

LAND OFF HEMPSTED LANE, GLOUCESTER
PROPOSED RESIDENTIAL DEVELOPMENT OF UP TO 245 DWELLINGS
(PLANNING REFERENCE 20/00315/OUT)

TECHNICAL NOTE 2 – TRAFFIC IMPACT

1.0 INTRODUCTION

Following constructive discussions between the applicant and Gloucestershire County Council as Highway Authority, the applicant has agreed to revisit the traffic impact on the immediate surrounding network to address concerns regarding the original analysis in the Transport Assessment. This Technical Note sets out the updated analysis.

2.0 TRAFFIC IMPACT

2.1 Traffic Flows

There were no issues raised with the original traffic survey data, and despite some concerns the Highway Authority have accepted the trip rates as per the Transport Assessment. This gives the base 2019 traffic flows as per Figures 3 and 4 in the Transport Assessment. It is relevant to note that the number of houses has now been reduced from 245 to 215 so the traffic generations are as follows:

	Number of Houses: 215			
	Trip Rates		Development Trips	
	Arrive	Depart	Arrive	Depart
AM Peak	0.119	0.356	26	77
PM Peak	0.319	0.144	69	31

The Council required a 2031 assessment year and so TEMPRO factors to reflect growth from 2019-2031 were calculated. The TEMPRO printout is enclosed as Appendix 1 to this note and the 2031 base flows are shown in Figures 5a and 6a. As in the Transport Assessment three committed developments have been included, namely:

Land East of Hempsted Lane – 70 units (13/01032/OUT)

Land at Newark Farm – 44 units (15/01494/OUT)

Land at Rea Lane – 35 units (19/00068/FUL)

The flows from these developments are shown in Figures 7 and 8 from the Transport Assessment, the total committed development flows in Figures 9 and 10 and the 2031 flows with committed development in Figures 11a and 12a. It should be noted no adjustment was made to the TEMPRO factors to reflect the committed development so the forecasts should be robust.

In the Transport Assessment distribution of development traffic was based on National Census Journey to Work data. However again at the request of the Highway Authority for this analysis the development traffic is assumed all to go to the Hempsted Lane / A430 signals and then distribute up and down the A430 in proportion to the observed survey data. The resulting distribution of development traffic is shown in Figures 15 and 16 and the final 2031 flows with development in Figures 17a and 18a.

2.2 Junction Analysis

The resultant forecast flows were then run through the appropriate junction assessment models. It should be noted that the Council's comment on the south west approach to the Hempsted Lane signals has been taken on board and it is now coded as a long flare.

The resultant model outputs are included as Appendix 2 and the results summarised in the table overleaf.

As can be seen in 2031 the main junctions closest to the site continue to operate comfortably within capacity and the impact of the development traffic itself is modest. As would be expected given the low traffic flows on Hempsted Lane there are no capacity issues at the proposed access itself.

Land Off Hempsted Lane, Gloucester - Junction Analysis
(215 HOUSES)

1. A430/Hempsted Lane - LINSIG Results

Stages: 1. A430 Arms, 2. Hempsted Lane Arms

AM

Arm	Turn	2019 base		2031 without dev		2031 with com dev		2031 with CD + Prop	
		DoS (%)	Mean Max Queue (PCU)	DoS (%)	Mean Max Queue (PCU)	DoS (%)	Mean Max Queue (PCU)	DoS (%)	Mean Max Queue (PCU)
A430 SW (coded as long flare)	All	72.0	7.1	81.7	9.3	82.4	9.4	83.5	10.2
Hempsted Lane NW	All	25.6	1.1	29.1	1.2	43.2	1.9	67.6	3.8
A430 NE	Left/SA	31.8	3.0	36.2	3.6	36.4	3.6	37.6	3.8
	SA/Right	33.9	3.4	38.4	4.0	38.4	4.0	39.6	4.4
Hempsted Lane SE	All	19.7	0.8	22.2	0.9	22.2	0.9	19.7	0.9
Cycle Time (secs)		60		60		60		60	
PRC (%)		25.0		10.1		9.2		7.8	

PM

Arm	Turn	2019 base		2031 without dev		2031 with com dev		2031 with CD + Prop	
		DoS (%)	Mean Max Queue (PCU)	DoS (%)	Mean Max Queue (PCU)	DoS (%)	Mean Max Queue (PCU)	DoS (%)	Mean Max Queue (PCU)
A430 SW (coded as long flare)	All	61.9	5.5	69.6	6.6	70.9	6.8	74.2	7.4
Hempsted Lane NW	All	18.8	0.8	21.4	0.9	29.5	1.2	42.8	1.9
A430 NE	Left/SA	36.6	3.6	41.3	4.3	41.6	4.3	42.0	4.3
	SA/Right	38.7	4.1	43.4	4.8	43.6	4.8	44.0	5.0
Hempsted Lane SE	All	7.1	0.3	7.9	0.3	7.9	0.3	7.9	0.3
Cycle Time (secs)		60		60		60		60	
PRC (%)		45.3		29.3		26.9		21.3	

2. A430/The Gallops/Soren Larsen Way - LINSIG Results

Stages: 1. A430 Arms left/SA, 2. A430 Arms right, 3. The Gallops All, 4. Soren Larsen Way All

AM

Arm	Turn	2019 base		2031 without dev		2031 with com dev		2031 with CD + Prop	
		DoS (%)	Mean Max Queue (PCU)	DoS (%)	Mean Max Queue (PCU)	DoS (%)	Mean Max Queue (PCU)	DoS (%)	Mean Max Queue (PCU)
A430 S	Left/SA	68.3	17.8	77.5	22.2	77.9	22.6	78.4	22.8
	SA	69.4	19.6	78.5	24.4	78.8	24.5	79.5	25.0
	Right	3.3	0.2	3.8	0.2	3.8	0.2	3.8	0.2
The Gallops	All	54.5	2.6	62.2	3.1	62.2	3.1	62.2	3.1
A430 N	Left/SA	37.4	7.6	42.5	9.1	42.6	9.1	42.9	9.1
	SA	38.7	8.6	43.8	10.2	43.9	10.2	44.2	10.3
	Right	3.8	0.2	4.3	0.3	4.3	0.3	4.3	0.3
Soren Larsen Way	All	41.5	1.9	46.8	2.1	46.8	2.1	46.8	2.1
Cycle Time (secs)		120		120		120		120	
PRC (%)		29.8		14.6		14.2		13.2	

PM

Arm	Turn	2019 base		2031 without dev		2031 with com dev		2031 with CD + Prop	
		DoS (%)	Mean Max Queue (PCU)	DoS (%)	Mean Max Queue (PCU)	DoS (%)	Mean Max Queue (PCU)	DoS (%)	Mean Max Queue (PCU)
A430 S	Left/SA	57.5	13.7	64.8	16.5	65.0	16.5	65.4	16.6
	SA	58.8	15.2	66.0	18.2	66.1	18.2	66.6	18.4
	Right	9.9	0.6	11.0	0.7	11.0	0.7	11.0	0.7
The Gallops	All	25.0	1.1	28.4	1.2	28.4	1.2	28.4	1.2
A430 N	Left/SA	46.1	10.1	52.0	11.9	52.3	12.0	52.7	12.3
	SA	47.4	11.3	53.2	13.3	53.5	13.4	53.9	13.5
	Right	23.1	1.5	25.8	1.6	25.8	1.6	25.8	1.6
Soren Larsen Way	All	30.9	1.3	35.3	1.5	35.3	1.5	35.3	1.5
Cycle Time (secs)		120		120		120		120	
PRC (%)		53.1		36.4		36.2		35.1	

3. Proposed Access Off Hempsted Lane - PICADY Results

AM

Arm	Turn	2031 with CD + Prop	
		Max RFC	Queue (PCU)
Access	Left/Right	0.18	0.2
Hempsted Lane NW	All	0.00	0.0

PM

Arm	Turn	2031 with CD + Prop	
		Max RFC	Queue (PCU)
Access	Left/Right	0.07	0.1
Hempsted Lane NW	All	0.00	0.0

Further to the south is the A430 / Bristol Road junction. This is a large signalised junction which gives access to a large employment area. There are large existing flows through the junction and development traffic flows through this junction are modest (85 vehicles two-way in the AM peak and 80 vehicles two-way in the PM). By comparison total flows through the junction in 2031 without the development is:

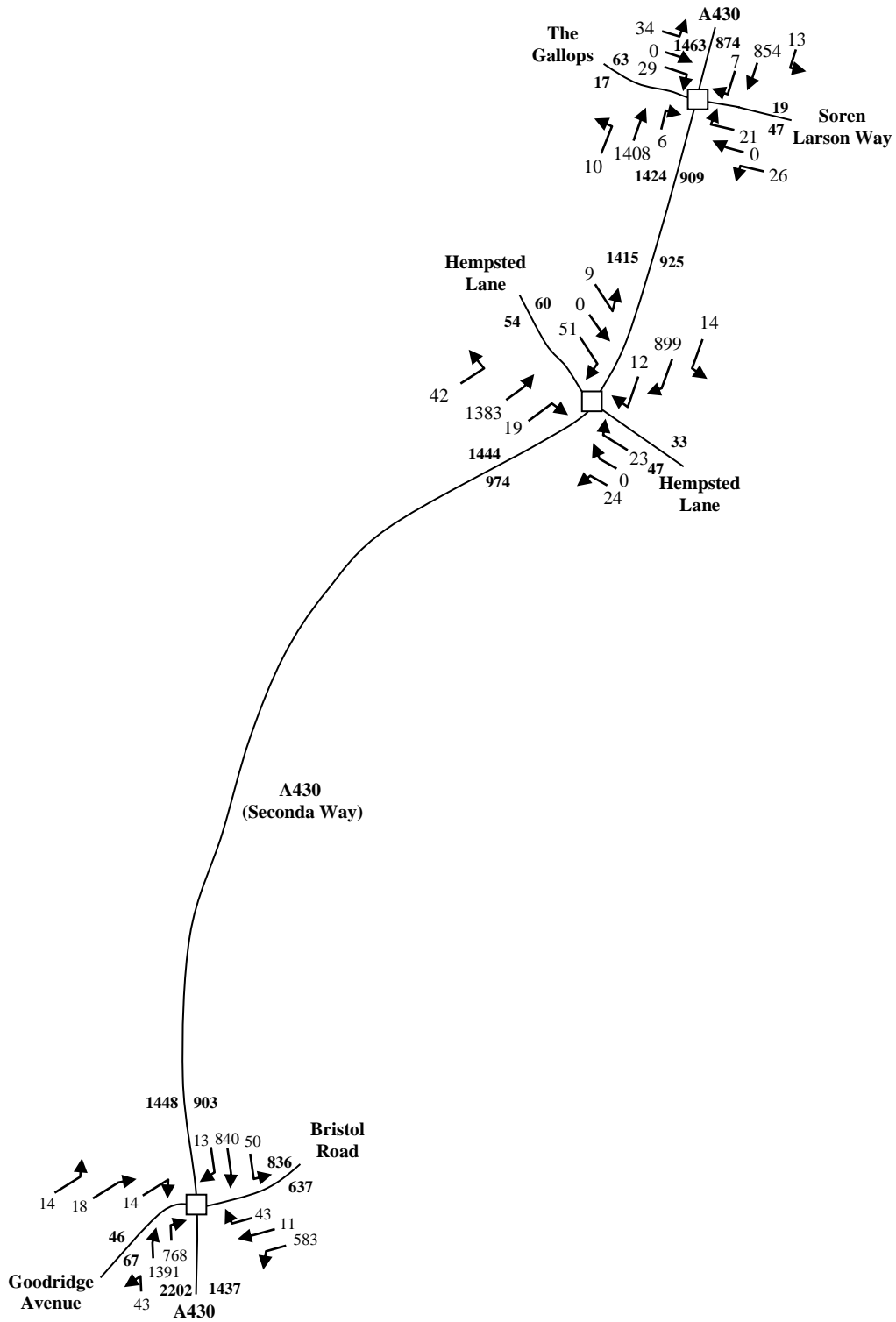
AM Peak	4289 vehicles
PM Peak	4272 vehicles

Previous analysis at this junction has focussed on the percentage increase of development traffic and in the revised approach the percentage increase is now 1.9% in the AM peak and 1.8% in the PM. Whilst it is noted that Gloucestershire County Council do not normally accept a percentage increase approach as it is considered outdated, it is only a requirement to mitigate severe impacts for sustainable sites. An increase of less than 2% on junctions carrying over 4000 vehicles plainly is not a severe impact and so it is suggested there is no need to take this analysis further.

3.0 CONCLUSIONS

Overall therefore it is concluded that based on the revised analysis reflecting Gloucestershire County Council's preferred approach there remains no material or severe traffic impacts associated with the proposed development.

TRAFFIC FLOW DIAGRAMS



Woolstone Centre
1-2 Mill Lane
Woolstone
Milton Keynes
MK15 0AJ

Drawing
2019 AM Peak (0745-0845) Observed Flows (PCUS)

Project
Hempsted Lane, Gloucester

Client
Gladman Developments Limited

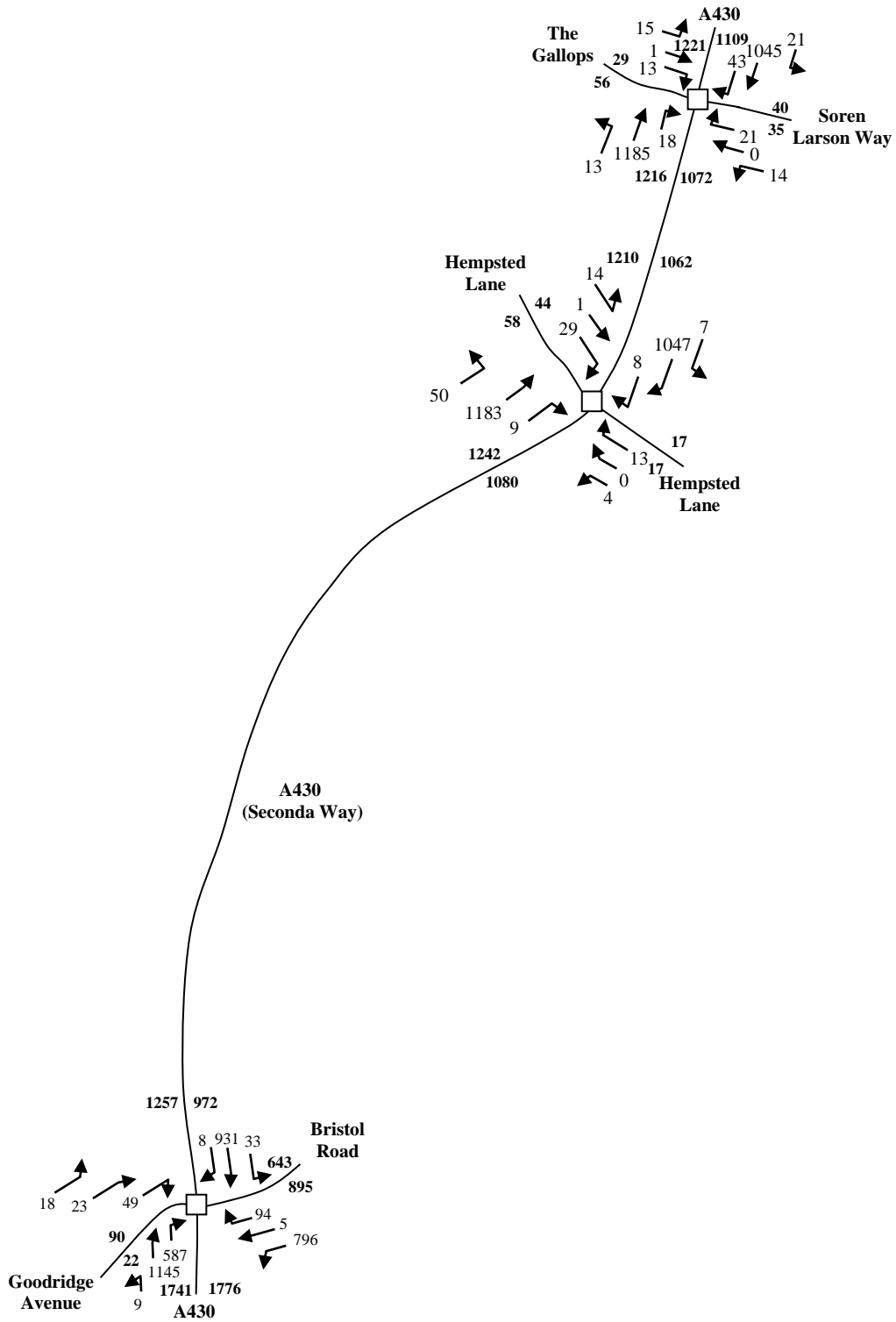
Drawn
HC

Scale
NTS

Figure No
3

Checked
NW

Date
Oct 2019



Woolstone Centre
1-2 Mill Lane
Woolstone
Milton Keynes
MK15 0AJ

Drawing
2019 PM Peak (1700-1800) Observed Flows (PCUS)

Figure No
4

Project
Hempsted Lane, Gloucester

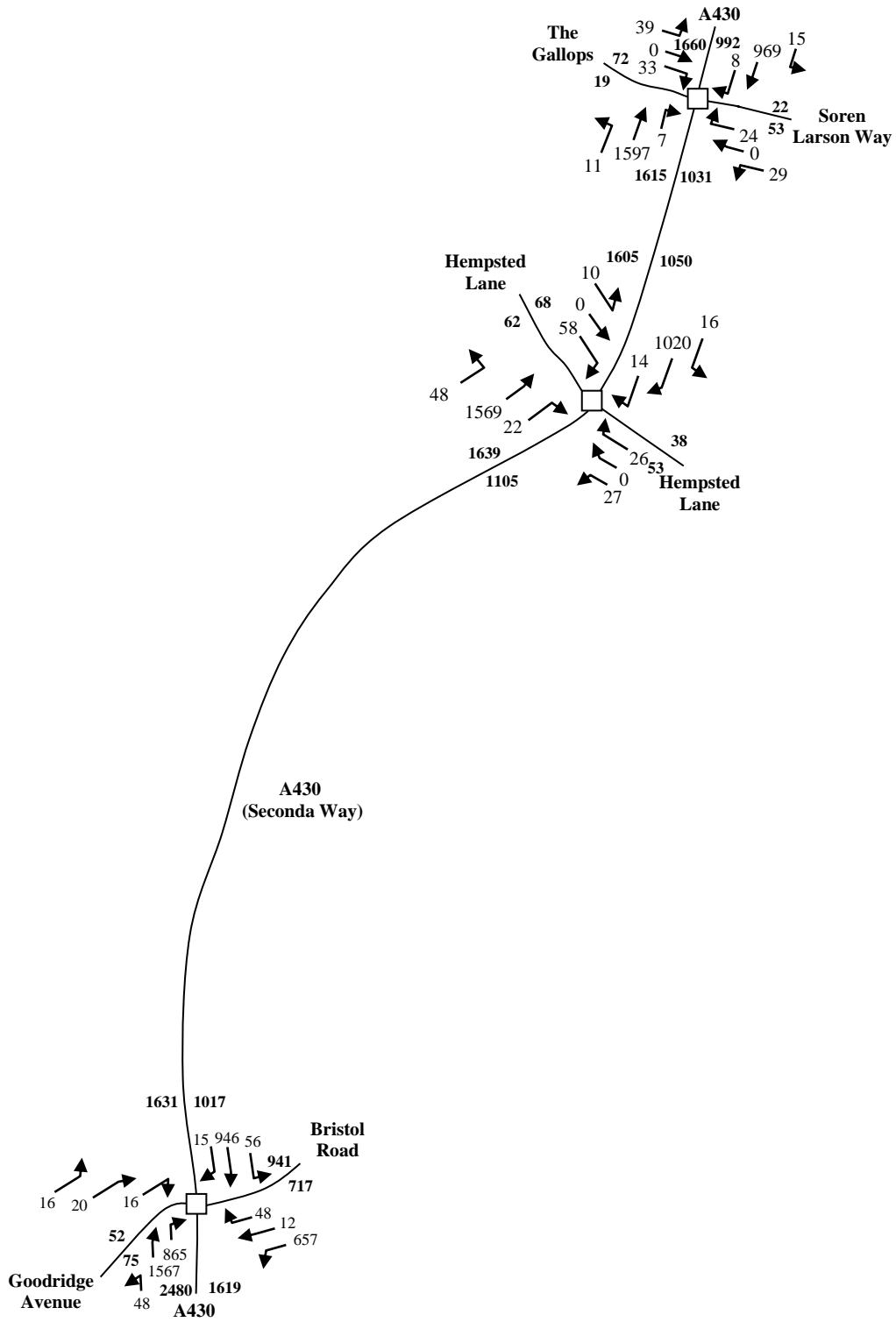
Drawn
HC

Checked
NW

Client
Gladman Developments Limited

Scale
NTS

Date
Oct 2019



Woolstone Centre
1-2 Mill Lane
Woolstone
Milton Keynes
MK15 0AJ

Drawing
2031 AM Peak Flows Without Development

Project
Hempsted Lane, Gloucester

Client
Gladman Developments Limited

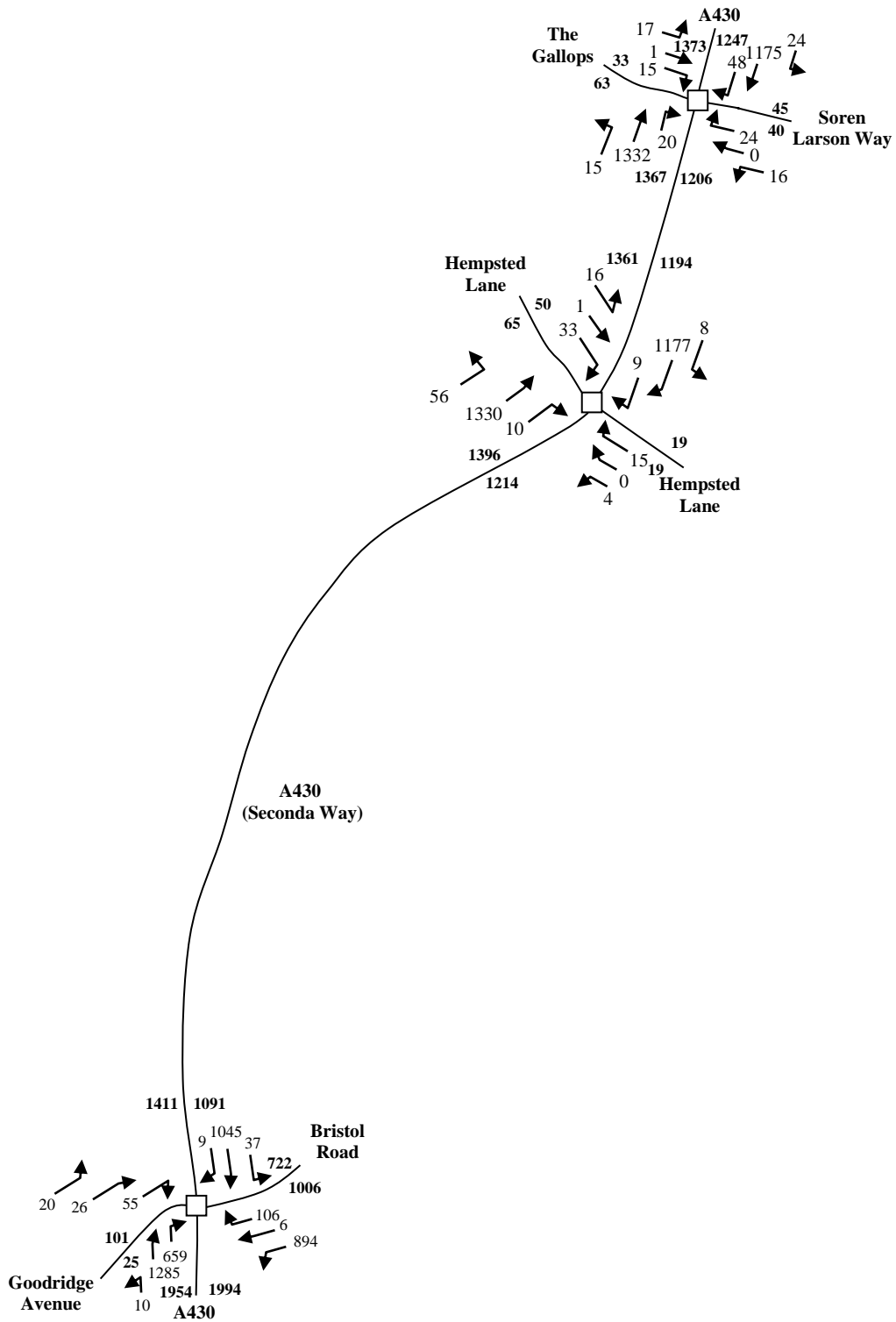
Drawn
HC

Scale
NTS

Figure No
5a

Checked
NW

Date
June 2022



Woolstone Centre
1-2 Mill Lane
Woolstone
Milton Keynes
MK15 0AJ

Drawing
2031 PM Peak Flows Without Development

Project
Hempsted Lane, Gloucester

Client
Gladman Developments Limited

Drawn
HC

Scale
NTS

Figure No
6a

Checked
NW

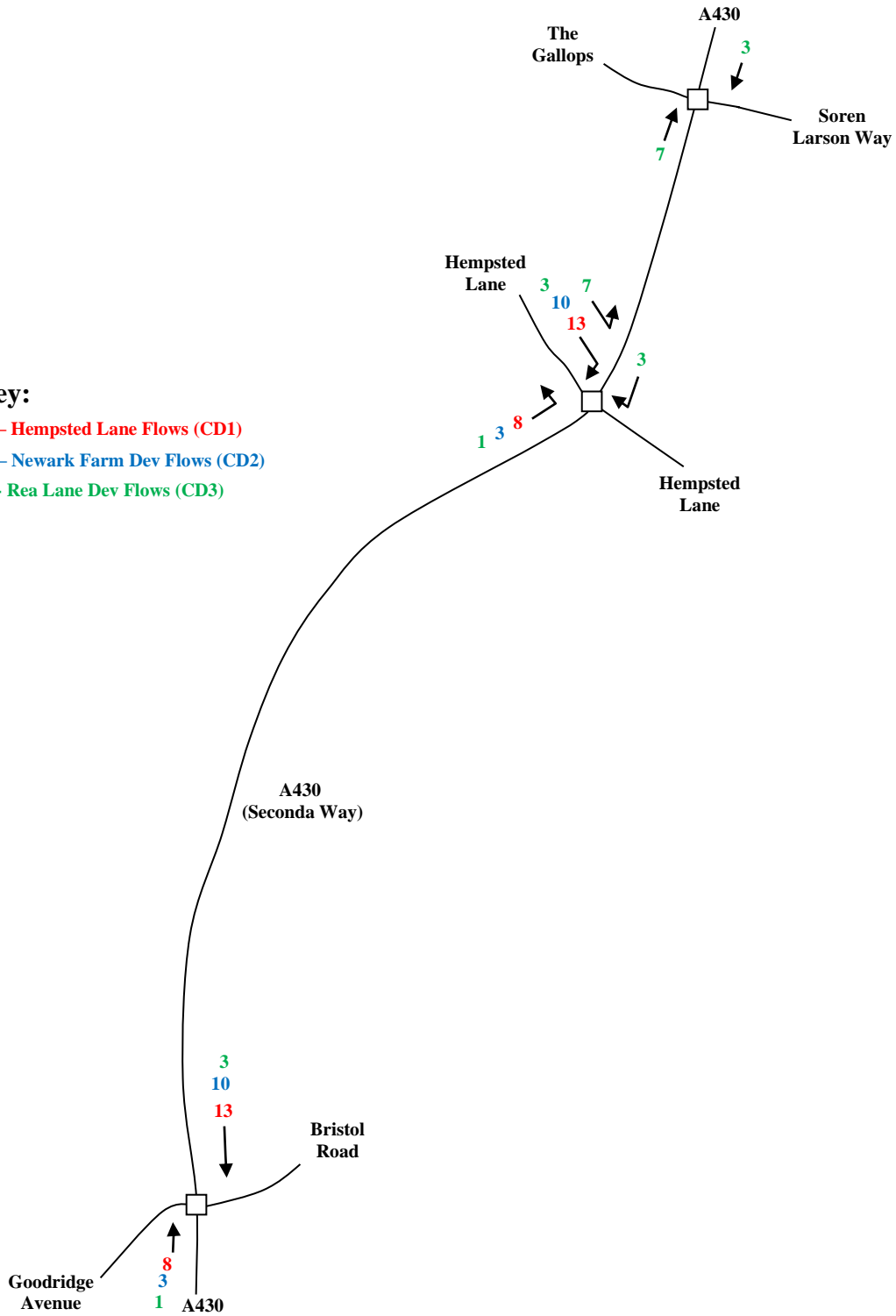
Date
June 2022

Key:

11 – Hempsted Lane Flows (CD1)

11 – Newark Farm Dev Flows (CD2)

11 - Rea Lane Dev Flows (CD3)



Woolstone Centre
1-2 Mill Lane
Woolstone
Milton Keynes
MK15 0AJ

Drawing
AM Committed Developments (CD1-CD3)

Project
Hempsted Lane, Gloucester

Client
Gladman Developments Ltd

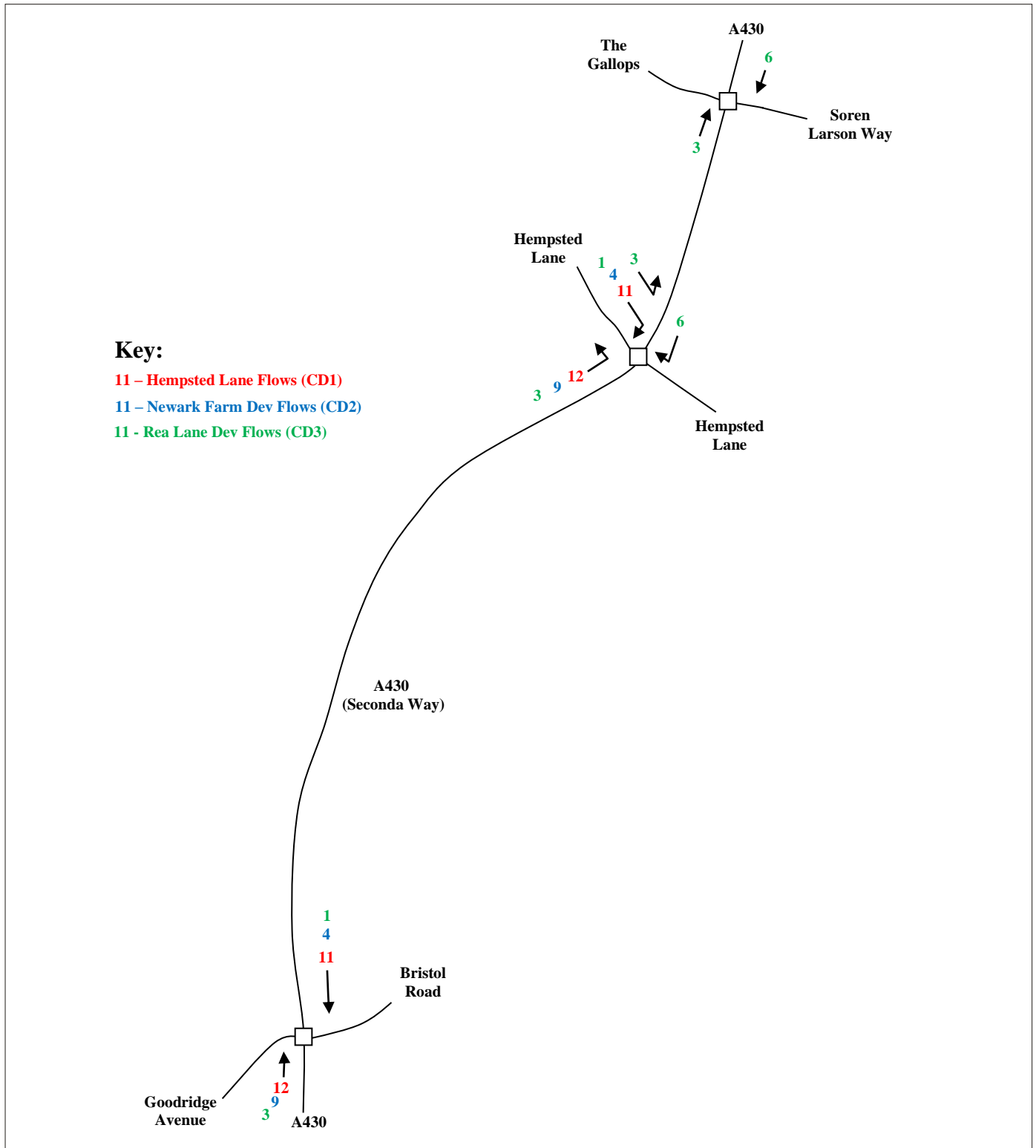
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HC

Scale
NTS

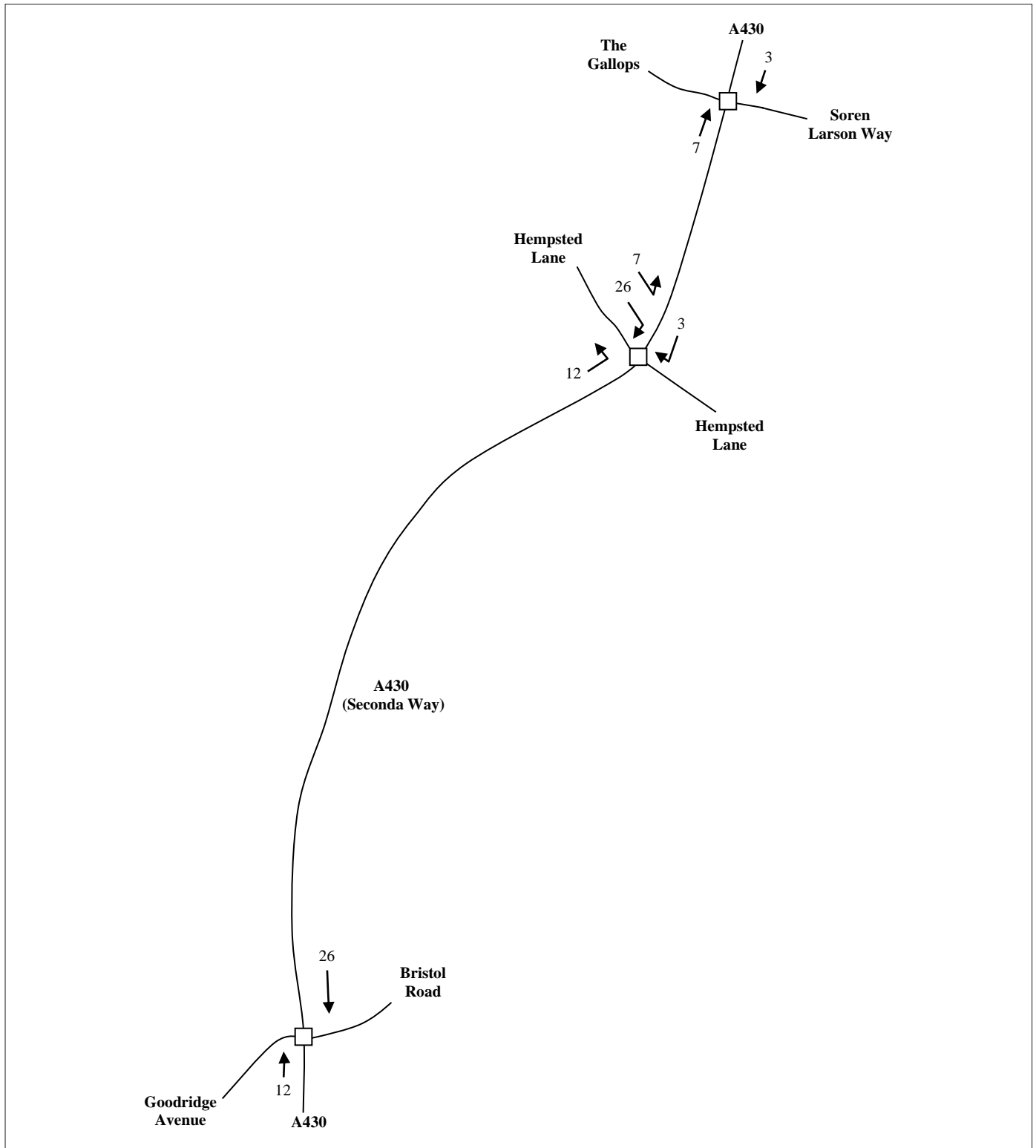
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7


Checked
NW

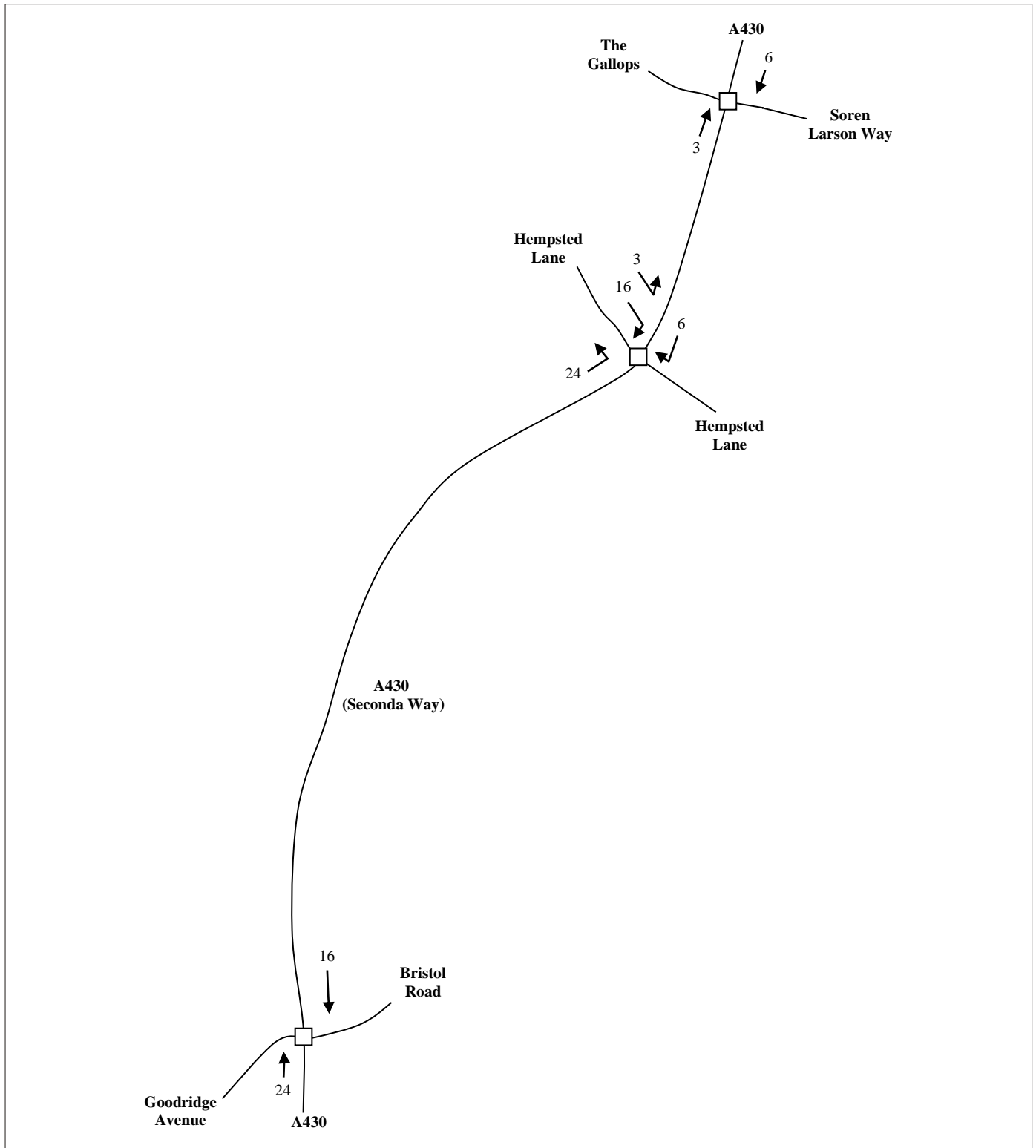
Date
Oct 2019



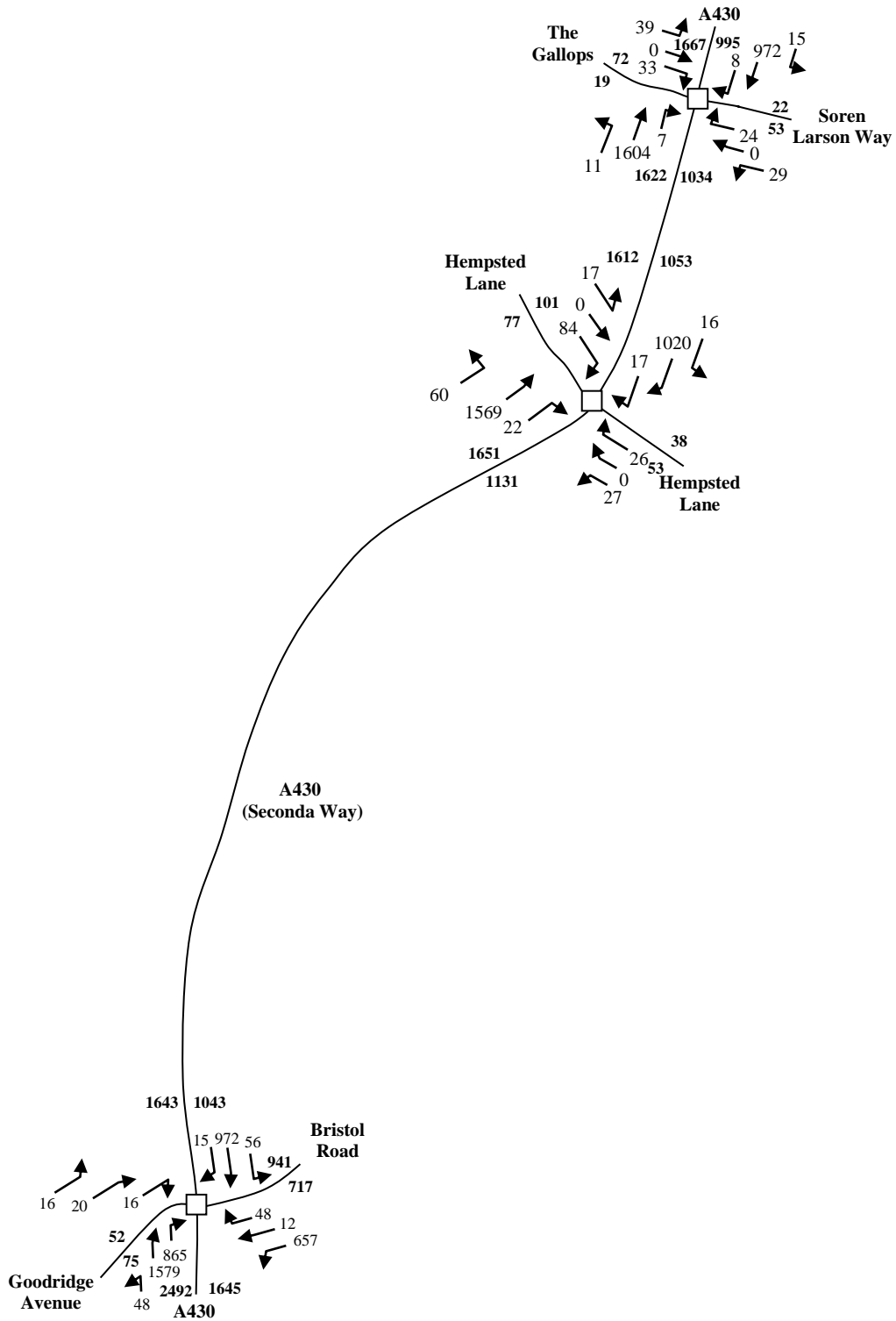
 Woolstone Centre 1-2 Mill Lane Woolstone Milton Keynes MK15 0AJ	Drawing PM Committed Developments (CD1-CD3)		Figure No 8
	Project Hempsted Lane, Gloucester	Drawn HC	Checked NW
	Client Gladman Developments Ltd	Scale NTS	Date Oct 2019



 Woolstone Centre 1-2 Mill Lane Woolstone Milton Keynes MK15 0AJ	Drawing AM Total Committed Development Flows		Figure No 9
	Project Hempsted Lane, Gloucester	Drawn HC	Checked NW
	Client Gladman Developments Ltd	Scale NTS	Date Oct 2019



 Woolstone Centre 1-2 Mill Lane Woolstone Milton Keynes MK15 0AJ	Drawing PM Total Committed Development Flows		Figure No 10
	Project Hempsted Lane, Gloucester	Drawn HC	Checked NW
	Client Gladman Developments Ltd	Scale NTS	Date Oct 2019



Woolstone Centre
1-2 Mill Lane
Woolstone
Milton Keynes
MK15 0AJ

Drawing
2031 AM Peak Flows With Committed Development (CD)

Figure No
11a

Project
Hempsted Lane, Gloucester

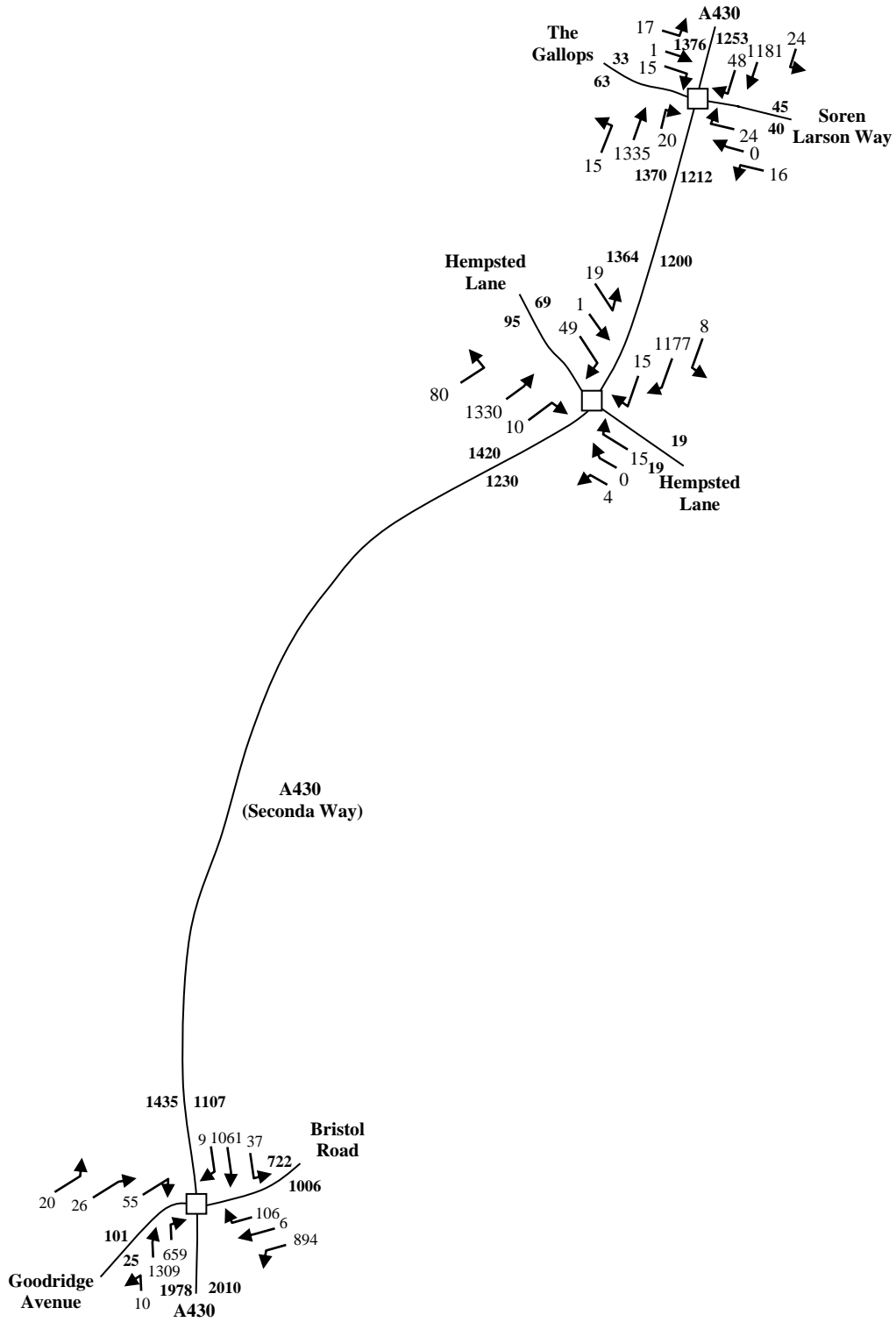
Drawn
HC

Checked
NW

Client
Gladman Developments Limited

Scale
NTS

Date
June 2022



Woolstone Centre
1-2 Mill Lane
Woolstone
Milton Keynes
MK15 0AJ

Drawing
2031 PM Peak Flows With Committed Development (CD)

Project
Hempsted Lane, Gloucester

Client
Gladman Developments Limited

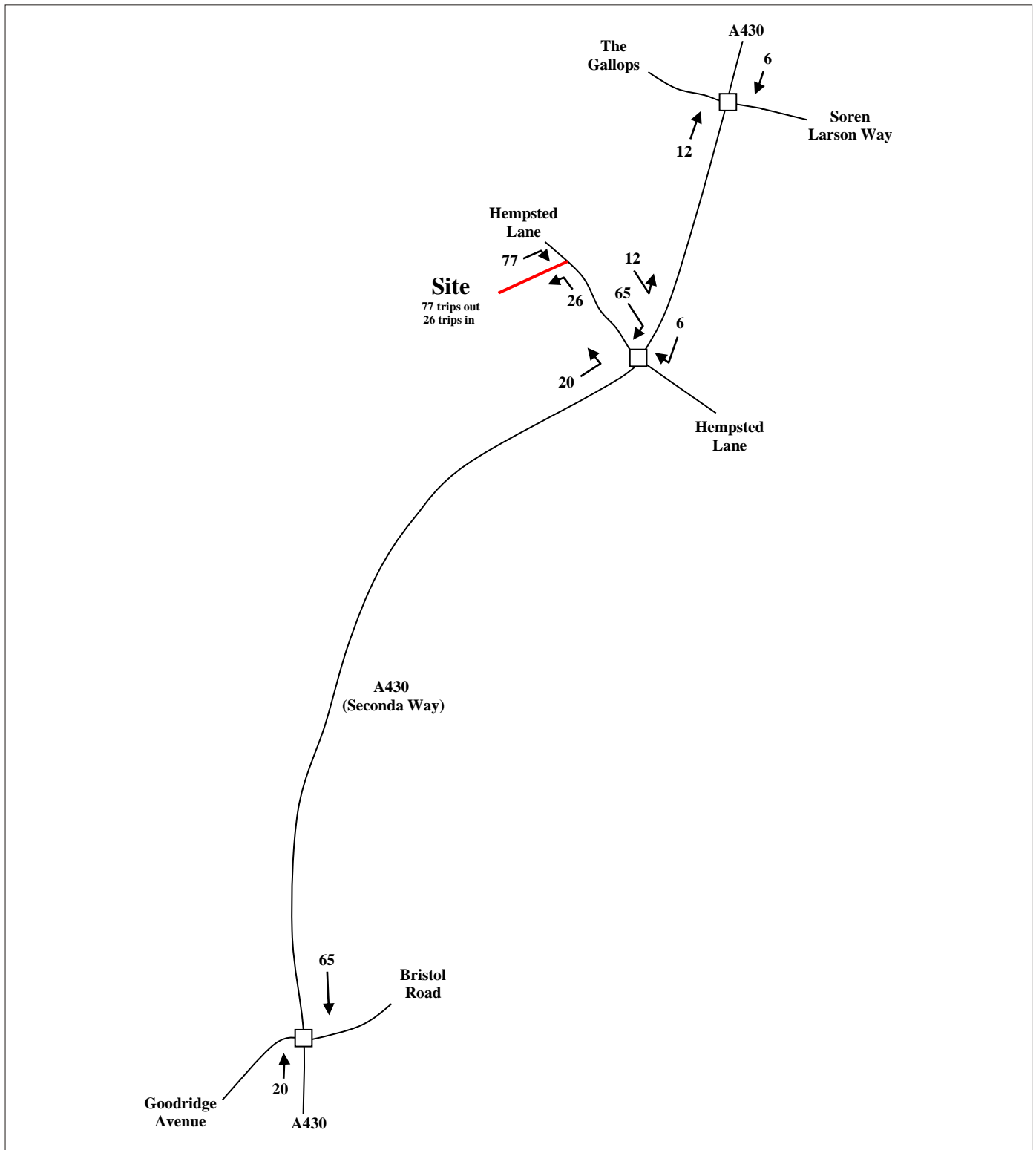
Drawn
HC


Scale
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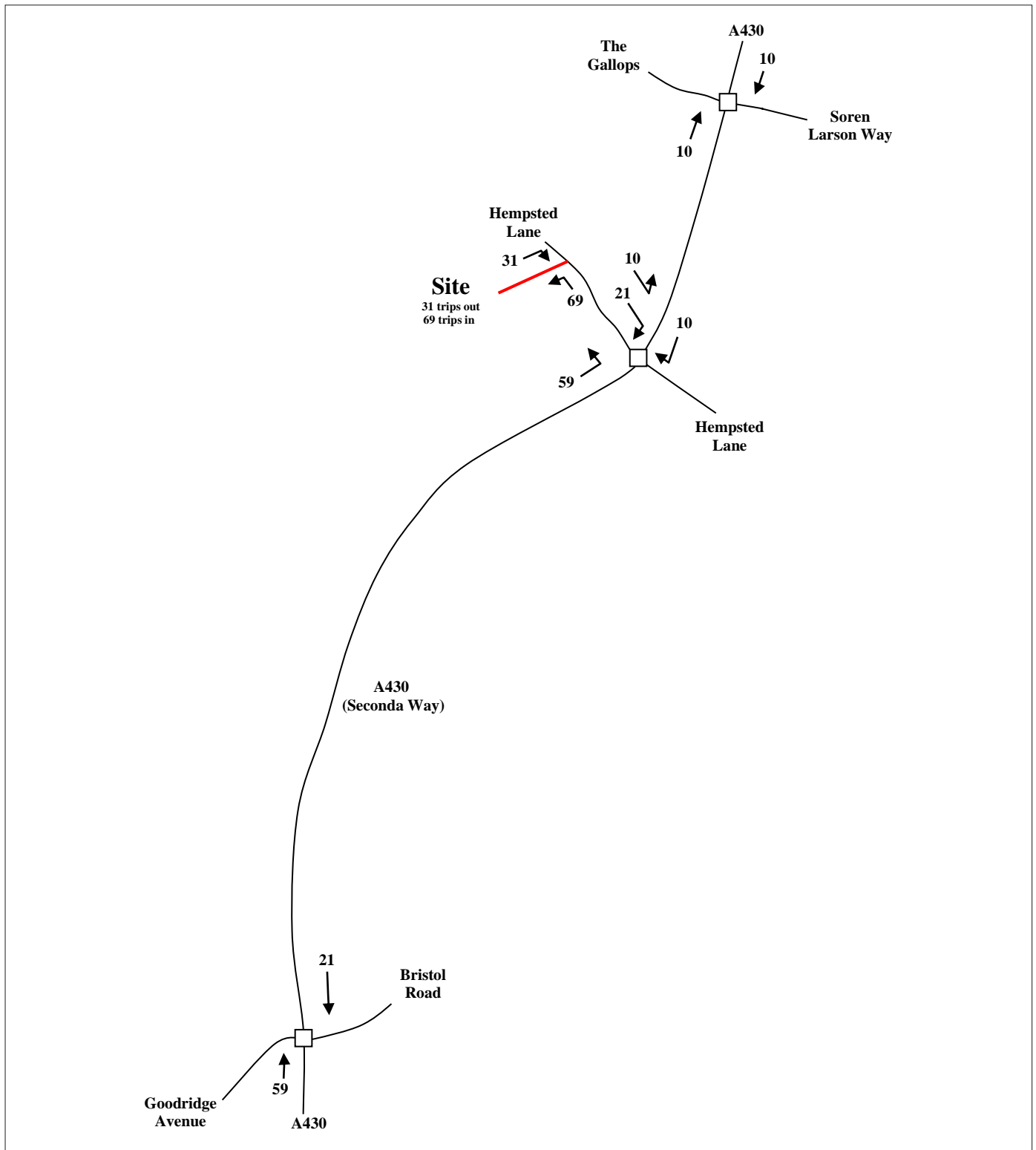
Figure No
12a


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NW

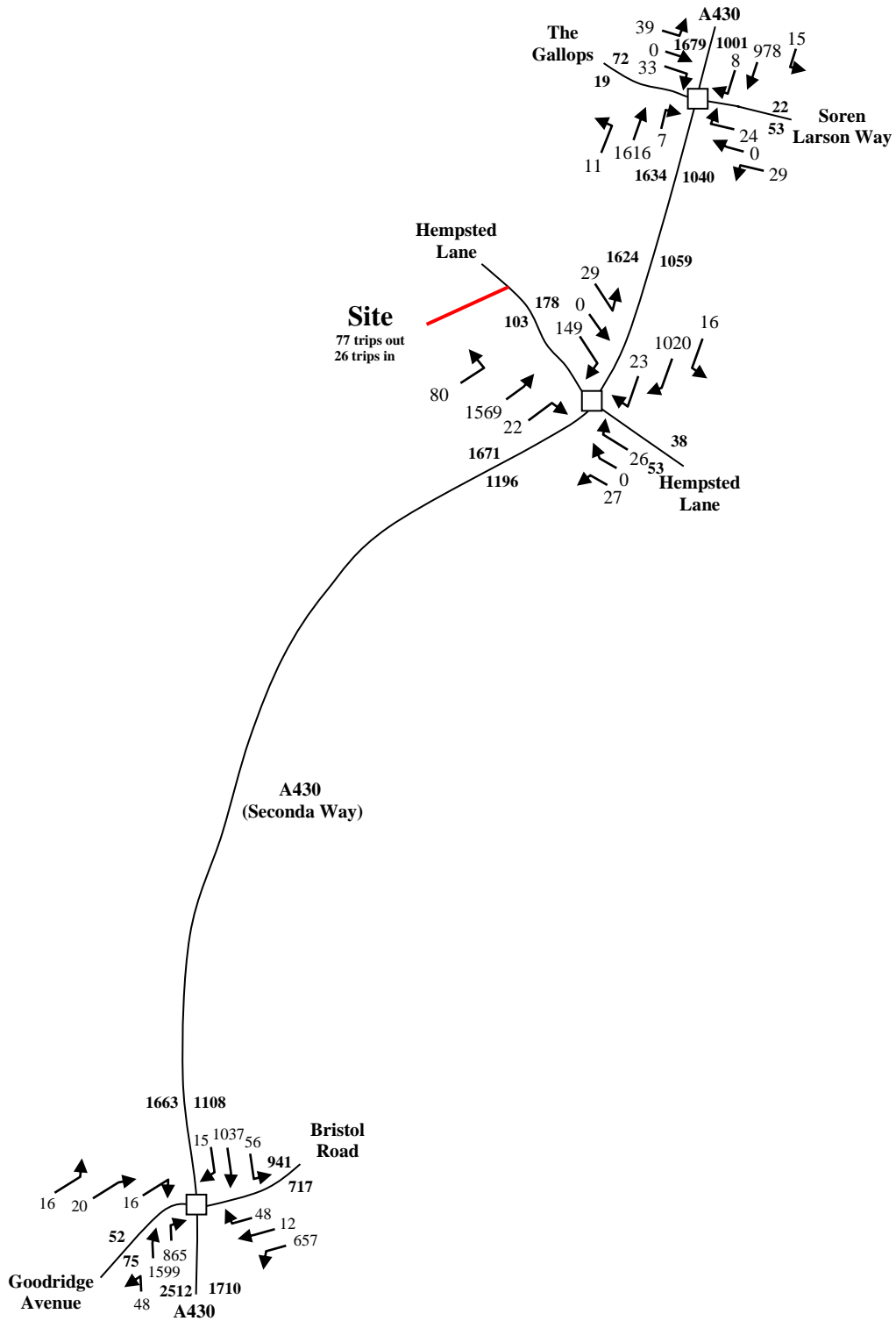
Date
June 2022



 Woolstone Centre 1-2 Mill Lane Woolstone Milton Keynes MK15 0AJ	Drawing AM Proposed Development Flows		Figure No 15
	Project Hempsted Lane, Gloucester	Drawn HC	Checked NW
	Client Gladman Developments Limited	Scale NTS	Date June 2022



 Woolstone Centre 1-2 Mill Lane Woolstone Milton Keynes MK15 0AJ	Drawing PM Proposed Development Flows		Figure No 16
	Project Hempsted Lane, Gloucester	Drawn HC	Checked NW
	Client Gladman Developments Limited	Scale NTS	Date June 2022



Woolstone Centre
1-2 Mill Lane
Woolstone
Milton Keynes
MK15 0AJ

Drawing
2031 AM Peak Flows With CD + Proposed Development

Figure No
17a

Project
Hempsted Lane, Gloucester

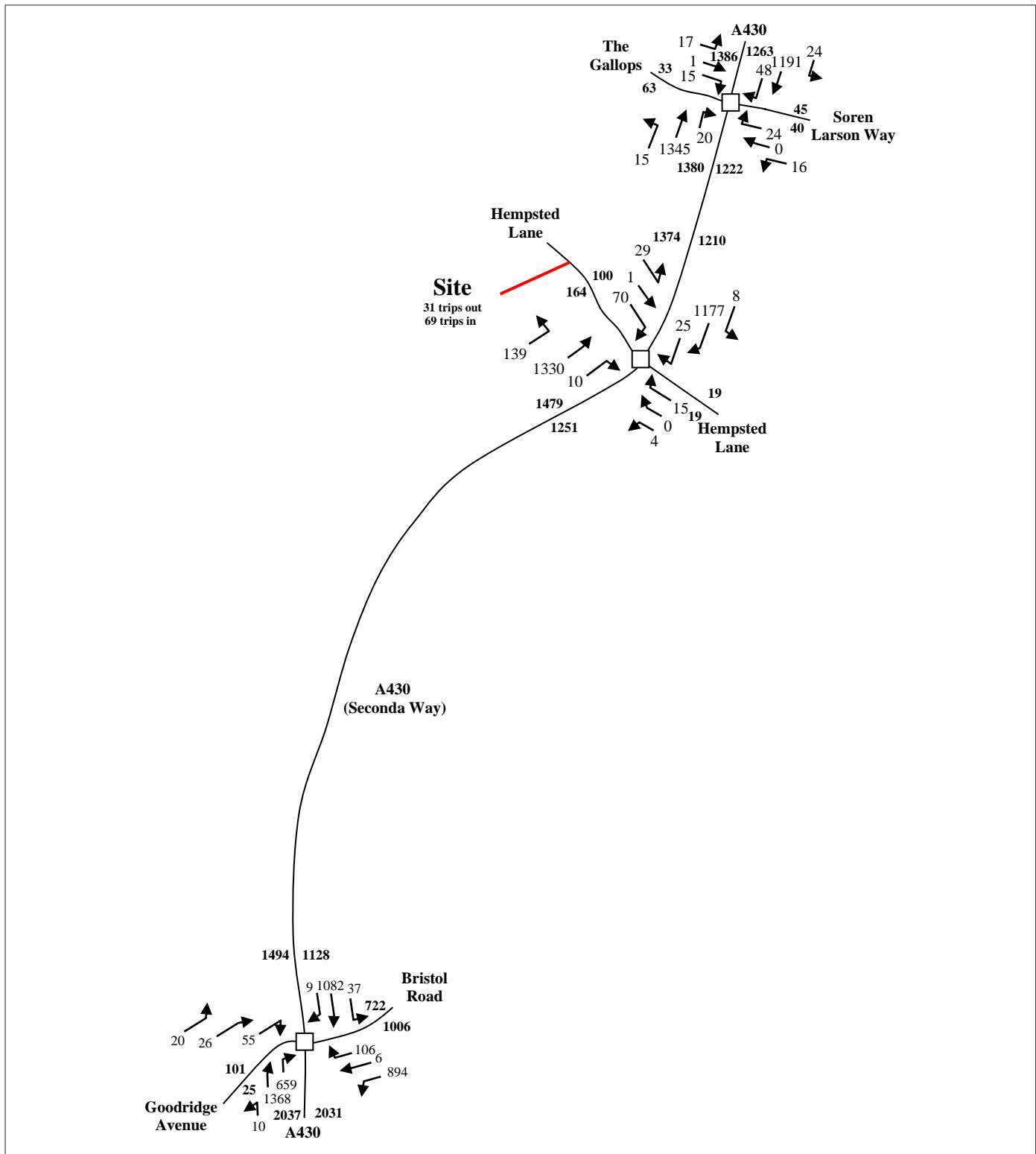
Drawn
HC


Checked
NW

Client
Gladman Developments Limited

Scale
NTS

Date
June 2022



 Woolstone Centre 1-2 Mill Lane Woolstone Milton Keynes MK15 0AJ	Drawing 2031 PM Peak Flows With CD + Proposed Development		Figure No 18a
	Project Hempsted Lane, Gloucester	Drawn HC	Checked NW
	Client Gladman Developments Limited	Scale NTS	Date June 2022

APPENDIX 1
TEMPRO FACTORS

GROWTH FACTORS FOR HEMPSTED, GLOUCESTER

Parameters

Software	TEMPRO 7.2b
Dataset:	NTEM 7.2
Geog Area:	Gloucester 004
Area/Road Type:	All
NTM Model	2018 RTF

From	To	AM	PM
2019	2031	1.1342	1.1241

GROWTH FACTORS FOR A430/BRISTOL RD JUNCTION & AIR QUALITY SITES

Parameters

Software	TEMPRO 7.2b
Dataset:	NTEM 7.2
Geog Area:	Gloucester (auth)
Area/Road Type:	All
NTM Model	2018 RTF

From	To	AM	PM
2019	2031	1.1267	1.1227

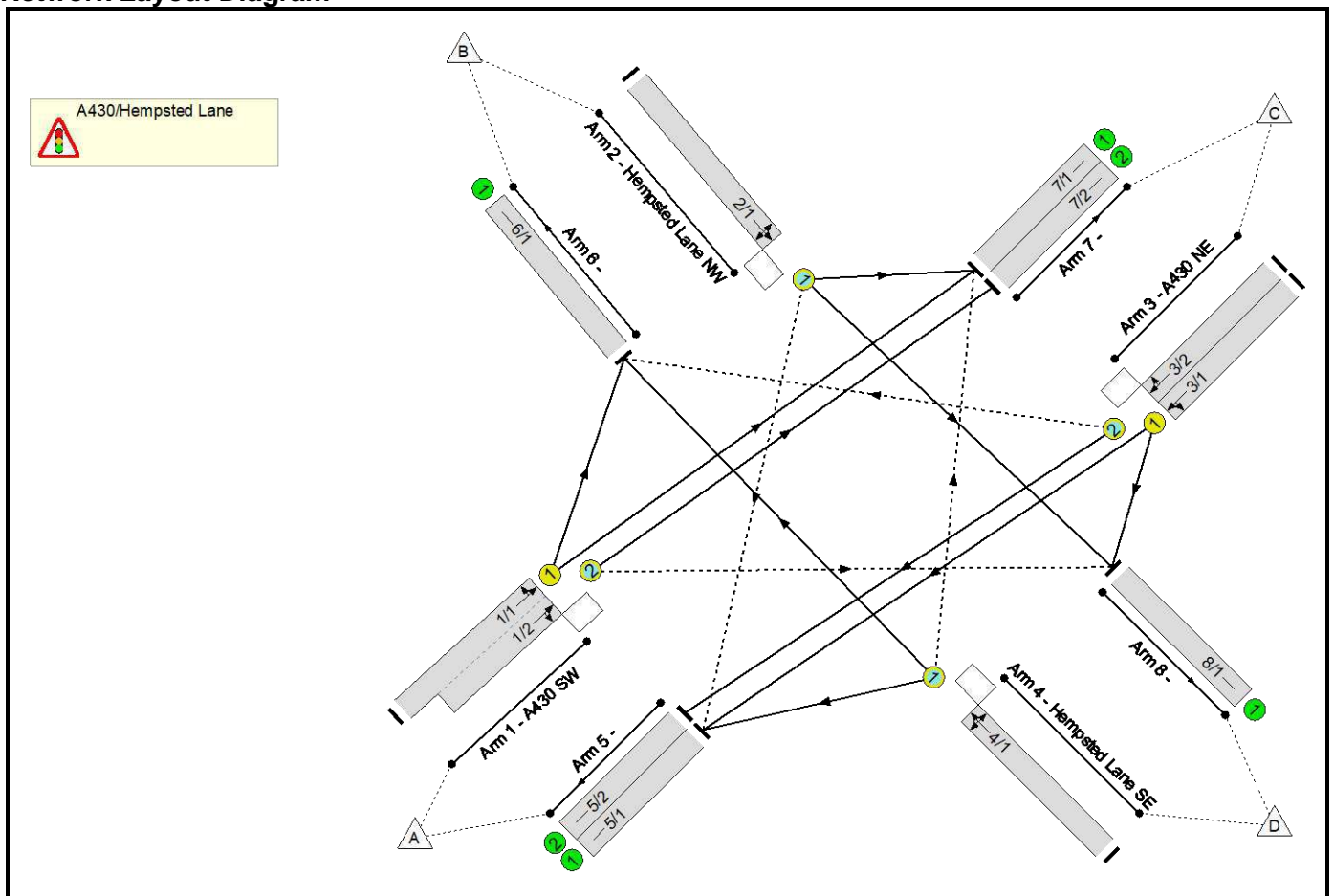
APPENDIX 2
JUNCTION CAPACITY OUTPUT

Full Input Data And Results
Full Input Data And Results

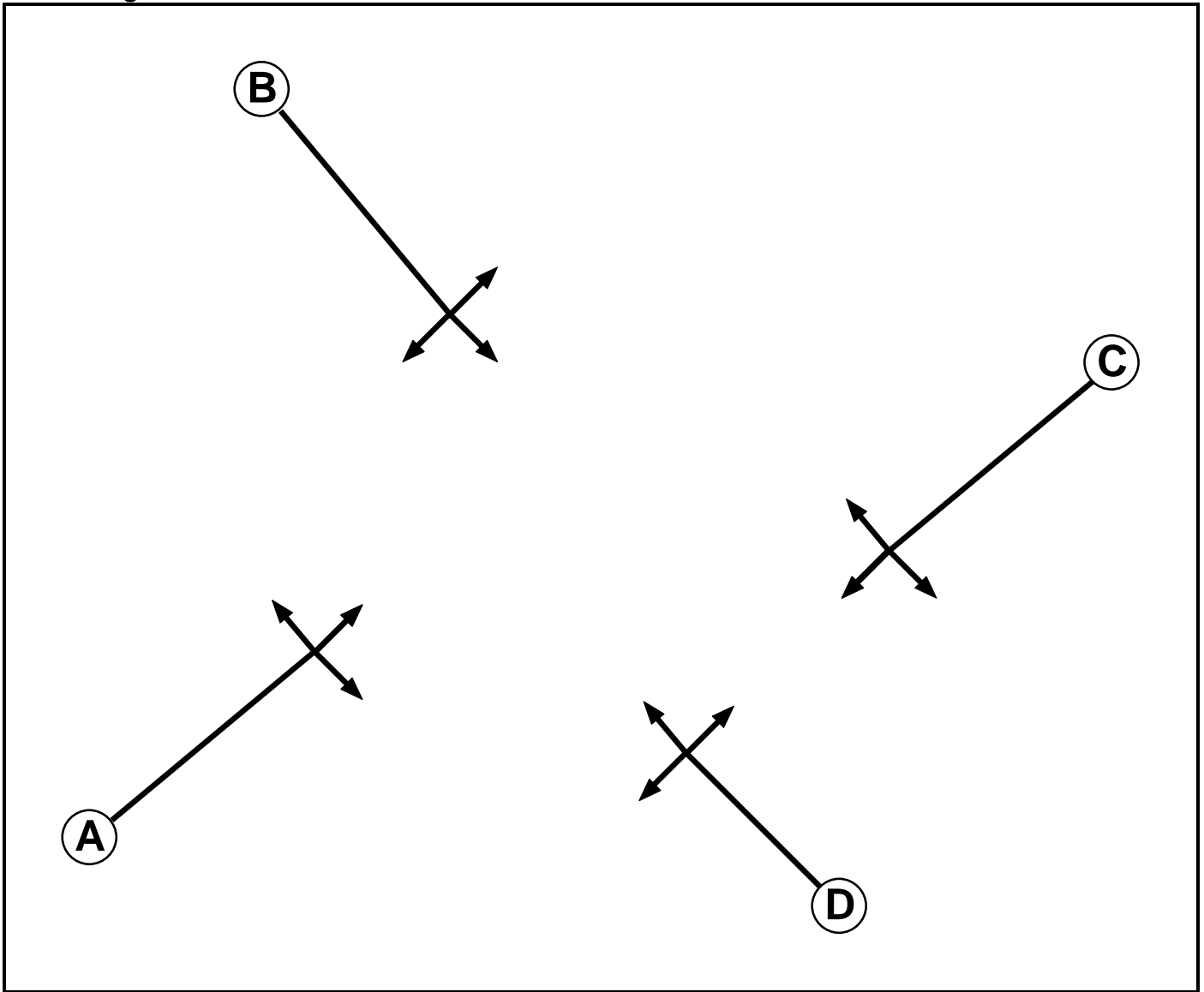
User and Project Details

Project:	Hempsted Lane, Gloucester
Title:	J1 - A430/Hempsted Lane
Location:	
Additional detail:	
File name:	j1 a430_hempsted lane (A430 SW flare) 2031.lsg3x
Author:	HC
Company:	SMT
Address:	

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7

Full Input Data And Results

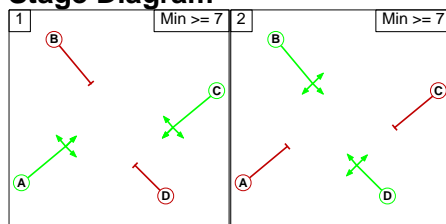
Phase Intergrens Matrix

		Starting Phase			
		A	B	C	D
Terminating Phase	A	7	-	5	
	B	5	5	-	
	C	-	6	7	
	D	5	-	5	

Phases in Stage

Stage No.	Phases in Stage
1	A C
2	B D

Stage Diagram



Phase Delays

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

Prohibited Stage Change

		To Stage	
		1	2
From Stage	1	7	
	2	5	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A430/Hempsted Lane											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/2 (A430 SW)	8/1 (Right)	1439	0	3/1	1.09	All	2.00	2.00	0.50	2	2.00
				3/2	1.09	To 5/2 (Ahead)					
2/1 (Hempsted Lane NW)	5/1 (Right)	1439	0	4/1	1.09	To 5/1 (Left) To 6/1 (Ahead)	2.00	2.00	0.50	2	2.00
3/2 (A430 NE)	6/1 (Right)	1439	0	1/1	1.09	All	2.00	2.00	0.50	2	2.00
				1/2	1.09	To 7/2 (Ahead)					
4/1 (Hempsted Lane SE)	7/1 (Right)	1439	0	2/1	1.09	To 7/1 (Left) To 8/1 (Ahead)	2.00	2.00	0.50	2	2.00

Full Input Data And Results

Lane Input Data

Junction: A430/Hempsted Lane												
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 (A430 SW)	U	A	2	3	34.8	Geom	-	3.30	0.00	Y	Arm 6 Left	15.00
											Arm 7 Ahead	Inf
1/2 (A430 SW)	O	A	2	3	24.3	Geom	-	3.30	0.00	N	Arm 7 Ahead	Inf
											Arm 8 Right	11.00
											Arm 5 Right	17.00
2/1 (Hempsted Lane NW)	O	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 7 Left	14.00
											Arm 8 Ahead	Inf
3/1 (A430 NE)	U	C	2	3	60.0	Geom	-	3.30	0.00	Y	Arm 5 Ahead	Inf
											Arm 8 Left	15.00
3/2 (A430 NE)	O	C	2	3	60.0	Geom	-	3.30	0.00	N	Arm 5 Ahead	Inf
											Arm 6 Right	12.00
4/1 (Hempsted Lane SE)	O	D	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Left	14.00
											Arm 6 Ahead	Inf
											Arm 7 Right	17.00
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/2	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/2	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2019 AM'	08:00	09:00	01:00	
2: '2019 PM'	17:00	18:00	01:00	
3: '2031 AM without dev'	08:00	09:00	01:00	F1*1.1342
4: '2031 PM without dev'	17:00	18:00	01:00	F2*1.1241
7: '2031 AM with com dev'	08:00	09:00	01:00	F3+F5
8: '2031 PM with com dev'	17:00	18:00	01:00	F4+F6
11: '2031 AM with CD + prop dev'	08:00	09:00	01:00	F7+F9
12: '2031 PM with CD + prop dev'	08:00	09:00	01:00	F8+F10

Scenario 1: '2019 AM' (FG1: '2019 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	42	1383	19	1444
	B	51	0	9	0	60
	C	899	12	0	14	925
	D	24	0	23	0	47
	Tot.	974	54	1415	33	2476

Traffic Lane Flows

Lane	Scenario 1: 2019 AM
Junction: A430/Hempsted Lane	
1/1 (with short)	1444(In) 696(Out)
1/2 (short)	748
2/1	60
3/1	431
3/2	494
4/1	47
5/1	492
5/2	482
6/1	54
7/1	686
7/2	729
8/1	33

Full Input Data And Results

Lane Saturation Flows

Junction: A430/Hempsted Lane								
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 (A430 SW)	3.30	0.00	Y	Arm 6 Left	15.00	6.0 %	1933	1933
				Arm 7 Ahead	Inf	94.0 %		
1/2 (A430 SW)	3.30	0.00	N	Arm 7 Ahead	Inf	97.5 %	2078	2078
				Arm 8 Right	11.00	2.5 %		
2/1 (Hempsted Lane NW)	3.00	0.00	Y	Arm 5 Right	17.00	85.0 %	1755	1755
				Arm 7 Left	14.00	15.0 %		
				Arm 8 Ahead	Inf	0.0 %		
3/1 (A430 NE)	3.30	0.00	Y	Arm 5 Ahead	Inf	96.8 %	1939	1939
				Arm 8 Left	15.00	3.2 %		
3/2 (A430 NE)	3.30	0.00	N	Arm 5 Ahead	Inf	97.6 %	2079	2079
				Arm 6 Right	12.00	2.4 %		
4/1 (Hempsted Lane SE)	3.50	0.00	Y	Arm 5 Left	14.00	51.1 %	1790	1790
				Arm 6 Ahead	Inf	0.0 %		
				Arm 7 Right	17.00	48.9 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
7/2	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2019 PM' (FG2: '2019 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					Tot.
	A	B	C	D		
Origin	A	0	50	1183	9	1242
	B	29	0	14	1	44
	C	1047	8	0	7	1062
	D	4	0	13	0	17
	Tot.	1080	58	1210	17	2365

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2019 PM
Junction: A430/Hempsted Lane	
1/1 (with short)	1242(In) 597(Out)
1/2 (short)	645
2/1	44
3/1	498
3/2	564
4/1	17
5/1	524
5/2	556
6/1	58
7/1	574
7/2	636
8/1	17

Lane Saturation Flows

Junction: A430/Hempsted Lane									
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 (A430 SW)	3.30	0.00	Y	Arm 6 Left Arm 7 Ahead	15.00 Inf	8.4 % 91.6 %	1929	1929	
1/2 (A430 SW)	3.30	0.00	N	Arm 7 Ahead	Inf	98.6 %	2081	2081	
2/1 (Hempsted Lane NW)	3.00	0.00	Y	Arm 8 Right Arm 5 Right Arm 7 Left Arm 8 Ahead	11.00 17.00 14.00 Inf	1.4 % 65.9 % 31.8 % 2.3 %			1753
3/1 (A430 NE)	3.30	0.00	Y	Arm 5 Ahead Arm 8 Left	Inf 15.00	98.6 % 1.4 %	1942	1942	
3/2 (A430 NE)	3.30	0.00	N	Arm 5 Ahead	Inf	98.6 %	2081	2081	
4/1 (Hempsted Lane SE)	3.50	0.00	Y	Arm 6 Right Arm 5 Left Arm 6 Ahead Arm 7 Right	12.00 14.00 Inf 17.00	1.4 % 23.5 % 0.0 % 76.5 %			1798
5/1	Infinite Saturation Flow							Inf	Inf
5/2	Infinite Saturation Flow							Inf	Inf
6/1	Infinite Saturation Flow							Inf	Inf
7/1	Infinite Saturation Flow							Inf	Inf
7/2	Infinite Saturation Flow							Inf	Inf
8/1	Infinite Saturation Flow							Inf	Inf

Full Input Data And Results

Scenario 3: '2031 AM without dev' (FG3: '2031 AM without dev', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	48	1569	22	1639
	B	58	0	10	0	68
	C	1020	14	0	16	1050
	D	27	0	26	0	53
	Tot.	1105	62	1605	38	2810

Traffic Lane Flows

Lane	Scenario 3: 2031 AM without dev
Junction: A430/Hempsted Lane	
1/1 (with short)	1639(In) 790(Out)
1/2 (short)	849
2/1	68
3/1	492
3/2	558
4/1	53
5/1	561
5/2	544
6/1	62
7/1	778
7/2	827
8/1	38

Full Input Data And Results

Lane Saturation Flows

Junction: A430/Hempsted Lane								
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 (A430 SW)	3.30	0.00	Y	Arm 6 Left	15.00	6.1 %	1933	1933
				Arm 7 Ahead	Inf	93.9 %		
1/2 (A430 SW)	3.30	0.00	N	Arm 7 Ahead	Inf	97.4 %	2078	2078
				Arm 8 Right	11.00	2.6 %		
2/1 (Hempsted Lane NW)	3.00	0.00	Y	Arm 5 Right	17.00	85.3 %	1755	1755
				Arm 7 Left	14.00	14.7 %		
				Arm 8 Ahead	Inf	0.0 %		
3/1 (A430 NE)	3.30	0.00	Y	Arm 5 Ahead	Inf	96.7 %	1939	1939
				Arm 8 Left	15.00	3.3 %		
3/2 (A430 NE)	3.30	0.00	N	Arm 5 Ahead	Inf	97.5 %	2078	2078
				Arm 6 Right	12.00	2.5 %		
4/1 (Hempsted Lane SE)	3.50	0.00	Y	Arm 5 Left	14.00	50.9 %	1790	1790
				Arm 6 Ahead	Inf	0.0 %		
				Arm 7 Right	17.00	49.1 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
7/2	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2031 PM without dev' (FG4: '2031 PM without dev', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					Tot.
	A	B	C	D		
Origin	A	0	56	1330	10	1396
	B	33	0	16	1	50
	C	1177	9	0	8	1194
	D	4	0	15	0	19
	Tot.	1214	65	1361	19	2659

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: 2031 PM without dev
Junction: A430/Hempsted Lane	
1/1 (with short)	1396(In) 672(Out)
1/2 (short)	724
2/1	50
3/1	562
3/2	632
4/1	19
5/1	591
5/2	623
6/1	65
7/1	647
7/2	714
8/1	19

Lane Saturation Flows

Junction: A430/Hempsted Lane								
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 (A430 SW)	3.30	0.00	Y	Arm 6 Left	15.00	8.3 %	1929	1929
				Arm 7 Ahead	Inf	91.7 %		
1/2 (A430 SW)	3.30	0.00	N	Arm 7 Ahead	Inf	98.6 %	2081	2081
				Arm 8 Right	11.00	1.4 %		
2/1 (Hempsted Lane NW)	3.00	0.00	Y	Arm 5 Right	17.00	66.0 %	1753	1753
				Arm 7 Left	14.00	32.0 %		
				Arm 8 Ahead	Inf	2.0 %		
3/1 (A430 NE)	3.30	0.00	Y	Arm 5 Ahead	Inf	98.6 %	1942	1942
				Arm 8 Left	15.00	1.4 %		
3/2 (A430 NE)	3.30	0.00	N	Arm 5 Ahead	Inf	98.6 %	2081	2081
				Arm 6 Right	12.00	1.4 %		
4/1 (Hempsted Lane SE)	3.50	0.00	Y	Arm 5 Left	14.00	21.1 %	1799	1799
				Arm 6 Ahead	Inf	0.0 %		
				Arm 7 Right	17.00	78.9 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
7/2	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 5: '2031 AM with com dev' (FG7: '2031 AM with com dev', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	60	1569	22	1651
	B	84	0	17	0	101
	C	1020	17	0	16	1053
	D	27	0	26	0	53
	Tot.	1131	77	1612	38	2858

Traffic Lane Flows

Lane	Scenario 5: 2031 AM with com dev
Junction: A430/Hempsted Lane	
1/1 (with short)	1651(In) 795(Out)
1/2 (short)	856
2/1	101
3/1	494
3/2	559
4/1	53
5/1	589
5/2	542
6/1	77
7/1	778
7/2	834
8/1	38

Full Input Data And Results

Lane Saturation Flows

Junction: A430/Hempsted Lane								
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 (A430 SW)	3.30	0.00	Y	Arm 6 Left	15.00	7.5 %	1930	1930
				Arm 7 Ahead	Inf	92.5 %		
1/2 (A430 SW)	3.30	0.00	N	Arm 7 Ahead	Inf	97.4 %	2078	2078
				Arm 8 Right	11.00	2.6 %		
2/1 (Hempsted Lane NW)	3.00	0.00	Y	Arm 5 Right	17.00	83.2 %	1755	1755
				Arm 7 Left	14.00	16.8 %		
				Arm 8 Ahead	Inf	0.0 %		
3/1 (A430 NE)	3.30	0.00	Y	Arm 5 Ahead	Inf	96.8 %	1939	1939
				Arm 8 Left	15.00	3.2 %		
3/2 (A430 NE)	3.30	0.00	N	Arm 5 Ahead	Inf	97.0 %	2077	2077
				Arm 6 Right	12.00	3.0 %		
4/1 (Hempsted Lane SE)	3.50	0.00	Y	Arm 5 Left	14.00	50.9 %	1790	1790
				Arm 6 Ahead	Inf	0.0 %		
				Arm 7 Right	17.00	49.1 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
7/2	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 6: '2031 PM with com dev' (FG8: '2031 PM with com dev', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
	A	B	C	D	Tot.	
Origin	A	0	80	1330	10	1420
B	49	0	19	1	69	
C	1177	15	0	8	1200	
D	4	0	15	0	19	
Tot.	1230	95	1364	19	2708	

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: 2031 PM with com dev
Junction: A430/Hempsted Lane	
1/1 (with short)	1420(In) 682(Out)
1/2 (short)	738
2/1	69
3/1	565
3/2	635
4/1	19
5/1	610
5/2	620
6/1	95
7/1	636
7/2	728
8/1	19

Lane Saturation Flows

Junction: A430/Hempsted Lane								
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 (A430 SW)	3.30	0.00	Y	Arm 6 Left	15.00	11.7 %	1922	1922
				Arm 7 Ahead	Inf	88.3 %		
1/2 (A430 SW)	3.30	0.00	N	Arm 7 Ahead	Inf	98.6 %	2081	2081
				Arm 8 Right	11.00	1.4 %		
2/1 (Hempsted Lane NW)	3.00	0.00	Y	Arm 5 Right	17.00	71.0 %	1753	1753
				Arm 7 Left	14.00	27.5 %		
				Arm 8 Ahead	Inf	1.4 %		
3/1 (A430 NE)	3.30	0.00	Y	Arm 5 Ahead	Inf	98.6 %	1942	1942
				Arm 8 Left	15.00	1.4 %		
3/2 (A430 NE)	3.30	0.00	N	Arm 5 Ahead	Inf	97.6 %	2079	2079
				Arm 6 Right	12.00	2.4 %		
4/1 (Hempsted Lane SE)	3.50	0.00	Y	Arm 5 Left	14.00	21.1 %	1799	1799
				Arm 6 Ahead	Inf	0.0 %		
				Arm 7 Right	17.00	78.9 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
7/2	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 7: '2031 AM with all dev' (FG11: '2031 AM with CD + prop dev', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	80	1569	22	1671
	B	149	0	29	0	178
	C	1020	23	0	16	1059
	D	27	0	26	0	53
	Tot.	1196	103	1624	38	2961

Traffic Lane Flows

Lane	Scenario 7: 2031 AM with all dev
Junction: A430/Hempsted Lane	
1/1 (with short)	1671(In) 804(Out)
1/2 (short)	867
2/1	178
3/1	498
3/2	561
4/1	53
5/1	658
5/2	538
6/1	103
7/1	779
7/2	845
8/1	38

Full Input Data And Results

Lane Saturation Flows

Junction: A430/Hempsted Lane								
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 (A430 SW)	3.30	0.00	Y	Arm 6 Left	15.00	10.0 %	1926	1926
				Arm 7 Ahead	Inf	90.0 %		
1/2 (A430 SW)	3.30	0.00	N	Arm 7 Ahead	Inf	97.5 %	2078	2078
				Arm 8 Right	11.00	2.5 %		
2/1 (Hempsted Lane NW)	3.00	0.00	Y	Arm 5 Right	17.00	83.7 %	1755	1755
				Arm 7 Left	14.00	16.3 %		
				Arm 8 Ahead	Inf	0.0 %		
3/1 (A430 NE)	3.30	0.00	Y	Arm 5 Ahead	Inf	96.8 %	1939	1939
				Arm 8 Left	15.00	3.2 %		
3/2 (A430 NE)	3.30	0.00	N	Arm 5 Ahead	Inf	95.9 %	2074	2074
				Arm 6 Right	12.00	4.1 %		
4/1 (Hempsted Lane SE)	3.50	0.00	Y	Arm 5 Left	14.00	50.9 %	1790	1790
				Arm 6 Ahead	Inf	0.0 %		
				Arm 7 Right	17.00	49.1 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
7/2	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 8: '2031 PM with all dev' (FG12: '2031 PM with CD + prop dev', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					Tot.
	A	B	C	D		
Origin	A	0	139	1330	10	1479
B	70	0	29	1	100	
C	1177	25	0	8	1210	
D	4	0	15	0	19	
Tot.	1251	164	1374	19	2808	

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 8: 2031 PM with all dev
Junction: A430/Hempsted Lane	
1/1 (with short)	1479(In) 707(Out)
1/2 (short)	772
2/1	100
3/1	571
3/2	639
4/1	19
5/1	637
5/2	614
6/1	164
7/1	612
7/2	762
8/1	19

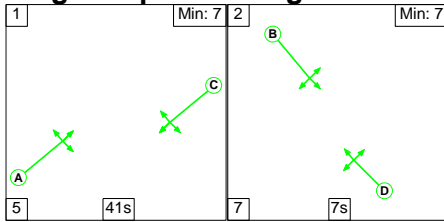
Lane Saturation Flows

Junction: A430/Hempsted Lane								
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 (A430 SW)	3.30	0.00	Y	Arm 6 Left	15.00	19.7 %	1907	1907
				Arm 7 Ahead	Inf	80.3 %		
1/2 (A430 SW)	3.30	0.00	N	Arm 7 Ahead	Inf	98.7 %	2081	2081
				Arm 8 Right	11.00	1.3 %		
2/1 (Hempsted Lane NW)	3.00	0.00	Y	Arm 5 Right	17.00	70.0 %	1752	1752
				Arm 7 Left	14.00	29.0 %		
				Arm 8 Ahead	Inf	1.0 %		
3/1 (A430 NE)	3.30	0.00	Y	Arm 5 Ahead	Inf	98.6 %	1942	1942
				Arm 8 Left	15.00	1.4 %		
3/2 (A430 NE)	3.30	0.00	N	Arm 5 Ahead	Inf	96.1 %	2075	2075
				Arm 6 Right	12.00	3.9 %		
4/1 (Hempsted Lane SE)	3.50	0.00	Y	Arm 5 Left	14.00	21.1 %	1799	1799
				Arm 6 Ahead	Inf	0.0 %		
				Arm 7 Right	17.00	78.9 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
7/2	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 1: '2019 AM' (FG1: '2019 AM', Plan 1: 'Network Control Plan 1')

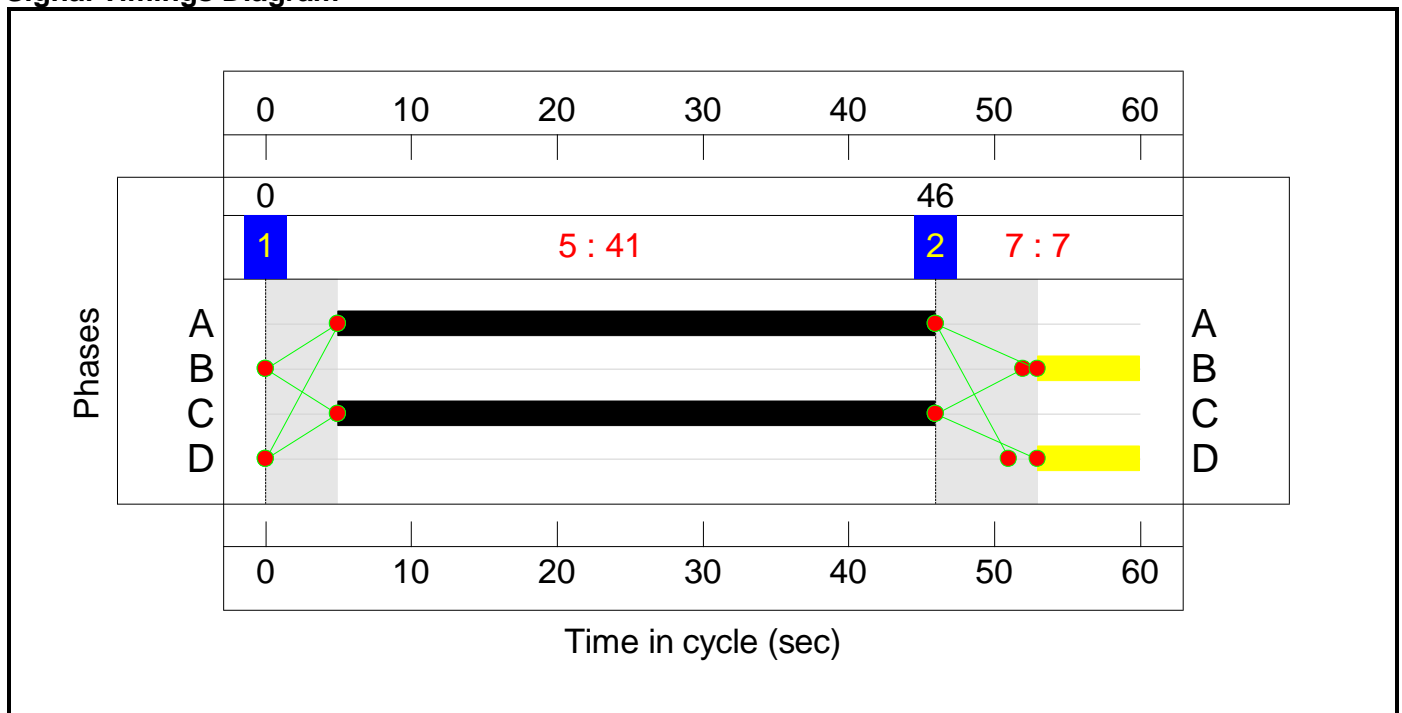
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	41	7
Change Point	0	46

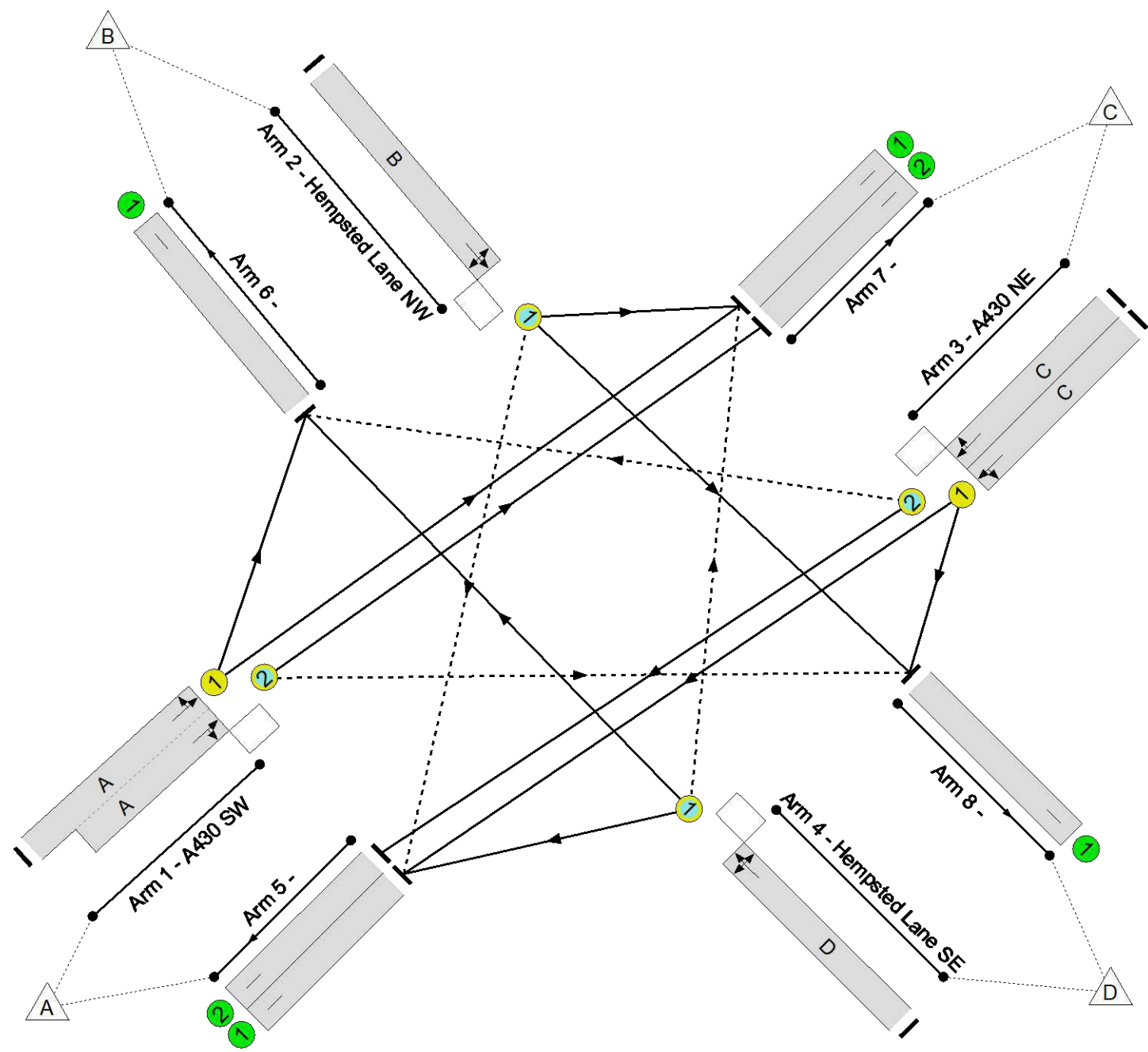

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results

A430/Hempsted Lane
PRC: 25.0 %
Total Traffic Delay: 5.5 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: J1 - A430/Hempsted Lane	-	-	N/A	-	-		-	-	-	-	-	-	72.0%
A430/Hempsted Lane	-	-	N/A	-	-		-	-	-	-	-	-	72.0%
1/1+1/2	A430 SW Left Ahead Right	U+O	N/A	N/A	A		1	41	-	1444	1933:2078	2005	72.0%
2/1	Hempsted Lane NW Right Left Ahead	O	N/A	N/A	B		1	7	-	60	1755	234	25.6%
3/1	A430 NE Ahead Left	U	N/A	N/A	C		1	41	-	431	1939	1357	31.8%
3/2	A430 NE Ahead Right	O	N/A	N/A	C		1	41	-	494	2079	1455	33.9%
4/1	Hempsted Lane SE Left Ahead Right	O	N/A	N/A	D		1	7	-	47	1790	239	19.7%
5/1		U	N/A	N/A	-		-	-	-	492	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	482	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	54	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	686	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	729	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	33	Inf	Inf	0.0%

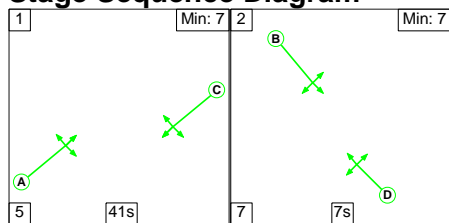
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: J1 - A430/Hempsted Lane	-	-	93	0	12	3.3	2.1	0.1	5.5	-	-	-	-
A430/Hempsted Lane	-	-	93	0	12	3.3	2.1	0.1	5.5	-	-	-	-
1/1+1/2	1444	1444	19	0	0	1.7	1.3	0.0	3.0	7.4	5.8	1.3	7.1
2/1	60	60	51	0	0	0.4	0.2	0.0	0.6	34.3	0.9	0.2	1.1
3/1	431	431	-	-	-	0.4	0.2	-	0.6	5.4	2.8	0.2	3.0
3/2	494	494	0	0	12	0.5	0.3	0.1	0.8	6.1	3.2	0.3	3.4
4/1	47	47	23	0	0	0.3	0.1	0.0	0.4	32.6	0.7	0.1	0.8
5/1	492	492	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	482	482	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	54	54	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	686	686	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	729	729	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	33	33	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1			PRC for Signalled Lanes (%):	25.0	Total Delay for Signalled Lanes (pcuHr):			5.46	Cycle Time (s): 60				
			PRC Over All Lanes (%):	25.0	Total Delay Over All Lanes(pcuHr):			5.46					

Full Input Data And Results

Scenario 2: '2019 PM' (FG2: '2019 PM', Plan 1: 'Network Control Plan 1')

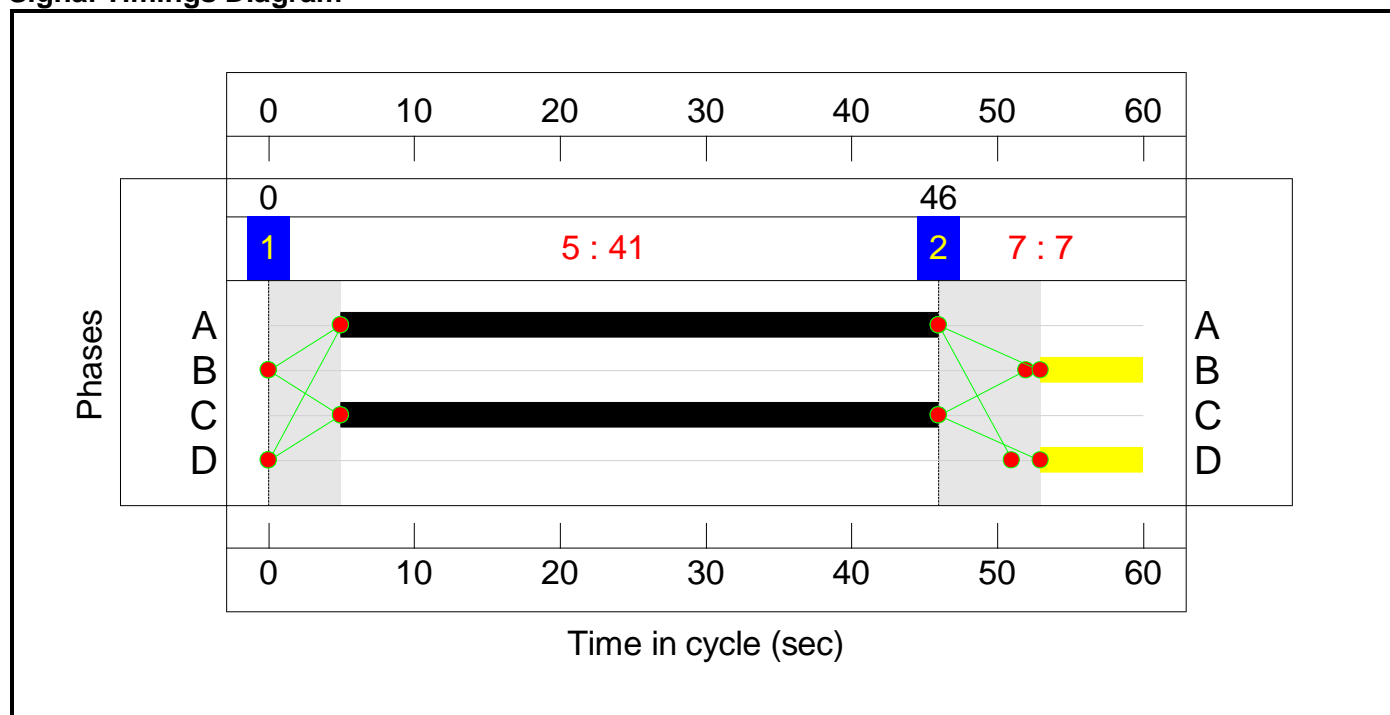
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	41	7
Change Point	0	46

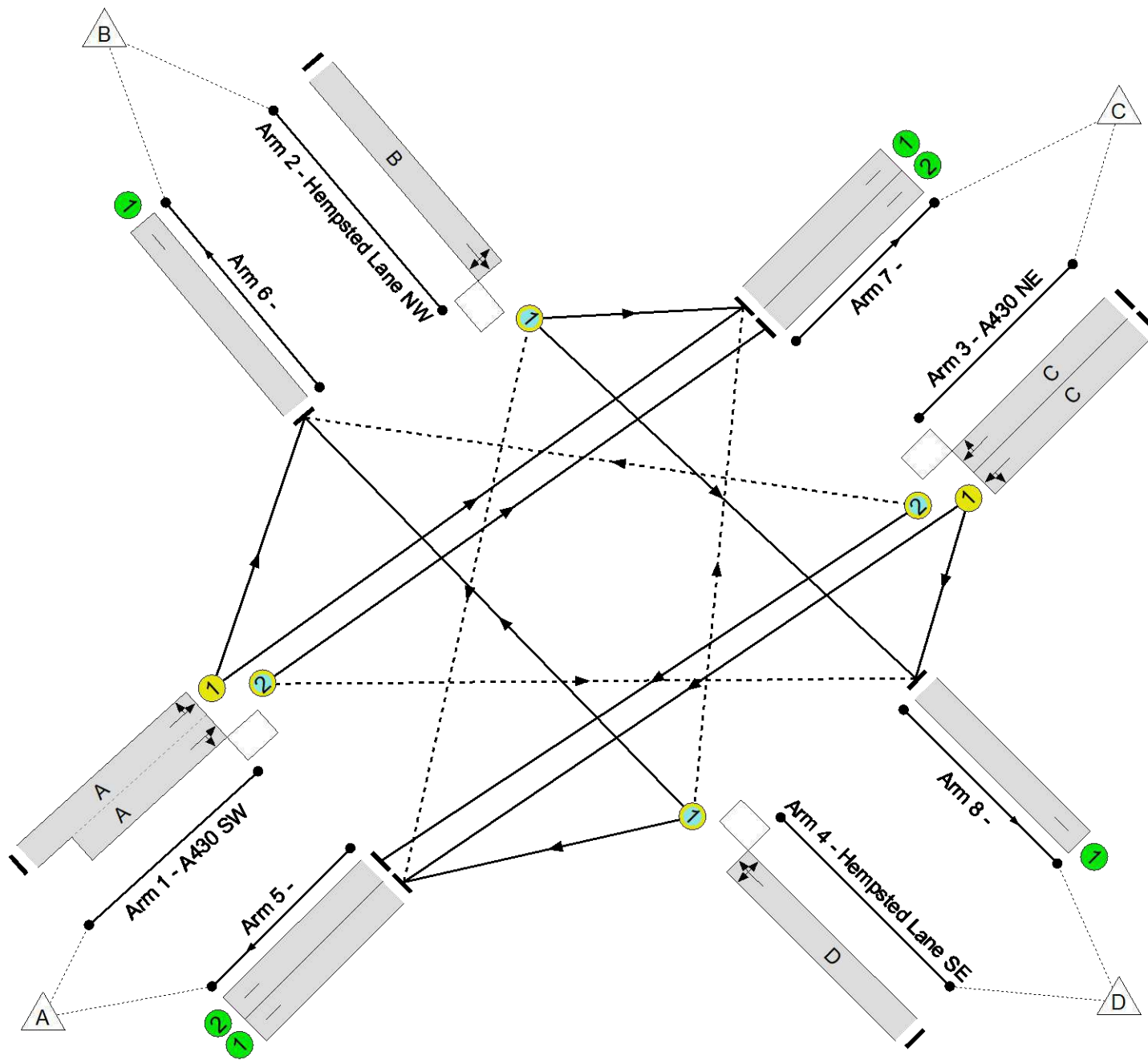
Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results

A430/Hempsted Lane
PRC: 45.3 %
Total Traffic Delay: 4.4 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: J1 - A430/Hempsted Lane	-	-	N/A	-	-		-	-	-	-	-	-	61.9%
A430/Hempsted Lane	-	-	N/A	-	-		-	-	-	-	-	-	61.9%
1/1+1/2	A430 SW Left Ahead Right	U+O	N/A	N/A	A		1	41	-	1242	1929:2081	2005	61.9%
2/1	Hempsted Lane NW Right Left Ahead	O	N/A	N/A	B		1	7	-	44	1753	234	18.8%
3/1	A430 NE Ahead Left	U	N/A	N/A	C		1	41	-	498	1942	1359	36.6%
3/2	A430 NE Ahead Right	O	N/A	N/A	C		1	41	-	564	2081	1457	38.7%
4/1	Hempsted Lane SE Left Ahead Right	O	N/A	N/A	D		1	7	-	17	1798	240	7.1%
5/1		U	N/A	N/A	-		-	-	-	524	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	556	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	58	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	574	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	636	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	17	Inf	Inf	0.0%

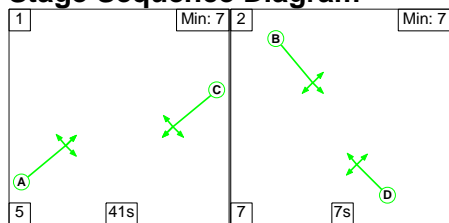
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: J1 - A430/Hempsted Lane	-	-	59	0	0	2.8	1.6	0.0	4.4	-	-	-	-
A430/Hempsted Lane	-	-	59	0	0	2.8	1.6	0.0	4.4	-	-	-	-
1/1+1/2	1242	1242	9	0	0	1.3	0.8	0.0	2.2	6.3	4.7	0.8	5.5
2/1	44	44	29	0	0	0.3	0.1	0.0	0.4	32.7	0.6	0.1	0.8
3/1	498	498	-	-	-	0.5	0.3	-	0.8	5.7	3.3	0.3	3.6
3/2	564	564	8	0	0	0.6	0.3	0.0	0.9	5.8	3.8	0.3	4.1
4/1	17	17	13	0	0	0.1	0.0	0.0	0.1	31.0	0.2	0.0	0.3
5/1	524	524	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	556	556	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	58	58	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	574	574	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	636	636	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	17	17	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
<p>C1 PRC for Signalled Lanes (%): 45.3 Total Delay for Signalled Lanes (pcuHr): 4.41 Cycle Time (s): 60 PRC Over All Lanes (%): 45.3 Total Delay Over All Lanes(pcuHr): 4.41</p>													

Full Input Data And Results

Scenario 3: '2031 AM without dev' (FG3: '2031 AM without dev', Plan 1: 'Network Control Plan 1')

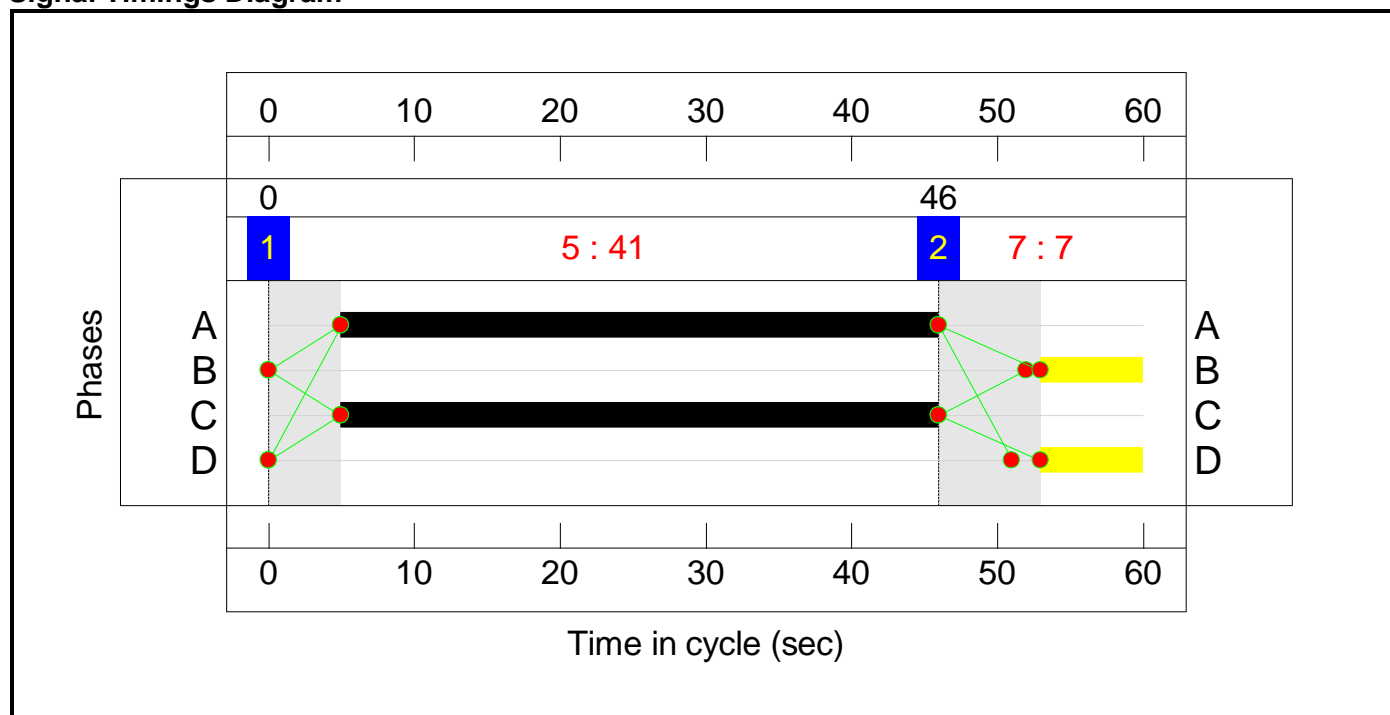
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	41	7
Change Point	0	46

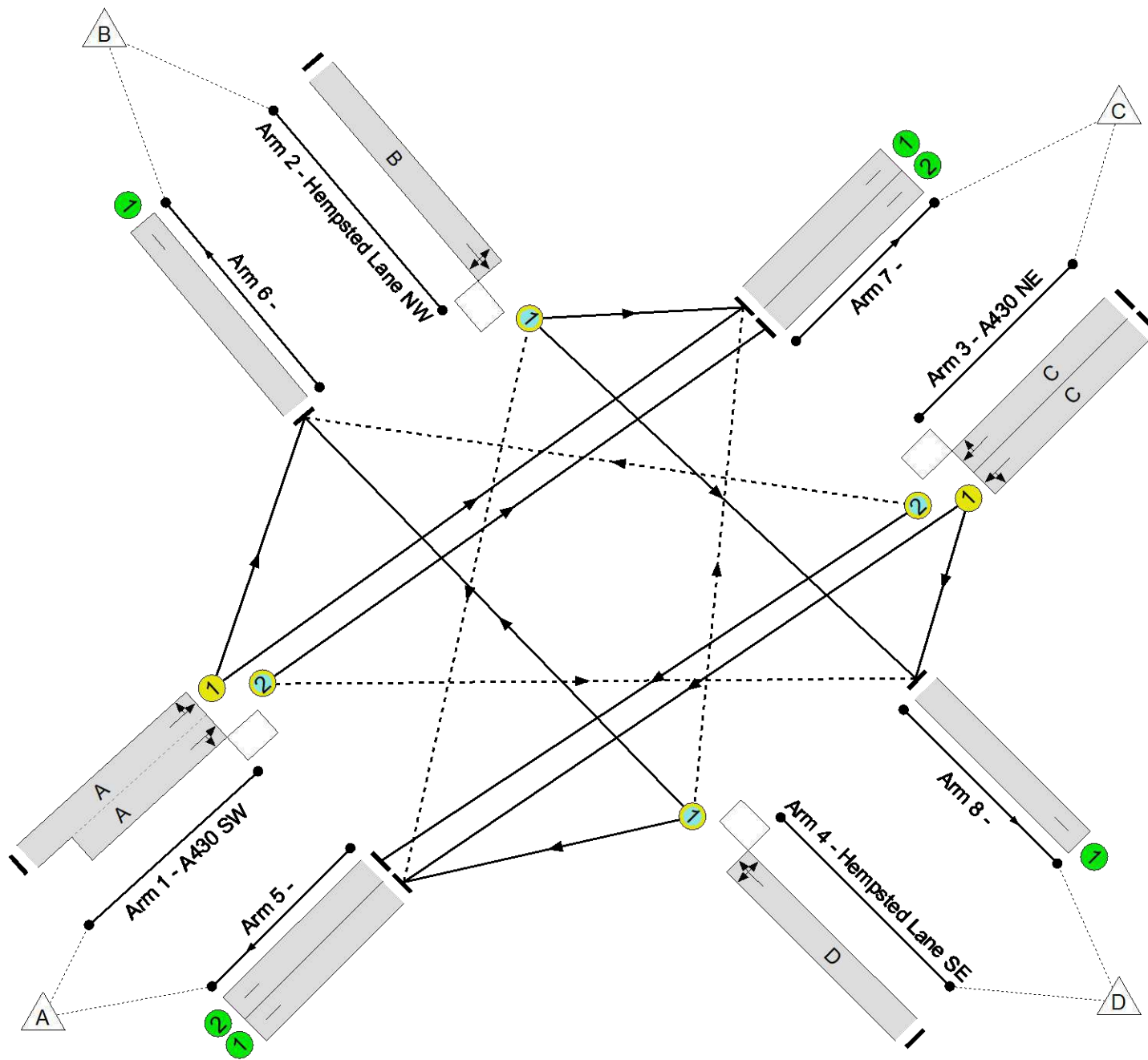

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results

A430/Hempsted Lane
PRC: 10.1 %
Total Traffic Delay: 7.2 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: J1 - A430/Hempsted Lane	-	-	N/A	-	-		-	-	-	-	-	-	81.7%
A430/Hempsted Lane	-	-	N/A	-	-		-	-	-	-	-	-	81.7%
1/1+1/2	A430 SW Left Ahead Right	U+O	N/A	N/A	A		1	41	-	1639	1933:2078	2005	81.7%
2/1	Hempsted Lane NW Right Left Ahead	O	N/A	N/A	B		1	7	-	68	1755	234	29.1%
3/1	A430 NE Ahead Left	U	N/A	N/A	C		1	41	-	492	1939	1357	36.2%
3/2	A430 NE Ahead Right	O	N/A	N/A	C		1	41	-	558	2078	1455	38.4%
4/1	Hempsted Lane SE Left Ahead Right	O	N/A	N/A	D		1	7	-	53	1790	239	22.2%
5/1		U	N/A	N/A	-		-	-	-	561	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	544	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	62	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	778	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	827	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	38	Inf	Inf	0.0%

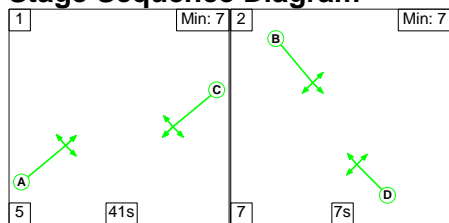
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: J1 - A430/Hempsted Lane	-	-	106	0	14	3.9	3.2	0.1	7.2	-	-	-	-
A430/Hempsted Lane	-	-	106	0	14	3.9	3.2	0.1	7.2	-	-	-	-
1/1+1/2	1639	1639	22	0	0	2.1	2.2	0.0	4.3	9.4	7.1	2.2	9.3
2/1	68	68	58	0	0	0.4	0.2	0.0	0.7	35.1	1.0	0.2	1.2
3/1	492	492	-	-	-	0.5	0.3	-	0.8	5.7	3.3	0.3	3.6
3/2	558	558	0	0	14	0.6	0.3	0.1	1.0	6.4	3.7	0.3	4.0
4/1	53	53	26	0	0	0.3	0.1	0.0	0.5	33.0	0.8	0.1	0.9
5/1	561	561	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	544	544	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	62	62	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	778	778	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	827	827	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	38	38	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
<p>C1 PRC for Signalled Lanes (%): 10.1 Total Delay for Signalled Lanes (pcuHr): 7.21 Cycle Time (s): 60</p> <p> PRC Over All Lanes (%): 10.1 Total Delay Over All Lanes(pcuHr): 7.21</p>													

Full Input Data And Results

Scenario 4: '2031 PM without dev' (FG4: '2031 PM without dev', Plan 1: 'Network Control Plan 1')

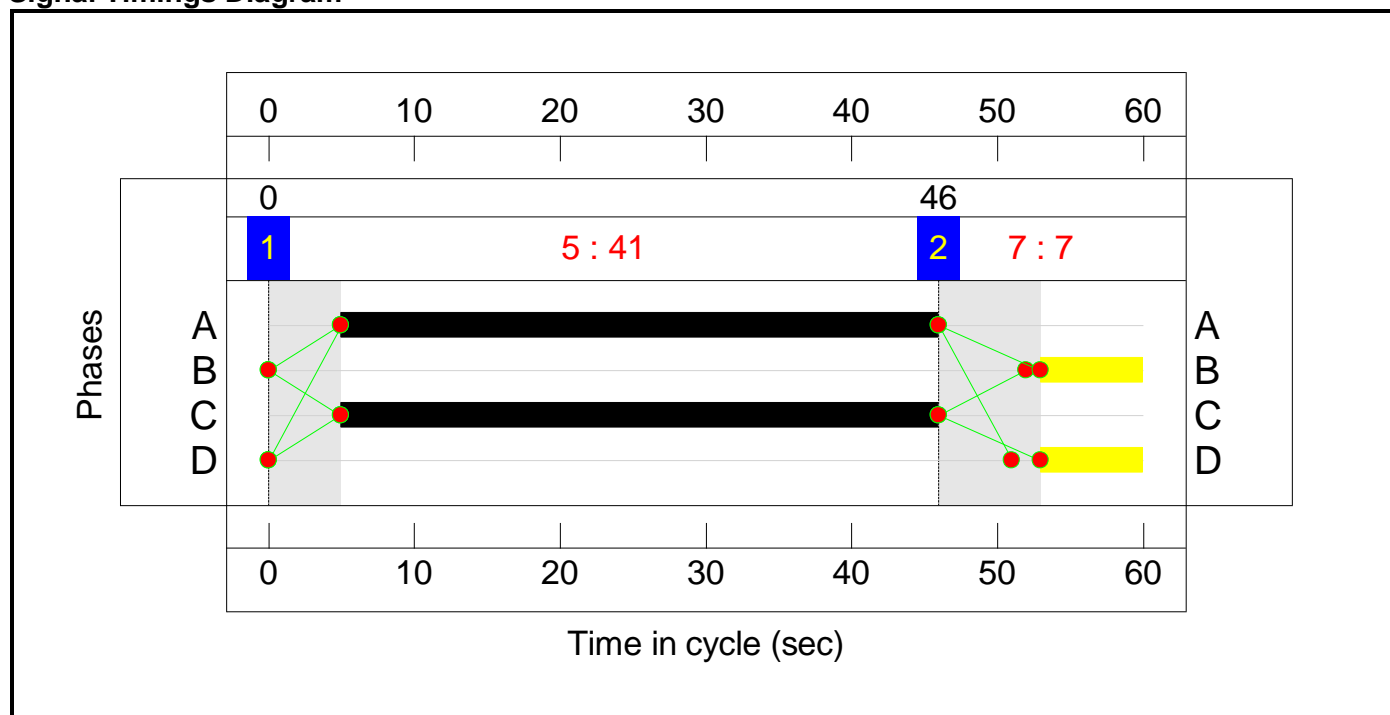
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	41	7
Change Point	0	46

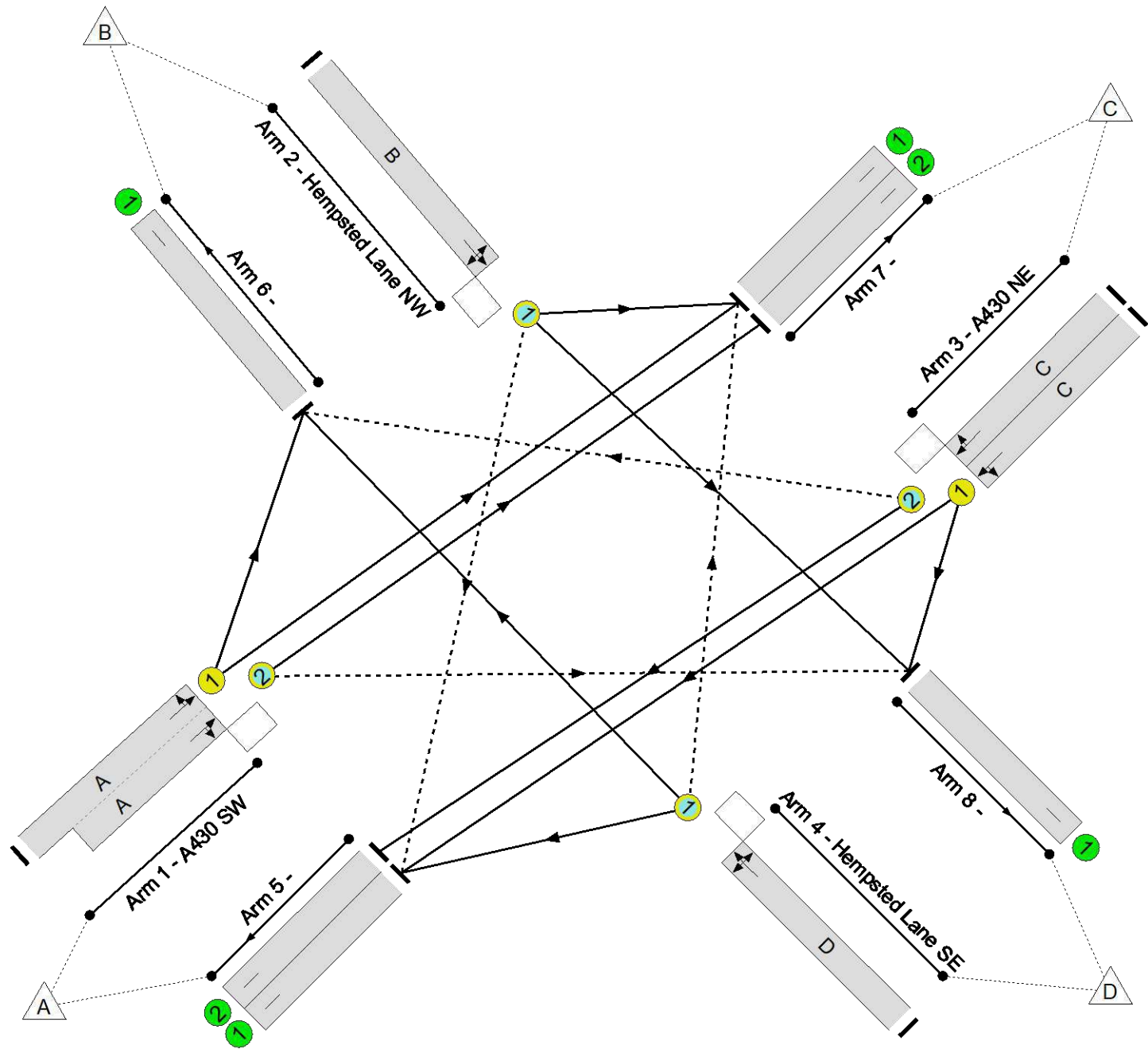
Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results

A430/Hempsted Lane
PRC: 29.3 %
Total Traffic Delay: 5.5 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: J1 - A430/Hempsted Lane	-	-	N/A	-	-		-	-	-	-	-	-	69.6%
A430/Hempsted Lane	-	-	N/A	-	-		-	-	-	-	-	-	69.6%
1/1+1/2	A430 SW Left Ahead Right	U+O	N/A	N/A	A		1	41	-	1396	1929:2081	2005	69.6%
2/1	Hempsted Lane NW Right Left Ahead	O	N/A	N/A	B		1	7	-	50	1753	234	21.4%
3/1	A430 NE Ahead Left	U	N/A	N/A	C		1	41	-	562	1942	1359	41.3%
3/2	A430 NE Ahead Right	O	N/A	N/A	C		1	41	-	632	2081	1457	43.4%
4/1	Hempsted Lane SE Left Ahead Right	O	N/A	N/A	D		1	7	-	19	1799	240	7.9%
5/1		U	N/A	N/A	-		-	-	-	591	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	623	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	65	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	647	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	714	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	19	Inf	Inf	0.0%

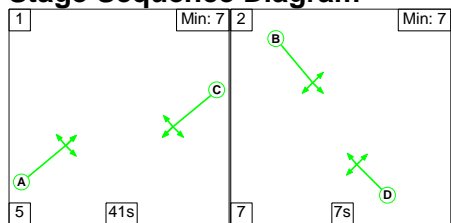
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: J1 - A430/Hempsted Lane	-	-	58	0	9	3.3	2.1	0.1	5.5	-	-	-	-
A430/Hempsted Lane	-	-	58	0	9	3.3	2.1	0.1	5.5	-	-	-	-
1/1+1/2	1396	1396	10	0	0	1.6	1.1	0.0	2.8	7.1	5.4	1.1	6.6
2/1	50	50	33	0	0	0.3	0.1	0.0	0.5	33.0	0.7	0.1	0.9
3/1	562	562	-	-	-	0.6	0.4	-	0.9	6.1	3.9	0.4	4.3
3/2	632	632	0	0	9	0.7	0.4	0.1	1.1	6.4	4.4	0.4	4.8
4/1	19	19	15	0	0	0.1	0.0	0.0	0.2	31.1	0.3	0.0	0.3
5/1	591	591	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	623	623	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	65	65	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	647	647	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	714	714	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	19	19	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1			PRC for Signalled Lanes (%):	29.3	Total Delay for Signalled Lanes (pcuHr):			5.45	Cycle Time (s): 60				
			PRC Over All Lanes (%):	29.3	Total Delay Over All Lanes(pcuHr):			5.45					

Full Input Data And Results

Scenario 5: '2031 AM with com dev' (FG7: '2031 AM with com dev', Plan 1: 'Network Control Plan 1')

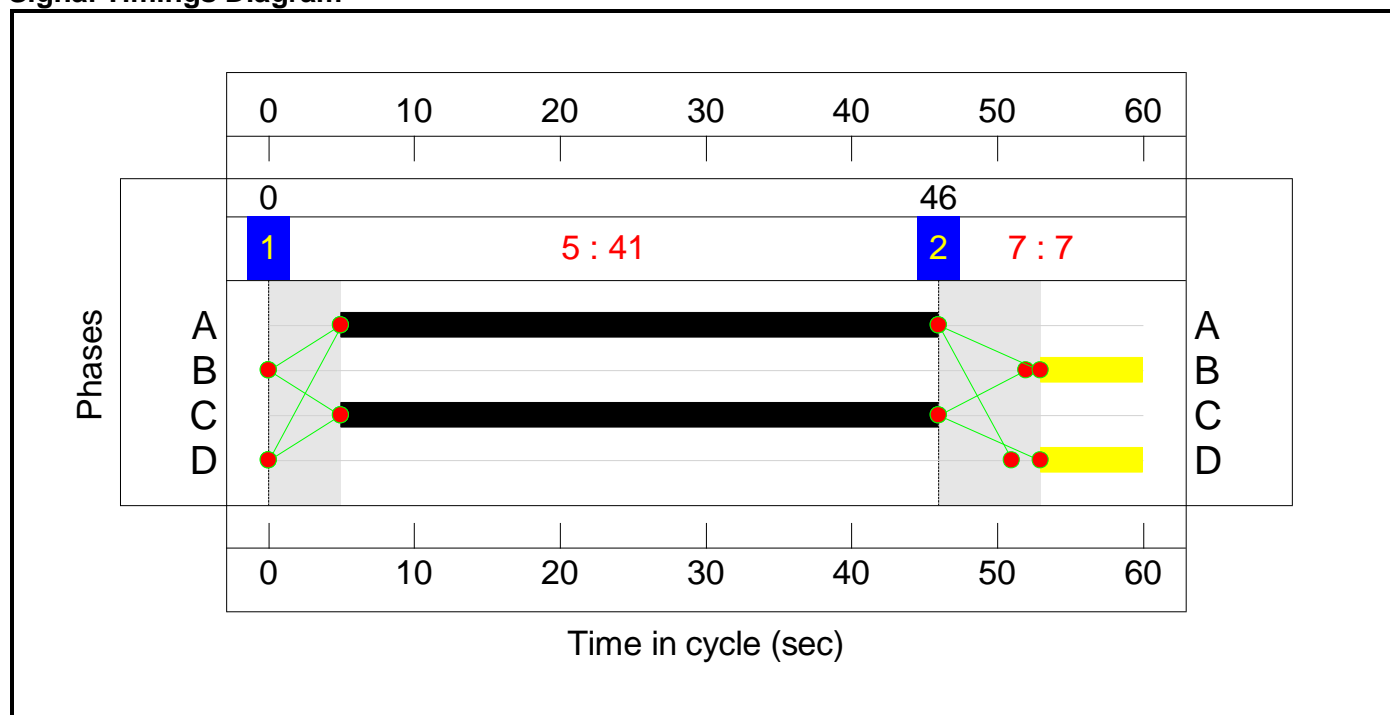
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	41	7
Change Point	0	46

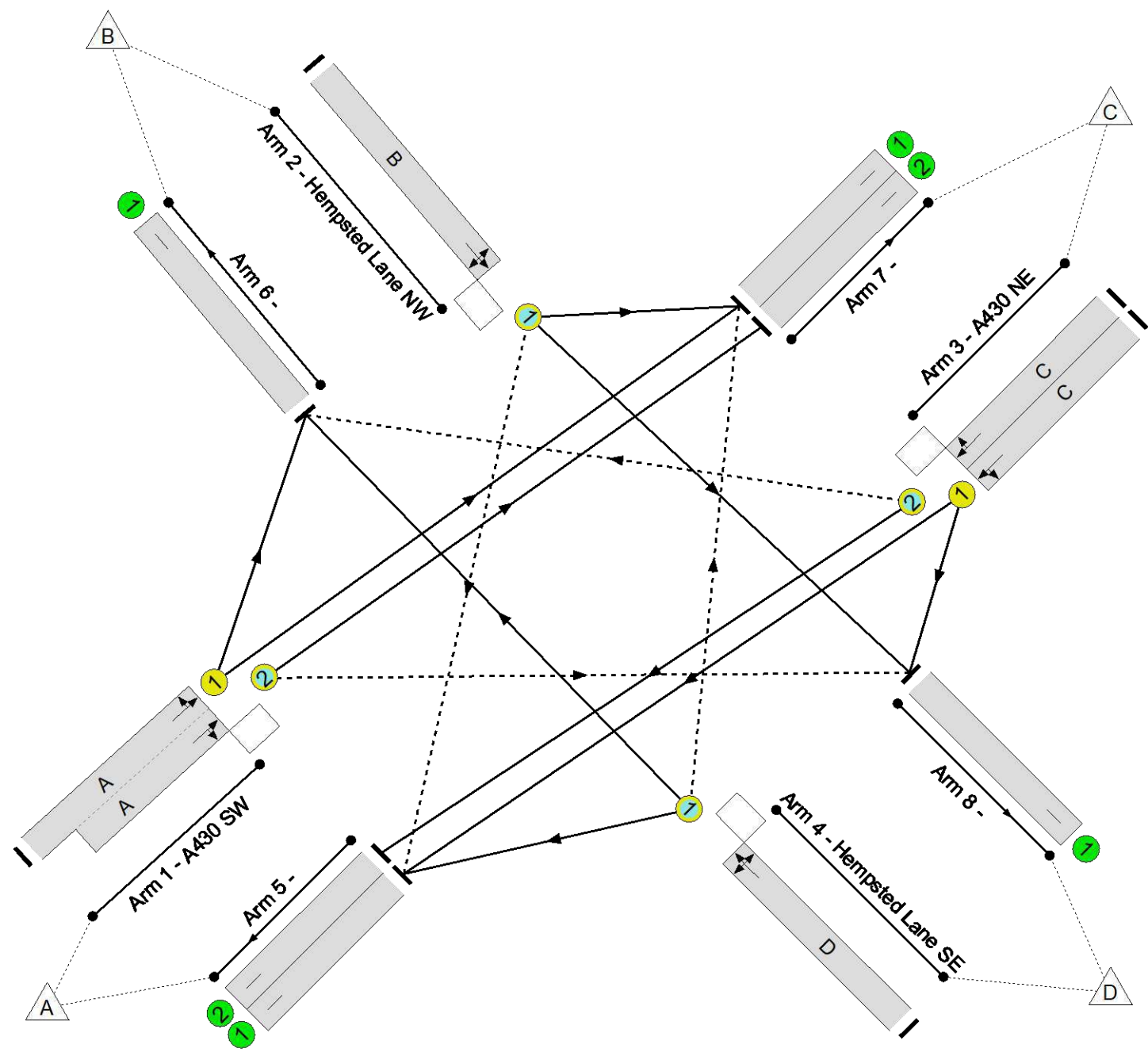
Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results

A430/Hempsted Lane
PRC: 9.2 %
Total Traffic Delay: 7.8 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: J1 - A430/Hempsted Lane	-	-	N/A	-	-		-	-	-	-	-	-	82.4%
A430/Hempsted Lane	-	-	N/A	-	-		-	-	-	-	-	-	82.4%
1/1+1/2	A430 SW Left Ahead Right	U+O	N/A	N/A	A		1	41	-	1651	1930:2078	2004	82.4%
2/1	Hempsted Lane NW Right Left Ahead	O	N/A	N/A	B		1	7	-	101	1755	234	43.2%
3/1	A430 NE Ahead Left	U	N/A	N/A	C		1	41	-	494	1939	1357	36.4%
3/2	A430 NE Ahead Right	O	N/A	N/A	C		1	41	-	559	2077	1454	38.4%
4/1	Hempsted Lane SE Left Ahead Right	O	N/A	N/A	D		1	7	-	53	1790	239	22.2%
5/1		U	N/A	N/A	-		-	-	-	589	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	542	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	77	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	778	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	834	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	38	Inf	Inf	0.0%

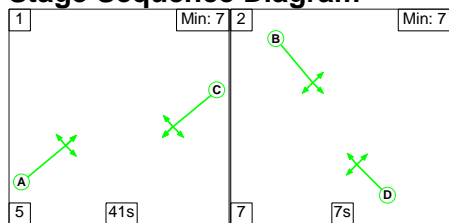
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: J1 - A430/Hempsted Lane	-	-	132	0	17	4.2	3.4	0.2	7.8	-	-	-	-
A430/Hempsted Lane	-	-	132	0	17	4.2	3.4	0.2	7.8	-	-	-	-
1/1+1/2	1651	1651	22	0	0	2.1	2.3	0.0	4.4	9.6	7.1	2.3	9.4
2/1	101	101	84	0	0	0.7	0.4	0.0	1.1	38.2	1.5	0.4	1.9
3/1	494	494	-	-	-	0.5	0.3	-	0.8	5.7	3.3	0.3	3.6
3/2	559	559	0	0	17	0.6	0.3	0.1	1.0	6.5	3.7	0.3	4.0
4/1	53	53	26	0	0	0.3	0.1	0.0	0.5	33.0	0.8	0.1	0.9
5/1	589	589	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	542	542	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	77	77	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	778	778	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	834	834	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	38	38	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
<p>C1 PRC for Signalled Lanes (%): 9.2 Total Delay for Signalled Lanes (pcuHr): 7.78 Cycle Time (s): 60 PRC Over All Lanes (%): 9.2 Total Delay Over All Lanes(pcuHr): 7.78</p>													

Full Input Data And Results

Scenario 6: '2031 PM with com dev' (FG8: '2031 PM with com dev', Plan 1: 'Network Control Plan 1')

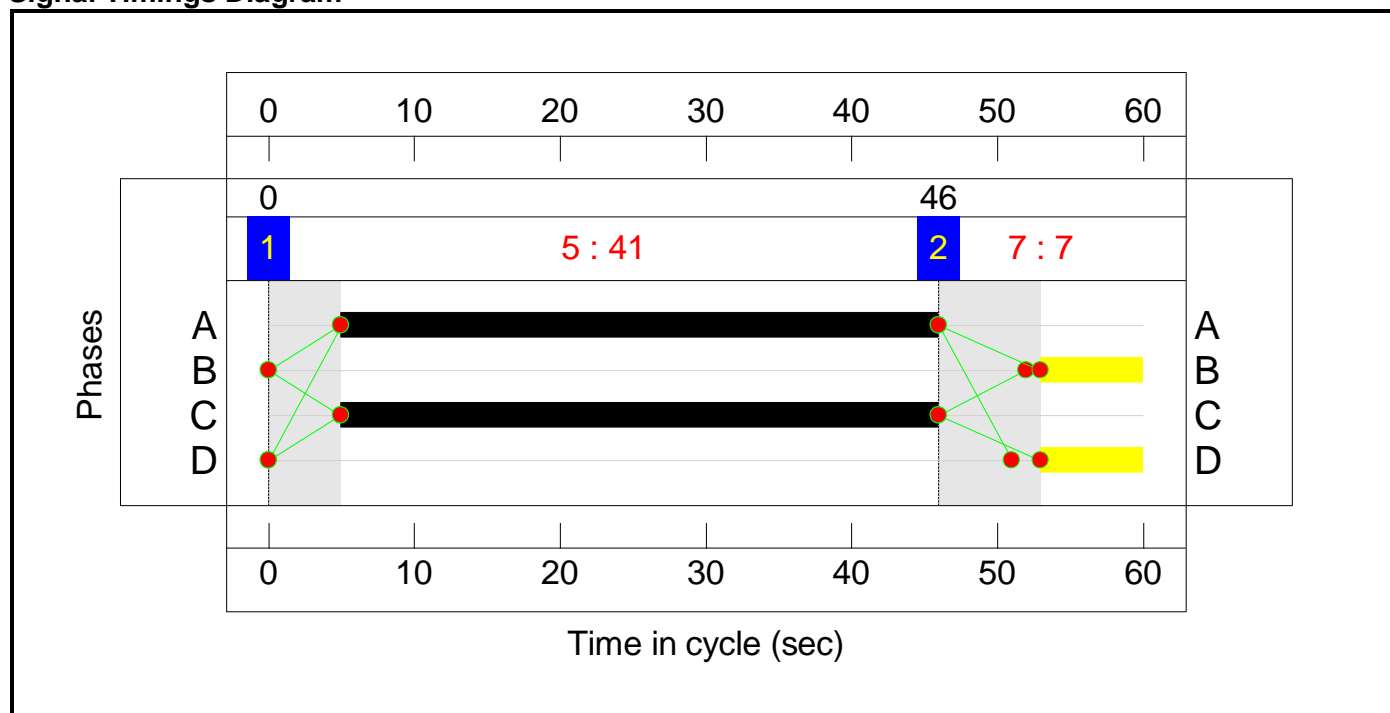
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	41	7
Change Point	0	46

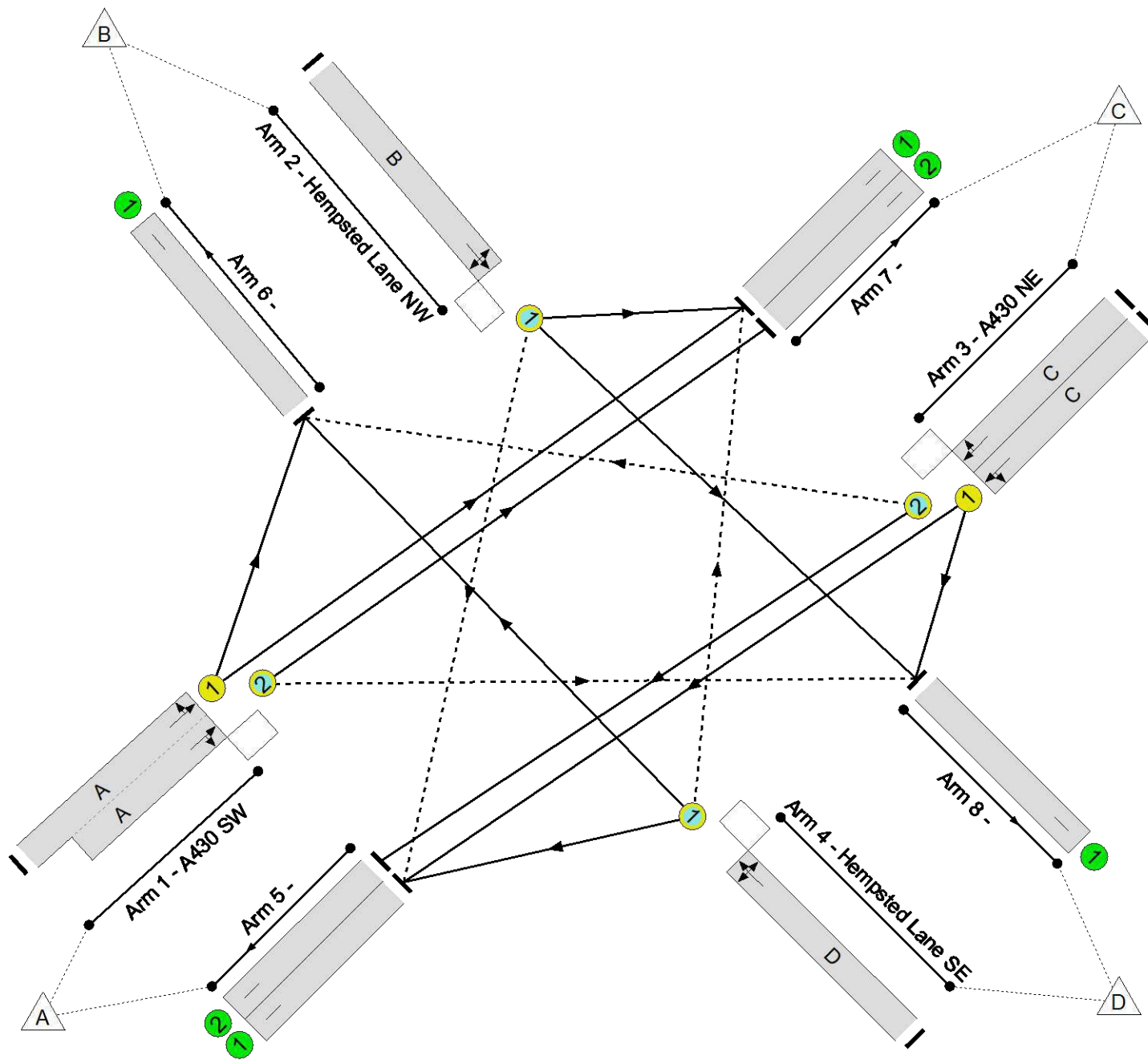

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results

A430/Hempsted Lane
PRC: 26.9 %
Total Traffic Delay: 5.8 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: J1 - A430/Hempsted Lane	-	-	N/A	-	-		-	-	-	-	-	-	70.9%
A430/Hempsted Lane	-	-	N/A	-	-		-	-	-	-	-	-	70.9%
1/1+1/2	A430 SW Left Ahead Right	U+O	N/A	N/A	A		1	41	-	1420	1922:2081	2001	70.9%
2/1	Hempsted Lane NW Right Left Ahead	O	N/A	N/A	B		1	7	-	69	1753	234	29.5%
3/1	A430 NE Ahead Left	U	N/A	N/A	C		1	41	-	565	1942	1359	41.6%
3/2	A430 NE Ahead Right	O	N/A	N/A	C		1	41	-	635	2079	1455	43.6%
4/1	Hempsted Lane SE Left Ahead Right	O	N/A	N/A	D		1	7	-	19	1799	240	7.9%
5/1		U	N/A	N/A	-		-	-	-	610	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	620	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	95	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	636	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	728	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	19	Inf	Inf	0.0%

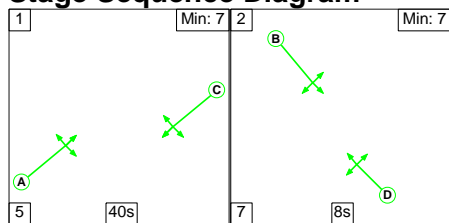
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: J1 - A430/Hempsted Lane	-	-	74	0	15	3.5	2.2	0.1	5.8	-	-	-	-
A430/Hempsted Lane	-	-	74	0	15	3.5	2.2	0.1	5.8	-	-	-	-
1/1+1/2	1420	1420	10	0	0	1.7	1.2	0.0	2.9	7.3	5.5	1.2	6.8
2/1	69	69	49	0	0	0.5	0.2	0.0	0.7	34.4	1.0	0.2	1.2
3/1	565	565	-	-	-	0.6	0.4	-	1.0	6.1	3.9	0.4	4.3
3/2	635	635	0	0	15	0.7	0.4	0.1	1.2	6.7	4.4	0.4	4.8
4/1	19	19	15	0	0	0.1	0.0	0.0	0.2	31.1	0.3	0.0	0.3
5/1	610	610	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	620	620	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	95	95	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	636	636	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	728	728	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	19	19	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1		PRC for Signalled Lanes (%):		26.9	Total Delay for Signalled Lanes (pcuHr):		5.83	Cycle Time (s):		60			
		PRC Over All Lanes (%):		26.9	Total Delay Over All Lanes(pcuHr):		5.83						

Full Input Data And Results

Scenario 7: '2031 AM with all dev' (FG11: '2031 AM with CD + prop dev', Plan 1: 'Network Control Plan 1')

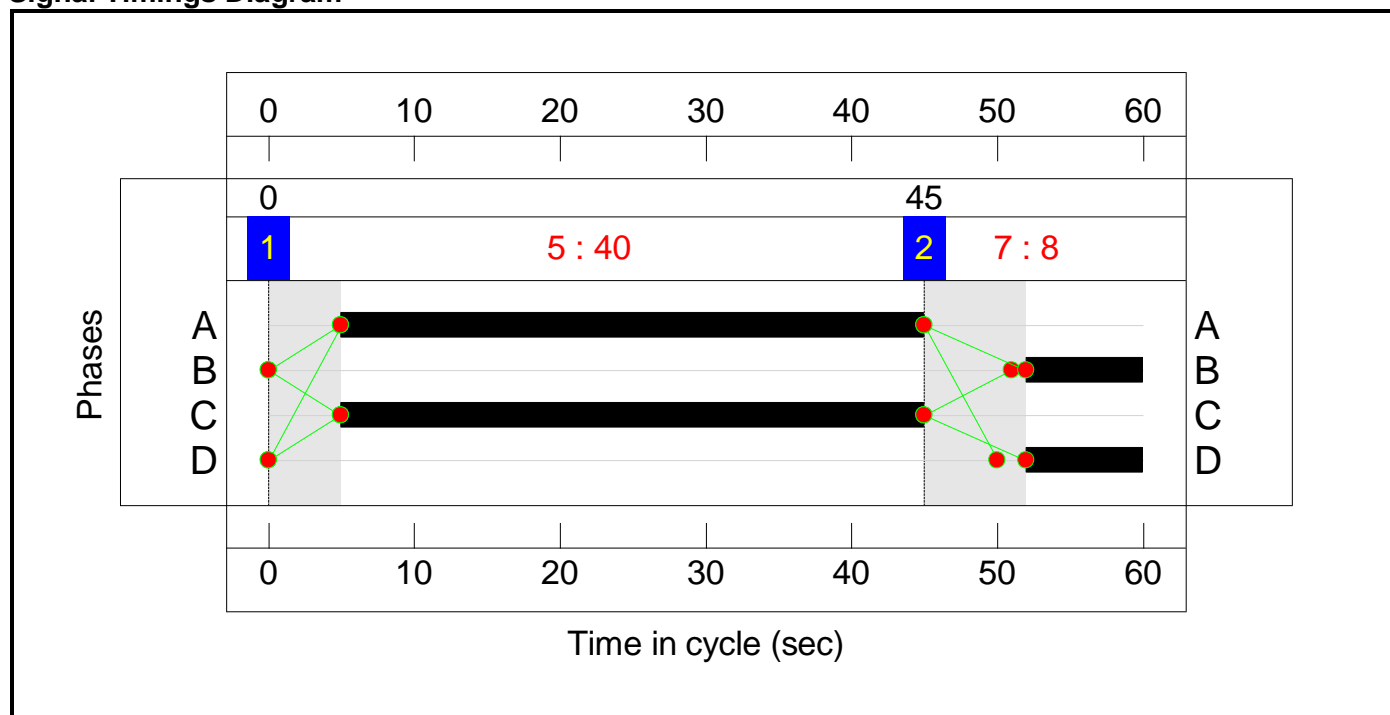
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	40	8
Change Point	0	45

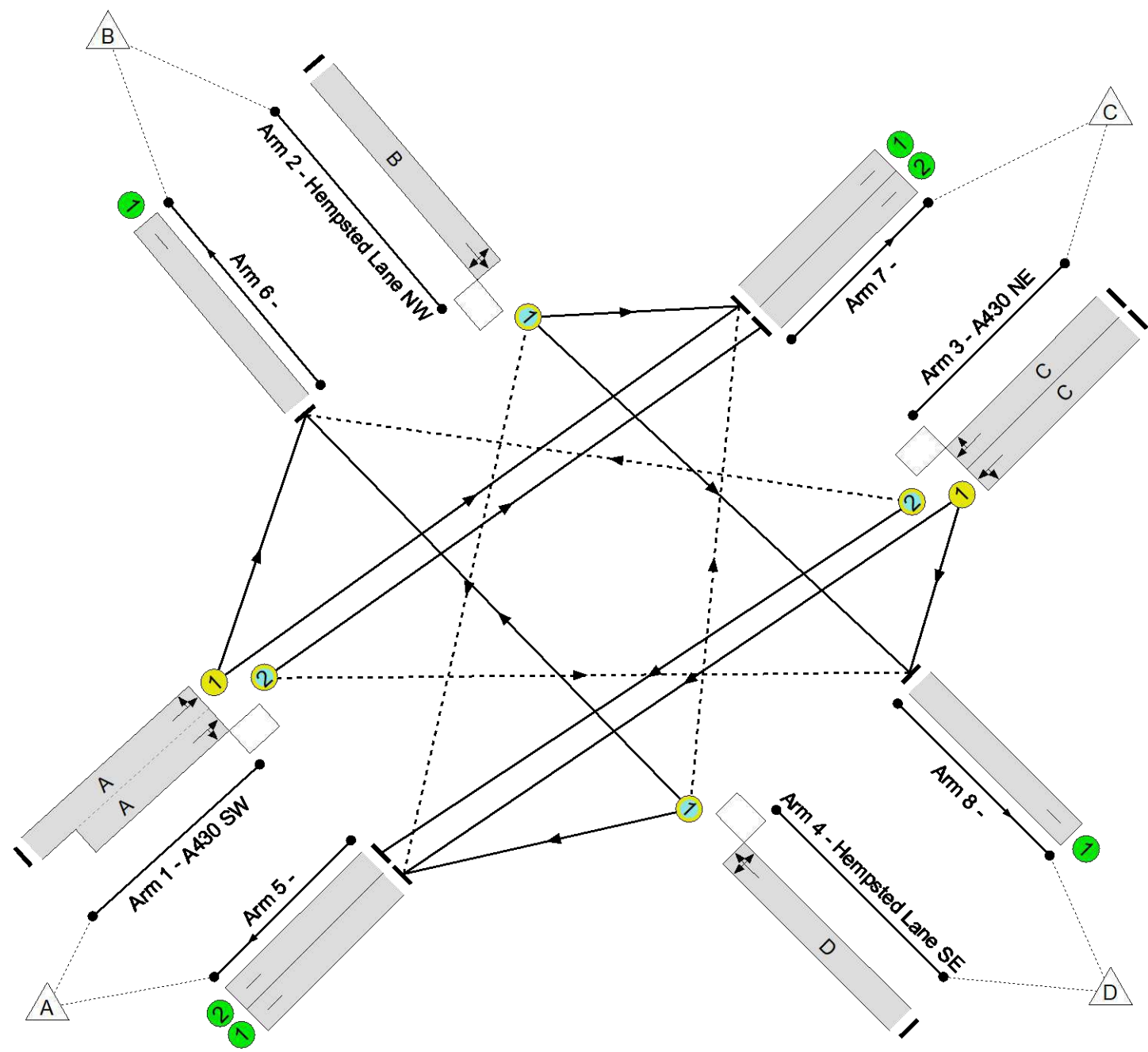

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results

A430/Hempsted Lane
PRC: 7.8 %
Total Traffic Delay: 9.6 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: J1 - A430/Hempsted Lane	-	-	N/A	-	-		-	-	-	-	-	-	83.5%
A430/Hempsted Lane	-	-	N/A	-	-		-	-	-	-	-	-	83.5%
1/1+1/2	A430 SW Left Ahead Right	U+O	N/A	N/A	A		1	40	-	1671	1926:2078	2002	83.5%
2/1	Hempsted Lane NW Right Left Ahead	O	N/A	N/A	B		1	8	-	178	1755	263	67.6%
3/1	A430 NE Ahead Left	U	N/A	N/A	C		1	40	-	498	1939	1325	37.6%
3/2	A430 NE Ahead Right	O	N/A	N/A	C		1	40	-	561	2074	1417	39.6%
4/1	Hempsted Lane SE Left Ahead Right	O	N/A	N/A	D		1	8	-	53	1790	268	19.7%
5/1		U	N/A	N/A	-		-	-	-	658	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	538	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	103	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	779	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	845	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	38	Inf	Inf	0.0%

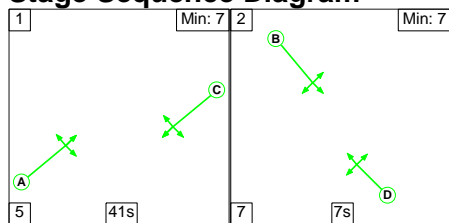
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: J1 - A430/Hempsted Lane	-	-	197	0	23	5.1	4.3	0.2	9.6	-	-	-	-
A430/Hempsted Lane	-	-	197	0	23	5.1	4.3	0.2	9.6	-	-	-	-
1/1+1/2	1671	1671	22	0	0	2.4	2.5	0.0	4.9	10.5	7.7	2.5	10.2
2/1	178	178	149	0	0	1.2	1.0	0.0	2.3	45.7	2.8	1.0	3.8
3/1	498	498	-	-	-	0.6	0.3	-	0.9	6.2	3.5	0.3	3.8
3/2	561	561	0	0	23	0.6	0.3	0.2	1.1	7.3	4.1	0.3	4.4
4/1	53	53	26	0	0	0.3	0.1	0.0	0.5	30.7	0.8	0.1	0.9
5/1	658	658	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	538	538	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	103	103	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	779	779	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	845	845	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	38	38	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
<p>C1 PRC for Signalled Lanes (%): 7.8 Total Delay for Signalled Lanes (pcuHr): 9.60 Cycle Time (s): 60 PRC Over All Lanes (%): 7.8 Total Delay Over All Lanes(pcuHr): 9.60</p>													

Full Input Data And Results

Scenario 8: '2031 PM with all dev' (FG12: '2031 PM with CD + prop dev', Plan 1: 'Network Control Plan 1')

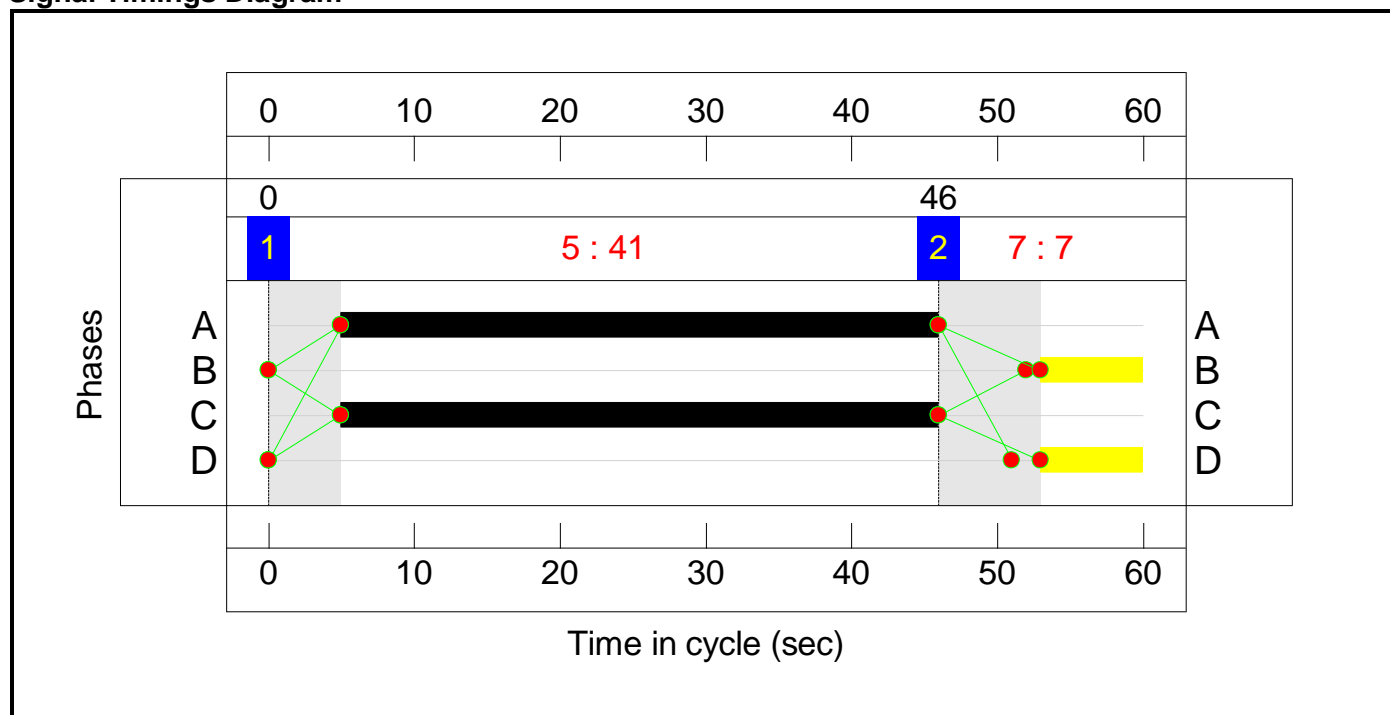
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	41	7
Change Point	0	46

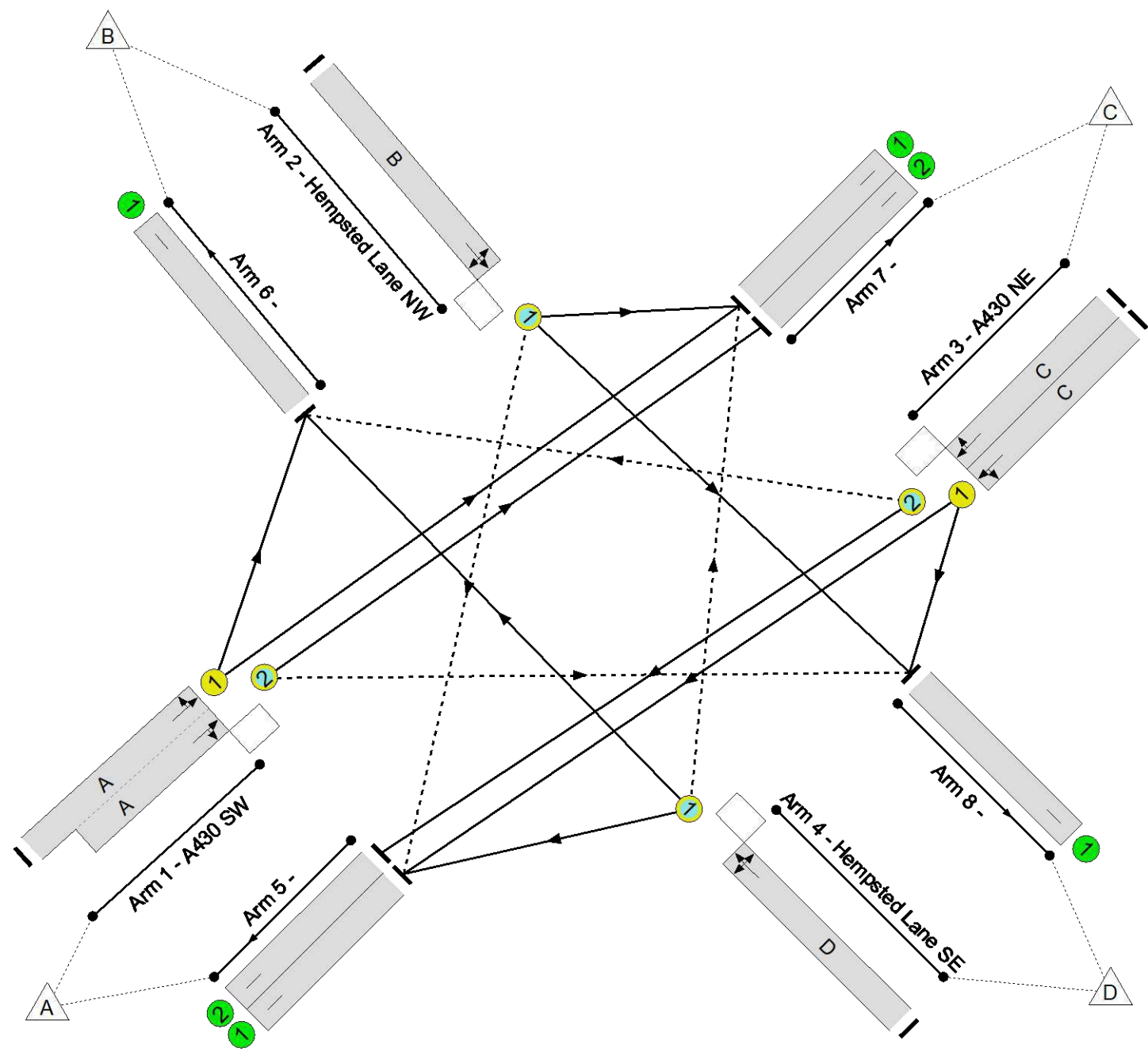

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results

A430/Hempsted Lane
PRC: 21.3 %
Total Traffic Delay: 6.6 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: J1 - A430/Hempsted Lane	-	-	N/A	-	-		-	-	-	-	-	-	74.2%
A430/Hempsted Lane	-	-	N/A	-	-		-	-	-	-	-	-	74.2%
1/1+1/2	A430 SW Left Ahead Right	U+O	N/A	N/A	A		1	41	-	1479	1907:2081	1994	74.2%
2/1	Hempsted Lane NW Right Left Ahead	O	N/A	N/A	B		1	7	-	100	1752	234	42.8%
3/1	A430 NE Ahead Left	U	N/A	N/A	C		1	41	-	571	1942	1359	42.0%
3/2	A430 NE Ahead Right	O	N/A	N/A	C		1	41	-	639	2075	1452	44.0%
4/1	Hempsted Lane SE Left Ahead Right	O	N/A	N/A	D		1	7	-	19	1799	240	7.9%
5/1		U	N/A	N/A	-		-	-	-	637	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	614	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	164	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	612	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	762	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	19	Inf	Inf	0.0%

Full Input Data And Results

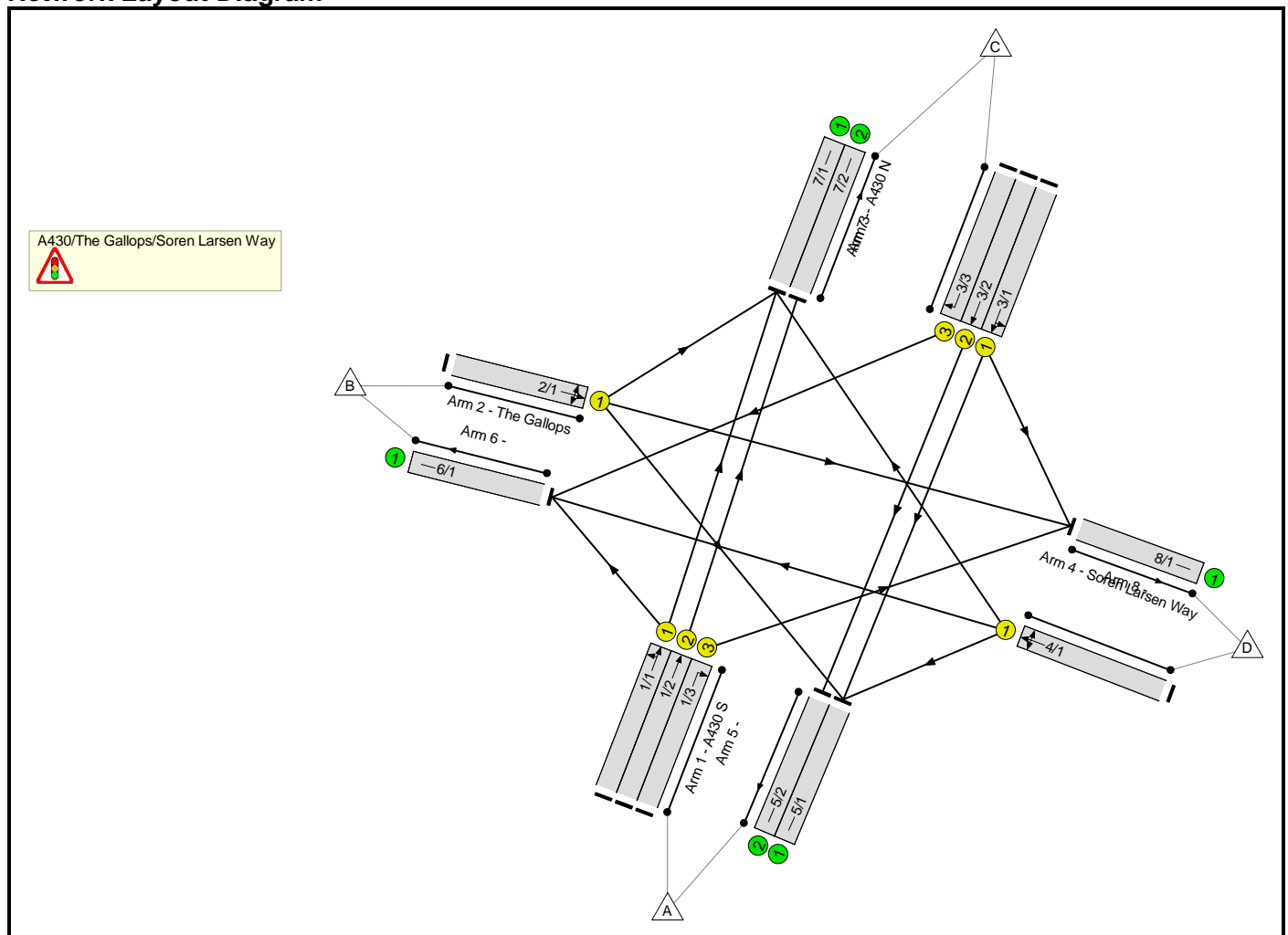
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: J1 - A430/Hempsted Lane	-	-	95	0	25	3.8	2.6	0.2	6.6	-	-	-	-
A430/Hempsted Lane	-	-	95	0	25	3.8	2.6	0.2	6.6	-	-	-	-
1/1+1/2	1479	1479	10	0	0	1.8	1.4	0.0	3.2	7.8	6.0	1.4	7.4
2/1	100	100	70	0	0	0.7	0.4	0.0	1.0	37.3	1.5	0.4	1.9
3/1	571	571	-	-	-	0.6	0.4	-	1.0	6.1	4.0	0.4	4.3
3/2	639	639	0	0	25	0.7	0.4	0.2	1.3	7.2	4.6	0.4	5.0
4/1	19	19	15	0	0	0.1	0.0	0.0	0.2	31.1	0.3	0.0	0.3
5/1	637	637	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	614	614	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	164	164	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	612	612	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	762	762	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	19	19	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1			PRC for Signalled Lanes (%):	21.3	Total Delay for Signalled Lanes (pcuHr):			6.64	Cycle Time (s): 60				
			PRC Over All Lanes (%):	21.3	Total Delay Over All Lanes(pcuHr):			6.64					

Full Input Data And Results
Full Input Data And Results

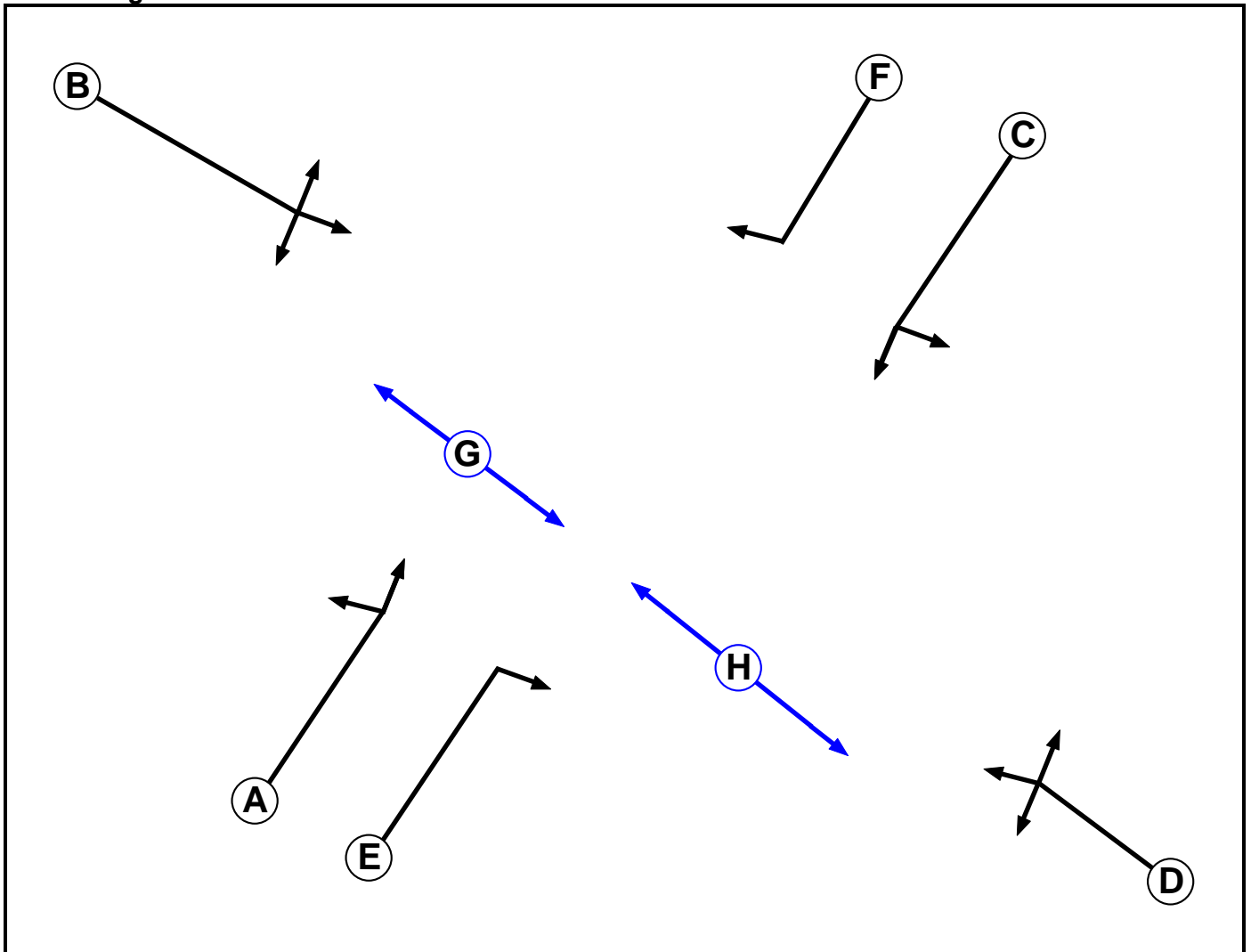
User and Project Details

Project:	Hempsted Lane, Gloucester
Title:	J2 - A430/The Gallops/Soren Larsen Way
Location:	
Additional detail:	
File name:	j2 a430_the gallops_soren larsen way 2031.lsg3x
Author:	HC
Company:	SMT
Address:	

Network Layout Diagram



Phase Diagram



Phase Input Data

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

Full Input Data And Results

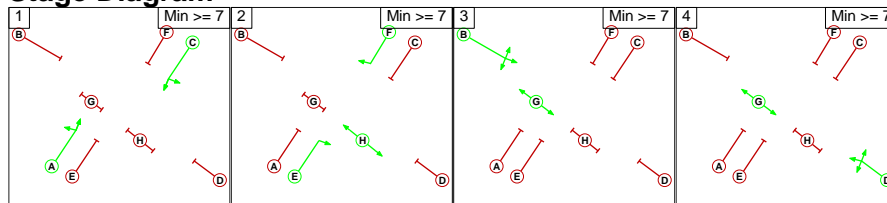
Phase Intergrens Matrix

		Starting Phase							
		A	B	C	D	E	F	G	H
Terminating Phase	A		7	-	5	0	5	5	0
	B	5		6	6	5	5	-	9
	C	-	5		7	5	0	0	10
	D	5	6	5		5	5	-	8
	E	0	5	6	7		-	5	-
	F	6	5	0	6	-		0	-
	G	12	-	0	-	12	0		0
	H	0	10	10	10	-	-	0	

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

		To Stage			
		1	2	3	4
From Stage	1		10	7	7
	2	10		10	10
	3	12	12		6
	4	12	12	6	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A430/The Gallops/Soren Larsen Way

There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: A430/The Gallops/Soren Larsen Way												
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 (A430 S)	U	A	2	3	60.0	Geom	-	3.10	0.00	Y	Arm 6 Left	17.00
											Arm 7 Ahead	Inf
1/2 (A430 S)	U	A	2	3	60.0	Geom	-	3.10	0.00	N	Arm 7 Ahead	Inf
1/3 (A430 S)	U	E	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 8 Right	11.00
											Arm 5 Right	13.00
2/1 (The Gallops)	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 7 Left	16.00
											Arm 8 Ahead	Inf
3/1 (A430 N)	U	C	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Ahead	Inf
											Arm 8 Left	15.00
3/2 (A430 N)	U	C	2	3	60.0	Geom	-	3.00	0.00	N	Arm 5 Ahead	Inf
3/3 (A430 N)	U	F	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 6 Right	13.00
4/1 (Soren Larsen Way)	U	D	2	3	60.0	Geom	-	2.80	0.00	Y	Arm 5 Left	13.00
											Arm 6 Ahead	Inf
											Arm 7 Right	13.00
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/2	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/2	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2019 AM'	08:00	09:00	01:00	
2: '2019 PM'	17:00	18:00	01:00	
3: '2031 AM without dev'	08:00	09:00	01:00	F1*1.1342
4: '2031 PM without dev'	08:00	09:00	01:00	F2*1.1241
7: '2031 AM with com dev'	08:00	09:00	01:00	F3+F5
8: '2031 PM with com dev'	17:00	18:00	01:00	F4+F6
11: 'AM 2031 with CD + prop dev'	08:00	09:00	01:00	F7+F9
12: 'PM 2031 with CD + prop dev'	08:00	09:00	01:00	F8+F10

Scenario 1: '2019 AM' (FG1: '2019 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	10	1408	6	1424
	B	29	0	34	0	63
	C	854	7	0	13	874
	D	26	0	21	0	47
	Tot.	909	17	1463	19	2408

Traffic Lane Flows

Lane	Scenario 1: 2019 AM
Junction: A430/The Gallops/Soren Larsen Way	
1/1	678
1/2	740
1/3	6
2/1	63
3/1	410
3/2	457
3/3	7
4/1	47
5/1	452
5/2	457
6/1	17
7/1	723
7/2	740
8/1	19

Full Input Data And Results

Lane Saturation Flows

Junction: A430/The Gallops/Soren Larsen Way								
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 (A430 S)	3.10	0.00	Y	Arm 6 Left	17.00	1.5 %	1922	1922
				Arm 7 Ahead	Inf	98.5 %		
1/2 (A430 S)	3.10	0.00	N	Arm 7 Ahead	Inf	100.0 %	2065	2065
1/3 (A430 S)	3.00	0.00	Y	Arm 8 Right	11.00	100.0 %	1685	1685
2/1 (The Gallops)	3.00	0.00	Y	Arm 5 Right	13.00	46.0 %	1735	1735
				Arm 7 Left	16.00	54.0 %		
				Arm 8 Ahead	Inf	0.0 %		
3/1 (A430 N)	3.00	0.00	Y	Arm 5 Ahead	Inf	96.8 %	1909	1909
				Arm 8 Left	15.00	3.2 %		
3/2 (A430 N)	3.00	0.00	N	Arm 5 Ahead	Inf	100.0 %	2055	2055
3/3 (A430 N) 4/1 (Soren Larsen Way)	3.00	0.00	Y	Arm 6 Right	13.00	100.0 %	1717	1717
				Arm 5 Left	13.00	55.3 %		
	2.80	0.00	Y	Arm 6 Ahead	Inf	0.0 %	1699	1699
				Arm 7 Right	13.00	44.7 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
7/2	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2019 PM' (FG2: '2019 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
	A	B	C	D	Tot.	
Origin	A	0	13	1185	18	1216
	B	13	0	15	1	29
	C	1045	43	0	21	1109
	D	14	0	21	0	35
	Tot.	1072	56	1221	40	2389

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2019 PM
Junction: A430/The Gallops/Soren Larsen Way	
1/1	571
1/2	627
1/3	18
2/1	29
3/1	506
3/2	560
3/3	43
4/1	35
5/1	512
5/2	560
6/1	56
7/1	594
7/2	627
8/1	40

Lane Saturation Flows

Junction: A430/The Gallops/Soren Larsen Way								
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 (A430 S)	3.10	0.00	Y	Arm 6 Left	17.00	2.3 %	1921	1921
				Arm 7 Ahead	Inf	97.7 %		
1/2 (A430 S)	3.10	0.00	N	Arm 7 Ahead	Inf	100.0 %	2065	2065
1/3 (A430 S)	3.00	0.00	Y	Arm 8 Right	11.00	100.0 %	1685	1685
2/1 (The Gallops)	3.00	0.00	Y	Arm 5 Right	13.00	44.8 %	1741	1741
				Arm 7 Left	16.00	51.7 %		
				Arm 8 Ahead	Inf	3.4 %		
3/1 (A430 N)	3.00	0.00	Y	Arm 5 Ahead	Inf	95.8 %	1907	1907
				Arm 8 Left	15.00	4.2 %		
3/2 (A430 N)	3.00	0.00	N	Arm 5 Ahead	Inf	100.0 %	2055	2055
3/3 (A430 N) 4/1 (Soren Larsen Way)	3.00	0.00	Y	Arm 6 Right	13.00	100.0 %	1717	1717
				Arm 5 Left	13.00	40.0 %		
	2.80	0.00	Y	Arm 6 Ahead	Inf	0.0 %	1699	1699
				Arm 7 Right	13.00	60.0 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
7/2	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 3: '2031 AM without dev' (FG3: '2031 AM without dev', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
	A	B	C	D	Tot.	
Origin	A	0	11	1597	7	1615
	B	33	0	39	0	72
	C	969	8	0	15	992
	D	29	0	24	0	53
	Tot.	1031	19	1660	22	2732

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: 2031 AM without dev
Junction: A430/The Gallops/Soren Larsen Way	
1/1	770
1/2	838
1/3	7
2/1	72
3/1	467
3/2	517
3/3	8
4/1	53
5/1	514
5/2	517
6/1	19
7/1	822
7/2	838
8/1	22

Lane Saturation Flows

Junction: A430/The Gallops/Soren Larsen Way								
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 (A430 S)	3.10	0.00	Y	Arm 6 Left	17.00	1.4 %	1923	1923
				Arm 7 Ahead	Inf	98.6 %		
1/2 (A430 S)	3.10	0.00	N	Arm 7 Ahead	Inf	100.0 %	2065	2065
1/3 (A430 S)	3.00	0.00	Y	Arm 8 Right	11.00	100.0 %	1685	1685
2/1 (The Gallops)	3.00	0.00	Y	Arm 5 Right	13.00	45.8 %	1735	1735
				Arm 7 Left	16.00	54.2 %		
				Arm 8 Ahead	Inf	0.0 %		
3/1 (A430 N)	3.00	0.00	Y	Arm 5 Ahead	Inf	96.8 %	1909	1909
				Arm 8 Left	15.00	3.2 %		
3/2 (A430 N)	3.00	0.00	N	Arm 5 Ahead	Inf	100.0 %	2055	2055
3/3 (A430 N) 4/1 (Soren Larsen Way)	3.00	0.00	Y	Arm 6 Right	13.00	100.0 %	1717	1717
				Arm 5 Left	13.00	54.7 %		
	2.80	0.00	Y	Arm 6 Ahead	Inf	0.0 %	1699	1699
				Arm 7 Right	13.00	45.3 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
7/2	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2031 PM without dev' (FG4: '2031 PM without dev', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
	A	B	C	D	Tot.	
Origin	A	0	15	1332	20	1367
	B	15	0	17	1	33
	C	1175	48	0	24	1247
	D	16	0	24	0	40
	Tot.	1206	63	1373	45	2687

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: 2031 PM without dev
Junction: A430/The Gallops/Soren Larsen Way	
1/1	643
1/2	704
1/3	20
2/1	33
3/1	570
3/2	629
3/3	48
4/1	40
5/1	577
5/2	629
6/1	63
7/1	669
7/2	704
8/1	45

Full Input Data And Results

Lane Saturation Flows

Junction: A430/The Gallops/Soren Larsen Way								
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 (A430 S)	3.10	0.00	Y	Arm 6 Left	17.00	2.3 %	1921	1921
				Arm 7 Ahead	Inf	97.7 %		
1/2 (A430 S)	3.10	0.00	N	Arm 7 Ahead	Inf	100.0 %	2065	2065
1/3 (A430 S)	3.00	0.00	Y	Arm 8 Right	11.00	100.0 %	1685	1685
2/1 (The Gallops)	3.00	0.00	Y	Arm 5 Right	13.00	45.5 %	1740	1740
				Arm 7 Left	16.00	51.5 %		
				Arm 8 Ahead	Inf	3.0 %		
3/1 (A430 N)	3.00	0.00	Y	Arm 5 Ahead	Inf	95.8 %	1907	1907
				Arm 8 Left	15.00	4.2 %		
3/2 (A430 N)	3.00	0.00	N	Arm 5 Ahead	Inf	100.0 %	2055	2055
3/3 (A430 N) 4/1 (Soren Larsen Way)	3.00	0.00	Y	Arm 6 Right	13.00	100.0 %	1717	1717
				Arm 5 Left	13.00	40.0 %		
	2.80	0.00	Y	Arm 6 Ahead	Inf	0.0 %	1699	1699
				Arm 7 Right	13.00	60.0 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
7/2	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 5: '2031 AM with com dev' (FG7: '2031 AM with com dev', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
	A	B	C	D	Tot.	
Origin	A	0	11	1604	7	1622
	B	33	0	39	0	72
	C	972	8	0	15	995
	D	29	0	24	0	53
	Tot.	1034	19	1667	22	2742

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 5: 2031 AM with com dev
Junction: A430/The Gallops/Soren Larsen Way	
1/1	774
1/2	841
1/3	7
2/1	72
3/1	468
3/2	519
3/3	8
4/1	53
5/1	515
5/2	519
6/1	19
7/1	826
7/2	841
8/1	22

Lane Saturation Flows

Junction: A430/The Gallops/Soren Larsen Way								
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 (A430 S)	3.10	0.00	Y	Arm 6 Left	17.00	1.4 %	1923	1923
				Arm 7 Ahead	Inf	98.6 %		
1/2 (A430 S)	3.10	0.00	N	Arm 7 Ahead	Inf	100.0 %	2065	2065
1/3 (A430 S)	3.00	0.00	Y	Arm 8 Right	11.00	100.0 %	1685	1685
2/1 (The Gallops)	3.00	0.00	Y	Arm 5 Right	13.00	45.8 %	1735	1735
				Arm 7 Left	16.00	54.2 %		
				Arm 8 Ahead	Inf	0.0 %		
3/1 (A430 N)	3.00	0.00	Y	Arm 5 Ahead	Inf	96.8 %	1909	1909
				Arm 8 Left	15.00	3.2 %		
3/2 (A430 N)	3.00	0.00	N	Arm 5 Ahead	Inf	100.0 %	2055	2055
3/3 (A430 N) 4/1 (Soren Larsen Way)	3.00	0.00	Y	Arm 6 Right	13.00	100.0 %	1717	1717
				Arm 5 Left	13.00	54.7 %		
	2.80	0.00	Y	Arm 6 Ahead	Inf	0.0 %	1699	1699
				Arm 7 Right	13.00	45.3 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
7/2	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 6: '2031 PM with com dev' (FG8: '2031 PM with com dev', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
	A	B	C	D	Tot.	
Origin	A	0	15	1335	20	1370
	B	15	0	17	1	33
	C	1181	48	0	24	1253
	D	16	0	24	0	40
	Tot.	1212	63	1376	45	2696

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: 2031 PM with com dev
Junction: A430/The Gallops/Soren Larsen Way	
1/1	645
1/2	705
1/3	20
2/1	33
3/1	573
3/2	632
3/3	48
4/1	40
5/1	580
5/2	632
6/1	63
7/1	671
7/2	705
8/1	45

Full Input Data And Results

Lane Saturation Flows

Junction: A430/The Gallops/Soren Larsen Way								
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 (A430 S)	3.10	0.00	Y	Arm 6 Left	17.00	2.3 %	1921	1921
				Arm 7 Ahead	Inf	97.7 %		
1/2 (A430 S)	3.10	0.00	N	Arm 7 Ahead	Inf	100.0 %	2065	2065
1/3 (A430 S)	3.00	0.00	Y	Arm 8 Right	11.00	100.0 %	1685	1685
2/1 (The Gallops)	3.00	0.00	Y	Arm 5 Right	13.00	45.5 %	1740	1740
				Arm 7 Left	16.00	51.5 %		
				Arm 8 Ahead	Inf	3.0 %		
3/1 (A430 N)	3.00	0.00	Y	Arm 5 Ahead	Inf	95.8 %	1907	1907
				Arm 8 Left	15.00	4.2 %		
3/2 (A430 N)	3.00	0.00	N	Arm 5 Ahead	Inf	100.0 %	2055	2055
3/3 (A430 N) 4/1 (Soren Larsen Way)	3.00	0.00	Y	Arm 6 Right	13.00	100.0 %	1717	1717
				Arm 5 Left	13.00	40.0 %		
	2.80	0.00	Y	Arm 6 Ahead	Inf	0.0 %	1699	1699
				Arm 7 Right	13.00	60.0 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
7/2	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 7: '2031 AM with all dev' (FG11: 'AM 2031 with CD + prop dev', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
	A	B	C	D	Tot.	
Origin	A	0	11	1616	7	1634
	B	33	0	39	0	72
	C	978	8	0	15	1001
	D	29	0	24	0	53
	Tot.	1040	19	1679	22	2760

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 7: 2031 AM with all dev
Junction: A430/The Gallops/Soren Larsen Way	
1/1	779
1/2	848
1/3	7
2/1	72
3/1	471
3/2	522
3/3	8
4/1	53
5/1	518
5/2	522
6/1	19
7/1	831
7/2	848
8/1	22

Lane Saturation Flows

Junction: A430/The Gallops/Soren Larsen Way								
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 (A430 S)	3.10	0.00	Y	Arm 6 Left	17.00	1.4 %	1923	1923
				Arm 7 Ahead	Inf	98.6 %		
1/2 (A430 S)	3.10	0.00	N	Arm 7 Ahead	Inf	100.0 %	2065	2065
1/3 (A430 S)	3.00	0.00	Y	Arm 8 Right	11.00	100.0 %	1685	1685
2/1 (The Gallops)	3.00	0.00	Y	Arm 5 Right	13.00	45.8 %	1735	1735
				Arm 7 Left	16.00	54.2 %		
				Arm 8 Ahead	Inf	0.0 %		
3/1 (A430 N)	3.00	0.00	Y	Arm 5 Ahead	Inf	96.8 %	1909	1909
				Arm 8 Left	15.00	3.2 %		
3/2 (A430 N)	3.00	0.00	N	Arm 5 Ahead	Inf	100.0 %	2055	2055
3/3 (A430 N) 4/1 (Soren Larsen Way)	3.00	0.00	Y	Arm 6 Right	13.00	100.0 %	1717	1717
				Arm 5 Left	13.00	54.7 %		
	2.80	0.00	Y	Arm 6 Ahead	Inf	0.0 %	1699	1699
				Arm 7 Right	13.00	45.3 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
7/2	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 8: '2031 PM with all dev' (FG12: 'PM 2031 with CD + prop dev', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
	A	B	C	D	Tot.	
Origin	A	0	15	1345	20	1380
	B	15	0	17	1	33
	C	1191	48	0	24	1263
	D	16	0	24	0	40
	Tot.	1222	63	1386	45	2716

Full Input Data And Results

Traffic Lane Flows

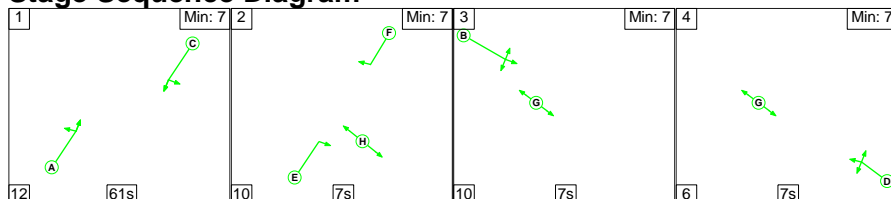
Lane	Scenario 8: 2031 PM with all dev
Junction: A430/The Gallops/Soren Larsen Way	
1/1	649
1/2	711
1/3	20
2/1	33
3/1	578
3/2	637
3/3	48
4/1	40
5/1	585
5/2	637
6/1	63
7/1	675
7/2	711
8/1	45

Lane Saturation Flows

Junction: A430/The Gallops/Soren Larsen Way								
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 (A430 S)	3.10	0.00	Y	Arm 6 Left	17.00	2.3 %	1921	1921
				Arm 7 Ahead	Inf	97.7 %		
1/2 (A430 S)	3.10	0.00	N	Arm 7 Ahead	Inf	100.0 %	2065	2065
1/3 (A430 S)	3.00	0.00	Y	Arm 8 Right	11.00	100.0 %	1685	1685
2/1 (The Gallops)	3.00	0.00	Y	Arm 5 Right	13.00	45.5 %	1740	1740
				Arm 7 Left	16.00	51.5 %		
				Arm 8 Ahead	Inf	3.0 %		
3/1 (A430 N)	3.00	0.00	Y	Arm 5 Ahead	Inf	95.8 %	1907	1907
				Arm 8 Left	15.00	4.2 %		
3/2 (A430 N)	3.00	0.00	N	Arm 5 Ahead	Inf	100.0 %	2055	2055
3/3 (A430 N)	3.00	0.00	Y	Arm 6 Right	13.00	100.0 %	1717	1717
				Arm 5 Left	13.00	40.0 %		
4/1 (Soren Larsen Way)	2.80	0.00	Y	Arm 6 Ahead	Inf	0.0 %	1699	1699
				Arm 7 Right	13.00	60.0 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
7/2	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2019 AM' (FG1: '2019 AM', Plan 1: 'Network Control Plan 1')

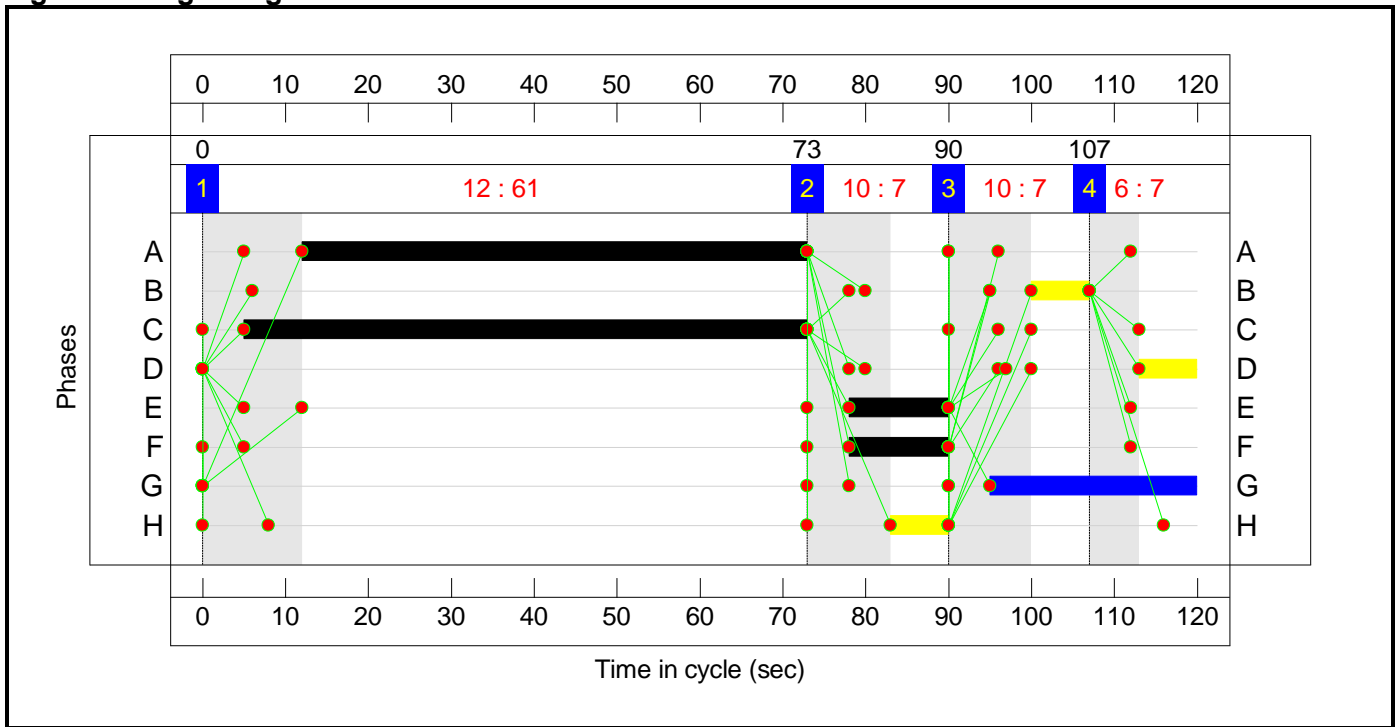
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	61	7	7	7
Change Point	0	73	90	107

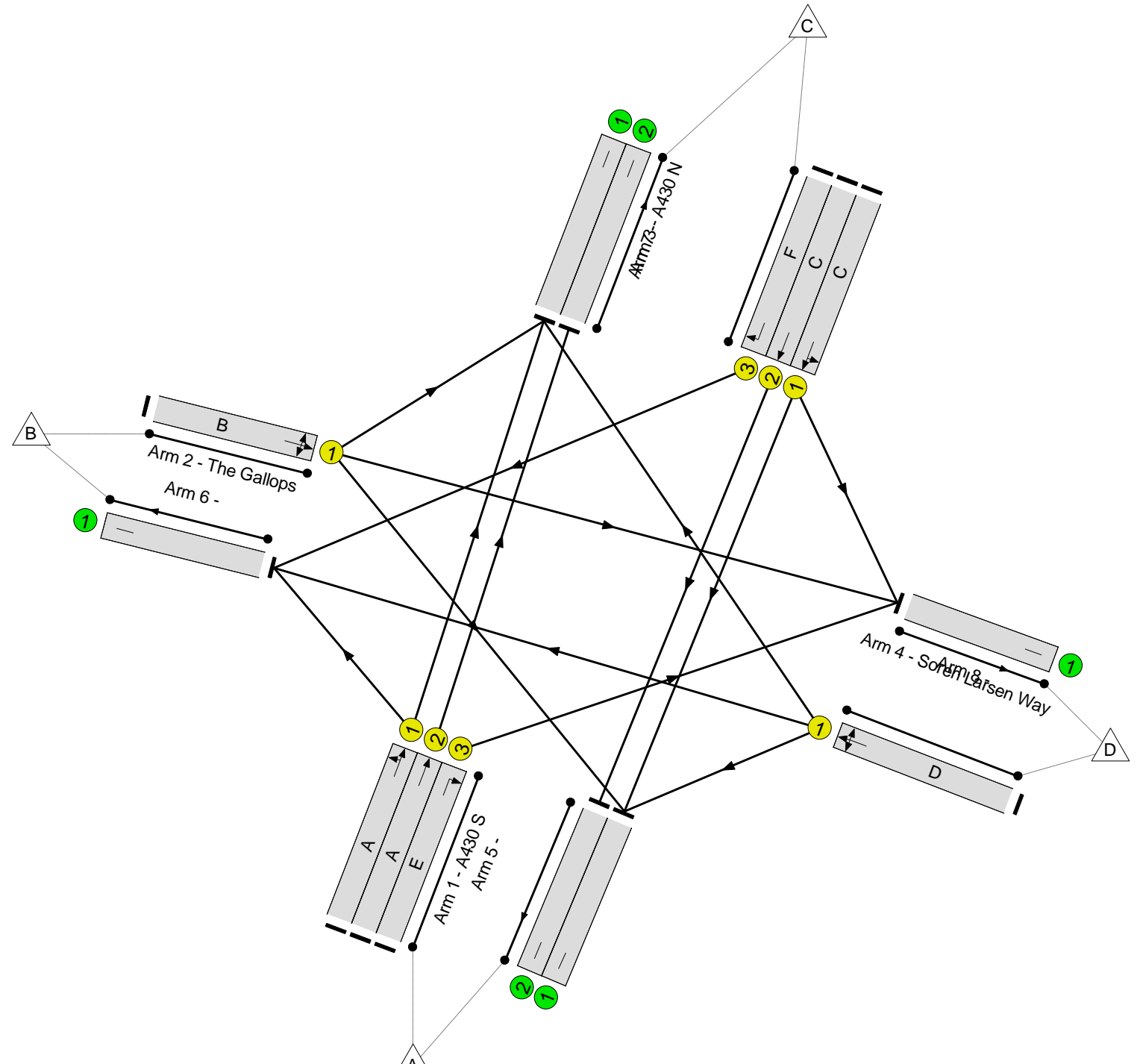
Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results

A430/The Gallops/Soren Larsen Way
PRC: 29.8 %
Total Traffic Delay: 17.5 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: J2 - A430/The Gallops/Soren Larsen Way	-	-	N/A	-	-		-	-	-	-	-	-	69.4%
A430/The Gallops/Soren Larsen Way	-	-	N/A	-	-		-	-	-	-	-	-	69.4%
1/1	A430 S Left Ahead	U	N/A	N/A	A		1	61	-	678	1922	993	68.3%
1/2	A430 S Ahead	U	N/A	N/A	A		1	61	-	740	2065	1067	69.4%
1/3	A430 S Right	U	N/A	N/A	E		1	12	-	6	1685	183	3.3%
2/1	The Gallops Right Left Ahead	U	N/A	N/A	B		1	7	-	63	1735	116	54.5%
3/1	A430 N Ahead Left	U	N/A	N/A	C		1	68	-	410	1909	1098	37.4%
3/2	A430 N Ahead	U	N/A	N/A	C		1	68	-	457	2055	1182	38.7%
3/3	A430 N Right	U	N/A	N/A	F		1	12	-	7	1717	186	3.8%
4/1	Soren Larsen Way Left Ahead Right	U	N/A	N/A	D		1	7	-	47	1699	113	41.5%
5/1		U	N/A	N/A	-		-	-	-	452	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	457	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	17	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	723	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	740	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	19	Inf	Inf	0.0%

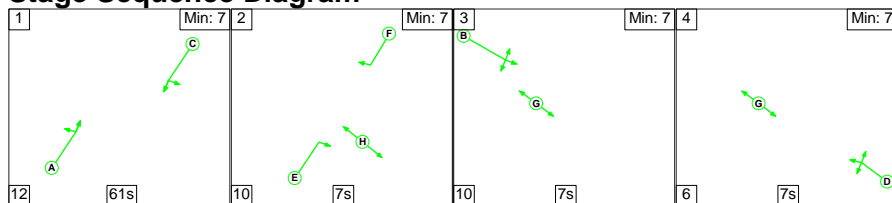
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: J2 - A430/The Gallops/Soren Larsen Way	-	-	0	0	0	13.7	3.8	0.0	17.5	-	-	-	-
A430/The Gallops/Soren Larsen Way	-	-	0	0	0	13.7	3.8	0.0	17.5	-	-	-	-
1/1	678	678	-	-	-	4.1	1.1	-	5.1	27.3	16.8	1.1	17.8
1/2	740	740	-	-	-	4.5	1.1	-	5.6	27.3	18.5	1.1	19.6
1/3	6	6	-	-	-	0.1	0.0	-	0.1	58.3	0.2	0.0	0.2
2/1	63	63	-	-	-	0.9	0.6	-	1.5	87.7	2.0	0.6	2.6
3/1	410	410	-	-	-	1.6	0.3	-	1.9	16.4	7.3	0.3	7.6
3/2	457	457	-	-	-	1.8	0.3	-	2.1	16.4	8.3	0.3	8.6
3/3	7	7	-	-	-	0.1	0.0	-	0.1	58.2	0.2	0.0	0.2
4/1	47	47	-	-	-	0.7	0.4	-	1.1	80.7	1.5	0.4	1.9
5/1	452	452	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	457	457	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	17	17	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	723	723	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	740	740	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	19	19	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1			PRC for Signalled Lanes (%): 29.8		Total Delay for Signalled Lanes (pcuHr): 17.51			Cycle Time (s): 120					
			PRC Over All Lanes (%): 29.8		Total Delay Over All Lanes(pcuHr): 17.51								

Full Input Data And Results

Scenario 2: '2019 PM' (FG2: '2019 PM', Plan 1: 'Network Control Plan 1')

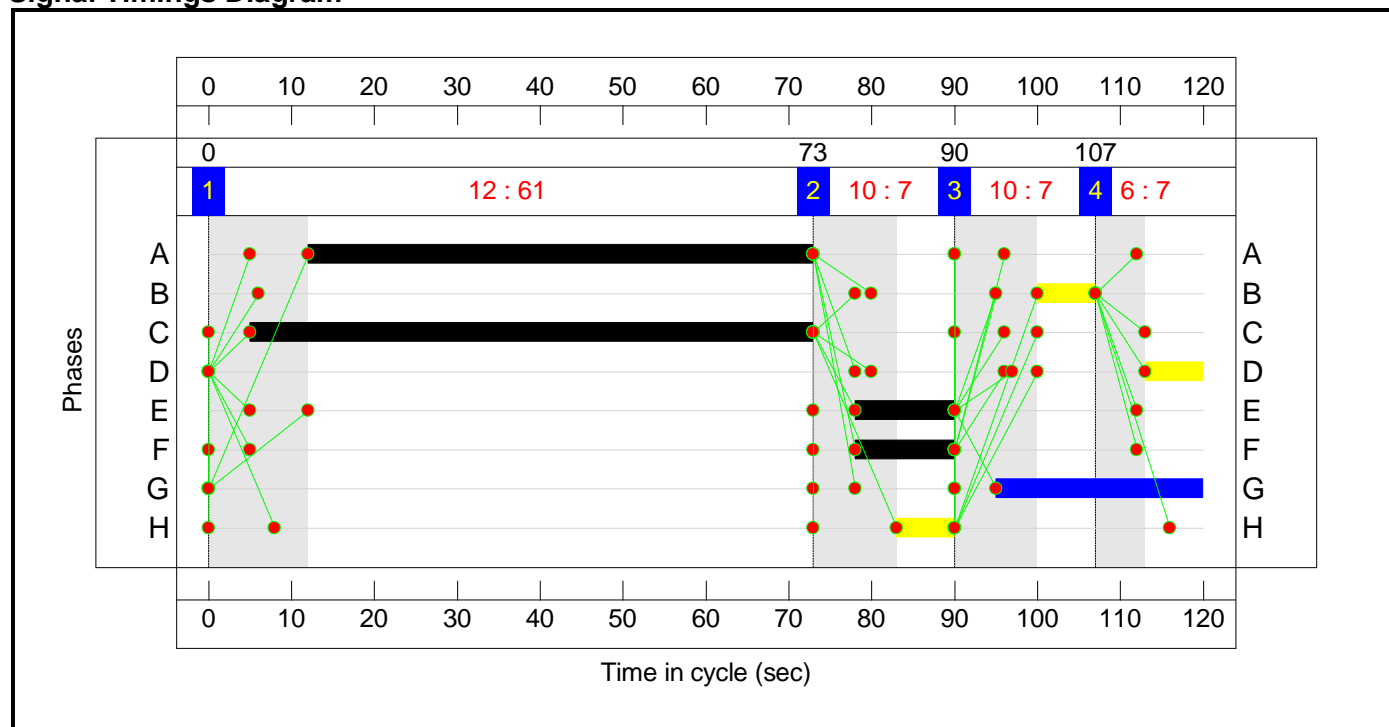
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	61	7	7	7
Change Point	0	73	90	107


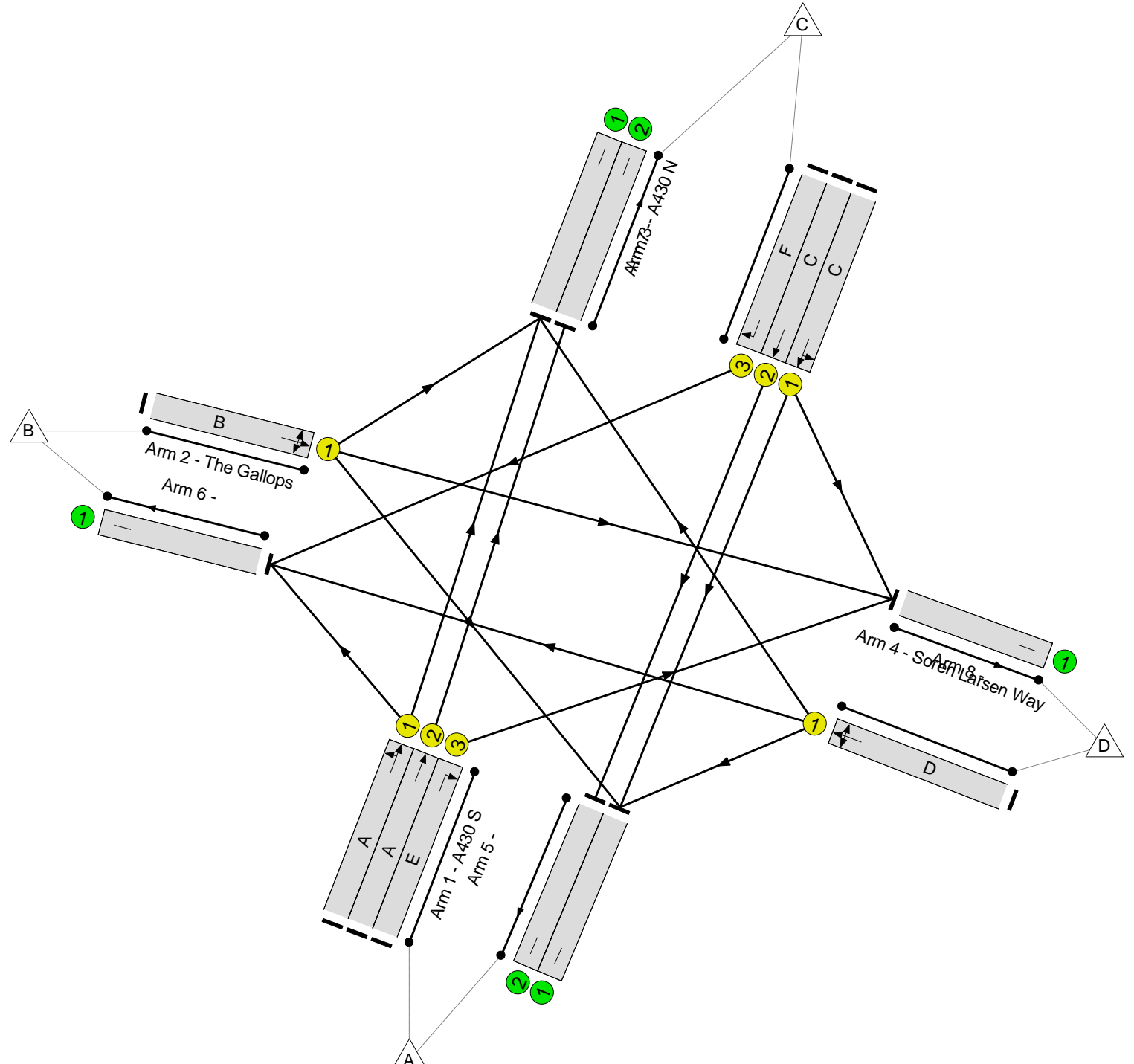
Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results

A430/The Gallops/Soren Larsen Way
 PRC: 53.1 %
 Total Traffic Delay: 15.7 pcuHr

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: J2 - A430/The Gallops/Soren Larsen Way	-	-	N/A	-	-		-	-	-	-	-	-	58.8%
A430/The Gallops/Soren Larsen Way	-	-	N/A	-	-		-	-	-	-	-	-	58.8%
1/1	A430 S Left Ahead	U	N/A	N/A	A		1	61	-	571	1921	993	57.5%
1/2	A430 S Ahead	U	N/A	N/A	A		1	61	-	627	2065	1067	58.8%
1/3	A430 S Right	U	N/A	N/A	E		1	12	-	18	1685	183	9.9%
2/1	The Gallops Right Left Ahead	U	N/A	N/A	B		1	7	-	29	1741	116	25.0%
3/1	A430 N Ahead Left	U	N/A	N/A	C		1	68	-	506	1907	1097	46.1%
3/2	A430 N Ahead	U	N/A	N/A	C		1	68	-	560	2055	1182	47.4%
3/3	A430 N Right	U	N/A	N/A	F		1	12	-	43	1717	186	23.1%
4/1	Soren Larsen Way Left Ahead Right	U	N/A	N/A	D		1	7	-	35	1699	113	30.9%
5/1		U	N/A	N/A	-		-	-	-	512	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	560	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	56	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	594	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	627	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	40	Inf	Inf	0.0%

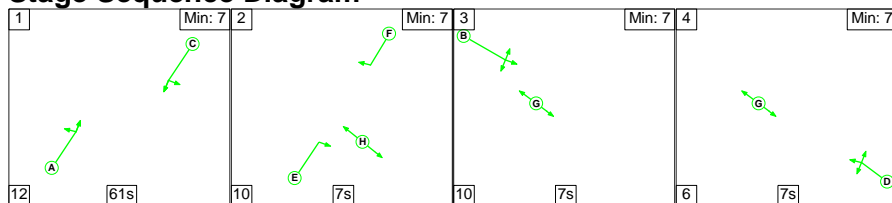
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: J2 - A430/The Gallops/Soren Larsen Way	-	-	0	0	0	12.8	2.9	0.0	15.7	-	-	-	-
A430/The Gallops/Soren Larsen Way	-	-	0	0	0	12.8	2.9	0.0	15.7	-	-	-	-
1/1	571	571	-	-	-	3.2	0.7	-	3.8	24.2	13.0	0.7	13.7
1/2	627	627	-	-	-	3.5	0.7	-	4.2	24.2	14.5	0.7	15.2
1/3	18	18	-	-	-	0.2	0.1	-	0.3	59.2	0.5	0.1	0.6
2/1	29	29	-	-	-	0.4	0.2	-	0.6	73.8	0.9	0.2	1.1
3/1	506	506	-	-	-	2.1	0.4	-	2.5	17.8	9.7	0.4	10.1
3/2	560	560	-	-	-	2.3	0.4	-	2.8	17.8	10.9	0.4	11.3
3/3	43	43	-	-	-	0.6	0.2	-	0.7	61.5	1.3	0.2	1.5
4/1	35	35	-	-	-	0.5	0.2	-	0.7	76.3	1.1	0.2	1.3
5/1	512	512	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	560	560	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	56	56	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	594	594	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	627	627	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	40	40	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1			PRC for Signalled Lanes (%):		53.1	Total Delay for Signalled Lanes (pcuHr):		15.69	Cycle Time (s): 120				
			PRC Over All Lanes (%):		53.1	Total Delay Over All Lanes (pcuHr):		15.69					

Full Input Data And Results

Scenario 3: '2031 AM without dev' (FG3: '2031 AM without dev', Plan 1: 'Network Control Plan 1')

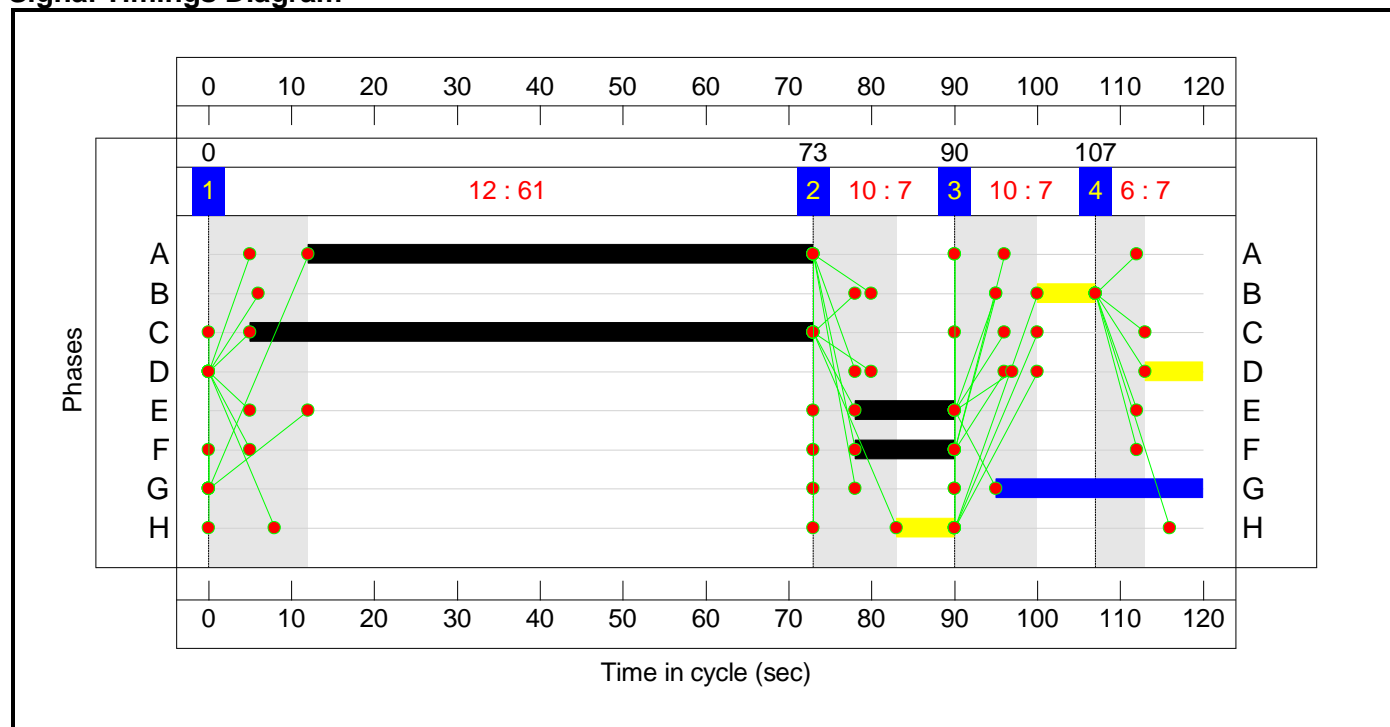
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	61	7	7	7
Change Point	0	73	90	107

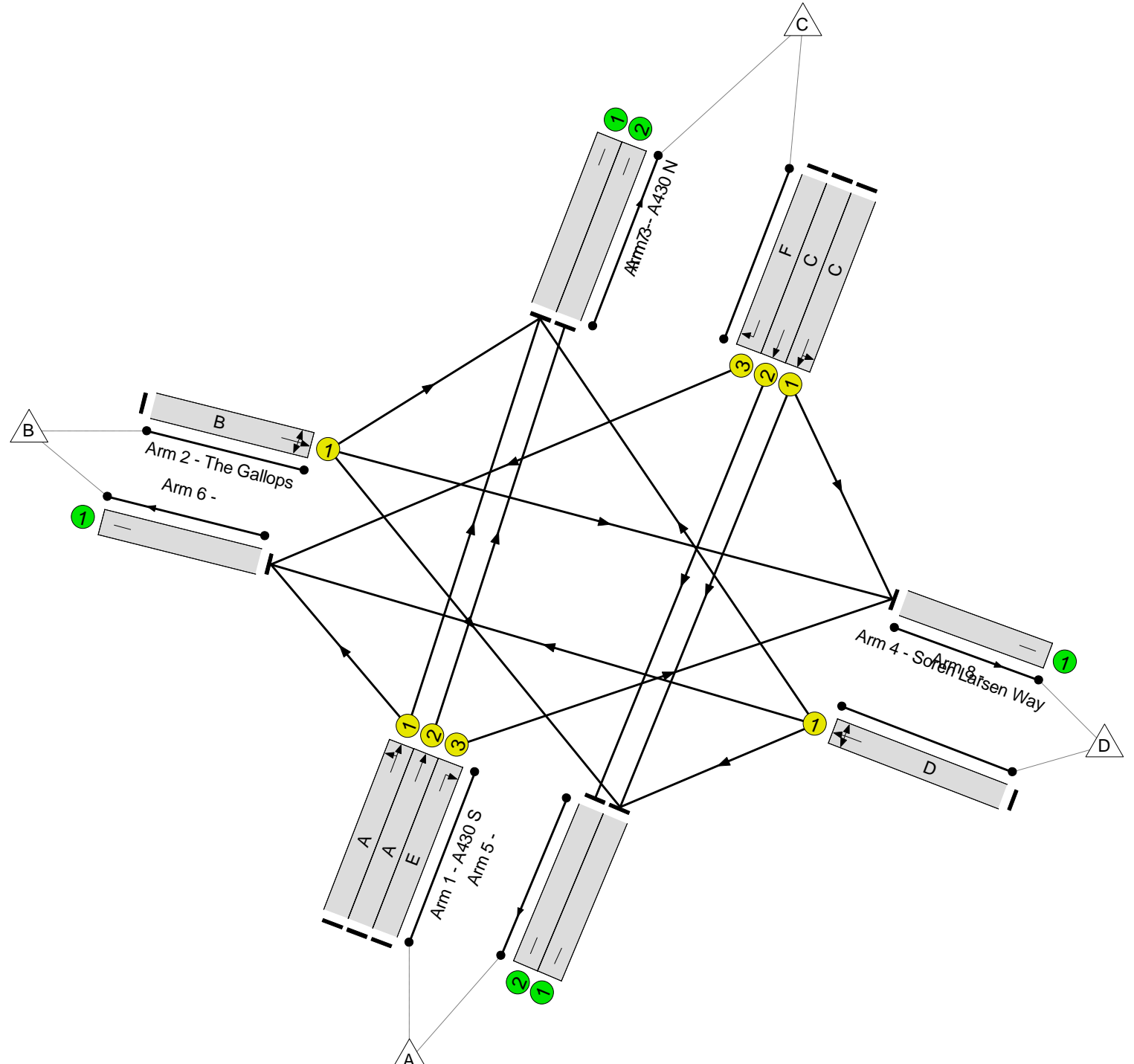
Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results

A430/The Gallops/Soren Larsen Way
PRC: 14.6 %
Total Traffic Delay: 22.0 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: J2 - A430/The Gallops/Soren Larsen Way	-	-	N/A	-	-		-	-	-	-	-	-	78.5%
A430/The Gallops/Soren Larsen Way	-	-	N/A	-	-		-	-	-	-	-	-	78.5%
1/1	A430 S Left Ahead	U	N/A	N/A	A		1	61	-	770	1923	994	77.5%
1/2	A430 S Ahead	U	N/A	N/A	A		1	61	-	838	2065	1067	78.5%
1/3	A430 S Right	U	N/A	N/A	E		1	12	-	7	1685	183	3.8%
2/1	The Gallops Right Left Ahead	U	N/A	N/A	B		1	7	-	72	1735	116	62.2%
3/1	A430 N Ahead Left	U	N/A	N/A	C		1	68	-	467	1909	1098	42.5%
3/2	A430 N Ahead	U	N/A	N/A	C		1	68	-	517	2055	1182	43.8%
3/3	A430 N Right	U	N/A	N/A	F		1	12	-	8	1717	186	4.3%
4/1	Soren Larsen Way Left Ahead Right	U	N/A	N/A	D		1	7	-	53	1699	113	46.8%
5/1		U	N/A	N/A	-		-	-	-	514	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	517	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	19	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	822	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	838	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	22	Inf	Inf	0.0%

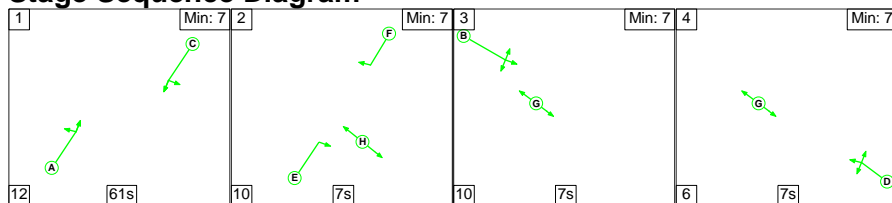
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: J2 - A430/The Gallops/Soren Larsen Way	-	-	0	0	0	16.5	5.5	0.0	22.0	-	-	-	-
A430/The Gallops/Soren Larsen Way	-	-	0	0	0	16.5	5.5	0.0	22.0	-	-	-	-
1/1	770	770	-	-	-	5.0	1.7	-	6.7	31.3	20.5	1.7	22.2
1/2	838	838	-	-	-	5.5	1.8	-	7.3	31.3	22.6	1.8	24.4
1/3	7	7	-	-	-	0.1	0.0	-	0.1	58.4	0.2	0.0	0.2
2/1	72	72	-	-	-	1.1	0.8	-	1.9	94.3	2.3	0.8	3.1
3/1	467	467	-	-	-	1.9	0.4	-	2.2	17.2	8.7	0.4	9.1
3/2	517	517	-	-	-	2.1	0.4	-	2.5	17.2	9.8	0.4	10.2
3/3	8	8	-	-	-	0.1	0.0	-	0.1	58.3	0.2	0.0	0.3
4/1	53	53	-	-	-	0.8	0.4	-	1.2	83.4	1.7	0.4	2.1
5/1	514	514	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	517	517	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	19	19	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	822	822	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	838	838	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	22	22	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1			PRC for Signalled Lanes (%):		14.6	Total Delay for Signalled Lanes (pcuHr):		22.05	Cycle Time (s): 120				
			PRC Over All Lanes (%):		14.6	Total Delay Over All Lanes (pcuHr):		22.05					

Full Input Data And Results

Scenario 4: '2031 PM without dev' (FG4: '2031 PM without dev', Plan 1: 'Network Control Plan 1')

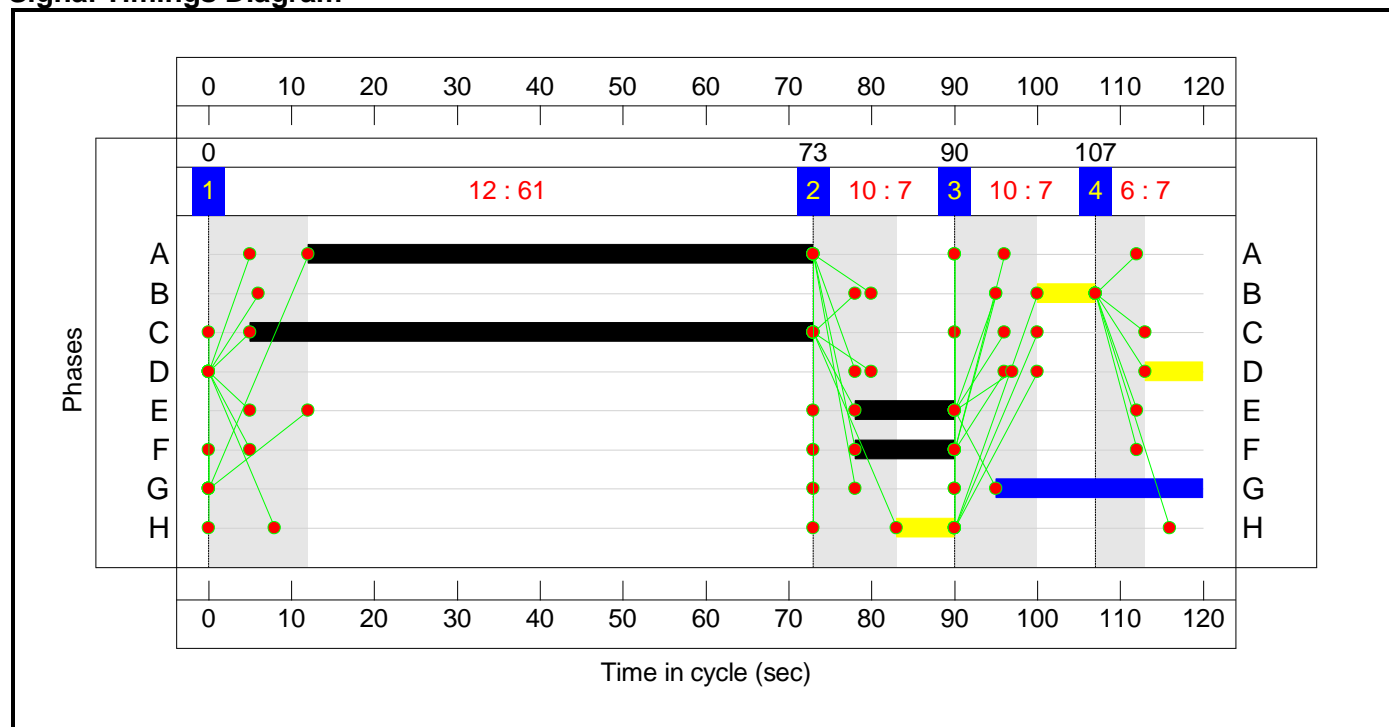
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	61	7	7	7
Change Point	0	73	90	107

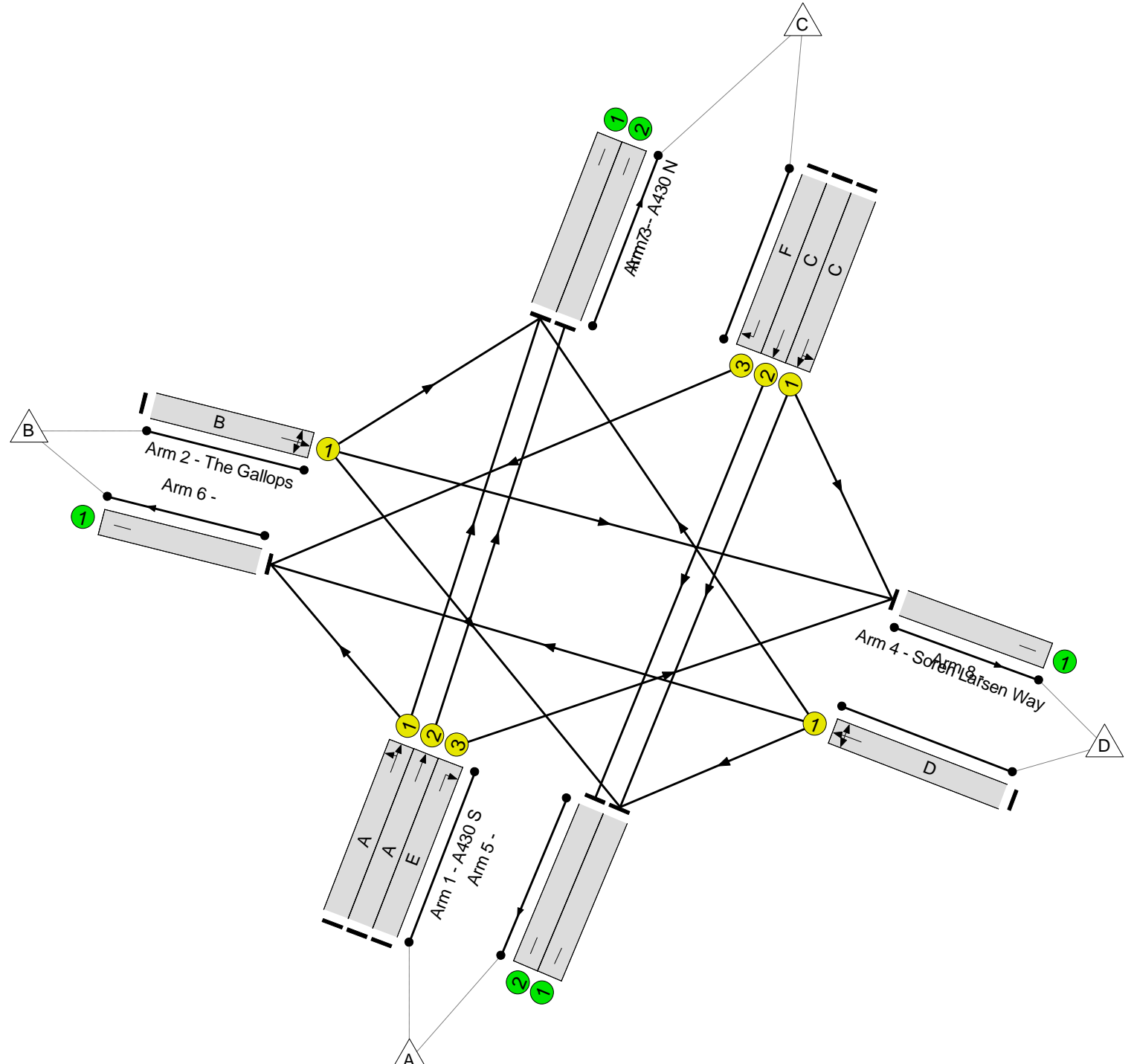
Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results

A430/The Gallops/Soren Larsen Way
 PRC: 36.4 %
 Total Traffic Delay: 18.8 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: J2 - A430/The Gallops/Soren Larsen Way	-	-	N/A	-	-		-	-	-	-	-	-	66.0%
A430/The Gallops/Soren Larsen Way	-	-	N/A	-	-		-	-	-	-	-	-	66.0%
1/1	A430 S Left Ahead	U	N/A	N/A	A		1	61	-	643	1921	993	64.8%
1/2	A430 S Ahead	U	N/A	N/A	A		1	61	-	704	2065	1067	66.0%
1/3	A430 S Right	U	N/A	N/A	E		1	12	-	20	1685	183	11.0%
2/1	The Gallops Right Left Ahead	U	N/A	N/A	B		1	7	-	33	1740	116	28.4%
3/1	A430 N Ahead Left	U	N/A	N/A	C		1	68	-	570	1907	1097	52.0%
3/2	A430 N Ahead	U	N/A	N/A	C		1	68	-	629	2055	1182	53.2%
3/3	A430 N Right	U	N/A	N/A	F		1	12	-	48	1717	186	25.8%
4/1	Soren Larsen Way Left Ahead Right	U	N/A	N/A	D		1	7	-	40	1699	113	35.3%
5/1		U	N/A	N/A	-		-	-	-	577	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	629	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	63	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	669	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	704	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	45	Inf	Inf	0.0%

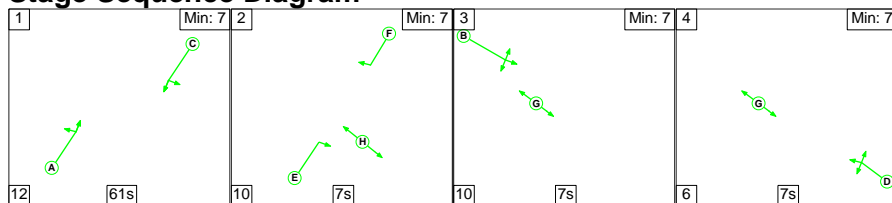
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: J2 - A430/The Gallops/Soren Larsen Way	-	-	0	0	0	15.1	3.7	0.0	18.8	-	-	-	-
A430/The Gallops/Soren Larsen Way	-	-	0	0	0	15.1	3.7	0.0	18.8	-	-	-	-
1/1	643	643	-	-	-	3.8	0.9	-	4.7	26.2	15.5	0.9	16.5
1/2	704	704	-	-	-	4.2	1.0	-	5.1	26.2	17.2	1.0	18.2
1/3	20	20	-	-	-	0.3	0.1	-	0.3	59.4	0.6	0.1	0.7
2/1	33	33	-	-	-	0.5	0.2	-	0.7	74.9	1.0	0.2	1.2
3/1	570	570	-	-	-	2.4	0.5	-	3.0	18.9	11.4	0.5	11.9
3/2	629	629	-	-	-	2.7	0.6	-	3.3	18.9	12.8	0.6	13.3
3/3	48	48	-	-	-	0.7	0.2	-	0.8	62.1	1.5	0.2	1.6
4/1	40	40	-	-	-	0.6	0.3	-	0.9	78.0	1.3	0.3	1.5
5/1	577	577	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	629	629	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	63	63	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	669	669	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	704	704	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	45	45	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1			PRC for Signalled Lanes (%):		36.4	Total Delay for Signalled Lanes (pcuHr):		18.80	Cycle Time (s): 120				
			PRC Over All Lanes (%):		36.4	Total Delay Over All Lanes(pcuHr):		18.80					

Full Input Data And Results

Scenario 5: '2031 AM with com dev' (FG7: '2031 AM with com dev', Plan 1: 'Network Control Plan 1')

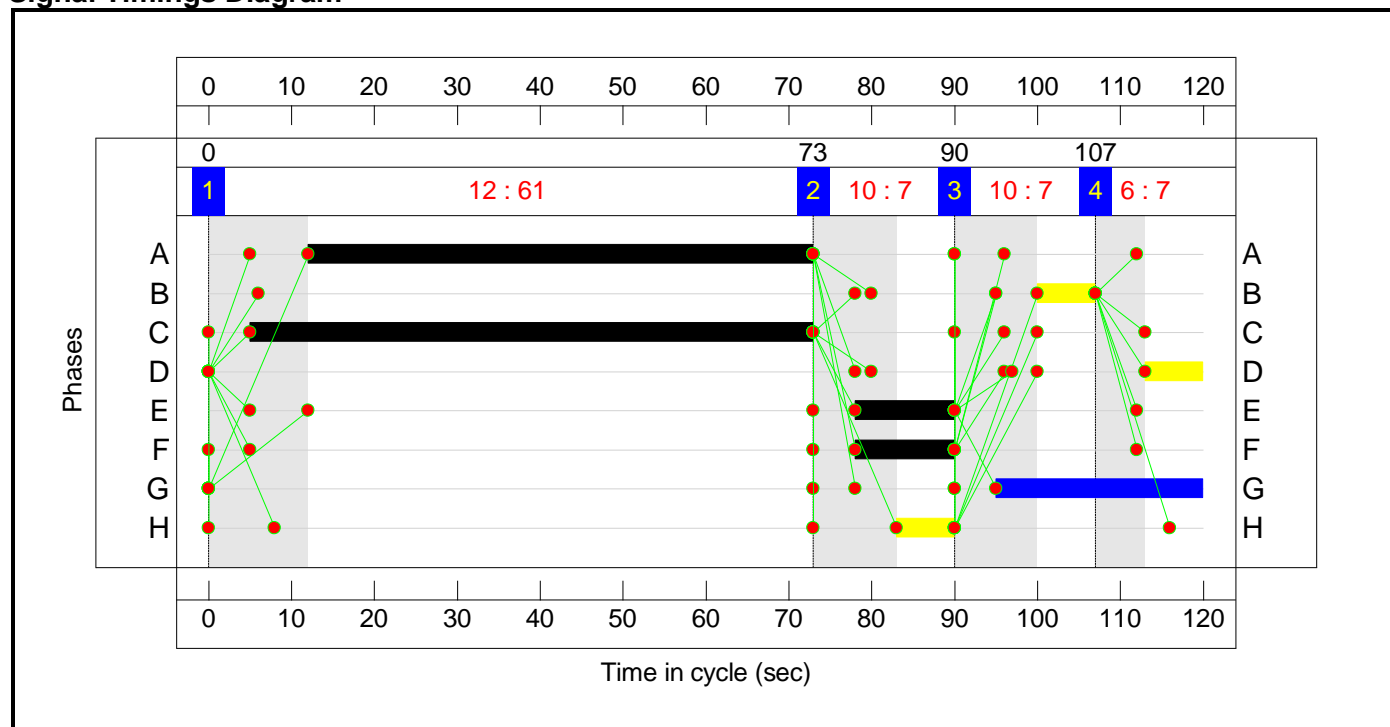
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	61	7	7	7
Change Point	0	73	90	107

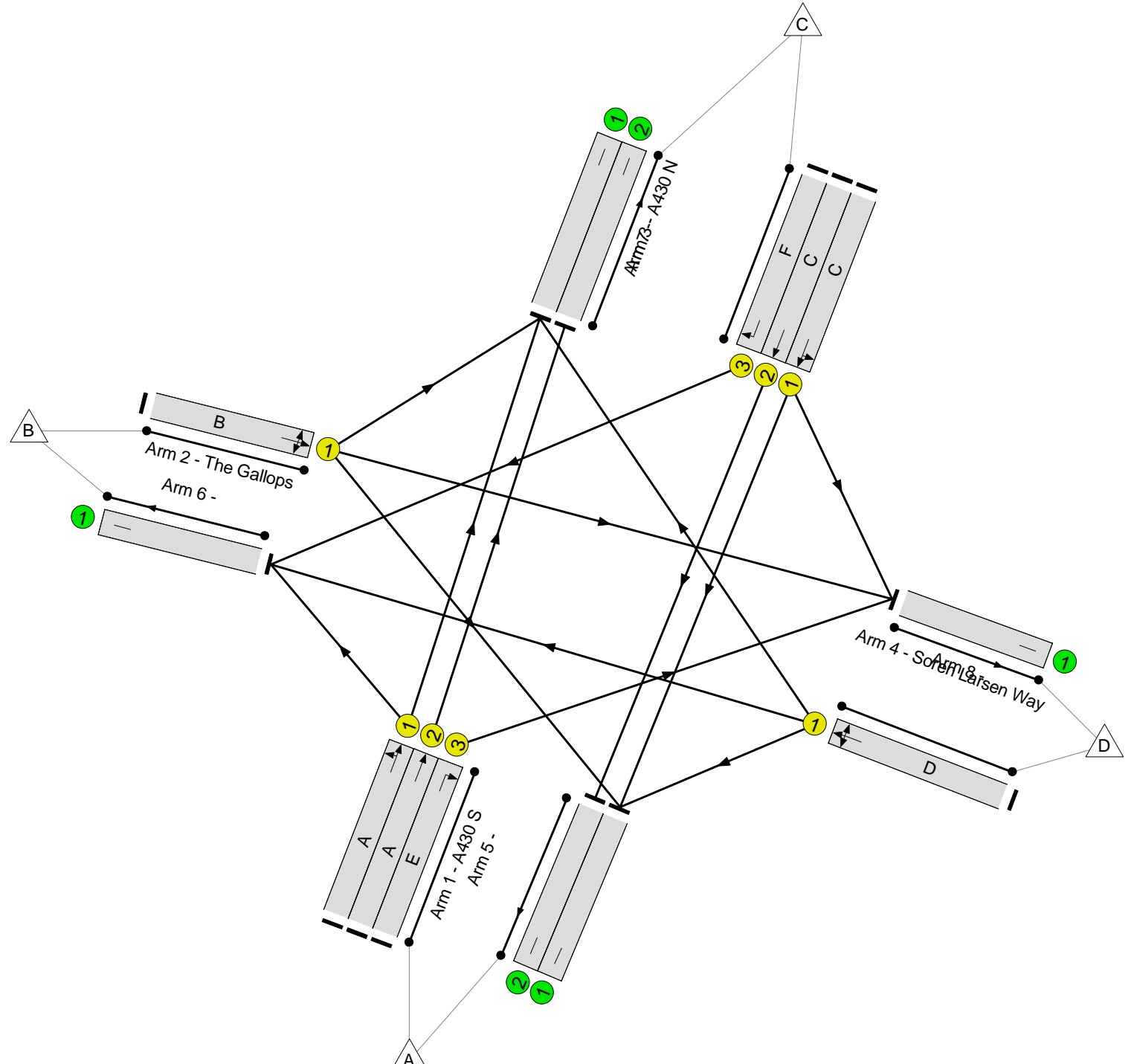
Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results

A430/The Gallops/Soren Larsen Way
PRC: 14.2 %
Total Traffic Delay: 22.2 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: J2 - A430/The Gallops/Soren Larsen Way	-	-	N/A	-	-		-	-	-	-	-	-	78.8%
A430/The Gallops/Soren Larsen Way	-	-	N/A	-	-		-	-	-	-	-	-	78.8%
1/1	A430 S Left Ahead	U	N/A	N/A	A		1	61	-	774	1923	994	77.9%
1/2	A430 S Ahead	U	N/A	N/A	A		1	61	-	841	2065	1067	78.8%
1/3	A430 S Right	U	N/A	N/A	E		1	12	-	7	1685	183	3.8%
2/1	The Gallops Right Left Ahead	U	N/A	N/A	B		1	7	-	72	1735	116	62.2%
3/1	A430 N Ahead Left	U	N/A	N/A	C		1	68	-	468	1909	1098	42.6%
3/2	A430 N Ahead	U	N/A	N/A	C		1	68	-	519	2055	1182	43.9%
3/3	A430 N Right	U	N/A	N/A	F		1	12	-	8	1717	186	4.3%
4/1	Soren Larsen Way Left Ahead Right	U	N/A	N/A	D		1	7	-	53	1699	113	46.8%
5/1		U	N/A	N/A	-		-	-	-	515	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	519	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	19	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	826	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	841	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	22	Inf	Inf	0.0%

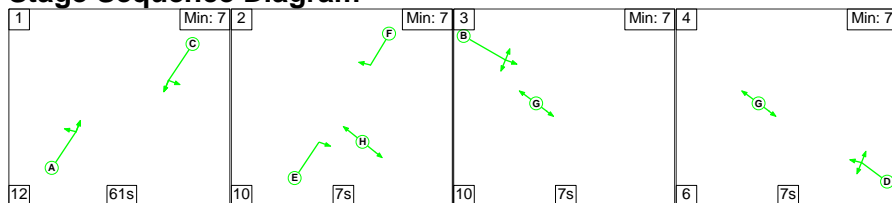
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: J2 - A430/The Gallops/Soren Larsen Way	-	-	0	0	0	16.6	5.6	0.0	22.2	-	-	-	-
A430/The Gallops/Soren Larsen Way	-	-	0	0	0	16.6	5.6	0.0	22.2	-	-	-	-
1/1	774	774	-	-	-	5.0	1.7	-	6.8	31.5	20.9	1.7	22.6
1/2	841	841	-	-	-	5.5	1.8	-	7.4	31.5	22.7	1.8	24.5
1/3	7	7	-	-	-	0.1	0.0	-	0.1	58.4	0.2	0.0	0.2
2/1	72	72	-	-	-	1.1	0.8	-	1.9	94.3	2.3	0.8	3.1
3/1	468	468	-	-	-	1.9	0.4	-	2.2	17.2	8.7	0.4	9.1
3/2	519	519	-	-	-	2.1	0.4	-	2.5	17.2	9.8	0.4	10.2
3/3	8	8	-	-	-	0.1	0.0	-	0.1	58.3	0.2	0.0	0.3
4/1	53	53	-	-	-	0.8	0.4	-	1.2	83.4	1.7	0.4	2.1
5/1	515	515	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	519	519	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	19	19	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	826	826	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	841	841	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	22	22	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1			PRC for Signalled Lanes (%):		14.2	Total Delay for Signalled Lanes (pcuHr):		22.21	Cycle Time (s): 120				
			PRC Over All Lanes (%):		14.2	Total Delay Over All Lanes(pcuHr):		22.21					

Full Input Data And Results

Scenario 6: '2031 PM with com dev' (FG8: '2031 PM with com dev', Plan 1: 'Network Control Plan 1')

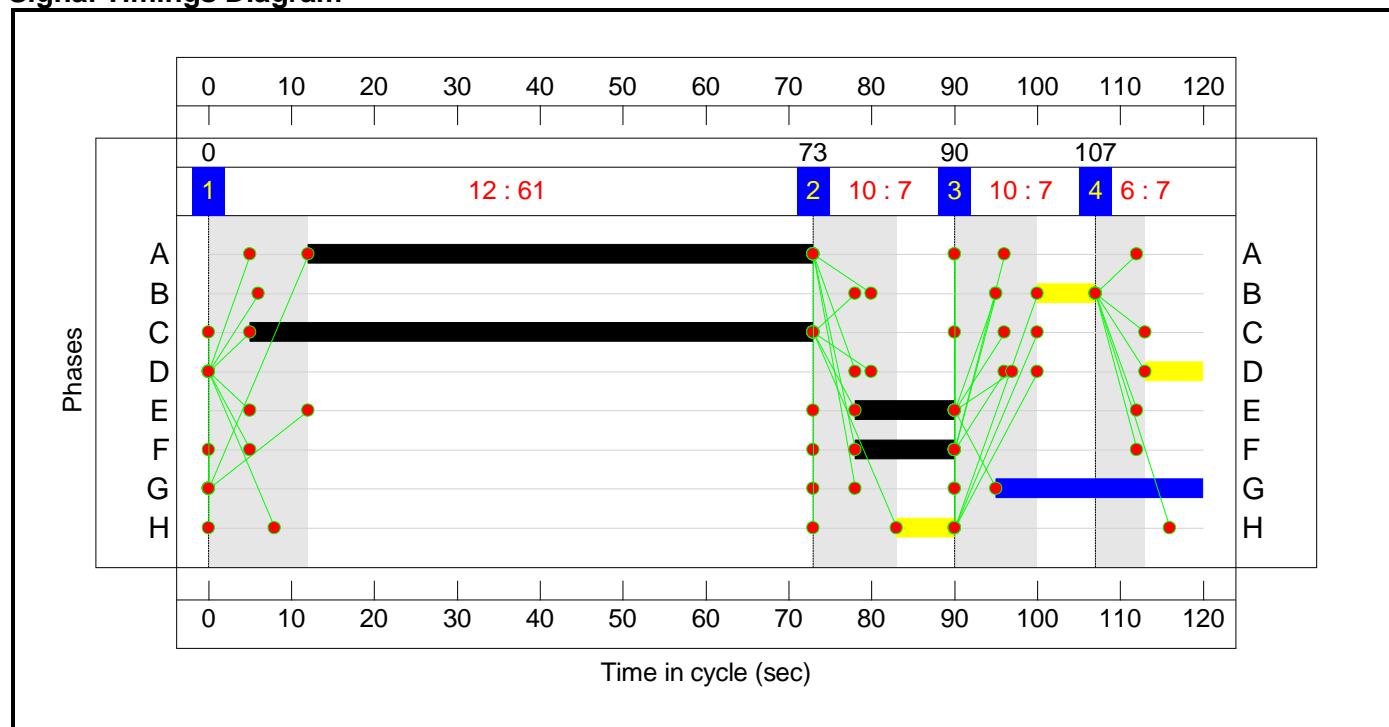
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	61	7	7	7
Change Point	0	73	90	107

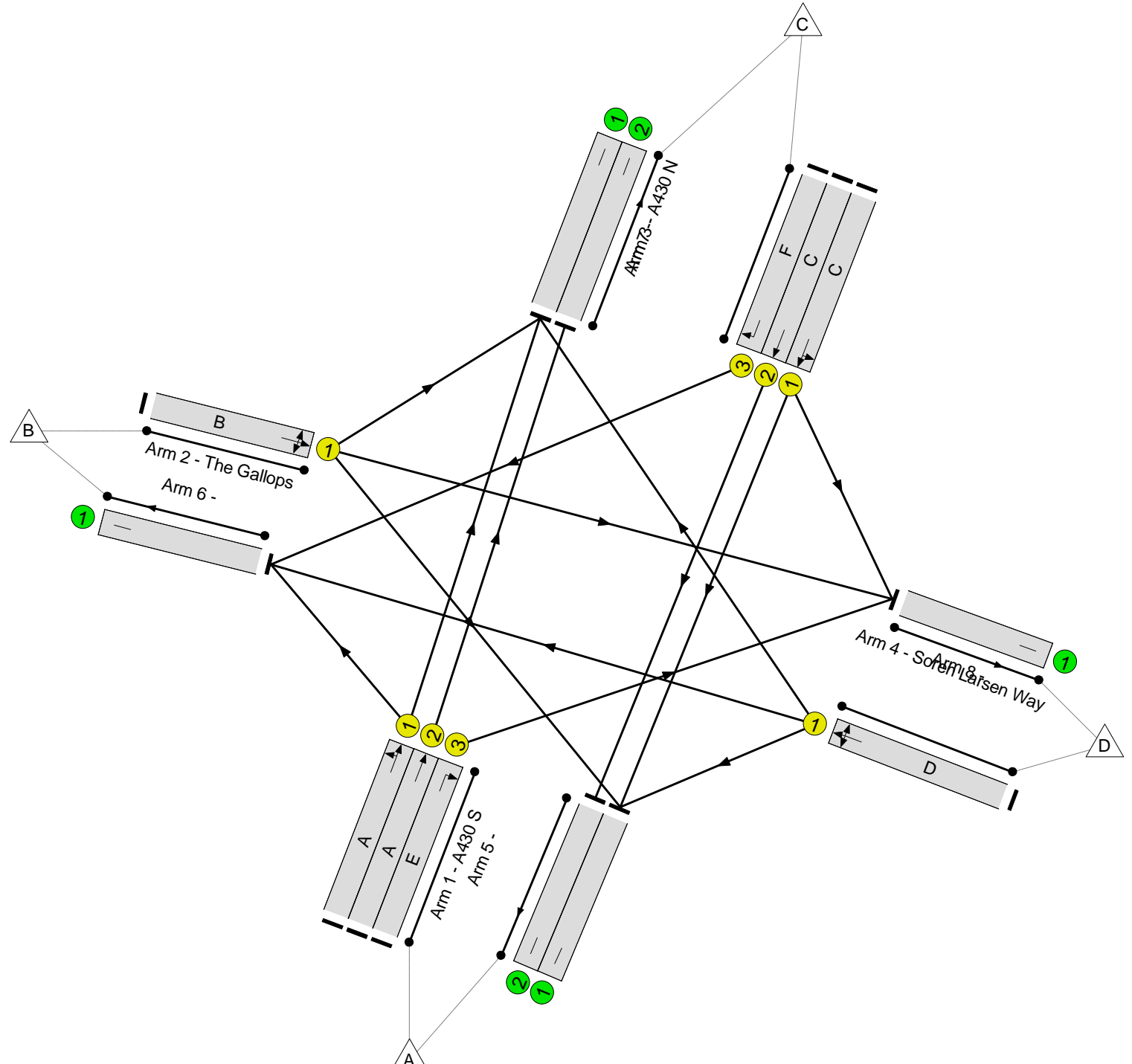
Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results

A430/The Gallops/Soren Larsen Way
PRC: 36.2 %
Total Traffic Delay: 18.9 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: J2 - A430/The Gallops/Soren Larsen Way	-	-	N/A	-	-		-	-	-	-	-	-	66.1%
A430/The Gallops/Soren Larsen Way	-	-	N/A	-	-		-	-	-	-	-	-	66.1%
1/1	A430 S Left Ahead	U	N/A	N/A	A		1	61	-	645	1921	993	65.0%
1/2	A430 S Ahead	U	N/A	N/A	A		1	61	-	705	2065	1067	66.1%
1/3	A430 S Right	U	N/A	N/A	E		1	12	-	20	1685	183	11.0%
2/1	The Gallops Right Left Ahead	U	N/A	N/A	B		1	7	-	33	1740	116	28.4%
3/1	A430 N Ahead Left	U	N/A	N/A	C		1	68	-	573	1907	1097	52.3%
3/2	A430 N Ahead	U	N/A	N/A	C		1	68	-	632	2055	1182	53.5%
3/3	A430 N Right	U	N/A	N/A	F		1	12	-	48	1717	186	25.8%
4/1	Soren Larsen Way Left Ahead Right	U	N/A	N/A	D		1	7	-	40	1699	113	35.3%
5/1		U	N/A	N/A	-		-	-	-	580	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	632	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	63	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	671	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	705	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	45	Inf	Inf	0.0%

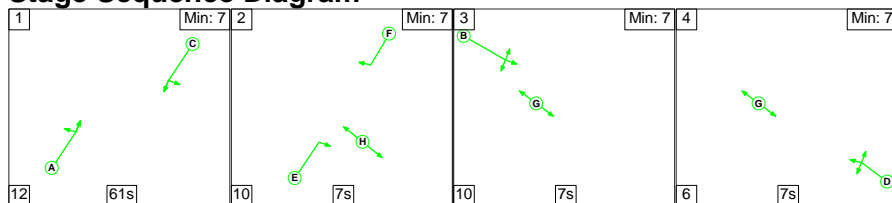
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: J2 - A430/The Gallops/Soren Larsen Way	-	-	0	0	0	15.2	3.7	0.0	18.9	-	-	-	-
A430/The Gallops/Soren Larsen Way	-	-	0	0	0	15.2	3.7	0.0	18.9	-	-	-	-
1/1	645	645	-	-	-	3.8	0.9	-	4.7	26.3	15.6	0.9	16.5
1/2	705	705	-	-	-	4.2	1.0	-	5.1	26.2	17.2	1.0	18.2
1/3	20	20	-	-	-	0.3	0.1	-	0.3	59.4	0.6	0.1	0.7
2/1	33	33	-	-	-	0.5	0.2	-	0.7	74.9	1.0	0.2	1.2
3/1	573	573	-	-	-	2.5	0.5	-	3.0	18.9	11.5	0.5	12.0
3/2	632	632	-	-	-	2.7	0.6	-	3.3	18.9	12.8	0.6	13.4
3/3	48	48	-	-	-	0.7	0.2	-	0.8	62.1	1.5	0.2	1.6
4/1	40	40	-	-	-	0.6	0.3	-	0.9	78.0	1.3	0.3	1.5
5/1	580	580	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	632	632	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	63	63	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	671	671	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	705	705	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	45	45	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1			PRC for Signalled Lanes (%): 36.2		36.2	Total Delay for Signalled Lanes (pcuHr): 18.89		18.89	Cycle Time (s): 120				
			PRC Over All Lanes (%):		36.2	Total Delay Over All Lanes(pcuHr):		18.89					

Full Input Data And Results

Scenario 7: '2031 AM with all dev' (FG11: 'AM 2031 with CD + prop dev', Plan 1: 'Network Control Plan 1')

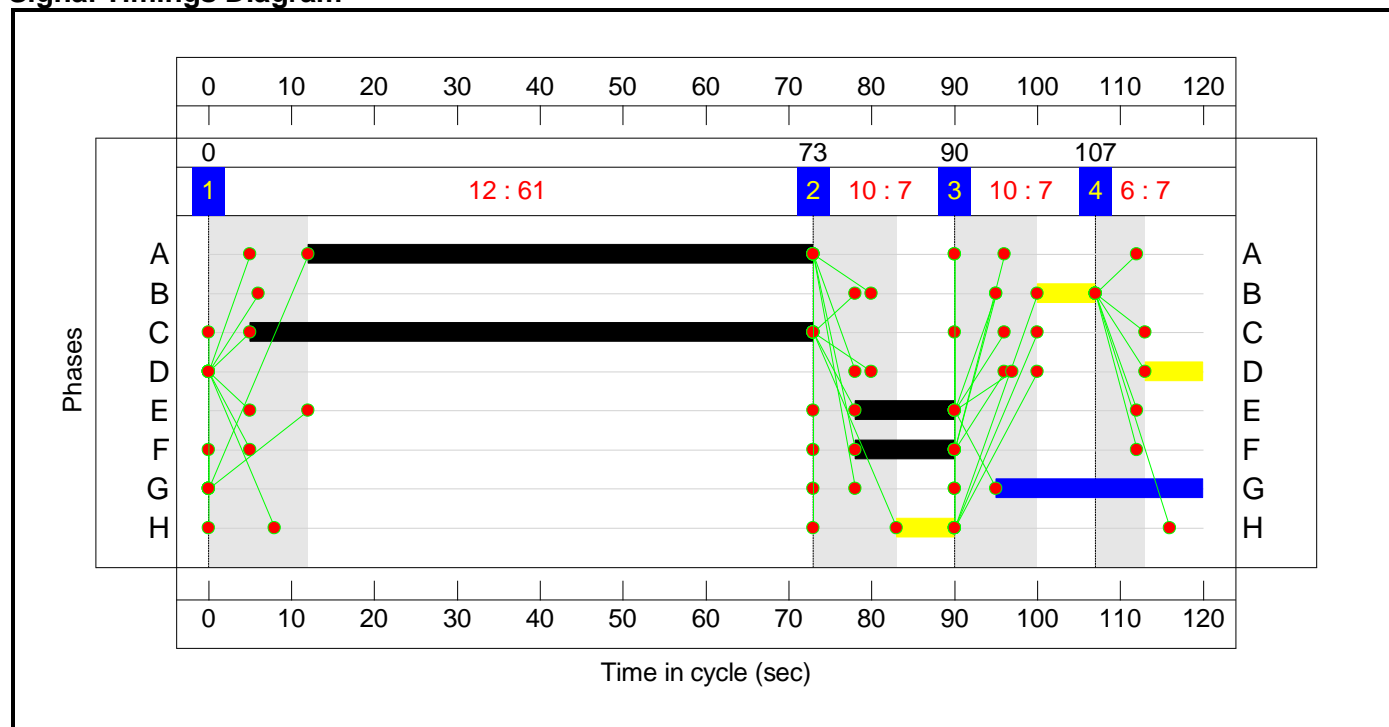
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	61	7	7	7
Change Point	0	73	90	107

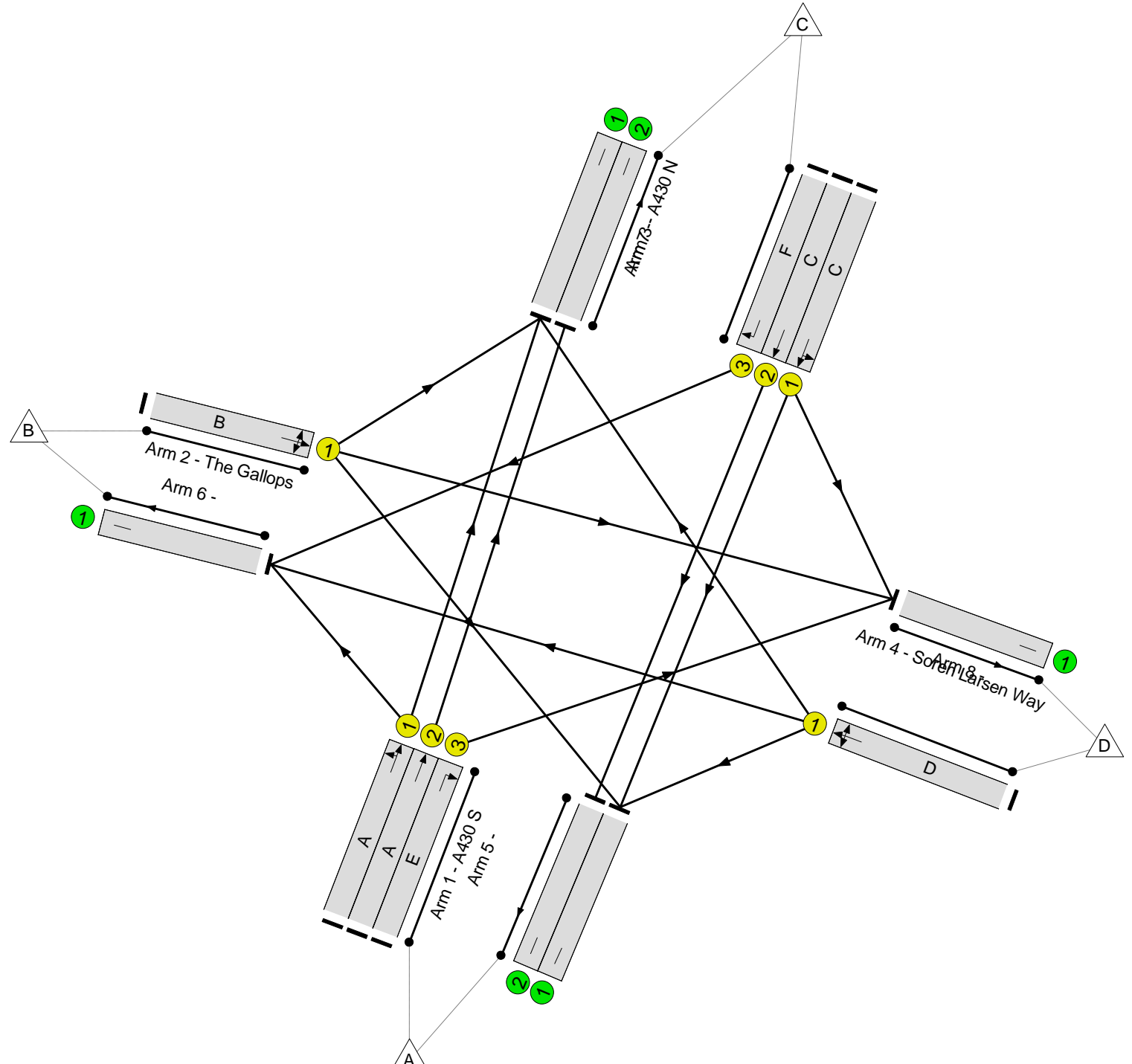
Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results

A430/The Gallops/Soren Larsen Way
 PRC: 13.2 %
 Total Traffic Delay: 22.5 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: J2 - A430/The Gallops/Soren Larsen Way	-	-	N/A	-	-		-	-	-	-	-	-	79.5%
A430/The Gallops/Soren Larsen Way	-	-	N/A	-	-		-	-	-	-	-	-	79.5%
1/1	A430 S Left Ahead	U	N/A	N/A	A		1	61	-	779	1923	994	78.4%
1/2	A430 S Ahead	U	N/A	N/A	A		1	61	-	848	2065	1067	79.5%
1/3	A430 S Right	U	N/A	N/A	E		1	12	-	7	1685	183	3.8%
2/1	The Gallops Right Left Ahead	U	N/A	N/A	B		1	7	-	72	1735	116	62.2%
3/1	A430 N Ahead Left	U	N/A	N/A	C		1	68	-	471	1909	1098	42.9%
3/2	A430 N Ahead	U	N/A	N/A	C		1	68	-	522	2055	1182	44.2%
3/3	A430 N Right	U	N/A	N/A	F		1	12	-	8	1717	186	4.3%
4/1	Soren Larsen Way Left Ahead Right	U	N/A	N/A	D		1	7	-	53	1699	113	46.8%
5/1		U	N/A	N/A	-		-	-	-	518	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	522	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	19	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	831	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	848	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	22	Inf	Inf	0.0%

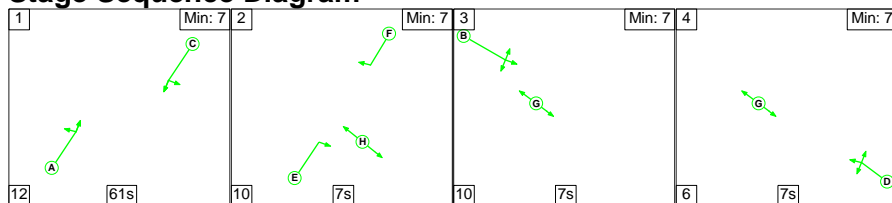
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: J2 - A430/The Gallops/Soren Larsen Way	-	-	0	0	0	16.8	5.7	0.0	22.5	-	-	-	-
A430/The Gallops/Soren Larsen Way	-	-	0	0	0	16.8	5.7	0.0	22.5	-	-	-	-
1/1	779	779	-	-	-	5.1	1.8	-	6.9	31.8	21.0	1.8	22.8
1/2	848	848	-	-	-	5.6	1.9	-	7.5	31.9	23.1	1.9	25.0
1/3	7	7	-	-	-	0.1	0.0	-	0.1	58.4	0.2	0.0	0.2
2/1	72	72	-	-	-	1.1	0.8	-	1.9	94.3	2.3	0.8	3.1
3/1	471	471	-	-	-	1.9	0.4	-	2.3	17.3	8.8	0.4	9.1
3/2	522	522	-	-	-	2.1	0.4	-	2.5	17.3	9.9	0.4	10.3
3/3	8	8	-	-	-	0.1	0.0	-	0.1	58.3	0.2	0.0	0.3
4/1	53	53	-	-	-	0.8	0.4	-	1.2	83.4	1.7	0.4	2.1
5/1	518	518	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	522	522	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	19	19	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	831	831	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	848	848	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	22	22	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1			PRC for Signalled Lanes (%):		13.2	Total Delay for Signalled Lanes (pcuHr):		22.51	Cycle Time (s): 120				
			PRC Over All Lanes (%):		13.2	Total Delay Over All Lanes(pcuHr):		22.51					

Full Input Data And Results

Scenario 8: '2031 PM with all dev' (FG12: 'PM 2031 with CD + prop dev', Plan 1: 'Network Control Plan 1')

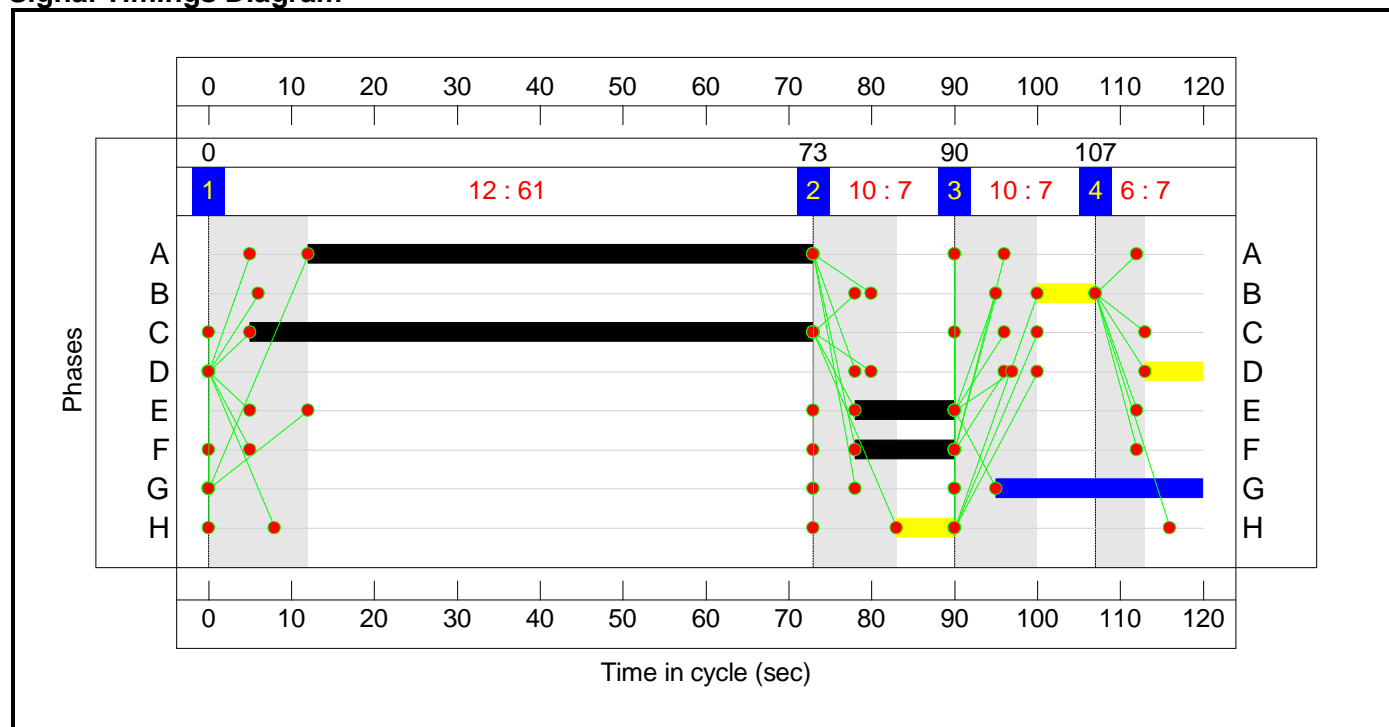
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	61	7	7	7
Change Point	0	73	90	107

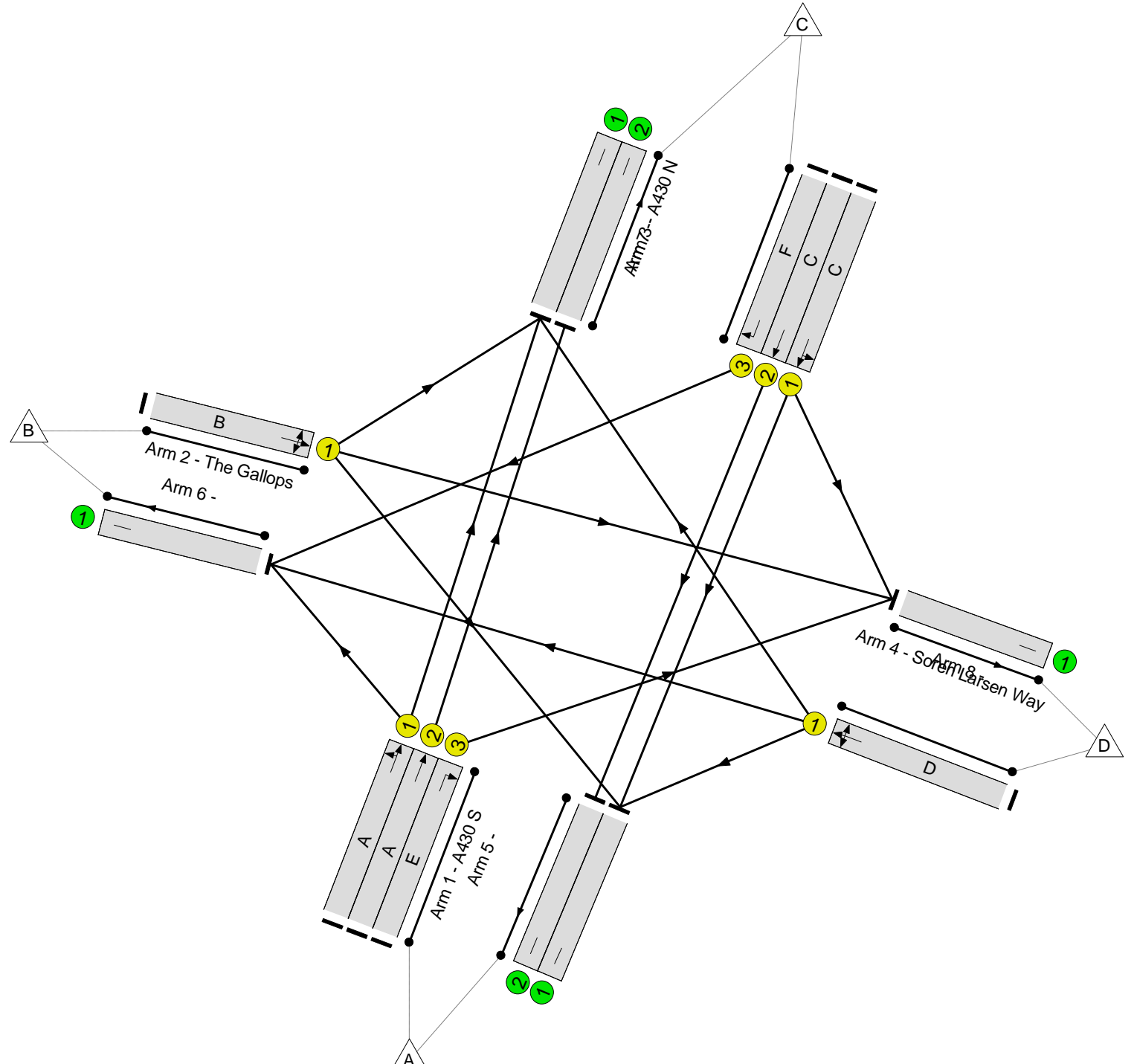
Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results

A430/The Gallops/Soren Larsen Way
 PRC: 35.1 %
 Total Traffic Delay: 19.1 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: J2 - A430/The Gallops/Soren Larsen Way	-	-	N/A	-	-		-	-	-	-	-	-	66.6%
A430/The Gallops/Soren Larsen Way	-	-	N/A	-	-		-	-	-	-	-	-	66.6%
1/1	A430 S Left Ahead	U	N/A	N/A	A		1	61	-	649	1921	993	65.4%
1/2	A430 S Ahead	U	N/A	N/A	A		1	61	-	711	2065	1067	66.6%
1/3	A430 S Right	U	N/A	N/A	E		1	12	-	20	1685	183	11.0%
2/1	The Gallops Right Left Ahead	U	N/A	N/A	B		1	7	-	33	1740	116	28.4%
3/1	A430 N Ahead Left	U	N/A	N/A	C		1	68	-	578	1907	1097	52.7%
3/2	A430 N Ahead	U	N/A	N/A	C		1	68	-	637	2055	1182	53.9%
3/3	A430 N Right	U	N/A	N/A	F		1	12	-	48	1717	186	25.8%
4/1	Soren Larsen Way Left Ahead Right	U	N/A	N/A	D		1	7	-	40	1699	113	35.3%
5/1		U	N/A	N/A	-		-	-	-	585	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	637	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	63	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	675	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	711	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	45	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: J2 - A430/The Gallops/Soren Larsen Way	-	-	0	0	0	15.3	3.8	0.0	19.1	-	-	-	-
A430/The Gallops/Soren Larsen Way	-	-	0	0	0	15.3	3.8	0.0	19.1	-	-	-	-
1/1	649	649	-	-	-	3.8	0.9	-	4.8	26.4	15.7	0.9	16.6
1/2	711	711	-	-	-	4.2	1.0	-	5.2	26.4	17.4	1.0	18.4
1/3	20	20	-	-	-	0.3	0.1	-	0.3	59.4	0.6	0.1	0.7
2/1	33	33	-	-	-	0.5	0.2	-	0.7	74.9	1.0	0.2	1.2
3/1	578	578	-	-	-	2.5	0.6	-	3.1	19.0	11.7	0.6	12.3
3/2	637	637	-	-	-	2.8	0.6	-	3.4	19.0	12.9	0.6	13.5
3/3	48	48	-	-	-	0.7	0.2	-	0.8	62.1	1.5	0.2	1.6
4/1	40	40	-	-	-	0.6	0.3	-	0.9	78.0	1.3	0.3	1.5
5/1	585	585	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	637	637	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	63	63	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	675	675	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	711	711	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	45	45	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1			PRC for Signalled Lanes (%): 35.1		Total Delay for Signalled Lanes (pcuHr): 19.10			Cycle Time (s): 120					
			PRC Over All Lanes (%): 35.1		Total Delay Over All Lanes(pcuHr): 19.10								

<h1>Junctions 8</h1>
<h2>PICADY 8 - Priority Intersection Module</h2>
Version: 8.0.6.541 [19821,26/11/2015] © Copyright TRL Limited, 2022
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Filename: prop access off hempsted lane 2031.arc8

Path: C:\Users\Hugh Crook\Documents\Hugh Temp\FP101 Gloucester\LINSIG & PICADY

Report generation date: 13/06/2022 14:38:52

» 2031 with CD + prop dev, AM

» 2031 with CD + prop dev, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2031 with CD + prop dev								
Stream B-AC	0.22	9.50	0.18	A	0.08	8.47	0.07	A
Stream C-AB	0.00	0.00	0.00	A	0.00	0.00	0.00	A
Stream C-A	-	-	-	-	-	-	-	-
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-

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

"D1 - 2031 with CD + prop dev, AM " model duration: 07:30 - 09:00

"D2 - 2031 with CD + prop dev, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.6.541 at 13/06/2022 14:38:51

File summary

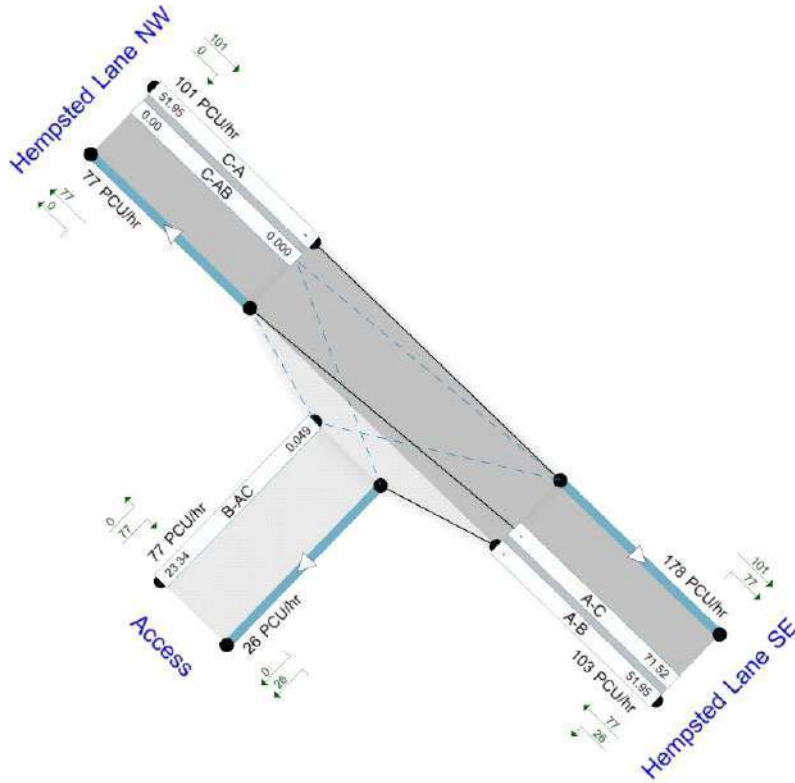
Title	Proposed Access off Hempsted Lane
Location	Hempsted, Gloucester
Site Number	
Date	13/06/2022
Version	
Status	(new file)
Identifier	
Client	Gladman Developments Limited
Jobnumber	FP101
Enumerator	SMT/HC
Description	

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



Showing original traffic demand (PCU/hr)
 Streams (upstreams) show Total Demand (PCU/hr); Streams (downstreams) show RFC (s)
 Time Segment: (07:30-07:45)
 Showing Analysis Set 'A1 - *'; Demand Set 'D1 - 2031 with CD + prop dev, AM'

The junction diagram reflects the last run of ARCADY.

2031 with CD + prop dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
	N/A			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)	Single Time Segment Only	Locked
2031 with CD + prop dev, AM	2031 with CD + prop dev	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Access off Hempsted Lane	T-Junction	Two-way	A,B,C	9.50	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Hempsted Lane SE	A	Hempsted Lane SE		Major
Access	B	Access		Minor
Hempsted Lane NW	C	Hempsted Lane NW		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Hempsted Lane NW	6.00		0.00		2.20	80.00	✓	0.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Access	One lane	3.00										40	40

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	510.248	0.093	0.235	0.148	0.336
1	B-C	649.118	0.100	0.252	-	-
1	C-B	620.292	0.240	0.240	-	-

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

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

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

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Hempsted Lane SE	ONE HOUR	✓	103.00	100.000
Access	ONE HOUR	✓	77.00	100.000
Hempsted Lane NW	ONE HOUR	✓	101.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Access off Hempsted Lane (for whole period)

		To		
		Hempsted Lane SE	Access	Hempsted Lane NW
From	Hempsted Lane SE	0.000	26.000	77.000
	Access	77.000	0.000	0.000
	Hempsted Lane NW	101.000	0.000	0.000

Turning Proportions (PCU) - Access off Hempsted Lane (for whole period)

		To		
		Hempsted Lane SE	Access	Hempsted Lane NW
From	Hempsted Lane SE	0.00	0.25	0.75
	Access	1.00	0.00	0.00
	Hempsted Lane NW	1.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Access off Hempsted Lane (for whole period)

		To		
		Hempsted Lane SE	Access	Hempsted Lane NW
From	Hempsted Lane SE	1.000	1.020	1.038
	Access	1.020	1.000	1.020
	Hempsted Lane NW	1.000	1.020	1.000

Heavy Vehicle Percentages - Access off Hempsted Lane (for whole period)

		To		
From		Hempsted Lane SE	Access	Hempsted Lane NW
	Hempsted Lane SE	0.0	2.0	3.8
	Access	2.0	0.0	2.0
	Hempsted Lane NW	0.0	2.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.18	9.50	0.22	A
C-AB	0.00	0.00	0.00	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

2031 with CD + prop dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
	N/A			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)	Single Time Segment Only	Locked
2031 with CD + prop dev, PM	2031 with CD + prop dev	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Access off Hempsted Lane	T-Junction	Two-way	A,B,C	8.47	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
Hempsted Lane SE	A	Hempsted Lane SE		Major
Access	B	Access		Minor
Hempsted Lane NW	C	Hempsted Lane NW		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
Hempsted Lane NW	6.00		0.00		2.20	80.00	✓	0.00

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Access	One lane	3.00										40	40

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	510.248	0.093	0.235	0.148	0.336
1	B-C	649.118	0.100	0.252	-	-
1	C-B	620.292	0.240	0.240	-	-

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

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

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

Traffic 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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Hempsted Lane SE	ONE HOUR	✓	164.00	100.000
Access	ONE HOUR	✓	31.00	100.000
Hempsted Lane NW	ONE HOUR	✓	69.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Access off Hempsted Lane (for whole period)

		To		
		Hempsted Lane SE	Access	Hempsted Lane NW
From	Hempsted Lane SE	0.000	69.000	95.000
	Access	31.000	0.000	0.000
	Hempsted Lane NW	69.000	0.000	0.000

Turning Proportions (PCU) - Access off Hempsted Lane (for whole period)

		To		
		Hempsted Lane SE	Access	Hempsted Lane NW
From	Hempsted Lane SE	0.00	0.42	0.58
	Access	1.00	0.00	0.00
	Hempsted Lane NW	1.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Access off Hempsted Lane (for whole period)

		To		
		Hempsted Lane SE	Access	Hempsted Lane NW
From	Hempsted Lane SE	1.000	1.020	1.018
	Access	1.020	1.000	1.020
	Hempsted Lane NW	1.000	1.020	1.000

Heavy Vehicle Percentages - Access off Hempsted Lane (for whole period)

		To		
		Hempsted Lane SE	Access	Hempsted Lane NW
From	Hempsted Lane SE	0.0	2.0	1.8
	Access	2.0	0.0	2.0
	Hempsted Lane NW	0.0	2.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.07	8.47	0.08	A
C-AB	0.00	0.00	0.00	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-