3 (with short)	200(In) 72(Out)
1/4 (short)	128
2/1	1102
2/2	1187
3/1	370
3/2 (with short)	386(In) 347(Out)
3/3 (short)	39
4/1	1490
4/2 (with short)	734(In) 344(Out)
4/3 (short)	390
5/1	1490
5/2	370
5/3	347
6/1	350
6/2 (with short)	423(In) 302(Out)
6/3 (short)	121
7/1 (short)	743
7/2 (with short)	1116(In) 373(Out)
7/3 (with short)	906(In) 470(Out)
7/4 (short)	436
8/1	1093
8/2	302
9/1	121
9/2	373
9/3	470
9/4	436
10/1 (short)	785
10/2 (with short)	1469(In) 684(Out)
10/3	556

11/1	1039
11/2	1120
11/3	556
12/1	337
12/2	373

Lane Saturation Flows

Junction: Unnamed Junction

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 (Upton Valley Way)	3.55	0.00	Y	Arm 2 Left	Inf	100.0 %	1970	1970
1/2 (Upton Valley Way)	3.50	0.00	N	Arm 2 Left	Inf	100.0 %	2105	2105
1/3 (Upton Valley Way)	3.50	0.00	N	Arm 3 Ahead	Inf	100.0 %	2105	2105
1/4 (Upton Valley Way)	3.50	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1965	1965
2/1	Infinite Saturation Flow						Inf	Inf
2/2	Infinite Saturation Flow						Inf	Inf
3/1	This lane uses a directly entered Saturation Flow						1900	1900
3/2	This lane uses a directly entered Saturation Flow						1900	1900
3/3	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (A5076 Upton Way Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (A5076 Upton Way)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
4/3 (A5076 Upton Way)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
5/3	Infinite Saturation Flow						Inf	Inf
6/1	This lane uses a directly entered Saturation Flow						1900	1900
6/2	This lane uses a directly entered Saturation Flow						1900	1900
6/3	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (Danes Camp Way)	3.50	0.00	Y	Arm 8 Left	Inf	100.0 %	1965	1965
				Arm 9 Ahead	Inf	0.0 %		
7/2 (Danes Camp Way)	3.50	0.00	N	Arm 9 Ahead	Inf	100.0 %	2105	2105
7/3 (Danes Camp Way)	3.50	0.00	N	Arm 9 Ahead	Inf	100.0 %	2105	2105
7/4 (Danes Camp Way)	3.50	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1965	1965
8/1	Infinite Saturation Flow						Inf	Inf
8/2	Infinite Saturation Flow						Inf	Inf
9/1	This lane uses a directly entered Saturation Flow						1900	1900
9/2	This lane uses a directly entered Saturation Flow						1900	1900
9/3	This lane uses a directly entered Saturation Flow						1900	1900
9/4	This lane uses a directly entered Saturation Flow						1900	1900
10/1 (A5123)	3.50	0.00	Y	Arm 11 Ahead	Inf	72.5 %	1965	1965
				Arm 12 Left	Inf	27.5 %		

10/2 (A5123)	3.50	0.00	N	Arm 11 Ahead	Inf	100.0 %	2105	2105
10/3 (A5123)	3.50	0.00	Y	Arm 11 Ahead	Inf	100.0 %	1965	1965
11/1	This lane uses a directly entered Saturation Flow						1900	1900
11/2	This lane uses a directly entered Saturation Flow						1900	1900
11/3	This lane uses a directly entered Saturation Flow						1900	1900
12/1	Infinite Saturation Flow						Inf	Inf
12/2	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2031 J1d PM Peak' (FG4: '2031 J1d PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	1494	608	123	2225
	B	865	0	741	394	2000
	C	1307	645	0	280	2232
	D	151	111	27	4	293
	Tot.	2323	2250	1376	801	6750

Traffic Lane Flows

Lane	Scenario 4: 2031 J1d PM Peak
Junction: Unnamed Junction	
1/1 (short)	73
1/2 (with short)	151(In) 78(Out)
1/3 (with short)	142(In) 70(Out)
1/4 (short)	72
2/1	1087
2/2	1236
3/1	392
3/2 (with short)	395(In) 364(Out)
3/3 (short)	31
4/1	1494
4/2 (with short)	731(In) 352(Out)
4/3 (short)	379
5/1	1494
5/2	392
5/3	364
6/1	352
6/2 (with short)	410(In) 283(Out)
6/3 (short)	127
7/1 (short)	742
7/2 (with short)	1135(In) 393(Out)
7/3 (with short)	865(In) 473(Out)
7/4 (short)	392
8/1	1093
8/2	283
9/1	121
9/2	400
9/3	473
9/4	392
10/1 (short)	821
10/2 (with short)	1587(In) 766(Out)
10/3	645

11/1	1014
11/2	1158
11/3	645
12/1	401
12/2	400

Lane Saturation Flows

Junction: Unnamed Junction

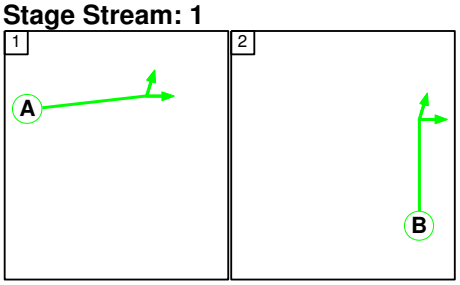
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Upton Valley Way)	3.55	0.00	Y	Arm 2 Left	Inf	100.0 %	1970	1970
1/2 (Upton Valley Way)	3.50	0.00	N	Arm 2 Left	Inf	100.0 %	2105	2105
1/3 (Upton Valley Way)	3.50	0.00	N	Arm 3 Ahead	Inf	100.0 %	2105	2105
1/4 (Upton Valley Way)	3.50	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1965	1965
2/1	Infinite Saturation Flow						Inf	Inf
2/2	Infinite Saturation Flow						Inf	Inf
3/1	This lane uses a directly entered Saturation Flow						1900	1900
3/2	This lane uses a directly entered Saturation Flow						1900	1900
3/3	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (A5076 Upton Way Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (A5076 Upton Way)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
4/3 (A5076 Upton Way)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
5/3	Infinite Saturation Flow						Inf	Inf
6/1	This lane uses a directly entered Saturation Flow						1900	1900
6/2	This lane uses a directly entered Saturation Flow						1900	1900
6/3	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (Danes Camp Way)	3.50	0.00	Y	Arm 8 Left	Inf	99.9 %	1965	1965
				Arm 9 Ahead	Inf	0.1 %		
7/2 (Danes Camp Way)	3.50	0.00	N	Arm 9 Ahead	Inf	100.0 %	2105	2105
7/3 (Danes Camp Way)	3.50	0.00	N	Arm 9 Ahead	Inf	100.0 %	2105	2105
7/4 (Danes Camp Way)	3.50	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1965	1965
8/1	Infinite Saturation Flow						Inf	Inf
8/2	Infinite Saturation Flow						Inf	Inf
9/1	This lane uses a directly entered Saturation Flow						1900	1900
9/2	This lane uses a directly entered Saturation Flow						1900	1900
9/3	This lane uses a directly entered Saturation Flow						1900	1900
9/4	This lane uses a directly entered Saturation Flow						1900	1900
10/1 (A5123)	3.50	0.00	Y	Arm 11 Ahead	Inf	65.9 %	1965	1965
				Arm 12 Left	Inf	34.1 %		

10/2 (A5123)	3.50	0.00	N	Arm 11 Ahead	Inf	100.0 %	2105	2105
10/3 (A5123)	3.50	0.00	Y	Arm 11 Ahead	Inf	100.0 %	1965	1965
11/1	This lane uses a directly entered Saturation Flow						1900	1900
11/2	This lane uses a directly entered Saturation Flow						1900	1900
11/3	This lane uses a directly entered Saturation Flow						1900	1900
12/1	Infinite Saturation Flow						Inf	Inf
12/2	Infinite Saturation Flow						Inf	Inf

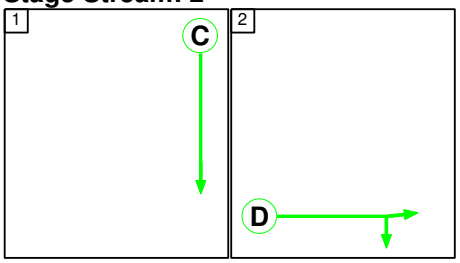
Scenario 1: '2031 D1 AM Peak' (FG1: '2031 D1 AM Peak', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

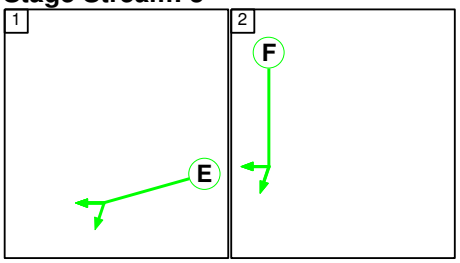
Stage Stream: 1



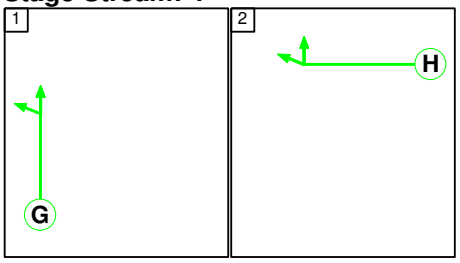
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	7	41
Change Point	51	4

Stage Stream: 2

Stage	1	2
Duration	13	35
Change Point	39	58

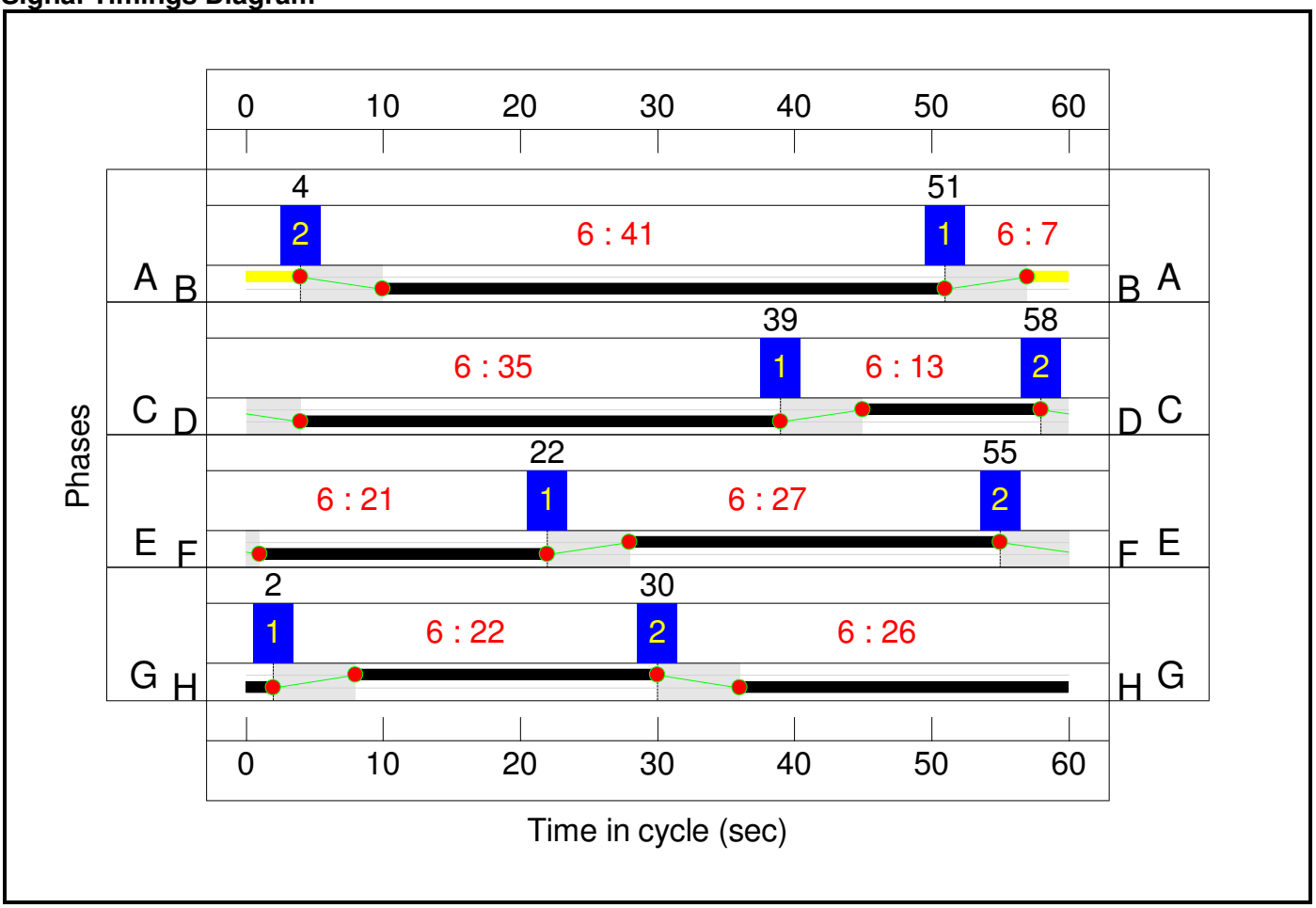
Stage Stream: 3

Stage	1	2
Duration	27	21
Change Point	22	55

Stage Stream: 4

Stage	1	2
Duration	22	26
Change Point	2	30

Signal Timings Diagram



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**	-	-		-	-	-	-	-	-	**146.6%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**146.6%**
1/2+1/1	Upton Valley Way Left	U	1	N/A	A		1	7	-	327	2105:1970	281+263	60.2 : 60.2%
1/3+1/4	Upton Valley Way Ahead	U	1	N/A	A		1	7	-	661	2105:1965	281+262	121.9 : 121.8%
3/1	Ahead	U	2	N/A	D		1	35	-	726	1900	1140	48.6%
3/2+3/3	Ahead Right	U	2	N/A	D		1	35	-	992	1900:1900	852+352	59.1 : 67.6%
4/2+4/3	A5076 Upton Way Ahead	U	2	N/A	C		1	13	-	966	1965:1965	260+399	146.6 : 146.6%
6/1	Ahead	U	3	N/A	F		1	21	-	595	1900	697	62.5%
6/2+6/3	Ahead Right	U	3	N/A	F		1	21	-	661	1900:1900	557+221	59.7 : 58.2%
7/2+7/1	Danes Camp Way Left Ahead	U	3	N/A	E		1	27	-	1581	2105:1965	285+870	136.8 : 136.8%
7/3+7/4	Danes Camp Way Ahead	U	3	N/A	E		1	27	-	1187	2105:1965	823+822	72.2 : 72.2%
9/1	Ahead	U	4	N/A	H		1	26	-	321	1900	855	26.9%
9/2	Ahead	U	4	N/A	H		1	26	-	483	1900	855	40.8%
9/3	Right	U	4	N/A	H		1	26	-	594	1900	855	69.5%
9/4	Right	U	4	N/A	H		1	26	-	593	1900	855	69.4%
10/2+10/1	A5123 Ahead Left	U	4	N/A	G		1	22	-	700	2105:1965	807+753	41.4 : 48.6%
10/3	A5123 Ahead	U	4	N/A	G		1	22	-	1057	1965	753	140.3%
11/1	Ahead	U	1	N/A	B		1	41	-	928	1900	1330	69.8%
11/2	Ahead	U	1	N/A	B		1	41	-	927	1900	1330	69.7%
11/3	Right	U	1	N/A	B		1	41	-	1057	1900	1330	56.6%

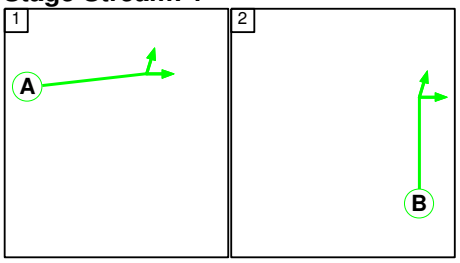
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**73.1**	**596.0**	**0.0**	**669.1**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**73.1**	**596.0**	**0.0**	**669.1**	**-**	**-**	**-**	**-**
1/2+1/1	327	327	-	-	-	2.2	0.8	-	3.0	32.8	2.6	0.8	3.4
1/3+1/4	661	543	-	-	-	8.5	61.8	-	70.4	383.3	7.1	61.8	68.9
3/1	554	554	-	-	-	0.5	0.5	-	1.0	6.4	7.4	0.5	7.8
3/2+3/3	742	742	-	-	-	0.4	0.8	-	1.2	6.0	9.9	0.8	10.7
4/2+4/3	966	659	-	-	-	15.9	155.0	-	170.9	637.0	22.0	155.0	177.0
6/1	436	436	-	-	-	0.9	0.8	-	1.8	14.5	5.5	0.8	6.3
6/2+6/3	462	462	-	-	-	1.1	0.7	-	1.8	14.0	5.2	0.7	6.0
7/2+7/1	1581	1156	-	-	-	17.2	214.6	-	231.8	527.8	32.6	214.6	247.2
7/3+7/4	1187	1187	-	-	-	4.0	1.3	-	5.3	16.0	7.4	1.3	8.7
9/1	230	230	-	-	-	0.6	0.2	-	0.8	11.7	1.8	0.2	2.0
9/2	349	349	-	-	-	0.9	0.3	-	1.3	13.0	4.9	0.3	5.2
9/3	594	594	-	-	-	0.6	1.1	-	1.8	10.7	8.4	1.1	9.5
9/4	593	593	-	-	-	0.6	1.1	-	1.7	10.3	8.4	1.1	9.5
10/2+10/1	700	700	-	-	-	2.7	0.4	-	3.1	15.9	4.6	0.4	5.0
10/3	1057	753	-	-	-	13.8	153.6	-	167.4	570.1	22.7	153.6	176.3
11/1	928	928	-	-	-	1.5	1.1	-	2.7	10.3	8.7	1.1	9.9
11/2	927	927	-	-	-	1.5	1.1	-	2.7	10.4	8.7	1.1	9.9
11/3	753	753	-	-	-	0.1	0.7	-	0.7	3.5	0.4	0.7	1.1

C1	Stream: 1 PRC for Signalled Lanes (%):	-35.4	Total Delay for Signalled Lanes (pcuHr):	79.44	Cycle Time (s): 60
C1	Stream: 2 PRC for Signalled Lanes (%):	-62.8	Total Delay for Signalled Lanes (pcuHr):	173.14	Cycle Time (s): 60
C1	Stream: 3 PRC for Signalled Lanes (%):	-52.0	Total Delay for Signalled Lanes (pcuHr):	240.59	Cycle Time (s): 60
C1	Stream: 4 PRC for Signalled Lanes (%):	-55.9	Total Delay for Signalled Lanes (pcuHr):	175.94	Cycle Time (s): 60
	PRC Over All Lanes (%):	-62.8	Total Delay Over All Lanes(pcuHr):	669.11	

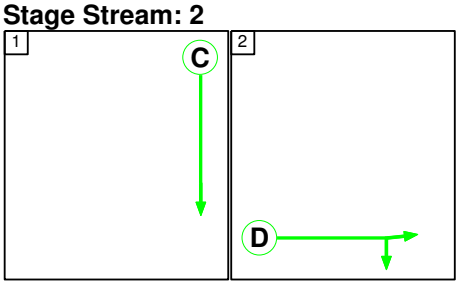
Scenario 2: '2031 J1d AM Peak' (FG3: '2031 J1d AM Peak', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

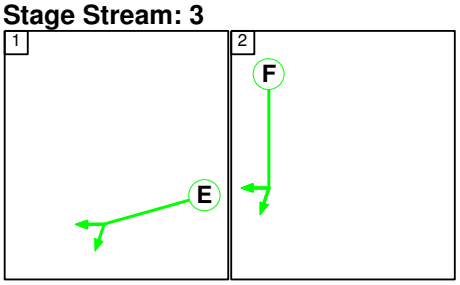
Stage Stream: 1



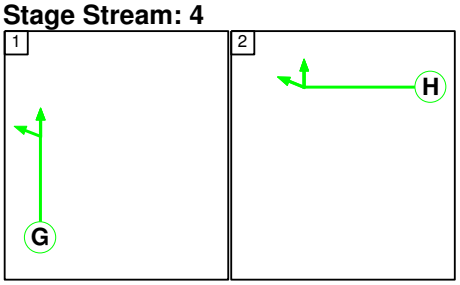
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	7	41
Change Point	0	13

Stage Stream: 2

Stage	1	2
Duration	13	35
Change Point	47	6

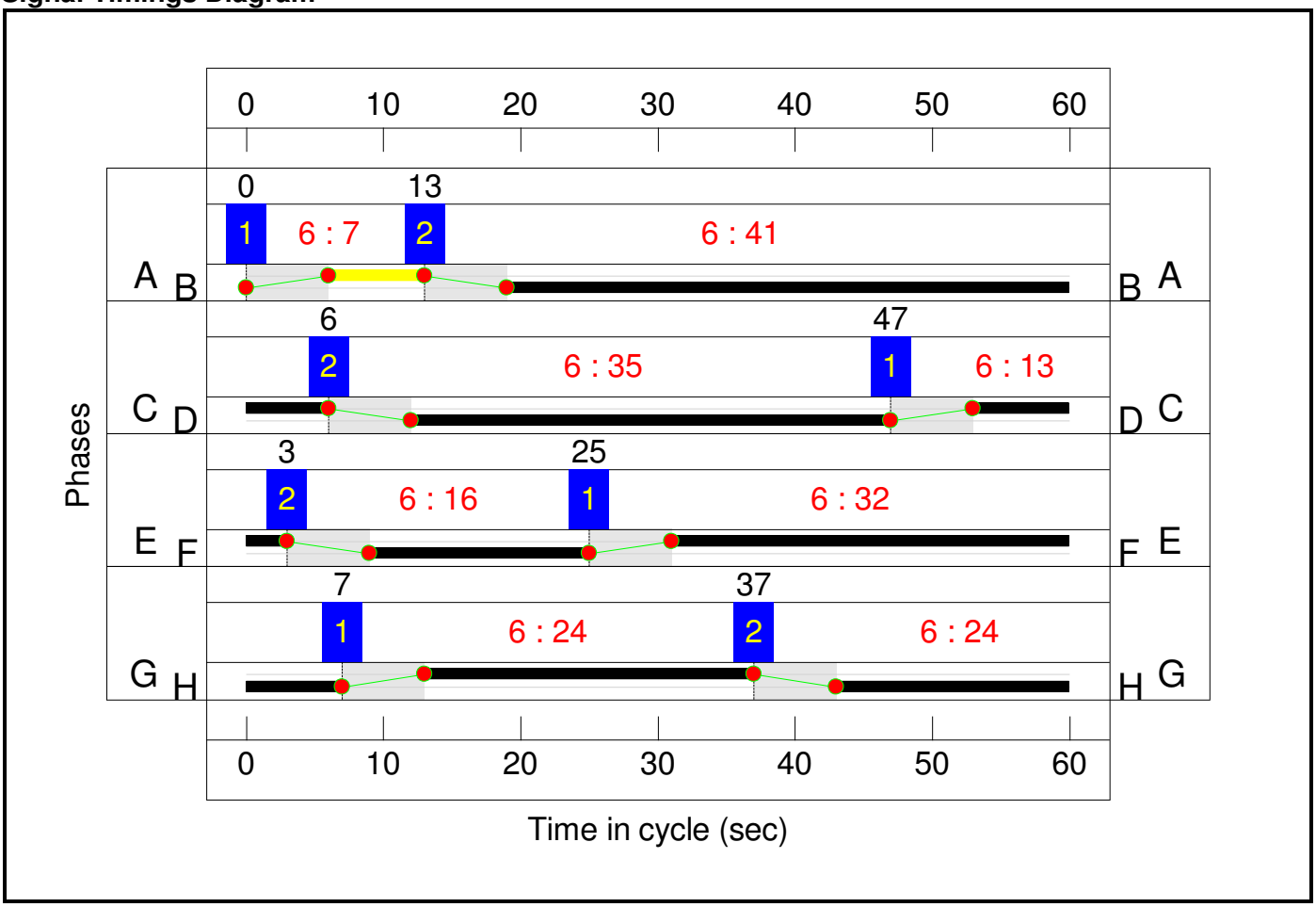
Stage Stream: 3

Stage	1	2
Duration	32	16
Change Point	25	3

Stage Stream: 4

Stage	1	2
Duration	24	24
Change Point	7	37

Signal Timings Diagram



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**	-	-		-	-	-	-	-	-	**145.0%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**145.0%**
1/2+1/1	Upton Valley Way Left	U	1	N/A	A		1	7	-	358	2105:1970	281+263	65.9 : 65.9%
1/3+1/4	Upton Valley Way Ahead	U	1	N/A	A		1	7	-	679	2105:1965	281+262	125.1 : 125.2%
3/1	Ahead	U	2	N/A	D		1	35	-	789	1900	1140	53.7%
3/2+3/3	Ahead Right	U	2	N/A	D		1	35	-	973	1900:1900	845+362	61.1 : 64.4%
4/2+4/3	A5076 Upton Way Ahead	U	2	N/A	C		1	13	-	941	1965:1965	248+401	145.0 : 145.0%
6/1	Ahead	U	3	N/A	F		1	16	-	556	1900	538	75.2%
6/2+6/3	Ahead Right	U	3	N/A	F		1	16	-	677	1900:1900	434+202	75.6 : 73.5%
7/2+7/1	Danes Camp Way Left Ahead	U	3	N/A	E		1	32	-	1665	2105:1965	179+1030	137.8 : 137.8%
7/3+7/4	Danes Camp Way Ahead	U	3	N/A	E		1	32	-	1127	2105:1965	908+906	62.1 : 62.1%
9/1	Ahead	U	4	N/A	H		1	24	-	405	1900	792	36.7%
9/2	Ahead	U	4	N/A	H		1	24	-	354	1900	792	32.0%
9/3	Right	U	4	N/A	H		1	24	-	564	1900	792	71.2%
9/4	Right	U	4	N/A	H		1	24	-	563	1900	792	71.1%
10/2+10/1	A5123 Ahead Left	U	4	N/A	G		1	24	-	714	2105:1965	817+819	41.6 : 45.7%
10/3	A5123 Ahead	U	4	N/A	G		1	24	-	1083	1965	819	132.3%
11/1	Ahead	U	1	N/A	B		1	41	-	904	1900	1330	68.0%
11/2	Ahead	U	1	N/A	B		1	41	-	903	1900	1330	67.9%
11/3	Right	U	1	N/A	B		1	41	-	1083	1900	1330	61.6%

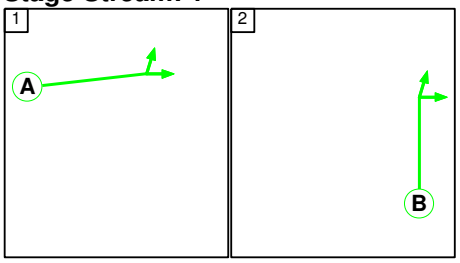
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**73.7**	**594.8**	**0.0**	**668.5**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**73.7**	**594.8**	**0.0**	**668.5**	**-**	**-**	**-**	**-**
1/2+1/1	358	358	-	-	-	2.5	1.0	-	3.4	34.3	2.9	1.0	3.9
1/3+1/4	679	543	-	-	-	9.0	70.6	-	79.6	422.0	7.0	70.6	77.6
3/1	612	612	-	-	-	0.6	0.6	-	1.2	7.0	8.5	0.6	9.1
3/2+3/3	750	750	-	-	-	0.5	0.8	-	1.3	6.4	11.0	0.8	11.8
4/2+4/3	941	649	-	-	-	15.4	147.7	-	163.1	624.0	20.0	147.7	167.7
6/1	405	405	-	-	-	0.8	1.5	-	2.3	20.7	4.5	1.5	6.0
6/2+6/3	477	477	-	-	-	1.1	1.5	-	2.6	19.6	4.9	1.5	6.4
7/2+7/1	1665	1209	-	-	-	20.5	230.0	-	250.5	541.6	36.7	230.0	266.7
7/3+7/4	1127	1127	-	-	-	2.6	0.8	-	3.5	11.0	5.8	0.8	6.6
9/1	290	290	-	-	-	0.7	0.3	-	1.0	12.4	2.7	0.3	3.0
9/2	253	253	-	-	-	0.9	0.2	-	1.2	16.7	3.2	0.2	3.5
9/3	564	564	-	-	-	1.0	1.2	-	2.2	14.0	7.7	1.2	8.9
9/4	563	563	-	-	-	0.9	1.2	-	2.2	13.8	7.7	1.2	8.9
10/2+10/1	714	714	-	-	-	2.5	0.4	-	2.8	14.4	4.5	0.4	4.9
10/3	1083	819	-	-	-	12.1	134.1	-	146.2	486.1	22.5	134.1	156.6
11/1	904	904	-	-	-	1.1	1.1	-	2.1	8.5	7.2	1.1	8.2
11/2	903	903	-	-	-	1.1	1.1	-	2.2	8.6	7.1	1.1	8.2
11/3	819	819	-	-	-	0.3	0.8	-	1.1	4.9	1.0	0.8	1.8

C1	Stream: 1 PRC for Signalled Lanes (%):	-39.1	Total Delay for Signalled Lanes (pcuHr):	88.40	Cycle Time (s): 60
C1	Stream: 2 PRC for Signalled Lanes (%):	-61.2	Total Delay for Signalled Lanes (pcuHr):	165.63	Cycle Time (s): 60
C1	Stream: 3 PRC for Signalled Lanes (%):	-53.1	Total Delay for Signalled Lanes (pcuHr):	258.88	Cycle Time (s): 60
C1	Stream: 4 PRC for Signalled Lanes (%):	-47.0	Total Delay for Signalled Lanes (pcuHr):	155.61	Cycle Time (s): 60
	PRC Over All Lanes (%):	-61.2	Total Delay Over All Lanes(pcuHr):	668.52	

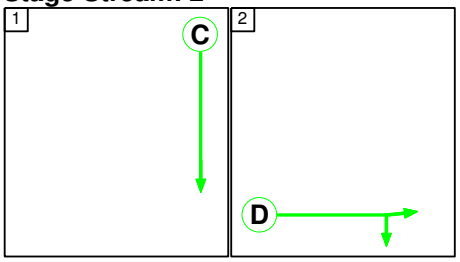
Scenario 3: '2031 D1 PM Peak' (FG2: '2031 D1 PM Peak', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

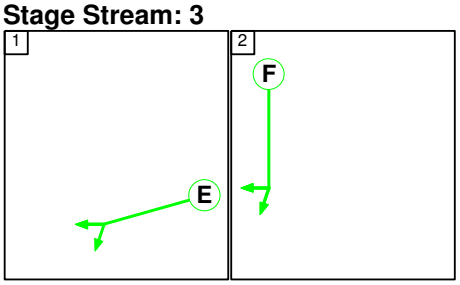
Stage Stream: 1



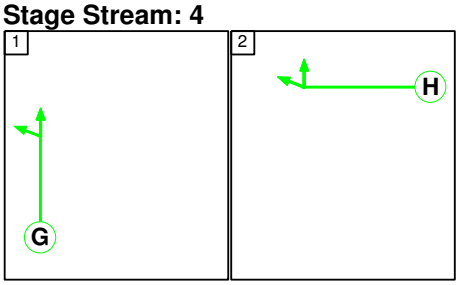
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	7	41
Change Point	0	13

Stage Stream: 2

Stage	1	2
Duration	32	16
Change Point	36	14

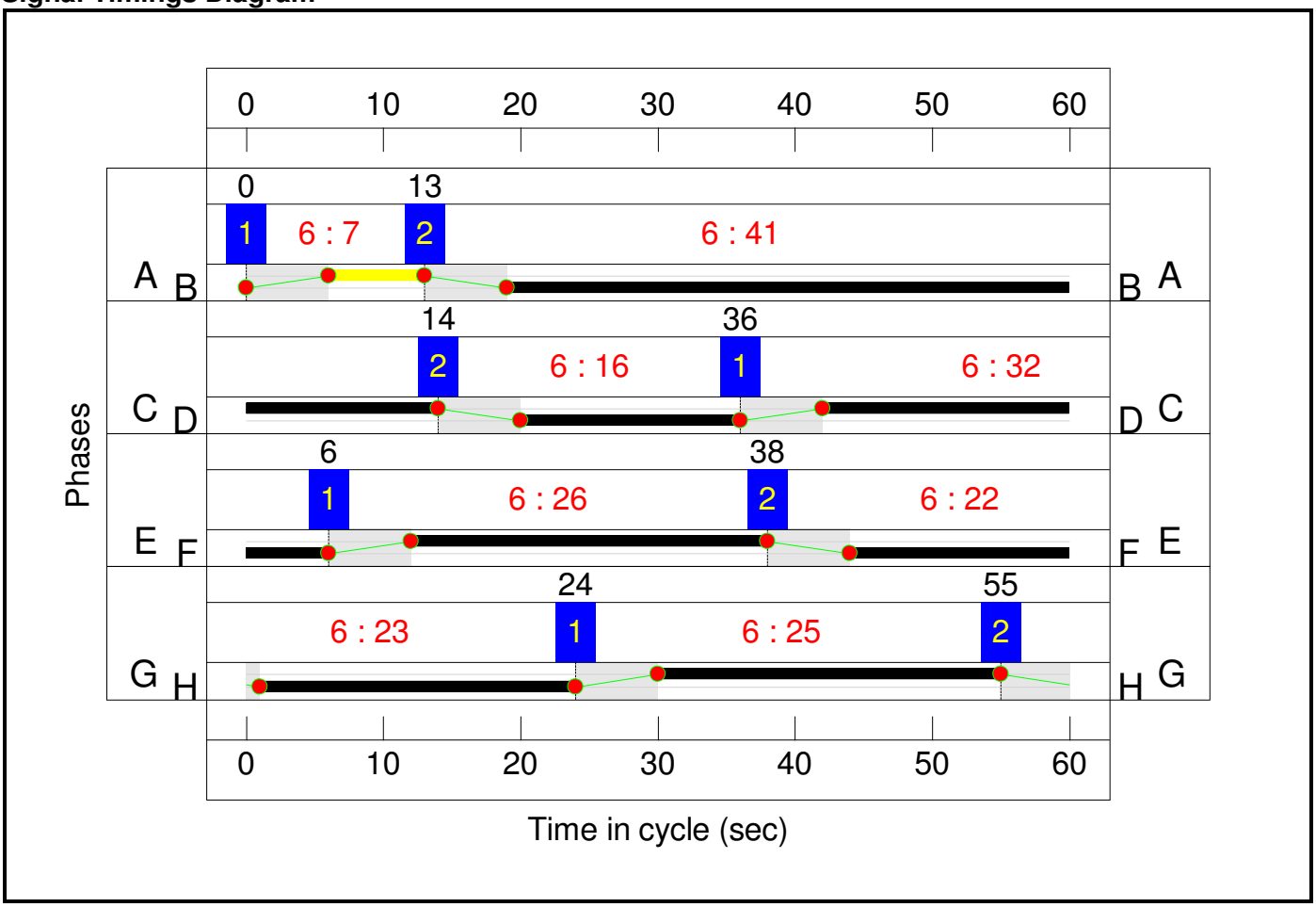
Stage Stream: 3

Stage	1	2
Duration	26	22
Change Point	6	38

Stage Stream: 4

Stage	1	2
Duration	25	23
Change Point	24	55

Signal Timings Diagram



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**	-	-		-	-	-	-	-	-	**92.2%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**92.2%**
1/2+1/1	Upton Valley Way Left	U	1	N/A	A		1	7	-	130	2105:1970	281+263	23.9 : 24.0%
1/3+1/4	Upton Valley Way Ahead	U	1	N/A	A		1	7	-	200	2105:1965	192+262	37.5 : 48.9%
3/1	Ahead	U	2	N/A	D		1	16	-	370	1900	538	68.7%
3/2+3/3	Ahead Right	U	2	N/A	D		1	16	-	386	1900:1900	493+55	70.4 : 70.4%
4/2+4/3	A5076 Upton Way Ahead	U	2	N/A	C		1	32	-	734	1965:1965	633+718	54.3 : 54.3%
6/1	Ahead	U	3	N/A	F		1	22	-	350	1900	728	48.1%
6/2+6/3	Ahead Right	U	3	N/A	F		1	22	-	423	1900:1900	579+232	52.1 : 52.1%
7/2+7/1	Danes Camp Way Left Ahead	U	3	N/A	E		1	26	-	1116	2105:1965	417+831	89.4 : 89.4%
7/3+7/4	Danes Camp Way Ahead	U	3	N/A	E		1	26	-	906	2105:1965	826+766	56.9 : 56.9%
9/1	Ahead	U	4	N/A	H		1	23	-	121	1900	760	15.9%
9/2	Ahead	U	4	N/A	H		1	23	-	373	1900	760	49.1%
9/3	Right	U	4	N/A	H		1	23	-	470	1900	760	61.8%
9/4	Right	U	4	N/A	H		1	23	-	436	1900	760	57.4%
10/2+10/1	A5123 Ahead Left	U	4	N/A	G		1	25	-	1469	2105:1965	742+852	92.2 : 92.2%
10/3	A5123 Ahead	U	4	N/A	G		1	25	-	556	1965	852	65.3%
11/1	Ahead	U	1	N/A	B		1	41	-	1039	1900	1330	78.1%
11/2	Ahead	U	1	N/A	B		1	41	-	1120	1900	1330	84.2%
11/3	Right	U	1	N/A	B		1	41	-	556	1900	1330	41.8%

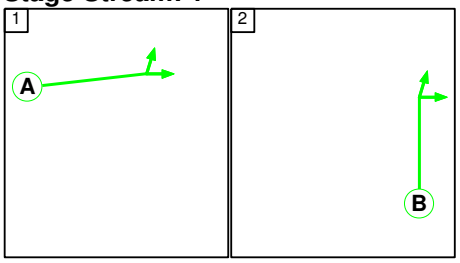
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**29.3**	**22.2**	**0.0**	**51.5**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**29.3**	**22.2**	**0.0**	**51.5**	**-**	**-**	**-**	**-**
1/2+1/1	130	130	-	-	-	0.8	0.2	-	1.0	27.7	1.0	0.2	1.1
1/3+1/4	200	200	-	-	-	1.3	0.4	-	1.7	30.9	2.0	0.4	2.3
3/1	370	370	-	-	-	1.3	1.1	-	2.4	23.0	2.8	1.1	3.9
3/2+3/3	386	386	-	-	-	1.3	1.2	-	2.4	22.7	3.2	1.2	4.4
4/2+4/3	734	734	-	-	-	1.5	0.6	-	2.1	10.4	3.6	0.6	4.2
6/1	350	350	-	-	-	0.7	0.5	-	1.1	11.7	1.7	0.5	2.2
6/2+6/3	423	423	-	-	-	0.9	0.5	-	1.4	12.2	6.2	0.5	6.8
7/2+7/1	1116	1116	-	-	-	4.2	4.0	-	8.1	26.2	10.9	4.0	14.9
7/3+7/4	906	906	-	-	-	2.9	0.7	-	3.6	14.3	5.5	0.7	6.1
9/1	121	121	-	-	-	0.3	0.1	-	0.4	11.5	1.8	0.1	1.9
9/2	373	373	-	-	-	0.9	0.5	-	1.4	13.5	1.9	0.5	2.3
9/3	470	470	-	-	-	1.7	0.8	-	2.5	19.1	3.1	0.8	3.9
9/4	436	436	-	-	-	1.3	0.7	-	2.0	16.2	2.5	0.7	3.2
10/2+10/1	1469	1469	-	-	-	6.2	5.4	-	11.6	28.5	12.2	5.4	17.6
10/3	556	556	-	-	-	2.1	0.9	-	3.0	19.5	7.3	0.9	8.2
11/1	1039	1039	-	-	-	1.0	1.8	-	2.7	9.5	7.8	1.8	9.6
11/2	1120	1120	-	-	-	0.9	2.6	-	3.5	11.3	7.3	2.6	9.9
11/3	556	556	-	-	-	0.0	0.4	-	0.4	2.5	0.2	0.4	0.6

C1	Stream: 1 PRC for Signalled Lanes (%):	6.9	Total Delay for Signalled Lanes (pcuHr):	9.35	Cycle Time (s): 60
C1	Stream: 2 PRC for Signalled Lanes (%):	27.9	Total Delay for Signalled Lanes (pcuHr):	6.92	Cycle Time (s): 60
C1	Stream: 3 PRC for Signalled Lanes (%):	0.7	Total Delay for Signalled Lanes (pcuHr):	14.29	Cycle Time (s): 60
C1	Stream: 4 PRC for Signalled Lanes (%):	-2.4	Total Delay for Signalled Lanes (pcuHr):	20.89	Cycle Time (s): 60
	PRC Over All Lanes (%):	-2.4	Total Delay Over All Lanes(pcuHr):	51.46	

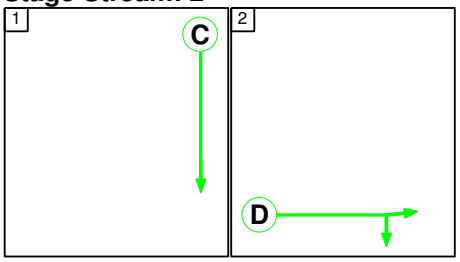
Scenario 4: '2031 J1d PM Peak' (FG4: '2031 J1d PM Peak', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

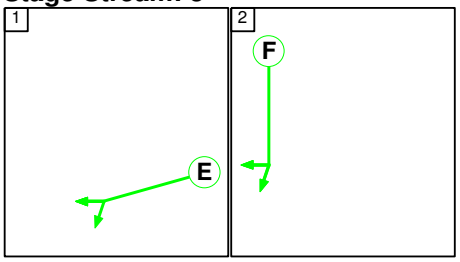
Stage Stream: 1



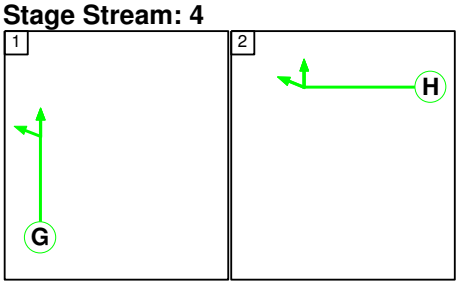
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	7	41
Change Point	45	58

Stage Stream: 2

Stage	1	2
Duration	23	25
Change Point	24	53

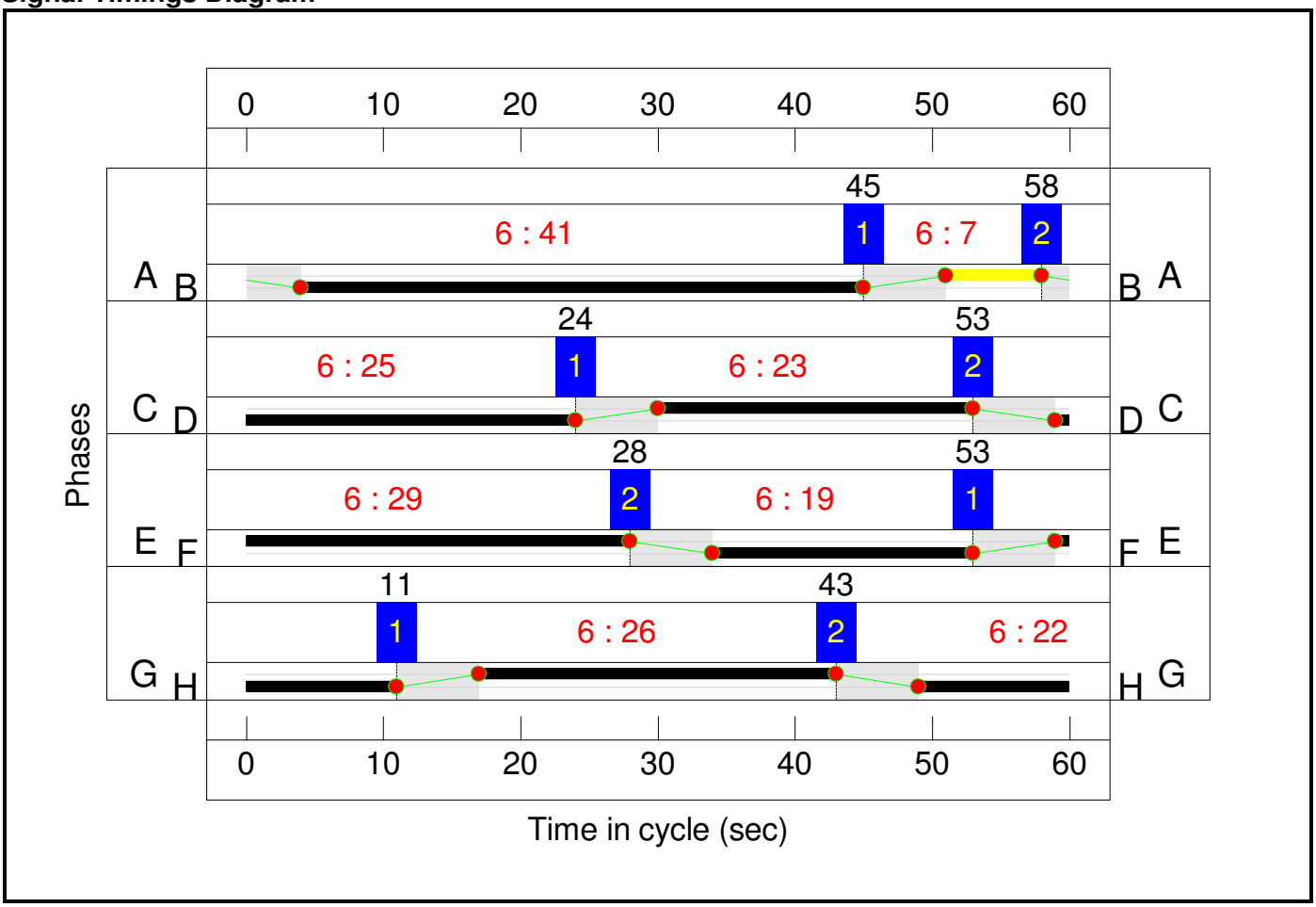
Stage Stream: 3

Stage	1	2
Duration	29	19
Change Point	53	28

Stage Stream: 4

Stage	1	2
Duration	26	22
Change Point	11	43

Signal Timings Diagram



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**	-	-		-	-	-	-	-	-	**92.8%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**92.8%**
1/2+1/1	Upton Valley Way Left	U	1	N/A	A		1	7	-	151	2105:1970	281+263	27.8 : 27.8%
1/3+1/4	Upton Valley Way Ahead	U	1	N/A	A		1	7	-	142	2105:1965	281+262	24.9 : 27.5%
3/1	Ahead	U	2	N/A	D		1	25	-	392	1900	823	47.6%
3/2+3/3	Ahead Right	U	2	N/A	D		1	25	-	395	1900:1900	764+65	47.7 : 47.7%
4/2+4/3	A5076 Upton Way Ahead	U	2	N/A	C		1	23	-	731	1965:1965	515+555	68.3 : 68.3%
6/1	Ahead	U	3	N/A	F		1	19	-	352	1900	633	55.6%
6/2+6/3	Ahead Right	U	3	N/A	F		1	19	-	410	1900:1900	502+225	56.3 : 56.3%
7/2+7/1	Danes Camp Way Left Ahead	U	3	N/A	E		1	29	-	1135	2105:1965	474+895	82.9 : 82.9%
7/3+7/4	Danes Camp Way Ahead	U	3	N/A	E		1	29	-	865	2105:1965	887+735	53.3 : 53.3%
9/1	Ahead	U	4	N/A	H		1	22	-	121	1900	728	16.6%
9/2	Ahead	U	4	N/A	H		1	22	-	400	1900	728	54.9%
9/3	Right	U	4	N/A	H		1	22	-	473	1900	728	64.9%
9/4	Right	U	4	N/A	H		1	22	-	392	1900	728	53.8%
10/2+10/1	A5123 Ahead Left	U	4	N/A	G		1	26	-	1587	2105:1965	853+884	89.8 : 92.8%
10/3	A5123 Ahead	U	4	N/A	G		1	26	-	645	1965	884	72.9%
11/1	Ahead	U	1	N/A	B		1	41	-	1014	1900	1330	76.2%
11/2	Ahead	U	1	N/A	B		1	41	-	1158	1900	1330	87.1%
11/3	Right	U	1	N/A	B		1	41	-	645	1900	1330	48.5%

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	**-**	**-**	**0**	**0**	**0**	**28.5**	**20.4**	**0.0**	**48.9**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**28.5**	**20.4**	**0.0**	**48.9**	**-**	**-**	**-**	**-**
1/2+1/1	151	151	-	-	-	1.0	0.2	-	1.2	28.0	1.2	0.2	1.4
1/3+1/4	142	142	-	-	-	0.9	0.2	-	1.1	27.9	1.1	0.2	1.2
3/1	392	392	-	-	-	1.1	0.5	-	1.5	13.9	3.1	0.5	3.6
3/2+3/3	395	395	-	-	-	1.0	0.5	-	1.5	13.5	3.0	0.5	3.5
4/2+4/3	731	731	-	-	-	2.7	1.1	-	3.8	18.6	4.6	1.1	5.7
6/1	352	352	-	-	-	0.3	0.6	-	0.9	9.6	0.9	0.6	1.6
6/2+6/3	410	410	-	-	-	0.6	0.6	-	1.2	10.6	6.3	0.6	6.9
7/2+7/1	1135	1135	-	-	-	3.5	2.4	-	5.9	18.6	9.9	2.4	12.3
7/3+7/4	865	865	-	-	-	2.3	0.6	-	2.9	11.9	5.0	0.6	5.6
9/1	121	121	-	-	-	0.2	0.1	-	0.3	10.3	1.8	0.1	1.9
9/2	400	400	-	-	-	1.1	0.6	-	1.7	15.7	2.4	0.6	3.0
9/3	473	473	-	-	-	1.6	0.9	-	2.6	19.5	3.1	0.9	4.1
9/4	392	392	-	-	-	1.1	0.6	-	1.7	15.5	2.3	0.6	2.9
10/2+10/1	1587	1587	-	-	-	6.6	5.0	-	11.6	26.2	12.8	5.0	17.7
10/3	645	645	-	-	-	2.4	1.3	-	3.8	21.0	8.8	1.3	10.1
11/1	1014	1014	-	-	-	0.9	1.6	-	2.5	8.9	8.3	1.6	9.9
11/2	1158	1158	-	-	-	0.9	3.2	-	4.2	12.9	3.5	3.2	6.7
11/3	645	645	-	-	-	0.2	0.5	-	0.7	3.7	0.5	0.5	1.0

C1	Stream: 1 PRC for Signalled Lanes (%):	3.4	Total Delay for Signalled Lanes (pcuHr):	9.60	Cycle Time (s): 60
C1	Stream: 2 PRC for Signalled Lanes (%):	31.7	Total Delay for Signalled Lanes (pcuHr):	6.76	Cycle Time (s): 60
C1	Stream: 3 PRC for Signalled Lanes (%):	8.6	Total Delay for Signalled Lanes (pcuHr):	10.87	Cycle Time (s): 60
C1	Stream: 4 PRC for Signalled Lanes (%):	-3.2	Total Delay for Signalled Lanes (pcuHr):	21.65	Cycle Time (s): 60
	PRC Over All Lanes (%):	-3.2	Total Delay Over All Lanes(pcuHr):	48.88	

APPENDIX C

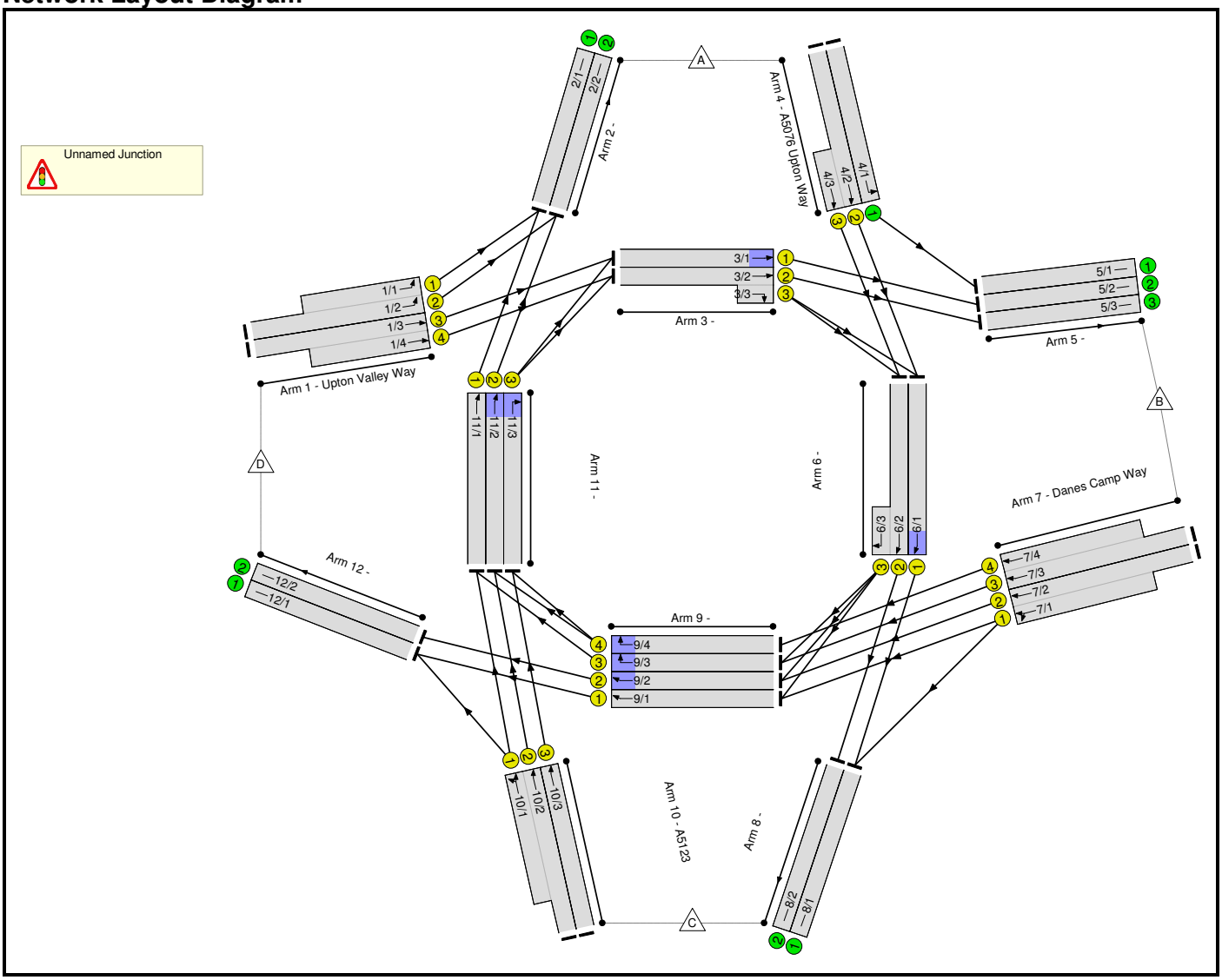
A5123/A5076 DANES CAMP WAY/UPTON VALLEY WAY GYRATORY SENSITIVITY LINSIG MODEL

Full Input Data And Results

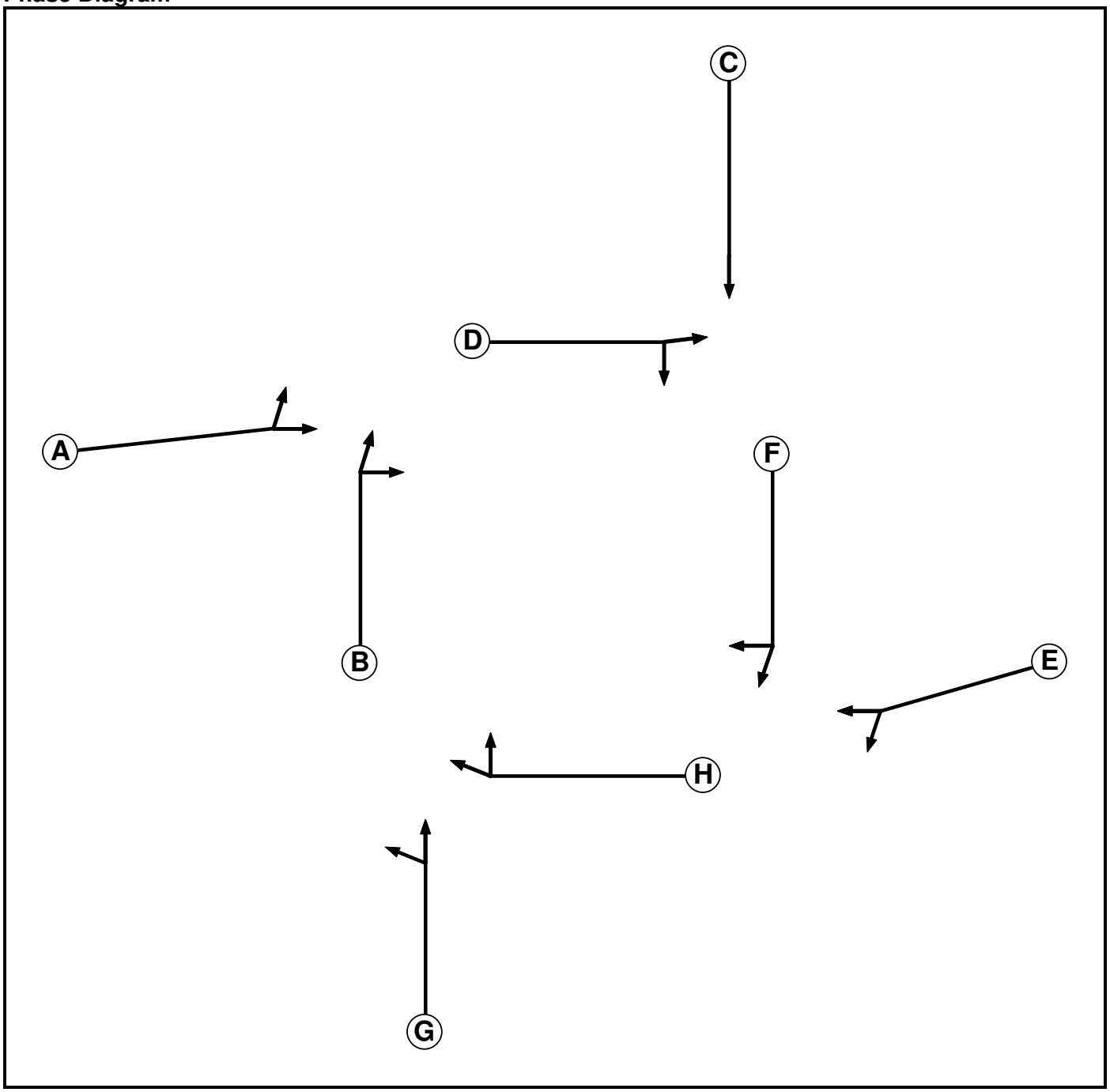
User and Project Details

Project:	**Northampton Gateway SRFI**
Title:	**A5076 Danes Camp Way/A5123 Sensitivity Test**
Location:	
File name:	180320 A5123_A5076 Base Model sensitivity.lsg3x
Author:	Mark Higgins
Company:	ADC Infrastructure
Address:	Western House
Notes:	Evening peak hour senitivity test as per flow adjustmnet in Technical Note 10A

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Traffic	2		7	7
D	Traffic	2		7	7
E	Traffic	3		7	7
F	Traffic	3		7	7
G	Traffic	4		7	7
H	Traffic	4		7	7

Phase Intergreens Matrix

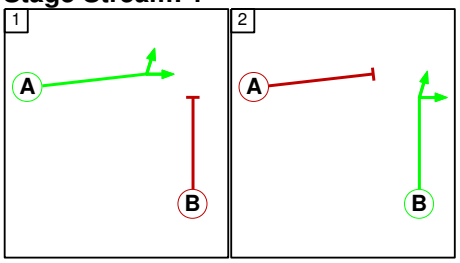
		Starting Phase							
		A	B	C	D	E	F	G	H
Terminating Phase	A		6	-	-	-	-	-	-
	B	6		-	-	-	-	-	-
	C	-	-		6	-	-	-	-
	D	-	-	6		-	-	-	-
	E	-	-	-	-		6	-	-
	F	-	-	-	-	6		-	-
	G	-	-	-	-	-	-		6
	H	-	-	-	-	-	-	6	

Phases in Stage

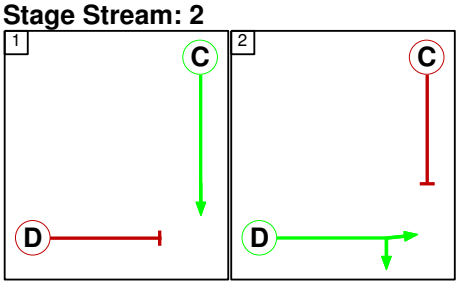
Stream	Stage No.	Phases in Stage
1	1	A
1	2	B
2	1	C
2	2	D
3	1	E
3	2	F
4	1	G
4	2	H

Stage Diagram

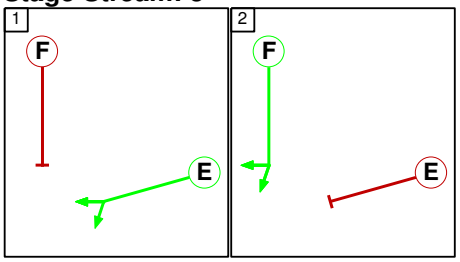
Stage Stream: 1



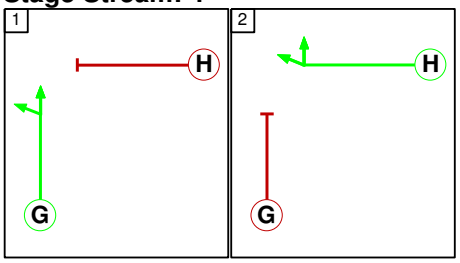
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Prohibited Stage Change

Stage Stream: 1

	To Stage		
		1	2
From Stage	1		6
	2	6	

Stage Stream: 2

	To Stage		
		1	2
From Stage	1		6
	2	6	

Stage Stream: 3

	To Stage		
		1	2
From Stage	1		6
	2	6	

Stage Stream: 4

	To Stage		
		1	2
From Stage	1		6
	2	6	

Lane Input Data

Junction: Unnamed Junction												
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 (Upton Valley Way)	U	A	2	3	10.0	Geom	-	3.55	0.00	Y	Arm 2 Left	Inf
1/2 (Upton Valley Way)	U	A	2	3	60.0	Geom	-	3.50	0.00	N	Arm 2 Left	Inf
1/3 (Upton Valley Way)	U	A	2	3	60.0	Geom	-	3.50	0.00	N	Arm 3 Ahead	Inf
1/4 (Upton Valley Way)	U	A	2	3	10.0	Geom	-	3.50	0.00	Y	Arm 3 Ahead	Inf
2/1	U		2	3	5.0	Inf	-	-	-	-	-	-
2/2	U		2	3	5.0	Inf	-	-	-	-	-	-
3/1	U	D	2	3	10.4	User	1900	-	-	-	-	-
3/2	U	D	2	3	10.4	User	1900	-	-	-	-	-
3/3	U	D	2	3	3.0	User	1900	-	-	-	-	-
4/1 (A5076 Upton Way)	U		2	3	60.0	Inf	-	-	-	-	-	-
4/2 (A5076 Upton Way)	U	C	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 6 Ahead	Inf
4/3 (A5076 Upton Way)	U	C	2	3	5.0	Geom	-	3.50	0.00	Y	Arm 6 Ahead	Inf
5/1	U		2	3	5.0	Inf	-	-	-	-	-	-
5/2	U		2	3	5.0	Inf	-	-	-	-	-	-
5/3	U		2	3	5.0	Inf	-	-	-	-	-	-
6/1	U	F	2	3	7.8	User	1900	-	-	-	-	-
6/2	U	F	2	3	7.8	User	1900	-	-	-	-	-
6/3	U	F	2	3	4.0	User	1900	-	-	-	-	-
7/1 (Danes Camp Way)	U	E	2	3	12.0	Geom	-	3.50	0.00	Y	Arm 8 Left	Inf
											Arm 9 Ahead	Inf
7/2 (Danes Camp Way)	U	E	2	3	60.0	Geom	-	3.50	0.00	N	Arm 9 Ahead	Inf
7/3 (Danes Camp Way)	U	E	2	3	60.0	Geom	-	3.50	0.00	N	Arm 9 Ahead	Inf
7/4 (Danes Camp Way)	U	E	2	3	12.0	Geom	-	3.50	0.00	Y	Arm 9 Ahead	Inf
8/1	U		2	3	5.0	Inf	-	-	-	-	-	-
8/2	U		2	3	5.0	Inf	-	-	-	-	-	-

9/1	U	H	2	3	9.6	User	1900	-	-	-	-	-
9/2	U	H	2	3	9.6	User	1900	-	-	-	-	-
9/3	U	H	2	3	9.6	User	1900	-	-	-	-	-
9/4	U	H	2	3	9.6	User	1900	-	-	-	-	-
10/1 (A5123)	U	G	2	3	18.0	Geom	-	3.50	0.00	Y	Arm 11 Ahead Arm 12 Left	Inf Inf
10/2 (A5123)	U	G	2	3	60.0	Geom	-	3.50	0.00	N	Arm 11 Ahead	Inf
10/3 (A5123)	U	G	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 11 Ahead	Inf
11/1	U	B	2	3	12.2	User	1900	-	-	-	-	-
11/2	U	B	2	3	12.2	User	1900	-	-	-	-	-
11/3	U	B	2	3	12.2	User	1900	-	-	-	-	-
12/1	U		2	3	5.0	Inf	-	-	-	-	-	-
12/2	U		2	3	5.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
2: '2031 D1 PM Peak - sensitivity'	17:00	18:00	01:00	
4: '2031 J1d PM Peak - sensitivity'	17:00	18:00	01:00	

Scenario 1: '2031 D1 PM Peak' (FG2: '2031 D1 PM Peak - sensitivity', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	1490	619	115	2224
	B	1307	0	743	373	2423
	C	1110	820	0	95	2025
	D	130	161	33	6	330
	Tot.	2547	2471	1395	589	7002

Traffic Lane Flows

Lane	Scenario 1: 2031 D1 PM Peak
Junction: Unnamed Junction	
1/1 (short)	63
1/2 (with short)	130(In) 67(Out)
1/3 (with short)	200(In) 82(Out)
1/4 (short)	118
2/1	1227
2/2	1320
3/1	507
3/2 (with short)	513(In) 474(Out)
3/3 (short)	39
4/1	1490
4/2 (with short)	734(In) 358(Out)
4/3 (short)	376
5/1	1490
5/2	507
5/3	474
6/1	358
6/2 (with short)	415(In) 294(Out)
6/3 (short)	121
7/1 (short)	743
7/2 (with short)	1116(In) 373(Out)
7/3 (with short)	1307(In) 676(Out)
7/4 (short)	631
8/1	1101
8/2	294
9/1	121
9/2	373
9/3	676
9/4	631
10/1 (short)	583
10/2 (with short)	1205(In) 622(Out)
10/3	820
11/1	1164

11/2	1253
11/3	820
12/1	216
12/2	373

Lane Saturation Flows

Junction: Unnamed Junction								
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 (Upton Valley Way)	3.55	0.00	Y	Arm 2 Left	Inf	100.0 %	1970	1970
1/2 (Upton Valley Way)	3.50	0.00	N	Arm 2 Left	Inf	100.0 %	2105	2105
1/3 (Upton Valley Way)	3.50	0.00	N	Arm 3 Ahead	Inf	100.0 %	2105	2105
1/4 (Upton Valley Way)	3.50	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1965	1965
2/1	Infinite Saturation Flow						Inf	Inf
2/2	Infinite Saturation Flow						Inf	Inf
3/1	This lane uses a directly entered Saturation Flow						1900	1900
3/2	This lane uses a directly entered Saturation Flow						1900	1900
3/3	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (A5076 Upton Way Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (A5076 Upton Way)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
4/3 (A5076 Upton Way)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
5/3	Infinite Saturation Flow						Inf	Inf
6/1	This lane uses a directly entered Saturation Flow						1900	1900
6/2	This lane uses a directly entered Saturation Flow						1900	1900
6/3	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (Danes Camp Way)	3.50	0.00	Y	Arm 8 Left	Inf	100.0 %	1965	1965
				Arm 9 Ahead	Inf	0.0 %		
7/2 (Danes Camp Way)	3.50	0.00	N	Arm 9 Ahead	Inf	100.0 %	2105	2105
7/3 (Danes Camp Way)	3.50	0.00	N	Arm 9 Ahead	Inf	100.0 %	2105	2105
7/4 (Danes Camp Way)	3.50	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1965	1965
8/1	Infinite Saturation Flow						Inf	Inf
8/2	Infinite Saturation Flow						Inf	Inf
9/1	This lane uses a directly entered Saturation Flow						1900	1900
9/2	This lane uses a directly entered Saturation Flow						1900	1900
9/3	This lane uses a directly entered Saturation Flow						1900	1900
9/4	This lane uses a directly entered Saturation Flow						1900	1900
10/1 (A5123)	3.50	0.00	Y	Arm 11 Ahead	Inf	83.7 %	1965	1965
				Arm 12 Left	Inf	16.3 %		
10/2 (A5123)	3.50	0.00	N	Arm 11 Ahead	Inf	100.0 %	2105	2105

10/3 (A5123)	3.50	0.00	Y	Arm 11 Ahead	Inf	100.0 %	1965	1965
11/1	This lane uses a directly entered Saturation Flow						1900	1900
11/2	This lane uses a directly entered Saturation Flow						1900	1900
11/3	This lane uses a directly entered Saturation Flow						1900	1900
12/1	Infinite Saturation Flow						Inf	Inf
12/2	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2031 J1d PM Peak' (FG4: '2031 J1d PM Peak - sensitivity', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	1494	608	123	2225
	B	1266	0	741	394	2401
	C	1224	903	0	105	2232
	D	151	111	27	4	293
	Tot.	2641	2508	1376	626	7151

Traffic Lane Flows

Lane	Scenario 2: 2031 J1d PM Peak
Junction: Unnamed Junction	
1/1 (short)	73
1/2 (with short)	151(In) 78(Out)
1/3 (with short)	142(In) 58(Out)
1/4 (short)	84
2/1	1287
2/2	1354
3/1	527
3/2 (with short)	518(In) 487(Out)
3/3 (short)	31
4/1	1494
4/2 (with short)	731(In) 357(Out)
4/3 (short)	374
5/1	1494
5/2	527
5/3	487
6/1	357
6/2 (with short)	405(In) 278(Out)
6/3 (short)	127
7/1 (short)	741
7/2 (with short)	1135(In) 394(Out)
7/3 (with short)	1266(In) 655(Out)
7/4 (short)	611
8/1	1098
8/2	278
9/1	124
9/2	397
9/3	655
9/4	611
10/1 (short)	664
10/2 (with short)	1329(In) 665(Out)
10/3	903
11/1	1214

11/2	1276
11/3	903
12/1	229
12/2	397

Lane Saturation Flows

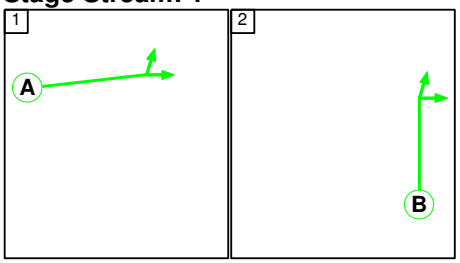
Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Upton Valley Way)	3.55	0.00	Y	Arm 2 Left	Inf	100.0 %	1970	1970
1/2 (Upton Valley Way)	3.50	0.00	N	Arm 2 Left	Inf	100.0 %	2105	2105
1/3 (Upton Valley Way)	3.50	0.00	N	Arm 3 Ahead	Inf	100.0 %	2105	2105
1/4 (Upton Valley Way)	3.50	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1965	1965
2/1	Infinite Saturation Flow						Inf	Inf
2/2	Infinite Saturation Flow						Inf	Inf
3/1	This lane uses a directly entered Saturation Flow						1900	1900
3/2	This lane uses a directly entered Saturation Flow						1900	1900
3/3	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (A5076 Upton Way Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (A5076 Upton Way)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
4/3 (A5076 Upton Way)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
5/3	Infinite Saturation Flow						Inf	Inf
6/1	This lane uses a directly entered Saturation Flow						1900	1900
6/2	This lane uses a directly entered Saturation Flow						1900	1900
6/3	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (Danes Camp Way)	3.50	0.00	Y	Arm 8 Left	Inf	100.0 %	1965	1965
				Arm 9 Ahead	Inf	0.0 %		
7/2 (Danes Camp Way)	3.50	0.00	N	Arm 9 Ahead	Inf	100.0 %	2105	2105
7/3 (Danes Camp Way)	3.50	0.00	N	Arm 9 Ahead	Inf	100.0 %	2105	2105
7/4 (Danes Camp Way)	3.50	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1965	1965
8/1	Infinite Saturation Flow						Inf	Inf
8/2	Infinite Saturation Flow						Inf	Inf
9/1	This lane uses a directly entered Saturation Flow						1900	1900
9/2	This lane uses a directly entered Saturation Flow						1900	1900
9/3	This lane uses a directly entered Saturation Flow						1900	1900
9/4	This lane uses a directly entered Saturation Flow						1900	1900
10/1 (A5123)	3.50	0.00	Y	Arm 11 Ahead	Inf	84.2 %	1965	1965
				Arm 12 Left	Inf	15.8 %		
10/2 (A5123)	3.50	0.00	N	Arm 11 Ahead	Inf	100.0 %	2105	2105

10/3 (A5123)	3.50	0.00	Y	Arm 11 Ahead	Inf	100.0 %	1965	1965
11/1	This lane uses a directly entered Saturation Flow						1900	1900
11/2	This lane uses a directly entered Saturation Flow						1900	1900
11/3	This lane uses a directly entered Saturation Flow						1900	1900
12/1	Infinite Saturation Flow						Inf	Inf
12/2	Infinite Saturation Flow						Inf	Inf

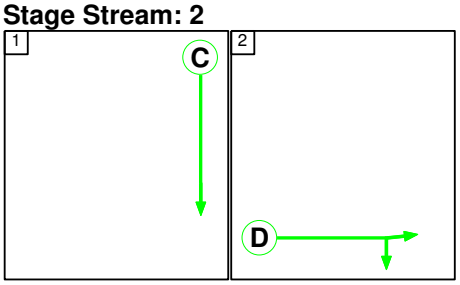
Scenario 1: '2031 D1 PM Peak' (FG2: '2031 D1 PM Peak - sensitivity', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

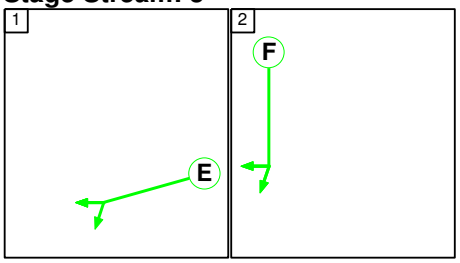
Stage Stream: 1



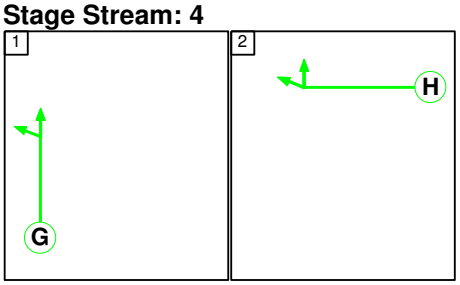
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	7	41
Change Point	0	13

Stage Stream: 2

Stage	1	2
Duration	14	34
Change Point	37	57

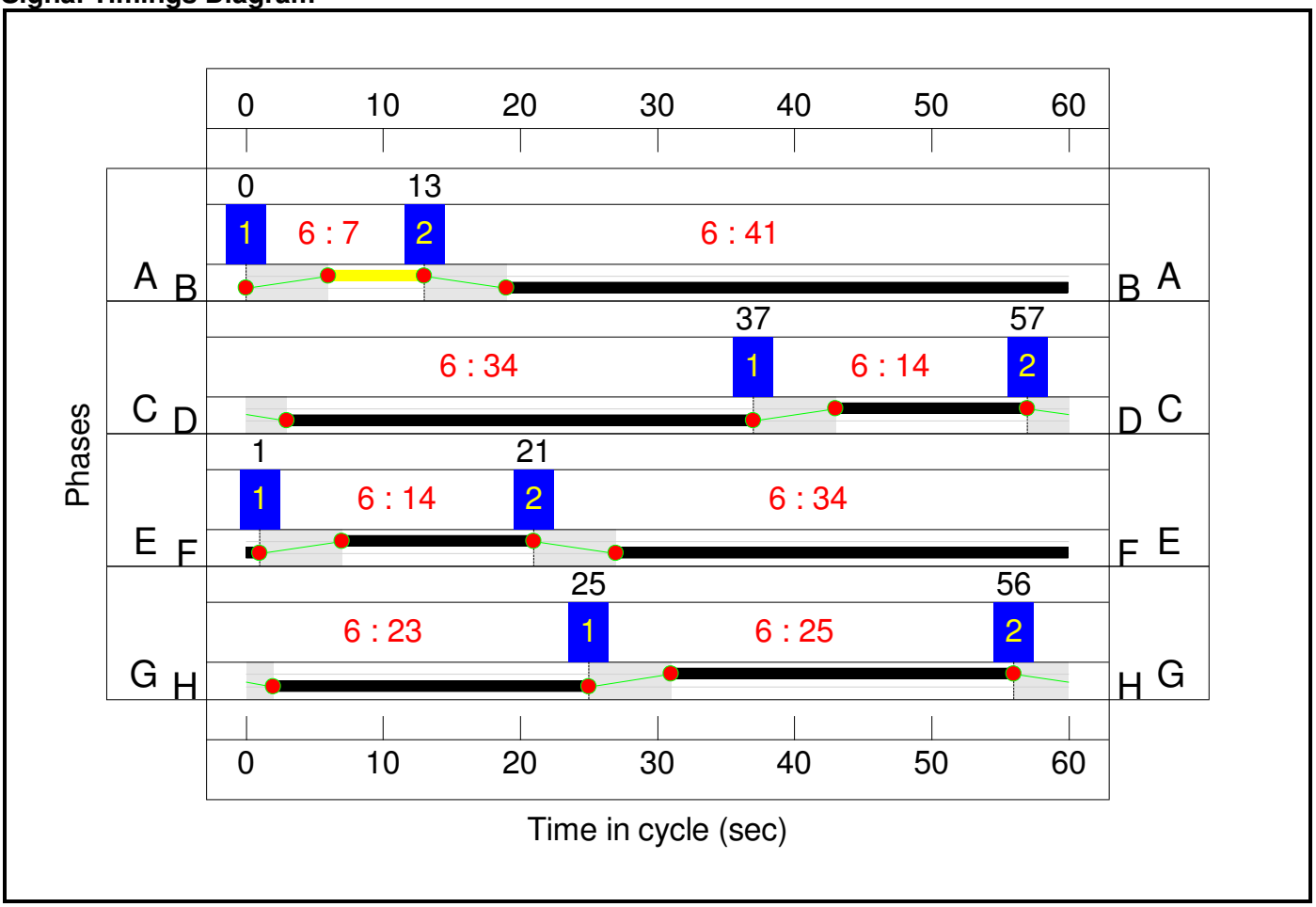
Stage Stream: 3

Stage	1	2
Duration	14	34
Change Point	1	21

Stage Stream: 4

Stage	1	2
Duration	25	23
Change Point	25	56

Signal Timings Diagram



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: A5076 Danes Camp Way/A5123 Sensitivity Test	-	-	**N/A**	-	-		-	-	-	-	-	-	**151.2%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**151.2%**
1/2+1/1	Upton Valley Way Left	U	1	N/A	A		1	7	-	130	2105:1970	281+263	23.9 : 24.0%
1/3+1/4	Upton Valley Way Ahead	U	1	N/A	A		1	7	-	200	2105:1965	281+262	29.2 : 45.0%
3/1	Ahead	U	2	N/A	D		1	34	-	507	1900	1108	45.7%
3/2+3/3	Ahead Right	U	2	N/A	D		1	34	-	513	1900:1900	1029+85	46.1 : 46.1%
4/2+4/3	A5076 Upton Way Ahead	U	2	N/A	C		1	14	-	734	1965:1965	381+401	93.8 : 93.8%
6/1	Ahead	U	3	N/A	F		1	34	-	358	1900	1108	32.3%
6/2+6/3	Ahead Right	U	3	N/A	F		1	34	-	415	1900:1900	846+348	34.8 : 34.8%
7/2+7/1	Danes Camp Way Left Ahead	U	3	N/A	E		1	14	-	1116	2105:1965	247+491	151.2 : 151.2%
7/3+7/4	Danes Camp Way Ahead	U	3	N/A	E		1	14	-	1307	2105:1965	526+491	128.5 : 128.4%
9/1	Ahead	U	4	N/A	H		1	23	-	121	1900	760	15.9%
9/2	Ahead	U	4	N/A	H		1	23	-	373	1900	760	32.4%
9/3	Right	U	4	N/A	H		1	23	-	676	1900	760	69.2%
9/4	Right	U	4	N/A	H		1	23	-	631	1900	760	64.6%
10/2+10/1	A5123 Ahead Left	U	4	N/A	G		1	25	-	1205	2105:1965	912+852	68.2 : 68.5%
10/3	A5123 Ahead	U	4	N/A	G		1	25	-	820	1965	852	96.3%
11/1	Ahead	U	1	N/A	B		1	41	-	1164	1900	1330	76.3%
11/2	Ahead	U	1	N/A	B		1	41	-	1253	1900	1330	83.7%
11/3	Right	U	1	N/A	B		1	41	-	820	1900	1330	61.7%

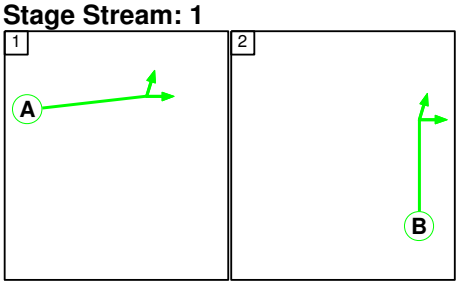
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: A5076 Danes Camp Way/A5123 Sensitivity Test	**-**	**-**	**0**	**0**	**0**	**52.7**	**362.2**	**0.0**	**414.9**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**52.7**	**362.2**	**0.0**	**414.9**	**-**	**-**	**-**	**-**
1/2+1/1	130	130	-	-	-	0.8	0.2	-	1.0	27.7	1.0	0.2	1.1
1/3+1/4	200	200	-	-	-	1.3	0.3	-	1.6	29.0	1.8	0.3	2.1
3/1	507	507	-	-	-	1.3	0.4	-	1.7	12.3	3.6	0.4	4.0
3/2+3/3	513	513	-	-	-	1.2	0.4	-	1.6	11.4	5.2	0.4	5.6
4/2+4/3	734	734	-	-	-	4.3	6.1	-	10.3	50.7	6.9	6.1	12.9
6/1	358	358	-	-	-	0.0	0.2	-	0.2	2.5	0.1	0.2	0.4
6/2+6/3	415	415	-	-	-	0.1	0.3	-	0.4	3.5	9.3	0.3	9.5
7/2+7/1	1116	738	-	-	-	15.8	190.5	-	206.3	665.6	22.0	190.5	212.5
7/3+7/4	1307	1017	-	-	-	16.5	147.0	-	163.5	450.4	18.7	147.0	165.6
9/1	121	121	-	-	-	0.3	0.1	-	0.4	10.9	2.0	0.1	2.1
9/2	246	246	-	-	-	0.0	0.2	-	0.3	3.9	0.4	0.2	0.6
9/3	526	526	-	-	-	0.6	1.1	-	1.7	12.0	0.9	1.1	2.0
9/4	491	491	-	-	-	0.2	0.9	-	1.1	8.1	0.3	0.9	1.2
10/2+10/1	1205	1205	-	-	-	4.6	1.1	-	5.7	16.9	8.3	1.1	9.4
10/3	820	820	-	-	-	3.8	8.5	-	12.2	53.7	13.2	8.5	21.7
11/1	1014	1014	-	-	-	0.9	1.6	-	2.4	8.7	8.9	1.6	10.5
11/2	1113	1113	-	-	-	0.7	2.5	-	3.2	10.5	8.4	2.5	10.9
11/3	820	820	-	-	-	0.2	0.8	-	1.0	4.6	0.5	0.8	1.3

C1	Stream: 1 PRC for Signalled Lanes (%):	7.5	Total Delay for Signalled Lanes (pcuHr):	9.33	Cycle Time (s): 60
C1	Stream: 2 PRC for Signalled Lanes (%):	-4.3	Total Delay for Signalled Lanes (pcuHr):	13.69	Cycle Time (s): 60
C1	Stream: 3 PRC for Signalled Lanes (%):	-68.1	Total Delay for Signalled Lanes (pcuHr):	370.50	Cycle Time (s): 60
C1	Stream: 4 PRC for Signalled Lanes (%):	-7.0	Total Delay for Signalled Lanes (pcuHr):	21.37	Cycle Time (s): 60
	PRC Over All Lanes (%):	-68.1	Total Delay Over All Lanes(pcuHr):	414.90	

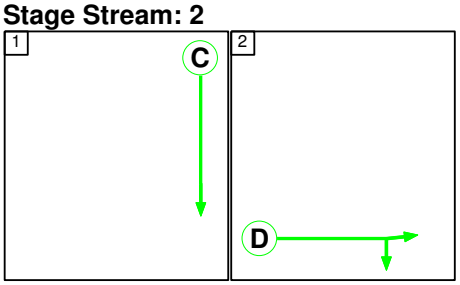
Scenario 2: '2031 J1d PM Peak' (FG4: '2031 J1d PM Peak - sensitivity', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

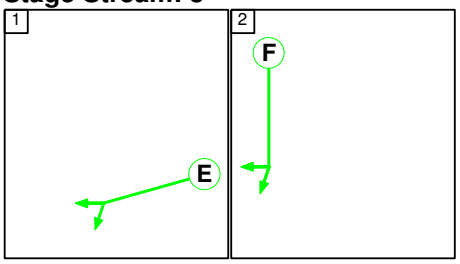
Stage Stream: 1



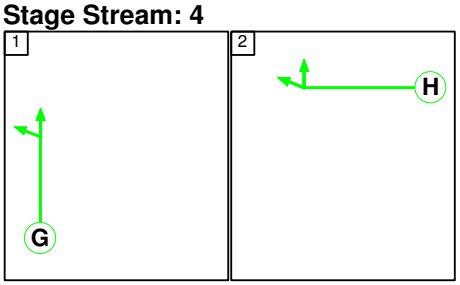
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	7	41
Change Point	0	13

Stage Stream: 2

Stage	1	2
Duration	14	34
Change Point	37	57

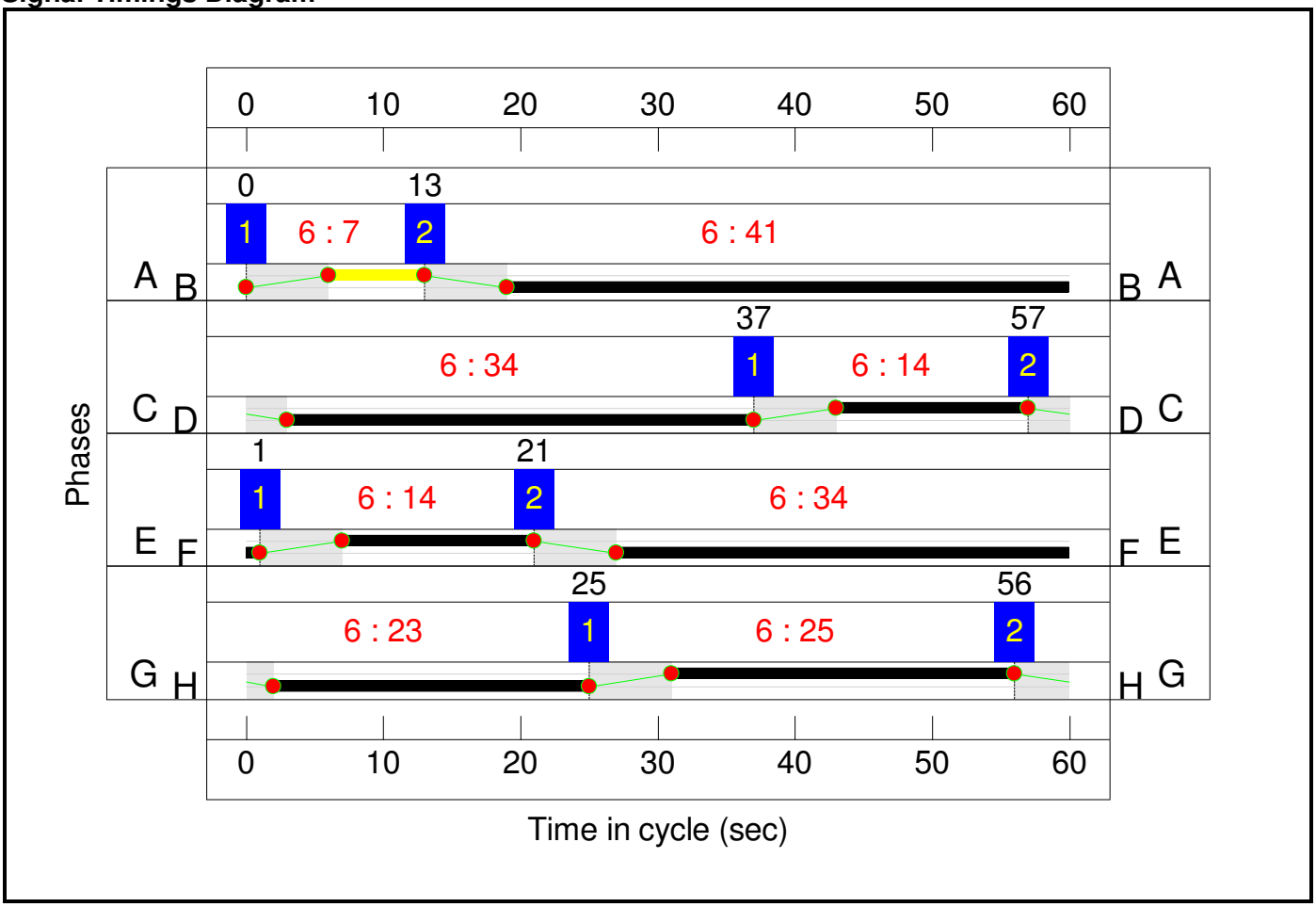
Stage Stream: 3

Stage	1	2
Duration	14	34
Change Point	1	21

Stage Stream: 4

Stage	1	2
Duration	25	23
Change Point	25	56

Signal Timings Diagram



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: A5076 Danes Camp Way/A5123 Sensitivity Test	-	-	**N/A**	-	-		-	-	-	-	-	-	**150.8%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**150.8%**
1/2+1/1	Upton Valley Way Left	U	1	N/A	A		1	7	-	151	2105:1970	281+263	27.8 : 27.8%
1/3+1/4	Upton Valley Way Ahead	U	1	N/A	A		1	7	-	142	2105:1965	281+262	20.7 : 32.1%
3/1	Ahead	U	2	N/A	D		1	34	-	527	1900	1108	45.1%
3/2+3/3	Ahead Right	U	2	N/A	D		1	34	-	518	1900:1900	1043+66	44.3 : 46.7%
4/2+4/3	A5076 Upton Way Ahead	U	2	N/A	C		1	14	-	731	1965:1965	382+401	93.4 : 93.4%
6/1	Ahead	U	3	N/A	F		1	34	-	357	1900	1108	32.2%
6/2+6/3	Ahead Right	U	3	N/A	F		1	34	-	405	1900:1900	827+378	33.6 : 33.6%
7/2+7/1	Danes Camp Way Left Ahead	U	3	N/A	E		1	14	-	1135	2105:1965	261+491	150.8 : 150.8%
7/3+7/4	Danes Camp Way Ahead	U	3	N/A	E		1	14	-	1266	2105:1965	526+491	124.5 : 124.4%
9/1	Ahead	U	4	N/A	H		1	23	-	124	1900	760	16.3%
9/2	Ahead	U	4	N/A	H		1	23	-	397	1900	760	34.8%
9/3	Right	U	4	N/A	H		1	23	-	655	1900	760	69.2%
9/4	Right	U	4	N/A	H		1	23	-	611	1900	760	64.6%
10/2+10/1	A5123 Ahead Left	U	4	N/A	G		1	25	-	1329	2105:1965	912+852	72.9 : 78.0%
10/3	A5123 Ahead	U	4	N/A	G		1	25	-	903	1965	852	106.0%
11/1	Ahead	U	1	N/A	B		1	41	-	1214	1900	1330	81.6%
11/2	Ahead	U	1	N/A	B		1	41	-	1276	1900	1330	86.9%
11/3	Right	U	1	N/A	B		1	41	-	903	1900	1330	64.0%

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: A5076 Danes Camp Way/A5123 Sensitivity Test	**-**	**-**	**0**	**0**	**0**	**54.2**	**369.8**	**0.0**	**424.0**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**54.2**	**369.8**	**0.0**	**424.0**	**-**	**-**	**-**	**-**
1/2+1/1	151	151	-	-	-	1.0	0.2	-	1.2	28.0	1.2	0.2	1.4
1/3+1/4	142	142	-	-	-	0.9	0.2	-	1.1	27.9	1.3	0.2	1.4
3/1	500	500	-	-	-	1.3	0.4	-	1.7	12.4	3.6	0.4	4.0
3/2+3/3	493	493	-	-	-	1.2	0.4	-	1.6	11.7	4.9	0.4	5.3
4/2+4/3	731	731	-	-	-	4.2	5.8	-	10.0	49.2	6.8	5.8	12.6
6/1	357	357	-	-	-	0.0	0.2	-	0.2	2.5	0.1	0.2	0.4
6/2+6/3	405	405	-	-	-	0.1	0.3	-	0.4	3.3	9.3	0.3	9.5
7/2+7/1	1135	752	-	-	-	16.0	192.7	-	208.7	662.0	22.1	192.7	214.8
7/3+7/4	1266	1017	-	-	-	15.1	126.7	-	141.8	403.3	17.3	126.7	144.1
9/1	124	124	-	-	-	0.2	0.1	-	0.3	9.9	2.0	0.1	2.1
9/2	264	264	-	-	-	0.1	0.3	-	0.3	4.4	0.4	0.3	0.7
9/3	526	526	-	-	-	0.6	1.1	-	1.7	12.0	0.9	1.1	2.0
9/4	491	491	-	-	-	0.2	0.9	-	1.1	8.1	0.3	0.9	1.2
10/2+10/1	1329	1329	-	-	-	5.3	1.5	-	6.8	18.4	9.4	1.5	10.9
10/3	903	851	-	-	-	5.9	32.7	-	38.6	153.9	16.5	32.7	49.2
11/1	1085	1085	-	-	-	0.9	2.2	-	3.0	10.1	8.9	2.2	11.1
11/2	1156	1156	-	-	-	0.8	3.2	-	4.0	12.3	8.4	3.2	11.6
11/3	851	851	-	-	-	0.4	0.9	-	1.3	5.5	1.0	0.9	1.9

C1	Stream: 1 PRC for Signalled Lanes (%):	3.5	Total Delay for Signalled Lanes (pcuHr):	10.58	Cycle Time (s): 60
C1	Stream: 2 PRC for Signalled Lanes (%):	-3.8	Total Delay for Signalled Lanes (pcuHr):	13.33	Cycle Time (s): 60
C1	Stream: 3 PRC for Signalled Lanes (%):	-67.6	Total Delay for Signalled Lanes (pcuHr):	351.15	Cycle Time (s): 60
C1	Stream: 4 PRC for Signalled Lanes (%):	-17.8	Total Delay for Signalled Lanes (pcuHr):	48.92	Cycle Time (s): 60
	PRC Over All Lanes (%):	-67.6	Total Delay Over All Lanes(pcuHr):	423.98	

APPENDIX D

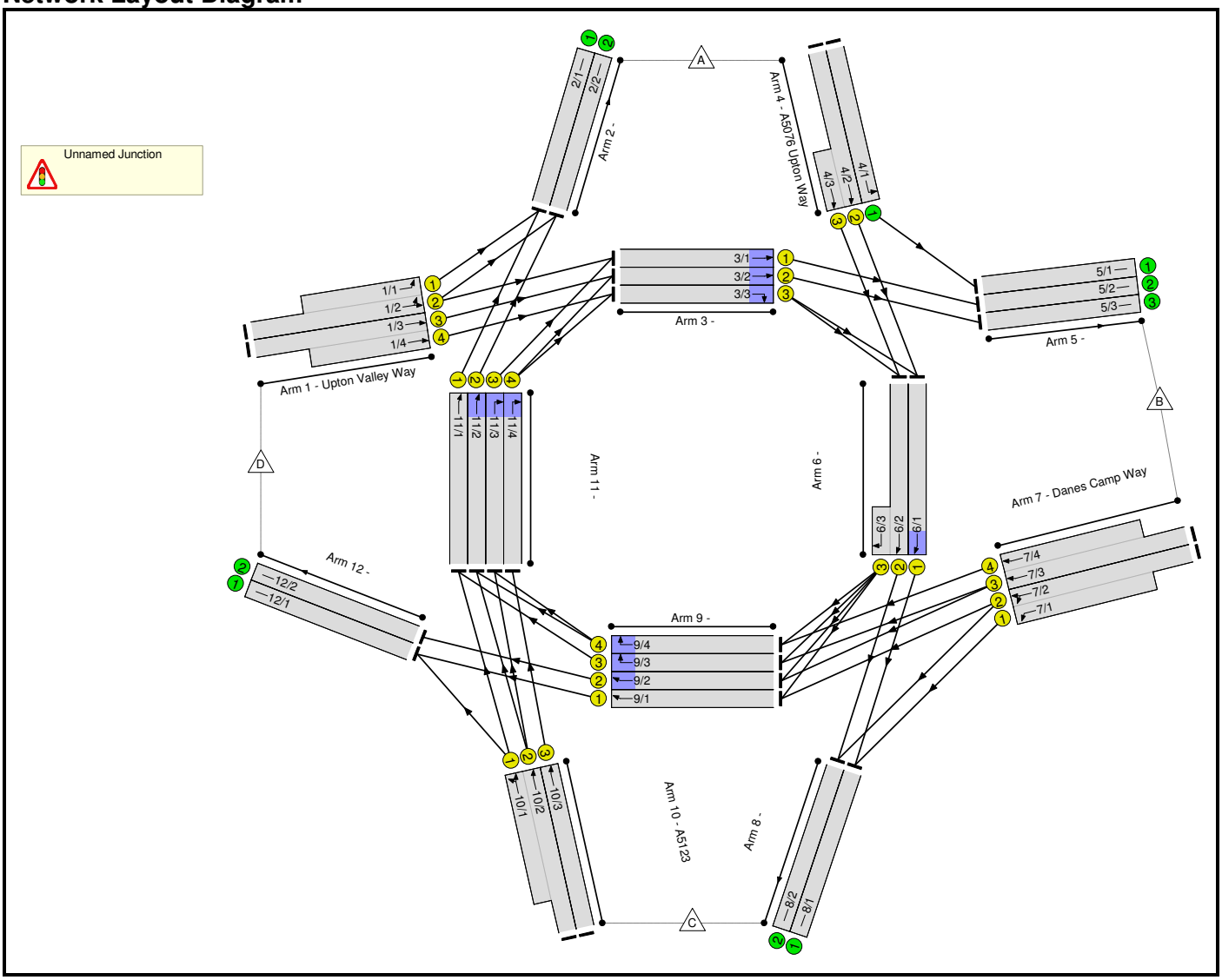
A5123/A5076 DANES CAMP WAY/UPTON VALLEY WAY GYRATORY MITIGATION LINSIG MODEL

Full Input Data And Results

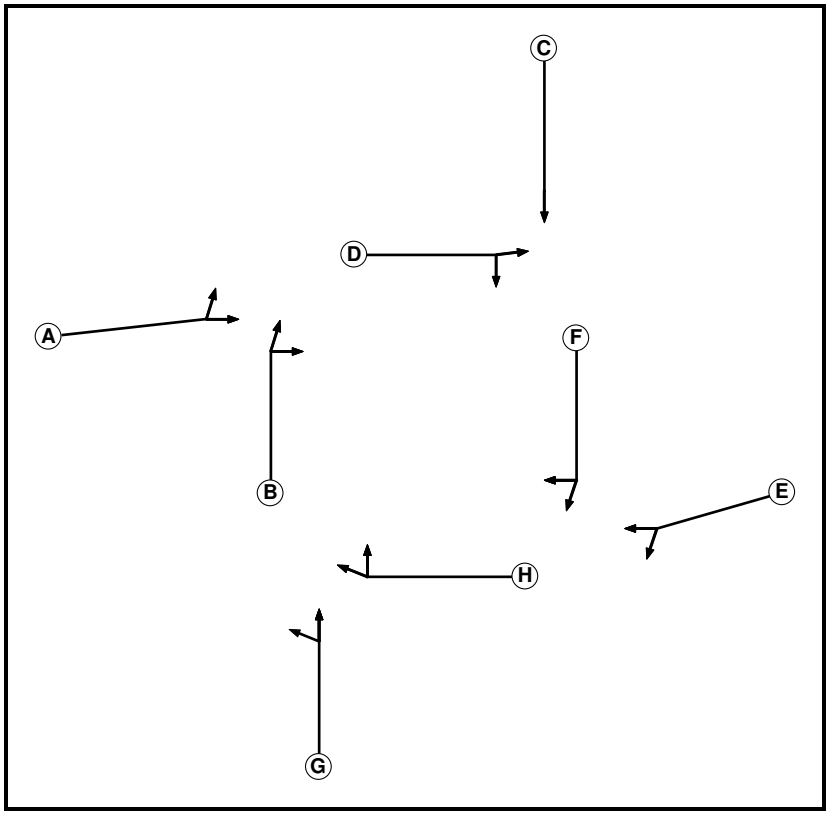
User and Project Details

Project:	**Northampton Gateway SRFI**
Title:	**Proposed A5076 Danes Camp Way/A5123 Mitigation**
Location:	
File name:	180320 A5123_A5076 Base Model sensitivity Mitigation.lsg3x
Author:	Mark Higgins
Company:	ADC Infrastructure
Address:	Western House, Nottingham
Notes:	Sensitivity flows used for evening peak hour

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Traffic	2		7	7
D	Traffic	2		7	7
E	Traffic	3		7	7
F	Traffic	3		7	7
G	Traffic	4		7	7
H	Traffic	4		7	7

Phase Intergreens Matrix

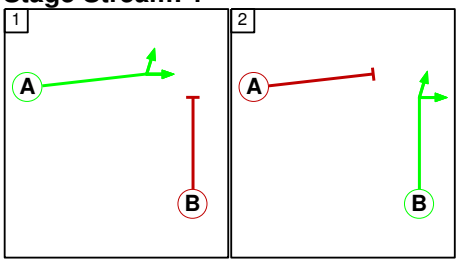
		Starting Phase							
		A	B	C	D	E	F	G	H
Terminating Phase	A		6	-	-	-	-	-	-
	B	6		-	-	-	-	-	-
	C	-	-		6	-	-	-	-
	D	-	-	6		-	-	-	-
	E	-	-	-	-		6	-	-
	F	-	-	-	-	6		-	-
	G	-	-	-	-	-	-		6
	H	-	-	-	-	-	-	6	

Phases in Stage

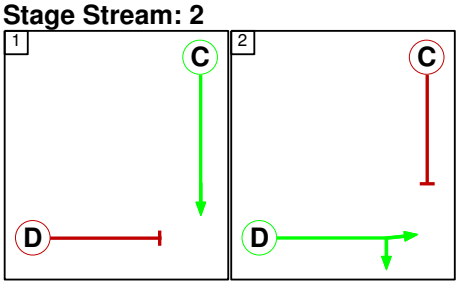
Stream	Stage No.	Phases in Stage
1	1	A
1	2	B
2	1	C
2	2	D
3	1	E
3	2	F
4	1	G
4	2	H

Stage Diagram

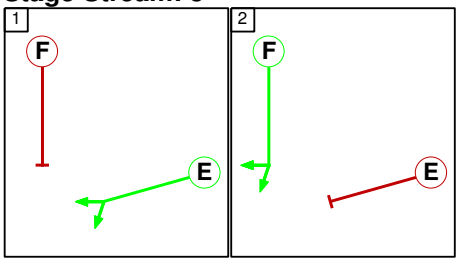
Stage Stream: 1



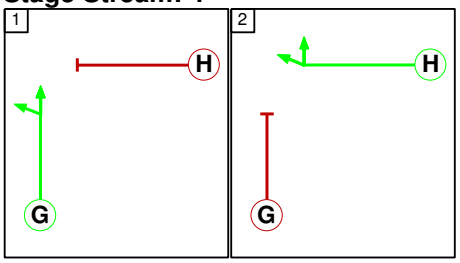
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Prohibited Stage Change

Stage Stream: 1

	To Stage		
		1	2
From Stage	1		6
	2	6	

Stage Stream: 2

	To Stage		
		1	2
From Stage	1		6
	2	6	

Stage Stream: 3

	To Stage		
		1	2
From Stage	1		6
	2	6	

Stage Stream: 4

	To Stage		
		1	2
From Stage	1		6
	2	6	

Lane Input Data

Junction: Unnamed Junction												
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 (Upton Valley Way)	U	A	2	3	10.0	Geom	-	3.55	0.00	Y	Arm 2 Left	Inf
1/2 (Upton Valley Way)	U	A	2	3	60.0	Geom	-	3.50	0.00	N	Arm 2 Left	Inf
											Arm 3 Ahead	Inf
1/3 (Upton Valley Way)	U	A	2	3	60.0	Geom	-	3.50	0.00	N	Arm 3 Ahead	Inf
1/4 (Upton Valley Way)	U	A	2	3	10.0	Geom	-	3.50	0.00	Y	Arm 3 Ahead	Inf
2/1	U		2	3	5.0	Inf	-	-	-	-	-	-
2/2	U		2	3	5.0	Inf	-	-	-	-	-	-
3/1	U	D	2	3	10.4	User	1900	-	-	-	-	-
3/2	U	D	2	3	10.4	User	1900	-	-	-	-	-
3/3	U	D	2	3	10.4	User	1900	-	-	-	-	-
4/1 (A5076 Upton Way)	U		2	3	60.0	Inf	-	-	-	-	-	-
4/2 (A5076 Upton Way)	U	C	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 6 Ahead	Inf
4/3 (A5076 Upton Way)	U	C	2	3	5.0	Geom	-	3.50	0.00	Y	Arm 6 Ahead	Inf
5/1	U		2	3	5.0	Inf	-	-	-	-	-	-
5/2	U		2	3	5.0	Inf	-	-	-	-	-	-
5/3	U		2	3	5.0	Inf	-	-	-	-	-	-
6/1	U	F	2	3	7.8	User	1900	-	-	-	-	-
6/2	U	F	2	3	7.8	User	1900	-	-	-	-	-
6/3	U	F	2	3	4.0	User	1900	-	-	-	-	-
7/1 (Danes Camp Way)	U	E	2	3	12.0	Geom	-	3.50	0.00	Y	Arm 8 Left	Inf
7/2 (Danes Camp Way)	U	E	2	3	60.0	Geom	-	3.50	0.00	N	Arm 8 Left	Inf
											Arm 9 Ahead	Inf
7/3 (Danes Camp Way)	U	E	2	3	60.0	Geom	-	3.50	0.00	N	Arm 9 Ahead	Inf
7/4 (Danes Camp Way)	U	E	2	3	12.0	Geom	-	3.50	0.00	Y	Arm 9 Ahead	Inf
8/1	U		2	3	5.0	Inf	-	-	-	-	-	-

8/2	U		2	3	5.0	Inf	-	-	-	-	-	-
9/1	U	H	2	3	9.6	User	1900	-	-	-	-	-
9/2	U	H	2	3	9.6	User	1900	-	-	-	-	-
9/3	U	H	2	3	9.6	User	1900	-	-	-	-	-
9/4	U	H	2	3	9.6	User	1900	-	-	-	-	-
10/1 (A5123)	U	G	2	3	18.0	Geom	-	3.50	0.00	Y	Arm 11 Ahead Arm 12 Left	Inf Inf
10/2 (A5123)	U	G	2	3	60.0	Geom	-	3.50	0.00	N	Arm 11 Ahead	Inf
10/3 (A5123)	U	G	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 11 Ahead	Inf
11/1	U	B	2	3	12.2	User	1900	-	-	-	-	-
11/2	U	B	2	3	12.2	User	1900	-	-	-	-	-
11/3	U	B	2	3	12.2	User	1900	-	-	-	-	-
11/4	U	B	2	3	12.2	User	1900	-	-	-	-	-
12/1	U		2	3	5.0	Inf	-	-	-	-	-	-
12/2	U		2	3	5.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2031 D1 AM Peak'	08:00	09:00	01:00	
2: '2031 D1 PM Peak - sensitivity'	17:00	18:00	01:00	
3: '2031 J1d AM Peak'	08:00	09:00	01:00	
4: '2031 J1d PM Peak - sensitivity'	17:00	18:00	01:00	

Scenario 1: '2031 J1d AM Peak' (FG3: '2031 J1d AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	1222	730	211	2163
	B	1127	0	1121	544	2792
	C	680	1083	0	34	1797
	D	358	387	288	4	1037
	Tot.	2165	2692	2139	793	7789

Traffic Lane Flows

Lane	Scenario 1: 2031 J1d AM Peak
Junction: Unnamed Junction	
1/1 (short)	251
1/2 (with short)	519(In) 268(Out)
1/3 (with short)	518(In) 226(Out)
1/4 (short)	292
2/1	1228
2/2	937
3/1	691
3/2	779
3/3	292
4/1	1222
4/2 (with short)	941(In) 462(Out)
4/3 (short)	479
5/1	1222
5/2	691
5/3	779
6/1	569
6/2 (with short)	664(In) 449(Out)
6/3 (short)	215
7/1 (short)	674
7/2 (with short)	1396(In) 722(Out)
7/3 (with short)	1396(In) 723(Out)
7/4 (short)	673
8/1	1243
8/2	896
9/1	455
9/2	304
9/3	454
9/4	673
10/1 (short)	557
10/2 (with short)	1244(In) 687(Out)
10/3	553
11/1	977
11/2	830

11/3	530
11/4	553
12/1	489
12/2	304

Lane Saturation Flows

Junction: Unnamed Junction								
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 (Upton Valley Way)	3.55	0.00	Y	Arm 2 Left	Inf	100.0 %	1970	1970
1/2 (Upton Valley Way)	3.50	0.00	N	Arm 2 Left	Inf	39.9 %	2105	2105
				Arm 3 Ahead	Inf	60.1 %		
1/3 (Upton Valley Way)	3.50	0.00	N	Arm 3 Ahead	Inf	100.0 %	2105	2105
1/4 (Upton Valley Way)	3.50	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1965	1965
2/1	Infinite Saturation Flow						Inf	Inf
2/2	Infinite Saturation Flow						Inf	Inf
3/1	This lane uses a directly entered Saturation Flow						1900	1900
3/2	This lane uses a directly entered Saturation Flow						1900	1900
3/3	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (A5076 Upton Way Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (A5076 Upton Way)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
4/3 (A5076 Upton Way)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
5/3	Infinite Saturation Flow						Inf	Inf
6/1	This lane uses a directly entered Saturation Flow						1900	1900
6/2	This lane uses a directly entered Saturation Flow						1900	1900
6/3	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (Danes Camp Way)	3.50	0.00	Y	Arm 8 Left	Inf	100.0 %	1965	1965
7/2 (Danes Camp Way)	3.50	0.00	N	Arm 8 Left	Inf	61.9 %	2105	2105
				Arm 9 Ahead	Inf	38.1 %		
7/3 (Danes Camp Way)	3.50	0.00	N	Arm 9 Ahead	Inf	100.0 %	2105	2105
7/4 (Danes Camp Way)	3.50	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1965	1965
8/1	Infinite Saturation Flow						Inf	Inf
8/2	Infinite Saturation Flow						Inf	Inf
9/1	This lane uses a directly entered Saturation Flow						1900	1900
9/2	This lane uses a directly entered Saturation Flow						1900	1900
9/3	This lane uses a directly entered Saturation Flow						1900	1900
9/4	This lane uses a directly entered Saturation Flow						1900	1900
10/1 (A5123)	3.50	0.00	Y	Arm 11 Ahead	Inf	93.9 %	1965	1965
				Arm 12 Left	Inf	6.1 %		
10/2 (A5123)	3.50	0.00	N	Arm 11 Ahead	Inf	100.0 %	2105	2105

10/3 (A5123)	3.50	0.00	Y	Arm 11 Ahead	Inf	100.0 %	1965	1965
11/1	This lane uses a directly entered Saturation Flow						1900	1900
11/2	This lane uses a directly entered Saturation Flow						1900	1900
11/3	This lane uses a directly entered Saturation Flow						1900	1900
11/4	This lane uses a directly entered Saturation Flow						1900	1900
12/1	Infinite Saturation Flow						Inf	Inf
12/2	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2031 J1d PM Peak' (FG4: '2031 J1d PM Peak - sensitivity', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	1494	608	123	2225
	B	1266	0	741	394	2401
	C	1224	903	0	105	2232
	D	151	111	27	4	293
	Tot.	2641	2508	1376	626	7151

Traffic Lane Flows

Lane	Scenario 2: 2031 J1d PM Peak
Junction: Unnamed Junction	
1/1 (short)	127
1/2 (with short)	262(In) 135(Out)
1/3 (with short)	31(In) 0(Out)
1/4 (short)	31
2/1	1403
2/2	1238
3/1	316
3/2	698
3/3	31
4/1	1494
4/2 (with short)	731(In) 283(Out)
4/3 (short)	448
5/1	1494
5/2	316
5/3	698
6/1	304
6/2 (with short)	458(In) 331(Out)
6/3 (short)	127
7/1 (short)	548
7/2 (with short)	1135(In) 587(Out)
7/3 (with short)	1266(In) 654(Out)
7/4 (short)	612
8/1	852
8/2	524
9/1	395
9/2	126
9/3	654
9/4	612
10/1 (short)	727
10/2 (with short)	1534(In) 807(Out)
10/3	698
11/1	1276
11/2	1214

11/3	205
11/4	698
12/1	500
12/2	126

Lane Saturation Flows

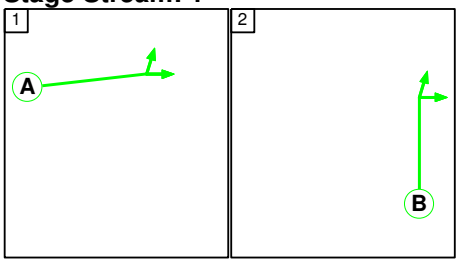
Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Upton Valley Way)	3.55	0.00	Y	Arm 2 Left	Inf	100.0 %	1970	1970
1/2 (Upton Valley Way)	3.50	0.00	N	Arm 2 Left	Inf	17.8 %	2105	2105
				Arm 3 Ahead	Inf	82.2 %		
1/3 (Upton Valley Way)	3.50	0.00	N	Arm 3 Ahead	Inf	0.0 %	2105	2105
1/4 (Upton Valley Way)	3.50	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1965	1965
2/1	Infinite Saturation Flow						Inf	Inf
2/2	Infinite Saturation Flow						Inf	Inf
3/1	This lane uses a directly entered Saturation Flow						1900	1900
3/2	This lane uses a directly entered Saturation Flow						1900	1900
3/3	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (A5076 Upton Way Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (A5076 Upton Way)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
4/3 (A5076 Upton Way)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
5/3	Infinite Saturation Flow						Inf	Inf
6/1	This lane uses a directly entered Saturation Flow						1900	1900
6/2	This lane uses a directly entered Saturation Flow						1900	1900
6/3	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (Danes Camp Way)	3.50	0.00	Y	Arm 8 Left	Inf	100.0 %	1965	1965
7/2 (Danes Camp Way)	3.50	0.00	N	Arm 8 Left	Inf	32.9 %	2105	2105
				Arm 9 Ahead	Inf	67.1 %		
7/3 (Danes Camp Way)	3.50	0.00	N	Arm 9 Ahead	Inf	100.0 %	2105	2105
7/4 (Danes Camp Way)	3.50	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1965	1965
8/1	Infinite Saturation Flow						Inf	Inf
8/2	Infinite Saturation Flow						Inf	Inf
9/1	This lane uses a directly entered Saturation Flow						1900	1900
9/2	This lane uses a directly entered Saturation Flow						1900	1900
9/3	This lane uses a directly entered Saturation Flow						1900	1900
9/4	This lane uses a directly entered Saturation Flow						1900	1900
10/1 (A5123)	3.50	0.00	Y	Arm 11 Ahead	Inf	85.6 %	1965	1965
				Arm 12 Left	Inf	14.4 %		
10/2 (A5123)	3.50	0.00	N	Arm 11 Ahead	Inf	100.0 %	2105	2105

10/3 (A5123)	3.50	0.00	Y	Arm 11 Ahead	Inf	100.0 %	1965	1965
11/1	This lane uses a directly entered Saturation Flow						1900	1900
11/2	This lane uses a directly entered Saturation Flow						1900	1900
11/3	This lane uses a directly entered Saturation Flow						1900	1900
11/4	This lane uses a directly entered Saturation Flow						1900	1900
12/1	Infinite Saturation Flow						Inf	Inf
12/2	Infinite Saturation Flow						Inf	Inf

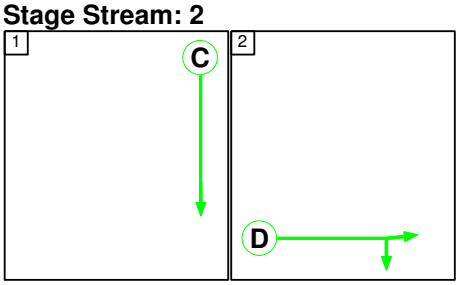
Scenario 1: '2031 J1d AM Peak' (FG3: '2031 J1d AM Peak', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

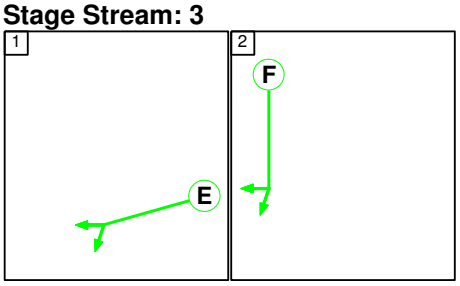
Stage Stream: 1



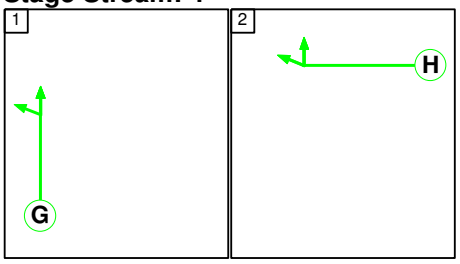
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	7	41
Change Point	0	13

Stage Stream: 2

Stage	1	2
Duration	14	34
Change Point	31	51

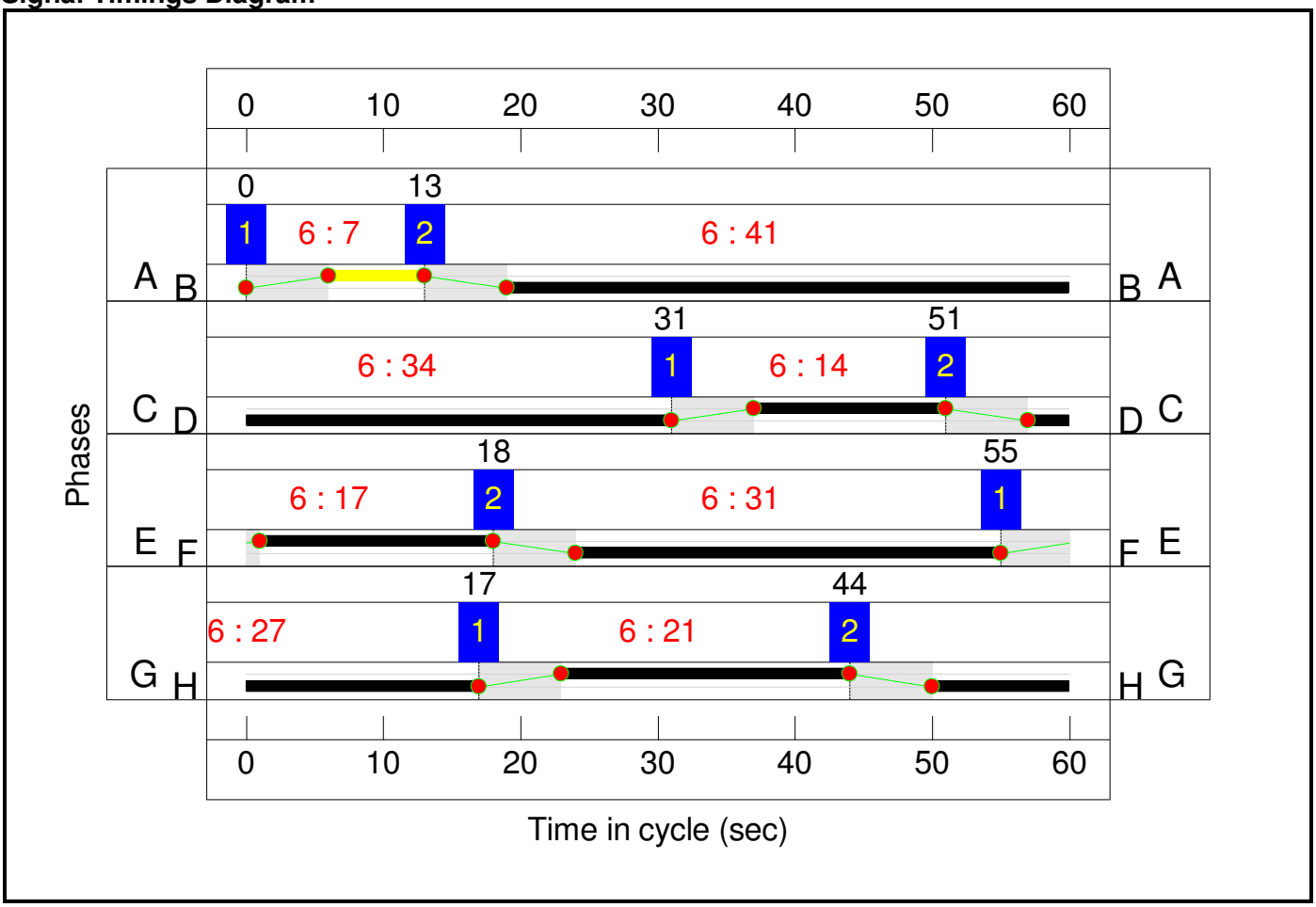
Stage Stream: 3

Stage	1	2
Duration	17	31
Change Point	55	18

Stage Stream: 4

Stage	1	2
Duration	21	27
Change Point	17	44

Signal Timings Diagram



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: Proposed A5076 Danes Camp Way/A5123 Mitigation	-	-	**N/A**	-	-		-	-	-	-	-	-	**119.7%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**119.7%**
1/2+1/1	Upton Valley Way Left Ahead	U	1	N/A	A		1	7	-	519	2105:1970	281+263	95.5 : 95.6%
1/3+1/4	Upton Valley Way Ahead	U	1	N/A	A		1	7	-	518	2105:1965	281+262	80.5 : 111.5%
3/1	Ahead	U	2	N/A	D		1	34	-	691	1900	1108	62.3%
3/2	Ahead	U	2	N/A	D		1	34	-	779	1900	1108	70.3%
3/3	Right	U	2	N/A	D		1	34	-	292	1900	1108	23.6%
4/2+4/3	A5076 Upton Way Ahead	U	2	N/A	C		1	14	-	941	1965:1965	386+400	119.7 : 119.7%
6/1	Ahead	U	3	N/A	F		1	31	-	569	1900	1013	47.5%
6/2+6/3	Ahead Right	U	3	N/A	F		1	31	-	664	1900:1900	754+361	51.2 : 49.8%
7/2+7/1	Danes Camp Way Left Ahead	U	3	N/A	E		1	17	-	1396	2105:1965	632+590	114.3 : 114.3%
7/3+7/4	Danes Camp Way Ahead	U	3	N/A	E		1	17	-	1396	2105:1965	632+590	114.5 : 114.2%
9/1	Ahead	U	4	N/A	H		1	27	-	455	1900	887	44.1%
9/2	Ahead	U	4	N/A	H		1	27	-	304	1900	887	29.8%
9/3	Right	U	4	N/A	H		1	27	-	454	1900	887	44.7%
9/4	Right	U	4	N/A	H		1	27	-	673	1900	887	66.5%
10/2+10/1	A5123 Ahead Left	U	4	N/A	G		1	21	-	1244	2105:1965	772+721	89.0 : 77.3%
10/3	A5123 Ahead	U	4	N/A	G		1	21	-	553	1965	721	76.8%
11/1	Ahead	U	1	N/A	B		1	41	-	977	1900	1330	69.1%
11/2	Ahead	U	1	N/A	B		1	41	-	830	1900	1330	56.1%
11/3	Right	U	1	N/A	B		1	41	-	530	1900	1330	39.8%
11/4	Right	U	1	N/A	B		1	41	-	553	1900	1330	41.6%

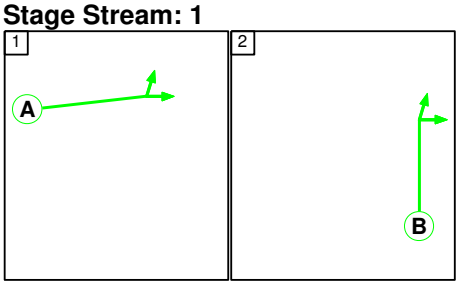
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Proposed A5076 Danes Camp Way/A5123 Mitigation	**-**	**-**	**0**	**0**	**0**	**60.5**	**303.4**	**0.0**	**363.9**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**60.5**	**303.4**	**0.0**	**363.9**	**-**	**-**	**-**	**-**
1/2+1/1	519	519	-	-	-	3.7	6.8	-	10.6	73.2	4.4	6.8	11.2
1/3+1/4	518	488	-	-	-	4.6	21.8	-	26.4	183.3	5.4	21.8	27.1
3/1	691	691	-	-	-	1.0	0.8	-	1.8	9.6	2.5	0.8	3.3
3/2	779	779	-	-	-	0.7	1.2	-	1.9	8.9	1.8	1.2	3.0
3/3	262	262	-	-	-	0.0	0.2	-	0.2	2.3	0.1	0.2	0.3
4/2+4/3	941	786	-	-	-	8.8	80.5	-	89.3	341.7	14.5	80.5	95.0
6/1	482	482	-	-	-	0.2	0.5	-	0.7	5.1	1.6	0.5	2.1
6/2+6/3	566	566	-	-	-	0.4	0.5	-	0.9	5.8	9.3	0.5	9.8
7/2+7/1	1396	1221	-	-	-	13.4	91.3	-	104.7	270.1	19.0	91.3	110.3
7/3+7/4	1396	1221	-	-	-	13.4	91.3	-	104.7	270.1	19.0	91.3	110.3
9/1	391	391	-	-	-	0.7	0.4	-	1.1	10.2	3.2	0.4	3.6
9/2	264	264	-	-	-	0.6	0.2	-	0.8	10.8	1.4	0.2	1.6
9/3	397	397	-	-	-	1.0	0.4	-	1.4	12.4	1.8	0.4	2.2
9/4	589	589	-	-	-	1.6	1.0	-	2.6	16.0	3.0	1.0	3.9
10/2+10/1	1244	1244	-	-	-	6.0	2.5	-	8.5	24.5	10.7	2.5	13.1
10/3	553	553	-	-	-	2.6	1.6	-	4.2	27.3	8.0	1.6	9.6
11/1	920	920	-	-	-	0.6	1.1	-	1.7	6.5	5.3	1.1	6.4
11/2	746	746	-	-	-	1.1	0.6	-	1.7	8.2	7.4	0.6	8.0
11/3	530	530	-	-	-	0.0	0.3	-	0.3	2.2	0.0	0.3	0.3
11/4	553	553	-	-	-	0.0	0.4	-	0.4	2.5	0.3	0.4	0.6

C1	Stream: 1 PRC for Signalled Lanes (%):	-23.8	Total Delay for Signalled Lanes (pcuHr):	41.02	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	-33.0	Total Delay for Signalled Lanes (pcuHr):	93.25	Cycle Time (s):	60
C1	Stream: 3 PRC for Signalled Lanes (%):	-27.2	Total Delay for Signalled Lanes (pcuHr):	211.08	Cycle Time (s):	60
C1	Stream: 4 PRC for Signalled Lanes (%):	1.1	Total Delay for Signalled Lanes (pcuHr):	18.54	Cycle Time (s):	60
	PRC Over All Lanes (%):	-33.0	Total Delay Over All Lanes(pcuHr):	363.89		

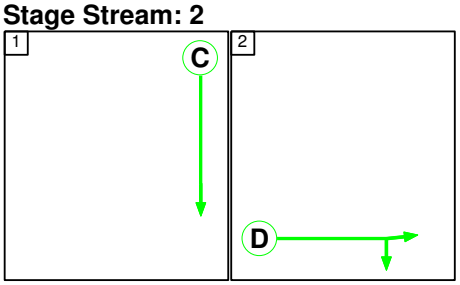
Scenario 2: '2031 J1d PM Peak' (FG4: '2031 J1d PM Peak - sensitivity', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

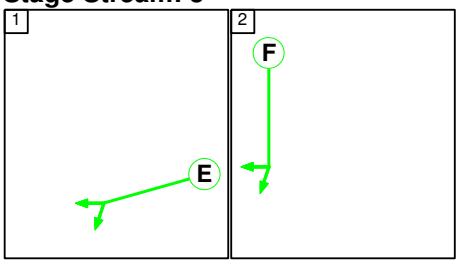
Stage Stream: 1



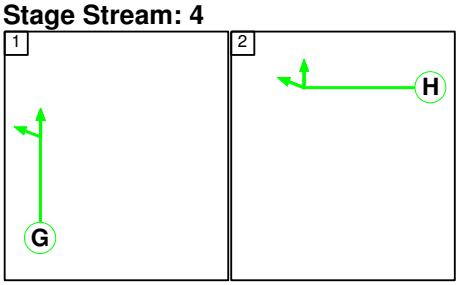
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	7	41
Change Point	35	48

Stage Stream: 2

Stage	1	2
Duration	18	30
Change Point	25	49

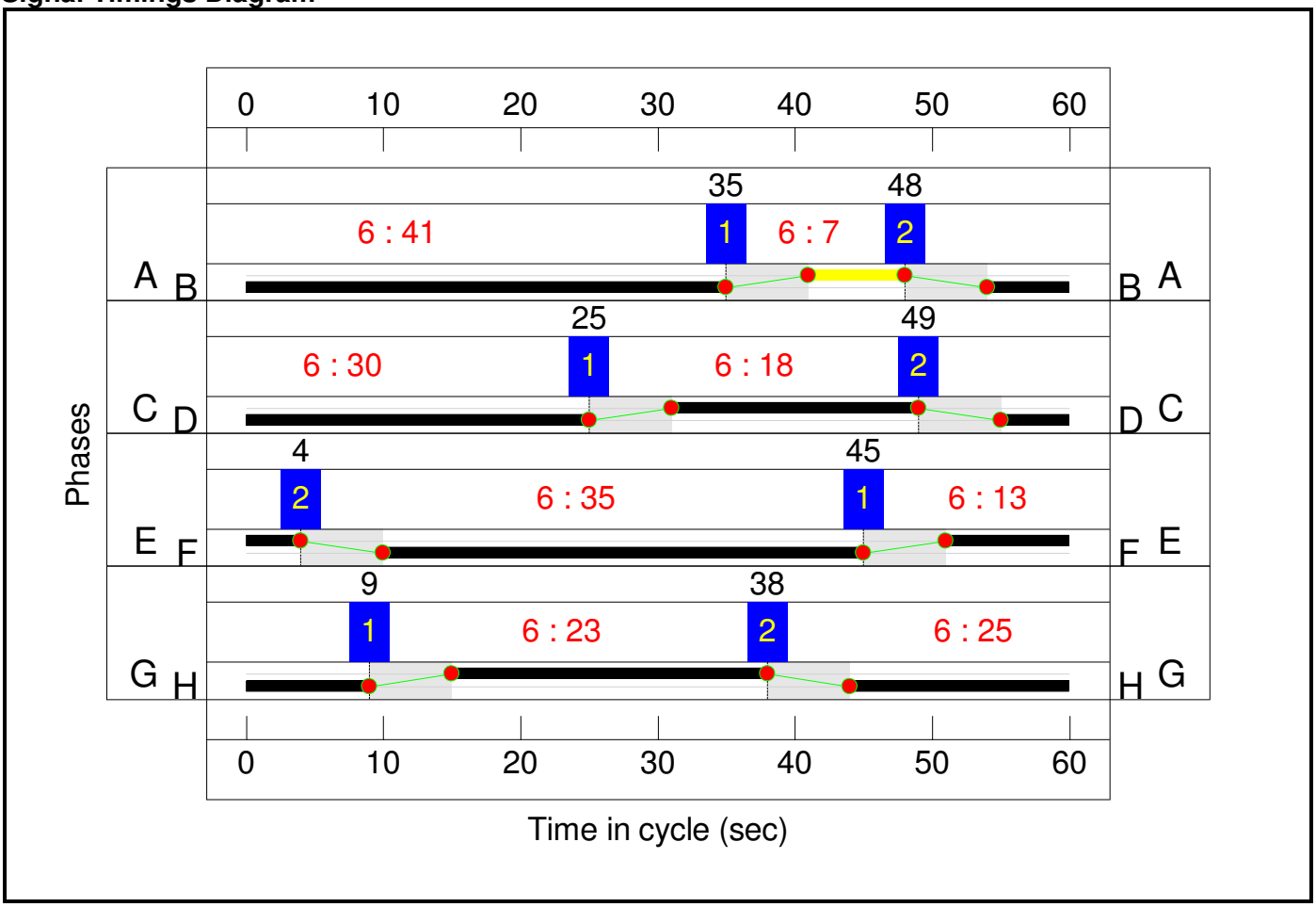
Stage Stream: 3

Stage	1	2
Duration	13	35
Change Point	45	4

Stage Stream: 4

Stage	1	2
Duration	23	25
Change Point	9	38

Signal Timings Diagram



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: Proposed A5076 Danes Camp Way/A5123 Mitigation	-	-	**N/A**	-	-		-	-	-	-	-	-	**133.5%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**133.5%**
1/2+1/1	Upton Valley Way Left Ahead	U	1	N/A	A		1	7	-	262	2105:1970	281+263	48.1 : 48.4%
1/3+1/4	Upton Valley Way Ahead	U	1	N/A	A		1	7	-	31	2105:1965	0+262	0.0 : 11.8%
3/1	Ahead	U	2	N/A	D		1	30	-	316	1900	982	32.2%
3/2	Ahead	U	2	N/A	D		1	30	-	698	1900	982	71.1%
3/3	Right	U	2	N/A	D		1	30	-	31	1900	982	3.2%
4/2+4/3	A5076 Upton Way Ahead	U	2	N/A	C		1	18	-	731	1965:1965	316+501	89.5 : 89.5%
6/1	Ahead	U	3	N/A	F		1	35	-	304	1900	1140	26.7%
6/2+6/3	Ahead Right	U	3	N/A	F		1	35	-	458	1900:1900	881+338	37.6 : 37.6%
7/2+7/1	Danes Camp Way Left Ahead	U	3	N/A	E		1	13	-	1135	2105:1965	491+458	119.5 : 119.5%
7/3+7/4	Danes Camp Way Ahead	U	3	N/A	E		1	13	-	1266	2105:1965	491+458	133.2 : 133.5%
9/1	Ahead	U	4	N/A	H		1	25	-	395	1900	823	40.2%
9/2	Ahead	U	4	N/A	H		1	25	-	126	1900	823	15.3%
9/3	Right	U	4	N/A	H		1	25	-	654	1900	823	59.7%
9/4	Right	U	4	N/A	H		1	25	-	612	1900	823	55.7%
10/2+10/1	A5123 Ahead Left	U	4	N/A	G		1	23	-	1534	2105:1965	842+786	95.8 : 92.5%
10/3	A5123 Ahead	U	4	N/A	G		1	23	-	698	1965	786	88.8%
11/1	Ahead	U	1	N/A	B		1	41	-	1276	1900	1330	83.7%
11/2	Ahead	U	1	N/A	B		1	41	-	1214	1900	1330	79.7%
11/3	Right	U	1	N/A	B		1	41	-	205	1900	1330	15.4%
11/4	Right	U	1	N/A	B		1	41	-	698	1900	1330	52.5%

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: Proposed A5076 Danes Camp Way/A5123 Mitigation	**-**	**-**	**0**	**0**	**0**	**52.7**	**279.8**	**0.0**	**332.5**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**52.7**	**279.8**	**0.0**	**332.5**	**-**	**-**	**-**	**-**
1/2+1/1	262	262	-	-	-	1.8	0.5	-	2.2	30.5	2.1	0.5	2.5
1/3+1/4	31	31	-	-	-	0.2	0.1	-	0.3	30.8	0.4	0.1	0.5
3/1	316	316	-	-	-	0.5	0.2	-	0.8	9.0	2.9	0.2	3.1
3/2	698	698	-	-	-	0.6	1.2	-	1.8	9.3	3.2	1.2	4.4
3/3	31	31	-	-	-	0.1	0.0	-	0.1	11.4	0.5	0.0	0.5
4/2+4/3	731	731	-	-	-	3.6	3.9	-	7.5	37.1	8.0	3.9	11.9
6/1	304	304	-	-	-	0.4	0.2	-	0.6	7.2	1.3	0.2	1.5
6/2+6/3	458	458	-	-	-	0.7	0.3	-	1.0	7.9	9.3	0.3	9.6
7/2+7/1	1135	950	-	-	-	12.7	95.6	-	108.3	343.5	12.9	95.6	108.6
7/3+7/4	1266	950	-	-	-	17.8	160.1	-	177.9	506.0	17.6	160.1	177.7
9/1	331	331	-	-	-	0.0	0.3	-	0.3	3.7	0.0	0.3	0.3
9/2	126	126	-	-	-	0.3	0.1	-	0.4	12.3	1.6	0.1	1.7
9/3	491	491	-	-	-	0.3	0.7	-	1.0	7.3	0.8	0.7	1.5
9/4	458	458	-	-	-	0.0	0.6	-	0.7	5.2	0.3	0.6	0.9
10/2+10/1	1534	1534	-	-	-	7.4	7.1	-	14.5	34.0	13.0	7.1	20.1
10/3	698	698	-	-	-	3.2	3.7	-	6.9	35.6	10.7	3.7	14.3
11/1	1113	1113	-	-	-	0.9	2.5	-	3.4	11.0	3.2	2.5	5.7
11/2	1061	1061	-	-	-	0.9	1.9	-	2.8	9.6	3.1	1.9	5.0
11/3	205	205	-	-	-	0.3	0.1	-	0.4	6.3	1.0	0.1	1.1
11/4	698	698	-	-	-	1.0	0.6	-	1.6	8.0	3.2	0.6	3.7

C1	Stream: 1 PRC for Signalled Lanes (%):	7.5	Total Delay for Signalled Lanes (pcuHr):	10.62	Cycle Time (s): 60
C1	Stream: 2 PRC for Signalled Lanes (%):	0.6	Total Delay for Signalled Lanes (pcuHr):	10.23	Cycle Time (s): 60
C1	Stream: 3 PRC for Signalled Lanes (%):	-48.3	Total Delay for Signalled Lanes (pcuHr):	287.87	Cycle Time (s): 60
C1	Stream: 4 PRC for Signalled Lanes (%):	-6.5	Total Delay for Signalled Lanes (pcuHr):	23.81	Cycle Time (s): 60
	PRC Over All Lanes (%):	-48.3	Total Delay Over All Lanes(pcuHr):	332.52	