Appendix A – Capacity Criteria

TYPE	WIDTH	LANES	CAPACITY
Trunk	Very Narrow	1	1020
A Road	Very Narrow	1	1020
B Road	Very Narrow	1	900
Unclassified	Very Narrow	1	750
Trunk	Narrow	1	1320
A Road	Narrow	1	1260
B Road	Narrow	1	1110
Unclassified	Narrow	1	900
Trunk	Normal	1	1590
A Road	Normal	1	1470
B Road	Normal	1	1300
Unclassified	Normal	1	1140
Trunk	Wide	1	1860
A Road	Wide	1	1650
B Road	Wide	1	1620
Unclassified	Wide	1	1410
Dual Carriageway	Normal	2	2950
Dual Carriageway Trunk	Normal	2	3350
Dual Carriageway Trunk	Wide	2	3600
Motorway	Normal	3	5600
Dual Carriageway	Wide	2	3200
Motorway	Wide	3	5600
Motorway	Wide	4	7450

Appendix B – TRICS Trip Rate Tables

Calculation Reference: AUDIT-700701-160524-0517

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED
VEHICLES

Selected regions and areas:
02 SOUTH EAST
EX ESSEX 1 days

Filtering Stage 2 selection:

Parameter:	Number of dwellings
Actual Range:	237 to 237 (units:)
Range Selected by User:	100 to 4334 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/08 to 25/09/15

Selected survey days:
Tuesday 1 days

Selected survey types:
Manual count 1 days
Directional ATC Count 0 days

Selected Locations:
Edge of Town 1

Selected Location Sub Categories:
Residential Zone 1

LIST OF SITES relevant to selection parameters

1 EX-03-A-01 SEMI-DET. ESSEX
MILTON ROAD
CORRINGHAM
STANFORD-LE-HOPE
Edge of Town
Residential Zone
Total Number of dwellings: 237
Survey date: TUESDAY 13/05/08 Survey Type: MANUAL

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
CH-03-A-02	**Not Suitable**
DV-03-A-02	**Not Suitable**
NE-03-A-03	**Not Suitable**
NY-03-A-06	**Not Suitable**
WS-03-A-04	**Not Suitable**

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	1	237	0.127	1	237	0.333	1	237	0.460
08:00 - 09:00	1	237	0.177	1	237	0.523	1	237	0.700
09:00 - 10:00	1	237	0.156	1	237	0.198	1	237	0.354
10:00 - 11:00	1	237	0.122	1	237	0.190	1	237	0.312
11:00 - 12:00	1	237	0.165	1	237	0.118	1	237	0.283
12:00 - 13:00	1	237	0.215	1	237	0.186	1	237	0.401
13:00 - 14:00	1	237	0.203	1	237	0.190	1	237	0.393
14:00 - 15:00	1	237	0.207	1	237	0.186	1	237	0.393
15:00 - 16:00	1	237	0.473	1	237	0.308	1	237	0.781
16:00 - 17:00	1	237	0.405	1	237	0.232	1	237	0.637
17:00 - 18:00	1	237	0.439	1	237	0.274	1	237	0.713
18:00 - 19:00	1	237	0.287	1	237	0.194	1	237	0.481
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.976			2.932			5.908

Parameter summary

Trip rate parameter range selected:	237 - 237 (units:)
Survey date date range:	01/01/08 - 25/09/15
Number of weekdays (Monday-Friday):	1
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	5

Calculation Reference: AUDIT-700701-160524-0547

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : A - OFFICE
VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	HC	HAMPSHIRE	1 days
	KC	KENT	2 days
	SC	SURREY	4 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	WY	WEST YORKSHIRE	1 days
08	NORTH WEST		
	LC	LANCASHIRE	1 days
09	NORTH		
	DH	DURHAM	1 days
	TW	TYNE & WEAR	3 days

Filtering Stage 2 selection:

Parameter:	Gross floor area
Actual Range:	1113 to 70291 (units: sqm)
Range Selected by User:	999 to 30000 (units: sqm)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/08 to 26/11/15

Selected survey days:

Monday	2 days
Tuesday	7 days
Wednesday	1 days
Thursday	3 days
Friday	1 days

Selected survey types:

Manual count	14 days
Directional ATC Count	0 days

Selected Locations:

Suburban Area (PPS6 Out of Centre)	7
Edge of Town	7

Selected Location Sub Categories:

Commercial Zone	7
Residential Zone	6
Built-Up Zone	1

LIST OF SITES relevant to selection parameters

1 CA-02-A-04 OFFICE CAMBRIDGESHIRE
BRETTON WAY

PETERBOROUGH
Edge of Town
Commercial Zone
Total Gross floor area: 6483 sqm
Survey date: THURSDAY 20/10/11 Survey Type: MANUAL

2 DH-02-A-01 RPMI OFFICES DURHAM
BRINKBURN ROAD

DARLINGTON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 3372 sqm
Survey date: FRIDAY 05/11/10 Survey Type: MANUAL

3 HC-02-A-11 DIY CO. HQ HAMPSHIRE
CHESTNUT AVENUE

CHANDLER'S FORD
Edge of Town
Commercial Zone
Total Gross floor area: 26100 sqm
Survey date: MONDAY 17/10/11 Survey Type: MANUAL

4 KC-02-A-06 LAND REGISTRY KENT
FOREST ROAD
CAMDEN PARK
TUNBRIDGE WELLS
Edge of Town
Residential Zone
Total Gross floor area: 5677 sqm
Survey date: TUESDAY 01/12/09 Survey Type: MANUAL

5 KC-02-A-07 KCC HIGHWAYS REG. KENT
KAVELIN WAY
HENWOOD IND. ESTATE
ASHFORD
Edge of Town
Commercial Zone
Total Gross floor area: 2525 sqm
Survey date: MONDAY 05/12/11 Survey Type: MANUAL

6 LC-02-A-09 OFFICES LANCASHIRE
FURTHERGATE

BLACKBURN
Suburban Area (PPS6 Out of Centre)
Built-Up Zone
Total Gross floor area: 2600 sqm
Survey date: TUESDAY 04/06/13 Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

7 SC-02-A-14 UNILEVER SURREY
SPRINGFIELD DRIVE

LEATHERHEAD
Edge of Town
Commercial Zone
Total Gross floor area: 19974 sqm
Survey date: TUESDAY 10/03/09 Survey Type: MANUAL

8 SC-02-A-15 ACCOUNTANTS SURREY
BOXGROVE ROAD

GUILDFORD
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 1896 sqm
Survey date: TUESDAY 05/10/10 Survey Type: MANUAL

9 SC-02-A-16 BANK OF AMERICA SURREY
STANHOPE ROAD

CAMBERLEY
Edge of Town
Commercial Zone
Total Gross floor area: 39230 sqm
Survey date: TUESDAY 10/05/11 Survey Type: MANUAL

10 SC-02-A-17 PHARMACEUTICALS SURREY
ST GEORGE'S AVENUE
THE HEATH
WEYBRIDGE
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 10293 sqm
Survey date: TUESDAY 18/10/11 Survey Type: MANUAL

11 TW-02-A-03 DEVELOPMENT AGENCY TYNE & WEAR
KINGFISHER BOULEVARD
LEMINGTON
NEWCASTLE UPON TYNE
Edge of Town
Commercial Zone
Total Gross floor area: 6480 sqm
Survey date: THURSDAY 11/12/08 Survey Type: MANUAL

12 TW-02-A-05 TELEVISION CO. TYNE & WEAR
DELTA BANK ROAD
METRO RIVERSIDE PARK
GATESHEAD
Suburban Area (PPS6 Out of Centre)
Commercial Zone
Total Gross floor area: 1500 sqm
Survey date: TUESDAY 29/09/09 Survey Type: MANUAL

13 TW-02-A-06 GOVERNMENT OFFICES TYNE & WEAR
BENTON PARK ROAD
LONGBENTON
NEWCASTLE UPON TYNE
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 70291 sqm
Survey date: WEDNESDAY 25/11/09 Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

14 WY-02-A-03 OFFICE WEST YORKSHIRE
VICTORIA ROAD
HEADINGLEY
LEEDS
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 2696 sqm
Survey date: THURSDAY 17/06/10 Survey Type: MANUAL

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
ES-02-A-11	Too Small

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	19974	0.020	1	19974	0.010	1	19974	0.030
06:00 - 07:00	2	45133	0.691	2	45133	0.189	2	45133	0.880
07:00 - 08:00	14	13554	0.913	14	13554	0.226	14	13554	1.139
08:00 - 09:00	14	13554	1.401	14	13554	0.287	14	13554	1.688
09:00 - 10:00	14	13554	0.757	14	13554	0.221	14	13554	0.978
10:00 - 11:00	14	13554	0.325	14	13554	0.114	14	13554	0.439
11:00 - 12:00	14	13554	0.244	14	13554	0.155	14	13554	0.399
12:00 - 13:00	14	13554	0.229	14	13554	0.276	14	13554	0.505
13:00 - 14:00	14	13554	0.288	14	13554	0.232	14	13554	0.520
14:00 - 15:00	14	13554	0.278	14	13554	0.326	14	13554	0.604
15:00 - 16:00	14	13554	0.255	14	13554	0.647	14	13554	0.902
16:00 - 17:00	14	13554	0.242	14	13554	1.046	14	13554	1.288
17:00 - 18:00	14	13554	0.192	14	13554	1.162	14	13554	1.354
18:00 - 19:00	14	13554	0.133	14	13554	0.541	14	13554	0.674
19:00 - 20:00	1	70291	0.175	1	70291	0.218	1	70291	0.393
20:00 - 21:00	1	70291	0.185	1	70291	0.198	1	70291	0.383
21:00 - 22:00	1	70291	0.084	1	70291	0.182	1	70291	0.266
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			6.412			6.030			12.442

Parameter summary

Trip rate parameter range selected:	1113 - 70291 (units: sqm)
Survey date date range:	01/01/08 - 26/11/15
Number of weekdays (Monday-Friday):	14
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	4

Calculation Reference: AUDIT-700701-160524-0507

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : C - INDUSTRIAL UNIT
VEHICLES

Selected regions and areas:

03	SOUTH WEST		
	BR	BRISTOL CITY	1 days
	DV	DEVON	1 days
05	EAST MIDLANDS		
	DS	DERBYSHIRE	1 days
	NR	NORTHAMPTONSHIRE	1 days
06	WEST MIDLANDS		
	HE	HEREFORDSHIRE	1 days
09	NORTH		
	TW	TYNE & WEAR	1 days

Filtering Stage 2 selection:

Parameter:	Gross floor area
Actual Range:	950 to 20000 (units: sqm)
Range Selected by User:	999 to 43325 (units: sqm)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/08 to 19/10/15

Selected survey days:

Monday	1 days
Tuesday	2 days
Thursday	3 days

Selected survey types:

Manual count	6 days
Directional ATC Count	0 days

Selected Locations:

Suburban Area (PPS6 Out of Centre)	3
Edge of Town	3

Selected Location Sub Categories:

Industrial Zone	5
Commercial Zone	1

LIST OF SITES relevant to selection parameters

1 BR-02-C-01 MECH. ENGINEERS BRISTOL CITY
NOVERS HILL
BEDMINSTER
BRISTOL
Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Gross floor area: 1100 sqm
Survey date: MONDAY 19/10/09 Survey Type: MANUAL

2 DS-02-C-02 ENGINEERED PRODUCTS DERBYSHIRE
PONTEFRACT STREET

DERBY
Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Gross floor area: 2600 sqm
Survey date: THURSDAY 25/06/15 Survey Type: MANUAL

3 DV-02-C-01 TUBE MANUFACTURE DEVON
PLYMBRIDGE ROAD
ESTOVER
PLYMOUTH
Edge of Town
Industrial Zone
Total Gross floor area: 20000 sqm
Survey date: TUESDAY 17/07/12 Survey Type: MANUAL

4 HE-02-C-02 THERMAL PROCESSING HEREFORDSHIRE
COLLEGE ROAD
BURCOTT
HEREFORD
Edge of Town
Commercial Zone
Total Gross floor area: 1880 sqm
Survey date: TUESDAY 22/10/13 Survey Type: MANUAL

5 NR-02-C-01 PAPER COMPANY NORTHAMPTONSHIRE
RHOSILI ROAD
BRACKMILLS
NORTHAMPTON
Edge of Town
Industrial Zone
Total Gross floor area: 11500 sqm
Survey date: THURSDAY 27/11/08 Survey Type: MANUAL

6 TW-02-C-01 INDUSTRIAL UNIT TYNE & WEAR
SHAFTESBURY AVENUE
TYNE POINT IND. ESTATE
JARROW
Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Gross floor area: 950 sqm
Survey date: THURSDAY 15/11/12 Survey Type: MANUAL

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
HE-02-C-01	-

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT

VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	6	6338	0.231	6	6338	0.047	6	6338	0.278
08:00 - 09:00	6	6338	0.255	6	6338	0.066	6	6338	0.321
09:00 - 10:00	6	6338	0.142	6	6338	0.095	6	6338	0.237
10:00 - 11:00	6	6338	0.063	6	6338	0.055	6	6338	0.118
11:00 - 12:00	6	6338	0.068	6	6338	0.055	6	6338	0.123
12:00 - 13:00	6	6338	0.087	6	6338	0.131	6	6338	0.218
13:00 - 14:00	6	6338	0.252	6	6338	0.121	6	6338	0.373
14:00 - 15:00	6	6338	0.153	6	6338	0.234	6	6338	0.387
15:00 - 16:00	6	6338	0.105	6	6338	0.200	6	6338	0.305
16:00 - 17:00	6	6338	0.050	6	6338	0.231	6	6338	0.281
17:00 - 18:00	6	6338	0.034	6	6338	0.210	6	6338	0.244
18:00 - 19:00	6	6338	0.032	6	6338	0.100	6	6338	0.132
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.472			1.545			3.017

Parameter summary

Trip rate parameter range selected:	950 - 20000 (units: sqm)
Survey date date range:	01/01/08 - 19/10/15
Number of weekdays (Monday-Friday):	6
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

Calculation Reference: AUDIT-700701-160524-0525

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : F - WAREHOUSING (COMMERCIAL)
VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	HF	HERTFORDSHIRE	1 days
04	EAST ANGLIA		
	SF	SUFFOLK	2 days
09	NORTH		
	CB	CUMBRIA	1 days
	TV	TEES VALLEY	2 days

Filtering Stage 2 selection:

Parameter:	Gross floor area
Actual Range:	387 to 80066 (units: sqm)
Range Selected by User:	999 to 80066 (units: sqm)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/08 to 18/09/15

Selected survey days:

Tuesday	3 days
Thursday	2 days
Friday	1 days

Selected survey types:

Manual count	6 days
Directional ATC Count	0 days

Selected Locations:

Suburban Area (PPS6 Out of Centre)	2
Edge of Town	4

Selected Location Sub Categories:

Industrial Zone	5
Commercial Zone	1

LIST OF SITES relevant to selection parameters

1 CB-02-F-01 DOMINO'S PIZZA CUMBRIA
COWPER ROAD
GILWILLY IND. ESTATE
PENRITH
Edge of Town
Industrial Zone
Total Gross floor area: 2950 sqm
Survey date: TUESDAY 10/06/14 Survey Type: MANUAL

2 HF-02-F-03 DISTRIBUTION CEN. HERTFORDSHIRE

HATFIELD BUSINESS CEN.
HATFIELD
Edge of Town
Commercial Zone
Total Gross floor area: 80000 sqm
Survey date: THURSDAY 10/07/08 Survey Type: MANUAL

3 SF-02-F-02 WAREHOUSING SUFFOLK
WALTON ROAD

FELIXSTOWE
Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Gross floor area: 22270 sqm
Survey date: THURSDAY 11/07/13 Survey Type: MANUAL

4 SF-02-F-03 ROAD HAULAGE SUFFOLK
CENTRAL AVENUE
WARREN HEATH
IPSWICH
Edge of Town
Industrial Zone
Total Gross floor area: 4700 sqm
Survey date: FRIDAY 18/09/15 Survey Type: MANUAL

5 TV-02-F-02 ARGOS WAREHOUSE TEES VALLEY
ROUNDHOUSE ROAD
FAVERDALE
DARLINGTON
Edge of Town
Industrial Zone
Total Gross floor area: 80066 sqm
Survey date: TUESDAY 07/10/08 Survey Type: MANUAL

6 TV-02-F-03 ELECTRICAL COMPONENTS TEES VALLEY
UNIT 8,NAVIGATOR COURT

STOCKTON-ON-TEES
Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Gross floor area: 387 sqm
Survey date: TUESDAY 28/06/11 Survey Type: MANUAL

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)

VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	2	12123	0.029	2	12123	0.037	2	12123	0.066
06:00 - 07:00	2	12123	0.070	2	12123	0.062	2	12123	0.132
07:00 - 08:00	6	30900	0.090	6	30900	0.063	6	30900	0.153
08:00 - 09:00	6	30900	0.064	6	30900	0.047	6	30900	0.111
09:00 - 10:00	6	30900	0.072	6	30900	0.052	6	30900	0.124
10:00 - 11:00	6	30900	0.059	6	30900	0.058	6	30900	0.117
11:00 - 12:00	6	30900	0.054	6	30900	0.054	6	30900	0.108
12:00 - 13:00	6	30900	0.060	6	30900	0.061	6	30900	0.121
13:00 - 14:00	6	30900	0.106	6	30900	0.090	6	30900	0.196
14:00 - 15:00	6	30900	0.087	6	30900	0.101	6	30900	0.188
15:00 - 16:00	6	30900	0.086	6	30900	0.108	6	30900	0.194
16:00 - 17:00	6	30900	0.067	6	30900	0.102	6	30900	0.169
17:00 - 18:00	6	30900	0.032	6	30900	0.082	6	30900	0.114
18:00 - 19:00	6	30900	0.022	6	30900	0.051	6	30900	0.073
19:00 - 20:00	2	12123	0.058	2	12123	0.054	2	12123	0.112
20:00 - 21:00	2	12123	0.025	2	12123	0.045	2	12123	0.070
21:00 - 22:00	1	22270	0.031	1	22270	0.018	1	22270	0.049
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.012			1.085			2.097

Parameter summary

Trip rate parameter range selected:	387 - 80066 (units: sqm)
Survey date date range:	01/01/08 - 18/09/15
Number of weekdays (Monday-Friday):	6
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

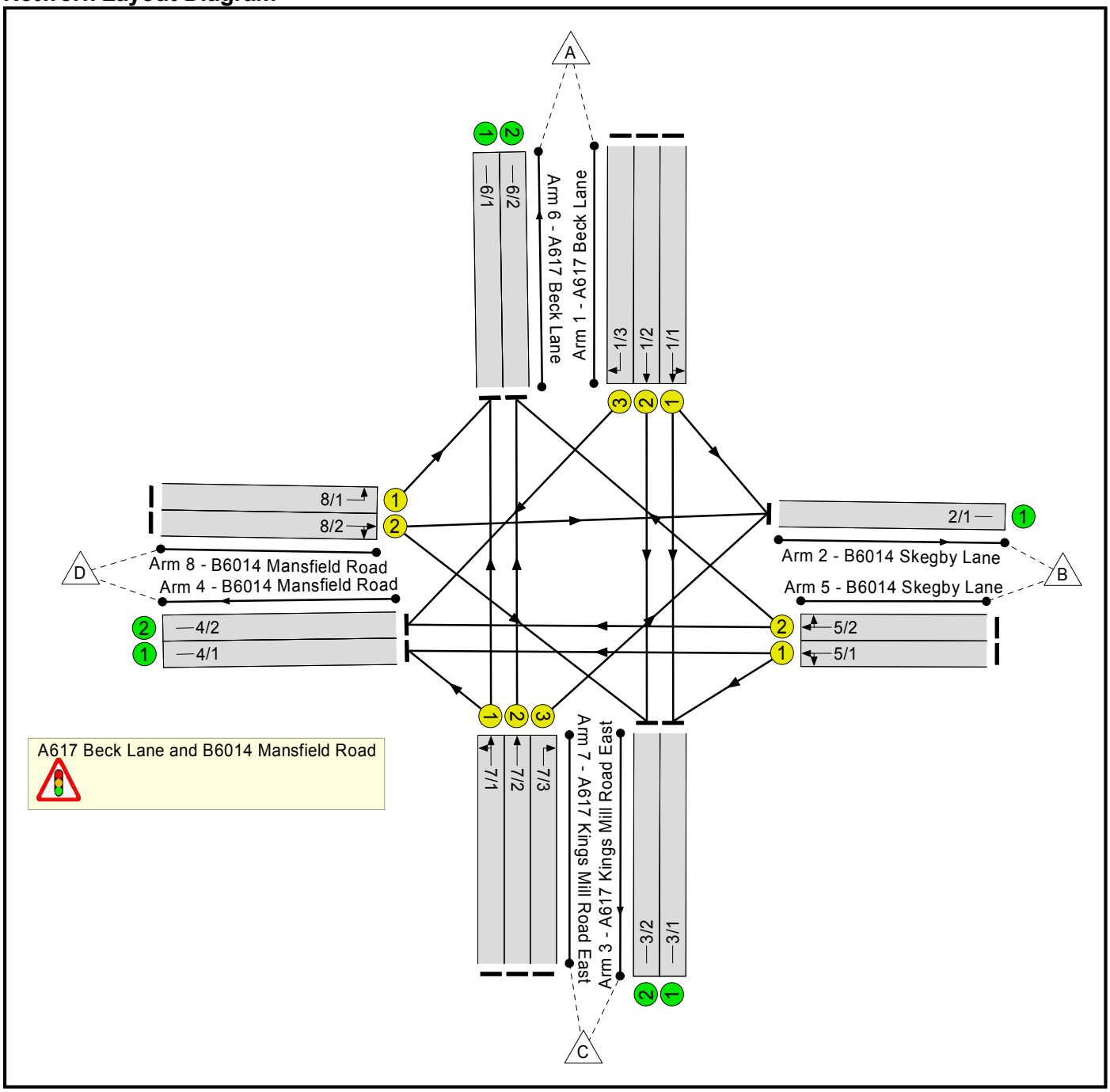
Appendix C – Junction Assessment Outputs

Full Input Data And Results

User and Project Details

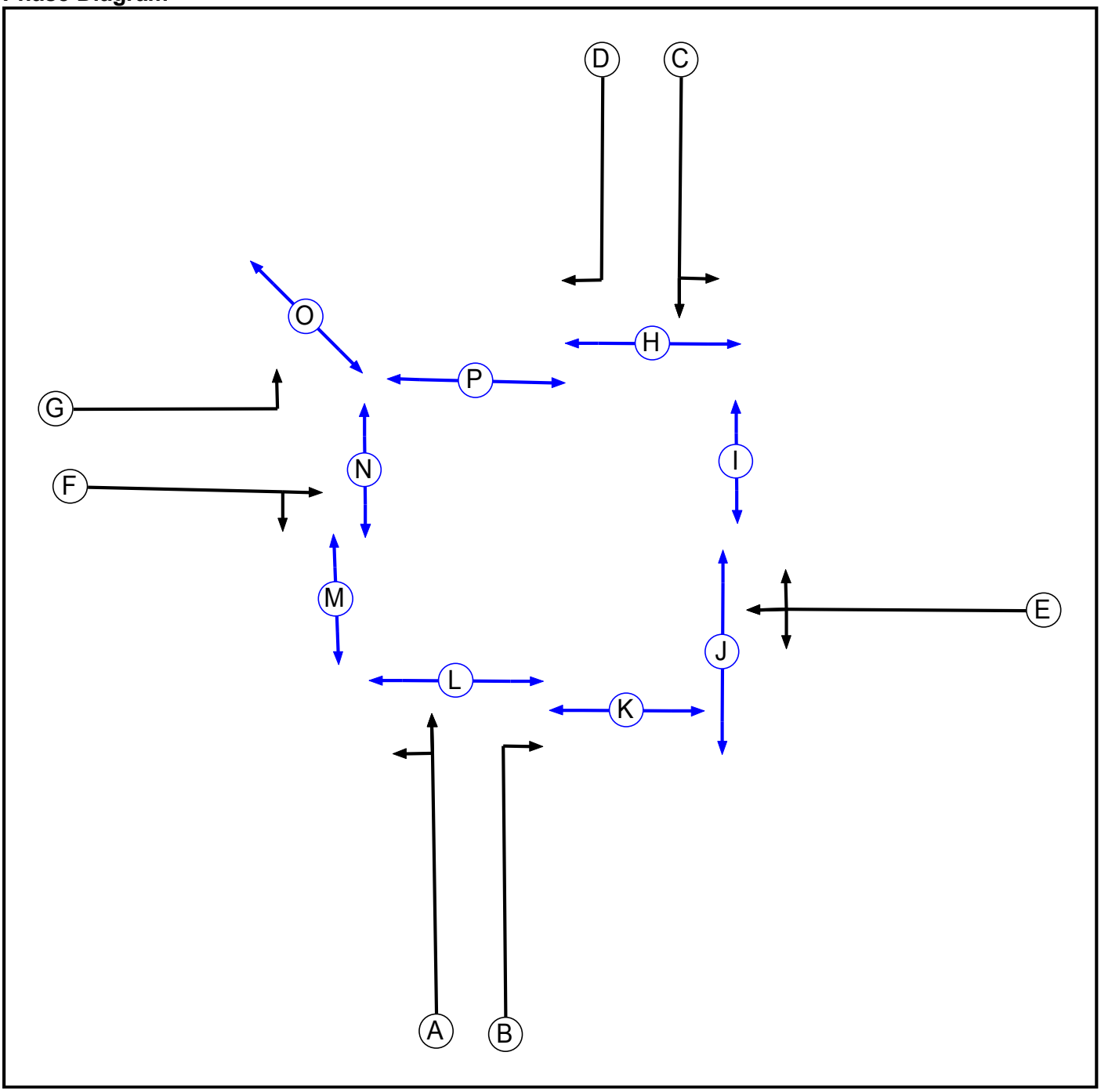
Project:	
Title:	
Location:	
File name:	2016-08-17 J1 JMP.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

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		2	2
G	Traffic		2	2
H	Pedestrian		2	2
I	Pedestrian		7	7
J	Pedestrian		2	2
K	Pedestrian		2	2
L	Pedestrian		2	2
M	Pedestrian		2	2
N	Pedestrian		7	7
O	Pedestrian		7	7
P	Pedestrian		2	2

Full Input Data And Results

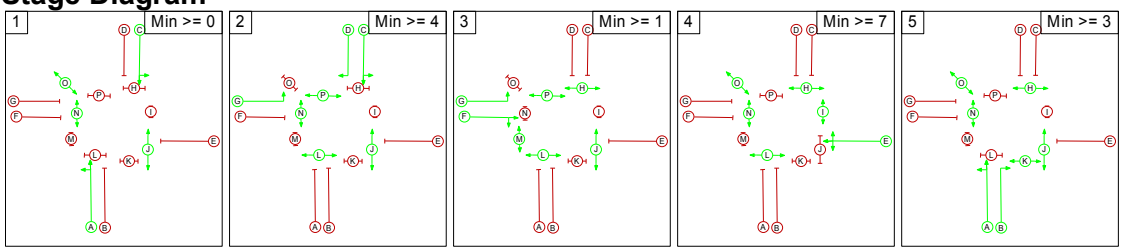
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
A		-	-	7	7	9	9	-	-	-	-	7	10	-	-	10
B	-		8	8	7	9	-	-	12	-	-	7	-	-	-	-
C	-	7		-	7	7	-	7	10	-	11	-	-	-	-	-
D	8	8	-		7	7	-	7	-	-	-	-	12	-	-	-
E	8	8	7	7		9	9	-	-	5	8	-	10	-	-	11
F	7	7	7	7	5		-	-	9	-	10	-	-	5	-	-
G	7	-	-	-	5	-		-	-	-	-	-	-	-	5	-
H	-	-	10	10	-	-	-		-	-	-	-	-	-	-	-
I	-	6	7	-	-	7	-	-		-	-	-	-	-	-	-
J	-	-	-	-	7	-	-	-	-		-	-	-	-	-	-
K	-	-	8	-	8	8	-	-	-	-		-	-	-	-	-
L	10	10	-	-	-	-	-	-	-	-	-		-	-	-	-
M	6	-	-	5	5	-	-	-	-	-	-	-		-	-	-
N	-	-	-	-	-	6	-	-	-	-	-	-	-		-	-
O	-	-	-	-	-	-	6	-	-	-	-	-	-	-		-
P	7	-	-	-	6	-	-	-	-	-	-	-	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A C J N O
2	C D G J L N P
3	F G H J L M P
4	E H I L N O
5	A B H J K N O

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
3	4	F	Losing	2	2
4	5	E	Losing	2	2
5	1	B	Losing	2	2

Full Input Data And Results

Prohibited Stage Change

		To Stage				
		1	2	3	4	5
From Stage	1		10	10	10	11
	2	10		12	10	11
	3	10	10		11	10
	4	10	11	11		10
	5	10	10	10	12	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A617 Beck Lane and B6014 Mansfield Road
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: A617 Beck Lane and B6014 Mansfield Road												
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 (A617 Beck Lane)	U	C	2	3	60.0	User	1900	-	-	-	-	-
1/2 (A617 Beck Lane)	U	C	2	3	60.0	User	2000	-	-	-	-	-
1/3 (A617 Beck Lane)	U	D	2	3	60.0	User	1800	-	-	-	-	-
2/1 (B6014 Skegby Lane)	U		2	3	60.0	Inf	-	-	-	-	-	-
3/1 (A617 Kings Mill Road East)	U		2	3	60.0	Inf	-	-	-	-	-	-
3/2 (A617 Kings Mill Road East)	U		2	3	60.0	Inf	-	-	-	-	-	-
4/1 (B6014 Mansfield Road)	U		2	3	60.0	Inf	-	-	-	-	-	-
4/2 (B6014 Mansfield Road)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (B6014 Skegby Lane)	U	E	2	3	60.0	User	1900	-	-	-	-	-
5/2 (B6014 Skegby Lane)	U	E	2	3	60.0	User	1800	-	-	-	-	-
6/1 (A617 Beck Lane)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/2 (A617 Beck Lane)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (A617 Kings Mill Road East)	U	A	2	3	60.0	User	1900	-	-	-	-	-
7/2 (A617 Kings Mill Road East)	U	A	2	3	60.0	User	2000	-	-	-	-	-
7/3 (A617 Kings Mill Road East)	U	B	2	3	60.0	User	1800	-	-	-	-	-
8/1 (B6014 Mansfield Road)	U	G	2	3	60.0	User	1950	-	-	-	-	-
8/2 (B6014 Mansfield Road)	U	F	2	3	60.0	User	1800	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2032 Reference Case AM'	08:00	09:00	01:00	
2: '2032 Development Case AM'	08:00	09:00	01:00	
3: '2032 Reference Case PM'	17:00	18:00	01:00	
4: '2032 Development Case PM'	17:00	18:00	01:00	

Scenario 1: 'AM Reference Case ' (FG1: '2032 Reference Case AM', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	329	1293	159	1781
	B	275	0	14	27	316
	C	988	13	0	5	1006
	D	400	79	25	0	504
	Tot.	1663	421	1332	191	3607

Traffic Lane Flows

Lane	Scenario 1: AM Reference Case
Junction: A617 Beck Lane and B6014 Mansfield Road	
1/1	790
1/2	832
1/3	159
2/1	421
3/1	475
3/2	857
4/1	32
4/2	159
5/1	41
5/2	275
6/1	876
6/2	787
7/1	481
7/2	512
7/3	13
8/1	400
8/2	104

Full Input Data And Results

Lane Saturation Flows

Junction: A617 Beck Lane and B6014 Mansfield Road								
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 (A617 Beck Lane Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
1/2 (A617 Beck Lane Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
1/3 (A617 Beck Lane Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (B6014 Skegby Lane Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (A617 Kings Mill Road East Lane 1)	Infinite Saturation Flow						Inf	Inf
3/2 (A617 Kings Mill Road East Lane 2)	Infinite Saturation Flow						Inf	Inf
4/1 (B6014 Mansfield Road Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (B6014 Mansfield Road Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (B6014 Skegby Lane Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/2 (B6014 Skegby Lane Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (A617 Beck Lane Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A617 Beck Lane Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (A617 Kings Mill Road East Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (A617 Kings Mill Road East Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
7/3 (A617 Kings Mill Road East Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
8/1 (B6014 Mansfield Road Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
8/2 (B6014 Mansfield Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case PM', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	365	856	177	1398
	B	294	0	1	3	298
	C	914	4	0	1	919
	D	215	3	0	0	218
	Tot.	1423	372	857	181	2833

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM Reference Case
Junction: A617 Beck Lane and B6014 Mansfield Road	
1/1	595
1/2	626
1/3	177
2/1	372
3/1	231
3/2	626
4/1	4
4/2	177
5/1	4
5/2	294
6/1	656
6/2	767
7/1	442
7/2	473
7/3	4
8/1	215
8/2	3

Full Input Data And Results

Lane Saturation Flows

Junction: A617 Beck Lane and B6014 Mansfield Road								
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 (A617 Beck Lane Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
1/2 (A617 Beck Lane Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
1/3 (A617 Beck Lane Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (B6014 Skegby Lane Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (A617 Kings Mill Road East Lane 1)	Infinite Saturation Flow						Inf	Inf
3/2 (A617 Kings Mill Road East Lane 2)	Infinite Saturation Flow						Inf	Inf
4/1 (B6014 Mansfield Road Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (B6014 Mansfield Road Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (B6014 Skegby Lane Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/2 (B6014 Skegby Lane Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (A617 Beck Lane Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A617 Beck Lane Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (A617 Kings Mill Road East Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (A617 Kings Mill Road East Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
7/3 (A617 Kings Mill Road East Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
8/1 (B6014 Mansfield Road Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
8/2 (B6014 Mansfield Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case AM', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	278	1372	158	1808
	B	254	0	31	57	342
	C	1176	31	0	14	1221
	D	407	158	63	0	628
	Tot.	1837	467	1466	229	3999

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: AM Development Scenario
Junction: A617 Beck Lane and B6014 Mansfield Road	
1/1	804
1/2	846
1/3	158
2/1	467
3/1	557
3/2	909
4/1	71
4/2	158
5/1	88
5/2	254
6/1	971
6/2	866
7/1	578
7/2	612
7/3	31
8/1	407
8/2	221

Full Input Data And Results

Lane Saturation Flows

Junction: A617 Beck Lane and B6014 Mansfield Road								
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 (A617 Beck Lane Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
1/2 (A617 Beck Lane Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
1/3 (A617 Beck Lane Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (B6014 Skegby Lane Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (A617 Kings Mill Road East Lane 1)	Infinite Saturation Flow						Inf	Inf
3/2 (A617 Kings Mill Road East Lane 2)	Infinite Saturation Flow						Inf	Inf
4/1 (B6014 Mansfield Road Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (B6014 Mansfield Road Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (B6014 Skegby Lane Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/2 (B6014 Skegby Lane Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (A617 Beck Lane Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A617 Beck Lane Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (A617 Kings Mill Road East Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (A617 Kings Mill Road East Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
7/3 (A617 Kings Mill Road East Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
8/1 (B6014 Mansfield Road Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
8/2 (B6014 Mansfield Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case PM', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	399	1023	256	1678
	B	292	0	5	15	312
	C	1011	18	0	8	1037
	D	247	15	2	0	264
	Tot.	1550	432	1030	279	3291

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: PM Development Scenario
Junction: A617 Beck Lane and B6014 Mansfield Road	
1/1	693
1/2	729
1/3	256
2/1	432
3/1	299
3/2	731
4/1	23
4/2	256
5/1	20
5/2	292
6/1	732
6/2	818
7/1	493
7/2	526
7/3	18
8/1	247
8/2	17

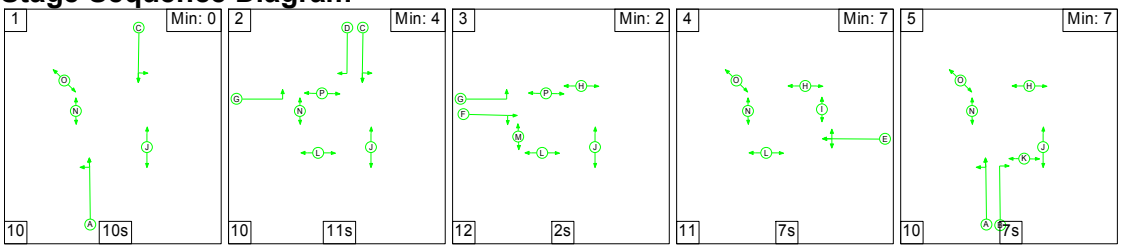
Full Input Data And Results

Lane Saturation Flows

Junction: A617 Beck Lane and B6014 Mansfield Road								
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 (A617 Beck Lane Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
1/2 (A617 Beck Lane Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
1/3 (A617 Beck Lane Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (B6014 Skegby Lane Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (A617 Kings Mill Road East Lane 1)	Infinite Saturation Flow						Inf	Inf
3/2 (A617 Kings Mill Road East Lane 2)	Infinite Saturation Flow						Inf	Inf
4/1 (B6014 Mansfield Road Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (B6014 Mansfield Road Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (B6014 Skegby Lane Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/2 (B6014 Skegby Lane Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (A617 Beck Lane Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A617 Beck Lane Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (A617 Kings Mill Road East Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (A617 Kings Mill Road East Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
7/3 (A617 Kings Mill Road East Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
8/1 (B6014 Mansfield Road Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
8/2 (B6014 Mansfield Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 1: 'AM Reference Case ' (FG1: '2032 Reference Case AM', Plan 1: 'Staging Plan No. 1')

Stage Sequence Diagram

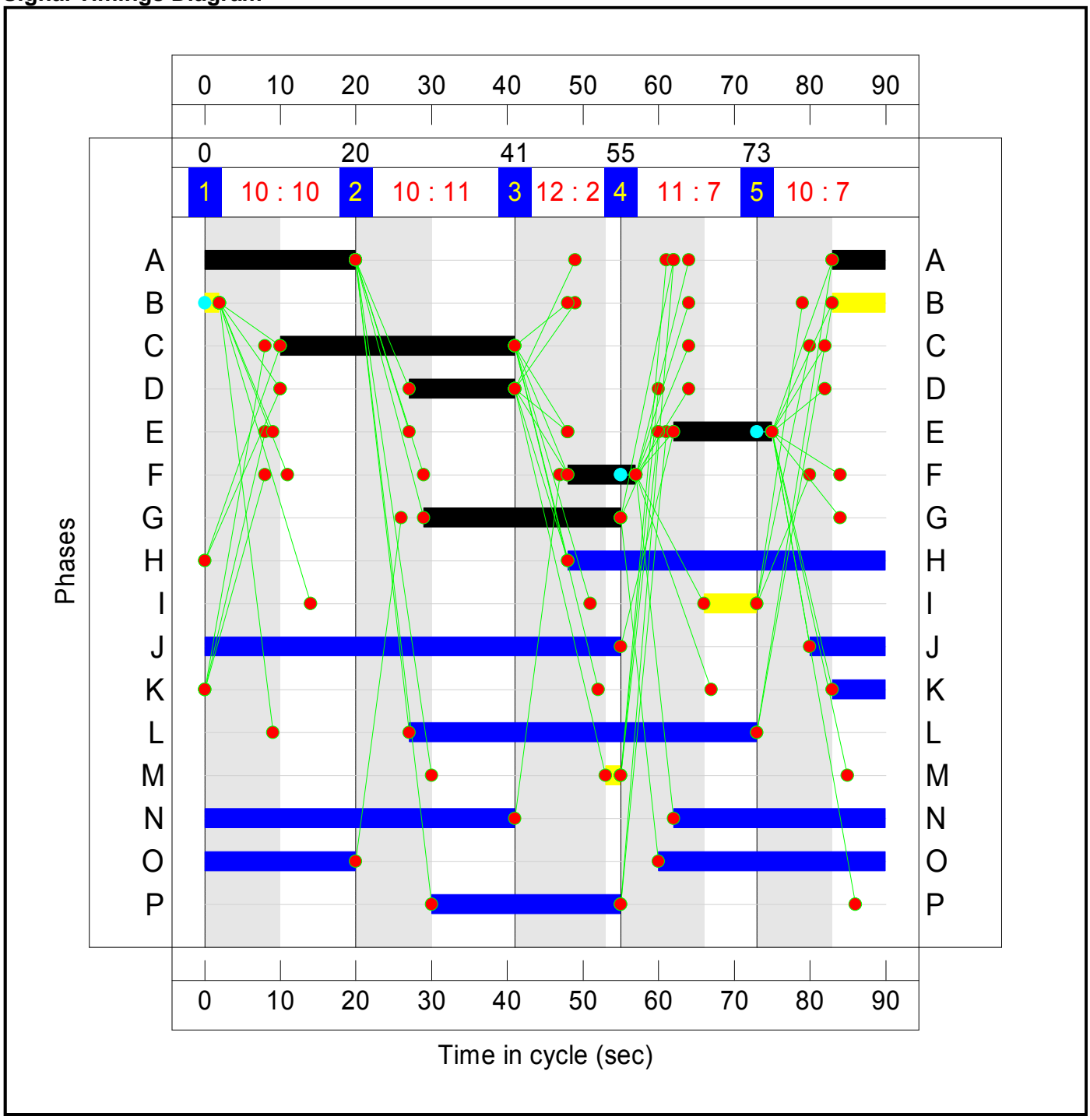


Full Input Data And Results

Stage Timings

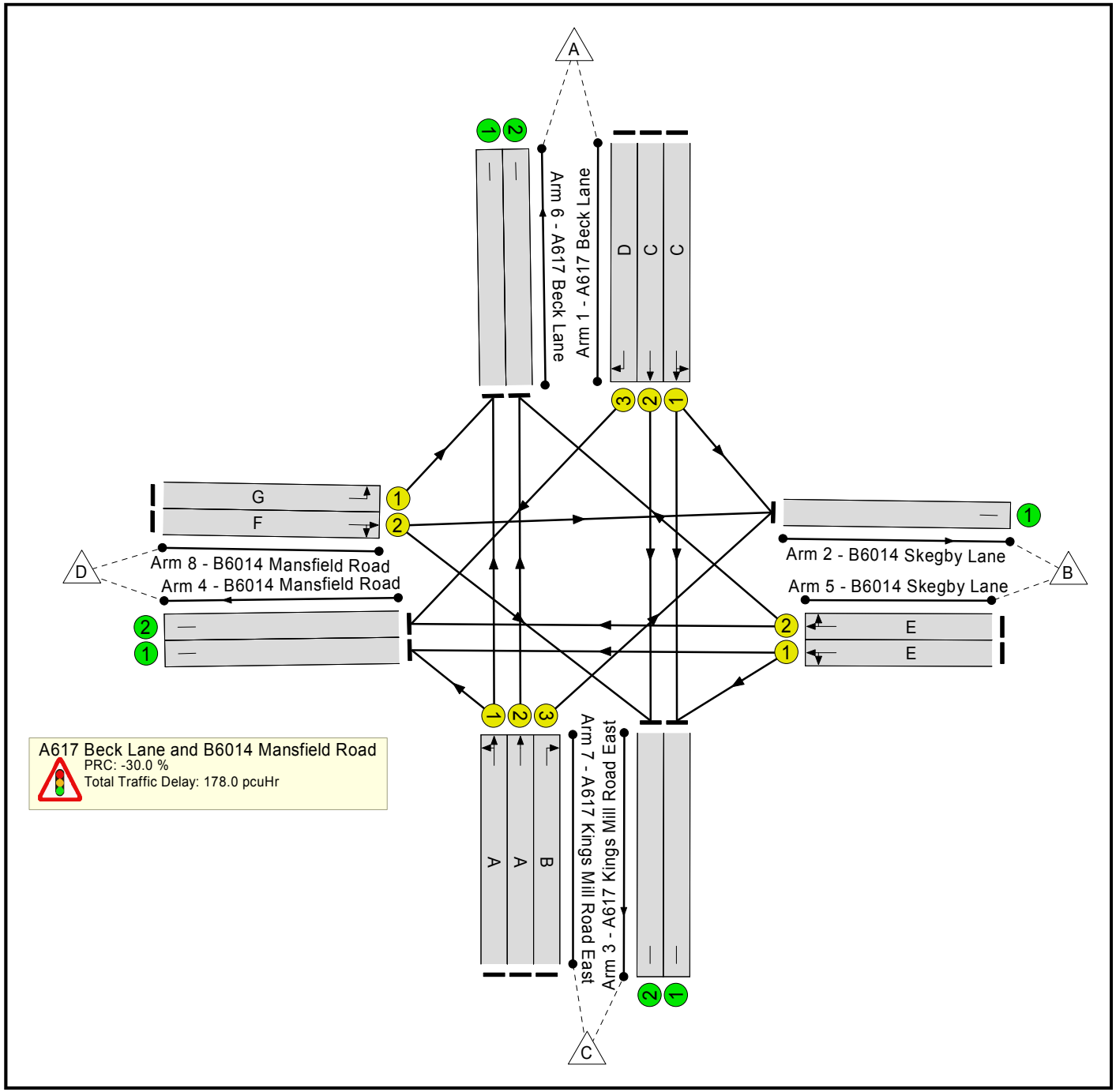
Stage	1	2	3	4	5
Duration	10	11	2	7	7
Change Point	0	20	41	55	73

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**117.0%**
A617 Beck Lane and B6014 Mansfield Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**117.0%**
1/1	A617 Beck Lane Left Ahead	U	N/A	N/A	C		1	31	-	790	1900	676	116.9%
1/2	A617 Beck Lane Ahead	U	N/A	N/A	C		1	31	-	832	2000	711	117.0%
1/3	A617 Beck Lane Right	U	N/A	N/A	D		1	14	-	159	1800	300	53.0%
2/1	B6014 Skegby Lane	U	N/A	N/A	-		-	-	-	421	Inf	Inf	0.0%
3/1	A617 Kings Mill Road East	U	N/A	N/A	-		-	-	-	475	Inf	Inf	0.0%
3/2	A617 Kings Mill Road East	U	N/A	N/A	-		-	-	-	857	Inf	Inf	0.0%
4/1	B6014 Mansfield Road	U	N/A	N/A	-		-	-	-	32	Inf	Inf	0.0%
4/2	B6014 Mansfield Road	U	N/A	N/A	-		-	-	-	159	Inf	Inf	0.0%
5/1	B6014 Skegby Lane Left Ahead	U	N/A	N/A	E		1	13	-	41	1900	296	13.9%
5/2	B6014 Skegby Lane Ahead Right	U	N/A	N/A	E		1	13	-	275	1800	280	98.2%
6/1	A617 Beck Lane	U	N/A	N/A	-		-	-	-	876	Inf	Inf	0.0%
6/2	A617 Beck Lane	U	N/A	N/A	-		-	-	-	787	Inf	Inf	0.0%
7/1	A617 Kings Mill Road East Left Ahead	U	N/A	N/A	A		1	27	-	481	1900	591	81.4%
7/2	A617 Kings Mill Road East Ahead	U	N/A	N/A	A		1	27	-	512	2000	622	82.3%
7/3	A617 Kings Mill Road East Right	U	N/A	N/A	B		1	9	-	13	1800	200	6.5%

Full Input Data And Results

8/1	B6014 Mansfield Road Left	U	N/A	N/A	G		1	26	-	400	1950	585	68.4%
8/2	B6014 Mansfield Road Ahead Right	U	N/A	N/A	F		1	9	-	104	1800	200	52.0%

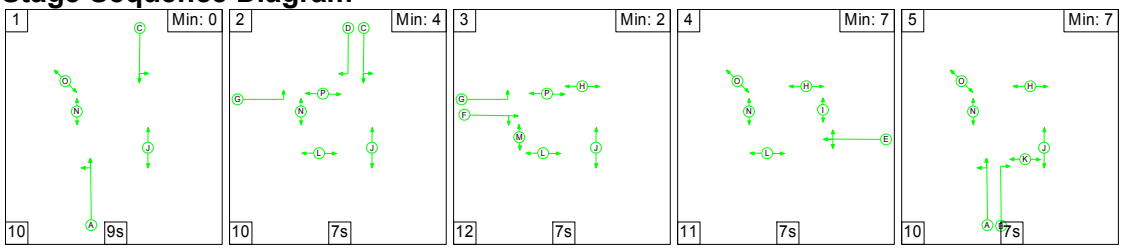
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**40.0**	**137.9**	**0.0**	**178.0**	**-**	**-**	**-**	**-**
A617 Beck Lane and B6014 Mansfield Road	**-**	**-**	**0**	**0**	**0**	**40.0**	**137.9**	**0.0**	**178.0**	**-**	**-**	**-**	**-**
1/1	790	676	-	-	-	11.2	60.5	-	71.7	326.7	22.6	60.5	83.1
1/2	832	711	-	-	-	11.8	63.7	-	75.5	326.8	23.8	63.7	87.5
1/3	159	159	-	-	-	1.5	0.6	-	2.1	47.0	3.6	0.6	4.2
2/1	373	373	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	408	408	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	736	736	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	32	32	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	159	159	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	41	41	-	-	-	0.4	0.1	-	0.5	39.9	0.9	0.1	1.0
5/2	275	275	-	-	-	2.9	7.1	-	10.0	131.3	6.8	7.1	13.9
6/1	876	876	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	787	787	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	481	481	-	-	-	3.8	2.1	-	5.9	44.3	11.1	2.1	13.2
7/2	512	512	-	-	-	4.1	2.2	-	6.3	44.4	11.8	2.2	14.0
7/3	13	13	-	-	-	0.1	0.0	-	0.2	45.6	0.3	0.0	0.3
8/1	400	400	-	-	-	3.1	1.1	-	4.2	37.4	8.8	1.1	9.8
8/2	104	104	-	-	-	1.1	0.5	-	1.6	56.3	2.4	0.5	3.0

C1 PRC for Signalled Lanes (%): -30.0 Total Delay for Signalled Lanes (pcuHr): 177.97 Cycle Time (s): 90
PRC Over All Lanes (%): -30.0 Total Delay Over All Lanes(pcuHr): 177.97

Full Input Data And Results

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case PM', Plan 1: 'Staging Plan No. 1')

Stage Sequence Diagram

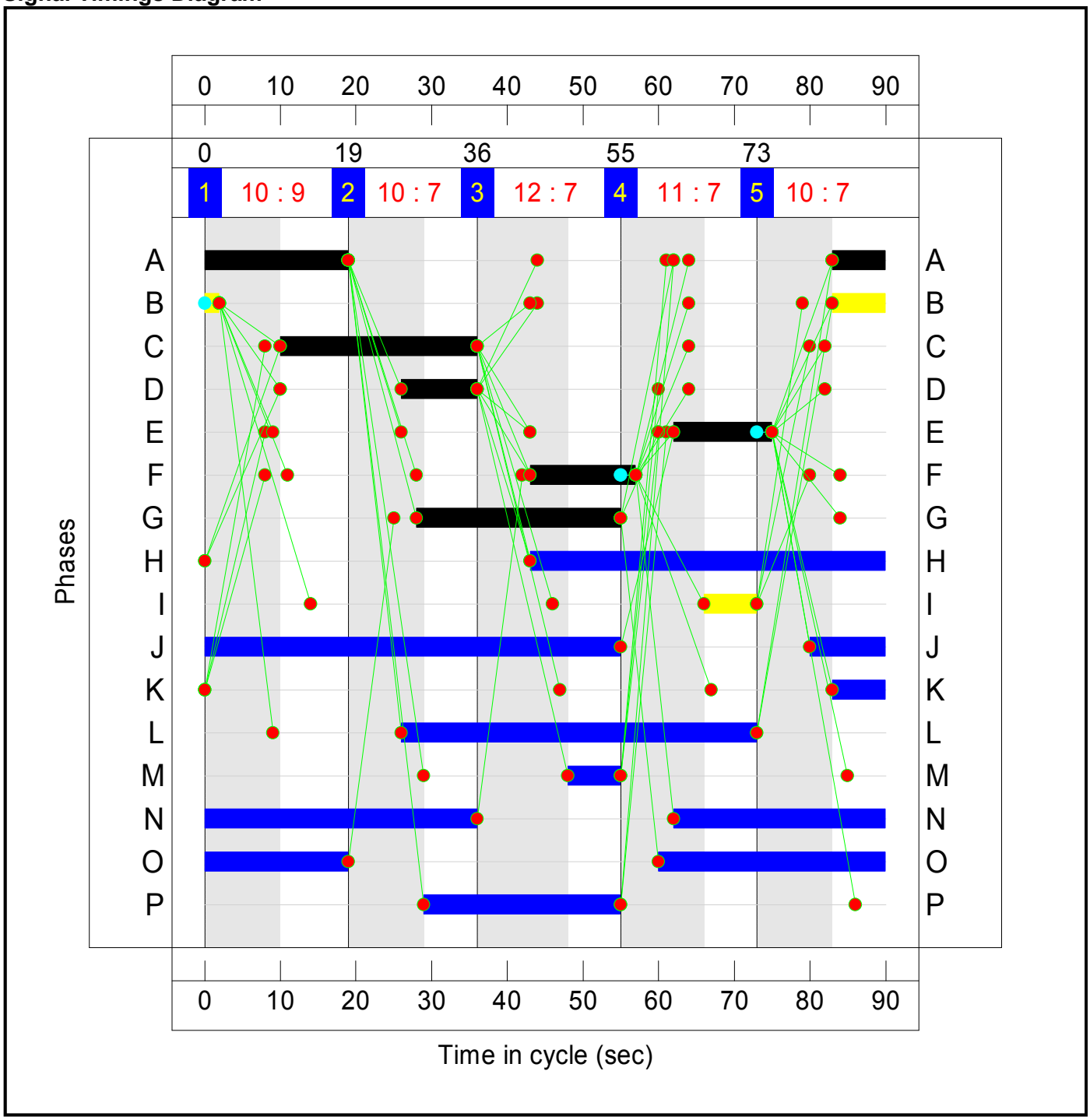


Stage Timings

Stage	1	2	3	4	5
Duration	9	7	7	7	7
Change Point	0	19	36	55	73

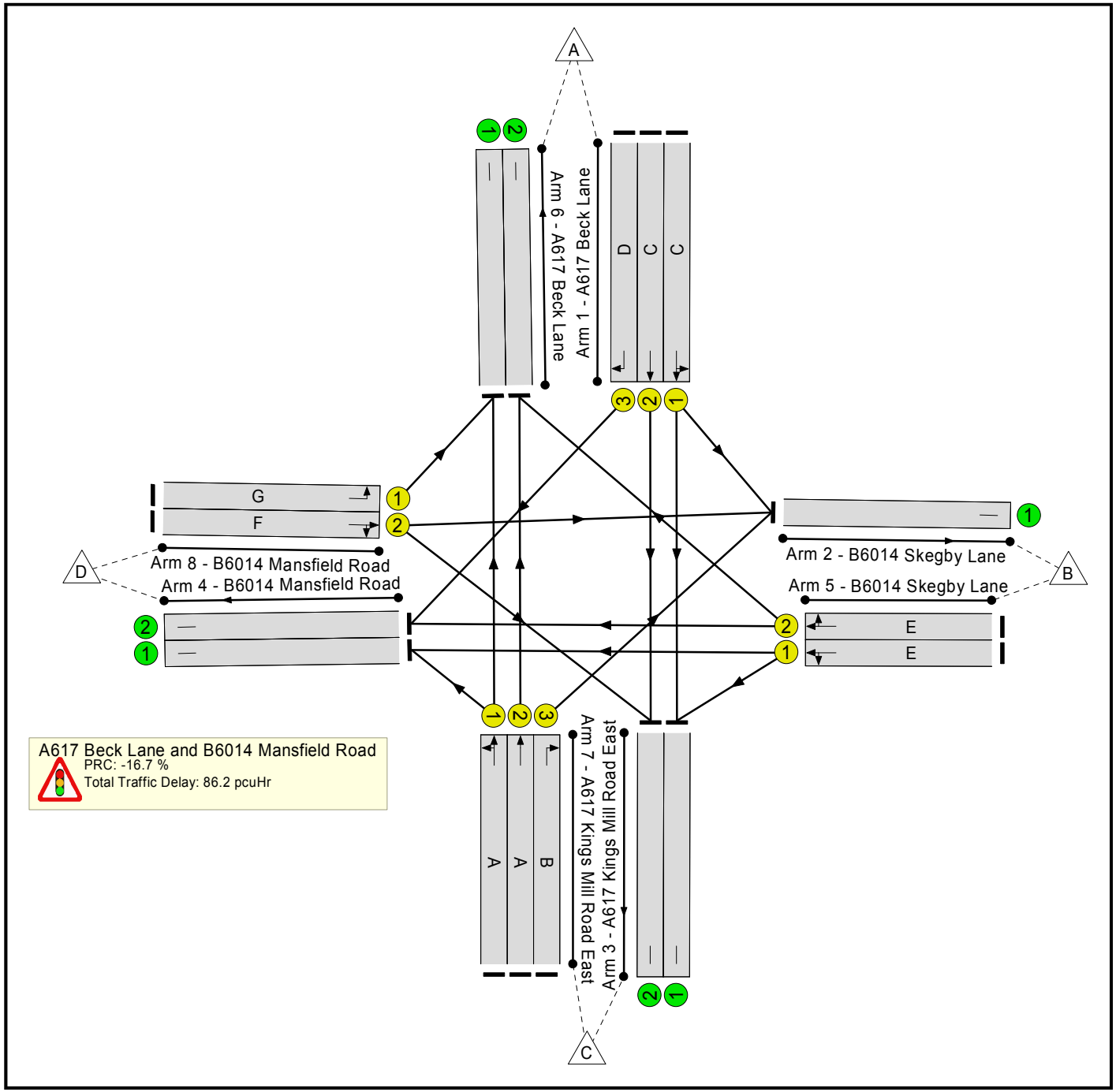
Full Input Data And Results

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**105.0%**
A617 Beck Lane and B6014 Mansfield Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**105.0%**
1/1	A617 Beck Lane Left Ahead	U	N/A	N/A	C		1	26	-	595	1900	570	104.4%
1/2	A617 Beck Lane Ahead	U	N/A	N/A	C		1	26	-	626	2000	600	104.3%
1/3	A617 Beck Lane Right	U	N/A	N/A	D		1	10	-	177	1800	220	80.5%
2/1	B6014 Skegby Lane	U	N/A	N/A	-		-	-	-	372	Inf	Inf	0.0%
3/1	A617 Kings Mill Road East	U	N/A	N/A	-		-	-	-	231	Inf	Inf	0.0%
3/2	A617 Kings Mill Road East	U	N/A	N/A	-		-	-	-	626	Inf	Inf	0.0%
4/1	B6014 Mansfield Road	U	N/A	N/A	-		-	-	-	4	Inf	Inf	0.0%
4/2	B6014 Mansfield Road	U	N/A	N/A	-		-	-	-	177	Inf	Inf	0.0%
5/1	B6014 Skegby Lane Left Ahead	U	N/A	N/A	E		1	13	-	4	1900	296	1.4%
5/2	B6014 Skegby Lane Ahead Right	U	N/A	N/A	E		1	13	-	294	1800	280	105.0%
6/1	A617 Beck Lane	U	N/A	N/A	-		-	-	-	656	Inf	Inf	0.0%
6/2	A617 Beck Lane	U	N/A	N/A	-		-	-	-	767	Inf	Inf	0.0%
7/1	A617 Kings Mill Road East Left Ahead	U	N/A	N/A	A		1	26	-	442	1900	570	77.5%
7/2	A617 Kings Mill Road East Ahead	U	N/A	N/A	A		1	26	-	473	2000	600	78.8%
7/3	A617 Kings Mill Road East Right	U	N/A	N/A	B		1	9	-	4	1800	200	2.0%

Full Input Data And Results

8/1	B6014 Mansfield Road Left	U	N/A	N/A	G		1	27	-	215	1950	607	35.4%
8/2	B6014 Mansfield Road Ahead Right	U	N/A	N/A	F		1	14	-	3	1800	300	1.0%

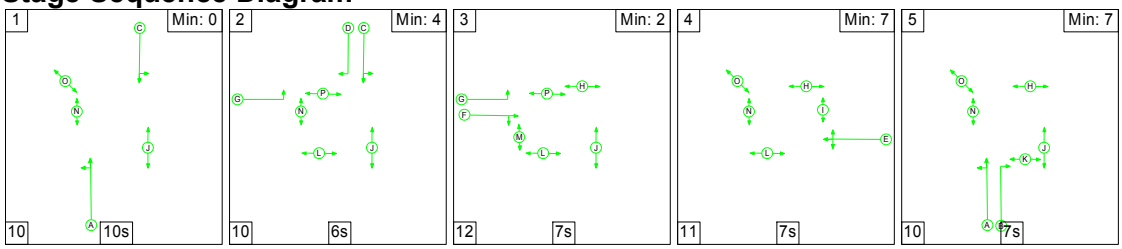
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**27.2**	**59.0**	**0.0**	**86.2**	**-**	**-**	**-**	**-**
A617 Beck Lane and B6014 Mansfield Road	**-**	**-**	**0**	**0**	**0**	**27.2**	**59.0**	**0.0**	**86.2**	**-**	**-**	**-**	**-**
1/1	595	570	-	-	-	6.3	20.0	-	26.2	158.7	15.5	20.0	35.5
1/2	626	600	-	-	-	6.6	20.6	-	27.2	156.4	16.3	20.6	36.9
1/3	177	177	-	-	-	1.9	1.9	-	3.8	76.9	4.3	1.9	6.2
2/1	357	357	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	221	221	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	600	600	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	4	4	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	177	177	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	4	4	-	-	-	0.0	0.0	-	0.0	38.7	0.1	0.0	0.1
5/2	294	280	-	-	-	3.5	12.8	-	16.3	199.5	7.7	12.8	20.5
6/1	656	656	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	753	753	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	442	442	-	-	-	3.5	1.7	-	5.2	42.4	10.1	1.7	11.8
7/2	473	473	-	-	-	3.8	1.8	-	5.6	42.7	10.8	1.8	12.6
7/3	4	4	-	-	-	0.0	0.0	-	0.1	45.2	0.1	0.0	0.1
8/1	215	215	-	-	-	1.4	0.3	-	1.7	28.6	4.1	0.3	4.4
8/2	3	3	-	-	-	0.0	0.0	-	0.0	37.7	0.1	0.0	0.1

C1 PRC for Signalled Lanes (%): -16.7 Total Delay for Signalled Lanes (pcuHr): 86.15 Cycle Time (s): 90
PRC Over All Lanes (%): -16.7 Total Delay Over All Lanes(pcuHr): 86.15

Full Input Data And Results

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case AM', Plan 1: 'Staging Plan No. 1')

Stage Sequence Diagram

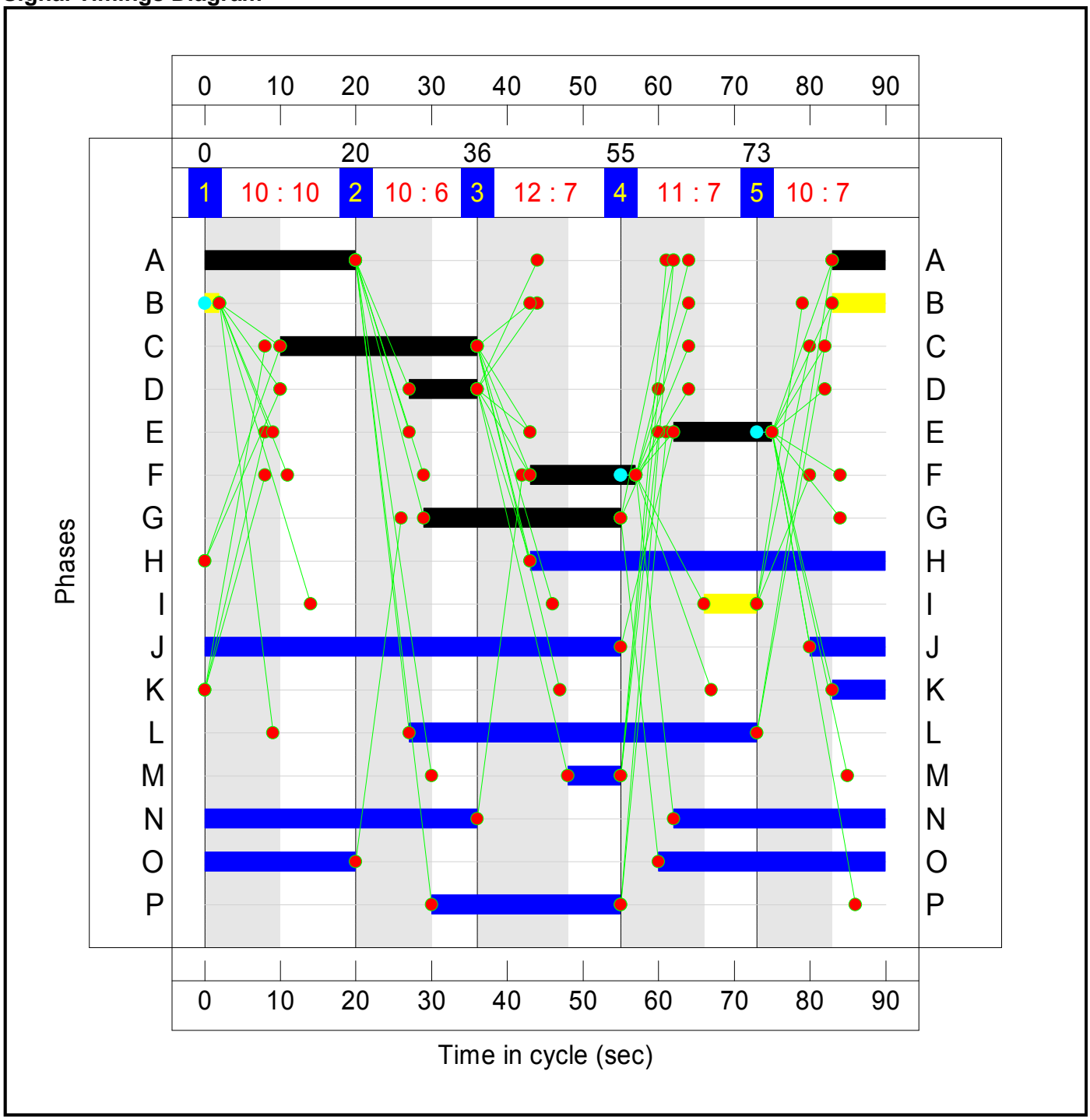


Stage Timings

Stage	1	2	3	4	5
Duration	10	6	7	7	7
Change Point	0	20	36	55	73

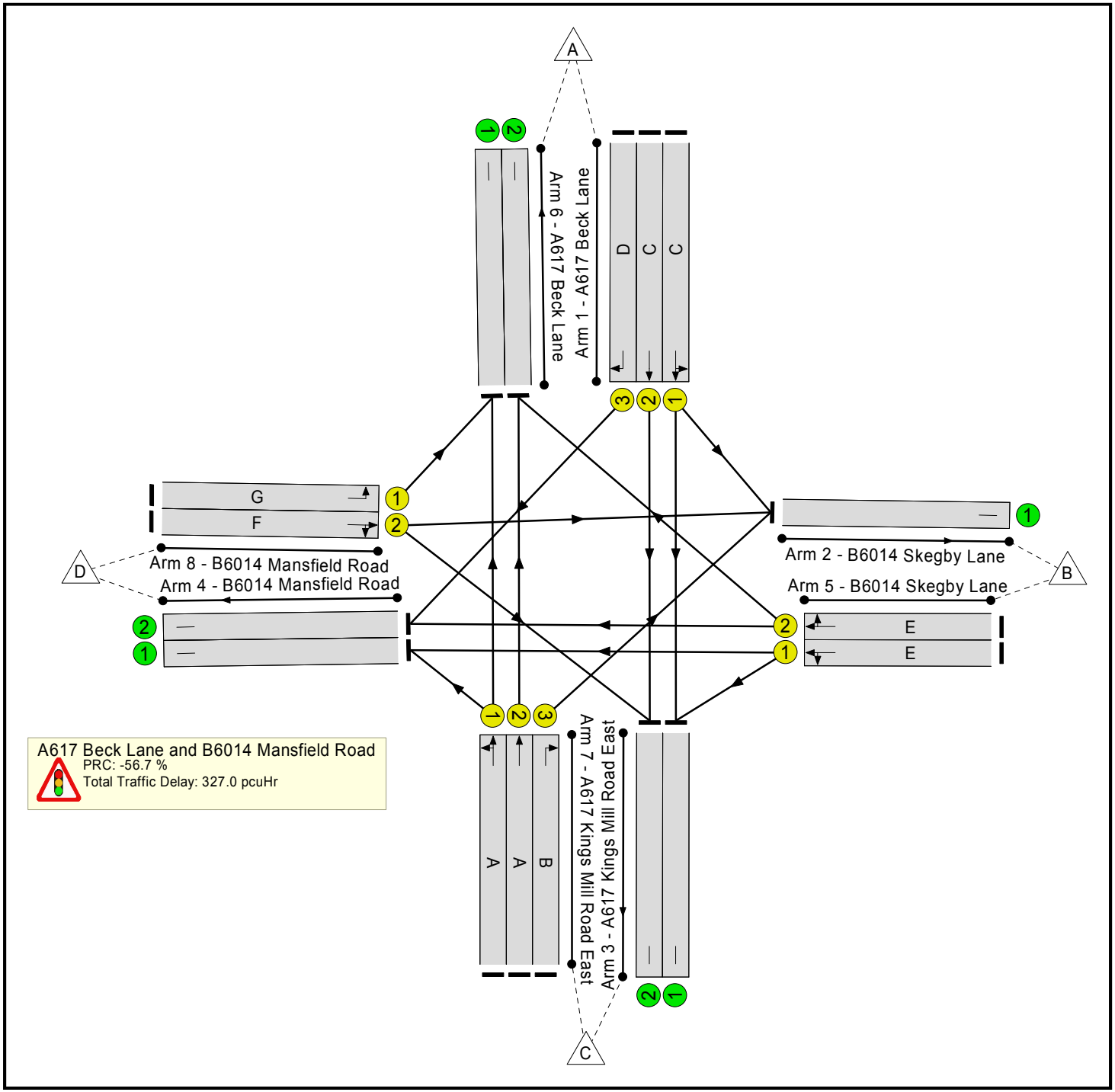
Full Input Data And Results

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**141.1%**
A617 Beck Lane and B6014 Mansfield Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**141.1%**
1/1	A617 Beck Lane Left Ahead	U	N/A	N/A	C		1	26	-	804	1900	570	141.1%
1/2	A617 Beck Lane Ahead	U	N/A	N/A	C		1	26	-	846	2000	600	141.0%
1/3	A617 Beck Lane Right	U	N/A	N/A	D		1	9	-	158	1800	200	79.0%
2/1	B6014 Skegby Lane	U	N/A	N/A	-		-	-	-	467	Inf	Inf	0.0%
3/1	A617 Kings Mill Road East	U	N/A	N/A	-		-	-	-	557	Inf	Inf	0.0%
3/2	A617 Kings Mill Road East	U	N/A	N/A	-		-	-	-	909	Inf	Inf	0.0%
4/1	B6014 Mansfield Road	U	N/A	N/A	-		-	-	-	71	Inf	Inf	0.0%
4/2	B6014 Mansfield Road	U	N/A	N/A	-		-	-	-	158	Inf	Inf	0.0%
5/1	B6014 Skegby Lane Left Ahead	U	N/A	N/A	E		1	13	-	88	1900	296	29.8%
5/2	B6014 Skegby Lane Ahead Right	U	N/A	N/A	E		1	13	-	254	1800	280	90.7%
6/1	A617 Beck Lane	U	N/A	N/A	-		-	-	-	971	Inf	Inf	0.0%
6/2	A617 Beck Lane	U	N/A	N/A	-		-	-	-	866	Inf	Inf	0.0%
7/1	A617 Kings Mill Road East Left Ahead	U	N/A	N/A	A		1	27	-	578	1900	591	97.8%
7/2	A617 Kings Mill Road East Ahead	U	N/A	N/A	A		1	27	-	612	2000	622	98.4%
7/3	A617 Kings Mill Road East Right	U	N/A	N/A	B		1	9	-	31	1800	200	15.5%

Full Input Data And Results

8/1	B6014 Mansfield Road Left	U	N/A	N/A	G		1	26	-	407	1950	585	69.6%
8/2	B6014 Mansfield Road Ahead Right	U	N/A	N/A	F		1	14	-	221	1800	300	73.7%

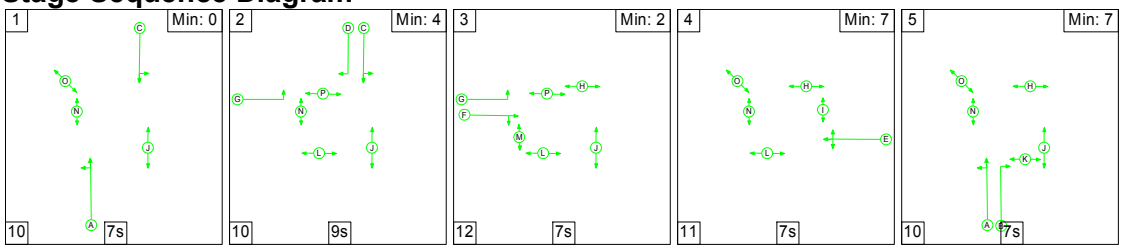
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**56.1**	**271.0**	**0.0**	**327.0**	**-**	**-**	**-**	**-**
A617 Beck Lane and B6014 Mansfield Road	**-**	**-**	**0**	**0**	**0**	**56.1**	**271.0**	**0.0**	**327.0**	**-**	**-**	**-**	**-**
1/1	804	570	-	-	-	17.1	118.7	-	135.8	608.1	25.9	118.7	144.6
1/2	846	600	-	-	-	18.0	124.7	-	142.7	607.2	27.3	124.7	152.0
1/3	158	158	-	-	-	1.7	1.7	-	3.4	78.6	3.8	1.7	5.6
2/1	386	386	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	404	404	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	663	663	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	71	71	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	158	158	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	88	88	-	-	-	0.8	0.2	-	1.0	42.3	1.9	0.2	2.1
5/2	254	254	-	-	-	2.6	3.8	-	6.4	91.0	6.2	3.8	10.0
6/1	971	971	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	866	866	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	578	578	-	-	-	4.9	9.2	-	14.1	87.9	14.3	9.2	23.5
7/2	612	612	-	-	-	5.2	10.1	-	15.3	90.0	15.1	10.1	25.2
7/3	31	31	-	-	-	0.3	0.1	-	0.4	46.9	0.7	0.1	0.8
8/1	407	407	-	-	-	3.2	1.1	-	4.3	37.9	8.9	1.1	10.1
8/2	221	221	-	-	-	2.2	1.4	-	3.5	57.7	5.2	1.4	6.6

C1 PRC for Signalled Lanes (%): -56.7 Total Delay for Signalled Lanes (pcuHr): 327.04 Cycle Time (s): 90
PRC Over All Lanes (%): -56.7 Total Delay Over All Lanes(pcuHr): 327.04

Full Input Data And Results

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case PM', Plan 1: 'Staging Plan No. 1')

Stage Sequence Diagram

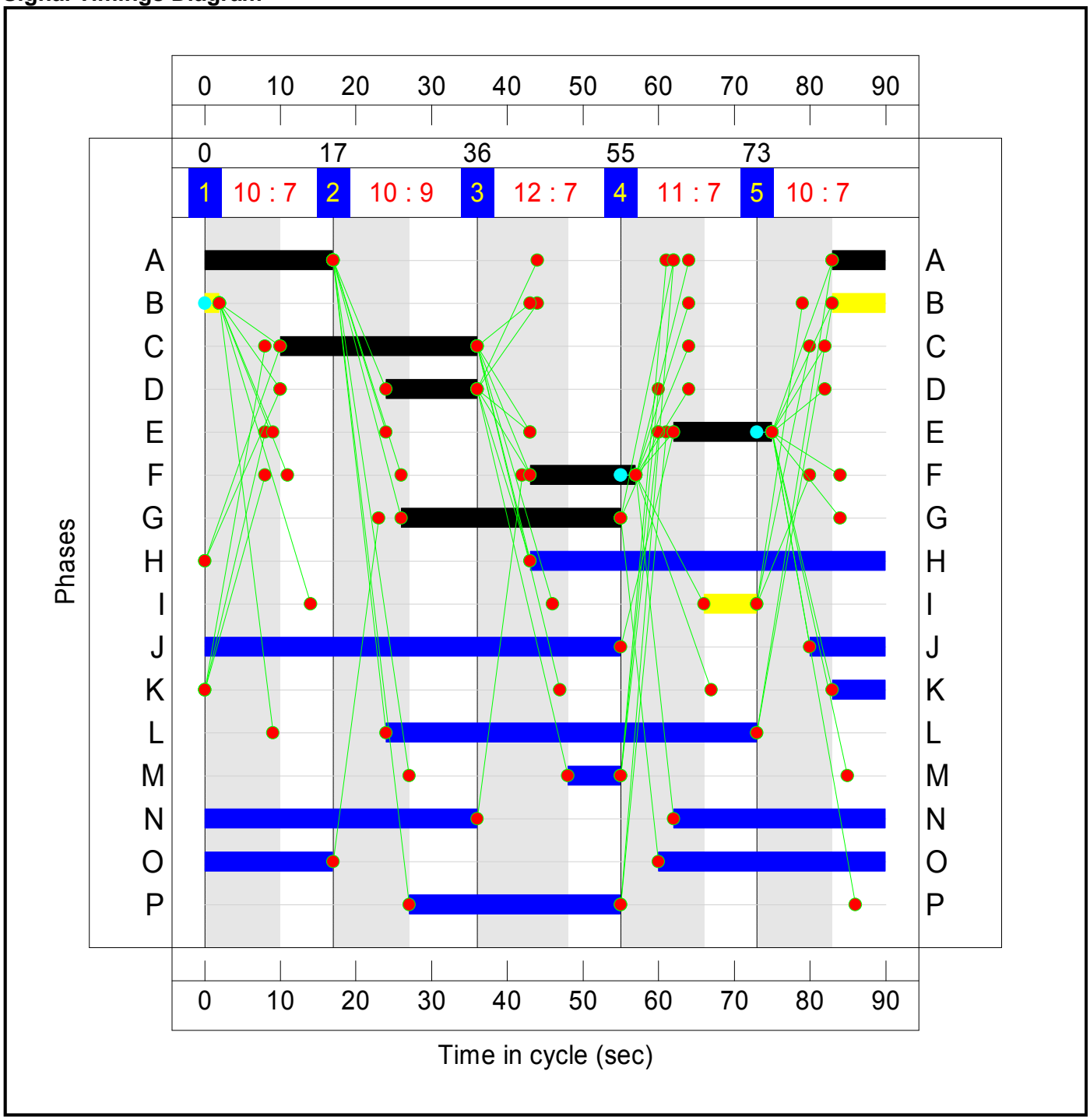


Stage Timings

Stage	1	2	3	4	5
Duration	7	9	7	7	7
Change Point	0	17	36	55	73

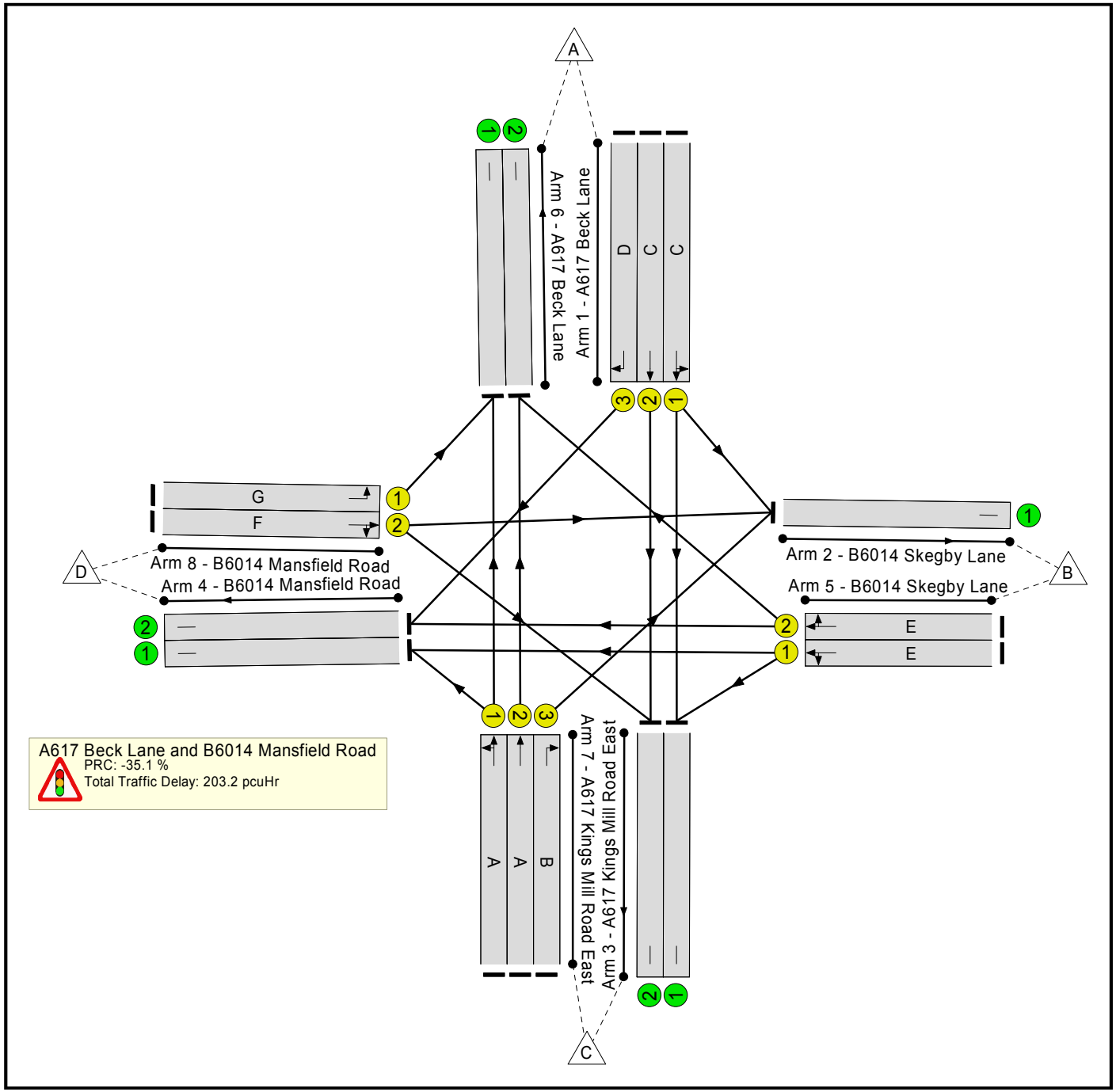
Full Input Data And Results

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**121.6%**
A617 Beck Lane and B6014 Mansfield Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**121.6%**
1/1	A617 Beck Lane Left Ahead	U	N/A	N/A	C		1	26	-	693	1900	570	121.6%
1/2	A617 Beck Lane Ahead	U	N/A	N/A	C		1	26	-	729	2000	600	121.5%
1/3	A617 Beck Lane Right	U	N/A	N/A	D		1	12	-	256	1800	260	98.5%
2/1	B6014 Skegby Lane	U	N/A	N/A	-		-	-	-	432	Inf	Inf	0.0%
3/1	A617 Kings Mill Road East	U	N/A	N/A	-		-	-	-	299	Inf	Inf	0.0%
3/2	A617 Kings Mill Road East	U	N/A	N/A	-		-	-	-	731	Inf	Inf	0.0%
4/1	B6014 Mansfield Road	U	N/A	N/A	-		-	-	-	23	Inf	Inf	0.0%
4/2	B6014 Mansfield Road	U	N/A	N/A	-		-	-	-	256	Inf	Inf	0.0%
5/1	B6014 Skegby Lane Left Ahead	U	N/A	N/A	E		1	13	-	20	1900	296	6.8%
5/2	B6014 Skegby Lane Ahead Right	U	N/A	N/A	E		1	13	-	292	1800	280	104.3%
6/1	A617 Beck Lane	U	N/A	N/A	-		-	-	-	732	Inf	Inf	0.0%
6/2	A617 Beck Lane	U	N/A	N/A	-		-	-	-	818	Inf	Inf	0.0%
7/1	A617 Kings Mill Road East Left Ahead	U	N/A	N/A	A		1	24	-	493	1900	528	93.4%
7/2	A617 Kings Mill Road East Ahead	U	N/A	N/A	A		1	24	-	526	2000	556	94.7%
7/3	A617 Kings Mill Road East Right	U	N/A	N/A	B		1	9	-	18	1800	200	9.0%

Full Input Data And Results

8/1	B6014 Mansfield Road Left	U	N/A	N/A	G		1	29	-	247	1950	650	38.0%
8/2	B6014 Mansfield Road Ahead Right	U	N/A	N/A	F		1	14	-	17	1800	300	5.7%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**40.5**	**162.6**	**0.0**	**203.2**	**-**	**-**	**-**	**-**
A617 Beck Lane and B6014 Mansfield Road	**-**	**-**	**0**	**0**	**0**	**40.5**	**162.6**	**0.0**	**203.2**	**-**	**-**	**-**	**-**
1/1	693	570	-	-	-	11.4	64.2	-	75.6	392.5	20.4	64.2	84.6
1/2	729	600	-	-	-	11.9	67.2	-	79.1	390.8	21.4	67.2	88.7
1/3	256	256	-	-	-	2.7	7.1	-	9.8	137.7	6.3	7.1	13.4
2/1	361	361	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	247	247	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	602	602	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	23	23	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	256	256	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	20	20	-	-	-	0.2	0.0	-	0.2	39.0	0.4	0.0	0.5
5/2	292	280	-	-	-	3.4	12.1	-	15.5	191.1	7.6	12.1	19.7
6/1	732	732	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	806	806	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	493	493	-	-	-	4.3	5.4	-	9.7	71.2	11.9	5.4	17.3
7/2	526	526	-	-	-	4.7	6.3	-	10.9	74.6	12.9	6.3	19.1
7/3	18	18	-	-	-	0.2	0.0	-	0.2	45.9	0.4	0.0	0.4
8/1	247	247	-	-	-	1.6	0.3	-	1.9	27.4	4.7	0.3	5.0
8/2	17	17	-	-	-	0.1	0.0	-	0.2	38.0	0.4	0.0	0.4

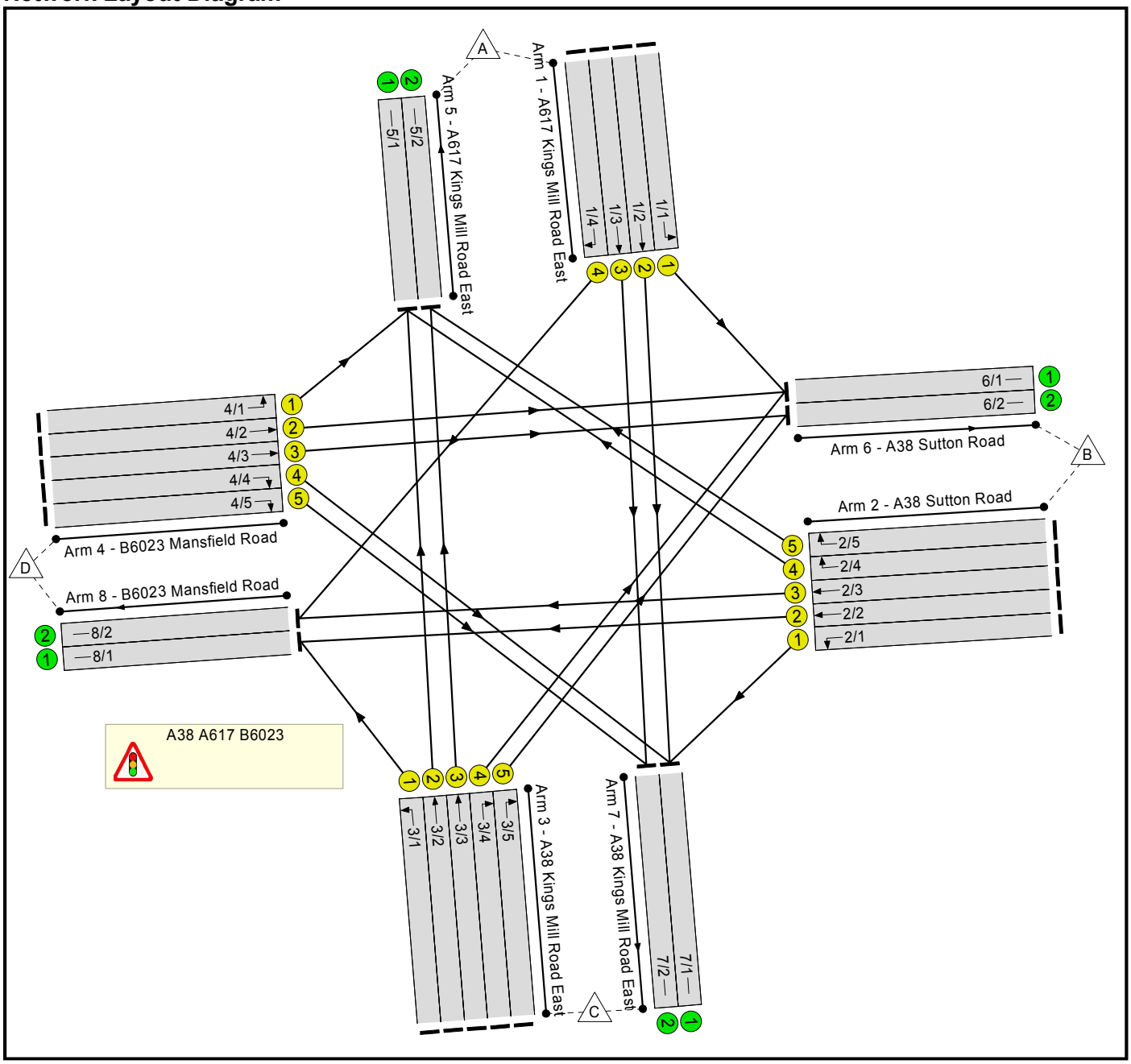
C1 PRC for Signalled Lanes (%): -35.1 Total Delay for Signalled Lanes (pcuHr): 203.16 Cycle Time (s): 90
PRC Over All Lanes (%): -35.1 Total Delay Over All Lanes(pcuHr): 203.16

Full Input Data And Results

User and Project Details

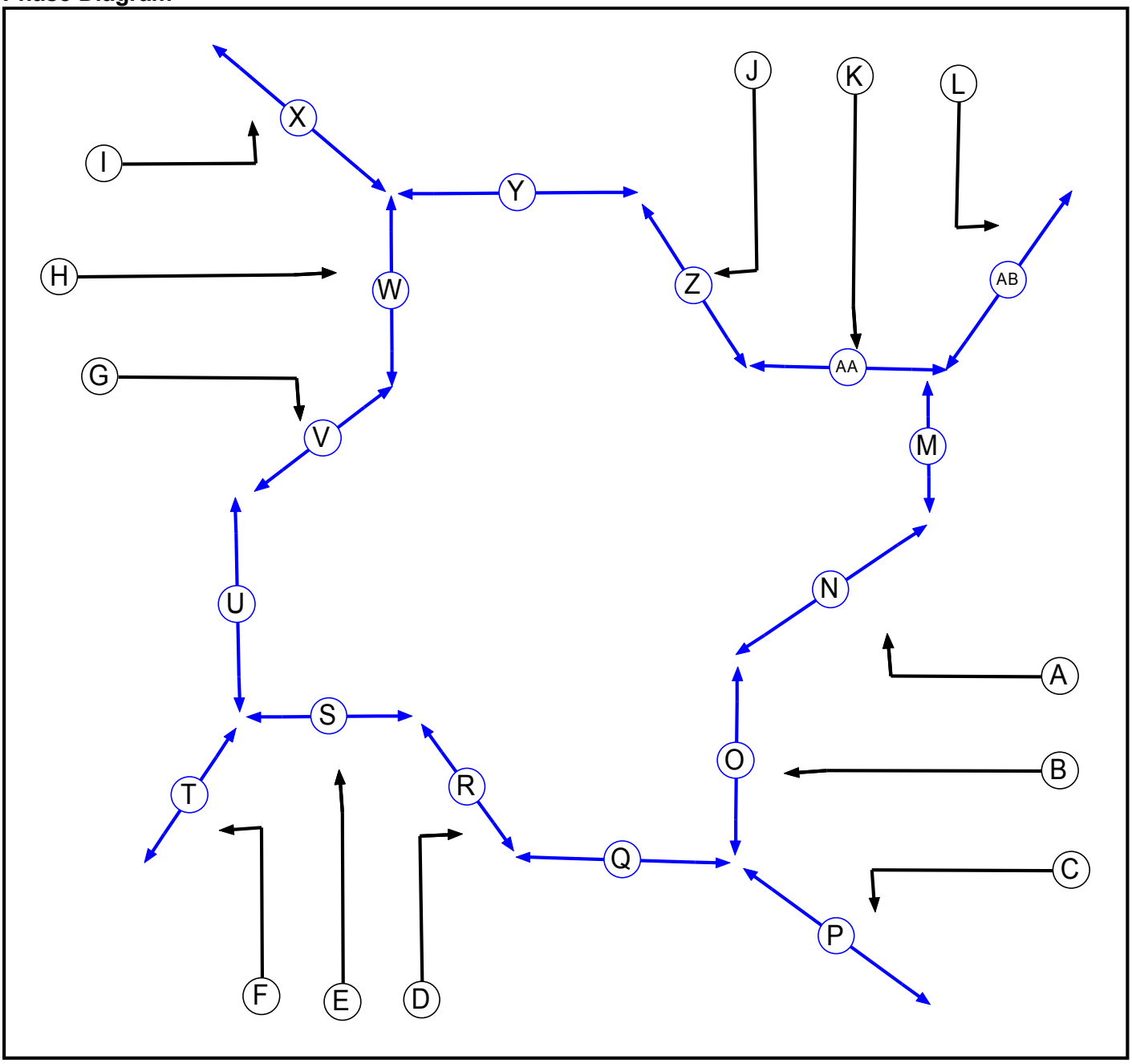
Project:	
Title:	
Location:	
File name:	2016-08-17 J2 JMP.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Traffic	1		7	7
D	Traffic	1		7	7
E	Traffic	1		7	7
F	Traffic	1		7	7
G	Traffic	1		7	7
H	Traffic	1		7	7
I	Traffic	1		7	7
J	Traffic	1		7	7
K	Traffic	1		7	7
L	Traffic	1		7	7
M	Pedestrian	1		7	7
N	Pedestrian	1		7	7
O	Pedestrian	1		7	7
P	Pedestrian	1		7	7
Q	Pedestrian	1		7	7
R	Pedestrian	1		7	7
S	Pedestrian	1		7	7
T	Pedestrian	1		7	7
U	Pedestrian	1		7	7
V	Pedestrian	1		7	7
W	Pedestrian	1		7	7
X	Pedestrian	1		7	7
Y	Pedestrian	1		7	7
Z	Pedestrian	1		7	7
AA	Pedestrian	1		7	7
AB	Pedestrian	1		7	7

Full Input Data And Results

Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
A		-	-	10	10	-	10	10	13	8	8	-	-	7	-	-	-	-	-	-	-	-	-	-	14	-	-	-
B	-		-	10	10	10	10	-	-	8	8	-	-	-	7	-	-	-	-	-	11	-	-	-	-	-	-	-
C	-	-		-	-	-	4	-	-	-	4	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-
D	8	8	-		-	-	9	9	-	10	10	12	15	-	-	-	-	7	-	-	-	-	-	-	-	-	-	-
E	8	8	-	-		-	9	9	11	10	-	-	-	-	-	-	-	-	7	-	-	-	-	-	11	-	-	-
F	-	4	-	-	-		-	-	-	4	-	-	-	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-
G	9	9	12	8	8	-		-	-	9	9	-	-	-	-	-	13	-	-	-	-	7	-	-	-	-	-	-
H	9	-	-	8	8	-	-		-	9	9	9	11	-	-	-	-	-	-	-	-	-	7	-	-	-	-	-
I	4	-	-	-	4	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-
J	10	10	-	10	10	13	9	9	-		-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	7	-	-
K	10	10	11	10	-	-	9	9	-	-		-	-	-	-	-	12	-	-	-	-	-	-	-	-	-	7	-
L	-	-	-	4	-	-	-	4	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
M	-	-	-	9	-	-	-	9	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N	8	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-
O	-	8	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-
P	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-
Q	-	-	-	-	-	-	9	-	-	-	9	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-
R	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-
S	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-
T	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-
U	-	8	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-
V	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-
W	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-
X	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-
Y	9	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-
Z	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-
AA	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
AB	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

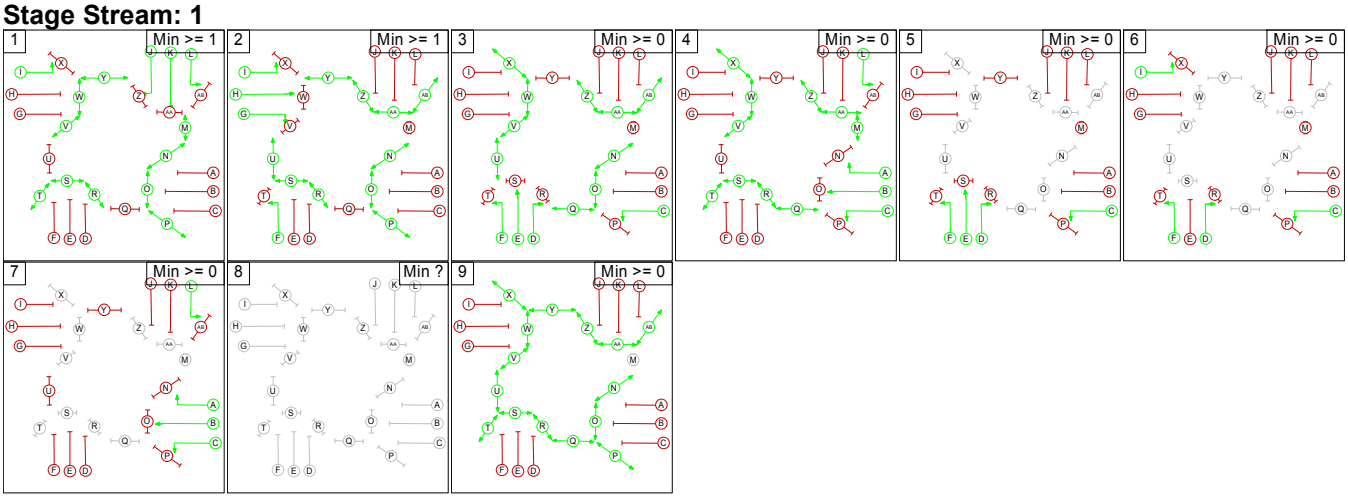
Phases in Stage

Full Input Data And Results

Stream	Stage No.	Phases in Stage
1	1	I J K L M N O P R S T V W Y
1	2	F G H I N O P R S U Y Z AA AB
1	3	C D E F N O Q U V W X Z AA AB
1	4	A B C L M Q R S T V W X Z AA
1	5	C D E F
1	6	C D F I
1	7	A B C L
1	8	
1	9	N O P Q R S T U V W X Y Z AA AB

Stage Diagram

Stage Stream: 1



Phase Delays

Stage Stream: 1

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

Prohibited Stage Change

Stage Stream: 1

	To Stage								
From Stage	1	2	3	4	5	6	7	8	9
1		15	15	12	13	13	11	X	15
2	11		13	13	12	12	12	X	13
3	15	11		15	0	11	12	X	11
4	14	14	11		10	13	0	X	14
5	15	11	0	15		11	12	X	11
6	15	9	5	15	4		12	X	7
7	14	14	11	0	10	13		X	14
8	X	X	X	X	X	X	X		X
9	9	9	8	9	8	8	9	X	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A38 A617 B6023
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Full Input Data And Results

Junction: A38 A617 B6023												
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 (A617 Kings Mill Road East)	U	L	2	3	60.0	User	1950	-	-	-	-	-
1/2 (A617 Kings Mill Road East)	U	K	2	3	60.0	User	2000	-	-	-	-	-
1/3 (A617 Kings Mill Road East)	U	K	2	3	60.0	User	2000	-	-	-	-	-
1/4 (A617 Kings Mill Road East)	U	J	2	3	60.0	User	1800	-	-	-	-	-
2/1 (A38 Sutton Road)	U	C	2	3	60.0	User	1950	-	-	-	-	-
2/2 (A38 Sutton Road)	U	B	2	3	60.0	User	2000	-	-	-	-	-
2/3 (A38 Sutton Road)	U	B	2	3	60.0	User	2000	-	-	-	-	-
2/4 (A38 Sutton Road)	U	A	2	3	60.0	User	1800	-	-	-	-	-
2/5 (A38 Sutton Road)	U	A	2	3	60.0	User	1800	-	-	-	-	-
3/1 (A38 Kings Mill Road East)	U	F	2	3	60.0	User	1950	-	-	-	-	-
3/2 (A38 Kings Mill Road East)	U	E	2	3	60.0	User	2000	-	-	-	-	-
3/3 (A38 Kings Mill Road East)	U	E	2	3	60.0	User	2000	-	-	-	-	-
3/4 (A38 Kings Mill Road East)	U	D	2	3	60.0	User	1800	-	-	-	-	-
3/5 (A38 Kings Mill Road East)	U	D	2	3	60.0	User	1800	-	-	-	-	-
4/1 (B6023 Mansfield Road)	U	I	2	3	60.0	User	1950	-	-	-	-	-

4/2 (B6023 Mansfield Road)	U	H	2	3	60.0	User	2000	-	-	-	-	-
4/3 (B6023 Mansfield Road)	U	H	2	3	60.0	User	2000	-	-	-	-	-
4/4 (B6023 Mansfield Road)	U	G	2	3	60.0	User	1800	-	-	-	-	-
4/5 (B6023 Mansfield Road)	U	G	2	3	60.0	User	1800	-	-	-	-	-
5/1 (A617 Kings Mill Road East)	U		2	3	60.0	User	1800	-	-	-	-	-
5/2 (A617 Kings Mill Road East)	U		2	3	60.0	User	1800	-	-	-	-	-
6/1 (A38 Sutton Road)	U		2	3	60.0	User	1800	-	-	-	-	-
6/2 (A38 Sutton Road)	U		2	3	60.0	User	1800	-	-	-	-	-
7/1 (A38 Kings Mill Road East)	U		2	3	60.0	User	1800	-	-	-	-	-
7/2 (A38 Kings Mill Road East)	U		2	3	60.0	User	1800	-	-	-	-	-
8/1 (B6023 Mansfield Road)	U		2	3	60.0	User	1800	-	-	-	-	-
8/2 (B6023 Mansfield Road)	U		2	3	60.0	User	1800	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2032 Reference Case AM'	08:00	09:00	01:00	
2: '2032 Development Case AM'	08:00	09:00	01:00	
3: '2032 Reference Case PM'	17:00	18:00	01:00	
4: '2032 Development Case PM'	17:00	18:00	01:00	

Scenario 1: 'AM Reference Case' (FG1: '2032 Reference Case AM', Plan 1: 'NCC Signal Plan ')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	417	366	42	825
	B	451	0	1312	847	2610
	C	717	1686	0	69	2472
	D	164	994	173	0	1331
	Tot.	1332	3097	1851	958	7238

Traffic Lane Flows

Lane	Scenario 1: AM Reference Case
Junction: A38 A617 B6023	
1/1	417
1/2	175
1/3	191
1/4	42
2/1	1312
2/2	423
2/3	424
2/4	225
2/5	226
3/1	69
3/2	358
3/3	359
3/4	842
3/5	844
4/1	164
4/2	497
4/3	497
4/4	80
4/5	93
5/1	747
5/2	585
6/1	1756
6/2	1341
7/1	1567
7/2	284
8/1	492
8/2	466

Full Input Data And Results

Lane Saturation Flows

Full Input Data And Results

Junction: A38 A617 B6023								
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 (A617 Kings Mill Road East Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
1/2 (A617 Kings Mill Road East Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
1/3 (A617 Kings Mill Road East Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
1/4 (A617 Kings Mill Road East Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A38 Sutton Road Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
2/2 (A38 Sutton Road Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
2/3 (A38 Sutton Road Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
2/4 (A38 Sutton Road Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
2/5 (A38 Sutton Road Lane 5)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A38 Kings Mill Road East Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
3/2 (A38 Kings Mill Road East Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
3/3 (A38 Kings Mill Road East Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
3/4 (A38 Kings Mill Road East Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
3/5 (A38 Kings Mill Road East Lane 5)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (B6023 Mansfield Road Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
4/2 (B6023 Mansfield Road Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
4/3 (B6023 Mansfield Road Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
4/4 (B6023 Mansfield Road Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
4/5 (B6023 Mansfield Road Lane 5)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A617 Kings Mill Road East Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/2 (A617 Kings Mill Road East Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (A38 Sutton Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (A38 Sutton Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
7/1 (A38 Kings Mill Road East Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800

7/2 (A38 Kings Mill Road East Lane 2)	This lane uses a directly entered Saturation Flow	1800	1800
8/1 (B6023 Mansfield Road Lane 1)	This lane uses a directly entered Saturation Flow	1800	1800
8/2 (B6023 Mansfield Road Lane 2)	This lane uses a directly entered Saturation Flow	1800	1800

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case PM', Plan 1: 'NCC Signal Plan ')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	444	331	83	858
	B	373	0	1608	910	2891
	C	426	1941	0	127	2494
	D	58	1054	94	0	1206
	Tot.	857	3439	2033	1120	7449

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM Reference Case
Junction: A38 A617 B6023	
1/1	444
1/2	158
1/3	173
1/4	83
2/1	1608
2/2	455
2/3	455
2/4	186
2/5	187
3/1	127
3/2	213
3/3	213
3/4	970
3/5	971
4/1	58
4/2	527
4/3	527
4/4	39
4/5	55
5/1	457
5/2	400
6/1	1941
6/2	1498
7/1	1805
7/2	228
8/1	582
8/2	538

Full Input Data And Results

Lane Saturation Flows

Full Input Data And Results

Junction: A38 A617 B6023								
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 (A617 Kings Mill Road East Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
1/2 (A617 Kings Mill Road East Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
1/3 (A617 Kings Mill Road East Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
1/4 (A617 Kings Mill Road East Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A38 Sutton Road Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
2/2 (A38 Sutton Road Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
2/3 (A38 Sutton Road Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
2/4 (A38 Sutton Road Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
2/5 (A38 Sutton Road Lane 5)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A38 Kings Mill Road East Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
3/2 (A38 Kings Mill Road East Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
3/3 (A38 Kings Mill Road East Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
3/4 (A38 Kings Mill Road East Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
3/5 (A38 Kings Mill Road East Lane 5)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (B6023 Mansfield Road Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
4/2 (B6023 Mansfield Road Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
4/3 (B6023 Mansfield Road Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
4/4 (B6023 Mansfield Road Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
4/5 (B6023 Mansfield Road Lane 5)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A617 Kings Mill Road East Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/2 (A617 Kings Mill Road East Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (A38 Sutton Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (A38 Sutton Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
7/1 (A38 Kings Mill Road East Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800

7/2 (A38 Kings Mill Road East Lane 2)	This lane uses a directly entered Saturation Flow	1800	1800
8/1 (B6023 Mansfield Road Lane 1)	This lane uses a directly entered Saturation Flow	1800	1800
8/2 (B6023 Mansfield Road Lane 2)	This lane uses a directly entered Saturation Flow	1800	1800

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case AM', Plan 1: 'NCC Signal Plan ')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	530	501	62	1093
	B	453	0	1285	902	2640
	C	813	1732	0	83	2628
	D	200	1094	205	0	1499
	Tot.	1466	3356	1991	1047	7860

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: AM Development Scenario
Junction: A38 A617 B6023	
1/1	530
1/2	245
1/3	256
1/4	62
2/1	1285
2/2	451
2/3	451
2/4	226
2/5	227
3/1	83
3/2	406
3/3	407
3/4	865
3/5	867
4/1	200
4/2	547
4/3	547
4/4	96
4/5	109
5/1	832
5/2	634
6/1	1942
6/2	1414
7/1	1626
7/2	365
8/1	534
8/2	513

Full Input Data And Results

Lane Saturation Flows

Full Input Data And Results

Junction: A38 A617 B6023								
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 (A617 Kings Mill Road East Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
1/2 (A617 Kings Mill Road East Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
1/3 (A617 Kings Mill Road East Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
1/4 (A617 Kings Mill Road East Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A38 Sutton Road Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
2/2 (A38 Sutton Road Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
2/3 (A38 Sutton Road Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
2/4 (A38 Sutton Road Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
2/5 (A38 Sutton Road Lane 5)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A38 Kings Mill Road East Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
3/2 (A38 Kings Mill Road East Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
3/3 (A38 Kings Mill Road East Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
3/4 (A38 Kings Mill Road East Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
3/5 (A38 Kings Mill Road East Lane 5)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (B6023 Mansfield Road Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
4/2 (B6023 Mansfield Road Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
4/3 (B6023 Mansfield Road Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
4/4 (B6023 Mansfield Road Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
4/5 (B6023 Mansfield Road Lane 5)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A617 Kings Mill Road East Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/2 (A617 Kings Mill Road East Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (A38 Sutton Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (A38 Sutton Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
7/1 (A38 Kings Mill Road East Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800

7/2 (A38 Kings Mill Road East Lane 2)	This lane uses a directly entered Saturation Flow	1800	1800
8/1 (B6023 Mansfield Road Lane 1)	This lane uses a directly entered Saturation Flow	1800	1800
8/2 (B6023 Mansfield Road Lane 2)	This lane uses a directly entered Saturation Flow	1800	1800

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case PM', Plan 1: 'NCC Signal Plan ')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	509	425	113	1047
	B	427	0	1679	1006	3112
	C	529	1968	0	152	2649
	D	74	1108	110	0	1292
	Tot.	1030	3585	2214	1271	8100

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: PM Development Scenario
Junction: A38 A617 B6023	
1/1	509
1/2	206
1/3	219
1/4	113
2/1	1679
2/2	503
2/3	503
2/4	213
2/5	214
3/1	152
3/2	264
3/3	265
3/4	983
3/5	985
4/1	74
4/2	554
4/3	554
4/4	47
4/5	63
5/1	551
5/2	479
6/1	2046
6/2	1539
7/1	1932
7/2	282
8/1	655
8/2	616

Full Input Data And Results

Lane Saturation Flows

Full Input Data And Results

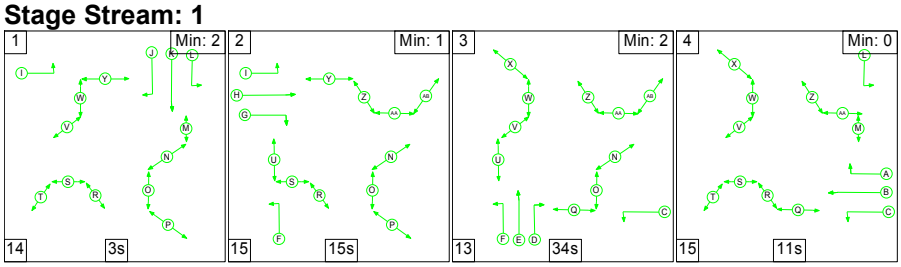
Junction: A38 A617 B6023								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A617 Kings Mill Road East Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
1/2 (A617 Kings Mill Road East Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
1/3 (A617 Kings Mill Road East Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
1/4 (A617 Kings Mill Road East Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A38 Sutton Road Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
2/2 (A38 Sutton Road Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
2/3 (A38 Sutton Road Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
2/4 (A38 Sutton Road Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
2/5 (A38 Sutton Road Lane 5)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A38 Kings Mill Road East Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
3/2 (A38 Kings Mill Road East Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
3/3 (A38 Kings Mill Road East Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
3/4 (A38 Kings Mill Road East Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
3/5 (A38 Kings Mill Road East Lane 5)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (B6023 Mansfield Road Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
4/2 (B6023 Mansfield Road Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
4/3 (B6023 Mansfield Road Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
4/4 (B6023 Mansfield Road Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
4/5 (B6023 Mansfield Road Lane 5)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A617 Kings Mill Road East Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/2 (A617 Kings Mill Road East Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (A38 Sutton Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (A38 Sutton Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
7/1 (A38 Kings Mill Road East Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800

7/2 (A38 Kings Mill Road East Lane 2)	This lane uses a directly entered Saturation Flow	1800	1800
8/1 (B6023 Mansfield Road Lane 1)	This lane uses a directly entered Saturation Flow	1800	1800
8/2 (B6023 Mansfield Road Lane 2)	This lane uses a directly entered Saturation Flow	1800	1800

Scenario 1: 'AM Reference Case' (FG1: '2032 Reference Case AM', Plan 1: 'NCC Signal Plan ')

Stage Sequence Diagram

Stage Stream: 1



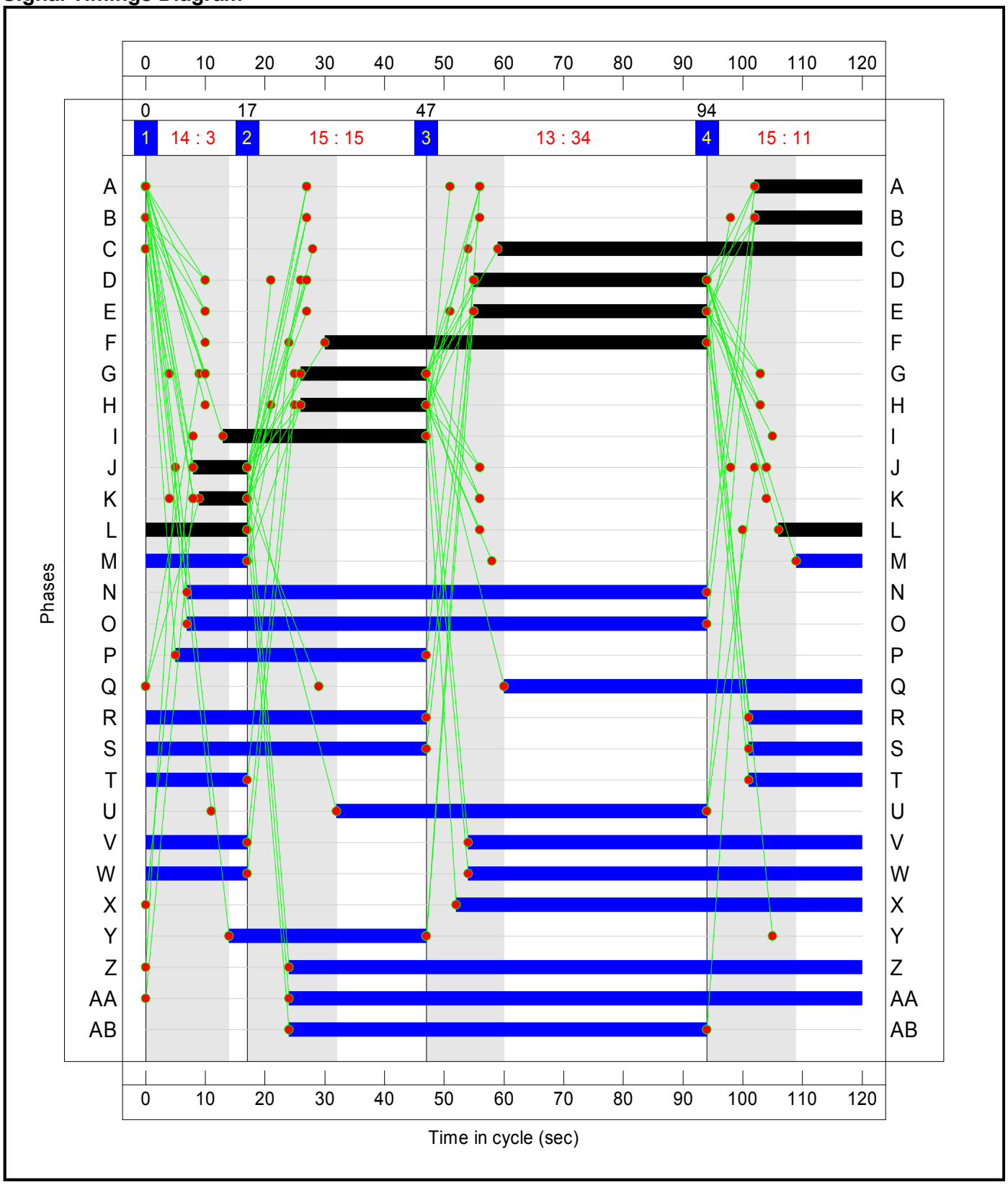
Stage Timings

Stage Stream: 1

Stage	1	2	3	4
Duration	3	15	34	11
Change Point	0	17	47	94

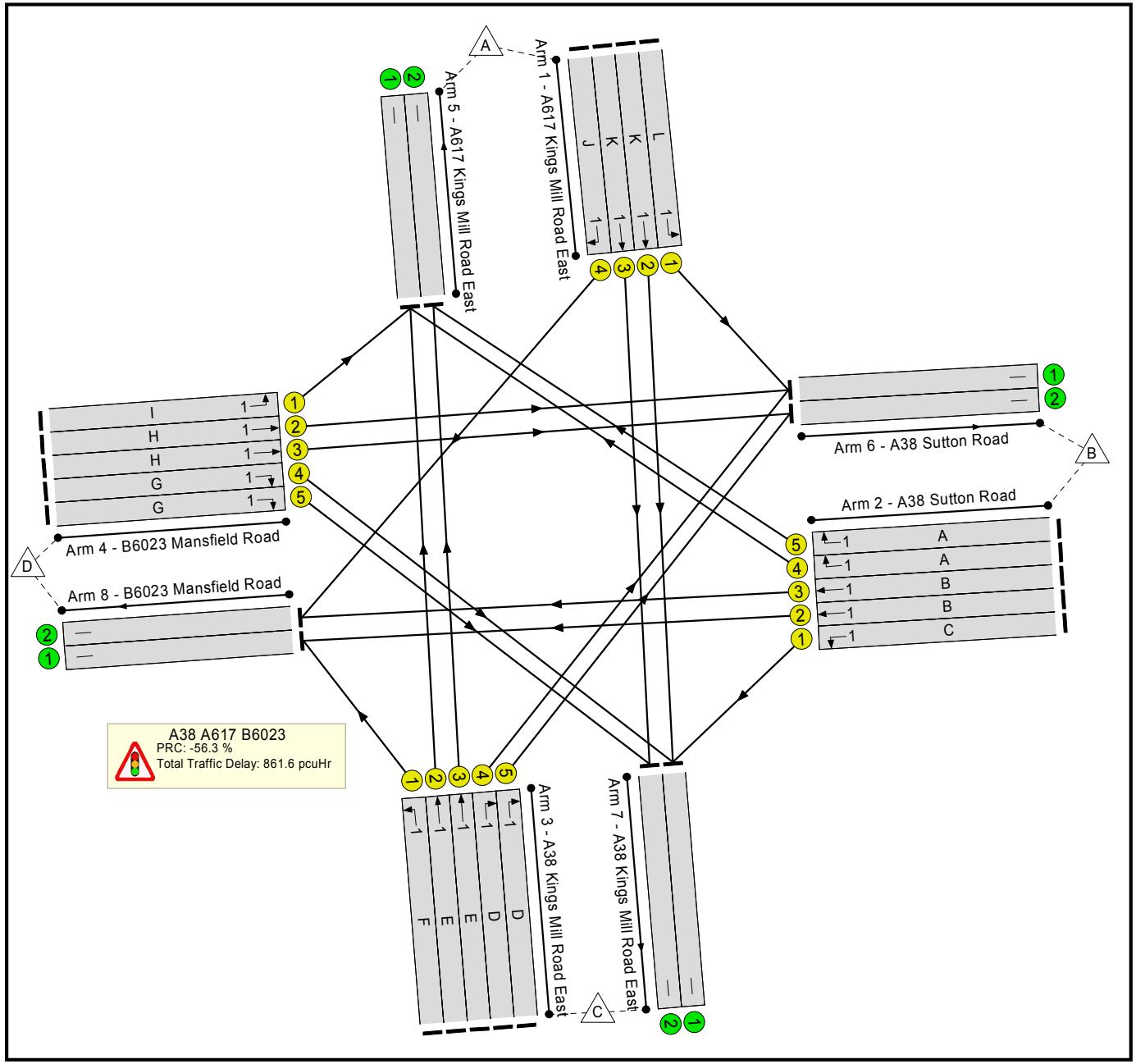
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Full Input Data And Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**140.7%**
A38 A617 B6023	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**140.7%**
1/1	A617 Kings Mill Road East Left	U	1	N/A	L		1	31	-	417	1950	520	80.2%
1/2	A617 Kings Mill Road East Ahead	U	1	N/A	K		1	8	-	175	2000	150	116.7%
1/3	A617 Kings Mill Road East Ahead	U	1	N/A	K		1	8	-	191	2000	150	127.3%
1/4	A617 Kings Mill Road East Right	U	1	N/A	J		1	9	-	42	1800	150	28.0%
2/1	A38 Sutton Road Left	U	1	N/A	C		1	61	-	1312	1950	1007	130.2%
2/2	A38 Sutton Road Ahead	U	1	N/A	B		1	18	-	423	2000	317	133.6%
2/3	A38 Sutton Road Ahead	U	1	N/A	B		1	18	-	424	2000	317	133.9%
2/4	A38 Sutton Road Right	U	1	N/A	A		1	18	-	225	1800	285	78.9%
2/5	A38 Sutton Road Right	U	1	N/A	A		1	18	-	226	1800	285	79.3%
3/1	A38 Kings Mill Road East Left	U	1	N/A	F		1	64	-	69	1950	1056	6.5%
3/2	A38 Kings Mill Road East Ahead	U	1	N/A	E		1	39	-	358	2000	667	53.7%
3/3	A38 Kings Mill Road East Ahead	U	1	N/A	E		1	39	-	359	2000	667	53.9%
3/4	A38 Kings Mill Road East Right	U	1	N/A	D		1	39	-	842	1800	600	140.3%
3/5	A38 Kings Mill Road East Right	U	1	N/A	D		1	39	-	844	1800	600	140.7%
4/1	B6023 Mansfield Road Left	U	1	N/A	I		1	34	-	164	1950	569	28.8%

Full Input Data And Results

4/2	B6023 Mansfield Road Ahead	U	1	N/A	H		1	21	-	497	2000	367	135.5%
4/3	B6023 Mansfield Road Ahead	U	1	N/A	H		1	21	-	497	2000	367	135.5%
4/4	B6023 Mansfield Road Right	U	1	N/A	G		1	21	-	80	1800	330	24.2%
4/5	B6023 Mansfield Road Right	U	1	N/A	G		1	21	-	93	1800	330	28.2%
5/1	A617 Kings Mill Road East	U	N/A	N/A	-		-	-	-	747	1800	1800	41.5%
5/2	A617 Kings Mill Road East	U	N/A	N/A	-		-	-	-	585	1800	1800	32.5%
6/1	A38 Sutton Road	U	N/A	N/A	-		-	-	-	1756	1800	1800	76.9%
6/2	A38 Sutton Road	U	N/A	N/A	-		-	-	-	1341	1800	1800	53.7%
7/1	A38 Kings Mill Road East	U	N/A	N/A	-		-	-	-	1567	1800	1800	68.8%
7/2	A38 Kings Mill Road East	U	N/A	N/A	-		-	-	-	284	1800	1800	13.5%
8/1	B6023 Mansfield Road	U	N/A	N/A	-		-	-	-	492	1800	1800	21.4%
8/2	B6023 Mansfield Road	U	N/A	N/A	-		-	-	-	466	1800	1800	19.9%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**166.4**	**695.2**	**0.0**	**861.6**	**-**	**-**	**-**	**-**
A38 A617 B6023	**-**	**-**	**0**	**0**	**0**	**166.4**	**695.2**	**0.0**	**861.6**	**-**	**-**	**-**	**-**
1/1	417	417	-	-	-	4.8	2.0	-	6.7	57.9	12.9	2.0	14.8
1/2	175	150	-	-	-	4.3	15.4	-	19.6	403.4	6.7	15.4	22.0
1/3	191	150	-	-	-	5.5	22.6	-	28.1	530.0	8.0	22.6	30.7
1/4	42	42	-	-	-	0.6	0.2	-	0.8	68.3	1.3	0.2	1.5
2/1	1312	1008	-	-	-	33.3	154.4	-	187.7	514.9	62.9	154.4	217.3
2/2	423	317	-	-	-	13.2	55.1	-	68.3	581.4	20.8	55.1	75.9
2/3	424	317	-	-	-	13.3	55.6	-	68.9	584.9	20.9	55.6	76.5
2/4	225	225	-	-	-	3.0	1.8	-	4.8	76.9	7.2	1.8	9.0
2/5	226	226	-	-	-	3.1	1.8	-	4.9	77.4	7.2	1.8	9.0
3/1	69	69	-	-	-	0.3	0.0	-	0.3	14.9	1.1	0.0	1.1
3/2	358	358	-	-	-	3.2	0.6	-	3.8	38.3	9.6	0.6	10.2
3/3	359	359	-	-	-	3.2	0.6	-	3.8	38.3	9.7	0.6	10.3
3/4	842	600	-	-	-	23.0	122.7	-	145.7	623.2	38.8	122.7	161.5
3/5	844	600	-	-	-	23.2	123.7	-	146.9	626.6	39.0	123.7	162.7
4/1	164	164	-	-	-	1.5	0.2	-	1.7	37.3	4.2	0.2	4.4
4/2	497	367	-	-	-	14.1	67.0	-	81.1	587.3	20.9	67.0	87.9
4/3	497	367	-	-	-	14.1	67.0	-	81.1	587.3	20.9	67.0	87.9
4/4	80	80	-	-	-	0.9	0.2	-	1.1	49.1	2.3	0.2	2.4
4/5	93	93	-	-	-	1.1	0.2	-	1.3	49.8	2.7	0.2	2.9
5/1	747	747	-	-	-	0.0	0.4	-	0.4	1.8	6.6	0.4	6.9
5/2	585	585	-	-	-	0.0	0.2	-	0.3	1.6	6.6	0.2	6.8
6/1	1384	1384	-	-	-	0.1	1.6	-	1.7	4.5	9.6	1.6	11.2
6/2	967	967	-	-	-	0.0	0.6	-	0.6	2.3	9.1	0.6	9.7
7/1	1238	1238	-	-	-	0.5	1.1	-	1.6	4.7	30.4	1.1	31.5

Full Input Data And Results

7/2	243	243	-	-	-	0.0	0.1	-	0.1	1.2	1.0	0.1	1.1
8/1	386	386	-	-	-	0.0	0.1	-	0.2	1.5	7.2	0.1	7.3
8/2	359	359	-	-	-	0.0	0.1	-	0.2	1.5	7.2	0.1	7.3

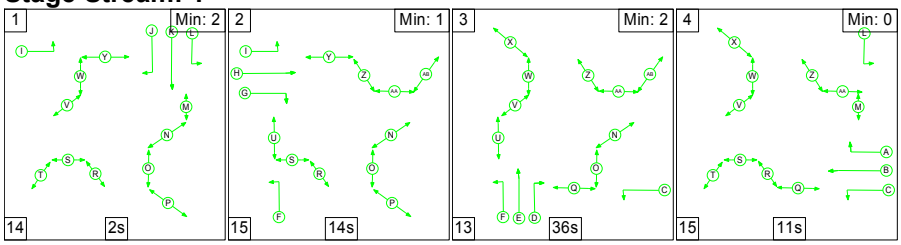
C1 Stream: 1 PRC for Signalled Lanes (%): -56.3 Total Delay for Signalled Lanes (pcuHr): 856.56 Cycle Time (s): 120
PRC Over All Lanes (%): -56.3 Total Delay Over All Lanes(pcuHr): 861.57

Full Input Data And Results

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case PM', Plan 1: 'NCC Signal Plan ')

Stage Sequence Diagram

Stage Stream: 1



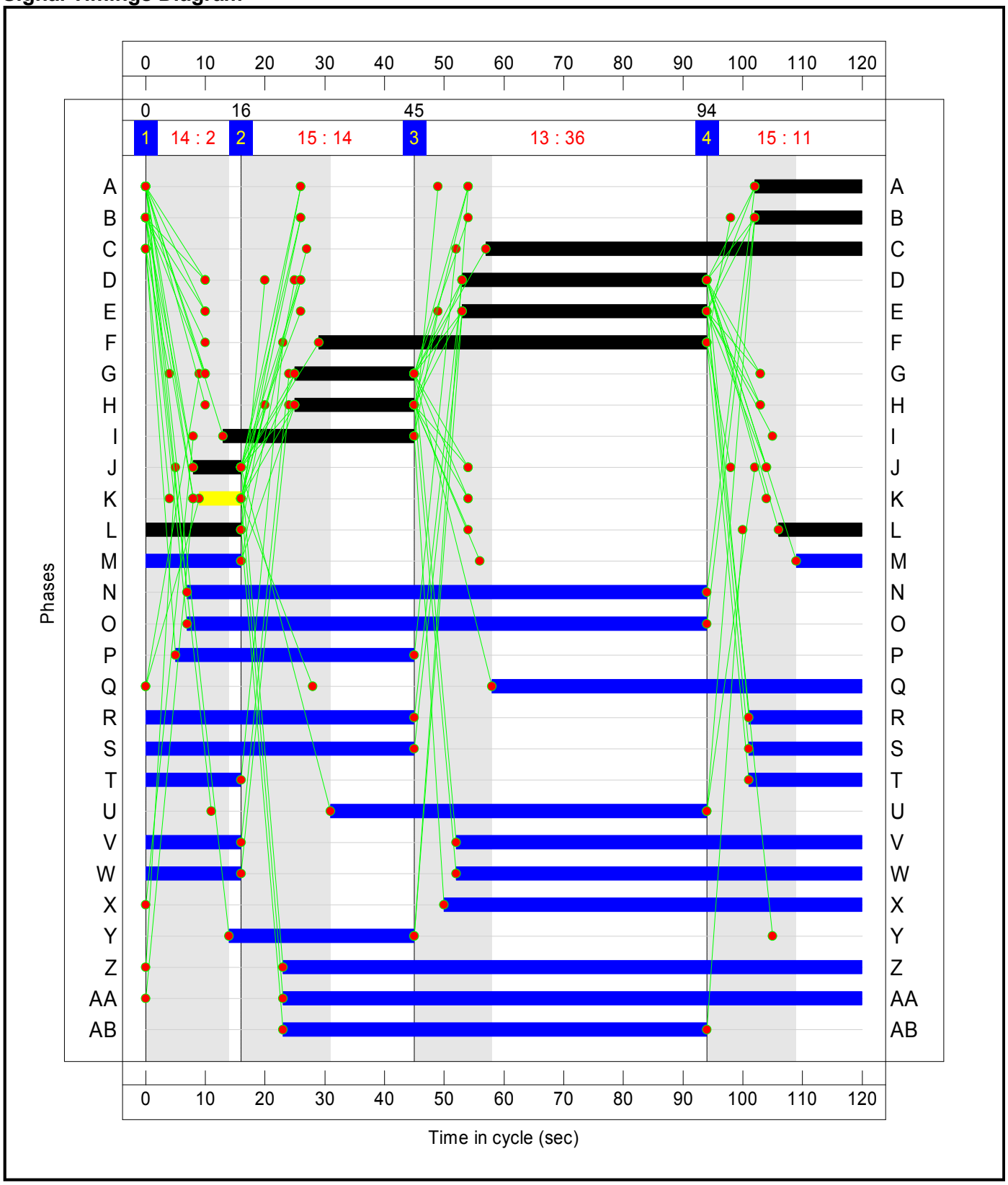
Stage Timings

Stage Stream: 1

Stage	1	2	3	4
Duration	2	14	36	11
Change Point	0	16	45	94

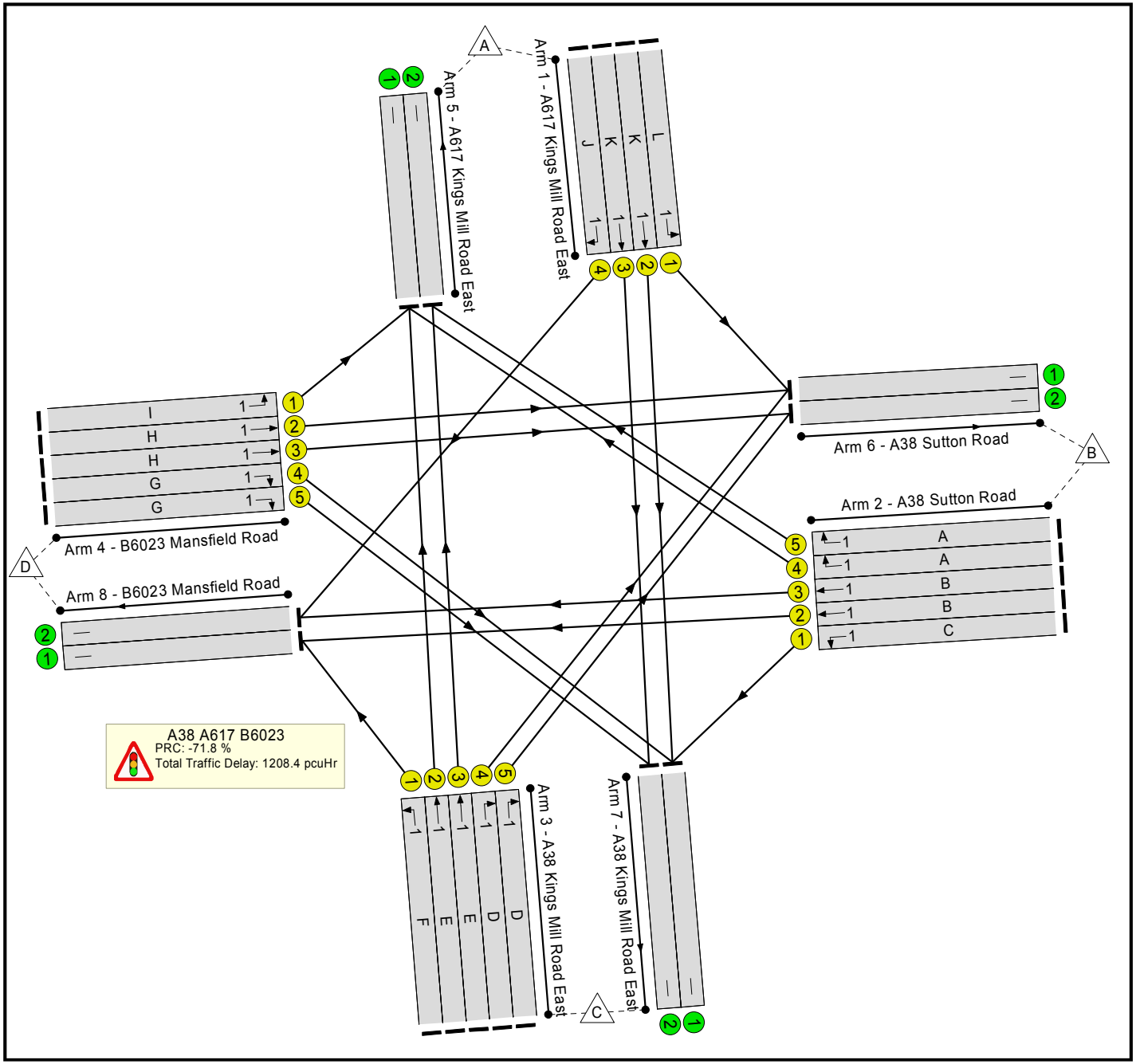
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Full Input Data And Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**154.6%**
A38 A617 B6023	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**154.6%**
1/1	A617 Kings Mill Road East Left	U	1	N/A	L		1	30	-	444	1950	504	88.1%
1/2	A617 Kings Mill Road East Ahead	U	1	N/A	K		1	7	-	158	2000	133	118.5%
1/3	A617 Kings Mill Road East Ahead	U	1	N/A	K		1	7	-	173	2000	133	129.8%
1/4	A617 Kings Mill Road East Right	U	1	N/A	J		1	8	-	83	1800	135	61.5%
2/1	A38 Sutton Road Left	U	1	N/A	C		1	63	-	1608	1950	1040	154.6%
2/2	A38 Sutton Road Ahead	U	1	N/A	B		1	18	-	455	2000	317	143.7%
2/3	A38 Sutton Road Ahead	U	1	N/A	B		1	18	-	455	2000	317	143.7%
2/4	A38 Sutton Road Right	U	1	N/A	A		1	18	-	186	1800	285	65.3%
2/5	A38 Sutton Road Right	U	1	N/A	A		1	18	-	187	1800	285	65.6%
3/1	A38 Kings Mill Road East Left	U	1	N/A	F		1	65	-	127	1950	1073	11.8%
3/2	A38 Kings Mill Road East Ahead	U	1	N/A	E		1	41	-	213	2000	700	30.4%
3/3	A38 Kings Mill Road East Ahead	U	1	N/A	E		1	41	-	213	2000	700	30.4%
3/4	A38 Kings Mill Road East Right	U	1	N/A	D		1	41	-	970	1800	630	154.0%
3/5	A38 Kings Mill Road East Right	U	1	N/A	D		1	41	-	971	1800	630	154.1%
4/1	B6023 Mansfield Road Left	U	1	N/A	I		1	32	-	58	1950	536	10.8%

Full Input Data And Results

4/2	B6023 Mansfield Road Ahead	U	1	N/A	H		1	20	-	527	2000	350	150.6%
4/3	B6023 Mansfield Road Ahead	U	1	N/A	H		1	20	-	527	2000	350	150.6%
4/4	B6023 Mansfield Road Right	U	1	N/A	G		1	20	-	39	1800	315	12.4%
4/5	B6023 Mansfield Road Right	U	1	N/A	G		1	20	-	55	1800	315	17.5%
5/1	A617 Kings Mill Road East	U	N/A	N/A	-		-	-	-	457	1800	1800	25.4%
5/2	A617 Kings Mill Road East	U	N/A	N/A	-		-	-	-	400	1800	1800	22.2%
6/1	A38 Sutton Road	U	N/A	N/A	-		-	-	-	1941	1800	1800	79.1%
6/2	A38 Sutton Road	U	N/A	N/A	-		-	-	-	1498	1800	1800	54.4%
7/1	A38 Kings Mill Road East	U	N/A	N/A	-		-	-	-	1805	1800	1800	67.4%
7/2	A38 Kings Mill Road East	U	N/A	N/A	-		-	-	-	228	1800	1800	10.5%
8/1	B6023 Mansfield Road	U	N/A	N/A	-		-	-	-	582	1800	1800	24.6%
8/2	B6023 Mansfield Road	U	N/A	N/A	-		-	-	-	538	1800	1800	22.2%

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	**-**	**-**	**0**	**0**	**0**	**210.5**	**997.9**	**0.0**	**1208.4**	**-**	**-**	**-**	**-**
A38 A617 B6023	**-**	**-**	**0**	**0**	**0**	**210.5**	**997.9**	**0.0**	**1208.4**	**-**	**-**	**-**	**-**
1/1	444	444	-	-	-	5.3	3.3	-	8.6	69.8	14.2	3.3	17.5
1/2	158	133	-	-	-	4.0	15.0	-	19.0	432.3	6.1	15.0	21.1
1/3	173	133	-	-	-	5.2	21.8	-	27.0	561.7	7.5	21.8	29.3
1/4	83	83	-	-	-	1.2	0.8	-	2.0	87.5	2.7	0.8	3.4
2/1	1608	1040	-	-	-	55.0	285.4	-	340.4	762.2	90.1	285.4	375.5
2/2	455	317	-	-	-	15.9	70.8	-	86.6	685.6	24.0	70.8	94.8
2/3	455	317	-	-	-	15.9	70.8	-	86.6	685.6	24.0	70.8	94.8
2/4	186	186	-	-	-	2.4	0.9	-	3.4	65.3	5.8	0.9	6.7
2/5	187	187	-	-	-	2.5	0.9	-	3.4	65.5	5.8	0.9	6.8
3/1	127	127	-	-	-	0.5	0.1	-	0.5	14.9	2.0	0.1	2.1
3/2	213	213	-	-	-	1.7	0.2	-	1.9	32.1	5.1	0.2	5.4
3/3	213	213	-	-	-	1.7	0.2	-	1.9	32.1	5.1	0.2	5.4
3/4	970	630	-	-	-	31.2	171.4	-	202.6	751.9	48.8	171.4	220.2
3/5	971	630	-	-	-	31.3	171.9	-	203.2	753.3	48.9	171.9	220.8
4/1	58	58	-	-	-	0.5	0.1	-	0.6	36.3	1.4	0.1	1.5
4/2	527	350	-	-	-	17.2	90.0	-	107.2	732.2	23.5	90.0	113.4
4/3	527	350	-	-	-	17.2	90.0	-	107.2	732.2	23.5	90.0	113.4
4/4	39	39	-	-	-	0.5	0.1	-	0.5	48.3	1.1	0.1	1.2
4/5	55	55	-	-	-	0.6	0.1	-	0.7	49.1	1.6	0.1	1.7
5/1	457	457	-	-	-	0.0	0.2	-	0.2	1.3	1.0	0.2	1.2
5/2	400	400	-	-	-	0.0	0.1	-	0.1	1.3	1.0	0.1	1.2
6/1	1424	1424	-	-	-	0.1	1.9	-	2.0	5.0	11.0	1.9	12.9
6/2	980	980	-	-	-	0.0	0.6	-	0.6	2.3	8.5	0.6	9.1
7/1	1212	1212	-	-	-	0.6	1.0	-	1.6	4.7	31.5	1.0	32.6

Full Input Data And Results

7/2	188	188	-	-	-	0.0	0.1	-	0.1	1.1	0.5	0.1	0.6
8/1	444	444	-	-	-	0.0	0.2	-	0.2	1.5	7.2	0.2	7.4
8/2	400	400	-	-	-	0.0	0.1	-	0.2	1.5	7.2	0.1	7.3

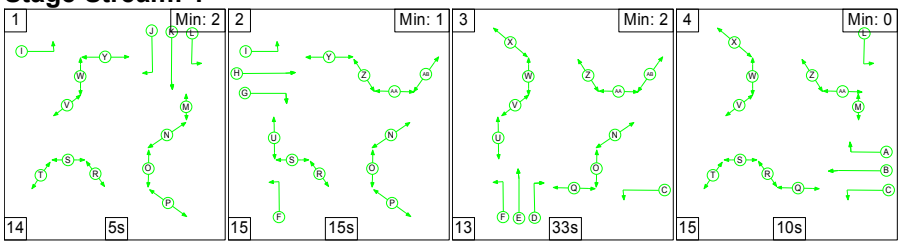
C1 Stream: 1 PRC for Signalled Lanes (%): -71.8 Total Delay for Signalled Lanes (pcuHr): 1203.43 Cycle Time (s): 120
PRC Over All Lanes (%): -71.8 Total Delay Over All Lanes(pcuHr): 1208.36

Full Input Data And Results

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case AM', Plan 1: 'NCC Signal Plan ')

Stage Sequence Diagram

Stage Stream: 1



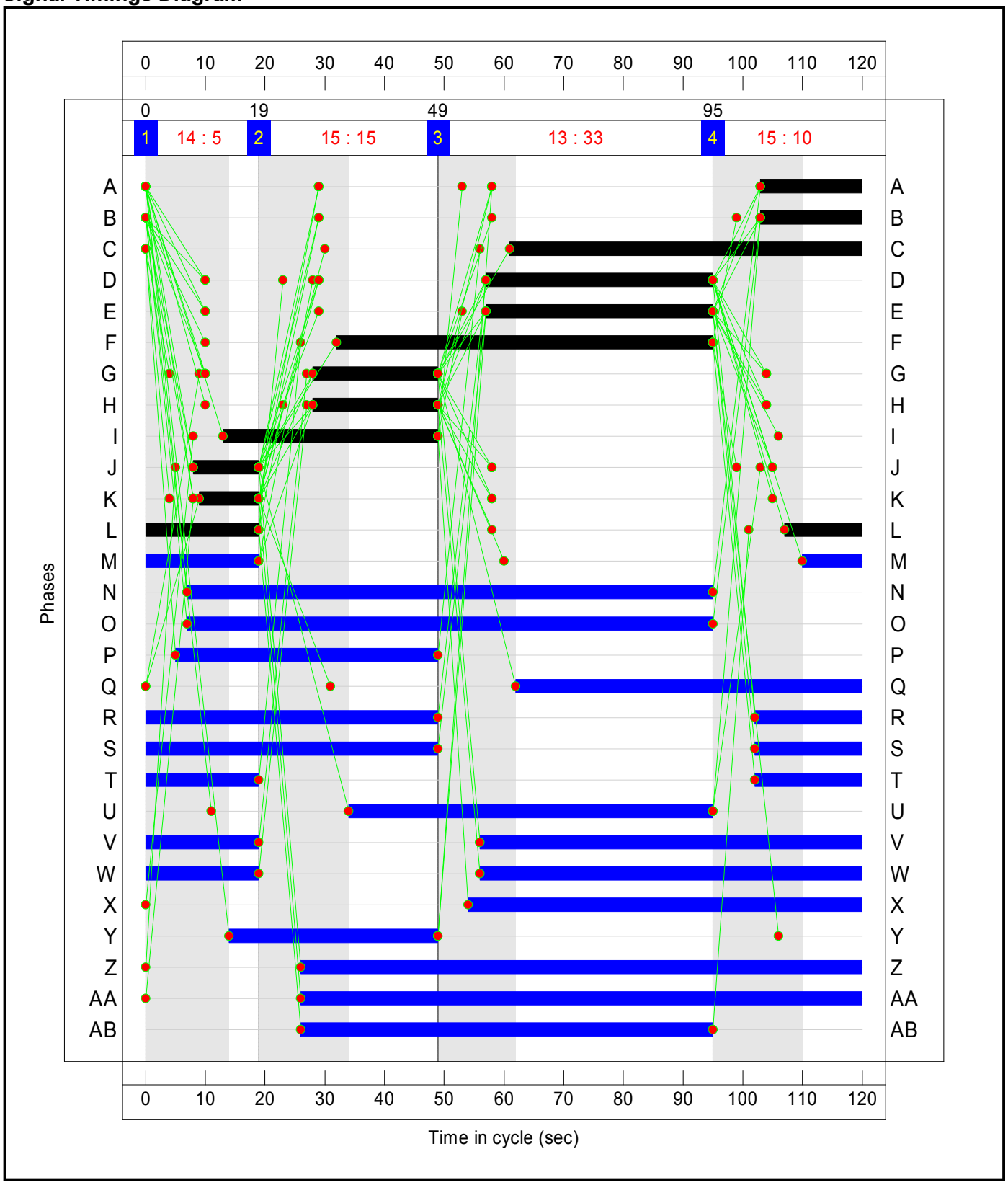
Stage Timings

Stage Stream: 1

Stage	1	2	3	4
Duration	5	15	33	10
Change Point	0	19	49	95

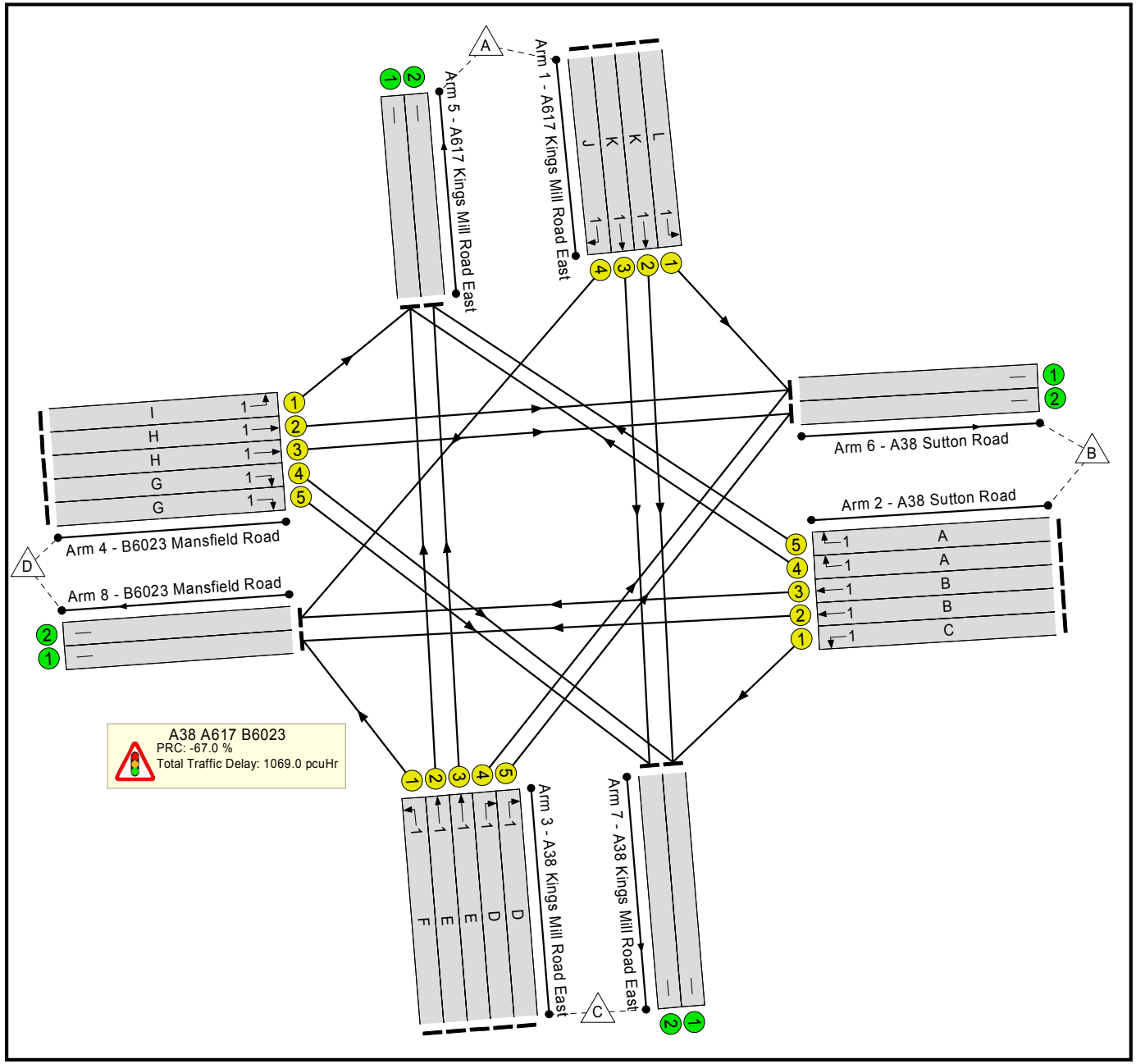
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Full Input Data And Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**150.3%**
A38 A617 B6023	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**150.3%**
1/1	A617 Kings Mill Road East Left	U	1	N/A	L		1	32	-	530	1950	536	98.8%
1/2	A617 Kings Mill Road East Ahead	U	1	N/A	K		1	10	-	245	2000	183	133.6%
1/3	A617 Kings Mill Road East Ahead	U	1	N/A	K		1	10	-	256	2000	183	139.6%
1/4	A617 Kings Mill Road East Right	U	1	N/A	J		1	11	-	62	1800	180	34.4%
2/1	A38 Sutton Road Left	U	1	N/A	C		1	59	-	1285	1950	975	131.8%
2/2	A38 Sutton Road Ahead	U	1	N/A	B		1	17	-	451	2000	300	150.3%
2/3	A38 Sutton Road Ahead	U	1	N/A	B		1	17	-	451	2000	300	150.3%
2/4	A38 Sutton Road Right	U	1	N/A	A		1	17	-	226	1800	270	83.7%
2/5	A38 Sutton Road Right	U	1	N/A	A		1	17	-	227	1800	270	84.1%
3/1	A38 Kings Mill Road East Left	U	1	N/A	F		1	63	-	83	1950	1040	8.0%
3/2	A38 Kings Mill Road East Ahead	U	1	N/A	E		1	38	-	406	2000	650	62.5%
3/3	A38 Kings Mill Road East Ahead	U	1	N/A	E		1	38	-	407	2000	650	62.6%
3/4	A38 Kings Mill Road East Right	U	1	N/A	D		1	38	-	865	1800	585	147.9%
3/5	A38 Kings Mill Road East Right	U	1	N/A	D		1	38	-	867	1800	585	148.2%
4/1	B6023 Mansfield Road Left	U	1	N/A	I		1	36	-	200	1950	601	33.3%

Full Input Data And Results

4/2	B6023 Mansfield Road Ahead	U	1	N/A	H		1	21	-	547	2000	367	149.2%
4/3	B6023 Mansfield Road Ahead	U	1	N/A	H		1	21	-	547	2000	367	149.2%
4/4	B6023 Mansfield Road Right	U	1	N/A	G		1	21	-	96	1800	330	29.1%
4/5	B6023 Mansfield Road Right	U	1	N/A	G		1	21	-	109	1800	330	33.0%
5/1	A617 Kings Mill Road East	U	N/A	N/A	-		-	-	-	832	1800	1800	46.2%
5/2	A617 Kings Mill Road East	U	N/A	N/A	-		-	-	-	634	1800	1800	35.2%
6/1	A38 Sutton Road	U	N/A	N/A	-		-	-	-	1942	1800	1800	82.3%
6/2	A38 Sutton Road	U	N/A	N/A	-		-	-	-	1414	1800	1800	52.9%
7/1	A38 Kings Mill Road East	U	N/A	N/A	-		-	-	-	1626	1800	1800	69.7%
7/2	A38 Kings Mill Road East	U	N/A	N/A	-		-	-	-	365	1800	1800	16.2%
8/1	B6023 Mansfield Road	U	N/A	N/A	-		-	-	-	534	1800	1800	21.3%
8/2	B6023 Mansfield Road	U	N/A	N/A	-		-	-	-	513	1800	1800	20.1%

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	**-**	**-**	**0**	**0**	**0**	**197.5**	**871.5**	**0.0**	**1069.0**	**-**	**-**	**-**	**-**
A38 A617 B6023	**-**	**-**	**0**	**0**	**0**	**197.5**	**871.5**	**0.0**	**1069.0**	**-**	**-**	**-**	**-**
1/1	530	530	-	-	-	6.4	10.1	-	16.4	111.6	17.5	10.1	27.6
1/2	245	183	-	-	-	7.5	32.7	-	40.3	591.5	10.8	32.7	43.5
1/3	256	183	-	-	-	8.4	38.0	-	46.4	652.7	11.8	38.0	49.8
1/4	62	62	-	-	-	0.9	0.3	-	1.1	65.5	1.9	0.3	2.2
2/1	1285	975	-	-	-	33.7	157.0	-	190.8	534.5	62.4	157.0	219.5
2/2	451	300	-	-	-	16.7	77.0	-	93.7	747.9	24.7	77.0	101.7
2/3	451	300	-	-	-	16.7	77.0	-	93.7	747.9	24.7	77.0	101.7
2/4	226	226	-	-	-	3.1	2.3	-	5.4	86.6	7.3	2.3	9.6
2/5	227	227	-	-	-	3.1	2.4	-	5.5	87.3	7.3	2.4	9.7
3/1	83	83	-	-	-	0.3	0.0	-	0.4	15.6	1.3	0.0	1.4
3/2	406	406	-	-	-	3.9	0.8	-	4.7	41.6	11.4	0.8	12.2
3/3	407	407	-	-	-	3.9	0.8	-	4.7	41.7	11.4	0.8	12.3
3/4	865	585	-	-	-	26.4	141.5	-	167.9	698.8	42.2	141.5	183.7
3/5	867	585	-	-	-	26.5	142.5	-	169.1	702.0	42.4	142.5	184.9
4/1	200	200	-	-	-	1.8	0.2	-	2.0	36.5	5.1	0.2	5.4
4/2	547	367	-	-	-	17.4	91.7	-	109.1	718.0	24.2	91.7	115.9
4/3	547	367	-	-	-	17.4	91.7	-	109.1	718.0	24.2	91.7	115.9
4/4	96	96	-	-	-	1.1	0.2	-	1.3	50.0	2.7	0.2	3.0
4/5	109	109	-	-	-	1.3	0.2	-	1.5	50.7	3.1	0.2	3.4
5/1	832	832	-	-	-	0.0	0.4	-	0.5	2.0	8.6	0.4	9.0
5/2	634	634	-	-	-	0.0	0.3	-	0.3	1.8	8.6	0.3	8.9
6/1	1482	1482	-	-	-	0.1	2.3	-	2.4	5.9	14.2	2.3	16.5
6/2	952	952	-	-	-	0.0	0.6	-	0.6	2.3	9.1	0.6	9.6
7/1	1254	1254	-	-	-	0.5	1.1	-	1.6	4.7	29.3	1.1	30.5

Full Input Data And Results

7/2	292	292	-	-	-	0.0	0.1	-	0.1	1.2	2.1	0.1	2.2
8/1	383	383	-	-	-	0.0	0.1	-	0.2	1.5	6.6	0.1	6.8
8/2	362	362	-	-	-	0.0	0.1	-	0.1	1.5	6.6	0.1	6.8

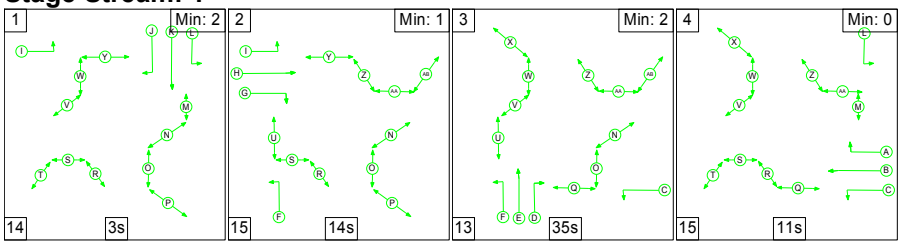
C1 Stream: 1 PRC for Signalled Lanes (%): -67.0 Total Delay for Signalled Lanes (pcuHr): 1063.17 Cycle Time (s): 120
PRC Over All Lanes (%): -67.0 Total Delay Over All Lanes(pcuHr): 1069.03

Full Input Data And Results

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case PM', Plan 1: 'NCC Signal Plan ')

Stage Sequence Diagram

Stage Stream: 1



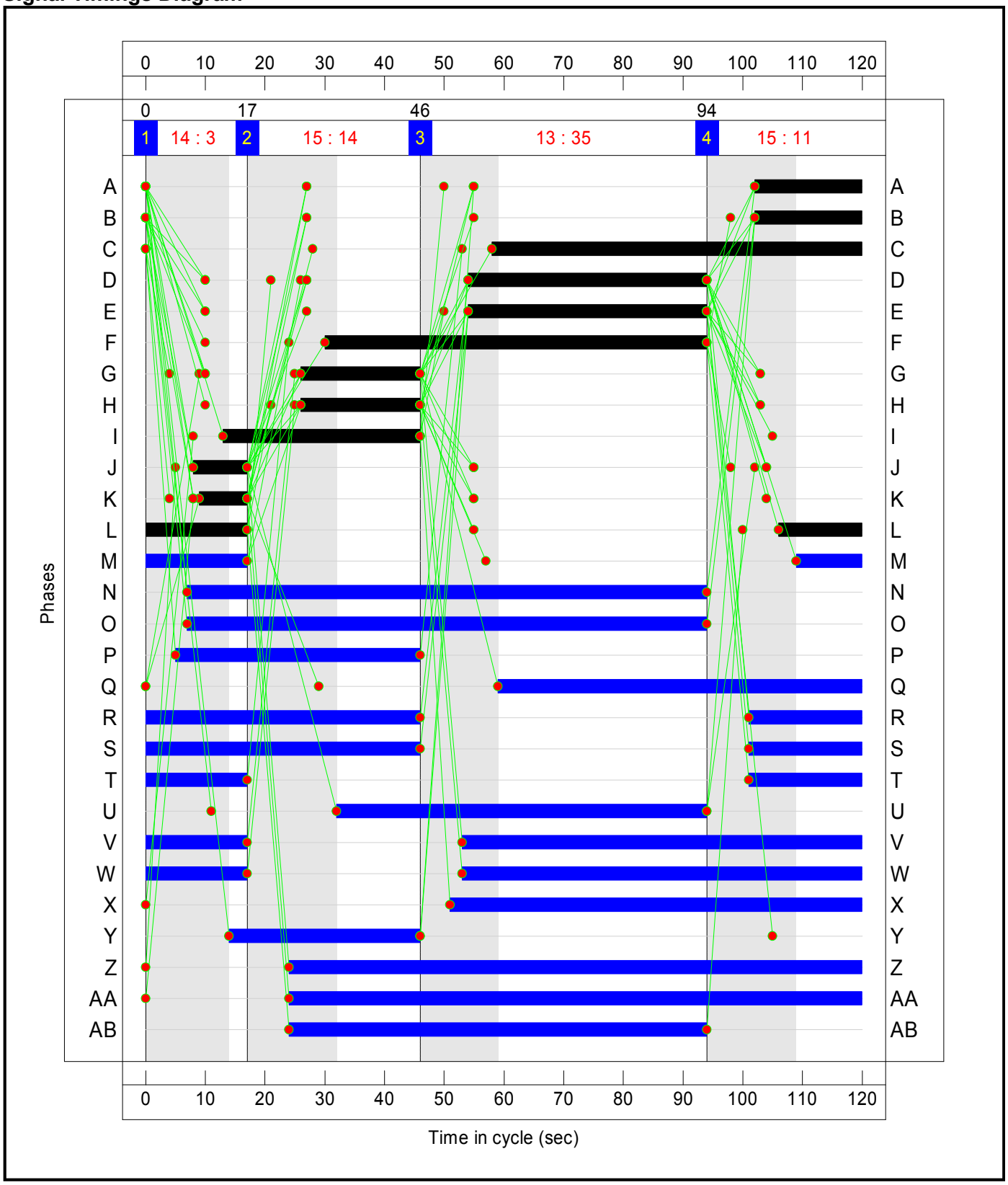
Stage Timings

Stage Stream: 1

Stage	1	2	3	4
Duration	3	14	35	11
Change Point	0	17	46	94

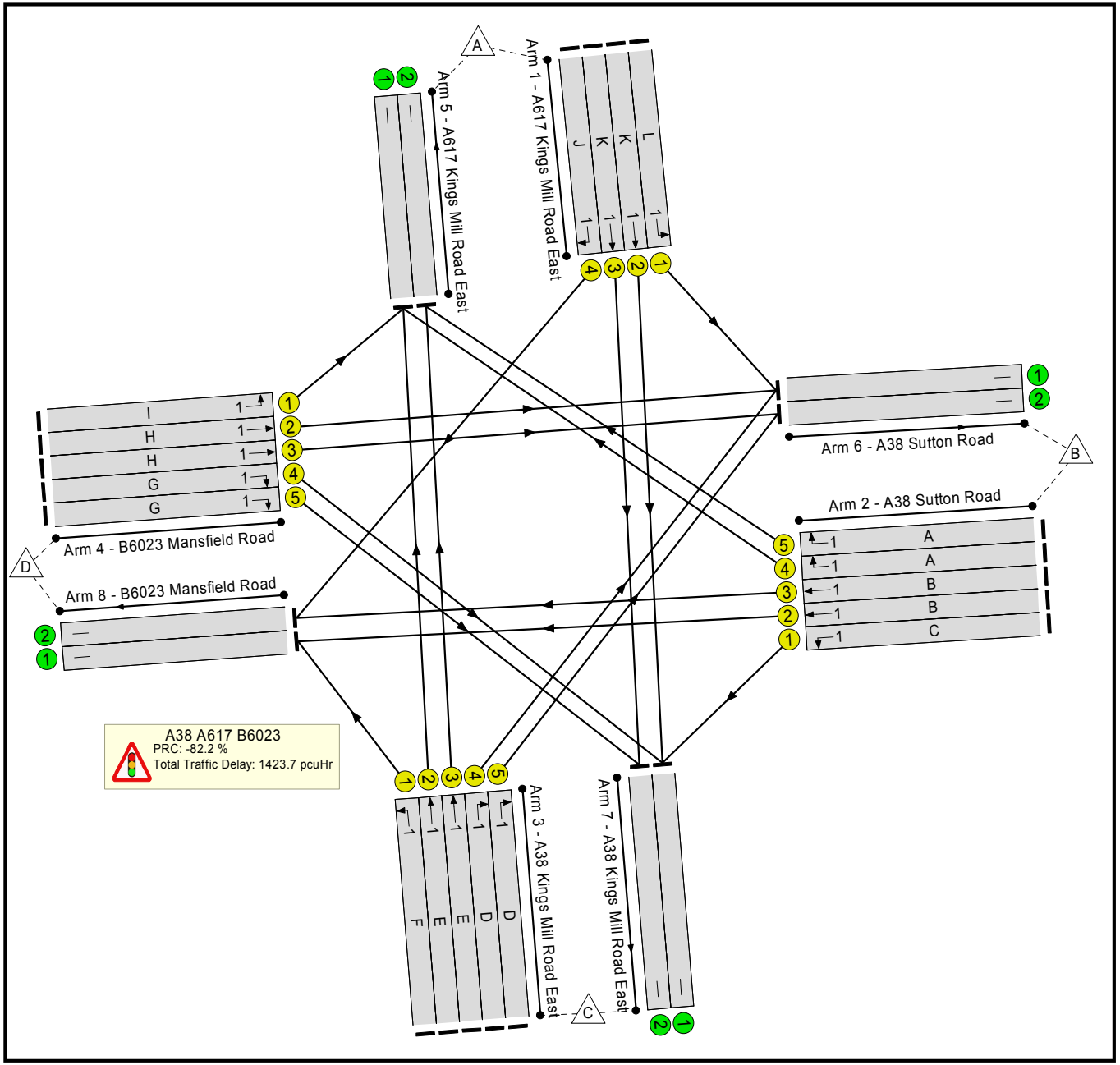
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Full Input Data And Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**164.0%**
A38 A617 B6023	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**164.0%**
1/1	A617 Kings Mill Road East Left	U	1	N/A	L		1	31	-	509	1950	520	97.9%
1/2	A617 Kings Mill Road East Ahead	U	1	N/A	K		1	8	-	206	2000	150	137.3%
1/3	A617 Kings Mill Road East Ahead	U	1	N/A	K		1	8	-	219	2000	150	146.0%
1/4	A617 Kings Mill Road East Right	U	1	N/A	J		1	9	-	113	1800	150	75.3%
2/1	A38 Sutton Road Left	U	1	N/A	C		1	62	-	1679	1950	1024	164.0%
2/2	A38 Sutton Road Ahead	U	1	N/A	B		1	18	-	503	2000	317	158.8%
2/3	A38 Sutton Road Ahead	U	1	N/A	B		1	18	-	503	2000	317	158.8%
2/4	A38 Sutton Road Right	U	1	N/A	A		1	18	-	213	1800	285	74.7%
2/5	A38 Sutton Road Right	U	1	N/A	A		1	18	-	214	1800	285	75.1%
3/1	A38 Kings Mill Road East Left	U	1	N/A	F		1	64	-	152	1950	1056	14.4%
3/2	A38 Kings Mill Road East Ahead	U	1	N/A	E		1	40	-	264	2000	683	38.6%
3/3	A38 Kings Mill Road East Ahead	U	1	N/A	E		1	40	-	265	2000	683	38.8%
3/4	A38 Kings Mill Road East Right	U	1	N/A	D		1	40	-	983	1800	615	159.8%
3/5	A38 Kings Mill Road East Right	U	1	N/A	D		1	40	-	985	1800	615	160.2%
4/1	B6023 Mansfield Road Left	U	1	N/A	I		1	33	-	74	1950	552	13.4%

Full Input Data And Results

4/2	B6023 Mansfield Road Ahead	U	1	N/A	H		1	20	-	554	2000	350	158.3%
4/3	B6023 Mansfield Road Ahead	U	1	N/A	H		1	20	-	554	2000	350	158.3%
4/4	B6023 Mansfield Road Right	U	1	N/A	G		1	20	-	47	1800	315	14.9%
4/5	B6023 Mansfield Road Right	U	1	N/A	G		1	20	-	63	1800	315	20.0%
5/1	A617 Kings Mill Road East	U	N/A	N/A	-		-	-	-	551	1800	1800	30.6%
5/2	A617 Kings Mill Road East	U	N/A	N/A	-		-	-	-	479	1800	1800	26.6%
6/1	A38 Sutton Road	U	N/A	N/A	-		-	-	-	2046	1800	1800	81.9%
6/2	A38 Sutton Road	U	N/A	N/A	-		-	-	-	1539	1800	1800	53.6%
7/1	A38 Kings Mill Road East	U	N/A	N/A	-		-	-	-	1932	1800	1800	67.8%
7/2	A38 Kings Mill Road East	U	N/A	N/A	-		-	-	-	282	1800	1800	11.8%
8/1	B6023 Mansfield Road	U	N/A	N/A	-		-	-	-	655	1800	1800	26.0%
8/2	B6023 Mansfield Road	U	N/A	N/A	-		-	-	-	616	1800	1800	23.9%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**243.0**	**1180.8**	**0.0**	**1423.7**	**-**	**-**	**-**	**-**
A38 A617 B6023	**-**	**-**	**0**	**0**	**0**	**243.0**	**1180.8**	**0.0**	**1423.7**	**-**	**-**	**-**	**-**
1/1	509	509	-	-	-	6.2	8.9	-	15.0	106.3	16.8	8.9	25.7
1/2	206	150	-	-	-	6.7	29.7	-	36.4	636.3	9.5	29.7	39.2
1/3	219	150	-	-	-	7.7	36.0	-	43.7	718.5	10.7	36.0	46.7
1/4	113	113	-	-	-	1.7	1.4	-	3.1	99.0	3.7	1.4	5.1
2/1	1679	1024	-	-	-	62.3	328.9	-	391.2	838.7	98.3	328.9	427.2
2/2	503	317	-	-	-	19.8	94.5	-	114.3	818.3	28.8	94.5	123.3
2/3	503	317	-	-	-	19.8	94.5	-	114.3	818.3	28.8	94.5	123.3
2/4	213	213	-	-	-	2.9	1.4	-	4.3	72.3	6.7	1.4	8.2
2/5	214	214	-	-	-	2.9	1.4	-	4.3	72.6	6.8	1.4	8.2
3/1	152	152	-	-	-	0.6	0.1	-	0.7	15.7	2.5	0.1	2.6
3/2	264	264	-	-	-	2.2	0.3	-	2.5	34.2	6.7	0.3	7.0
3/3	265	265	-	-	-	2.2	0.3	-	2.5	34.3	6.7	0.3	7.0
3/4	983	615	-	-	-	33.5	185.3	-	218.9	801.5	51.0	185.3	236.3
3/5	985	615	-	-	-	33.7	186.3	-	220.0	804.2	51.2	186.3	237.5
4/1	74	74	-	-	-	0.7	0.1	-	0.7	35.8	1.8	0.1	1.9
4/2	554	350	-	-	-	19.1	103.3	-	122.4	795.4	25.3	103.3	128.6
4/3	554	350	-	-	-	19.1	103.3	-	122.4	795.4	25.3	103.3	128.6
4/4	47	47	-	-	-	0.5	0.1	-	0.6	48.7	1.3	0.1	1.4
4/5	63	63	-	-	-	0.7	0.1	-	0.9	49.5	1.8	0.1	1.9
5/1	551	551	-	-	-	0.0	0.2	-	0.2	1.5	3.1	0.2	3.3
5/2	479	479	-	-	-	0.0	0.2	-	0.2	1.4	3.1	0.2	3.2
6/1	1474	1474	-	-	-	0.1	2.2	-	2.4	5.8	13.5	2.2	15.8
6/2	965	965	-	-	-	0.0	0.6	-	0.6	2.3	8.5	0.6	9.1
7/1	1221	1221	-	-	-	0.5	1.0	-	1.6	4.7	30.9	1.0	32.0

Full Input Data And Results

7/2	213	213	-	-	-	0.0	0.1	-	0.1	1.1	1.0	0.1	1.1
8/1	469	469	-	-	-	0.0	0.2	-	0.2	1.6	7.2	0.2	7.4
8/2	430	430	-	-	-	0.0	0.2	-	0.2	1.5	7.2	0.2	7.4

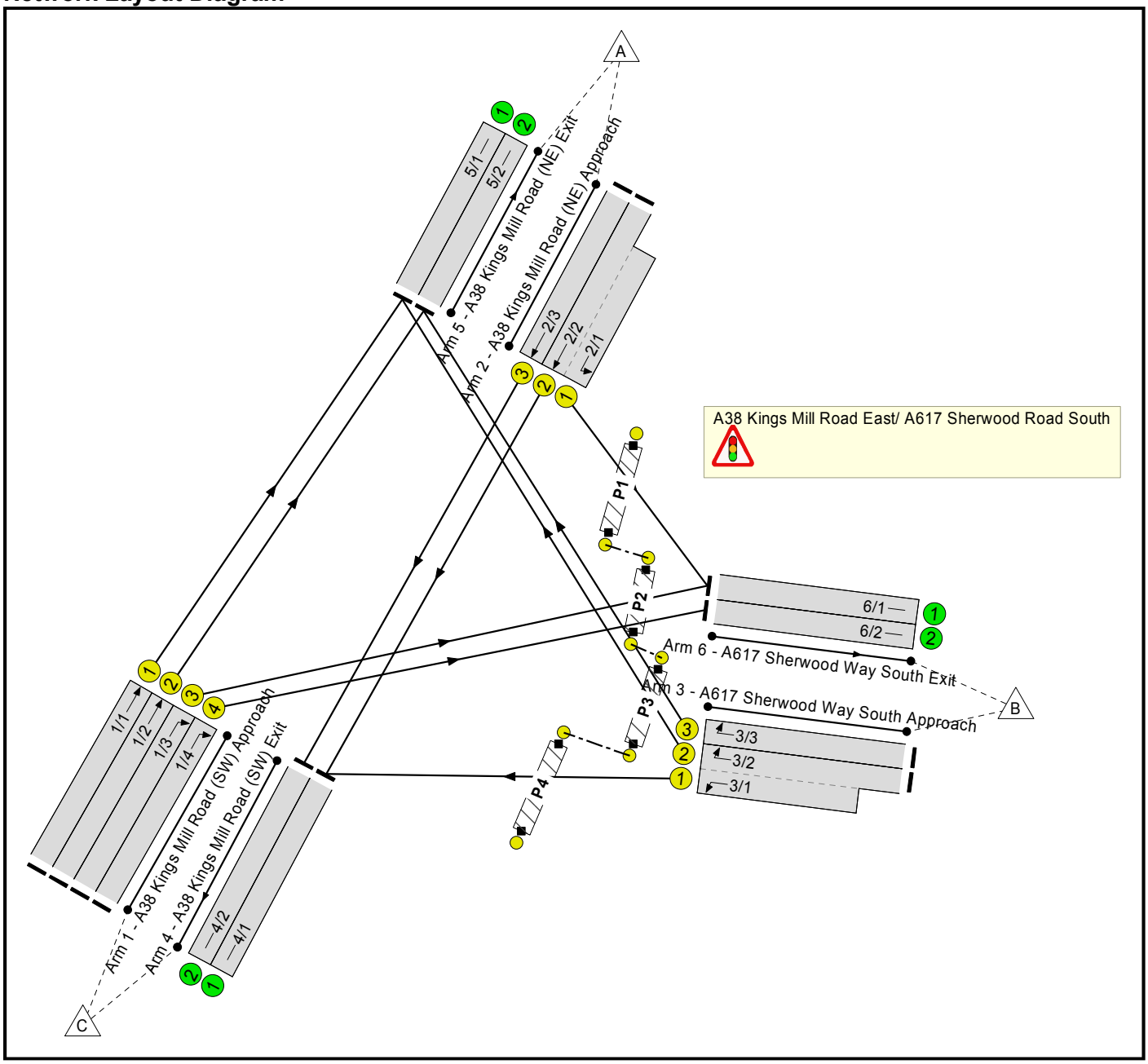
C1 Stream: 1 PRC for Signalled Lanes (%): -82.2 Total Delay for Signalled Lanes (pcuHr): 1418.31 Cycle Time (s): 120
PRC Over All Lanes (%): -82.2 Total Delay Over All Lanes(pcuHr): 1423.74

Full Input Data And Results

User and Project Details

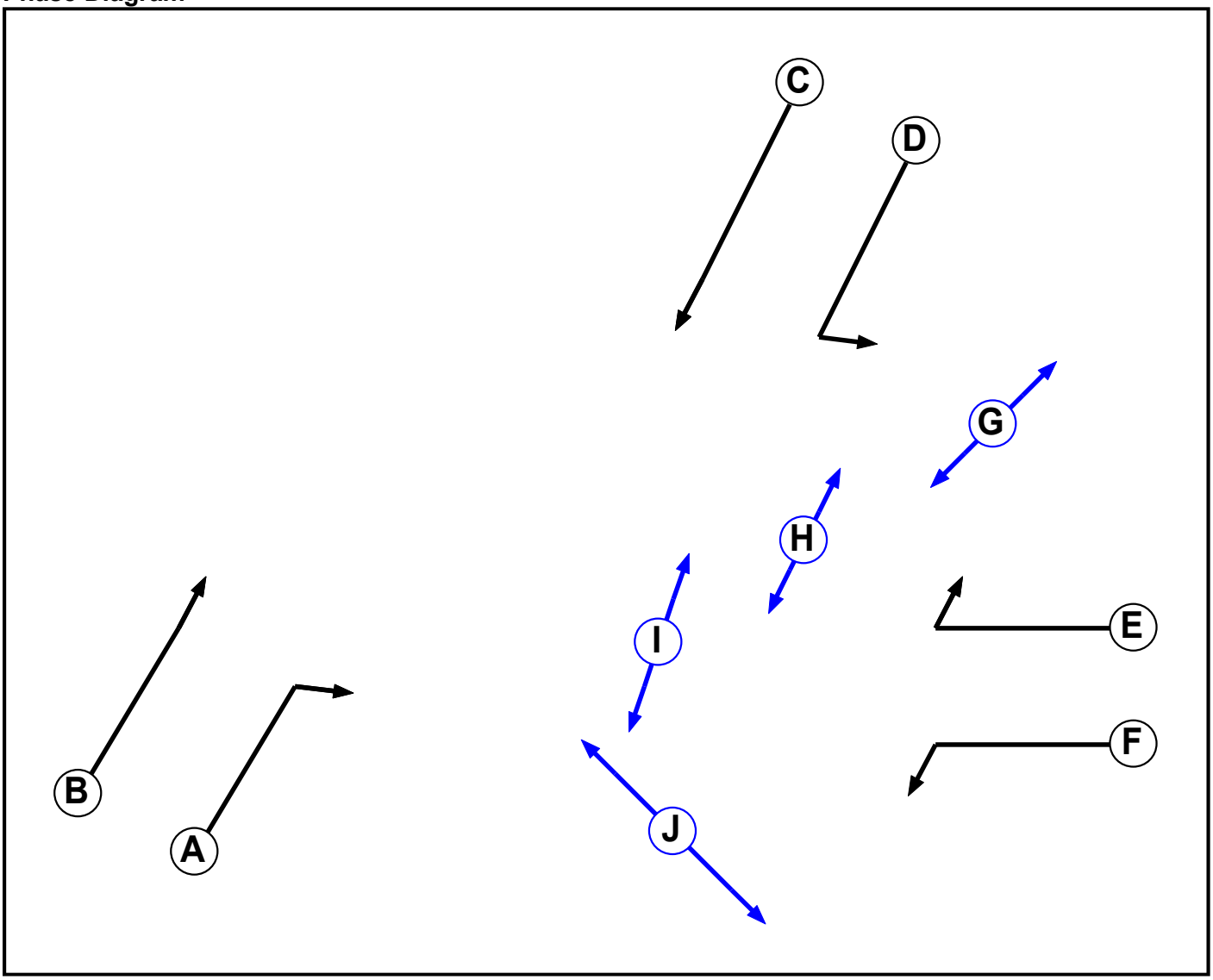
Project:	
Title:	
Location:	
File name:	2016-08-17 J3 JMP.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

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
I	Pedestrian		7	7
J	Pedestrian		7	7

Full Input Data And Results

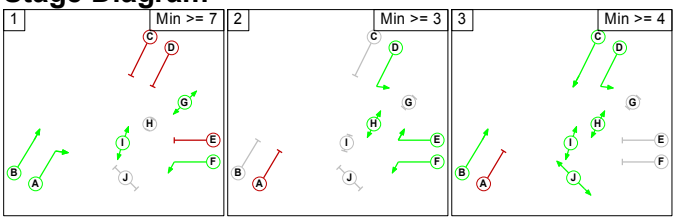
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J
A		-	8	11	7	-	-	-	-	-
B	-		-	-	-	-	-	-	-	-
C	-	-		-	-	-	-	-	-	-
D	-	-	-		-	-	-	-	-	-
E	-	-	-	-		-	-	-	-	-
F	-	-	-	-	-		-	-	-	-
G	-	-	-	-	-	-		-	-	-
H	-	-	-	-	-	-	-		-	-
I	-	-	-	-	-	-	-	-		-
J	-	-	-	-	-	-	-	-	-	

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

From Stage \ To Stage	1	2	3
1		11	11
2	2		2
3	2	2	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A38 Kings Mill Road East/ A617 Sherwood Road South
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Full Input Data And Results

Junction: A38 Kings Mill Road East/ A617 Sherwood Road South												
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 (A38 Kings Mill Road (SW) Approach)	U	B	2	3	60.0	User	2080	-	-	-	-	-
1/2 (A38 Kings Mill Road (SW) Approach)	U	B	2	3	60.0	User	2080	-	-	-	-	-
1/3 (A38 Kings Mill Road (SW) Approach)	U	A	2	3	12.2	User	1800	-	-	-	-	-
1/4 (A38 Kings Mill Road (SW) Approach)	U	A	2	3	12.2	User	1800	-	-	-	-	-
2/1 (A38 Kings Mill Road (NE) Approach)	U	D	2	3	10.4	User	1800	-	-	-	-	-
2/2 (A38 Kings Mill Road (NE) Approach)	U	C	2	3	60.0	User	2080	-	-	-	-	-
2/3 (A38 Kings Mill Road (NE) Approach)	U	C	2	3	60.0	User	2080	-	-	-	-	-
3/1 (A617 Sherwood Way South Approach)	U	F	2	3	17.7	User	1800	-	-	-	-	-
3/2 (A617 Sherwood Way South Approach)	U	E	2	3	60.0	User	1800	-	-	-	-	-
3/3 (A617 Sherwood Way South Approach)	U	E	2	3	60.0	User	1800	-	-	-	-	-
4/1 (A38 Kings Mill Road (SW) Exit)	U		2	3	60.0	User	1800	-	-	-	-	-
4/2 (A38 Kings Mill Road (SW) Exit)	U		2	3	60.0	User	1800	-	-	-	-	-
5/1 (A38 Kings Mill Road (NE) Exit)	U		2	3	60.0	User	1800	-	-	-	-	-

5/2 (A38 Kings Mill Road (NE) Exit)	U		2	3	60.0	User	1800	-	-	-	-	-
6/1 (A617 Sherwood Way South Exit)	U		2	3	60.0	User	1800	-	-	-	-	-
6/2 (A617 Sherwood Way South Exit)	U		2	3	60.0	User	1800	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'Reference Case AM'	08:00	09:00	01:00	
2: '2032 Development Case AM'	08:00	09:00	01:00	
3: 'Reference Case PM'	17:00	18:00	01:00	
4: '2032 Development Case PM'	17:00	18:00	01:00	

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

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	843	1050	1893
	B	631	0	1469	2100
	C	1027	1920	0	2947
	Tot.	1658	2763	2519	6940

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: AM Reference Case
Junction: A38 Kings Mill Road East/ A617 Sherwood Road South	
1/1	535
1/2	492
1/3	959
1/4	961
2/1 (short)	843
2/2 (with short)	1217(In) 374(Out)
2/3	676
3/1 (short)	1469
3/2 (with short)	1701(In) 232(Out)
3/3	399
4/1	1843
4/2	676
5/1	767
5/2	891
6/1	1802
6/2	961

Full Input Data And Results

Lane Saturation Flows

Junction: A38 Kings Mill Road East/ A617 Sherwood Road South								
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 (A38 Kings Mill Road (SW) Approach Lane 1)	This lane uses a directly entered Saturation Flow						2080	2080
1/2 (A38 Kings Mill Road (SW) Approach Lane 2)	This lane uses a directly entered Saturation Flow						2080	2080
1/3 (A38 Kings Mill Road (SW) Approach Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
1/4 (A38 Kings Mill Road (SW) Approach Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A38 Kings Mill Road (NE) Approach Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (A38 Kings Mill Road (NE) Approach Lane 2)	This lane uses a directly entered Saturation Flow						2080	2080
2/3 (A38 Kings Mill Road (NE) Approach Lane 3)	This lane uses a directly entered Saturation Flow						2080	2080
3/1 (A617 Sherwood Way South Approach Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (A617 Sherwood Way South Approach Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/3 (A617 Sherwood Way South Approach Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (A38 Kings Mill Road (SW) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A38 Kings Mill Road (SW) Exit Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A38 Kings Mill Road (NE) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/2 (A38 Kings Mill Road (NE) Exit Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (A617 Sherwood Way South Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (A617 Sherwood Way South Exit Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800

Full Input Data And Results

Scenario 2: 'PM Reference Case' (FG3: 'Reference Case PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	758	1146	1904
	B	986	0	1992	2978
	C	1251	1671	0	2922
	Tot.	2237	2429	3138	7804

Traffic Lane Flows

Lane	Scenario 2: PM Reference Case
Junction: A38 Kings Mill Road East/ A617 Sherwood Road South	
1/1	659
1/2	592
1/3	835
1/4	836
2/1 (short)	758
2/2 (with short)	1329(In) 571(Out)
2/3	575
3/1 (short)	1992
3/2 (with short)	2265(In) 273(Out)
3/3	713
4/1	2563
4/2	575
5/1	932
5/2	1305
6/1	1593
6/2	836

Full Input Data And Results

Lane Saturation Flows

Junction: A38 Kings Mill Road East/ A617 Sherwood Road South								
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 (A38 Kings Mill Road (SW) Approach Lane 1)	This lane uses a directly entered Saturation Flow						2080	2080
1/2 (A38 Kings Mill Road (SW) Approach Lane 2)	This lane uses a directly entered Saturation Flow						2080	2080
1/3 (A38 Kings Mill Road (SW) Approach Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
1/4 (A38 Kings Mill Road (SW) Approach Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A38 Kings Mill Road (NE) Approach Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (A38 Kings Mill Road (NE) Approach Lane 2)	This lane uses a directly entered Saturation Flow						2080	2080
2/3 (A38 Kings Mill Road (NE) Approach Lane 3)	This lane uses a directly entered Saturation Flow						2080	2080
3/1 (A617 Sherwood Way South Approach Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (A617 Sherwood Way South Approach Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/3 (A617 Sherwood Way South Approach Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (A38 Kings Mill Road (SW) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A38 Kings Mill Road (SW) Exit Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A38 Kings Mill Road (NE) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/2 (A38 Kings Mill Road (NE) Exit Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (A617 Sherwood Way South Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (A617 Sherwood Way South Exit Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800

Full Input Data And Results

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	838	1193	2031
	B	652	0	1488	2140
	C	1162	1864	0	3026
	Tot.	1814	2702	2681	7197

Traffic Lane Flows

Lane	Scenario 3: AM Development Scenario
Junction: A38 Kings Mill Road East/ A617 Sherwood Road South	
1/1	602
1/2	560
1/3	931
1/4	933
2/1 (short)	838
2/2 (with short)	1335(In) 497(Out)
2/3	696
3/1 (short)	1488
3/2 (with short)	1734(In) 246(Out)
3/3	406
4/1	1985
4/2	696
5/1	848
5/2	966
6/1	1769
6/2	933

Full Input Data And Results

Lane Saturation Flows

Junction: A38 Kings Mill Road East/ A617 Sherwood Road South								
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 (A38 Kings Mill Road (SW) Approach Lane 1)	This lane uses a directly entered Saturation Flow						2080	2080
1/2 (A38 Kings Mill Road (SW) Approach Lane 2)	This lane uses a directly entered Saturation Flow						2080	2080
1/3 (A38 Kings Mill Road (SW) Approach Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
1/4 (A38 Kings Mill Road (SW) Approach Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A38 Kings Mill Road (NE) Approach Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (A38 Kings Mill Road (NE) Approach Lane 2)	This lane uses a directly entered Saturation Flow						2080	2080
2/3 (A38 Kings Mill Road (NE) Approach Lane 3)	This lane uses a directly entered Saturation Flow						2080	2080
3/1 (A617 Sherwood Way South Approach Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (A617 Sherwood Way South Approach Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/3 (A617 Sherwood Way South Approach Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (A38 Kings Mill Road (SW) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A38 Kings Mill Road (SW) Exit Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A38 Kings Mill Road (NE) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/2 (A38 Kings Mill Road (NE) Exit Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (A617 Sherwood Way South Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (A617 Sherwood Way South Exit Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800

Full Input Data And Results

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	780	1297	2077
	B	994	0	1967	2961
	C	1423	1692	0	3115
	Tot.	2417	2472	3264	8153

Traffic Lane Flows

Lane	Scenario 4: PM Development Scenario
Junction: A38 Kings Mill Road East/ A617 Sherwood Road South	
1/1	743
1/2	680
1/3	845
1/4	847
2/1 (short)	780
2/2 (with short)	1412(In) 632(Out)
2/3	665
3/1 (short)	1967
3/2 (with short)	2264(In) 297(Out)
3/3	697
4/1	2599
4/2	665
5/1	1040
5/2	1377
6/1	1625
6/2	847

Full Input Data And Results

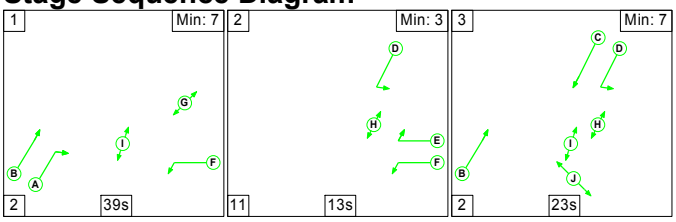
Lane Saturation Flows

Junction: A38 Kings Mill Road East/ A617 Sherwood Road South								
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 (A38 Kings Mill Road (SW) Approach Lane 1)	This lane uses a directly entered Saturation Flow						2080	2080
1/2 (A38 Kings Mill Road (SW) Approach Lane 2)	This lane uses a directly entered Saturation Flow						2080	2080
1/3 (A38 Kings Mill Road (SW) Approach Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
1/4 (A38 Kings Mill Road (SW) Approach Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A38 Kings Mill Road (NE) Approach Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (A38 Kings Mill Road (NE) Approach Lane 2)	This lane uses a directly entered Saturation Flow						2080	2080
2/3 (A38 Kings Mill Road (NE) Approach Lane 3)	This lane uses a directly entered Saturation Flow						2080	2080
3/1 (A617 Sherwood Way South Approach Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (A617 Sherwood Way South Approach Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/3 (A617 Sherwood Way South Approach Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (A38 Kings Mill Road (SW) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A38 Kings Mill Road (SW) Exit Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A38 Kings Mill Road (NE) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/2 (A38 Kings Mill Road (NE) Exit Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (A617 Sherwood Way South Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (A617 Sherwood Way South Exit Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800

Full Input Data And Results

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

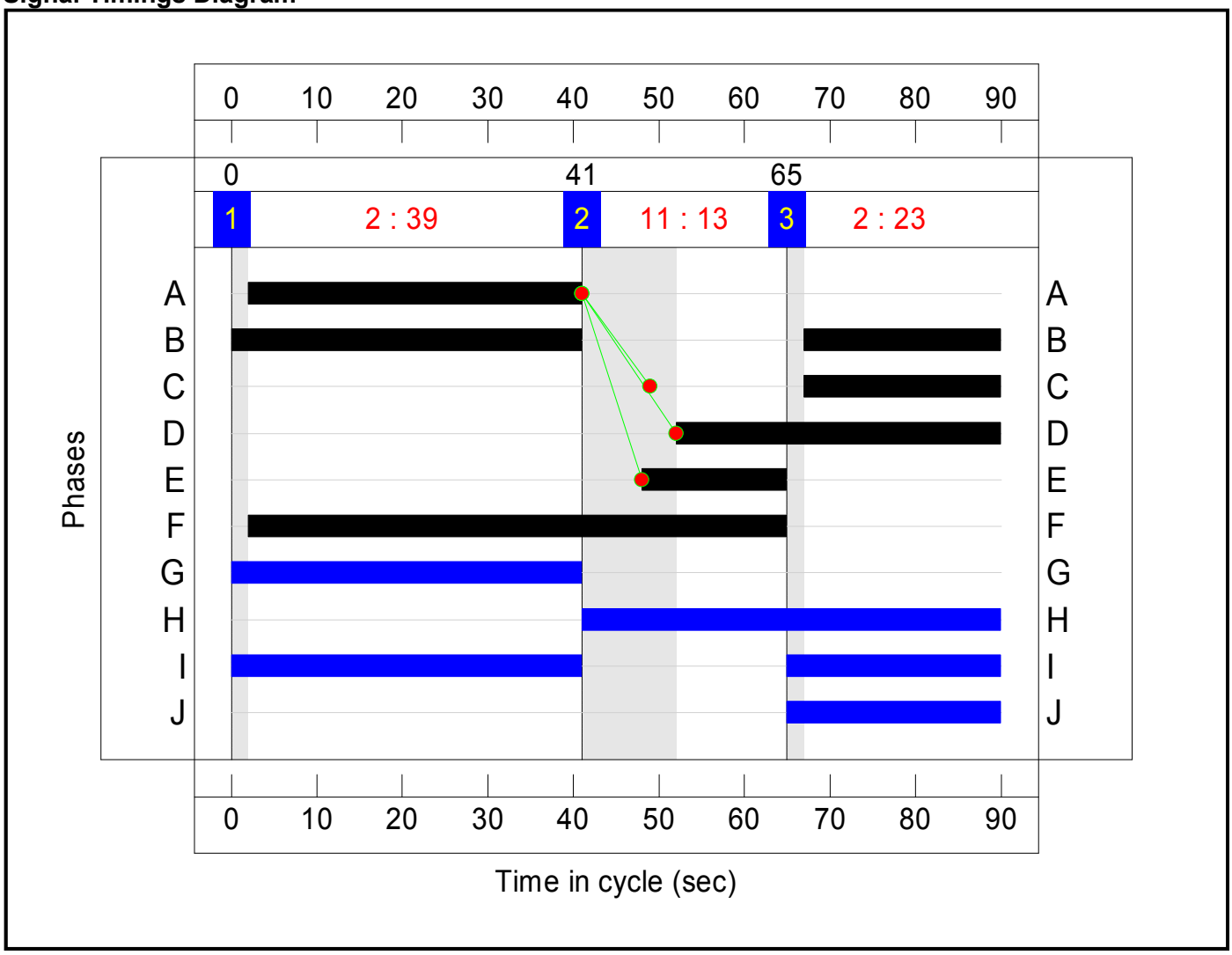
Stage Sequence Diagram



Stage Timings

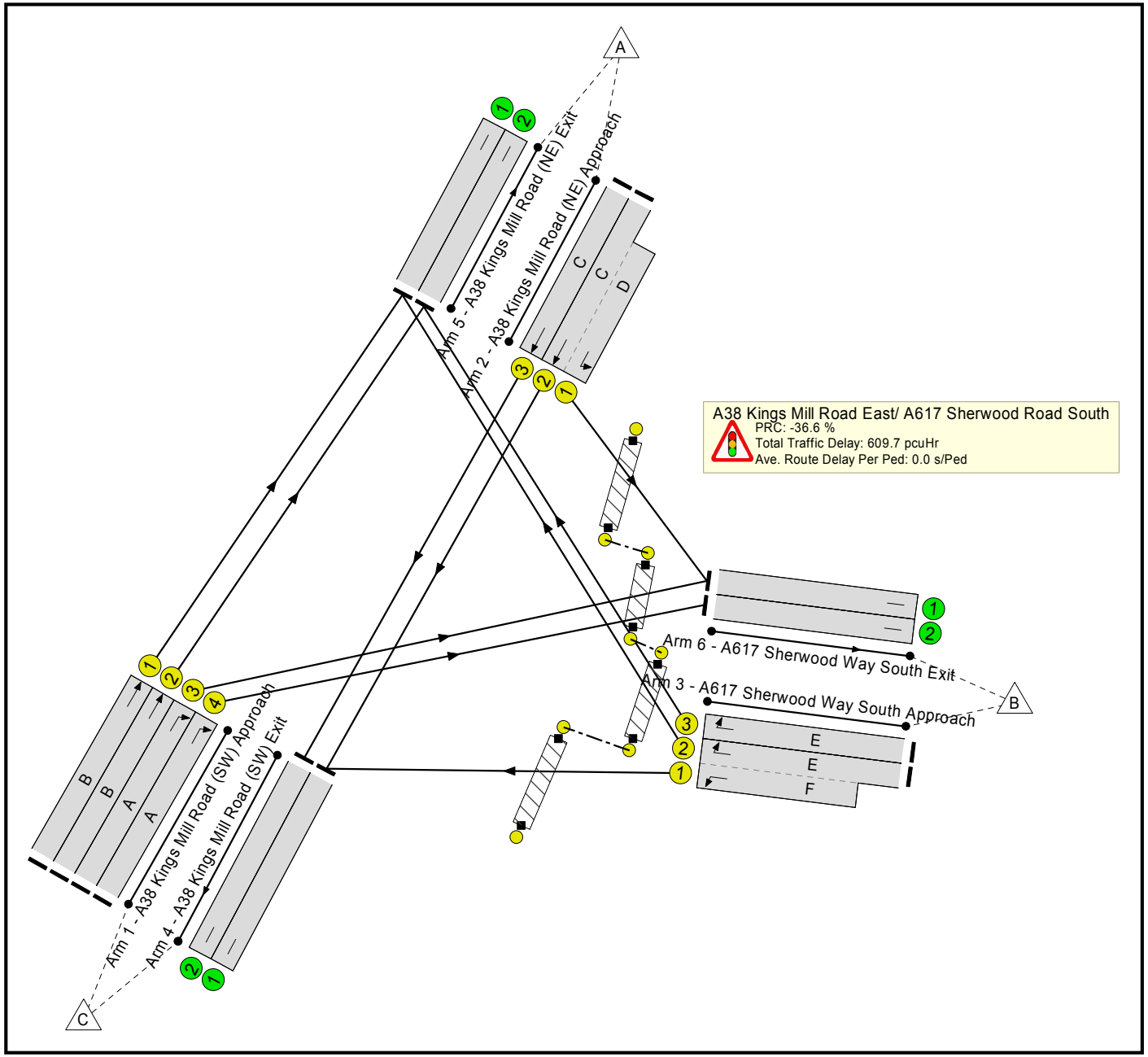
Stage	1	2	3
Duration	39	13	23
Change Point	0	41	65

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Full Input Data And Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**122.9%**
A38 Kings Mill Road East/ A617 Sherwood Road South	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**122.9%**
1/1	A38 Kings Mill Road (SW) Approach Ahead	U	N/A	N/A	B		1	64	-	535	2080	1502	35.6%
1/2	A38 Kings Mill Road (SW) Approach Ahead	U	N/A	N/A	B		1	64	-	492	2080	1502	32.8%
1/3	A38 Kings Mill Road (SW) Approach Right	U	N/A	N/A	A		1	39	-	959	1800	800	119.9%
1/4	A38 Kings Mill Road (SW) Approach Right	U	N/A	N/A	A		1	39	-	961	1800	800	120.1%
2/2+2/1	A38 Kings Mill Road (NE) Approach Ahead Left	U	N/A	N/A	C D		1	23:38	-	1217	2080:1800	304+686	122.9 : 122.9%
2/3	A38 Kings Mill Road (NE) Approach Ahead	U	N/A	N/A	C		1	23	-	676	2080	555	121.9%
3/2+3/1	A617 Sherwood Way South Approach Left Right	U	N/A	N/A	E F		1	17:63	-	1701	1800:1800	192+1215	120.9 : 120.9%
3/3	A617 Sherwood Way South Approach Right	U	N/A	N/A	E		1	17	-	399	1800	360	110.8%
4/1	A38 Kings Mill Road (SW) Exit	U	N/A	N/A	-		-	-	-	1843	1800	1800	84.4%
4/2	A38 Kings Mill Road (SW) Exit	U	N/A	N/A	-		-	-	-	676	1800	1800	30.8%
5/1	A38 Kings Mill Road (NE) Exit	U	N/A	N/A	-		-	-	-	767	1800	1800	40.4%
5/2	A38 Kings Mill Road (NE) Exit	U	N/A	N/A	-		-	-	-	891	1800	1800	47.3%

Full Input Data And Results

6/1	A617 Sherwood Way South Exit	U	N/A	N/A	-		-	-	-	1802	1800	1800	82.5%
6/2	A617 Sherwood Way South Exit	U	N/A	N/A	-		-	-	-	961	1800	1800	44.4%
Ped Link: P1	A38 left to A617 Crossing	-	N/A	-	G		1	41	-	0	-	0	0.0%
Ped Link: P2	A38 Right to A617 Crossing	-	N/A	-	H		1	49	-	0	-	0	0.0%
Ped Link: P3	A617 Right to A38 Crossing	-	N/A	-	I		1	66	-	0	-	0	0.0%
Ped Link: P4	A617 Left to A38 Crossing	-	N/A	-	J		1	25	-	0	-	0	0.0%

Full Input Data And Results

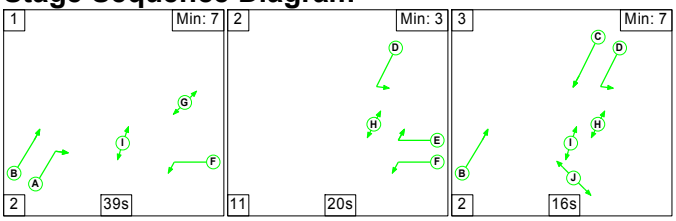
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**83.9**	**525.9**	**0.0**	**609.7**	**-**	**-**	**-**	**-**
A38 Kings Mill Road East/ A617 Sherwood Road South	**-**	**-**	**0**	**0**	**0**	**83.9**	**525.9**	**0.0**	**609.7**	**-**	**-**	**-**	**-**
1/1	535	535	-	-	-	0.7	0.3	-	1.0	6.5	4.9	0.3	5.2
1/2	492	492	-	-	-	0.6	0.2	-	0.9	6.3	4.4	0.2	4.6
1/3	959	800	-	-	-	13.6	82.4	-	96.0	360.3	28.0	82.4	110.4
1/4	961	800	-	-	-	13.7	83.4	-	97.1	363.6	28.0	83.4	111.4
2/2+2/1	1217	990	-	-	-	18.5	116.0	-	134.6	398.1	34.8	116.0	150.8
2/3	676	555	-	-	-	12.6	63.3	-	75.9	404.3	22.4	63.3	85.7
3/2+3/1	1701	1406	-	-	-	18.6	150.1	-	168.7	357.1	55.1	150.1	205.2
3/3	399	360	-	-	-	5.3	23.7	-	29.0	261.8	10.9	23.7	34.7
4/1	1519	1519	-	-	-	0.0	2.7	-	2.7	6.3	4.6	2.7	7.3
4/2	555	555	-	-	-	0.2	0.2	-	0.4	2.7	12.7	0.2	12.9
5/1	727	727	-	-	-	0.0	0.3	-	0.3	1.7	3.6	0.3	4.0
5/2	852	852	-	-	-	0.0	0.4	-	0.5	1.9	3.7	0.4	4.1
6/1	1486	1486	-	-	-	0.0	2.3	-	2.3	5.6	2.0	2.3	4.3
6/2	800	800	-	-	-	0.0	0.4	-	0.4	1.8	2.0	0.4	2.4
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -36.6 Total Delay for Signalled Lanes (pcuHr): 603.11 Cycle Time (s): 90
PRC Over All Lanes (%): -36.6 Total Delay Over All Lanes(pcuHr): 609.75

Full Input Data And Results

Scenario 2: 'PM Reference Case' (FG3: 'Reference Case PM', Plan 1: 'Network Control Plan 1')

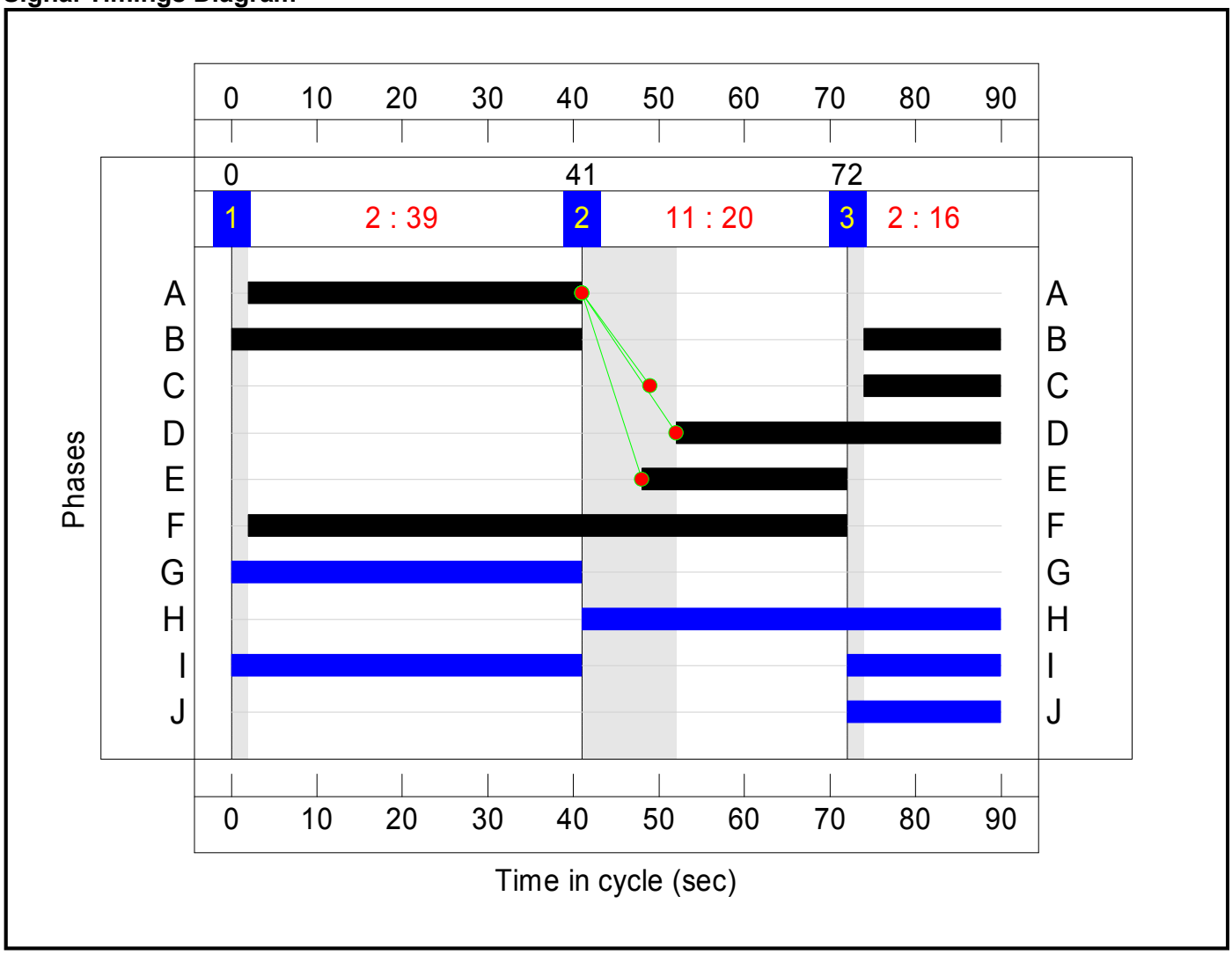
Stage Sequence Diagram



Stage Timings

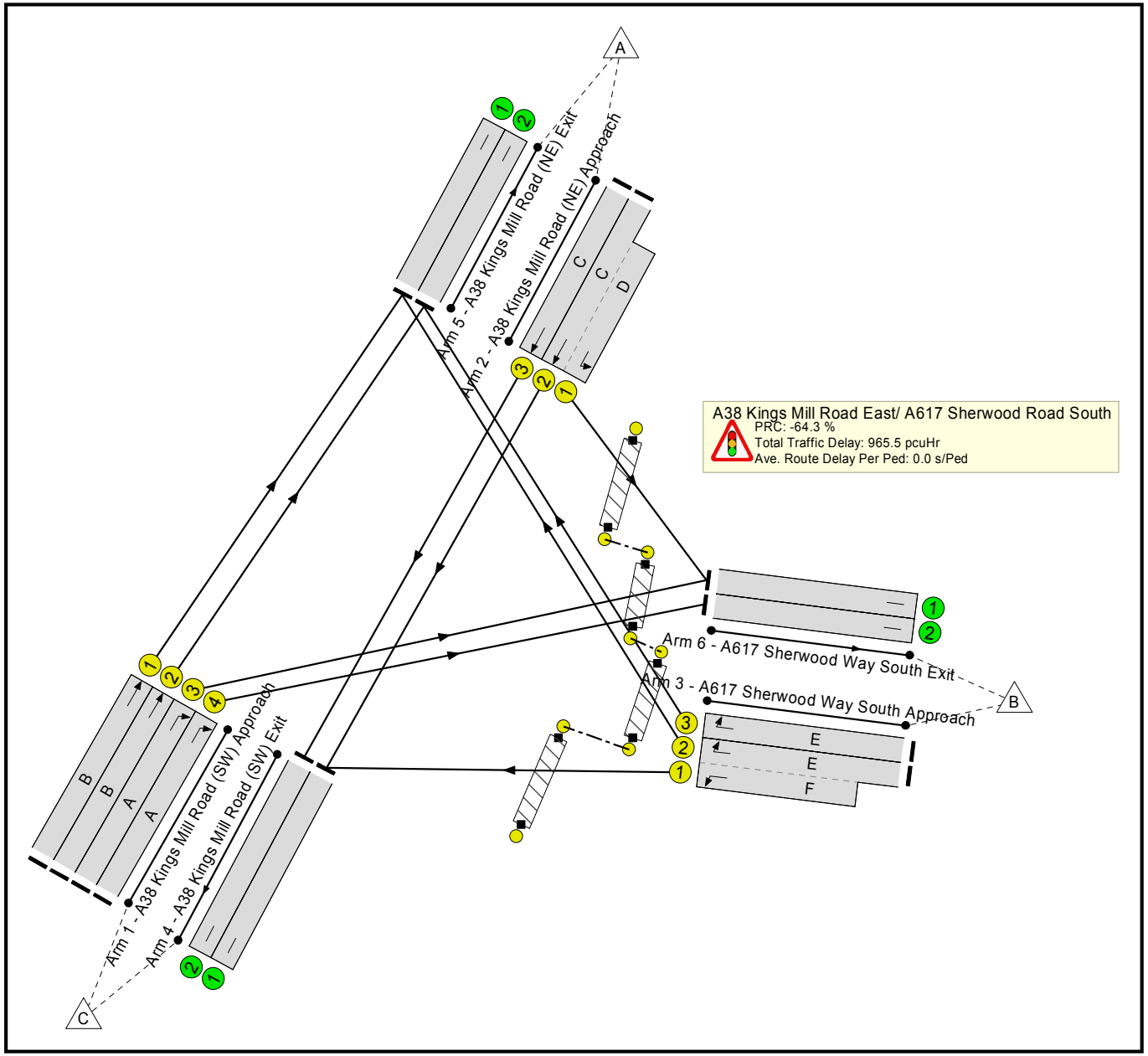
Stage	1	2	3
Duration	39	20	16
Change Point	0	41	72

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Full Input Data And Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**147.9%**
A38 Kings Mill Road East/ A617 Sherwood Road South	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**147.9%**
1/1	A38 Kings Mill Road (SW) Approach Ahead	U	N/A	N/A	B		1	57	-	659	2080	1340	49.2%
1/2	A38 Kings Mill Road (SW) Approach Ahead	U	N/A	N/A	B		1	57	-	592	2080	1340	44.2%
1/3	A38 Kings Mill Road (SW) Approach Right	U	N/A	N/A	A		1	39	-	835	1800	800	104.4%
1/4	A38 Kings Mill Road (SW) Approach Right	U	N/A	N/A	A		1	39	-	836	1800	800	104.5%
2/2+2/1	A38 Kings Mill Road (NE) Approach Ahead Left	U	N/A	N/A	C D		1	16:38	-	1329	2080:1800	393+522	145.3 : 145.3%
2/3	A38 Kings Mill Road (NE) Approach Ahead	U	N/A	N/A	C		1	16	-	575	2080	393	146.4%
3/2+3/1	A617 Sherwood Way South Approach Left Right	U	N/A	N/A	E F		1	24:70	-	2265	1800:1800	185+1347	147.9 : 147.9%
3/3	A617 Sherwood Way South Approach Right	U	N/A	N/A	E		1	24	-	713	1800	500	142.6%
4/1	A38 Kings Mill Road (SW) Exit	U	N/A	N/A	-		-	-	-	2563	1800	1800	96.7%
4/2	A38 Kings Mill Road (SW) Exit	U	N/A	N/A	-		-	-	-	575	1800	1800	21.8%
5/1	A38 Kings Mill Road (NE) Exit	U	N/A	N/A	-		-	-	-	932	1800	1800	46.9%
5/2	A38 Kings Mill Road (NE) Exit	U	N/A	N/A	-		-	-	-	1305	1800	1800	60.7%

Full Input Data And Results

6/1	A617 Sherwood Way South Exit	U	N/A	N/A	-		-	-	-	1593	1800	1800	73.4%
6/2	A617 Sherwood Way South Exit	U	N/A	N/A	-		-	-	-	836	1800	1800	44.4%
Ped Link: P1	A38 left to A617 Crossing	-	N/A	-	G		1	41	-	0	-	0	0.0%
Ped Link: P2	A38 Right to A617 Crossing	-	N/A	-	H		1	49	-	0	-	0	0.0%
Ped Link: P3	A617 Right to A38 Crossing	-	N/A	-	I		1	59	-	0	-	0	0.0%
Ped Link: P4	A617 Left to A38 Crossing	-	N/A	-	J		1	18	-	0	-	0	0.0%

Full Input Data And Results

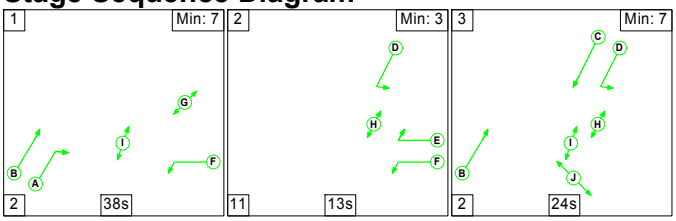
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**121.3**	**844.2**	**0.0**	**965.5**	**-**	**-**	**-**	**-**
A38 Kings Mill Road East/ A617 Sherwood Road South	**-**	**-**	**0**	**0**	**0**	**121.3**	**844.2**	**0.0**	**965.5**	**-**	**-**	**-**	**-**
1/1	659	659	-	-	-	1.5	0.5	-	2.0	11.0	8.4	0.5	8.9
1/2	592	592	-	-	-	1.3	0.4	-	1.7	10.4	7.2	0.4	7.6
1/3	835	800	-	-	-	7.3	25.6	-	33.0	142.1	21.7	25.6	47.4
1/4	836	800	-	-	-	7.4	26.0	-	33.4	143.8	21.8	26.0	47.8
2/2+2/1	1329	914	-	-	-	29.5	208.9	-	238.4	645.8	42.2	208.9	251.1
2/3	575	393	-	-	-	15.2	92.6	-	107.8	675.2	23.0	92.6	115.6
3/2+3/1	2265	1532	-	-	-	42.6	368.2	-	410.9	653.0	91.6	368.2	459.8
3/3	713	500	-	-	-	15.8	108.1	-	123.9	625.7	25.5	108.1	133.7
4/1	1740	1740	-	-	-	0.4	10.7	-	11.1	23.0	34.0	10.7	44.7
4/2	393	393	-	-	-	0.1	0.1	-	0.2	2.0	8.6	0.1	8.7
5/1	844	844	-	-	-	0.1	0.4	-	0.5	2.2	7.7	0.4	8.2
5/2	1092	1092	-	-	-	0.1	0.8	-	0.8	2.7	7.1	0.8	7.8
6/1	1322	1322	-	-	-	0.0	1.4	-	1.4	3.7	2.0	1.4	3.4
6/2	800	800	-	-	-	0.0	0.4	-	0.4	1.8	2.0	0.4	2.4
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -64.3 Total Delay for Signalled Lanes (pcuHr): 951.10 Cycle Time (s): 90
PRC Over All Lanes (%): -64.3 Total Delay Over All Lanes(pcuHr): 965.51

Full Input Data And Results

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case AM', Plan 1: 'Network Control Plan 1')

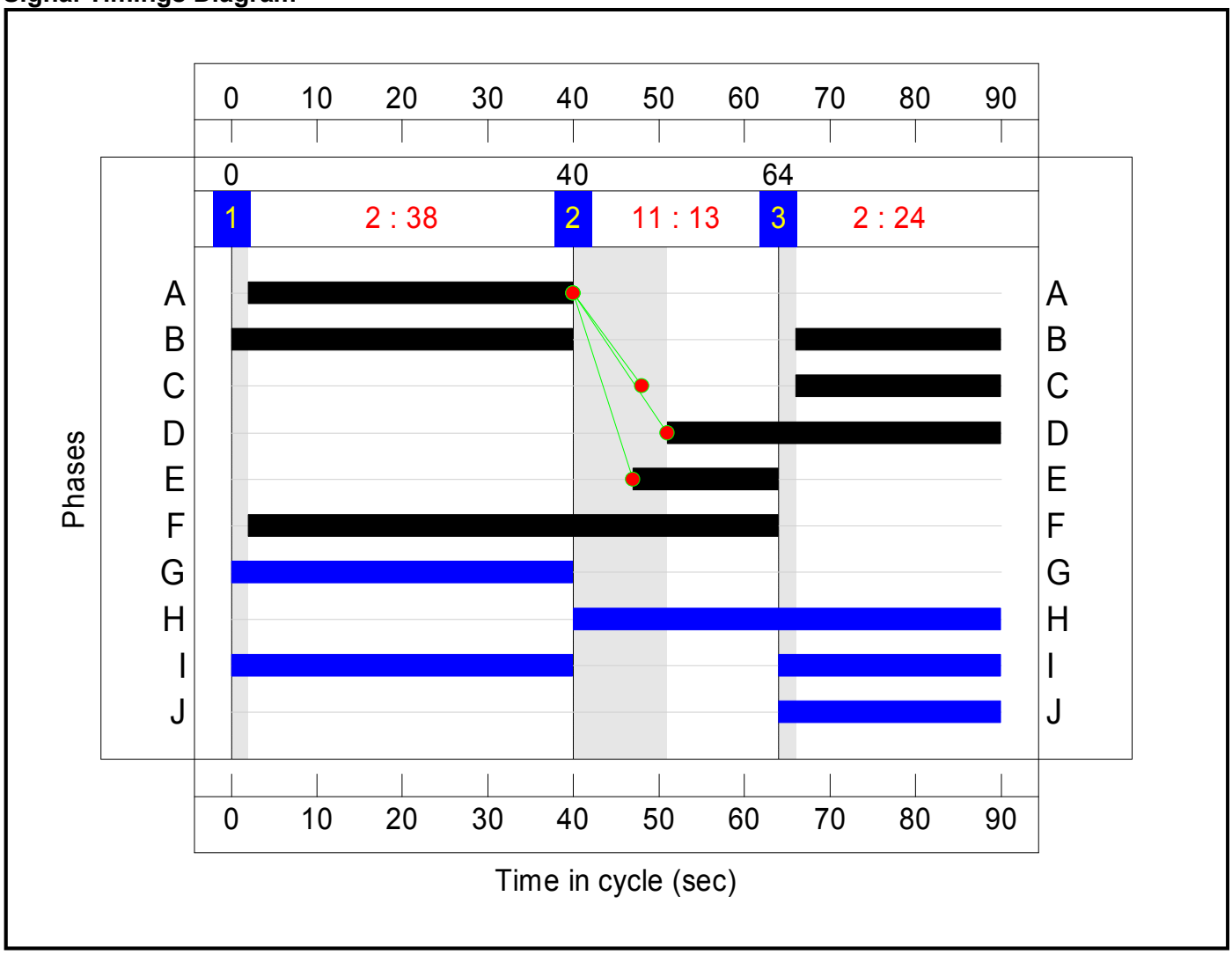
Stage Sequence Diagram



Stage Timings

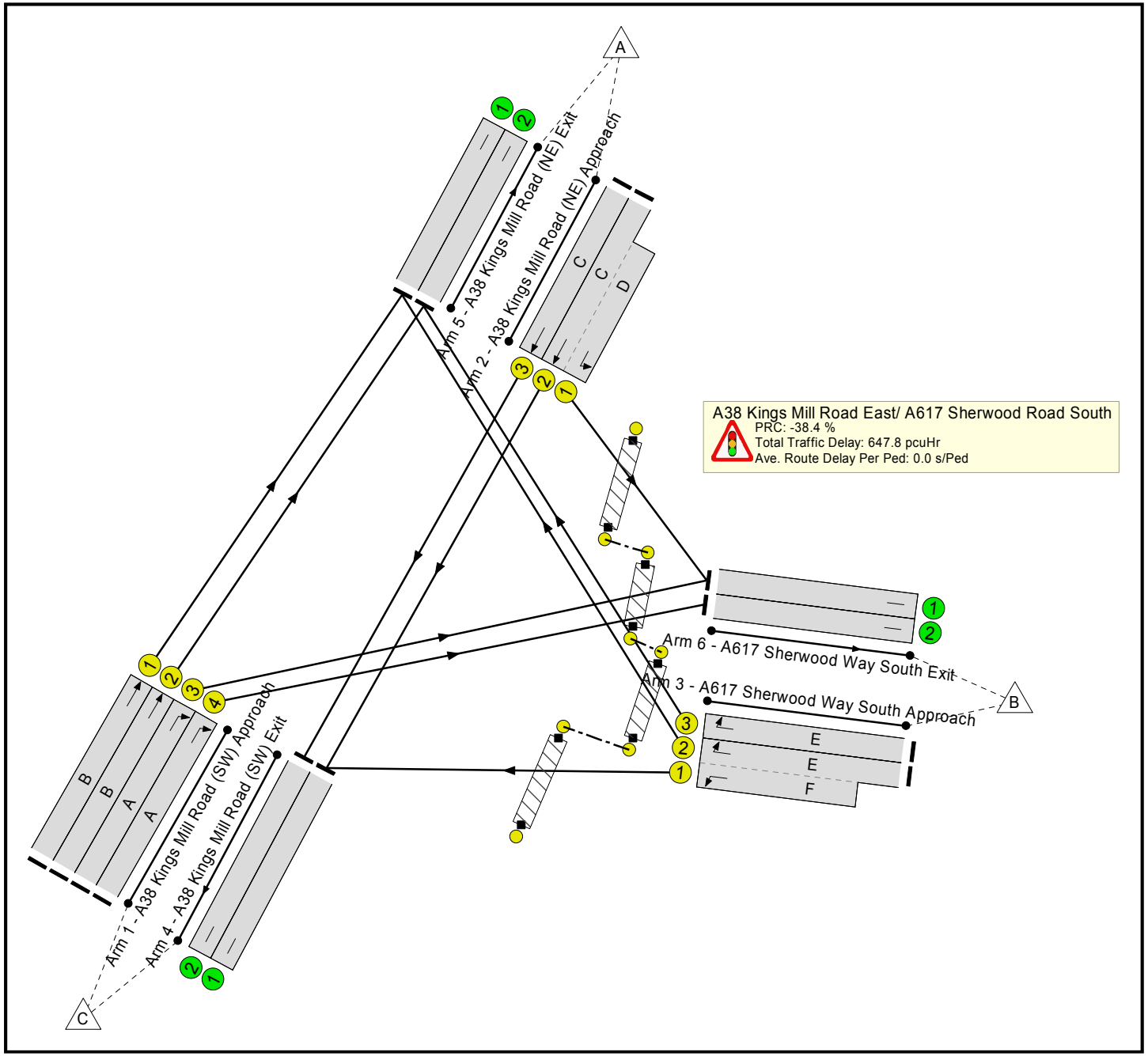
Stage	1	2	3
Duration	38	13	24
Change Point	0	40	64

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Full Input Data And Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**124.6%**
A38 Kings Mill Road East/ A617 Sherwood Road South	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**124.6%**
1/1	A38 Kings Mill Road (SW) Approach Ahead	U	N/A	N/A	B		1	64	-	602	2080	1502	40.1%
1/2	A38 Kings Mill Road (SW) Approach Ahead	U	N/A	N/A	B		1	64	-	560	2080	1502	37.3%
1/3	A38 Kings Mill Road (SW) Approach Right	U	N/A	N/A	A		1	38	-	931	1800	780	119.4%
1/4	A38 Kings Mill Road (SW) Approach Right	U	N/A	N/A	A		1	38	-	933	1800	780	119.6%
2/2+2/1	A38 Kings Mill Road (NE) Approach Ahead Left	U	N/A	N/A	C D		1	24:39	-	1335	2080:1800	401+676	123.9 : 123.9%
2/3	A38 Kings Mill Road (NE) Approach Ahead	U	N/A	N/A	C		1	24	-	696	2080	578	120.5%
3/2+3/1	A617 Sherwood Way South Approach Left Right	U	N/A	N/A	E F		1	17:62	-	1734	1800:1800	197+1194	124.6 : 124.6%
3/3	A617 Sherwood Way South Approach Right	U	N/A	N/A	E		1	17	-	406	1800	360	112.8%
4/1	A38 Kings Mill Road (SW) Exit	U	N/A	N/A	-		-	-	-	1985	1800	1800	88.6%
4/2	A38 Kings Mill Road (SW) Exit	U	N/A	N/A	-		-	-	-	696	1800	1800	32.1%
5/1	A38 Kings Mill Road (NE) Exit	U	N/A	N/A	-		-	-	-	848	1800	1800	44.4%
5/2	A38 Kings Mill Road (NE) Exit	U	N/A	N/A	-		-	-	-	966	1800	1800	51.1%

Full Input Data And Results

6/1	A617 Sherwood Way South Exit	U	N/A	N/A	-		-	-	-	1769	1800	1800	80.9%
6/2	A617 Sherwood Way South Exit	U	N/A	N/A	-		-	-	-	933	1800	1800	43.3%
Ped Link: P1	A38 left to A617 Crossing	-	N/A	-	G		1	40	-	0	-	0	0.0%
Ped Link: P2	A38 Right to A617 Crossing	-	N/A	-	H		1	50	-	0	-	0	0.0%
Ped Link: P3	A617 Right to A38 Crossing	-	N/A	-	I		1	66	-	0	-	0	0.0%
Ped Link: P4	A617 Left to A38 Crossing	-	N/A	-	J		1	26	-	0	-	0	0.0%

Full Input Data And Results

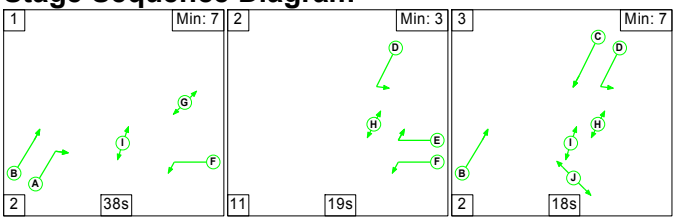
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**88.2**	**559.6**	**0.0**	**647.8**	**-**	**-**	**-**	**-**
A38 Kings Mill Road East/ A617 Sherwood Road South	**-**	**-**	**0**	**0**	**0**	**88.2**	**559.6**	**0.0**	**647.8**	**-**	**-**	**-**	**-**
1/1	602	602	-	-	-	0.8	0.3	-	1.2	6.9	5.9	0.3	6.2
1/2	560	560	-	-	-	0.7	0.3	-	1.0	6.7	5.3	0.3	5.6
1/3	931	780	-	-	-	13.2	78.5	-	91.6	354.4	27.0	78.5	105.5
1/4	933	780	-	-	-	13.3	79.4	-	92.7	357.8	27.2	79.4	106.6
2/2+2/1	1335	1077	-	-	-	20.8	131.3	-	152.1	410.2	37.5	131.3	168.8
2/3	696	578	-	-	-	12.5	61.9	-	74.4	385.1	22.7	61.9	84.7
3/2+3/1	1734	1392	-	-	-	21.0	173.6	-	194.6	404.0	57.2	173.6	230.8
3/3	406	360	-	-	-	5.6	26.8	-	32.4	287.4	11.3	26.8	38.1
4/1	1595	1595	-	-	-	0.1	3.8	-	3.8	8.6	7.6	3.8	11.4
4/2	578	578	-	-	-	0.2	0.2	-	0.5	2.8	13.3	0.2	13.5
5/1	799	799	-	-	-	0.0	0.4	-	0.4	1.9	4.7	0.4	5.1
5/2	920	920	-	-	-	0.0	0.5	-	0.5	2.1	4.7	0.5	5.2
6/1	1456	1456	-	-	-	0.0	2.1	-	2.1	5.2	1.5	2.1	3.6
6/2	780	780	-	-	-	0.0	0.4	-	0.4	1.8	1.5	0.4	1.9
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -38.4 Total Delay for Signalled Lanes (pcuHr): 640.13 Cycle Time (s): 90
PRC Over All Lanes (%): -38.4 Total Delay Over All Lanes(pcuHr): 647.85

Full Input Data And Results

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case PM', Plan 1: 'Network Control Plan 1')

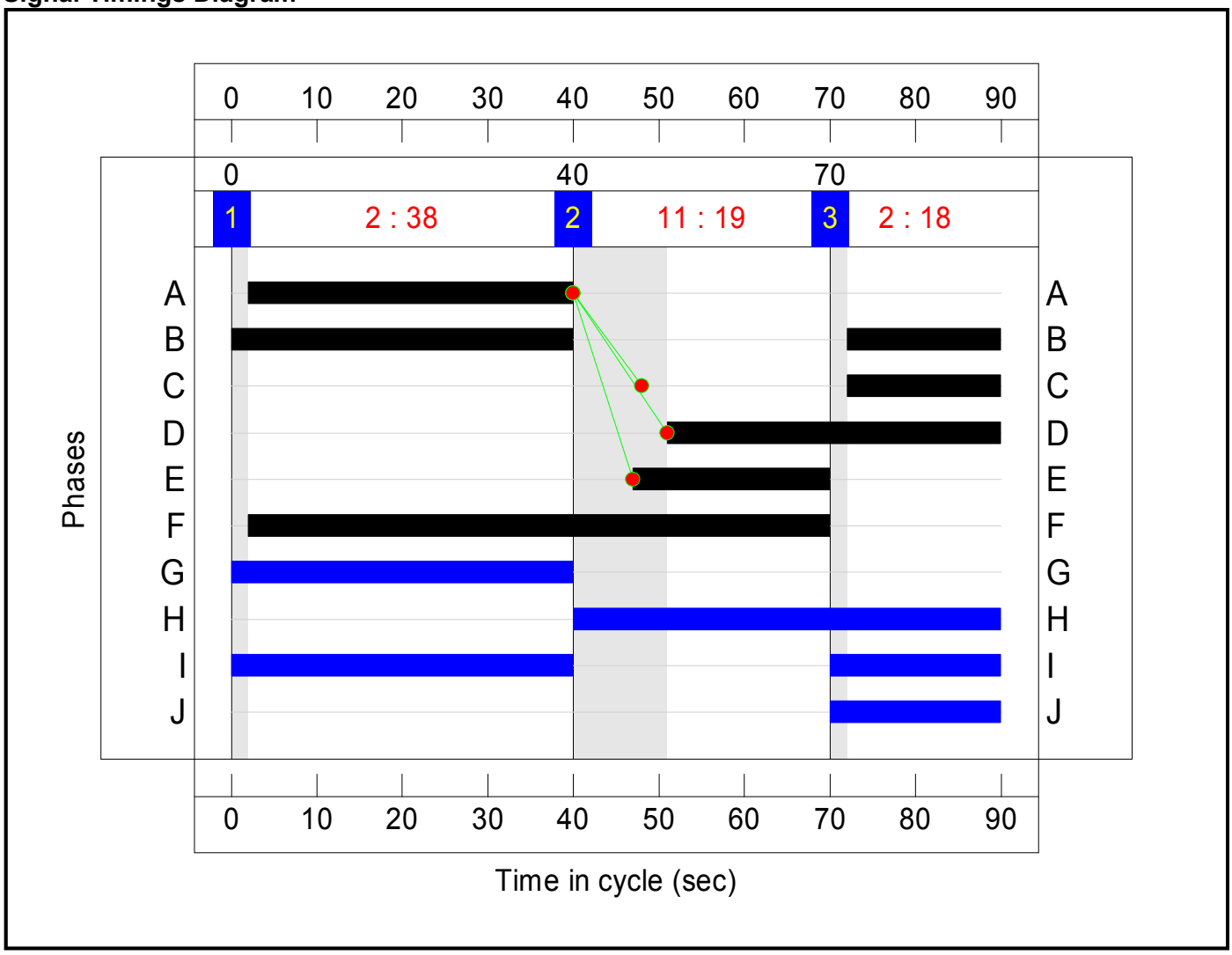
Stage Sequence Diagram



Stage Timings

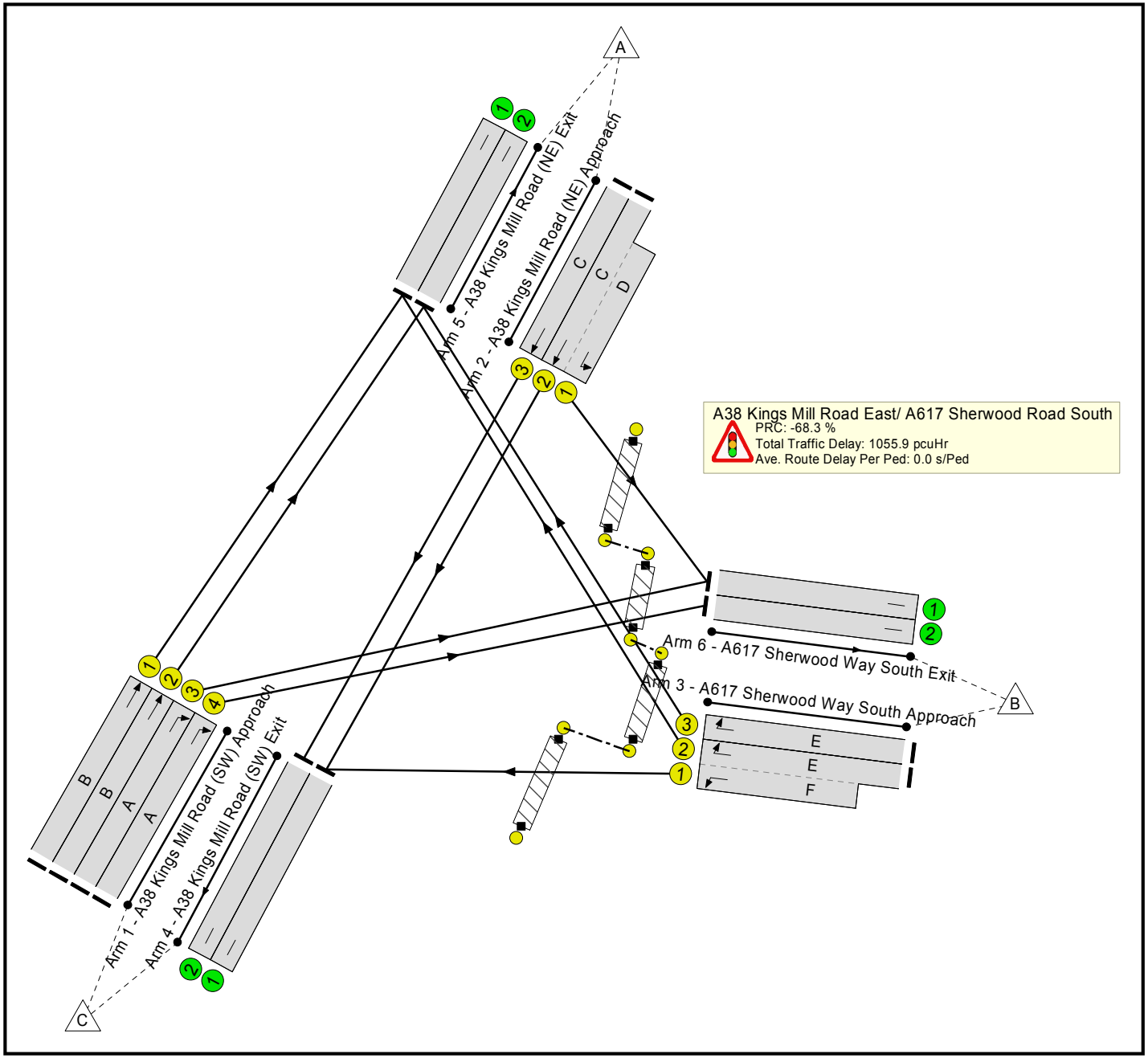
Stage	1	2	3
Duration	38	19	18
Change Point	0	40	70

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Full Input Data And Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**151.4%**
A38 Kings Mill Road East/ A617 Sherwood Road South	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**151.4%**
1/1	A38 Kings Mill Road (SW) Approach Ahead	U	N/A	N/A	B		1	58	-	743	2080	1364	54.5%
1/2	A38 Kings Mill Road (SW) Approach Ahead	U	N/A	N/A	B		1	58	-	680	2080	1364	49.9%
1/3	A38 Kings Mill Road (SW) Approach Right	U	N/A	N/A	A		1	38	-	845	1800	780	108.3%
1/4	A38 Kings Mill Road (SW) Approach Right	U	N/A	N/A	A		1	38	-	847	1800	780	108.6%
2/2+2/1	A38 Kings Mill Road (NE) Approach Ahead Left	U	N/A	N/A	C D		1	18:39	-	1412	2080:1800	433+534	146.0 : 146.0%
2/3	A38 Kings Mill Road (NE) Approach Ahead	U	N/A	N/A	C		1	18	-	665	2080	439	151.4%
3/2+3/1	A617 Sherwood Way South Approach Left Right	U	N/A	N/A	E F		1	23:68	-	2264	1800:1800	197+1305	150.8 : 150.8%
3/3	A617 Sherwood Way South Approach Right	U	N/A	N/A	E		1	23	-	697	1800	480	145.2%
4/1	A38 Kings Mill Road (SW) Exit	U	N/A	N/A	-		-	-	-	2599	1800	1800	96.5%
4/2	A38 Kings Mill Road (SW) Exit	U	N/A	N/A	-		-	-	-	665	1800	1800	24.4%
5/1	A38 Kings Mill Road (NE) Exit	U	N/A	N/A	-		-	-	-	1040	1800	1800	52.2%
5/2	A38 Kings Mill Road (NE) Exit	U	N/A	N/A	-		-	-	-	1377	1800	1800	64.4%

Full Input Data And Results

6/1	A617 Sherwood Way South Exit	U	N/A	N/A	-		-	-	-	1625	1800	1800	73.0%
6/2	A617 Sherwood Way South Exit	U	N/A	N/A	-		-	-	-	847	1800	1800	43.3%
Ped Link: P1	A38 left to A617 Crossing	-	N/A	-	G		1	40	-	0	-	0	0.0%
Ped Link: P2	A38 Right to A617 Crossing	-	N/A	-	H		1	50	-	0	-	0	0.0%
Ped Link: P3	A617 Right to A38 Crossing	-	N/A	-	I		1	60	-	0	-	0	0.0%
Ped Link: P4	A617 Left to A38 Crossing	-	N/A	-	J		1	20	-	0	-	0	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	**-**	**-**	**0**	**0**	**0**	**132.9**	**922.9**	**0.0**	**1055.9**	**-**	**-**	**-**	**-**
A38 Kings Mill Road East/ A617 Sherwood Road South	**-**	**-**	**0**	**0**	**0**	**132.9**	**922.9**	**0.0**	**1055.9**	**-**	**-**	**-**	**-**
1/1	743	743	-	-	-	1.7	0.6	-	2.3	11.2	9.9	0.6	10.5
1/2	680	680	-	-	-	1.5	0.5	-	2.0	10.6	8.7	0.5	9.2
1/3	845	780	-	-	-	8.8	38.1	-	46.9	199.7	22.7	38.1	60.8
1/4	847	780	-	-	-	8.9	38.9	-	47.9	203.4	22.9	38.9	61.8
2/2+2/1	1412	967	-	-	-	32.8	223.9	-	256.7	654.5	47.3	223.9	271.2
2/3	665	439	-	-	-	18.3	114.4	-	132.7	718.3	27.4	114.4	141.8
3/2+3/1	2264	1502	-	-	-	44.4	382.7	-	427.1	679.2	92.3	382.7	475.0
3/3	697	480	-	-	-	15.7	110.1	-	125.8	649.8	25.0	110.1	135.1
4/1	1738	1738	-	-	-	0.4	10.4	-	10.9	22.5	34.5	10.4	44.9
4/2	439	439	-	-	-	0.1	0.2	-	0.3	2.2	9.7	0.2	9.9
5/1	940	940	-	-	-	0.1	0.5	-	0.6	2.5	9.5	0.5	10.1
5/2	1160	1160	-	-	-	0.1	0.9	-	1.0	3.1	8.6	0.9	9.5
6/1	1314	1314	-	-	-	0.0	1.3	-	1.3	3.7	1.5	1.3	2.8
6/2	780	780	-	-	-	0.0	0.4	-	0.4	1.8	1.5	0.4	1.9
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

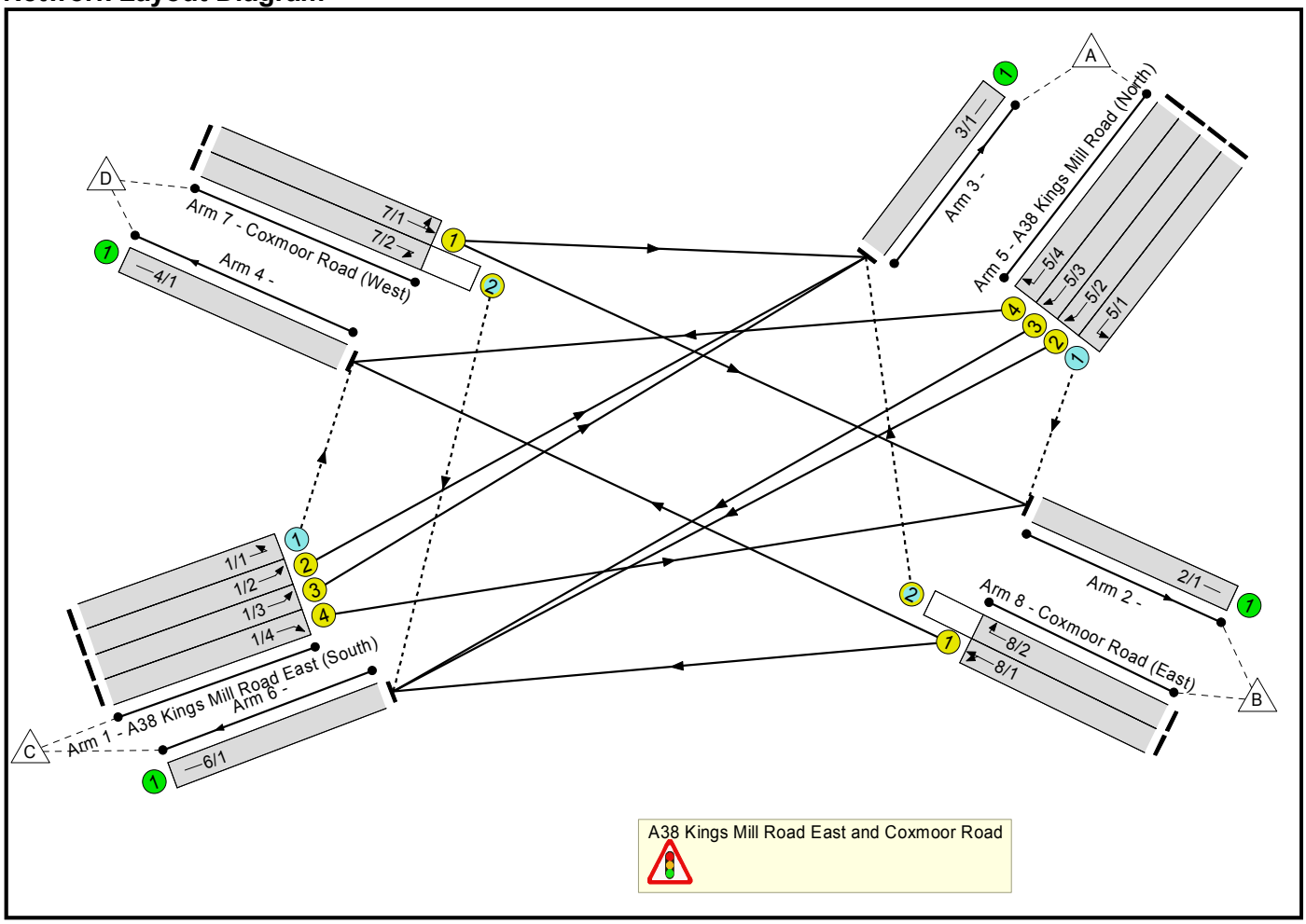
C1 PRC for Signalled Lanes (%): -68.3 Total Delay for Signalled Lanes (pcuHr): 1041.36 Cycle Time (s): 90
PRC Over All Lanes (%): -68.3 Total Delay Over All Lanes(pcuHr): 1055.86

Full Input Data And Results

User and Project Details

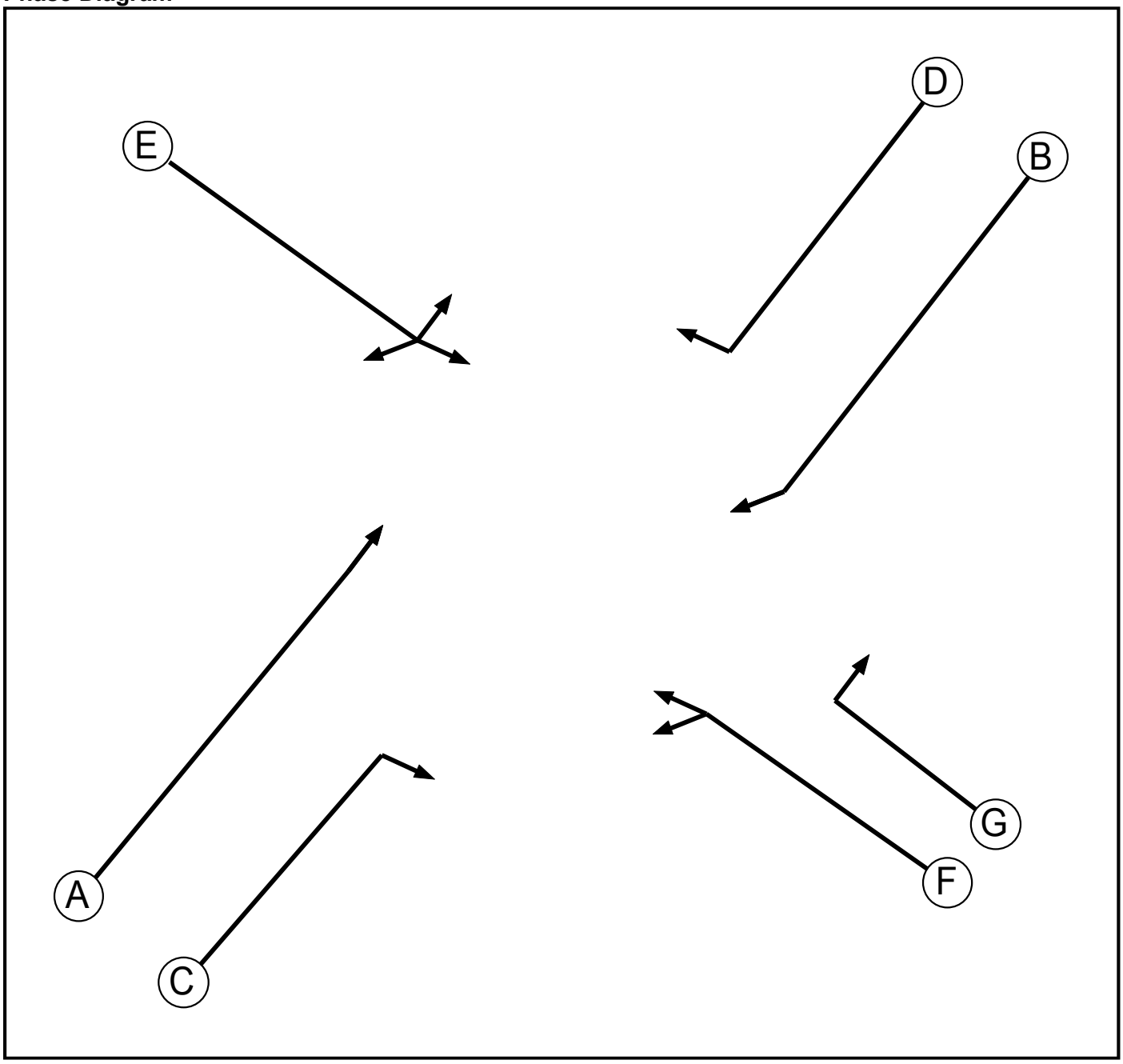
Project:	
Title:	
Location:	
File name:	Junction 4 2016.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

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	Traffic		7	7

Full Input Data And Results

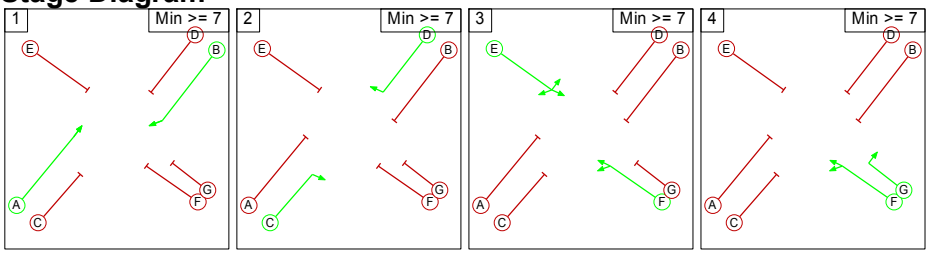
Phase Intergreens Matrix

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

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

From Stage	To Stage			
	1	2	3	4
1		7	8	8
2	7		5	5
3	7	6		5
4	7	6	7	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A38 Kings Mill Road East and Coxmoor Road

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/1 (A38 Kings Mill Road East (South))	4/1 (U-Turn)	1440	0	8/1	1.09	To 4/1 (Ahead)	-	-	-	-	-
				5/4	1.09	All					
5/1 (A38 Kings Mill Road (North))	2/1 (Left)	1440	0	7/1	1.09	To 2/1 (Ahead)	-	-	-	-	-
				1/4	1.09	All					
7/2 (Coxmoor Road (West))	6/1 (U-Turn)	1440	0	8/1	1.09	All	3.00	-	0.50	3	3.00
8/2 (Coxmoor Road (East))	3/1 (Right)	1439	0	7/1	1.09	All	3.00	-	0.50	3	2.00

Full Input Data And Results

Lane Input Data

Junction: A38 Kings Mill Road East and Coxmoor Road												
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 (A38 Kings Mill Road East (South))	O		2	3	5.2	User	1900	-	-	-	-	-
1/2 (A38 Kings Mill Road East (South))	U	A	2	3	60.0	User	2000	-	-	-	-	-
1/3 (A38 Kings Mill Road East (South))	U	A	2	3	60.0	User	2000	-	-	-	-	-
1/4 (A38 Kings Mill Road East (South))	U	C	2	3	10.4	User	1800	-	-	-	-	-
2/1	U		2	3	60.0	Inf	-	-	-	-	-	-
3/1	U		2	3	60.0	Inf	-	-	-	-	-	-
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (A38 Kings Mill Road (North))	O		2	3	8.7	User	1900	-	-	-	-	-
5/2 (A38 Kings Mill Road (North))	U	B	2	3	60.0	User	2000	-	-	-	-	-
5/3 (A38 Kings Mill Road (North))	U	B	2	3	60.0	User	2000	-	-	-	-	-
5/4 (A38 Kings Mill Road (North))	U	D	2	3	11.0	User	1800	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Coxmoor Road (West))	U	E	2	3	60.0	User	1900	-	-	-	-	-
7/2 (Coxmoor Road (West))	O	E	2	3	10.4	User	1800	-	-	-	-	-
8/1 (Coxmoor Road (East))	U	F	2	3	60.0	User	1900	-	-	-	-	-
8/2 (Coxmoor Road (East))	O	G	2	3	8.7	User	1800	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2032 Reference Case Morning Peak'	08:00	09:00	01:00	
2: '2032 Development Case Morning Peak'	08:00	09:00	01:00	
3: '2032 Reference Case Evening Peak'	17:00	18:00	01:00	
4: '2032 Development Case Evening Peak'	17:00	18:00	01:00	

Scenario 1: 'AM Reference Case ' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	777	2017	189	2983
	B	713	0	103	367	1183
	C	1860	176	0	135	2171
	D	164	516	176	0	856
	Tot.	2737	1469	2296	691	7193

Traffic Lane Flows

Lane	Scenario 1: AM Reference Case
Junction: A38 Kings Mill Road East and Coxmoor Road	
1/1	29
1/2	702
1/3	701
1/4	372
2/1	1218
3/1	2410
4/1	625
5/1	417
5/2	856
5/3	856
5/4	374
6/1	1943
7/1	606
7/2	84
8/1	369
8/2	830

Full Input Data And Results

Lane Saturation Flows

Junction: A38 Kings Mill Road East and Coxmoor Road								
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 (A38 Kings Mill Road East (South) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
1/2 (A38 Kings Mill Road East (South) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
1/3 (A38 Kings Mill Road East (South) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
1/4 (A38 Kings Mill Road East (South) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
2/1	Infinite Saturation Flow						Inf	Inf
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf
5/1 (A38 Kings Mill Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/2 (A38 Kings Mill Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
5/3 (A38 Kings Mill Road (North) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
5/4 (A38 Kings Mill Road (North) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
6/1	Infinite Saturation Flow						Inf	Inf
7/1 (Coxmoor Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Coxmoor Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
8/1 (Coxmoor Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/2 (Coxmoor Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case Evening Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	772	1903	174	2849
	B	714	0	104	364	1182
	C	1739	176	0	125	2040
	D	150	506	163	0	819
	Tot.	2603	1454	2170	663	6890

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM Reference Case
Junction: A38 Kings Mill Road East and Coxmoor Road	
1/1	125
1/2	870
1/3	869
1/4	176
2/1	1454
3/1	2603
4/1	663
5/1	772
5/2	952
5/3	951
5/4	174
6/1	2170
7/1	656
7/2	163
8/1	468
8/2	714

Full Input Data And Results

Lane Saturation Flows

Junction: A38 Kings Mill Road East and Coxmoor Road								
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 (A38 Kings Mill Road East (South) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
1/2 (A38 Kings Mill Road East (South) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
1/3 (A38 Kings Mill Road East (South) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
1/4 (A38 Kings Mill Road East (South) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
2/1	Infinite Saturation Flow						Inf	Inf
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf
5/1 (A38 Kings Mill Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/2 (A38 Kings Mill Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
5/3 (A38 Kings Mill Road (North) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
5/4 (A38 Kings Mill Road (North) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
6/1	Infinite Saturation Flow						Inf	Inf
7/1 (Coxmoor Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Coxmoor Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
8/1 (Coxmoor Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/2 (Coxmoor Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	422	1838	403	2663
	B	846	0	150	228	1224
	C	1542	386	0	33	1961
	D	194	446	93	0	733
	Tot.	2582	1254	2081	664	6581

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: AM Development Scenario
Junction: A38 Kings Mill Road East and Coxmoor Road	
1/1	33
1/2	771
1/3	771
1/4	386
2/1	1254
3/1	2582
4/1	664
5/1	422
5/2	919
5/3	919
5/4	403
6/1	2081
7/1	640
7/2	93
8/1	378
8/2	846

Full Input Data And Results

Lane Saturation Flows

Junction: A38 Kings Mill Road East and Coxmoor Road								
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 (A38 Kings Mill Road East (South) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
1/2 (A38 Kings Mill Road East (South) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
1/3 (A38 Kings Mill Road East (South) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
1/4 (A38 Kings Mill Road East (South) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
2/1	Infinite Saturation Flow						Inf	Inf
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf
5/1 (A38 Kings Mill Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/2 (A38 Kings Mill Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
5/3 (A38 Kings Mill Road (North) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
5/4 (A38 Kings Mill Road (North) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
6/1	Infinite Saturation Flow						Inf	Inf
7/1 (Coxmoor Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Coxmoor Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
8/1 (Coxmoor Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/2 (Coxmoor Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	777	2017	189	2983
	B	713	0	103	367	1183
	C	1860	176	0	135	2171
	D	164	516	176	0	856
	Tot.	2737	1469	2296	691	7193

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: PM Development Scenario
Junction: A38 Kings Mill Road East and Coxmoor Road	
1/1	135
1/2	930
1/3	930
1/4	176
2/1	1469
3/1	2737
4/1	691
5/1	777
5/2	1009
5/3	1008
5/4	189
6/1	2296
7/1	680
7/2	176
8/1	470
8/2	713

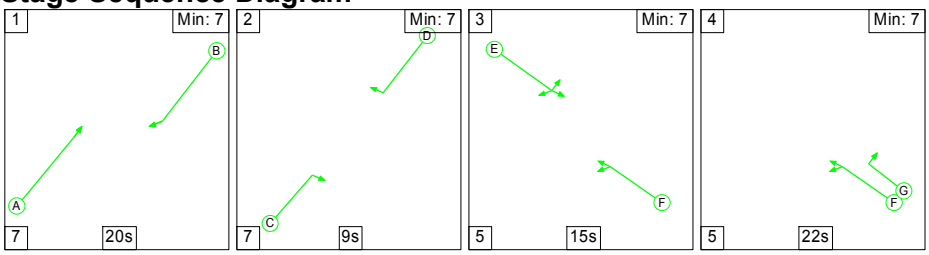
Full Input Data And Results

Lane Saturation Flows

Junction: A38 Kings Mill Road East and Coxmoor Road								
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 (A38 Kings Mill Road East (South) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
1/2 (A38 Kings Mill Road East (South) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
1/3 (A38 Kings Mill Road East (South) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
1/4 (A38 Kings Mill Road East (South) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
2/1	Infinite Saturation Flow						Inf	Inf
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf
5/1 (A38 Kings Mill Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/2 (A38 Kings Mill Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
5/3 (A38 Kings Mill Road (North) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
5/4 (A38 Kings Mill Road (North) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
6/1	Infinite Saturation Flow						Inf	Inf
7/1 (Coxmoor Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (Coxmoor Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
8/1 (Coxmoor Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/2 (Coxmoor Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 1: 'AM Reference Case ' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Staging Plan No. 1')

Stage Sequence Diagram

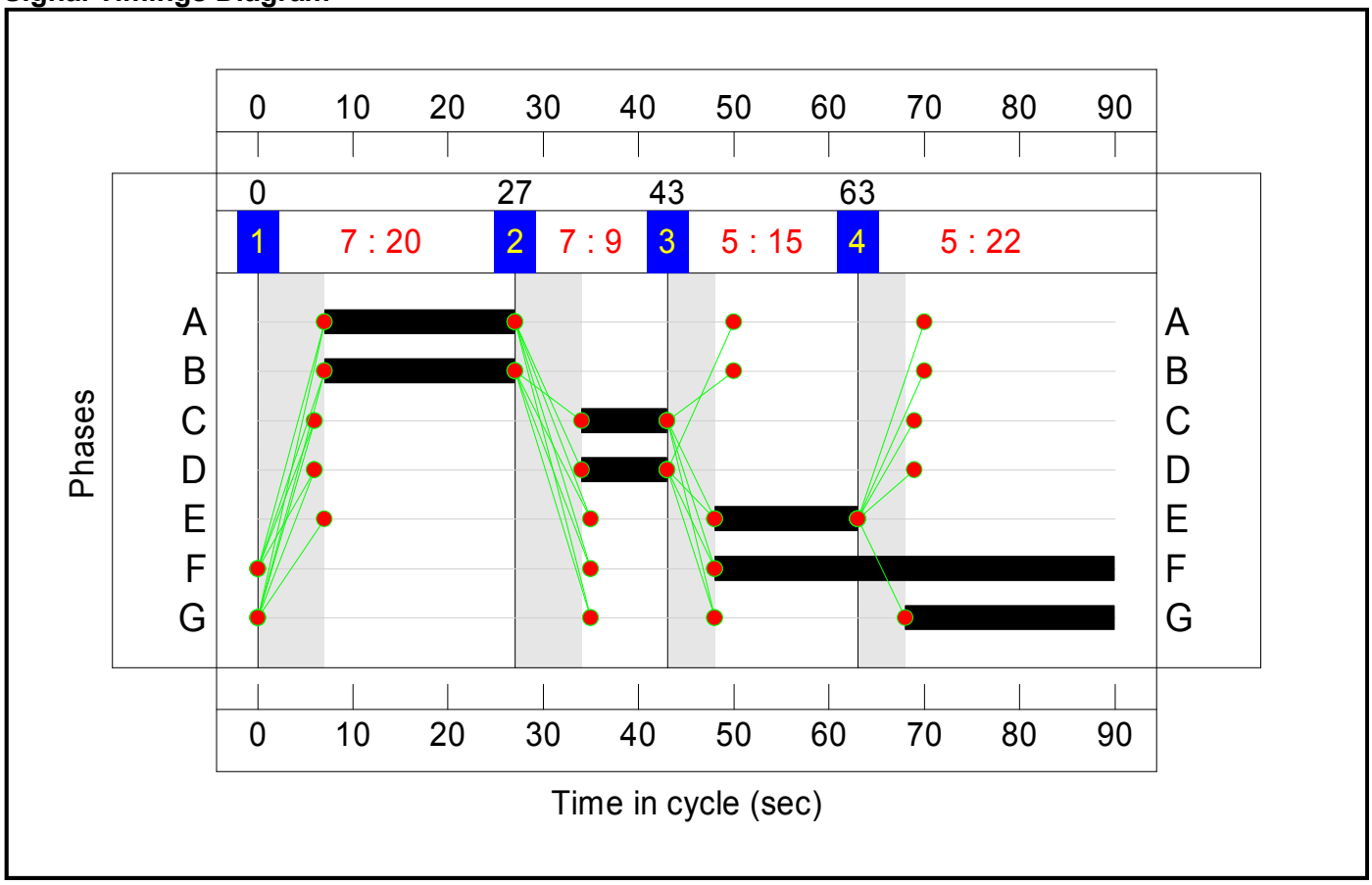


Full Input Data And Results

Stage Timings

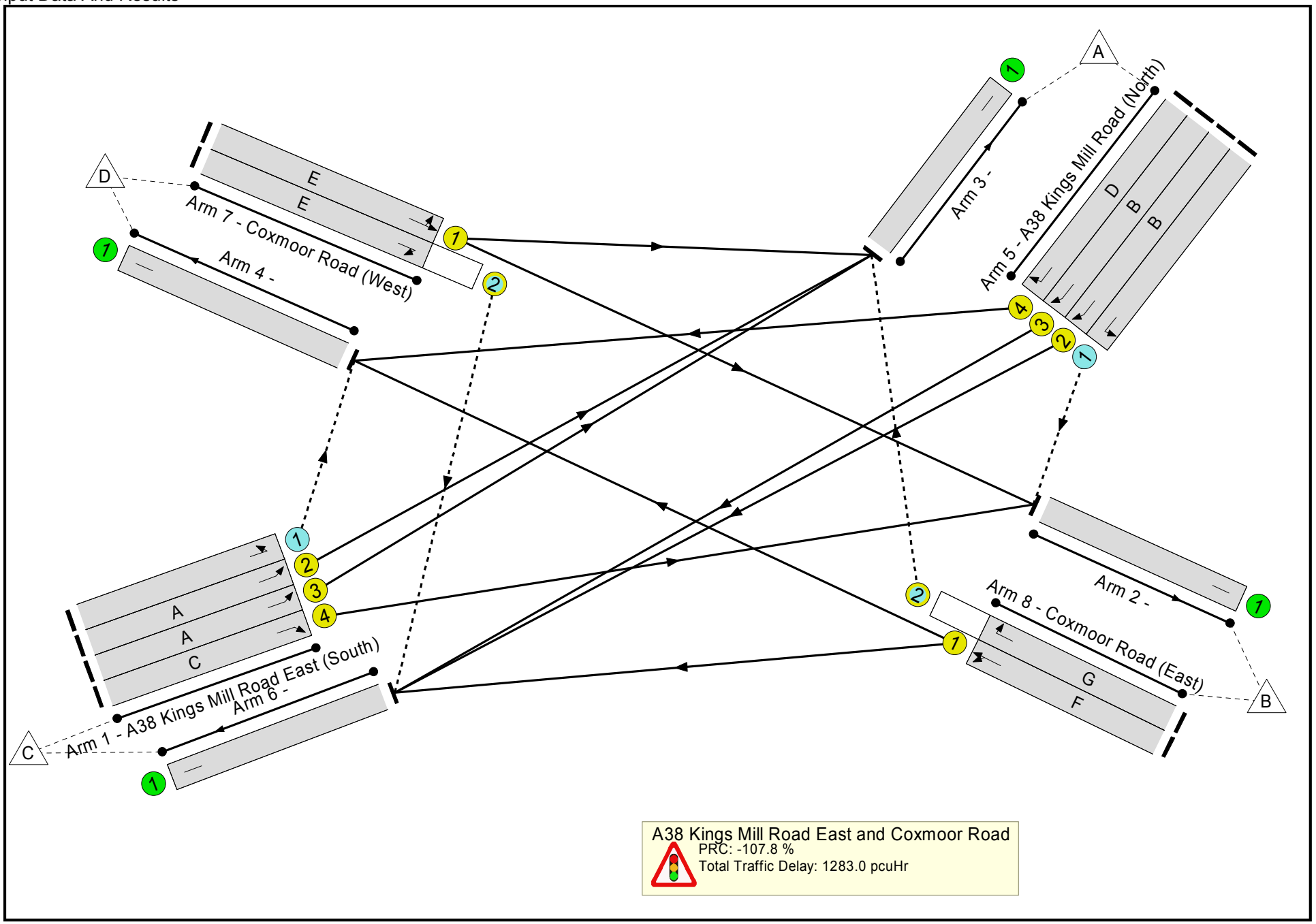
Stage	1	2	3	4
Duration	20	9	15	22
Change Point	0	27	43	63

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**187.0%**
A38 Kings Mill Road East and Coxmoor Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**187.0%**
1/1	A38 Kings Mill Road East (South) U-Turn	O	N/A	N/A	-		-	-	-	29	1900	1038	2.8%
1/2	A38 Kings Mill Road East (South) Ahead	U	N/A	N/A	A		1	20	-	702	2000	467	150.4%
1/3	A38 Kings Mill Road East (South) Ahead	U	N/A	N/A	A		1	20	-	701	2000	467	150.2%
1/4	A38 Kings Mill Road East (South) Ahead	U	N/A	N/A	C		1	9	-	372	1800	200	186.0%
2/1		U	N/A	N/A	-		-	-	-	1218	Inf	Inf	0.0%
3/1		U	N/A	N/A	-		-	-	-	2410	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	625	Inf	Inf	0.0%
5/1	A38 Kings Mill Road (North) Left	O	N/A	N/A	-		-	-	-	417	1900	1024	40.7%
5/2	A38 Kings Mill Road (North) Ahead	U	N/A	N/A	B		1	20	-	856	2000	467	183.4%
5/3	A38 Kings Mill Road (North) Ahead	U	N/A	N/A	B		1	20	-	856	2000	467	183.4%
5/4	A38 Kings Mill Road (North) Right	U	N/A	N/A	D		1	9	-	374	1800	200	187.0%
6/1		U	N/A	N/A	-		-	-	-	1943	Inf	Inf	0.0%
7/1	Coxmoor Road (West) Ahead Left	U	N/A	N/A	E		1	15	-	606	1900	338	179.4%
7/2	Coxmoor Road (West) U-Turn	O	N/A	N/A	E		1	15	-	84	1800	120	70.0%

Full Input Data And Results

8/1	Coxmoor Road (East) Ahead Left	U	N/A	N/A	F		1	42	-	369	1900	908	40.6%
8/2	Coxmoor Road (East) Right	O	N/A	N/A	G		1	22	-	830	1800	460	180.4%

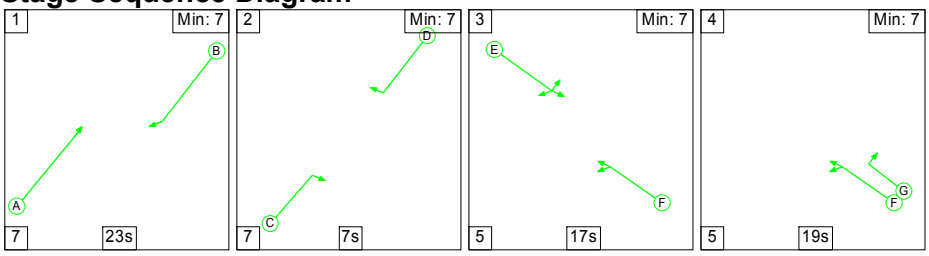
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**98**	**832**	**60**	**155.2**	**1127.6**	**0.3**	**1283.0**	**-**	**-**	**-**	**-**
A38 Kings Mill Road East and Coxmoor Road	**-**	**-**	**98**	**832**	**60**	**155.2**	**1127.6**	**0.3**	**1283.0**	**-**	**-**	**-**	**-**
1/1	29	29	14	15	0	0.0	0.0	-	0.0	2.4	0.1	0.0	0.1
1/2	702	467	-	-	-	17.3	119.1	-	136.4	699.4	23.5	119.1	142.6
1/3	701	467	-	-	-	17.2	118.6	-	135.8	697.6	23.4	118.6	142.0
1/4	372	200	-	-	-	10.8	87.1	-	97.9	947.1	13.6	87.1	100.7
2/1	856	856	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	1492	1492	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	451	451	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	417	417	0	417	0	0.3	0.3	-	0.7	5.8	4.2	0.3	4.5
5/2	856	467	-	-	-	25.6	195.8	-	221.4	931.0	33.7	195.8	229.5
5/3	856	467	-	-	-	25.6	195.8	-	221.4	931.0	33.7	195.8	229.5
5/4	374	200	-	-	-	10.9	88.1	-	99.0	952.6	13.7	88.1	101.8
6/1	1164	1164	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	606	338	-	-	-	18.0	135.2	-	153.3	910.4	24.5	135.2	159.8
7/2	84	84	84	0	0	0.7	1.1	0.3	2.1	90.3	1.8	1.1	2.9
8/1	369	369	-	-	-	1.6	0.3	-	1.9	18.6	5.9	0.3	6.3
8/2	830	460	0	400	60	27.1	186.1	0.0	213.3	925.0	38.6	186.1	224.7

C1 PRC for Signalled Lanes (%): -107.8 Total Delay for Signalled Lanes (pcuHr): 1282.34 Cycle Time (s): 90
PRC Over All Lanes (%): -107.8 Total Delay Over All Lanes(pcuHr): 1283.03

Full Input Data And Results

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case Evening Peak', Plan 1: 'Staging Plan No. 1')

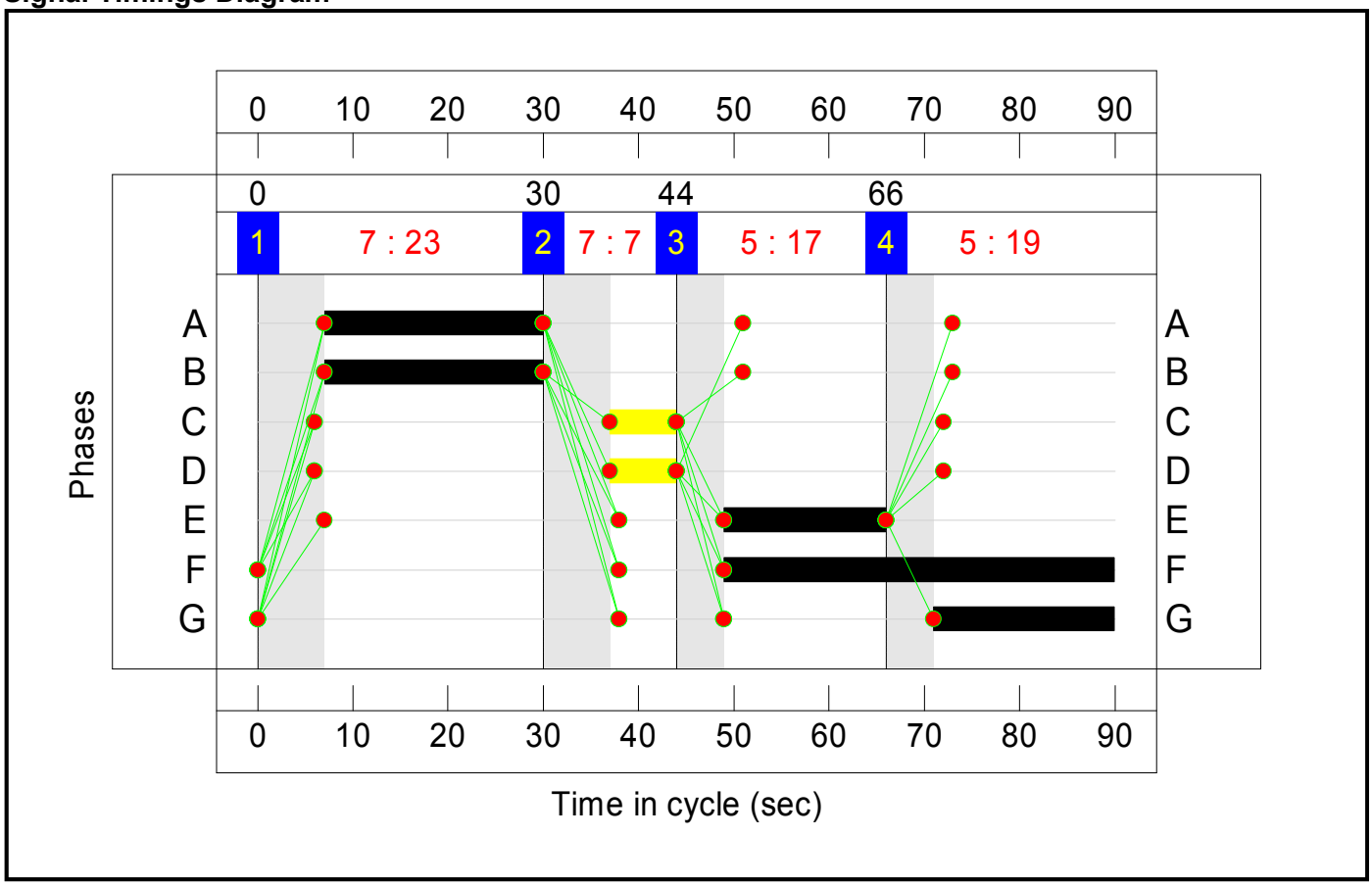
Stage Sequence Diagram



Stage Timings

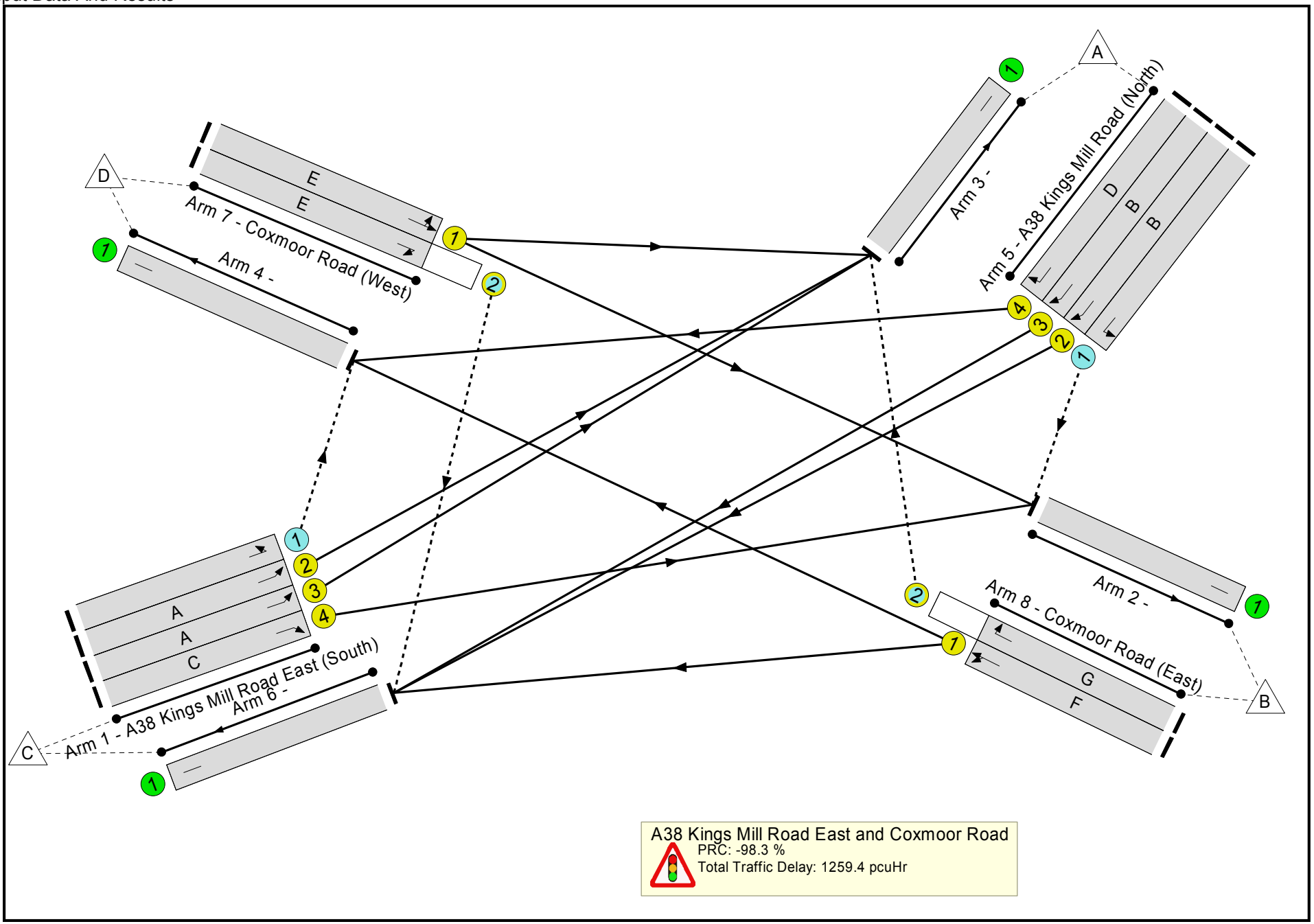
Stage	1	2	3	4
Duration	23	7	17	19
Change Point	0	30	44	66

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**178.5%**
A38 Kings Mill Road East and Coxmoor Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**178.5%**
1/1	A38 Kings Mill Road East (South) U-Turn	O	N/A	N/A	-		-	-	-	125	1900	944	13.2%
1/2	A38 Kings Mill Road East (South) Ahead	U	N/A	N/A	A		1	23	-	870	2000	533	163.1%
1/3	A38 Kings Mill Road East (South) Ahead	U	N/A	N/A	A		1	23	-	869	2000	533	162.9%
1/4	A38 Kings Mill Road East (South) Ahead	U	N/A	N/A	C		1	7	-	176	1800	160	110.0%
2/1		U	N/A	N/A	-		-	-	-	1454	Inf	Inf	0.0%
3/1		U	N/A	N/A	-		-	-	-	2603	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	663	Inf	Inf	0.0%
5/1	A38 Kings Mill Road (North) Left	O	N/A	N/A	-		-	-	-	772	1900	1024	75.4%
5/2	A38 Kings Mill Road (North) Ahead	U	N/A	N/A	B		1	23	-	952	2000	533	178.5%
5/3	A38 Kings Mill Road (North) Ahead	U	N/A	N/A	B		1	23	-	951	2000	533	178.3%
5/4	A38 Kings Mill Road (North) Right	U	N/A	N/A	D		1	7	-	174	1800	160	108.8%
6/1		U	N/A	N/A	-		-	-	-	2170	Inf	Inf	0.0%
7/1	Coxmoor Road (West) Ahead Left	U	N/A	N/A	E		1	17	-	656	1900	380	172.6%
7/2	Coxmoor Road (West) U-Turn	O	N/A	N/A	E		1	17	-	163	1800	120	135.8%

Full Input Data And Results

8/1	Coxmoor Road (East) Ahead Left	U	N/A	N/A	F		1	41	-	468	1900	887	52.8%
8/2	Coxmoor Road (East) Right	O	N/A	N/A	G		1	19	-	714	1800	400	178.5%

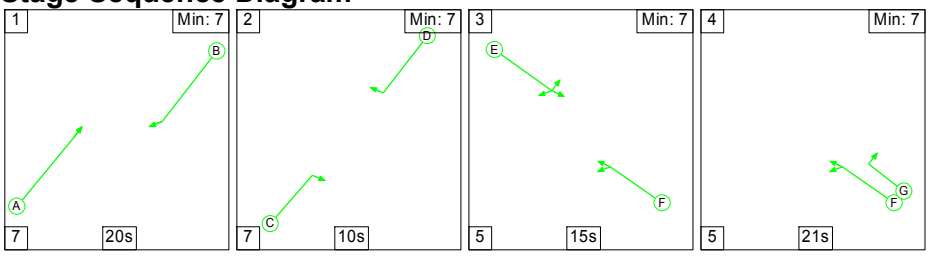
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**178**	**1179**	**60**	**154.2**	**1104.6**	**0.6**	**1259.4**	**-**	**-**	**-**	**-**
A38 Kings Mill Road East and Coxmoor Road	**-**	**-**	**178**	**1179**	**60**	**154.2**	**1104.6**	**0.6**	**1259.4**	**-**	**-**	**-**	**-**
1/1	125	125	58	67	0	0.1	0.1	-	0.1	4.2	0.6	0.1	0.7
1/2	870	533	-	-	-	22.9	169.6	-	192.5	796.6	30.6	169.6	200.2
1/3	869	533	-	-	-	22.8	169.1	-	192.0	795.2	30.5	169.1	199.7
1/4	176	160	-	-	-	2.6	11.7	-	14.4	293.8	4.8	11.7	16.5
2/1	1225	1225	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	1554	1554	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	649	649	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	772	772	0	772	0	1.4	1.5	-	2.9	13.7	12.0	1.5	13.5
5/2	952	533	-	-	-	27.3	210.5	-	237.7	899.0	36.0	210.5	246.5
5/3	951	533	-	-	-	27.2	210.0	-	237.2	897.9	35.9	210.0	245.9
5/4	174	160	-	-	-	2.5	11.0	-	13.5	279.0	4.7	11.0	15.7
6/1	1291	1291	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	656	380	-	-	-	18.9	139.2	-	158.1	867.3	26.4	139.2	165.6
7/2	163	120	120	0	0	3.0	23.3	0.6	26.8	592.8	5.3	23.3	28.5
8/1	468	468	-	-	-	2.2	0.6	-	2.8	21.3	8.2	0.6	8.7
8/2	714	400	0	340	60	23.3	158.1	0.0	181.4	914.7	33.0	158.1	191.1

C1 PRC for Signalled Lanes (%): -98.3 Total Delay for Signalled Lanes (pcuHr): 1256.32 Cycle Time (s): 90
PRC Over All Lanes (%): -98.3 Total Delay Over All Lanes(pcuHr): 1259.39

Full Input Data And Results

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Staging Plan No. 1')

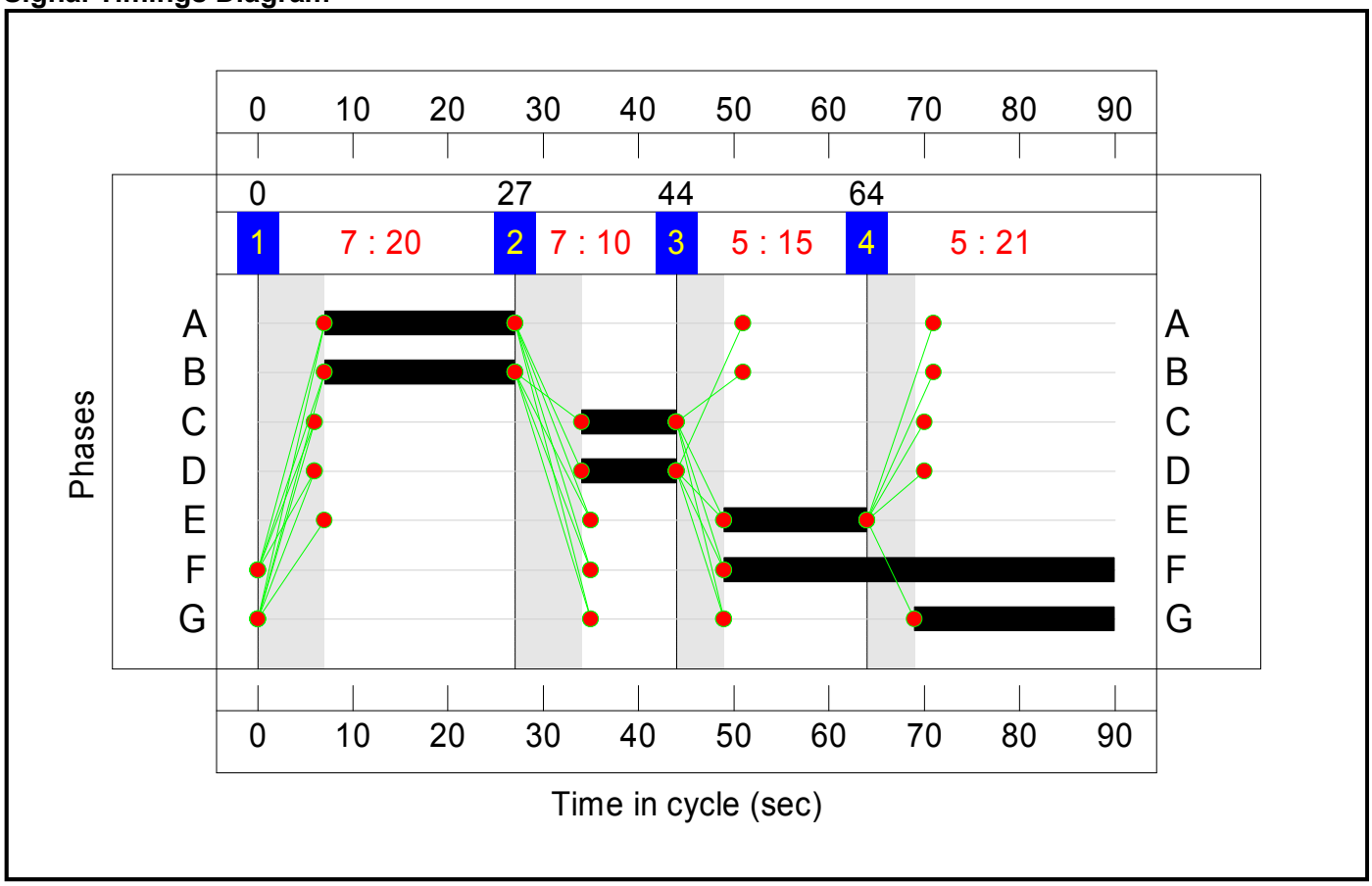
Stage Sequence Diagram



Stage Timings

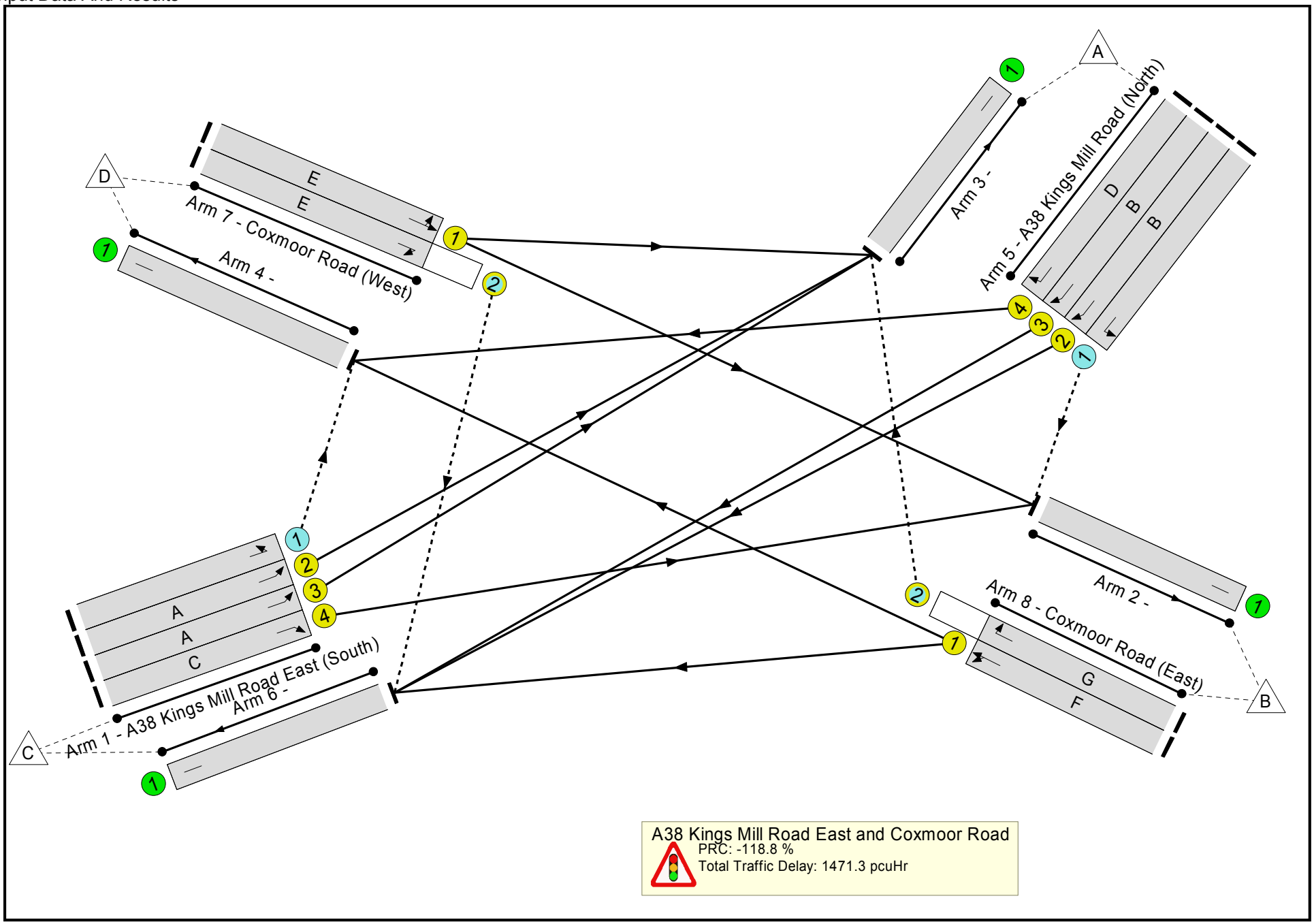
Stage	1	2	3	4
Duration	20	10	15	21
Change Point	0	27	44	64

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**196.9%**
A38 Kings Mill Road East and Coxmoor Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**196.9%**
1/1	A38 Kings Mill Road East (South) U-Turn	O	N/A	N/A	-		-	-	-	33	1900	1015	3.2%
1/2	A38 Kings Mill Road East (South) Ahead	U	N/A	N/A	A		1	20	-	771	2000	467	165.2%
1/3	A38 Kings Mill Road East (South) Ahead	U	N/A	N/A	A		1	20	-	771	2000	467	165.2%
1/4	A38 Kings Mill Road East (South) Ahead	U	N/A	N/A	C		1	10	-	386	1800	220	175.5%
2/1		U	N/A	N/A	-		-	-	-	1254	Inf	Inf	0.0%
3/1		U	N/A	N/A	-		-	-	-	2582	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	664	Inf	Inf	0.0%
5/1	A38 Kings Mill Road (North) Left	O	N/A	N/A	-		-	-	-	422	1900	1008	41.9%
5/2	A38 Kings Mill Road (North) Ahead	U	N/A	N/A	B		1	20	-	919	2000	467	196.9%
5/3	A38 Kings Mill Road (North) Ahead	U	N/A	N/A	B		1	20	-	919	2000	467	196.9%
5/4	A38 Kings Mill Road (North) Right	U	N/A	N/A	D		1	10	-	403	1800	220	183.2%
6/1		U	N/A	N/A	-		-	-	-	2081	Inf	Inf	0.0%
7/1	Coxmoor Road (West) Ahead Left	U	N/A	N/A	E		1	15	-	640	1900	338	189.5%
7/2	Coxmoor Road (West) U-Turn	O	N/A	N/A	E		1	15	-	93	1800	120	77.5%

Full Input Data And Results

8/1	Coxmoor Road (East) Ahead Left	U	N/A	N/A	F		1	41	-	378	1900	887	42.6%
8/2	Coxmoor Road (East) Right	O	N/A	N/A	G		1	21	-	846	1800	440	192.3%

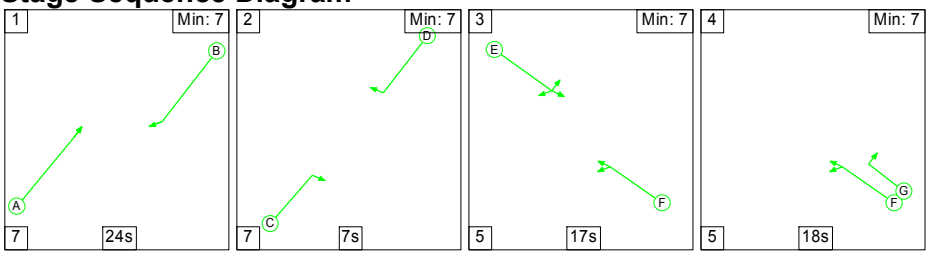
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**108**	**820**	**60**	**174.6**	**1296.4**	**0.3**	**1471.3**	**-**	**-**	**-**	**-**
A38 Kings Mill Road East and Coxmoor Road	**-**	**-**	**108**	**820**	**60**	**174.6**	**1296.4**	**0.3**	**1471.3**	**-**	**-**	**-**	**-**
1/1	33	33	15	18	0	0.0	0.0	-	0.0	2.6	0.1	0.0	0.1
1/2	771	467	-	-	-	21.0	153.4	-	174.4	814.4	28.1	153.4	181.5
1/3	771	467	-	-	-	21.0	153.4	-	174.4	814.4	28.1	153.4	181.5
1/4	386	220	-	-	-	10.6	84.1	-	94.8	884.1	13.8	84.1	97.9
2/1	877	877	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	1476	1476	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	481	481	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	422	422	0	422	0	0.4	0.4	-	0.7	6.4	4.5	0.4	4.8
5/2	919	467	-	-	-	29.0	227.2	-	256.2	1003.7	37.9	227.2	265.1
5/3	919	467	-	-	-	29.0	227.2	-	256.2	1003.7	37.9	227.2	265.1
5/4	403	220	-	-	-	11.5	92.6	-	104.1	929.7	14.6	92.6	107.2
6/1	1176	1176	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	640	338	-	-	-	20.2	152.2	-	172.4	969.8	27.0	152.2	179.2
7/2	93	93	93	0	0	0.8	1.5	0.3	2.7	103.9	2.0	1.5	3.6
8/1	378	378	-	-	-	1.7	0.4	-	2.0	19.5	6.2	0.4	6.6
8/2	846	440	0	380	60	29.2	204.0	0.0	233.3	992.7	40.7	204.0	244.8

C1 PRC for Signalled Lanes (%): -118.8 Total Delay for Signalled Lanes (pcuHr): 1470.57 Cycle Time (s): 90
PRC Over All Lanes (%): -118.8 Total Delay Over All Lanes(pcuHr): 1471.34

Full Input Data And Results

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Staging Plan No. 1')

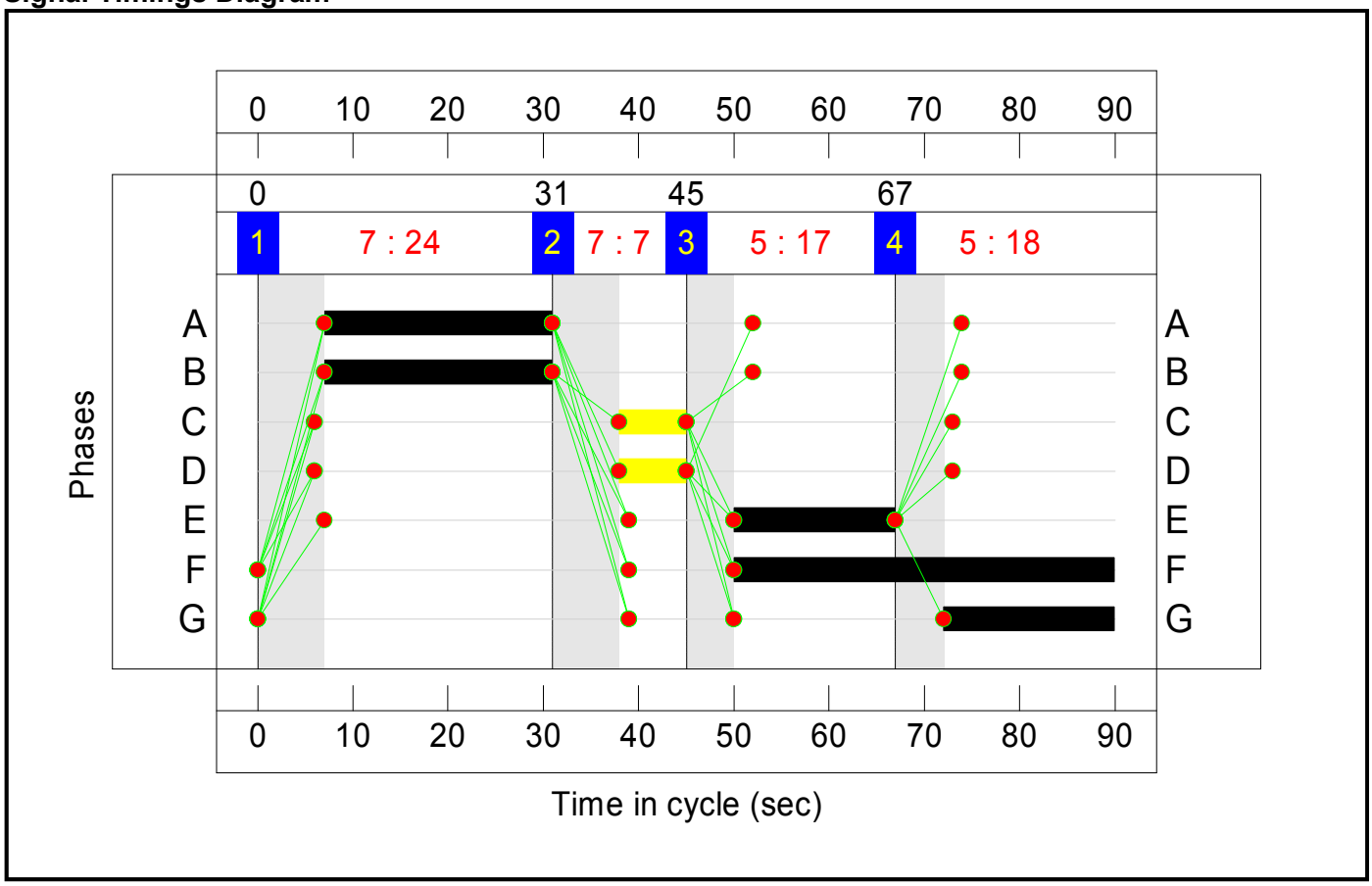
Stage Sequence Diagram



Stage Timings

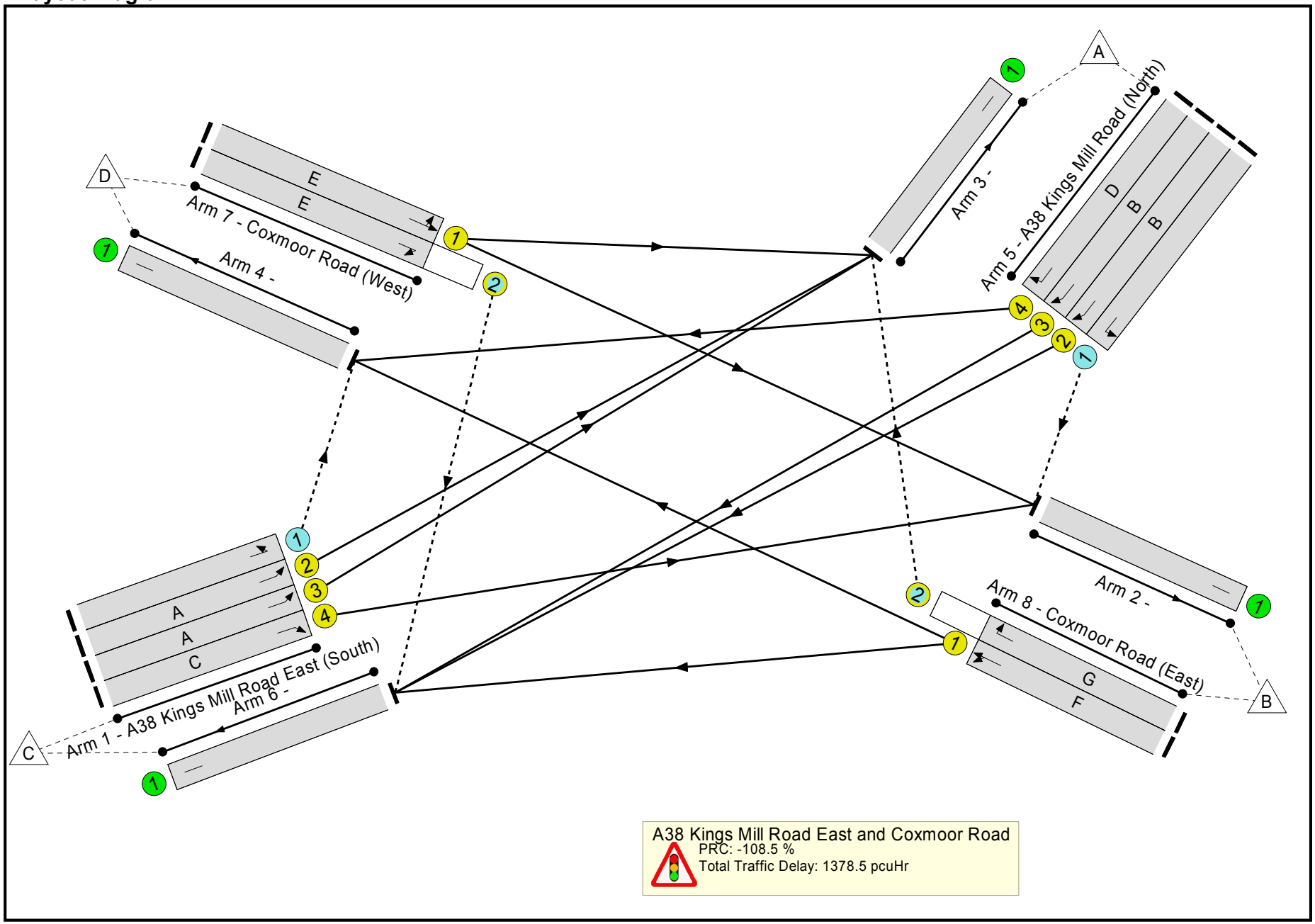
Stage	1	2	3	4
Duration	24	7	17	18
Change Point	0	31	45	67

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**187.6%**
A38 Kings Mill Road East and Coxmoor Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**187.6%**
1/1	A38 Kings Mill Road East (South) U-Turn	O	N/A	N/A	-		-	-	-	135	1900	943	14.3%
1/2	A38 Kings Mill Road East (South) Ahead	U	N/A	N/A	A		1	24	-	930	2000	556	167.4%
1/3	A38 Kings Mill Road East (South) Ahead	U	N/A	N/A	A		1	24	-	930	2000	556	167.4%
1/4	A38 Kings Mill Road East (South) Ahead	U	N/A	N/A	C		1	7	-	176	1800	160	110.0%
2/1		U	N/A	N/A	-		-	-	-	1469	Inf	Inf	0.0%
3/1		U	N/A	N/A	-		-	-	-	2737	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	691	Inf	Inf	0.0%
5/1	A38 Kings Mill Road (North) Left	O	N/A	N/A	-		-	-	-	777	1900	1024	75.9%
5/2	A38 Kings Mill Road (North) Ahead	U	N/A	N/A	B		1	24	-	1009	2000	556	181.6%
5/3	A38 Kings Mill Road (North) Ahead	U	N/A	N/A	B		1	24	-	1008	2000	556	181.4%
5/4	A38 Kings Mill Road (North) Right	U	N/A	N/A	D		1	7	-	189	1800	160	118.1%
6/1		U	N/A	N/A	-		-	-	-	2296	Inf	Inf	0.0%
7/1	Coxmoor Road (West) Ahead Left	U	N/A	N/A	E		1	17	-	680	1900	380	178.9%
7/2	Coxmoor Road (West) U-Turn	O	N/A	N/A	E		1	17	-	176	1800	120	146.7%

Full Input Data And Results

8/1	Coxmoor Road (East) Ahead Left	U	N/A	N/A	F		1	40	-	470	1900	866	54.3%
8/2	Coxmoor Road (East) Right	O	N/A	N/A	G		1	18	-	713	1800	380	187.6%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**182**	**1170**	**60**	**166.4**	**1211.5**	**0.6**	**1378.5**	**-**	**-**	**-**	**-**
A38 Kings Mill Road East and Coxmoor Road	**-**	**-**	**182**	**1170**	**60**	**166.4**	**1211.5**	**0.6**	**1378.5**	**-**	**-**	**-**	**-**
1/1	135	135	62	74	0	0.1	0.1	-	0.2	4.3	0.7	0.1	0.8
1/2	930	556	-	-	-	24.9	188.5	-	213.4	826.0	33.2	188.5	221.6
1/3	930	556	-	-	-	24.9	188.5	-	213.4	826.0	33.2	188.5	221.6
1/4	176	160	-	-	-	2.6	11.7	-	14.4	293.7	4.8	11.7	16.5
2/1	1225	1225	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	1583	1583	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	662	662	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	777	777	0	777	0	1.4	1.6	-	3.0	13.9	12.1	1.6	13.6
5/2	1009	556	-	-	-	29.1	227.8	-	257.0	916.8	38.4	227.8	266.2
5/3	1008	556	-	-	-	29.1	227.3	-	256.4	915.8	38.3	227.3	265.6
5/4	189	160	-	-	-	3.3	17.2	-	20.5	390.3	5.5	17.2	22.7
6/1	1334	1334	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	680	380	-	-	-	20.5	151.1	-	171.6	908.5	28.2	151.1	179.3
7/2	176	120	120	0	0	3.8	29.5	0.6	33.9	694.1	6.2	29.5	35.7
8/1	470	470	-	-	-	2.3	0.6	-	2.9	22.3	8.5	0.6	9.1
8/2	713	380	0	320	60	24.3	167.6	0.0	191.9	968.9	33.9	167.6	201.4

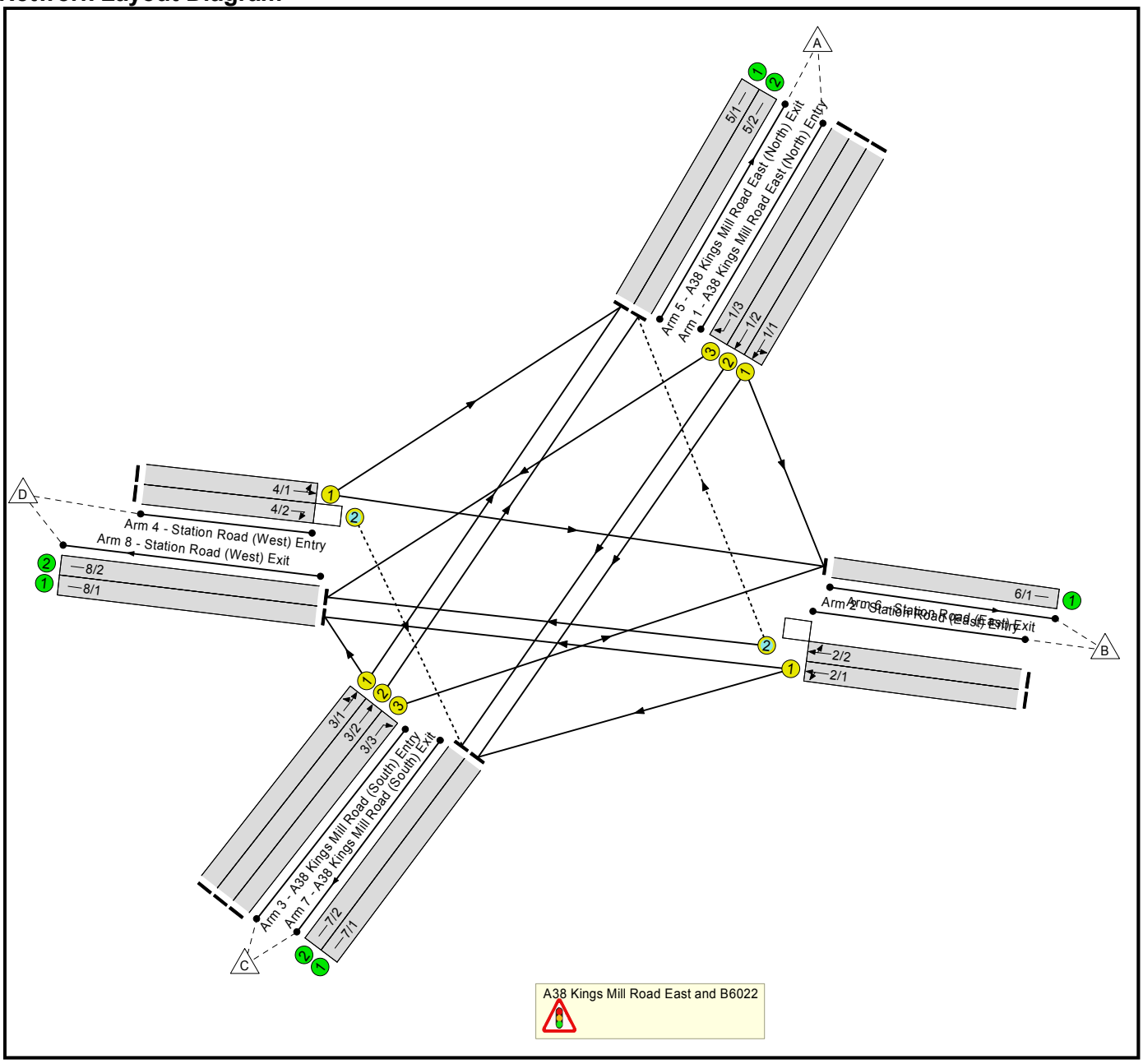
C1 PRC for Signalled Lanes (%): -108.5 Total Delay for Signalled Lanes (pcuHr): 1375.35 Cycle Time (s): 90
PRC Over All Lanes (%): -108.5 Total Delay Over All Lanes(pcuHr): 1378.50

Full Input Data And Results

User and Project Details

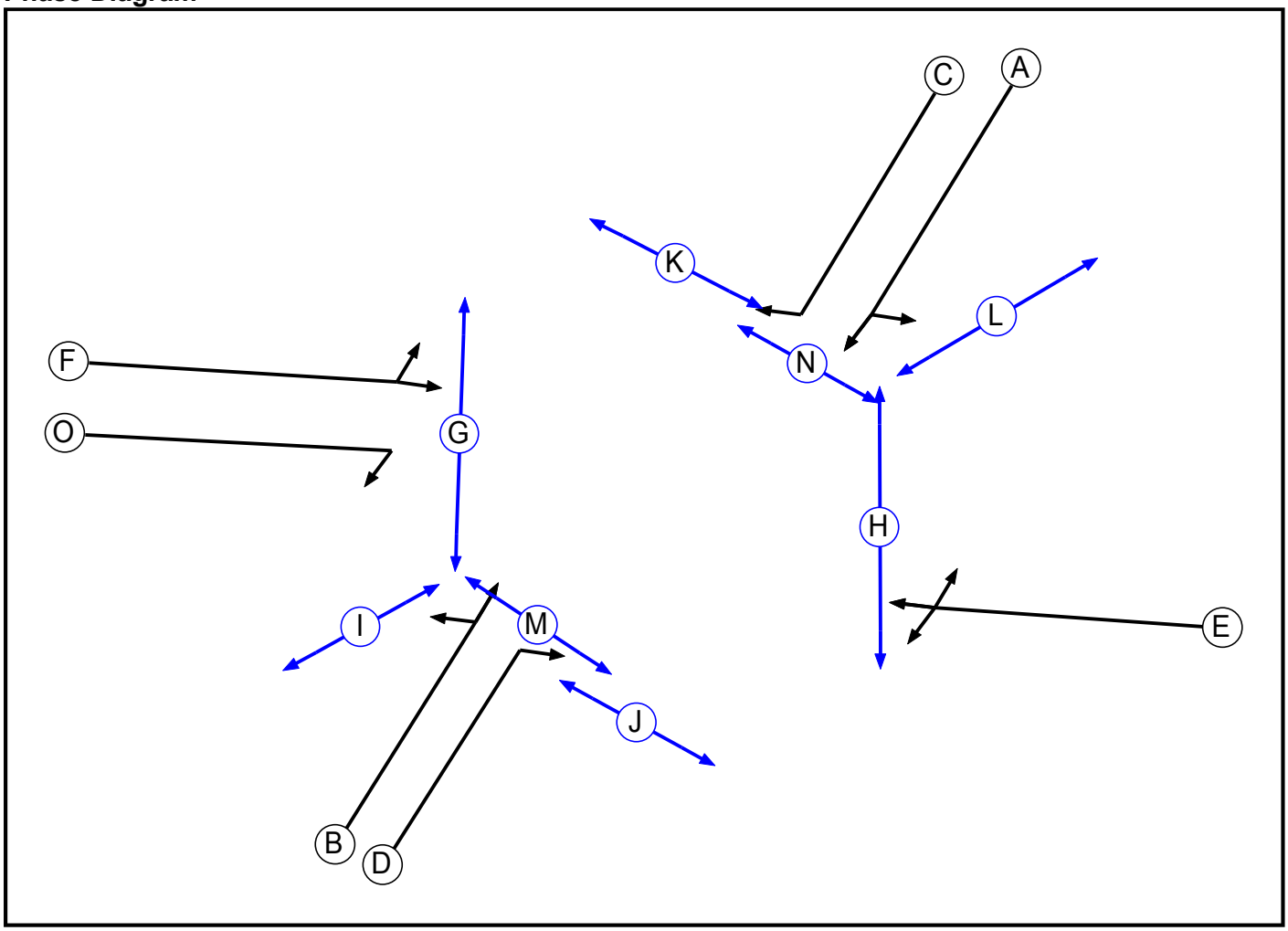
Project:	
Title:	
Location:	
File name:	Junction 5 2016.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

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
I	Pedestrian		7	7
J	Pedestrian		7	7
K	Pedestrian		7	7
L	Pedestrian		7	7
M	Pedestrian		7	7
N	Pedestrian		7	7
O	Traffic		7	7

Full Input Data And Results

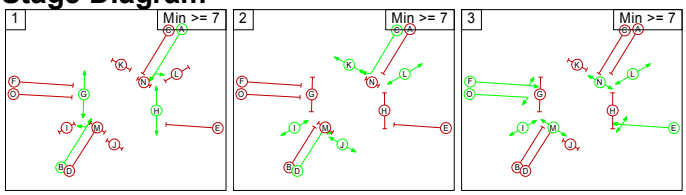
Phase Intergreens Matrix

Terminating Phase	Starting Phase														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
A		-	-	7	8	8	-	-	-	11	-	7	7	7	7
B	-		7	-	8	8	-	-	7	-	11	-	7	7	8
C	-	12		-	7	7	11	12	-	-	-	-	5	5	5
D	12	-	-		7	7	11	12	-	-	-	-	5	5	5
E	5	9	5	5		-	9	5	-	10	11	-	-	-	-
F	9	5	5	5	-		5	9	-	10	8	-	-	-	-
G	-	-	0	0	0	0		-	-	-	-	-	-	-	0
H	-	-	0	0	0	0	-		-	-	-	-	-	-	0
I	-	9	-	-	-	-	-	-		-	-	-	-	-	-
J	6	-	-	-	7	7	-	-	-		-	-	-	-	7
K	-	6	-	-	7	7	-	-	-	-		-	-	-	-
L	7	-	-	-	-	-	-	-	-	-	-		-	-	-
M	0	0	0	0	-	-	-	-	-	-	-	-		-	-
N	0	0	0	0	-	-	-	-	-	-	-	-	-		-
O	5	5	5	5	-	-	5	0	-	11	-	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A B G H
2	C D I J K L
3	E F I L M N O

Stage Diagram



Phase Delays

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

Prohibited Stage Change

From Stage	To Stage		
	1	2	3
1		11	8
2	12		7
3	9	11	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A38 Kings Mill Road East and B6022

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)
2/2 (Station Road (East) Entry)	5/2 (Right)	1440	0	4/1	1.09	All	2.00	2.00	0.50	2	2.00
4/2 (Station Road (West) Entry)	7/2 (Right)	1440	0	2/2	1.09	All	2.00	-	0.50	2	2.00

Full Input Data And Results

Lane Input Data

Junction: A38 Kings Mill Road East and B6022												
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 (A38 Kings Mill Road East (North) Entry)	U	A	2	3	60.0	User	1900	-	-	-	-	-
1/2 (A38 Kings Mill Road East (North) Entry)	U	A	2	3	22.6	User	2000	-	-	-	-	-
1/3 (A38 Kings Mill Road East (North) Entry)	U	C	2	3	14.8	User	1800	-	-	-	-	-
2/1 (Station Road (East) Entry)	U	E	2	3	60.0	User	1900	-	-	-	-	-
2/2 (Station Road (East) Entry)	O	E	2	3	12.2	User	1800	-	-	-	-	-
3/1 (A38 Kings Mill Road (South) Entry)	U	B	2	3	60.0	User	1900	-	-	-	-	-
3/2 (A38 Kings Mill Road (South) Entry)	U	B	2	3	27.8	User	2000	-	-	-	-	-
3/3 (A38 Kings Mill Road (South) Entry)	U	D	2	3	18.3	User	1800	-	-	-	-	-
4/1 (Station Road (West) Entry)	U	F	2	3	60.0	User	1900	-	-	-	-	-
4/2 (Station Road (West) Entry)	O	O	2	3	10.4	User	1800	-	-	-	-	-
5/1 (A38 Kings Mill Road East (North) Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/2 (A38 Kings Mill Road East (North) Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Station Road (East) Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (A38 Kings Mill Road (South) Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

7/2 (A38 Kings Mill Road (South) Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (Station Road (West) Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/2 (Station Road (West) Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2032 Reference Case Morning Peak'	08:00	09:00	01:00	
2: '2032 Development Case Morning Peak'	08:00	09:00	01:00	
3: '2032 Reference Case Evening Peak'	17:00	18:00	01:00	
4: '2032 Development Case Evening Peak'	17:00	18:00	01:00	

Scenario 1: 'AM Reference Case' (FG1: '2032 Reference Case Morning Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	195	1260	341	1796
	B	66	0	176	196	438
	C	1384	48	0	295	1727
	D	536	303	40	0	879
	Tot.	1986	546	1476	832	4840

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: AM Reference Case
Junction: A38 Kings Mill Road East and B6022	
1/1	709
1/2	746
1/3	341
2/1	372
2/2	66
3/1	818
3/2	861
3/3	48
4/1	839
4/2	40
5/1	1059
5/2	927
6/1	546
7/1	690
7/2	786
8/1	491
8/2	341

Full Input Data And Results

Lane Saturation Flows

Junction: A38 Kings Mill Road East and B6022								
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 (A38 Kings Mill Road East (North) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
1/2 (A38 Kings Mill Road East (North) Entry Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
1/3 (A38 Kings Mill Road East (North) Entry Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Station Road (East) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/2 (Station Road (East) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A38 Kings Mill Road (South) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (A38 Kings Mill Road (South) Entry Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
3/3 (A38 Kings Mill Road (South) Entry Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Station Road (West) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (Station Road (West) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A38 Kings Mill Road East (North) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A38 Kings Mill Road East (North) Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Station Road (East) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A38 Kings Mill Road (South) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (A38 Kings Mill Road (South) Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
8/1 (Station Road (West) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Station Road (West) Exit Lane 2)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case Evening Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	87	1693	429	2209
	B	132	0	180	665	977
	C	1530	117	0	14	1661
	D	330	301	64	0	695
	Tot.	1992	505	1937	1108	5542

Traffic Lane Flows

Lane	Scenario 2: PM Reference Case
Junction: A38 Kings Mill Road East and B6022	
1/1	867
1/2	913
1/3	429
2/1	752
2/2	225
3/1	752
3/2	792
3/3	117
4/1	631
4/2	64
5/1	1068
5/2	924
6/1	505
7/1	960
7/2	977
8/1	586
8/2	522

Full Input Data And Results

Lane Saturation Flows

Junction: A38 Kings Mill Road East and B6022								
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 (A38 Kings Mill Road East (North) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
1/2 (A38 Kings Mill Road East (North) Entry Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
1/3 (A38 Kings Mill Road East (North) Entry Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Station Road (East) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/2 (Station Road (East) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A38 Kings Mill Road (South) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (A38 Kings Mill Road (South) Entry Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
3/3 (A38 Kings Mill Road (South) Entry Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Station Road (West) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (Station Road (West) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A38 Kings Mill Road East (North) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A38 Kings Mill Road East (North) Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Station Road (East) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A38 Kings Mill Road (South) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (A38 Kings Mill Road (South) Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
8/1 (Station Road (West) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Station Road (West) Exit Lane 2)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	220	1343	373	1936
	B	81	0	219	250	550
	C	1462	54	0	321	1837
	D	550	330	41	0	921
	Tot.	2093	604	1603	944	5244

Traffic Lane Flows

Lane	Scenario 3: AM Development Scenario
Junction: A38 Kings Mill Road East and B6022	
1/1	761
1/2	802
1/3	373
2/1	469
2/2	81
3/1	869
3/2	914
3/3	54
4/1	880
4/2	41
5/1	1098
5/2	995
6/1	604
7/1	760
7/2	843
8/1	571
8/2	373

Full Input Data And Results

Lane Saturation Flows

Junction: A38 Kings Mill Road East and B6022								
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 (A38 Kings Mill Road East (North) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
1/2 (A38 Kings Mill Road East (North) Entry Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
1/3 (A38 Kings Mill Road East (North) Entry Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Station Road (East) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/2 (Station Road (East) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A38 Kings Mill Road (South) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (A38 Kings Mill Road (South) Entry Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
3/3 (A38 Kings Mill Road (South) Entry Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Station Road (West) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (Station Road (West) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A38 Kings Mill Road East (North) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A38 Kings Mill Road East (North) Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Station Road (East) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A38 Kings Mill Road (South) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (A38 Kings Mill Road (South) Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
8/1 (Station Road (West) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Station Road (West) Exit Lane 2)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	102	1788	447	2337
	B	139	0	196	710	1045
	C	1667	146	0	15	1828
	D	364	379	73	0	816
	Tot.	2170	627	2057	1172	6026

Traffic Lane Flows

Lane	Scenario 4: PM Development Scenario
Junction: A38 Kings Mill Road East and B6022	
1/1	921
1/2	969
1/3	447
2/1	813
2/2	232
3/1	819
3/2	863
3/3	146
4/1	743
4/2	73
5/1	1168
5/2	1002
6/1	627
7/1	1015
7/2	1042
8/1	632
8/2	540

Full Input Data And Results

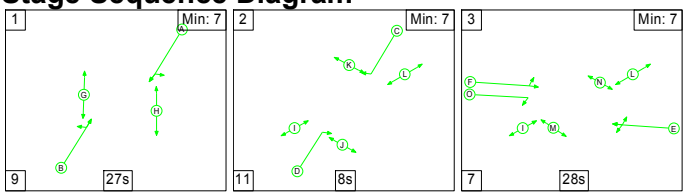
Lane Saturation Flows

Junction: A38 Kings Mill Road East and B6022								
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 (A38 Kings Mill Road East (North) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
1/2 (A38 Kings Mill Road East (North) Entry Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
1/3 (A38 Kings Mill Road East (North) Entry Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Station Road (East) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/2 (Station Road (East) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A38 Kings Mill Road (South) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (A38 Kings Mill Road (South) Entry Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
3/3 (A38 Kings Mill Road (South) Entry Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Station Road (West) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (Station Road (West) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A38 Kings Mill Road East (North) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A38 Kings Mill Road East (North) Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Station Road (East) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A38 Kings Mill Road (South) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (A38 Kings Mill Road (South) Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
8/1 (Station Road (West) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Station Road (West) Exit Lane 2)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 1: 'AM Reference Case' (FG1: '2032 Reference Case Morning Peak', Plan 1: 'Staging Plan No. 1')

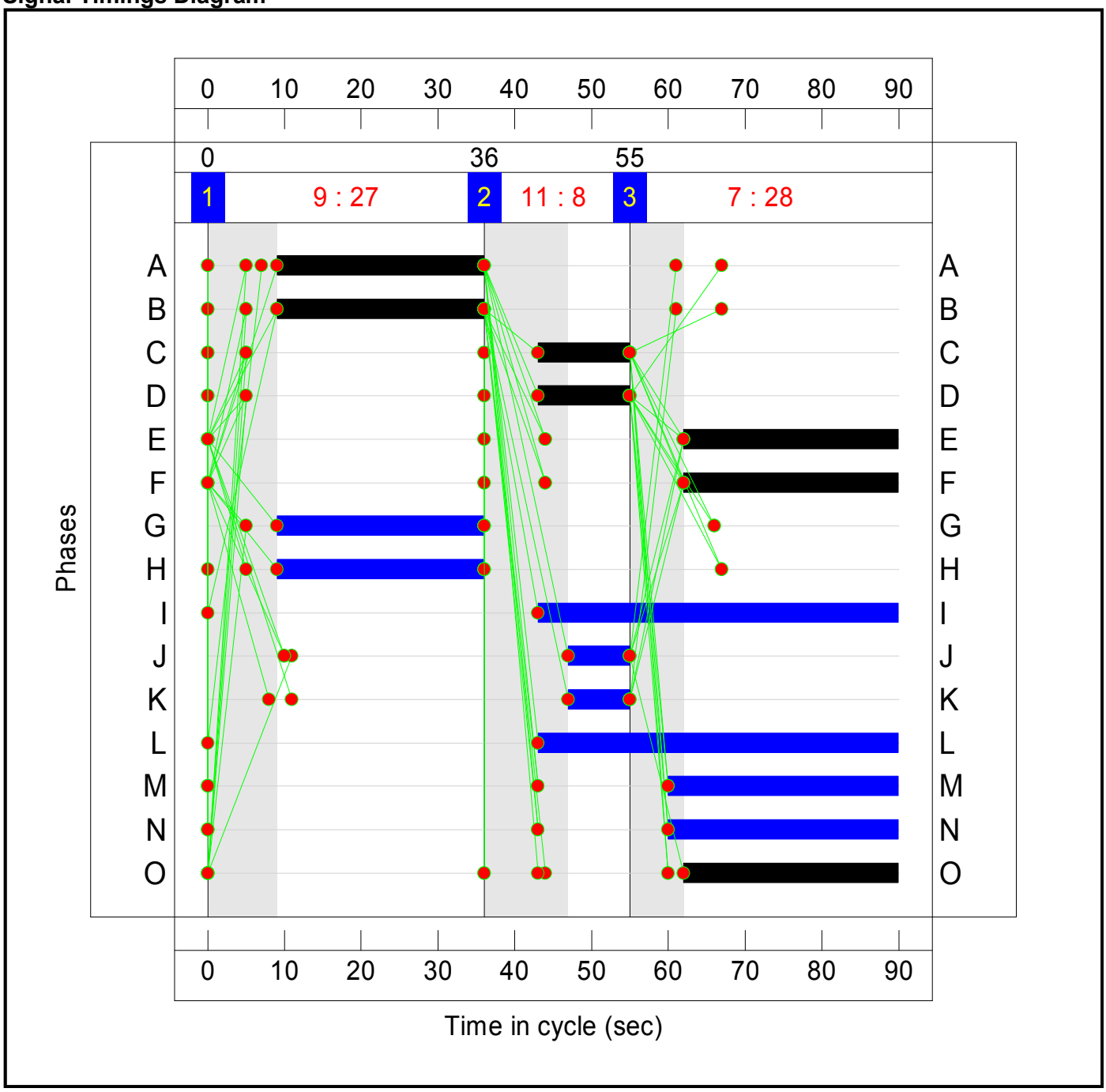
Stage Sequence Diagram



Stage Timings

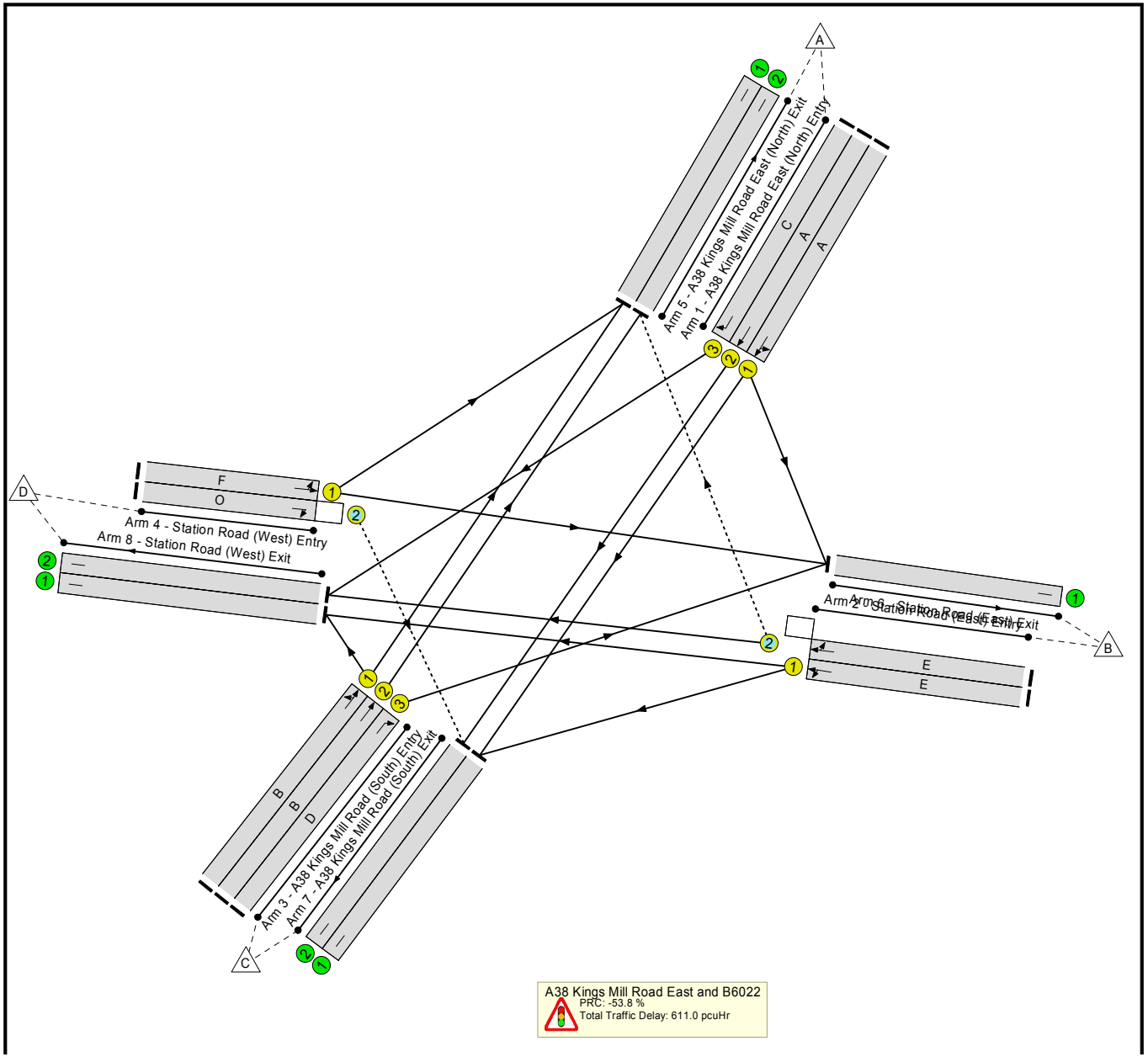
Stage	1	2	3
Duration	27	8	28
Change Point	0	36	55

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**138.4%**
A38 Kings Mill Road East and B6022	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**138.4%**
1/1	A38 Kings Mill Road East (North) Entry Left Ahead	U	N/A	N/A	A		1	27	-	709	1900	591	119.9%
1/2	A38 Kings Mill Road East (North) Entry Ahead	U	N/A	N/A	A		1	27	-	746	2000	622	119.9%
1/3	A38 Kings Mill Road East (North) Entry Right	U	N/A	N/A	C		1	12	-	341	1800	260	131.2%
2/1	Station Road (East) Entry Left Ahead	U	N/A	N/A	E		1	28	-	372	1900	612	60.8%
2/2	Station Road (East) Entry Right Ahead	O	N/A	N/A	E		1	28	-	66	1800	80	82.5%
3/1	A38 Kings Mill Road (South) Entry Ahead Left	U	N/A	N/A	B		1	27	-	818	1900	591	138.4%
3/2	A38 Kings Mill Road (South) Entry Ahead	U	N/A	N/A	B		1	27	-	861	2000	622	138.4%
3/3	A38 Kings Mill Road (South) Entry Right	U	N/A	N/A	D		1	12	-	48	1800	260	18.5%
4/1	Station Road (West) Entry Left Ahead	U	N/A	N/A	F		1	28	-	839	1900	612	137.0%
4/2	Station Road (West) Entry Right	O	N/A	N/A	O		1	28	-	40	1800	512	7.8%
5/1	A38 Kings Mill Road East (North) Exit	U	N/A	N/A	-		-	-	-	1059	Inf	Inf	0.0%
5/2	A38 Kings Mill Road East (North) Exit	U	N/A	N/A	-		-	-	-	927	Inf	Inf	0.0%

Full Input Data And Results

6/1	Station Road (East) Exit	U	N/A	N/A	-		-	-	-	546	Inf	Inf	0.0%
7/1	A38 Kings Mill Road (South) Exit	U	N/A	N/A	-		-	-	-	690	Inf	Inf	0.0%
7/2	A38 Kings Mill Road (South) Exit	U	N/A	N/A	-		-	-	-	786	Inf	Inf	0.0%
8/1	Station Road (West) Exit	U	N/A	N/A	-		-	-	-	491	Inf	Inf	0.0%
8/2	Station Road (West) Exit	U	N/A	N/A	-		-	-	-	341	Inf	Inf	0.0%

Full Input Data And Results

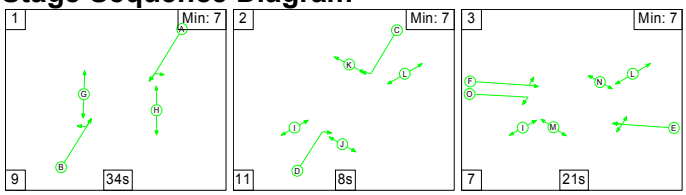
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**40**	**0**	**66**	**87.0**	**523.5**	**0.5**	**611.0**	**-**	**-**	**-**	**-**
A38 Kings Mill Road East and B6022	**-**	**-**	**40**	**0**	**66**	**87.0**	**523.5**	**0.5**	**611.0**	**-**	**-**	**-**	**-**
1/1	709	591	-	-	-	11.2	61.8	-	73.0	370.7	20.7	61.8	82.5
1/2	746	622	-	-	-	11.8	64.8	-	76.5	369.4	21.7	64.8	86.5
1/3	341	260	-	-	-	6.5	42.5	-	49.1	517.9	10.5	42.5	53.1
2/1	372	372	-	-	-	2.7	0.8	-	3.4	33.2	7.7	0.8	8.5
2/2	66	66	0	0	66	0.4	1.9	0.5	2.7	148.2	1.2	1.9	3.0
3/1	818	591	-	-	-	16.8	115.2	-	132.1	581.2	26.1	115.2	141.3
3/2	861	622	-	-	-	17.7	121.2	-	138.9	580.7	27.5	121.2	148.7
3/3	48	48	-	-	-	0.5	0.1	-	0.6	42.3	1.1	0.1	1.2
4/1	839	612	-	-	-	19.2	115.2	-	134.4	576.7	31.6	115.2	146.8
4/2	40	40	40	0	0	0.2	0.0	0.0	0.3	25.1	0.7	0.0	0.7
5/1	769	769	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	688	688	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	432	432	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	605	605	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	662	662	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	409	409	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	260	260	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -53.8 Total Delay for Signalled Lanes (pcuHr): 610.96 Cycle Time (s): 90
PRC Over All Lanes (%): -53.8 Total Delay Over All Lanes(pcuHr): 610.96

Full Input Data And Results

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case Evening Peak', Plan 1: 'Staging Plan No. 1')

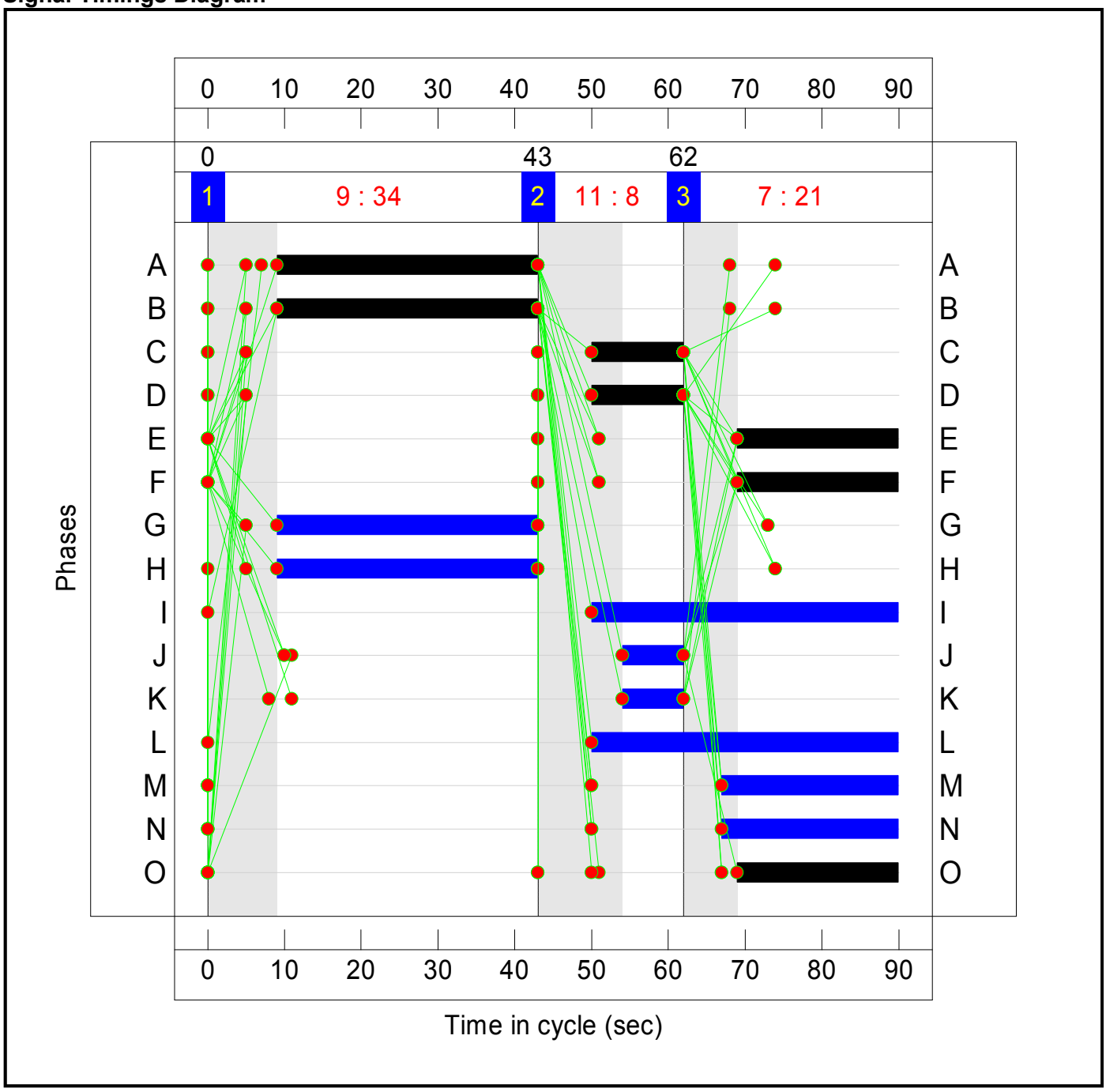
Stage Sequence Diagram



Stage Timings

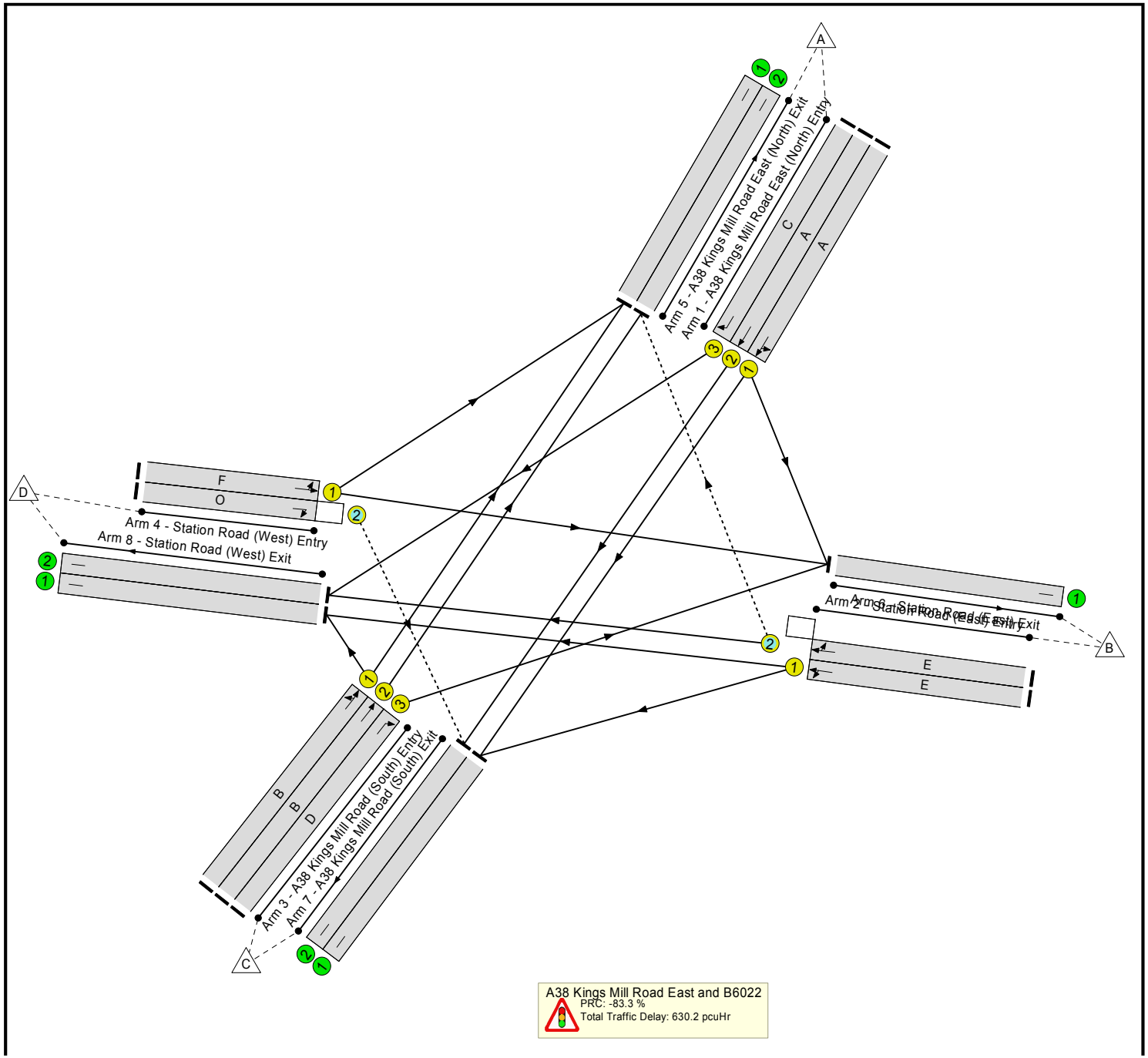
Stage	1	2	3
Duration	34	8	21
Change Point	0	43	62

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**165.0%**
A38 Kings Mill Road East and B6022	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**165.0%**
1/1	A38 Kings Mill Road East (North) Entry Left Ahead	U	N/A	N/A	A		1	34	-	867	1900	739	117.3%
1/2	A38 Kings Mill Road East (North) Entry Ahead	U	N/A	N/A	A		1	34	-	913	2000	778	117.4%
1/3	A38 Kings Mill Road East (North) Entry Right	U	N/A	N/A	C		1	12	-	429	1800	260	165.0%
2/1	Station Road (East) Entry Left Ahead	U	N/A	N/A	E		1	21	-	752	1900	464	161.9%
2/2	Station Road (East) Entry Right Ahead	O	N/A	N/A	E		1	21	-	225	1800	136	165.0%
3/1	A38 Kings Mill Road (South) Entry Ahead Left	U	N/A	N/A	B		1	34	-	752	1900	739	101.8%
3/2	A38 Kings Mill Road (South) Entry Ahead	U	N/A	N/A	B		1	34	-	792	2000	778	101.8%
3/3	A38 Kings Mill Road (South) Entry Right	U	N/A	N/A	D		1	12	-	117	1800	260	45.0%
4/1	Station Road (West) Entry Left Ahead	U	N/A	N/A	F		1	21	-	631	1900	464	135.9%
4/2	Station Road (West) Entry Right	O	N/A	N/A	O		1	21	-	64	1800	339	18.9%
5/1	A38 Kings Mill Road East (North) Exit	U	N/A	N/A	-		-	-	-	1068	Inf	Inf	0.0%
5/2	A38 Kings Mill Road East (North) Exit	U	N/A	N/A	-		-	-	-	924	Inf	Inf	0.0%

Full Input Data And Results

6/1	Station Road (East) Exit	U	N/A	N/A	-		-	-	-	505	Inf	Inf	0.0%
7/1	A38 Kings Mill Road (South) Exit	U	N/A	N/A	-		-	-	-	960	Inf	Inf	0.0%
7/2	A38 Kings Mill Road (South) Exit	U	N/A	N/A	-		-	-	-	977	Inf	Inf	0.0%
8/1	Station Road (West) Exit	U	N/A	N/A	-		-	-	-	586	Inf	Inf	0.0%
8/2	Station Road (West) Exit	U	N/A	N/A	-		-	-	-	522	Inf	Inf	0.0%

Full Input Data And Results

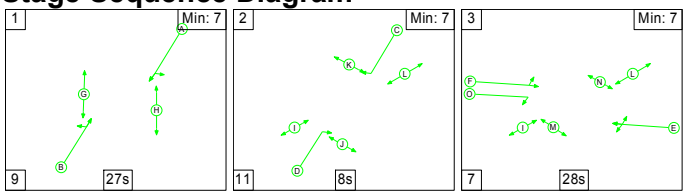
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**64**	**0**	**80**	**94.2**	**535.6**	**0.5**	**630.2**	**-**	**-**	**-**	**-**
A38 Kings Mill Road East and B6022	**-**	**-**	**64**	**0**	**80**	**94.2**	**535.6**	**0.5**	**630.2**	**-**	**-**	**-**	**-**
1/1	867	739	-	-	-	12.0	67.3	-	79.3	329.3	24.9	67.3	92.2
1/2	913	778	-	-	-	12.7	70.8	-	83.5	329.3	26.2	70.8	97.0
1/3	429	260	-	-	-	11.6	85.8	-	97.3	816.6	16.2	85.8	101.9
2/1	752	464	-	-	-	22.2	145.1	-	167.2	800.6	32.6	145.1	177.6
2/2	225	136	0	0	80	6.5	45.6	0.5	52.5	839.8	9.9	45.6	55.4
3/1	752	739	-	-	-	6.3	17.4	-	23.7	113.3	19.1	17.4	36.5
3/2	792	778	-	-	-	6.7	18.1	-	24.7	112.4	20.2	18.1	38.2
3/3	117	117	-	-	-	1.1	0.4	-	1.6	47.8	2.7	0.4	3.1
4/1	631	464	-	-	-	14.7	85.1	-	99.8	569.4	23.6	85.1	108.7
4/2	64	64	64	0	0	0.5	0.1	0.0	0.6	35.1	1.2	0.1	1.4
5/1	968	968	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	858	858	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	413	413	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	776	776	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	842	842	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	367	367	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	316	316	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -83.3 Total Delay for Signalled Lanes (pcuHr): 630.24 Cycle Time (s): 90
PRC Over All Lanes (%): -83.3 Total Delay Over All Lanes(pcuHr): 630.24

Full Input Data And Results

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Staging Plan No. 1')

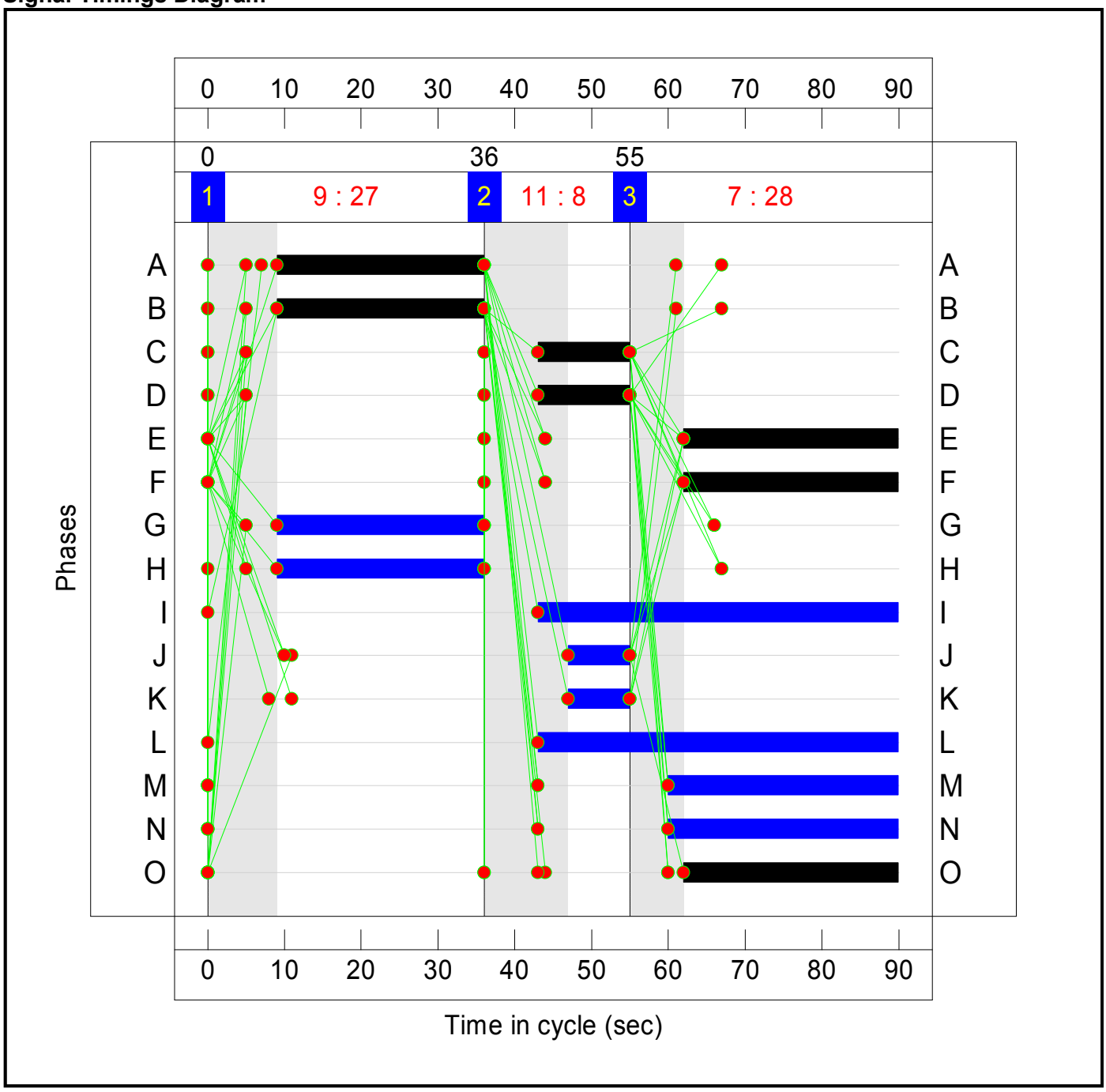
Stage Sequence Diagram



Stage Timings

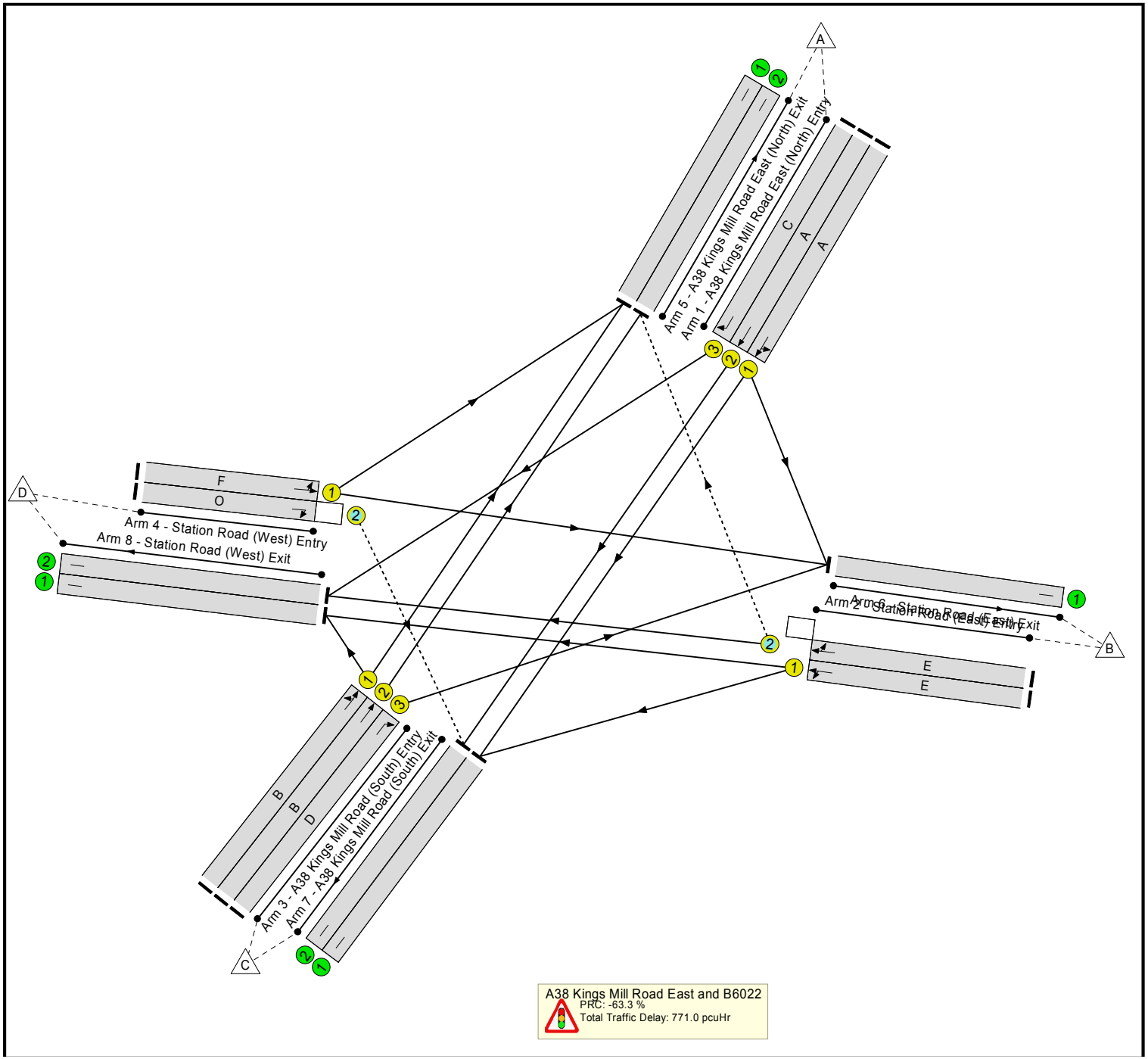
Stage	1	2	3
Duration	27	8	28
Change Point	0	36	55

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**147.0%**
A38 Kings Mill Road East and B6022	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**147.0%**
1/1	A38 Kings Mill Road East (North) Entry Left Ahead	U	N/A	N/A	A		1	27	-	761	1900	591	128.7%
1/2	A38 Kings Mill Road East (North) Entry Ahead	U	N/A	N/A	A		1	27	-	802	2000	622	128.9%
1/3	A38 Kings Mill Road East (North) Entry Right	U	N/A	N/A	C		1	12	-	373	1800	260	143.5%
2/1	Station Road (East) Entry Left Ahead	U	N/A	N/A	E		1	28	-	469	1900	612	76.6%
2/2	Station Road (East) Entry Right Ahead	O	N/A	N/A	E		1	28	-	81	1800	80	101.3%
3/1	A38 Kings Mill Road (South) Entry Ahead Left	U	N/A	N/A	B		1	27	-	869	1900	591	147.0%
3/2	A38 Kings Mill Road (South) Entry Ahead	U	N/A	N/A	B		1	27	-	914	2000	622	146.9%
3/3	A38 Kings Mill Road (South) Entry Right	U	N/A	N/A	D		1	12	-	54	1800	260	20.8%
4/1	Station Road (West) Entry Left Ahead	U	N/A	N/A	F		1	28	-	880	1900	612	143.7%
4/2	Station Road (West) Entry Right	O	N/A	N/A	O		1	28	-	41	1800	512	8.0%
5/1	A38 Kings Mill Road East (North) Exit	U	N/A	N/A	-		-	-	-	1098	Inf	Inf	0.0%
5/2	A38 Kings Mill Road East (North) Exit	U	N/A	N/A	-		-	-	-	995	Inf	Inf	0.0%

Full Input Data And Results

6/1	Station Road (East) Exit	U	N/A	N/A	-		-	-	-	604	Inf	Inf	0.0%
7/1	A38 Kings Mill Road (South) Exit	U	N/A	N/A	-		-	-	-	760	Inf	Inf	0.0%
7/2	A38 Kings Mill Road (South) Exit	U	N/A	N/A	-		-	-	-	843	Inf	Inf	0.0%
8/1	Station Road (West) Exit	U	N/A	N/A	-		-	-	-	571	Inf	Inf	0.0%
8/2	Station Road (West) Exit	U	N/A	N/A	-		-	-	-	373	Inf	Inf	0.0%

Full Input Data And Results

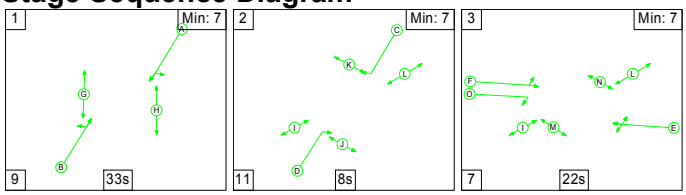
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**41**	**0**	**80**	**103.1**	**667.3**	**0.6**	**771.0**	**-**	**-**	**-**	**-**
A38 Kings Mill Road East and B6022	**-**	**-**	**41**	**0**	**80**	**103.1**	**667.3**	**0.6**	**771.0**	**-**	**-**	**-**	**-**
1/1	761	591	-	-	-	13.9	87.1	-	101.0	477.9	23.3	87.1	110.4
1/2	802	622	-	-	-	14.7	92.1	-	106.7	479.1	24.5	92.1	116.6
1/3	373	260	-	-	-	8.0	58.1	-	66.1	638.4	12.1	58.1	70.3
2/1	469	469	-	-	-	3.6	1.6	-	5.2	39.7	10.4	1.6	12.0
2/2	81	81	0	0	80	0.5	4.8	0.6	5.9	260.6	1.5	4.8	6.2
3/1	869	591	-	-	-	19.5	140.5	-	160.0	662.7	28.7	140.5	169.2
3/2	914	622	-	-	-	20.5	147.4	-	167.9	661.4	30.1	147.4	177.6
3/3	54	54	-	-	-	0.5	0.1	-	0.6	42.7	1.2	0.1	1.3
4/1	880	612	-	-	-	21.7	135.5	-	157.2	643.3	34.7	135.5	170.2
4/2	41	41	41	0	0	0.2	0.0	0.0	0.3	25.1	0.7	0.0	0.7
5/1	755	755	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	702	702	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	454	454	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	639	639	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	663	663	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	468	468	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	260	260	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -63.3 Total Delay for Signalled Lanes (pcuHr): 771.01 Cycle Time (s): 90
PRC Over All Lanes (%): -63.3 Total Delay Over All Lanes(pcuHr): 771.01

Full Input Data And Results

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Staging Plan No. 1')

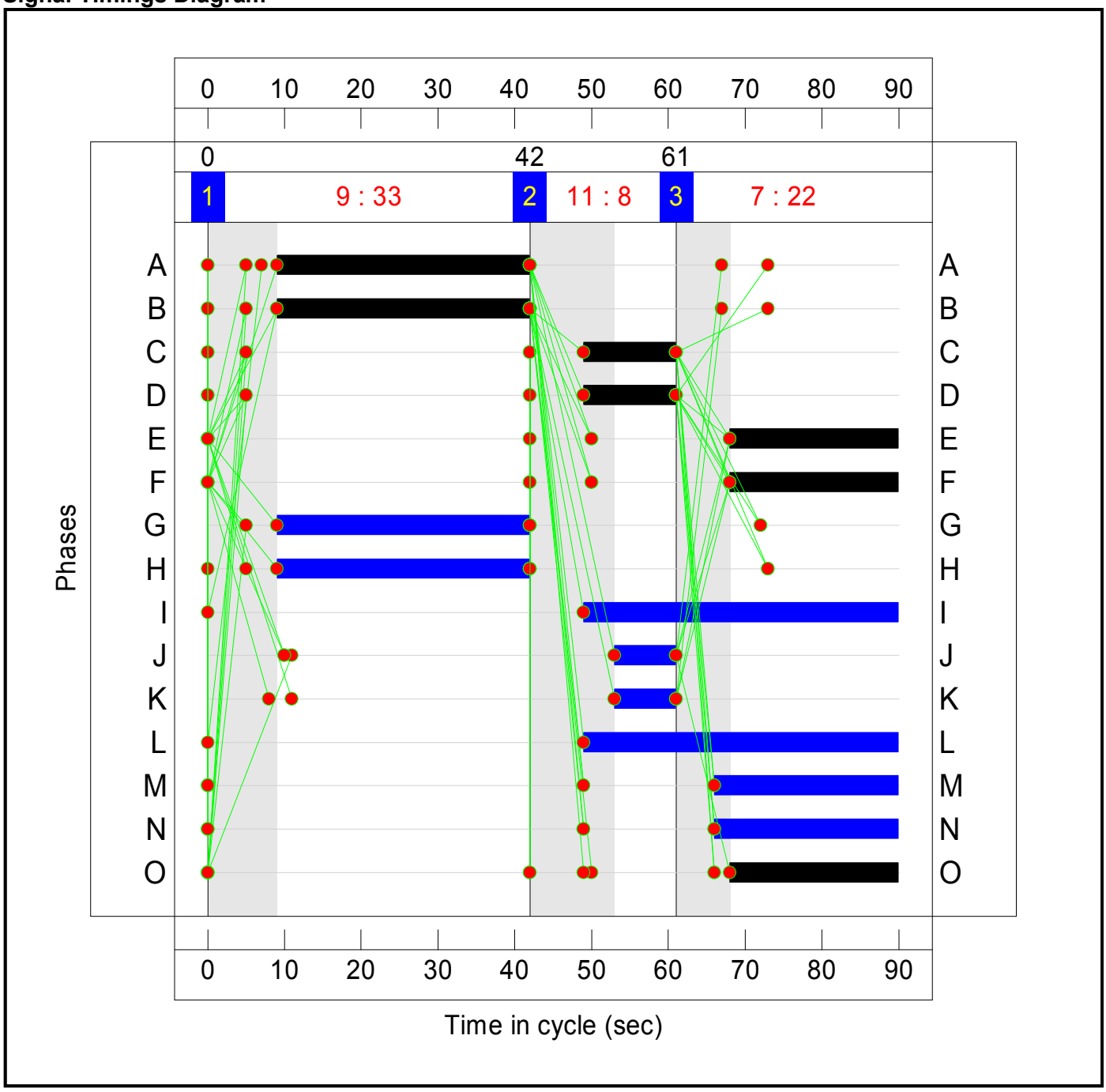
Stage Sequence Diagram



Stage Timings

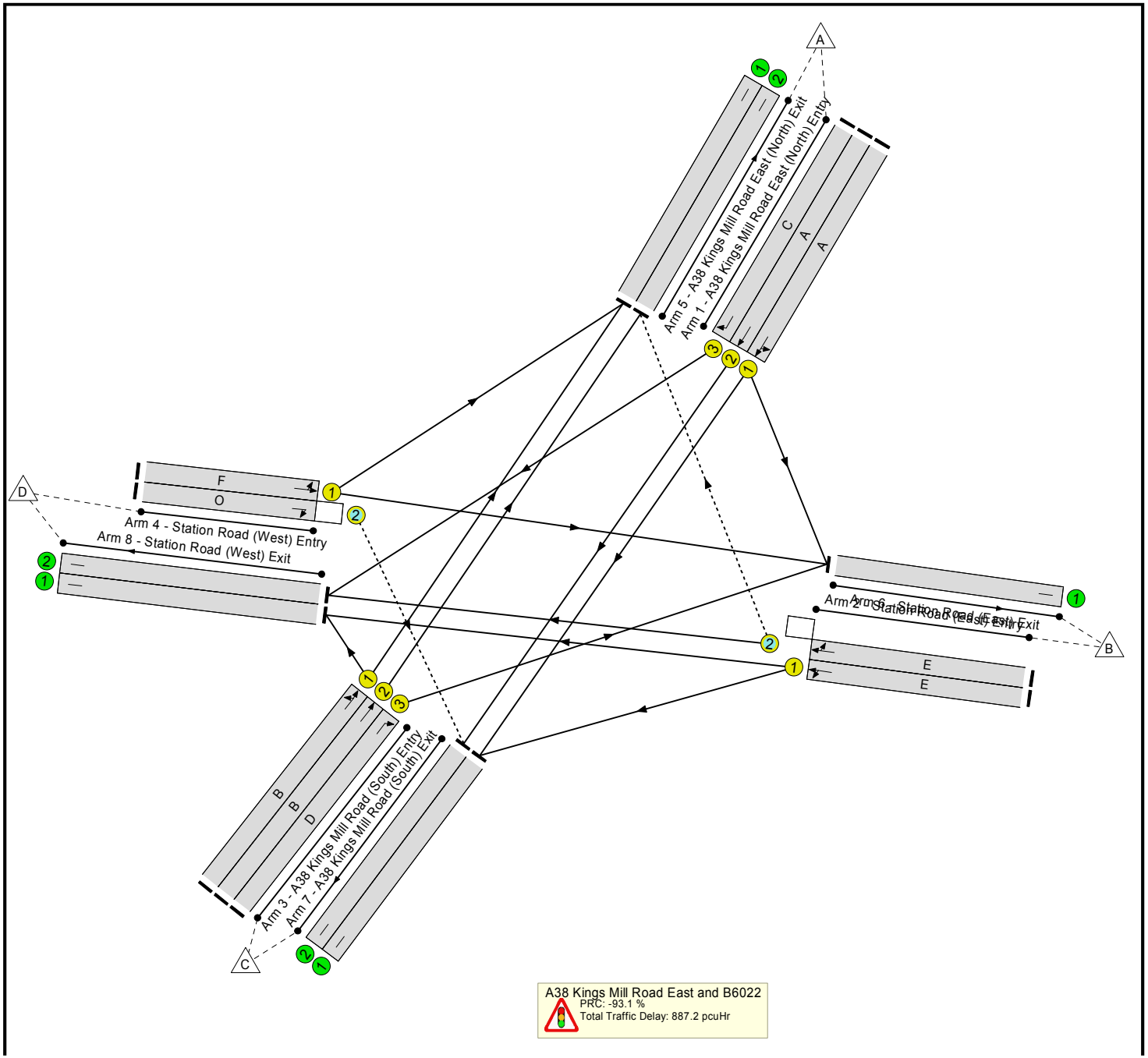
Stage	1	2	3
Duration	33	8	22
Change Point	0	42	61

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**173.8%**
A38 Kings Mill Road East and B6022	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**173.8%**
1/1	A38 Kings Mill Road East (North) Entry Left Ahead	U	N/A	N/A	A		1	33	-	921	1900	718	128.3%
1/2	A38 Kings Mill Road East (North) Entry Ahead	U	N/A	N/A	A		1	33	-	969	2000	756	128.3%
1/3	A38 Kings Mill Road East (North) Entry Right	U	N/A	N/A	C		1	12	-	447	1800	260	171.9%
2/1	Station Road (East) Entry Left Ahead	U	N/A	N/A	E		1	22	-	813	1900	486	167.4%
2/2	Station Road (East) Entry Right Ahead	O	N/A	N/A	E		1	22	-	232	1800	134	173.8%
3/1	A38 Kings Mill Road (South) Entry Ahead Left	U	N/A	N/A	B		1	33	-	819	1900	718	114.1%
3/2	A38 Kings Mill Road (South) Entry Ahead	U	N/A	N/A	B		1	33	-	863	2000	756	114.2%
3/3	A38 Kings Mill Road (South) Entry Right	U	N/A	N/A	D		1	12	-	146	1800	260	56.2%
4/1	Station Road (West) Entry Left Ahead	U	N/A	N/A	F		1	22	-	743	1900	486	153.0%
4/2	Station Road (West) Entry Right	O	N/A	N/A	O		1	22	-	73	1800	358	20.4%
5/1	A38 Kings Mill Road East (North) Exit	U	N/A	N/A	-		-	-	-	1168	Inf	Inf	0.0%
5/2	A38 Kings Mill Road East (North) Exit	U	N/A	N/A	-		-	-	-	1002	Inf	Inf	0.0%

Full Input Data And Results

6/1	Station Road (East) Exit	U	N/A	N/A	-		-	-	-	627	Inf	Inf	0.0%
7/1	A38 Kings Mill Road (South) Exit	U	N/A	N/A	-		-	-	-	1015	Inf	Inf	0.0%
7/2	A38 Kings Mill Road (South) Exit	U	N/A	N/A	-		-	-	-	1042	Inf	Inf	0.0%
8/1	Station Road (West) Exit	U	N/A	N/A	-		-	-	-	632	Inf	Inf	0.0%
8/2	Station Road (West) Exit	U	N/A	N/A	-		-	-	-	540	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	**-**	**-**	**73**	**0**	**80**	**121.1**	**765.6**	**0.5**	**887.2**	**-**	**-**	**-**	**-**
A38 Kings Mill Road East and B6022	**-**	**-**	**73**	**0**	**80**	**121.1**	**765.6**	**0.5**	**887.2**	**-**	**-**	**-**	**-**
1/1	921	718	-	-	-	15.8	103.8	-	119.6	467.5	28.1	103.8	131.9
1/2	969	756	-	-	-	16.6	108.9	-	125.5	466.3	29.6	108.9	138.5
1/3	447	260	-	-	-	12.6	94.7	-	107.3	864.1	17.3	94.7	112.0
2/1	813	486	-	-	-	24.8	165.0	-	189.7	840.0	36.0	165.0	201.0
2/2	232	134	0	0	80	7.0	50.4	0.5	57.9	898.4	10.5	50.4	60.9
3/1	819	718	-	-	-	10.7	54.4	-	65.0	285.9	23.0	54.4	77.4
3/2	863	756	-	-	-	11.3	57.5	-	68.7	286.7	24.3	57.5	81.7
3/3	146	146	-	-	-	1.5	0.6	-	2.1	51.5	3.4	0.6	4.0
4/1	743	486	-	-	-	20.4	130.1	-	150.6	729.6	30.8	130.1	161.0
4/2	73	73	73	0	0	0.5	0.1	0.0	0.7	34.3	1.4	0.1	1.5
5/1	943	943	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	836	836	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	473	473	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	755	755	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	829	829	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	382	382	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	314	314	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

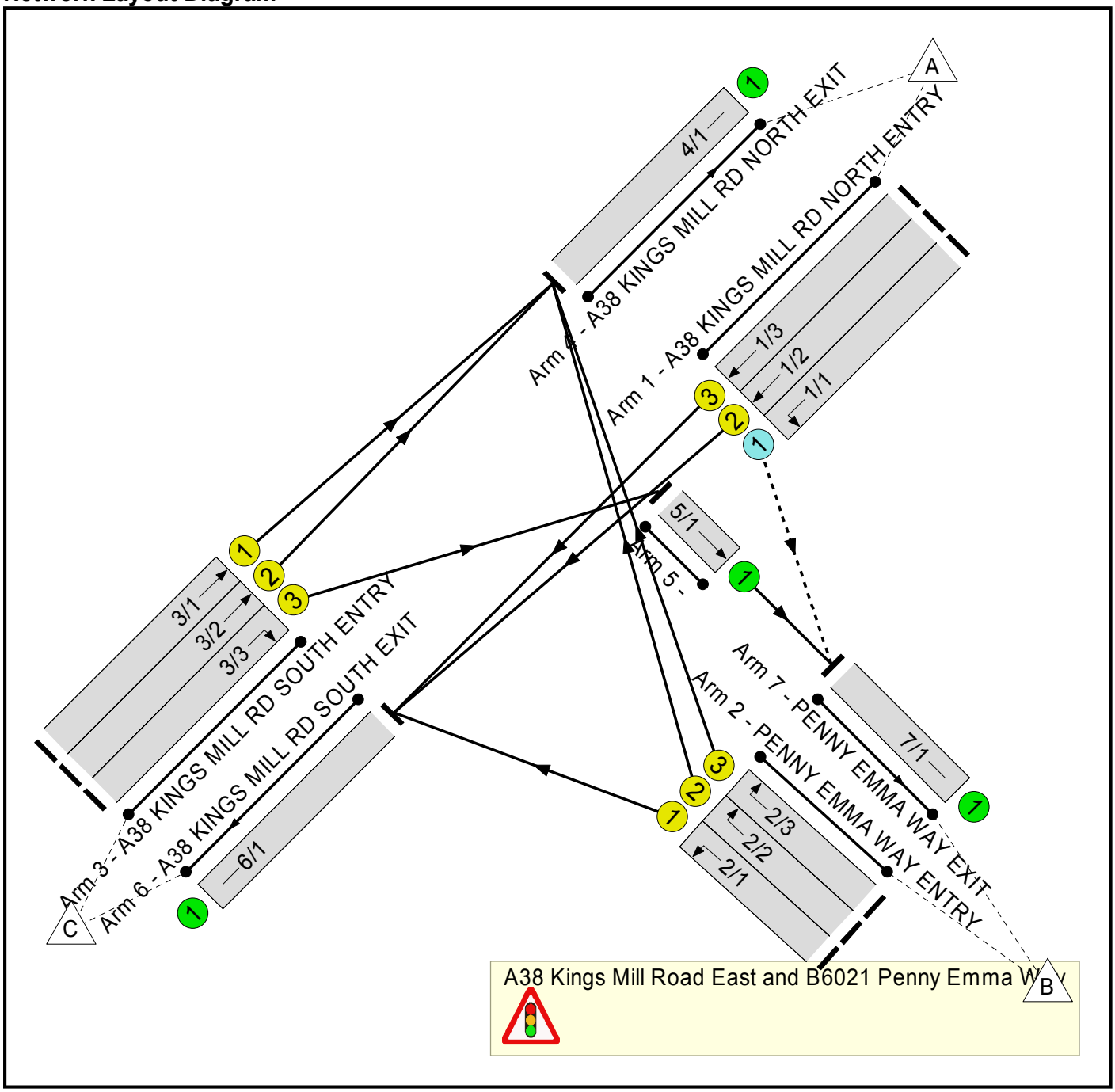
C1 PRC for Signalled Lanes (%): -93.1 Total Delay for Signalled Lanes (pcuHr): 887.17 Cycle Time (s): 90
PRC Over All Lanes (%): -93.1 Total Delay Over All Lanes(pcuHr): 887.17

Full Input Data And Results

User and Project Details

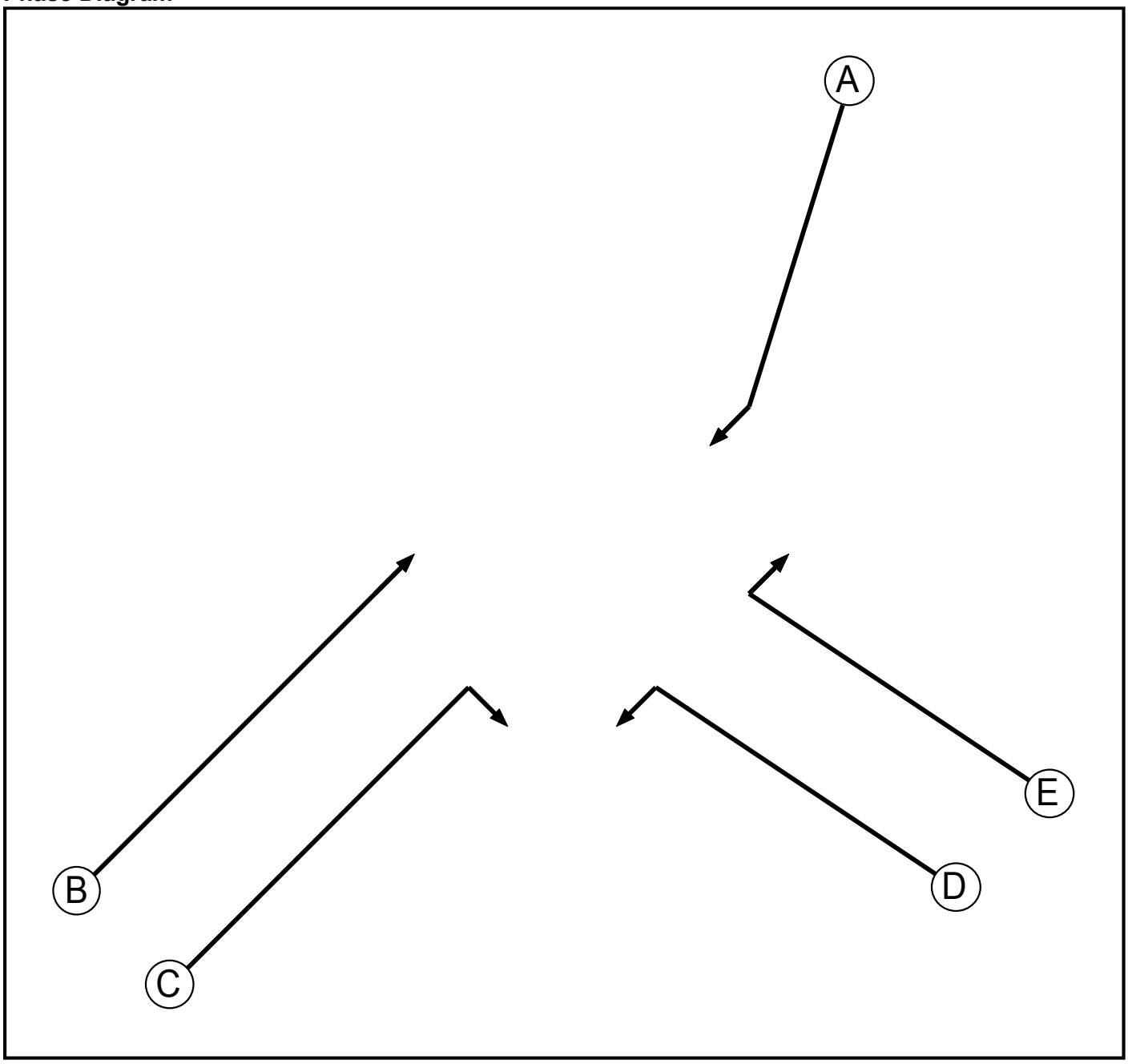
Project:	**A38 KINGS MILL RD/ PENNY EMMA WAY - NEW ST800**
Title:	**EXISTING**
Location:	A38 KINGS MILL RD/ PENNY EMMA WAY, SUTTON
File name:	Notts Data J6 A38 Penny Emma Way.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

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

Full Input Data And Results

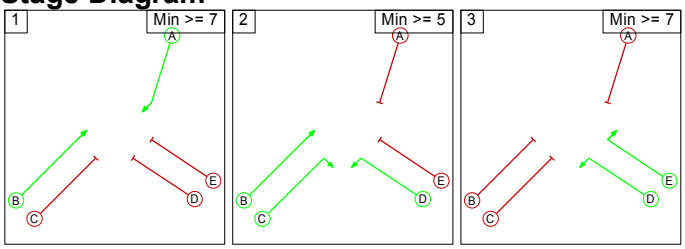
Phase Intergreens Matrix

Terminating Phase	Starting Phase				
	A	B	C	D	E
A		-	7	9	9
B	-		-	-	7
C	7	-		-	7
D	6	-	-		-
E	6	6	6	-	

Phases in Stage

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

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
2	1	D	Losing	1	1

Prohibited Stage Change

From Stage	To Stage		
	1	2	3
1		9	9
2	7		7
3	6	6	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A38 Kings Mill Road East and B6021 Penny Emma Way

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/1 (A38 KINGS MILL RD NORTH ENTRY)	7/1 (Left)	1400	0	5/1	1.10	All	-	-	-	-	-

Full Input Data And Results

Lane Input Data

Junction: A38 Kings Mill Road East and B6021 Penny Emma 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 (A38 KINGS MILL RD NORTH ENTRY)	O		2	3	60.0	User	1800	-	-	-	-	-
1/2 (A38 KINGS MILL RD NORTH ENTRY)	U	A	2	3	60.0	Geom	-	3.25	0.00	N	Arm 6 Ahead	Inf
1/3 (A38 KINGS MILL RD NORTH ENTRY)	U	A	2	3	60.0	Geom	-	3.25	0.00	N	Arm 6 Ahead	Inf
2/1 (PENNY EMMA WAY ENTRY)	U	D	2	3	60.0	Geom	-	3.25	0.00	N	Arm 6 Left	Inf
2/2 (PENNY EMMA WAY ENTRY)	U	E	2	3	60.0	Geom	-	3.25	0.00	N	Arm 4 Right	Inf
2/3 (PENNY EMMA WAY ENTRY)	U	E	2	3	60.0	Geom	-	3.25	0.00	N	Arm 4 Right	Inf
3/1 (A38 KINGS MILL RD SOUTH ENTRY)	U	B	2	3	60.0	Geom	-	3.25	0.00	N	Arm 4 Ahead	Inf
3/2 (A38 KINGS MILL RD SOUTH ENTRY)	U	B	2	3	60.0	Geom	-	3.25	0.00	N	Arm 4 Ahead	Inf
3/3 (A38 KINGS MILL RD SOUTH ENTRY)	U	C	2	3	60.0	Geom	-	3.25	0.00	N	Arm 5 Right	Inf
4/1 (A38 KINGS MILL RD NORTH EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1	U		2	3	60.0	User	1800	-	-	-	-	-
6/1 (A38 KINGS MILL RD SOUTH EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (PENNY EMMA WAY EXIT)	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2032 Reference Case Morning Peak'	08:00	09:00	01:00	
2: '2032 Development Case Morning Peak'	08:00	09:00	01:00	
3: '2032 Reference Case Evening Peak'	17:00	18:00	01:00	
4: '2032 Development Case Evening Peak'	17:00	18:00	01:00	

Scenario 1: 'AM Reference Case' (FG1: '2032 Reference Case Morning Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	5	1553	1558
	B	54	0	547	601
	C	1801	292	0	2093
	Tot.	1855	297	2100	4252

Traffic Lane Flows

Lane	Scenario 1: AM Reference Case
Junction: A38 Kings Mill Road East and B6021 Penny Emma Way	
1/1	5
1/2	776
1/3	777
2/1	547
2/2	27
2/3	27
3/1	900
3/2	901
3/3	292
4/1	1855
5/1	292
6/1	2100
7/1	297

Full Input Data And Results

Lane Saturation Flows

Junction: A38 Kings Mill Road East and B6021 Penny Emma 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 (A38 KINGS MILL RD NORTH ENTRY Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (A38 KINGS MILL RD NORTH ENTRY)	3.25	0.00	N	Arm 6 Ahead	Inf	100.0 %	2080	2080
1/3 (A38 KINGS MILL RD NORTH ENTRY)	3.25	0.00	N	Arm 6 Ahead	Inf	100.0 %	2080	2080
2/1 (PENNY EMMA WAY ENTRY)	3.25	0.00	N	Arm 6 Left	Inf	100.0 %	2080	2080
2/2 (PENNY EMMA WAY ENTRY)	3.25	0.00	N	Arm 4 Right	Inf	100.0 %	2080	2080
2/3 (PENNY EMMA WAY ENTRY)	3.25	0.00	N	Arm 4 Right	Inf	100.0 %	2080	2080
3/1 (A38 KINGS MILL RD SOUTH ENTRY)	3.25	0.00	N	Arm 4 Ahead	Inf	100.0 %	2080	2080
3/2 (A38 KINGS MILL RD SOUTH ENTRY)	3.25	0.00	N	Arm 4 Ahead	Inf	100.0 %	2080	2080
3/3 (A38 KINGS MILL RD SOUTH ENTRY)	3.25	0.00	N	Arm 5 Right	Inf	100.0 %	2080	2080
4/1 (A38 KINGS MILL RD NORTH EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (A38 KINGS MILL RD SOUTH EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (PENNY EMMA WAY EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case Evening Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	19	1541	1560
	B	157	0	621	778
	C	1492	260	0	1752
	Tot.	1649	279	2162	4090

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM Reference Case
Junction: A38 Kings Mill Road East and B6021 Penny Emma Way	
1/1	19
1/2	770
1/3	771
2/1	621
2/2	78
2/3	79
3/1	746
3/2	746
3/3	260
4/1	1649
5/1	260
6/1	2162
7/1	279

Full Input Data And Results

Lane Saturation Flows

Junction: A38 Kings Mill Road East and B6021 Penny Emma 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 (A38 KINGS MILL RD NORTH ENTRY Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (A38 KINGS MILL RD NORTH ENTRY)	3.25	0.00	N	Arm 6 Ahead	Inf	100.0 %	2080	2080
1/3 (A38 KINGS MILL RD NORTH ENTRY)	3.25	0.00	N	Arm 6 Ahead	Inf	100.0 %	2080	2080
2/1 (PENNY EMMA WAY ENTRY)	3.25	0.00	N	Arm 6 Left	Inf	100.0 %	2080	2080
2/2 (PENNY EMMA WAY ENTRY)	3.25	0.00	N	Arm 4 Right	Inf	100.0 %	2080	2080
2/3 (PENNY EMMA WAY ENTRY)	3.25	0.00	N	Arm 4 Right	Inf	100.0 %	2080	2080
3/1 (A38 KINGS MILL RD SOUTH ENTRY)	3.25	0.00	N	Arm 4 Ahead	Inf	100.0 %	2080	2080
3/2 (A38 KINGS MILL RD SOUTH ENTRY)	3.25	0.00	N	Arm 4 Ahead	Inf	100.0 %	2080	2080
3/3 (A38 KINGS MILL RD SOUTH ENTRY)	3.25	0.00	N	Arm 5 Right	Inf	100.0 %	2080	2080
4/1 (A38 KINGS MILL RD NORTH EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (A38 KINGS MILL RD SOUTH EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (PENNY EMMA WAY EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	7	1684	1691
	B	64	0	703	767
	C	1899	415	0	2314
	Tot.	1963	422	2387	4772

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: AM Development Scenario
Junction: A38 Kings Mill Road East and B6021 Penny Emma Way	
1/1	7
1/2	842
1/3	842
2/1	703
2/2	32
2/3	32
3/1	949
3/2	950
3/3	415
4/1	1963
5/1	415
6/1	2387
7/1	422

Full Input Data And Results

Lane Saturation Flows

Junction: A38 Kings Mill Road East and B6021 Penny Emma 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 (A38 KINGS MILL RD NORTH ENTRY Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (A38 KINGS MILL RD NORTH ENTRY)	3.25	0.00	N	Arm 6 Ahead	Inf	100.0 %	2080	2080
1/3 (A38 KINGS MILL RD NORTH ENTRY)	3.25	0.00	N	Arm 6 Ahead	Inf	100.0 %	2080	2080
2/1 (PENNY EMMA WAY ENTRY)	3.25	0.00	N	Arm 6 Left	Inf	100.0 %	2080	2080
2/2 (PENNY EMMA WAY ENTRY)	3.25	0.00	N	Arm 4 Right	Inf	100.0 %	2080	2080
2/3 (PENNY EMMA WAY ENTRY)	3.25	0.00	N	Arm 4 Right	Inf	100.0 %	2080	2080
3/1 (A38 KINGS MILL RD SOUTH ENTRY)	3.25	0.00	N	Arm 4 Ahead	Inf	100.0 %	2080	2080
3/2 (A38 KINGS MILL RD SOUTH ENTRY)	3.25	0.00	N	Arm 4 Ahead	Inf	100.0 %	2080	2080
3/3 (A38 KINGS MILL RD SOUTH ENTRY)	3.25	0.00	N	Arm 5 Right	Inf	100.0 %	2080	2080
4/1 (A38 KINGS MILL RD NORTH EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (A38 KINGS MILL RD SOUTH EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (PENNY EMMA WAY EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	29	1663	1692
	B	182	0	762	944
	C	1635	430	0	2065
	Tot.	1817	459	2425	4701

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: PM Development Scenario
Junction: A38 Kings Mill Road East and B6021 Penny Emma Way	
1/1	29
1/2	831
1/3	832
2/1	762
2/2	91
2/3	91
3/1	817
3/2	818
3/3	430
4/1	1817
5/1	430
6/1	2425
7/1	459

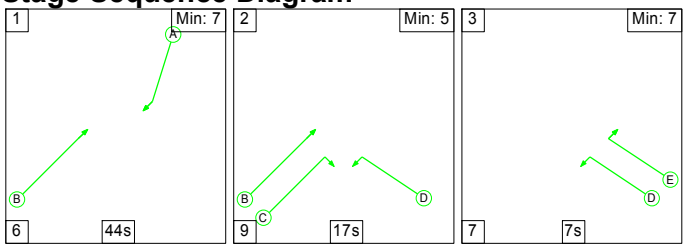
Full Input Data And Results

Lane Saturation Flows

Junction: A38 Kings Mill Road East and B6021 Penny Emma 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 (A38 KINGS MILL RD NORTH ENTRY Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (A38 KINGS MILL RD NORTH ENTRY)	3.25	0.00	N	Arm 6 Ahead	Inf	100.0 %	2080	2080
1/3 (A38 KINGS MILL RD NORTH ENTRY)	3.25	0.00	N	Arm 6 Ahead	Inf	100.0 %	2080	2080
2/1 (PENNY EMMA WAY ENTRY)	3.25	0.00	N	Arm 6 Left	Inf	100.0 %	2080	2080
2/2 (PENNY EMMA WAY ENTRY)	3.25	0.00	N	Arm 4 Right	Inf	100.0 %	2080	2080
2/3 (PENNY EMMA WAY ENTRY)	3.25	0.00	N	Arm 4 Right	Inf	100.0 %	2080	2080
3/1 (A38 KINGS MILL RD SOUTH ENTRY)	3.25	0.00	N	Arm 4 Ahead	Inf	100.0 %	2080	2080
3/2 (A38 KINGS MILL RD SOUTH ENTRY)	3.25	0.00	N	Arm 4 Ahead	Inf	100.0 %	2080	2080
3/3 (A38 KINGS MILL RD SOUTH ENTRY)	3.25	0.00	N	Arm 5 Right	Inf	100.0 %	2080	2080
4/1 (A38 KINGS MILL RD NORTH EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (A38 KINGS MILL RD SOUTH EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (PENNY EMMA WAY EXIT Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'AM Reference Case' (FG1: '2032 Reference Case Morning Peak', Plan 1: 'Staging Plan No. 1')

Stage Sequence Diagram

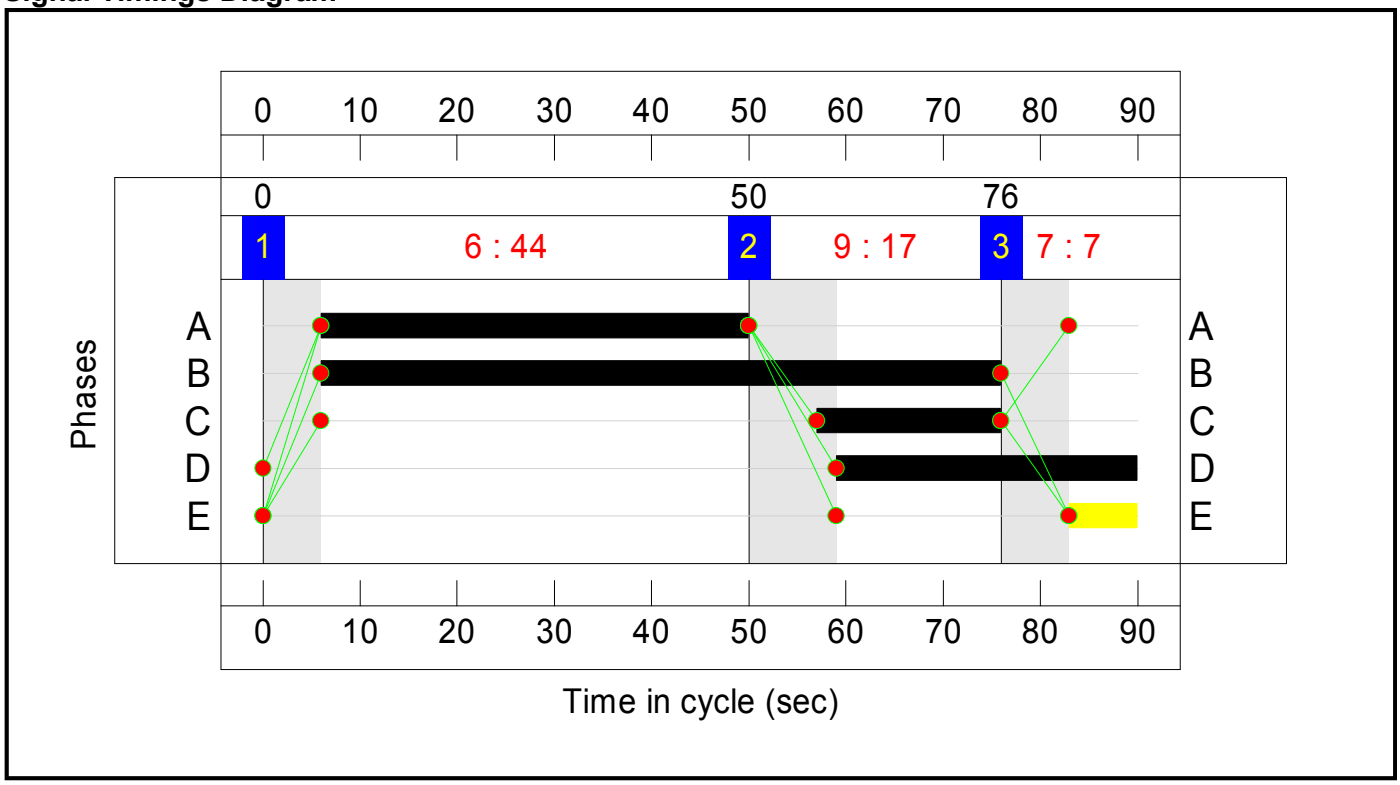


Stage Timings

Stage	1	2	3
Duration	44	17	7
Change Point	0	50	76

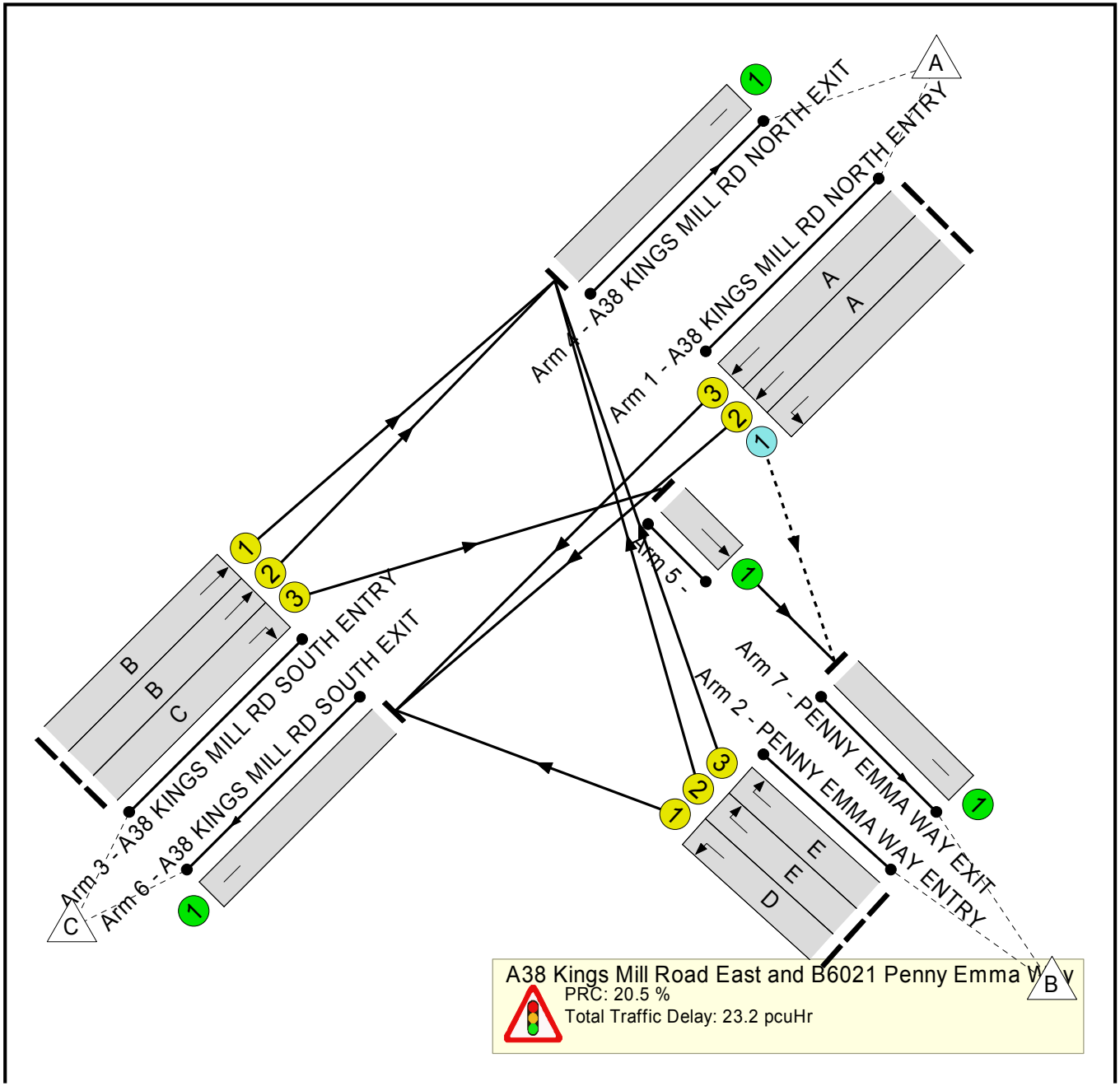
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: EXISTING	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**74.7%**
A38 Kings Mill Road East and B6021 Penny Emma Way	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**74.7%**
1/1	A38 KINGS MILL RD NORTH ENTRY Left	O	N/A	N/A	-		-	-	-	5	1800	1149	0.4%
1/2	A38 KINGS MILL RD NORTH ENTRY Ahead	U	N/A	N/A	A		1	44	-	776	2080	1040	74.6%
1/3	A38 KINGS MILL RD NORTH ENTRY Ahead	U	N/A	N/A	A		1	44	-	777	2080	1040	74.7%
2/1	PENNY EMMA WAY ENTRY Left	U	N/A	N/A	D		1	31	-	547	2080	740	74.0%
2/2	PENNY EMMA WAY ENTRY Right	U	N/A	N/A	E		1	7	-	27	2080	185	14.6%
2/3	PENNY EMMA WAY ENTRY Right	U	N/A	N/A	E		1	7	-	27	2080	185	14.6%
3/1	A38 KINGS MILL RD SOUTH ENTRY Ahead	U	N/A	N/A	B		1	70	-	900	2080	1641	54.8%
3/2	A38 KINGS MILL RD SOUTH ENTRY Ahead	U	N/A	N/A	B		1	70	-	901	2080	1641	54.9%
3/3	A38 KINGS MILL RD SOUTH ENTRY Right	U	N/A	N/A	C		1	19	-	292	2080	462	63.2%
4/1	A38 KINGS MILL RD NORTH EXIT	U	N/A	N/A	-		-	-	-	1855	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	292	1800	1800	16.2%
6/1	A38 KINGS MILL RD SOUTH EXIT	U	N/A	N/A	-		-	-	-	2100	Inf	Inf	0.0%

Full Input Data And Results

7/1	PENNY EMMA WAY EXIT	U	N/A	N/A	-		-	-	-	297	Inf	Inf	0.0%

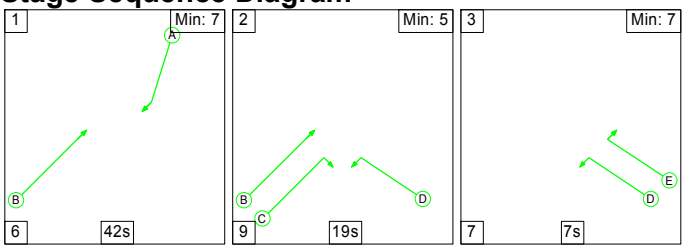
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: EXISTING	**-**	**-**	**5**	**0**	**0**	**16.5**	**6.6**	**0.0**	**23.2**	**-**	**-**	**-**	**-**
A38 Kings Mill Road East and B6021 Penny Emma Way	**-**	**-**	**5**	**0**	**0**	**16.5**	**6.6**	**0.0**	**23.2**	**-**	**-**	**-**	**-**
1/1	5	5	5	0	0	0.0	0.0	-	0.0	2.4	0.0	0.0	0.0
1/2	776	776	-	-	-	3.9	1.5	-	5.3	24.7	15.3	1.5	16.8
1/3	777	777	-	-	-	3.9	1.5	-	5.3	24.7	15.3	1.5	16.8
2/1	547	547	-	-	-	3.9	1.4	-	5.3	34.6	11.9	1.4	13.3
2/2	27	27	-	-	-	0.3	0.1	-	0.4	49.3	0.6	0.1	0.7
2/3	27	27	-	-	-	0.3	0.1	-	0.4	49.3	0.6	0.1	0.7
3/1	900	900	-	-	-	0.9	0.6	-	1.5	6.0	8.3	0.6	8.9
3/2	901	901	-	-	-	0.9	0.6	-	1.5	6.0	8.3	0.6	8.9
3/3	292	292	-	-	-	2.6	0.8	-	3.4	42.1	6.6	0.8	7.4
4/1	1855	1855	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	292	292	-	-	-	0.0	0.1	-	0.1	1.4	4.7	0.1	4.8
6/1	2100	2100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	297	297	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 20.5 Total Delay for Signalled Lanes (pcuHr): 23.05 Cycle Time (s): 90
PRC Over All Lanes (%): 20.5 Total Delay Over All Lanes(pcuHr): 23.18

Full Input Data And Results

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case Evening Peak', Plan 1: 'Staging Plan No. 1')

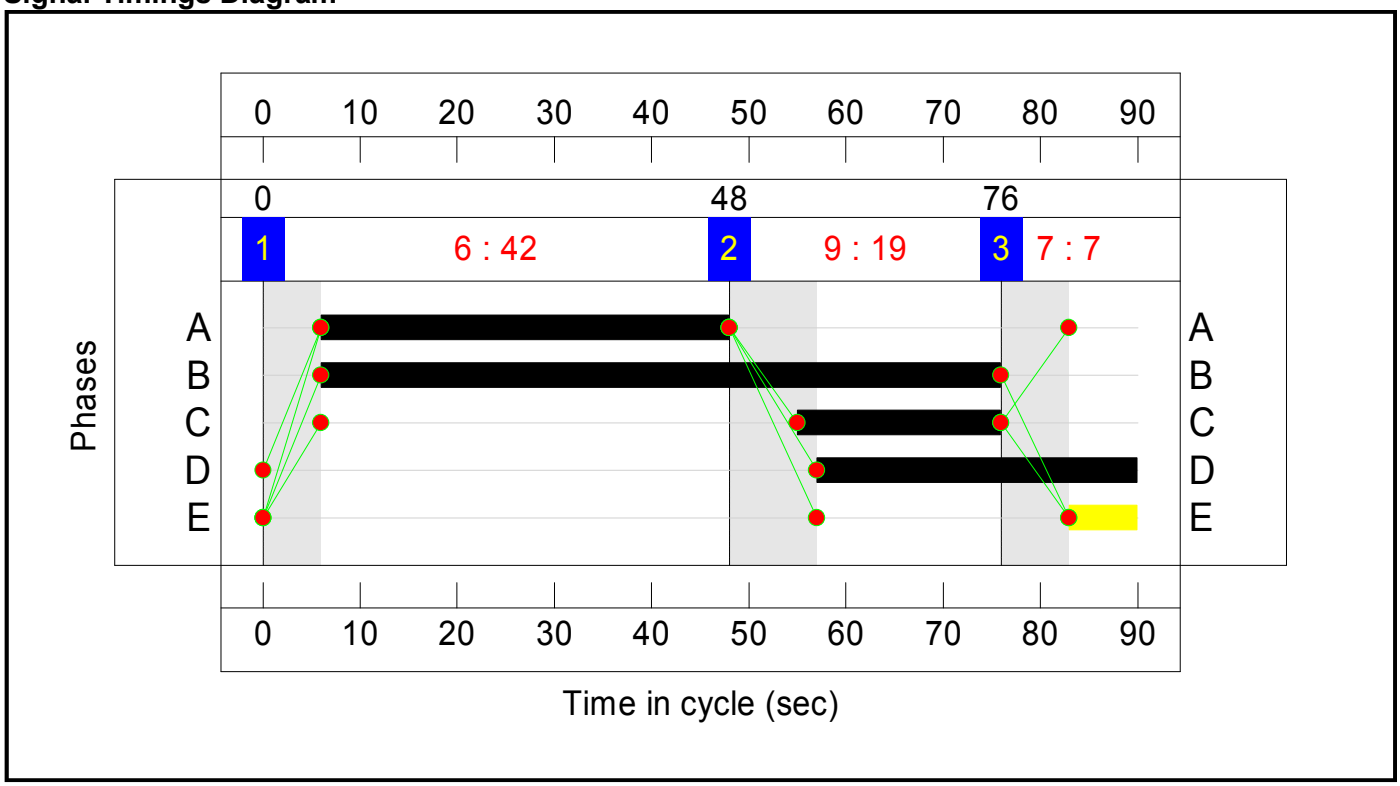
Stage Sequence Diagram



Stage Timings

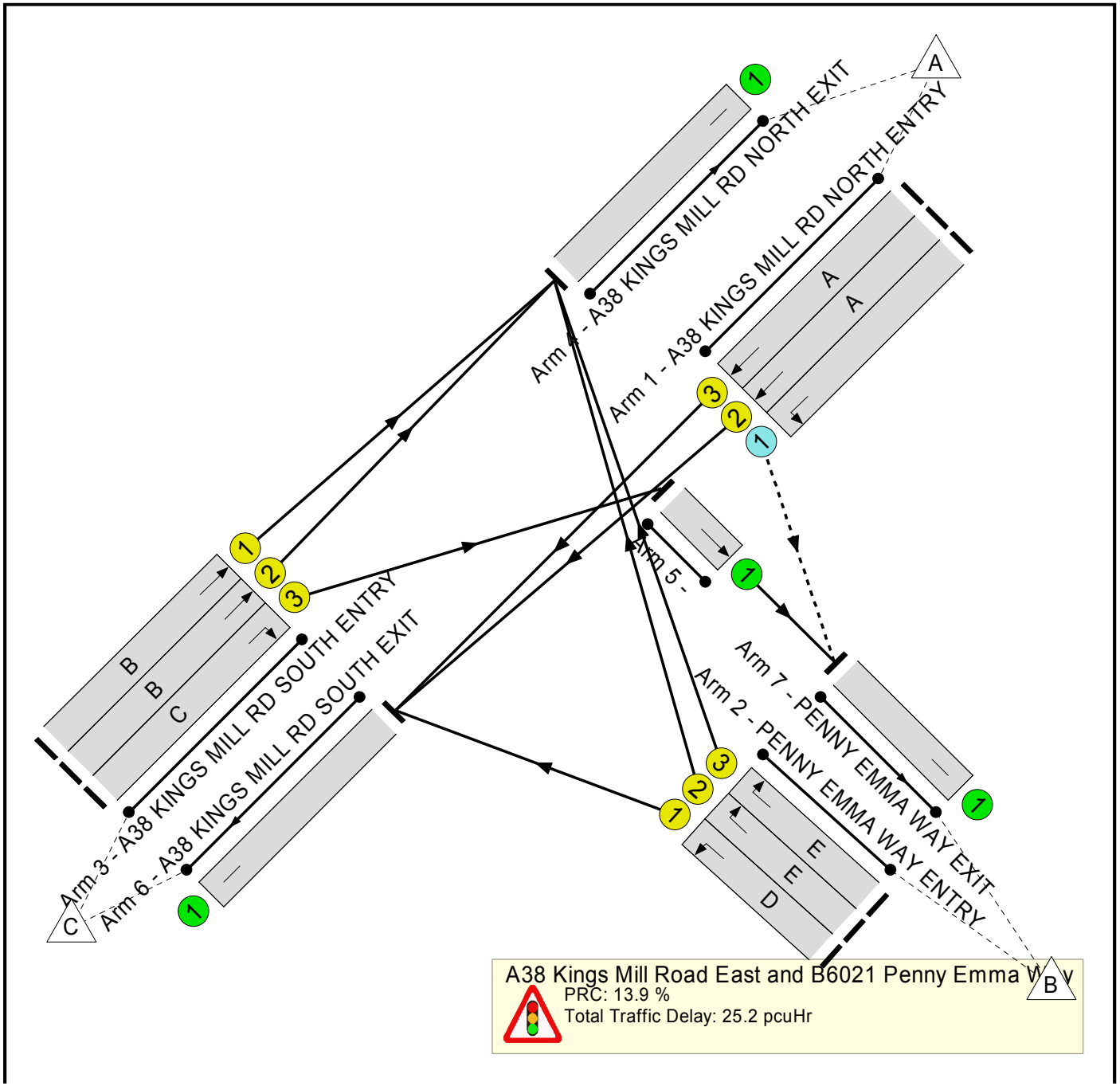
Stage	1	2	3
Duration	42	19	7
Change Point	0	48	76

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



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: EXISTING	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**79.0%**
A38 Kings Mill Road East and B6021 Penny Emma Way	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**79.0%**
1/1	A38 KINGS MILL RD NORTH ENTRY Left	O	N/A	N/A	-		-	-	-	19	1800	1169	1.6%
1/2	A38 KINGS MILL RD NORTH ENTRY Ahead	U	N/A	N/A	A		1	42	-	770	2080	994	77.5%
1/3	A38 KINGS MILL RD NORTH ENTRY Ahead	U	N/A	N/A	A		1	42	-	771	2080	994	77.6%
2/1	PENNY EMMA WAY ENTRY Left	U	N/A	N/A	D		1	33	-	621	2080	786	79.0%
2/2	PENNY EMMA WAY ENTRY Right	U	N/A	N/A	E		1	7	-	78	2080	185	42.2%
2/3	PENNY EMMA WAY ENTRY Right	U	N/A	N/A	E		1	7	-	79	2080	185	42.7%
3/1	A38 KINGS MILL RD SOUTH ENTRY Ahead	U	N/A	N/A	B		1	70	-	746	2080	1641	45.5%
3/2	A38 KINGS MILL RD SOUTH ENTRY Ahead	U	N/A	N/A	B		1	70	-	746	2080	1641	45.5%
3/3	A38 KINGS MILL RD SOUTH ENTRY Right	U	N/A	N/A	C		1	21	-	260	2080	508	51.1%
4/1	A38 KINGS MILL RD NORTH EXIT	U	N/A	N/A	-		-	-	-	1649	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	260	1800	1800	14.4%
6/1	A38 KINGS MILL RD SOUTH EXIT	U	N/A	N/A	-		-	-	-	2162	Inf	Inf	0.0%

Full Input Data And Results

7/1	PENNY EMMA WAY EXIT	U	N/A	N/A	-		-	-	-	279	Inf	Inf	0.0%

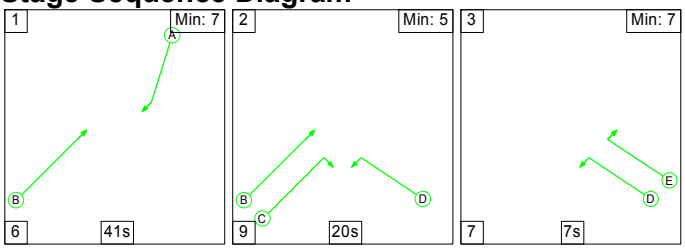
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: EXISTING	**-**	**-**	**19**	**0**	**0**	**17.8**	**7.4**	**0.0**	**25.2**	**-**	**-**	**-**	**-**
A38 Kings Mill Road East and B6021 Penny Emma Way	**-**	**-**	**19**	**0**	**0**	**17.8**	**7.4**	**0.0**	**25.2**	**-**	**-**	**-**	**-**
1/1	19	19	19	0	0	0.0	0.0	-	0.0	2.2	0.1	0.0	0.1
1/2	770	770	-	-	-	4.2	1.7	-	5.9	27.4	15.8	1.7	17.5
1/3	771	771	-	-	-	4.2	1.7	-	5.9	27.5	15.8	1.7	17.6
2/1	621	621	-	-	-	4.3	1.8	-	6.1	35.5	13.6	1.8	15.5
2/2	78	78	-	-	-	0.8	0.4	-	1.2	55.6	1.8	0.4	2.2
2/3	79	79	-	-	-	0.9	0.4	-	1.2	55.7	1.9	0.4	2.2
3/1	746	746	-	-	-	0.6	0.4	-	1.1	5.1	6.0	0.4	6.4
3/2	746	746	-	-	-	0.6	0.4	-	1.1	5.1	6.0	0.4	6.4
3/3	260	260	-	-	-	2.1	0.5	-	2.6	36.6	5.6	0.5	6.1
4/1	1649	1649	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	260	260	-	-	-	0.0	0.1	-	0.1	1.3	3.6	0.1	3.7
6/1	2162	2162	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	279	279	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 13.9 Total Delay for Signalled Lanes (pcuHr): 25.07 Cycle Time (s): 90
PRC Over All Lanes (%): 13.9 Total Delay Over All Lanes(pcuHr): 25.18

Full Input Data And Results

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Staging Plan No. 1')

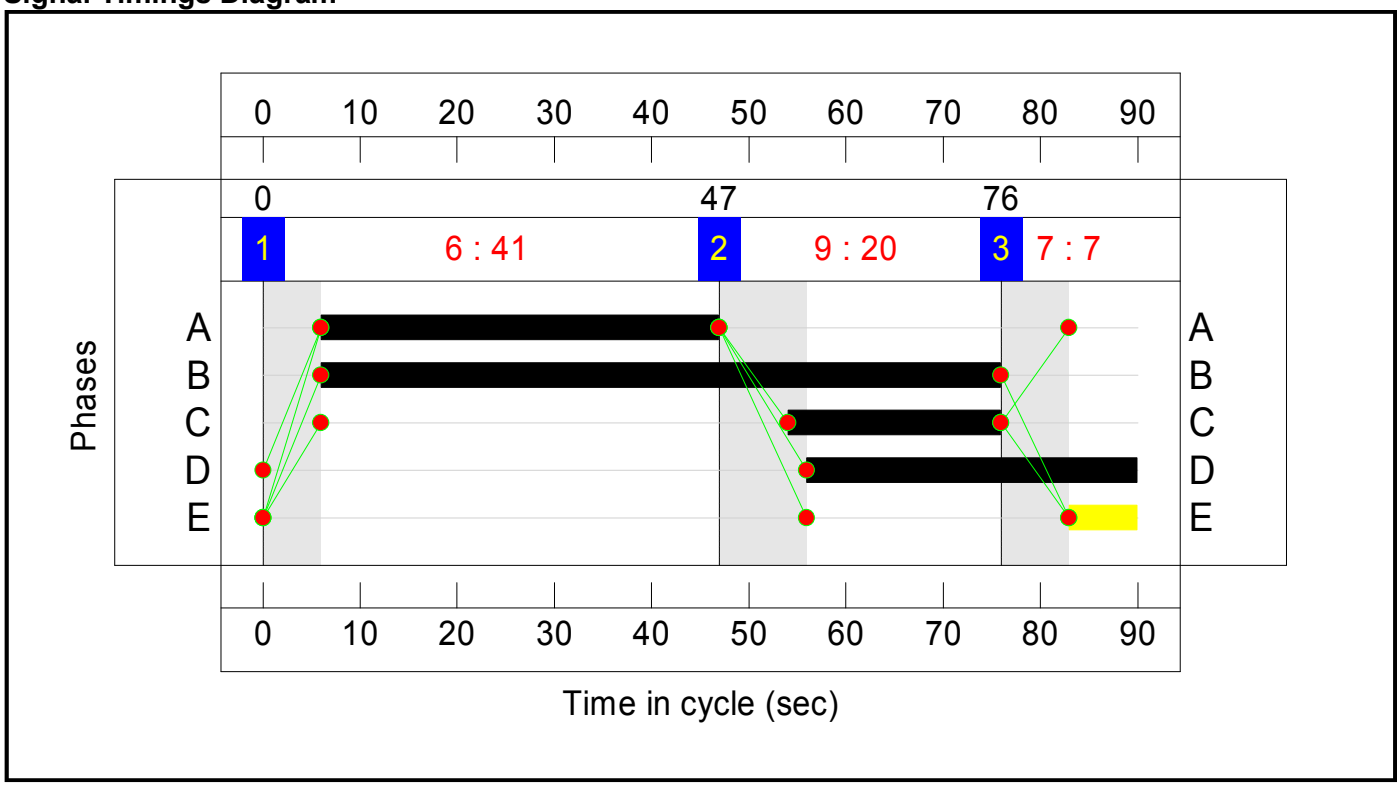
Stage Sequence Diagram



Stage Timings

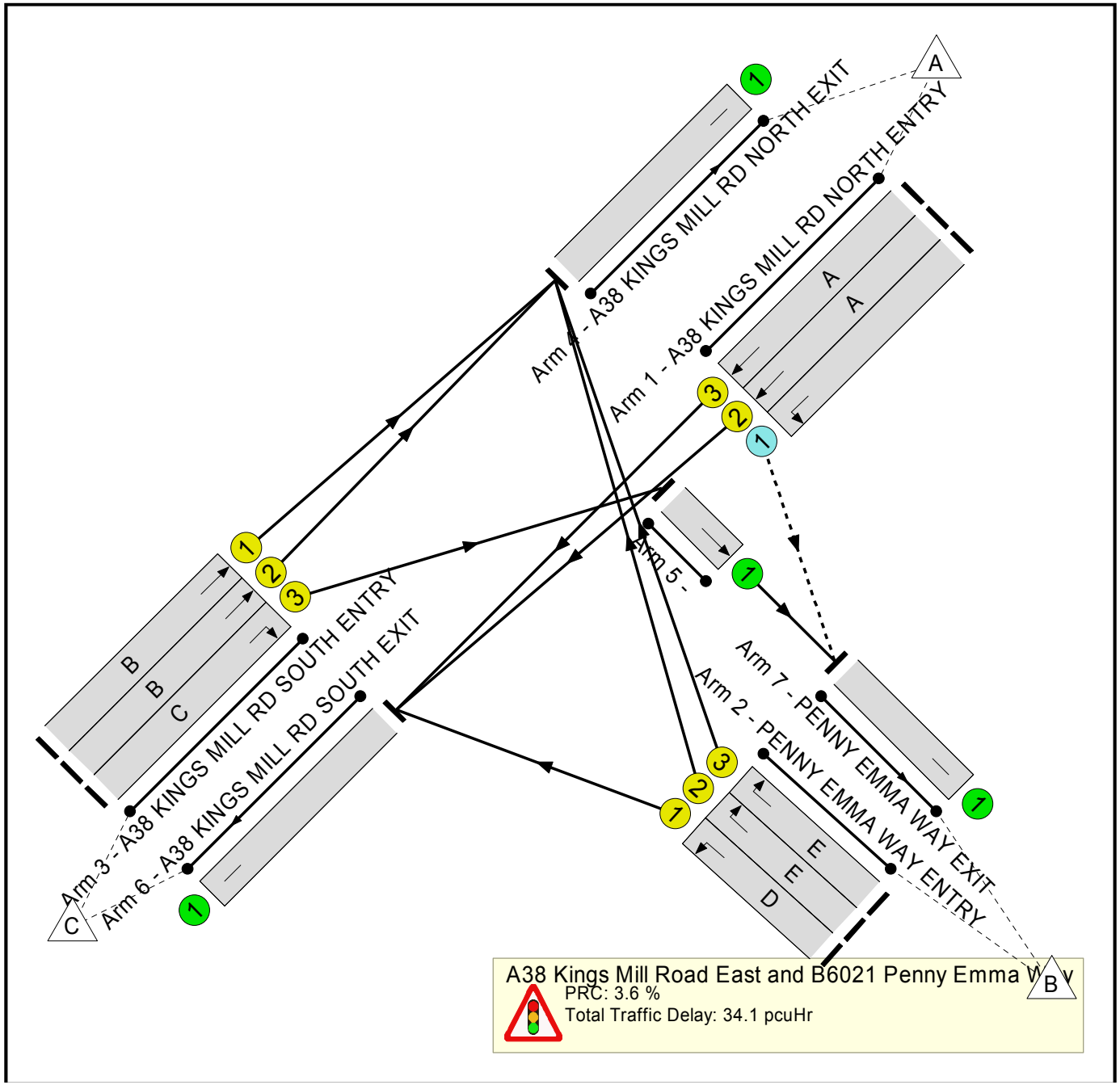
Stage	1	2	3
Duration	41	20	7
Change Point	0	47	76

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



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: EXISTING	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**86.9%**
A38 Kings Mill Road East and B6021 Penny Emma Way	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**86.9%**
1/1	A38 KINGS MILL RD NORTH ENTRY Left	O	N/A	N/A	-		-	-	-	7	1800	1056	0.7%
1/2	A38 KINGS MILL RD NORTH ENTRY Ahead	U	N/A	N/A	A		1	41	-	842	2080	971	86.7%
1/3	A38 KINGS MILL RD NORTH ENTRY Ahead	U	N/A	N/A	A		1	41	-	842	2080	971	86.7%
2/1	PENNY EMMA WAY ENTRY Left	U	N/A	N/A	D		1	34	-	703	2080	809	86.9%
2/2	PENNY EMMA WAY ENTRY Right	U	N/A	N/A	E		1	7	-	32	2080	185	17.3%
2/3	PENNY EMMA WAY ENTRY Right	U	N/A	N/A	E		1	7	-	32	2080	185	17.3%
3/1	A38 KINGS MILL RD SOUTH ENTRY Ahead	U	N/A	N/A	B		1	70	-	949	2080	1641	57.8%
3/2	A38 KINGS MILL RD SOUTH ENTRY Ahead	U	N/A	N/A	B		1	70	-	950	2080	1641	57.9%
3/3	A38 KINGS MILL RD SOUTH ENTRY Right	U	N/A	N/A	C		1	22	-	415	2080	532	78.1%
4/1	A38 KINGS MILL RD NORTH EXIT	U	N/A	N/A	-		-	-	-	1963	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	415	1800	1800	23.1%
6/1	A38 KINGS MILL RD SOUTH EXIT	U	N/A	N/A	-		-	-	-	2387	Inf	Inf	0.0%

Full Input Data And Results

7/1	PENNY EMMA WAY EXIT	U	N/A	N/A	-		-	-	-	422	Inf	Inf	0.0%

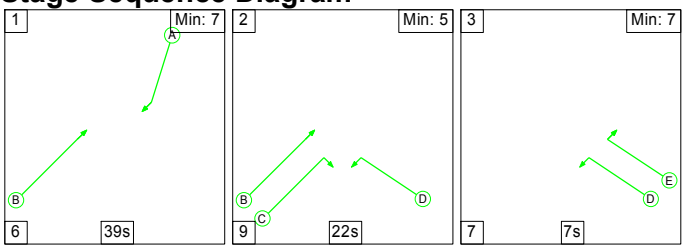
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: EXISTING	**-**	**-**	**7**	**0**	**0**	**21.3**	**12.8**	**0.0**	**34.1**	**-**	**-**	**-**	**-**
A38 Kings Mill Road East and B6021 Penny Emma Way	**-**	**-**	**7**	**0**	**0**	**21.3**	**12.8**	**0.0**	**34.1**	**-**	**-**	**-**	**-**
1/1	7	7	7	0	0	0.0	0.0	-	0.0	3.8	0.0	0.0	0.0
1/2	842	842	-	-	-	5.0	3.1	-	8.2	34.8	18.7	3.1	21.8
1/3	842	842	-	-	-	5.0	3.1	-	8.2	34.8	18.7	3.1	21.8
2/1	703	703	-	-	-	5.0	3.1	-	8.1	41.4	16.2	3.1	19.3
2/2	32	32	-	-	-	0.3	0.1	-	0.4	49.8	0.7	0.1	0.8
2/3	32	32	-	-	-	0.3	0.1	-	0.4	49.8	0.7	0.1	0.8
3/1	949	949	-	-	-	1.0	0.7	-	1.7	6.3	9.0	0.7	9.6
3/2	950	950	-	-	-	1.0	0.7	-	1.7	6.3	9.0	0.7	9.7
3/3	415	415	-	-	-	3.6	1.7	-	5.3	46.2	9.6	1.7	11.3
4/1	1963	1963	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	415	415	-	-	-	0.1	0.1	-	0.2	1.9	8.2	0.1	8.3
6/1	2387	2387	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	422	422	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 3.6 Total Delay for Signalled Lanes (pcuHr): 33.92 Cycle Time (s): 90
PRC Over All Lanes (%): 3.6 Total Delay Over All Lanes(pcuHr): 34.15

Full Input Data And Results

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Staging Plan No. 1')

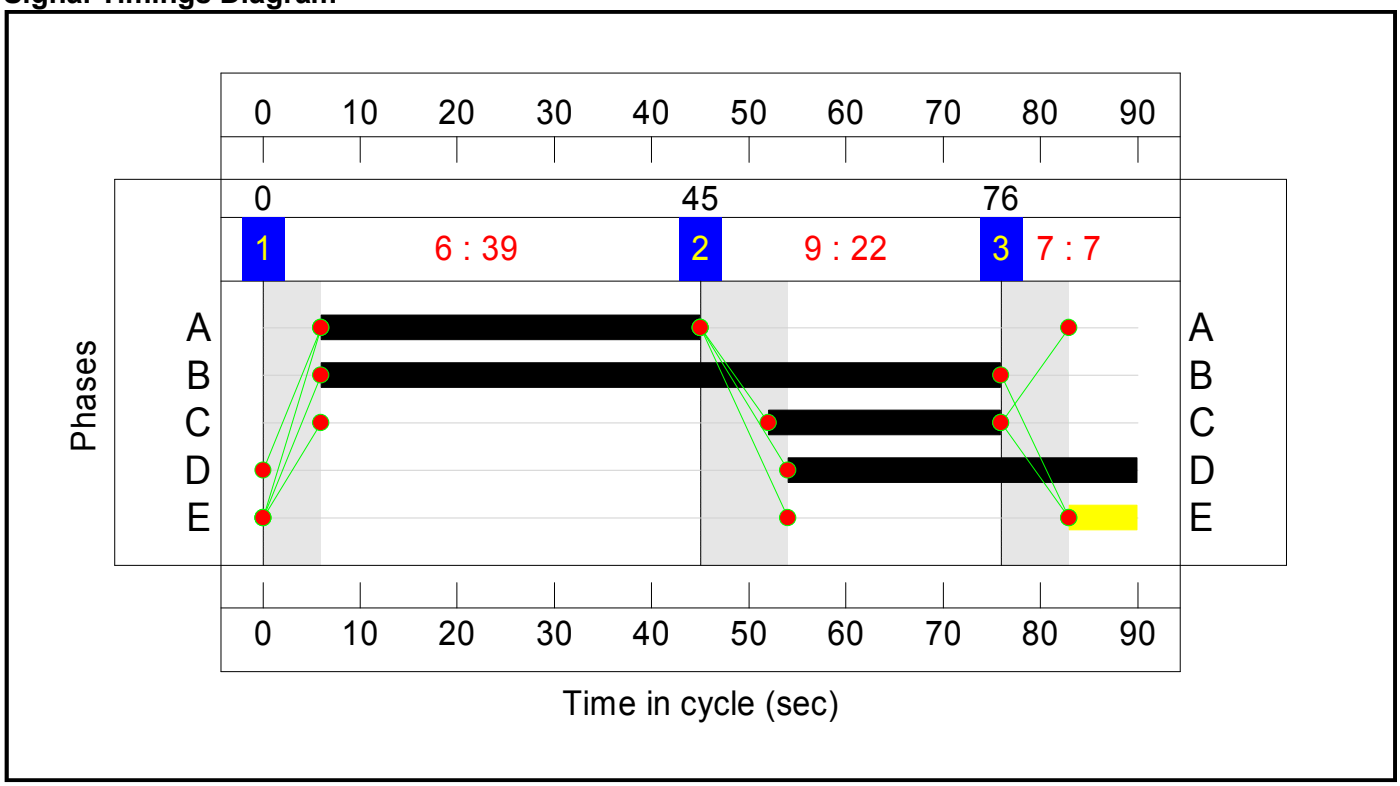
Stage Sequence Diagram



Stage Timings

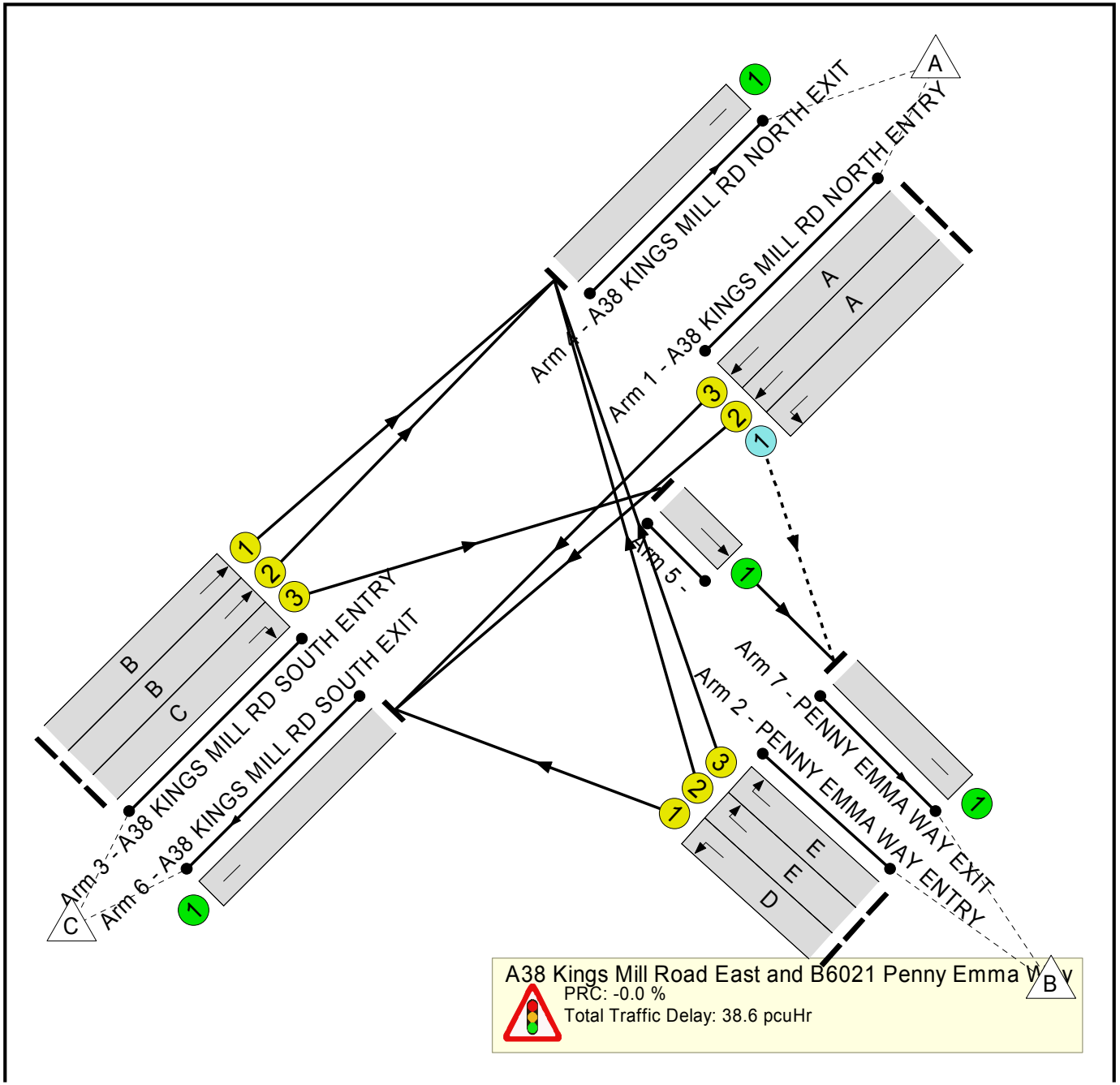
Stage	1	2	3
Duration	39	22	7
Change Point	0	45	76

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: EXISTING	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**90.0%**
A38 Kings Mill Road East and B6021 Penny Emma Way	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**90.0%**
1/1	A38 KINGS MILL RD NORTH ENTRY Left	O	N/A	N/A	-		-	-	-	29	1800	1044	2.8%
1/2	A38 KINGS MILL RD NORTH ENTRY Ahead	U	N/A	N/A	A		1	39	-	831	2080	924	89.9%
1/3	A38 KINGS MILL RD NORTH ENTRY Ahead	U	N/A	N/A	A		1	39	-	832	2080	924	90.0%
2/1	PENNY EMMA WAY ENTRY Left	U	N/A	N/A	D		1	36	-	762	2080	855	89.1%
2/2	PENNY EMMA WAY ENTRY Right	U	N/A	N/A	E		1	7	-	91	2080	185	49.2%
2/3	PENNY EMMA WAY ENTRY Right	U	N/A	N/A	E		1	7	-	91	2080	185	49.2%
3/1	A38 KINGS MILL RD SOUTH ENTRY Ahead	U	N/A	N/A	B		1	70	-	817	2080	1641	49.8%
3/2	A38 KINGS MILL RD SOUTH ENTRY Ahead	U	N/A	N/A	B		1	70	-	818	2080	1641	49.9%
3/3	A38 KINGS MILL RD SOUTH ENTRY Right	U	N/A	N/A	C		1	24	-	430	2080	578	74.4%
4/1	A38 KINGS MILL RD NORTH EXIT	U	N/A	N/A	-		-	-	-	1817	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	430	1800	1800	23.9%
6/1	A38 KINGS MILL RD SOUTH EXIT	U	N/A	N/A	-		-	-	-	2425	Inf	Inf	0.0%

Full Input Data And Results

7/1	PENNY EMMA WAY EXIT	U	N/A	N/A	-		-	-	-	459	Inf	Inf	0.0%
Item	**Arriving (pcu)**	**Leaving (pcu)**	**Turners In Gaps (pcu)**	**Turners When Unopposed (pcu)**	**Turners In Intergreen (pcu)**	**Uniform Delay (pcuHr)**	**Rand + Oversat Delay (pcuHr)**	**Storage Area Uniform Delay (pcuHr)**	**Total Delay (pcuHr)**	**Av. Delay Per PCU (s/pcu)**	**Max. Back of Uniform Queue (pcu)**	**Rand + Oversat Queue (pcu)**	**Mean Max Queue (pcu)**
Network: EXISTING	**-**	**-**	**29**	**0**	**0**	**23.0**	**15.6**	**0.0**	**38.6**	**-**	**-**	**-**	**-**
A38 Kings Mill Road East and B6021 Penny Emma Way	**-**	**-**	**29**	**0**	**0**	**23.0**	**15.6**	**0.0**	**38.6**	**-**	**-**	**-**	**-**
1/1	29	29	29	0	0	0.0	0.0	-	0.0	3.9	0.2	0.0	0.2
1/2	831	831	-	-	-	5.3	4.1	-	9.4	40.8	19.2	4.1	23.2
1/3	832	832	-	-	-	5.4	4.1	-	9.5	41.0	19.2	4.1	23.3
2/1	762	762	-	-	-	5.2	3.8	-	9.0	42.5	17.6	3.8	21.4
2/2	91	91	-	-	-	1.0	0.5	-	1.5	58.1	2.1	0.5	2.6
2/3	91	91	-	-	-	1.0	0.5	-	1.5	58.1	2.1	0.5	2.6
3/1	817	817	-	-	-	0.7	0.5	-	1.2	5.5	7.0	0.5	7.5
3/2	818	818	-	-	-	0.8	0.5	-	1.2	5.5	7.0	0.5	7.5
3/3	430	430	-	-	-	3.5	1.4	-	5.0	41.5	9.7	1.4	11.1
4/1	1817	1817	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	430	430	-	-	-	0.1	0.2	-	0.2	1.9	8.3	0.2	8.4
6/1	2425	2425	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	459	459	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

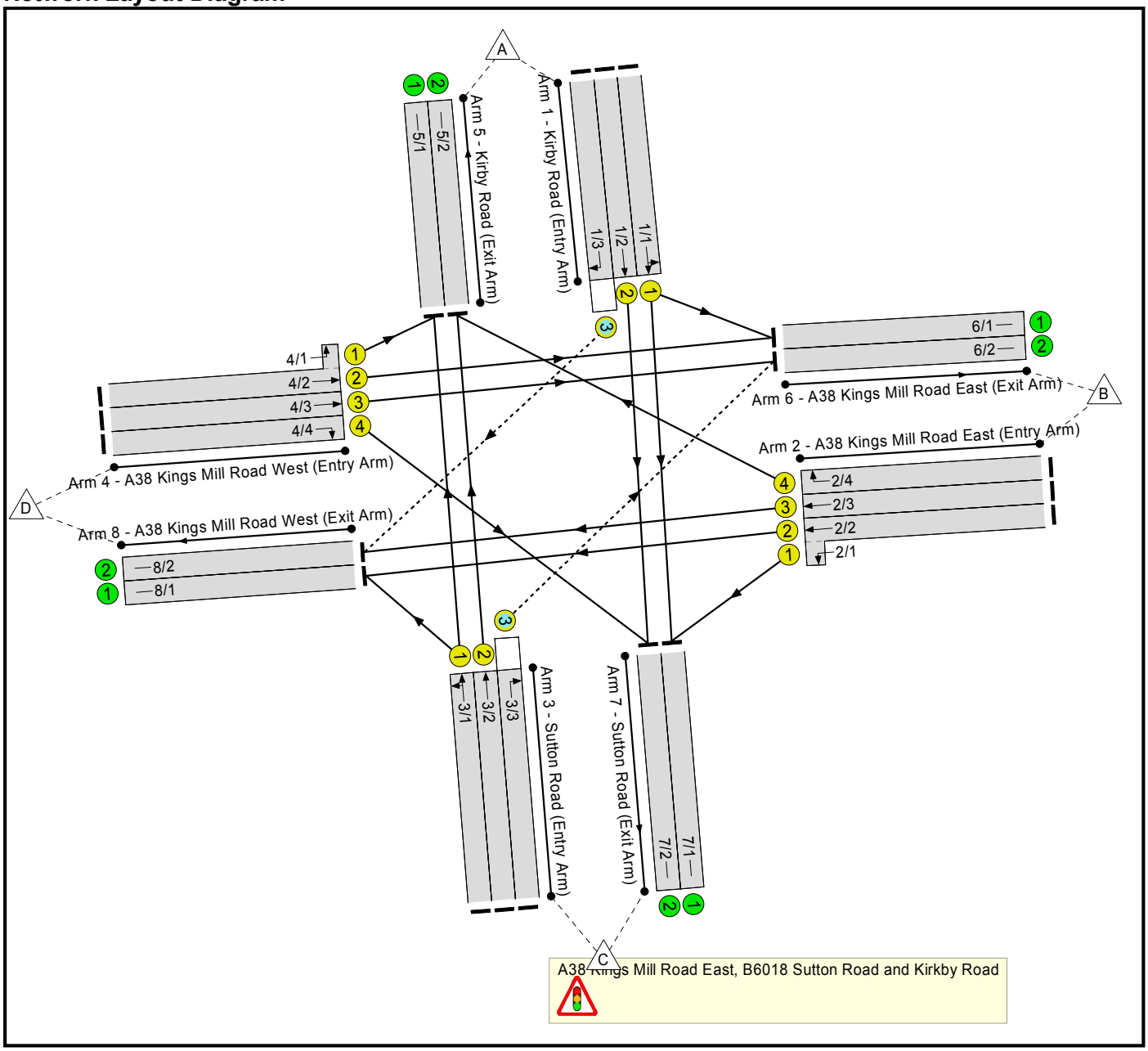
C1 PRC for Signalled Lanes (%): -0.0 Total Delay for Signalled Lanes (pcuHr): 38.30 Cycle Time (s): 90
PRC Over All Lanes (%): -0.0 Total Delay Over All Lanes(pcuHr): 38.56

Full Input Data And Results

User and Project Details

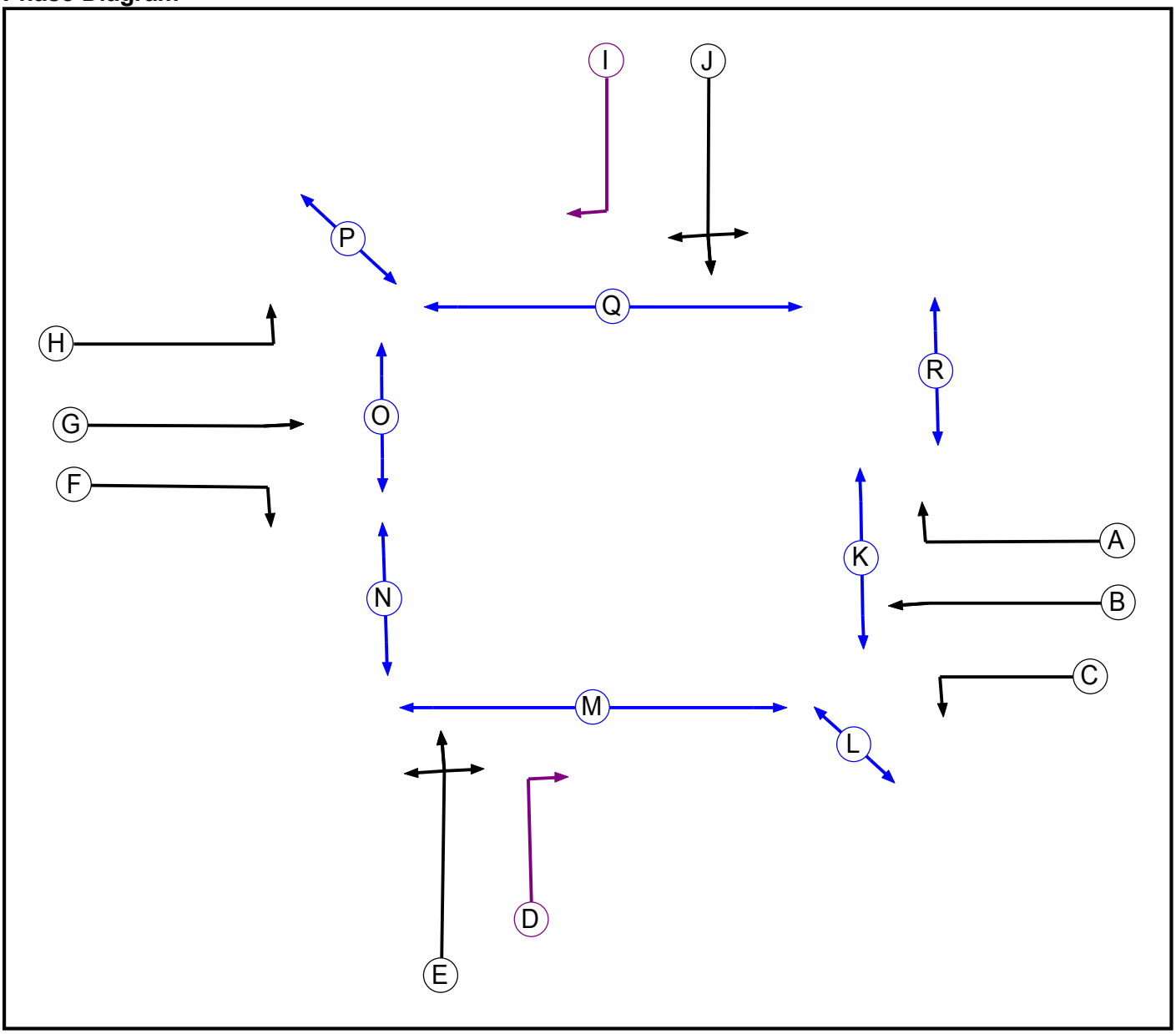
Project:	
Title:	
Location:	
File name:	Junction 7 2016.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

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	Ind. Arrow	E	7	7
E	Traffic		7	7
F	Traffic		7	7
G	Traffic		7	7
H	Traffic		7	7
I	Ind. Arrow	J	4	4
J	Traffic		7	7
K	Pedestrian		8	8
L	Pedestrian		3	3
M	Pedestrian		10	10
N	Pedestrian		6	6
O	Pedestrian		8	8
P	Pedestrian		4	4
Q	Pedestrian		10	10
R	Pedestrian		6	6

Full Input Data And Results

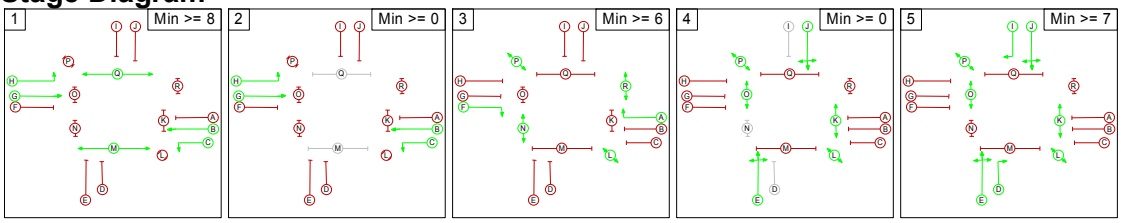
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
A		-	-	7	8	-	8	10	7	6	3	-	-	-	-	-	9	-
B	-		-	7	9	6	-	-	9	9	3	-	-	9	-	-	-	-
C	-	-		-	-	7	-	-	-	7	-	3	-	-	-	-	-	-
D	7	7	-		-	6	8	-	-	-	-	-	3	-	-	-	-	3
E	9	7	-	-		7	8	10	-	-	-	-	3	-	-	-	3	-
F	-	8	10	7	7		-	-	7	8	-	-	8	-	3	-	-	-
G	7	-	-	8	6	-		-	7	8	-	-	-	-	3	-	-	7
H	7	-	-	-	7	-	-		-	-	-	-	-	-	-	3	-	-
I	6	8	-	-	-	6	6	-		-	-	-	-	8	-	-	3	-
J	7	8	10	-	-	8	7	-	-		-	-	8	-	-	-	3	6
K	3	3	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-
L	-	-	3	-	-	-	-	-	-	-	-		-	-	-	-	-	-
M	-	-	-	3	3	3	-	-	-	3	-	-		-	-	-	-	-
N	-	3	-	-	-	-	-	-	3	-	-	-	-		-	-	-	-
O	-	-	-	-	-	3	3	-	-	-	-	-	-	-		-	-	-
P	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-		-	-
Q	3	-	-	-	3	-	-	-	3	3	-	-	-	-	-	-		-
R	-	-	-	3	-	-	3	-	-	3	-	-	-	-	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	B C G H M Q
2	B C G H
3	A F L N P R
4	E J K L O P
5	D E I J K L O P

Stage Diagram



Phase Delays

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

Full Input Data And Results

Prohibited Stage Change

		To Stage				
		1	2	3	4	5
From Stage	1		0	9	9	X
	2	0		9	9	X
	3	10	10		8	X
	4	10	10	9		0
	5	10	10	9	0	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A38 Kings Mill Road East, B6018 Sutton Road and Kirkby Road

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)
1/3 (Kirby Road (Entry Arm))	8/2 (Right)	1400	0	3/2	1.09	All	2.00	-	0.50	2	2.00
3/3 (Sutton Road (Entry Arm))	6/2 (Right)	1400	0	1/1	1.09	All	2.00	-	0.50	2	2.00
				1/2	1.09	All					

Full Input Data And Results

Lane Input Data

Junction: A38 Kings Mill Road East, B6018 Sutton Road and Kirkby Road												
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 (Kirby Road (Entry Arm))	U	J	2	3	60.0	User	1800	-	-	-	-	-
1/2 (Kirby Road (Entry Arm))	U	J	2	3	12.7	User	1800	-	-	-	-	-
1/3 (Kirby Road (Entry Arm))	O	J I	2	3	5.7	User	1800	-	-	-	-	-
2/1 (A38 Kings Mill Road East (Entry Arm))	U	C	2	3	1.2	User	1800	-	-	-	-	-
2/2 (A38 Kings Mill Road East (Entry Arm))	U	B	2	3	60.0	User	1800	-	-	-	-	-
2/3 (A38 Kings Mill Road East (Entry Arm))	U	B	2	3	23.5	User	1800	-	-	-	-	-
2/4 (A38 Kings Mill Road East (Entry Arm))	U	A	2	3	13.2	User	1800	-	-	-	-	-
3/1 (Sutton Road (Entry Arm))	U	E	2	3	7.5	User	1800	-	-	-	-	-
3/2 (Sutton Road (Entry Arm))	U	E	2	3	60.0	User	1800	-	-	-	-	-
3/3 (Sutton Road (Entry Arm))	O	E D	2	3	16.5	User	1800	-	-	-	-	-
4/1 (A38 Kings Mill Road West (Entry Arm))	U	H	2	3	1.0	User	1800	-	-	-	-	-
4/2 (A38 Kings Mill Road West (Entry Arm))	U	G	2	3	60.0	User	1800	-	-	-	-	-
4/3 (A38 Kings Mill Road West (Entry Arm))	U	G	2	3	27.8	User	1800	-	-	-	-	-
4/4 (A38 Kings Mill Road West (Entry Arm))	U	F	2	3	16.2	User	1800	-	-	-	-	-
5/1 (Kirby Road (Exit Arm))	U		2	3	60.0	User	1800	-	-	-	-	-

5/2 (Kirby Road (Exit Arm))	U		2	3	60.0	User	1800	-	-	-	-	-
6/1 (A38 Kings Mill Road East (Exit Arm))	U		2	3	60.0	User	1800	-	-	-	-	-
6/2 (A38 Kings Mill Road East (Exit Arm))	U		2	3	60.0	User	1800	-	-	-	-	-
7/1 (Sutton Road (Exit Arm))	U		2	3	60.0	User	1800	-	-	-	-	-
7/2 (Sutton Road (Exit Arm))	U		2	3	60.0	User	1800	-	-	-	-	-
8/1 (A38 Kings Mill Road West (Exit Arm))	U		2	3	60.0	User	1800	-	-	-	-	-
8/2 (A38 Kings Mill Road West (Exit Arm))	U		2	3	60.0	User	1800	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2032 Reference Case Morning Peak'	08:00	09:00	01:00	
2: '2032 Development Case Morning Peak'	08:00	09:00	01:00	
3: '2032 Reference Case Evening Peak'	17:00	18:00	01:00	
4: '2032 Development Case Evening Peak'	17:00	18:00	01:00	

Scenario 1: 'AM Reference Case' (FG1: '2032 Reference Case Morning Peak', Plan 1: 'NCC Signal Plan ')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	127	475	37	639
	B	150	0	303	1654	2107
	C	622	552	0	386	1560
	D	67	1514	285	0	1866
	Tot.	839	2193	1063	2077	6172

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: AM Reference Case
Junction: A38 Kings Mill Road East, B6018 Sutton Road and Kirkby Road	
1/1	304
1/2	298
1/3	37
2/1 (short)	303
2/2 (with short)	1004(In) 701(Out)
2/3	953
2/4	150
3/1	509
3/2	499
3/3	552
4/1 (short)	67
4/2 (with short)	794(In) 727(Out)
4/3	787
4/4	285
5/1	190
5/2	649
6/1	854
6/2	1339
7/1	480
7/2	583
8/1	1087
8/2	990

Full Input Data And Results

Lane Saturation Flows

Junction: A38 Kings Mill Road East, B6018 Sutton Road and Kirkby Road								
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 (Kirby Road (Entry Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (Kirby Road (Entry Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
1/3 (Kirby Road (Entry Arm) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A38 Kings Mill Road East (Entry Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (A38 Kings Mill Road East (Entry Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/3 (A38 Kings Mill Road East (Entry Arm) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/4 (A38 Kings Mill Road East (Entry Arm) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (Sutton Road (Entry Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (Sutton Road (Entry Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/3 (Sutton Road (Entry Arm) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (A38 Kings Mill Road West (Entry Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A38 Kings Mill Road West (Entry Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/3 (A38 Kings Mill Road West (Entry Arm) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/4 (A38 Kings Mill Road West (Entry Arm) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (Kirby Road (Exit Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/2 (Kirby Road (Exit Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (A38 Kings Mill Road East (Exit Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (A38 Kings Mill Road East (Exit Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
7/1 (Sutton Road (Exit Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
7/2 (Sutton Road (Exit Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800

8/1 (A38 Kings Mill Road West (Exit Arm) Lane 1)	This lane uses a directly entered Saturation Flow	1800	1800
8/2 (A38 Kings Mill Road West (Exit Arm) Lane 2)	This lane uses a directly entered Saturation Flow	1800	1800

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case Evening Peak', Plan 1: 'NCC Signal Plan ')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	129	736	63	928
	B	221	0	470	1509	2200
	C	660	360	0	294	1314
	D	128	1629	562	0	2319
	Tot.	1009	2118	1768	1866	6761

Traffic Lane Flows

Lane	Scenario 2: PM Reference Case
Junction: A38 Kings Mill Road East, B6018 Sutton Road and Kirkby Road	
1/1	435
1/2	430
1/3	63
2/1 (short)	470
2/2 (with short)	1013(In) 543(Out)
2/3	966
2/4	221
3/1	481
3/2	473
3/3	360
4/1 (short)	128
4/2 (with short)	885(In) 757(Out)
4/3	872
4/4	562
5/1	315
5/2	694
6/1	886
6/2	1232
7/1	776
7/2	992
8/1	837
8/2	1029

Full Input Data And Results

Lane Saturation Flows

Junction: A38 Kings Mill Road East, B6018 Sutton Road and Kirkby Road								
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 (Kirby Road (Entry Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (Kirby Road (Entry Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
1/3 (Kirby Road (Entry Arm) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A38 Kings Mill Road East (Entry Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (A38 Kings Mill Road East (Entry Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/3 (A38 Kings Mill Road East (Entry Arm) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/4 (A38 Kings Mill Road East (Entry Arm) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (Sutton Road (Entry Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (Sutton Road (Entry Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/3 (Sutton Road (Entry Arm) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (A38 Kings Mill Road West (Entry Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A38 Kings Mill Road West (Entry Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/3 (A38 Kings Mill Road West (Entry Arm) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/4 (A38 Kings Mill Road West (Entry Arm) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (Kirby Road (Exit Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/2 (Kirby Road (Exit Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (A38 Kings Mill Road East (Exit Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (A38 Kings Mill Road East (Exit Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
7/1 (Sutton Road (Exit Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
7/2 (Sutton Road (Exit Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800

8/1 (A38 Kings Mill Road West (Exit Arm) Lane 1)	This lane uses a directly entered Saturation Flow	1800	1800
8/2 (A38 Kings Mill Road West (Exit Arm) Lane 2)	This lane uses a directly entered Saturation Flow	1800	1800

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'NCC Signal Plan ')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	127	608	44	779
	B	164	0	375	1886	2425
	C	685	538	0	444	1667
	D	88	1758	424	0	2270
	Tot.	937	2423	1407	2374	7141

Traffic Lane Flows

Lane	Scenario 3: AM Development Scenario
Junction: A38 Kings Mill Road East, B6018 Sutton Road and Kirkby Road	
1/1	370
1/2	365
1/3	44
2/1 (short)	375
2/2 (with short)	1164(In) 789(Out)
2/3	1097
2/4	164
3/1	569
3/2	560
3/3	538
4/1 (short)	88
4/2 (with short)	927(In) 839(Out)
4/3	919
4/4	424
5/1	213
5/2	724
6/1	966
6/2	1457
7/1	618
7/2	789
8/1	1233
8/2	1141

Full Input Data And Results

Lane Saturation Flows

Junction: A38 Kings Mill Road East, B6018 Sutton Road and Kirkby Road								
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 (Kirby Road (Entry Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (Kirby Road (Entry Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
1/3 (Kirby Road (Entry Arm) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A38 Kings Mill Road East (Entry Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (A38 Kings Mill Road East (Entry Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/3 (A38 Kings Mill Road East (Entry Arm) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/4 (A38 Kings Mill Road East (Entry Arm) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (Sutton Road (Entry Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (Sutton Road (Entry Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/3 (Sutton Road (Entry Arm) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (A38 Kings Mill Road West (Entry Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A38 Kings Mill Road West (Entry Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/3 (A38 Kings Mill Road West (Entry Arm) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/4 (A38 Kings Mill Road West (Entry Arm) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (Kirby Road (Exit Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/2 (Kirby Road (Exit Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (A38 Kings Mill Road East (Exit Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (A38 Kings Mill Road East (Exit Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
7/1 (Sutton Road (Exit Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
7/2 (Sutton Road (Exit Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800

8/1 (A38 Kings Mill Road West (Exit Arm) Lane 1)	This lane uses a directly entered Saturation Flow	1800	1800
8/2 (A38 Kings Mill Road West (Exit Arm) Lane 2)	This lane uses a directly entered Saturation Flow	1800	1800

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'NCC Signal Plan ')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	141	812	79	1032
	B	221	0	475	1742	2438
	C	783	425	0	401	1609
	D	148	1880	655	0	2683
	Tot.	1152	2446	1942	2222	7762

Traffic Lane Flows

Lane	Scenario 4: PM Development Scenario
Junction: A38 Kings Mill Road East, B6018 Sutton Road and Kirkby Road	
1/1	480
1/2	473
1/3	79
2/1 (short)	475
2/2 (with short)	1150(In) 675(Out)
2/3	1067
2/4	221
3/1	597
3/2	587
3/3	425
4/1 (short)	148
4/2 (with short)	1023(In) 875(Out)
4/3	1005
4/4	655
5/1	344
5/2	808
6/1	1016
6/2	1430
7/1	814
7/2	1128
8/1	1076
8/2	1146

Full Input Data And Results

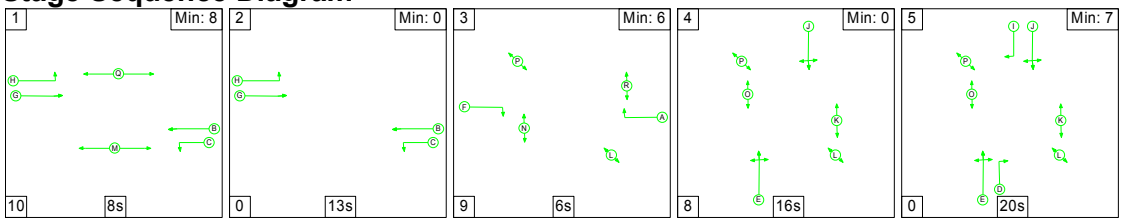
Lane Saturation Flows

Junction: A38 Kings Mill Road East, B6018 Sutton Road and Kirkby Road								
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 (Kirby Road (Entry Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (Kirby Road (Entry Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
1/3 (Kirby Road (Entry Arm) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A38 Kings Mill Road East (Entry Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (A38 Kings Mill Road East (Entry Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/3 (A38 Kings Mill Road East (Entry Arm) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/4 (A38 Kings Mill Road East (Entry Arm) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (Sutton Road (Entry Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (Sutton Road (Entry Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/3 (Sutton Road (Entry Arm) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (A38 Kings Mill Road West (Entry Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A38 Kings Mill Road West (Entry Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/3 (A38 Kings Mill Road West (Entry Arm) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/4 (A38 Kings Mill Road West (Entry Arm) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (Kirby Road (Exit Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/2 (Kirby Road (Exit Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (A38 Kings Mill Road East (Exit Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (A38 Kings Mill Road East (Exit Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
7/1 (Sutton Road (Exit Arm) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
7/2 (Sutton Road (Exit Arm) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800

8/1 (A38 Kings Mill Road West (Exit Arm) Lane 1)	This lane uses a directly entered Saturation Flow	1800	1800
8/2 (A38 Kings Mill Road West (Exit Arm) Lane 2)	This lane uses a directly entered Saturation Flow	1800	1800

Scenario 1: 'AM Reference Case' (FG1: '2032 Reference Case Morning Peak', Plan 1: 'NCC Signal Plan ')

Stage Sequence Diagram

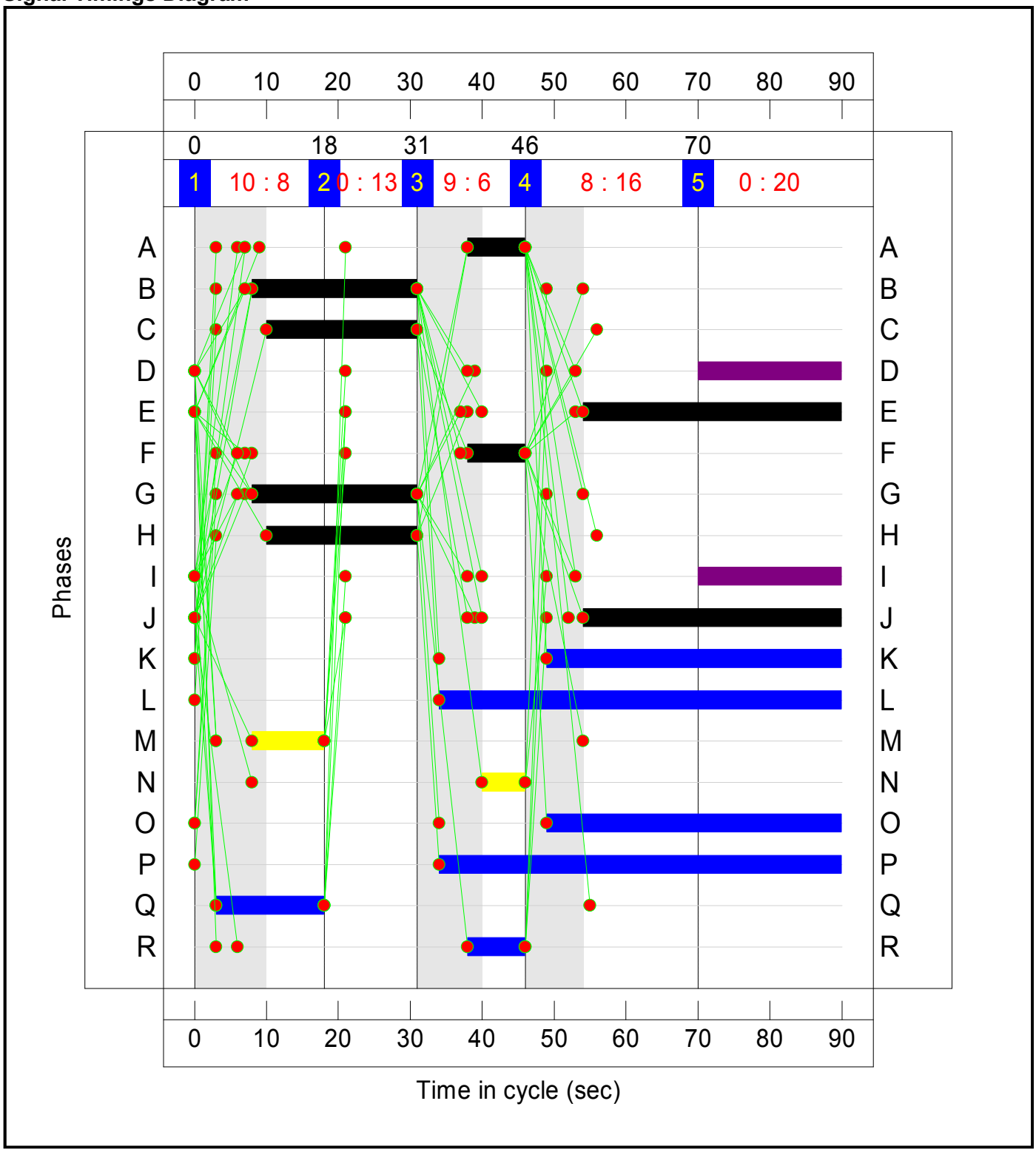


Stage Timings

Stage	1	2	3	4	5
Duration	8	13	6	16	20
Change Point	0	18	31	46	70

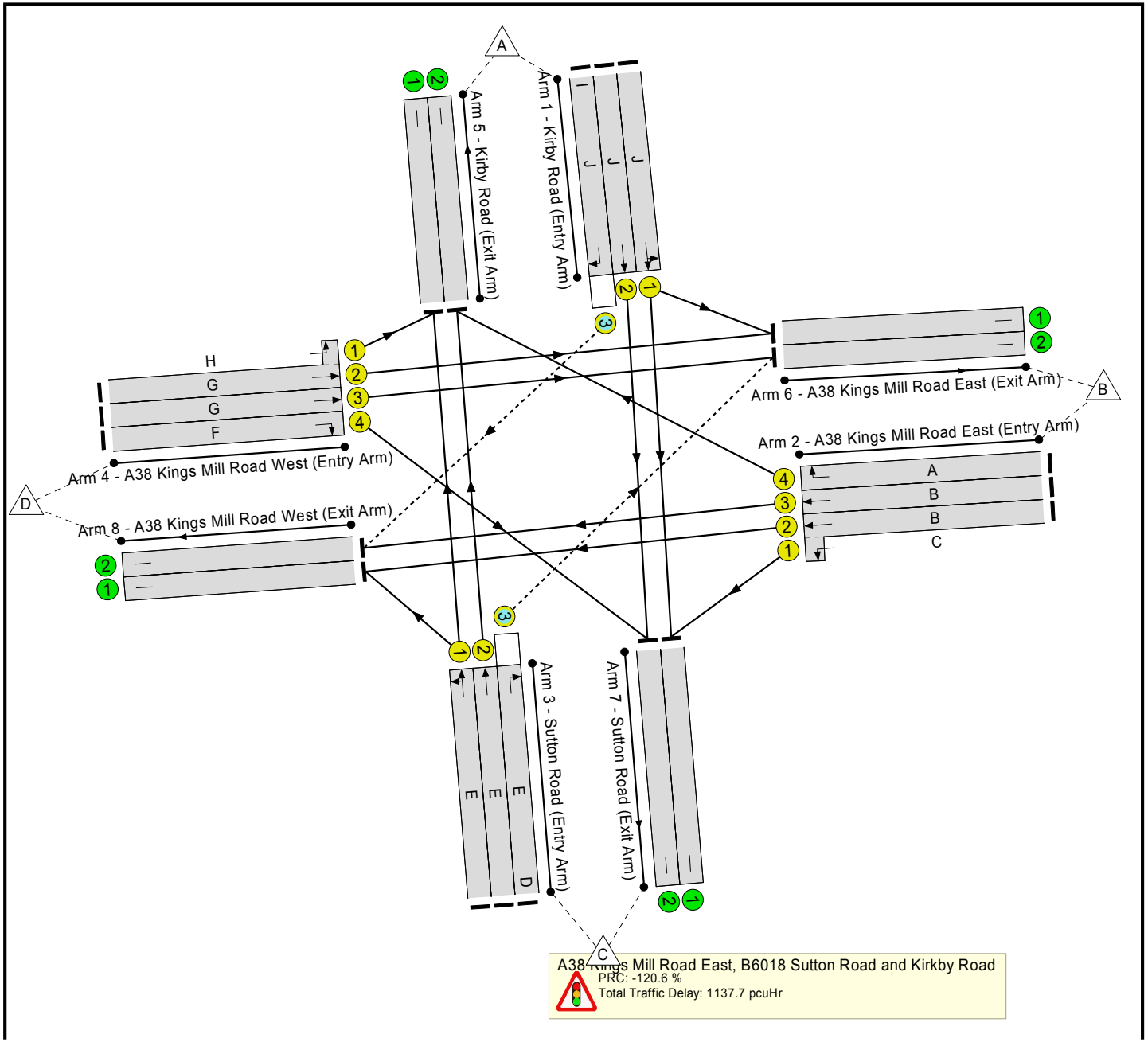
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**198.5%**
A38 Kings Mill Road East, B6018 Sutton Road and Kirkby Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**198.5%**
1/1	Kirby Road (Entry Arm) Left Ahead	U	N/A	N/A	J		1	36	-	304	1800	740	41.1%
1/2	Kirby Road (Entry Arm) Ahead	U	N/A	N/A	J		1	36	-	298	1800	740	40.3%
1/3	Kirby Road (Entry Arm) Right	O	N/A	N/A	J	I	1	36	20	37	1800	217	17.0%
2/2+2/1	A38 Kings Mill Road East (Entry Arm) Left Ahead	U	N/A	N/A	B C		1	23:21	-	1004	1800:1800	506	198.5%
2/3	A38 Kings Mill Road East (Entry Arm) Ahead	U	N/A	N/A	B		1	23	-	953	1800	480	198.5%
2/4	A38 Kings Mill Road East (Entry Arm) Right	U	N/A	N/A	A		1	8	-	150	1800	180	83.3%
3/1	Sutton Road (Entry Arm) Ahead Left	U	N/A	N/A	E		1	36	-	509	1800	740	68.8%
3/2	Sutton Road (Entry Arm) Ahead	U	N/A	N/A	E		1	36	-	499	1800	740	67.4%
3/3	Sutton Road (Entry Arm) Right	O	N/A	N/A	E	D	1	36	20	552	1800	278	198.4%
4/2+4/1	A38 Kings Mill Road West (Entry Arm) Left Ahead	U	N/A	N/A	G H		1	23:21	-	794	1800:1800	484	164.2%
4/3	A38 Kings Mill Road West (Entry Arm) Ahead	U	N/A	N/A	G		1	23	-	787	1800	480	164.0%
4/4	A38 Kings Mill Road West (Entry Arm) Right	U	N/A	N/A	F		1	8	-	285	1800	180	158.3%

Full Input Data And Results

5/1	Kirby Road (Exit Arm)	U	N/A	N/A	-		-	-	-	190	1800	1800	9.1%
5/2	Kirby Road (Exit Arm)	U	N/A	N/A	-		-	-	-	649	1800	1800	36.1%
6/1	A38 Kings Mill Road East (Exit Arm)	U	N/A	N/A	-		-	-	-	854	1800	1800	31.7%
6/2	A38 Kings Mill Road East (Exit Arm)	U	N/A	N/A	-		-	-	-	1339	1800	1800	42.1%
7/1	Sutton Road (Exit Arm)	U	N/A	N/A	-		-	-	-	480	1800	1800	18.3%
7/2	Sutton Road (Exit Arm)	U	N/A	N/A	-		-	-	-	583	1800	1800	26.6%
8/1	A38 Kings Mill Road West (Exit Arm)	U	N/A	N/A	-		-	-	-	1087	1800	1800	41.1%
8/2	A38 Kings Mill Road West (Exit Arm)	U	N/A	N/A	-		-	-	-	990	1800	1800	28.7%

Full Input Data And Results

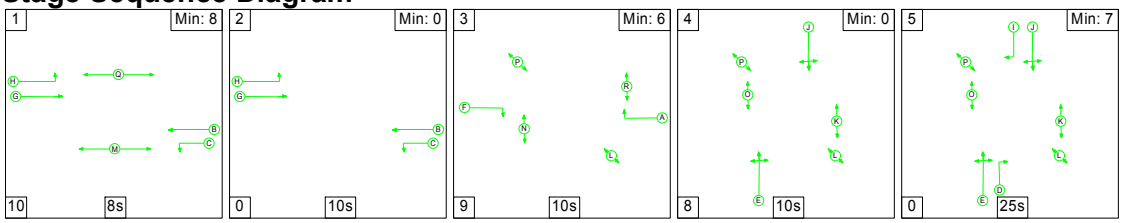
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**252**	**0**	**63**	**139.5**	**997.4**	**0.8**	**1137.7**	**-**	**-**	**-**	**-**
A38 Kings Mill Road East, B6018 Sutton Road and Kirkby Road	**-**	**-**	**252**	**0**	**63**	**139.5**	**997.4**	**0.8**	**1137.7**	**-**	**-**	**-**	**-**
1/1	304	304	-	-	-	1.6	0.3	-	1.9	22.9	5.3	0.3	5.7
1/2	298	298	-	-	-	1.5	0.3	-	1.9	22.8	5.2	0.3	5.6
1/3	37	37	37	0	0	0.2	0.1	0.2	0.4	41.4	0.6	0.1	0.7
2/2+2/1	1004	506	-	-	-	31.1	250.1	-	281.2	1008.2	40.0	250.1	290.1
2/3	953	480	-	-	-	29.6	237.5	-	267.1	1008.8	38.5	237.5	276.0
2/4	150	150	-	-	-	1.7	2.2	-	3.8	92.2	3.7	2.2	5.8
3/1	509	509	-	-	-	3.1	1.1	-	4.2	29.5	10.3	1.1	11.4
3/2	499	499	-	-	-	3.0	1.0	-	4.0	29.0	10.1	1.0	11.1
3/3	552	278	215	0	63	19.0	137.9	0.7	157.5	1027.3	27.0	137.9	164.9
4/2+4/1	794	484	-	-	-	20.9	156.4	-	177.4	804.1	27.8	156.4	184.2
4/3	787	480	-	-	-	20.7	154.8	-	175.5	802.8	27.6	154.8	182.4
4/4	285	180	-	-	-	7.2	53.8	-	61.0	770.5	9.8	53.8	63.6
5/1	164	164	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
5/2	649	649	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3
6/1	570	570	-	-	-	0.0	0.2	-	0.2	1.5	0.0	0.2	0.2
6/2	758	758	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
7/1	330	330	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
7/2	478	478	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
8/1	739	739	-	-	-	0.0	0.3	-	0.3	1.7	0.0	0.3	0.3
8/2	517	517	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2

C1 PRC for Signalled Lanes (%): -120.6 Total Delay for Signalled Lanes (pcuHr): 1135.90 Cycle Time (s): 90
PRC Over All Lanes (%): -120.6 Total Delay Over All Lanes(pcuHr): 1137.67

Full Input Data And Results

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case Evening Peak', Plan 1: 'NCC Signal Plan ')

Stage Sequence Diagram

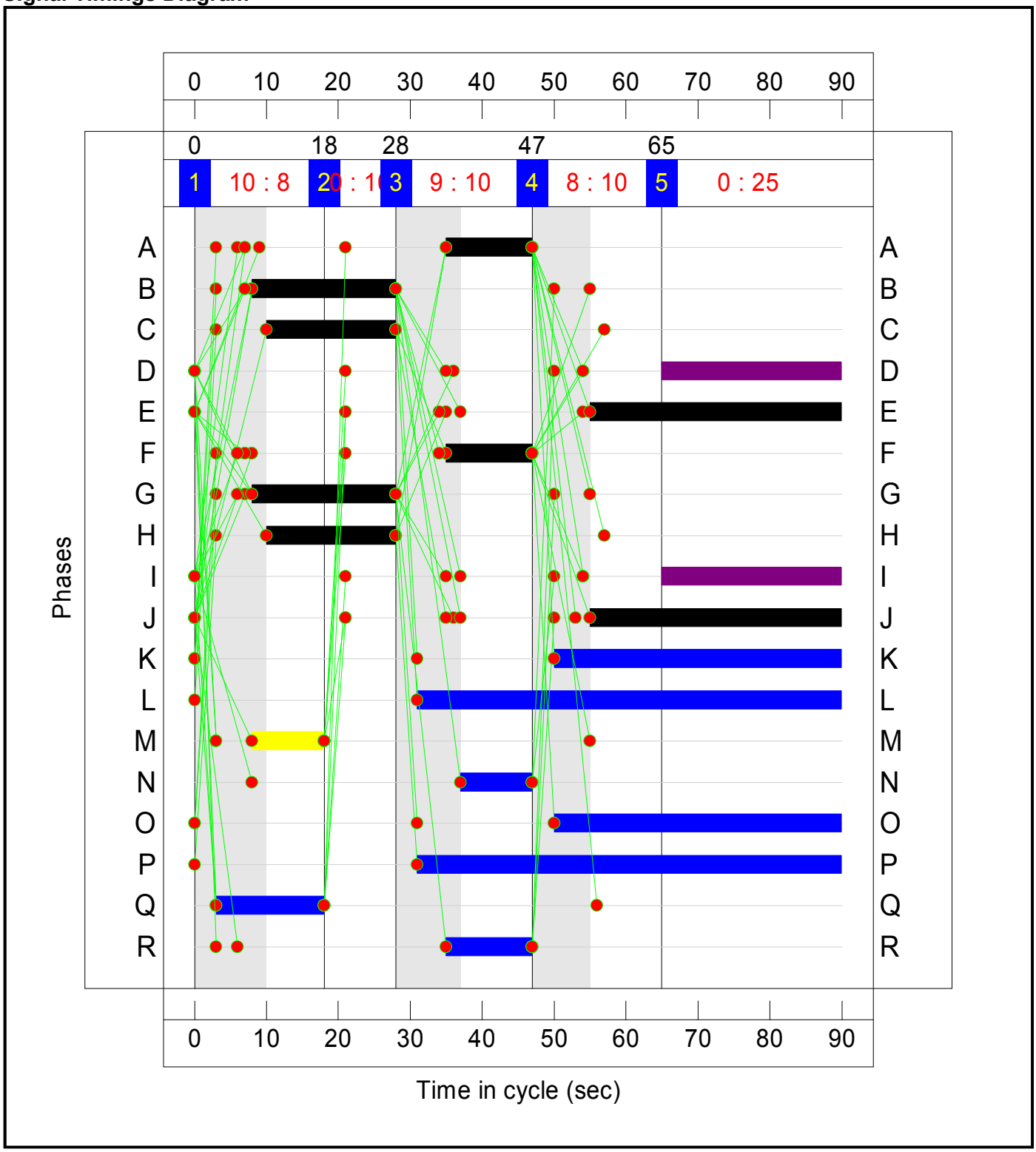


Stage Timings

Stage	1	2	3	4	5
Duration	8	10	10	10	25
Change Point	0	18	28	47	65

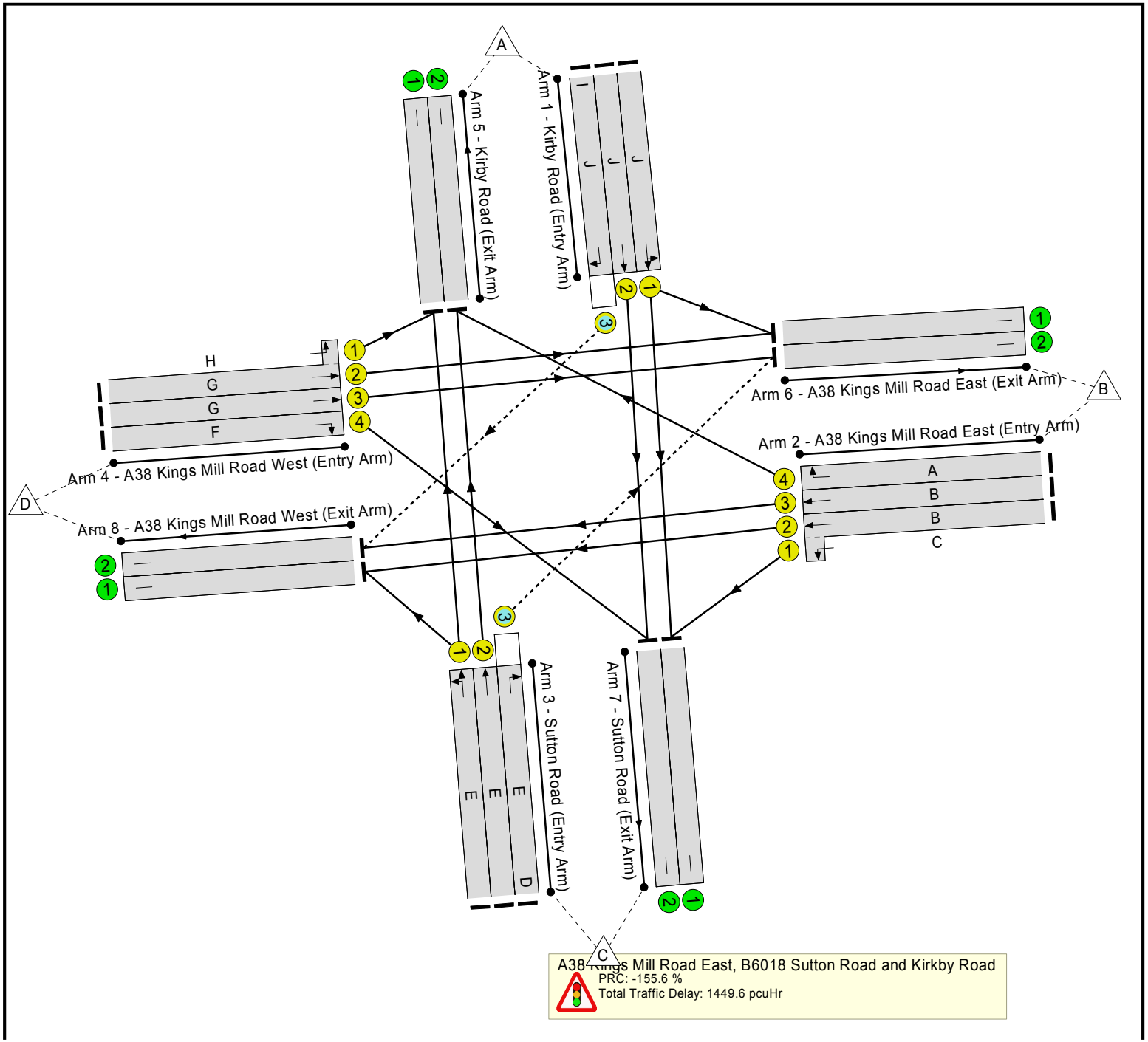
Full Input Data And Results

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**230.0%**
A38 Kings Mill Road East, B6018 Sutton Road and Kirkby Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**230.0%**
1/1	Kirby Road (Entry Arm) Left Ahead	U	N/A	N/A	J		1	35	-	435	1800	720	60.4%
1/2	Kirby Road (Entry Arm) Ahead	U	N/A	N/A	J		1	35	-	430	1800	720	59.7%
1/3	Kirby Road (Entry Arm) Right	O	N/A	N/A	J	I	1	35	25	63	1800	223	28.2%
2/2+2/1	A38 Kings Mill Road East (Entry Arm) Left Ahead	U	N/A	N/A	B C		1	20:18	-	1013	1800:1800	441	229.7%
2/3	A38 Kings Mill Road East (Entry Arm) Ahead	U	N/A	N/A	B		1	20	-	966	1800	420	230.0%
2/4	A38 Kings Mill Road East (Entry Arm) Right	U	N/A	N/A	A		1	12	-	221	1800	260	85.0%
3/1	Sutton Road (Entry Arm) Ahead Left	U	N/A	N/A	E		1	35	-	481	1800	720	66.8%
3/2	Sutton Road (Entry Arm) Ahead	U	N/A	N/A	E		1	35	-	473	1800	720	65.7%
3/3	Sutton Road (Entry Arm) Right	O	N/A	N/A	E	D	1	35	25	360	1800	163	221.1%
4/2+4/1	A38 Kings Mill Road West (Entry Arm) Left Ahead	U	N/A	N/A	G H		1	20:18	-	885	1800:1800	427	207.4%
4/3	A38 Kings Mill Road West (Entry Arm) Ahead	U	N/A	N/A	G		1	20	-	872	1800	420	207.6%
4/4	A38 Kings Mill Road West (Entry Arm) Right	U	N/A	N/A	F		1	12	-	562	1800	260	216.2%

Full Input Data And Results

5/1	Kirby Road (Exit Arm)	U	N/A	N/A	-		-	-	-	315	1800	1800	13.8%
5/2	Kirby Road (Exit Arm)	U	N/A	N/A	-		-	-	-	694	1800	1800	38.6%
6/1	A38 Kings Mill Road East (Exit Arm)	U	N/A	N/A	-		-	-	-	886	1800	1800	27.4%
6/2	A38 Kings Mill Road East (Exit Arm)	U	N/A	N/A	-		-	-	-	1232	1800	1800	32.4%
7/1	Sutton Road (Exit Arm)	U	N/A	N/A	-		-	-	-	776	1800	1800	28.4%
7/2	Sutton Road (Exit Arm)	U	N/A	N/A	-		-	-	-	992	1800	1800	38.3%
8/1	A38 Kings Mill Road West (Exit Arm)	U	N/A	N/A	-		-	-	-	837	1800	1800	29.5%
8/2	A38 Kings Mill Road West (Exit Arm)	U	N/A	N/A	-		-	-	-	1029	1800	1800	26.8%

Full Input Data And Results

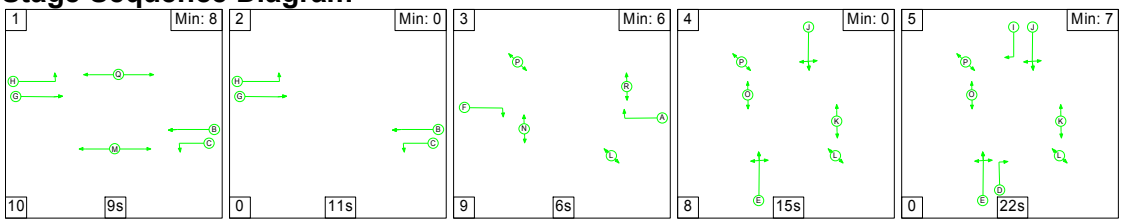
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**156**	**0**	**70**	**171.5**	**1277.0**	**1.0**	**1449.6**	**-**	**-**	**-**	**-**
A38 Kings Mill Road East, B6018 Sutton Road and Kirkby Road	**-**	**-**	**156**	**0**	**70**	**171.5**	**1277.0**	**1.0**	**1449.6**	**-**	**-**	**-**	**-**
1/1	435	435	-	-	-	2.6	0.8	-	3.3	27.6	8.6	0.8	9.3
1/2	430	430	-	-	-	2.5	0.7	-	3.3	27.5	8.4	0.7	9.1
1/3	63	63	63	0	0	0.3	0.2	0.3	0.8	43.4	1.0	0.2	1.2
2/2+2/1	1013	441	-	-	-	35.0	286.8	-	321.9	1143.9	44.1	286.8	331.0
2/3	966	420	-	-	-	33.5	273.9	-	307.4	1145.6	43.1	273.9	317.0
2/4	221	221	-	-	-	2.3	2.5	-	4.8	78.4	5.3	2.5	7.9
3/1	481	481	-	-	-	3.0	1.0	-	4.0	29.6	9.8	1.0	10.8
3/2	473	473	-	-	-	2.9	1.0	-	3.8	29.2	9.6	1.0	10.5
3/3	360	163	93	0	70	13.3	99.5	0.7	113.5	1135.0	18.6	99.5	118.0
4/2+4/1	885	427	-	-	-	28.8	230.1	-	258.9	1053.2	37.2	230.1	267.3
4/3	872	420	-	-	-	28.4	227.0	-	255.4	1054.4	36.9	227.0	263.9
4/4	562	260	-	-	-	18.8	151.9	-	170.7	1093.7	22.9	151.9	174.8
5/1	249	249	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
5/2	694	694	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3
6/1	494	494	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
6/2	583	583	-	-	-	0.0	0.2	-	0.2	1.5	0.0	0.2	0.2
7/1	511	511	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
7/2	690	690	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3
8/1	531	531	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
8/2	483	483	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2

C1 PRC for Signalled Lanes (%): -155.6 Total Delay for Signalled Lanes (pcuHr): 1447.83 Cycle Time (s): 90
PRC Over All Lanes (%): -155.6 Total Delay Over All Lanes(pcuHr): 1449.55

Full Input Data And Results

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'NCC Signal Plan ')

Stage Sequence Diagram

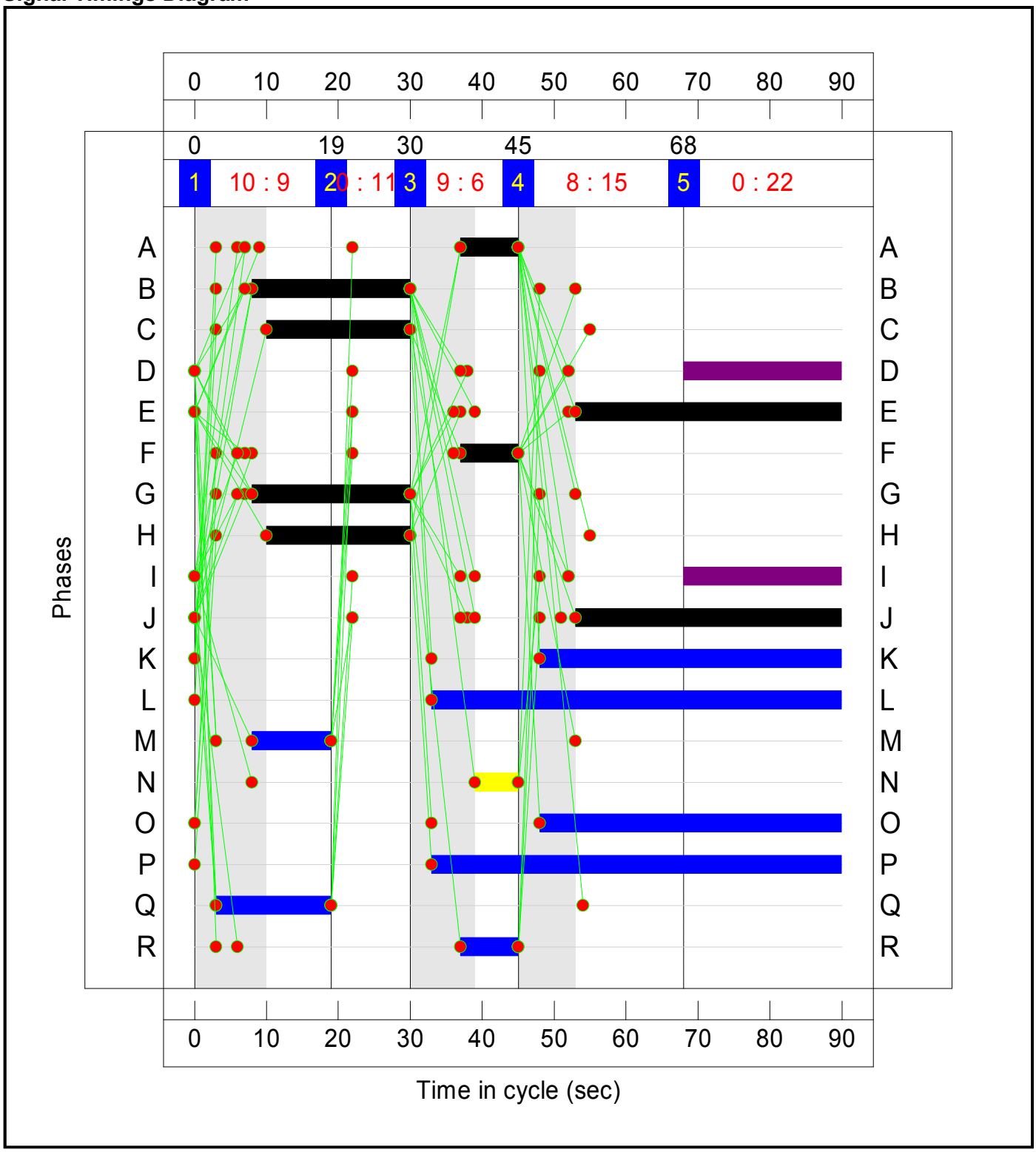


Stage Timings

Stage	1	2	3	4	5
Duration	9	11	6	15	22
Change Point	0	19	30	45	68

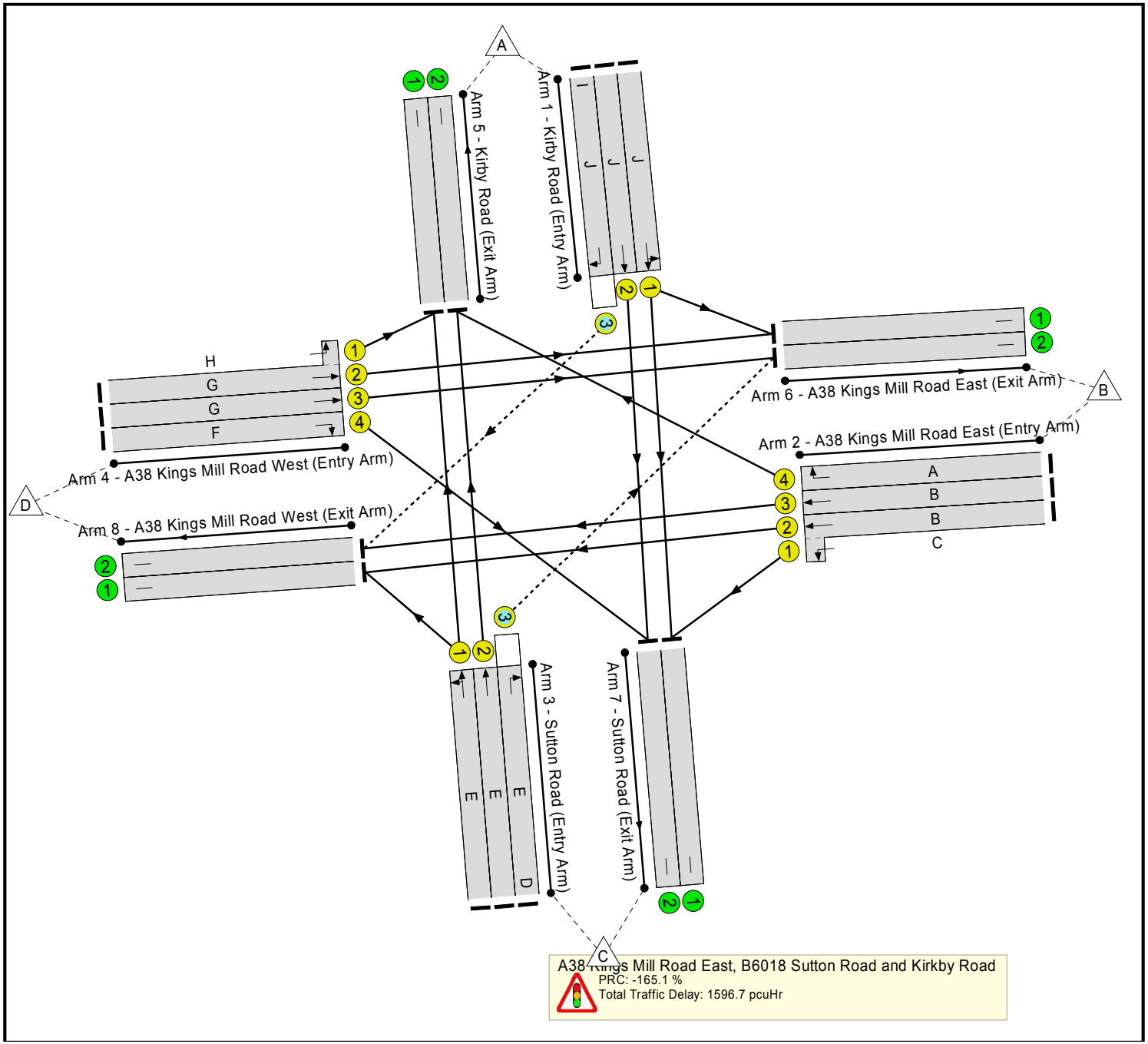
Full Input Data And Results

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**238.6%**
A38 Kings Mill Road East, B6018 Sutton Road and Kirkby Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**238.6%**
1/1	Kirby Road (Entry Arm) Left Ahead	U	N/A	N/A	J		1	37	-	370	1800	760	48.7%
1/2	Kirby Road (Entry Arm) Ahead	U	N/A	N/A	J		1	37	-	365	1800	760	48.0%
1/3	Kirby Road (Entry Arm) Right	O	N/A	N/A	J	I	1	37	22	44	1800	187	23.6%
2/2+2/1	A38 Kings Mill Road East (Entry Arm) Left Ahead	U	N/A	N/A	B C		1	22:20	-	1164	1800:1800	488	238.6%
2/3	A38 Kings Mill Road East (Entry Arm) Ahead	U	N/A	N/A	B		1	22	-	1097	1800	460	238.5%
2/4	A38 Kings Mill Road East (Entry Arm) Right	U	N/A	N/A	A		1	8	-	164	1800	180	91.1%
3/1	Sutton Road (Entry Arm) Ahead Left	U	N/A	N/A	E		1	37	-	569	1800	760	74.9%
3/2	Sutton Road (Entry Arm) Ahead	U	N/A	N/A	E		1	37	-	560	1800	760	73.7%
3/3	Sutton Road (Entry Arm) Right	O	N/A	N/A	E	D	1	37	22	538	1800	226	237.7%
4/2+4/1	A38 Kings Mill Road West (Entry Arm) Left Ahead	U	N/A	N/A	G H		1	22:20	-	927	1800:1800	464	199.7%
4/3	A38 Kings Mill Road West (Entry Arm) Ahead	U	N/A	N/A	G		1	22	-	919	1800	460	199.8%
4/4	A38 Kings Mill Road West (Entry Arm) Right	U	N/A	N/A	F		1	8	-	424	1800	180	235.6%

Full Input Data And Results

5/1	Kirby Road (Exit Arm)	U	N/A	N/A	-		-	-	-	213	1800	1800	9.4%
5/2	Kirby Road (Exit Arm)	U	N/A	N/A	-		-	-	-	724	1800	1800	40.2%
6/1	A38 Kings Mill Road East (Exit Arm)	U	N/A	N/A	-		-	-	-	966	1800	1800	30.4%
6/2	A38 Kings Mill Road East (Exit Arm)	U	N/A	N/A	-		-	-	-	1457	1800	1800	38.1%
7/1	Sutton Road (Exit Arm)	U	N/A	N/A	-		-	-	-	618	1800	1800	22.2%
7/2	Sutton Road (Exit Arm)	U	N/A	N/A	-		-	-	-	789	1800	1800	30.3%
8/1	A38 Kings Mill Road West (Exit Arm)	U	N/A	N/A	-		-	-	-	1233	1800	1800	43.0%
8/2	A38 Kings Mill Road West (Exit Arm)	U	N/A	N/A	-		-	-	-	1141	1800	1800	28.0%

Full Input Data And Results

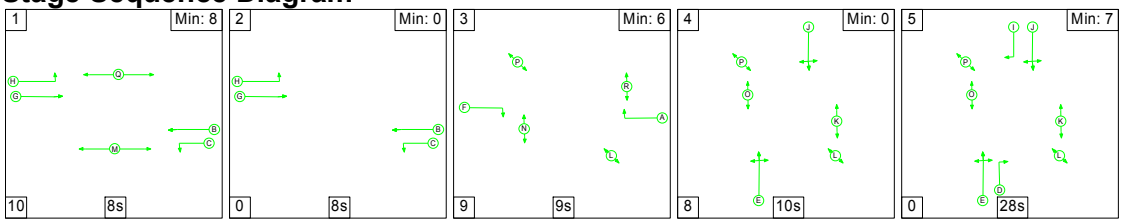
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**204**	**0**	**67**	**185.6**	**1410.1**	**1.0**	**1596.7**	**-**	**-**	**-**	**-**
A38 Kings Mill Road East, B6018 Sutton Road and Kirkby Road	**-**	**-**	**204**	**0**	**67**	**185.6**	**1410.1**	**1.0**	**1596.7**	**-**	**-**	**-**	**-**
1/1	370	370	-	-	-	1.9	0.5	-	2.4	23.5	6.7	0.5	7.2
1/2	365	365	-	-	-	1.9	0.5	-	2.4	23.4	6.6	0.5	7.1
1/3	44	44	44	0	0	0.2	0.2	0.2	0.6	46.4	0.6	0.2	0.8
2/2+2/1	1164	488	-	-	-	40.6	338.9	-	379.5	1173.8	51.7	338.9	390.6
2/3	1097	460	-	-	-	38.3	319.4	-	357.7	1173.9	49.2	319.4	368.6
2/4	164	164	-	-	-	1.8	3.5	-	5.4	118.0	4.1	3.5	7.6
3/1	569	569	-	-	-	3.5	1.5	-	4.9	31.2	12.0	1.5	13.5
3/2	560	560	-	-	-	3.4	1.4	-	4.8	30.7	11.7	1.4	13.0
3/3	538	226	160	0	67	20.9	156.7	0.7	178.3	1193.1	28.6	156.7	185.3
4/2+4/1	927	464	-	-	-	29.1	232.4	-	261.5	1015.4	37.7	232.4	270.1
4/3	919	460	-	-	-	28.8	230.5	-	259.3	1015.8	37.5	230.5	268.0
4/4	424	180	-	-	-	15.2	122.9	-	138.1	1172.3	18.3	122.9	141.2
5/1	169	169	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
5/2	724	724	-	-	-	0.0	0.3	-	0.3	1.7	0.0	0.3	0.3
6/1	547	547	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
6/2	686	686	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3
7/1	400	400	-	-	-	0.0	0.1	-	0.1	1.3	0.0	0.1	0.1
7/2	545	545	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
8/1	775	775	-	-	-	0.0	0.4	-	0.4	1.8	0.0	0.4	0.4
8/2	504	504	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2

C1 PRC for Signalled Lanes (%): -165.1 Total Delay for Signalled Lanes (pcuHr): 1594.82 Cycle Time (s): 90
PRC Over All Lanes (%): -165.1 Total Delay Over All Lanes(pcuHr): 1596.66

Full Input Data And Results

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'NCC Signal Plan ')

Stage Sequence Diagram

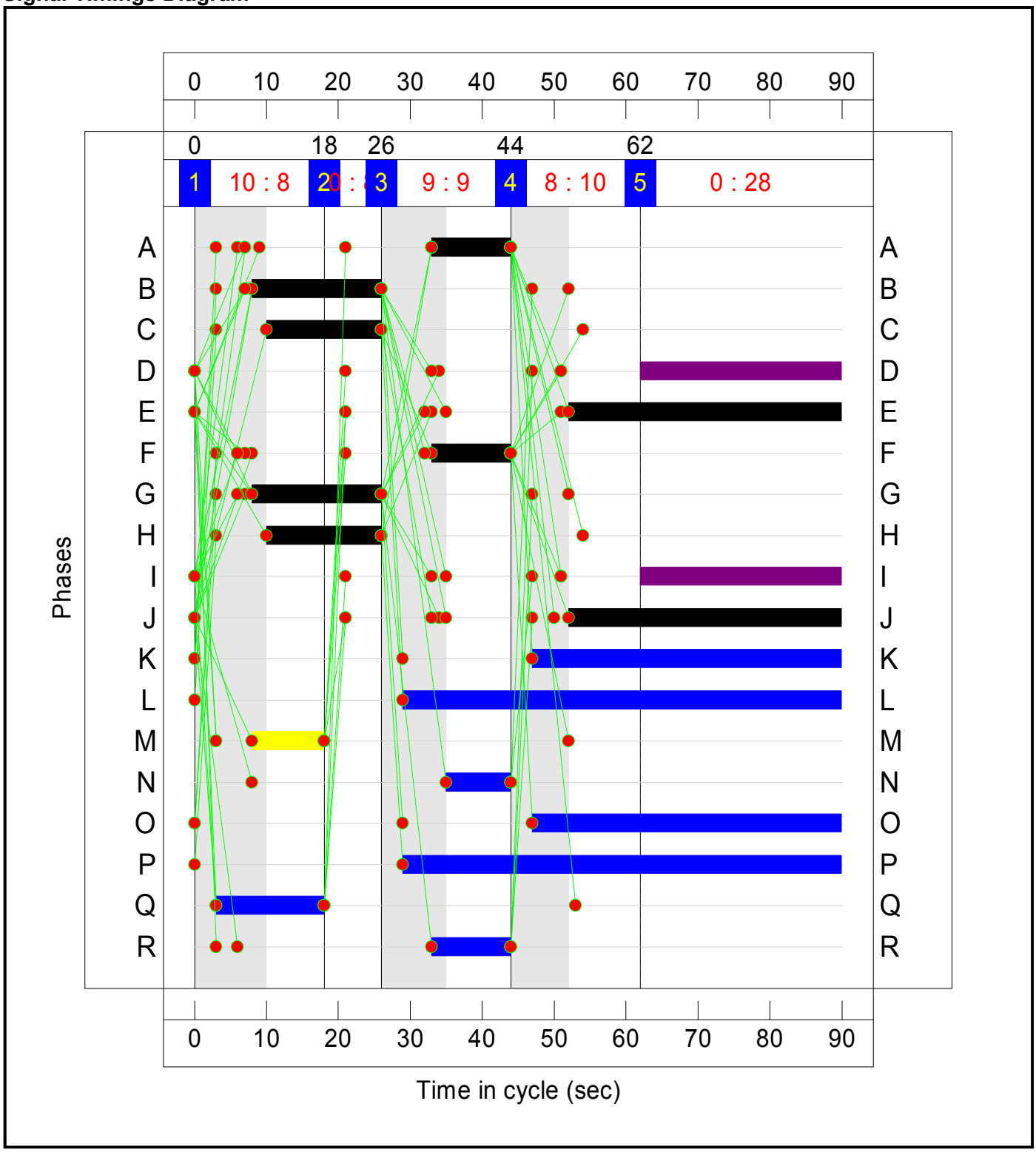


Stage Timings

Stage	1	2	3	4	5
Duration	8	8	9	10	28
Change Point	0	18	26	44	62

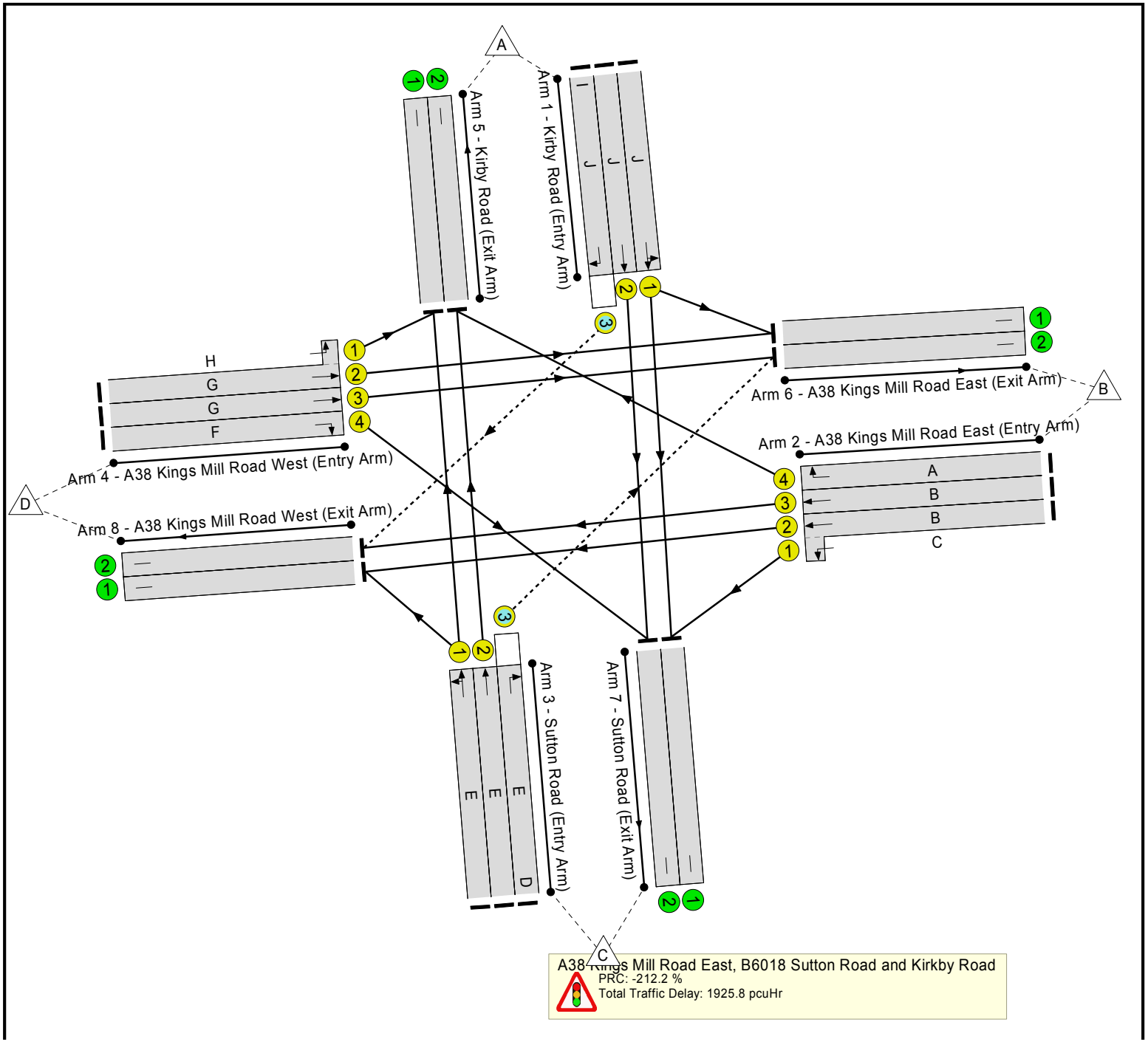
Full Input Data And Results

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**281.0%**
A38 Kings Mill Road East, B6018 Sutton Road and Kirkby Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**281.0%**
1/1	Kirby Road (Entry Arm) Left Ahead	U	N/A	N/A	J		1	38	-	480	1800	780	61.5%
1/2	Kirby Road (Entry Arm) Ahead	U	N/A	N/A	J		1	38	-	473	1800	780	60.6%
1/3	Kirby Road (Entry Arm) Right	O	N/A	N/A	J	I	1	38	28	79	1800	181	43.6%
2/2+2/1	A38 Kings Mill Road East (Entry Arm) Left Ahead	U	N/A	N/A	B C		1	18:16	-	1150	1800:1800	409	281.0%
2/3	A38 Kings Mill Road East (Entry Arm) Ahead	U	N/A	N/A	B		1	18	-	1067	1800	380	280.8%
2/4	A38 Kings Mill Road East (Entry Arm) Right	U	N/A	N/A	A		1	11	-	221	1800	240	92.1%
3/1	Sutton Road (Entry Arm) Ahead Left	U	N/A	N/A	E		1	38	-	597	1800	780	76.5%
3/2	Sutton Road (Entry Arm) Ahead	U	N/A	N/A	E		1	38	-	587	1800	780	75.3%
3/3	Sutton Road (Entry Arm) Right	O	N/A	N/A	E	D	1	38	28	425	1800	152	279.3%
4/2+4/1	A38 Kings Mill Road West (Entry Arm) Left Ahead	U	N/A	N/A	G H		1	18:16	-	1023	1800:1800	387	264.5%
4/3	A38 Kings Mill Road West (Entry Arm) Ahead	U	N/A	N/A	G		1	18	-	1005	1800	380	264.5%
4/4	A38 Kings Mill Road West (Entry Arm) Right	U	N/A	N/A	F		1	11	-	655	1800	240	272.9%

Full Input Data And Results

5/1	Kirby Road (Exit Arm)	U	N/A	N/A	-		-	-	-	344	1800	1800	14.0%
5/2	Kirby Road (Exit Arm)	U	N/A	N/A	-		-	-	-	808	1800	1800	44.9%
6/1	A38 Kings Mill Road East (Exit Arm)	U	N/A	N/A	-		-	-	-	1016	1800	1800	26.2%
6/2	A38 Kings Mill Road East (Exit Arm)	U	N/A	N/A	-		-	-	-	1430	1800	1800	29.6%
7/1	Sutton Road (Exit Arm)	U	N/A	N/A	-		-	-	-	814	1800	1800	28.3%
7/2	Sutton Road (Exit Arm)	U	N/A	N/A	-		-	-	-	1128	1800	1800	39.6%
8/1	A38 Kings Mill Road West (Exit Arm)	U	N/A	N/A	-		-	-	-	1076	1800	1800	35.7%
8/2	A38 Kings Mill Road West (Exit Arm)	U	N/A	N/A	-		-	-	-	1146	1800	1800	25.5%

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	**-**	**-**	**159**	**0**	**72**	**220.4**	**1704.1**	**1.3**	**1925.8**	**-**	**-**	**-**	**-**
A38 Kings Mill Road East, B6018 Sutton Road and Kirkby Road	**-**	**-**	**159**	**0**	**72**	**220.4**	**1704.1**	**1.3**	**1925.8**	**-**	**-**	**-**	**-**
1/1	480	480	-	-	-	2.6	0.8	-	3.4	25.7	9.2	0.8	10.0
1/2	473	473	-	-	-	2.6	0.8	-	3.3	25.4	9.1	0.8	9.8
1/3	79	79	79	0	0	0.3	0.4	0.5	1.2	53.3	1.2	0.4	1.5
2/2+2/1	1150	411	-	-	-	44.3	371.1	-	415.5	1300.6	55.6	371.1	426.7
2/3	1067	380	-	-	-	41.2	344.3	-	385.5	1300.7	52.4	344.3	396.7
2/4	221	221	-	-	-	2.4	4.1	-	6.4	104.9	5.4	4.1	9.5
3/1	597	597	-	-	-	3.6	1.6	-	5.2	31.3	12.6	1.6	14.2
3/2	587	587	-	-	-	3.5	1.5	-	5.0	30.6	12.2	1.5	13.7
3/3	425	152	80	0	72	17.8	137.2	0.8	155.8	1319.4	23.9	137.2	161.1
4/2+4/1	1023	387	-	-	-	38.5	318.9	-	357.4	1257.9	49.0	318.9	367.9
4/3	1005	380	-	-	-	37.9	313.3	-	351.2	1257.9	48.3	313.3	361.6
4/4	655	240	-	-	-	25.7	208.3	-	234.0	1286.2	31.1	208.3	239.4
5/1	252	252	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
5/2	808	808	-	-	-	0.0	0.4	-	0.4	1.8	0.0	0.4	0.4
6/1	472	472	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
6/2	532	532	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
7/1	509	509	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
7/2	713	713	-	-	-	0.0	0.3	-	0.3	1.7	0.0	0.3	0.3
8/1	642	642	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3
8/2	459	459	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2

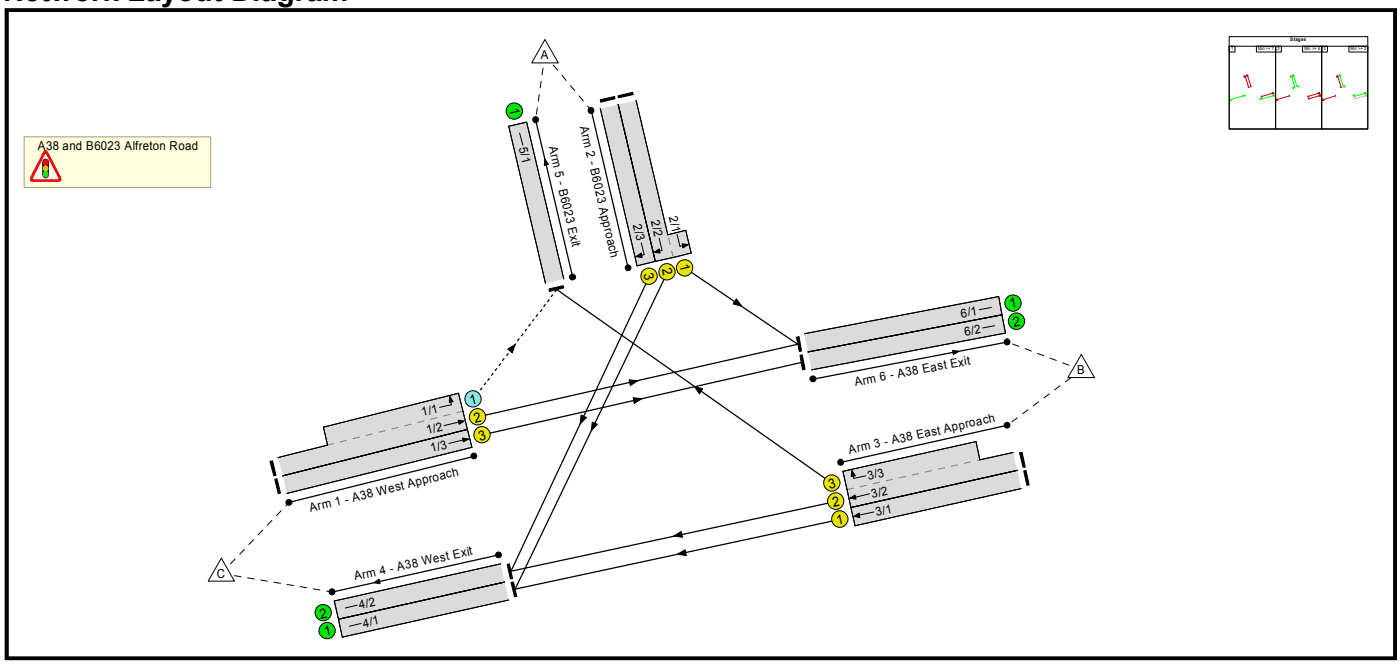
C1 PRC for Signalled Lanes (%): -212.2 Total Delay for Signalled Lanes (pcuHr): 1923.93 Cycle Time (s): 90
PRC Over All Lanes (%): -212.2 Total Delay Over All Lanes(pcuHr): 1925.78

Full Input Data And Results

User and Project Details

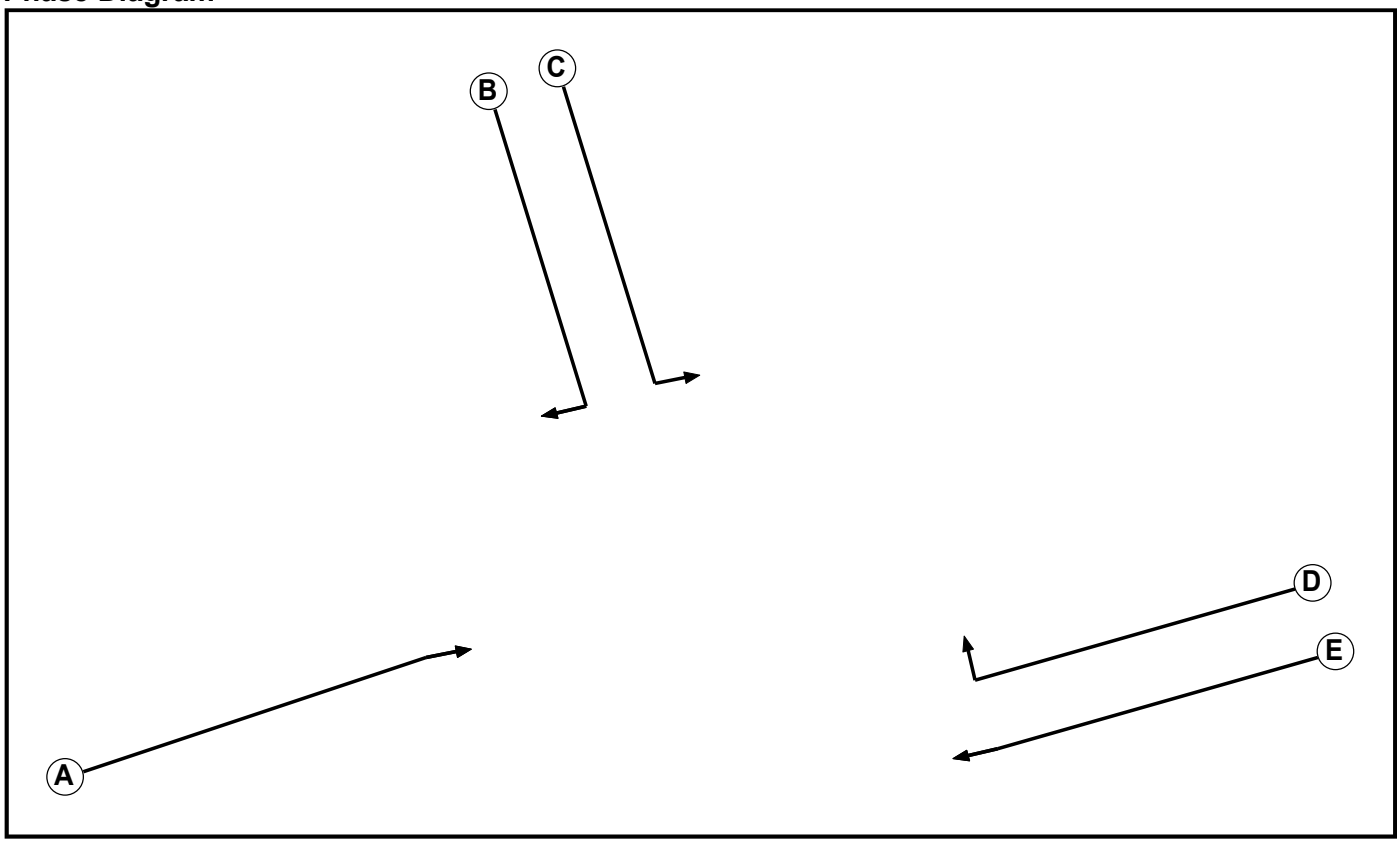
Project:	
Title:	
Location:	
File name:	Junction 8 2016.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

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

Phase Intergreens Matrix

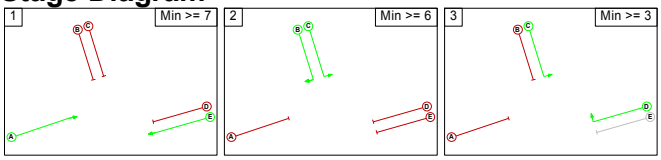
		Starting Phase				
		A	B	C	D	E
Terminating Phase	A		7	10	6	-
	B	6		-	6	9
	C	8	-		-	-
	D	7	7	-		-
	E	-	9	-	-	

Phases in Stage

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

Full Input Data And Results

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
From Stage	1		10	10
	2	9		6
	3	8	7	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A38 and B6023 Alfreton Road

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/1 (A38 West Approach)	5/1 (Left)	1439	0	3/3	1.09	All	-	-	-	-	-

Full Input Data And Results

Lane Input Data

Junction: A38 and B6023 Alfreton Road												
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 (A38 West Approach)	O		2	3	11.3	User	1800	-	-	-	-	-
1/2 (A38 West Approach)	U	A	2	3	60.0	User	1800	-	-	-	-	-
1/3 (A38 West Approach)	U	A	2	3	60.0	User	1800	-	-	-	-	-
2/1 (B6023 Approach)	U	C	2	3	1.9	User	1800	-	-	-	-	-
2/2 (B6023 Approach)	U	B	2	3	60.0	User	1800	-	-	-	-	-
2/3 (B6023 Approach)	U	B	2	3	7.0	User	1800	-	-	-	-	-
3/1 (A38 East Approach)	U	E	2	3	60.0	User	1800	-	-	-	-	-
3/2 (A38 East Approach)	U	E	2	3	60.0	User	1800	-	-	-	-	-
3/3 (A38 East Approach)	U	D	2	3	13.9	User	1800	-	-	-	-	-
4/1 (A38 West Exit)	U		2	3	60.0	User	1800	-	-	-	-	-
4/2 (A38 West Exit)	U		2	3	60.0	User	1800	-	-	-	-	-
5/1 (B6023 Exit)	U		2	3	60.0	User	1800	-	-	-	-	-
6/1 (A38 East Exit)	U		2	3	60.0	User	1800	-	-	-	-	-
6/2 (A38 East Exit)	U		2	3	60.0	User	1800	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2032 Reference Case Morning Peak'	08:00	09:00	01:00	
2: '2032 Development Case Morning Peak'	08:00	09:00	01:00	
3: '2032 Reference Case Evening Peak'	17:00	18:00	01:00	
4: '2032 Development Case Evening Peak'	17:00	18:00	01:00	

Scenario 1: 'AM Reference Case' (FG1: '2032 Reference Case Morning Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	56	313	369
	B	85	0	1637	1722
	C	162	1800	0	1962
	Tot.	247	1856	1950	4053

Traffic Lane Flows

Lane	Scenario 1: AM Reference Case
Junction: A38 and B6023 Alfreton Road	
1/1 (short)	162
1/2 (with short)	1032(In) 870(Out)
1/3	930
2/1 (short)	56
2/2 (with short)	209(In) 153(Out)
2/3	160
3/1	821
3/2 (with short)	901(In) 816(Out)
3/3 (short)	85
4/1	974
4/2	976
5/1	247
6/1	926
6/2	930

Full Input Data And Results

Lane Saturation Flows

Junction: A38 and B6023 Alfreton Road								
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 (A38 West Approach Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (A38 West Approach Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
1/3 (A38 West Approach Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (B6023 Approach Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (B6023 Approach Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/3 (B6023 Approach Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A38 East Approach Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (A38 East Approach Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/3 (A38 East Approach Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (A38 West Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A38 West Exit Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (B6023 Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (A38 East Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (A38 East Exit Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case Evening Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	9	115	124
	B	34	0	2139	2173
	C	347	2269	0	2616
	Tot.	381	2278	2254	4913

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM Reference Case
Junction: A38 and B6023 Alfreton Road	
1/1 (short)	347
1/2 (with short)	1399(In) 1052(Out)
1/3	1217
2/1 (short)	9
2/2 (with short)	73(In) 64(Out)
2/3	51
3/1	1068
3/2 (with short)	1105(In) 1071(Out)
3/3 (short)	34
4/1	1132
4/2	1122
5/1	381
6/1	1061
6/2	1217

Full Input Data And Results

Lane Saturation Flows

Junction: A38 and B6023 Alfreton Road								
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 (A38 West Approach Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (A38 West Approach Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
1/3 (A38 West Approach Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (B6023 Approach Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (B6023 Approach Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/3 (B6023 Approach Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A38 East Approach Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (A38 East Approach Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/3 (A38 East Approach Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (A38 West Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A38 West Exit Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (B6023 Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (A38 East Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (A38 East Exit Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	171	312	483
	B	229	0	2843	3072
	C	152	2060	0	2212
	Tot.	381	2231	3155	5767

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: AM Development Scenario
Junction: A38 and B6023 Alfreton Road	
1/1 (short)	152
1/2 (with short)	1145(In) 993(Out)
1/3	1067
2/1 (short)	171
2/2 (with short)	307(In) 136(Out)
2/3	176
3/1	1467
3/2 (with short)	1605(In) 1376(Out)
3/3 (short)	229
4/1	1603
4/2	1552
5/1	381
6/1	1164
6/2	1067

Full Input Data And Results

Lane Saturation Flows

Junction: A38 and B6023 Alfreton Road								
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 (A38 West Approach Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (A38 West Approach Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
1/3 (A38 West Approach Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (B6023 Approach Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (B6023 Approach Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/3 (B6023 Approach Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A38 East Approach Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (A38 East Approach Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/3 (A38 East Approach Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (A38 West Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A38 West Exit Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (B6023 Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (A38 East Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (A38 East Exit Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	70	205	275
	B	134	0	2195	2329
	C	360	2597	0	2957
	Tot.	494	2667	2400	5561

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: PM Development Scenario
Junction: A38 and B6023 Alfreton Road	
1/1 (short)	360
1/2 (with short)	1572(In) 1212(Out)
1/3	1385
2/1 (short)	70
2/2 (with short)	173(In) 103(Out)
2/3	102
3/1	1119
3/2 (with short)	1210(In) 1076(Out)
3/3 (short)	134
4/1	1222
4/2	1178
5/1	494
6/1	1282
6/2	1385

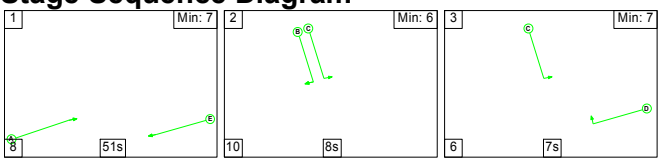
Full Input Data And Results

Lane Saturation Flows

Junction: A38 and B6023 Alfreton Road								
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 (A38 West Approach Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (A38 West Approach Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
1/3 (A38 West Approach Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (B6023 Approach Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (B6023 Approach Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/3 (B6023 Approach Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A38 East Approach Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (A38 East Approach Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/3 (A38 East Approach Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (A38 West Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A38 West Exit Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (B6023 Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (A38 East Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (A38 East Exit Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 1: 'AM Reference Case' (FG1: '2032 Reference Case Morning Peak', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

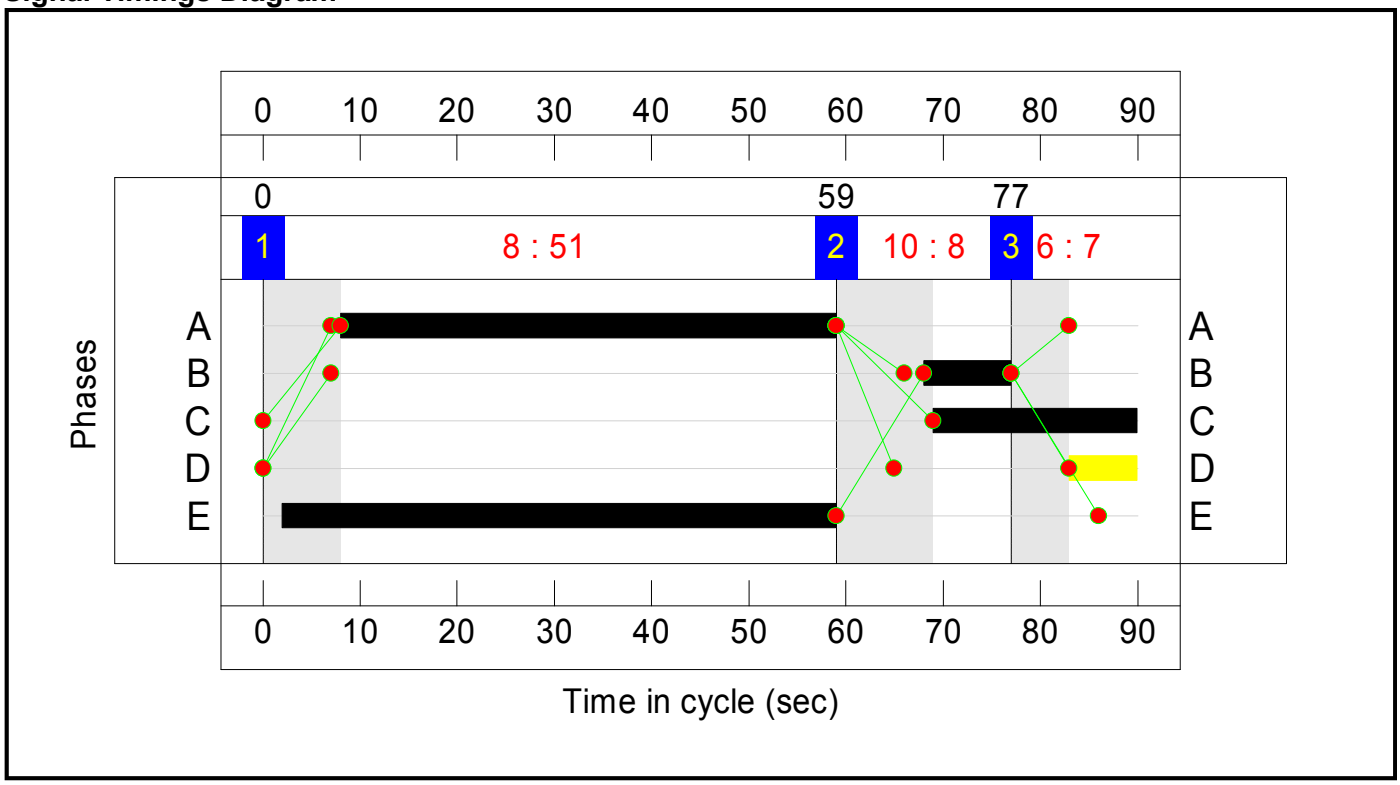


Stage Timings

Stage	1	2	3
Duration	51	8	7
Change Point	0	59	77

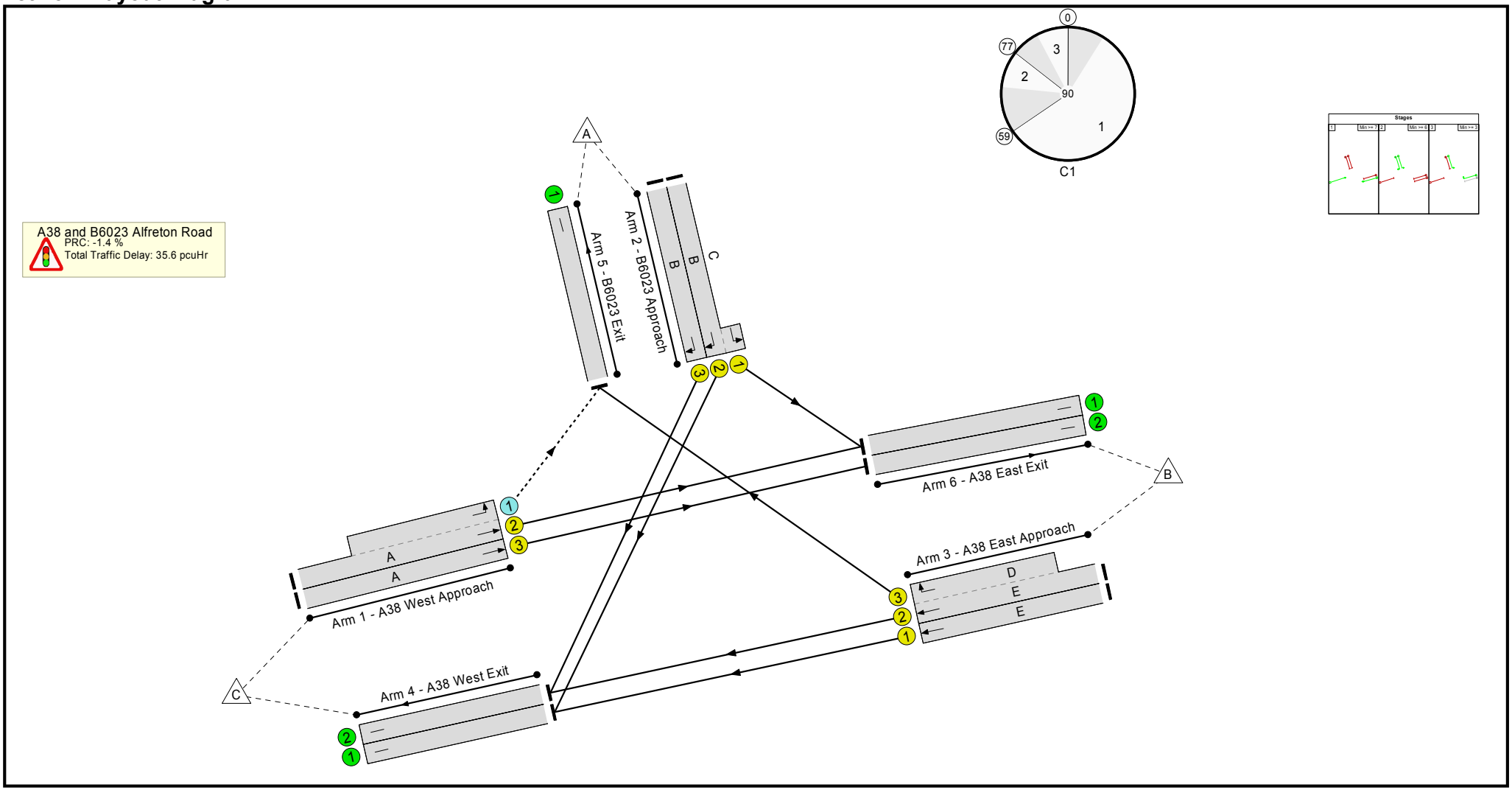
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**91.3%**
A38 and B6023 Alfreton Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**91.3%**
1/2+1/1	A38 West Approach Left Ahead	U+O	N/A	N/A	A -		1	51	-	1032	1800:1800	953+178	91.3 : 91.3%
1/3	A38 West Approach Ahead	U	N/A	N/A	A		1	51	-	930	1800	1040	89.4%
2/2+2/1	B6023 Approach Right Left	U	N/A	N/A	B C		1	9:21	-	209	1800:1800	180+66	84.8 : 84.8%
2/3	B6023 Approach Right	U	N/A	N/A	B		1	9	-	160	1800	200	80.0%
3/1	A38 East Approach Ahead	U	N/A	N/A	E		1	57	-	821	1800	1160	70.8%
3/2+3/3	A38 East Approach Ahead Right	U	N/A	N/A	E D		1	57:7	-	901	1800:1800	1119+117	72.9 : 72.9%
4/1	A38 West Exit	U	N/A	N/A	-		-	-	-	974	1800	1800	54.1%
4/2	A38 West Exit	U	N/A	N/A	-		-	-	-	976	1800	1800	54.2%
5/1	B6023 Exit	U	N/A	N/A	-		-	-	-	247	1800	1800	13.7%
6/1	A38 East Exit	U	N/A	N/A	-		-	-	-	926	1800	1800	51.4%
6/2	A38 East Exit	U	N/A	N/A	-		-	-	-	930	1800	1800	51.7%

Full Input Data And Results

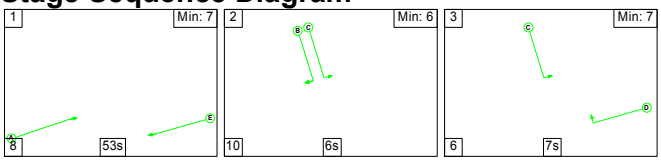
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**14**	**148**	**0**	**17.7**	**17.9**	**0.0**	**35.6**	**-**	**-**	**-**	**-**
A38 and B6023 Alfreton Road	**-**	**-**	**14**	**148**	**0**	**17.7**	**17.9**	**0.0**	**35.6**	**-**	**-**	**-**	**-**
1/2+1/1	1032	1032	14	148	0	3.9	4.8	-	8.7	30.4	20.5	4.8	25.2
1/3	930	930	-	-	-	4.3	3.9	-	8.2	31.9	20.1	3.9	24.1
2/2+2/1	209	209	-	-	-	2.1	2.5	-	4.5	78.4	4.4	2.5	6.8
2/3	160	160	-	-	-	1.7	1.8	-	3.6	80.3	3.9	1.8	5.7
3/1	821	821	-	-	-	2.4	1.2	-	3.6	15.7	13.2	1.2	14.4
3/2+3/3	901	901	-	-	-	3.3	1.3	-	4.6	18.5	13.1	1.3	14.5
4/1	974	974	-	-	-	0.0	0.6	-	0.6	2.2	0.0	0.6	0.6
4/2	976	976	-	-	-	0.0	0.6	-	0.6	2.2	0.0	0.6	0.6
5/1	247	247	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
6/1	926	926	-	-	-	0.0	0.5	-	0.5	2.1	0.0	0.5	0.5
6/2	930	930	-	-	-	0.0	0.5	-	0.5	2.1	2.0	0.5	2.5

C1 PRC for Signalled Lanes (%): -1.4 Total Delay for Signalled Lanes (pcuHr): 33.26 Cycle Time (s): 90
PRC Over All Lanes (%): -1.4 Total Delay Over All Lanes(pcuHr): 35.58

Full Input Data And Results

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case Evening Peak', Plan 1: 'Network Control Plan 1')

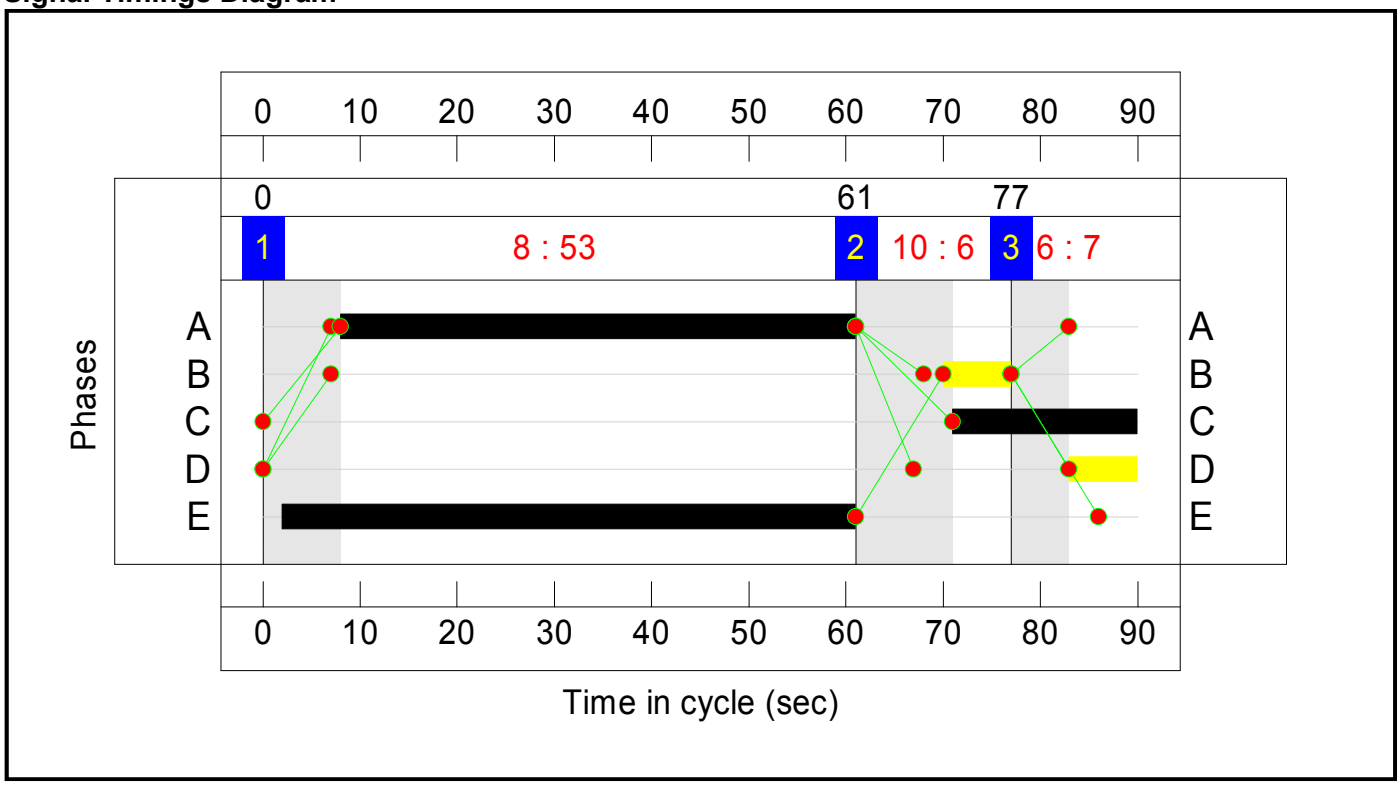
Stage Sequence Diagram



Stage Timings

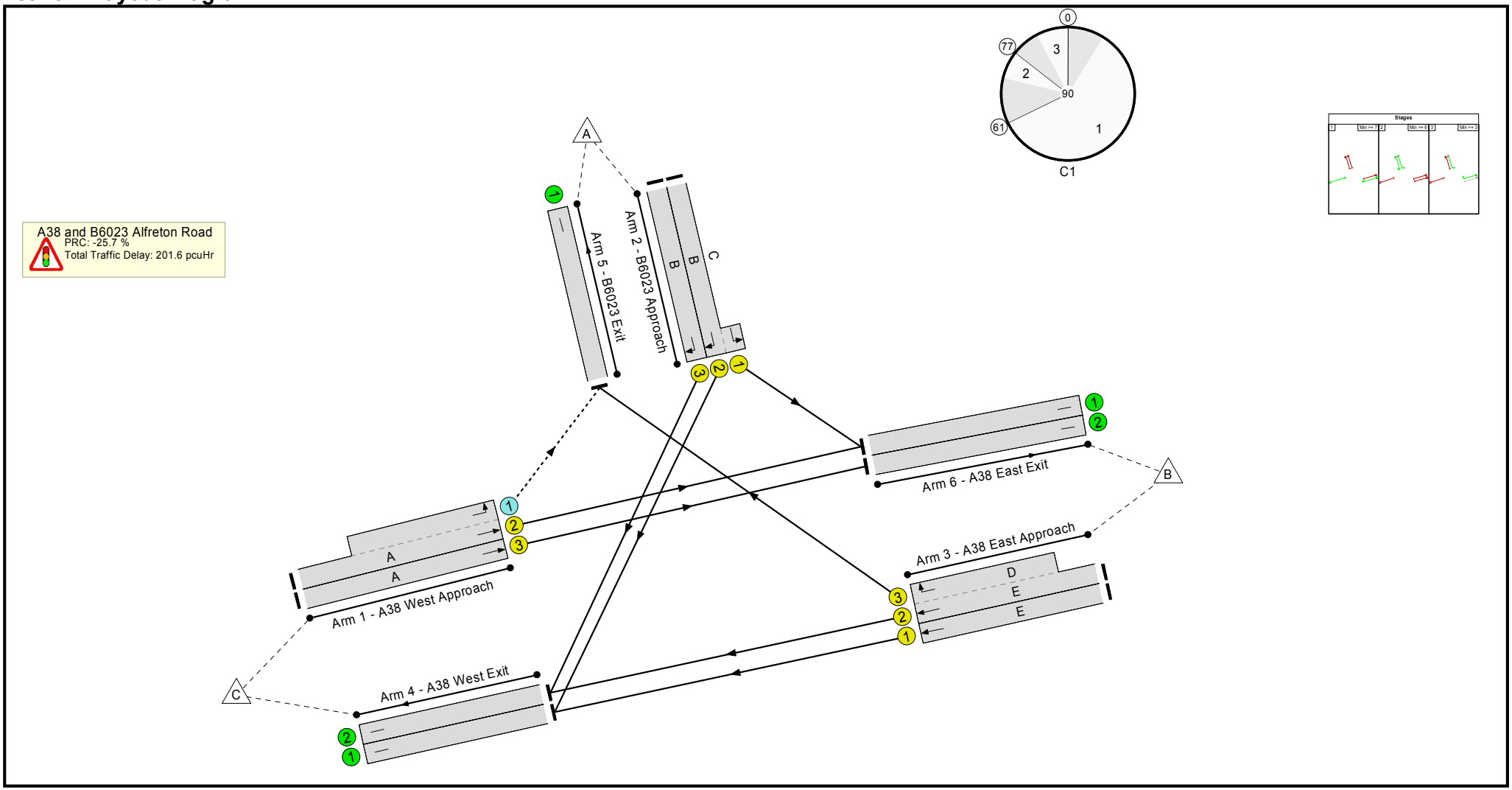
Stage	1	2	3
Duration	53	6	7
Change Point	0	61	77

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**113.2%**
A38 and B6023 Alfreton Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**113.2%**
1/2+1/1	A38 West Approach Left Ahead	U+O	N/A	N/A	A -		1	53	-	1399	1800:1800	930+307	113.2 : 113.2%
1/3	A38 West Approach Ahead	U	N/A	N/A	A		1	53	-	1217	1800	1080	112.7%
2/2+2/1	B6023 Approach Right Left	U	N/A	N/A	B C		1	7:19	-	73	1800:1800	160+23	40.0 : 40.0%
2/3	B6023 Approach Right	U	N/A	N/A	B		1	7	-	51	1800	160	31.9%
3/1	A38 East Approach Ahead	U	N/A	N/A	E		1	59	-	1068	1800	1200	89.0%
3/2+3/3	A38 East Approach Ahead Right	U	N/A	N/A	E D		1	59:7	-	1105	1800:1800	1198+38	89.4 : 89.4%
4/1	A38 West Exit	U	N/A	N/A	-		-	-	-	1132	1800	1800	62.9%
4/2	A38 West Exit	U	N/A	N/A	-		-	-	-	1122	1800	1800	62.3%
5/1	B6023 Exit	U	N/A	N/A	-		-	-	-	381	1800	1800	18.9%
6/1	A38 East Exit	U	N/A	N/A	-		-	-	-	1061	1800	1800	52.1%
6/2	A38 East Exit	U	N/A	N/A	-		-	-	-	1217	1800	1800	60.0%

Full Input Data And Results

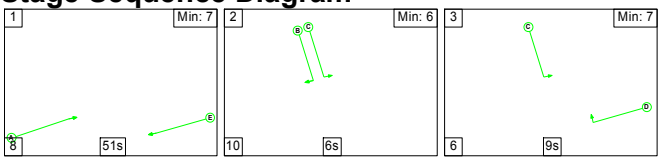
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**35**	**272**	**0**	**32.0**	**169.6**	**0.0**	**201.6**	**-**	**-**	**-**	**-**
A38 and B6023 Alfreton Road	**-**	**-**	**35**	**272**	**0**	**32.0**	**169.6**	**0.0**	**201.6**	**-**	**-**	**-**	**-**
1/2+1/1	1399	1236	35	272	0	11.5	85.5	-	97.0	249.5	76.6	85.5	162.1
1/3	1217	1080	-	-	-	11.5	72.7	-	84.2	249.2	33.9	72.7	106.5
2/2+2/1	73	73	-	-	-	0.8	0.3	-	1.1	53.7	1.5	0.3	1.8
2/3	51	51	-	-	-	0.5	0.2	-	0.8	54.9	1.2	0.2	1.4
3/1	1068	1068	-	-	-	3.6	3.8	-	7.5	25.2	21.7	3.8	25.5
3/2+3/3	1105	1105	-	-	-	4.0	4.0	-	8.0	26.1	22.2	4.0	26.2
4/1	1132	1132	-	-	-	0.0	0.8	-	0.8	2.7	3.5	0.8	4.3
4/2	1122	1122	-	-	-	0.0	0.8	-	0.8	2.6	4.0	0.8	4.8
5/1	341	341	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
6/1	939	939	-	-	-	0.0	0.5	-	0.5	2.1	0.0	0.5	0.5
6/2	1080	1080	-	-	-	0.0	0.7	-	0.7	2.5	9.0	0.7	9.7

C1 PRC for Signalled Lanes (%): -25.7 Total Delay for Signalled Lanes (pcuHr): 198.56 Cycle Time (s): 90
PRC Over All Lanes (%): -25.7 Total Delay Over All Lanes(pcuHr): 201.64

Full Input Data And Results

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Network Control Plan 1')

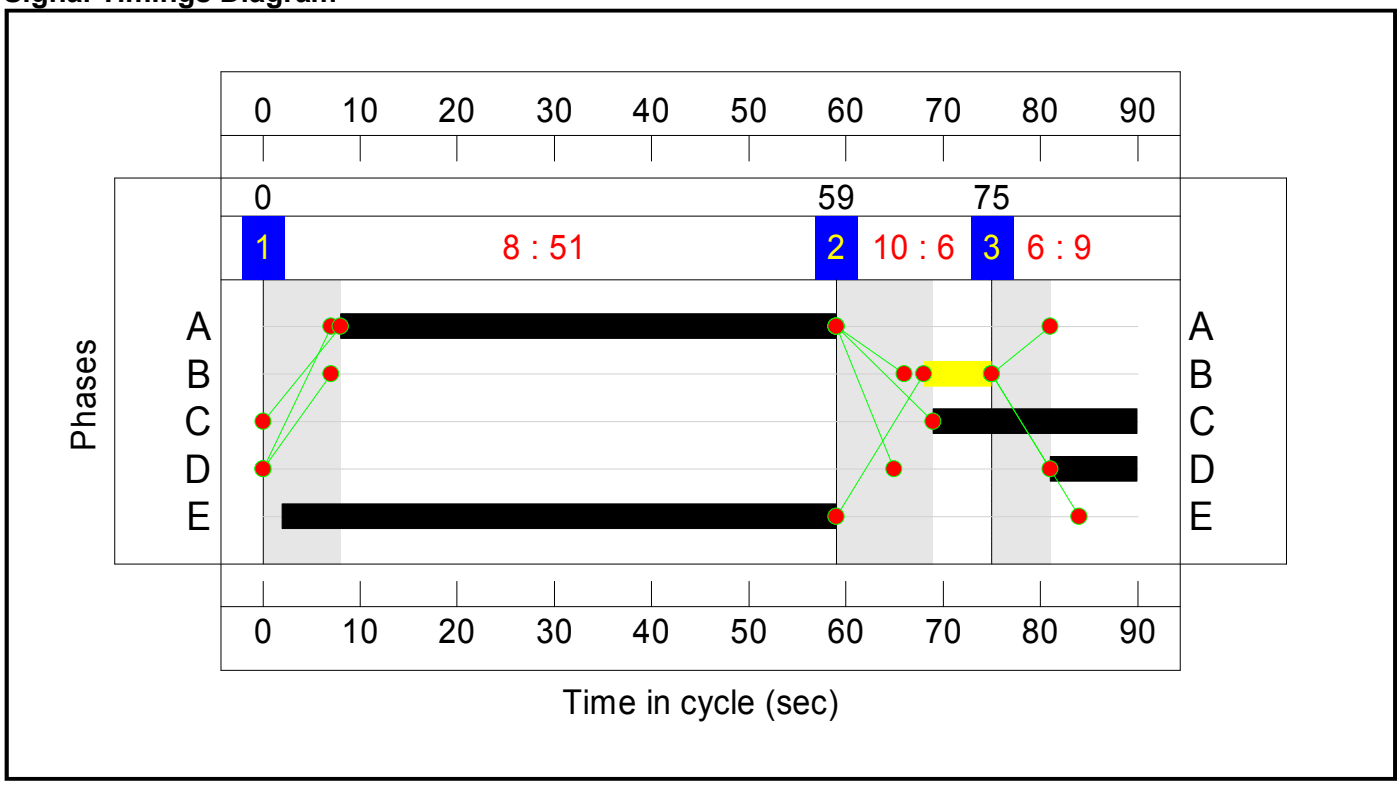
Stage Sequence Diagram



Stage Timings

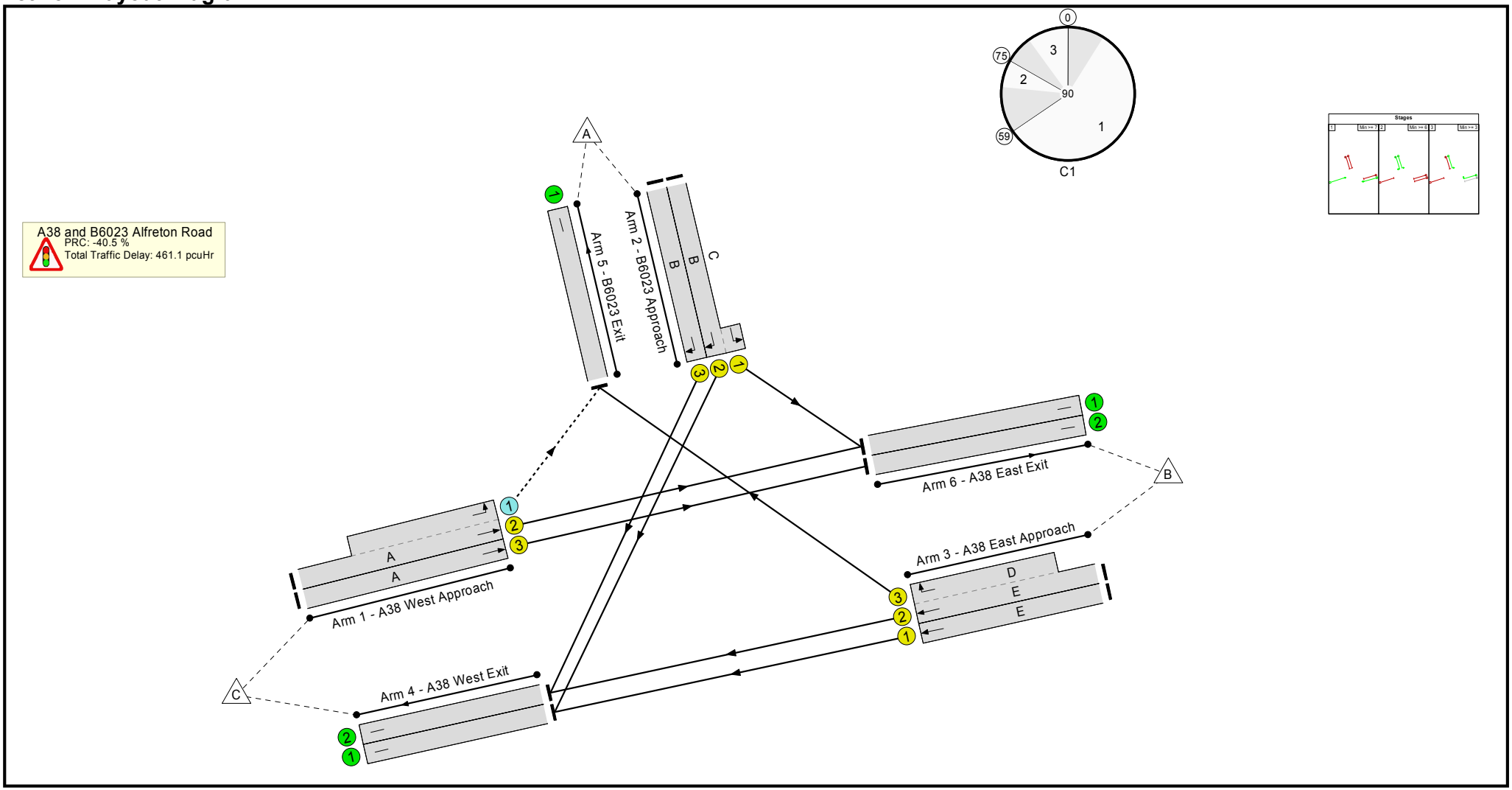
Stage	1	2	3
Duration	51	6	9
Change Point	0	59	75

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**126.5%**
A38 and B6023 Alfreton Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**126.5%**
1/2+1/1	A38 West Approach Left Ahead	U+O	N/A	N/A	A -		1	51	-	1145	1800:1800	968+148	102.6 : 102.6%
1/3	A38 West Approach Ahead	U	N/A	N/A	A		1	51	-	1067	1800	1040	102.6%
2/2+2/1	B6023 Approach Right Left	U	N/A	N/A	B C		1	7:21	-	307	1800:1800	122+153	111.4 : 111.4%
2/3	B6023 Approach Right	U	N/A	N/A	B		1	7	-	176	1800	160	110.0%
3/1	A38 East Approach Ahead	U	N/A	N/A	E		1	57	-	1467	1800	1160	126.5%
3/2+3/3	A38 East Approach Ahead Right	U	N/A	N/A	E D		1	57:9	-	1605	1800:1800	1090+200	126.3 : 114.5%
4/1	A38 West Exit	U	N/A	N/A	-		-	-	-	1603	1800	1800	71.2%
4/2	A38 West Exit	U	N/A	N/A	-		-	-	-	1552	1800	1800	69.4%
5/1	B6023 Exit	U	N/A	N/A	-		-	-	-	381	1800	1800	19.2%
6/1	A38 East Exit	U	N/A	N/A	-		-	-	-	1164	1800	1800	63.3%
6/2	A38 East Exit	U	N/A	N/A	-		-	-	-	1067	1800	1800	57.8%

Full Input Data And Results

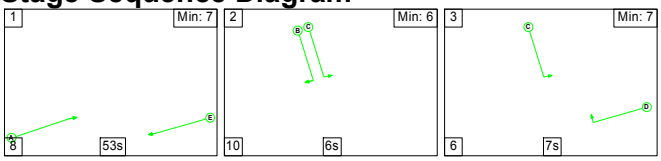
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**152**	**0**	**59.4**	**401.7**	**0.0**	**461.1**	**-**	**-**	**-**	**-**
A38 and B6023 Alfreton Road	**-**	**-**	**0**	**152**	**0**	**59.4**	**401.7**	**0.0**	**461.1**	**-**	**-**	**-**	**-**
1/2+1/1	1145	1120	0	152	0	6.3	25.7	-	32.1	100.8	30.4	25.7	56.1
1/3	1067	1040	-	-	-	6.7	24.4	-	31.1	105.1	27.4	24.4	51.8
2/2+2/1	307	293	-	-	-	3.8	19.6	-	23.4	274.4	7.4	19.6	27.0
2/3	176	160	-	-	-	2.5	11.7	-	14.2	290.9	4.8	11.7	16.5
3/1	1467	1160	-	-	-	19.1	155.9	-	175.0	429.3	44.4	155.9	200.2
3/2+3/3	1605	1284	-	-	-	21.0	160.3	-	181.3	406.6	52.0	160.3	212.2
4/1	1282	1282	-	-	-	0.0	1.2	-	1.2	3.5	11.0	1.2	12.2
4/2	1250	1250	-	-	-	0.0	1.1	-	1.1	3.3	0.0	1.1	1.1
5/1	346	346	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
6/1	1139	1139	-	-	-	0.0	0.9	-	0.9	2.7	0.0	0.9	0.9
6/2	1040	1040	-	-	-	0.0	0.7	-	0.7	2.4	8.0	0.7	8.7

C1 PRC for Signalled Lanes (%): -40.5 Total Delay for Signalled Lanes (pcuHr): 457.08 Cycle Time (s): 90
PRC Over All Lanes (%): -40.5 Total Delay Over All Lanes(pcuHr): 461.10

Full Input Data And Results

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Network Control Plan 1')

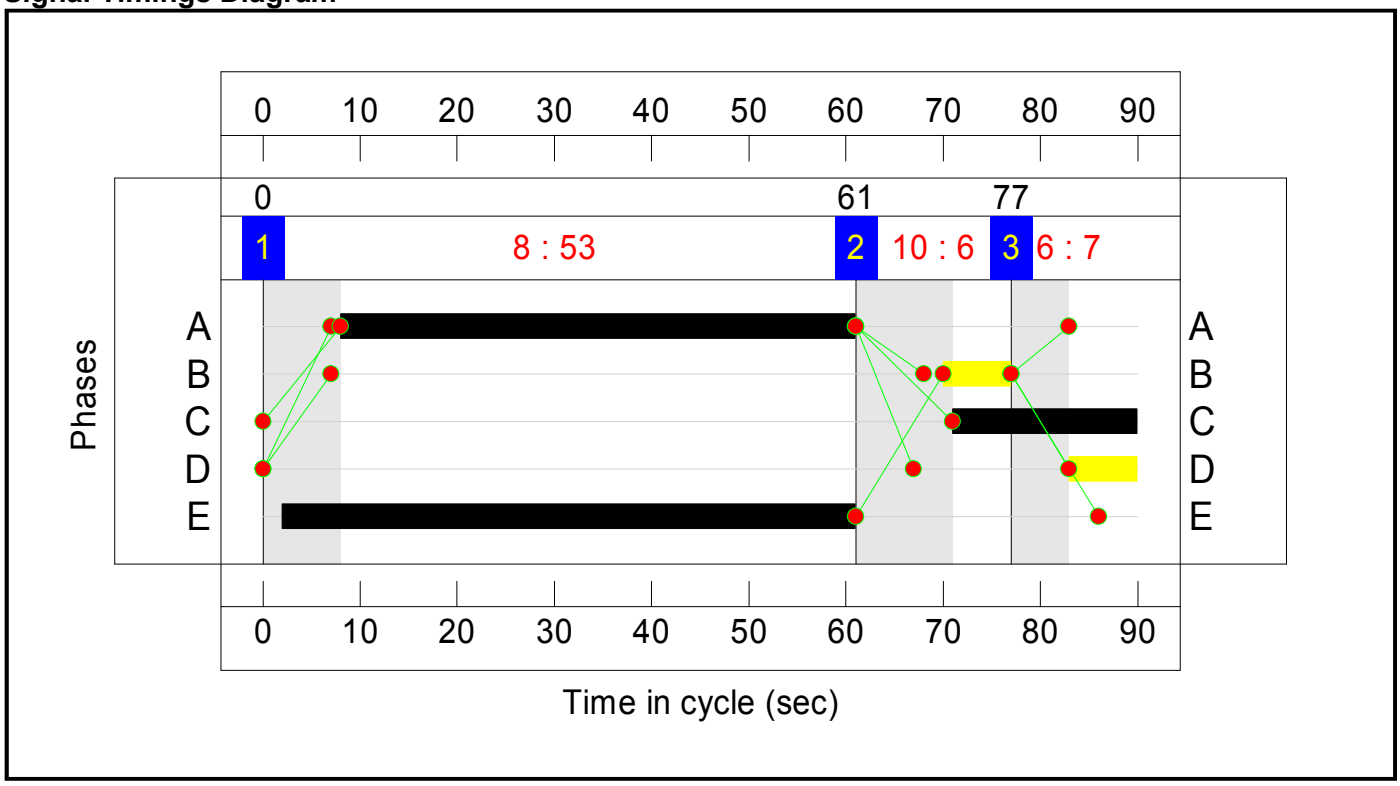
Stage Sequence Diagram



Stage Timings

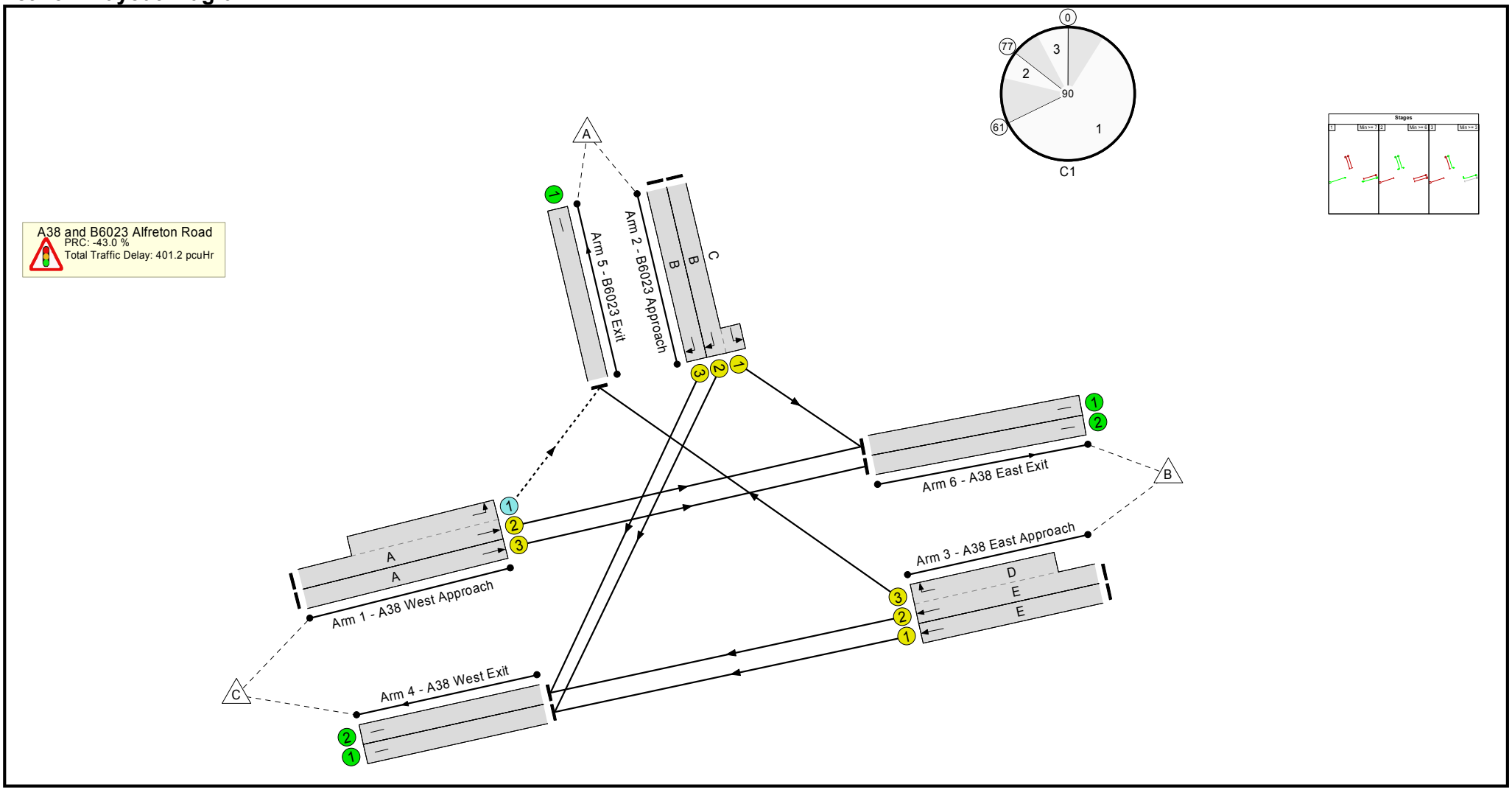
Stage	1	2	3
Duration	53	6	7
Change Point	0	61	77

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**128.7%**
A38 and B6023 Alfreton Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**128.7%**
1/2+1/1	A38 West Approach Left Ahead	U+O	N/A	N/A	A -		1	53	-	1572	1800:1800	942+280	128.7 : 128.7%
1/3	A38 West Approach Ahead	U	N/A	N/A	A		1	53	-	1385	1800	1080	128.2%
2/2+2/1	B6023 Approach Right Left	U	N/A	N/A	B C		1	7:19	-	173	1800:1800	137+93	75.0 : 75.0%
2/3	B6023 Approach Right	U	N/A	N/A	B		1	7	-	102	1800	160	63.8%
3/1	A38 East Approach Ahead	U	N/A	N/A	E		1	59	-	1119	1800	1200	93.3%
3/2+3/3	A38 East Approach Ahead Right	U	N/A	N/A	E D		1	59:7	-	1210	1800:1800	1145+160	94.0 : 83.9%
4/1	A38 West Exit	U	N/A	N/A	-		-	-	-	1222	1800	1800	67.9%
4/2	A38 West Exit	U	N/A	N/A	-		-	-	-	1178	1800	1800	65.4%
5/1	B6023 Exit	U	N/A	N/A	-		-	-	-	494	1800	1800	23.0%
6/1	A38 East Exit	U	N/A	N/A	-		-	-	-	1282	1800	1800	56.2%
6/2	A38 East Exit	U	N/A	N/A	-		-	-	-	1385	1800	1800	60.0%

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	**-**	**-**	**17**	**263**	**0**	**51.3**	**349.8**	**0.0**	**401.2**	**-**	**-**	**-**	**-**
A38 and B6023 Alfreton Road	**-**	**-**	**17**	**263**	**0**	**51.3**	**349.8**	**0.0**	**401.2**	**-**	**-**	**-**	**-**
1/2+1/1	1572	1221	17	263	0	20.1	177.6	-	197.6	452.6	86.8	177.6	264.4
1/3	1385	1080	-	-	-	19.1	154.7	-	173.8	451.8	42.2	154.7	197.0
2/2+2/1	173	173	-	-	-	1.7	1.4	-	3.1	64.8	2.8	1.4	4.3
2/3	102	102	-	-	-	1.1	0.9	-	2.0	69.8	2.4	0.9	3.3
3/1	1119	1119	-	-	-	4.1	6.0	-	10.1	32.6	24.6	6.0	30.6
3/2+3/3	1210	1210	-	-	-	5.3	5.7	-	11.0	32.6	24.7	5.7	30.4
4/1	1222	1222	-	-	-	0.0	1.1	-	1.1	3.1	6.5	1.1	7.6
4/2	1178	1178	-	-	-	0.0	0.9	-	0.9	2.9	0.0	0.9	0.9
5/1	414	414	-	-	-	0.0	0.1	-	0.1	1.3	0.0	0.1	0.1
6/1	1012	1012	-	-	-	0.0	0.6	-	0.6	2.3	0.0	0.6	0.6
6/2	1080	1080	-	-	-	0.0	0.7	-	0.7	2.5	9.0	0.7	9.7

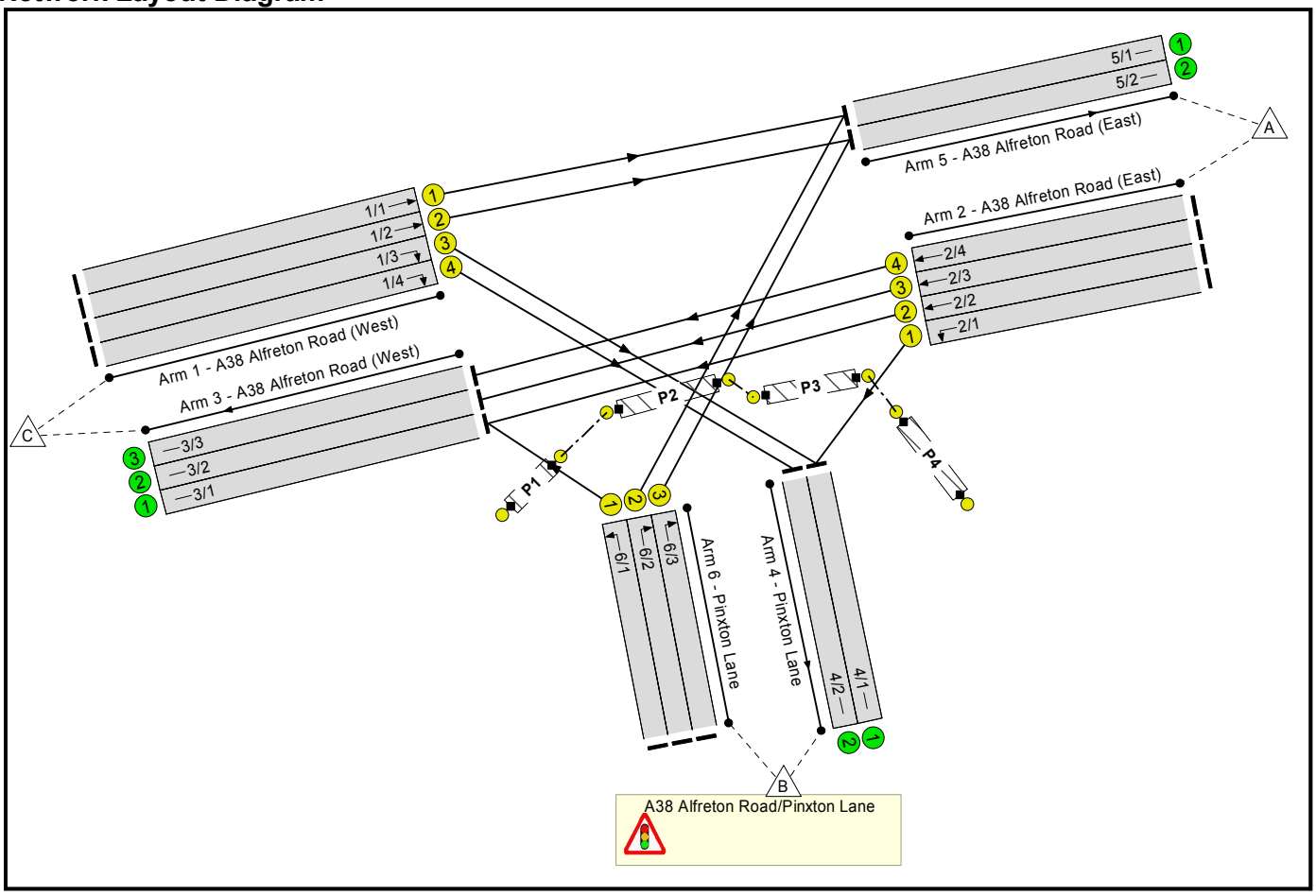
C1 PRC for Signalled Lanes (%): -43.0 Total Delay for Signalled Lanes (pcuHr): 397.63 Cycle Time (s): 90
PRC Over All Lanes (%): -43.0 Total Delay Over All Lanes(pcuHr): 401.16

Full Input Data And Results

User and Project Details

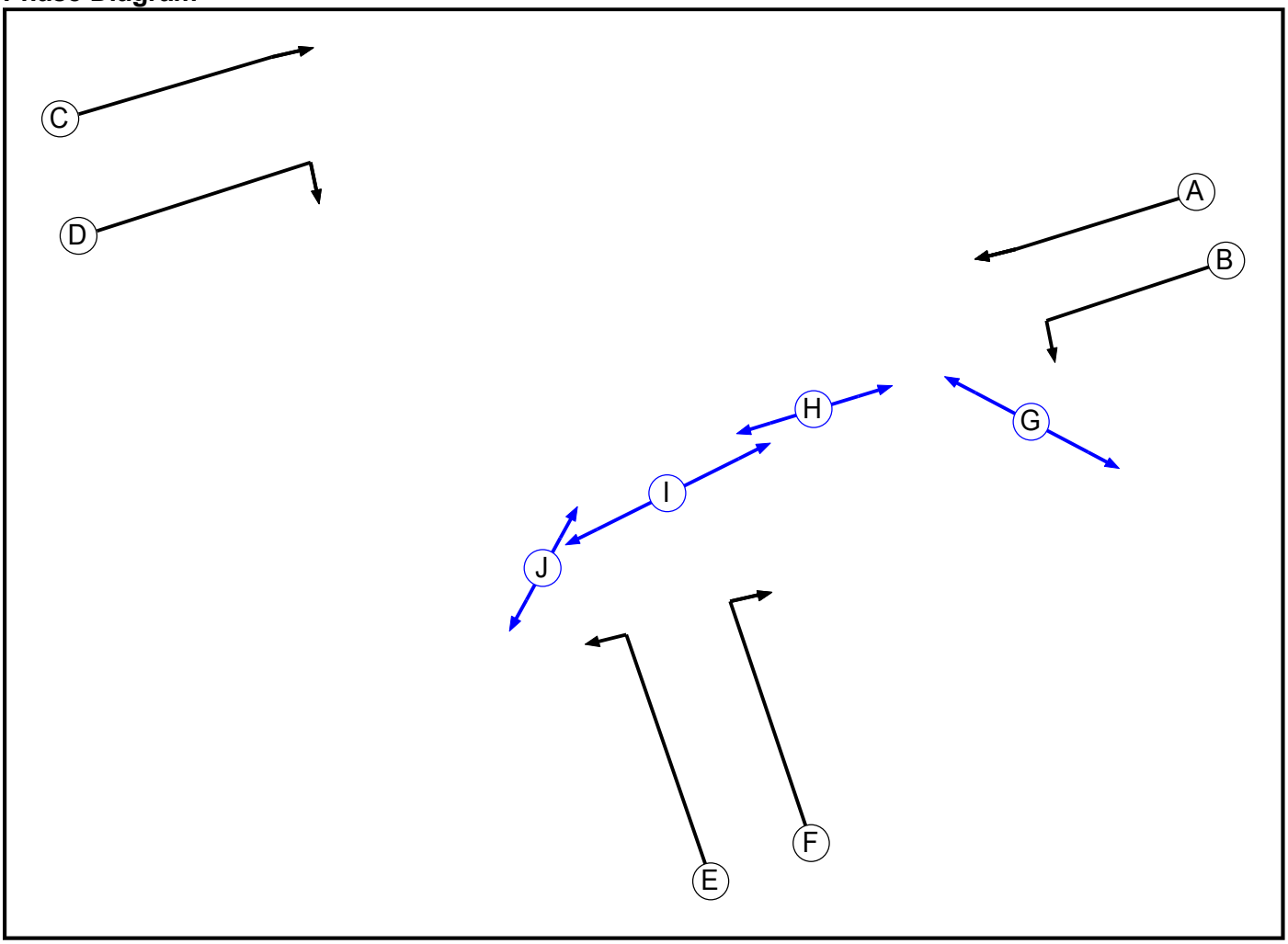
Project:	
Title:	
Location:	
File name:	Junction 9 Only - 2016 A38 Alfreton Road and Pinxton Lane.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

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
I	Pedestrian		7	7
J	Pedestrian		7	7

Full Input Data And Results

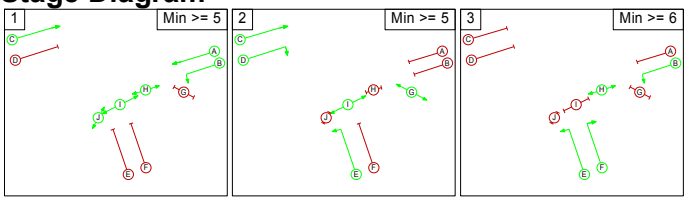
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J
A		-	-	7	9	8	-	-	-	-
B	-		-	7	-	-	5	-	-	-
C	-	-		-	-	7	-	-	-	-
D	7	8	-		-	5	-	9	-	-
E	5	-	-	-		-	-	-	-	5
F	7	-	7	6	-		-	-	5	-
G	-	7	-	-	-	-		-	-	-
H	-	-	-	7	-	-	-		-	-
I	-	-	-	-	-	8	-	-		-
J	-	-	-	-	6	-	-	-	-	

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

From Stage \ To Stage	1	2	3
1		9	9
2	9		9
3	7	7	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A38 Alfreton Road/Pinxton Lane
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: A38 Alfreton Road/Pinxton 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 (A38 Alfreton Road (West))	U	C	2	3	60.0	User	2000	-	-	-	-	-
1/2 (A38 Alfreton Road (West))	U	C	2	3	60.0	User	2000	-	-	-	-	-
1/3 (A38 Alfreton Road (West))	U	D	2	3	60.0	User	1800	-	-	-	-	-
1/4 (A38 Alfreton Road (West))	U	D	2	3	13.0	User	1800	-	-	-	-	-
2/1 (A38 Alfreton Road (East))	U	B	2	3	12.2	User	1900	-	-	-	-	-
2/2 (A38 Alfreton Road (East))	U	A	2	3	60.0	User	2000	-	-	-	-	-
2/3 (A38 Alfreton Road (East))	U	A	2	3	60.0	User	2000	-	-	-	-	-
2/4 (A38 Alfreton Road (East))	U	A	2	3	24.3	User	2000	-	-	-	-	-
3/1 (A38 Alfreton Road (West))	U		2	3	60.0	User	2000	-	-	-	-	-
3/2 (A38 Alfreton Road (West))	U		2	3	60.0	User	2000	-	-	-	-	-
3/3 (A38 Alfreton Road (West))	U		2	3	60.0	User	2000	-	-	-	-	-
4/1 (Pinxton Lane)	U		2	3	60.0	User	1800	-	-	-	-	-
4/2 (Pinxton Lane)	U		2	3	60.0	User	1800	-	-	-	-	-
5/1 (A38 Alfreton Road (East))	U		2	3	60.0	User	2000	-	-	-	-	-
5/2 (A38 Alfreton Road (East))	U		2	3	60.0	User	2000	-	-	-	-	-
6/1 (Pinxton Lane)	U	E	2	3	10.4	User	1900	-	-	-	-	-
6/2 (Pinxton Lane)	U	F	2	3	60.0	User	1800	-	-	-	-	-
6/3 (Pinxton Lane)	U	F	2	3	60.0	User	1800	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2032 Reference Case Morning Peak'	08:00	09:00	01:00	
2: '2032 Development Case Morning Peak'	08:00	09:00	01:00	
3: '2032 Reference Case Evening Peak'	17:00	18:00	01:00	
4: '2032 Development Case Evening Peak'	17:00	18:00	01:00	

Scenario 1: 'AM Reference Case ' (FG1: '2032 Reference Case Morning Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	557	2362	2919
	B	219	0	156	375
	C	1634	276	0	1910
	Tot.	1853	833	2518	5204

Traffic Lane Flows

Lane	Scenario 1: AM Reference Case
Junction: A38 Alfreton Road/Pinxton Lane	
1/1	817
1/2	817
1/3	114
1/4	162
2/1	557
2/2	787
2/3	787
2/4	788
3/1	943
3/2	787
3/3	788
4/1	671
4/2	162
5/1	927
5/2	926
6/1	156
6/2	110
6/3	109

Full Input Data And Results

Lane Saturation Flows

Junction: A38 Alfreton Road/Pinxton 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 (A38 Alfreton Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
1/2 (A38 Alfreton Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
1/3 (A38 Alfreton Road (West) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
1/4 (A38 Alfreton Road (West) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A38 Alfreton Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/2 (A38 Alfreton Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
2/3 (A38 Alfreton Road (East) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
2/4 (A38 Alfreton Road (East) Lane 4)	This lane uses a directly entered Saturation Flow						2000	2000
3/1 (A38 Alfreton Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
3/2 (A38 Alfreton Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
3/3 (A38 Alfreton Road (West) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
4/1 (Pinxton Lane Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (Pinxton Lane Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A38 Alfreton Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
5/2 (A38 Alfreton Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
6/1 (Pinxton Lane Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/2 (Pinxton Lane Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/3 (Pinxton Lane Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800

Full Input Data And Results

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case Evening Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	232	2021	2253
	B	474	0	244	718
	C	2556	195	0	2751
	Tot.	3030	427	2265	5722

Traffic Lane Flows

Lane	Scenario 2: PM Reference Case
Junction: A38 Alfreton Road/Pinxton Lane	
1/1	1278
1/2	1278
1/3	85
1/4	110
2/1	232
2/2	674
2/3	674
2/4	673
3/1	918
3/2	674
3/3	673
4/1	317
4/2	110
5/1	1515
5/2	1515
6/1	244
6/2	237
6/3	237

Full Input Data And Results

Lane Saturation Flows

Junction: A38 Alfreton Road/Pinxton 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 (A38 Alfreton Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
1/2 (A38 Alfreton Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
1/3 (A38 Alfreton Road (West) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
1/4 (A38 Alfreton Road (West) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A38 Alfreton Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/2 (A38 Alfreton Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
2/3 (A38 Alfreton Road (East) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
2/4 (A38 Alfreton Road (East) Lane 4)	This lane uses a directly entered Saturation Flow						2000	2000
3/1 (A38 Alfreton Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
3/2 (A38 Alfreton Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
3/3 (A38 Alfreton Road (West) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
4/1 (Pinxton Lane Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (Pinxton Lane Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A38 Alfreton Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
5/2 (A38 Alfreton Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
6/1 (Pinxton Lane Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/2 (Pinxton Lane Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/3 (Pinxton Lane Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800

Full Input Data And Results

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	519	2609	3128
	B	213	0	155	368
	C	1730	251	0	1981
	Tot.	1943	770	2764	5477

Traffic Lane Flows

Lane	Scenario 3: AM Development Scenario
Junction: A38 Alfreton Road/Pinxton Lane	
1/1	865
1/2	865
1/3	100
1/4	151
2/1	519
2/2	870
2/3	870
2/4	869
3/1	1025
3/2	870
3/3	869
4/1	619
4/2	151
5/1	972
5/2	971
6/1	155
6/2	107
6/3	106

Full Input Data And Results

Lane Saturation Flows

Junction: A38 Alfreton Road/Pinxton 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 (A38 Alfreton Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
1/2 (A38 Alfreton Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
1/3 (A38 Alfreton Road (West) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
1/4 (A38 Alfreton Road (West) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A38 Alfreton Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/2 (A38 Alfreton Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
2/3 (A38 Alfreton Road (East) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
2/4 (A38 Alfreton Road (East) Lane 4)	This lane uses a directly entered Saturation Flow						2000	2000
3/1 (A38 Alfreton Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
3/2 (A38 Alfreton Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
3/3 (A38 Alfreton Road (West) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
4/1 (Pinxton Lane Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (Pinxton Lane Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A38 Alfreton Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
5/2 (A38 Alfreton Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
6/1 (Pinxton Lane Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/2 (Pinxton Lane Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/3 (Pinxton Lane Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800

Full Input Data And Results

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	232	2162	2394
	B	465	0	236	701
	C	2785	196	0	2981
	Tot.	3250	428	2398	6076

Traffic Lane Flows

Lane	Scenario 4: PM Development Scenario
Junction: A38 Alfreton Road/Pinxton Lane	
1/1	1392
1/2	1393
1/3	85
1/4	111
2/1	232
2/2	721
2/3	721
2/4	720
3/1	957
3/2	721
3/3	720
4/1	317
4/2	111
5/1	1625
5/2	1625
6/1	236
6/2	233
6/3	232

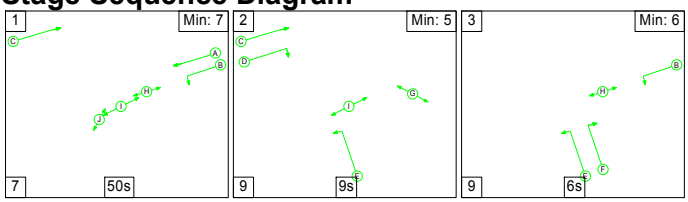
Full Input Data And Results

Lane Saturation Flows

Junction: A38 Alfreton Road/Pinxton 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 (A38 Alfreton Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
1/2 (A38 Alfreton Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
1/3 (A38 Alfreton Road (West) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
1/4 (A38 Alfreton Road (West) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A38 Alfreton Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/2 (A38 Alfreton Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
2/3 (A38 Alfreton Road (East) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
2/4 (A38 Alfreton Road (East) Lane 4)	This lane uses a directly entered Saturation Flow						2000	2000
3/1 (A38 Alfreton Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
3/2 (A38 Alfreton Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
3/3 (A38 Alfreton Road (West) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
4/1 (Pinxton Lane Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (Pinxton Lane Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A38 Alfreton Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
5/2 (A38 Alfreton Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
6/1 (Pinxton Lane Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/2 (Pinxton Lane Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/3 (Pinxton Lane Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 1: 'AM Reference Case ' (FG1: '2032 Reference Case Morning Peak', Plan 1: 'Staging Plan No. 1')

Stage Sequence Diagram

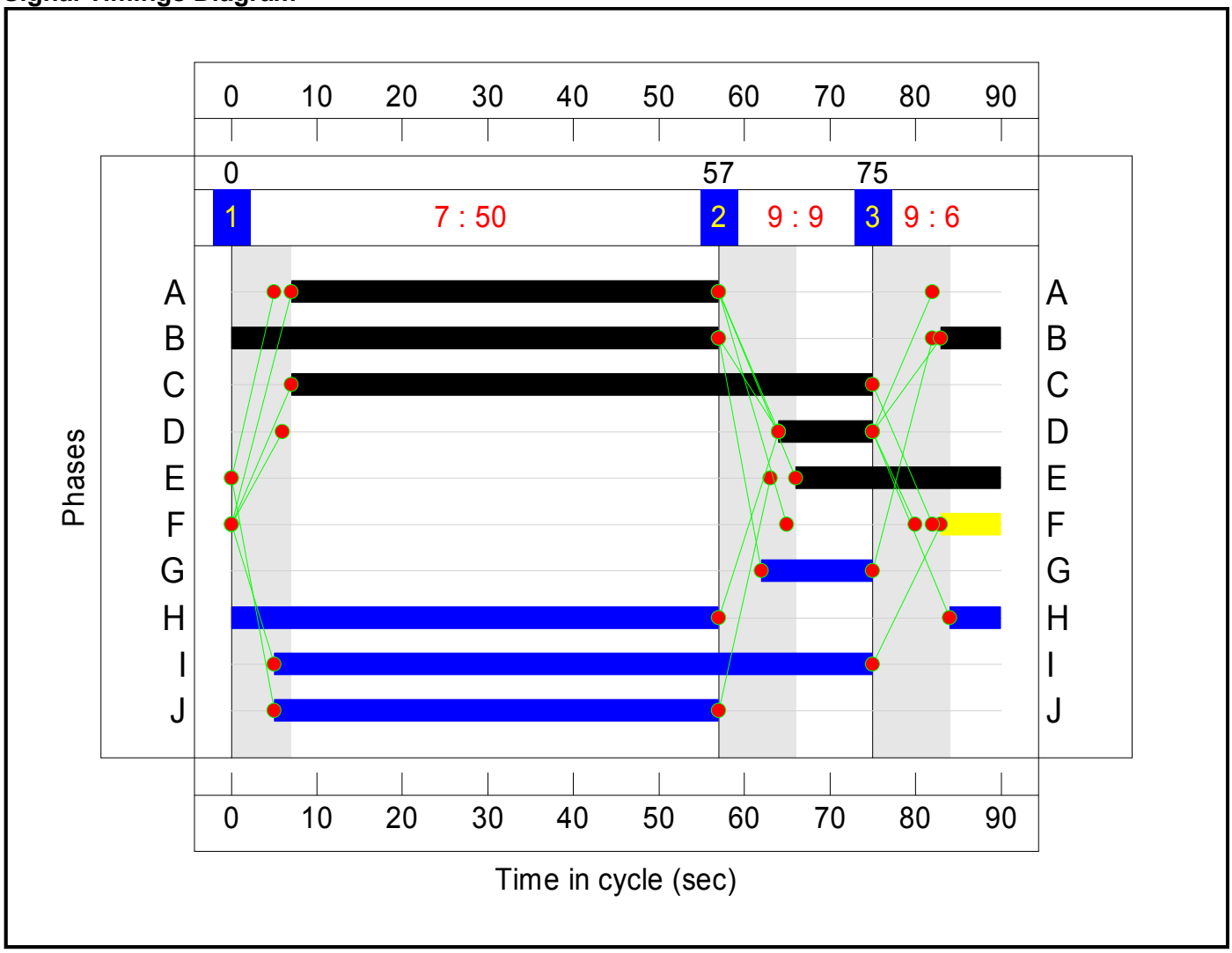


Full Input Data And Results

Stage Timings

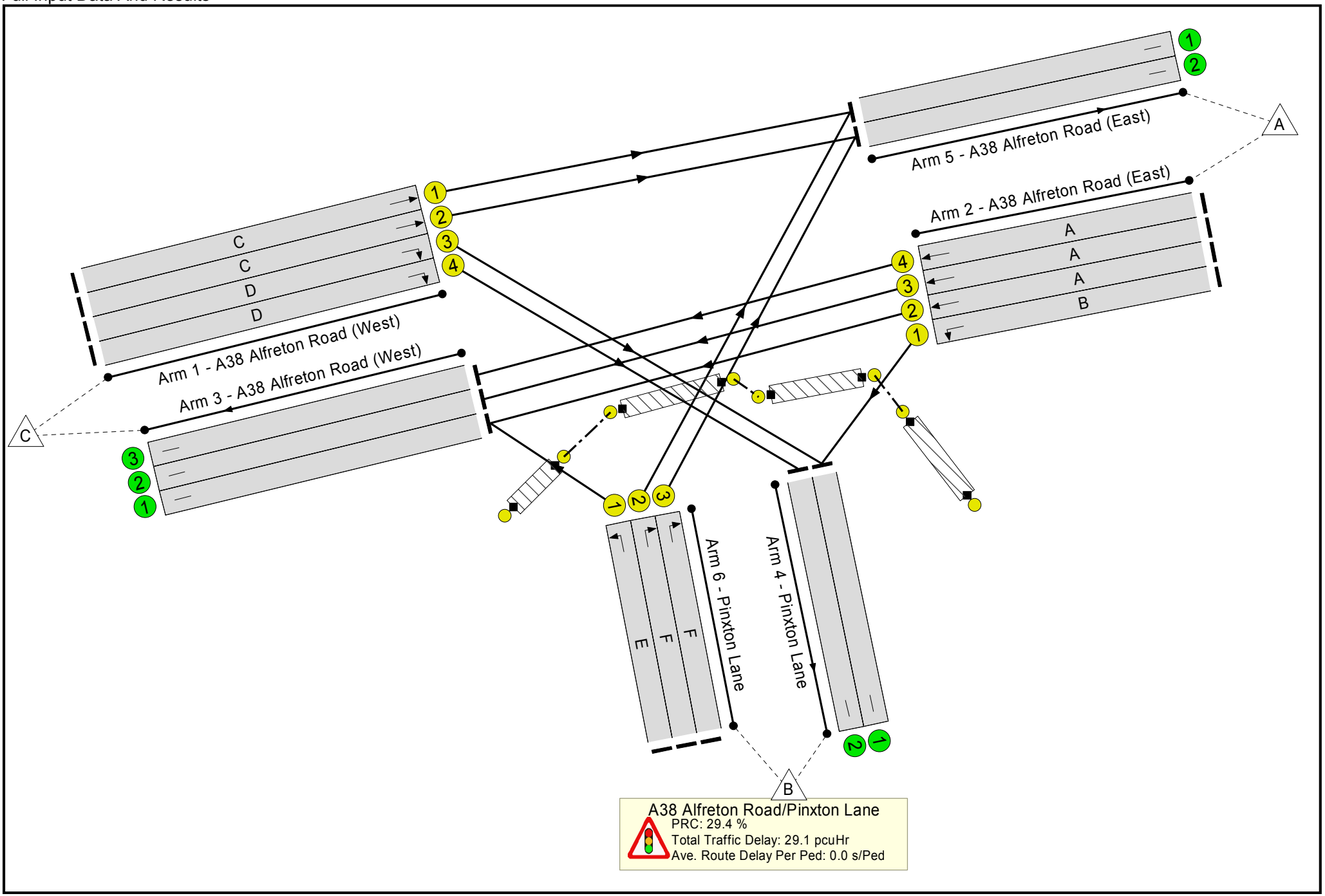
Stage	1	2	3
Duration	50	9	6
Change Point	0	57	75

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**69.5%**
A38 Alfreton Road/Pinxton Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**69.5%**
1/1	A38 Alfreton Road (West) Ahead	U	N/A	N/A	C		1	68	-	817	2000	1533	53.3%
1/2	A38 Alfreton Road (West) Ahead	U	N/A	N/A	C		1	68	-	817	2000	1533	53.3%
1/3	A38 Alfreton Road (West) Right	U	N/A	N/A	D		1	11	-	114	1800	240	47.5%
1/4	A38 Alfreton Road (West) Right	U	N/A	N/A	D		1	11	-	162	1800	240	67.5%
2/1	A38 Alfreton Road (East) Left	U	N/A	N/A	B		1	64	-	557	1900	1372	40.6%
2/2	A38 Alfreton Road (East) Ahead	U	N/A	N/A	A		1	50	-	787	2000	1133	69.4%
2/3	A38 Alfreton Road (East) Ahead	U	N/A	N/A	A		1	50	-	787	2000	1133	69.4%
2/4	A38 Alfreton Road (East) Ahead	U	N/A	N/A	A		1	50	-	788	2000	1133	69.5%
3/1	A38 Alfreton Road (West)	U	N/A	N/A	-		-	-	-	943	2000	2000	47.2%
3/2	A38 Alfreton Road (West)	U	N/A	N/A	-		-	-	-	787	2000	2000	39.4%
3/3	A38 Alfreton Road (West)	U	N/A	N/A	-		-	-	-	788	2000	2000	39.4%
4/1	Pinxton Lane	U	N/A	N/A	-		-	-	-	671	1800	1800	37.3%
4/2	Pinxton Lane	U	N/A	N/A	-		-	-	-	162	1800	1800	9.0%

Full Input Data And Results

5/1	A38 Alfreton Road (East)	U	N/A	N/A	-		-	-	-	927	2000	2000	46.4%
5/2	A38 Alfreton Road (East)	U	N/A	N/A	-		-	-	-	926	2000	2000	46.3%
6/1	Pinxton Lane Left	U	N/A	N/A	E		1	24	-	156	1900	528	29.6%
6/2	Pinxton Lane Right	U	N/A	N/A	F		1	7	-	110	1800	160	68.8%
6/3	Pinxton Lane Right	U	N/A	N/A	F		1	7	-	109	1800	160	68.1%
Ped Link: P1	Pinxton Lane Left Turn	-	N/A	-	J		1	52	-	0	-	0	0.0%
Ped Link: P2	Pinxton Lane Right Turn	-	N/A	-	I		1	70	-	0	-	0	0.0%
Ped Link: P3	A38 Right Turn Crossing	-	N/A	-	H		1	63	-	0	-	0	0.0%
Ped Link: P4	A38 Left Turn Crossing	-	N/A	-	G		1	13	-	0	-	0	0.0%

Full Input Data And Results

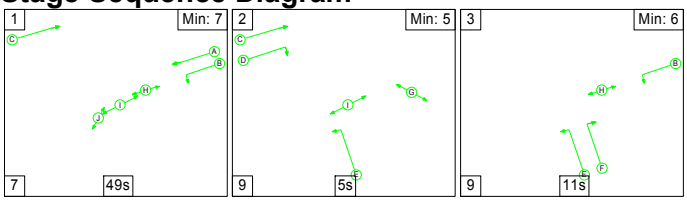
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**18.1**	**10.9**	**0.0**	**29.1**	**-**	**-**	**-**	**-**
A38 Alfreton Road/Pinxton Lane	**-**	**-**	**0**	**0**	**0**	**18.1**	**10.9**	**0.0**	**29.1**	**-**	**-**	**-**	**-**
1/1	817	817	-	-	-	0.9	0.6	-	1.5	6.7	7.9	0.6	8.5
1/2	817	817	-	-	-	0.9	0.6	-	1.5	6.7	7.9	0.6	8.5
1/3	114	114	-	-	-	1.1	0.4	-	1.6	50.3	2.6	0.4	3.1
1/4	162	162	-	-	-	1.7	1.0	-	2.7	59.6	3.8	1.0	4.8
2/1	557	557	-	-	-	0.8	0.3	-	1.1	7.1	5.4	0.3	5.8
2/2	787	787	-	-	-	3.0	1.1	-	4.2	19.1	14.0	1.1	15.1
2/3	787	787	-	-	-	3.0	1.1	-	4.2	19.1	14.0	1.1	15.1
2/4	788	788	-	-	-	3.1	1.1	-	4.2	19.1	14.0	1.1	15.1
3/1	943	943	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
3/2	787	787	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
3/3	788	788	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
4/1	671	671	-	-	-	0.0	0.3	-	0.3	1.6	0.5	0.3	0.8
4/2	162	162	-	-	-	0.0	0.0	-	0.0	1.1	0.0	0.0	0.0
5/1	927	927	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
5/2	926	926	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
6/1	156	156	-	-	-	1.1	0.2	-	1.3	30.4	3.0	0.2	3.2
6/2	110	110	-	-	-	1.2	1.1	-	2.3	74.3	2.7	1.1	3.7
6/3	109	109	-	-	-	1.2	1.0	-	2.2	73.7	2.6	1.0	3.7
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 29.4 Total Delay for Signalled Lanes (pcuHr): 26.76 Cycle Time (s): 90
PRC Over All Lanes (%): 29.4 Total Delay Over All Lanes(pcuHr): 29.06

Full Input Data And Results

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case Evening Peak', Plan 1: 'Staging Plan No. 1')

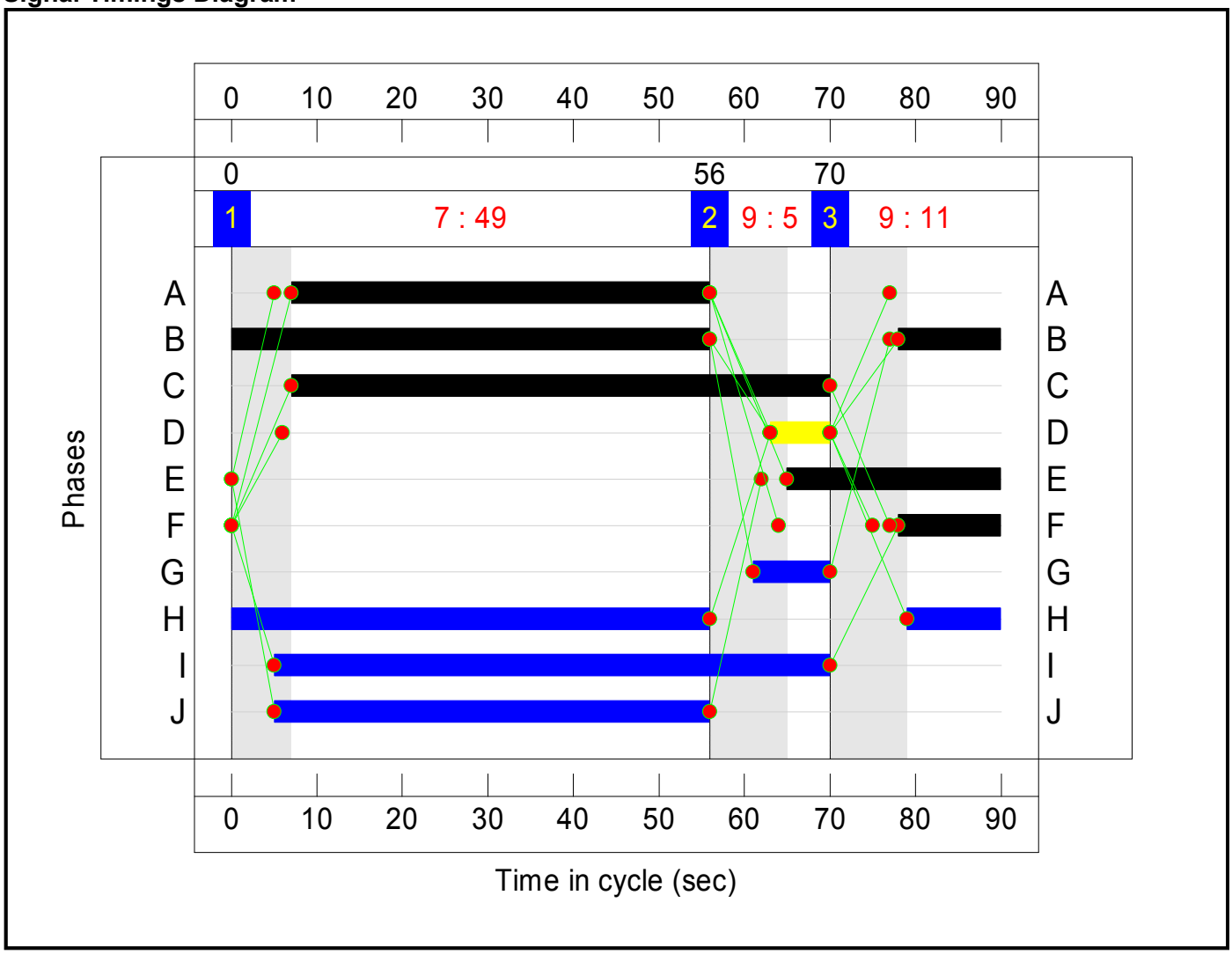
Stage Sequence Diagram



Stage Timings

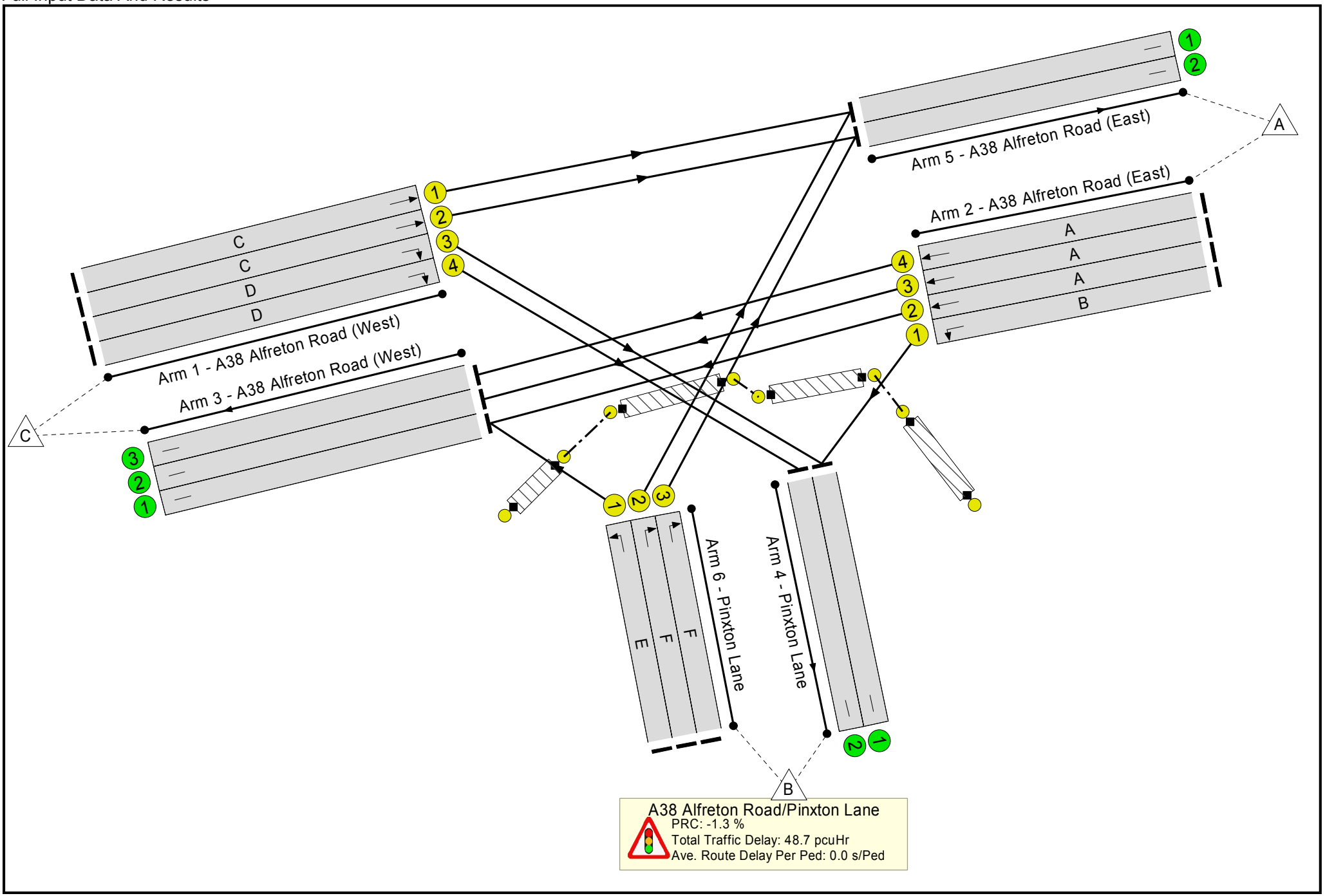
Stage	1	2	3
Duration	49	5	11
Change Point	0	56	70

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**91.2%**
A38 Alfreton Road/Pinxton Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**91.2%**
1/1	A38 Alfreton Road (West) Ahead	U	N/A	N/A	C		1	63	-	1278	2000	1422	89.9%
1/2	A38 Alfreton Road (West) Ahead	U	N/A	N/A	C		1	63	-	1278	2000	1422	89.9%
1/3	A38 Alfreton Road (West) Right	U	N/A	N/A	D		1	7	-	85	1800	160	53.1%
1/4	A38 Alfreton Road (West) Right	U	N/A	N/A	D		1	7	-	110	1800	160	68.8%
2/1	A38 Alfreton Road (East) Left	U	N/A	N/A	B		1	68	-	232	1900	1457	15.9%
2/2	A38 Alfreton Road (East) Ahead	U	N/A	N/A	A		1	49	-	674	2000	1111	60.7%
2/3	A38 Alfreton Road (East) Ahead	U	N/A	N/A	A		1	49	-	674	2000	1111	60.7%
2/4	A38 Alfreton Road (East) Ahead	U	N/A	N/A	A		1	49	-	673	2000	1111	60.6%
3/1	A38 Alfreton Road (West)	U	N/A	N/A	-		-	-	-	918	2000	2000	45.9%
3/2	A38 Alfreton Road (West)	U	N/A	N/A	-		-	-	-	674	2000	2000	33.7%
3/3	A38 Alfreton Road (West)	U	N/A	N/A	-		-	-	-	673	2000	2000	33.7%
4/1	Pinxton Lane	U	N/A	N/A	-		-	-	-	317	1800	1800	17.6%
4/2	Pinxton Lane	U	N/A	N/A	-		-	-	-	110	1800	1800	6.1%

Full Input Data And Results

5/1	A38 Alfreton Road (East)	U	N/A	N/A	-		-	-	-	1515	2000	2000	75.8%
5/2	A38 Alfreton Road (East)	U	N/A	N/A	-		-	-	-	1515	2000	2000	75.8%
6/1	Pinxton Lane Left	U	N/A	N/A	E		1	25	-	244	1900	549	44.5%
6/2	Pinxton Lane Right	U	N/A	N/A	F		1	12	-	237	1800	260	91.2%
6/3	Pinxton Lane Right	U	N/A	N/A	F		1	12	-	237	1800	260	91.2%
Ped Link: P1	Pinxton Lane Left Turn	-	N/A	-	J		1	51	-	0	-	0	0.0%
Ped Link: P2	Pinxton Lane Right Turn	-	N/A	-	I		1	65	-	0	-	0	0.0%
Ped Link: P3	A38 Right Turn Crossing	-	N/A	-	H		1	67	-	0	-	0	0.0%
Ped Link: P4	A38 Left Turn Crossing	-	N/A	-	G		1	9	-	0	-	0	0.0%

Full Input Data And Results

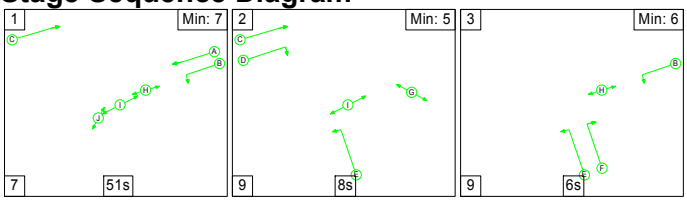
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**24.0**	**24.7**	**0.0**	**48.7**	**-**	**-**	**-**	**-**
A38 Alfreton Road/Pinxton Lane	**-**	**-**	**0**	**0**	**0**	**24.0**	**24.7**	**0.0**	**48.7**	**-**	**-**	**-**	**-**
1/1	1278	1278	-	-	-	3.7	4.2	-	7.9	22.2	25.6	4.2	29.7
1/2	1278	1278	-	-	-	3.7	4.2	-	7.9	22.2	25.6	4.2	29.7
1/3	85	85	-	-	-	0.9	0.6	-	1.5	62.9	2.0	0.6	2.6
1/4	110	110	-	-	-	1.2	1.1	-	2.3	74.3	2.7	1.1	3.7
2/1	232	232	-	-	-	0.2	0.1	-	0.3	4.3	1.5	0.1	1.6
2/2	674	674	-	-	-	2.5	0.8	-	3.3	17.5	11.2	0.8	12.0
2/3	674	674	-	-	-	2.5	0.8	-	3.3	17.5	11.2	0.8	12.0
2/4	673	673	-	-	-	2.5	0.8	-	3.3	17.5	11.2	0.8	12.0
3/1	918	918	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
3/2	674	674	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
3/3	673	673	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
4/1	317	317	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
4/2	110	110	-	-	-	0.0	0.0	-	0.0	1.1	0.0	0.0	0.0
5/1	1515	1515	-	-	-	0.0	1.6	-	1.6	3.7	0.0	1.6	1.6
5/2	1515	1515	-	-	-	0.0	1.6	-	1.6	3.7	0.0	1.6	1.6
6/1	244	244	-	-	-	1.8	0.4	-	2.2	32.0	4.9	0.4	5.3
6/2	237	237	-	-	-	2.5	3.9	-	6.4	96.5	5.8	3.9	9.7
6/3	237	237	-	-	-	2.5	3.9	-	6.4	96.5	5.8	3.9	9.7
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -1.3 Total Delay for Signalled Lanes (pcuHr): 44.50 Cycle Time (s): 90
PRC Over All Lanes (%): -1.3 Total Delay Over All Lanes(pcuHr): 48.68

Full Input Data And Results

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Staging Plan No. 1')

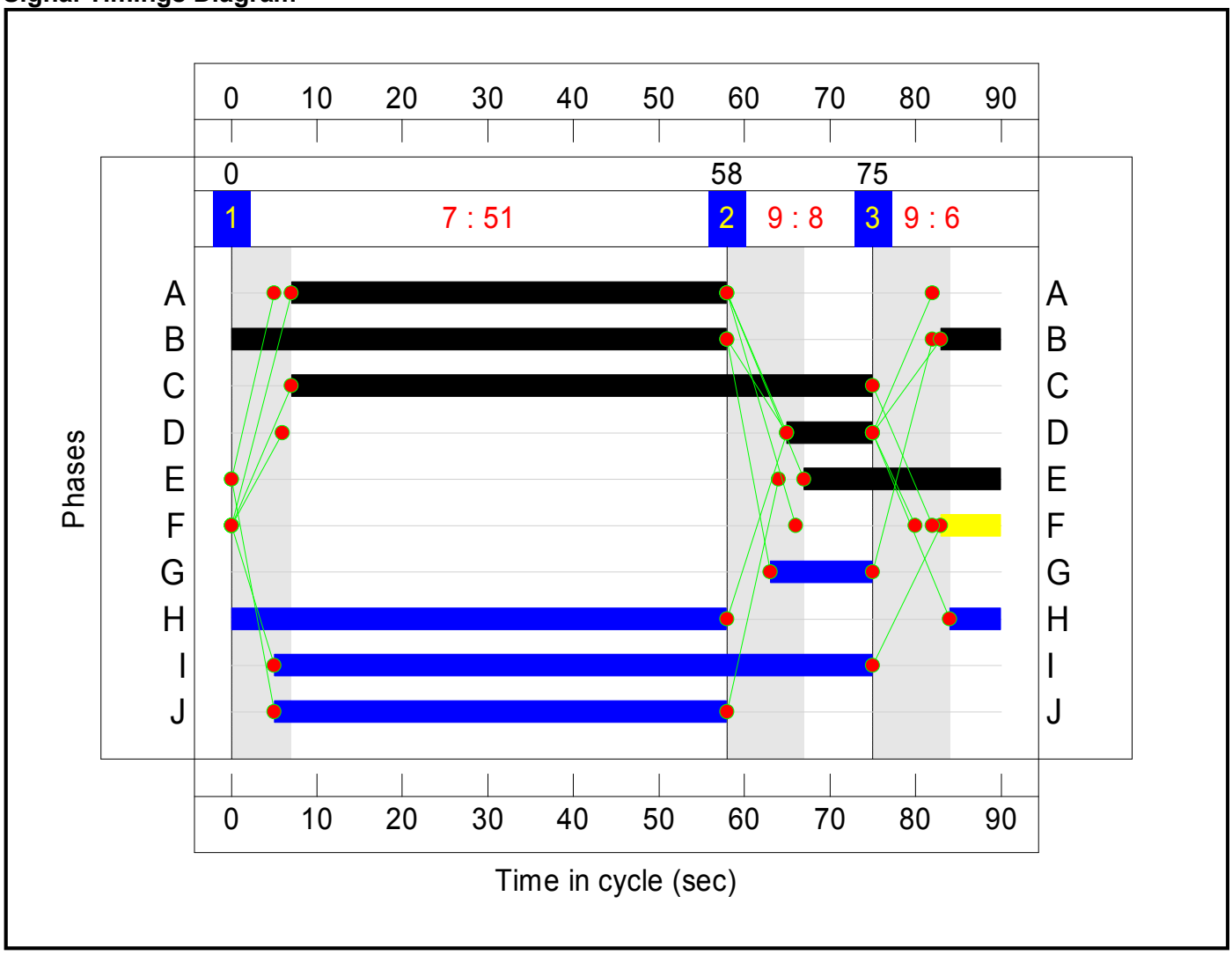
Stage Sequence Diagram



Stage Timings

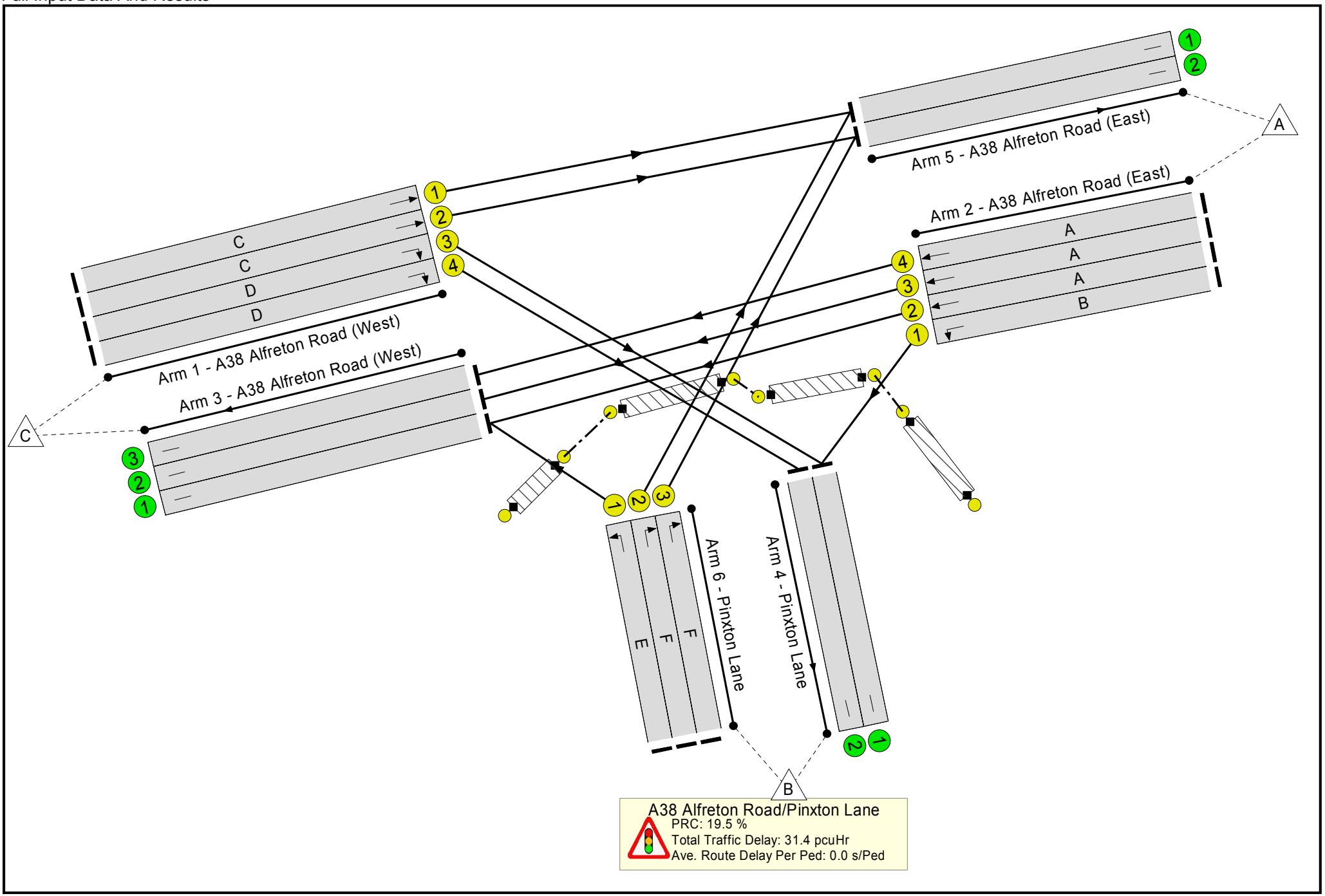
Stage	1	2	3
Duration	51	8	6
Change Point	0	58	75

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**75.3%**
A38 Alfreton Road/Pinxton Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**75.3%**
1/1	A38 Alfreton Road (West) Ahead	U	N/A	N/A	C		1	68	-	865	2000	1533	56.4%
1/2	A38 Alfreton Road (West) Ahead	U	N/A	N/A	C		1	68	-	865	2000	1533	56.4%
1/3	A38 Alfreton Road (West) Right	U	N/A	N/A	D		1	10	-	100	1800	220	45.5%
1/4	A38 Alfreton Road (West) Right	U	N/A	N/A	D		1	10	-	151	1800	220	68.6%
2/1	A38 Alfreton Road (East) Left	U	N/A	N/A	B		1	65	-	519	1900	1393	37.2%
2/2	A38 Alfreton Road (East) Ahead	U	N/A	N/A	A		1	51	-	870	2000	1156	75.3%
2/3	A38 Alfreton Road (East) Ahead	U	N/A	N/A	A		1	51	-	870	2000	1156	75.3%
2/4	A38 Alfreton Road (East) Ahead	U	N/A	N/A	A		1	51	-	869	2000	1156	75.2%
3/1	A38 Alfreton Road (West)	U	N/A	N/A	-		-	-	-	1025	2000	2000	51.3%
3/2	A38 Alfreton Road (West)	U	N/A	N/A	-		-	-	-	870	2000	2000	43.5%
3/3	A38 Alfreton Road (West)	U	N/A	N/A	-		-	-	-	869	2000	2000	43.5%
4/1	Pinxton Lane	U	N/A	N/A	-		-	-	-	619	1800	1800	34.4%
4/2	Pinxton Lane	U	N/A	N/A	-		-	-	-	151	1800	1800	8.4%

Full Input Data And Results

5/1	A38 Alfreton Road (East)	U	N/A	N/A	-		-	-	-	972	2000	2000	48.6%
5/2	A38 Alfreton Road (East)	U	N/A	N/A	-		-	-	-	971	2000	2000	48.6%
6/1	Pinxton Lane Left	U	N/A	N/A	E		1	23	-	155	1900	507	30.6%
6/2	Pinxton Lane Right	U	N/A	N/A	F		1	7	-	107	1800	160	66.9%
6/3	Pinxton Lane Right	U	N/A	N/A	F		1	7	-	106	1800	160	66.3%
Ped Link: P1	Pinxton Lane Left Turn	-	N/A	-	J		1	53	-	0	-	0	0.0%
Ped Link: P2	Pinxton Lane Right Turn	-	N/A	-	I		1	70	-	0	-	0	0.0%
Ped Link: P3	A38 Right Turn Crossing	-	N/A	-	H		1	64	-	0	-	0	0.0%
Ped Link: P4	A38 Left Turn Crossing	-	N/A	-	G		1	12	-	0	-	0	0.0%

Full Input Data And Results

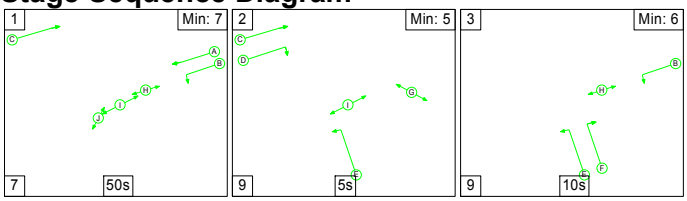
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**19.1**	**12.3**	**0.0**	**31.4**	**-**	**-**	**-**	**-**
A38 Alfreton Road/Pinxton Lane	**-**	**-**	**0**	**0**	**0**	**19.1**	**12.3**	**0.0**	**31.4**	**-**	**-**	**-**	**-**
1/1	865	865	-	-	-	1.0	0.6	-	1.7	7.0	8.9	0.6	9.5
1/2	865	865	-	-	-	1.0	0.6	-	1.7	7.0	8.9	0.6	9.5
1/3	100	100	-	-	-	1.0	0.4	-	1.4	51.6	2.3	0.4	2.7
1/4	151	151	-	-	-	1.6	1.1	-	2.6	63.2	3.6	1.1	4.7
2/1	519	519	-	-	-	0.6	0.3	-	0.9	6.5	4.8	0.3	5.1
2/2	870	870	-	-	-	3.4	1.5	-	4.9	20.4	16.2	1.5	17.7
2/3	870	870	-	-	-	3.4	1.5	-	4.9	20.4	16.2	1.5	17.7
2/4	869	869	-	-	-	3.4	1.5	-	4.9	20.4	16.2	1.5	17.7
3/1	1025	1025	-	-	-	0.0	0.5	-	0.5	1.8	0.0	0.5	0.5
3/2	870	870	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
3/3	869	869	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
4/1	619	619	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
4/2	151	151	-	-	-	0.0	0.0	-	0.0	1.1	0.0	0.0	0.0
5/1	972	972	-	-	-	0.0	0.5	-	0.5	1.7	0.0	0.5	0.5
5/2	971	971	-	-	-	0.0	0.5	-	0.5	1.7	0.0	0.5	0.5
6/1	155	155	-	-	-	1.1	0.2	-	1.4	31.5	3.1	0.2	3.3
6/2	107	107	-	-	-	1.2	1.0	-	2.2	72.5	2.6	1.0	3.6
6/3	106	106	-	-	-	1.2	0.9	-	2.1	71.9	2.6	0.9	3.5
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 19.5 Total Delay for Signalled Lanes (pcuHr): 28.81 Cycle Time (s): 90
PRC Over All Lanes (%): 19.5 Total Delay Over All Lanes(pcuHr): 31.36

Full Input Data And Results

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Staging Plan No. 1')

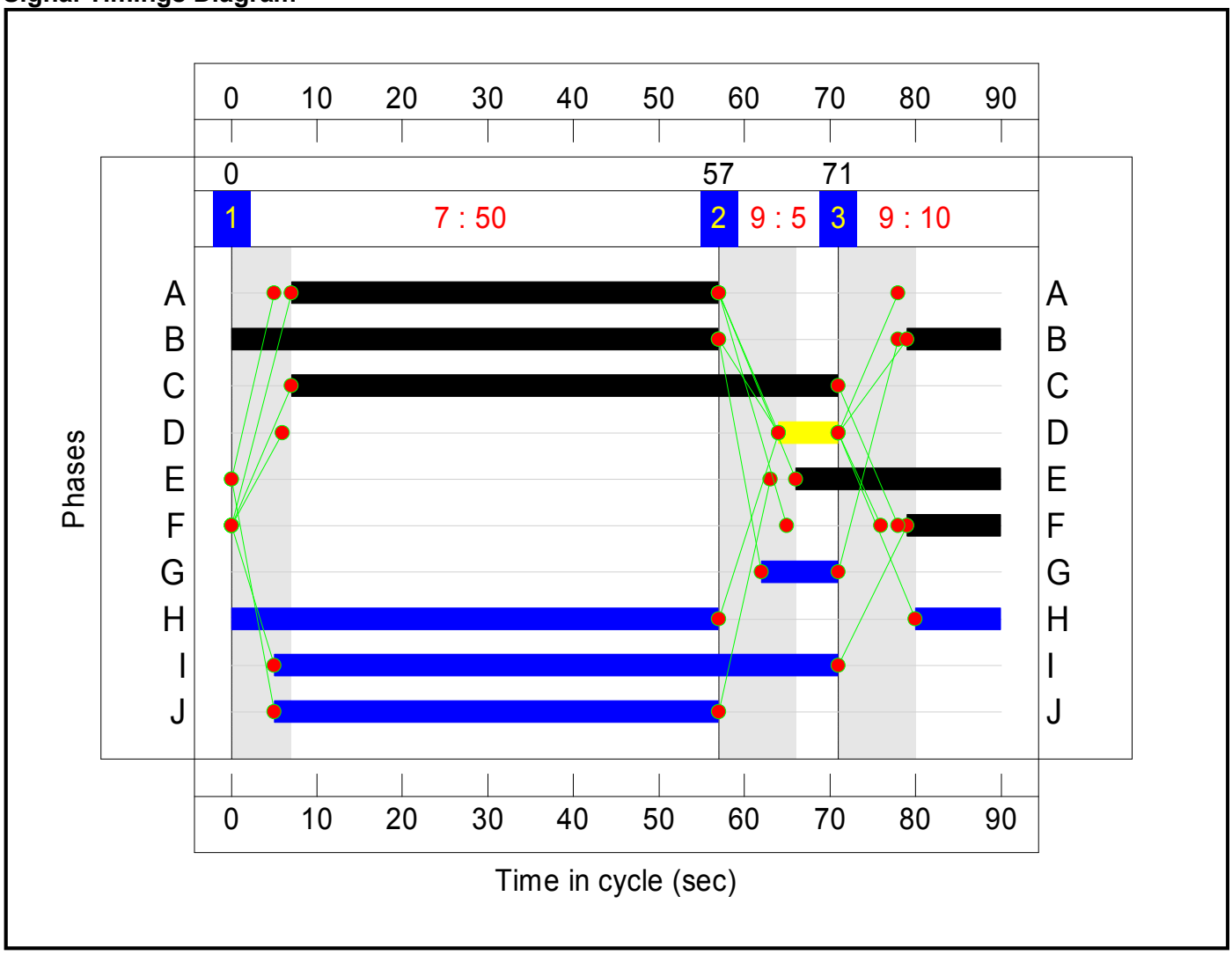
Stage Sequence Diagram



Stage Timings

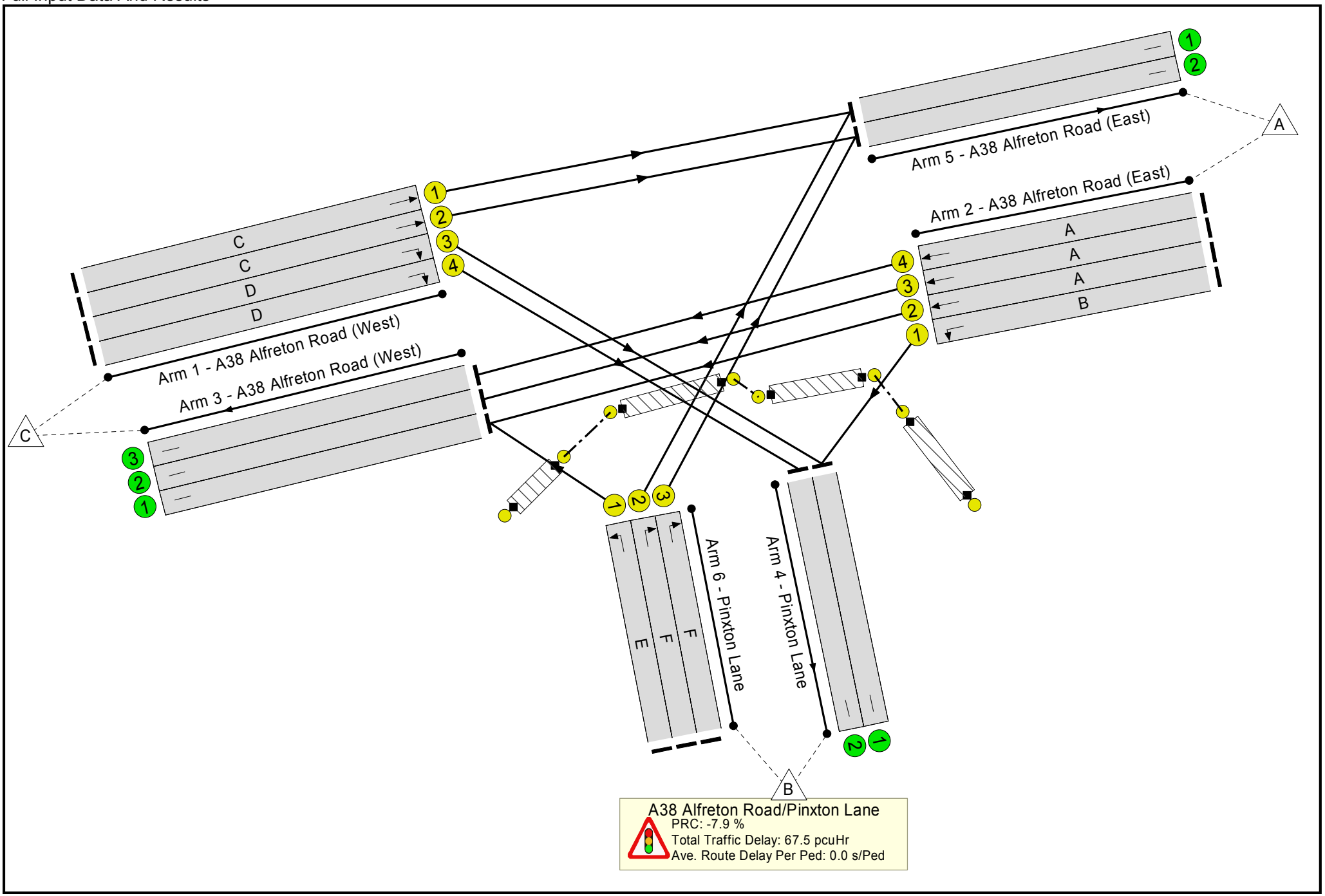
Stage	1	2	3
Duration	50	5	10
Change Point	0	57	71

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**97.1%**
A38 Alfreton Road/Pinxton Lane	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**97.1%**
1/1	A38 Alfreton Road (West) Ahead	U	N/A	N/A	C		1	64	-	1392	2000	1444	96.4%
1/2	A38 Alfreton Road (West) Ahead	U	N/A	N/A	C		1	64	-	1393	2000	1444	96.4%
1/3	A38 Alfreton Road (West) Right	U	N/A	N/A	D		1	7	-	85	1800	160	53.1%
1/4	A38 Alfreton Road (West) Right	U	N/A	N/A	D		1	7	-	111	1800	160	69.4%
2/1	A38 Alfreton Road (East) Left	U	N/A	N/A	B		1	68	-	232	1900	1457	15.9%
2/2	A38 Alfreton Road (East) Ahead	U	N/A	N/A	A		1	50	-	721	2000	1133	63.6%
2/3	A38 Alfreton Road (East) Ahead	U	N/A	N/A	A		1	50	-	721	2000	1133	63.6%
2/4	A38 Alfreton Road (East) Ahead	U	N/A	N/A	A		1	50	-	720	2000	1133	63.5%
3/1	A38 Alfreton Road (West)	U	N/A	N/A	-		-	-	-	957	2000	2000	47.9%
3/2	A38 Alfreton Road (West)	U	N/A	N/A	-		-	-	-	721	2000	2000	36.1%
3/3	A38 Alfreton Road (West)	U	N/A	N/A	-		-	-	-	720	2000	2000	36.0%
4/1	Pinxton Lane	U	N/A	N/A	-		-	-	-	317	1800	1800	17.6%
4/2	Pinxton Lane	U	N/A	N/A	-		-	-	-	111	1800	1800	6.2%

Full Input Data And Results

5/1	A38 Alfreton Road (East)	U	N/A	N/A	-		-	-	-	1625	2000	2000	81.3%
5/2	A38 Alfreton Road (East)	U	N/A	N/A	-		-	-	-	1625	2000	2000	81.3%
6/1	Pinxton Lane Left	U	N/A	N/A	E		1	24	-	236	1900	528	44.7%
6/2	Pinxton Lane Right	U	N/A	N/A	F		1	11	-	233	1800	240	97.1%
6/3	Pinxton Lane Right	U	N/A	N/A	F		1	11	-	232	1800	240	96.7%
Ped Link: P1	Pinxton Lane Left Turn	-	N/A	-	J		1	52	-	0	-	0	0.0%
Ped Link: P2	Pinxton Lane Right Turn	-	N/A	-	I		1	66	-	0	-	0	0.0%
Ped Link: P3	A38 Right Turn Crossing	-	N/A	-	H		1	67	-	0	-	0	0.0%
Ped Link: P4	A38 Left Turn Crossing	-	N/A	-	G		1	9	-	0	-	0	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	**-**	**-**	**0**	**0**	**0**	**25.9**	**41.6**	**0.0**	**67.5**	**-**	**-**	**-**	**-**
A38 Alfreton Road/Pinxton Lane	**-**	**-**	**0**	**0**	**0**	**25.9**	**41.6**	**0.0**	**67.5**	**-**	**-**	**-**	**-**
1/1	1392	1392	-	-	-	4.4	9.7	-	14.1	36.5	31.7	9.7	41.4
1/2	1393	1393	-	-	-	4.4	9.8	-	14.2	36.8	31.7	9.8	41.5
1/3	85	85	-	-	-	0.9	0.6	-	1.5	62.9	2.0	0.6	2.6
1/4	111	111	-	-	-	1.2	1.1	-	2.3	75.0	2.7	1.1	3.8
2/1	232	232	-	-	-	0.2	0.1	-	0.3	4.3	1.5	0.1	1.6
2/2	721	721	-	-	-	2.6	0.9	-	3.5	17.6	12.0	0.9	12.9
2/3	721	721	-	-	-	2.6	0.9	-	3.5	17.6	12.0	0.9	12.9
2/4	720	720	-	-	-	2.6	0.9	-	3.5	17.5	12.0	0.9	12.9
3/1	957	957	-	-	-	0.0	0.5	-	0.5	1.7	0.0	0.5	0.5
3/2	721	721	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
3/3	720	720	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
4/1	317	317	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
4/2	111	111	-	-	-	0.0	0.0	-	0.0	1.1	0.0	0.0	0.0
5/1	1625	1625	-	-	-	0.0	2.1	-	2.1	4.7	0.0	2.1	2.1
5/2	1625	1625	-	-	-	0.0	2.1	-	2.1	4.7	0.0	2.1	2.1
6/1	236	236	-	-	-	1.8	0.4	-	2.2	33.0	4.9	0.4	5.3
6/2	233	233	-	-	-	2.5	6.1	-	8.6	132.8	5.8	6.1	11.8
6/3	232	232	-	-	-	2.5	5.9	-	8.4	130.0	5.7	5.9	11.6
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

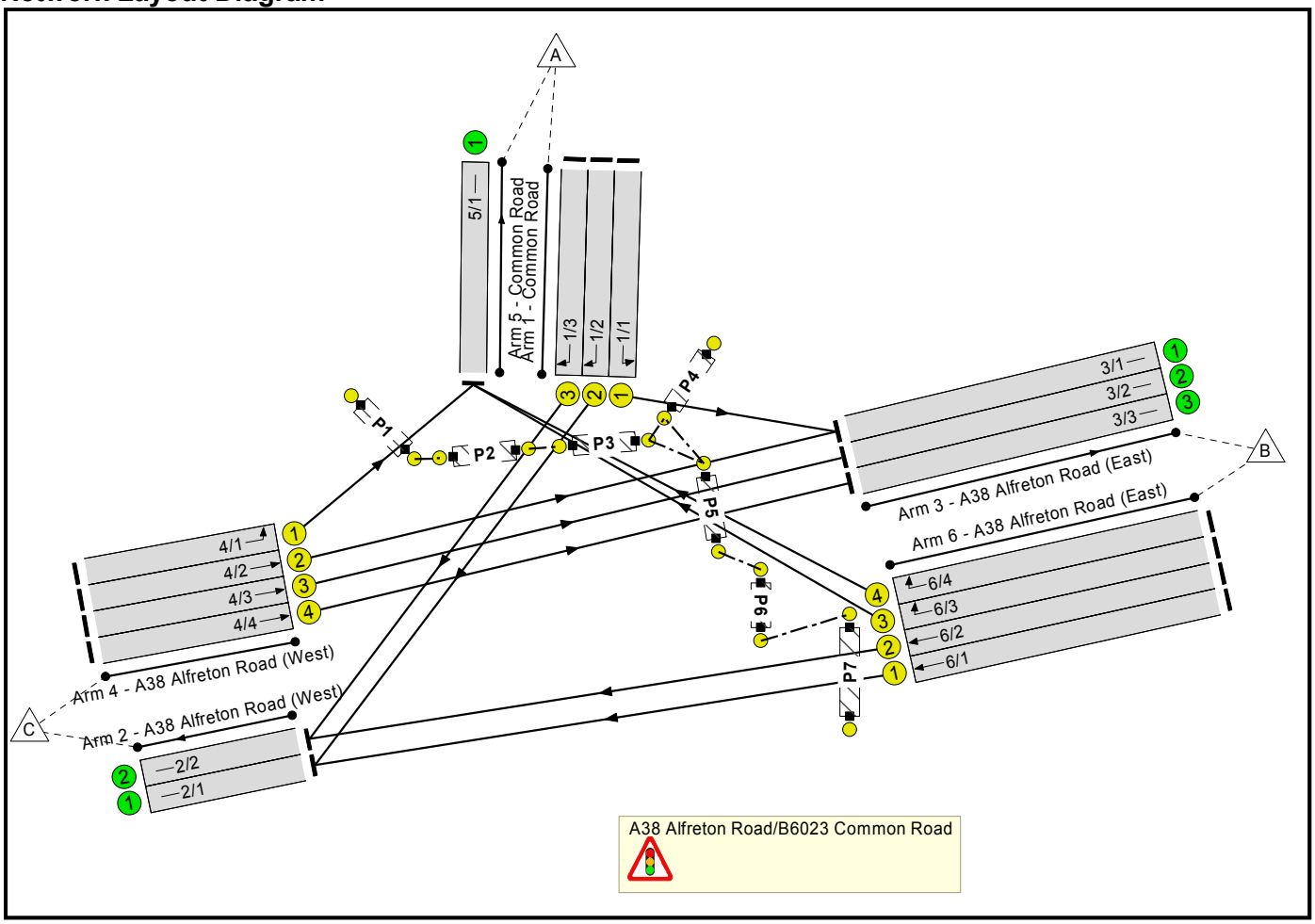
C1 PRC for Signalled Lanes (%): -7.9 Total Delay for Signalled Lanes (pcuHr): 62.08 Cycle Time (s): 90
PRC Over All Lanes (%): -7.9 Total Delay Over All Lanes(pcuHr): 67.53

Full Input Data And Results

User and Project Details

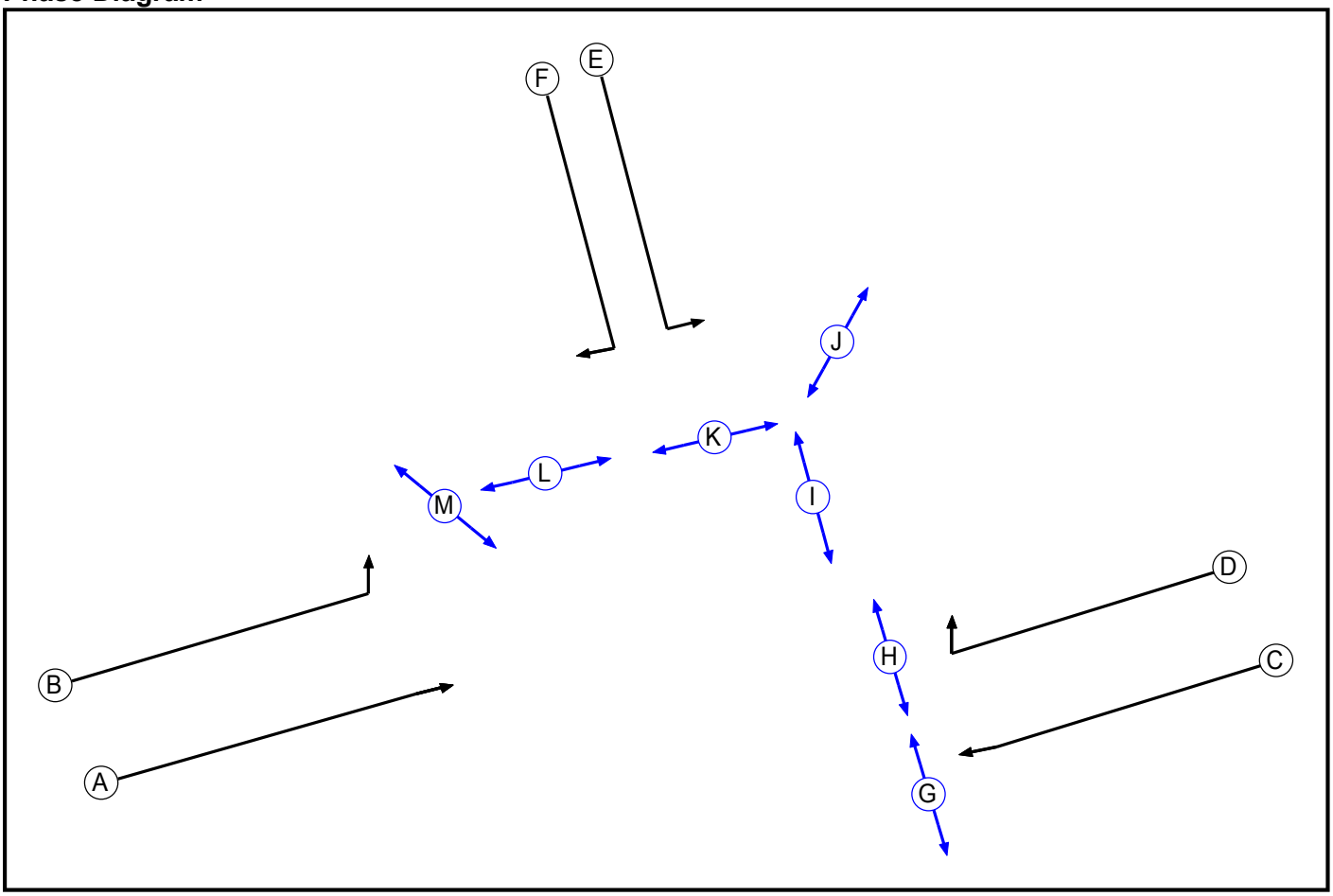
Project:	
Title:	
Location:	
File name:	Junction 10 Only - 2016 A38 Alfreton Road and Common Road.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Traffic	1		7	7
D	Traffic	1		7	7
E	Traffic	1		7	7
F	Traffic	1		7	7
G	Pedestrian	1		7	7
H	Pedestrian	1		7	7
I	Pedestrian	1		7	7
J	Pedestrian	1		7	7
K	Pedestrian	1		7	7
L	Pedestrian	1		7	7
M	Pedestrian	1		7	7

Full Input Data And Results

Phase Intergreens Matrix

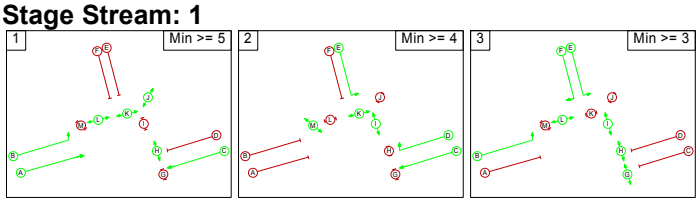
Terminating Phase	Starting Phase												
	A	B	C	D	E	F	G	H	I	J	K	L	M
A		-	-	7	9	9	-	-	10	-	-	-	-
B	-		-	7	-	-	-	-	-	-	-	-	5
C	-	-		-	-	7	7	-	-	-	-	-	-
D	9	9	-		-	7	-	5	-	-	-	11	-
E	6	-	-	-		-	-	-	-	5	-	-	-
F	6	-	6	6	-		-	-	-	-	5	-	-
G	-	-	0	-	-	-		-	-	-	-	-	-
H	-	-	-	0	-	-	-		-	-	-	-	-
I	0	-	-	-	-	-	-	-		-	-	-	-
J	-	-	-	-	0	-	-	-	-		-	-	-
K	-	-	-	-	-	0	-	-	-	-		-	-
L	-	-	-	0	-	-	-	-	-	-	-		-
M	-	0	-	-	-	-	-	-	-	-	-	-	

Phases in Stage

Stream	Stage No.	Phases in Stage
1	1	A B C H J K L
1	2	C D E I K M
1	3	B E F G H I L

Stage Diagram

Stage Stream: 1



Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	2	A	Losing	1	1
1	2	B	Losing	1	1
3	1	E	Losing	5	5
3	1	F	Losing	5	5

Full Input Data And Results

Prohibited Stage Change

Stage Stream: 1

		To Stage		
		1	2	3
From Stage	1		11	10
	2	11		11
	3	11	7	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A38 Alfreton Road/B6023 Common Road
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: A38 Alfreton Road/B6023 Common Road												
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 (Common Road)	U	E	2	3	7.8	User	1900	-	-	-	-	-
1/2 (Common Road)	U	F	2	3	60.0	User	1800	-	-	-	-	-
1/3 (Common Road)	U	F	2	3	9.6	User	1800	-	-	-	-	-
2/1 (A38 Alfreton Road (West))	U		2	3	60.0	User	2000	-	-	-	-	-
2/2 (A38 Alfreton Road (West))	U		2	3	60.0	User	2000	-	-	-	-	-
3/1 (A38 Alfreton Road (East))	U		2	3	60.0	User	2000	-	-	-	-	-
3/2 (A38 Alfreton Road (East))	U		2	3	60.0	User	2000	-	-	-	-	-
3/3 (A38 Alfreton Road (East))	U		2	3	60.0	User	2000	-	-	-	-	-
4/1 (A38 Alfreton Road (West))	U	B	2	3	16.2	User	1900	-	-	-	-	-
4/2 (A38 Alfreton Road (West))	U	A	2	3	60.0	User	2000	-	-	-	-	-
4/3 (A38 Alfreton Road (West))	U	A	2	3	60.0	User	2000	-	-	-	-	-
4/4 (A38 Alfreton Road (West))	U	A	2	3	21.7	User	2000	-	-	-	-	-
5/1 (Common Road)	U		2	3	60.0	Geom	-	3.25	0.00	Y		
6/1 (A38 Alfreton Road (East))	U	C	2	3	60.0	User	2000	-	-	-	-	-
6/2 (A38 Alfreton Road (East))	U	C	2	3	60.0	User	2000	-	-	-	-	-
6/3 (A38 Alfreton Road (East))	U	D	2	3	60.0	User	1800	-	-	-	-	-
6/4 (A38 Alfreton Road (East))	U	D	2	3	15.8	User	1800	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2032 Reference Case Morning Peak'	08:00	09:00	01:00	
2: '2032 Development Case Morning Peak'	08:00	09:00	01:00	
3: '2032 Reference Case Evening Peak'	17:00	18:00	01:00	
4: '2032 Development Case Evening Peak'	17:00	18:00	01:00	

Scenario 1: 'AM Reference Case' (FG1: '2032 Reference Case Morning Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	914	89	1003
	B	699	0	1567	2266
	C	56	1002	0	1058
	Tot.	755	1916	1656	4327

Traffic Lane Flows

Lane	Scenario 1: AM Reference Case
Junction: A38 Alfreton Road/B6023 Common Road	
1/1	914
1/2	44
1/3	45
2/1	827
2/2	829
3/1	1230
3/2	343
3/3	343
4/1	56
4/2	316
4/3	343
4/4	343
5/1	755
6/1	783
6/2	784
6/3	349
6/4	350

Full Input Data And Results

Lane Saturation Flows

Junction: A38 Alfreton Road/B6023 Common Road								
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 (Common Road Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
1/2 (Common Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
1/3 (Common Road Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A38 Alfreton Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
2/2 (A38 Alfreton Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
3/1 (A38 Alfreton Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
3/2 (A38 Alfreton Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
3/3 (A38 Alfreton Road (East) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
4/1 (A38 Alfreton Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (A38 Alfreton Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
4/3 (A38 Alfreton Road (West) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
4/4 (A38 Alfreton Road (West) Lane 4)	This lane uses a directly entered Saturation Flow						2000	2000
5/1 (Common Road)	3.25	0.00	Y				1940	1940
6/1 (A38 Alfreton Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
6/2 (A38 Alfreton Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
6/3 (A38 Alfreton Road (East) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
6/4 (A38 Alfreton Road (East) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case Evening Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	1061	6	1067
	B	1032	0	1247	2279
	C	13	1664	0	1677
	Tot.	1045	2725	1253	5023

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM Reference Case
Junction: A38 Alfreton Road/B6023 Common Road	
1/1	1061
1/2	3
1/3	3
2/1	626
2/2	627
3/1	1613
3/2	556
3/3	556
4/1	13
4/2	552
4/3	556
4/4	556
5/1	1045
6/1	623
6/2	624
6/3	516
6/4	516

Full Input Data And Results

Lane Saturation Flows

Junction: A38 Alfreton Road/B6023 Common Road								
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 (Common Road Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
1/2 (Common Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
1/3 (Common Road Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A38 Alfreton Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
2/2 (A38 Alfreton Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
3/1 (A38 Alfreton Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
3/2 (A38 Alfreton Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
3/3 (A38 Alfreton Road (East) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
4/1 (A38 Alfreton Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (A38 Alfreton Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
4/3 (A38 Alfreton Road (West) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
4/4 (A38 Alfreton Road (West) Lane 4)	This lane uses a directly entered Saturation Flow						2000	2000
5/1 (Common Road)	3.25	0.00	Y				1940	1940
6/1 (A38 Alfreton Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
6/2 (A38 Alfreton Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
6/3 (A38 Alfreton Road (East) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
6/4 (A38 Alfreton Road (East) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	933	95	1028
	B	793	0	1722	2515
	C	63	1048	0	1111
	Tot.	856	1981	1817	4654

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: AM Development Scenario
Junction: A38 Alfreton Road/B6023 Common Road	
1/1	933
1/2	47
1/3	48
2/1	908
2/2	909
3/1	1276
3/2	353
3/3	352
4/1	63
4/2	343
4/3	353
4/4	352
5/1	856
6/1	861
6/2	861
6/3	396
6/4	397

Full Input Data And Results

Lane Saturation Flows

Junction: A38 Alfreton Road/B6023 Common Road								
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 (Common Road Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
1/2 (Common Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
1/3 (Common Road Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A38 Alfreton Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
2/2 (A38 Alfreton Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
3/1 (A38 Alfreton Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
3/2 (A38 Alfreton Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
3/3 (A38 Alfreton Road (East) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
4/1 (A38 Alfreton Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (A38 Alfreton Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
4/3 (A38 Alfreton Road (West) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
4/4 (A38 Alfreton Road (West) Lane 4)	This lane uses a directly entered Saturation Flow						2000	2000
5/1 (Common Road)	3.25	0.00	Y				1940	1940
6/1 (A38 Alfreton Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
6/2 (A38 Alfreton Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
6/3 (A38 Alfreton Road (East) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
6/4 (A38 Alfreton Road (East) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	1151	8	1159
	B	1094	0	1328	2422
	C	19	1798	0	1817
	Tot.	1113	2949	1336	5398

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: PM Development Scenario
Junction: A38 Alfreton Road/B6023 Common Road	
1/1	1151
1/2	4
1/3	4
2/1	668
2/2	668
3/1	1749
3/2	600
3/3	600
4/1	19
4/2	598
4/3	600
4/4	600
5/1	1113
6/1	664
6/2	664
6/3	547
6/4	547

Full Input Data And Results

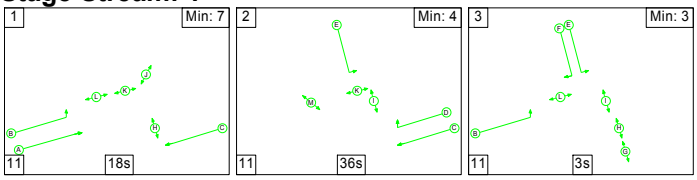
Lane Saturation Flows

Junction: A38 Alfreton Road/B6023 Common Road								
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 (Common Road Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
1/2 (Common Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
1/3 (Common Road Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A38 Alfreton Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
2/2 (A38 Alfreton Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
3/1 (A38 Alfreton Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
3/2 (A38 Alfreton Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
3/3 (A38 Alfreton Road (East) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
4/1 (A38 Alfreton Road (West) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (A38 Alfreton Road (West) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
4/3 (A38 Alfreton Road (West) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
4/4 (A38 Alfreton Road (West) Lane 4)	This lane uses a directly entered Saturation Flow						2000	2000
5/1 (Common Road)	3.25	0.00	Y				1940	1940
6/1 (A38 Alfreton Road (East) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
6/2 (A38 Alfreton Road (East) Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
6/3 (A38 Alfreton Road (East) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
6/4 (A38 Alfreton Road (East) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 1: 'AM Reference Case' (FG1: '2032 Reference Case Morning Peak', Plan 1: 'Staging Plan No. 1')

Stage Sequence Diagram

Stage Stream: 1



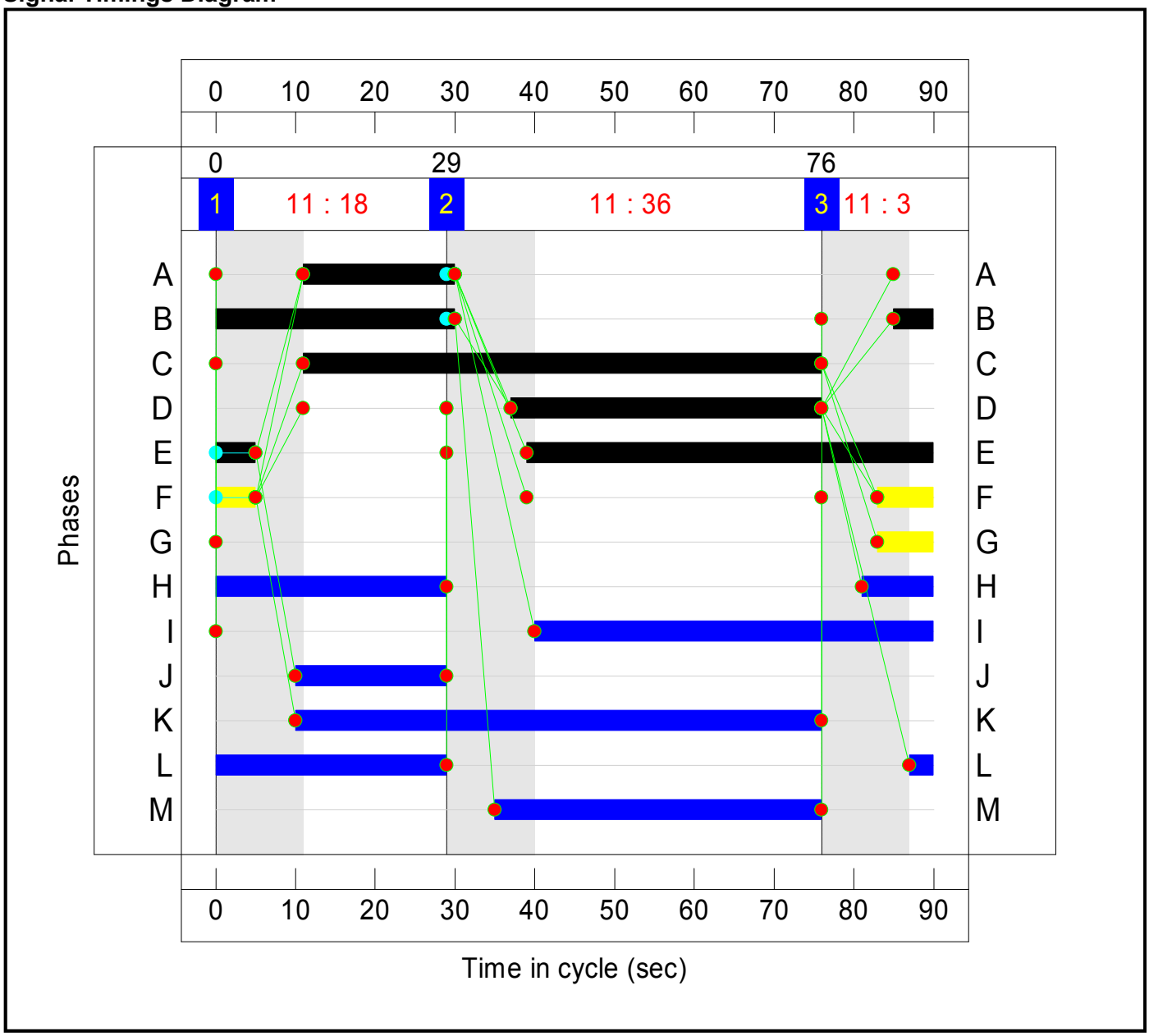
Full Input Data And Results

Stage Timings

Stage Stream: 1

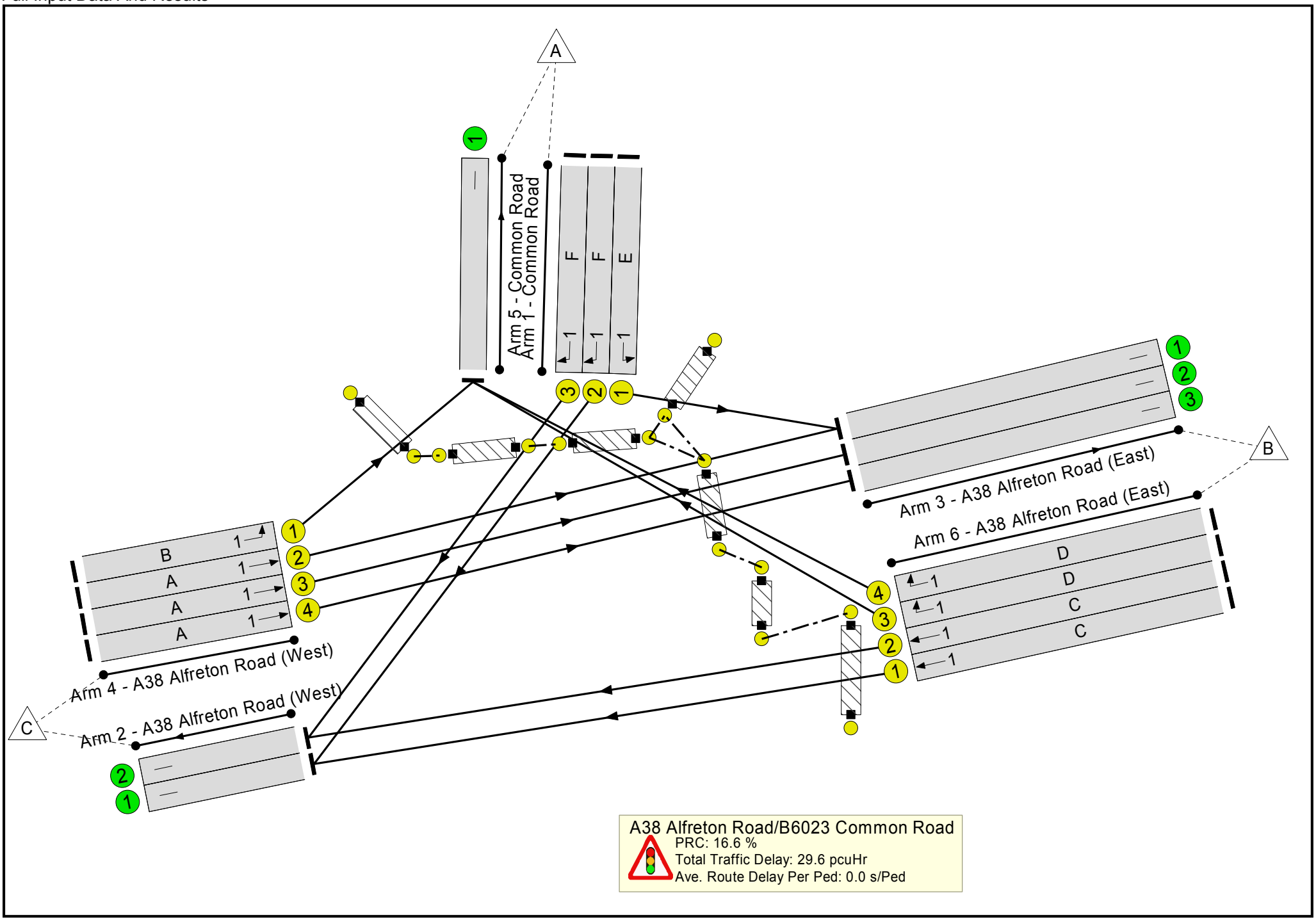
Stage	1	2	3
Duration	18	36	3
Change Point	0	29	76

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.2%**
A38 Alfreton Road/B6023 Common Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.2%**
1/1	Common Road Left	U	1	N/A	E		1	56	-	914	1900	1203	76.0%
1/2	Common Road Right	U	1	N/A	F		1	12	-	44	1800	260	16.9%
1/3	Common Road Right	U	1	N/A	F		1	12	-	45	1800	260	17.3%
2/1	A38 Alfreton Road (West)	U	N/A	N/A	-		-	-	-	827	2000	2000	41.4%
2/2	A38 Alfreton Road (West)	U	N/A	N/A	-		-	-	-	829	2000	2000	41.5%
3/1	A38 Alfreton Road (East)	U	N/A	N/A	-		-	-	-	1230	2000	2000	61.5%
3/2	A38 Alfreton Road (East)	U	N/A	N/A	-		-	-	-	343	2000	2000	17.2%
3/3	A38 Alfreton Road (East)	U	N/A	N/A	-		-	-	-	343	2000	2000	17.2%
4/1	A38 Alfreton Road (West) Left	U	1	N/A	B		1	35	-	56	1900	760	7.4%
4/2	A38 Alfreton Road (West) Ahead	U	1	N/A	A		1	19	-	316	2000	444	71.1%
4/3	A38 Alfreton Road (West) Ahead	U	1	N/A	A		1	19	-	343	2000	444	77.2%
4/4	A38 Alfreton Road (West) Ahead	U	1	N/A	A		1	19	-	343	2000	444	77.2%
5/1	Common Road	U	N/A	N/A	-		-	-	-	755	1940	1940	38.9%
6/1	A38 Alfreton Road (East) Ahead	U	1	N/A	C		1	65	-	783	2000	1467	53.4%

Full Input Data And Results

6/2	A38 Alfreton Road (East) Ahead	U	1	N/A	C		1	65	-	784	2000	1467	53.5%
6/3	A38 Alfreton Road (East) Right	U	1	N/A	D		1	39	-	349	1800	800	43.6%
6/4	A38 Alfreton Road (East) Right	U	1	N/A	D		1	39	-	350	1800	800	43.8%
Ped Link: P1	A38 Left Turn crossing	-	1	-	M		1	41	-	0	-	0	0.0%
Ped Link: P2	Crossing into B6023	-	1	-	L		1	32	-	0	-	0	0.0%
Ped Link: P3	Crossing out of B6023	-	1	-	K		1	66	-	0	-	0	0.0%
Ped Link: P4	B6023 Left Turn Crossing	-	1	-	J		1	19	-	0	-	0	0.0%
Ped Link: P5	A38 Eastbound Crossing	-	1	-	I		1	50	-	0	-	0	0.0%
Ped Link: P6	A38 Right Turn Crossing	-	1	-	H		1	38	-	0	-	0	0.0%
Ped Link: P7	A38 Westbound Crossing	-	1	-	G		1	7	-	0	-	0	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	**-**	**-**	**0**	**0**	**0**	**19.3**	**10.2**	**0.0**	**29.6**	**-**	**-**	**-**	**-**
A38 Alfreton Road/B6023 Common Road	**-**	**-**	**0**	**0**	**0**	**19.3**	**10.2**	**0.0**	**29.6**	**-**	**-**	**-**	**-**
1/1	914	914	-	-	-	3.0	1.6	-	4.5	17.8	16.0	1.6	17.6
1/2	44	44	-	-	-	0.4	0.1	-	0.5	42.1	1.0	0.1	1.1
1/3	45	45	-	-	-	0.4	0.1	-	0.5	42.2	1.0	0.1	1.1
2/1	827	827	-	-	-	0.0	0.4	-	0.4	1.5	0.0	0.4	0.4
2/2	829	829	-	-	-	0.0	0.4	-	0.4	1.5	0.0	0.4	0.4
3/1	1230	1230	-	-	-	0.0	0.8	-	0.8	2.3	0.0	0.8	0.8
3/2	343	343	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
3/3	343	343	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
4/1	56	56	-	-	-	0.3	0.0	-	0.3	19.3	0.9	0.0	0.9
4/2	316	316	-	-	-	2.8	1.2	-	4.0	46.1	7.3	1.2	8.5
4/3	343	343	-	-	-	3.1	1.6	-	4.8	50.1	8.0	1.6	9.6
4/4	343	343	-	-	-	3.1	1.6	-	4.8	50.1	8.0	1.6	9.6
5/1	755	755	-	-	-	0.5	0.3	-	0.8	4.0	13.7	0.3	14.0
6/1	783	783	-	-	-	1.1	0.6	-	1.7	7.9	8.5	0.6	9.1
6/2	784	784	-	-	-	1.1	0.6	-	1.7	7.9	8.5	0.6	9.1
6/3	349	349	-	-	-	1.7	0.4	-	2.1	21.2	6.0	0.4	6.4
6/4	350	350	-	-	-	1.7	0.4	-	2.1	21.2	6.0	0.4	6.4
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-

Full Input Data And Results

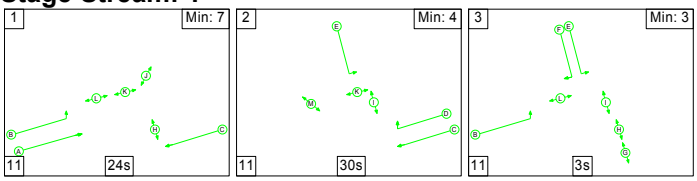
C1	Stream: 1	PRC for Signalled Lanes (%):	16.6	Total Delay for Signalled Lanes (pcuHr):	27.00	Cycle Time (s):	90
		PRC Over All Lanes (%):	16.6	Total Delay Over All Lanes(pcuHr):	29.56		

Full Input Data And Results

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case Evening Peak', Plan 1: 'Staging Plan No. 1')

Stage Sequence Diagram

Stage Stream: 1

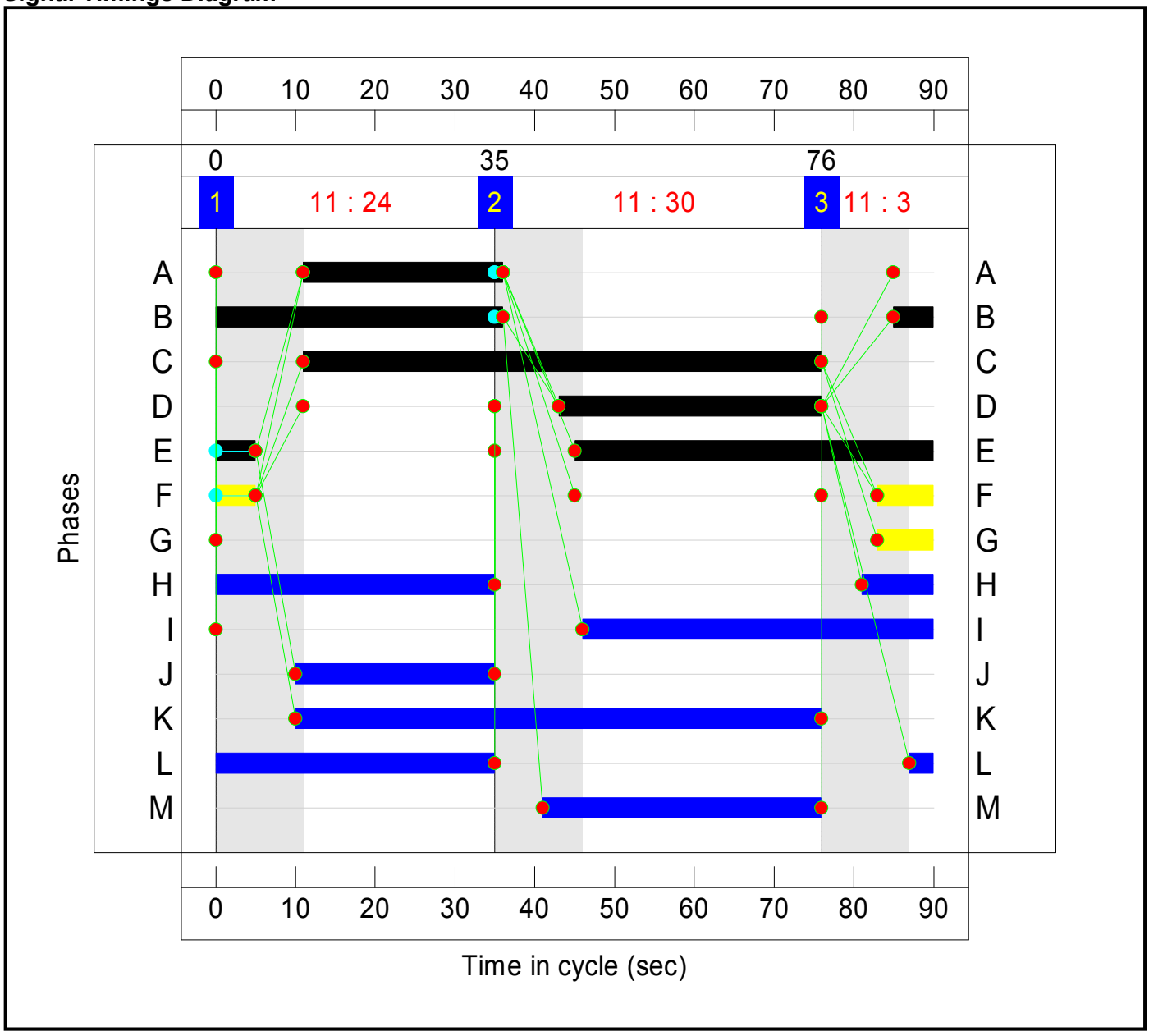


Stage Timings

Stage Stream: 1

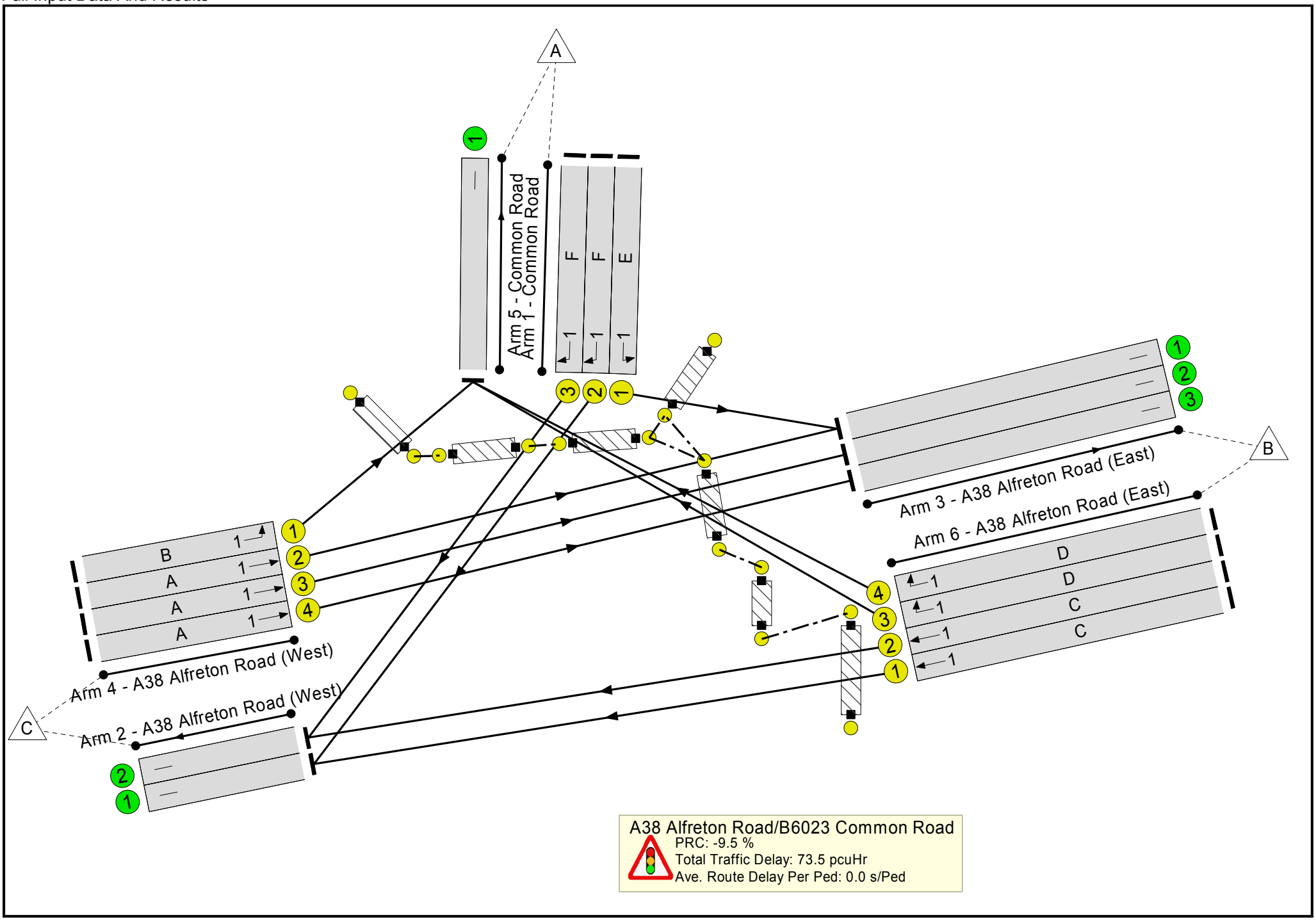
Stage	1	2	3
Duration	24	30	3
Change Point	0	35	76

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**98.5%**
A38 Alfreton Road/B6023 Common Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**98.5%**
1/1	Common Road Left	U	1	N/A	E		1	50	-	1061	1900	1077	98.5%
1/2	Common Road Right	U	1	N/A	F		1	12	-	3	1800	260	1.2%
1/3	Common Road Right	U	1	N/A	F		1	12	-	3	1800	260	1.2%
2/1	A38 Alfreton Road (West)	U	N/A	N/A	-		-	-	-	626	2000	2000	31.3%
2/2	A38 Alfreton Road (West)	U	N/A	N/A	-		-	-	-	627	2000	2000	31.4%
3/1	A38 Alfreton Road (East)	U	N/A	N/A	-		-	-	-	1613	2000	2000	80.7%
3/2	A38 Alfreton Road (East)	U	N/A	N/A	-		-	-	-	556	2000	2000	27.8%
3/3	A38 Alfreton Road (East)	U	N/A	N/A	-		-	-	-	556	2000	2000	27.8%
4/1	A38 Alfreton Road (West) Left	U	1	N/A	B		1	41	-	13	1900	887	1.5%
4/2	A38 Alfreton Road (West) Ahead	U	1	N/A	A		1	25	-	552	2000	578	95.5%
4/3	A38 Alfreton Road (West) Ahead	U	1	N/A	A		1	25	-	556	2000	578	96.2%
4/4	A38 Alfreton Road (West) Ahead	U	1	N/A	A		1	25	-	556	2000	578	96.2%
5/1	Common Road	U	N/A	N/A	-		-	-	-	1045	1940	1940	53.9%
6/1	A38 Alfreton Road (East) Ahead	U	1	N/A	C		1	65	-	623	2000	1467	42.5%

Full Input Data And Results

6/2	A38 Alfreton Road (East) Ahead	U	1	N/A	C		1	65	-	624	2000	1467	42.5%
6/3	A38 Alfreton Road (East) Right	U	1	N/A	D		1	33	-	516	1800	680	75.9%
6/4	A38 Alfreton Road (East) Right	U	1	N/A	D		1	33	-	516	1800	680	75.9%
Ped Link: P1	A38 Left Turn crossing	-	1	-	M		1	35	-	0	-	0	0.0%
Ped Link: P2	Crossing into B6023	-	1	-	L		1	38	-	0	-	0	0.0%
Ped Link: P3	Crossing out of B6023	-	1	-	K		1	66	-	0	-	0	0.0%
Ped Link: P4	B6023 Left Turn Crossing	-	1	-	J		1	25	-	0	-	0	0.0%
Ped Link: P5	A38 Eastbound Crossing	-	1	-	I		1	44	-	0	-	0	0.0%
Ped Link: P6	A38 Right Turn Crossing	-	1	-	H		1	44	-	0	-	0	0.0%
Ped Link: P7	A38 Westbound Crossing	-	1	-	G		1	7	-	0	-	0	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	**-**	**-**	**0**	**0**	**0**	**31.3**	**42.2**	**0.0**	**73.5**	**-**	**-**	**-**	**-**
A38 Alfreton Road/B6023 Common Road	**-**	**-**	**0**	**0**	**0**	**31.3**	**42.2**	**0.0**	**73.5**	**-**	**-**	**-**	**-**
1/1	1061	1061	-	-	-	5.6	12.8	-	18.5	62.7	25.9	12.8	38.8
1/2	3	3	-	-	-	0.0	0.0	-	0.0	40.4	0.1	0.0	0.1
1/3	3	3	-	-	-	0.0	0.0	-	0.0	40.4	0.1	0.0	0.1
2/1	626	626	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
2/2	627	627	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
3/1	1613	1613	-	-	-	0.0	2.1	-	2.1	4.6	0.0	2.1	2.1
3/2	556	556	-	-	-	0.0	0.2	-	0.2	1.2	0.0	0.2	0.2
3/3	556	556	-	-	-	0.0	0.2	-	0.2	1.2	0.0	0.2	0.2
4/1	13	13	-	-	-	0.0	0.0	-	0.1	15.1	0.2	0.0	0.2
4/2	552	552	-	-	-	4.8	7.0	-	11.8	76.8	13.5	7.0	20.4
4/3	556	556	-	-	-	4.9	7.5	-	12.4	80.4	13.6	7.5	21.1
4/4	556	556	-	-	-	4.9	7.5	-	12.4	80.4	13.6	7.5	21.1
5/1	1045	1045	-	-	-	2.4	0.6	-	3.0	10.3	25.2	0.6	25.8
6/1	623	623	-	-	-	0.8	0.4	-	1.2	6.8	5.9	0.4	6.3
6/2	624	624	-	-	-	0.8	0.4	-	1.2	6.8	5.9	0.4	6.3
6/3	516	516	-	-	-	3.5	1.5	-	5.0	35.2	11.2	1.5	12.7
6/4	516	516	-	-	-	3.5	1.5	-	5.0	35.2	11.2	1.5	12.7
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-

Full Input Data And Results

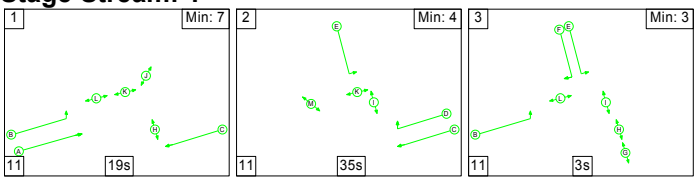
C1	Stream: 1	PRC for Signalled Lanes (%):	-9.5	Total Delay for Signalled Lanes (pcuHr):	67.63	Cycle Time (s):	90
		PRC Over All Lanes (%):	-9.5	Total Delay Over All Lanes(pcuHr):	73.52		

Full Input Data And Results

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Staging Plan No. 1')

Stage Sequence Diagram

Stage Stream: 1

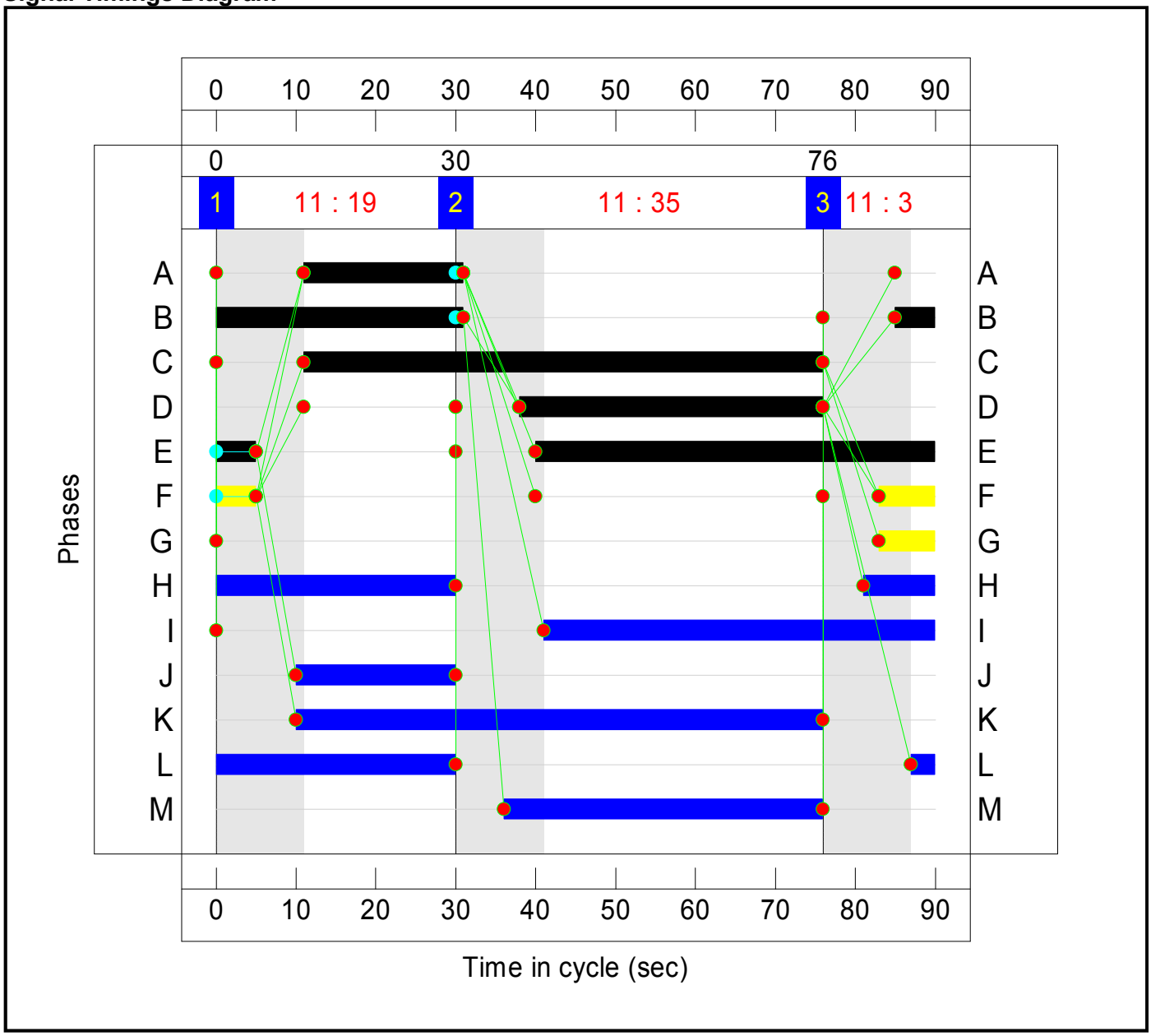


Stage Timings

Stage Stream: 1

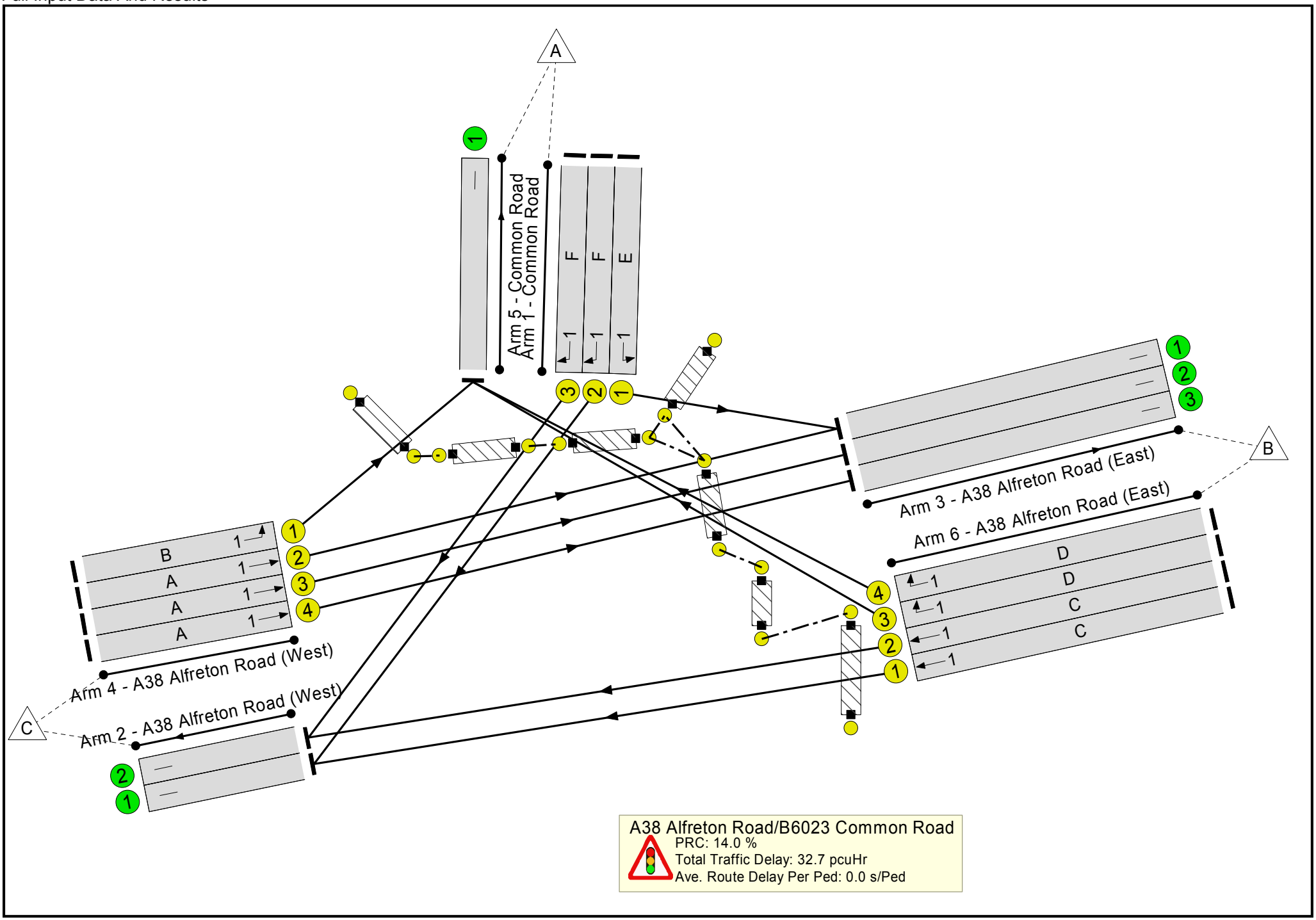
Stage	1	2	3
Duration	19	35	3
Change Point	0	30	76

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**78.9%**
A38 Alfreton Road/B6023 Common Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**78.9%**
1/1	Common Road Left	U	1	N/A	E		1	55	-	933	1900	1182	78.9%
1/2	Common Road Right	U	1	N/A	F		1	12	-	47	1800	260	18.1%
1/3	Common Road Right	U	1	N/A	F		1	12	-	48	1800	260	18.5%
2/1	A38 Alfreton Road (West)	U	N/A	N/A	-		-	-	-	908	2000	2000	45.4%
2/2	A38 Alfreton Road (West)	U	N/A	N/A	-		-	-	-	909	2000	2000	45.5%
3/1	A38 Alfreton Road (East)	U	N/A	N/A	-		-	-	-	1276	2000	2000	63.8%
3/2	A38 Alfreton Road (East)	U	N/A	N/A	-		-	-	-	353	2000	2000	17.7%
3/3	A38 Alfreton Road (East)	U	N/A	N/A	-		-	-	-	352	2000	2000	17.6%
4/1	A38 Alfreton Road (West) Left	U	1	N/A	B		1	36	-	63	1900	781	8.1%
4/2	A38 Alfreton Road (West) Ahead	U	1	N/A	A		1	20	-	343	2000	467	73.5%
4/3	A38 Alfreton Road (West) Ahead	U	1	N/A	A		1	20	-	353	2000	467	75.6%
4/4	A38 Alfreton Road (West) Ahead	U	1	N/A	A		1	20	-	352	2000	467	75.4%
5/1	Common Road	U	N/A	N/A	-		-	-	-	856	1940	1940	44.1%
6/1	A38 Alfreton Road (East) Ahead	U	1	N/A	C		1	65	-	861	2000	1467	58.7%

Full Input Data And Results

6/2	A38 Alfreton Road (East) Ahead	U	1	N/A	C		1	65	-	861	2000	1467	58.7%
6/3	A38 Alfreton Road (East) Right	U	1	N/A	D		1	38	-	396	1800	780	50.8%
6/4	A38 Alfreton Road (East) Right	U	1	N/A	D		1	38	-	397	1800	780	50.9%
Ped Link: P1	A38 Left Turn crossing	-	1	-	M		1	40	-	0	-	0	0.0%
Ped Link: P2	Crossing into B6023	-	1	-	L		1	33	-	0	-	0	0.0%
Ped Link: P3	Crossing out of B6023	-	1	-	K		1	66	-	0	-	0	0.0%
Ped Link: P4	B6023 Left Turn Crossing	-	1	-	J		1	20	-	0	-	0	0.0%
Ped Link: P5	A38 Eastbound Crossing	-	1	-	I		1	49	-	0	-	0	0.0%
Ped Link: P6	A38 Right Turn Crossing	-	1	-	H		1	39	-	0	-	0	0.0%
Ped Link: P7	A38 Westbound Crossing	-	1	-	G		1	7	-	0	-	0	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	**-**	**-**	**0**	**0**	**0**	**21.4**	**11.2**	**0.0**	**32.7**	**-**	**-**	**-**	**-**
A38 Alfreton Road/B6023 Common Road	**-**	**-**	**0**	**0**	**0**	**21.4**	**11.2**	**0.0**	**32.7**	**-**	**-**	**-**	**-**
1/1	933	933	-	-	-	3.3	1.8	-	5.1	19.7	17.1	1.8	18.9
1/2	47	47	-	-	-	0.4	0.1	-	0.6	42.3	1.0	0.1	1.1
1/3	48	48	-	-	-	0.5	0.1	-	0.6	42.3	1.1	0.1	1.2
2/1	908	908	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
2/2	909	909	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
3/1	1276	1276	-	-	-	0.0	0.9	-	0.9	2.5	0.0	0.9	0.9
3/2	353	353	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
3/3	352	352	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
4/1	63	63	-	-	-	0.3	0.0	-	0.3	18.7	0.9	0.0	1.0
4/2	343	343	-	-	-	3.0	1.4	-	4.4	46.2	7.9	1.4	9.3
4/3	353	353	-	-	-	3.1	1.5	-	4.7	47.5	8.1	1.5	9.7
4/4	352	352	-	-	-	3.1	1.5	-	4.6	47.4	8.1	1.5	9.6
5/1	856	856	-	-	-	0.9	0.4	-	1.3	5.3	17.4	0.4	17.8
6/1	861	861	-	-	-	1.3	0.7	-	2.1	8.6	10.0	0.7	10.8
6/2	861	861	-	-	-	1.3	0.7	-	2.1	8.6	10.0	0.7	10.8
6/3	396	396	-	-	-	2.0	0.5	-	2.6	23.2	7.2	0.5	7.7
6/4	397	397	-	-	-	2.0	0.5	-	2.6	23.2	7.2	0.5	7.7
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-

Full Input Data And Results

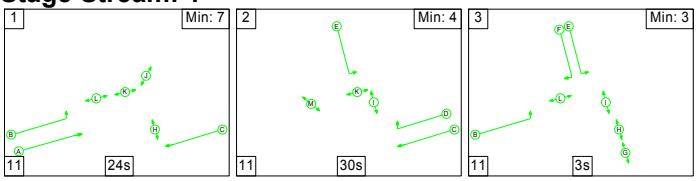
C1	Stream: 1	PRC for Signalled Lanes (%):	14.0	Total Delay for Signalled Lanes (pcuHr):	29.48	Cycle Time (s):	90
		PRC Over All Lanes (%):	14.0	Total Delay Over All Lanes(pcuHr):	32.67		

Full Input Data And Results

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Staging Plan No. 1')

Stage Sequence Diagram

Stage Stream: 1

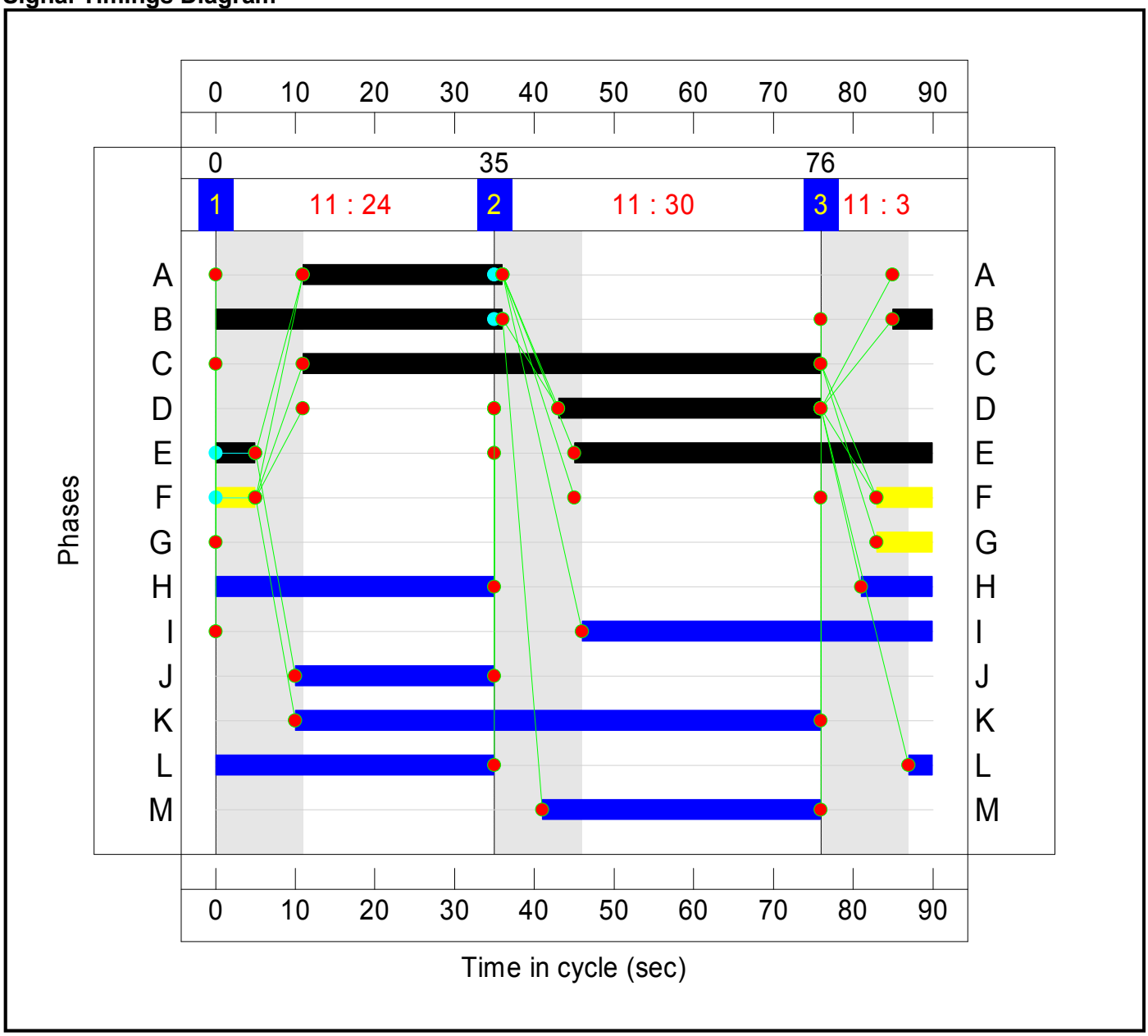


Stage Timings

Stage Stream: 1

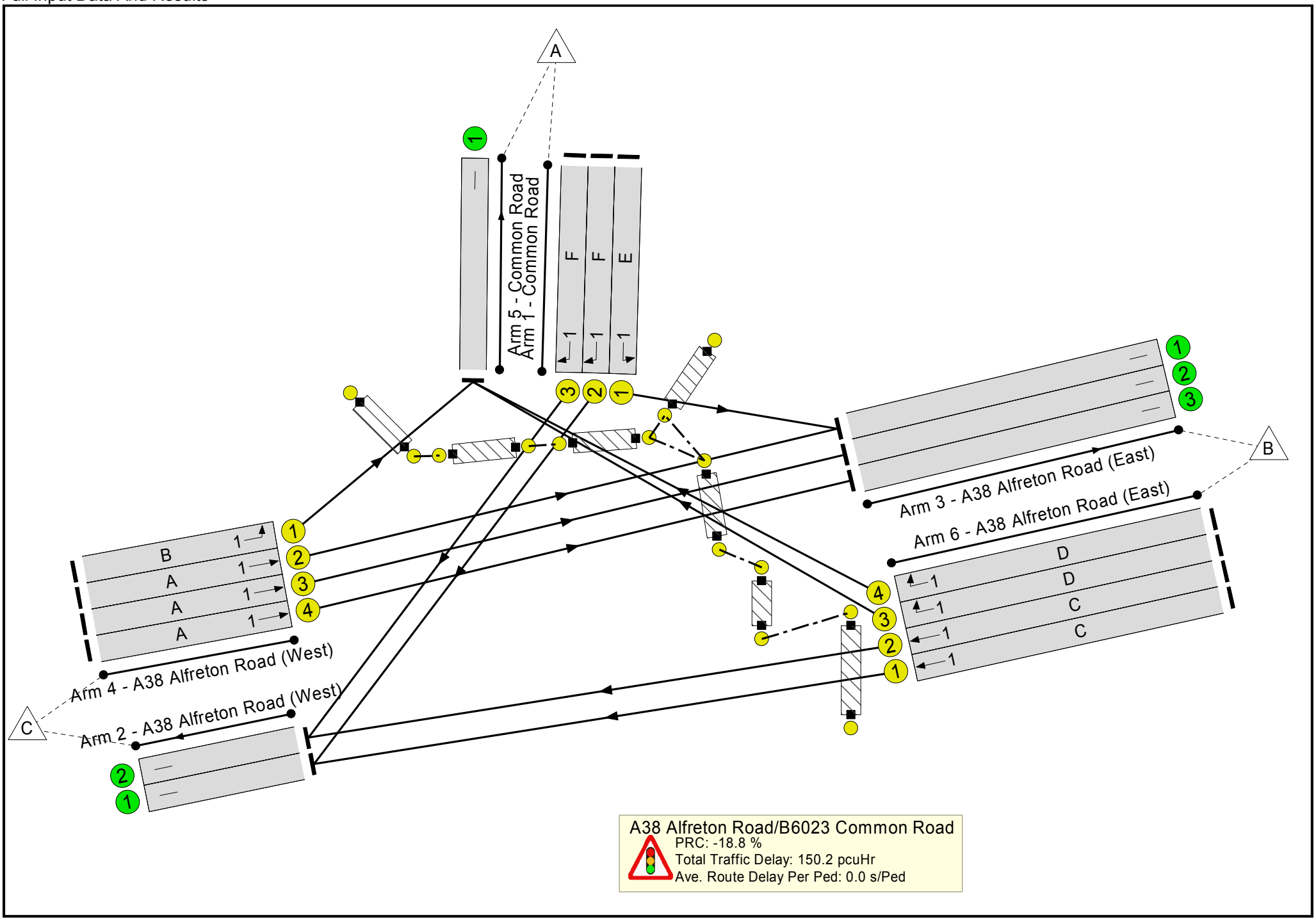
Stage	1	2	3
Duration	24	30	3
Change Point	0	35	76

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**106.9%**
A38 Alfreton Road/B6023 Common Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**106.9%**
1/1	Common Road Left	U	1	N/A	E		1	50	-	1151	1900	1077	106.9%
1/2	Common Road Right	U	1	N/A	F		1	12	-	4	1800	260	1.5%
1/3	Common Road Right	U	1	N/A	F		1	12	-	4	1800	260	1.5%
2/1	A38 Alfreton Road (West)	U	N/A	N/A	-		-	-	-	668	2000	2000	33.4%
2/2	A38 Alfreton Road (West)	U	N/A	N/A	-		-	-	-	668	2000	2000	33.4%
3/1	A38 Alfreton Road (East)	U	N/A	N/A	-		-	-	-	1749	2000	2000	82.7%
3/2	A38 Alfreton Road (East)	U	N/A	N/A	-		-	-	-	600	2000	2000	28.9%
3/3	A38 Alfreton Road (East)	U	N/A	N/A	-		-	-	-	600	2000	2000	28.9%
4/1	A38 Alfreton Road (West) Left	U	1	N/A	B		1	41	-	19	1900	887	2.1%
4/2	A38 Alfreton Road (West) Ahead	U	1	N/A	A		1	25	-	598	2000	578	103.5%
4/3	A38 Alfreton Road (West) Ahead	U	1	N/A	A		1	25	-	600	2000	578	103.8%
4/4	A38 Alfreton Road (West) Ahead	U	1	N/A	A		1	25	-	600	2000	578	103.8%
5/1	Common Road	U	N/A	N/A	-		-	-	-	1113	1940	1940	57.4%
6/1	A38 Alfreton Road (East) Ahead	U	1	N/A	C		1	65	-	664	2000	1467	45.3%

Full Input Data And Results

6/2	A38 Alfreton Road (East) Ahead	U	1	N/A	C		1	65	-	664	2000	1467	45.3%
6/3	A38 Alfreton Road (East) Right	U	1	N/A	D		1	33	-	547	1800	680	80.4%
6/4	A38 Alfreton Road (East) Right	U	1	N/A	D		1	33	-	547	1800	680	80.4%
Ped Link: P1	A38 Left Turn crossing	-	1	-	M		1	35	-	0	-	0	0.0%
Ped Link: P2	Crossing into B6023	-	1	-	L		1	38	-	0	-	0	0.0%
Ped Link: P3	Crossing out of B6023	-	1	-	K		1	66	-	0	-	0	0.0%
Ped Link: P4	B6023 Left Turn Crossing	-	1	-	J		1	25	-	0	-	0	0.0%
Ped Link: P5	A38 Eastbound Crossing	-	1	-	I		1	44	-	0	-	0	0.0%
Ped Link: P6	A38 Right Turn Crossing	-	1	-	H		1	44	-	0	-	0	0.0%
Ped Link: P7	A38 Westbound Crossing	-	1	-	G		1	7	-	0	-	0	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	**-**	**-**	**0**	**0**	**0**	**41.4**	**108.8**	**0.0**	**150.2**	**-**	**-**	**-**	**-**
A38 Alfreton Road/B6023 Common Road	**-**	**-**	**0**	**0**	**0**	**41.4**	**108.8**	**0.0**	**150.2**	**-**	**-**	**-**	**-**
1/1	1151	1077	-	-	-	10.3	43.7	-	54.1	169.1	30.6	43.7	74.4
1/2	4	4	-	-	-	0.0	0.0	-	0.0	40.4	0.1	0.0	0.1
1/3	4	4	-	-	-	0.0	0.0	-	0.0	40.4	0.1	0.0	0.1
2/1	668	668	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
2/2	668	668	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
3/1	1654	1654	-	-	-	0.0	2.4	-	2.4	5.1	0.0	2.4	2.4
3/2	578	578	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
3/3	578	578	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
4/1	19	19	-	-	-	0.1	0.0	-	0.1	15.1	0.3	0.0	0.3
4/2	598	578	-	-	-	6.2	18.3	-	24.5	147.3	15.5	18.3	33.7
4/3	600	578	-	-	-	6.3	19.0	-	25.3	151.7	15.6	19.0	34.6
4/4	600	578	-	-	-	6.3	19.0	-	25.3	151.7	15.6	19.0	34.6
5/1	1113	1113	-	-	-	2.8	0.7	-	3.5	11.3	26.9	0.7	27.6
6/1	664	664	-	-	-	0.9	0.4	-	1.3	7.0	6.5	0.4	6.9
6/2	664	664	-	-	-	0.9	0.4	-	1.3	7.0	6.5	0.4	6.9
6/3	547	547	-	-	-	3.8	2.0	-	5.8	38.2	12.2	2.0	14.2
6/4	547	547	-	-	-	3.8	2.0	-	5.8	38.2	12.2	2.0	14.2
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-

Full Input Data And Results

C1	Stream: 1	PRC for Signalled Lanes (%):	-18.8	Total Delay for Signalled Lanes (pcuHr):	143.48	Cycle Time (s):	90
		PRC Over All Lanes (%):	-18.8	Total Delay Over All Lanes(pcuHr):	150.24		

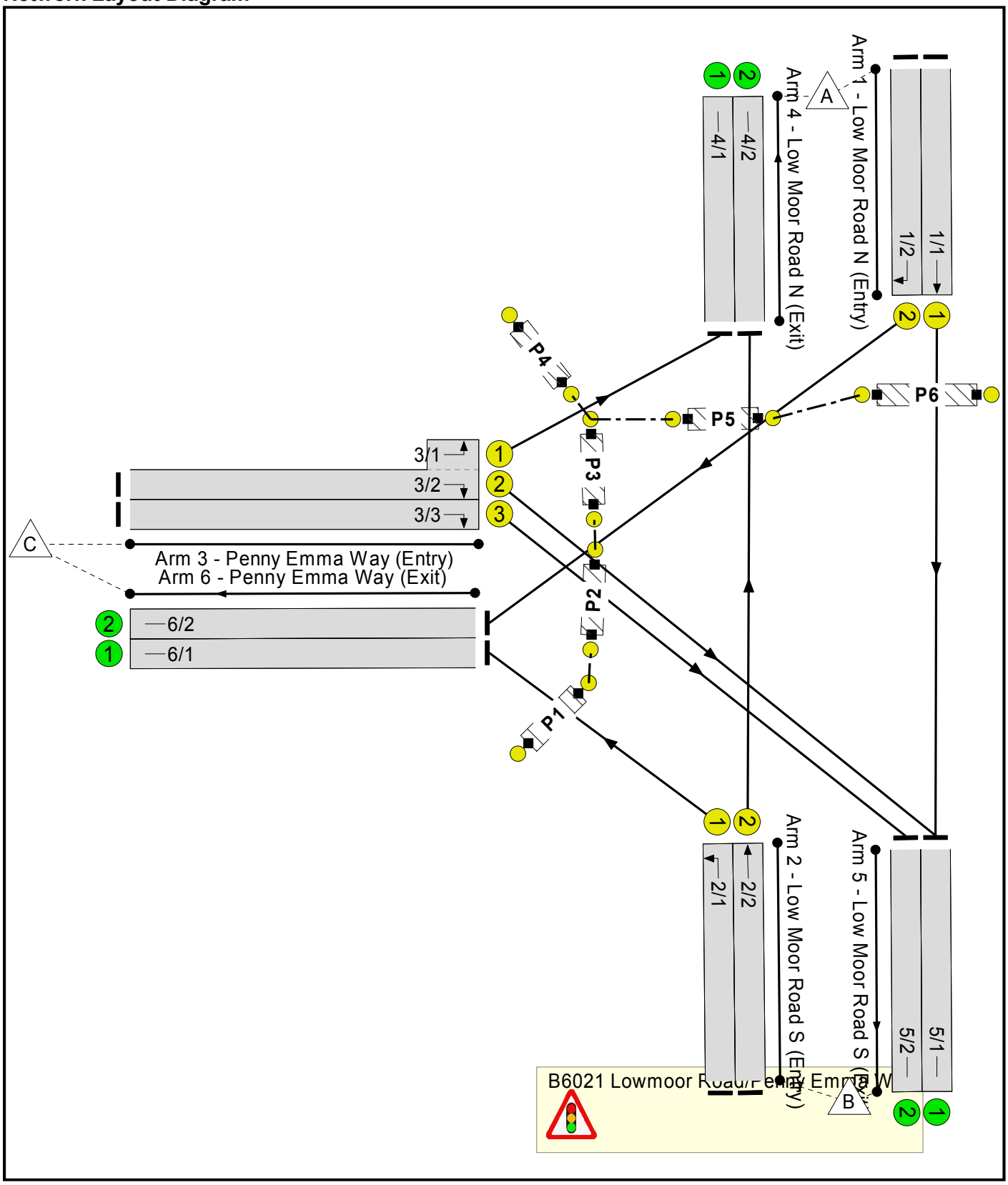
Full Input Data And Results

User and Project Details

Project:	
Title:	
Location:	
File name:	Junction 11 2016.lsg3x
Author:	
Company:	
Address:	
Notes:	

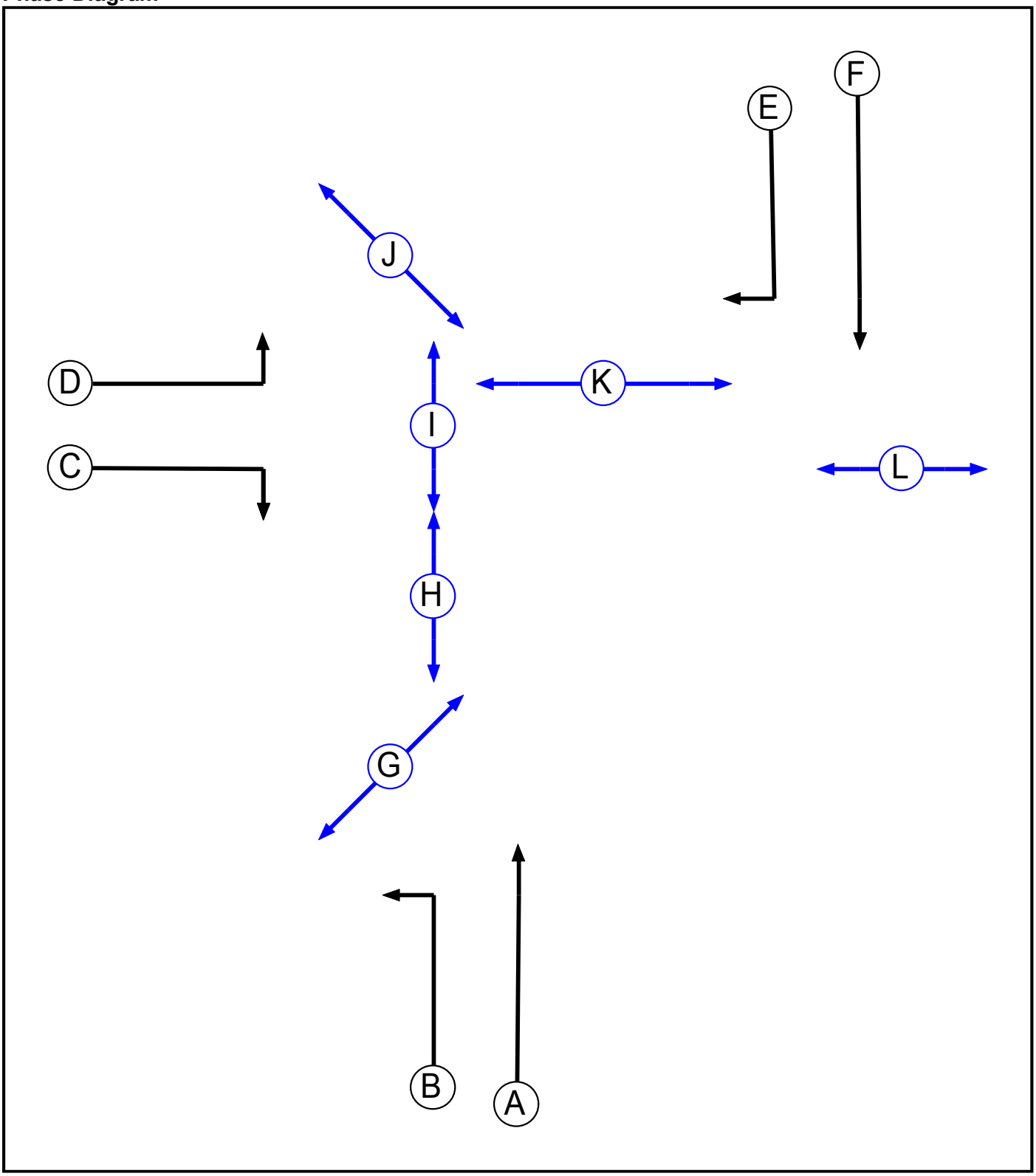
Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

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
I	Pedestrian		7	7
J	Pedestrian		7	7
K	Pedestrian		7	7
L	Pedestrian		7	7

Phase Intergreens Matrix

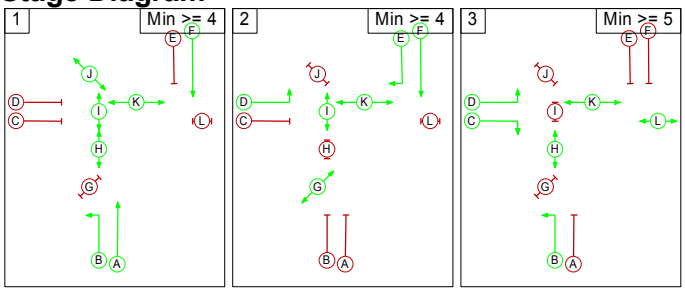
		Starting Phase											
		A	B	C	D	E	F	G	H	I	J	K	L
Terminating Phase	A		-	8	11	7	-	-	-	-	-	-	-
	B	-		-	-	8	-	5	-	-	-	-	-
	C	7	-		-	8	9	-	-	5	-	-	-
	D	8	-	-		-	-	-	-	-	5	-	-
	E	8	11	8	-		-	-	9	-	-	-	-
	F	-	-	9	-	-		-	-	-	-	-	5
	G	-	3	-	-	-	-		-	-	-	-	-
	H	-	-	-	-	3	-	-		-	-	-	-
	I	-	-	3	-	-	-	-	-		-	-	-
	J	-	-	-	3	-	-	-	-	-		-	-
	K	-	-	-	-	-	-	-	-	-	-		-
	L	-	-	-	-	-	3	-	-	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A B F H I J K
2	D E F G I K
3	B C D H K L

Full Input Data And Results

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
From Stage	1		11	11
	2	11		11
	3	9	9	

Full Input Data And Results

Give-Way Lane Input Data

Junction: B6021 Lowmoor Road/Penny Emma Way
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: B6021 Lowmoor Road/Penny Emma 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 (Low Moor Road N (Entry))	U	F	2	3	60.0	User	1800	-	-	-	-	-
1/2 (Low Moor Road N (Entry))	U	E	2	3	60.0	User	1800	-	-	-	-	-
2/1 (Low Moor Road S (Entry))	U	B	2	3	60.0	User	1800	-	-	-	-	-
2/2 (Low Moor Road S (Entry))	U	A	2	3	60.0	User	1800	-	-	-	-	-
3/1 (Penny Emma Way (Entry))	U	D	2	3	2.6	User	1900	-	-	-	-	-
3/2 (Penny Emma Way (Entry))	U	C	2	3	6.1	User	1800	-	-	-	-	-
3/3 (Penny Emma Way (Entry))	U	C	2	3	60.0	User	1800	-	-	-	-	-
4/1 (Low Moor Road N (Exit))	U		2	3	60.0	User	1800	-	-	-	-	-
4/2 (Low Moor Road N (Exit))	U		2	3	60.0	User	1800	-	-	-	-	-
5/1 (Low Moor Road S (Exit))	U		2	3	60.0	User	1800	-	-	-	-	-
5/2 (Low Moor Road S (Exit))	U		2	3	60.0	User	1800	-	-	-	-	-
6/1 (Penny Emma Way (Exit))	U		2	3	60.0	User	1800	-	-	-	-	-
6/2 (Penny Emma Way (Exit))	U		2	3	60.0	User	1800	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2032 Reference Case Morning Peak'	08:00	09:00	01:00	
2: '2032 Development Scenario Morning Peak'	08:00	09:00	01:00	
3: '2032 Reference Case Evening Peak'	17:00	18:00	01:00	
4: '2032 Development Scenario Evening Peak'	17:00	18:00	01:00	

Scenario 1: 'AM Reference Case' (FG1: '2032 Reference Case Morning Peak', Plan 1: 'Signal Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	874	132	1006
	B	832	0	443	1275
	C	42	216	0	258
	Tot.	874	1090	575	2539

Traffic Lane Flows

Lane	Scenario 1: AM Reference Case
Junction: B6021 Lowmoor Road/Penny Emma Way	
1/1	874
1/2	132
2/1	443
2/2	832
3/1 (short)	42
3/2 (with short)	155(In) 113(Out)
3/3	103
4/1	42
4/2	832
5/1	987
5/2	103
6/1	443
6/2	132

Full Input Data And Results

Lane Saturation Flows

Junction: B6021 Lowmoor Road/Penny Emma 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 (Low Moor Road N (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (Low Moor Road N (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Low Moor Road S (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (Low Moor Road S (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (Penny Emma Way (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (Penny Emma Way (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/3 (Penny Emma Way (Entry) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Low Moor Road N (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (Low Moor Road N (Exit) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (Low Moor Road S (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/2 (Low Moor Road S (Exit) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (Penny Emma Way (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (Penny Emma Way (Exit) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case Evening Peak', Plan 1: 'Signal Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	1086	247	1333
	B	939	0	680	1619
	C	125	250	0	375
	Tot.	1064	1336	927	3327

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM Reference Case
Junction: B6021 Lowmoor Road/Penny Emma Way	
1/1	1086
1/2	247
2/1	680
2/2	939
3/1 (short)	125
3/2 (with short)	249(In) 124(Out)
3/3	126
4/1	125
4/2	939
5/1	1210
5/2	126
6/1	680
6/2	247

Full Input Data And Results

Lane Saturation Flows

Junction: B6021 Lowmoor Road/Penny Emma 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 (Low Moor Road N (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (Low Moor Road N (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Low Moor Road S (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (Low Moor Road S (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (Penny Emma Way (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (Penny Emma Way (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/3 (Penny Emma Way (Entry) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Low Moor Road N (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (Low Moor Road N (Exit) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (Low Moor Road S (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/2 (Low Moor Road S (Exit) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (Penny Emma Way (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (Penny Emma Way (Exit) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Scenario Morning Peak', Plan 1: 'Signal Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	1011	227	1238
	B	896	0	506	1402
	C	80	294	0	374
	Tot.	976	1305	733	3014

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: AM Development Scenario
Junction: B6021 Lowmoor Road/Penny Emma Way	
1/1	1011
1/2	227
2/1	506
2/2	896
3/1 (short)	80
3/2 (with short)	224(In) 144(Out)
3/3	150
4/1	80
4/2	896
5/1	1155
5/2	150
6/1	506
6/2	227

Full Input Data And Results

Lane Saturation Flows

Junction: B6021 Lowmoor Road/Penny Emma 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 (Low Moor Road N (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (Low Moor Road N (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Low Moor Road S (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (Low Moor Road S (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (Penny Emma Way (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (Penny Emma Way (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/3 (Penny Emma Way (Entry) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Low Moor Road N (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (Low Moor Road N (Exit) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (Low Moor Road S (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/2 (Low Moor Road S (Exit) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (Penny Emma Way (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (Penny Emma Way (Exit) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Scenario Evening Peak', Plan 1: 'Signal Plan No. 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	1127	348	1475
	B	1042	0	756	1798
	C	237	351	0	588
	Tot.	1279	1478	1104	3861

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: PM Development Scenario
Junction: B6021 Lowmoor Road/Penny Emma Way	
1/1	1127
1/2	348
2/1	756
2/2	1042
3/1 (short)	237
3/2 (with short)	394(In) 157(Out)
3/3	194
4/1	237
4/2	1042
5/1	1284
5/2	194
6/1	756
6/2	348

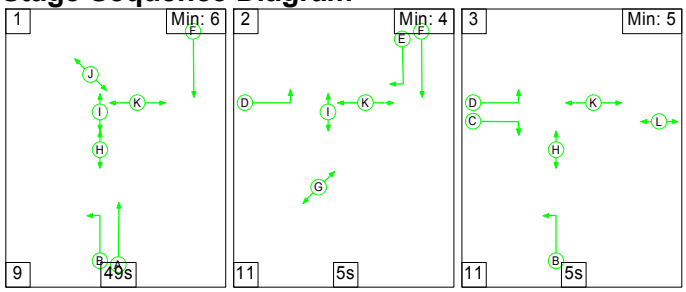
Full Input Data And Results

Lane Saturation Flows

Junction: B6021 Lowmoor Road/Penny Emma 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 (Low Moor Road N (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (Low Moor Road N (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Low Moor Road S (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (Low Moor Road S (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (Penny Emma Way (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (Penny Emma Way (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/3 (Penny Emma Way (Entry) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Low Moor Road N (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (Low Moor Road N (Exit) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (Low Moor Road S (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/2 (Low Moor Road S (Exit) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (Penny Emma Way (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (Penny Emma Way (Exit) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 1: 'AM Reference Case' (FG1: '2032 Reference Case Morning Peak', Plan 1: 'Signal Plan No. 1')

Stage Sequence Diagram

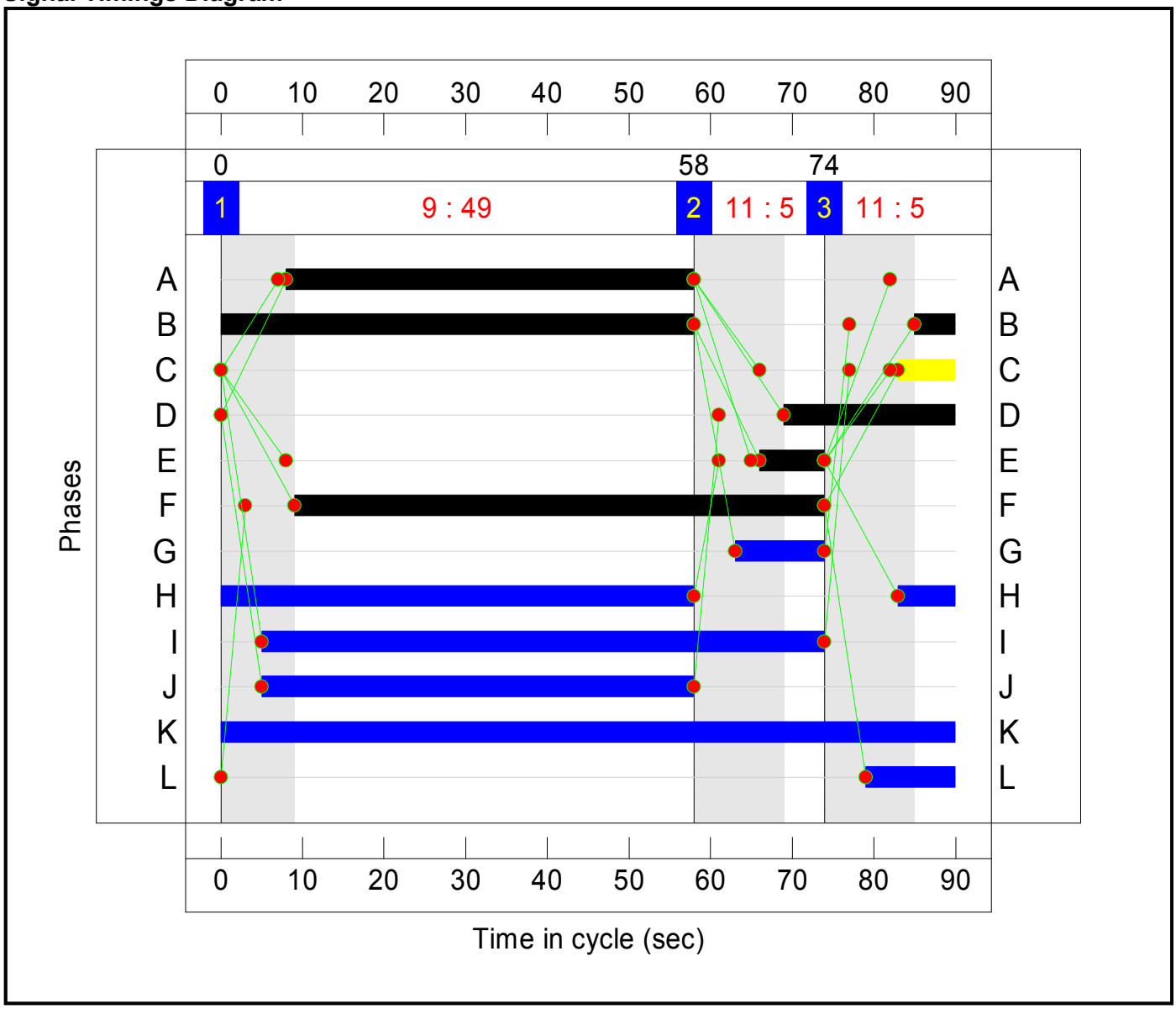


Stage Timings

Stage	1	2	3
Duration	49	5	5
Change Point	0	58	74

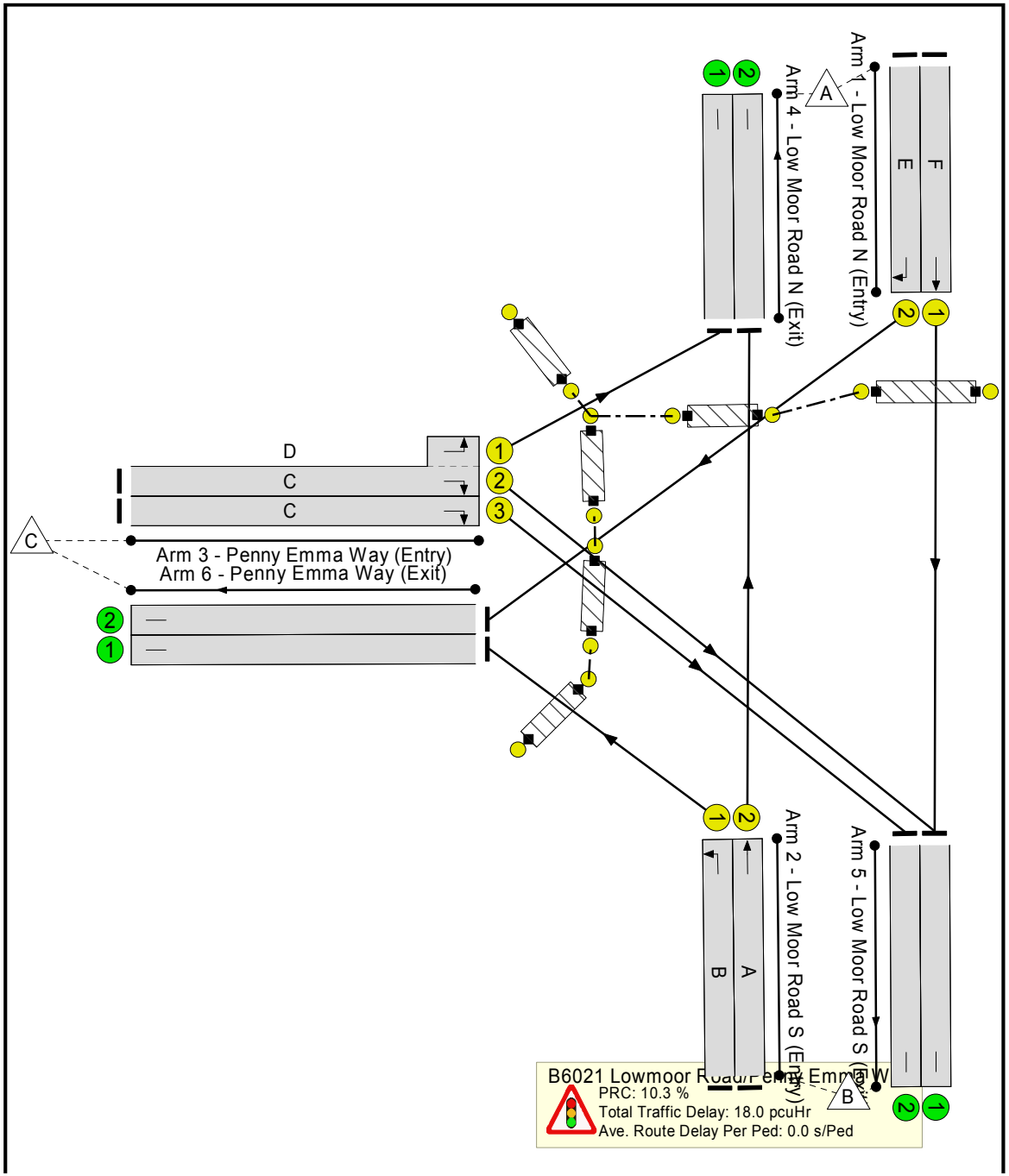
Full Input Data And Results

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**81.6%**
B6021 Lowmoor Road/Penny Emma Way	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**81.6%**
1/1	Low Moor Road N (Entry) Ahead	U	N/A	N/A	F		1	65	-	874	1800	1320	66.2%
1/2	Low Moor Road N (Entry) Right	U	N/A	N/A	E		1	8	-	132	1800	180	73.3%
2/1	Low Moor Road S (Entry) Left	U	N/A	N/A	B		1	63	-	443	1800	1280	34.6%
2/2	Low Moor Road S (Entry) Ahead	U	N/A	N/A	A		1	50	-	832	1800	1020	81.6%
3/2+3/1	Penny Emma Way (Entry) Left Right	U	N/A	N/A	C D		1	7:21	-	155	1800:1900	213	72.7%
3/3	Penny Emma Way (Entry) Right	U	N/A	N/A	C		1	7	-	103	1800	160	64.4%
4/1	Low Moor Road N (Exit)	U	N/A	N/A	-		-	-	-	42	1800	1800	2.3%
4/2	Low Moor Road N (Exit)	U	N/A	N/A	-		-	-	-	832	1800	1800	46.2%
5/1	Low Moor Road S (Exit)	U	N/A	N/A	-		-	-	-	987	1800	1800	54.8%
5/2	Low Moor Road S (Exit)	U	N/A	N/A	-		-	-	-	103	1800	1800	5.7%
6/1	Penny Emma Way (Exit)	U	N/A	N/A	-		-	-	-	443	1800	1800	24.6%
6/2	Penny Emma Way (Exit)	U	N/A	N/A	-		-	-	-	132	1800	1800	7.3%
Ped Link: P1	Low Moor Road Left Turn Crossing	-	N/A	-	G		1	11	-	0	-	0	0.0%
Ped Link: P2	Penny Emma Way Entry Crossing	-	N/A	-	H		1	65	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P3	Penny Emma Way Exit Crossing	-	N/A	-	I		1	69	-	0	-	0	0.0%
Ped Link: P4	Penny Emma Way Left Turn Crossing	-	N/A	-	J		1	53	-	0	-	0	0.0%
Ped Link: P5	Low Moor Road Northbound Crossing	-	N/A	-	K		1	90	-	0	-	0	0.0%
Ped Link: P6	Low Moor Road Southbound Crossing	-	N/A	-	L		1	11	-	0	-	0	0.0%

Full Input Data And Results

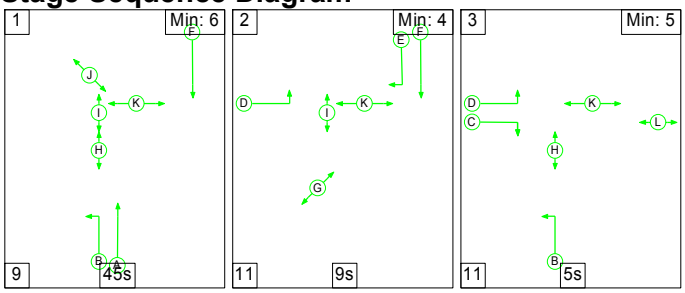
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**9.9**	**8.1**	**0.0**	**18.0**	**-**	**-**	**-**	**-**
B6021 Lowmoor Road/Penny Emma Way	**-**	**-**	**0**	**0**	**0**	**9.9**	**8.1**	**0.0**	**18.0**	**-**	**-**	**-**	**-**
1/1	874	874	-	-	-	1.5	1.0	-	2.5	10.2	11.2	1.0	12.1
1/2	132	132	-	-	-	1.4	1.3	-	2.7	74.9	3.2	1.3	4.5
2/1	443	443	-	-	-	0.6	0.3	-	0.9	7.1	4.2	0.3	4.4
2/2	832	832	-	-	-	3.6	2.2	-	5.8	25.1	16.6	2.2	18.8
3/2+3/1	155	155	-	-	-	1.6	1.3	-	2.8	65.9	2.8	1.3	4.0
3/3	103	103	-	-	-	1.1	0.9	-	2.0	70.3	2.5	0.9	3.3
4/1	42	42	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
4/2	832	832	-	-	-	0.0	0.4	-	0.4	1.9	0.0	0.4	0.4
5/1	987	987	-	-	-	0.0	0.6	-	0.6	2.2	0.0	0.6	0.6
5/2	103	103	-	-	-	0.0	0.0	-	0.0	1.1	0.0	0.0	0.0
6/1	443	443	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
6/2	132	132	-	-	-	0.0	0.0	-	0.0	1.1	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 10.3 Total Delay for Signalled Lanes (pcuHr): 16.75 Cycle Time (s): 90
PRC Over All Lanes (%): 10.3 Total Delay Over All Lanes(pcuHr): 18.03

Full Input Data And Results

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case Evening Peak', Plan 1: 'Signal Plan No. 1')

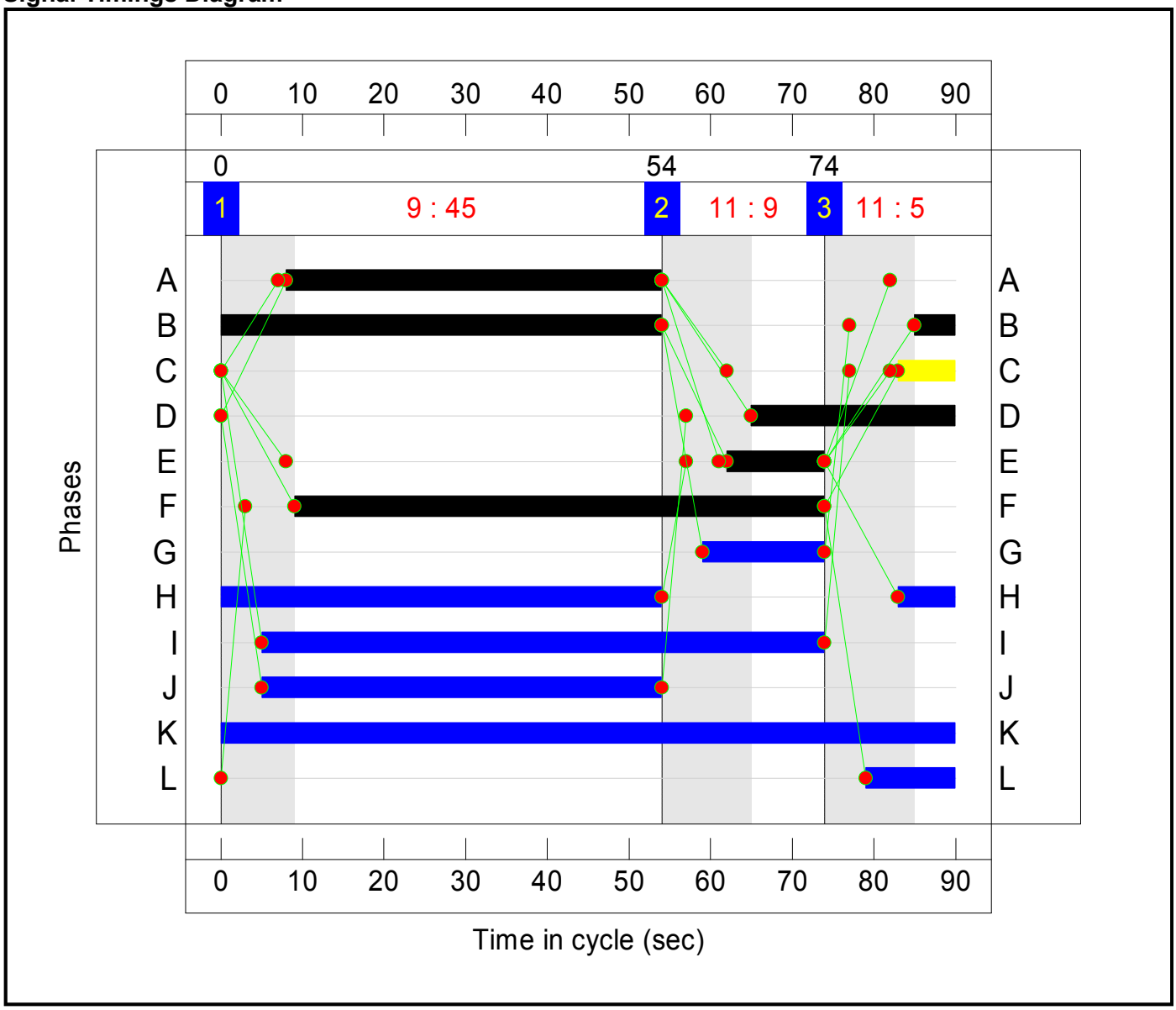
Stage Sequence Diagram



Stage Timings

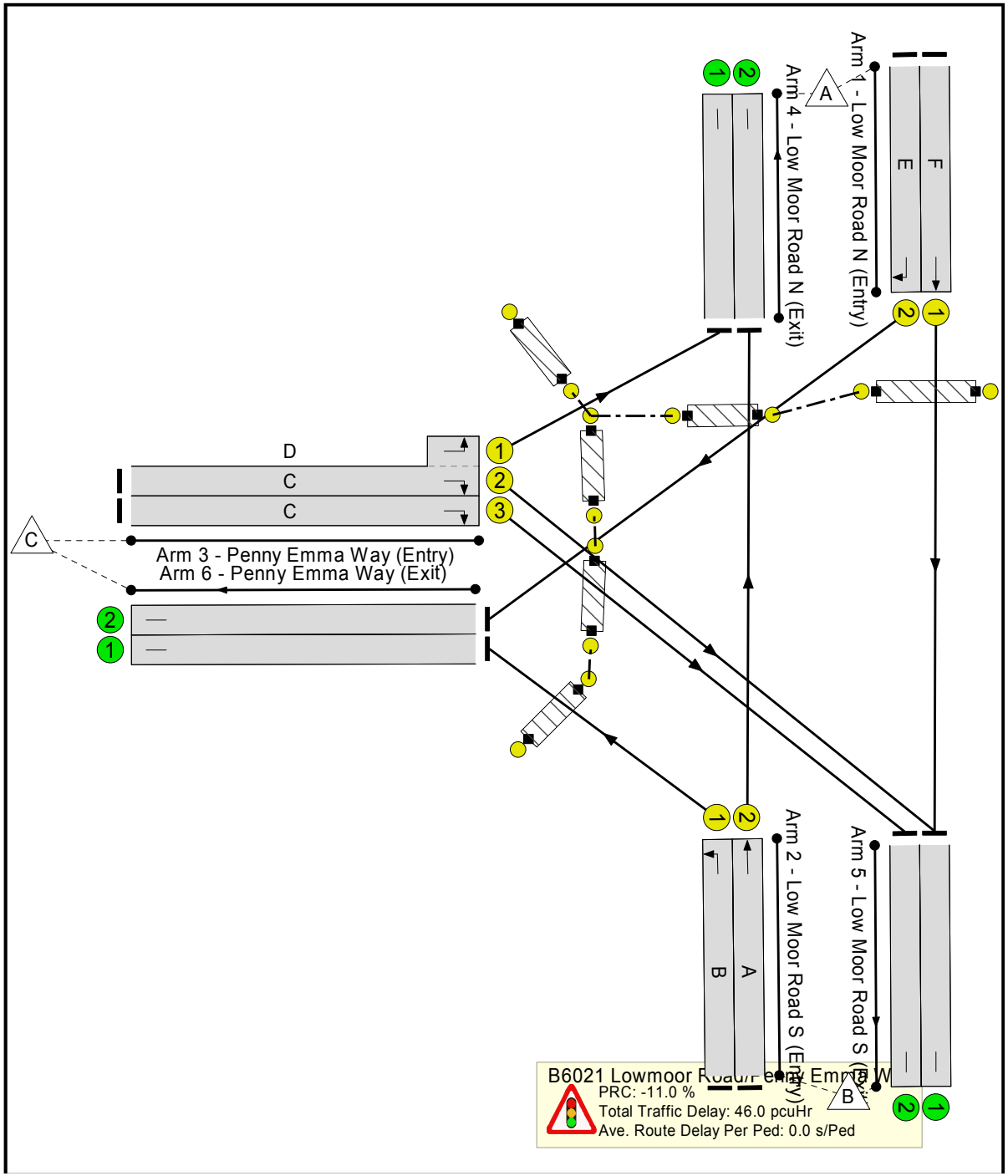
Stage	1	2	3
Duration	45	9	5
Change Point	0	54	74

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**99.9%**
B6021 Lowmoor Road/Penny Emma Way	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**99.9%**
1/1	Low Moor Road N (Entry) Ahead	U	N/A	N/A	F		1	65	-	1086	1800	1320	82.3%
1/2	Low Moor Road N (Entry) Right	U	N/A	N/A	E		1	12	-	247	1800	260	95.0%
2/1	Low Moor Road S (Entry) Left	U	N/A	N/A	B		1	59	-	680	1800	1200	56.7%
2/2	Low Moor Road S (Entry) Ahead	U	N/A	N/A	A		1	46	-	939	1800	940	99.9%
3/2+3/1	Penny Emma Way (Entry) Left Right	U	N/A	N/A	C D		1	7:25	-	249	1800:1900	282	88.3%
3/3	Penny Emma Way (Entry) Right	U	N/A	N/A	C		1	7	-	126	1800	160	78.8%
4/1	Low Moor Road N (Exit)	U	N/A	N/A	-		-	-	-	125	1800	1800	6.9%
4/2	Low Moor Road N (Exit)	U	N/A	N/A	-		-	-	-	939	1800	1800	52.2%
5/1	Low Moor Road S (Exit)	U	N/A	N/A	-		-	-	-	1210	1800	1800	67.2%
5/2	Low Moor Road S (Exit)	U	N/A	N/A	-		-	-	-	126	1800	1800	7.0%
6/1	Penny Emma Way (Exit)	U	N/A	N/A	-		-	-	-	680	1800	1800	37.8%
6/2	Penny Emma Way (Exit)	U	N/A	N/A	-		-	-	-	247	1800	1800	13.7%
Ped Link: P1	Low Moor Road Left Turn Crossing	-	N/A	-	G		1	15	-	0	-	0	0.0%
Ped Link: P2	Penny Emma Way Entry Crossing	-	N/A	-	H		1	61	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P3	Penny Emma Way Exit Crossing	-	N/A	-	I		1	69	-	0	-	0	0.0%
Ped Link: P4	Penny Emma Way Left Turn Crossing	-	N/A	-	J		1	49	-	0	-	0	0.0%
Ped Link: P5	Low Moor Road Northbound Crossing	-	N/A	-	K		1	90	-	0	-	0	0.0%
Ped Link: P6	Low Moor Road Southbound Crossing	-	N/A	-	L		1	11	-	0	-	0	0.0%

Full Input Data And Results

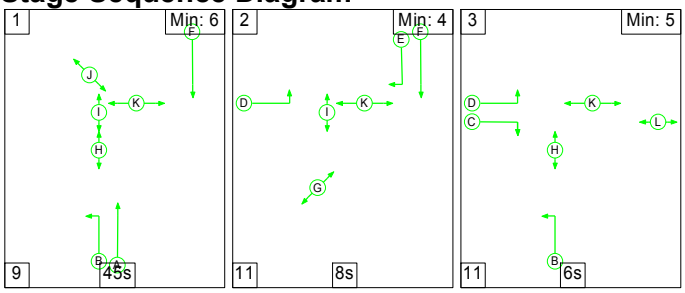
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**15.8**	**30.1**	**0.0**	**46.0**	**-**	**-**	**-**	**-**
B6021 Lowmoor Road/Penny Emma Way	**-**	**-**	**0**	**0**	**0**	**15.8**	**30.1**	**0.0**	**46.0**	**-**	**-**	**-**	**-**
1/1	1086	1086	-	-	-	2.4	2.3	-	4.7	15.6	18.1	2.3	20.4
1/2	247	247	-	-	-	2.6	5.3	-	7.9	114.8	6.1	5.3	11.4
2/1	680	680	-	-	-	1.5	0.7	-	2.2	11.5	9.1	0.7	9.7
2/2	939	939	-	-	-	5.6	15.1	-	20.7	79.3	23.2	15.1	38.3
3/2+3/1	249	249	-	-	-	2.3	3.2	-	5.4	78.3	3.5	3.2	6.7
3/3	126	126	-	-	-	1.4	1.7	-	3.1	88.3	3.1	1.7	4.8
4/1	125	125	-	-	-	0.0	0.0	-	0.0	1.1	0.0	0.0	0.0
4/2	939	939	-	-	-	0.0	0.5	-	0.5	2.1	0.0	0.5	0.5
5/1	1210	1210	-	-	-	0.0	1.0	-	1.0	3.0	0.0	1.0	1.0
5/2	126	126	-	-	-	0.0	0.0	-	0.0	1.1	0.0	0.0	0.0
6/1	680	680	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3
6/2	247	247	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -11.0 Total Delay for Signalled Lanes (pcuHr): 43.94 Cycle Time (s): 90
PRC Over All Lanes (%): -11.0 Total Delay Over All Lanes(pcuHr): 45.96

Full Input Data And Results

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Scenario Morning Peak', Plan 1: 'Signal Plan No. 1')

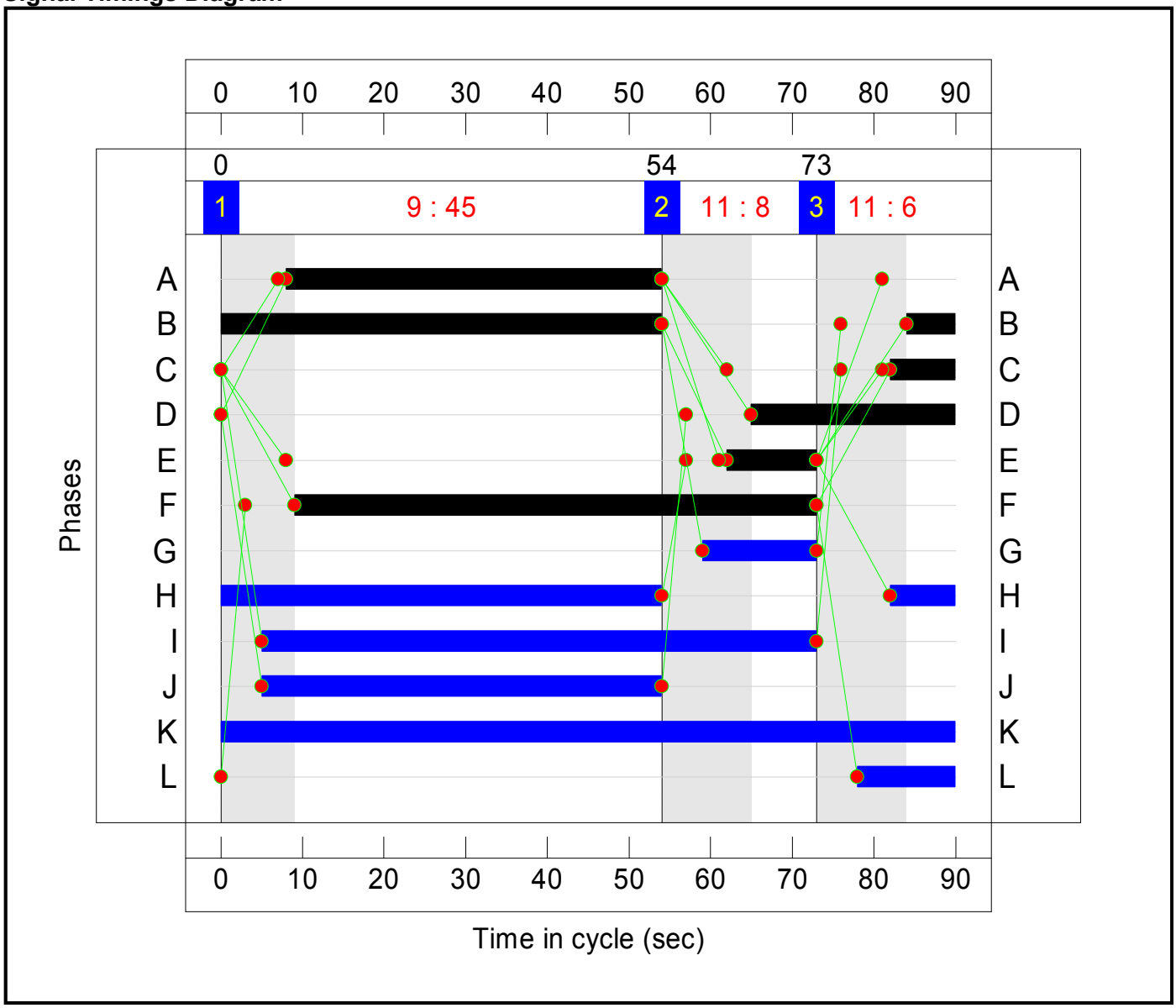
Stage Sequence Diagram



Stage Timings

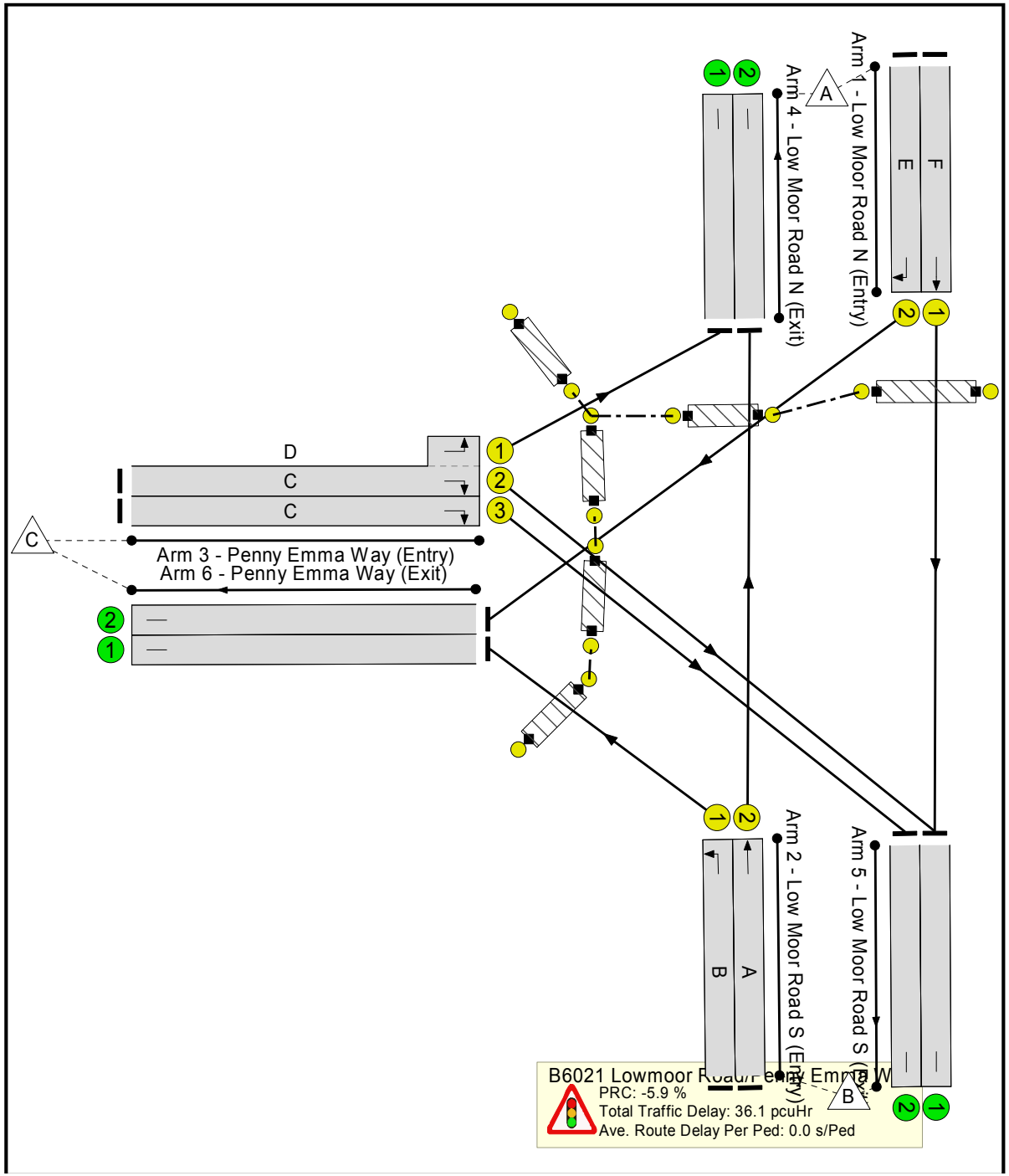
Stage	1	2	3
Duration	45	8	6
Change Point	0	54	73

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**95.3%**
B6021 Lowmoor Road/Penny Emma Way	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**95.3%**
1/1	Low Moor Road N (Entry) Ahead	U	N/A	N/A	F		1	64	-	1011	1800	1300	77.8%
1/2	Low Moor Road N (Entry) Right	U	N/A	N/A	E		1	11	-	227	1800	240	94.6%
2/1	Low Moor Road S (Entry) Left	U	N/A	N/A	B		1	60	-	506	1800	1220	41.5%
2/2	Low Moor Road S (Entry) Ahead	U	N/A	N/A	A		1	46	-	896	1800	940	95.3%
3/2+3/1	Penny Emma Way (Entry) Left Right	U	N/A	N/A	C D		1	8:25	-	224	1800:1900	254	88.3%
3/3	Penny Emma Way (Entry) Right	U	N/A	N/A	C		1	8	-	150	1800	180	83.3%
4/1	Low Moor Road N (Exit)	U	N/A	N/A	-		-	-	-	80	1800	1800	4.4%
4/2	Low Moor Road N (Exit)	U	N/A	N/A	-		-	-	-	896	1800	1800	49.8%
5/1	Low Moor Road S (Exit)	U	N/A	N/A	-		-	-	-	1155	1800	1800	64.2%
5/2	Low Moor Road S (Exit)	U	N/A	N/A	-		-	-	-	150	1800	1800	8.3%
6/1	Penny Emma Way (Exit)	U	N/A	N/A	-		-	-	-	506	1800	1800	28.1%
6/2	Penny Emma Way (Exit)	U	N/A	N/A	-		-	-	-	227	1800	1800	12.6%
Ped Link: P1	Low Moor Road Left Turn Crossing	-	N/A	-	G		1	14	-	0	-	0	0.0%
Ped Link: P2	Penny Emma Way Entry Crossing	-	N/A	-	H		1	62	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P3	Penny Emma Way Exit Crossing	-	N/A	-	I		1	68	-	0	-	0	0.0%
Ped Link: P4	Penny Emma Way Left Turn Crossing	-	N/A	-	J		1	49	-	0	-	0	0.0%
Ped Link: P5	Low Moor Road Northbound Crossing	-	N/A	-	K		1	90	-	0	-	0	0.0%
Ped Link: P6	Low Moor Road Southbound Crossing	-	N/A	-	L		1	12	-	0	-	0	0.0%

Full Input Data And Results

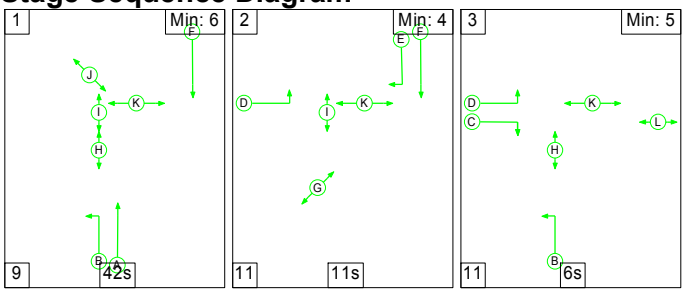
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**14.5**	**21.6**	**0.0**	**36.1**	**-**	**-**	**-**	**-**
B6021 Lowmoor Road/Penny Emma Way	**-**	**-**	**0**	**0**	**0**	**14.5**	**21.6**	**0.0**	**36.1**	**-**	**-**	**-**	**-**
1/1	1011	1011	-	-	-	2.2	1.7	-	4.0	14.1	16.0	1.7	17.7
1/2	227	227	-	-	-	2.4	5.0	-	7.4	117.3	5.6	5.0	10.6
2/1	506	506	-	-	-	0.9	0.4	-	1.3	9.0	5.6	0.4	6.0
2/2	896	896	-	-	-	5.1	7.6	-	12.7	50.9	21.2	7.6	28.7
3/2+3/1	224	224	-	-	-	2.2	3.1	-	5.3	85.1	4.0	3.1	7.2
3/3	150	150	-	-	-	1.7	2.2	-	3.8	92.2	3.7	2.2	5.8
4/1	80	80	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
4/2	896	896	-	-	-	0.0	0.5	-	0.5	2.0	0.0	0.5	0.5
5/1	1155	1155	-	-	-	0.0	0.9	-	0.9	2.8	0.0	0.9	0.9
5/2	150	150	-	-	-	0.0	0.0	-	0.0	1.1	0.0	0.0	0.0
6/1	506	506	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
6/2	227	227	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -5.9 Total Delay for Signalled Lanes (pcuHr): 34.42 Cycle Time (s): 90
PRC Over All Lanes (%): -5.9 Total Delay Over All Lanes(pcuHr): 36.14

Full Input Data And Results

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Scenario Evening Peak', Plan 1: 'Signal Plan No. 1')

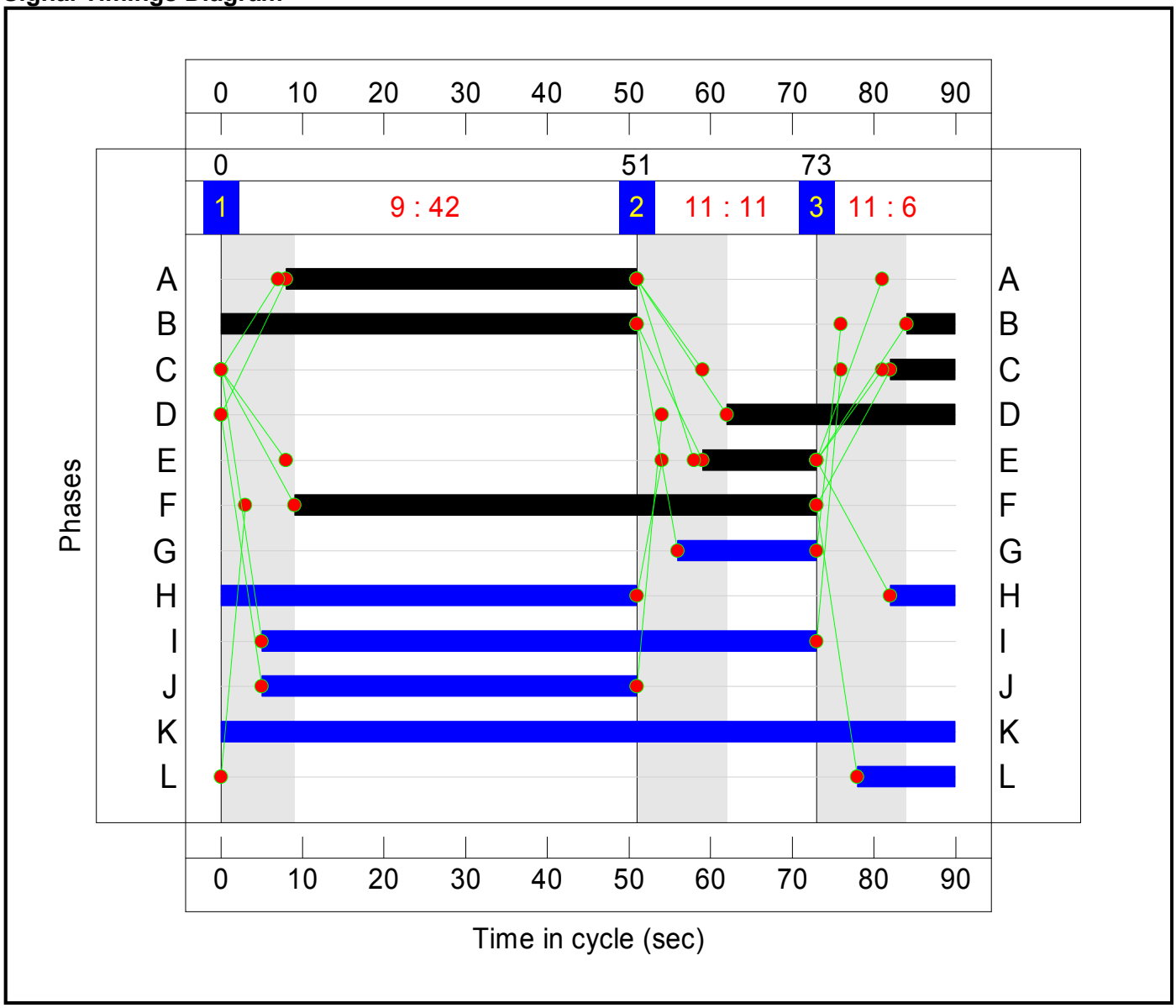
Stage Sequence Diagram



Stage Timings

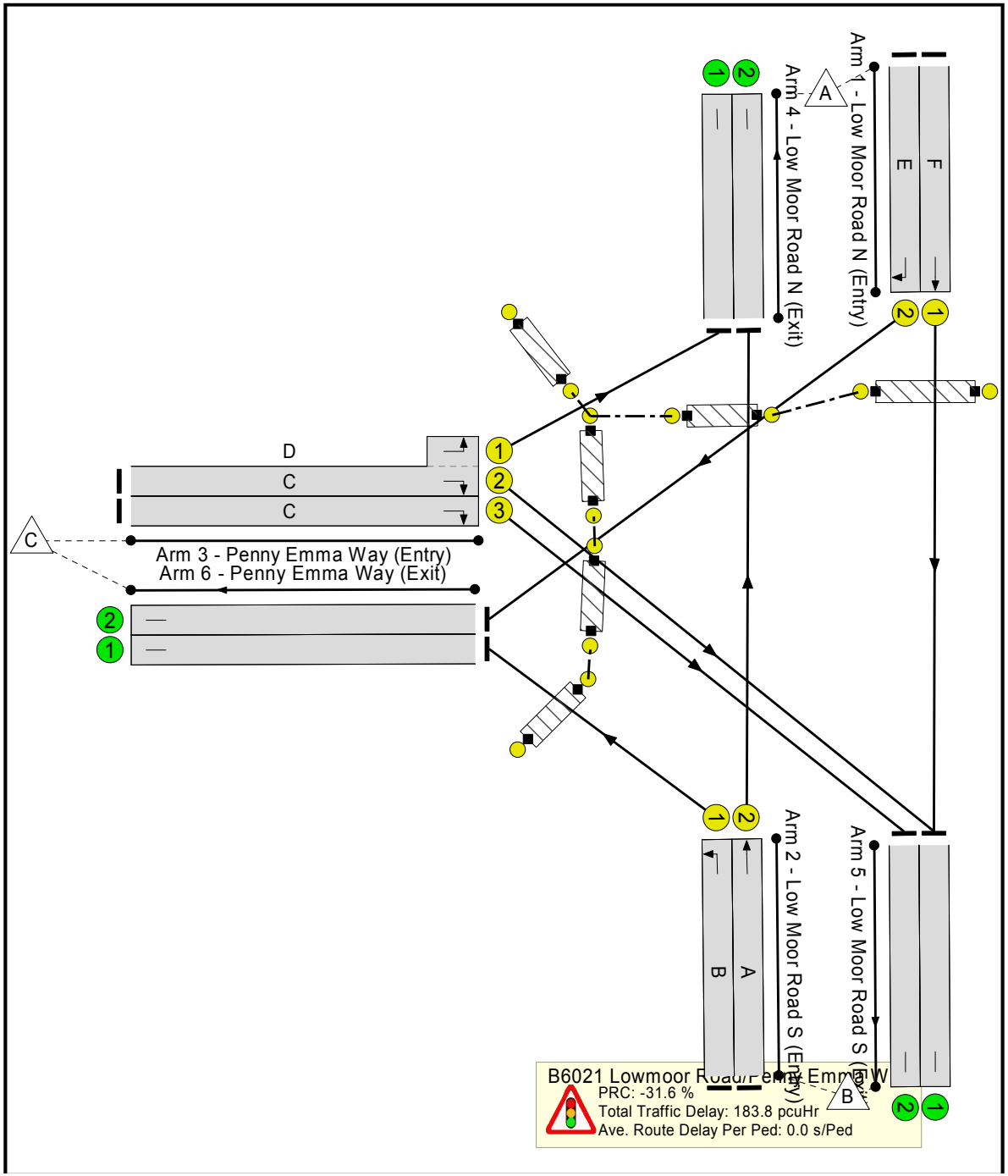
Stage	1	2	3
Duration	42	11	6
Change Point	0	51	73

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**118.4%**
B6021 Lowmoor Road/Penny Emma Way	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**118.4%**
1/1	Low Moor Road N (Entry) Ahead	U	N/A	N/A	F		1	64	-	1127	1800	1300	86.7%
1/2	Low Moor Road N (Entry) Right	U	N/A	N/A	E		1	14	-	348	1800	300	116.0%
2/1	Low Moor Road S (Entry) Left	U	N/A	N/A	B		1	57	-	756	1800	1160	65.2%
2/2	Low Moor Road S (Entry) Ahead	U	N/A	N/A	A		1	43	-	1042	1800	880	118.4%
3/2+3/1	Penny Emma Way (Entry) Left Right	U	N/A	N/A	C D		1	8:28	-	394	1800:1900	356	110.6%
3/3	Penny Emma Way (Entry) Right	U	N/A	N/A	C		1	8	-	194	1800	180	107.8%
4/1	Low Moor Road N (Exit)	U	N/A	N/A	-		-	-	-	237	1800	1800	11.9%
4/2	Low Moor Road N (Exit)	U	N/A	N/A	-		-	-	-	1042	1800	1800	48.9%
5/1	Low Moor Road S (Exit)	U	N/A	N/A	-		-	-	-	1284	1800	1800	70.5%
5/2	Low Moor Road S (Exit)	U	N/A	N/A	-		-	-	-	194	1800	1800	10.0%
6/1	Penny Emma Way (Exit)	U	N/A	N/A	-		-	-	-	756	1800	1800	42.0%
6/2	Penny Emma Way (Exit)	U	N/A	N/A	-		-	-	-	348	1800	1800	16.7%
Ped Link: P1	Low Moor Road Left Turn Crossing	-	N/A	-	G		1	17	-	0	-	0	0.0%
Ped Link: P2	Penny Emma Way Entry Crossing	-	N/A	-	H		1	59	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P3	Penny Emma Way Exit Crossing	-	N/A	-	I		1	68	-	0	-	0	0.0%
Ped Link: P4	Penny Emma Way Left Turn Crossing	-	N/A	-	J		1	46	-	0	-	0	0.0%
Ped Link: P5	Low Moor Road Northbound Crossing	-	N/A	-	K		1	90	-	0	-	0	0.0%
Ped Link: P6	Low Moor Road Southbound Crossing	-	N/A	-	L		1	12	-	0	-	0	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	**-**	**-**	**0**	**0**	**0**	**31.8**	**152.0**	**0.0**	**183.8**	**-**	**-**	**-**	**-**
B6021 Lowmoor Road/Penny Emma Way	**-**	**-**	**0**	**0**	**0**	**31.8**	**152.0**	**0.0**	**183.8**	**-**	**-**	**-**	**-**
1/1	1127	1127	-	-	-	2.9	3.1	-	6.1	19.3	20.7	3.1	23.8
1/2	348	300	-	-	-	5.1	27.2	-	32.3	334.3	9.9	27.2	37.1
2/1	756	756	-	-	-	2.1	0.9	-	3.0	14.2	11.6	0.9	12.5
2/2	1042	880	-	-	-	13.3	84.1	-	97.4	336.6	30.1	84.1	114.2
3/2+3/1	394	356	-	-	-	5.4	23.1	-	28.5	260.6	9.7	23.1	32.8
3/3	194	180	-	-	-	2.9	11.3	-	14.2	263.2	5.4	11.3	16.7
4/1	214	214	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
4/2	880	880	-	-	-	0.0	0.5	-	0.5	2.0	0.0	0.5	0.5
5/1	1269	1269	-	-	-	0.0	1.2	-	1.2	3.4	0.0	1.2	1.2
5/2	180	180	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
6/1	756	756	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
6/2	300	300	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -31.6 Total Delay for Signalled Lanes (pcuHr): 181.50 Cycle Time (s): 90
PRC Over All Lanes (%): -31.6 Total Delay Over All Lanes(pcuHr): 183.75

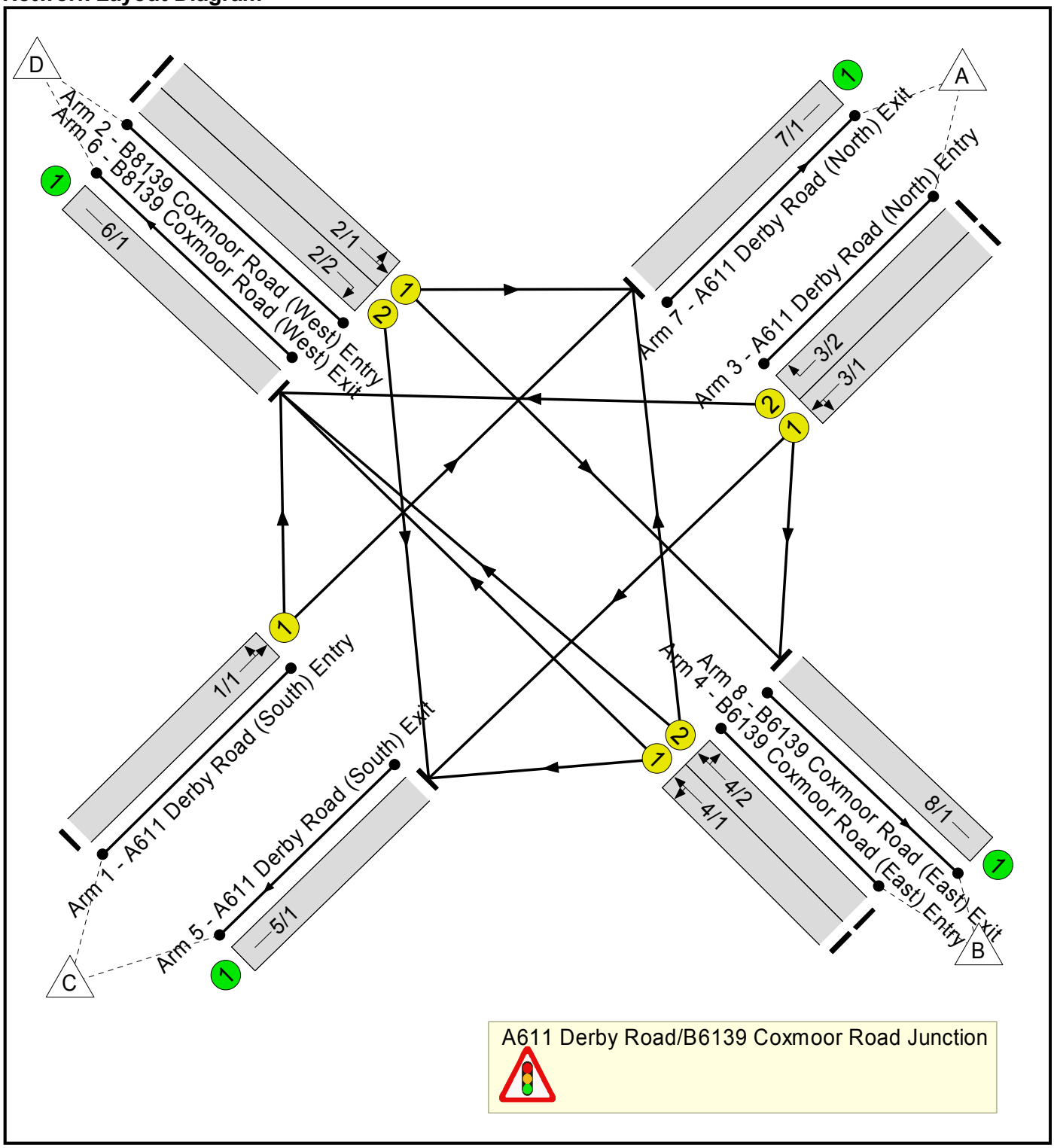
Full Input Data And Results

User and Project Details

Project:	
Title:	
Location:	
File name:	Junction 12 2016.lsg3x
Author:	
Company:	
Address:	
Notes:	

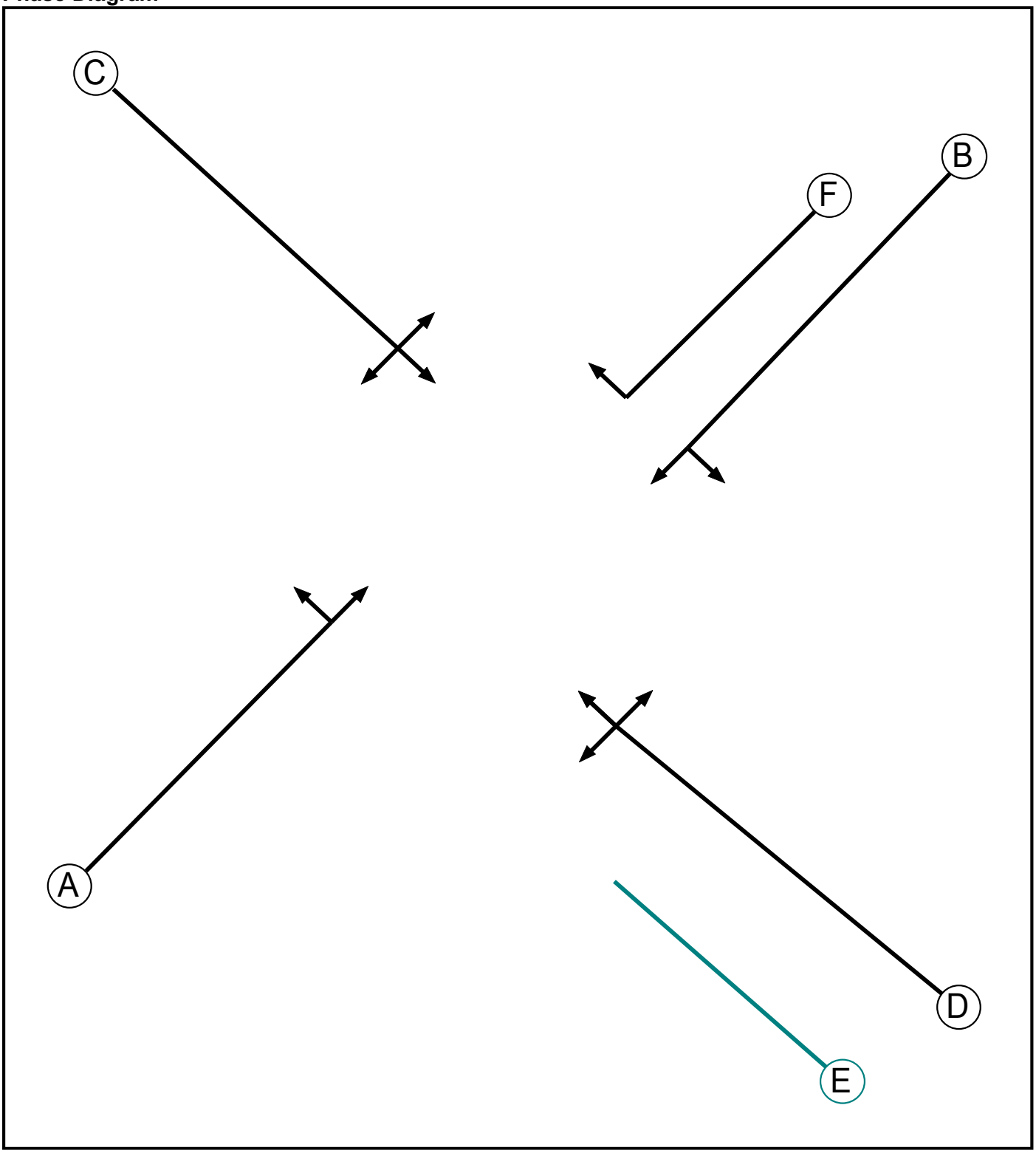
Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

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	Dummy		7	7
F	Traffic		7	7

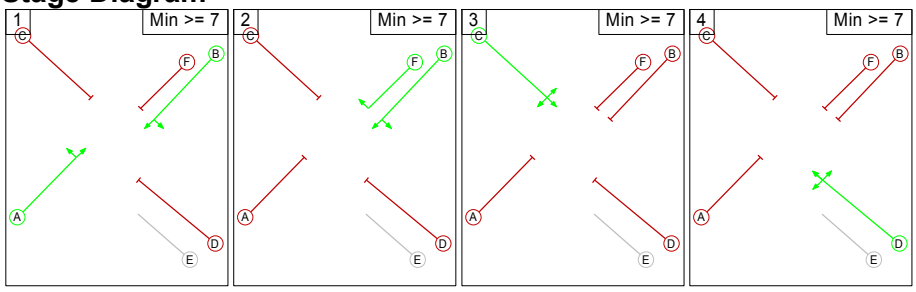
Phase Intergreens Matrix

		Starting Phase					
		A	B	C	D	E	F
Terminating Phase	A		-	8	8	-	7
	B	-		8	8	-	-
	C	8	8		9	-	8
	D	8	8	9		-	8
	E	-	-	-	-		-
	F	9	-	8	8	-	

Phases in Stage

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

Stage Diagram



Phase Delays

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

Full Input Data And Results

Prohibited Stage Change

		To Stage			
		1	2	3	4
From Stage	1		7	8	8
	2	9		8	8
	3	8	8		9
	4	8	8	9	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A611 Derby Road/B6139 Coxmoor Road Junction
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: A611 Derby Road/B6139 Coxmoor Road Junction												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A611 Derby Road (South) Entry)	U	A	2	3	60.0	User	1900	-	-	-	-	-
2/1 (B8139 Coxmoor Road (West) Entry)	U	C	2	3	60.0	User	1900	-	-	-	-	-
2/2 (B8139 Coxmoor Road (West) Entry)	U	C	2	3	11.5	User	1800	-	-	-	-	-
3/1 (A611 Derby Road (North) Entry)	U	B	2	3	60.0	User	1900	-	-	-	-	-
3/2 (A611 Derby Road (North) Entry)	U	F	2	3	15.7	User	1800	-	-	-	-	-
4/1 (B6139 Coxmoor Road (East) Entry)	U	D	2	3	60.0	User	1900	-	-	-	-	-
4/2 (B6139 Coxmoor Road (East) Entry)	U	D	2	3	10.4	User	1800	-	-	-	-	-
5/1 (A611 Derby Road (South) Exit)	U		2	3	60.0	User	1900	-	-	-	-	-
6/1 (B8139 Coxmoor Road (West) Exit)	U		2	3	60.0	User	1900	-	-	-	-	-
7/1 (A611 Derby Road (North) Exit)	U		2	3	60.0	User	1900	-	-	-	-	-
8/1 (B6139 Coxmoor Road (East) Exit)	U		2	3	60.0	User	1900	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2032 Reference Case Morning Peak'	08:00	09:00	01:00	
2: '2032 Development Case Morning Peak'	08:00	09:00	01:00	
3: '2032 Reference Case Evening Peak'	17:00	18:00	01:00	
4: '2032 Development Case Evening Peak'	17:00	18:00	01:00	

Scenario 1: 'AM Reference Case' (FG1: '2032 Reference Case Morning Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	2	1079	0	1081
	B	1	0	19	317	337
	C	971	46	0	392	1409
	D	7	295	190	0	492
	Tot.	979	343	1288	709	3319

Traffic Lane Flows

Lane	Scenario 1: AM Reference Case
Junction: A611 Derby Road/B6139 Coxmoor Road Junction	
1/1	1363
2/1	302
2/2	190
3/1	1081
3/2	0
4/1	173
4/2	164
5/1	1288
6/1	709
7/1	979
8/1	297

Full Input Data And Results

Lane Saturation Flows

Junction: A611 Derby Road/B6139 Coxmoor Road Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A611 Derby Road (South) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (B8139 Coxmoor Road (West) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/2 (B8139 Coxmoor Road (West) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A611 Derby Road (North) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (A611 Derby Road (North) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (B6139 Coxmoor Road (East) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (B6139 Coxmoor Road (East) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A611 Derby Road (South) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (B8139 Coxmoor Road (West) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (A611 Derby Road (North) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (B6139 Coxmoor Road (East) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case Evening Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	6	1200	0	1206
	B	5	0	7	368	380
	C	961	7	0	314	1282
	D	309	353	211	0	873
	Tot.	1275	366	1418	682	3741

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM Reference Case
Junction: A611 Derby Road/B6139 Coxmoor Road Junction	
1/1	1275
2/1	662
2/2	211
3/1	1206
3/2	0
4/1	197
4/2	183
5/1	1418
6/1	682
7/1	1275
8/1	359

Lane Saturation Flows

Junction: A611 Derby Road/B6139 Coxmoor Road Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A611 Derby Road (South) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (B8139 Coxmoor Road (West) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/2 (B8139 Coxmoor Road (West) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A611 Derby Road (North) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (A611 Derby Road (North) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (B6139 Coxmoor Road (East) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (B6139 Coxmoor Road (East) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A611 Derby Road (South) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (B8139 Coxmoor Road (West) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (A611 Derby Road (North) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (B6139 Coxmoor Road (East) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900

Full Input Data And Results

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	1	1061	0	1062
	B	1	0	14	333	348
	C	970	28	0	455	1453
	D	12	315	271	0	598
	Tot.	983	344	1346	788	3461

Traffic Lane Flows

Lane	Scenario 3: AM Development Scenario
Junction: A611 Derby Road/B6139 Coxmoor Road Junction	
1/1	1425
2/1	327
2/2	271
3/1	1062
3/2	0
4/1	180
4/2	168
5/1	1346
6/1	788
7/1	983
8/1	316

Full Input Data And Results

Lane Saturation Flows

Junction: A611 Derby Road/B6139 Coxmoor Road Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A611 Derby Road (South) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (B8139 Coxmoor Road (West) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/2 (B8139 Coxmoor Road (West) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A611 Derby Road (North) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (A611 Derby Road (North) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (B6139 Coxmoor Road (East) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (B6139 Coxmoor Road (East) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A611 Derby Road (South) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (B8139 Coxmoor Road (West) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (A611 Derby Road (North) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (B6139 Coxmoor Road (East) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	5	1178	0	1183
	B	4	0	6	370	380
	C	916	5	0	414	1335
	D	360	357	262	0	979
	Tot.	1280	367	1446	784	3877

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: PM Development Scenario
Junction: A611 Derby Road/B6139 Coxmoor Road Junction	
1/1	1330
2/1	717
2/2	262
3/1	1183
3/2	0
4/1	197
4/2	183
5/1	1446
6/1	784
7/1	1280
8/1	362

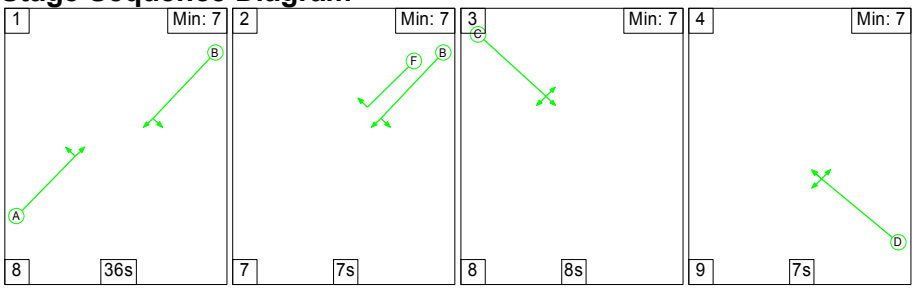
Lane Saturation Flows

Junction: A611 Derby Road/B6139 Coxmoor Road Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A611 Derby Road (South) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (B8139 Coxmoor Road (West) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/2 (B8139 Coxmoor Road (West) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A611 Derby Road (North) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (A611 Derby Road (North) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (B6139 Coxmoor Road (East) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (B6139 Coxmoor Road (East) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A611 Derby Road (South) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (B8139 Coxmoor Road (West) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (A611 Derby Road (North) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (B6139 Coxmoor Road (East) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900

Full Input Data And Results

Scenario 1: 'AM Reference Case' (FG1: '2032 Reference Case Morning Peak', Plan 1: 'Staging Plan No. 1')

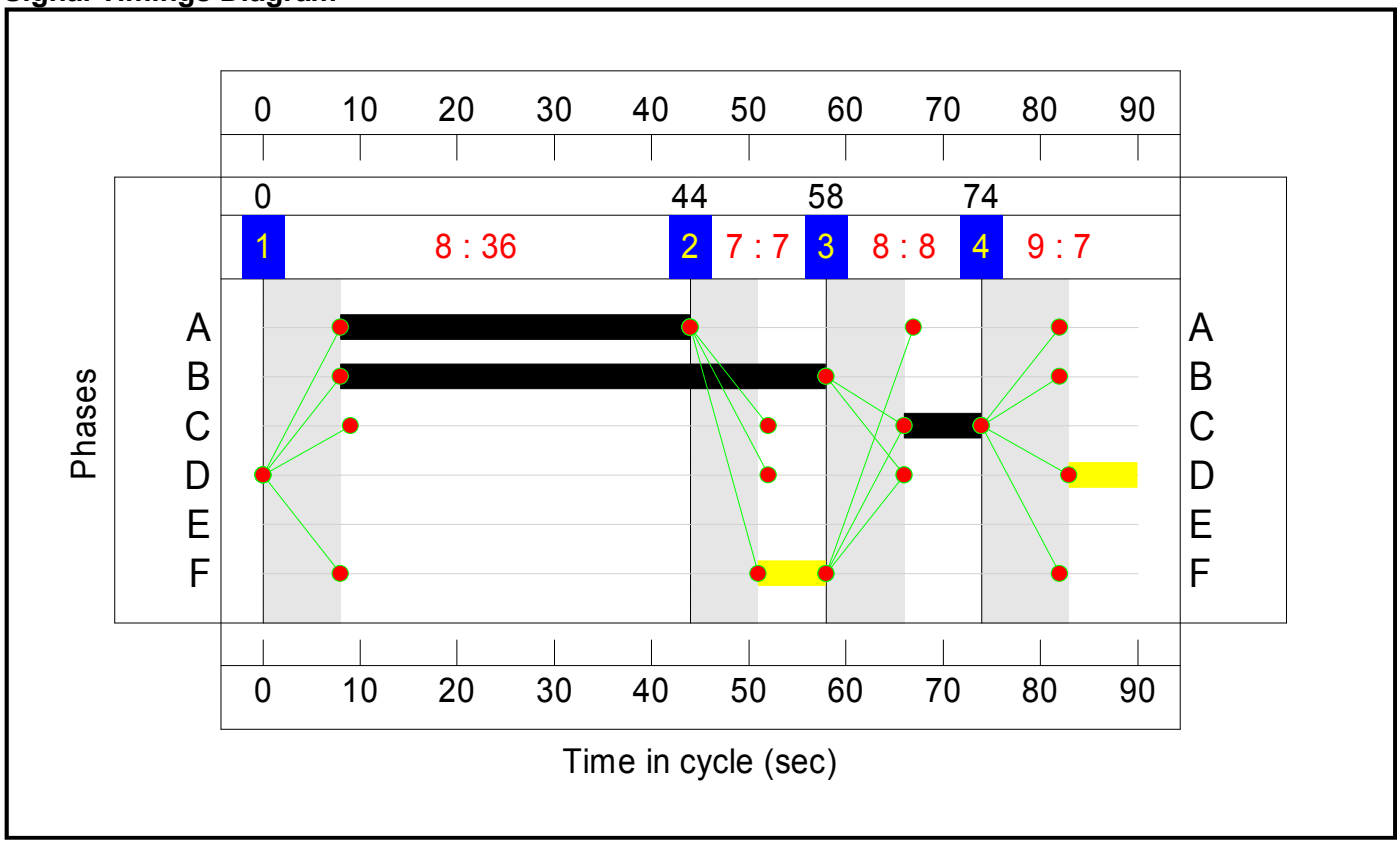
Stage Sequence Diagram



Stage Timings

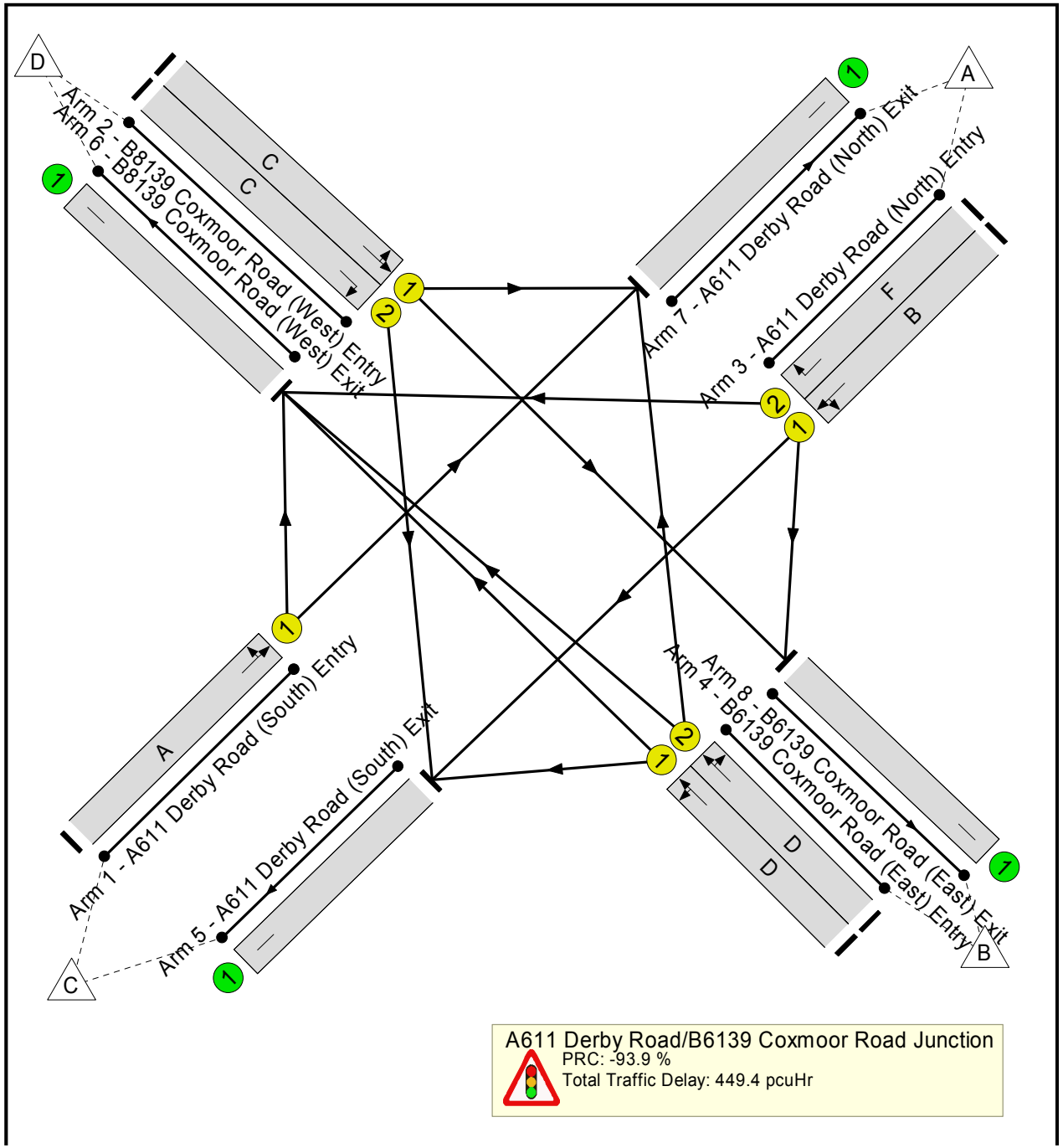
Stage	1	2	3	4
Duration	36	7	8	7
Change Point	0	44	58	74

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**174.5%**
A611 Derby Road/B6139 Coxmoor Road Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**174.5%**
1/1	A611 Derby Road (South) Entry Left Ahead	U	N/A	N/A	A		1	36	-	1363	1900	781	174.5%
2/1	B8139 Coxmoor Road (West) Entry Left Ahead	U	N/A	N/A	C		1	8	-	302	1900	190	158.9%
2/2	B8139 Coxmoor Road (West) Entry Right	U	N/A	N/A	C		1	8	-	190	1800	180	105.6%
3/1	A611 Derby Road (North) Entry Ahead Left	U	N/A	N/A	B		1	50	-	1081	1900	1077	100.4%
3/2	A611 Derby Road (North) Entry Right	U	N/A	N/A	F		1	7	-	0	1800	160	0.0%
4/1	B6139 Coxmoor Road (East) Entry Left Ahead	U	N/A	N/A	D		1	7	-	173	1900	169	102.4%
4/2	B6139 Coxmoor Road (East) Entry Ahead Right	U	N/A	N/A	D		1	7	-	164	1800	160	102.5%
5/1	A611 Derby Road (South) Exit	U	N/A	N/A	-		-	-	-	1288	1900	1900	67.0%
6/1	B8139 Coxmoor Road (West) Exit	U	N/A	N/A	-		-	-	-	709	1900	1900	28.1%
7/1	A611 Derby Road (North) Exit	U	N/A	N/A	-		-	-	-	979	1900	1900	29.6%
8/1	B6139 Coxmoor Road (East) Exit	U	N/A	N/A	-		-	-	-	297	1900	1900	9.9%

Full Input Data And Results

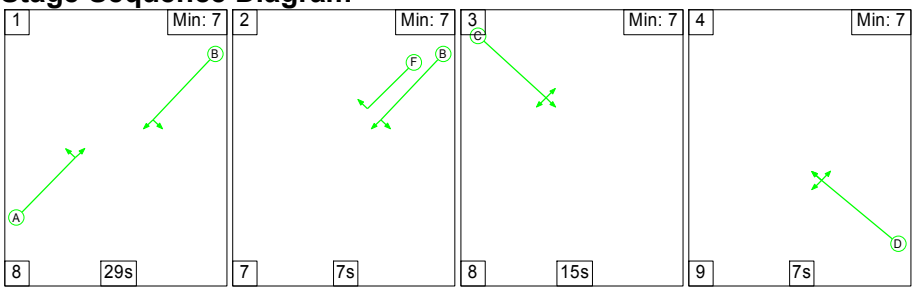
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**55.9**	**393.5**	**0.0**	**449.4**	**-**	**-**	**-**	**-**
A611 Derby Road/B6139 Coxmoor Road Junction	**-**	**-**	**0**	**0**	**0**	**55.9**	**393.5**	**0.0**	**449.4**	**-**	**-**	**-**	**-**
1/1	1363	781	-	-	-	34.6	292.1	-	326.7	862.9	48.6	292.1	340.7
2/1	302	190	-	-	-	8.5	57.3	-	65.8	784.2	12.1	57.3	69.4
2/2	190	180	-	-	-	2.4	9.8	-	12.3	232.5	5.0	9.8	14.8
3/1	1081	1077	-	-	-	6.0	17.6	-	23.6	78.6	27.1	17.6	44.7
3/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	173	169	-	-	-	2.2	7.7	-	9.9	205.2	4.4	7.7	12.1
4/2	164	160	-	-	-	2.1	7.5	-	9.6	209.6	4.2	7.5	11.7
5/1	1273	1273	-	-	-	0.0	1.0	-	1.0	2.9	0.0	1.0	1.0
6/1	534	534	-	-	-	0.1	0.2	-	0.3	2.1	6.6	0.2	6.8
7/1	562	562	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
8/1	188	188	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1

C1 PRC for Signalled Lanes (%): -93.9 Total Delay for Signalled Lanes (pcuHr): 447.77 Cycle Time (s): 90
PRC Over All Lanes (%): -93.9 Total Delay Over All Lanes(pcuHr): 449.35

Full Input Data And Results

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case Evening Peak', Plan 1: 'Staging Plan No. 1')

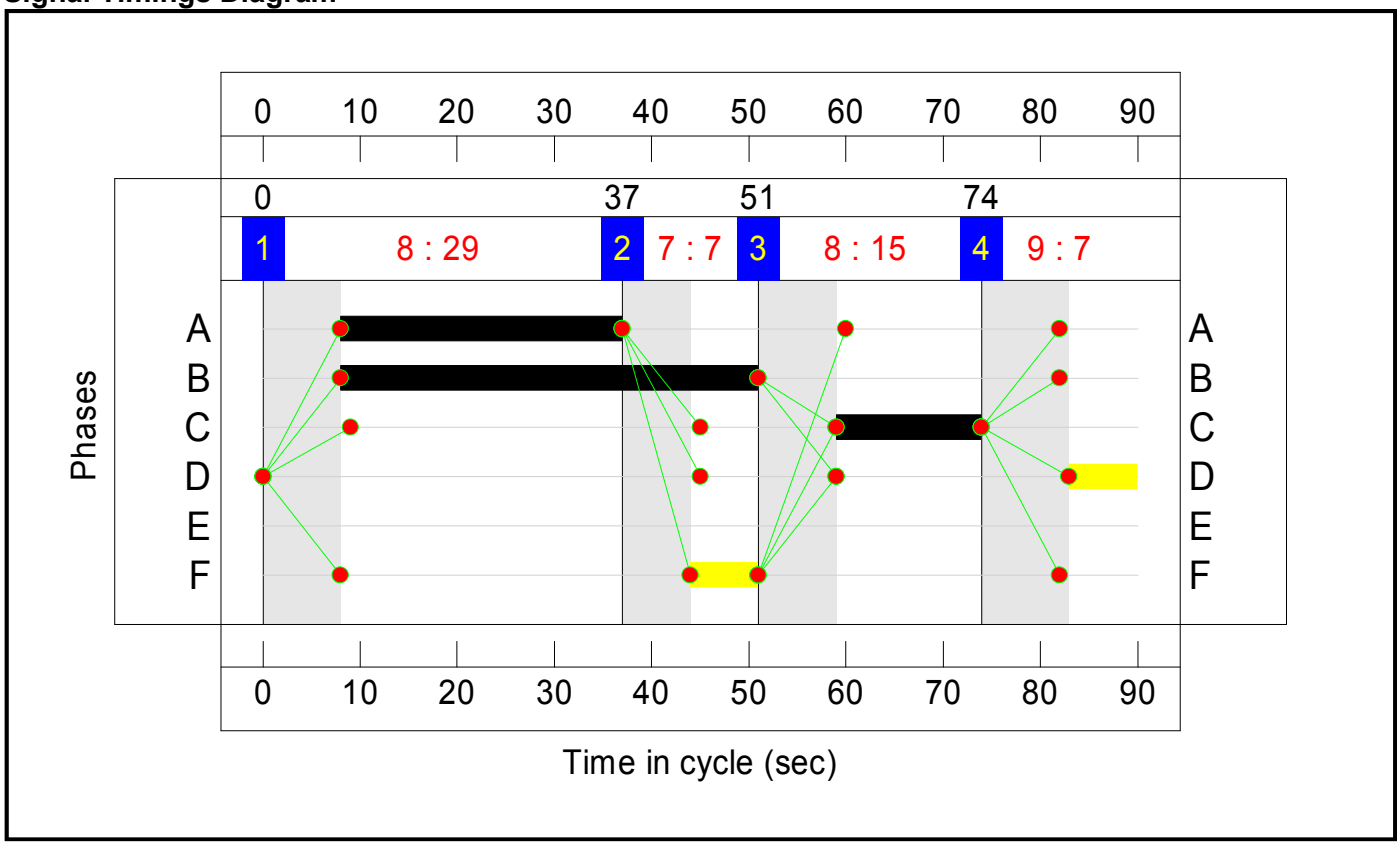
Stage Sequence Diagram



Stage Timings

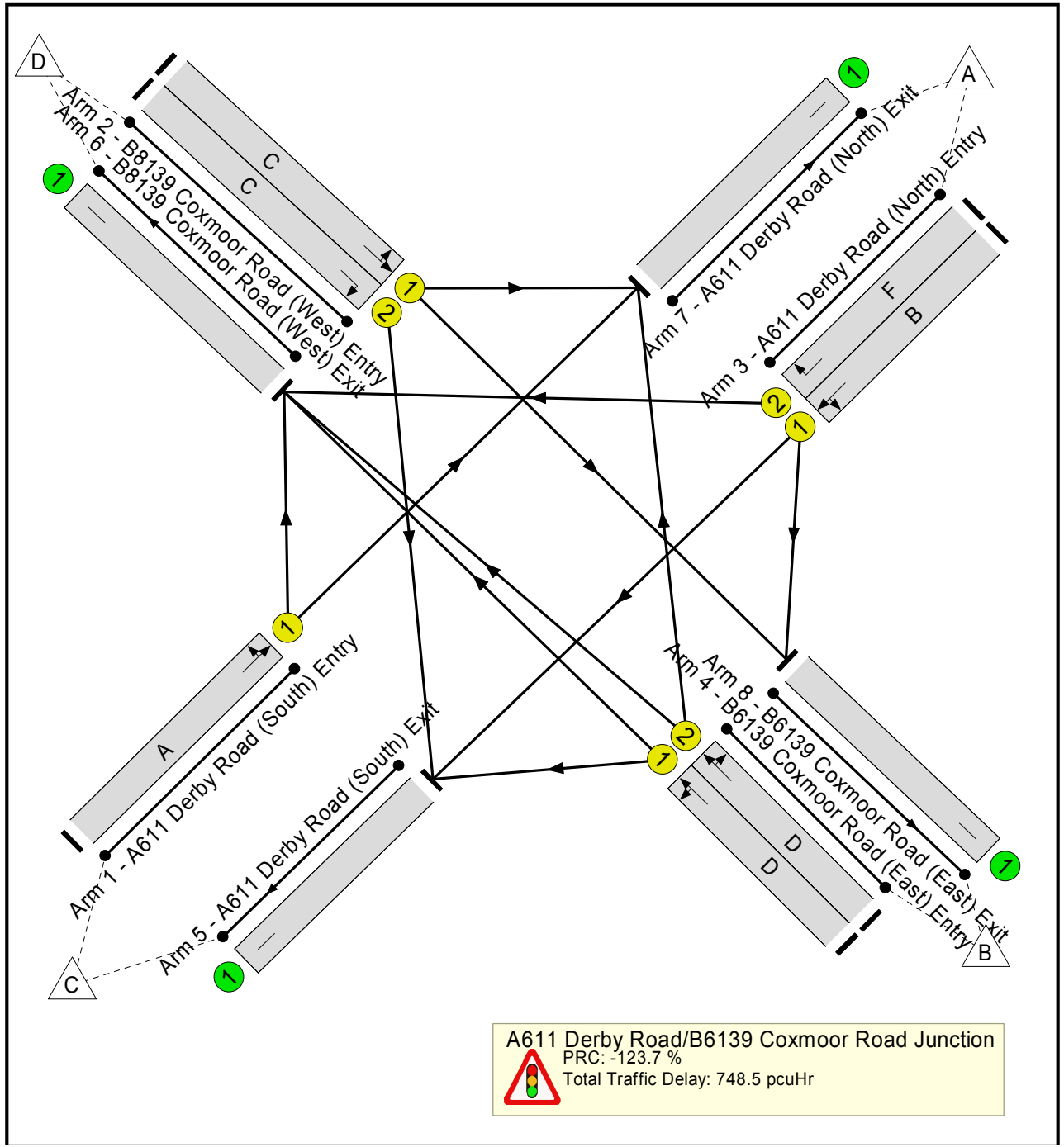
Stage	1	2	3	4
Duration	29	7	15	7
Change Point	0	37	51	74

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**201.3%**
A611 Derby Road/B6139 Coxmoor Road Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**201.3%**
1/1	A611 Derby Road (South) Entry Left Ahead	U	N/A	N/A	A		1	29	-	1275	1900	633	201.3%
2/1	B8139 Coxmoor Road (West) Entry Left Ahead	U	N/A	N/A	C		1	15	-	662	1900	338	196.0%
2/2	B8139 Coxmoor Road (West) Entry Right	U	N/A	N/A	C		1	15	-	211	1800	320	65.9%
3/1	A611 Derby Road (North) Entry Ahead Left	U	N/A	N/A	B		1	43	-	1206	1900	929	129.8%
3/2	A611 Derby Road (North) Entry Right	U	N/A	N/A	F		1	7	-	0	1800	160	0.0%
4/1	B6139 Coxmoor Road (East) Entry Left Ahead	U	N/A	N/A	D		1	7	-	197	1900	169	116.6%
4/2	B6139 Coxmoor Road (East) Entry Ahead Right	U	N/A	N/A	D		1	7	-	183	1800	160	114.4%
5/1	A611 Derby Road (South) Exit	U	N/A	N/A	-		-	-	-	1418	1900	1900	60.1%
6/1	B8139 Coxmoor Road (West) Exit	U	N/A	N/A	-		-	-	-	682	1900	1900	25.0%
7/1	A611 Derby Road (North) Exit	U	N/A	N/A	-		-	-	-	1275	1900	1900	33.7%
8/1	B6139 Coxmoor Road (East) Exit	U	N/A	N/A	-		-	-	-	359	1900	1900	9.7%

Full Input Data And Results

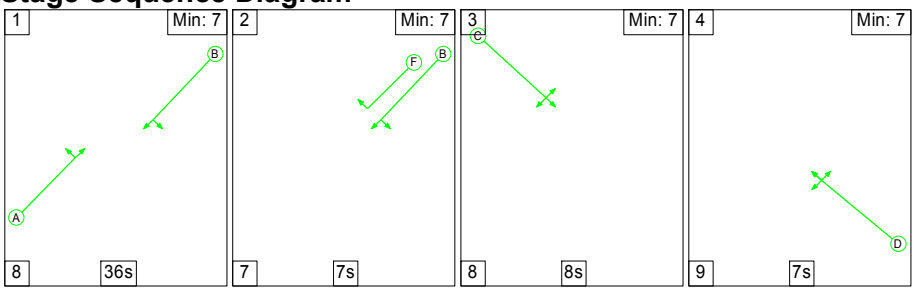
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**89.1**	**659.4**	**0.0**	**748.5**	**-**	**-**	**-**	**-**
A611 Derby Road/B6139 Coxmoor Road Junction	**-**	**-**	**0**	**0**	**0**	**89.1**	**659.4**	**0.0**	**748.5**	**-**	**-**	**-**	**-**
1/1	1275	633	-	-	-	38.3	321.8	-	360.2	1016.9	49.8	321.8	371.6
2/1	662	338	-	-	-	22.6	163.1	-	185.7	1009.8	30.4	163.1	193.5
2/2	211	211	-	-	-	2.0	1.0	-	3.0	50.7	4.9	1.0	5.8
3/1	1206	929	-	-	-	19.1	140.7	-	159.8	477.1	37.1	140.7	177.8
3/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	197	169	-	-	-	3.7	17.0	-	20.6	376.8	6.2	17.0	23.1
4/2	183	160	-	-	-	3.2	14.6	-	17.9	351.6	5.6	14.6	20.2
5/1	1141	1141	-	-	-	0.0	0.8	-	0.8	2.4	0.0	0.8	0.8
6/1	474	474	-	-	-	0.1	0.2	-	0.3	2.3	6.9	0.2	7.1
7/1	639	639	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
8/1	185	185	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1

C1 PRC for Signalled Lanes (%): -123.7 Total Delay for Signalled Lanes (pcuHr): 747.15 Cycle Time (s): 90
PRC Over All Lanes (%): -123.7 Total Delay Over All Lanes(pcuHr): 748.50

Full Input Data And Results

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Staging Plan No. 1')

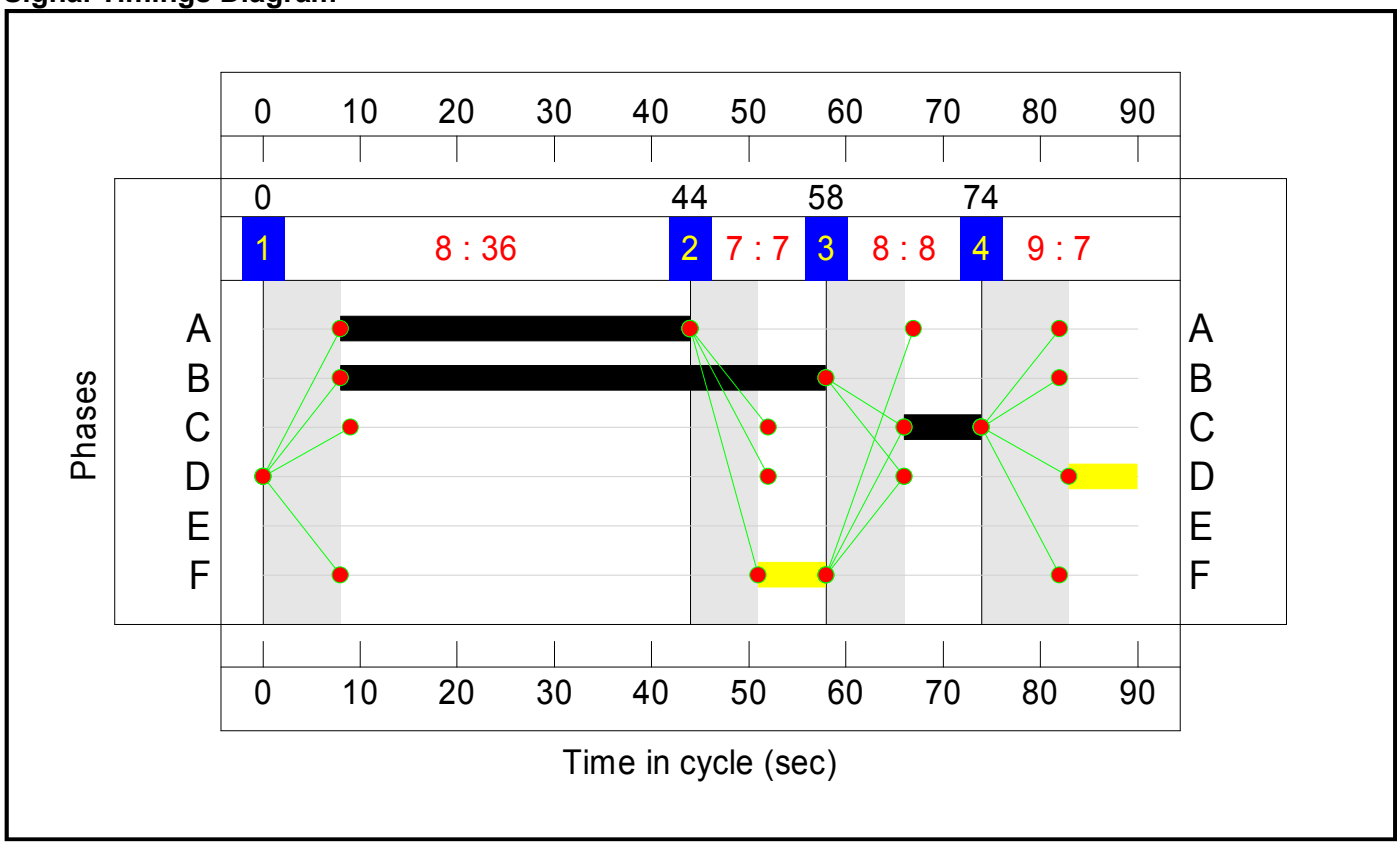
Stage Sequence Diagram



Stage Timings

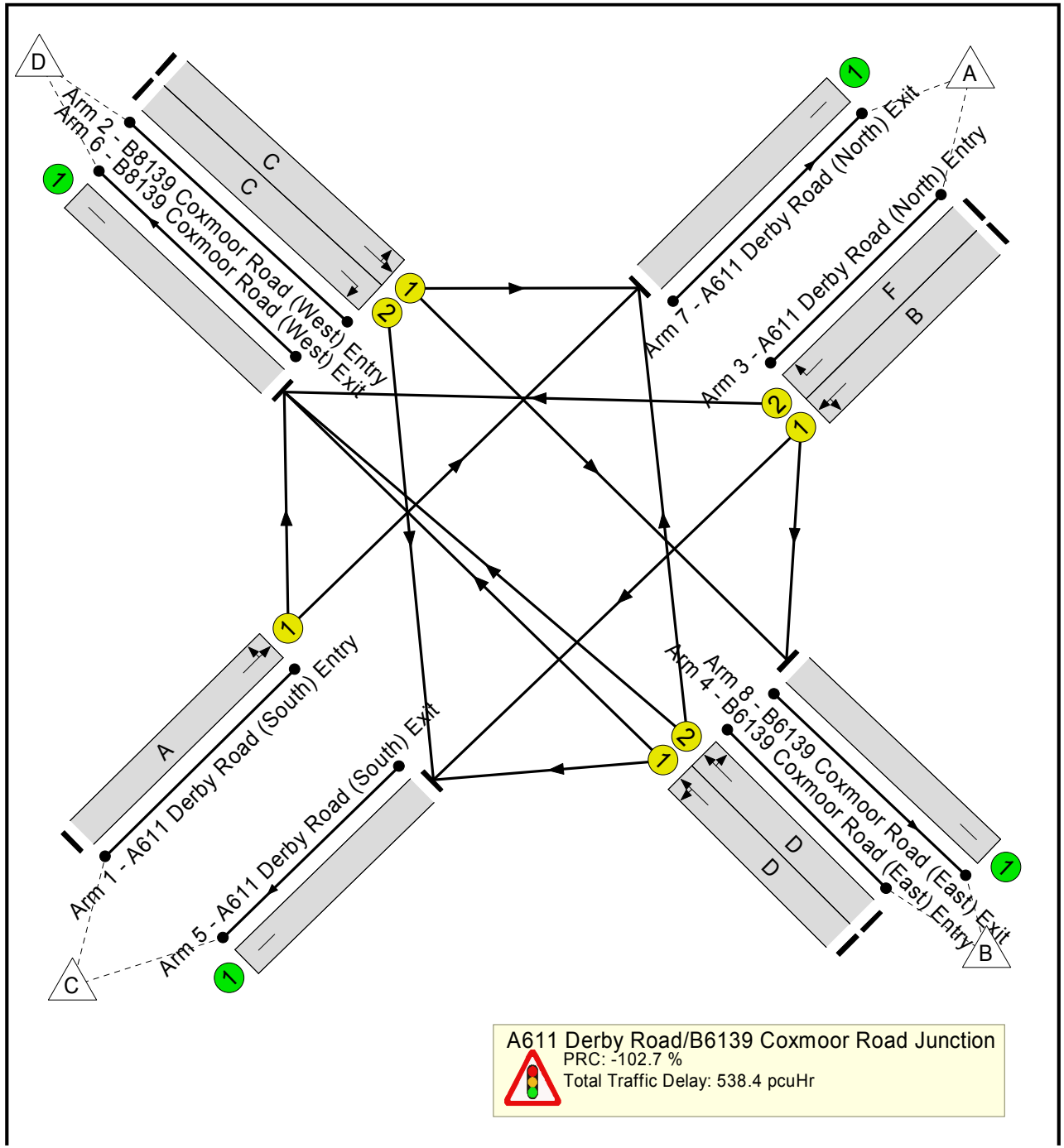
Stage	1	2	3	4
Duration	36	7	8	7
Change Point	0	44	58	74

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**182.4%**
A611 Derby Road/B6139 Coxmoor Road Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**182.4%**
1/1	A611 Derby Road (South) Entry Left Ahead	U	N/A	N/A	A		1	36	-	1425	1900	781	182.4%
2/1	B8139 Coxmoor Road (West) Entry Left Ahead	U	N/A	N/A	C		1	8	-	327	1900	190	172.1%
2/2	B8139 Coxmoor Road (West) Entry Right	U	N/A	N/A	C		1	8	-	271	1800	180	150.6%
3/1	A611 Derby Road (North) Entry Ahead Left	U	N/A	N/A	B		1	50	-	1062	1900	1077	98.6%
3/2	A611 Derby Road (North) Entry Right	U	N/A	N/A	F		1	7	-	0	1800	160	0.0%
4/1	B6139 Coxmoor Road (East) Entry Left Ahead	U	N/A	N/A	D		1	7	-	180	1900	169	106.6%
4/2	B6139 Coxmoor Road (East) Entry Ahead Right	U	N/A	N/A	D		1	7	-	168	1800	160	105.0%
5/1	A611 Derby Road (South) Exit	U	N/A	N/A	-		-	-	-	1346	1900	1900	66.0%
6/1	B8139 Coxmoor Road (West) Exit	U	N/A	N/A	-		-	-	-	788	1900	1900	29.7%
7/1	A611 Derby Road (North) Exit	U	N/A	N/A	-		-	-	-	983	1900	1900	28.4%
8/1	B6139 Coxmoor Road (East) Exit	U	N/A	N/A	-		-	-	-	316	1900	1900	9.7%

Full Input Data And Results

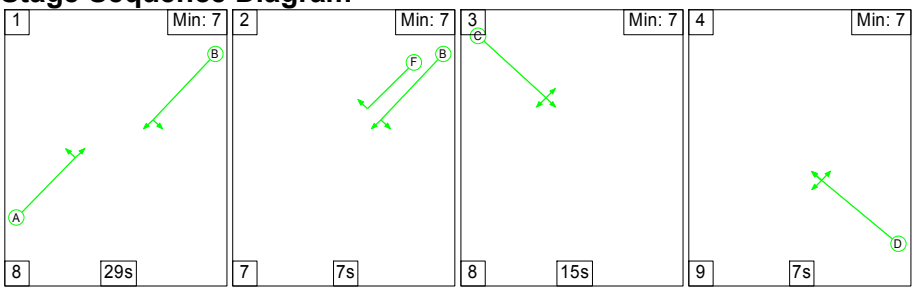
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**65.5**	**473.0**	**0.0**	**538.4**	**-**	**-**	**-**	**-**
A611 Derby Road/B6139 Coxmoor Road Junction	**-**	**-**	**0**	**0**	**0**	**65.5**	**473.0**	**0.0**	**538.4**	**-**	**-**	**-**	**-**
1/1	1425	781	-	-	-	37.7	323.0	-	360.7	911.3	51.7	323.0	374.8
2/1	327	190	-	-	-	10.0	69.7	-	79.7	877.5	13.8	69.7	83.5
2/2	271	180	-	-	-	7.1	46.9	-	54.0	717.6	10.3	46.9	57.3
3/1	1062	1062	-	-	-	5.7	13.0	-	18.7	63.3	26.0	13.0	39.0
3/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	180	169	-	-	-	2.6	10.0	-	12.6	253.0	4.9	10.0	14.9
4/2	168	160	-	-	-	2.3	8.8	-	11.1	237.8	4.5	8.8	13.2
5/1	1254	1254	-	-	-	0.0	1.0	-	1.0	2.8	0.0	1.0	1.0
6/1	564	564	-	-	-	0.1	0.2	-	0.3	2.1	6.9	0.2	7.1
7/1	540	540	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
8/1	184	184	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1

C1 PRC for Signalled Lanes (%): -102.7 Total Delay for Signalled Lanes (pcuHr): 536.88 Cycle Time (s): 90
PRC Over All Lanes (%): -102.7 Total Delay Over All Lanes(pcuHr): 538.44

Full Input Data And Results

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Staging Plan No. 1')

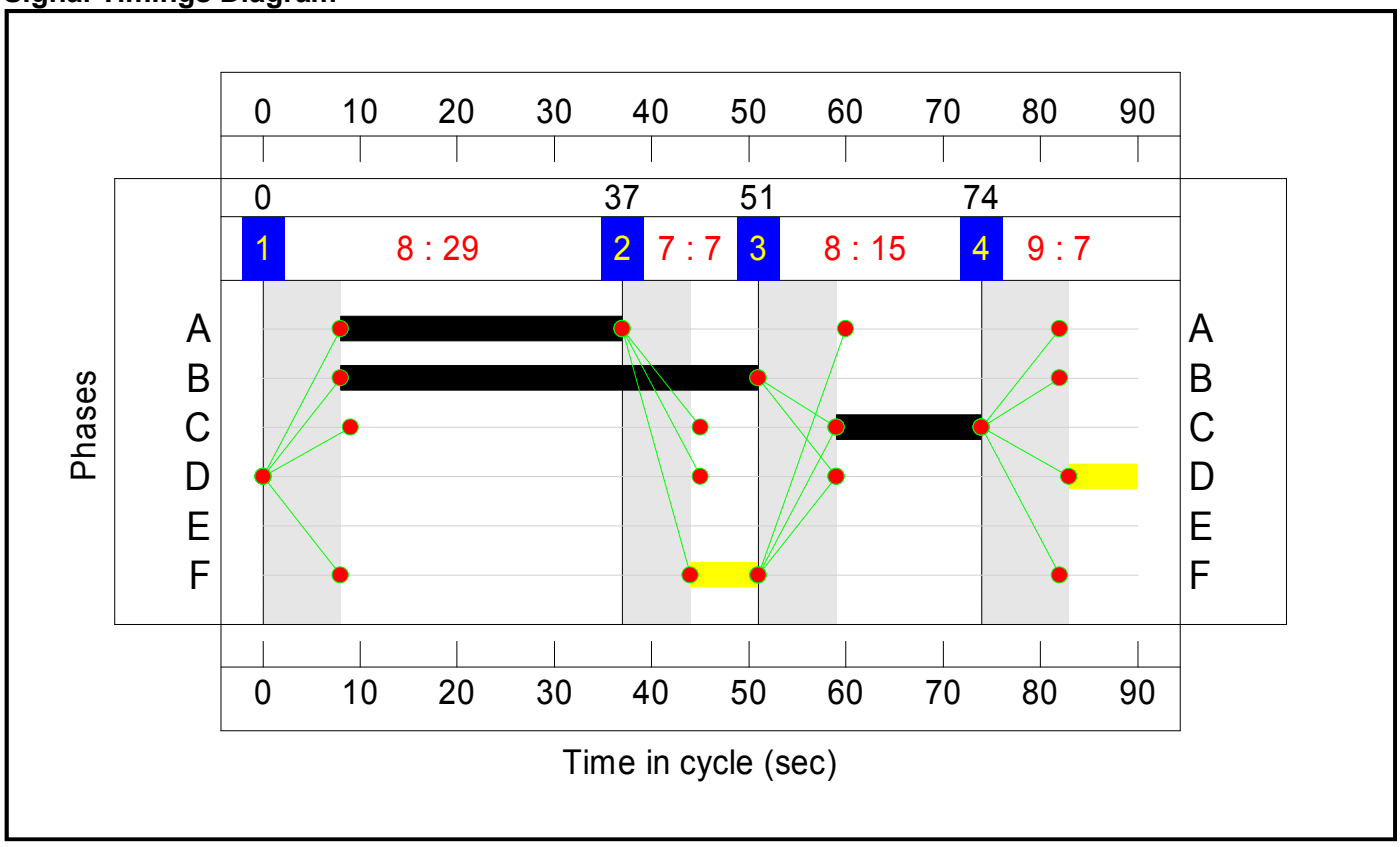
Stage Sequence Diagram



Stage Timings

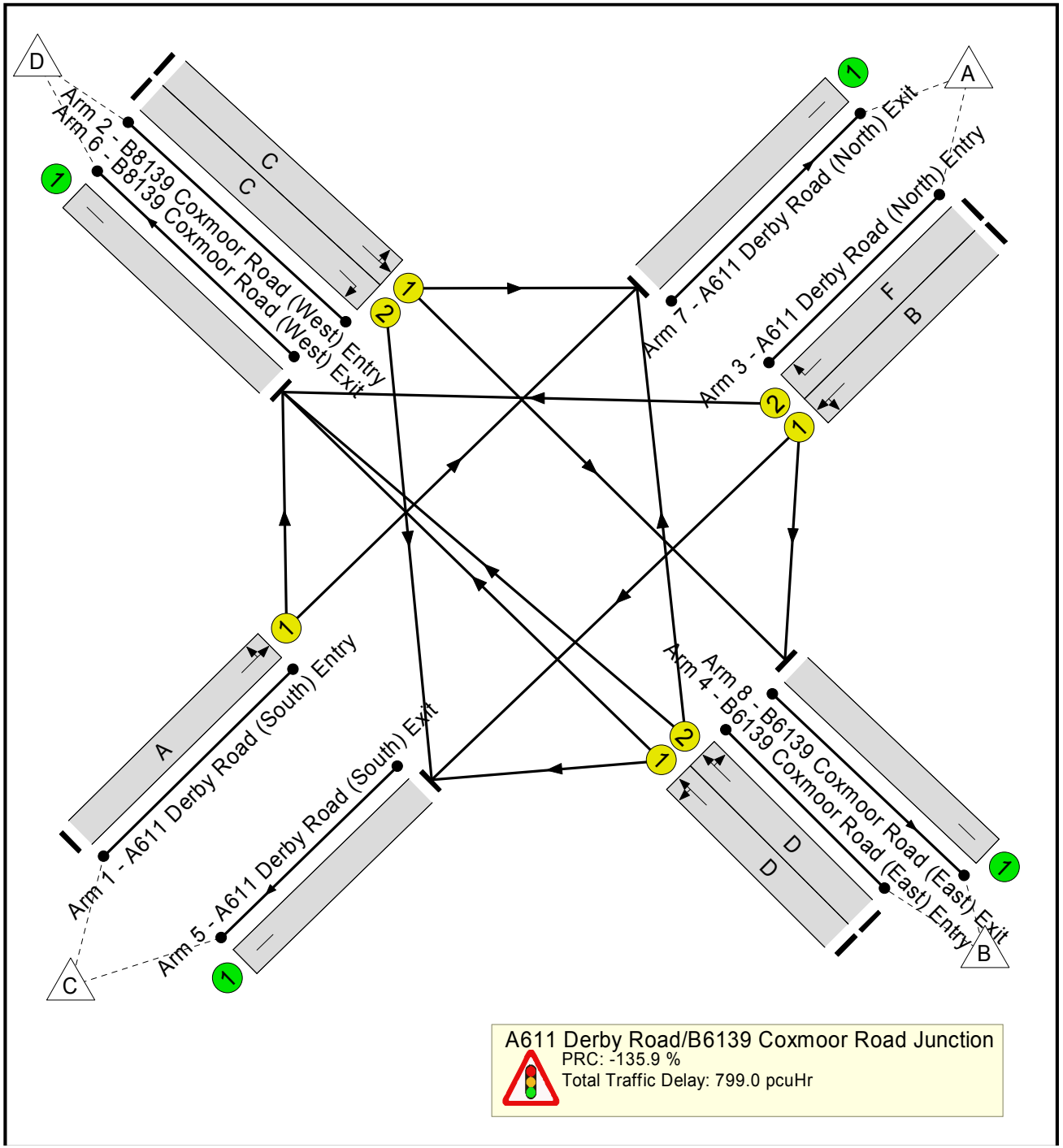
Stage	1	2	3	4
Duration	29	7	15	7
Change Point	0	37	51	74

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**212.3%**
A611 Derby Road/B6139 Coxmoor Road Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**212.3%**
1/1	A611 Derby Road (South) Entry Left Ahead	U	N/A	N/A	A		1	29	-	1330	1900	633	210.0%
2/1	B8139 Coxmoor Road (West) Entry Left Ahead	U	N/A	N/A	C		1	15	-	717	1900	338	212.3%
2/2	B8139 Coxmoor Road (West) Entry Right	U	N/A	N/A	C		1	15	-	262	1800	320	81.9%
3/1	A611 Derby Road (North) Entry Ahead Left	U	N/A	N/A	B		1	43	-	1183	1900	929	127.4%
3/2	A611 Derby Road (North) Entry Right	U	N/A	N/A	F		1	7	-	0	1800	160	0.0%
4/1	B6139 Coxmoor Road (East) Entry Left Ahead	U	N/A	N/A	D		1	7	-	197	1900	169	116.6%
4/2	B6139 Coxmoor Road (East) Entry Ahead Right	U	N/A	N/A	D		1	7	-	183	1800	160	114.4%
5/1	A611 Derby Road (South) Exit	U	N/A	N/A	-		-	-	-	1446	1900	1900	62.7%
6/1	B8139 Coxmoor Road (West) Exit	U	N/A	N/A	-		-	-	-	784	1900	1900	27.2%
7/1	A611 Derby Road (North) Exit	U	N/A	N/A	-		-	-	-	1280	1900	1900	32.1%
8/1	B6139 Coxmoor Road (East) Exit	U	N/A	N/A	-		-	-	-	362	1900	1900	9.1%

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	**-**	**-**	**0**	**0**	**0**	**94.9**	**704.2**	**0.0**	**799.0**	**-**	**-**	**-**	**-**
A611 Derby Road/B6139 Coxmoor Road Junction	**-**	**-**	**0**	**0**	**0**	**94.9**	**704.2**	**0.0**	**799.0**	**-**	**-**	**-**	**-**
1/1	1330	633	-	-	-	41.2	349.3	-	390.5	1056.9	53.3	349.3	402.6
2/1	717	338	-	-	-	26.0	190.6	-	216.6	1087.3	34.3	190.6	224.8
2/2	262	262	-	-	-	2.6	2.1	-	4.7	64.5	6.3	2.1	8.4
3/1	1183	929	-	-	-	18.0	129.3	-	147.4	448.5	35.9	129.3	165.3
3/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	197	169	-	-	-	3.7	17.0	-	20.6	376.8	6.2	17.0	23.1
4/2	183	160	-	-	-	3.2	14.6	-	17.9	351.6	5.6	14.6	20.2
5/1	1192	1192	-	-	-	0.0	0.8	-	0.8	2.5	0.0	0.8	0.8
6/1	517	517	-	-	-	0.1	0.2	-	0.3	2.2	7.0	0.2	7.2
7/1	609	609	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
8/1	172	172	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -135.9 Total Delay for Signalled Lanes (pcuHr): 797.59 Cycle Time (s): 90
PRC Over All Lanes (%): -135.9 Total Delay Over All Lanes(pcuHr): 799.04

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]
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Filename: Junction 13 2016.arc8
Path: J:\MID\4300\MID4354 - Ashfield Junction Assessments\CALCULATIONS\DATA\Ashfield_Junction_Assessment_Information\Junction 13 - Chapel Lane B6020 Church Street B6018 ARCADY
Report generation date: 30/08/2016 17:03:30

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS

	A1 - 2032 Reference Case Morning Peak			
B6020 Chapel Street	100.66	492.92	1.23	F
B6018 Church Street	80.09	229.41	1.12	F
B6018 Sutton Road	205.63	796.31	1.35	F

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

"D1 - 2032 Reference Case Morning Peak, AM " model duration: 07:45 - 09:15
"D2 - 2032 Reference Case Evening Peak, PM" model duration: 16:45 - 18:15
"D3 - 2032 Development Scenario Morning Peak, AM" model duration: 07:45 - 09:15
"D4 - 2032 Development Scenario Evening Peak, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.4.487 at 30/08/2016 17:03:24

File summary

Title	B6018 Sutton Road/B6020 Chapel Street
Location	Kirkby-in-Ashfield
Site Number	13
Date	21/06/2016
Version	1
Status	(new file)

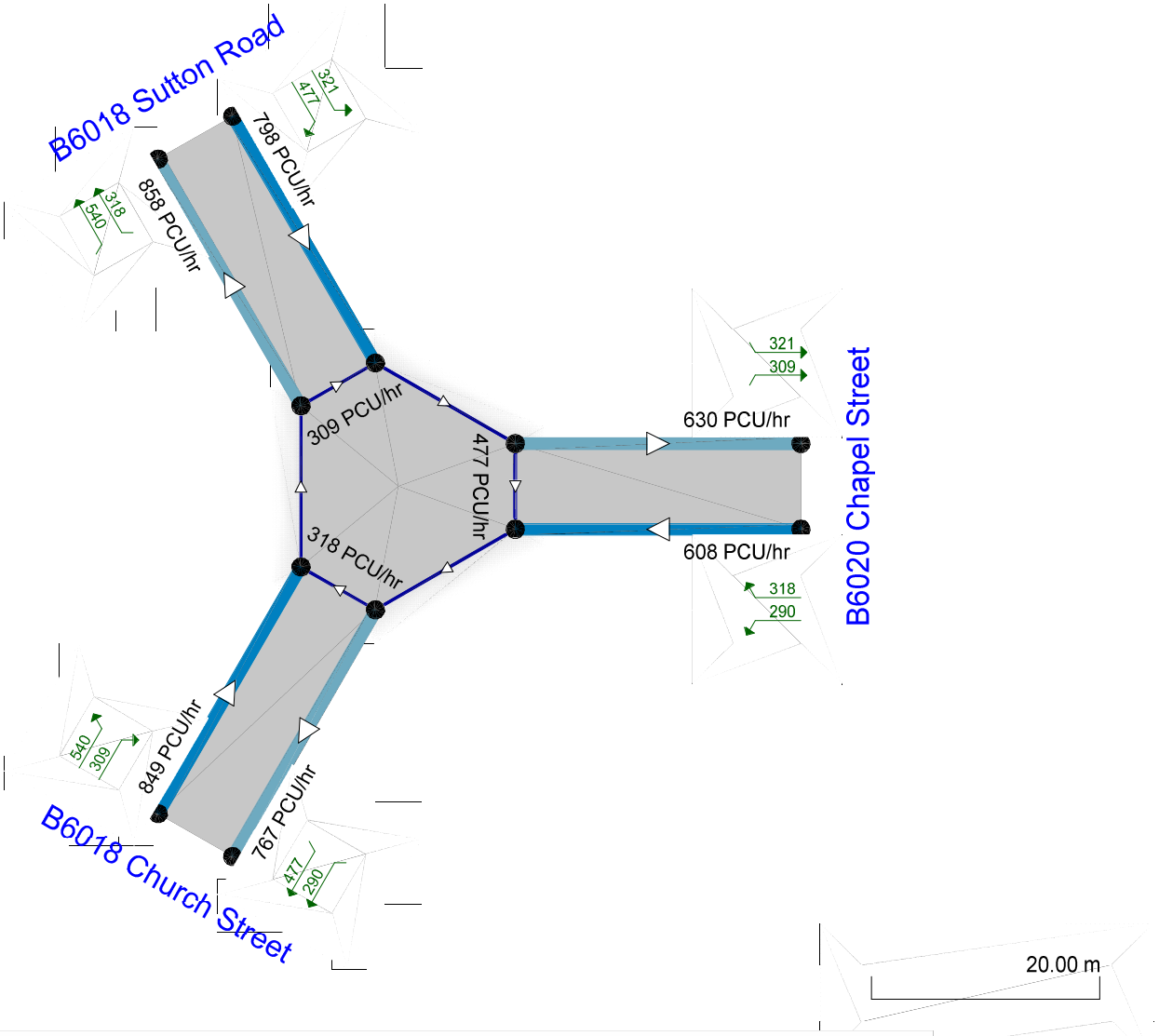
Identifier	
Client	
Jobnumber	
Enumerator	noram
Description	

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 modelled flow through junction (PCU/hr).

Time Segment: (07:45-08:00)

Showing Analysis Set "A1 "; Demand Set "D1 - 2032 Reference Case Morning Peak, AM "

The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2032 Reference Case Morning Peak, 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
(Default Analysis Set)	ARCADY			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
2032 Reference Case Morning Peak, AM	2032 Reference Case Morning Peak	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	B6018 Sutton Road/B6020 Chapel Street Roundabout	Mini-roundabout	1,2,3	502.55	F

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Name	Arm	Name	Description
B6020 Chapel Street	1	B6020 Chapel Street	
B6018 Church Street	2	B6018 Church Street	
B6018 Sutton Road	3	B6018 Sutton Road	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
B6020 Chapel Street	0.00	99999.00
B6018 Church Street	0.00	99999.00
B6018 Sutton Road	0.00	99999.00

Mini Roundabout Geometry

Name	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
B6020 Chapel Street	3.00	3.00	4.00	16.00	5.00	2.00	0.00	
B6018 Church Street	3.00	3.00	6.00	38.00	5.00	2.00	0.00	
B6018 Sutton Road	4.00	3.00	5.00	30.00	5.00	2.00	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
B6020 Chapel Street		(calculated)	(calculated)	0.546	1031.609
B6018 Church Street		(calculated)	(calculated)	0.624	1361.112
B6018 Sutton Road		(calculated)	(calculated)	0.586	1125.978

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

Traffic Flows

Demand Set Data Options

Default Vehicle	Vehicle Mix Varies Over	Vehicle Mix Varies Over	Vehicle Mix Varies Over	Vehicle Mix Source	PCU Factor for a HV	Default Turning Proportions	Estimate from entry/exit	Turning Proportions Vary	Turning Proportions Vary	Turning Proportions Vary

Mix	Time	Turn	Entry		(PCU)		counts	Over Time	Over Turn	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 (%)
B6020 Chapel Street	ONE HOUR	✓	827.00	100.000
B6018 Church Street	ONE HOUR	✓	1142.00	100.000
B6018 Sutton Road	ONE HOUR	✓	1089.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - B6018 Sutton Road/ B6020 Chapel Street Roundabout (for whole period)

		To		
		B6020 Chapel Street	**B6018 Church Street**	**B6018 Sutton Road**
From	**B6020 Chapel Street**	0.000	394.000	433.000
	B6018 Church Street	416.000	0.000	726.000

	B6018 Sutton Road	438.000	651.000	0.000

Turning Proportions (PCU) - B6018 Sutton Road/ B6020 Chapel Street Roundabout (for whole period)

		To		
		B6020 Chapel Street	**B6018 Church Street**	**B6018 Sutton Road**
From	**B6020 Chapel Street**	0.00	0.48	0.52
	B6018 Church Street	0.36	0.00	0.64
	B6018 Sutton Road	0.40	0.60	0.00

Vehicle Mix

Average PCU Per Vehicle - B6018 Sutton Road/ B6020 Chapel Street Roundabout (for whole period)

		To		
		B6020 Chapel Street	**B6018 Church Street**	**B6018 Sutton Road**
From	**B6020 Chapel Street**	1.000	1.000	1.000
	B6018 Church Street	1.000	1.000	1.000
	B6018 Sutton Road	1.000	1.000	1.000

Heavy Vehicle Percentages - B6018 Sutton Road/ B6020 Chapel Street Roundabout (for whole period)

	To			
From		B6020 Chapel Street	B6018 Church Street	B6018 Sutton Road
	B6020 Chapel Street	0.0	0.0	0.0
	B6018 Church Street	0.0	0.0	0.0
	B6018 Sutton Road	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B6020 Chapel Street	1.23	492.92	100.66	F
B6018 Church Street	1.12	229.41	80.09	F
B6018 Sutton Road	1.35	796.31	205.63	F

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6020 Chapel Street	622.61	607.74	477.08	0.00	771.25	0.807	3.72	20.484	C
B6018 Church Street	859.76	848.93	318.20	0.00	1162.61	0.740	2.71	11.124	B
B6018 Sutton Road	819.86	798.07	309.24	0.00	944.61	0.868	5.45	22.072	C

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6020 Chapel Street	743.46	702.05	532.21	0.00	741.16	1.003	14.07	60.456	F
B6018 Church Street	1026.63	1007.56	367.58	0.00	1131.81	0.907	7.48	25.689	D
B6018 Sutton Road	978.99	890.28	367.03	0.00	910.72	1.075	27.62	81.312	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6020 Chapel Street	910.54	738.43	531.06	0.00	741.79	1.228	57.10	187.156	F

B6018 Church Street	1257.37	1107.50	386.63	0.00	1119.93	1.123	44.94	97.341	F
B6018 Sutton Road	1199.01	888.36	403.43	0.00	889.37	1.348	105.28	279.234	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6020 Chapel Street	910.54	741.55	530.38	0.00	742.16	1.227	99.35	389.619	F
B6018 Church Street	1257.37	1116.77	388.26	0.00	1118.91	1.124	80.09	210.344	F
B6018 Sutton Road	1199.01	887.22	406.81	0.00	887.39	1.351	183.23	591.702	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6020 Chapel Street	743.46	738.19	531.69	0.00	741.45	1.003	100.66	492.920	F
B6018 Church Street	1026.63	1106.19	386.50	0.00	1120.00	0.917	60.20	229.411	F
B6018 Sutton Road	978.99	889.42	402.96	0.00	889.65	1.100	205.63	791.069	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6020 Chapel Street	622.61	733.91	532.14	0.00	741.20	0.840	72.84	426.893	F
B6018 Church Street	859.76	1083.49	384.26	0.00	1121.40	0.767	4.27	105.210	F
B6018 Sutton Road	819.86	890.17	394.69	0.00	894.50	0.917	188.05	796.309	F

(Default Analysis Set) - 2032 Reference Case Evening Peak, 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
(Default Analysis Set)	ARCADY			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
2032 Reference Case Evening Peak, PM	2032 Reference Case Evening Peak	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	B6018 Sutton Road/B6020 Chapel Street Roundabout	Mini-roundabout	1,2,3	727.90	F

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Name	Arm	Name	Description
B6020 Chapel Street	1	B6020 Chapel Street	
B6018 Church Street	2	B6018 Church Street	
B6018 Sutton Road	3	B6018 Sutton Road	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)

B6020 Chapel Street	0.00	99999.00
B6018 Church Street	0.00	99999.00
B6018 Sutton Road	0.00	99999.00

Mini Roundabout Geometry

Name	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
B6020 Chapel Street	3.00	3.00	4.00	16.00	5.00	2.00	0.00	
B6018 Church Street	3.00	3.00	6.00	38.00	5.00	2.00	0.00	
B6018 Sutton Road	4.00	3.00	5.00	30.00	5.00	2.00	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
B6020 Chapel Street		(calculated)	(calculated)	0.546	1031.609
B6018 Church Street		(calculated)	(calculated)	0.624	1361.112
B6018 Sutton Road		(calculated)	(calculated)	0.586	1125.978

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
B6020 Chapel Street	ONE HOUR	✓	809.00	100.000
B6018 Church Street	ONE HOUR	✓	945.00	100.000
B6018 Sutton Road	ONE HOUR	✓	1305.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - B6018 Sutton Road/ B6020 Chapel Street Roundabout (for whole period)

	To

		B6020 Chapel Street	B6018 Church Street	B6018 Sutton Road
From	B6020 Chapel Street	0.000	324.000	485.000
	B6018 Church Street	306.000	0.000	639.000
	B6018 Sutton Road	527.000	778.000	0.000

Turning Proportions (PCU) - B6018 Sutton Road/ B6020 Chapel Street Roundabout (for whole period)

	To			
From		B6020 Chapel Street	B6018 Church Street	B6018 Sutton Road
	B6020 Chapel Street	0.00	0.40	0.60
	B6018 Church Street	0.32	0.00	0.68
	B6018 Sutton Road	0.40	0.60	0.00

Vehicle Mix

Average PCU Per Vehicle - B6018 Sutton Road/ B6020 Chapel Street Roundabout (for whole period)

	To			
From		B6020 Chapel Street	B6018 Church Street	B6018 Sutton Road
	B6020 Chapel Street	1.000	1.000	1.000

	B6018 Church Street	1.000	1.000	1.000
	B6018 Sutton Road	1.000	1.000	1.000

Heavy Vehicle Percentages - B6018 Sutton Road/ B6020 Chapel Street Roundabout (for whole period)

	To			
From		**B6020 Chapel Street**	**B6018 Church Street**	**B6018 Sutton Road**
	B6020 Chapel Street	0.0	0.0	0.0
	B6018 Church Street	0.0	0.0	0.0
	B6018 Sutton Road	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B6020 Chapel Street	1.22	501.43	99.53	F
B6018 Church Street	0.96	49.60	13.52	E
B6018 Sutton Road	1.54	1359.47	373.19	F

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6020 Chapel Street	609.06	591.94	552.19	0.00	730.26	0.834	4.28	23.729	C
B6018 Church Street	711.45	704.96	354.87	0.00	1139.74	0.624	1.62	8.163	A
B6018 Sutton Road	982.47	926.23	228.27	0.00	992.10	0.990	14.06	40.043	E

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6020 Chapel Street	727.27	684.47	573.45	0.00	718.65	1.012	14.98	65.954	F
B6018 Church Street	849.54	843.50	410.34	0.00	1105.13	0.769	3.13	13.451	B
B6018 Sutton Road	1173.17	961.90	273.13	0.00	965.79	1.215	66.88	164.092	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6020 Chapel Street	890.73	724.49	556.90	0.00	727.68	1.224	56.54	191.446	F
B6018 Church Street	1040.46	1009.13	434.33	0.00	1090.17	0.954	10.96	35.262	E
B6018 Sutton Road	1436.83	934.14	326.77	0.00	934.33	1.538	192.55	507.848	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6020 Chapel Street	890.73	728.31	554.61	0.00	728.94	1.222	97.15	391.079	F
B6018 Church Street	1040.46	1030.23	436.62	0.00	1088.74	0.956	13.52	49.601	E
B6018 Sutton Road	1436.83	930.28	333.60	0.00	930.33	1.544	319.19	979.046	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6020 Chapel Street	727.27	717.72	570.64	0.00	720.19	1.010	99.53	501.428	F
B6018 Church	849.54	888.59	430.28	0.00	1092.70	0.777	3.76	20.395	C

Street									
B6018 Sutton Road	1173.17	957.18	287.73	0.00	957.23	1.226	373.19	1293.762	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6020 Chapel Street	609.06	703.48	588.30	0.00	710.55	0.857	75.93	450.149	F
B6018 Church Street	711.45	718.92	421.74	0.00	1098.02	0.648	1.89	9.674	A
B6018 Sutton Road	982.47	986.80	232.79	0.00	989.45	0.993	372.10	1359.467	F

(Default Analysis Set) - 2032 Development Scenario Morning Peak, 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
(Default Analysis Set)	ARCADY			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
2032 Development Scenario Morning Peak, AM	2032 Development Scenario Morning Peak	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	B6018 Sutton Road/B6020 Chapel Street Roundabout	Mini-roundabout	1,2,3	1326.60	F

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Name	Arm	Name	Description

B6020 Chapel Street	1	B6020 Chapel Street	
B6018 Church Street	2	B6018 Church Street	
B6018 Sutton Road	3	B6018 Sutton Road	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
B6020 Chapel Street	0.00	99999.00
B6018 Church Street	0.00	99999.00
B6018 Sutton Road	0.00	99999.00

Mini Roundabout Geometry

Name	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
B6020 Chapel Street	3.00	3.00	4.00	16.00	5.00	2.00	0.00	
B6018 Church Street	3.00	3.00	6.00	38.00	5.00	2.00	0.00	
B6018 Sutton Road	4.00	3.00	5.00	30.00	5.00	2.00	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
B6020 Chapel Street		(calculated)	(calculated)	0.546	1031.609
B6018 Church Street		(calculated)	(calculated)	0.624	1361.112
B6018 Sutton Road		(calculated)	(calculated)	0.586	1125.978

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
B6020 Chapel Street	ONE HOUR	✓	867.00	100.000

B6018 Church Street	ONE HOUR	✓	1212.00	100.000
B6018 Sutton Road	ONE HOUR	✓	1467.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - B6018 Sutton Road/ B6020 Chapel Street Roundabout (for whole period)

		To		
		B6020 Chapel Street	**B6018 Church Street**	**B6018 Sutton Road**
From	**B6020 Chapel Street**	0.000	374.000	493.000
	B6018 Church Street	403.000	0.000	809.000
	B6018 Sutton Road	604.000	863.000	0.000

Turning Proportions (PCU) - B6018 Sutton Road/ B6020 Chapel Street Roundabout (for whole period)

		To		
		B6020 Chapel Street	**B6018 Church Street**	**B6018 Sutton Road**
From	**B6020 Chapel Street**	0.00	0.43	0.57
	B6018 Church Street	0.33	0.00	0.67
	B6018 Sutton Road	0.41	0.59	0.00

Vehicle Mix

Average PCU Per Vehicle - B6018 Sutton Road/ B6020 Chapel Street Roundabout (for whole period)

	To			
From		B6020 Chapel Street	B6018 Church Street	B6018 Sutton Road
	B6020 Chapel Street	1.000	1.000	1.000
	B6018 Church Street	1.000	1.000	1.000
	B6018 Sutton Road	1.000	1.000	1.000

Heavy Vehicle Percentages - B6018 Sutton Road/ B6020 Chapel Street Roundabout (for whole period)

	To			
From		B6020 Chapel Street	B6018 Church Street	B6018 Sutton Road
	B6020 Chapel Street	0.0	0.0	0.0
	B6018 Church Street	0.0	0.0	0.0
	B6018 Sutton Road	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B6020 Chapel Street	1.29	668.52	140.73	F
B6018 Church Street	1.21	438.29	133.10	F
B6018 Sutton Road	1.77	2449.43	643.88	F

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6020 Chapel Street	652.72	628.66	546.90	0.00	733.14	0.890	6.02	29.772	D
B6018 Church Street	912.46	897.53	357.47	0.00	1138.11	0.802	3.73	14.197	B
B6018 Sutton Road	1104.43	929.67	298.44	0.00	950.95	1.161	43.69	94.872	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS

B6020 Chapel Street	779.42	715.58	542.04	0.00	735.80	1.059	21.98	86.440	F
B6018 Church Street	1089.56	1046.74	406.90	0.00	1107.28	0.984	14.44	42.568	E
B6018 Sutton Road	1318.80	921.40	348.05	0.00	921.85	1.431	143.04	374.313	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6020 Chapel Street	954.58	737.19	536.66	0.00	738.73	1.292	76.33	252.137	F
B6018 Church Street	1334.44	1095.66	419.18	0.00	1099.62	1.214	74.13	156.083	F
B6018 Sutton Road	1615.20	912.27	364.32	0.00	912.31	1.770	318.77	917.260	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6020 Chapel Street	954.58	738.60	536.35	0.00	738.90	1.292	130.32	512.499	F
B6018 Church Street	1334.44	1098.55	419.99	0.00	1099.11	1.214	133.10	346.651	F
B6018 Sutton Road	1615.20	911.73	365.28	0.00	911.75	1.772	494.64	1610.911	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6020 Chapel Street	779.42	737.77	537.34	0.00	738.36	1.056	140.73	668.518	F
B6018 Church Street	1089.56	1089.98	419.51	0.00	1099.41	0.991	133.00	438.292	F
B6018 Sutton Road	1318.80	913.41	362.43	0.00	913.42	1.444	595.99	2154.720	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6020 Chapel Street	652.72	733.33	537.01	0.00	738.54	0.884	120.58	642.006	F
B6018 Church Street	912.46	1092.77	416.99	0.00	1100.98	0.829	87.92	365.119	F
B6018 Sutton Road	1104.43	912.86	363.35	0.00	912.87	1.210	643.88	2449.431	F

(Default Analysis Set) - 2032 Development Scenario Evening Peak, 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
(Default Analysis Set)	ARCADY			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
2032 Development Scenario Evening Peak, PM	2032 Development Scenario Evening Peak	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	B6018 Sutton Road/B6020 Chapel Street Roundabout	Mini-roundabout	1,2,3	1544.91	F

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Name	Arm	Name	Description
B6020 Chapel Street	1	B6020 Chapel Street	
B6018 Church Street	2	B6018 Church Street	
B6018 Sutton Road	3	B6018 Sutton Road	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
B6020 Chapel Street	0.00	99999.00
B6018 Church Street	0.00	99999.00
B6018 Sutton Road	0.00	99999.00

Mini Roundabout Geometry

Name	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
B6020 Chapel Street	3.00	3.00	4.00	16.00	5.00	2.00	0.00	
B6018 Church	3.00	3.00	6.00	38.00	5.00	2.00	0.00	

Street								
B6018 Sutton Road	4.00	3.00	5.00	30.00	5.00	2.00	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
B6020 Chapel Street		(calculated)	(calculated)	0.546	1031.609
B6018 Church Street		(calculated)	(calculated)	0.624	1361.112
B6018 Sutton Road		(calculated)	(calculated)	0.586	1125.978

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
B6020 Chapel Street	ONE HOUR	✓	954.00	100.000
B6018 Church Street	ONE HOUR	✓	1147.00	100.000
B6018 Sutton Road	ONE HOUR	✓	1565.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - B6018 Sutton Road/ B6020 Chapel Street Roundabout (for whole period)

		To		
		B6020 Chapel Street	**B6018 Church Street**	**B6018 Sutton Road**
From	**B6020 Chapel Street**	0.000	329.000	625.000
	B6018 Church Street	312.000	0.000	835.000
	B6018 Sutton Road	628.000	937.000	0.000

Turning Proportions (PCU) - B6018 Sutton Road/ B6020 Chapel Street Roundabout (for whole period)

	To

		B6020 Chapel Street	B6018 Church Street	B6018 Sutton Road
From	B6020 Chapel Street	0.00	0.34	0.66
	B6018 Church Street	0.27	0.00	0.73
	B6018 Sutton Road	0.40	0.60	0.00

Vehicle Mix

Average PCU Per Vehicle - B6018 Sutton Road/ B6020 Chapel Street Roundabout (for whole period)

	To			
From		B6020 Chapel Street	B6018 Church Street	B6018 Sutton Road
	B6020 Chapel Street	1.000	1.000	1.000
	B6018 Church Street	1.000	1.000	1.000
	B6018 Sutton Road	1.000	1.000	1.000

Heavy Vehicle Percentages - B6018 Sutton Road/ B6020 Chapel Street Roundabout (for whole period)

	To			
From		B6020 Chapel Street	B6018 Church Street	B6018 Sutton Road
	B6020 Chapel Street	0.0	0.0	0.0

	B6018 Church Street	0.0	0.0	0.0
	B6018 Sutton Road	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B6020 Chapel Street	1.46	1259.91	250.54	F
B6018 Church Street	1.18	367.48	111.27	F
B6018 Sutton Road	1.80	2581.58	712.88	F

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6020 Chapel Street	718.22	664.57	581.75	0.00	714.12	1.006	13.41	51.587	F

B6018 Church Street	863.52	849.37	435.39	0.00	1089.51	0.793	3.54	14.257	B
B6018 Sutton Road	1178.21	971.66	231.04	0.00	990.47	1.190	51.64	104.978	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6020 Chapel Street	857.63	711.74	578.63	0.00	715.83	1.198	49.88	174.439	F
B6018 Church Street	1031.13	997.89	466.28	0.00	1070.23	0.963	11.85	38.320	E
B6018 Sutton Road	1406.90	966.44	271.44	0.00	966.78	1.455	161.75	406.516	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6020 Chapel Street	1050.37	718.74	572.71	0.00	719.06	1.461	132.79	466.872	F
B6018 Church Street	1262.87	1061.72	470.87	0.00	1067.37	1.183	62.13	136.844	F
B6018 Sutton Road	1723.10	956.56	288.80	0.00	956.60	1.801	353.39	975.151	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6020 Chapel Street	1050.37	719.21	572.29	0.00	719.29	1.460	215.58	879.598	F
B6018 Church Street	1262.87	1066.32	471.18	0.00	1067.18	1.183	111.27	300.528	F
B6018 Sutton Road	1723.10	955.85	290.05	0.00	955.86	1.803	545.20	1696.904	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6020 Chapel Street	857.63	718.77	573.10	0.00	718.85	1.193	250.30	1173.455	F
B6018 Church Street	1031.13	1057.85	470.89	0.00	1067.36	0.966	104.59	367.477	F
B6018 Sutton Road	1406.90	957.21	287.75	0.00	957.21	1.470	657.62	2266.365	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6020 Chapel Street	718.22	717.24	573.10	0.00	718.85	0.999	250.54	1259.906	F
B6018 Church	863.52	1057.87	469.89	0.00	1067.99	0.809	56.00	275.280	F

Street									
B6018 Sutton Road	1178.21	957.20	287.76	0.00	957.21	1.231	712.88	2581.584	F

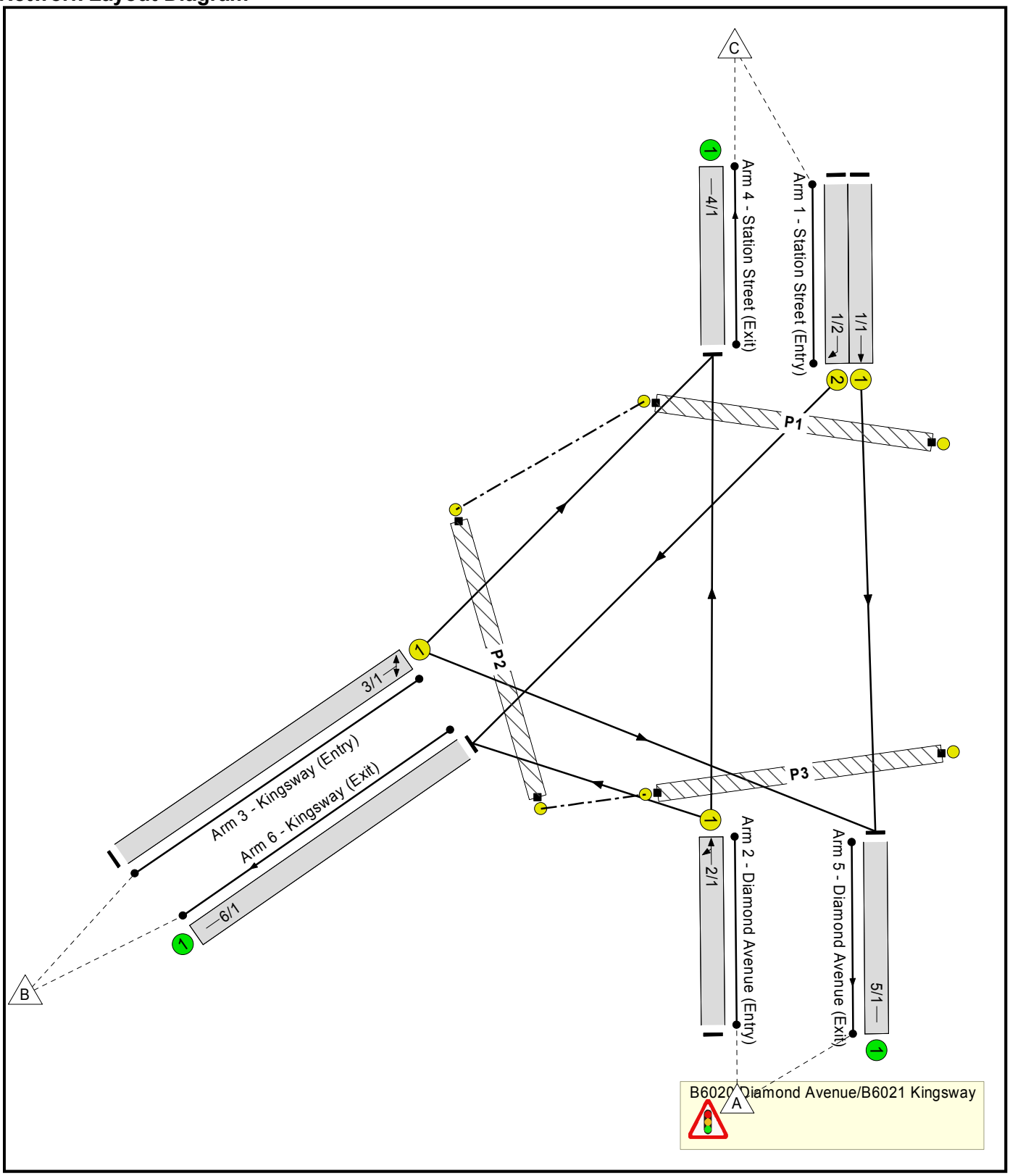
Full Input Data And Results

User and Project Details

Project:	
Title:	
Location:	
File name:	Junction 14 2016.lsg3x
Author:	
Company:	
Address:	
Notes:	

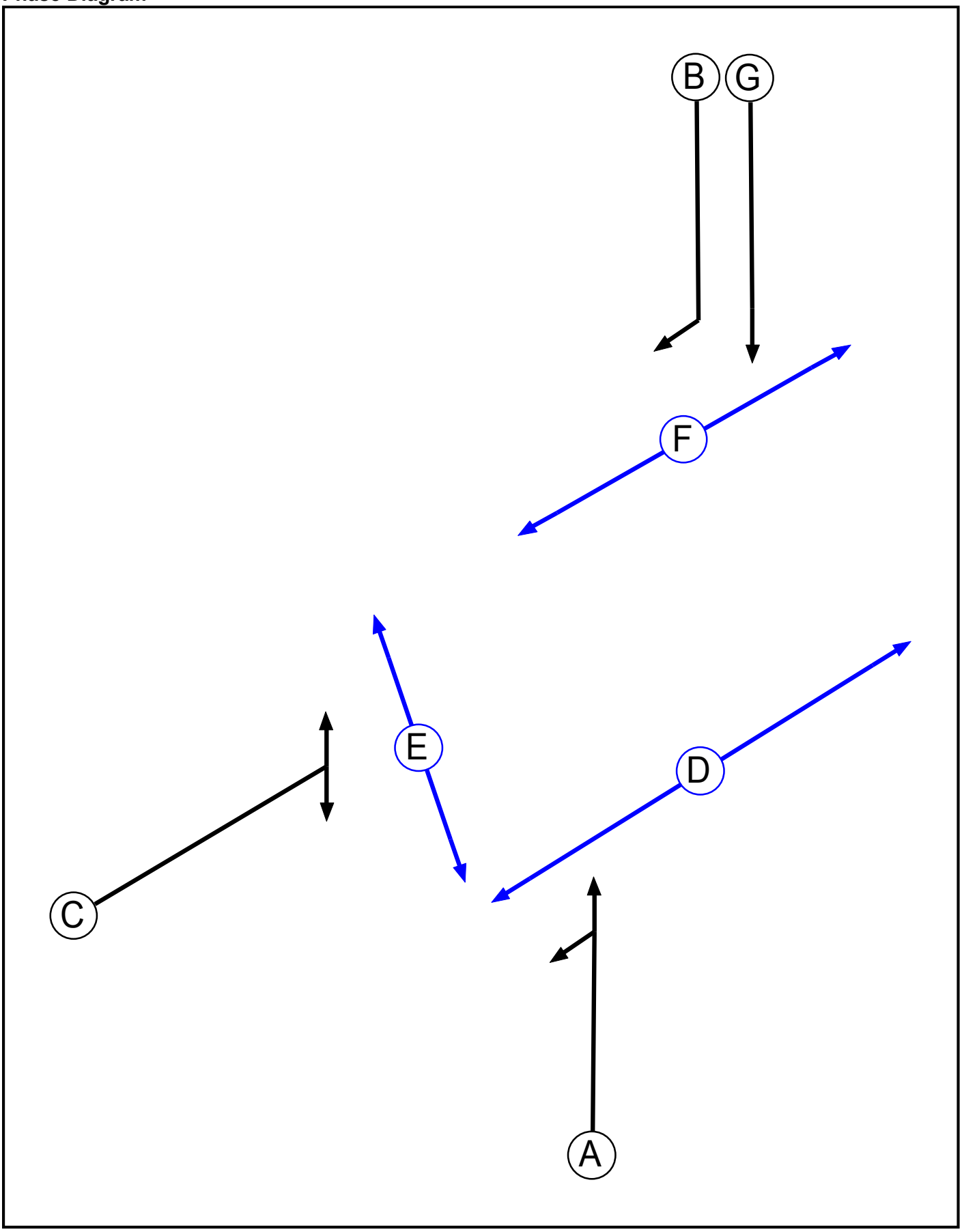
Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

Phase Input Data

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

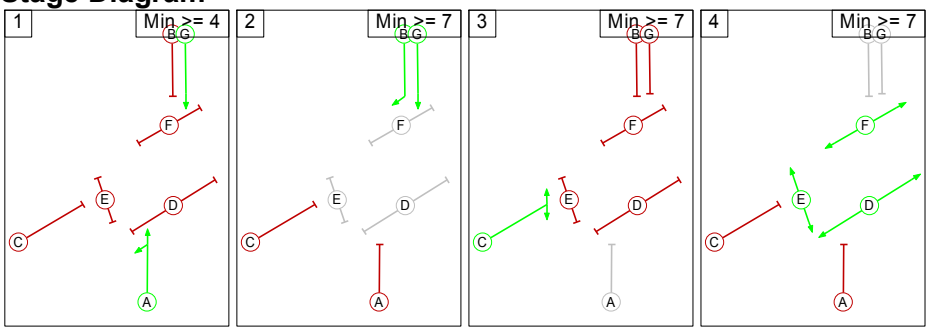
Phase Intergreens Matrix

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

Phases in Stage

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

Stage Diagram



Phase Delays

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

Full Input Data And Results

Prohibited Stage Change

		To Stage			
		1	2	3	4
From Stage	1		5	5	5
	2	2		5	0
	3	5	5		5
	4	5	2	7	

Full Input Data And Results

Give-Way Lane Input Data

Junction: B6020 Diamond Avenue/B6021 Kingsway
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: B6020 Diamond Avenue/B6021 Kingsway												
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 (Station Street (Entry))	U	G	2	3	60.0	User	2000	-	-	-	-	-
1/2 (Station Street (Entry))	U	B	2	3	15.7	User	1800	-	-	-	-	-
2/1 (Diamond Avenue (Entry))	U	A	2	3	60.0	User	1950	-	-	-	-	-
3/1 (Kingsway (Entry))	U	C	2	3	60.0	User	1800	-	-	-	-	-
4/1 (Station Street (Exit))	U		2	3	60.0	User	1800	-	-	-	-	-
5/1 (Diamond Avenue (Exit))	U		2	3	60.0	User	1800	-	-	-	-	-
6/1 (Kingsway (Exit))	U		2	3	60.0	User	1800	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2032 Reference Case Morning Peak'	08:00	09:00	01:00	
2: '2032 Development Case Morning Peak'	08:00	09:00	01:00	
3: '2032 Reference Case Evening Peak'	17:00	18:00	01:00	
4: '2032 Development Case Evening Peak'	17:00	18:00	01:00	

Scenario 1: 'AM Reference Case' (FG1: '2032 Reference Case Morning Peak', Plan 1: 'Signal Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	105	609	714
	B	160	0	308	468
	C	1006	371	0	1377
	Tot.	1166	476	917	2559

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: AM Reference Case
Junction: B6020 Diamond Avenue/B6021 Kingsway	
1/1	1006
1/2	371
2/1	714
3/1	468
4/1	917
5/1	1166
6/1	476

Lane Saturation Flows

Junction: B6020 Diamond Avenue/B6021 Kingsway								
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 (Station Street (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
1/2 (Station Street (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Diamond Avenue (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
3/1 (Kingsway (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Station Street (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (Diamond Avenue (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (Kingsway (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case Evening Peak', Plan 1: 'Signal Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	61	708	769
	B	116	0	482	598
	C	921	330	0	1251
	Tot.	1037	391	1190	2618

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM Reference Case
Junction: B6020 Diamond Avenue/B6021 Kingsway	
1/1	921
1/2	330
2/1	769
3/1	598
4/1	1190
5/1	1037
6/1	391

Lane Saturation Flows

Junction: B6020 Diamond Avenue/B6021 Kingsway								
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 (Station Street (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
1/2 (Station Street (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Diamond Avenue (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
3/1 (Kingsway (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Station Street (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (Diamond Avenue (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (Kingsway (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Signal Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	125	777	902
	B	178	0	338	516
	C	1090	373	0	1463
	Tot.	1268	498	1115	2881

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: AM Development Scenario
Junction: B6020 Diamond Avenue/B6021 Kingsway	
1/1	1090
1/2	373
2/1	902
3/1	516
4/1	1115
5/1	1268
6/1	498

Lane Saturation Flows

Junction: B6020 Diamond Avenue/B6021 Kingsway								
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 (Station Street (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
1/2 (Station Street (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Diamond Avenue (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
3/1 (Kingsway (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Station Street (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (Diamond Avenue (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (Kingsway (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Signal Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	83	821	904
	B	150	0	490	640
	C	1083	360	0	1443
	Tot.	1233	443	1311	2987

Full Input Data And Results

Traffic Lane Flows

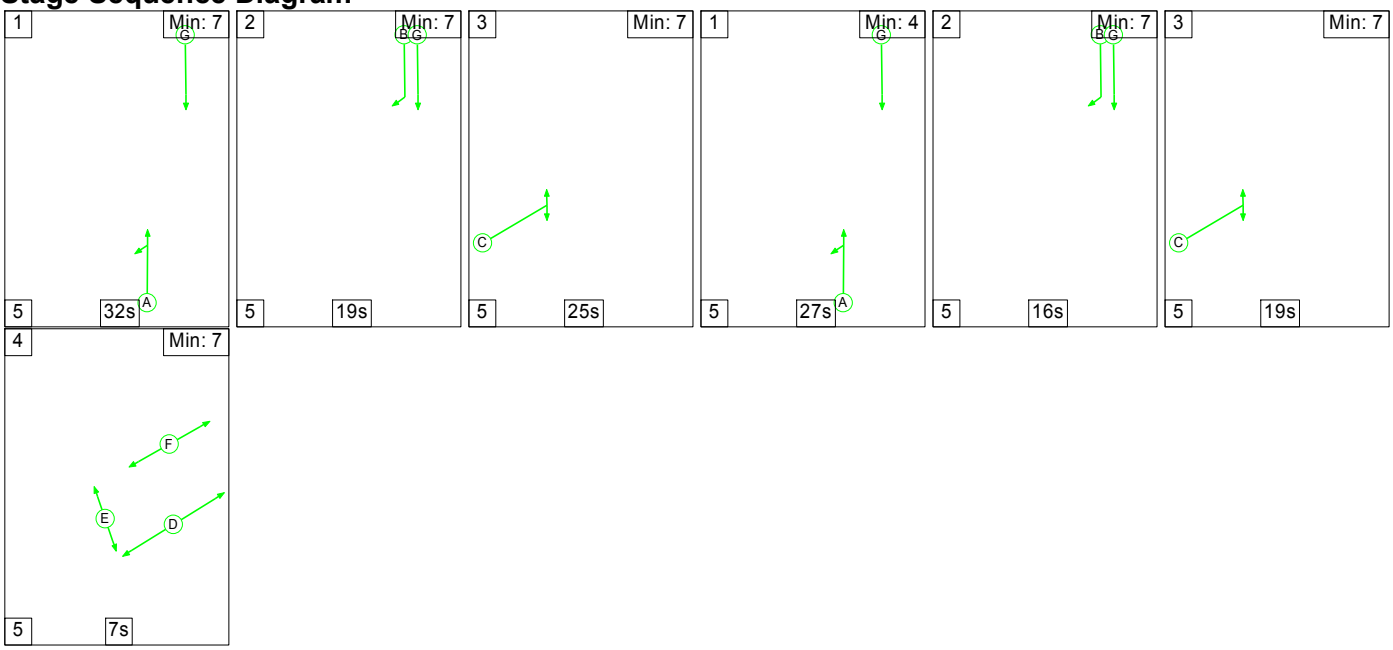
Lane	Scenario 4: PM Development Scenario
Junction: B6020 Diamond Avenue/B6021 Kingsway	
1/1	1083
1/2	360
2/1	904
3/1	640
4/1	1311
5/1	1233
6/1	443

Lane Saturation Flows

Junction: B6020 Diamond Avenue/B6021 Kingsway								
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 (Station Street (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
1/2 (Station Street (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Diamond Avenue (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
3/1 (Kingsway (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Station Street (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (Diamond Avenue (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (Kingsway (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 1: 'AM Reference Case' (FG1: '2032 Reference Case Morning Peak', Plan 1: 'Signal Plan No. 1')

Stage Sequence Diagram

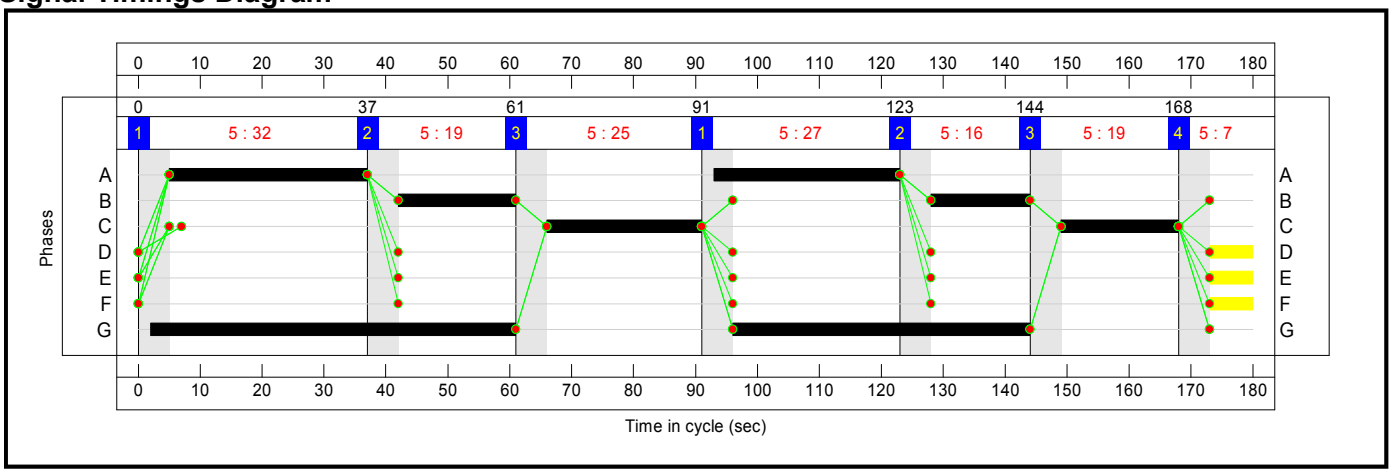


Full Input Data And Results

Stage Timings

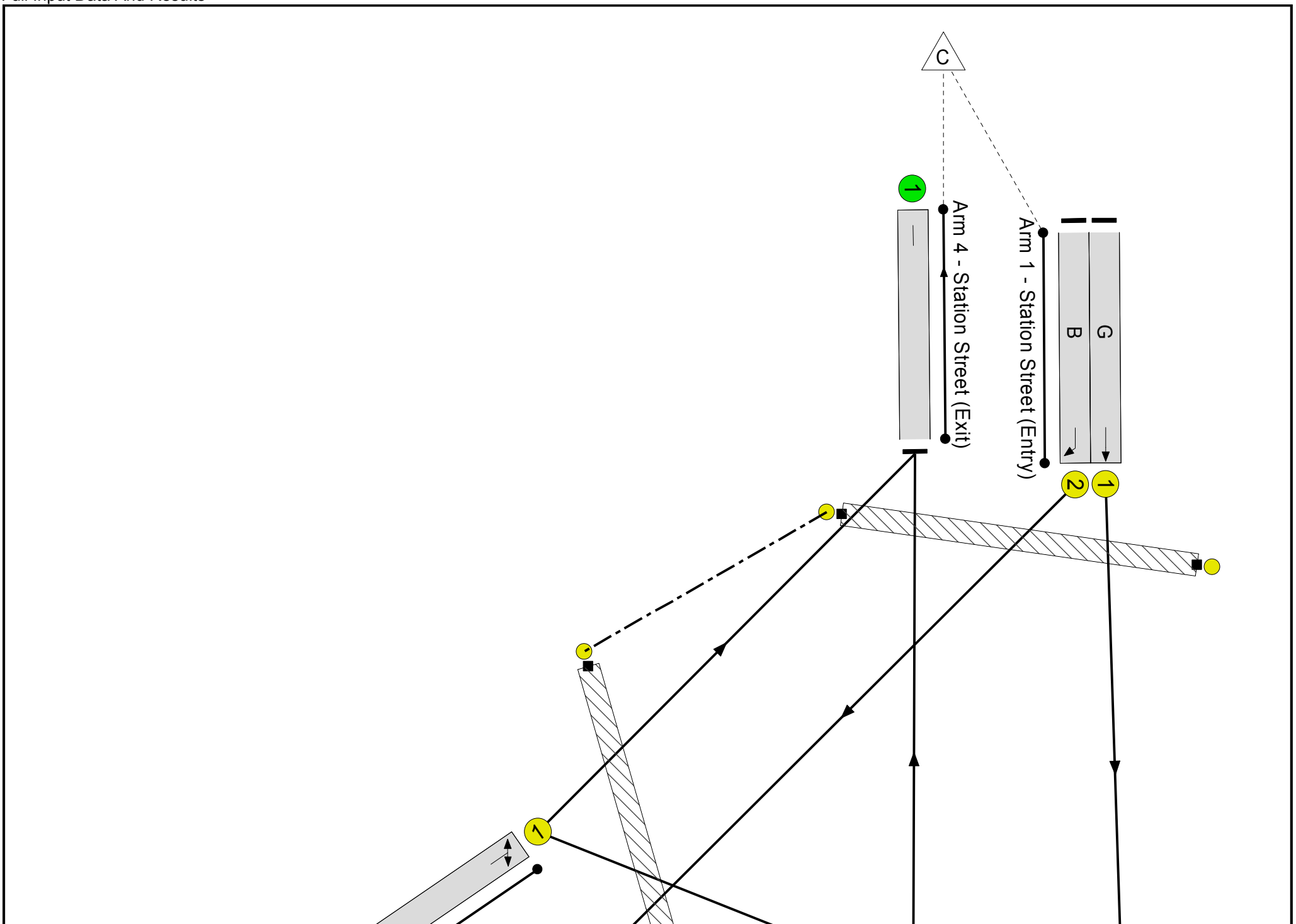
Stage	1	2	3	1	2	3	4
Duration	32	19	25	27	16	19	7
Change Point	0	37	61	91	123	144	168

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**103.0%**
B6020 Diamond Avenue/B6021 Kingsway	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**103.0%**
1/1	Station Street (Entry) Ahead	U	N/A	N/A	G		2	107	-	1006	2000	1211	83.1%
1/2	Station Street (Entry) Right	U	N/A	N/A	B		2	35	-	371	1800	370	100.3%
2/1	Diamond Avenue (Entry) Ahead Left	U	N/A	N/A	A		2	62	-	714	1950	693	103.0%
3/1	Kingsway (Entry) Left Right	U	N/A	N/A	C		2	44	-	468	1800	460	101.7%
4/1	Station Street (Exit)	U	N/A	N/A	-		-	-	-	917	1800	1800	49.7%
5/1	Diamond Avenue (Exit)	U	N/A	N/A	-		-	-	-	1166	1800	1800	64.6%
6/1	Kingsway (Exit)	U	N/A	N/A	-		-	-	-	476	1800	1800	26.2%
Ped Link: P1	Station Street Crossing	-	N/A	-	F		1	7	-	0	-	0	0.0%
Ped Link: P2	Kingsway Crossing	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P3	Diamond Avenue Crossing	-	N/A	-	D		1	7	-	0	-	0	0.0%

Full Input Data And Results

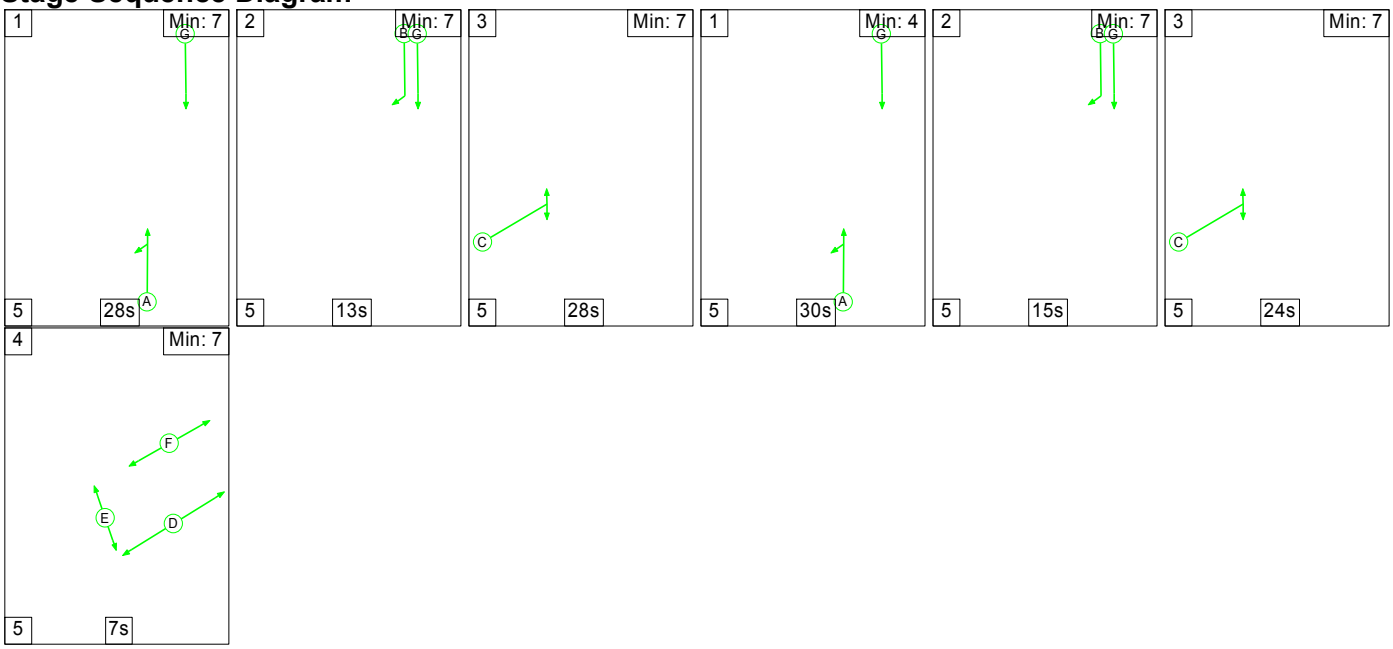
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**21.0**	**46.4**	**0.0**	**67.3**	**-**	**-**	**-**	**-**
B6020 Diamond Avenue/B6021 Kingsway	**-**	**-**	**0**	**0**	**0**	**21.0**	**46.4**	**0.0**	**67.3**	**-**	**-**	**-**	**-**
1/1	1006	1006	-	-	-	3.9	2.4	-	6.3	22.7	20.7	2.4	23.1
1/2	371	370	-	-	-	3.8	9.9	-	13.7	133.0	10.1	9.9	20.0
2/1	714	693	-	-	-	7.8	19.5	-	27.3	137.8	19.9	19.5	39.4
3/1	468	460	-	-	-	5.1	13.0	-	18.1	139.0	13.8	13.0	26.8
4/1	894	894	-	-	-	0.0	0.5	-	0.5	2.0	0.0	0.5	0.5
5/1	1163	1163	-	-	-	0.3	0.9	-	1.2	3.8	20.1	0.9	21.0
6/1	472	472	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -14.4 Total Delay for Signalled Lanes (pcuHr): 65.45 Cycle Time (s): 180
PRC Over All Lanes (%): -14.4 Total Delay Over All Lanes(pcuHr): 67.33

Full Input Data And Results

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case Evening Peak', Plan 1: 'Signal Plan No. 1')

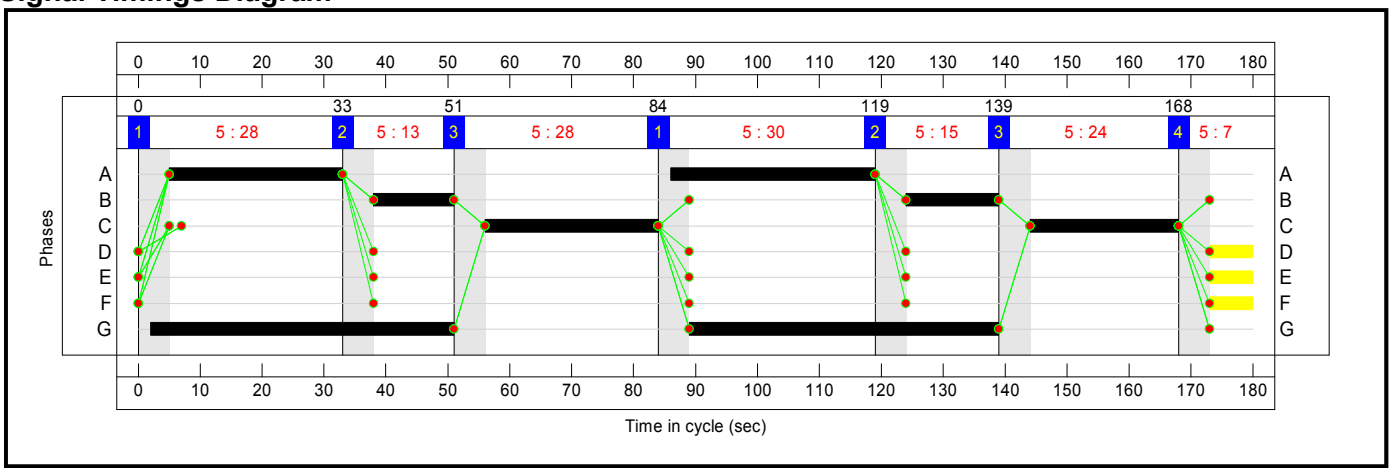
Stage Sequence Diagram



Stage Timings

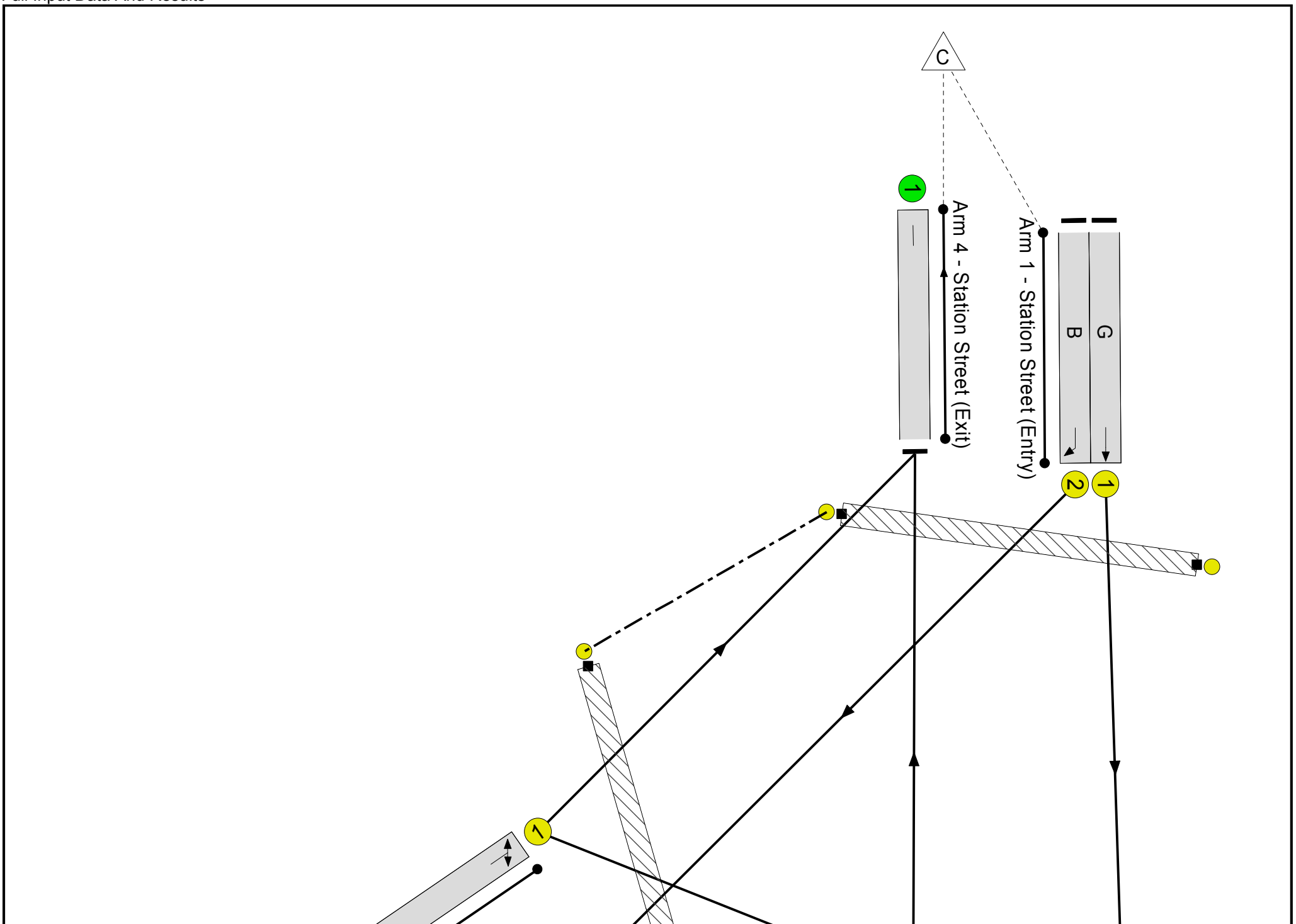
Stage	1	2	3	1	2	3	4
Duration	28	13	28	30	15	24	7
Change Point	0	33	51	84	119	139	168

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**112.7%**
B6020 Diamond Avenue/B6021 Kingsway	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**112.7%**
1/1	Station Street (Entry) Ahead	U	N/A	N/A	G		2	99	-	921	2000	1122	82.1%
1/2	Station Street (Entry) Right	U	N/A	N/A	B		2	28	-	330	1800	300	110.0%
2/1	Diamond Avenue (Entry) Ahead Left	U	N/A	N/A	A		2	61	-	769	1950	682	112.7%
3/1	Kingsway (Entry) Left Right	U	N/A	N/A	C		2	52	-	598	1800	540	110.7%
4/1	Station Street (Exit)	U	N/A	N/A	-		-	-	-	1190	1800	1800	59.1%
5/1	Diamond Avenue (Exit)	U	N/A	N/A	-		-	-	-	1037	1800	1800	57.0%
6/1	Kingsway (Exit)	U	N/A	N/A	-		-	-	-	391	1800	1800	19.7%
Ped Link: P1	Station Street Crossing	-	N/A	-	F		1	7	-	0	-	0	0.0%
Ped Link: P2	Kingsway Crossing	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P3	Diamond Avenue Crossing	-	N/A	-	D		1	7	-	0	-	0	0.0%

Full Input Data And Results

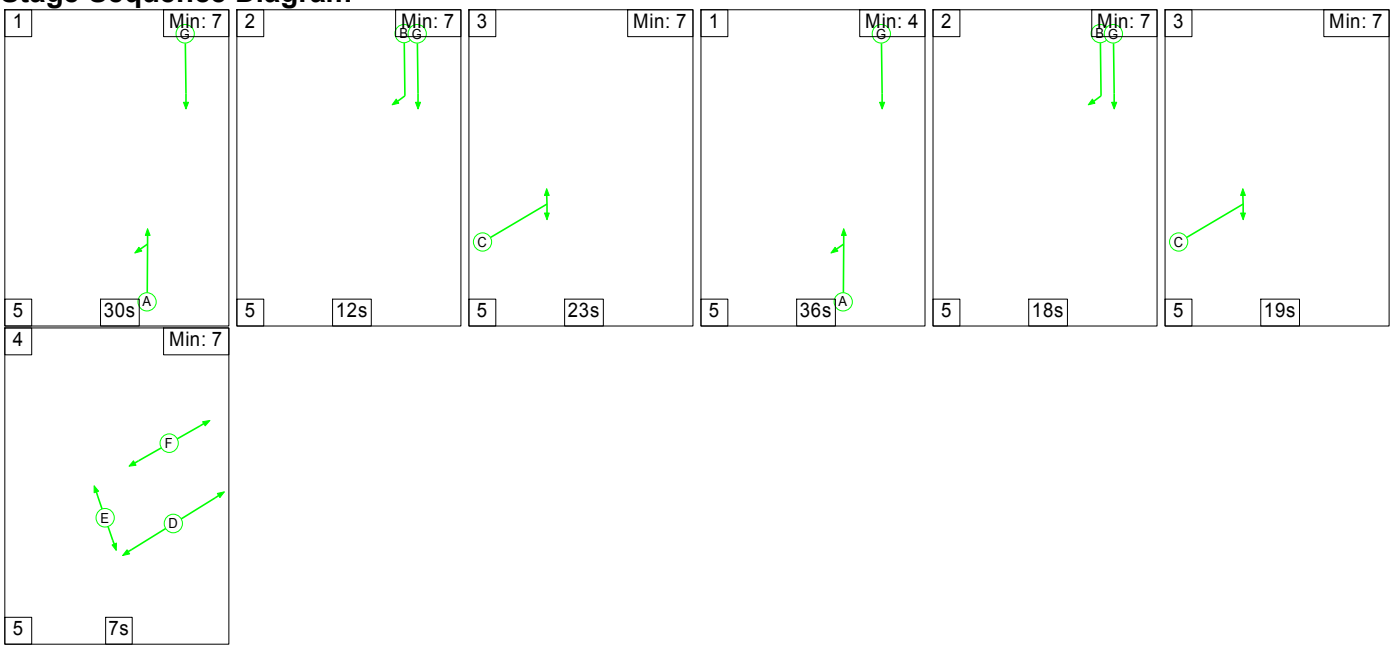
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**35.6**	**103.8**	**0.0**	**139.4**	**-**	**-**	**-**	**-**
B6020 Diamond Avenue/B6021 Kingsway	**-**	**-**	**0**	**0**	**0**	**35.6**	**103.8**	**0.0**	**139.4**	**-**	**-**	**-**	**-**
1/1	921	921	-	-	-	4.1	2.2	-	6.4	24.9	19.7	2.2	21.9
1/2	330	300	-	-	-	6.1	19.3	-	25.4	276.7	11.1	19.3	30.3
2/1	769	683	-	-	-	14.4	47.3	-	61.8	289.1	27.1	47.3	74.4
3/1	598	540	-	-	-	10.7	33.5	-	44.1	265.6	20.3	33.5	53.8
4/1	1064	1064	-	-	-	0.0	0.7	-	0.7	2.4	0.0	0.7	0.7
5/1	1026	1026	-	-	-	0.3	0.7	-	0.9	3.2	18.7	0.7	19.4
6/1	354	354	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -25.2 Total Delay for Signalled Lanes (pcuHr): 137.61 Cycle Time (s): 180
PRC Over All Lanes (%): -25.2 Total Delay Over All Lanes(pcuHr): 139.37

Full Input Data And Results

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Signal Plan No. 1')

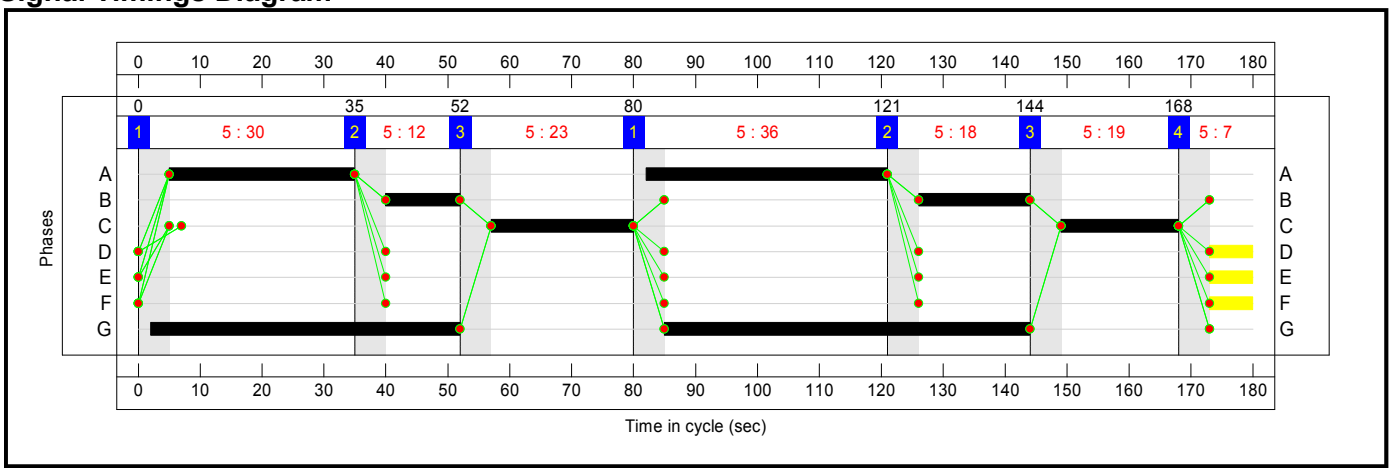
Stage Sequence Diagram



Stage Timings

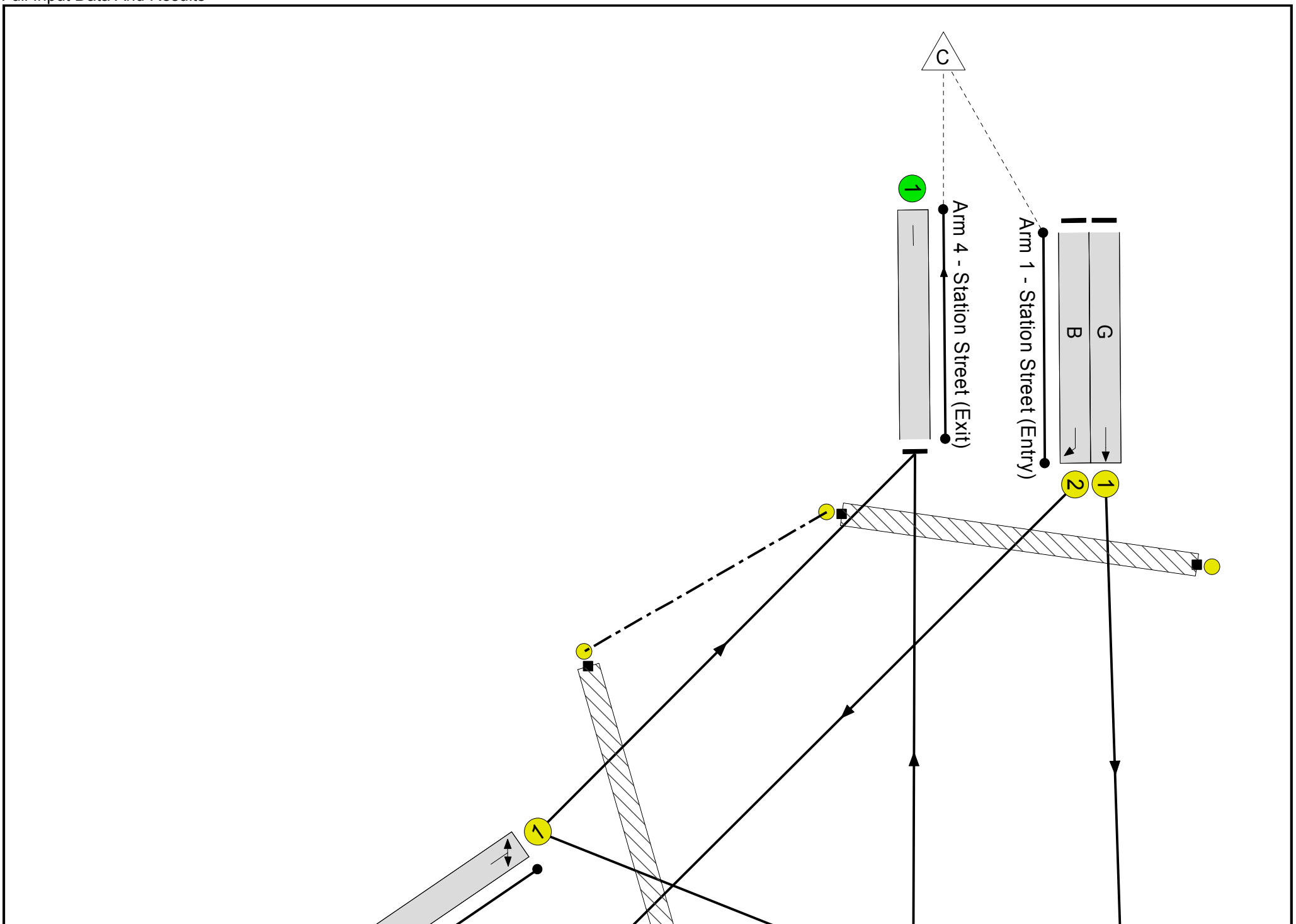
Stage	1	2	3	1	2	3	4
Duration	30	12	23	36	18	19	7
Change Point	0	35	52	80	121	144	168

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**117.3%**
B6020 Diamond Avenue/B6021 Kingsway	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**117.3%**
1/1	Station Street (Entry) Ahead	U	N/A	N/A	G		2	109	-	1090	2000	1233	88.4%
1/2	Station Street (Entry) Right	U	N/A	N/A	B		2	30	-	373	1800	320	116.6%
2/1	Diamond Avenue (Entry) Ahead Left	U	N/A	N/A	A		2	69	-	902	1950	769	117.3%
3/1	Kingsway (Entry) Left Right	U	N/A	N/A	C		2	42	-	516	1800	440	117.3%
4/1	Station Street (Exit)	U	N/A	N/A	-		-	-	-	1115	1800	1800	52.8%
5/1	Diamond Avenue (Exit)	U	N/A	N/A	-		-	-	-	1268	1800	1800	69.0%
6/1	Kingsway (Exit)	U	N/A	N/A	-		-	-	-	498	1800	1800	23.7%
Ped Link: P1	Station Street Crossing	-	N/A	-	F		1	7	-	0	-	0	0.0%
Ped Link: P2	Kingsway Crossing	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P3	Diamond Avenue Crossing	-	N/A	-	D		1	7	-	0	-	0	0.0%

Full Input Data And Results

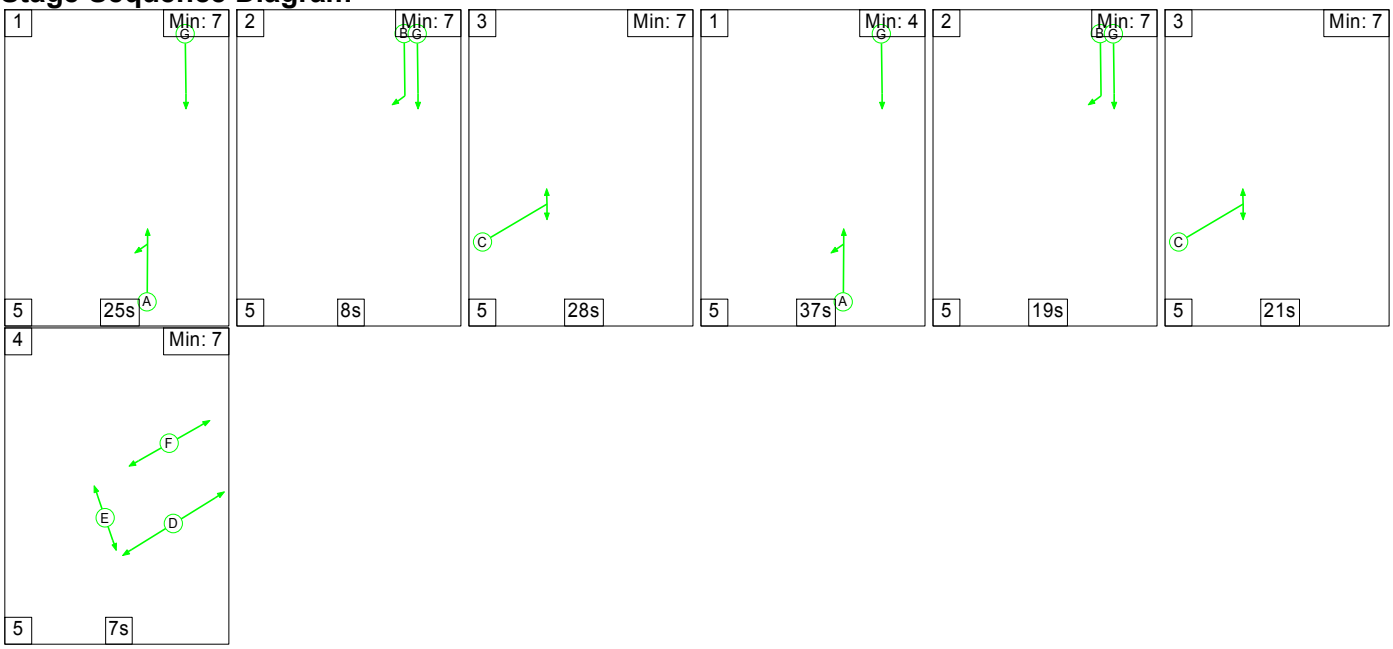
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**45.0**	**145.9**	**0.0**	**190.9**	**-**	**-**	**-**	**-**
B6020 Diamond Avenue/B6021 Kingsway	**-**	**-**	**0**	**0**	**0**	**45.0**	**145.9**	**0.0**	**190.9**	**-**	**-**	**-**	**-**
1/1	1090	1090	-	-	-	4.4	3.6	-	8.0	26.6	24.5	3.6	28.1
1/2	373	320	-	-	-	8.4	29.6	-	38.1	367.6	14.8	29.6	44.5
2/1	902	769	-	-	-	19.4	69.7	-	89.1	355.4	35.0	69.7	104.6
3/1	516	440	-	-	-	12.3	41.1	-	53.4	372.8	20.2	41.1	61.3
4/1	951	951	-	-	-	0.0	0.6	-	0.6	2.1	0.0	0.6	0.6
5/1	1242	1242	-	-	-	0.4	1.1	-	1.5	4.5	23.8	1.1	24.9
6/1	427	427	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -30.3 Total Delay for Signalled Lanes (pcuHr): 188.61 Cycle Time (s): 180
PRC Over All Lanes (%): -30.3 Total Delay Over All Lanes(pcuHr): 190.88

Full Input Data And Results

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Signal Plan No. 1')

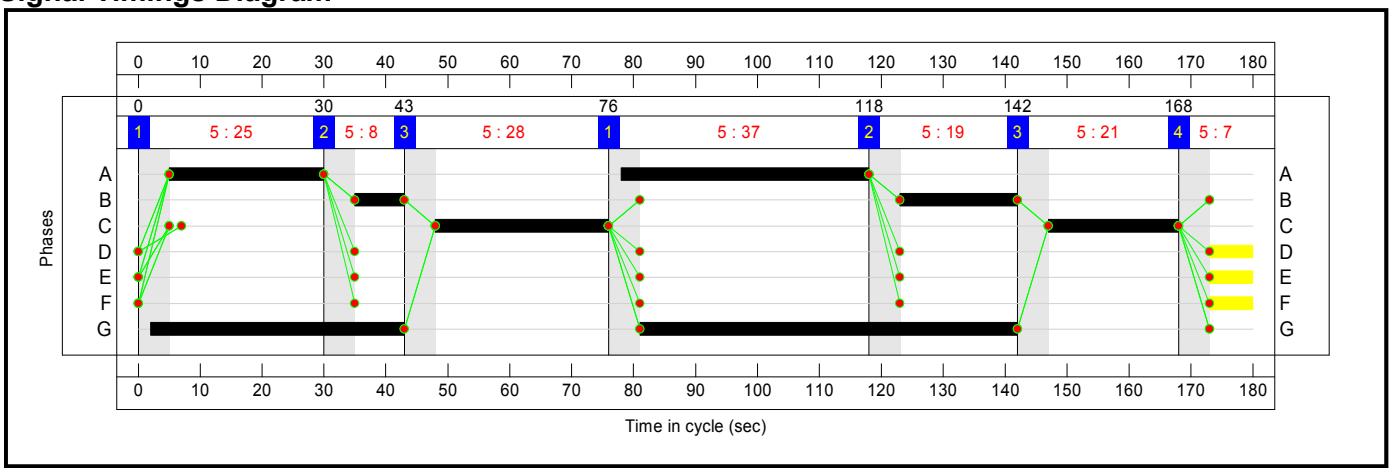
Stage Sequence Diagram



Stage Timings

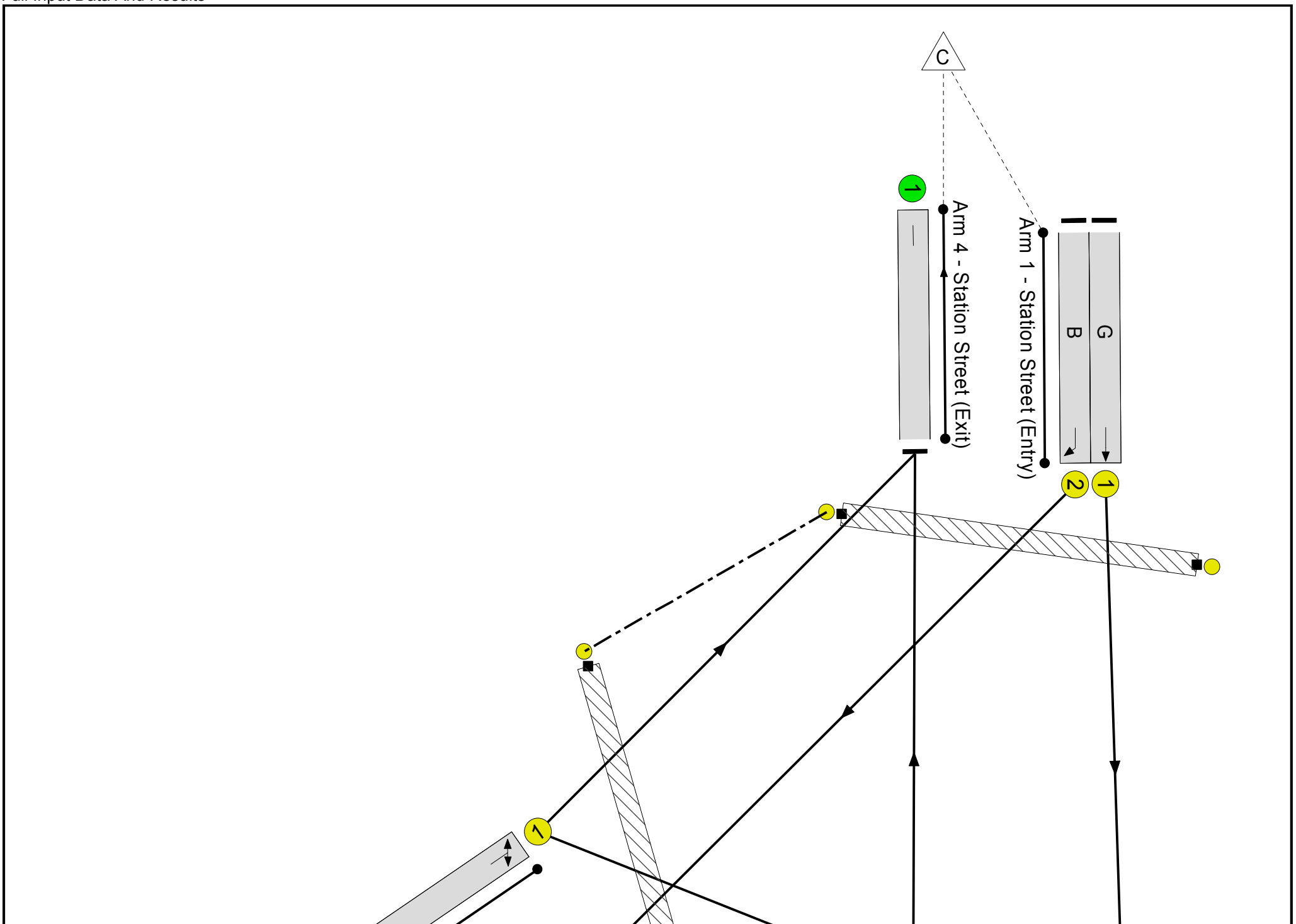
Stage	1	2	3	1	2	3	4
Duration	25	8	28	37	19	21	7
Change Point	0	30	43	76	118	142	168

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**125.5%**
B6020 Diamond Avenue/B6021 Kingsway	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**125.5%**
1/1	Station Street (Entry) Ahead	U	N/A	N/A	G		2	102	-	1083	2000	1156	93.7%
1/2	Station Street (Entry) Right	U	N/A	N/A	B		2	27	-	360	1800	290	124.1%
2/1	Diamond Avenue (Entry) Ahead Left	U	N/A	N/A	A		2	65	-	904	1950	726	124.5%
3/1	Kingsway (Entry) Left Right	U	N/A	N/A	C		2	49	-	640	1800	510	125.5%
4/1	Station Street (Exit)	U	N/A	N/A	-		-	-	-	1311	1800	1800	58.3%
5/1	Diamond Avenue (Exit)	U	N/A	N/A	-		-	-	-	1233	1800	1800	66.8%
6/1	Kingsway (Exit)	U	N/A	N/A	-		-	-	-	443	1800	1800	19.8%
Ped Link: P1	Station Street Crossing	-	N/A	-	F		1	7	-	0	-	0	0.0%
Ped Link: P2	Kingsway Crossing	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P3	Diamond Avenue Crossing	-	N/A	-	D		1	7	-	0	-	0	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	**-**	**-**	**0**	**0**	**0**	**59.3**	**204.5**	**0.0**	**263.8**	**-**	**-**	**-**	**-**
B6020 Diamond Avenue/B6021 Kingsway	**-**	**-**	**0**	**0**	**0**	**59.3**	**204.5**	**0.0**	**263.8**	**-**	**-**	**-**	**-**
1/1	1083	1083	-	-	-	5.7	6.4	-	12.1	40.2	26.3	6.4	32.7
1/2	360	290	-	-	-	10.0	37.4	-	47.5	474.5	17.0	37.4	54.4
2/1	904	726	-	-	-	24.0	91.6	-	115.6	460.2	40.0	91.6	131.6
3/1	640	510	-	-	-	18.9	67.4	-	86.3	485.6	29.4	67.4	96.7
4/1	1050	1050	-	-	-	0.0	0.7	-	0.7	2.4	0.0	0.7	0.7
5/1	1203	1203	-	-	-	0.5	1.0	-	1.5	4.5	27.2	1.0	28.2
6/1	357	357	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

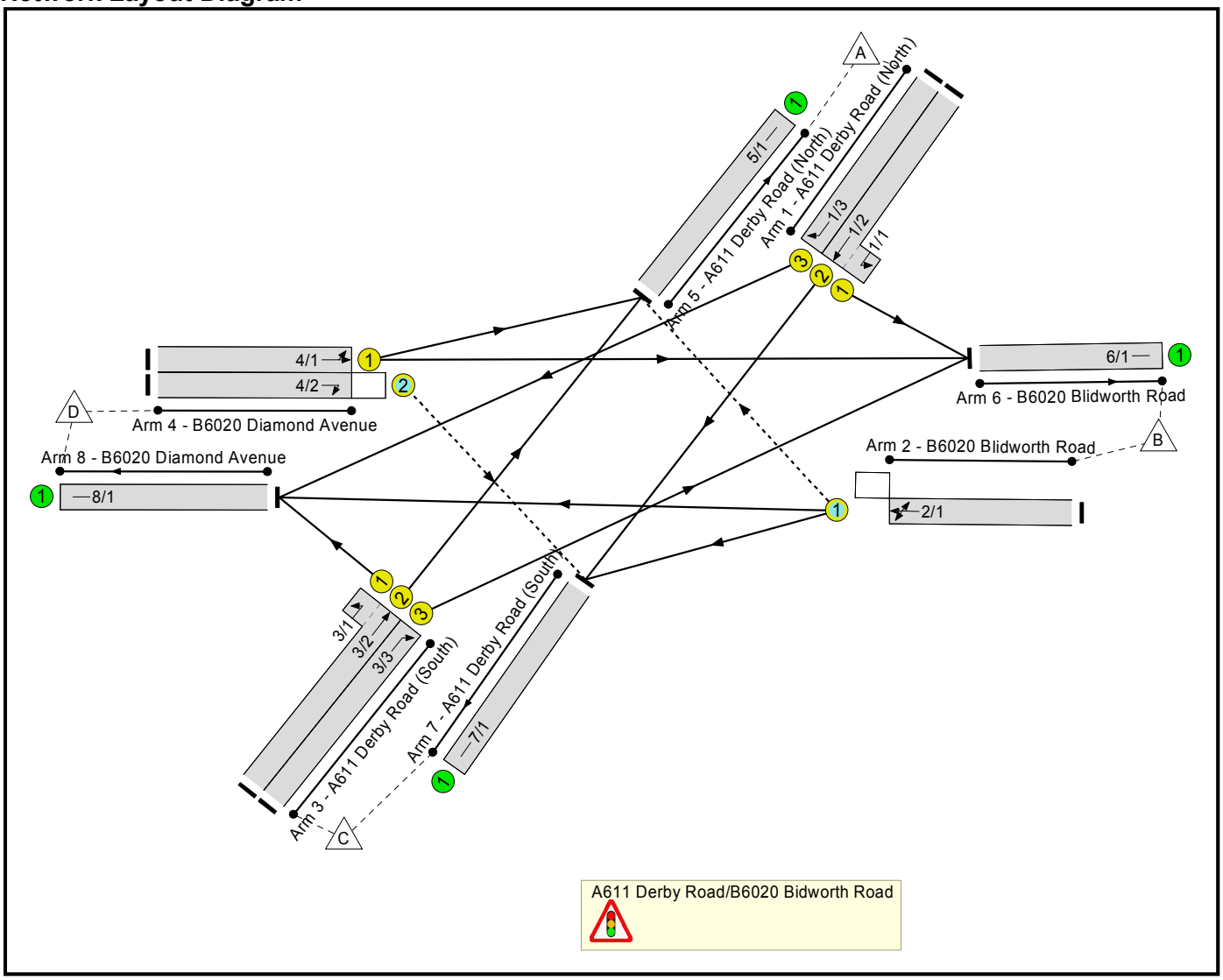
C1 PRC for Signalled Lanes (%): -39.4 Total Delay for Signalled Lanes (pcuHr): 261.43 Cycle Time (s): 180
PRC Over All Lanes (%): -39.4 Total Delay Over All Lanes(pcuHr): 263.77

Full Input Data And Results

User and Project Details

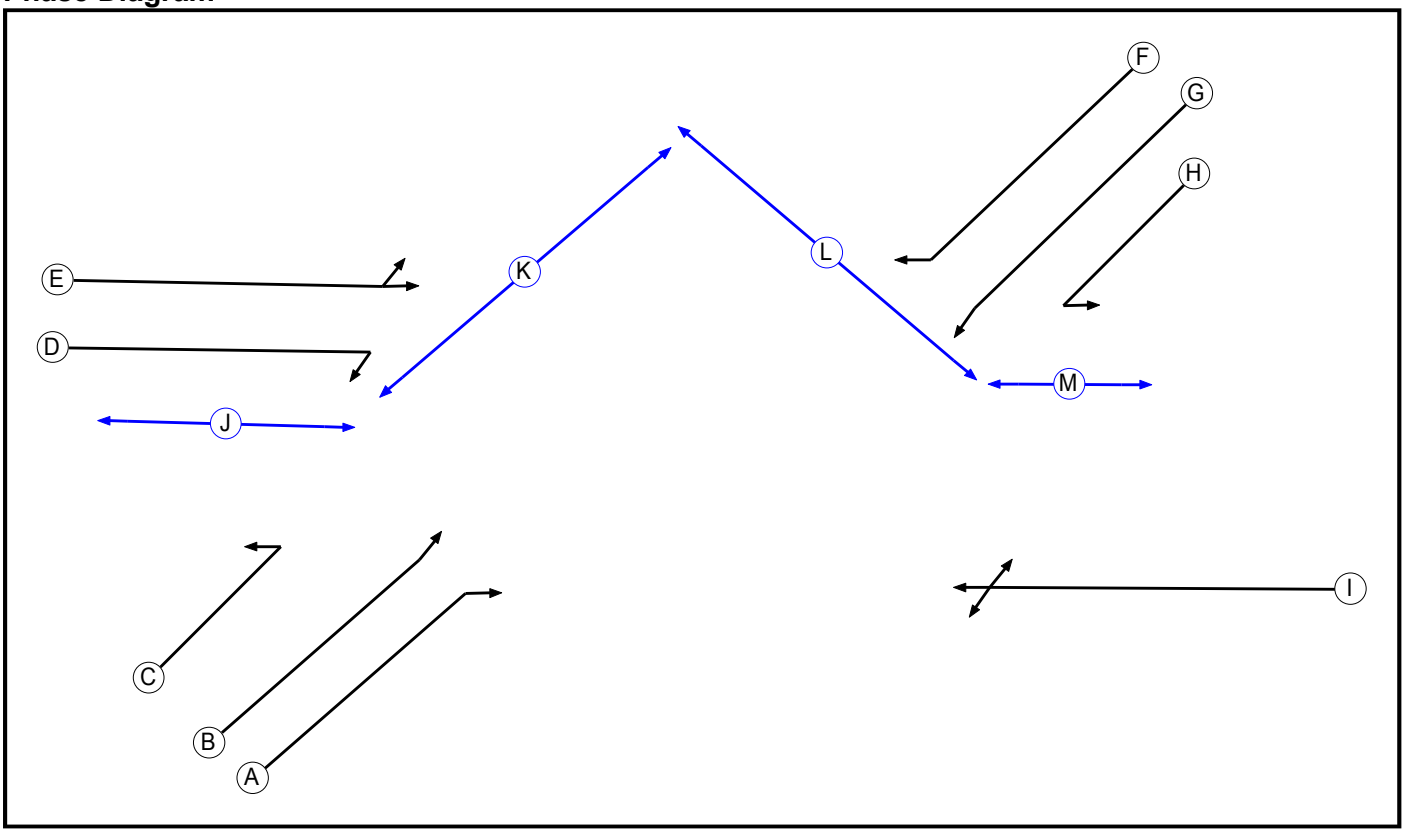
Project:	
Title:	
Location:	
File name:	Junction 15 2016.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

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	Traffic		7	7
H	Traffic		7	7
I	Traffic		7	7
J	Pedestrian		7	7
K	Pedestrian		7	7
L	Pedestrian		7	7
M	Pedestrian		7	7

Full Input Data And Results

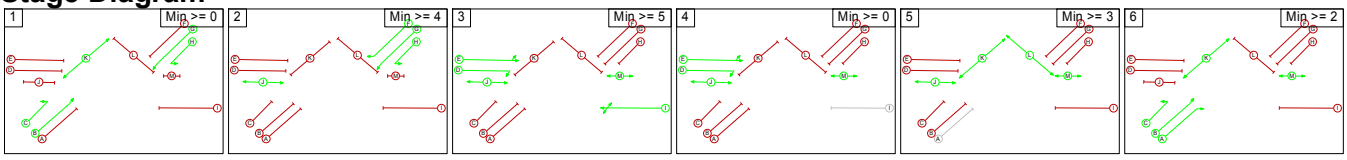
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K	L	M
A		-	-	7	9	-	7	10	7	-	-	-	-
B	-		-	7	8	6	-	-	6	-	-	9	-
C	-	-		-	-	7	-	-	7	5	-	-	-
D	7	6	-		-	7	8	-	-	-	5	-	-
E	8	7	-	-		7	7	10	-	-	5	7	-
F	-	8	11	8	7		-	-	9	-	9	5	-
G	6	-	-	7	6	-		-	7	-	-	5	-
H	6	-	-	-	6	-	-		-	-	-	-	5
I	7	8	11	-	-	7	6	-		-	7	8	-
J	-	-	3	-	-	-	-	-	-		-	-	-
K	-	-	-	3	3	3	-	-	3	-		-	-
L	-	3	-	-	3	3	3	-	3	-	-		-
M	-	-	-	-	-	-	-	3	-	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	B C G H K
2	F G H J
3	D E I J M
4	D E J M
5	J K L M
6	A B C K M

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	2	B	Losing	4	4

Full Input Data And Results

Prohibited Stage Change

		To Stage					
		1	2	3	4	5	6
From Stage	1		10	8	8	9	6
	2	11		9	8	9	11
	3	11	10		0	8	11
	4	10	10	2		7	8
	5	3	3	3	3		3
	6	10	10	9	9	9	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A611 Derby Road/B6020 Bidworth Road

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)
2/1 (B6020 Blidworth Road)	5/1 (Right)	1440	0	4/2	1.09	All	2.00	2.00	0.50	2	2.00
				4/1	1.09	All					
4/2 (B6020 Diamond Avenue)	7/1 (Right)	1440	0	2/1	1.09	All	2.00	-	0.50	2	2.00

Full Input Data And Results

Lane Input Data

Junction: A611 Derby Road/B6020 Bidworth Road												
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 (A611 Derby Road (North))	U	H	2	3	1.7	User	1800	-	-	-	-	-
1/2 (A611 Derby Road (North))	U	G	2	3	60.0	User	1900	-	-	-	-	-
1/3 (A611 Derby Road (North))	U	F	2	3	7.0	User	1800	-	-	-	-	-
2/1 (B6020 Blidworth Road)	O	I	2	3	60.0	User	1800	-	-	-	-	-
3/1 (A611 Derby Road (South))	U	C	2	3	1.7	User	1800	-	-	-	-	-
3/2 (A611 Derby Road (South))	U	B	2	3	60.0	User	1900	-	-	-	-	-
3/3 (A611 Derby Road (South))	U	A	2	3	7.0	User	1800	-	-	-	-	-
4/1 (B6020 Diamond Avenue)	U	E	2	3	60.0	User	1900	-	-	-	-	-
4/2 (B6020 Diamond Avenue)	O	D	2	3	7.0	User	1800	-	-	-	-	-
5/1 (A611 Derby Road (North))	U		2	3	60.0	User	1900	-	-	-	-	-
6/1 (B6020 Blidworth Road)	U		2	3	60.0	User	1900	-	-	-	-	-
7/1 (A611 Derby Road (South))	U		2	3	60.0	User	1900	-	-	-	-	-
8/1 (B6020 Diamond Avenue)	U		2	3	60.0	User	1900	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2032 Reference Case Morning Peak'	08:00	09:00	01:00	
2: '2032 Development Case Morning Peak'	08:00	09:00	01:00	
3: '2032 Reference Case Evening Peak'	17:00	18:00	01:00	
4: '2032 Development Case Evening Peak'	17:00	18:00	01:00	

Scenario 1: 'AM Reference Case ' (FG1: '2032 Reference Case Morning Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	0	1032	236	1268
	B	275	0	154	230	659
	C	1142	442	0	1	1585
	D	65	234	1	0	300
	Tot.	1482	676	1187	467	3812

Traffic Lane Flows

Lane	Scenario 1: AM Reference Case
Junction: A611 Derby Road/B6020 Bidworth Road	
1/1 (short)	0
1/2 (with short)	1032(In) 1032(Out)
1/3	236
2/1	659
3/1 (short)	1
3/2 (with short)	1143(In) 1142(Out)
3/3	442
4/1	299
4/2	1
5/1	1482
6/1	676
7/1	1187
8/1	467

Full Input Data And Results

Lane Saturation Flows

Junction: A611 Derby Road/B6020 Bidworth Road								
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 (A611 Derby Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (A611 Derby Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
1/3 (A611 Derby Road (North) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (B6020 Blidworth Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A611 Derby Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (A611 Derby Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
3/3 (A611 Derby Road (South) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (B6020 Diamond Avenue Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (B6020 Diamond Avenue Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A611 Derby Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (B6020 Blidworth Road Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (A611 Derby Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (B6020 Diamond Avenue Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case Evening Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	304	891	33	1228
	B	210	0	342	104	656
	C	932	188	0	0	1120
	D	119	267	4	0	390
	Tot.	1261	759	1237	137	3394

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM Reference Case
Junction: A611 Derby Road/B6020 Bidworth Road	
1/1 (short)	304
1/2 (with short)	1195(In) 891(Out)
1/3	33
2/1	656
3/1 (short)	0
3/2 (with short)	932(In) 932(Out)
3/3	188
4/1	386
4/2	4
5/1	1261
6/1	759
7/1	1237
8/1	137

Full Input Data And Results

Lane Saturation Flows

Junction: A611 Derby Road/B6020 Bidworth Road								
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 (A611 Derby Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (A611 Derby Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
1/3 (A611 Derby Road (North) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (B6020 Blidworth Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A611 Derby Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (A611 Derby Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
3/3 (A611 Derby Road (South) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (B6020 Diamond Avenue Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (B6020 Diamond Avenue Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A611 Derby Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (B6020 Blidworth Road Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (A611 Derby Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (B6020 Diamond Avenue Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	0	1076	266	1342
	B	238	0	163	264	665
	C	1163	419	0	2	1584
	D	80	267	1	0	348
	Tot.	1481	686	1240	532	3939

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: AM Development Scenario
Junction: A611 Derby Road/B6020 Bidworth Road	
1/1 (short)	0
1/2 (with short)	1076(In) 1076(Out)
1/3	266
2/1	665
3/1 (short)	2
3/2 (with short)	1165(In) 1163(Out)
3/3	419
4/1	347
4/2	1
5/1	1481
6/1	686
7/1	1240
8/1	532

Full Input Data And Results

Lane Saturation Flows

Junction: A611 Derby Road/B6020 Bidworth Road								
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 (A611 Derby Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (A611 Derby Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
1/3 (A611 Derby Road (North) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (B6020 Blidworth Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A611 Derby Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (A611 Derby Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
3/3 (A611 Derby Road (South) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (B6020 Diamond Avenue Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (B6020 Diamond Avenue Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A611 Derby Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (B6020 Blidworth Road Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (A611 Derby Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (B6020 Diamond Avenue Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	280	917	45	1242
	B	193	0	332	137	662
	C	984	188	0	1	1173
	D	142	300	4	0	446
	Tot.	1319	768	1253	183	3523

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: PM Development Scenario
Junction: A611 Derby Road/B6020 Bidworth Road	
1/1 (short)	280
1/2 (with short)	1197(In) 917(Out)
1/3	45
2/1	662
3/1 (short)	1
3/2 (with short)	985(In) 984(Out)
3/3	188
4/1	442
4/2	4
5/1	1319
6/1	768
7/1	1253
8/1	183

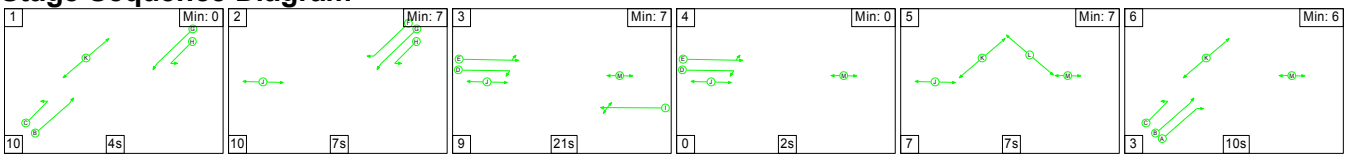
Full Input Data And Results

Lane Saturation Flows

Junction: A611 Derby Road/B6020 Bidworth Road								
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 (A611 Derby Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (A611 Derby Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
1/3 (A611 Derby Road (North) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (B6020 Blidworth Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A611 Derby Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (A611 Derby Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
3/3 (A611 Derby Road (South) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (B6020 Diamond Avenue Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (B6020 Diamond Avenue Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A611 Derby Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (B6020 Blidworth Road Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (A611 Derby Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (B6020 Diamond Avenue Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900

Scenario 1: 'AM Reference Case ' (FG1: '2032 Reference Case Morning Peak', Plan 1: 'Staging Plan No. 1')

Stage Sequence Diagram

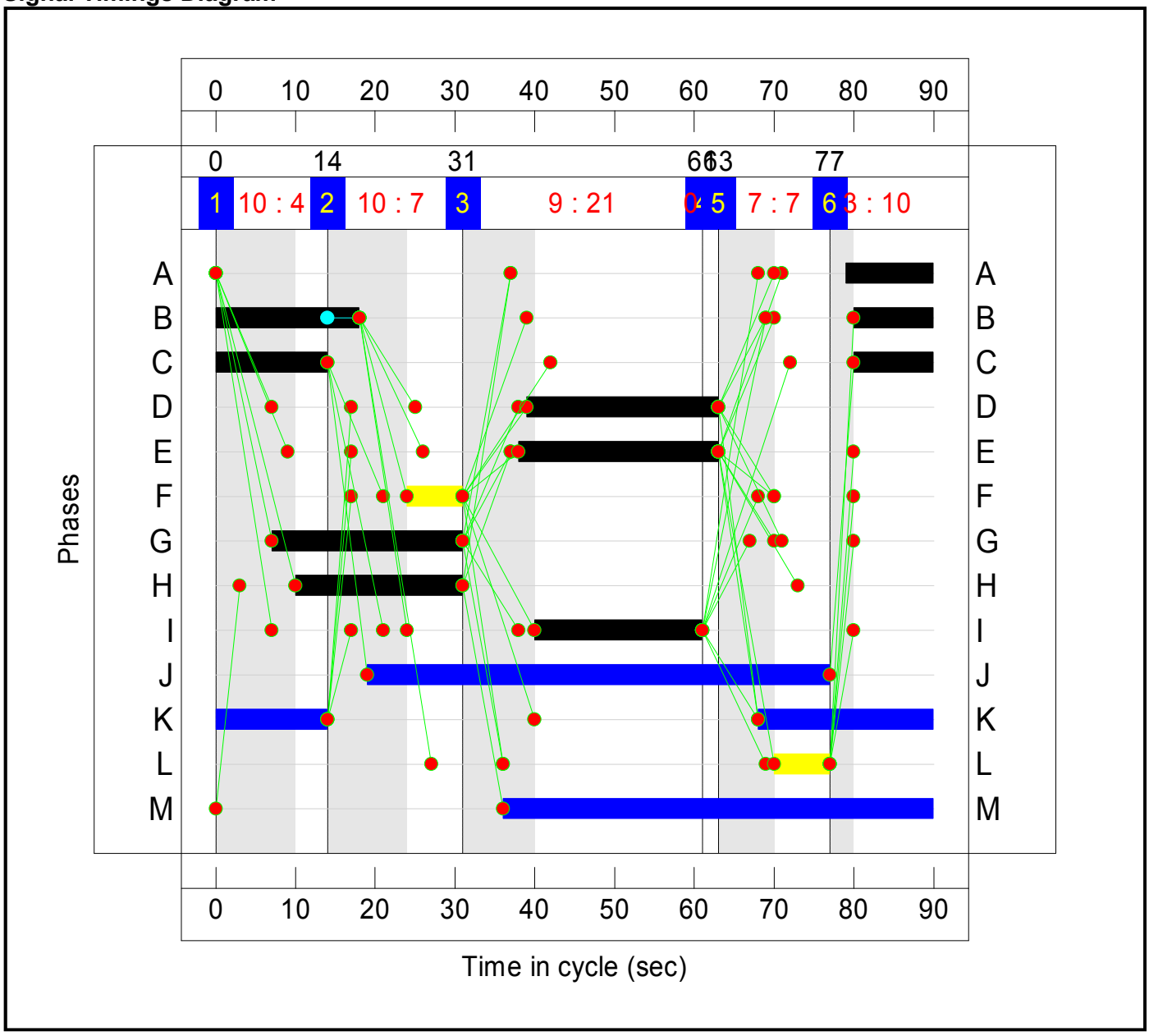


Stage Timings

Stage	1	2	3	4	5	6
Duration	4	7	21	2	7	10
Change Point	0	14	31	61	63	77

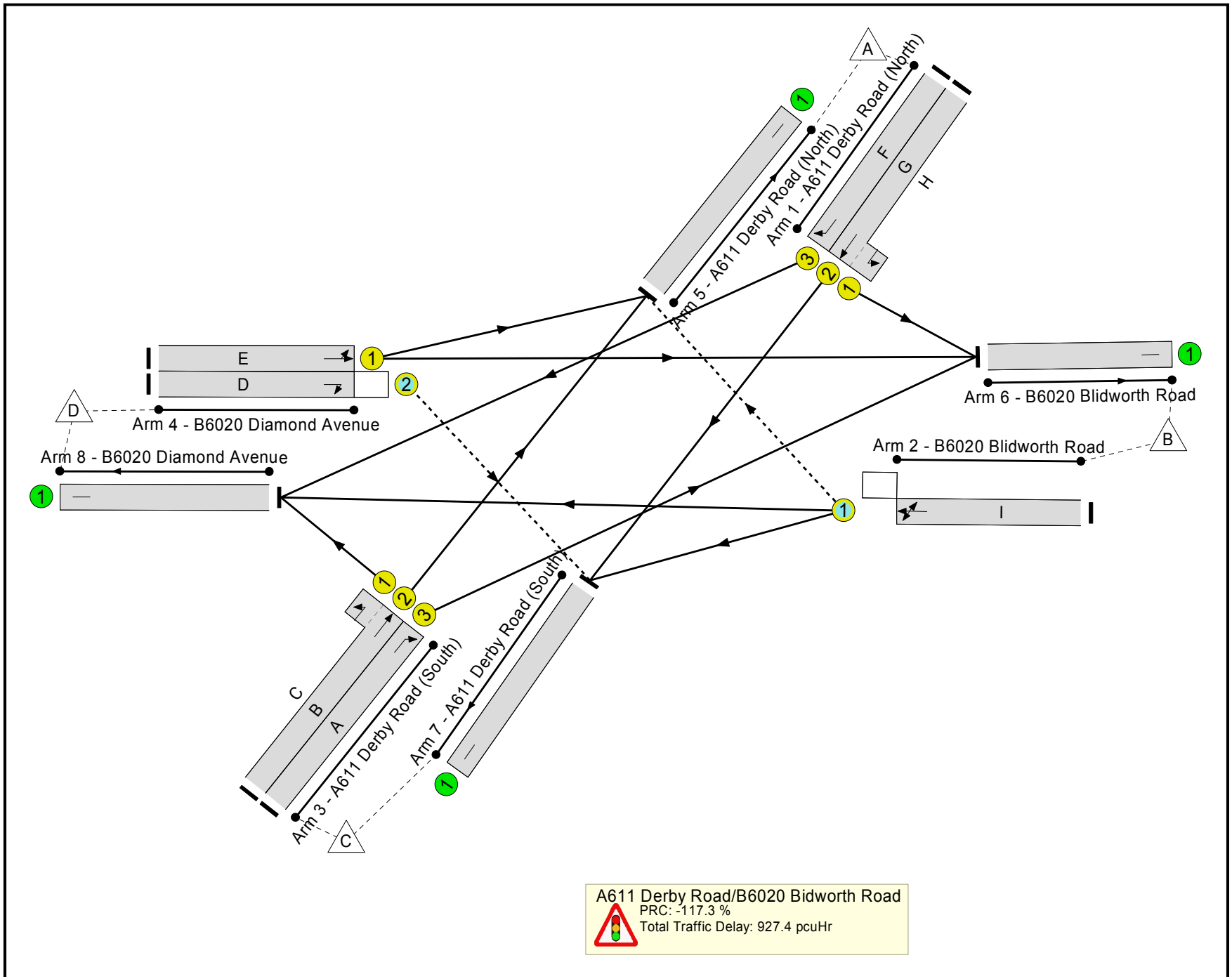
Full Input Data And Results

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**195.5%**
A611 Derby Road/B6020 Bidworth Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**195.5%**
1/2+1/1	A611 Derby Road (North) Left Ahead	U	N/A	N/A	G H		1	24:21	-	1032	1900:1800	528	195.5%
1/3	A611 Derby Road (North) Right	U	N/A	N/A	F		1	7	-	236	1800	160	147.5%
2/1	B6020 Blidworth Road Right Left Ahead	O	N/A	N/A	I		1	21	-	659	1800	352	187.4%
3/2+3/1	A611 Derby Road (South) Ahead Left	U	N/A	N/A	B C		1	28:24	-	1143	1900:1800	613	186.5%
3/3	A611 Derby Road (South) Right	U	N/A	N/A	A		1	11	-	442	1800	240	184.2%
4/1	B6020 Diamond Avenue Left Ahead	U	N/A	N/A	E		1	25	-	299	1900	549	54.5%
4/2	B6020 Diamond Avenue Right	O	N/A	N/A	D		1	24	-	1	1800	155	0.6%
5/1	A611 Derby Road (North)	U	N/A	N/A	-		-	-	-	1482	1900	1900	43.4%
6/1	B6020 Blidworth Road	U	N/A	N/A	-		-	-	-	676	1900	1900	24.9%
7/1	A611 Derby Road (South)	U	N/A	N/A	-		-	-	-	1187	1900	1900	32.2%
8/1	B6020 Diamond Avenue	U	N/A	N/A	-		-	-	-	467	1900	1900	14.9%

Full Input Data And Results

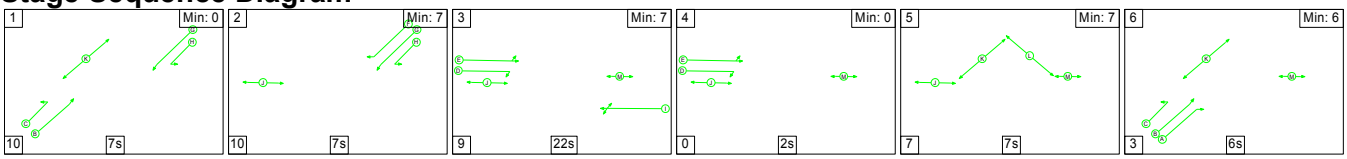
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**148**	**0**	**0**	**110.1**	**817.1**	**0.2**	**927.4**	**-**	**-**	**-**	**-**
A611 Derby Road/B6020 Bidworth Road	**-**	**-**	**148**	**0**	**0**	**110.1**	**817.1**	**0.2**	**927.4**	**-**	**-**	**-**	**-**
1/2+1/1	1032	528	-	-	-	31.6	253.1	-	284.7	993.2	41.3	253.1	294.4
1/3	236	160	-	-	-	5.9	39.5	-	45.4	691.9	7.8	39.5	47.3
2/1	659	352	147	0	0	20.0	154.7	0.2	174.9	955.6	27.1	154.7	181.8
3/2+3/1	1143	613	-	-	-	35.3	266.2	-	301.5	949.6	48.4	266.2	314.6
3/3	442	240	-	-	-	15.1	102.1	-	117.2	954.3	20.8	102.1	122.9
4/1	299	299	-	-	-	2.2	0.6	-	2.8	34.2	6.2	0.6	6.8
4/2	1	1	1	0	0	0.0	0.0	0.0	0.0	36.6	0.0	0.0	0.0
5/1	824	824	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
6/1	474	474	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
7/1	611	611	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
8/1	283	283	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1

C1 PRC for Signalled Lanes (%): -117.3 Total Delay for Signalled Lanes (pcuHr): 926.53 Cycle Time (s): 90
PRC Over All Lanes (%): -117.3 Total Delay Over All Lanes(pcuHr): 927.41

Full Input Data And Results

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case Evening Peak', Plan 1: 'Staging Plan No. 1')

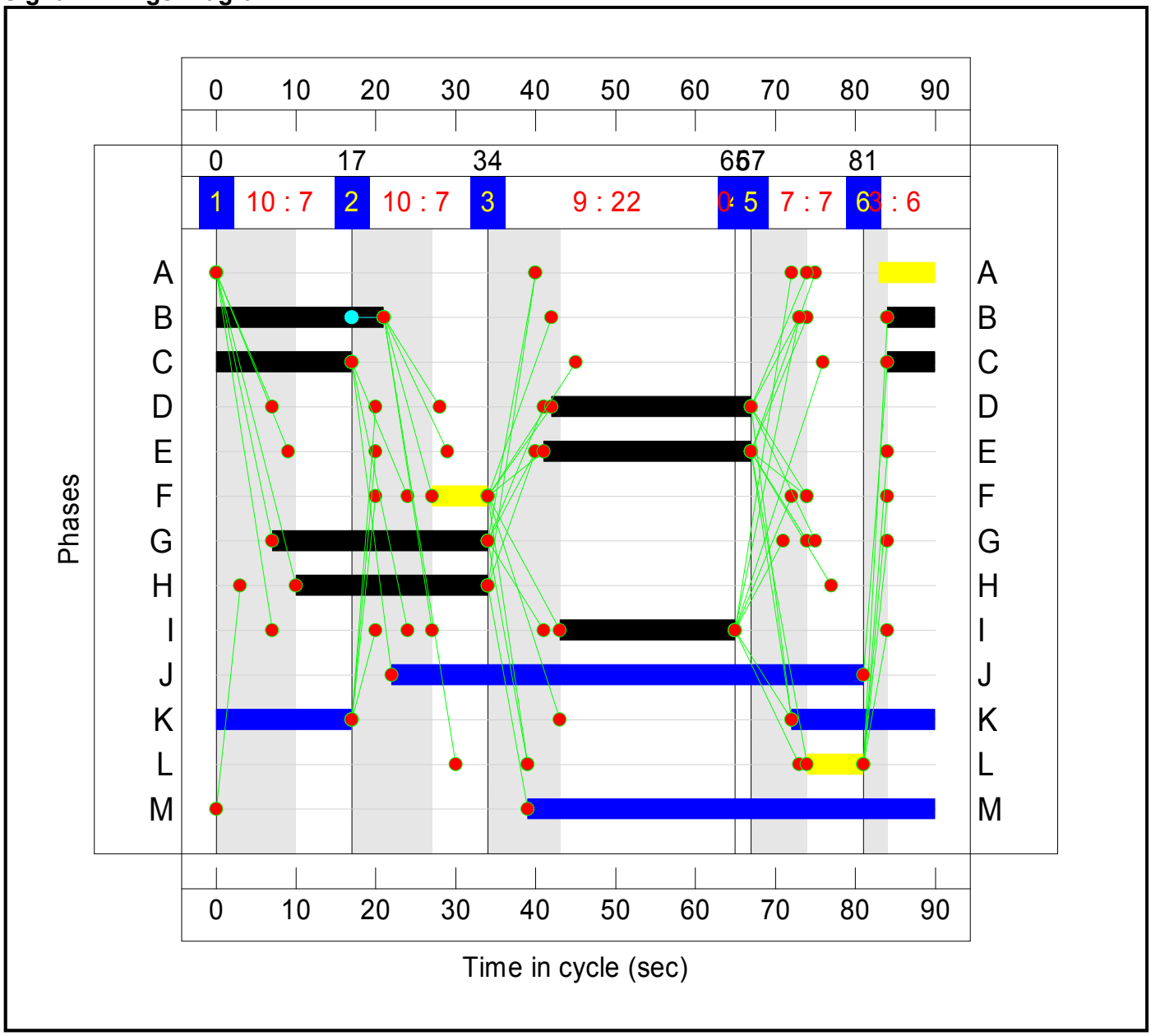
Stage Sequence Diagram



Stage Timings

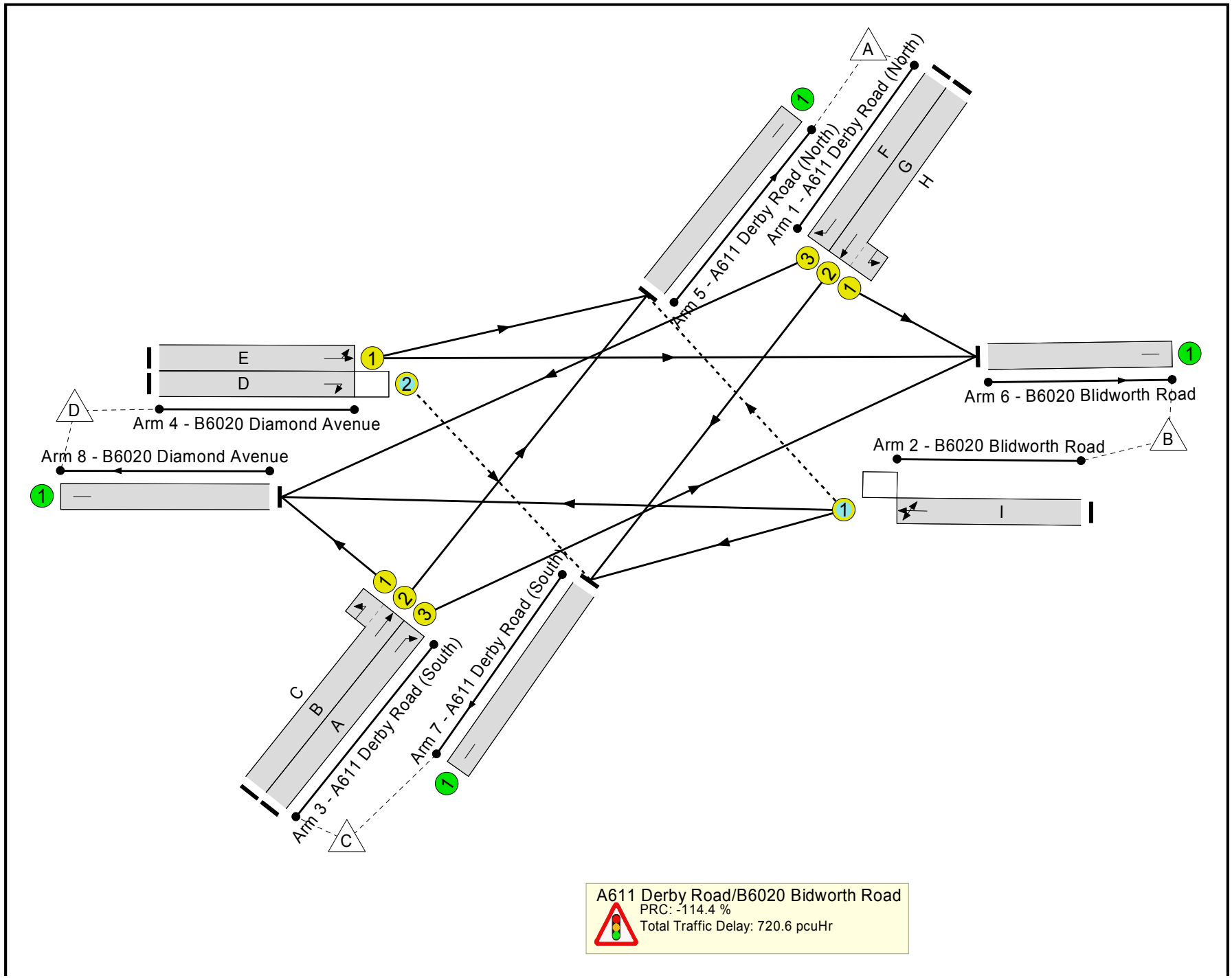
Stage	1	2	3	4	5	6
Duration	7	7	22	2	7	6
Change Point	0	17	34	65	67	81

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**193.0%**
A611 Derby Road/B6020 Bidworth Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**193.0%**
1/2+1/1	A611 Derby Road (North) Left Ahead	U	N/A	N/A	G H		1	27:24	-	1195	1900:1800	619	193.0%
1/3	A611 Derby Road (North) Right	U	N/A	N/A	F		1	7	-	33	1800	160	20.6%
2/1	B6020 Blidworth Road Right Left Ahead	O	N/A	N/A	I		1	22	-	656	1800	350	187.5%
3/2+3/1	A611 Derby Road (South) Ahead Left	U	N/A	N/A	B C		1	27:23	-	932	1900:1800	591	157.7%
3/3	A611 Derby Road (South) Right	U	N/A	N/A	A		1	7	-	188	1800	160	117.5%
4/1	B6020 Diamond Avenue Left Ahead	U	N/A	N/A	E		1	26	-	386	1900	570	67.7%
4/2	B6020 Diamond Avenue Right	O	N/A	N/A	D		1	25	-	4	1800	159	2.5%
5/1	A611 Derby Road (North)	U	N/A	N/A	-		-	-	-	1261	1900	1900	43.3%
6/1	B6020 Blidworth Road	U	N/A	N/A	-		-	-	-	759	1900	1900	30.8%
7/1	A611 Derby Road (South)	U	N/A	N/A	-		-	-	-	1237	1900	1900	34.1%
8/1	B6020 Diamond Avenue	U	N/A	N/A	-		-	-	-	137	1900	1900	4.7%

Full Input Data And Results

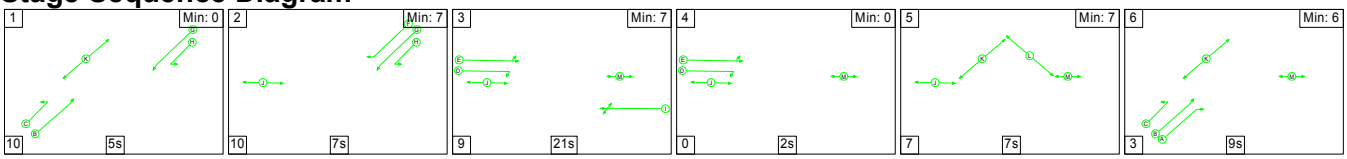
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**116**	**0**	**0**	**86.6**	**633.7**	**0.3**	**720.6**	**-**	**-**	**-**	**-**
A611 Derby Road/B6020 Bidworth Road	**-**	**-**	**116**	**0**	**0**	**86.6**	**633.7**	**0.3**	**720.6**	**-**	**-**	**-**	**-**
1/2+1/1	1195	619	-	-	-	35.4	288.9	-	324.3	976.9	45.8	288.9	334.7
1/3	33	33	-	-	-	0.3	0.1	-	0.5	52.3	0.8	0.1	0.9
2/1	656	350	112	0	0	20.2	154.1	0.3	174.6	958.0	27.7	154.1	181.8
3/2+3/1	932	591	-	-	-	24.2	171.8	-	196.0	757.0	34.1	171.8	205.9
3/3	188	160	-	-	-	3.6	16.8	-	20.4	389.7	5.9	16.8	22.7
4/1	386	386	-	-	-	3.0	1.0	-	4.0	37.3	8.5	1.0	9.5
4/2	4	4	4	0	0	0.0	0.0	0.0	0.0	36.2	0.1	0.0	0.1
5/1	822	822	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
6/1	585	585	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
7/1	648	648	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
8/1	88	88	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -114.4 Total Delay for Signalled Lanes (pcuHr): 719.67 Cycle Time (s): 90
PRC Over All Lanes (%): -114.4 Total Delay Over All Lanes(pcuHr): 720.56

Full Input Data And Results

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Staging Plan No. 1')

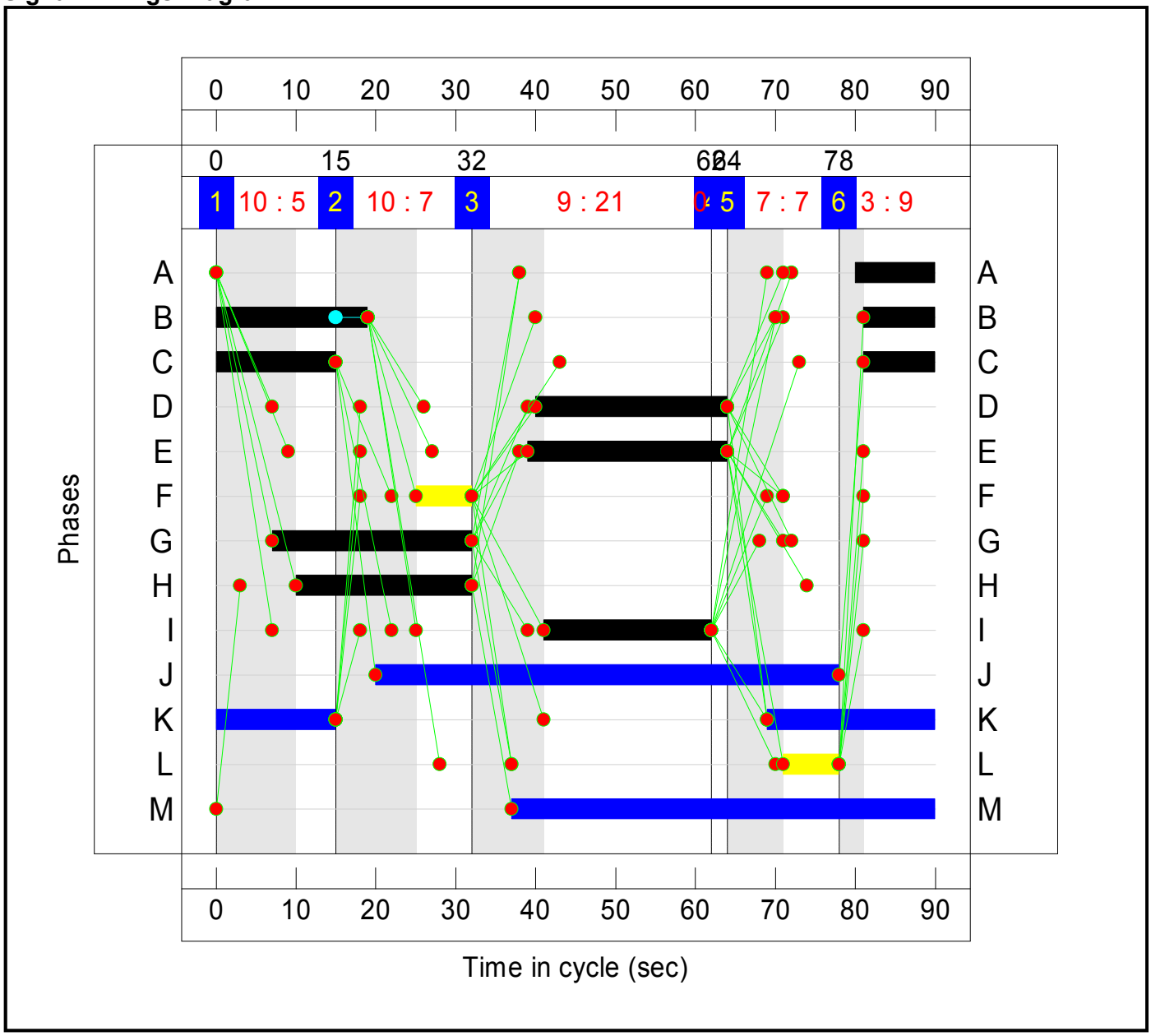
Stage Sequence Diagram



Stage Timings

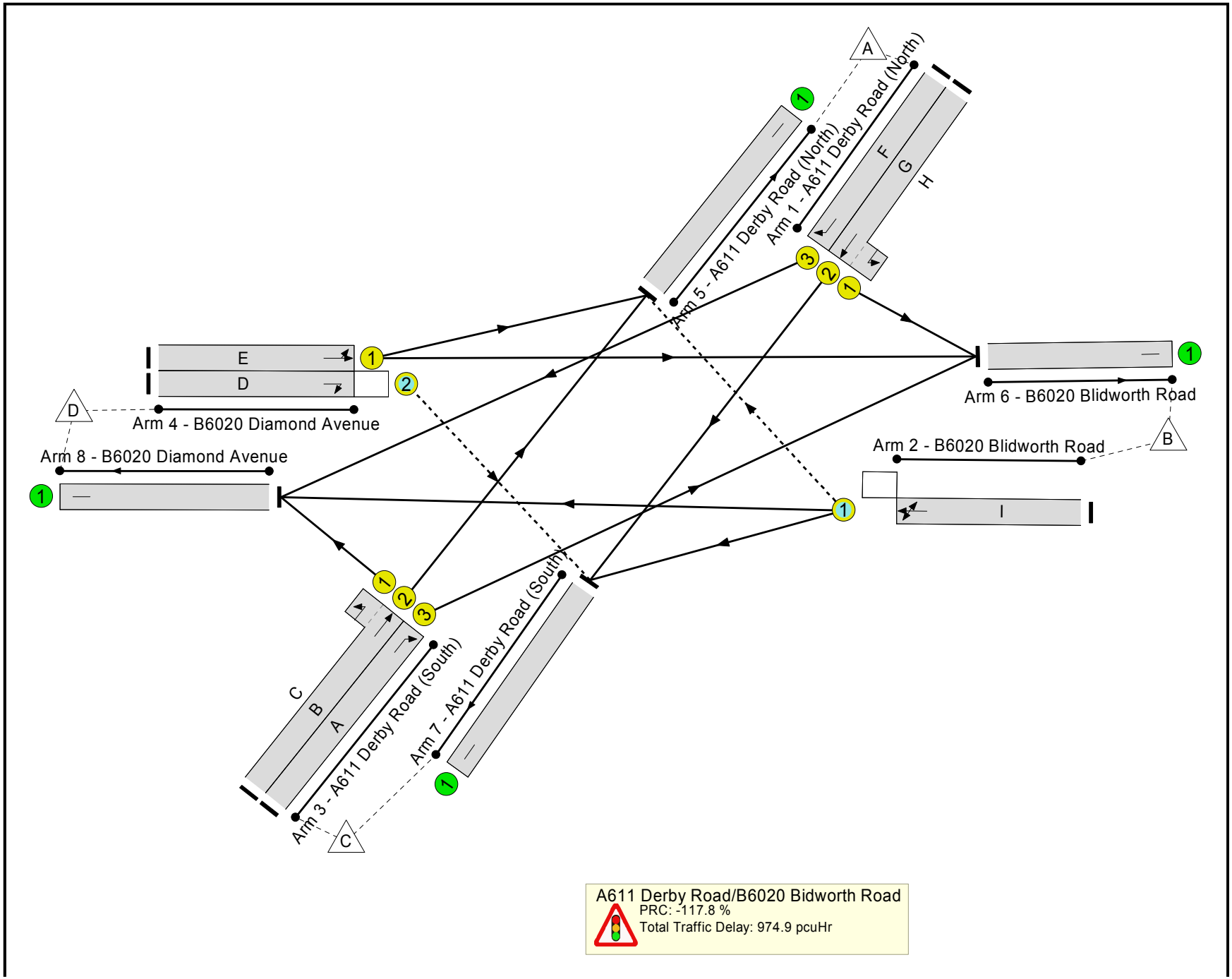
Stage	1	2	3	4	5	6
Duration	5	7	21	2	7	9
Change Point	0	15	32	62	64	78

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**196.0%**
A611 Derby Road/B6020 Bidworth Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**196.0%**
1/2+1/1	A611 Derby Road (North) Left Ahead	U	N/A	N/A	G H		1	25:22	-	1076	1900:1800	549	196.0%
1/3	A611 Derby Road (North) Right	U	N/A	N/A	F		1	7	-	266	1800	160	166.3%
2/1	B6020 Blidworth Road Right Left Ahead	O	N/A	N/A	I		1	21	-	665	1800	344	193.6%
3/2+3/1	A611 Derby Road (South) Ahead Left	U	N/A	N/A	B C		1	28:24	-	1165	1900:1800	613	190.0%
3/3	A611 Derby Road (South) Right	U	N/A	N/A	A		1	10	-	419	1800	220	190.5%
4/1	B6020 Diamond Avenue Left Ahead	U	N/A	N/A	E		1	25	-	347	1900	549	63.2%
4/2	B6020 Diamond Avenue Right	O	N/A	N/A	D		1	24	-	1	1800	160	0.6%
5/1	A611 Derby Road (North)	U	N/A	N/A	-		-	-	-	1481	1900	1900	42.9%
6/1	B6020 Blidworth Road	U	N/A	N/A	-		-	-	-	686	1900	1900	25.6%
7/1	A611 Derby Road (South)	U	N/A	N/A	-		-	-	-	1240	1900	1900	33.4%
8/1	B6020 Diamond Avenue	U	N/A	N/A	-		-	-	-	532	1900	1900	15.7%

Full Input Data And Results

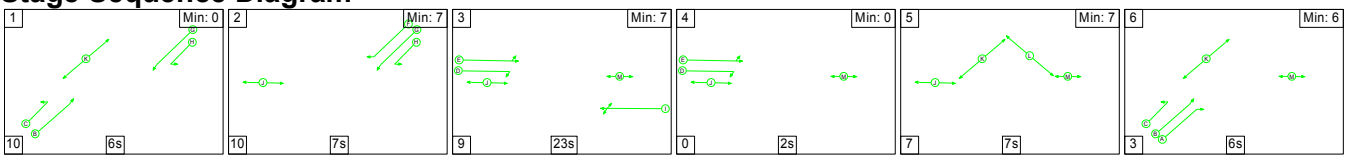
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**124**	**0**	**0**	**114.9**	**859.8**	**0.3**	**974.9**	**-**	**-**	**-**	**-**
A611 Derby Road/B6020 Bidworth Road	**-**	**-**	**124**	**0**	**0**	**114.9**	**859.8**	**0.3**	**974.9**	**-**	**-**	**-**	**-**
1/2+1/1	1076	549	-	-	-	32.8	264.6	-	297.3	994.8	42.8	264.6	307.4
1/3	266	160	-	-	-	7.4	54.2	-	61.7	834.5	9.4	54.2	63.6
2/1	665	344	123	0	0	20.9	161.8	0.3	182.9	990.4	28.1	161.8	189.8
3/2+3/1	1165	613	-	-	-	36.4	276.9	-	313.3	968.1	49.6	276.9	326.5
3/3	419	220	-	-	-	14.7	100.5	-	115.3	990.3	20.1	100.5	120.6
4/1	347	347	-	-	-	2.7	0.9	-	3.5	36.7	7.5	0.9	8.4
4/2	1	1	1	0	0	0.0	0.0	0.0	0.0	36.1	0.0	0.0	0.0
5/1	815	815	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
6/1	487	487	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
7/1	634	634	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
8/1	297	297	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1

C1 PRC for Signalled Lanes (%): -117.8 Total Delay for Signalled Lanes (pcuHr): 974.05 Cycle Time (s): 90
PRC Over All Lanes (%): -117.8 Total Delay Over All Lanes(pcuHr): 974.94

Full Input Data And Results

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Staging Plan No. 1')

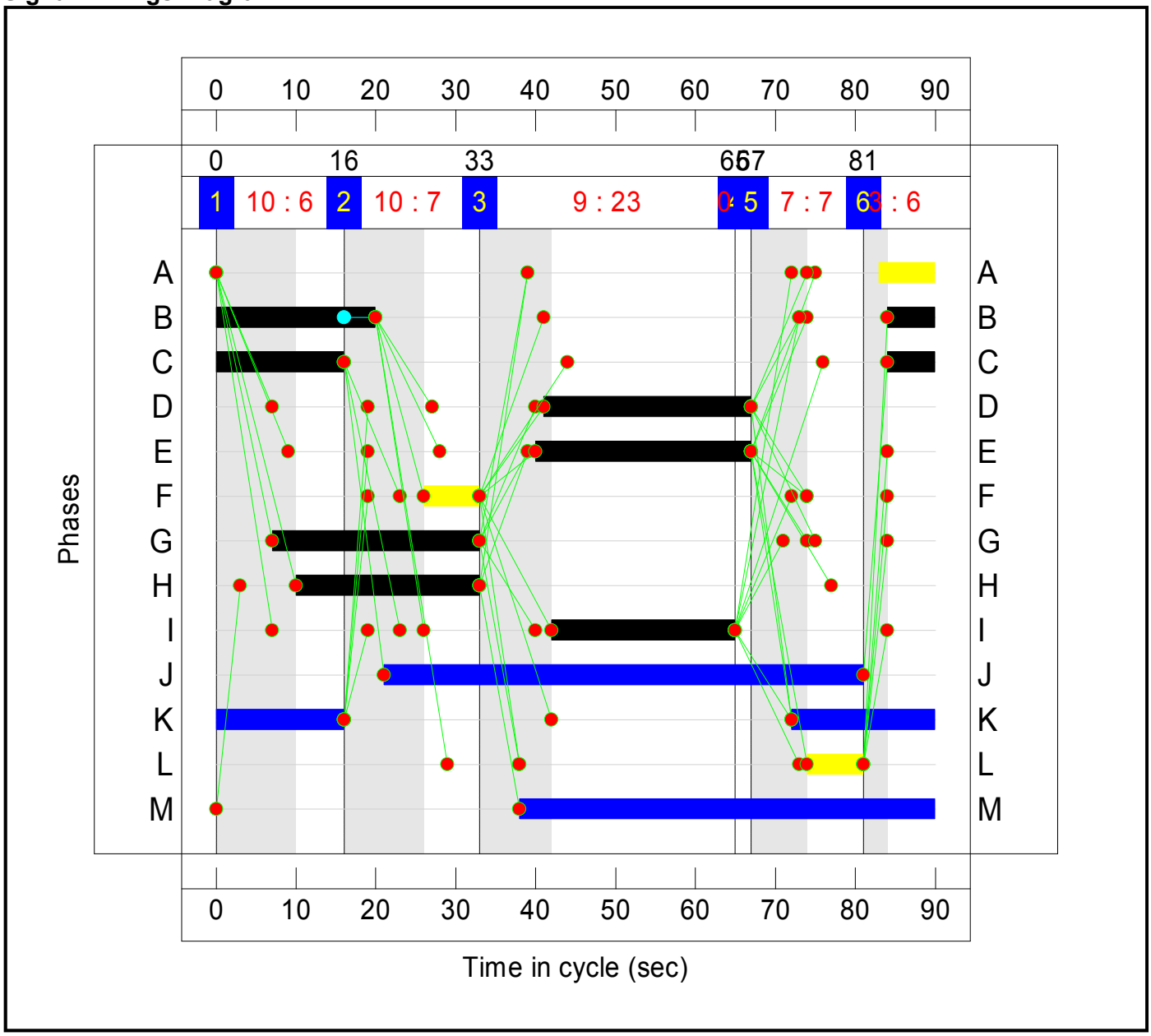
Stage Sequence Diagram



Stage Timings

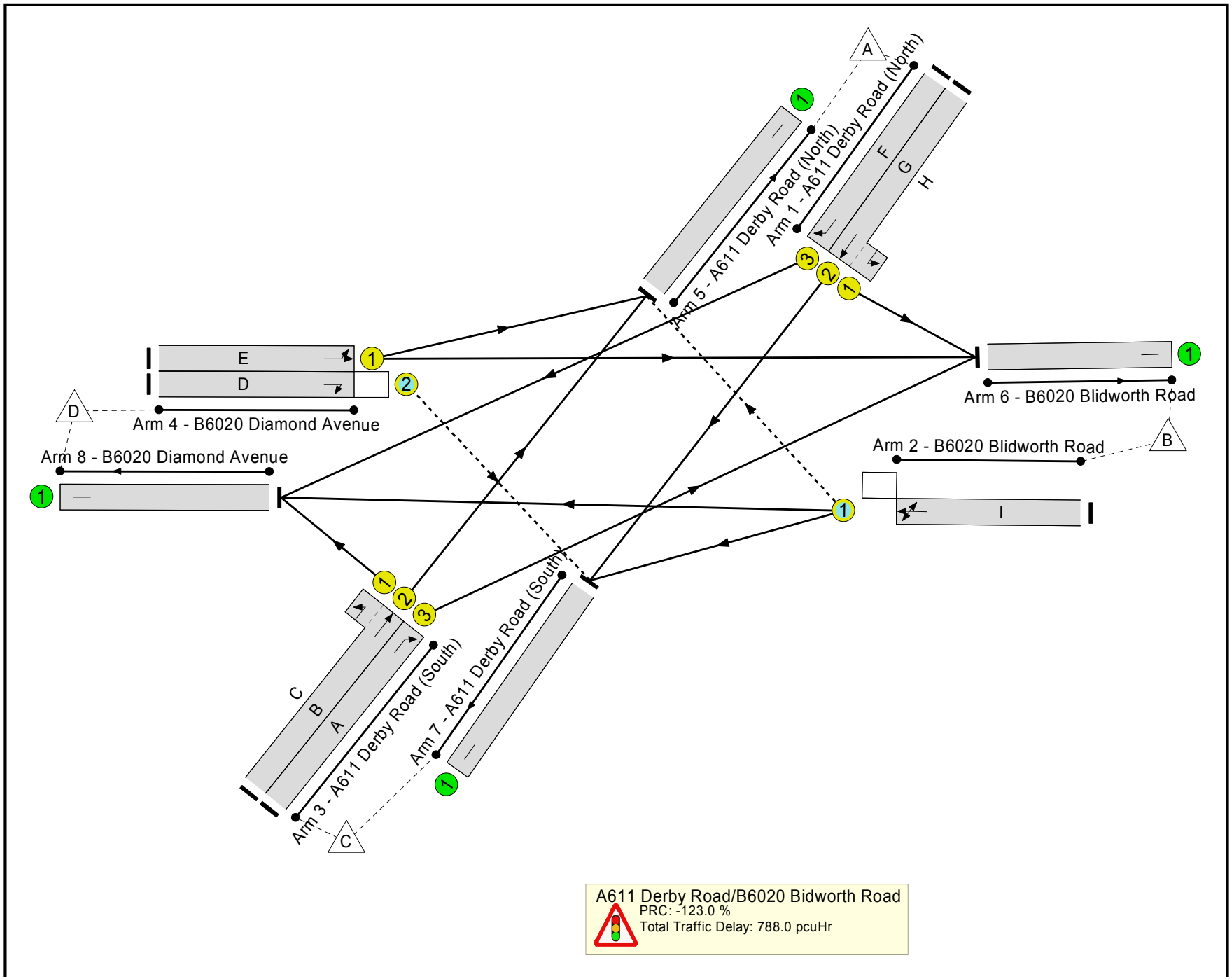
Stage	1	2	3	4	5	6
Duration	6	7	23	2	7	6
Change Point	0	16	33	65	67	81

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**200.7%**
A611 Derby Road/B6020 Bidworth Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**200.7%**
1/2+1/1	A611 Derby Road (North) Left Ahead	U	N/A	N/A	G H		1	26:23	-	1197	1900:1800	596	200.7%
1/3	A611 Derby Road (North) Right	U	N/A	N/A	F		1	7	-	45	1800	160	28.1%
2/1	B6020 Blidworth Road Right Left Ahead	O	N/A	N/A	I		1	23	-	662	1800	334	198.0%
3/2+3/1	A611 Derby Road (South) Ahead Left	U	N/A	N/A	B C		1	26:22	-	985	1900:1800	571	172.6%
3/3	A611 Derby Road (South) Right	U	N/A	N/A	A		1	7	-	188	1800	160	117.5%
4/1	B6020 Diamond Avenue Left Ahead	U	N/A	N/A	E		1	27	-	442	1900	591	74.8%
4/2	B6020 Diamond Avenue Right	O	N/A	N/A	D		1	26	-	4	1800	181	2.2%
5/1	A611 Derby Road (North)	U	N/A	N/A	-		-	-	-	1319	1900	1900	42.6%
6/1	B6020 Blidworth Road	U	N/A	N/A	-		-	-	-	768	1900	1900	31.6%
7/1	A611 Derby Road (South)	U	N/A	N/A	-		-	-	-	1253	1900	1900	33.1%
8/1	B6020 Diamond Avenue	U	N/A	N/A	-		-	-	-	183	1900	1900	6.0%

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	**-**	**-**	**99**	**0**	**2**	**93.8**	**693.8**	**0.3**	**788.0**	**-**	**-**	**-**	**-**
A611 Derby Road/B6020 Bidworth Road	**-**	**-**	**99**	**0**	**2**	**93.8**	**693.8**	**0.3**	**788.0**	**-**	**-**	**-**	**-**
1/2+1/1	1197	596	-	-	-	36.7	301.3	-	338.0	1016.5	47.5	301.3	348.7
1/3	45	45	-	-	-	0.5	0.2	-	0.7	53.9	1.0	0.2	1.2
2/1	662	334	96	0	2	21.3	164.8	0.3	186.5	1014.0	28.9	164.8	193.7
3/2+3/1	985	571	-	-	-	28.3	208.4	-	236.7	865.1	39.1	208.4	247.4
3/3	188	160	-	-	-	3.6	16.8	-	20.4	389.7	5.9	16.8	22.7
4/1	442	442	-	-	-	3.4	1.5	-	4.9	39.7	9.8	1.5	11.3
4/2	4	4	4	0	0	0.0	0.0	0.0	0.0	35.0	0.1	0.0	0.1
5/1	809	809	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
6/1	600	600	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
7/1	629	629	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
8/1	115	115	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -123.0 Total Delay for Signalled Lanes (pcuHr): 787.09 Cycle Time (s): 90
PRC Over All Lanes (%): -123.0 Total Delay Over All Lanes(pcuHr): 787.97

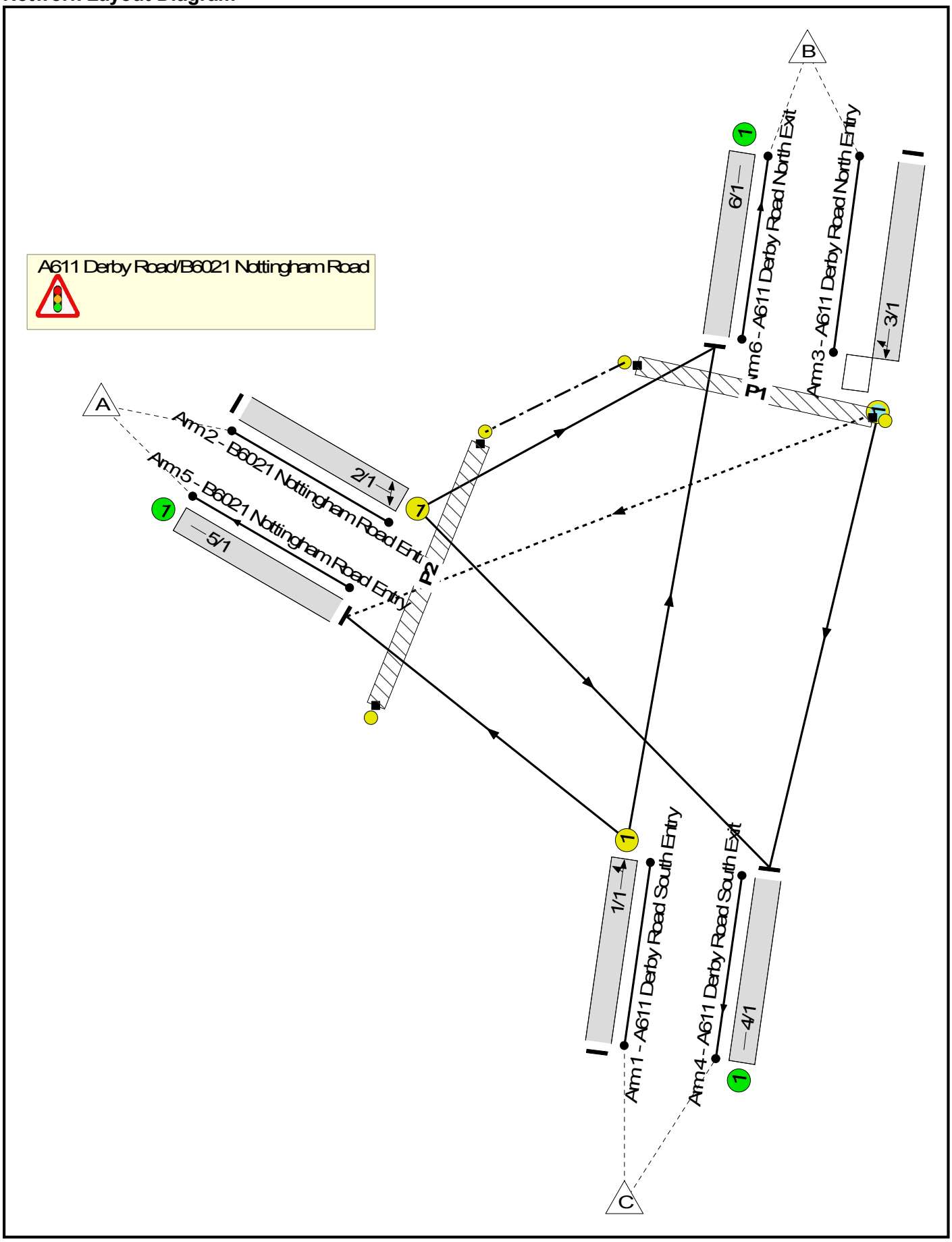
Full Input Data And Results

User and Project Details

Project:	
Title:	
Location:	
File name:	Junction 16 2016.lsg3x
Author:	
Company:	
Address:	
Notes:	

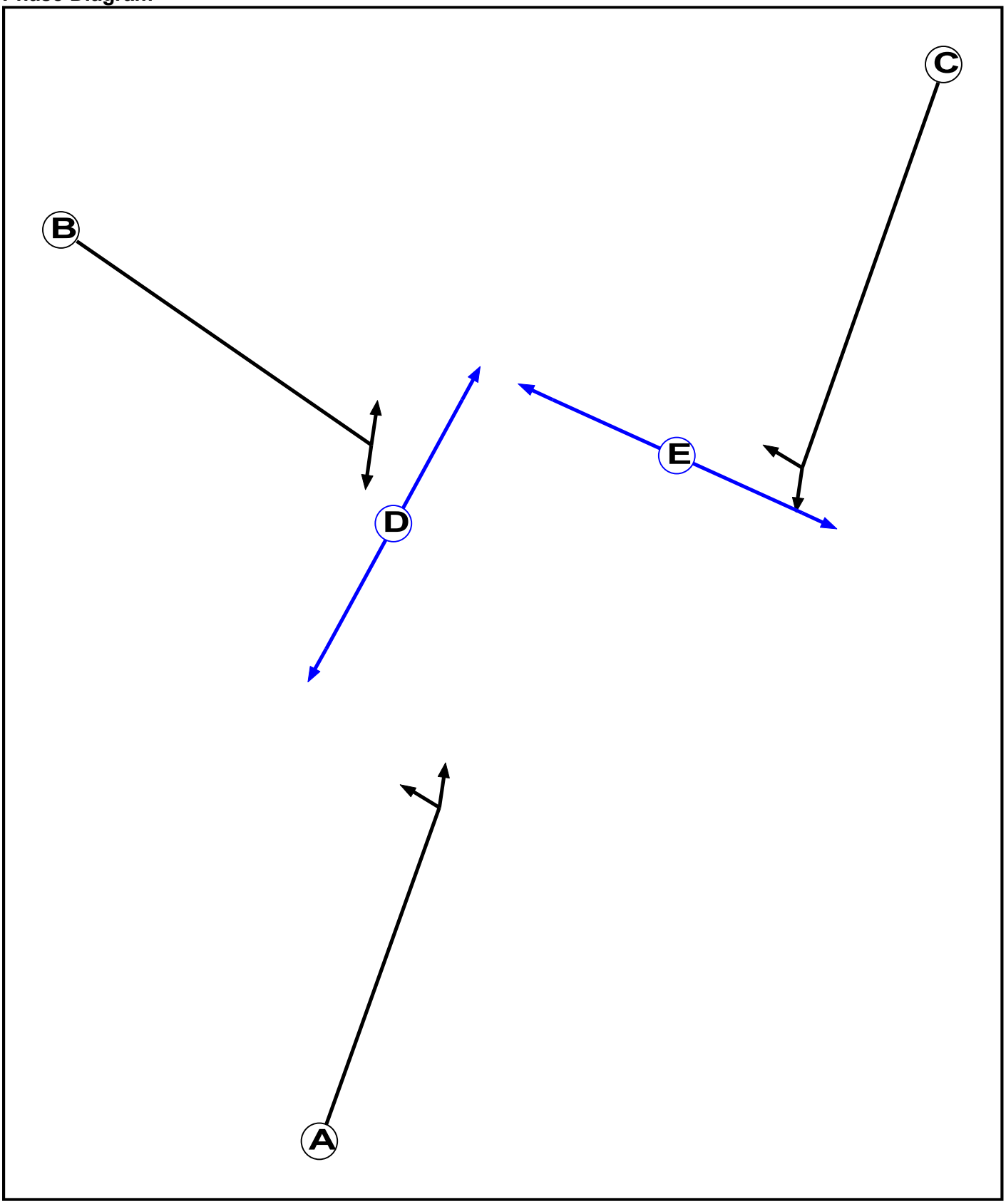
Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

Phase Input Data

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

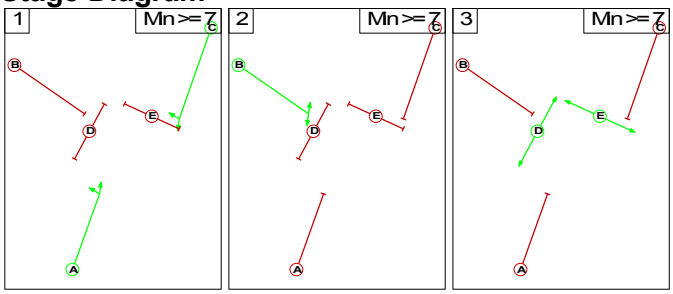
Phase Intergreens Matrix

		Starting Phase				
		A	B	C	D	E
Terminating Phase	A		11	-	9	10
	B	8		9	5	7
	C	-	9		9	5
	D	3	3	3		-
	E	3	3	3	-	

Phases in Stage

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

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
From Stage	1		11	10
	2	9		7
	3	3	3	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A611 Derby Road/B6021 Nottingham Road

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)
3/1 (A611 Derby Road North Entry)	5/1 (Right)	1439	0	1/1	1.09	All	2.00	2.00	0.50	2	2.00
				2/1	1.09	To 4/1 (Right)					

Full Input Data And Results

Lane Input Data

Junction: A611 Derby Road/B6021 Nottingham Road												
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 (A611 Derby Road South Entry)	U	A	2	3	60.0	User	1900	-	-	-	-	-
2/1 (B6021 Nottingham Road Entry)	U	B	2	3	60.0	User	1900	-	-	-	-	-
3/1 (A611 Derby Road North Entry)	O	C	2	3	60.0	User	1900	-	-	-	-	-
4/1 (A611 Derby Road South Exit)	U		2	3	60.0	User	1900	-	-	-	-	-
5/1 (B6021 Nottingham Road Entry)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (A611 Derby Road North Exit)	U		2	3	60.0	User	1900	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'Reference Case Morning Peak'	08:00	09:00	01:00	
2: '2032 Development Case Morning Peak'	08:00	09:00	01:00	
3: 'Reference Case Evening Peak'	17:00	18:00	01:00	
4: '2032 Development Case Evening Peak'	17:00	18:00	01:00	

Scenario 1: 'AM Reference Case' (FG1: 'Reference Case Morning Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	238	83	321
	B	296	0	1160	1456
	C	430	1170	0	1600
	Tot.	726	1408	1243	3377

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: AM Reference Case
Junction: A611 Derby Road/B6021 Nottingham Road	
1/1	1600
2/1	321
3/1	1456
4/1	1243
5/1	726
6/1	1408

Lane Saturation Flows

Junction: A611 Derby Road/B6021 Nottingham Road								
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 (A611 Derby Road South Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (B6021 Nottingham Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1 (A611 Derby Road North Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (A611 Derby Road South Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/1 (B6021 Nottingham Road Entry Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (A611 Derby Road North Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900

Scenario 2: 'PM Reference Case' (FG3: 'Reference Case Evening Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	101	379	480
	B	37	0	1269	1306
	C	423	769	0	1192
	Tot.	460	870	1648	2978

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM Reference Case
Junction: A611 Derby Road/B6021 Nottingham Road	
1/1	1192
2/1	480
3/1	1306
4/1	1648
5/1	460
6/1	870

Lane Saturation Flows

Junction: A611 Derby Road/B6021 Nottingham Road								
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 (A611 Derby Road South Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (B6021 Nottingham Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1 (A611 Derby Road North Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (A611 Derby Road South Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/1 (B6021 Nottingham Road Entry Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (A611 Derby Road North Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	301	223	524
	B	227	0	1300	1527
	C	583	1095	0	1678
	Tot.	810	1396	1523	3729

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: AM Development Scenario
Junction: A611 Derby Road/B6021 Nottingham Road	
1/1	1678
2/1	524
3/1	1527
4/1	1523
5/1	810
6/1	1396

Lane Saturation Flows

Junction: A611 Derby Road/B6021 Nottingham Road								
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 (A611 Derby Road South Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (B6021 Nottingham Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1 (A611 Derby Road North Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (A611 Derby Road South Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/1 (B6021 Nottingham Road Entry Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (A611 Derby Road North Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	89	521	610
	B	33	0	1303	1336
	C	622	829	0	1451
	Tot.	655	918	1824	3397

Full Input Data And Results

Traffic Lane Flows

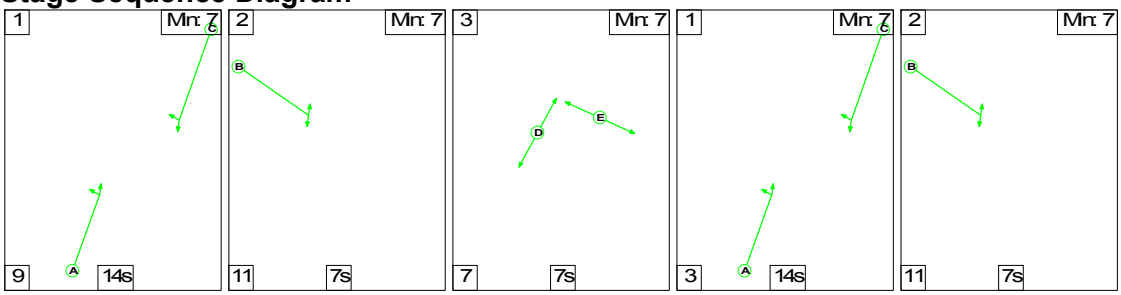
Lane	Scenario 4: PM Development Scenario
Junction: A611 Derby Road/B6021 Nottingham Road	
1/1	1451
2/1	610
3/1	1336
4/1	1824
5/1	655
6/1	918

Lane Saturation Flows

Junction: A611 Derby Road/B6021 Nottingham Road								
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 (A611 Derby Road South Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (B6021 Nottingham Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1 (A611 Derby Road North Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (A611 Derby Road South Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/1 (B6021 Nottingham Road Entry Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (A611 Derby Road North Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900

Scenario 1: 'AM Reference Case' (FG1: 'Reference Case Morning Peak', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

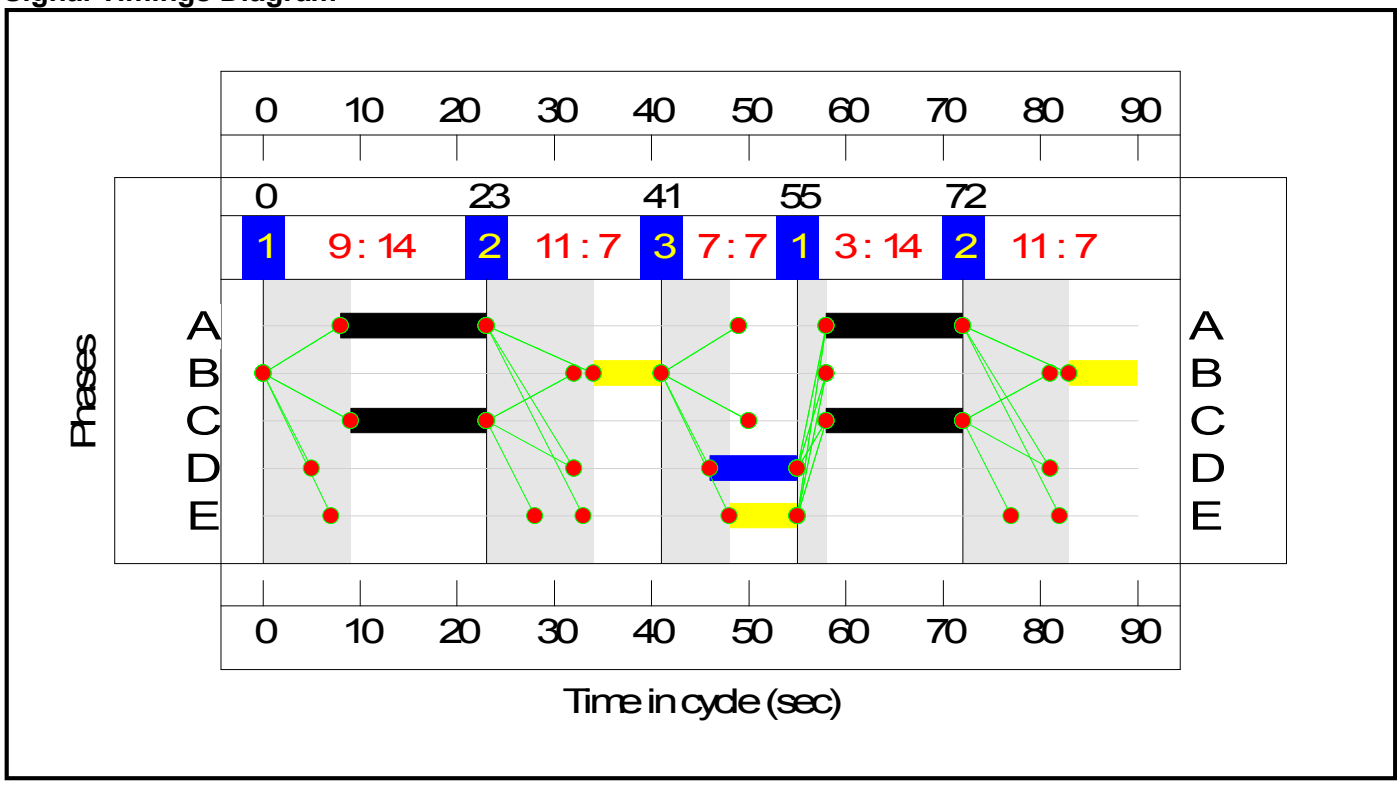


Stage Timings

Stage	1	2	3	1	2
Duration	14	7	7	14	7
Change Point	0	23	41	55	72

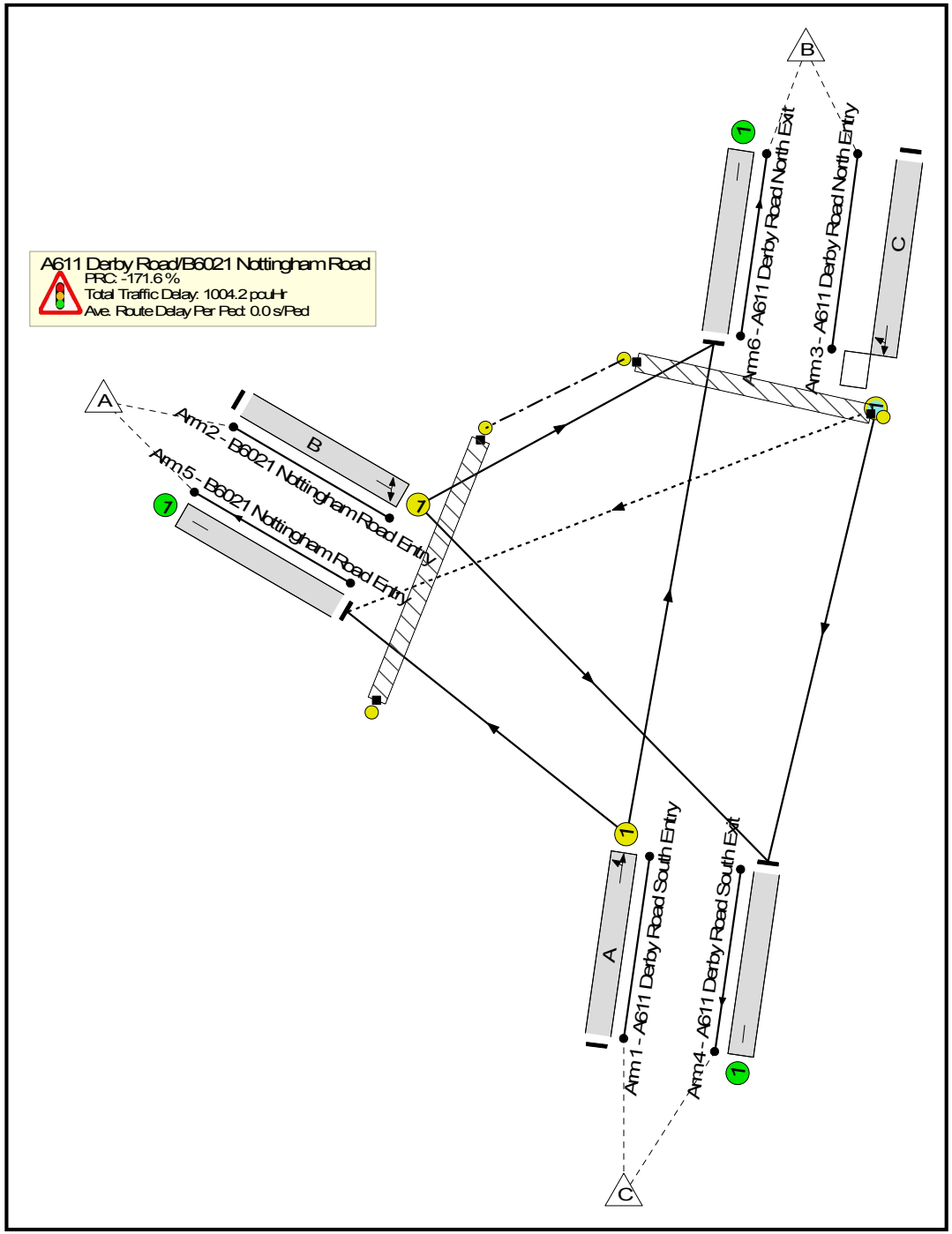
Full Input Data And Results

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**244.5%**
A611 Derby Road/B6021 Nottingham Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**244.5%**
1/1	A611 Derby Road South Entry Left Ahead	U	N/A	N/A	A		2	29	-	1600	1900	654	244.5%
2/1	B6021 Nottingham Road Entry Right Left	U	N/A	N/A	B		2	14	-	321	1900	338	95.0%
3/1	A611 Derby Road North Entry Ahead Right	O	N/A	N/A	C		2	28	-	1456	1900	633	230.1%
4/1	A611 Derby Road South Exit	U	N/A	N/A	-		-	-	-	1243	1900	1900	30.9%
5/1	B6021 Nottingham Road Entry	U	N/A	N/A	-		-	-	-	726	Inf	Inf	0.0%
6/1	A611 Derby Road North Exit	U	N/A	N/A	-		-	-	-	1408	1900	1900	37.7%
Ped Link: P1	A611 North Crossing	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P2	B6021 Nottingham Road Crossing	-	N/A	-	D		1	9	-	0	-	0	0.0%

Full Input Data And Results

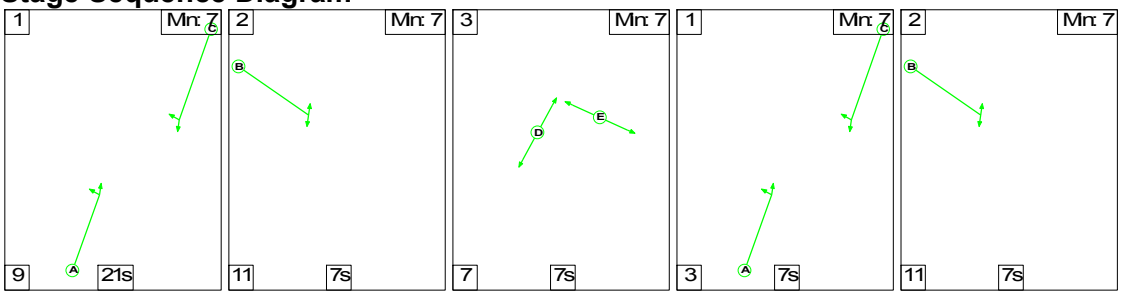
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**129**	**111.6**	**892.3**	**0.3**	**1004.2**	**-**	**-**	**-**	**-**
A611 Derby Road/B6021 Nottingham Road	**-**	**-**	**0**	**0**	**129**	**111.6**	**892.3**	**0.3**	**1004.2**	**-**	**-**	**-**	**-**
1/1	1600	654	-	-	-	58.7	473.6	-	532.3	1197.7	72.2	473.6	545.8
2/1	321	321	-	-	-	1.7	5.7	-	7.4	83.1	4.4	5.7	10.1
3/1	1456	633	0	0	129	51.2	412.5	0.3	464.0	1147.3	63.6	412.5	476.1
4/1	587	587	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
5/1	305	305	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	717	717	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -171.6 Total Delay for Signalled Lanes (pcuHr): 1003.71 Cycle Time (s): 90
PRC Over All Lanes (%): -171.6 Total Delay Over All Lanes(pcuHr): 1004.24

Full Input Data And Results

Scenario 2: 'PM Reference Case' (FG3: 'Reference Case Evening Peak', Plan 1: 'Network Control Plan 1')

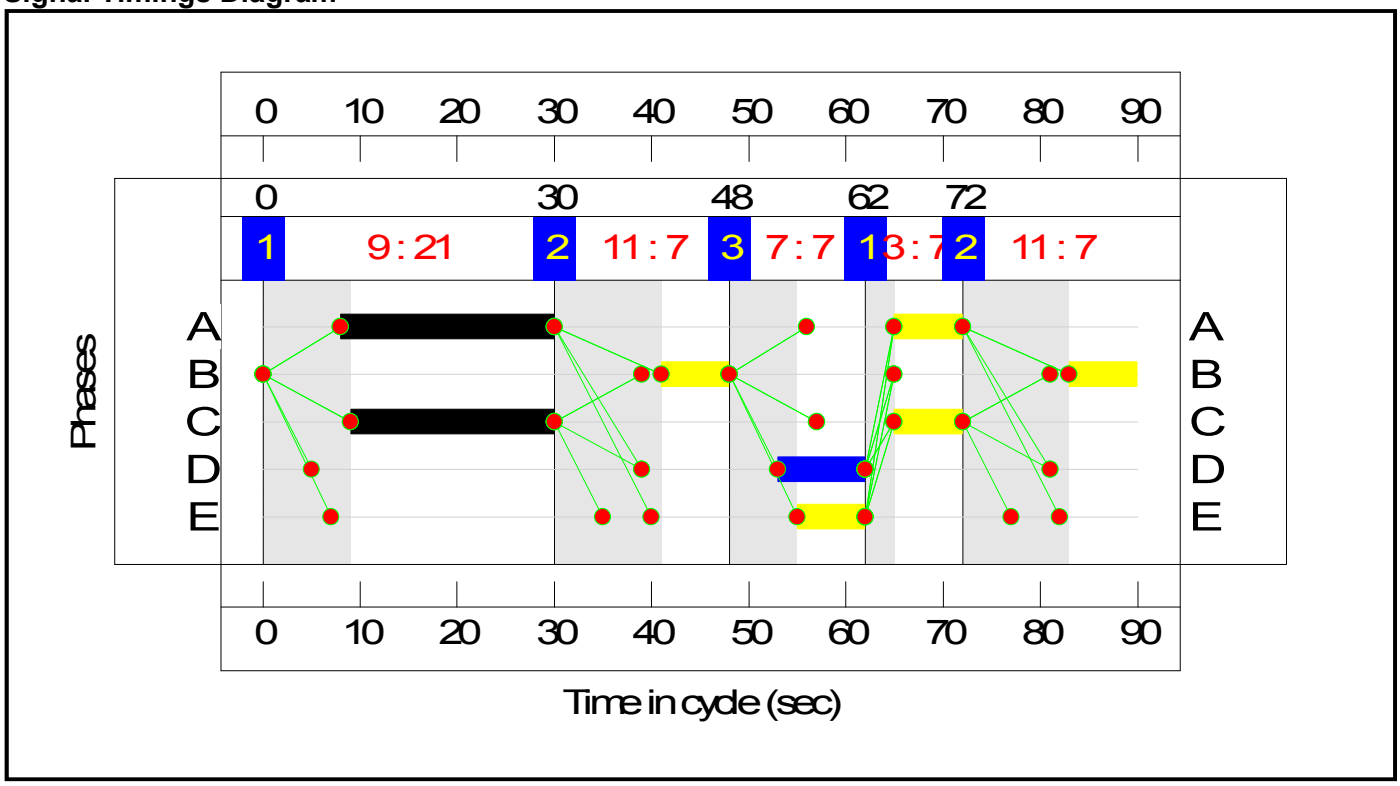
Stage Sequence Diagram



Stage Timings

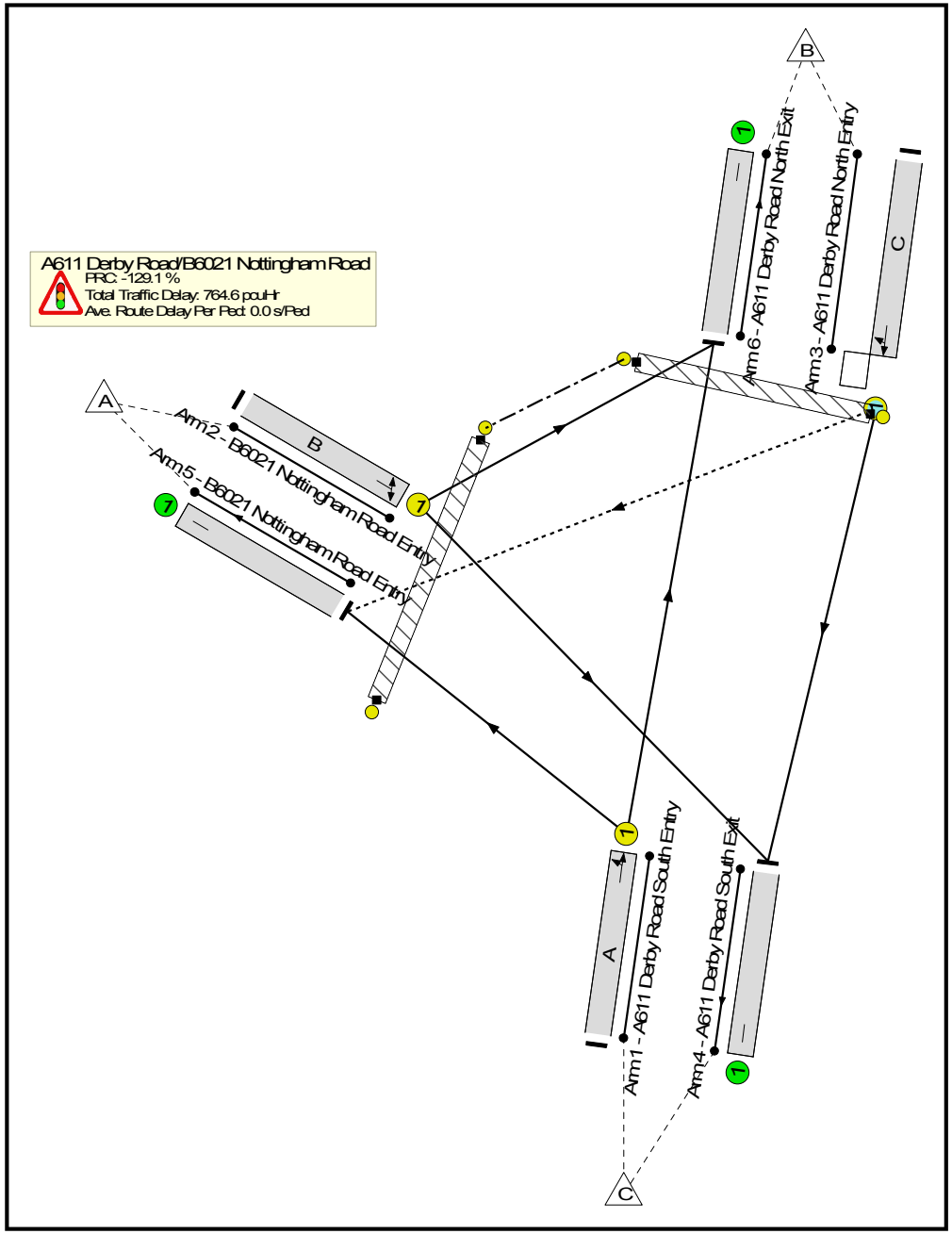
Stage	1	2	3	1	2
Duration	21	7	7	7	7
Change Point	0	30	48	62	72

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**206.2%**
A611 Derby Road/B6021 Nottingham Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**206.2%**
1/1	A611 Derby Road South Entry Left Ahead	U	N/A	N/A	A		2	29	-	1192	1900	654	182.1%
2/1	B6021 Nottingham Road Entry Right Left	U	N/A	N/A	B		2	14	-	480	1900	338	142.1%
3/1	A611 Derby Road North Entry Ahead Right	O	N/A	N/A	C		2	28	-	1306	1900	633	206.2%
4/1	A611 Derby Road South Exit	U	N/A	N/A	-		-	-	-	1648	1900	1900	46.4%
5/1	B6021 Nottingham Road Entry	U	N/A	N/A	-		-	-	-	460	Inf	Inf	0.0%
6/1	A611 Derby Road North Exit	U	N/A	N/A	-		-	-	-	870	1900	1900	26.0%
Ped Link: P1	A611 North Crossing	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P2	B6021 Nottingham Road Crossing	-	N/A	-	D		1	9	-	0	-	0	0.0%

Full Input Data And Results

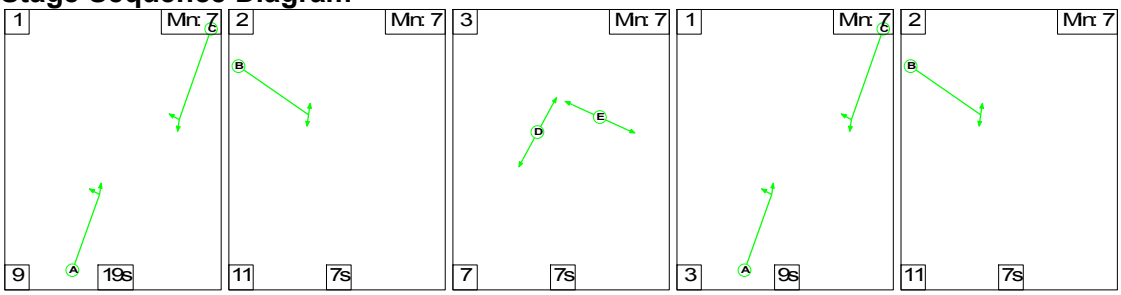
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**18**	**84.0**	**680.6**	**0.0**	**764.6**	**-**	**-**	**-**	**-**
A611 Derby Road/B6021 Nottingham Road	**-**	**-**	**0**	**0**	**18**	**84.0**	**680.6**	**0.0**	**764.6**	**-**	**-**	**-**	**-**
1/1	1192	654	-	-	-	32.9	269.9	-	302.8	914.5	41.5	269.9	311.4
2/1	480	338	-	-	-	10.7	72.8	-	83.4	625.7	14.5	72.8	87.2
3/1	1306	633	0	0	18	40.4	337.3	0.0	377.7	1041.2	50.5	337.3	387.8
4/1	882	882	-	-	-	0.0	0.4	-	0.4	1.8	0.0	0.4	0.4
5/1	250	250	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	493	493	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -129.1 Total Delay for Signalled Lanes (pcuHr): 763.98 Cycle Time (s): 90
PRC Over All Lanes (%): -129.1 Total Delay Over All Lanes(pcuHr): 764.59

Full Input Data And Results

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Network Control Plan 1')

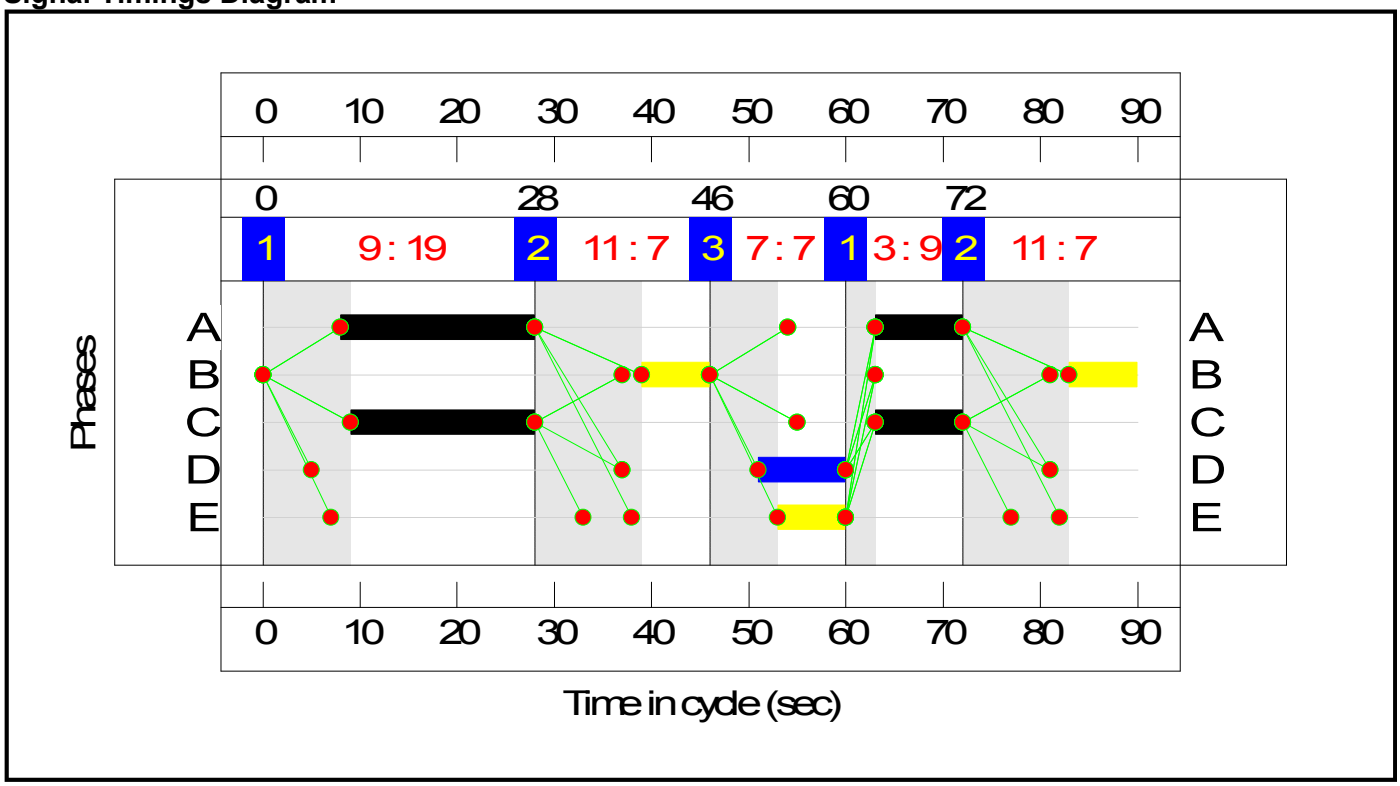
Stage Sequence Diagram



Stage Timings

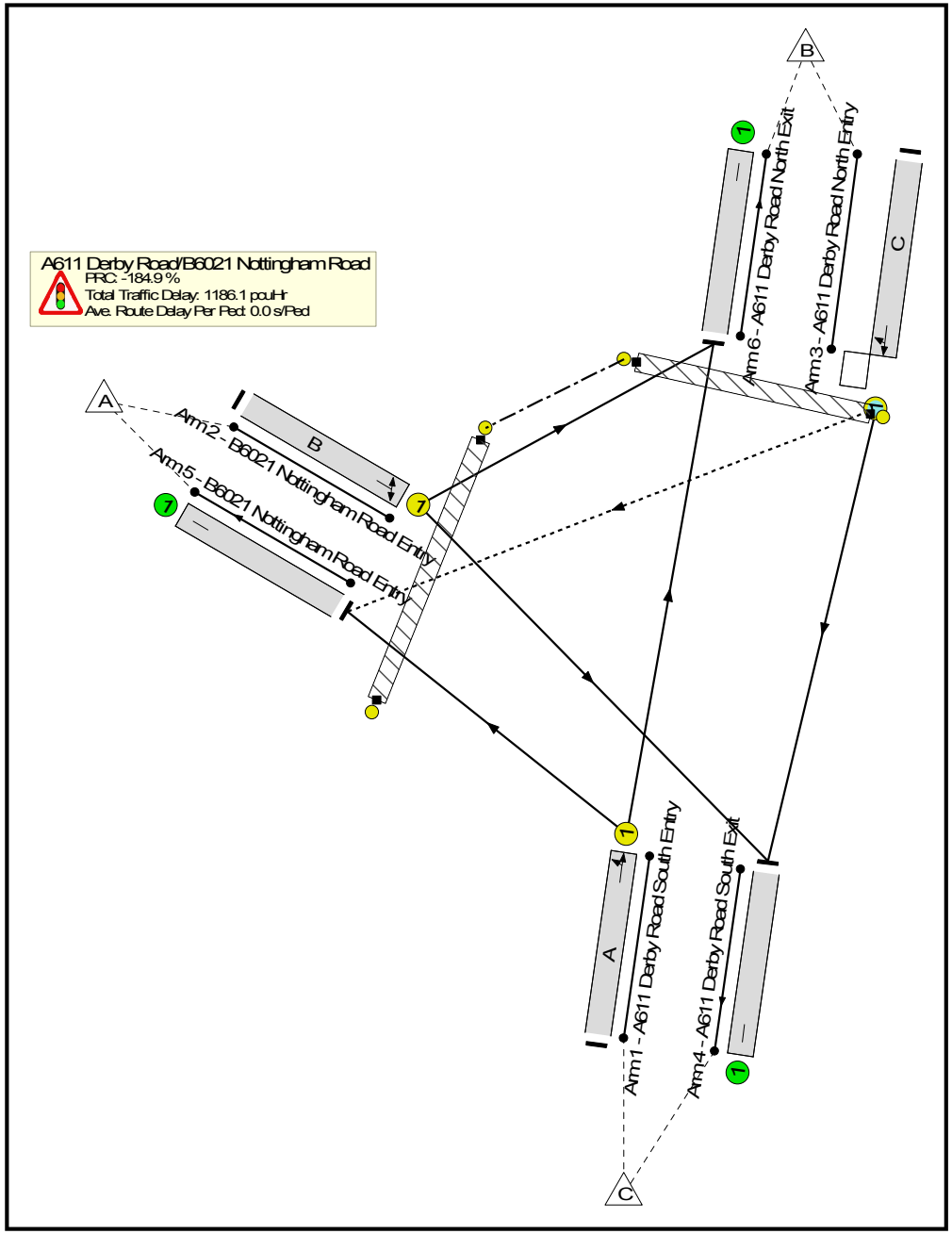
Stage	1	2	3	1	2
Duration	19	7	7	9	7
Change Point	0	28	46	60	72

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**256.4%**
A611 Derby Road/B6021 Nottingham Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**256.4%**
1/1	A611 Derby Road South Entry Left Ahead	U	N/A	N/A	A		2	29	-	1678	1900	654	256.4%
2/1	B6021 Nottingham Road Entry Right Left	U	N/A	N/A	B		2	14	-	524	1900	338	155.1%
3/1	A611 Derby Road North Entry Ahead Right	O	N/A	N/A	C		2	28	-	1527	1900	633	241.1%
4/1	A611 Derby Road South Exit	U	N/A	N/A	-		-	-	-	1523	1900	1900	35.9%
5/1	B6021 Nottingham Road Entry	U	N/A	N/A	-		-	-	-	810	Inf	Inf	0.0%
6/1	A611 Derby Road North Exit	U	N/A	N/A	-		-	-	-	1396	1900	1900	32.7%
Ped Link: P1	A611 North Crossing	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P2	B6021 Nottingham Road Crossing	-	N/A	-	D		1	9	-	0	-	0	0.0%

Full Input Data And Results

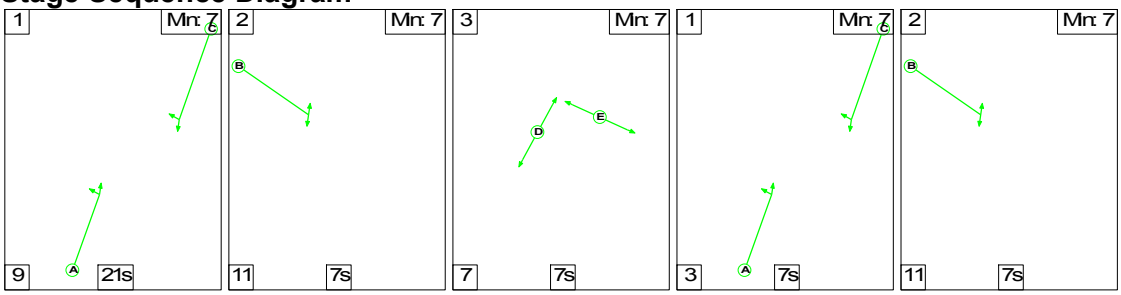
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**94**	**130.5**	**1055.4**	**0.3**	**1186.1**	**-**	**-**	**-**	**-**
A611 Derby Road/B6021 Nottingham Road	**-**	**-**	**0**	**0**	**94**	**130.5**	**1055.4**	**0.3**	**1186.1**	**-**	**-**	**-**	**-**
1/1	1678	654	-	-	-	62.6	512.6	-	575.2	1234.0	76.8	512.6	589.4
2/1	524	338	-	-	-	13.3	94.5	-	107.8	740.5	17.8	94.5	112.2
3/1	1527	633	0	0	94	54.6	447.7	0.3	502.6	1185.0	67.0	447.7	514.8
4/1	683	683	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
5/1	322	322	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	621	621	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -184.9 Total Delay for Signalled Lanes (pcuHr): 1185.58 Cycle Time (s): 90
PRC Over All Lanes (%): -184.9 Total Delay Over All Lanes(pcuHr): 1186.10

Full Input Data And Results

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Network Control Plan 1')

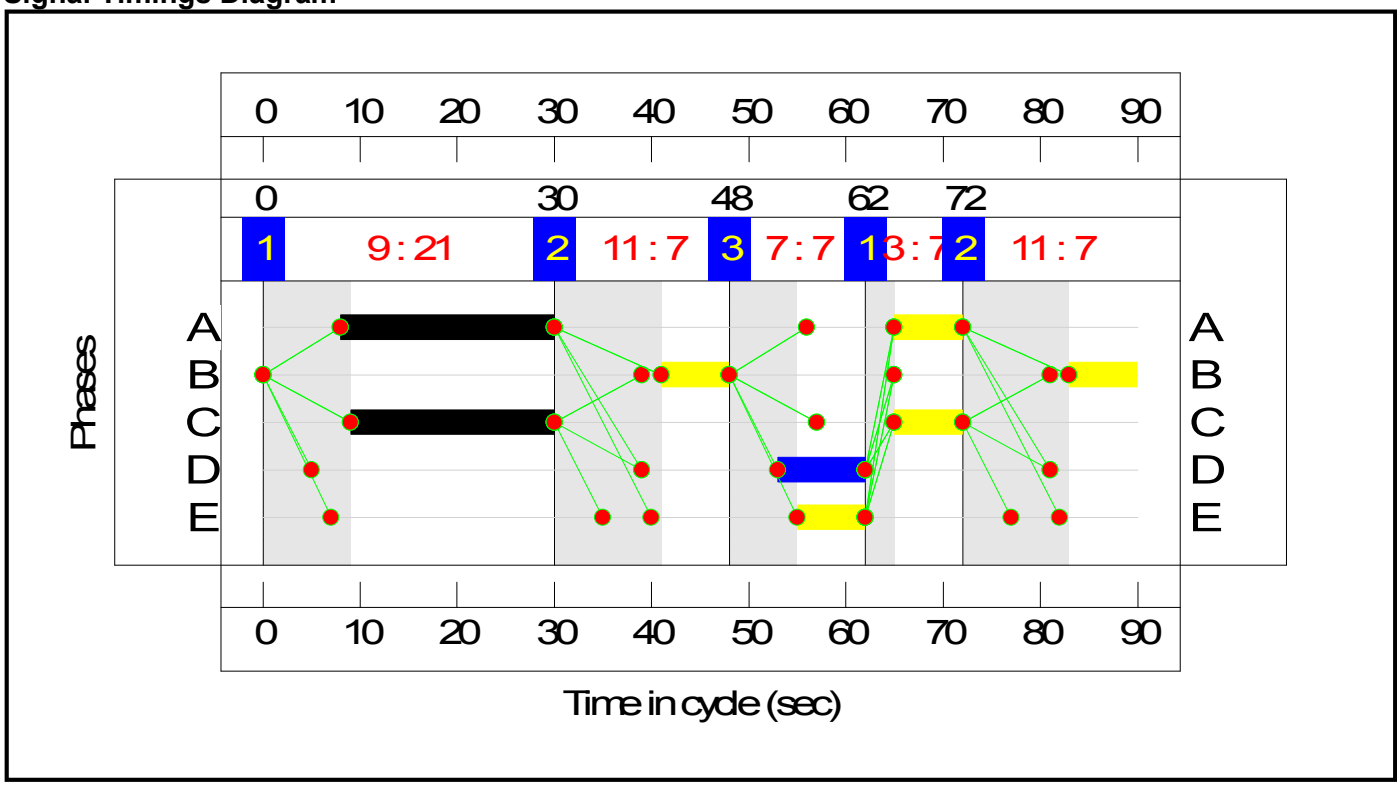
Stage Sequence Diagram



Stage Timings

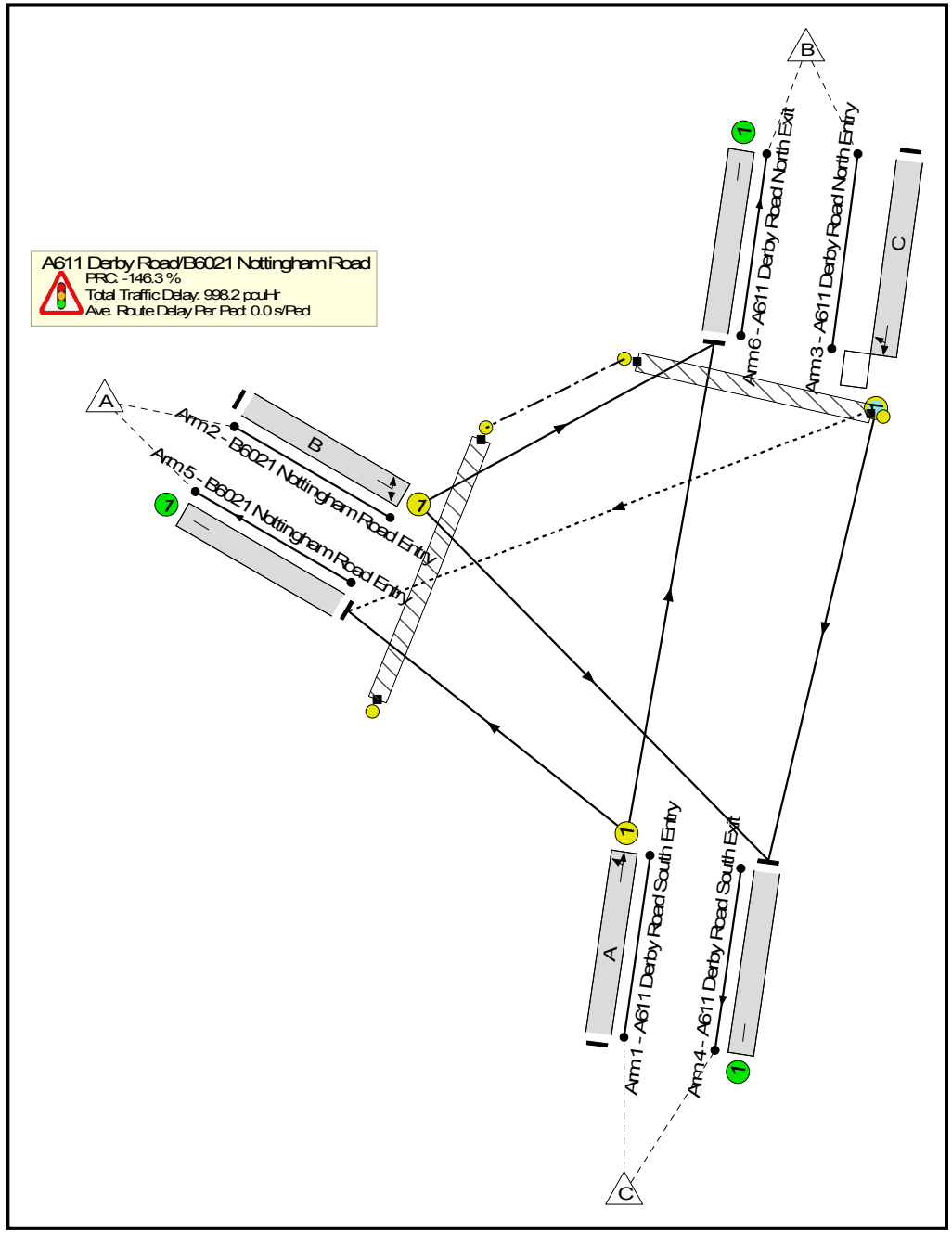
Stage	1	2	3	1	2
Duration	21	7	7	7	7
Change Point	0	30	48	62	72

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**221.7%**
A611 Derby Road/B6021 Nottingham Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**221.7%**
1/1	A611 Derby Road South Entry Left Ahead	U	N/A	N/A	A		2	29	-	1451	1900	654	221.7%
2/1	B6021 Nottingham Road Entry Right Left	U	N/A	N/A	B		2	14	-	610	1900	338	180.6%
3/1	A611 Derby Road North Entry Ahead Right	O	N/A	N/A	C		2	28	-	1336	1900	633	210.9%
4/1	A611 Derby Road South Exit	U	N/A	N/A	-		-	-	-	1824	1900	1900	47.7%
5/1	B6021 Nottingham Road Entry	U	N/A	N/A	-		-	-	-	655	Inf	Inf	0.0%
6/1	A611 Derby Road North Exit	U	N/A	N/A	-		-	-	-	918	1900	1900	22.3%
Ped Link: P1	A611 North Crossing	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P2	B6021 Nottingham Road Crossing	-	N/A	-	D		1	9	-	0	-	0	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	**-**	**-**	**0**	**0**	**16**	**108.9**	**889.3**	**0.0**	**998.2**	**-**	**-**	**-**	**-**
A611 Derby Road/B6021 Nottingham Road	**-**	**-**	**0**	**0**	**16**	**108.9**	**889.3**	**0.0**	**998.2**	**-**	**-**	**-**	**-**
1/1	1451	654	-	-	-	47.9	399.2	-	447.1	1109.4	59.7	399.2	458.9
2/1	610	338	-	-	-	18.7	137.2	-	155.9	920.2	24.1	137.2	161.4
3/1	1336	633	0	0	16	42.3	352.3	0.0	394.6	1063.3	52.7	352.3	405.0
4/1	906	906	-	-	-	0.0	0.5	-	0.5	1.8	0.0	0.5	0.5
5/1	296	296	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	423	423	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

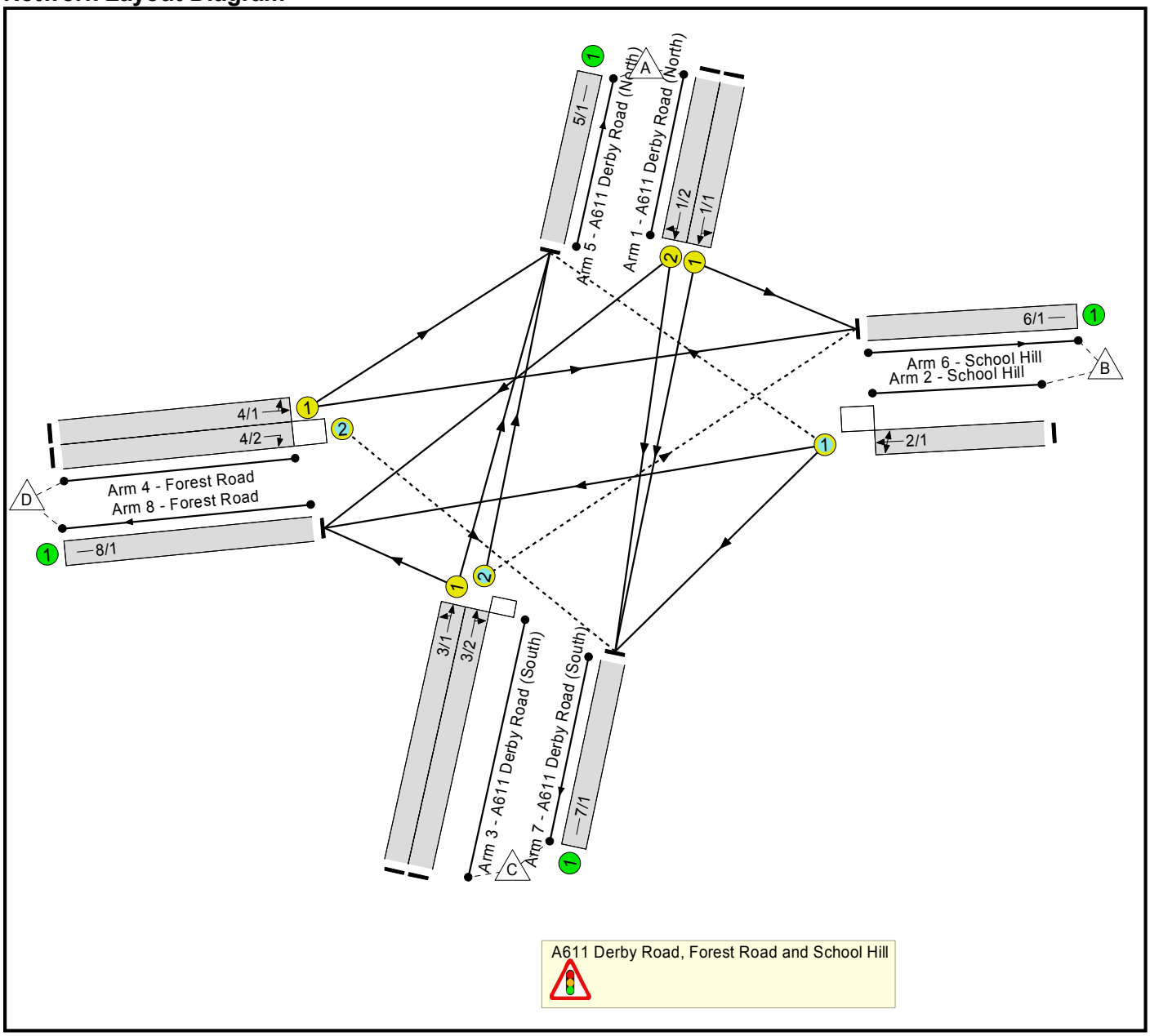
C1 PRC for Signalled Lanes (%): -146.3 Total Delay for Signalled Lanes (pcuHr): 997.65 Cycle Time (s): 90
PRC Over All Lanes (%): -146.3 Total Delay Over All Lanes(pcuHr): 998.24

Full Input Data And Results

User and Project Details

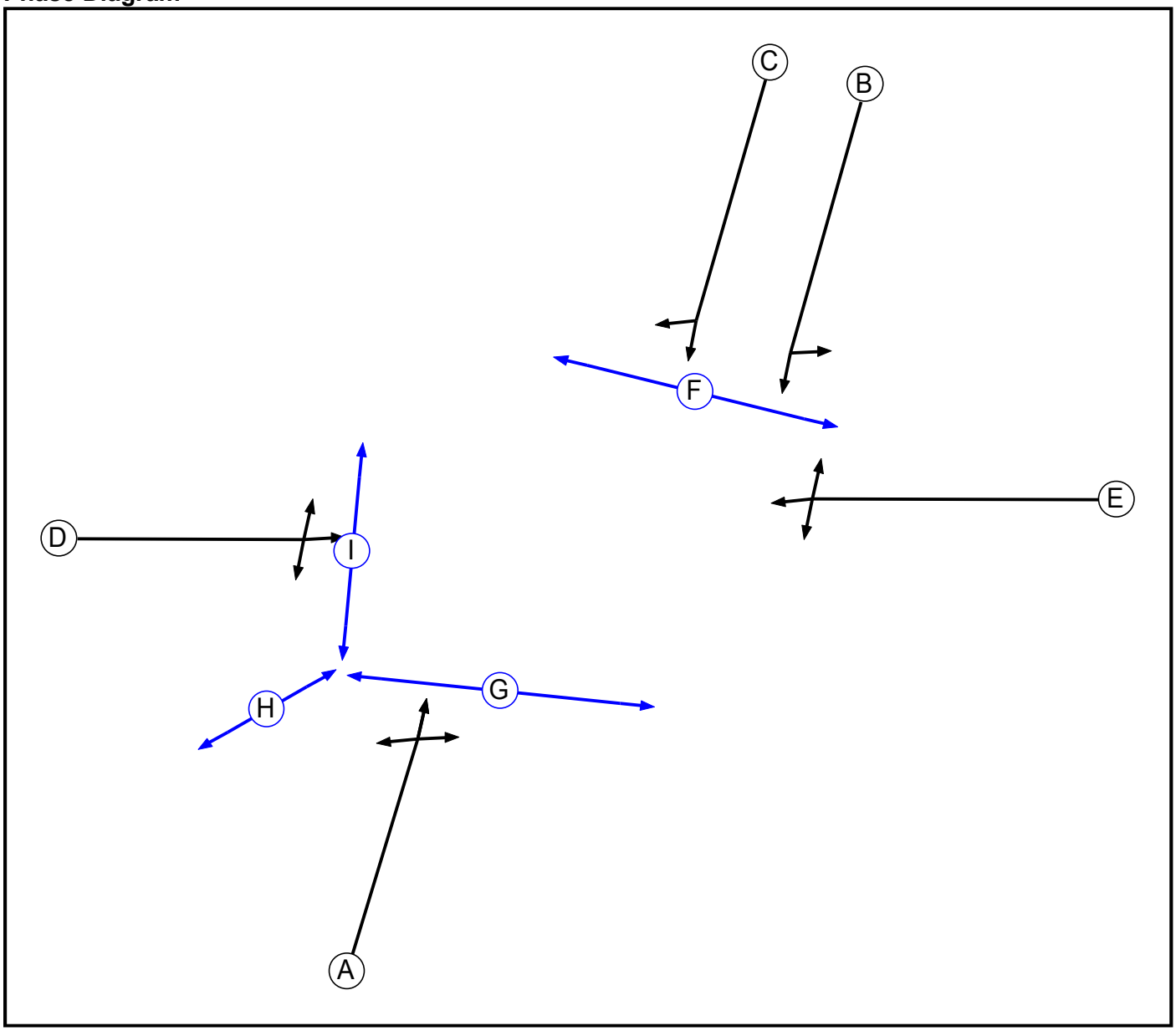
Project:	
Title:	
Location:	
File name:	Junction 17 2016.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

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	Pedestrian		7	7
G	Pedestrian		7	7
H	Pedestrian		7	7
I	Pedestrian		7	7

Full Input Data And Results

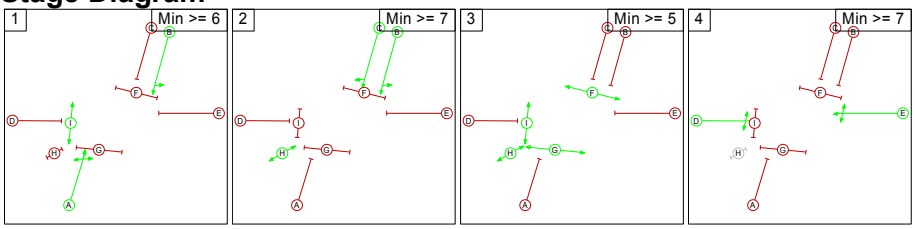
Phase Intergreens Matrix

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

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

From Stage \ To Stage	1	2	3	4
1		10	8	10
2	10		10	8
3	10	10		10
4	8	7	9	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A611 Derby Road, Forest Road and School Hill

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)
2/1 (School Hill)	5/1 (Right)	1440	0	4/1	1.09	All	2.00	2.00	0.50	2	2.00
3/2 (A611 Derby Road (South))	6/1 (Right)	1440	0	1/1	1.09	All	1.00	1.00	0.50	1	2.00
4/2 (Forest Road)	7/1 (Right)	1440	0	2/1	1.09	To 7/1 (Left) To 8/1 (Ahead)	2.00	-	0.50	2	2.00

Full Input Data And Results

Lane Input Data

Junction: A611 Derby Road, Forest Road and School Hill												
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 (A611 Derby Road (North))	U	B	2	3	60.0	User	1900	-	-	-	-	-
1/2 (A611 Derby Road (North))	U	C	2	3	17.0	User	1800	-	-	-	-	-
2/1 (School Hill)	O	E	2	3	60.0	User	1800	-	-	-	-	-
3/1 (A611 Derby Road (South))	U	A	2	3	12.0	User	1900	-	-	-	-	-
3/2 (A611 Derby Road (South))	O	A	2	3	60.0	User	1800	-	-	-	-	-
4/1 (Forest Road)	U	D	2	3	60.0	User	1900	-	-	-	-	-
4/2 (Forest Road)	O	D	2	3	9.6	User	1800	-	-	-	-	-
5/1 (A611 Derby Road (North))	U		2	3	60.0	User	1900	-	-	-	-	-
6/1 (School Hill)	U		2	3	60.0	User	1800	-	-	-	-	-
7/1 (A611 Derby Road (South))	U		2	3	60.0	User	1900	-	-	-	-	-
8/1 (Forest Road)	U		2	3	60.0	User	1900	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2032 Reference Case Morning Peak'	08:00	09:00	01:00	
2: '2032 Development Case Morning Peak'	08:00	09:00	01:00	
3: '2032 Reference Evening Peak'	17:00	18:00	01:00	
4: '2032 Development Case Evening Peak '	17:00	18:00	01:00	

Scenario 1: 'AM Reference Case ' (FG1: '2032 Reference Case Morning Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	0	1546	1	1547
	B	0	0	0	0	0
	C	1528	0	0	551	2079
	D	1	0	465	0	466
	Tot.	1529	0	2011	552	4092

Traffic Lane Flows

Lane	Scenario 1: AM Reference Case
Junction: A611 Derby Road, Forest Road and School Hill	
1/1	1439
1/2	108
2/1	0
3/1	1067
3/2	1012
4/1	1
4/2	465
5/1	1529
6/1	0
7/1	2011
8/1	552

Full Input Data And Results

Lane Saturation Flows

Junction: A611 Derby Road, Forest Road and School Hill								
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 (A611 Derby Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
1/2 (A611 Derby Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (School Hill Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A611 Derby Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (A611 Derby Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Forest Road Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (Forest Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A611 Derby Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (School Hill Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
7/1 (A611 Derby Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (Forest Road Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Evening Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	0	1672	13	1685
	B	0	0	0	0	0
	C	1140	0	0	190	1330
	D	29	0	327	0	356
	Tot.	1169	0	1999	203	3371

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM Reference Case
Junction: A611 Derby Road, Forest Road and School Hill	
1/1	1609
1/2	76
2/1	0
3/1	686
3/2	644
4/1	29
4/2	327
5/1	1169
6/1	0
7/1	1999
8/1	203

Lane Saturation Flows

Junction: A611 Derby Road, Forest Road and School Hill								
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 (A611 Derby Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
1/2 (A611 Derby Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (School Hill Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A611 Derby Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (A611 Derby Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Forest Road Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (Forest Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A611 Derby Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (School Hill Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
7/1 (A611 Derby Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (Forest Road Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900

Full Input Data And Results

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	0	1840	1	1841
	B	0	0	0	0	0
	C	1608	0	0	607	2215
	D	2	0	489	0	491
	Tot.	1610	0	2329	608	4547

Traffic Lane Flows

Lane	Scenario 3: AM Development Scenario
Junction: A611 Derby Road, Forest Road and School Hill	
1/1	1752
1/2	89
2/1	0
3/1	1140
3/2	1075
4/1	2
4/2	489
5/1	1610
6/1	0
7/1	2329
8/1	608

Full Input Data And Results

Lane Saturation Flows

Junction: A611 Derby Road, Forest Road and School Hill								
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 (A611 Derby Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
1/2 (A611 Derby Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (School Hill Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A611 Derby Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (A611 Derby Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Forest Road Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (Forest Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A611 Derby Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (School Hill Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
7/1 (A611 Derby Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (Forest Road Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak ', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	0	1842	16	1858
	B	0	0	0	0	0
	C	1392	0	0	208	1600
	D	41	0	369	0	410
	Tot.	1433	0	2211	224	3868

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: PM Development Scenario
Junction: A611 Derby Road, Forest Road and School Hill	
1/1	1768
1/2	90
2/1	0
3/1	825
3/2	775
4/1	41
4/2	369
5/1	1433
6/1	0
7/1	2211
8/1	224

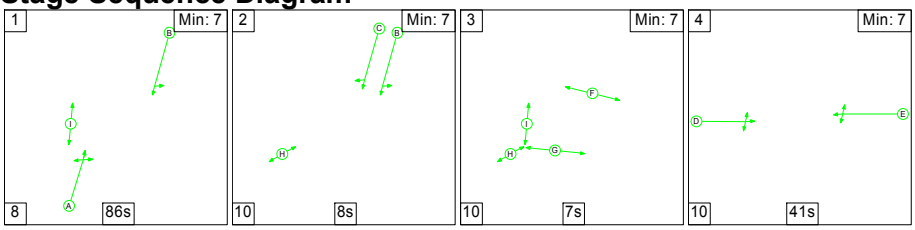
Lane Saturation Flows

Junction: A611 Derby Road, Forest Road and School Hill								
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 (A611 Derby Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
1/2 (A611 Derby Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (School Hill Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A611 Derby Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (A611 Derby Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Forest Road Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (Forest Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A611 Derby Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (School Hill Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
7/1 (A611 Derby Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (Forest Road Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900

Full Input Data And Results

Scenario 1: 'AM Reference Case ' (FG1: '2032 Reference Case Morning Peak', Plan 1: 'Staging Plan No. 1')

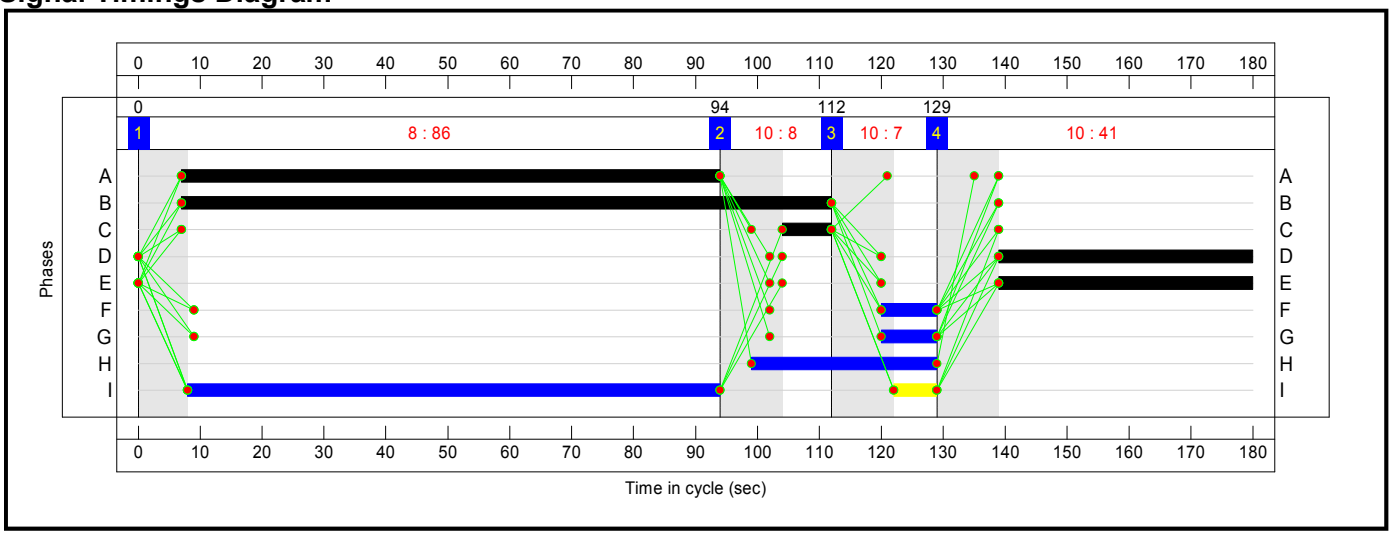
Stage Sequence Diagram



Stage Timings

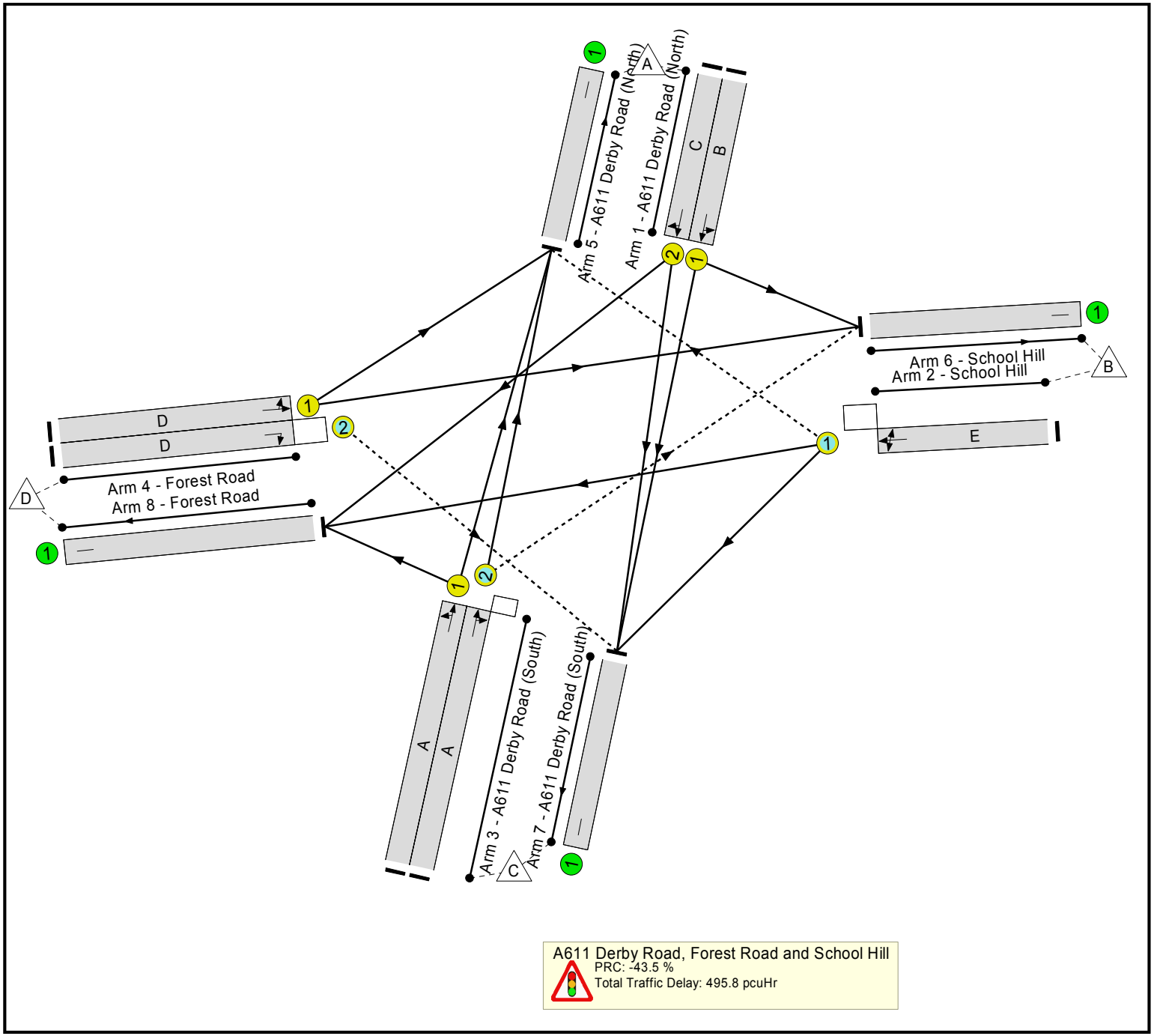
Stage	1	2	3	4
Duration	86	8	7	41
Change Point	0	94	112	129

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**129.2%**
A611 Derby Road, Forest Road and School Hill	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**129.2%**
1/1	A611 Derby Road (North) Left Ahead	U	N/A	N/A	B		1	105	-	1439	1900	1119	128.6%
1/2	A611 Derby Road (North) Ahead Right	U	N/A	N/A	C		1	8	-	108	1800	90	120.0%
2/1	School Hill Right Left Ahead	O	N/A	N/A	E		1	41	-	0	1800	420	0.0%
3/1	A611 Derby Road (South) Ahead Left	U	N/A	N/A	A		1	87	-	1067	1900	929	114.9%
3/2	A611 Derby Road (South) Ahead Right	O	N/A	N/A	A		1	87	-	1012	1800	880	115.0%
4/1	Forest Road Left Ahead	U	N/A	N/A	D		1	41	-	1	1900	443	0.2%
4/2	Forest Road Right	O	N/A	N/A	D		1	41	-	465	1800	360	129.2%
5/1	A611 Derby Road (North)	U	N/A	N/A	-		-	-	-	1529	1900	1900	70.0%
6/1	School Hill	U	N/A	N/A	-		-	-	-	0	1800	1800	0.0%
7/1	A611 Derby Road (South)	U	N/A	N/A	-		-	-	-	2011	1900	1900	82.5%
8/1	Forest Road	U	N/A	N/A	-		-	-	-	552	1900	1900	25.3%

Full Input Data And Results

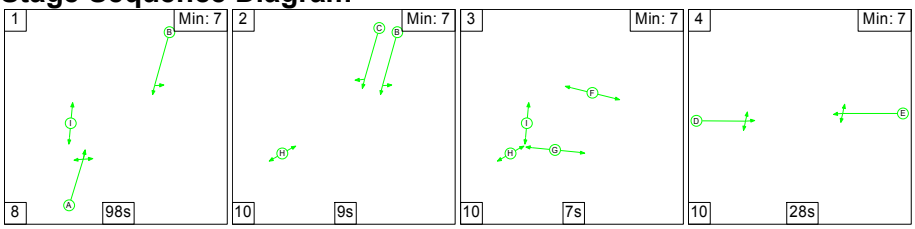
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**336**	**0**	**24**	**121.2**	**374.3**	**0.2**	**495.8**	**-**	**-**	**-**	**-**
A611 Derby Road, Forest Road and School Hill	**-**	**-**	**336**	**0**	**24**	**121.2**	**374.3**	**0.2**	**495.8**	**-**	**-**	**-**	**-**
1/1	1439	1119	-	-	-	41.3	162.3	-	203.6	509.4	88.0	162.3	250.2
1/2	108	90	-	-	-	3.8	11.4	-	15.2	506.3	6.3	11.4	17.7
2/1	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/1	1067	929	-	-	-	25.4	72.7	-	98.2	331.2	60.3	72.7	133.0
3/2	1012	880	0	0	0	24.2	69.6	0.0	93.8	333.8	57.2	69.6	126.8
4/1	1	1	-	-	-	0.0	0.0	-	0.0	57.3	0.0	0.0	0.0
4/2	465	360	336	0	24	19.9	54.6	0.2	74.7	578.5	33.4	54.6	88.0
5/1	1330	1330	-	-	-	6.4	1.2	-	7.5	20.4	65.5	1.2	66.6
6/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1568	1568	-	-	-	0.2	2.3	-	2.5	5.8	10.6	2.3	12.9
8/1	481	481	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2

C1 PRC for Signalled Lanes (%): -43.5 Total Delay for Signalled Lanes (pcuHr): 485.53 Cycle Time (s): 180
PRC Over All Lanes (%): -43.5 Total Delay Over All Lanes(pcuHr): 495.77

Full Input Data And Results

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Evening Peak', Plan 1: 'Staging Plan No. 1')

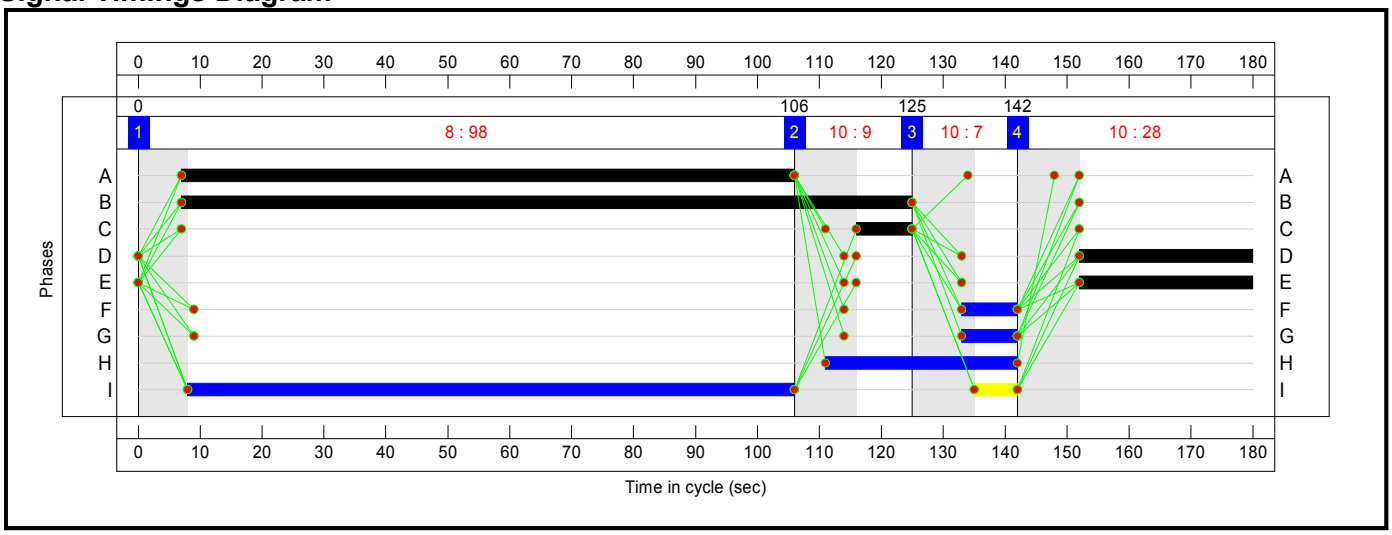
Stage Sequence Diagram



Stage Timings

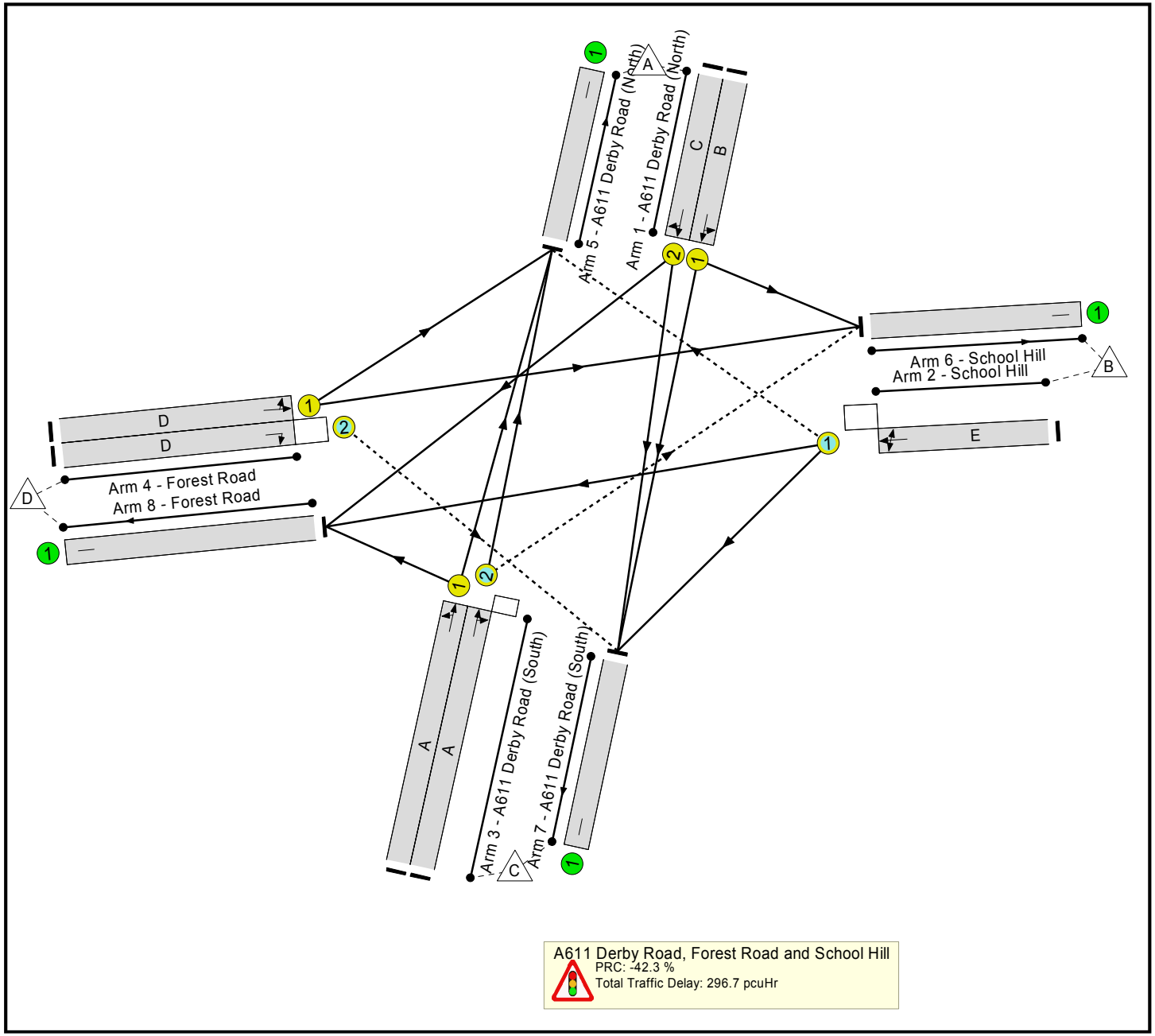
Stage	1	2	3	4
Duration	98	9	7	28
Change Point	0	106	125	142

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**128.1%**
A611 Derby Road, Forest Road and School Hill	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**128.1%**
1/1	A611 Derby Road (North) Left Ahead	U	N/A	N/A	B		1	118	-	1609	1900	1256	128.1%
1/2	A611 Derby Road (North) Ahead Right	U	N/A	N/A	C		1	9	-	76	1800	100	76.0%
2/1	School Hill Right Left Ahead	O	N/A	N/A	E		1	28	-	0	1800	290	0.0%
3/1	A611 Derby Road (South) Ahead Left	U	N/A	N/A	A		1	99	-	686	1900	1056	65.0%
3/2	A611 Derby Road (South) Ahead Right	O	N/A	N/A	A		1	99	-	644	1800	1000	64.4%
4/1	Forest Road Left Ahead	U	N/A	N/A	D		1	28	-	29	1900	306	9.5%
4/2	Forest Road Right	O	N/A	N/A	D		1	28	-	327	1800	256	127.7%
5/1	A611 Derby Road (North)	U	N/A	N/A	-		-	-	-	1169	1900	1900	61.5%
6/1	School Hill	U	N/A	N/A	-		-	-	-	0	1800	1800	0.0%
7/1	A611 Derby Road (South)	U	N/A	N/A	-		-	-	-	1999	1900	1900	82.9%
8/1	Forest Road	U	N/A	N/A	-		-	-	-	203	1900	1900	10.7%

Full Input Data And Results

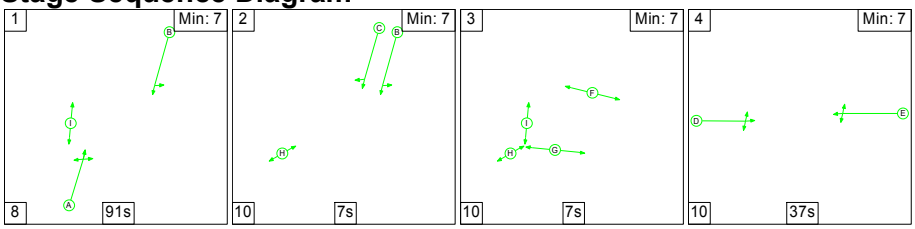
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**232**	**0**	**24**	**73.6**	**222.9**	**0.2**	**296.7**	**-**	**-**	**-**	**-**
A611 Derby Road, Forest Road and School Hill	**-**	**-**	**232**	**0**	**24**	**73.6**	**222.9**	**0.2**	**296.7**	**-**	**-**	**-**	**-**
1/1	1609	1256	-	-	-	42.3	178.7	-	221.0	494.4	98.1	178.7	276.8
1/2	76	76	-	-	-	1.8	1.4	-	3.2	150.9	3.7	1.4	5.2
2/1	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/1	686	686	-	-	-	5.3	0.9	-	6.2	32.7	23.8	0.9	24.7
3/2	644	644	0	0	0	5.0	0.9	0.0	5.9	32.7	22.2	0.9	23.1
4/1	29	29	-	-	-	0.5	0.1	-	0.6	70.9	1.2	0.1	1.3
4/2	327	256	232	0	24	14.1	37.7	0.2	52.0	572.1	23.2	37.7	60.8
5/1	1169	1169	-	-	-	4.5	0.8	-	5.3	16.4	56.3	0.8	57.1
6/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1575	1575	-	-	-	0.1	2.4	-	2.5	5.8	9.7	2.4	12.1
8/1	203	203	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1

C1 PRC for Signalled Lanes (%): -42.3 Total Delay for Signalled Lanes (pcuHr): 288.75 Cycle Time (s): 180
PRC Over All Lanes (%): -42.3 Total Delay Over All Lanes(pcuHr): 296.66

Full Input Data And Results

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Staging Plan No. 1')

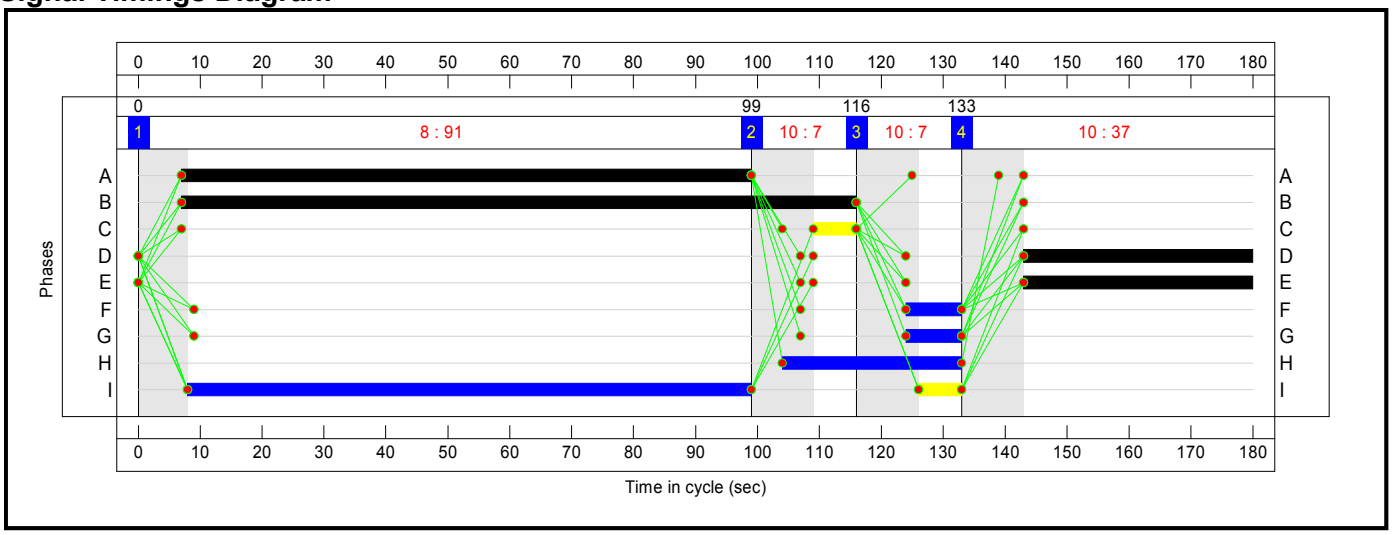
Stage Sequence Diagram



Stage Timings

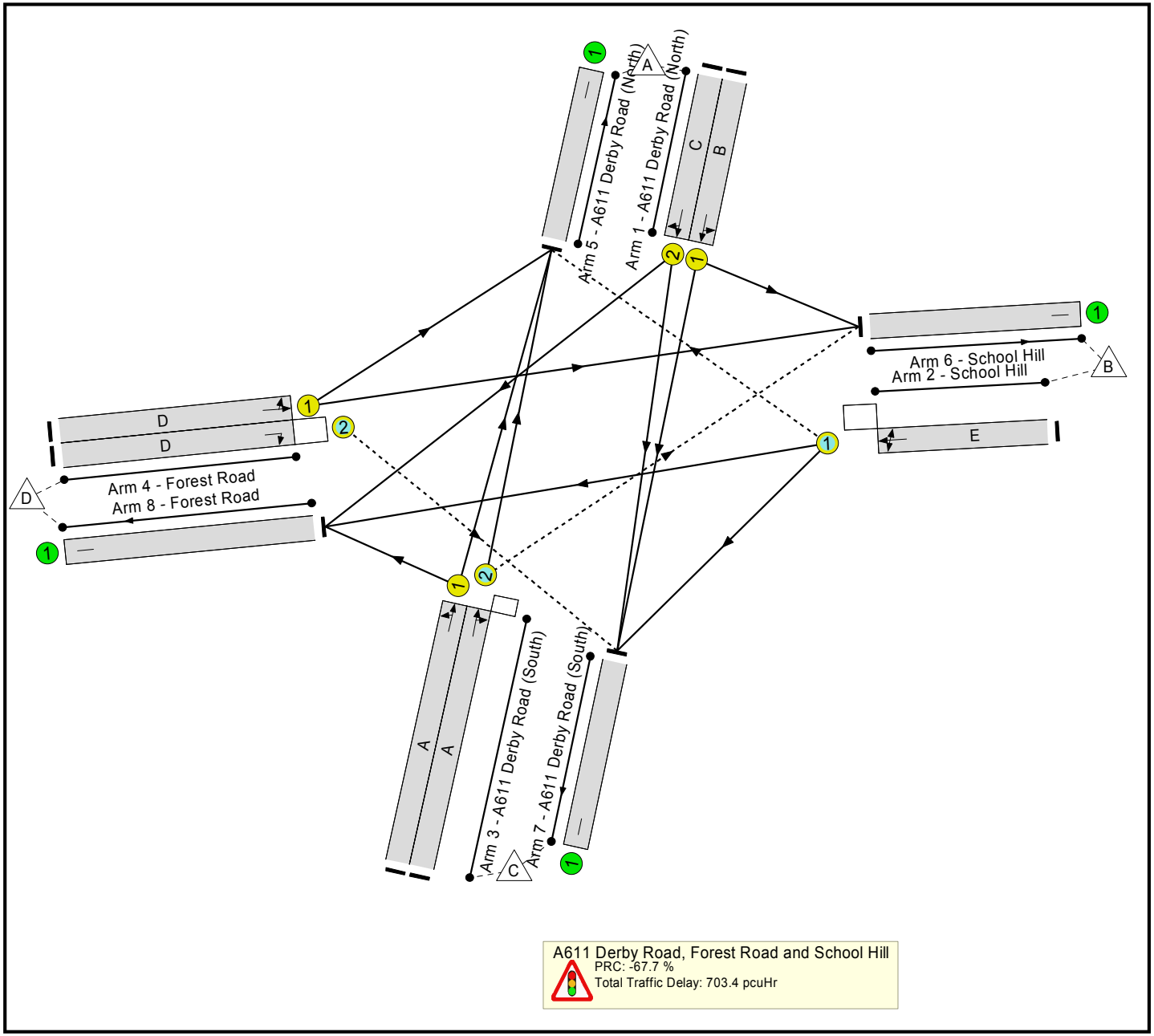
Stage	1	2	3	4
Duration	91	7	7	37
Change Point	0	99	116	133

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**150.9%**
A611 Derby Road, Forest Road and School Hill	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**150.9%**
1/1	A611 Derby Road (North) Left Ahead	U	N/A	N/A	B		1	109	-	1752	1900	1161	150.9%
1/2	A611 Derby Road (North) Ahead Right	U	N/A	N/A	C		1	7	-	89	1800	80	111.3%
2/1	School Hill Right Left Ahead	O	N/A	N/A	E		1	37	-	0	1800	380	0.0%
3/1	A611 Derby Road (South) Ahead Left	U	N/A	N/A	A		1	92	-	1140	1900	982	116.1%
3/2	A611 Derby Road (South) Ahead Right	O	N/A	N/A	A		1	92	-	1075	1800	930	115.6%
4/1	Forest Road Left Ahead	U	N/A	N/A	D		1	37	-	2	1900	401	0.5%
4/2	Forest Road Right	O	N/A	N/A	D		1	37	-	489	1800	328	149.1%
5/1	A611 Derby Road (North)	U	N/A	N/A	-		-	-	-	1610	1900	1900	73.2%
6/1	School Hill	U	N/A	N/A	-		-	-	-	0	1800	1800	0.0%
7/1	A611 Derby Road (South)	U	N/A	N/A	-		-	-	-	2329	1900	1900	82.5%
8/1	Forest Road	U	N/A	N/A	-		-	-	-	608	1900	1900	27.6%

Full Input Data And Results

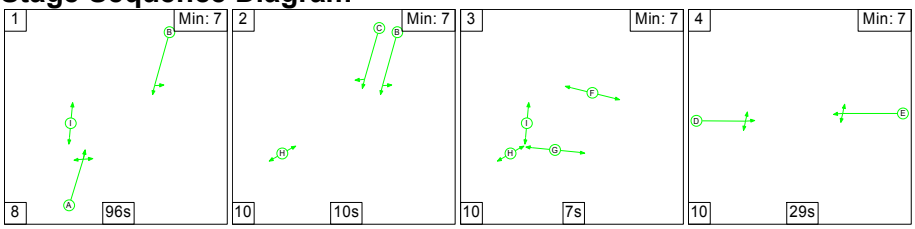
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**304**	**0**	**24**	**154.3**	**548.9**	**0.2**	**703.4**	**-**	**-**	**-**	**-**
A611 Derby Road, Forest Road and School Hill	**-**	**-**	**304**	**0**	**24**	**154.3**	**548.9**	**0.2**	**703.4**	**-**	**-**	**-**	**-**
1/1	1752	1161	-	-	-	65.7	296.9	-	362.6	745.1	117.1	296.9	414.1
1/2	89	80	-	-	-	2.7	7.5	-	10.2	413.2	4.9	7.5	12.4
2/1	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/1	1140	982	-	-	-	27.2	82.6	-	109.8	346.8	64.9	82.6	147.5
3/2	1075	930	0	0	0	25.3	76.0	0.0	101.3	339.3	61.0	76.0	137.0
4/1	2	2	-	-	-	0.0	0.0	-	0.0	60.9	0.1	0.0	0.1
4/2	489	328	304	0	24	26.4	82.0	0.2	108.6	799.6	40.1	82.0	122.1
5/1	1391	1391	-	-	-	6.8	1.4	-	8.2	21.1	67.9	1.4	69.3
6/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1568	1568	-	-	-	0.2	2.3	-	2.5	5.7	9.5	2.3	11.9
8/1	524	524	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2

C1 PRC for Signalled Lanes (%): -67.7 Total Delay for Signalled Lanes (pcuHr): 692.59 Cycle Time (s): 180
PRC Over All Lanes (%): -67.7 Total Delay Over All Lanes(pcuHr): 703.43

Full Input Data And Results

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak ', Plan 1: 'Staging Plan No. 1')

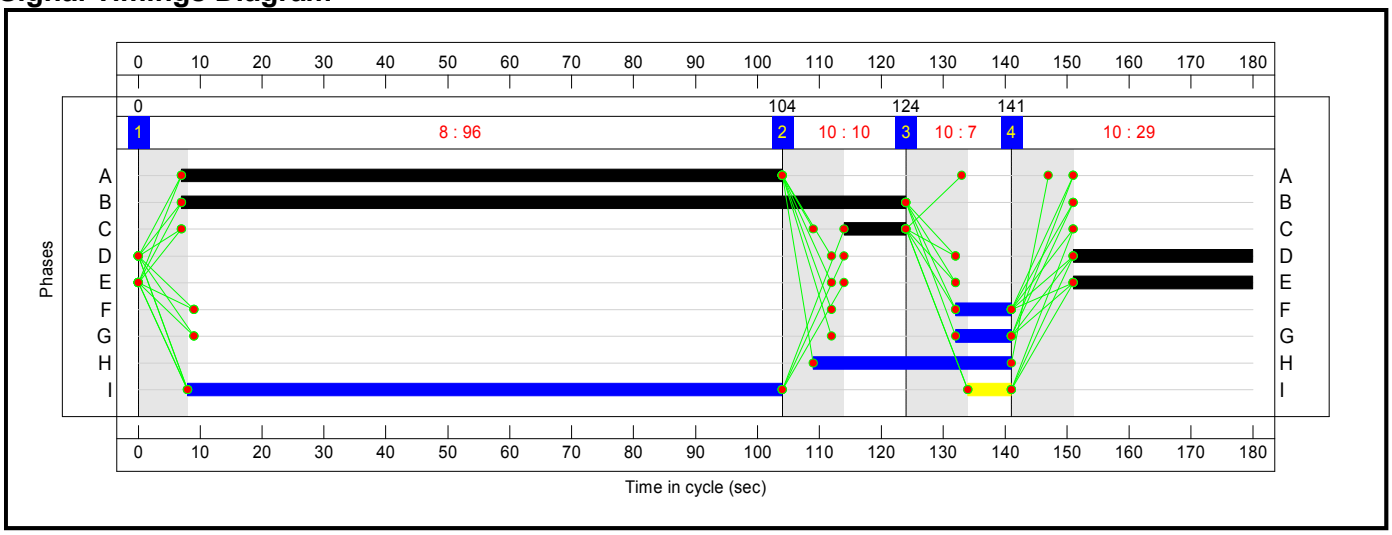
Stage Sequence Diagram



Stage Timings

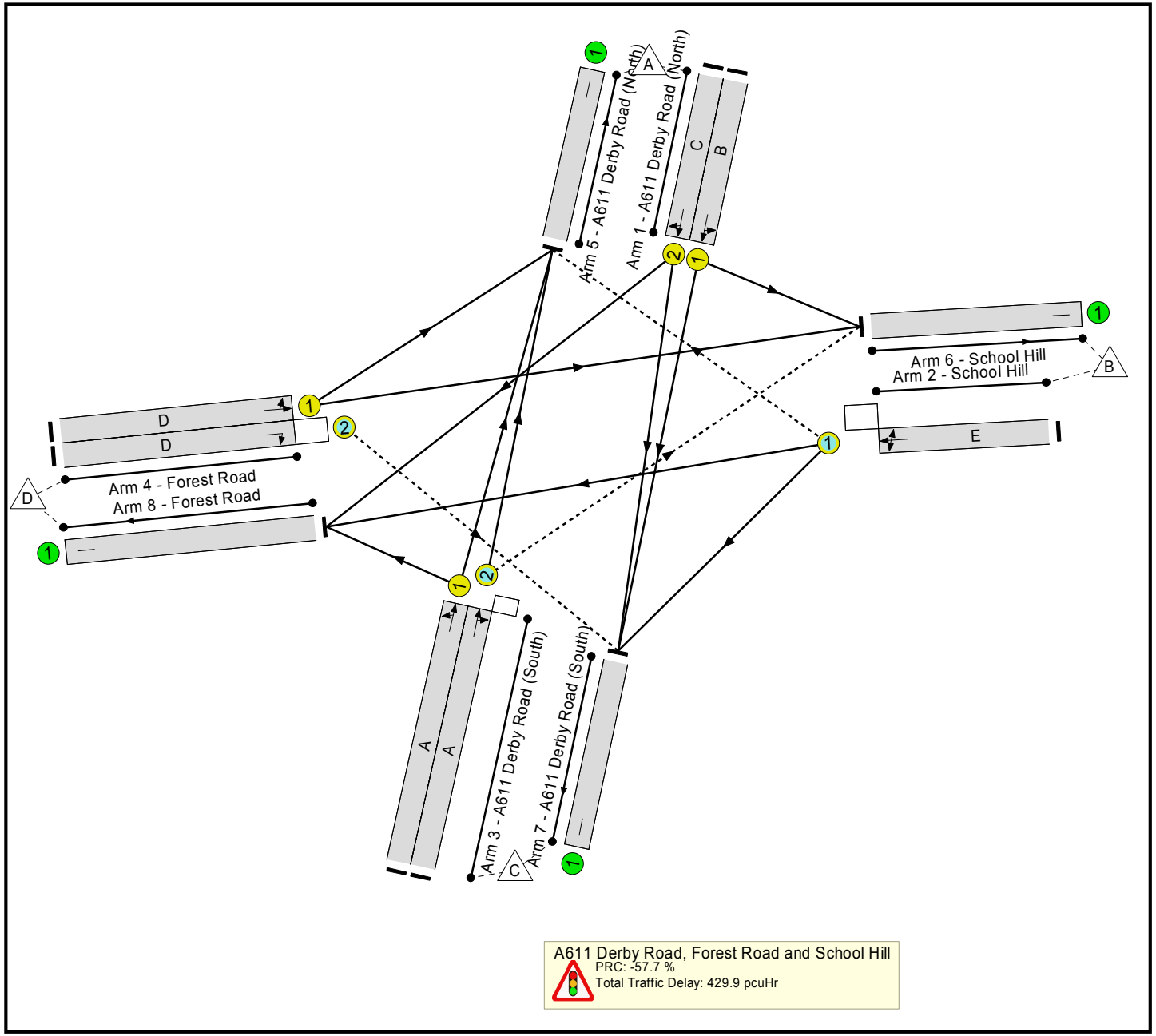
Stage	1	2	3	4
Duration	96	10	7	29
Change Point	0	104	124	141

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**141.9%**
A611 Derby Road, Forest Road and School Hill	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**141.9%**
1/1	A611 Derby Road (North) Left Ahead	U	N/A	N/A	B		1	117	-	1768	1900	1246	141.9%
1/2	A611 Derby Road (North) Ahead Right	U	N/A	N/A	C		1	10	-	90	1800	110	81.8%
2/1	School Hill Right Left Ahead	O	N/A	N/A	E		1	29	-	0	1800	300	0.0%
3/1	A611 Derby Road (South) Ahead Left	U	N/A	N/A	A		1	97	-	825	1900	1034	79.8%
3/2	A611 Derby Road (South) Ahead Right	O	N/A	N/A	A		1	97	-	775	1800	980	79.1%
4/1	Forest Road Left Ahead	U	N/A	N/A	D		1	29	-	41	1900	317	12.9%
4/2	Forest Road Right	O	N/A	N/A	D		1	29	-	369	1800	264	139.8%
5/1	A611 Derby Road (North)	U	N/A	N/A	-		-	-	-	1433	1900	1900	75.4%
6/1	School Hill	U	N/A	N/A	-		-	-	-	0	1800	1800	0.0%
7/1	A611 Derby Road (South)	U	N/A	N/A	-		-	-	-	2211	1900	1900	83.3%
8/1	Forest Road	U	N/A	N/A	-		-	-	-	224	1900	1900	11.8%

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	**-**	**-**	**240**	**0**	**24**	**102.8**	**326.9**	**0.2**	**429.9**	**-**	**-**	**-**	**-**
A611 Derby Road, Forest Road and School Hill	**-**	**-**	**240**	**0**	**24**	**102.8**	**326.9**	**0.2**	**429.9**	**-**	**-**	**-**	**-**
1/1	1768	1246	-	-	-	57.8	262.9	-	320.7	652.9	114.6	262.9	377.5
1/2	90	90	-	-	-	2.1	1.9	-	4.0	159.2	4.4	1.9	6.3
2/1	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/1	825	825	-	-	-	7.6	1.9	-	9.5	41.5	33.0	1.9	34.9
3/2	775	775	0	0	0	7.1	1.9	0.0	8.9	41.4	31.0	1.9	32.9
4/1	41	41	-	-	-	0.7	0.1	-	0.8	70.4	1.7	0.1	1.8
4/2	369	264	240	0	24	18.5	54.2	0.2	72.9	710.9	28.6	54.2	82.8
5/1	1433	1433	-	-	-	8.9	1.5	-	10.4	26.2	69.0	1.5	70.5
6/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1584	1584	-	-	-	0.2	2.5	-	2.7	6.0	10.9	2.5	13.3
8/1	224	224	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1

C1 PRC for Signalled Lanes (%): -57.7 Total Delay for Signalled Lanes (pcuHr): 416.73 Cycle Time (s): 180
PRC Over All Lanes (%): -57.7 Total Delay Over All Lanes(pcuHr): 429.88

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.4.487 [15039,24/03/2014]
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Filename: Junction 18 2016.arc8
Path: J:\MID\4300\MID4354 - Ashfield Junction Assessments\CALCULATIONS\DATA\Ashfield_Junction_Assessment_Information\Junction 18 - A611 Derby Road, Annesley Cutting PICADY
Report generation date: 13/09/2016 10:44:51

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS

	A1 - Reference Case Morning Peak			
Stream B-AC	308.73	2206.21	2.31	F
Stream C-AB	5.64	57.46	0.87	F
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 - Reference Case Morning Peak, AM " model duration: 07:45 - 09:15
"D2 - 2032 Development Scenario Morning Peak, AM" model duration: 07:45 - 09:15
"D3 - Reference Case Evening Peak, PM" model duration: 16:45 - 18:15
"D4 - 2032 Development Scenario Evening Peak, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.4.487 at 13/09/2016 10:44:43

File summary

Title	(untitled)
Location	
Site Number	
Date	22/06/2016

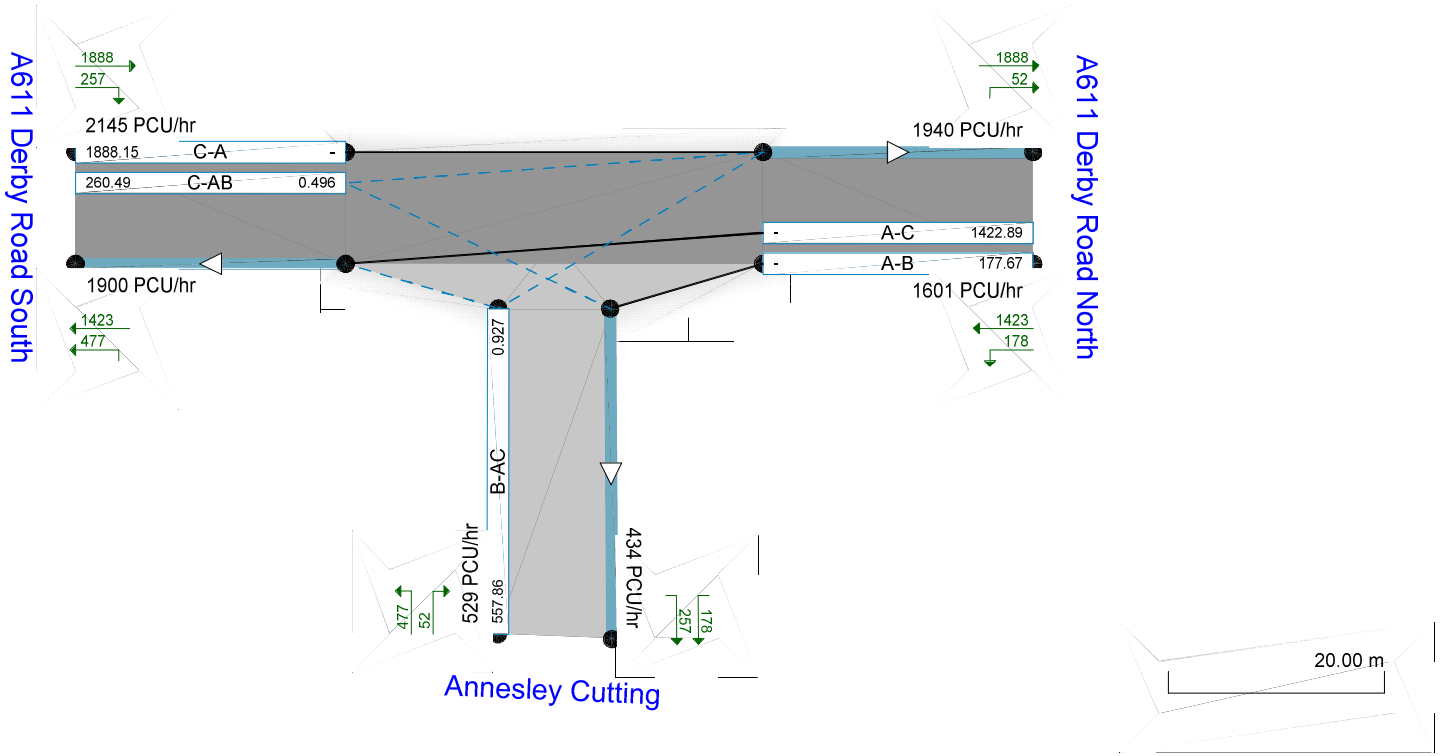
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	noram
Description	

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 modelled flow through junction (PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr); Streams (downstreams) show RFC ()

Time Segment: (07:45-08:00)
Showing Analysis Set "A1 "; Demand Set "D1 - Reference Case Morning Peak, AM "

The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - Reference Case Morning Peak, 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
(Default Analysis Set)	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
Reference Case Morning Peak, AM	Reference Case Morning Peak	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	1522.25	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
A611 Derby Road North	A	A611 Derby Road North		Major
Annesley Cutting	B	Annesley Cutting		Minor
A611 Derby Road South	C	A611 Derby Road South		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)
A611 Derby Road South	19.00		0.00		2.20	250.00	✓	99.00

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	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length	Visibility To Left (m)	Visibility To Right (m)

		(m)			(m)						(PCU)		
Annesley Cutting	One lane	5.00										200	200

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	780.162	0.062	0.156	0.098	0.223
1	B-C	899.987	0.060	0.151	-	-
1	C-B	718.741	0.121	0.121	-	-

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 (%)
A611 Derby Road North	ONE HOUR	✓	2126.00	100.000
Annesley Cutting	ONE HOUR	✓	741.00	100.000
A611 Derby Road South	ONE HOUR	✓	2854.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	**A611 Derby Road North**	1600.56	1600.56		
07:45-08:00	**Annesley Cutting**	557.86	557.86		
07:45-08:00	**A611 Derby Road**	2148.64	2148.64		

	South				
08:00-08:15	**A611 Derby Road North**	1911.23	1911.23		
08:00-08:15	**Annesley Cutting**	666.14	666.14		
08:00-08:15	**A611 Derby Road South**	2565.69	2565.69		
08:15-08:30	**A611 Derby Road North**	2340.77	2340.77		
08:15-08:30	**Annesley Cutting**	815.86	815.86		
08:15-08:30	**A611 Derby Road South**	3142.31	3142.31		
08:30-08:45	**A611 Derby Road North**	2340.77	2340.77		
08:30-08:45	**Annesley Cutting**	815.86	815.86		
08:30-08:45	**A611 Derby Road South**	3142.31	3142.31		
08:45-09:00	**A611 Derby Road North**	1911.23	1911.23		
08:45-09:00	**Annesley Cutting**	666.14	666.14		
08:45-09:00	**A611 Derby Road**	2565.69	2565.69		

	South				
09:00-09:15	A611 Derby Road North	1600.56	1600.56		
09:00-09:15	Annesley Cutting	557.86	557.86		
09:00-09:15	A611 Derby Road South	2148.64	2148.64		

Turning Proportions

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

		To		
From		A611 Derby Road North	Annesley Cutting	A611 Derby Road South
	A611 Derby Road North	0.000	236.000	1890.000
	Annesley Cutting	73.000	0.000	668.000
	A611 Derby Road South	2508.000	346.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To		
From		A611 Derby Road North	Annesley Cutting	A611 Derby Road South

	A611 Derby Road North	0.00	0.11	0.89
	Annesley Cutting	0.10	0.00	0.90
	A611 Derby Road South	0.88	0.12	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
		A611 Derby Road North	**Annesley Cutting**	**A611 Derby Road South**
From	**A611 Derby Road North**	1.000	1.000	1.000
	Annesley Cutting	1.000	1.000	1.000
	A611 Derby Road South	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
		A611 Derby Road North	**Annesley Cutting**	**A611 Derby Road South**
From	**A611 Derby Road North**	0.0	0.0	0.0
	Annesley Cutting	0.0	0.0	0.0

	A611 Derby Road South	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	2.31	2206.21	308.73	F
C-AB	0.87	57.46	5.64	F
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS

B-AC	557.86	528.81	0.00	601.60	0.927	7.26	40.219	E
C-AB	260.49	256.66	0.00	525.11	0.496	0.96	13.227	B
C-A	1888.15	1888.15	0.00	-	-	-	-	-
A-B	177.67	177.67	0.00	-	-	-	-	-
A-C	1422.89	1422.89	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	666.14	522.03	0.00	526.51	1.265	43.29	211.411	F
C-AB	311.05	308.20	0.00	487.52	0.638	1.67	19.755	C
C-A	2254.64	2254.64	0.00	-	-	-	-	-
A-B	212.16	212.16	0.00	-	-	-	-	-
A-C	1699.07	1699.07	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	815.86	358.90	0.00	358.99	2.273	157.53	990.439	F
C-AB	380.96	367.84	0.00	435.56	0.875	4.95	46.162	E

C-A	2761.36	2761.36	0.00	-	-	-	-	-
A-B	259.84	259.84	0.00	-	-	-	-	-
A-C	2080.93	2080.93	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	815.86	353.34	0.00	353.35	2.309	273.16	2206.212	F
C-AB	380.96	378.17	0.00	435.56	0.875	5.64	57.460	F
C-A	2761.36	2761.36	0.00	-	-	-	-	-
A-B	259.84	259.84	0.00	-	-	-	-	-
A-C	2080.93	2080.93	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	666.14	523.87	0.00	523.90	1.272	308.73	1865.709	F
C-AB	311.05	326.15	0.00	487.52	0.638	1.87	24.093	C
C-A	2254.64	2254.64	0.00	-	-	-	-	-
A-B	212.16	212.16	0.00	-	-	-	-	-

A-C	1699.07	1699.07	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	557.86	599.01	0.00	600.96	0.928	298.44	1824.628	F
C-AB	260.49	263.91	0.00	525.11	0.496	1.01	13.957	B
C-A	1888.15	1888.15	0.00	-	-	-	-	-
A-B	177.67	177.67	0.00	-	-	-	-	-
A-C	1422.89	1422.89	0.00	-	-	-	-	-

(Default Analysis Set) - 2032 Development Scenario Morning Peak, 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
(Default Analysis Set)	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
2032 Development Scenario Morning Peak, AM	2032 Development Scenario Morning Peak	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	2020.13	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type

A611 Derby Road North	A	A611 Derby Road North		Major
Annesley Cutting	B	Annesley Cutting		Minor
A611 Derby Road South	C	A611 Derby Road South		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)
A611 Derby Road South	19.00		0.00		2.20	250.00	✓	99.00

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)
Annesley Cutting	One lane	5.00										200	200

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	780.162	0.062	0.156	0.098	0.223
1	B-C	899.987	0.060	0.151	-	-
1	C-B	718.741	0.121	0.121	-	-

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 (%)
A611 Derby Road North	ONE HOUR	✓	2371.00	100.000

Annesley Cutting	ONE HOUR	✓	749.00	100.000
A611 Derby Road South	ONE HOUR	✓	2942.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	**A611 Derby Road North**	1785.01	1785.01		
07:45-08:00	**Annesley Cutting**	563.89	563.89		
07:45-08:00	**A611 Derby Road South**	2214.89	2214.89		
08:00-08:15	**A611 Derby Road North**	2131.48	2131.48		
08:00-08:15	**Annesley Cutting**	673.34	673.34		
08:00-08:15	**A611 Derby Road South**	2644.80	2644.80		
08:15-08:30	**A611 Derby Road North**	2610.52	2610.52		

08:15-08:30	**Annesley Cutting**	824.66	824.66		
08:15-08:30	**A611 Derby Road South**	3239.20	3239.20		
08:30-08:45	**A611 Derby Road North**	2610.52	2610.52		
08:30-08:45	**Annesley Cutting**	824.66	824.66		
08:30-08:45	**A611 Derby Road South**	3239.20	3239.20		
08:45-09:00	**A611 Derby Road North**	2131.48	2131.48		
08:45-09:00	**Annesley Cutting**	673.34	673.34		
08:45-09:00	**A611 Derby Road South**	2644.80	2644.80		
09:00-09:15	**A611 Derby Road North**	1785.01	1785.01		
09:00-09:15	**Annesley Cutting**	563.89	563.89		
09:00-09:15	**A611 Derby Road South**	2214.89	2214.89		

Turning Proportions

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

		To		
		A611 Derby Road North	Annesley Cutting	A611 Derby Road South
From	A611 Derby Road North	0.000	307.000	2064.000
	Annesley Cutting	100.000	0.000	649.000
	A611 Derby Road South	2634.000	308.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To		
		A611 Derby Road North	Annesley Cutting	A611 Derby Road South
From	A611 Derby Road North	0.00	0.13	0.87
	Annesley Cutting	0.13	0.00	0.87
	A611 Derby Road South	0.90	0.10	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

	To

		A611 Derby Road North	Annesley Cutting	A611 Derby Road South
From	A611 Derby Road North	1.000	1.000	1.000
	Annesley Cutting	1.000	1.000	1.000
	A611 Derby Road South	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

	To			
From		A611 Derby Road North	Annesley Cutting	A611 Derby Road South
	A611 Derby Road North	0.0	0.0	0.0
	Annesley Cutting	0.0	0.0	0.0
	A611 Derby Road South	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	4.03	2829.54	433.37	F
C-AB	0.84	51.78	4.55	F

C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	563.89	512.00	0.00	551.47	1.023	12.97	63.994	F
C-AB	231.88	228.55	0.00	502.79	0.461	0.83	12.987	B
C-A	1983.01	1983.01	0.00	-	-	-	-	-
A-B	231.13	231.13	0.00	-	-	-	-	-
A-C	1553.89	1553.89	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS

B-AC	673.34	456.29	0.00	457.55	1.472	67.23	460.668	F
C-AB	276.89	274.49	0.00	460.88	0.601	1.43	19.063	C
C-A	2367.91	2367.91	0.00	-	-	-	-	-
A-B	275.99	275.99	0.00	-	-	-	-	-
A-C	1855.49	1855.49	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	824.66	212.27	0.00	212.29	3.885	220.33	2447.430	F
C-AB	339.11	328.51	0.00	402.93	0.842	4.08	43.308	E
C-A	2900.09	2900.09	0.00	-	-	-	-	-
A-B	338.01	338.01	0.00	-	-	-	-	-
A-C	2272.51	2272.51	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	824.66	204.52	0.00	204.52	4.032	375.37	2677.469	F
C-AB	339.11	337.26	0.00	402.93	0.842	4.55	51.785	F

C-A	2900.09	2900.09	0.00	-	-	-	-	-
A-B	338.01	338.01	0.00	-	-	-	-	-
A-C	2272.51	2272.51	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	673.34	454.61	0.00	454.62	1.481	430.05	2797.106	F
C-AB	276.89	288.74	0.00	460.88	0.601	1.58	22.177	C
C-A	2367.91	2367.91	0.00	-	-	-	-	-
A-B	275.99	275.99	0.00	-	-	-	-	-
A-C	1855.49	1855.49	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	563.89	550.61	0.00	550.72	1.024	433.37	2829.540	F
C-AB	231.88	234.70	0.00	502.79	0.461	0.88	13.565	B
C-A	1983.01	1983.01	0.00	-	-	-	-	-
A-B	231.13	231.13	0.00	-	-	-	-	-

A-C	1553.89	1553.89	0.00	-	-	-	-	-

(Default Analysis Set) - Reference Case Evening Peak, 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
(Default Analysis Set)	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
Reference Case Evening Peak, PM	Reference Case Evening Peak	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	(untitled)	T-Junction	Two-way	A,B,C	378.53	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type
A611 Derby Road North	A	A611 Derby Road North		Major
Annesley Cutting	B	Annesley Cutting		Minor
A611 Derby Road South	C	A611 Derby Road South		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)
A611 Derby Road South	19.00		0.00		2.20	250.00	✓	99.00

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	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length	Visibility To Left (m)	Visibility To Right (m)

		(m)			(m)						(PCU)		
Annesley Cutting	One lane	5.00										200	200

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	780.162	0.062	0.156	0.098	0.223
1	B-C	899.987	0.060	0.151	-	-
1	C-B	718.741	0.121	0.121	-	-

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 (%)
A611 Derby Road North	ONE HOUR	✓	1574.00	100.000
Annesley Cutting	ONE HOUR	✓	514.00	100.000
A611 Derby Road South	ONE HOUR	✓	1154.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	**A611 Derby Road North**	1184.99	1184.99		
16:45-17:00	**Annesley Cutting**	386.97	386.97		
16:45-17:00	**A611 Derby Road**	868.79	868.79		

	South				
17:00-17:15	**A611 Derby Road North**	1414.99	1414.99		
17:00-17:15	**Annesley Cutting**	462.08	462.08		
17:00-17:15	**A611 Derby Road South**	1037.42	1037.42		
17:15-17:30	**A611 Derby Road North**	1733.01	1733.01		
17:15-17:30	**Annesley Cutting**	565.92	565.92		
17:15-17:30	**A611 Derby Road South**	1270.58	1270.58		
17:30-17:45	**A611 Derby Road North**	1733.01	1733.01		
17:30-17:45	**Annesley Cutting**	565.92	565.92		
17:30-17:45	**A611 Derby Road South**	1270.58	1270.58		
17:45-18:00	**A611 Derby Road North**	1414.99	1414.99		
17:45-18:00	**Annesley Cutting**	462.08	462.08		
17:45-18:00	**A611 Derby Road**	1037.42	1037.42		

	South				
18:00-18:15	A611 Derby Road North	1184.99	1184.99		
18:00-18:15	Annesley Cutting	386.97	386.97		
18:00-18:15	A611 Derby Road South	868.79	868.79		

Turning Proportions

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

		To		
From		A611 Derby Road North	Annesley Cutting	A611 Derby Road South
	A611 Derby Road North	0.000	262.000	1312.000
	Annesley Cutting	387.000	0.000	127.000
	A611 Derby Road South	1054.000	100.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To		
From		A611 Derby Road North	Annesley Cutting	A611 Derby Road South

	A611 Derby Road North	0.00	0.17	0.83
	Annesley Cutting	0.75	0.00	0.25
	A611 Derby Road South	0.91	0.09	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
From		**A611 Derby Road North**	**Annesley Cutting**	**A611 Derby Road South**
	A611 Derby Road North	1.000	1.000	1.000
	Annesley Cutting	1.000	1.000	1.000
	A611 Derby Road South	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
From		**A611 Derby Road North**	**Annesley Cutting**	**A611 Derby Road South**
	A611 Derby Road North	0.0	0.0	0.0
	Annesley Cutting	0.0	0.0	0.0

	A611 Derby Road South	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	1.28	450.41	69.39	F
C-AB	0.22	9.02	0.27	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS

B-AC	386.97	378.63	0.00	560.31	0.691	2.08	19.043	C
C-AB	75.29	74.69	0.00	575.38	0.131	0.15	7.179	A
C-A	793.51	793.51	0.00	-	-	-	-	-
A-B	197.25	197.25	0.00	-	-	-	-	-
A-C	987.74	987.74	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	462.08	445.94	0.00	511.05	0.904	6.12	46.612	E
C-AB	89.90	89.72	0.00	547.56	0.164	0.19	7.859	A
C-A	947.52	947.52	0.00	-	-	-	-	-
A-B	235.53	235.53	0.00	-	-	-	-	-
A-C	1179.46	1179.46	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	565.92	437.44	0.00	442.02	1.280	38.24	202.234	F
C-AB	110.10	109.79	0.00	509.09	0.216	0.27	9.008	A

C-A	1160.48	1160.48	0.00	-	-	-	-	-
A-B	288.47	288.47	0.00	-	-	-	-	-
A-C	1444.54	1444.54	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	565.92	441.31	0.00	441.96	1.281	69.39	434.254	F
C-AB	110.10	110.10	0.00	509.09	0.216	0.27	9.022	A
C-A	1160.48	1160.48	0.00	-	-	-	-	-
A-B	288.47	288.47	0.00	-	-	-	-	-
A-C	1444.54	1444.54	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	462.08	503.69	0.00	510.95	0.904	58.99	450.413	F
C-AB	89.90	90.20	0.00	547.56	0.164	0.20	7.877	A
C-A	947.52	947.52	0.00	-	-	-	-	-
A-B	235.53	235.53	0.00	-	-	-	-	-

A-C	1179.46	1179.46	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	386.97	550.82	0.00	560.16	0.691	18.02	257.614	F
C-AB	75.29	75.47	0.00	575.38	0.131	0.15	7.203	A
C-A	793.51	793.51	0.00	-	-	-	-	-
A-B	197.25	197.25	0.00	-	-	-	-	-
A-C	987.74	987.74	0.00	-	-	-	-	-

(Default Analysis Set) - 2032 Development Scenario Evening Peak, 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
(Default Analysis Set)	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
2032 Development Scenario Evening Peak, PM	2032 Development Scenario Evening Peak	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	(untitled)	T-Junction	Two-way	A,B,C	511.18	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description	Arm Type

A611 Derby Road North	A	A611 Derby Road North		Major
Annesley Cutting	B	Annesley Cutting		Minor
A611 Derby Road South	C	A611 Derby Road South		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)
A611 Derby Road South	19.00		0.00		2.20	250.00	✓	99.00

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)
Annesley Cutting	One lane	5.00										200	200

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	780.162	0.062	0.156	0.098	0.223
1	B-C	899.987	0.060	0.151	-	-
1	C-B	718.741	0.121	0.121	-	-

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 (%)
A611 Derby Road North	ONE HOUR	✓	1751.00	100.000

Annesley Cutting	ONE HOUR	✓	561.00	100.000
A611 Derby Road South	ONE HOUR	✓	1487.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	**A611 Derby Road North**	1318.24	1318.24		
16:45-17:00	**Annesley Cutting**	422.35	422.35		
16:45-17:00	**A611 Derby Road South**	1119.49	1119.49		
17:00-17:15	**A611 Derby Road North**	1574.11	1574.11		
17:00-17:15	**Annesley Cutting**	504.33	504.33		
17:00-17:15	**A611 Derby Road South**	1336.78	1336.78		
17:15-17:30	**A611 Derby Road North**	1927.89	1927.89		

17:15-17:30	**Annesley Cutting**	617.67	617.67		
17:15-17:30	**A611 Derby Road South**	1637.22	1637.22		
17:30-17:45	**A611 Derby Road North**	1927.89	1927.89		
17:30-17:45	**Annesley Cutting**	617.67	617.67		
17:30-17:45	**A611 Derby Road South**	1637.22	1637.22		
17:45-18:00	**A611 Derby Road North**	1574.11	1574.11		
17:45-18:00	**Annesley Cutting**	504.33	504.33		
17:45-18:00	**A611 Derby Road South**	1336.78	1336.78		
18:00-18:15	**A611 Derby Road North**	1318.24	1318.24		
18:00-18:15	**Annesley Cutting**	422.35	422.35		
18:00-18:15	**A611 Derby Road South**	1119.49	1119.49		

Turning Proportions

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

		To		
		A611 Derby Road North	Annesley Cutting	A611 Derby Road South
From	A611 Derby Road North	0.000	344.000	1407.000
	Annesley Cutting	259.000	0.000	302.000
	A611 Derby Road South	1452.000	35.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To		
		A611 Derby Road North	Annesley Cutting	A611 Derby Road South
From	A611 Derby Road North	0.00	0.20	0.80
	Annesley Cutting	0.46	0.00	0.54
	A611 Derby Road South	0.98	0.02	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

	To

		A611 Derby Road North	Annesley Cutting	A611 Derby Road South
From	A611 Derby Road North	1.000	1.000	1.000
	Annesley Cutting	1.000	1.000	1.000
	A611 Derby Road South	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

	To			
From		A611 Derby Road North	Annesley Cutting	A611 Derby Road South
	A611 Derby Road North	0.0	0.0	0.0
	Annesley Cutting	0.0	0.0	0.0
	A611 Derby Road South	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	1.33	542.57	85.74	F
C-AB	0.08	8.05	0.09	A

C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	422.35	413.03	0.00	590.31	0.715	2.33	19.415	C
C-AB	26.35	26.15	0.00	559.26	0.047	0.05	6.751	A
C-A	1093.14	1093.14	0.00	-	-	-	-	-
A-B	258.98	258.98	0.00	-	-	-	-	-
A-C	1059.26	1059.26	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS

B-AC	504.33	483.14	0.00	538.30	0.937	7.63	51.879	F
C-AB	31.46	31.41	0.00	528.31	0.060	0.06	7.244	A
C-A	1305.32	1305.32	0.00	-	-	-	-	-
A-B	309.25	309.25	0.00	-	-	-	-	-
A-C	1264.86	1264.86	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	617.67	460.06	0.00	463.25	1.333	47.03	232.116	F
C-AB	38.54	38.45	0.00	485.51	0.079	0.09	8.050	A
C-A	1598.68	1598.68	0.00	-	-	-	-	-
A-B	378.75	378.75	0.00	-	-	-	-	-
A-C	1549.14	1549.14	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	617.67	462.82	0.00	463.23	1.333	85.74	503.128	F
C-AB	38.54	38.53	0.00	485.51	0.079	0.09	8.053	A

C-A	1598.68	1598.68	0.00	-	-	-	-	-
A-B	378.75	378.75	0.00	-	-	-	-	-
A-C	1549.14	1549.14	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	504.33	532.07	0.00	538.27	0.937	78.81	542.574	F
C-AB	31.46	31.55	0.00	528.31	0.060	0.06	7.247	A
C-A	1305.32	1305.32	0.00	-	-	-	-	-
A-B	309.25	309.25	0.00	-	-	-	-	-
A-C	1264.86	1264.86	0.00	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	422.35	582.87	0.00	590.27	0.716	38.68	366.212	F
C-AB	26.35	26.41	0.00	559.26	0.047	0.05	6.758	A
C-A	1093.14	1093.14	0.00	-	-	-	-	-
A-B	258.98	258.98	0.00	-	-	-	-	-

A-C	1059.26	1059.26	0.00	-	-	-	-	-

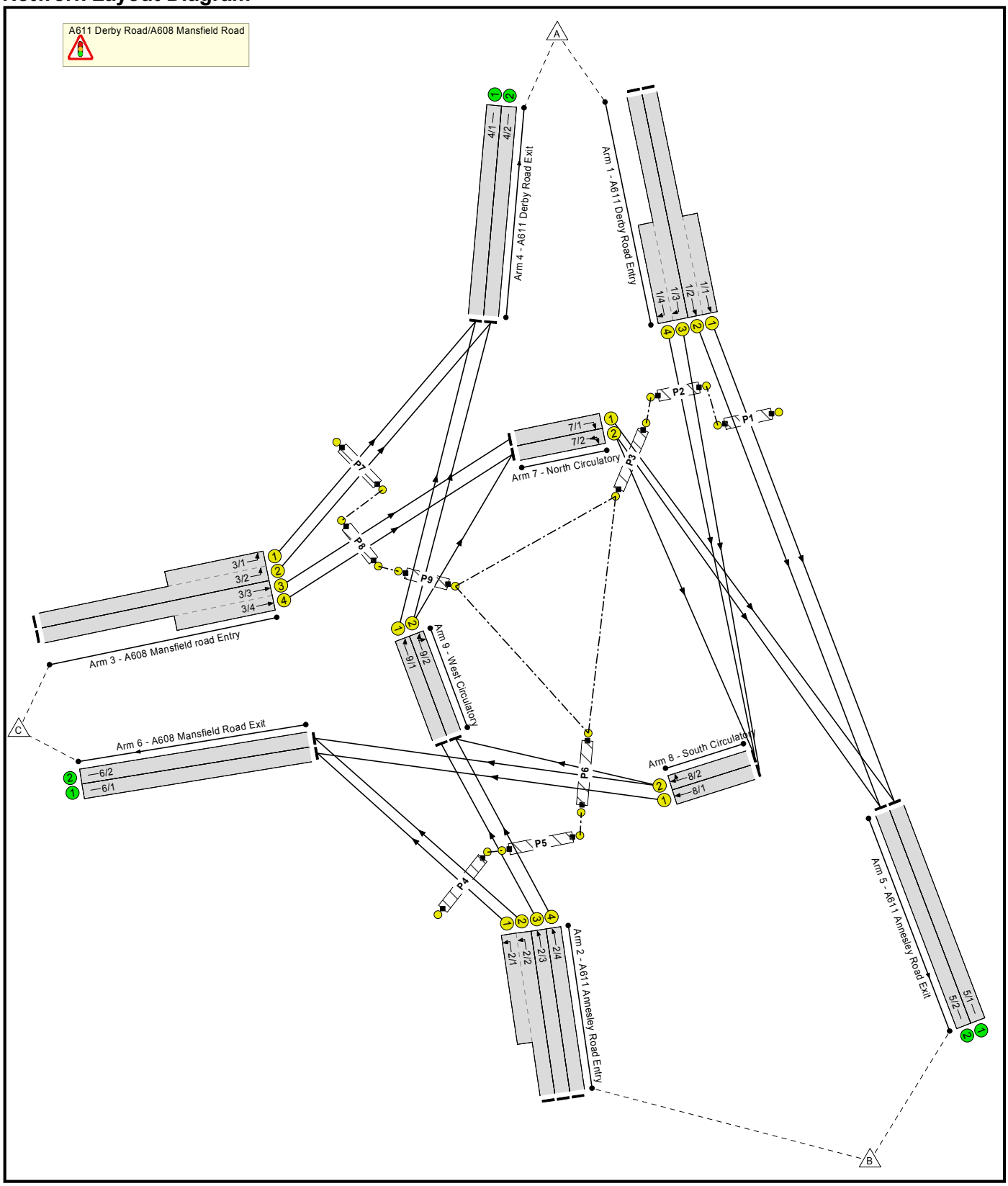
Full Input Data And Results

User and Project Details

Project:	
Title:	
Location:	
File name:	Junction 19 2016 v2.lsg3x
Author:	
Company:	
Address:	
Notes:	

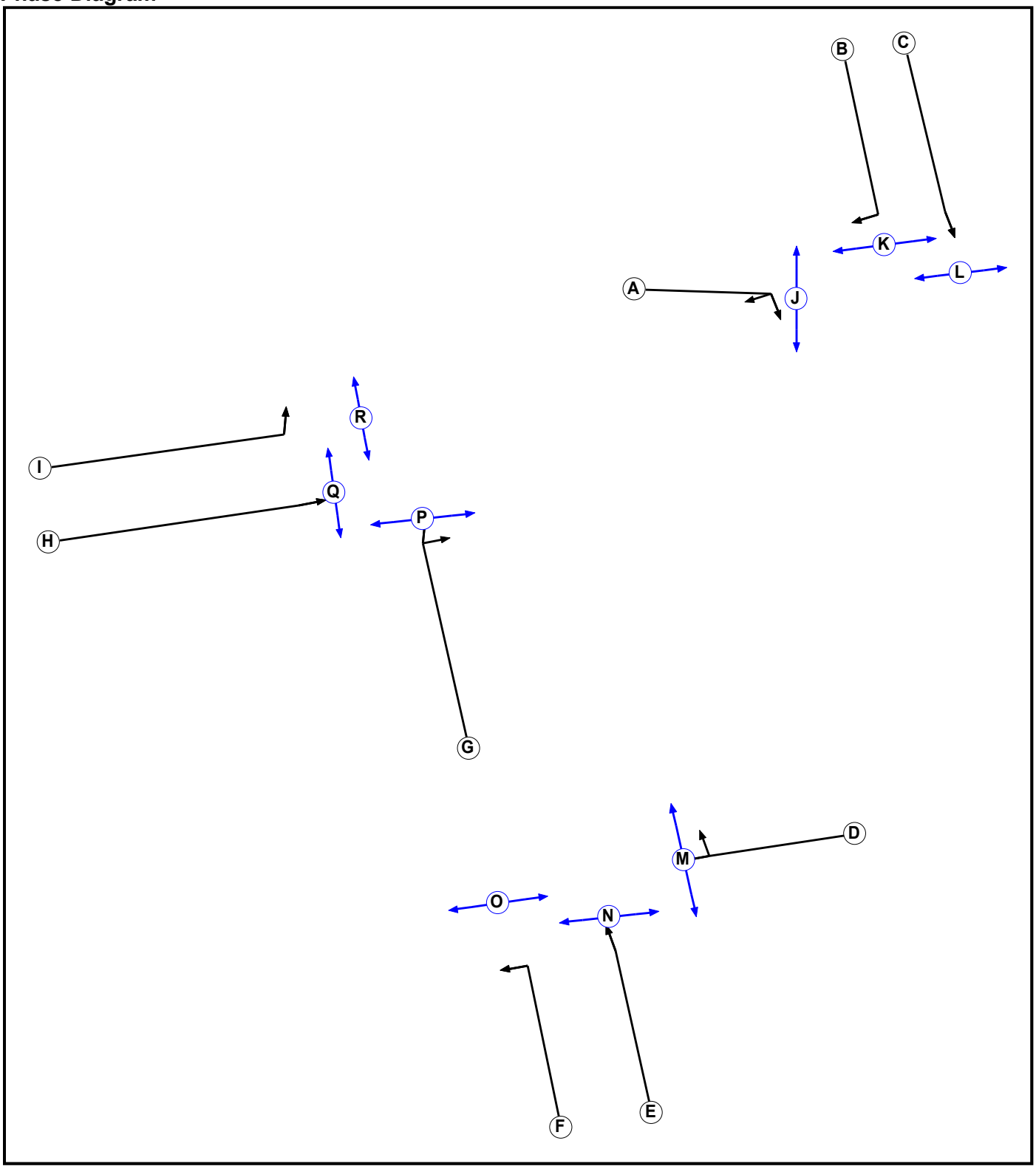
Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

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	Traffic		7	7
H	Traffic		7	7
I	Traffic		7	7
J	Pedestrian		7	7
K	Pedestrian		7	7
L	Pedestrian		7	7
M	Pedestrian		7	7
N	Pedestrian		7	7
O	Pedestrian		7	7
P	Pedestrian		7	7
Q	Pedestrian		7	7
R	Pedestrian		7	7

Full Input Data And Results

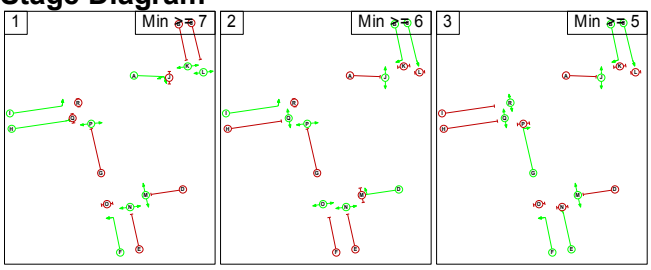
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
A		8	11	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-
B	10		-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-
C	12	-		-	-	-	-	-	-	-	-	5	-	-	-	-	-	-
D	-	-	-		9	10	-	-	-	-	-	-	5	-	-	-	-	-
E	-	-	-	9		-	-	-	-	-	-	-	-	5	-	-	-	-
F	-	-	-	10	-		-	-	-	-	-	-	-	-	5	-	-	-
G	-	-	-	-	-	-		9	9	-	-	-	-	-	-	5	-	-
H	-	-	-	-	-	-	9		-	-	-	-	-	-	-	-	5	-
I	-	-	-	-	-	-	9	-		-	-	-	-	-	-	-	-	5
J	3	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-
K	-	3	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-
L	-	-	3	-	-	-	-	-	-	-	-		-	-	-	-	-	-
M	-	-	-	3	-	-	-	-	-	-	-	-		-	-	-	-	-
N	-	-	-	-	3	-	-	-	-	-	-	-	-		-	-	-	-
O	-	-	-	-	-	3	-	-	-	-	-	-	-	-		-	-	-
P	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-		-	-
Q	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-		-
R	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A F H I K L M N P
2	B C D I J N O P Q
3	B C E F G J M Q R

Stage Diagram



Phase Delays

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

Full Input Data And Results

Prohibited Stage Change

		To Stage		
		1	2	3
From Stage	1		11	11
	2	12		10
	3	12	10	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A611 Derby Road/A608 Mansfield Road
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: A611 Derby Road/A608 Mansfield Road												
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 (A611 Derby Road Entry)	U	C	2	3	10.0	Geom	-	3.25	0.00	Y	Arm 5 Ahead	Inf
1/2 (A611 Derby Road Entry)	U	C	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 5 Ahead	Inf
1/3 (A611 Derby Road Entry)	U	B	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 8 Right	Inf
1/4 (A611 Derby Road Entry)	U	B	2	3	10.0	Geom	-	3.25	0.00	Y	Arm 8 Right	Inf
2/1 (A611 Annesley Road Entry)	U	F	2	3	11.0	Geom	-	3.25	0.00	Y	Arm 6 Left	Inf
2/2 (A611 Annesley Road Entry)	U	F	2	3	17.0	Geom	-	3.25	0.00	Y	Arm 6 Left	Inf
2/3 (A611 Annesley Road Entry)	U	E	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 9 Ahead	Inf
2/4 (A611 Annesley Road Entry)	U	E	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 9 Ahead	Inf
3/1 (A608 Mansfield road Entry)	U	I	2	3	10.0	Geom	-	3.25	0.00	Y	Arm 4 Left	Inf
3/2 (A608 Mansfield road Entry)	U	I	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 4 Left	Inf
3/3 (A608 Mansfield road Entry)	U	H	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 7 Ahead	Inf
3/4 (A608 Mansfield road Entry)	U	H	2	3	10.0	Geom	-	3.25	0.00	Y	Arm 7 Ahead	Inf
4/1 (A611 Derby Road Exit)	U		2	3	60.0	Geom	-	3.25	0.00	Y		
4/2 (A611 Derby Road Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (A611 Annesley Road Exit)	U		2	3	60.0	Geom	-	3.25	0.00	Y		

5/2 (A611 Annesley Road Exit)	U		2	3	60.0	Geom	-	3.25	0.00	Y		
6/1 (A608 Mansfield Road Exit)	U		2	3	60.0	Geom	-	3.25	0.00	Y		
6/2 (A608 Mansfield Road Exit)	U		2	3	60.0	Geom	-	3.25	0.00	Y		
7/1 (North Circulatory)	U	A	2	3	4.5	Geom	-	3.25	0.00	Y	Arm 5 Right	Inf
7/2 (North Circulatory)	U	A	2	3	4.5	Geom	-	3.25	0.00	Y	Arm 5 Right	Inf
											Arm 8 U-Turn	Inf
8/1 (South Circulatory)	U	D	2	3	15.0	Geom	-	3.25	0.00	Y	Arm 6 Ahead	Inf
8/2 (South Circulatory)	U	D	2	3	15.0	Geom	-	3.25	0.00	Y	Arm 6 Ahead	Inf
											Arm 9 Right	Inf
9/1 (West Circulatory)	U	G	2	3	2.6	Geom	-	3.25	0.00	Y	Arm 4 Ahead	Inf
9/2 (West Circulatory)	U	G	2	3	2.6	Geom	-	3.25	0.00	Y	Arm 4 Ahead	Inf
											Arm 7 Right	Inf

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'Reference Case Morning Peak'	08:00	09:00	01:00	
2: '2032 Development Case Morning Peak'	08:00	09:00	01:00	
3: 'Reference Case Evening Peak'	17:00	18:00	01:00	
4: '2032 Development Case Evening Peak'	17:00	18:00	01:00	

Scenario 1: 'AM Reference Case' (FG1: 'Reference Case Morning Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	1168	750	1918
	B	1576	0	704	2280
	C	982	443	0	1425
	Tot.	2558	1611	1454	5623

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: AM Reference Case
Junction: A611 Derby Road/A608 Mansfield Road	
1/1 (short)	584
1/2 (with short)	1168(In) 584(Out)
1/3 (with short)	750(In) 375(Out)
1/4 (short)	375
2/1 (short)	352
2/2 (with short)	704(In) 352(Out)
2/3	787
2/4	789
3/1 (short)	365
3/2 (with short)	982(In) 617(Out)
3/3 (with short)	443(In) 222(Out)
3/4 (short)	221
4/1	1152
4/2	1406
5/1	806
5/2	805
6/1	727
6/2	727
7/1	222
7/2	221
8/1	375
8/2	375
9/1	787
9/2	789

Full Input Data And Results

Lane Saturation Flows

Junction: A611 Derby Road/A608 Mansfield Road								
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 (A611 Derby Road Entry)	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
1/2 (A611 Derby Road Entry)	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
1/3 (A611 Derby Road Entry)	3.25	0.00	Y	Arm 8 Right	Inf	100.0 %	1940	1940
1/4 (A611 Derby Road Entry)	3.25	0.00	Y	Arm 8 Right	Inf	100.0 %	1940	1940
2/1 (A611 Annesley Road Entry)	3.25	0.00	Y	Arm 6 Left	Inf	100.0 %	1940	1940
2/2 (A611 Annesley Road Entry)	3.25	0.00	Y	Arm 6 Left	Inf	100.0 %	1940	1940
2/3 (A611 Annesley Road Entry)	3.25	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1940	1940
2/4 (A611 Annesley Road Entry)	3.25	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1940	1940
3/1 (A608 Mansfield road Entry)	3.25	0.00	Y	Arm 4 Left	Inf	100.0 %	1940	1940
3/2 (A608 Mansfield road Entry)	3.25	0.00	Y	Arm 4 Left	Inf	100.0 %	1940	1940
3/3 (A608 Mansfield road Entry)	3.25	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1940	1940
3/4 (A608 Mansfield road Entry)	3.25	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1940	1940
4/1 (A611 Derby Road Exit)	3.25	0.00	Y				1940	1940
4/2 (A611 Derby Road Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (A611 Annesley Road Exit)	3.25	0.00	Y				1940	1940
5/2 (A611 Annesley Road Exit)	3.25	0.00	Y				1940	1940
6/1 (A608 Mansfield Road Exit)	3.25	0.00	Y				1940	1940
6/2 (A608 Mansfield Road Exit)	3.25	0.00	Y				1940	1940
7/1 (North Circulatory)	3.25	0.00	Y	Arm 5 Right	Inf	100.0 %	1940	1940
7/2 (North Circulatory)	3.25	0.00	Y	Arm 5 Right	Inf	100.0 %	1940	1940
				Arm 8 U-Turn	Inf	0.0 %		
8/1 (South Circulatory)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
8/2 (South Circulatory)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
				Arm 9 Right	Inf	0.0 %		
9/1 (West Circulatory)	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940

9/2 (West Circulatory)	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
				Arm 7 Right	Inf	0.0 %		

Scenario 2: 'PM Reference Case' (FG3: 'Reference Case Evening Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	933	1017	1950
	B	814	0	575	1389
	C	625	654	0	1279
	Tot.	1439	1587	1592	4618

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM Reference Case
Junction: A611 Derby Road/A608 Mansfield Road	
1/1 (short)	467
1/2 (with short)	933(In) 466(Out)
1/3 (with short)	1017(In) 508(Out)
1/4 (short)	509
2/1 (short)	287
2/2 (with short)	575(In) 288(Out)
2/3	407
2/4	407
3/1 (short)	179
3/2 (with short)	625(In) 446(Out)
3/3 (with short)	654(In) 327(Out)
3/4 (short)	327
4/1	586
4/2	853
5/1	794
5/2	793
6/1	795
6/2	797
7/1	327
7/2	327
8/1	508
8/2	509
9/1	407
9/2	407

Full Input Data And Results

Lane Saturation Flows

Junction: A611 Derby Road/A608 Mansfield Road								
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 (A611 Derby Road Entry)	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
1/2 (A611 Derby Road Entry)	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
1/3 (A611 Derby Road Entry)	3.25	0.00	Y	Arm 8 Right	Inf	100.0 %	1940	1940
1/4 (A611 Derby Road Entry)	3.25	0.00	Y	Arm 8 Right	Inf	100.0 %	1940	1940
2/1 (A611 Annesley Road Entry)	3.25	0.00	Y	Arm 6 Left	Inf	100.0 %	1940	1940
2/2 (A611 Annesley Road Entry)	3.25	0.00	Y	Arm 6 Left	Inf	100.0 %	1940	1940
2/3 (A611 Annesley Road Entry)	3.25	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1940	1940
2/4 (A611 Annesley Road Entry)	3.25	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1940	1940
3/1 (A608 Mansfield road Entry)	3.25	0.00	Y	Arm 4 Left	Inf	100.0 %	1940	1940
3/2 (A608 Mansfield road Entry)	3.25	0.00	Y	Arm 4 Left	Inf	100.0 %	1940	1940
3/3 (A608 Mansfield road Entry)	3.25	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1940	1940
3/4 (A608 Mansfield road Entry)	3.25	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1940	1940
4/1 (A611 Derby Road Exit)	3.25	0.00	Y				1940	1940
4/2 (A611 Derby Road Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (A611 Annesley Road Exit)	3.25	0.00	Y				1940	1940
5/2 (A611 Annesley Road Exit)	3.25	0.00	Y				1940	1940
6/1 (A608 Mansfield Road Exit)	3.25	0.00	Y				1940	1940
6/2 (A608 Mansfield Road Exit)	3.25	0.00	Y				1940	1940
7/1 (North Circulatory)	3.25	0.00	Y	Arm 5 Right	Inf	100.0 %	1940	1940
7/2 (North Circulatory)	3.25	0.00	Y	Arm 5 Right	Inf	100.0 %	1940	1940
				Arm 8 U-Turn	Inf	0.0 %		
8/1 (South Circulatory)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
8/2 (South Circulatory)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
				Arm 9 Right	Inf	0.0 %		
9/1 (West Circulatory)	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940

9/2 (West Circulatory)	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
				Arm 7 Right	Inf	0.0 %		

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	1363	855	2218
	B	1684	0	757	2441
	C	1028	478	0	1506
	Tot.	2712	1841	1612	6165

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: AM Development Scenario
Junction: A611 Derby Road/A608 Mansfield Road	
1/1 (short)	682
1/2 (with short)	1363(In) 681(Out)
1/3 (with short)	855(In) 427(Out)
1/4 (short)	428
2/1 (short)	378
2/2 (with short)	757(In) 379(Out)
2/3	841
2/4	843
3/1 (short)	390
3/2 (with short)	1028(In) 638(Out)
3/3 (with short)	478(In) 239(Out)
3/4 (short)	239
4/1	1231
4/2	1481
5/1	921
5/2	920
6/1	805
6/2	807
7/1	239
7/2	239
8/1	427
8/2	428
9/1	841
9/2	843

Full Input Data And Results

Lane Saturation Flows

Junction: A611 Derby Road/A608 Mansfield Road								
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 (A611 Derby Road Entry)	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
1/2 (A611 Derby Road Entry)	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
1/3 (A611 Derby Road Entry)	3.25	0.00	Y	Arm 8 Right	Inf	100.0 %	1940	1940
1/4 (A611 Derby Road Entry)	3.25	0.00	Y	Arm 8 Right	Inf	100.0 %	1940	1940
2/1 (A611 Annesley Road Entry)	3.25	0.00	Y	Arm 6 Left	Inf	100.0 %	1940	1940
2/2 (A611 Annesley Road Entry)	3.25	0.00	Y	Arm 6 Left	Inf	100.0 %	1940	1940
2/3 (A611 Annesley Road Entry)	3.25	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1940	1940
2/4 (A611 Annesley Road Entry)	3.25	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1940	1940
3/1 (A608 Mansfield road Entry)	3.25	0.00	Y	Arm 4 Left	Inf	100.0 %	1940	1940
3/2 (A608 Mansfield road Entry)	3.25	0.00	Y	Arm 4 Left	Inf	100.0 %	1940	1940
3/3 (A608 Mansfield road Entry)	3.25	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1940	1940
3/4 (A608 Mansfield road Entry)	3.25	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1940	1940
4/1 (A611 Derby Road Exit)	3.25	0.00	Y				1940	1940
4/2 (A611 Derby Road Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (A611 Annesley Road Exit)	3.25	0.00	Y				1940	1940
5/2 (A611 Annesley Road Exit)	3.25	0.00	Y				1940	1940
6/1 (A608 Mansfield Road Exit)	3.25	0.00	Y				1940	1940
6/2 (A608 Mansfield Road Exit)	3.25	0.00	Y				1940	1940
7/1 (North Circulatory)	3.25	0.00	Y	Arm 5 Right	Inf	100.0 %	1940	1940
7/2 (North Circulatory)	3.25	0.00	Y	Arm 5 Right	Inf	100.0 %	1940	1940
				Arm 8 U-Turn	Inf	0.0 %		
8/1 (South Circulatory)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
8/2 (South Circulatory)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
				Arm 9 Right	Inf	0.0 %		
9/1 (West Circulatory)	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940

9/2 (West Circulatory)	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
				Arm 7 Right	Inf	0.0 %		

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	1063	1098	2161
	B	989	0	617	1606
	C	721	704	0	1425
	Tot.	1710	1767	1715	5192

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: PM Development Scenario
Junction: A611 Derby Road/A608 Mansfield Road	
1/1 (short)	532
1/2 (with short)	1063(In) 531(Out)
1/3 (with short)	1098(In) 549(Out)
1/4 (short)	549
2/1 (short)	308
2/2 (with short)	617(In) 309(Out)
2/3	494
2/4	495
3/1 (short)	239
3/2 (with short)	721(In) 482(Out)
3/3 (with short)	704(In) 352(Out)
3/4 (short)	352
4/1	733
4/2	977
5/1	884
5/2	883
6/1	857
6/2	858
7/1	352
7/2	352
8/1	549
8/2	549
9/1	494
9/2	495

Full Input Data And Results

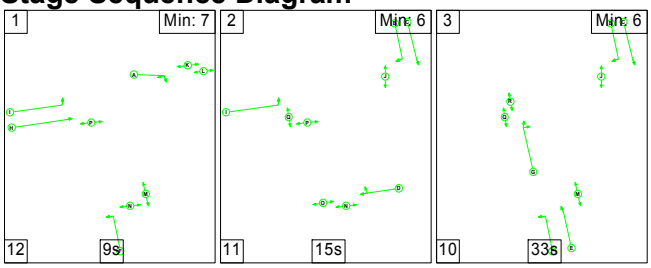
Lane Saturation Flows

Junction: A611 Derby Road/A608 Mansfield Road								
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 (A611 Derby Road Entry)	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
1/2 (A611 Derby Road Entry)	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
1/3 (A611 Derby Road Entry)	3.25	0.00	Y	Arm 8 Right	Inf	100.0 %	1940	1940
1/4 (A611 Derby Road Entry)	3.25	0.00	Y	Arm 8 Right	Inf	100.0 %	1940	1940
2/1 (A611 Annesley Road Entry)	3.25	0.00	Y	Arm 6 Left	Inf	100.0 %	1940	1940
2/2 (A611 Annesley Road Entry)	3.25	0.00	Y	Arm 6 Left	Inf	100.0 %	1940	1940
2/3 (A611 Annesley Road Entry)	3.25	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1940	1940
2/4 (A611 Annesley Road Entry)	3.25	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1940	1940
3/1 (A608 Mansfield road Entry)	3.25	0.00	Y	Arm 4 Left	Inf	100.0 %	1940	1940
3/2 (A608 Mansfield road Entry)	3.25	0.00	Y	Arm 4 Left	Inf	100.0 %	1940	1940
3/3 (A608 Mansfield road Entry)	3.25	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1940	1940
3/4 (A608 Mansfield road Entry)	3.25	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1940	1940
4/1 (A611 Derby Road Exit)	3.25	0.00	Y				1940	1940
4/2 (A611 Derby Road Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (A611 Annesley Road Exit)	3.25	0.00	Y				1940	1940
5/2 (A611 Annesley Road Exit)	3.25	0.00	Y				1940	1940
6/1 (A608 Mansfield Road Exit)	3.25	0.00	Y				1940	1940
6/2 (A608 Mansfield Road Exit)	3.25	0.00	Y				1940	1940
7/1 (North Circulatory)	3.25	0.00	Y	Arm 5 Right	Inf	100.0 %	1940	1940
7/2 (North Circulatory)	3.25	0.00	Y	Arm 5 Right	Inf	100.0 %	1940	1940
				Arm 8 U-Turn	Inf	0.0 %		
8/1 (South Circulatory)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
8/2 (South Circulatory)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
				Arm 9 Right	Inf	0.0 %		
9/1 (West Circulatory)	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940

9/2 (West Circulatory)	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
				Arm 7 Right	Inf	0.0 %		

Scenario 1: 'AM Reference Case' (FG1: 'Reference Case Morning Peak', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

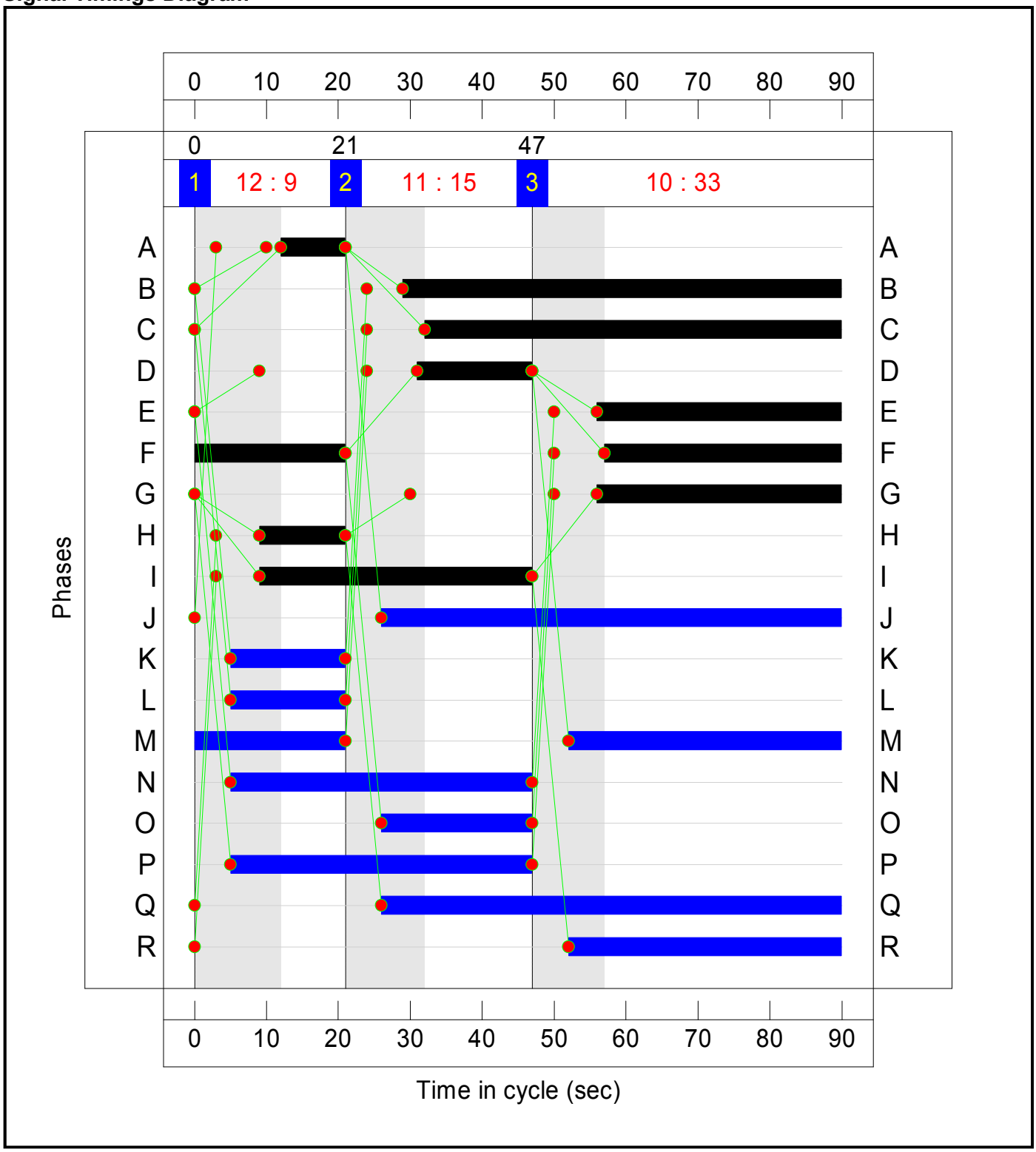


Stage Timings

Stage	1	2	3
Duration	9	15	33
Change Point	0	21	47

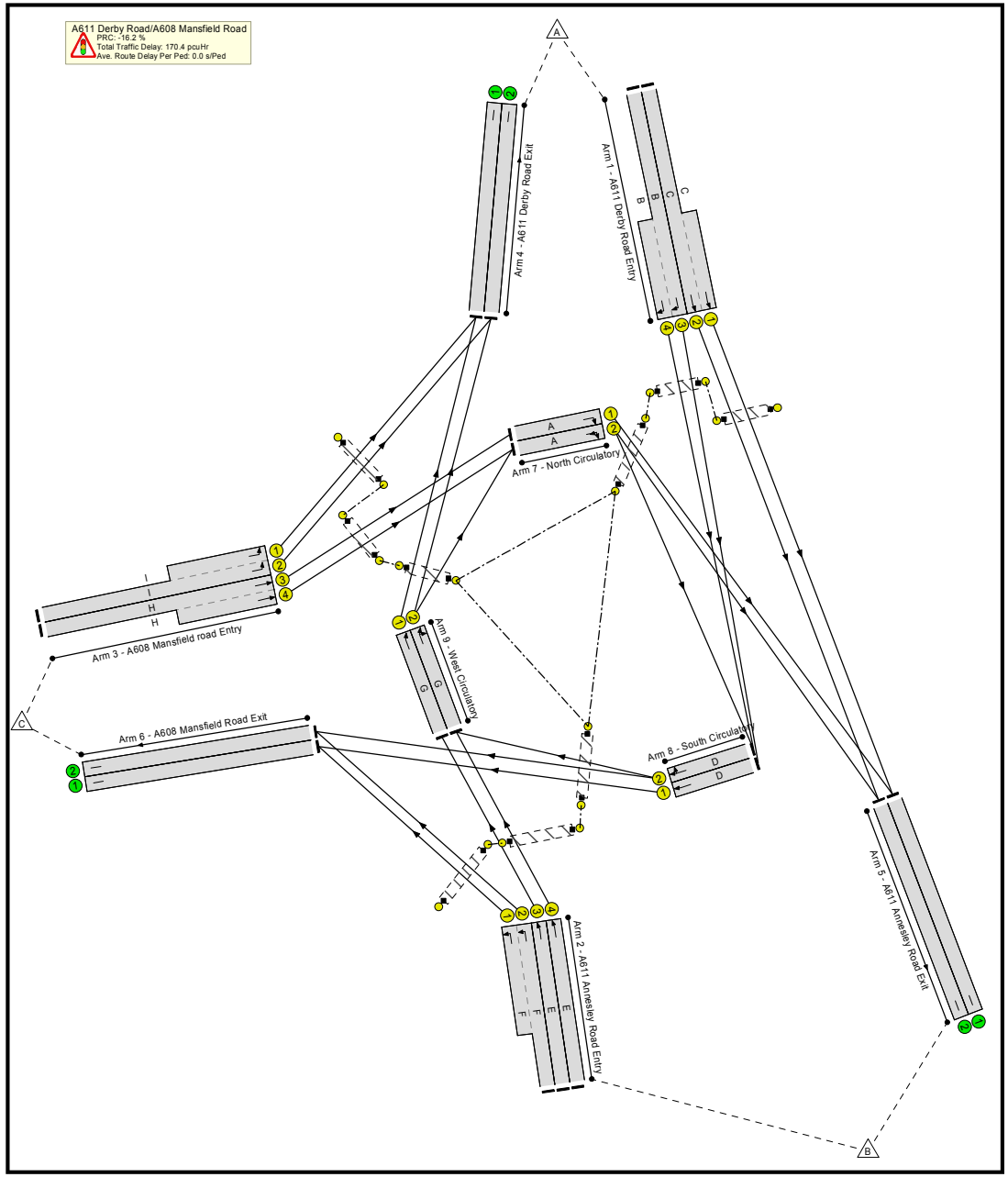
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**104.6%**
A611 Derby Road/A608 Mansfield Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**104.6%**
1/2+1/1	A611 Derby Road Entry Ahead	U	N/A	N/A	C		1	58	-	1168	1940:1940	831+831	70.3 : 70.3%
1/3+1/4	A611 Derby Road Entry Right	U	N/A	N/A	B		1	61	-	750	1940:1940	863+863	43.4 : 43.4%
2/2+2/1	A611 Annesley Road Entry Left	U	N/A	N/A	F		1	54	-	704	1940:1940	817+817	43.1 : 43.1%
2/3	A611 Annesley Road Entry Ahead	U	N/A	N/A	E		1	34	-	787	1940	754	104.3%
2/4	A611 Annesley Road Entry Ahead	U	N/A	N/A	E		1	34	-	789	1940	754	104.6%
3/2+3/1	A608 Mansfield road Entry Left	U	N/A	N/A	I		1	38	-	982	1940:1940	671+397	92.0 : 92.0%
3/3+3/4	A608 Mansfield road Entry Ahead	U	N/A	N/A	H		1	12	-	443	1940:1940	280+280	79.2 : 78.9%
4/1	A611 Derby Road Exit	U	N/A	N/A	-		-	-	-	1152	1940	1940	57.7%
4/2	A611 Derby Road Exit	U	N/A	N/A	-		-	-	-	1406	Inf	Inf	0.0%
5/1	A611 Annesley Road Exit	U	N/A	N/A	-		-	-	-	806	1940	1940	41.2%
5/2	A611 Annesley Road Exit	U	N/A	N/A	-		-	-	-	805	1940	1940	41.2%
6/1	A608 Mansfield Road Exit	U	N/A	N/A	-		-	-	-	727	1940	1940	37.0%
6/2	A608 Mansfield Road Exit	U	N/A	N/A	-		-	-	-	727	1940	1940	37.0%

Full Input Data And Results

7/1	North Circulatory Right	U	N/A	N/A	A		1	9	-	222	1940	216	103.0%
7/2	North Circulatory Right U-Turn	U	N/A	N/A	A		1	9	-	221	1940	216	102.5%
8/1	South Circulatory Ahead	U	N/A	N/A	D		1	16	-	375	1940	366	102.3%
8/2	South Circulatory Ahead Right	U	N/A	N/A	D		1	16	-	375	1940	366	102.3%
9/1	West Circulatory Ahead	U	N/A	N/A	G		1	34	-	787	1940	754	100.0%
9/2	West Circulatory Ahead Right	U	N/A	N/A	G		1	34	-	789	1940	754	100.0%
Ped Link: P1	A611 Derby Road One	-	N/A	-	L		1	16	-	0	-	0	0.0%
Ped Link: P2	A611 Derby Road Two	-	N/A	-	K		1	16	-	0	-	0	0.0%
Ped Link: P3	North Circulatory Crossing	-	N/A	-	J		1	64	-	0	-	0	0.0%
Ped Link: P4	A611 Annesley Road One	-	N/A	-	O		1	21	-	0	-	0	0.0%
Ped Link: P5	A611 Annesley Road Two	-	N/A	-	N		1	42	-	0	-	0	0.0%
Ped Link: P6	South Circulatory Crossing	-	N/A	-	M		1	59	-	0	-	0	0.0%
Ped Link: P7	A608 Mansfield Road One	-	N/A	-	R		1	38	-	0	-	0	0.0%
Ped Link: P8	A608 Mansfield Road Two	-	N/A	-	Q		1	64	-	0	-	0	0.0%
Ped Link: P9	West Circulatory Crossing	-	N/A	-	P		1	42	-	0	-	0	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	**-**	**-**	**0**	**0**	**0**	**40.4**	**130.1**	**0.0**	**170.4**	**-**	**-**	**-**	**-**
A611 Derby Road/A608 Mansfield Road	**-**	**-**	**0**	**0**	**0**	**40.4**	**130.1**	**0.0**	**170.4**	**-**	**-**	**-**	**-**
1/2+1/1	1168	1168	-	-	-	2.5	1.2	-	3.7	11.3	7.1	1.2	8.3
1/3+1/4	750	750	-	-	-	1.1	0.4	-	1.5	7.2	3.5	0.4	3.9
2/2+2/1	704	704	-	-	-	1.6	0.4	-	2.0	10.3	4.1	0.4	4.5
2/3	787	754	-	-	-	7.8	24.4	-	32.1	147.0	20.6	24.4	45.0
2/4	789	754	-	-	-	7.9	25.1	-	33.0	150.7	20.8	25.1	45.9
3/2+3/1	982	982	-	-	-	5.7	5.1	-	10.8	39.5	16.2	5.1	21.3
3/3+3/4	443	443	-	-	-	4.6	1.8	-	6.4	52.1	5.3	1.8	7.1
4/1	1119	1119	-	-	-	0.0	0.7	-	0.7	2.2	0.0	0.7	0.7
4/2	1371	1371	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	800	800	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
5/2	800	800	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
6/1	718	718	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
6/2	718	718	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
7/1	222	216	-	-	-	0.6	9.2	-	9.8	159.4	5.7	9.2	14.9
7/2	221	216	-	-	-	0.5	8.9	-	9.5	154.2	5.7	8.9	14.6
8/1	375	366	-	-	-	3.6	12.1	-	15.7	150.3	9.6	12.1	21.6
8/2	375	366	-	-	-	3.6	12.1	-	15.7	150.3	9.6	12.1	21.6
9/1	754	754	-	-	-	0.4	13.7	-	14.2	67.7	7.5	13.7	21.3
9/2	754	754	-	-	-	0.4	13.7	-	14.2	67.7	7.5	13.7	21.3
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-

Full Input Data And Results

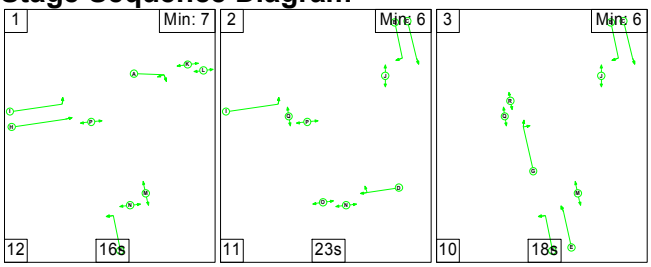
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P9	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -16.2 Total Delay for Signalled Lanes (pcuHr): 168.47 Cycle Time (s): 90
PRC Over All Lanes (%): -16.2 Total Delay Over All Lanes(pcuHr): 170.44

Full Input Data And Results

Scenario 2: 'PM Reference Case' (FG3: 'Reference Case Evening Peak', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

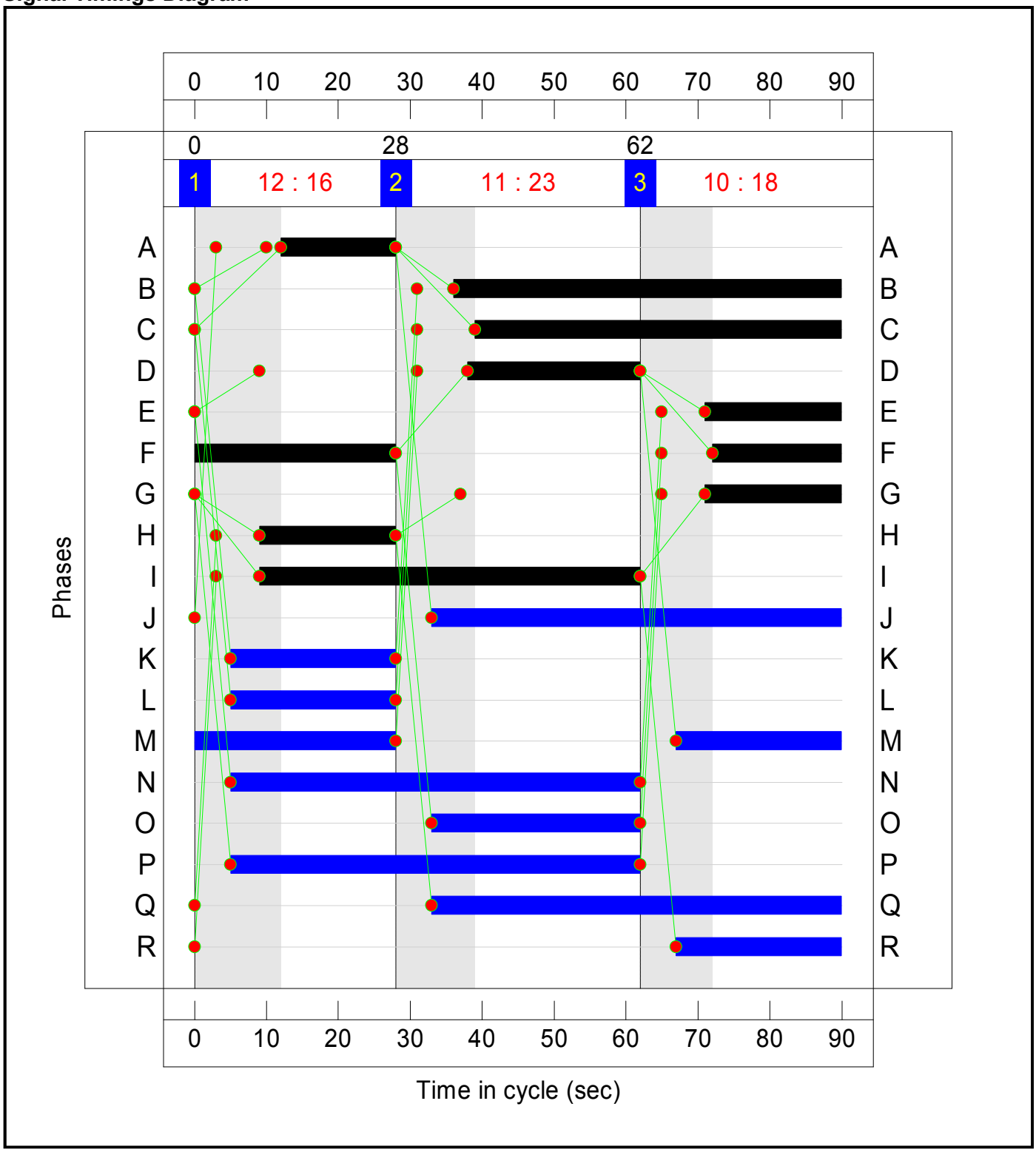


Stage Timings

Stage	1	2	3
Duration	16	23	18
Change Point	0	28	62

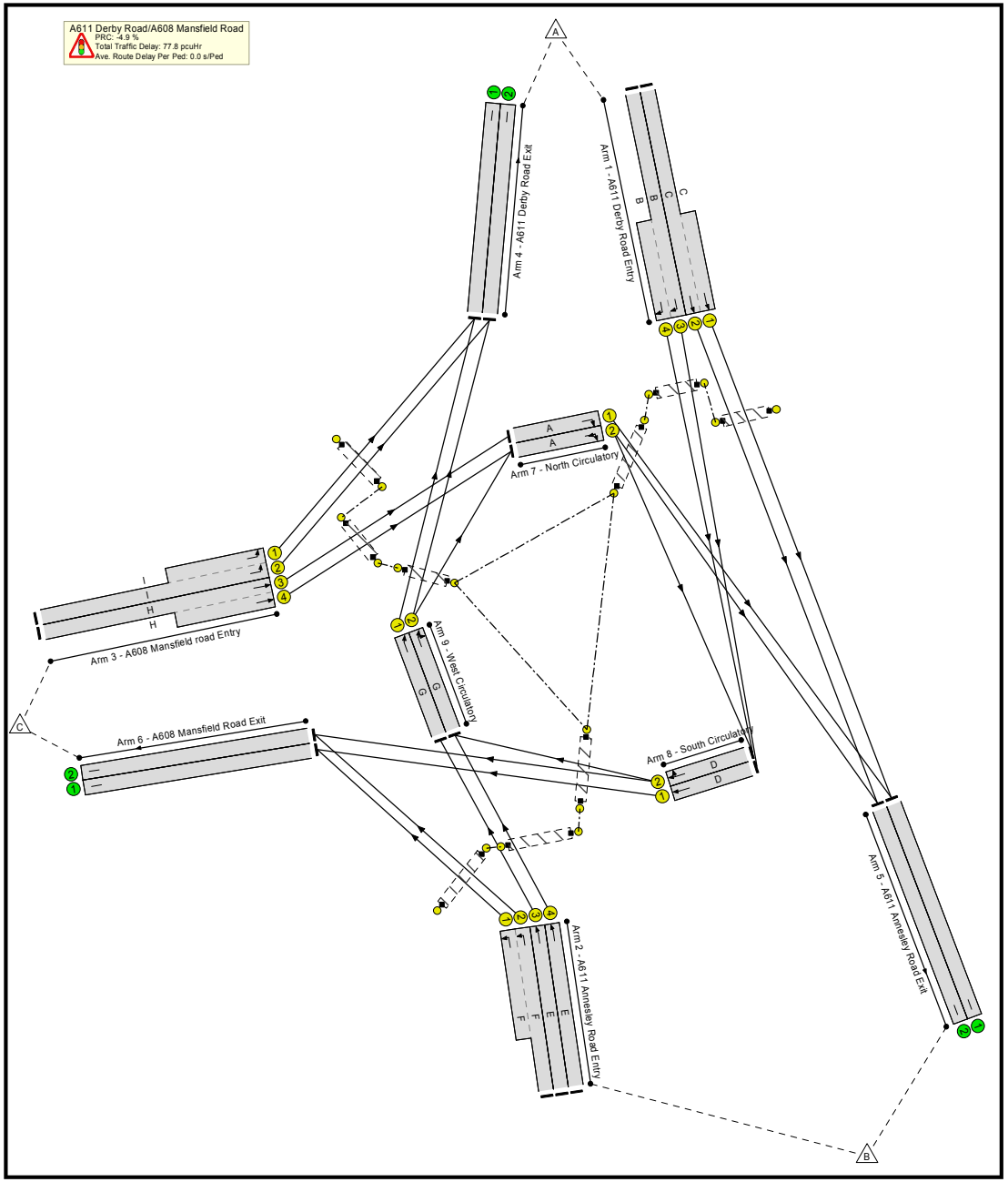
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**94.5%**
A611 Derby Road/A608 Mansfield Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**94.5%**
1/2+1/1	A611 Derby Road Entry Ahead	U	N/A	N/A	C		1	51	-	933	1940:1940	754+756	61.8 : 61.8%
1/3+1/4	A611 Derby Road Entry Right	U	N/A	N/A	B		1	54	-	1017	1940:1940	787+788	64.6 : 64.6%
2/2+2/1	A611 Annesley Road Entry Left	U	N/A	N/A	F		1	46	-	575	1940:1940	732+729	39.4 : 39.4%
2/3	A611 Annesley Road Entry Ahead	U	N/A	N/A	E		1	19	-	407	1940	431	94.4%
2/4	A611 Annesley Road Entry Ahead	U	N/A	N/A	E		1	19	-	407	1940	431	94.4%
3/2+3/1	A608 Mansfield road Entry Left	U	N/A	N/A	I		1	53	-	625	1940:1940	938+377	47.5 : 47.5%
3/3+3/4	A608 Mansfield road Entry Ahead	U	N/A	N/A	H		1	19	-	654	1940:1940	411+411	79.6 : 79.6%
4/1	A611 Derby Road Exit	U	N/A	N/A	-		-	-	-	586	1940	1940	30.2%
4/2	A611 Derby Road Exit	U	N/A	N/A	-		-	-	-	853	Inf	Inf	0.0%
5/1	A611 Annesley Road Exit	U	N/A	N/A	-		-	-	-	794	1940	1940	40.9%
5/2	A611 Annesley Road Exit	U	N/A	N/A	-		-	-	-	793	1940	1940	40.9%
6/1	A608 Mansfield Road Exit	U	N/A	N/A	-		-	-	-	795	1940	1940	41.0%
6/2	A608 Mansfield Road Exit	U	N/A	N/A	-		-	-	-	797	1940	1940	41.1%

Full Input Data And Results

7/1	North Circulatory Right	U	N/A	N/A	A		1	16	-	327	1940	366	89.2%
7/2	North Circulatory Right U-Turn	U	N/A	N/A	A		1	16	-	327	1940	366	89.2%
8/1	South Circulatory Ahead	U	N/A	N/A	D		1	24	-	508	1940	539	94.3%
8/2	South Circulatory Ahead Right	U	N/A	N/A	D		1	24	-	509	1940	539	94.5%
9/1	West Circulatory Ahead	U	N/A	N/A	G		1	19	-	407	1940	431	94.4%
9/2	West Circulatory Ahead Right	U	N/A	N/A	G		1	19	-	407	1940	431	94.4%
Ped Link: P1	A611 Derby Road One	-	N/A	-	L		1	23	-	0	-	0	0.0%
Ped Link: P2	A611 Derby Road Two	-	N/A	-	K		1	23	-	0	-	0	0.0%
Ped Link: P3	North Circulatory Crossing	-	N/A	-	J		1	57	-	0	-	0	0.0%
Ped Link: P4	A611 Annesley Road One	-	N/A	-	O		1	29	-	0	-	0	0.0%
Ped Link: P5	A611 Annesley Road Two	-	N/A	-	N		1	57	-	0	-	0	0.0%
Ped Link: P6	South Circulatory Crossing	-	N/A	-	M		1	51	-	0	-	0	0.0%
Ped Link: P7	A608 Mansfield Road One	-	N/A	-	R		1	23	-	0	-	0	0.0%
Ped Link: P8	A608 Mansfield Road Two	-	N/A	-	Q		1	57	-	0	-	0	0.0%
Ped Link: P9	West Circulatory Crossing	-	N/A	-	P		1	57	-	0	-	0	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	**-**	**-**	**0**	**0**	**0**	**29.9**	**47.9**	**0.0**	**77.8**	**-**	**-**	**-**	**-**
A611 Derby Road/A608 Mansfield Road	**-**	**-**	**0**	**0**	**0**	**29.9**	**47.9**	**0.0**	**77.8**	**-**	**-**	**-**	**-**
1/2+1/1	933	933	-	-	-	2.7	0.8	-	3.5	13.7	6.5	0.8	7.3
1/3+1/4	1017	1017	-	-	-	2.6	0.9	-	3.5	12.4	6.6	0.9	7.6
2/2+2/1	575	575	-	-	-	1.9	0.3	-	2.3	14.1	4.0	0.3	4.3
2/3	407	407	-	-	-	3.9	5.7	-	9.6	85.1	9.9	5.7	15.7
2/4	407	407	-	-	-	3.9	5.7	-	9.6	85.1	9.9	5.7	15.7
3/2+3/1	625	625	-	-	-	1.6	0.5	-	2.0	11.6	5.7	0.5	6.2
3/3+3/4	654	654	-	-	-	5.9	1.9	-	7.9	43.2	7.6	1.9	9.5
4/1	586	586	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
4/2	853	853	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	794	794	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3
5/2	793	793	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3
6/1	795	795	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3
6/2	797	797	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3
7/1	327	327	-	-	-	0.3	3.5	-	3.8	41.7	7.7	3.5	11.3
7/2	327	327	-	-	-	0.3	3.5	-	3.8	41.7	7.7	3.5	11.3
8/1	508	508	-	-	-	3.2	5.9	-	9.1	64.7	12.4	5.9	18.3
8/2	509	509	-	-	-	3.2	6.1	-	9.3	65.5	12.4	6.1	18.5
9/1	407	407	-	-	-	0.2	5.7	-	5.9	52.4	0.3	5.7	6.0
9/2	407	407	-	-	-	0.2	5.7	-	5.9	52.4	0.3	5.7	6.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-

Full Input Data And Results

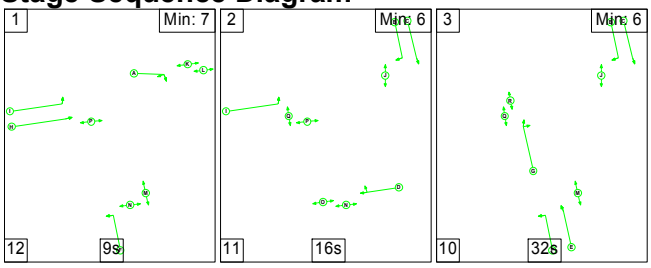
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P9	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -4.9 Total Delay for Signalled Lanes (pcuHr): 76.23 Cycle Time (s): 90
PRC Over All Lanes (%): -4.9 Total Delay Over All Lanes(pcuHr): 77.83

Full Input Data And Results

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

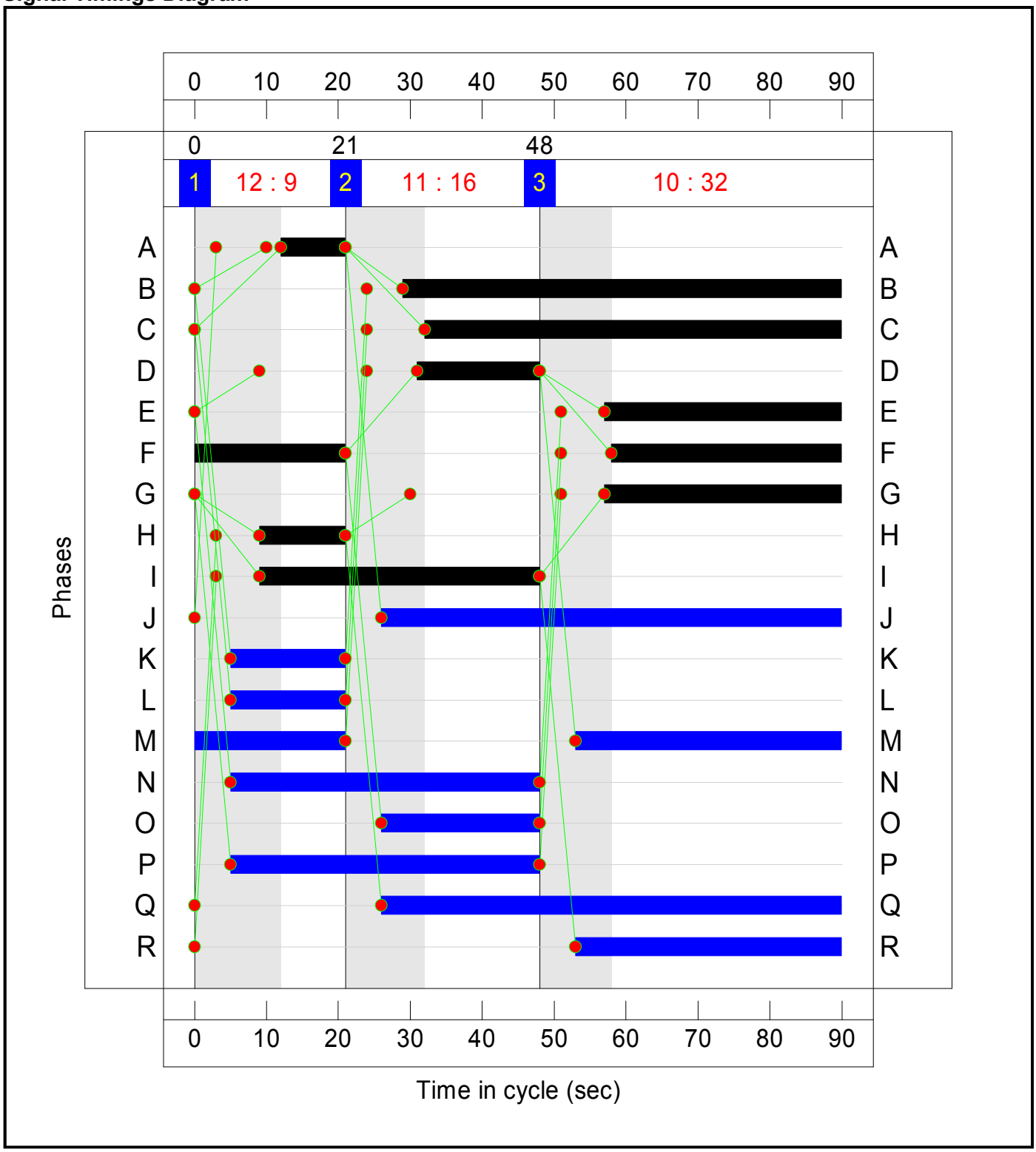


Stage Timings

Stage	1	2	3
Duration	9	16	32
Change Point	0	21	48

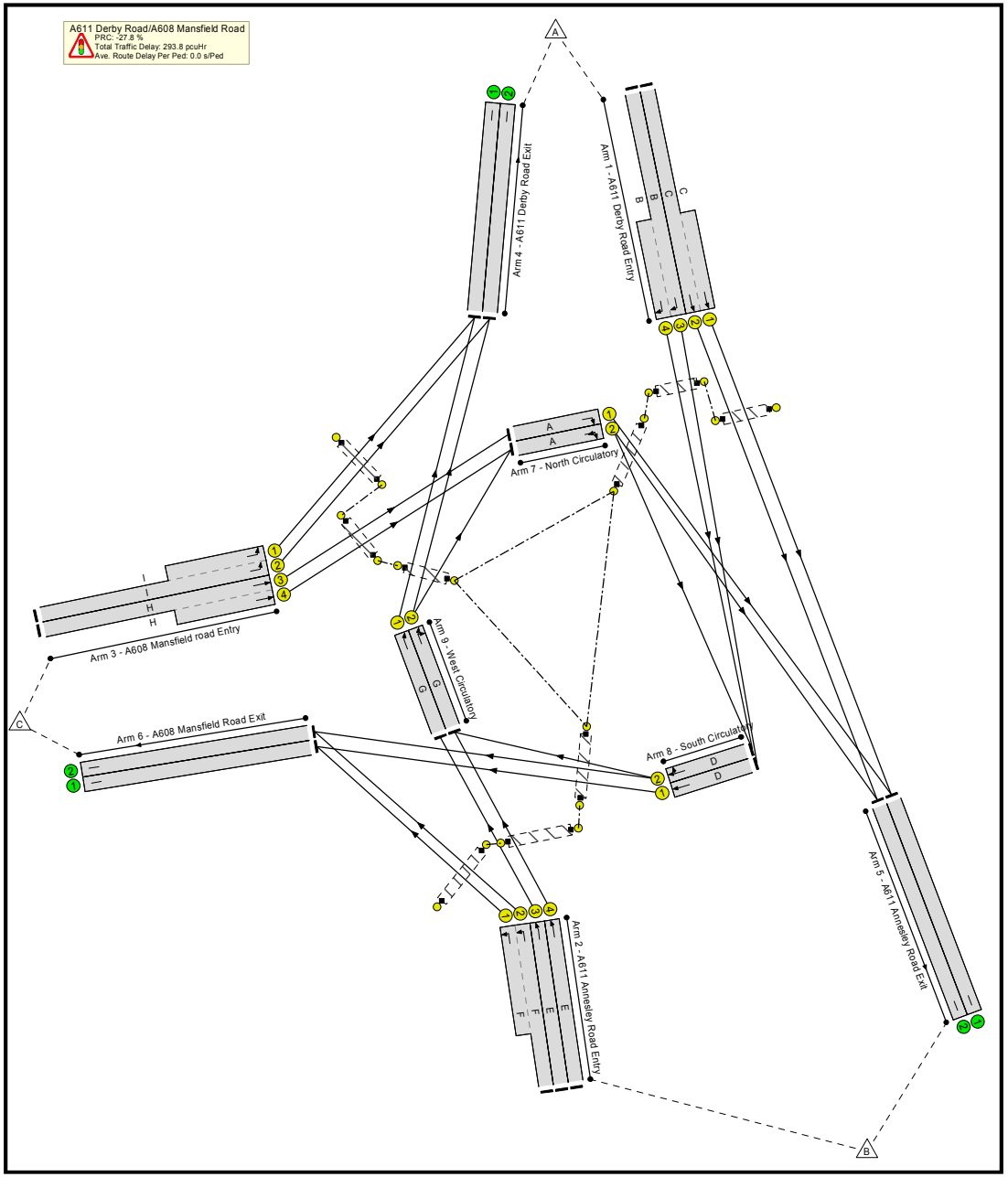
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**115.0%**
A611 Derby Road/A608 Mansfield Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**115.0%**
1/2+1/1	A611 Derby Road Entry Ahead	U	N/A	N/A	C		1	58	-	1363	1940:1940	830+831	82.0 : 82.0%
1/3+1/4	A611 Derby Road Entry Right	U	N/A	N/A	B		1	61	-	855	1940:1940	862+864	49.5 : 49.5%
2/2+2/1	A611 Annesley Road Entry Left	U	N/A	N/A	F		1	53	-	757	1940:1940	807+805	47.0 : 47.0%
2/3	A611 Annesley Road Entry Ahead	U	N/A	N/A	E		1	33	-	841	1940	733	114.8%
2/4	A611 Annesley Road Entry Ahead	U	N/A	N/A	E		1	33	-	843	1940	733	115.0%
3/2+3/1	A608 Mansfield road Entry Left	U	N/A	N/A	I		1	39	-	1028	1940:1940	681+416	93.7 : 93.7%
3/3+3/4	A608 Mansfield road Entry Ahead	U	N/A	N/A	H		1	12	-	478	1940:1940	280+280	85.3 : 85.3%
4/1	A611 Derby Road Exit	U	N/A	N/A	-		-	-	-	1231	1940	1940	57.9%
4/2	A611 Derby Road Exit	U	N/A	N/A	-		-	-	-	1481	Inf	Inf	0.0%
5/1	A611 Annesley Road Exit	U	N/A	N/A	-		-	-	-	921	1940	1940	46.3%
5/2	A611 Annesley Road Exit	U	N/A	N/A	-		-	-	-	920	1940	1940	46.2%
6/1	A608 Mansfield Road Exit	U	N/A	N/A	-		-	-	-	805	1940	1940	39.5%
6/2	A608 Mansfield Road Exit	U	N/A	N/A	-		-	-	-	807	1940	1940	39.5%

Full Input Data And Results

7/1	North Circulatory Right	U	N/A	N/A	A		1	9	-	239	1940	216	110.9%
7/2	North Circulatory Right U-Turn	U	N/A	N/A	A		1	9	-	239	1940	216	110.9%
8/1	South Circulatory Ahead	U	N/A	N/A	D		1	17	-	427	1940	388	110.1%
8/2	South Circulatory Ahead Right	U	N/A	N/A	D		1	17	-	428	1940	388	110.3%
9/1	West Circulatory Ahead	U	N/A	N/A	G		1	33	-	841	1940	733	100.0%
9/2	West Circulatory Ahead Right	U	N/A	N/A	G		1	33	-	843	1940	733	100.0%
Ped Link: P1	A611 Derby Road One	-	N/A	-	L		1	16	-	0	-	0	0.0%
Ped Link: P2	A611 Derby Road Two	-	N/A	-	K		1	16	-	0	-	0	0.0%
Ped Link: P3	North Circulatory Crossing	-	N/A	-	J		1	64	-	0	-	0	0.0%
Ped Link: P4	A611 Annesley Road One	-	N/A	-	O		1	22	-	0	-	0	0.0%
Ped Link: P5	A611 Annesley Road Two	-	N/A	-	N		1	43	-	0	-	0	0.0%
Ped Link: P6	South Circulatory Crossing	-	N/A	-	M		1	58	-	0	-	0	0.0%
Ped Link: P7	A608 Mansfield Road One	-	N/A	-	R		1	37	-	0	-	0	0.0%
Ped Link: P8	A608 Mansfield Road Two	-	N/A	-	Q		1	64	-	0	-	0	0.0%
Ped Link: P9	West Circulatory Crossing	-	N/A	-	P		1	43	-	0	-	0	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	**-**	**-**	**0**	**0**	**0**	**56.5**	**237.3**	**0.0**	**293.8**	**-**	**-**	**-**	**-**
A611 Derby Road/A608 Mansfield Road	**-**	**-**	**0**	**0**	**0**	**56.5**	**237.3**	**0.0**	**293.8**	**-**	**-**	**-**	**-**
1/2+1/1	1363	1363	-	-	-	3.1	2.2	-	5.4	14.2	8.9	2.2	11.2
1/3+1/4	855	855	-	-	-	1.3	0.5	-	1.8	7.7	4.2	0.5	4.7
2/2+2/1	757	757	-	-	-	1.9	0.4	-	2.3	11.1	4.6	0.4	5.1
2/3	841	733	-	-	-	12.4	57.7	-	70.1	300.0	25.7	57.7	83.4
2/4	843	733	-	-	-	12.5	58.6	-	71.2	303.9	25.9	58.6	84.5
3/2+3/1	1028	1028	-	-	-	5.9	6.3	-	12.1	42.5	17.6	6.3	23.9
3/3+3/4	478	478	-	-	-	5.0	2.7	-	7.7	58.1	5.8	2.7	8.5
4/1	1123	1123	-	-	-	0.0	0.7	-	0.7	2.2	0.0	0.7	0.7
4/2	1371	1371	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	898	898	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
5/2	897	897	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
6/1	766	766	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
6/2	767	767	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
7/1	239	216	-	-	-	1.6	15.6	-	17.2	258.8	6.7	15.6	22.2
7/2	239	216	-	-	-	1.6	15.6	-	17.2	258.8	6.7	15.6	22.2
8/1	427	388	-	-	-	5.1	24.0	-	29.1	245.3	11.7	24.0	35.6
8/2	428	388	-	-	-	5.2	24.4	-	29.6	248.7	11.7	24.4	36.1
9/1	733	733	-	-	-	0.5	13.5	-	14.0	68.7	7.5	13.5	21.1
9/2	733	733	-	-	-	0.5	13.5	-	14.0	68.7	7.5	13.5	21.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-

Full Input Data And Results

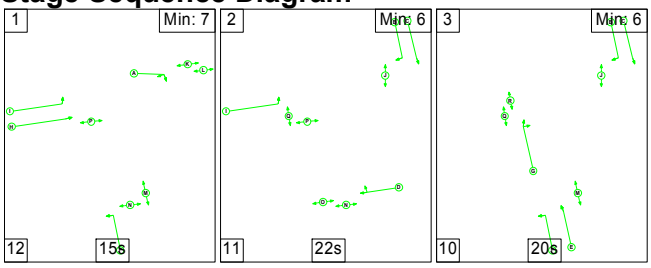
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P9	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -27.8 Total Delay for Signalled Lanes (pcuHr): 291.59 Cycle Time (s): 90
PRC Over All Lanes (%): -27.8 Total Delay Over All Lanes(pcuHr): 293.79

Full Input Data And Results

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

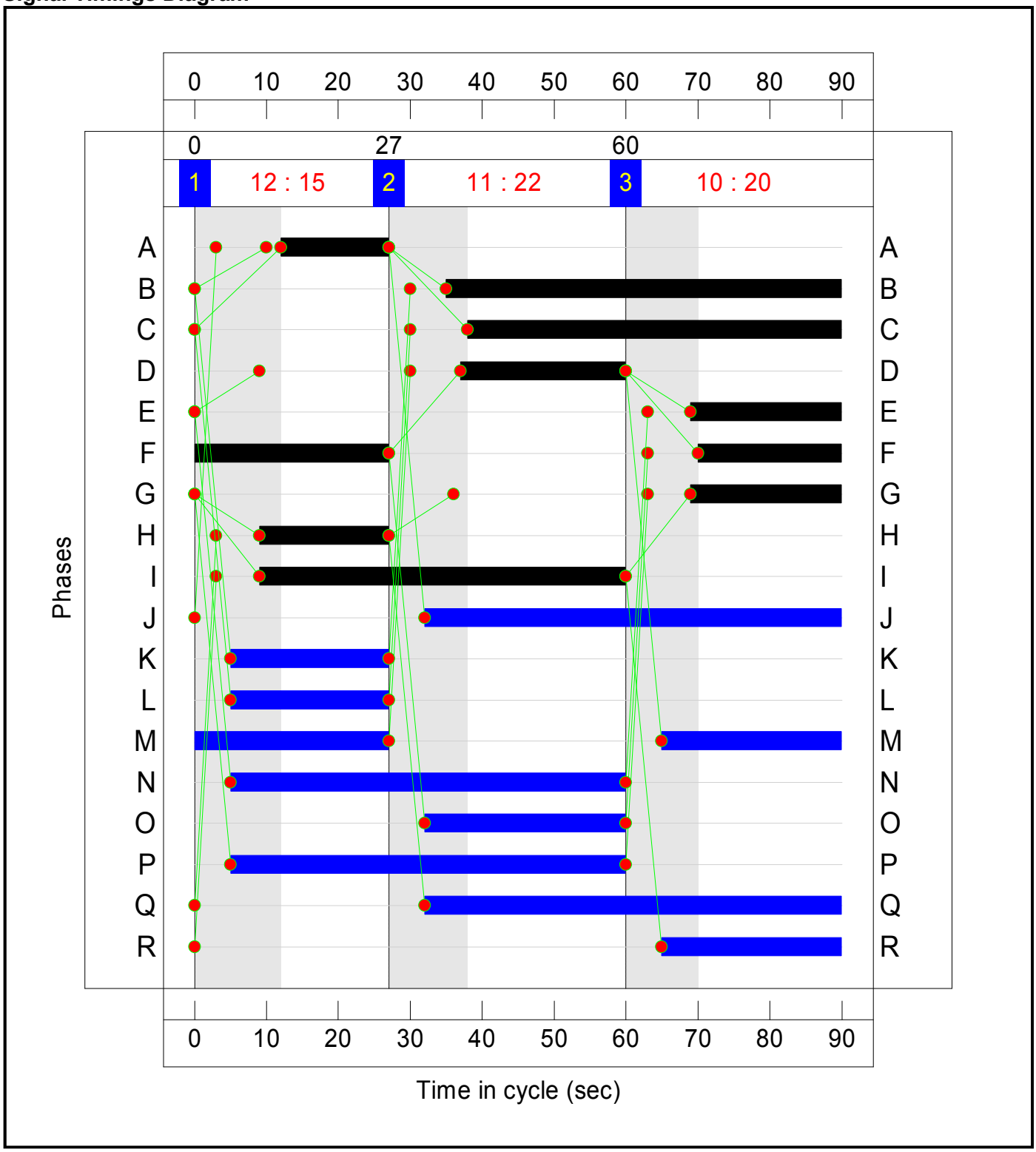


Stage Timings

Stage	1	2	3
Duration	15	22	20
Change Point	0	27	60

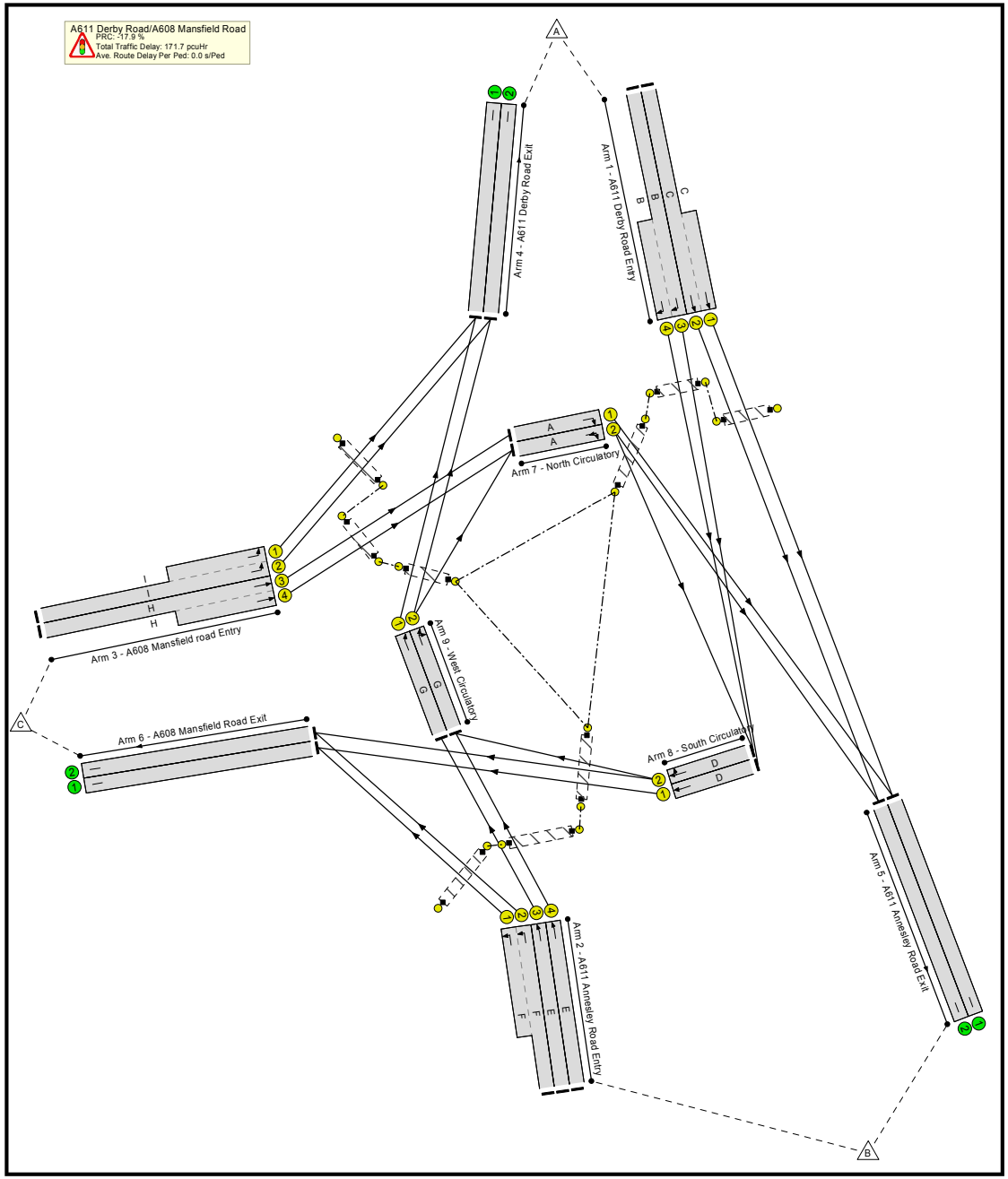
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**106.1%**
A611 Derby Road/A608 Mansfield Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**106.1%**
1/2+1/1	A611 Derby Road Entry Ahead	U	N/A	N/A	C		1	52	-	1063	1940:1940	765+767	69.4 : 69.4%
1/3+1/4	A611 Derby Road Entry Right	U	N/A	N/A	B		1	55	-	1098	1940:1940	799+799	68.7 : 68.7%
2/2+2/1	A611 Annesley Road Entry Left	U	N/A	N/A	F		1	47	-	617	1940:1940	742+740	41.6 : 41.6%
2/3	A611 Annesley Road Entry Ahead	U	N/A	N/A	E		1	21	-	494	1940	474	104.2%
2/4	A611 Annesley Road Entry Ahead	U	N/A	N/A	E		1	21	-	495	1940	474	104.4%
3/2+3/1	A608 Mansfield road Entry Left	U	N/A	N/A	I		1	51	-	721	1940:1940	876+434	55.1 : 55.1%
3/3+3/4	A608 Mansfield road Entry Ahead	U	N/A	N/A	H		1	18	-	704	1940:1940	400+400	88.0 : 88.0%
4/1	A611 Derby Road Exit	U	N/A	N/A	-		-	-	-	733	1940	1940	36.8%
4/2	A611 Derby Road Exit	U	N/A	N/A	-		-	-	-	977	Inf	Inf	0.0%
5/1	A611 Annesley Road Exit	U	N/A	N/A	-		-	-	-	884	1940	1940	45.2%
5/2	A611 Annesley Road Exit	U	N/A	N/A	-		-	-	-	883	1940	1940	45.1%
6/1	A608 Mansfield Road Exit	U	N/A	N/A	-		-	-	-	857	1940	1940	42.5%
6/2	A608 Mansfield Road Exit	U	N/A	N/A	-		-	-	-	858	1940	1940	42.6%

Full Input Data And Results

7/1	North Circulatory Right	U	N/A	N/A	A		1	15	-	352	1940	345	102.1%
7/2	North Circulatory Right U-Turn	U	N/A	N/A	A		1	15	-	352	1940	345	102.1%
8/1	South Circulatory Ahead	U	N/A	N/A	D		1	23	-	549	1940	517	106.1%
8/2	South Circulatory Ahead Right	U	N/A	N/A	D		1	23	-	549	1940	517	106.1%
9/1	West Circulatory Ahead	U	N/A	N/A	G		1	21	-	494	1940	474	100.0%
9/2	West Circulatory Ahead Right	U	N/A	N/A	G		1	21	-	495	1940	474	100.0%
Ped Link: P1	A611 Derby Road One	-	N/A	-	L		1	22	-	0	-	0	0.0%
Ped Link: P2	A611 Derby Road Two	-	N/A	-	K		1	22	-	0	-	0	0.0%
Ped Link: P3	North Circulatory Crossing	-	N/A	-	J		1	58	-	0	-	0	0.0%
Ped Link: P4	A611 Annesley Road One	-	N/A	-	O		1	28	-	0	-	0	0.0%
Ped Link: P5	A611 Annesley Road Two	-	N/A	-	N		1	55	-	0	-	0	0.0%
Ped Link: P6	South Circulatory Crossing	-	N/A	-	M		1	52	-	0	-	0	0.0%
Ped Link: P7	A608 Mansfield Road One	-	N/A	-	R		1	25	-	0	-	0	0.0%
Ped Link: P8	A608 Mansfield Road Two	-	N/A	-	Q		1	58	-	0	-	0	0.0%
Ped Link: P9	West Circulatory Crossing	-	N/A	-	P		1	55	-	0	-	0	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	**-**	**-**	**0**	**0**	**0**	**40.2**	**131.6**	**0.0**	**171.7**	**-**	**-**	**-**	**-**
A611 Derby Road/A608 Mansfield Road	**-**	**-**	**0**	**0**	**0**	**40.2**	**131.6**	**0.0**	**171.7**	**-**	**-**	**-**	**-**
1/2+1/1	1063	1063	-	-	-	3.1	1.1	-	4.2	14.3	7.4	1.1	8.5
1/3+1/4	1098	1098	-	-	-	2.7	1.1	-	3.8	12.5	7.2	1.1	8.3
2/2+2/1	617	617	-	-	-	2.0	0.4	-	2.4	13.7	4.2	0.4	4.6
2/3	494	474	-	-	-	5.7	17.1	-	22.8	166.2	12.9	17.1	30.0
2/4	495	474	-	-	-	5.8	17.5	-	23.2	169.0	13.0	17.5	30.5
3/2+3/1	721	721	-	-	-	2.0	0.6	-	2.6	13.2	6.7	0.6	7.3
3/3+3/4	704	704	-	-	-	6.7	3.4	-	10.1	51.7	8.4	3.4	11.8
4/1	713	713	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
4/2	956	956	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	877	877	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
5/2	876	876	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
6/1	825	825	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
6/2	826	826	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
7/1	352	345	-	-	-	0.7	11.3	-	12.0	122.9	9.0	11.3	20.3
7/2	352	345	-	-	-	0.7	11.3	-	12.0	122.9	9.0	11.3	20.3
8/1	549	517	-	-	-	4.8	22.1	-	26.9	176.3	14.5	22.1	36.6
8/2	549	517	-	-	-	4.8	22.1	-	26.9	176.3	14.5	22.1	36.6
9/1	474	474	-	-	-	0.5	10.9	-	11.4	86.8	7.5	10.9	18.4
9/2	474	474	-	-	-	0.5	10.9	-	11.4	86.8	7.5	10.9	18.4
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-

Full Input Data And Results

Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P9	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -17.9 Total Delay for Signalled Lanes (pcuHr): 169.89 Cycle Time (s): 90
PRC Over All Lanes (%): -17.9 Total Delay Over All Lanes(pcuHr): 171.74

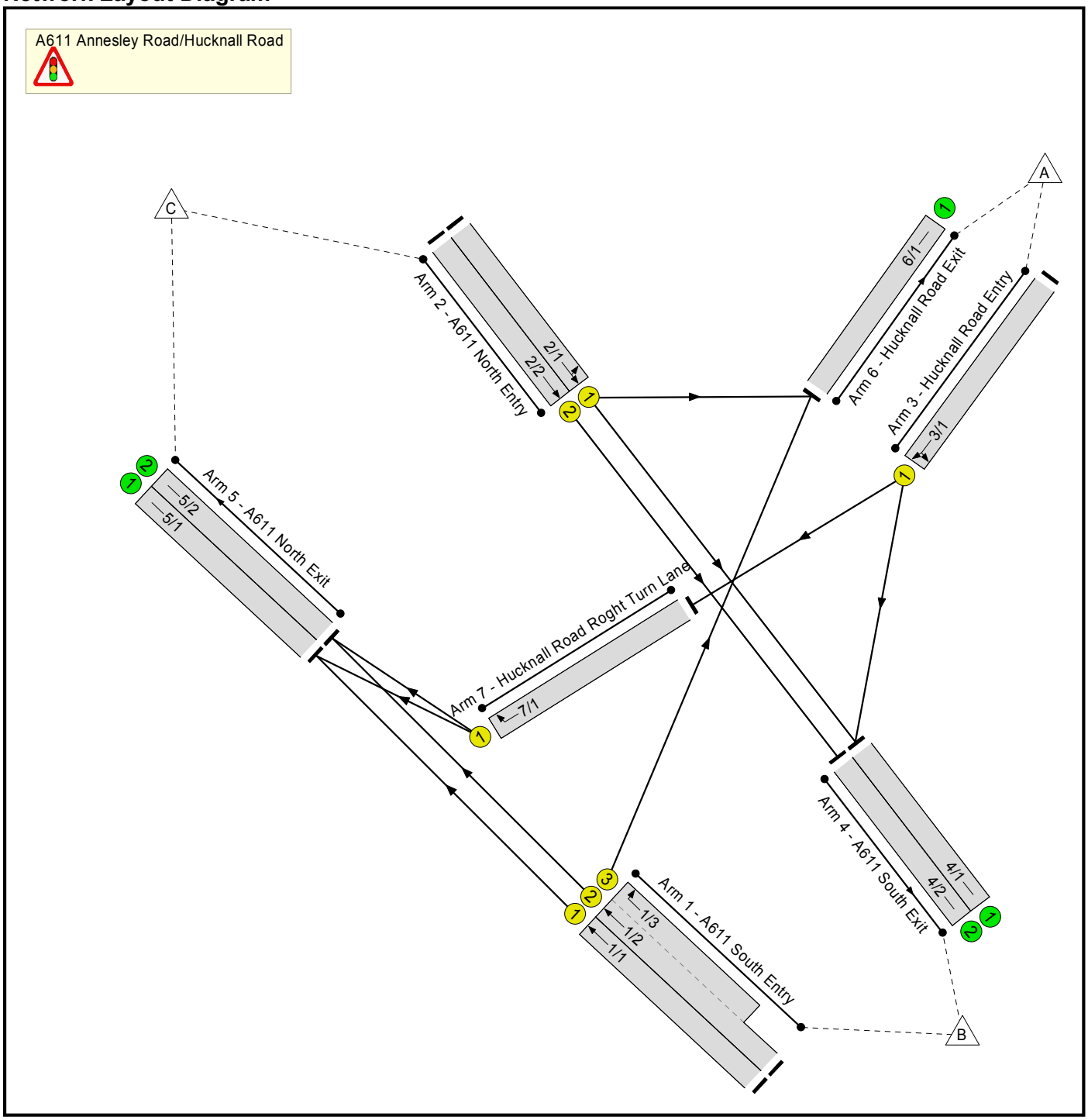
Full Input Data And Results

User and Project Details

Project:	
Title:	
Location:	
File name:	Junction 20 2016.lsg3x
Author:	
Company:	
Address:	
Notes:	

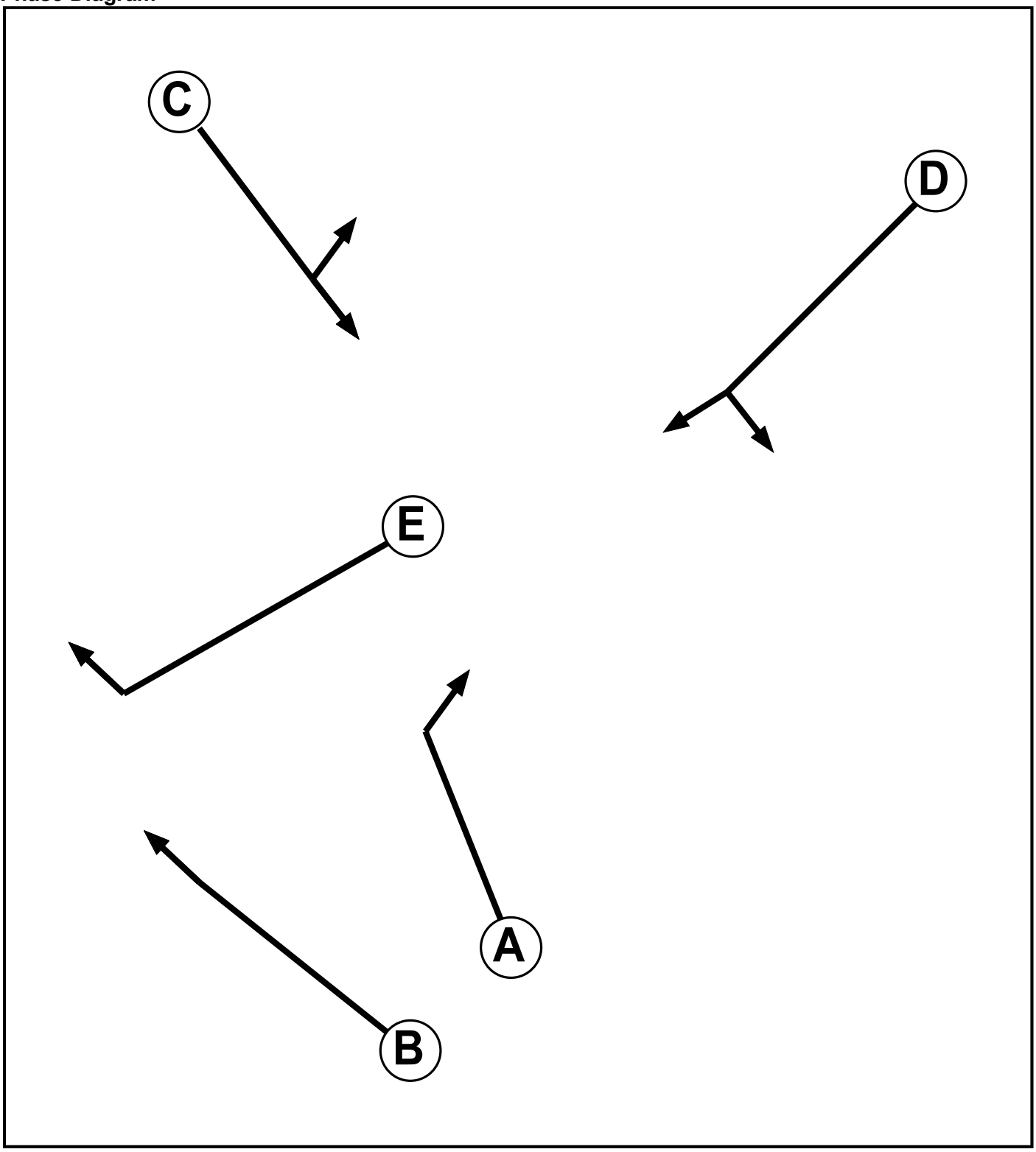
Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

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

Full Input Data And Results

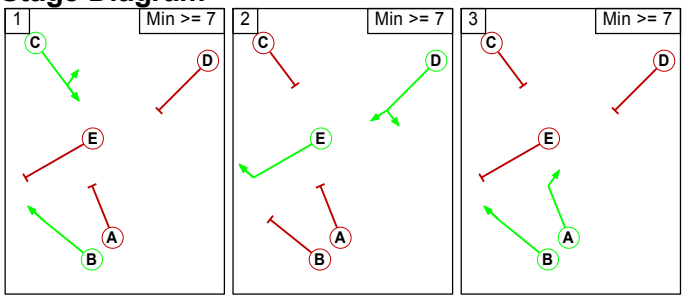
Phase Intergreens Matrix

		Starting Phase				
		A	B	C	D	E
Terminating Phase	A		-	9	7	-
	B	-		-	-	8
	C	9	-		11	-
	D	7	-	8		-
	E	-	6	-	-	

Phases in Stage

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

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
From Stage	1		11	9
	2	8		7
	3	9	8	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A611 Annesley Road/Hucknall Road
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: A611 Annesley Road/Hucknall Road												
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 (A611 South Entry)	U	B	2	3	60.0	User	2000	-	-	-	-	-
1/2 (A611 South Entry)	U	B	2	3	60.0	User	2000	-	-	-	-	-
1/3 (A611 South Entry)	U	A	2	3	18.0	User	1800	-	-	-	-	-
2/1 (A611 North Entry)	U	C	2	3	60.0	User	1900	-	-	-	-	-
2/2 (A611 North Entry)	U	C	2	3	60.0	User	2000	-	-	-	-	-
3/1 (Hucknall Road Entry)	U	D	2	3	60.0	User	1900	-	-	-	-	-
4/1 (A611 South Exit)	U		2	3	60.0	User	2000	-	-	-	-	-
4/2 (A611 South Exit)	U		2	3	60.0	User	2000	-	-	-	-	-
5/1 (A611 North Exit)	U		2	3	60.0	User	2000	-	-	-	-	-
5/2 (A611 North Exit)	U		2	3	60.0	User	2000	-	-	-	-	-
6/1 (Hucknall Road Exit)	U		2	3	60.0	User	1900	-	-	-	-	-
7/1 (Hucknall Road Roght Turn Lane)	U	E	2	3	60.0	User	1800	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'Reference Case Morning Peak'	08:00	09:00	01:00	
2: '2032 Development Case Morning Peak'	08:00	09:00	01:00	
3: 'Reference Case Evening Peak'	17:00	18:00	01:00	
4: '2032 Development Case Evening Peak'	17:00	18:00	01:00	

Scenario 1: 'AM Reference Case' (FG1: 'Reference Case Morning Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	187	1	188
	B	151	0	2413	2564
	C	5	2659	0	2664
	Tot.	156	2846	2414	5416

Traffic Lane Flows

Lane	Scenario 1: AM Reference Case
Junction: A611 Annesley Road/Hucknall Road	
1/1	1234
1/2 (with short)	1330(In) 1179(Out)
1/3 (short)	151
2/1	1298
2/2	1366
3/1	188
4/1	1480
4/2	1366
5/1	1234
5/2	1180
6/1	156
7/1	1

Full Input Data And Results

Lane Saturation Flows

Junction: A611 Annesley Road/Hucknall Road								
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 (A611 South Entry Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
1/2 (A611 South Entry Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
1/3 (A611 South Entry Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A611 North Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/2 (A611 North Entry Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
3/1 (Hucknall Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (A611 South Exit Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
4/2 (A611 South Exit Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
5/1 (A611 North Exit Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
5/2 (A611 North Exit Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
6/1 (Hucknall Road Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (Hucknall Road Roght Turn Lane Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 2: 'PM Reference Case' (FG3: 'Reference Case Evening Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	248	0	248
	B	126	0	1422	1548
	C	0	1698	0	1698
	Tot.	126	1946	1422	3494

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM Reference Case
Junction: A611 Annesley Road/Hucknall Road	
1/1	724
1/2 (with short)	824(In) 698(Out)
1/3 (short)	126
2/1	824
2/2	874
3/1	248
4/1	1072
4/2	874
5/1	724
5/2	698
6/1	126
7/1	0

Lane Saturation Flows

Junction: A611 Annesley Road/Hucknall Road								
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 (A611 South Entry Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
1/2 (A611 South Entry Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
1/3 (A611 South Entry Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A611 North Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/2 (A611 North Entry Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
3/1 (Hucknall Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (A611 South Exit Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
4/2 (A611 South Exit Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
5/1 (A611 North Exit Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
5/2 (A611 North Exit Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
6/1 (Hucknall Road Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (Hucknall Road Roght Turn Lane Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800

Full Input Data And Results

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	172	3	175
	B	142	0	2580	2722
	C	14	2806	0	2820
	Tot.	156	2978	2583	5717

Traffic Lane Flows

Lane	Scenario 3: AM Development Scenario
Junction: A611 Annesley Road/Hucknall Road	
1/1	1313
1/2 (with short)	1409(In) 1267(Out)
1/3 (short)	142
2/1	1374
2/2	1446
3/1	175
4/1	1532
4/2	1446
5/1	1314
5/2	1269
6/1	156
7/1	3

Full Input Data And Results

Lane Saturation Flows

Junction: A611 Annesley Road/Hucknall Road								
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 (A611 South Entry Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
1/2 (A611 South Entry Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
1/3 (A611 South Entry Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A611 North Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/2 (A611 North Entry Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
3/1 (Hucknall Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (A611 South Exit Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
4/2 (A611 South Exit Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
5/1 (A611 North Exit Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
5/2 (A611 North Exit Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
6/1 (Hucknall Road Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (Hucknall Road Roght Turn Lane Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	238	0	238
	B	125	0	1642	1767
	C	0	1807	0	1807
	Tot.	125	2045	1642	3812

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: PM Development Scenario
Junction: A611 Annesley Road/Hucknall Road	
1/1	833
1/2 (with short)	934(In) 809(Out)
1/3 (short)	125
2/1	878
2/2	929
3/1	238
4/1	1116
4/2	929
5/1	833
5/2	809
6/1	125
7/1	0

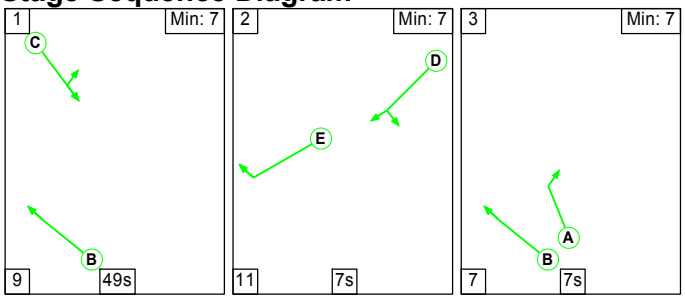
Lane Saturation Flows

Junction: A611 Annesley Road/Hucknall Road								
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 (A611 South Entry Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
1/2 (A611 South Entry Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
1/3 (A611 South Entry Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A611 North Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/2 (A611 North Entry Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
3/1 (Hucknall Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (A611 South Exit Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
4/2 (A611 South Exit Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
5/1 (A611 North Exit Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
5/2 (A611 North Exit Lane 2)	This lane uses a directly entered Saturation Flow						2000	2000
6/1 (Hucknall Road Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (Hucknall Road Roght Turn Lane Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800

Full Input Data And Results

Scenario 1: 'AM Reference Case' (FG1: 'Reference Case Morning Peak', Plan 1: 'Network Control Plan 1')

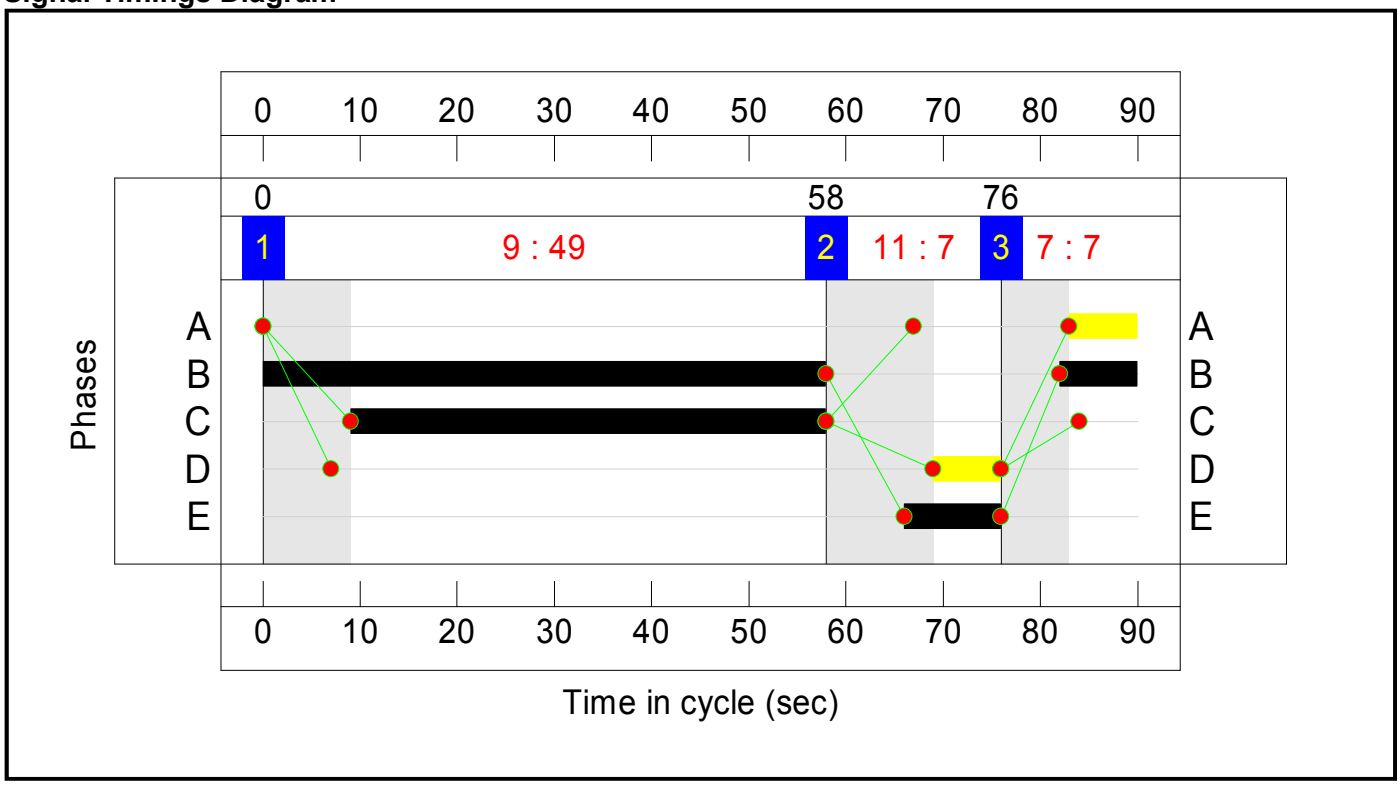
Stage Sequence Diagram



Stage Timings

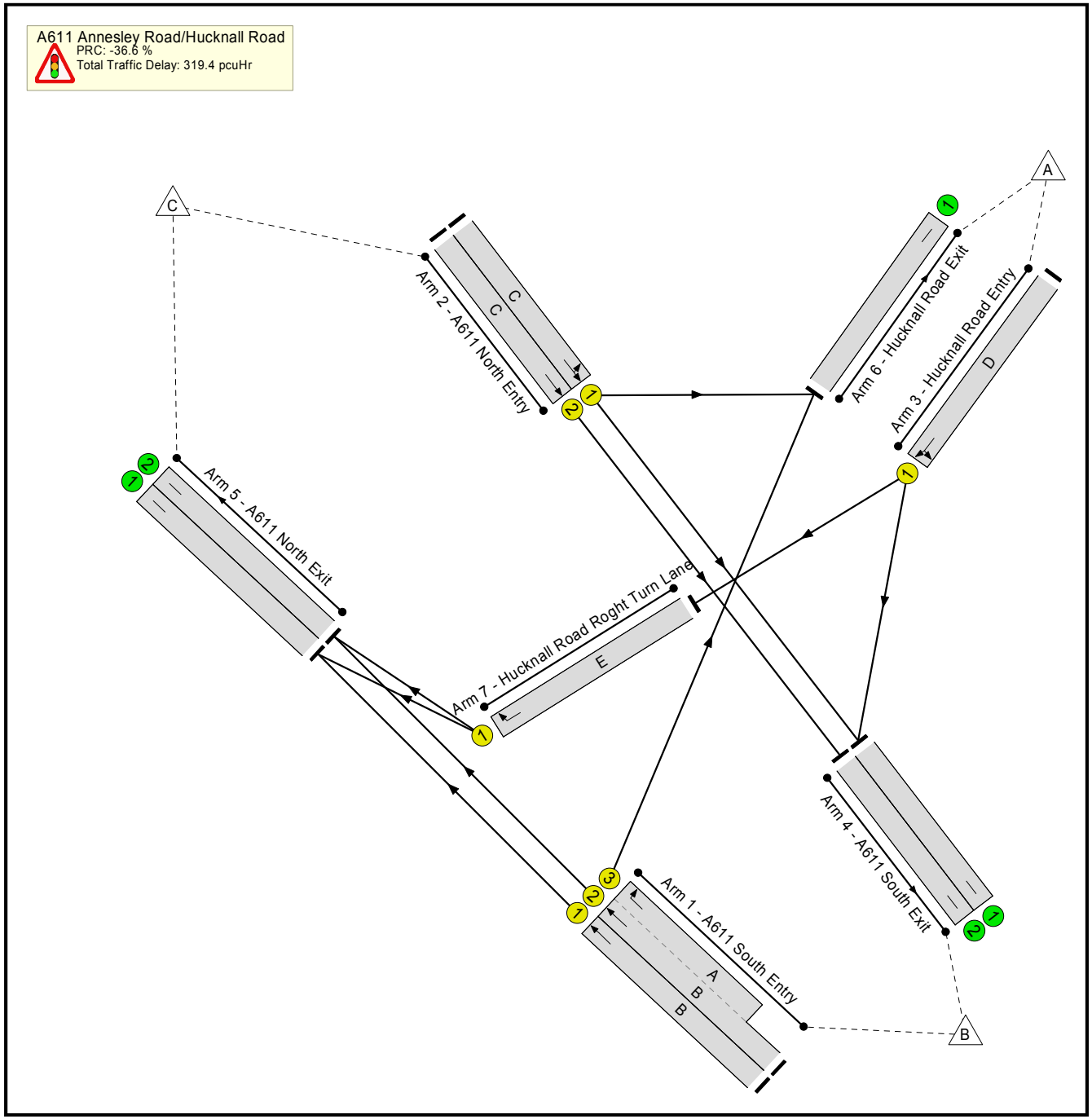
Stage	1	2	3
Duration	49	7	7
Change Point	0	58	76

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**123.0%**
A611 Annesley Road/Hucknall Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**123.0%**
1/1	A611 South Entry Ahead	U	N/A	N/A	B		1	66	-	1234	2000	1489	82.9%
1/2+1/3	A611 South Entry Ahead Right	U	N/A	N/A	B A		1	66:7	-	1330	2000:1800	1401+160	84.2 : 94.4%
2/1	A611 North Entry Ahead Left	U	N/A	N/A	C		1	49	-	1298	1900	1056	123.0%
2/2	A611 North Entry Ahead	U	N/A	N/A	C		1	49	-	1366	2000	1111	122.9%
3/1	Hucknall Road Entry Left Ahead	U	N/A	N/A	D		1	7	-	188	1900	169	111.3%
4/1	A611 South Exit	U	N/A	N/A	-		-	-	-	1480	2000	2000	61.0%
4/2	A611 South Exit	U	N/A	N/A	-		-	-	-	1366	2000	2000	55.6%
5/1	A611 North Exit	U	N/A	N/A	-		-	-	-	1234	2000	2000	61.7%
5/2	A611 North Exit	U	N/A	N/A	-		-	-	-	1180	2000	2000	59.0%
6/1	Hucknall Road Exit	U	N/A	N/A	-		-	-	-	156	1900	1900	8.2%
7/1	Hucknall Road Roght Turn Lane Right	U	N/A	N/A	E		1	10	-	1	1800	220	0.4%

Full Input Data And Results

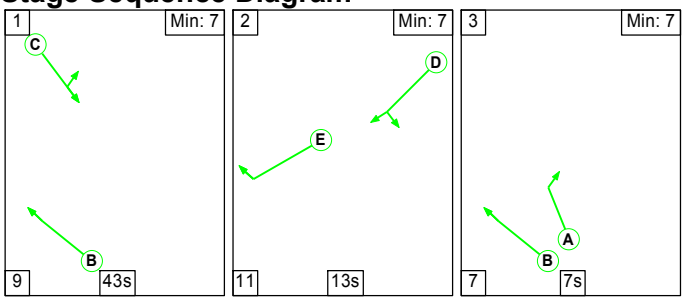
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**44.2**	**275.2**	**0.0**	**319.4**	**-**	**-**	**-**	**-**
A611 Annesley Road/Hucknall Road	**-**	**-**	**0**	**0**	**0**	**44.2**	**275.2**	**0.0**	**319.4**	**-**	**-**	**-**	**-**
1/1	1234	1234	-	-	-	2.6	2.4	-	5.0	14.6	20.6	2.4	22.9
1/2+1/3	1330	1330	-	-	-	4.1	2.8	-	6.9	18.6	18.3	2.8	21.2
2/1	1298	1056	-	-	-	16.9	123.8	-	140.8	390.5	38.5	123.8	162.4
2/2	1366	1111	-	-	-	17.8	130.1	-	147.9	389.8	40.5	130.1	170.6
3/1	188	169	-	-	-	2.7	13.1	-	15.8	303.2	5.2	13.1	18.3
4/1	1219	1219	-	-	-	0.0	0.8	-	0.8	2.3	0.0	0.8	0.8
4/2	1111	1111	-	-	-	0.0	0.6	-	0.6	2.0	0.0	0.6	0.6
5/1	1234	1234	-	-	-	0.0	0.8	-	0.8	2.3	0.0	0.8	0.8
5/2	1180	1180	-	-	-	0.0	0.7	-	0.7	2.2	0.0	0.7	0.7
6/1	155	155	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
7/1	1	1	-	-	-	0.0	0.0	-	0.0	63.4	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -36.6 Total Delay for Signalled Lanes (pcuHr): 316.40 Cycle Time (s): 90
PRC Over All Lanes (%): -36.6 Total Delay Over All Lanes(pcuHr): 319.37

Full Input Data And Results

Scenario 2: 'PM Reference Case' (FG3: 'Reference Case Evening Peak', Plan 1: 'Network Control Plan 1')

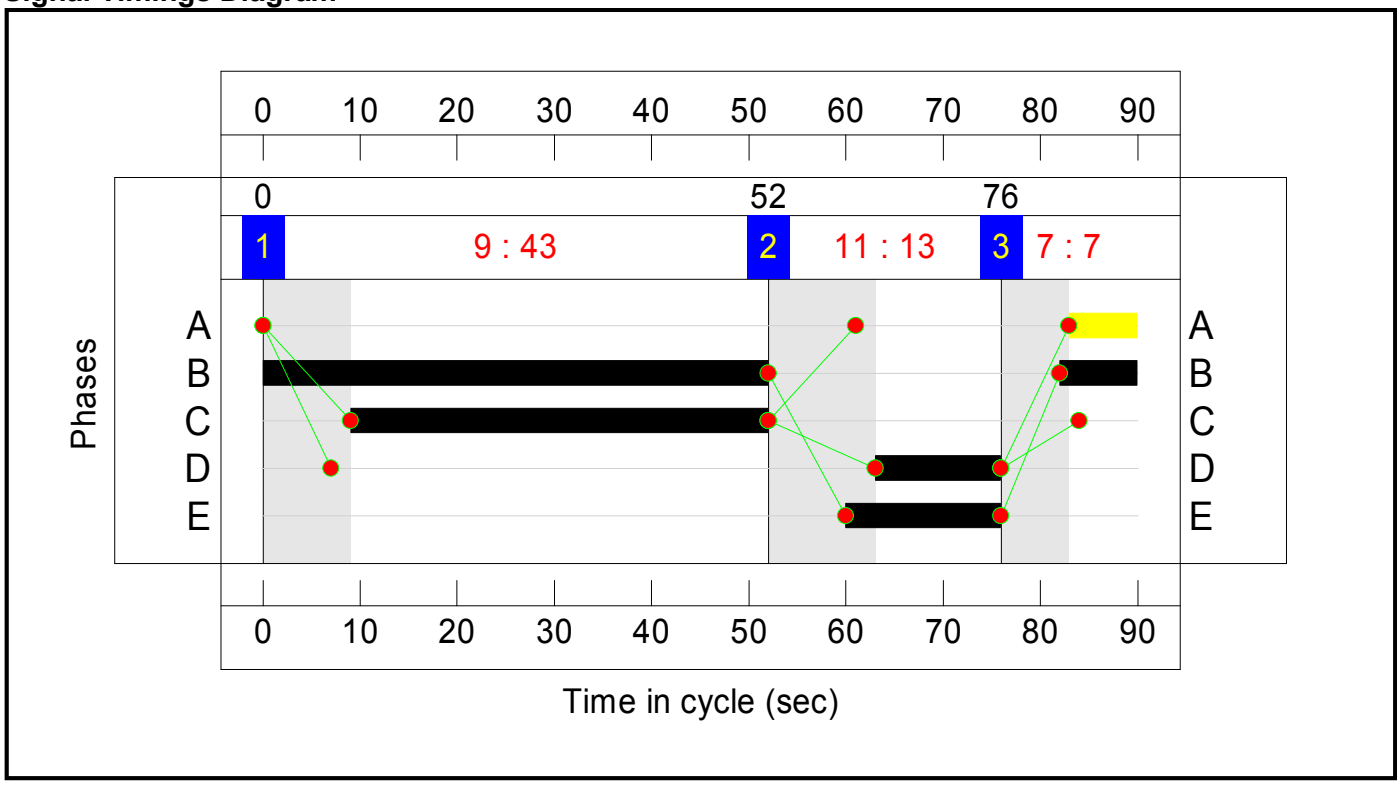
Stage Sequence Diagram



Stage Timings

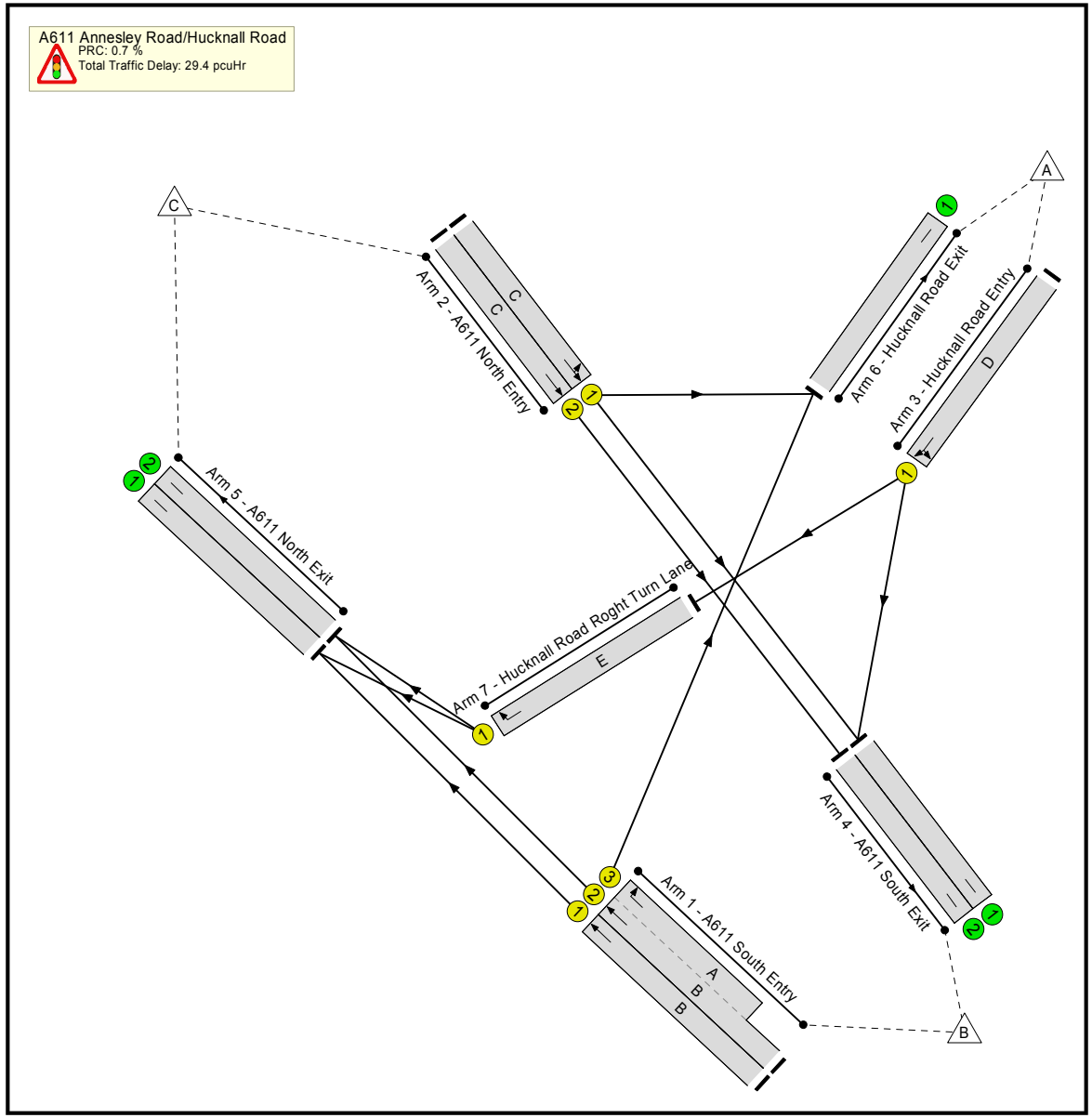
Stage	1	2	3
Duration	43	13	7
Change Point	0	52	76

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**89.4%**
A611 Annesley Road/Hucknall Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**89.4%**
1/1	A611 South Entry Ahead	U	N/A	N/A	B		1	60	-	724	2000	1356	53.4%
1/2+1/3	A611 South Entry Ahead Right	U	N/A	N/A	B A		1	60:7	-	824	2000:1800	1257+160	55.5 : 78.8%
2/1	A611 North Entry Ahead Left	U	N/A	N/A	C		1	43	-	824	1900	929	88.7%
2/2	A611 North Entry Ahead	U	N/A	N/A	C		1	43	-	874	2000	978	89.4%
3/1	Hucknall Road Entry Left Ahead	U	N/A	N/A	D		1	13	-	248	1900	296	83.9%
4/1	A611 South Exit	U	N/A	N/A	-		-	-	-	1072	2000	2000	53.6%
4/2	A611 South Exit	U	N/A	N/A	-		-	-	-	874	2000	2000	43.7%
5/1	A611 North Exit	U	N/A	N/A	-		-	-	-	724	2000	2000	36.2%
5/2	A611 North Exit	U	N/A	N/A	-		-	-	-	698	2000	2000	34.9%
6/1	Hucknall Road Exit	U	N/A	N/A	-		-	-	-	126	1900	1900	6.6%
7/1	Hucknall Road Roght Turn Lane Right	U	N/A	N/A	E		1	16	-	0	1800	340	0.0%

Full Input Data And Results

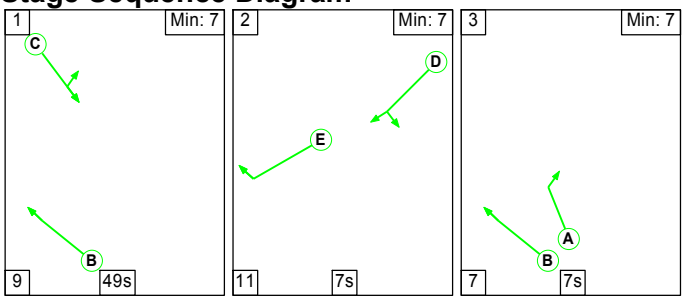
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**16.6**	**12.8**	**0.0**	**29.4**	**-**	**-**	**-**	**-**
A611 Annesley Road/Hucknall Road	**-**	**-**	**0**	**0**	**0**	**16.6**	**12.8**	**0.0**	**29.4**	**-**	**-**	**-**	**-**
1/1	724	724	-	-	-	1.5	0.6	-	2.0	10.2	9.0	0.6	9.6
1/2+1/3	824	824	-	-	-	2.8	0.7	-	3.5	15.3	8.5	0.7	9.2
2/1	824	824	-	-	-	4.8	3.7	-	8.4	36.8	18.5	3.7	22.2
2/2	874	874	-	-	-	5.1	3.9	-	9.0	37.0	19.7	3.9	23.6
3/1	248	248	-	-	-	2.5	2.4	-	4.9	71.3	6.0	2.4	8.4
4/1	1072	1072	-	-	-	0.0	0.6	-	0.6	1.9	0.0	0.6	0.6
4/2	874	874	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
5/1	724	724	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
5/2	698	698	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
6/1	126	126	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
7/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 0.7 Total Delay for Signalled Lanes (pcuHr): 27.86 Cycle Time (s): 90
PRC Over All Lanes (%): 0.7 Total Delay Over All Lanes(pcuHr): 29.41

Full Input Data And Results

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Network Control Plan 1')

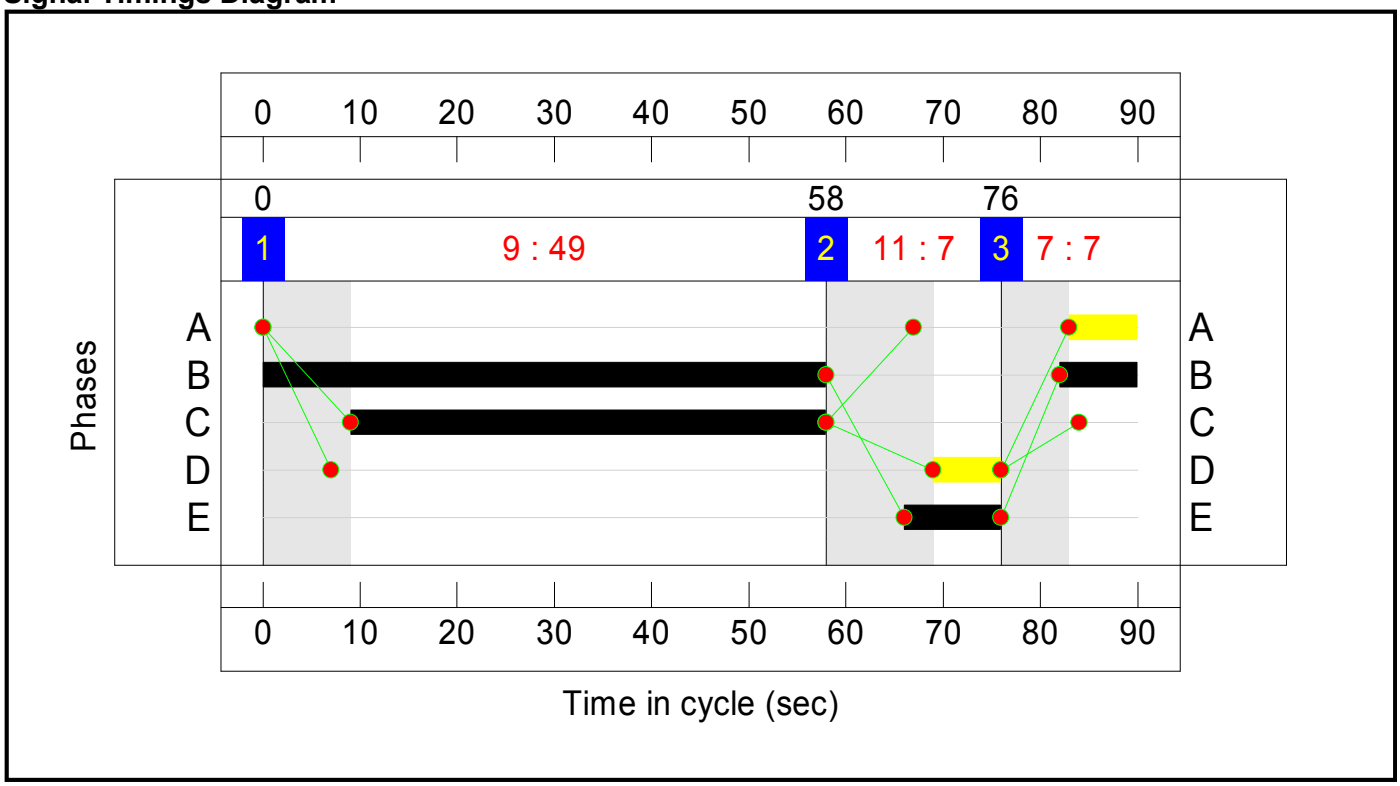
Stage Sequence Diagram



Stage Timings

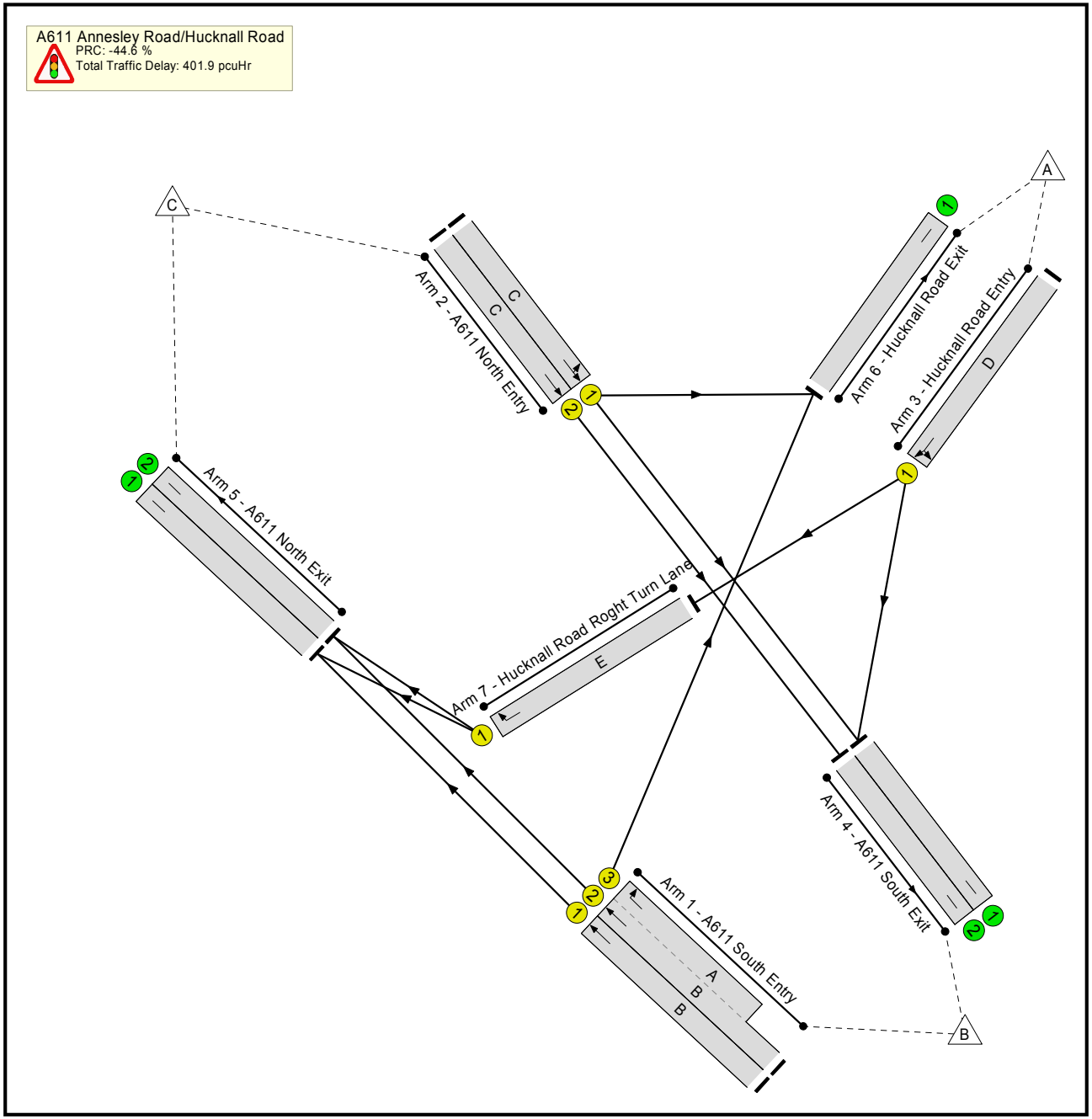
Stage	1	2	3
Duration	49	7	7
Change Point	0	58	76

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**130.2%**
A611 Annesley Road/Hucknall Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**130.2%**
1/1	A611 South Entry Ahead	U	N/A	N/A	B		1	66	-	1313	2000	1489	88.2%
1/2+1/3	A611 South Entry Ahead Right	U	N/A	N/A	B A		1	66:7	-	1409	2000:1800	1412+160	89.8 : 88.8%
2/1	A611 North Entry Ahead Left	U	N/A	N/A	C		1	49	-	1374	1900	1056	130.2%
2/2	A611 North Entry Ahead	U	N/A	N/A	C		1	49	-	1446	2000	1111	130.1%
3/1	Hucknall Road Entry Left Ahead	U	N/A	N/A	D		1	7	-	175	1900	169	103.6%
4/1	A611 South Exit	U	N/A	N/A	-		-	-	-	1532	2000	2000	60.5%
4/2	A611 South Exit	U	N/A	N/A	-		-	-	-	1446	2000	2000	55.6%
5/1	A611 North Exit	U	N/A	N/A	-		-	-	-	1314	2000	2000	65.7%
5/2	A611 North Exit	U	N/A	N/A	-		-	-	-	1269	2000	2000	63.4%
6/1	Hucknall Road Exit	U	N/A	N/A	-		-	-	-	156	1900	1900	8.0%
7/1	Hucknall Road Roght Turn Lane Right	U	N/A	N/A	E		1	10	-	3	1800	220	1.3%

Full Input Data And Results

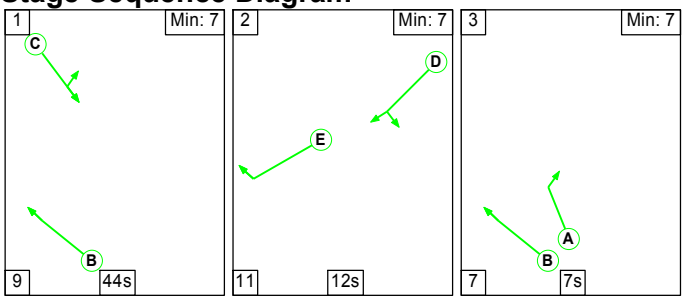
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**51.7**	**350.2**	**0.0**	**401.9**	**-**	**-**	**-**	**-**
A611 Annesley Road/Hucknall Road	**-**	**-**	**0**	**0**	**0**	**51.7**	**350.2**	**0.0**	**401.9**	**-**	**-**	**-**	**-**
1/1	1313	1313	-	-	-	3.1	3.6	-	6.7	18.4	24.1	3.6	27.7
1/2+1/3	1409	1409	-	-	-	4.4	4.1	-	8.6	21.9	23.1	4.1	27.2
2/1	1374	1056	-	-	-	20.4	161.4	-	181.8	476.2	42.3	161.4	203.7
2/2	1446	1111	-	-	-	21.5	169.6	-	191.1	475.6	44.5	169.6	214.1
3/1	175	169	-	-	-	2.2	8.3	-	10.5	215.8	4.5	8.3	12.8
4/1	1211	1211	-	-	-	0.0	0.8	-	0.8	2.3	0.0	0.8	0.8
4/2	1111	1111	-	-	-	0.0	0.6	-	0.6	2.0	0.0	0.6	0.6
5/1	1314	1314	-	-	-	0.0	1.0	-	1.0	2.6	0.0	1.0	1.0
5/2	1269	1269	-	-	-	0.0	0.9	-	0.9	2.5	0.0	0.9	0.9
6/1	153	153	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
7/1	3	3	-	-	-	0.0	0.0	-	0.1	63.4	0.1	0.0	0.1

C1 PRC for Signalled Lanes (%): -44.6 Total Delay for Signalled Lanes (pcuHr): 398.62 Cycle Time (s): 90
PRC Over All Lanes (%): -44.6 Total Delay Over All Lanes(pcuHr): 401.87

Full Input Data And Results

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Network Control Plan 1')

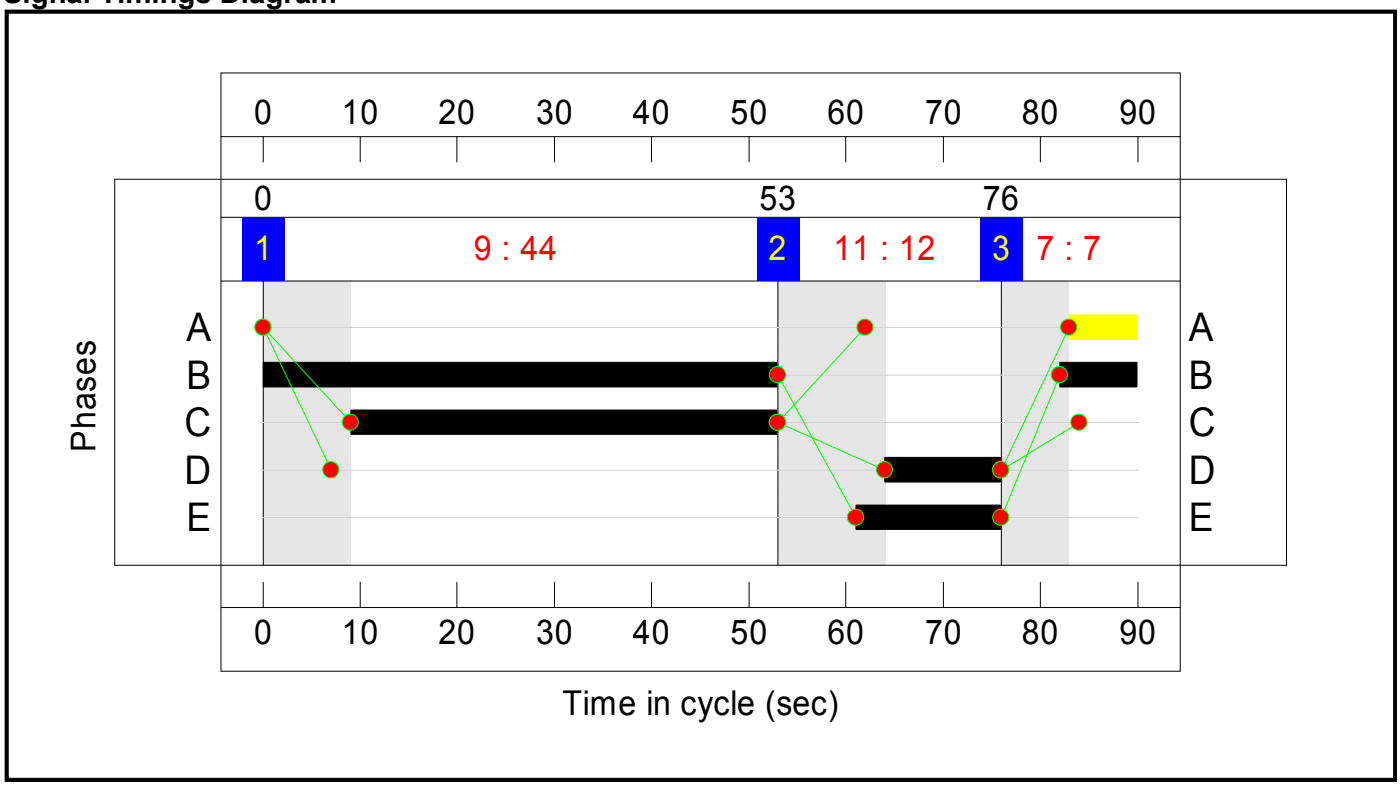
Stage Sequence Diagram



Stage Timings

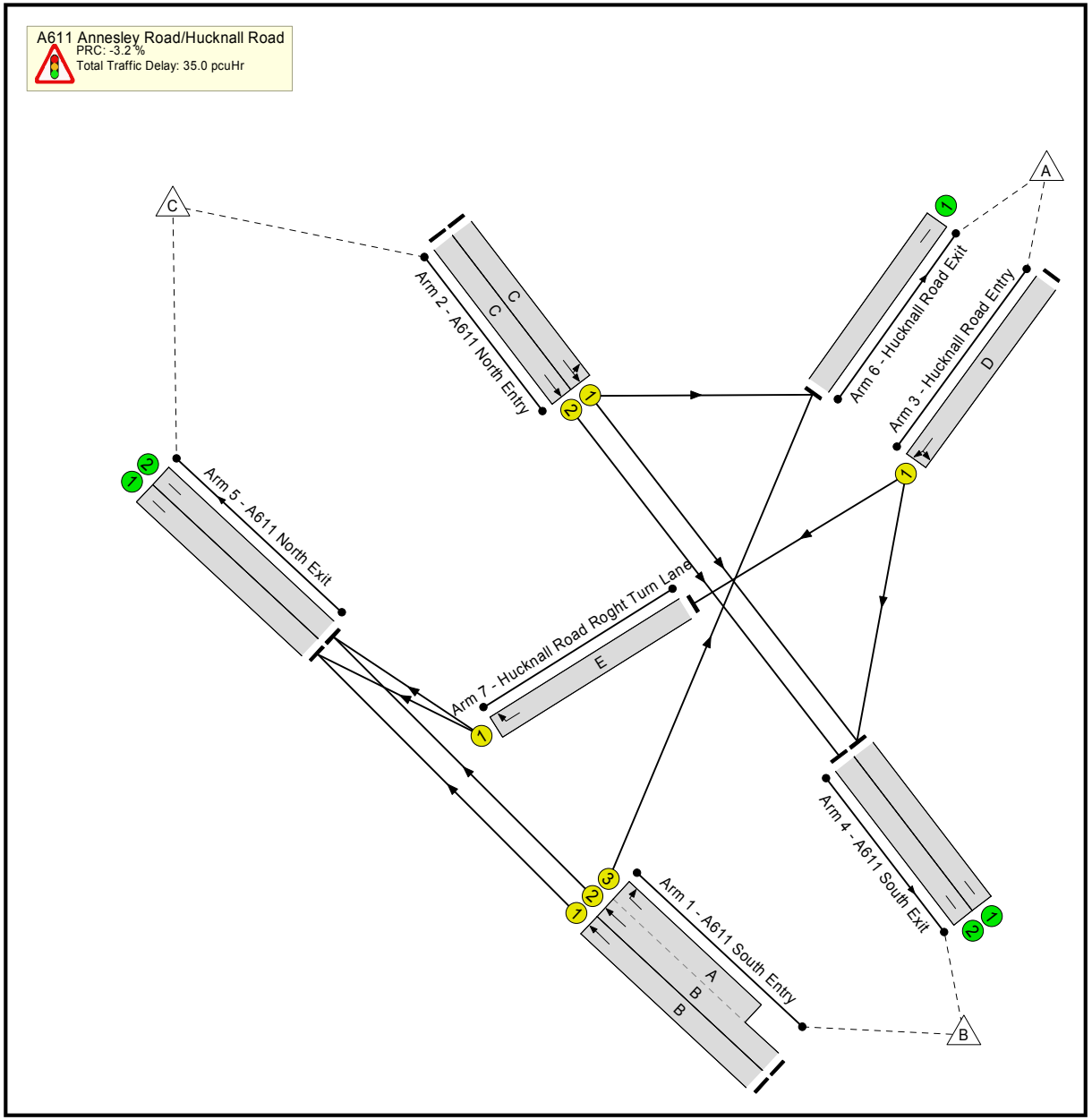
Stage	1	2	3
Duration	44	12	7
Change Point	0	53	76

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**92.9%**
A611 Annesley Road/Hucknall Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**92.9%**
1/1	A611 South Entry Ahead	U	N/A	N/A	B		1	61	-	833	2000	1378	60.5%
1/2+1/3	A611 South Entry Ahead Right	U	N/A	N/A	B A		1	61:7	-	934	2000:1800	1289+160	62.8 : 78.1%
2/1	A611 North Entry Ahead Left	U	N/A	N/A	C		1	44	-	878	1900	950	92.4%
2/2	A611 North Entry Ahead	U	N/A	N/A	C		1	44	-	929	2000	1000	92.9%
3/1	Hucknall Road Entry Left Ahead	U	N/A	N/A	D		1	12	-	238	1900	274	86.7%
4/1	A611 South Exit	U	N/A	N/A	-		-	-	-	1116	2000	2000	55.8%
4/2	A611 South Exit	U	N/A	N/A	-		-	-	-	929	2000	2000	46.5%
5/1	A611 North Exit	U	N/A	N/A	-		-	-	-	833	2000	2000	41.7%
5/2	A611 North Exit	U	N/A	N/A	-		-	-	-	809	2000	2000	40.5%
6/1	Hucknall Road Exit	U	N/A	N/A	-		-	-	-	125	1900	1900	6.6%
7/1	Hucknall Road Roght Turn Lane Right	U	N/A	N/A	E		1	15	-	0	1800	320	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	**-**	**-**	**0**	**0**	**0**	**17.8**	**17.2**	**0.0**	**35.0**	**-**	**-**	**-**	**-**
A611 Annesley Road/Hucknall Road	**-**	**-**	**0**	**0**	**0**	**17.8**	**17.2**	**0.0**	**35.0**	**-**	**-**	**-**	**-**
1/1	833	833	-	-	-	1.7	0.8	-	2.5	10.8	10.9	0.8	11.6
1/2+1/3	934	934	-	-	-	3.0	0.9	-	3.9	15.2	10.6	0.9	11.5
2/1	878	878	-	-	-	5.1	5.3	-	10.4	42.7	20.2	5.3	25.6
2/2	929	929	-	-	-	5.4	5.6	-	11.1	42.9	21.7	5.6	27.3
3/1	238	238	-	-	-	2.5	2.8	-	5.3	80.4	5.8	2.8	8.6
4/1	1116	1116	-	-	-	0.0	0.6	-	0.6	2.0	0.0	0.6	0.6
4/2	929	929	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
5/1	833	833	-	-	-	0.0	0.4	-	0.4	1.5	0.0	0.4	0.4
5/2	809	809	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
6/1	125	125	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
7/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -3.2 Total Delay for Signalled Lanes (pcuHr): 33.23 Cycle Time (s): 90
PRC Over All Lanes (%): -3.2 Total Delay Over All Lanes(pcuHr): 35.02

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]
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Filename: Junction 21 2016.arc8
Path: J:\MID\4300\MID4354 - Ashfield Junction Assessments\CALCULATIONS\DATA\Ashfield_Junction_Assessment_Information\Junction 21 - A611 and Annesley Road ARCADY
Report generation date: 01/09/2016 15:58:51

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS

	A1 - Reference Case Morning Peak			
Annesley Road	12.47	35.84	0.94	E
A611 South	1.89	7.22	0.66	A
A611 North	4.38	8.43	0.82	A

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

"D1 - Reference Case Morning Peak, AM " model duration: 07:45 - 09:15
"D2 - Reference Case Evening Peak, PM" model duration: 16:45 - 18:15
"D3 - 2032 Development Scenario Morning Peak, AM" model duration: 07:45 - 09:15
"D4 - 2032 Development Scenario Evening Peak, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.4.487 at 01/09/2016 15:58:47

File summary

Title	(untitled)
Location	
Site Number	
Date	22/06/2016
Version	
Status	(new file)

Identifier	
Client	
Jobnumber	
Enumerator	noram
Description	

Analysis Options

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

Units

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

(Default Analysis Set) - Reference Case Morning Peak, 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
(Default Analysis Set)	ARCADY			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
Reference Case Morning Peak, AM	Reference Case Morning Peak	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3			16.87	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
Annesley Road	1	Annesley Road	
A611 South	2	A611 South	
A611 North	3	A611 North	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
Annesley Road	0.00	99999.00
A611 South	0.00	99999.00
A611 North	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Annesley Road	5.22	8.00	22.60	22.20	70.00	51.00	
A611 South	5.50	7.50	22.50	53.80	70.00	48.00	
A611 North	7.20	8.30	18.80	46.00	70.00	45.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Annesley Road		(calculated)	(calculated)	0.542	2037.376
A611 South		(calculated)	(calculated)	0.556	2070.433
A611 North		(calculated)	(calculated)	0.610	2402.229

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)

Annesley Road	ONE HOUR	✓	1213.00	100.000
A611 South	ONE HOUR	✓	868.00	100.000
A611 North	ONE HOUR	✓	1735.00	100.000

Turning Proportions

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

		To		
		Annesley Road	**A611 South**	**A611 North**
From	**Annesley Road**	0.000	200.000	1013.000
	A611 South	99.000	0.000	769.000
	A611 North	693.000	1042.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To		
		Annesley Road	**A611 South**	**A611 North**
From	**Annesley Road**	0.00	0.16	0.84
	A611 South	0.11	0.00	0.89

	A611 North	0.40	0.60	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
		Annesley Road	**A611 South**	**A611 North**
From	**Annesley Road**	1.000	1.000	1.000
	A611 South	1.000	1.000	1.000
	A611 North	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
		Annesley Road	**A611 South**	**A611 North**
From	**Annesley Road**	0.0	0.0	0.0
	A611 South	0.0	0.0	0.0
	A611 North	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Annesley Road	0.94	35.84	12.47	E
A611 South	0.66	7.22	1.89	A
A611 North	0.82	8.43	4.38	A

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Annesley Road	913.21	908.06	781.51	0.00	1613.47	0.566	1.29	5.068	A
A611 South	653.48	650.87	758.34	0.00	1648.60	0.396	0.65	3.599	A
A611 North	1306.20	1301.27	74.23	0.00	2356.93	0.554	1.23	3.395	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Annesley Road	1090.46	1085.98	935.01	0.00	1530.21	0.713	2.41	8.023	A
A611 South	780.31	778.99	906.93	0.00	1565.95	0.498	0.98	4.567	A
A611 North	1559.73	1556.86	88.85	0.00	2348.02	0.664	1.95	4.534	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Annesley Road	1335.54	1303.19	1141.67	0.00	1418.11	0.942	10.49	26.142	D
A611 South	955.69	952.28	1088.32	0.00	1465.05	0.652	1.84	6.975	A
A611 North	1910.27	1900.95	108.61	0.00	2335.96	0.818	4.28	8.106	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Annesley Road	1335.54	1327.63	1147.02	0.00	1415.21	0.944	12.47	35.843	E
A611 South	955.69	955.47	1108.73	0.00	1453.69	0.657	1.89	7.219	A
A611 North	1910.27	1909.87	108.98	0.00	2335.73	0.818	4.38	8.431	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS

Annesley Road	1090.46	1130.01	942.43	0.00	1526.18	0.715	2.59	9.954	A
A611 South	780.31	783.75	943.69	0.00	1545.50	0.505	1.03	4.746	A
A611 North	1559.73	1569.21	89.39	0.00	2347.68	0.664	2.01	4.680	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Annesley Road	913.21	918.25	786.29	0.00	1610.88	0.567	1.33	5.234	A
A611 South	653.48	654.94	766.85	0.00	1643.87	0.398	0.66	3.647	A
A611 North	1306.20	1309.22	74.70	0.00	2356.65	0.554	1.25	3.446	A

(Default Analysis Set) - Reference Case Evening Peak, 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
(Default Analysis Set)	ARCADY			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
Reference Case Evening Peak, PM	Reference Case Evening Peak	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3			205.34	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
Annesley Road	1	Annesley Road	

A611 South	2	A611 South	
A611 North	3	A611 North	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
Annesley Road	0.00	99999.00
A611 South	0.00	99999.00
A611 North	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Annesley Road	5.22	8.00	22.60	22.20	70.00	51.00	
A611 South	5.50	7.50	22.50	53.80	70.00	48.00	
A611 North	7.20	8.30	18.80	46.00	70.00	45.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)

Annesley Road		(calculated)	(calculated)	0.542	2037.376
A611 South		(calculated)	(calculated)	0.556	2070.433
A611 North		(calculated)	(calculated)	0.610	2402.229

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Annesley Road	ONE HOUR	✓	1280.00	100.000
A611 South	ONE HOUR	✓	1491.00	100.000

A611 North	ONE HOUR	✓	2379.00	100.000

Turning Proportions

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

		To		
		Annesley Road	**A611 South**	**A611 North**
From	**Annesley Road**	0.000	144.000	1136.000
	A611 South	132.000	0.000	1359.000
	A611 North	1120.000	1259.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To		
		Annesley Road	**A611 South**	**A611 North**
From	**Annesley Road**	0.00	0.11	0.89
	A611 South	0.09	0.00	0.91
	A611 North	0.47	0.53	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
From		Annesley Road	A611 South	A611 North
	Annesley Road	1.000	1.000	1.000
	A611 South	1.000	1.000	1.000
	A611 North	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
From		Annesley Road	A611 South	A611 North
	Annesley Road	0.0	0.0	0.0
	A611 South	0.0	0.0	0.0
	A611 North	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Annesley Road	1.03	91.33	37.66	F
A611 South	1.17	287.53	126.43	F
A611 North	1.13	215.17	159.14	F

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Annesley Road	963.65	956.94	941.16	0.00	1526.87	0.631	1.68	6.246	A
A611 South	1122.50	1113.32	849.28	0.00	1598.01	0.702	2.30	7.297	A
A611 North	1791.04	1778.42	98.56	0.00	2342.09	0.765	3.16	6.254	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Annesley Road	1150.69	1142.00	1118.95	0.00	1430.43	0.804	3.85	12.126	B

A611 South	1340.38	1322.29	1013.52	0.00	1506.65	0.890	6.82	17.988	C
A611 North	2138.67	2114.37	117.06	0.00	2330.80	0.918	9.23	15.163	C

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Annesley Road	1409.31	1329.08	1224.47	0.00	1373.20	1.026	23.91	48.760	E
A611 South	1641.62	1403.94	1179.56	0.00	1414.29	1.161	66.24	103.449	F
A611 North	2619.33	2313.76	124.29	0.00	2326.39	1.126	85.62	81.083	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Annesley Road	1409.31	1354.29	1230.55	0.00	1369.90	1.029	37.66	91.333	F
A611 South	1641.62	1400.86	1201.93	0.00	1401.85	1.171	126.43	252.807	F
A611 North	2619.33	2325.24	124.02	0.00	2326.55	1.126	159.14	194.268	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Annesley Road	1150.69	1276.99	1222.77	0.00	1374.12	0.837	6.09	51.166	F
A611 South	1340.38	1428.71	1133.33	0.00	1440.01	0.931	104.35	287.526	F

A611 North	2138.67	2310.53	126.49	0.00	2325.05	0.920	116.18	215.171	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Annesley Road	963.65	978.80	1185.38	0.00	1394.40	0.691	2.30	8.959	A
A611 South	1122.50	1528.47	868.69	0.00	1587.22	0.707	2.86	115.986	F
A611 North	1791.04	2239.89	135.32	0.00	2319.66	0.772	3.97	87.306	F

(Default Analysis Set) - 2032 Development Scenario Morning Peak, 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
(Default Analysis Set)	ARCADY			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

2032 Development Scenario Morning Peak, AM	2032 Development Scenario Morning Peak	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3			25.58	D

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
Annesley Road	1	Annesley Road	
A611 South	2	A611 South	

A611 North	3	A611 North	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
Annesley Road	0.00	99999.00
A611 South	0.00	99999.00
A611 North	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Annesley Road	5.22	8.00	22.60	22.20	70.00	51.00	
A611 South	5.50	7.50	22.50	53.80	70.00	48.00	
A611 North	7.20	8.30	18.80	46.00	70.00	45.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Annesley Road		(calculated)	(calculated)	0.542	2037.376

A611 South		(calculated)	(calculated)	0.556	2070.433
A611 North		(calculated)	(calculated)	0.610	2402.229

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Annesley Road	ONE HOUR	✓	1252.00	100.000
A611 South	ONE HOUR	✓	905.00	100.000
A611 North	ONE HOUR	✓	1844.00	100.000

Turning Proportions

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

		To		
		Annesley Road	A611 South	A611 North
From	Annesley Road	0.000	211.000	1041.000
	A611 South	112.000	0.000	793.000
	A611 North	767.000	1077.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To		
		Annesley Road	A611 South	A611 North
From	Annesley Road	0.00	0.17	0.83
	A611 South	0.12	0.00	0.88
	A611 North	0.42	0.58	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

	To			
From		Annesley Road	A611 South	A611 North
	Annesley Road	1.000	1.000	1.000
	A611 South	1.000	1.000	1.000
	A611 North	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

	To			
From		Annesley Road	A611 South	A611 North
	Annesley Road	0.0	0.0	0.0
	A611 South	0.0	0.0	0.0
	A611 North	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Annesley Road	0.99	58.32	21.96	F

A611 South	0.69	8.03	2.18	A
A611 North	0.87	11.97	6.51	B

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Annesley Road	942.57	936.91	807.49	0.00	1599.38	0.589	1.41	5.390	A
A611 South	681.33	678.50	779.02	0.00	1637.10	0.416	0.71	3.745	A
A611 North	1388.26	1382.55	83.97	0.00	2350.99	0.591	1.43	3.697	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Annesley Road	1125.52	1120.00	965.98	0.00	1513.41	0.744	2.79	9.025	A
A611 South	813.58	812.05	931.25	0.00	1552.42	0.524	1.09	4.853	A
A611 North	1657.72	1653.91	100.50	0.00	2340.91	0.708	2.38	5.211	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Annesley Road	1378.48	1325.79	1176.78	0.00	1399.07	0.985	15.97	35.635	E
A611 South	996.42	992.35	1102.36	0.00	1457.24	0.684	2.11	7.677	A
A611 North	2030.28	2014.84	122.81	0.00	2327.29	0.872	6.24	11.012	B

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Annesley Road	1378.48	1354.50	1185.16	0.00	1394.52	0.989	21.96	58.322	F
A611 South	996.42	996.11	1126.23	0.00	1443.96	0.690	2.18	8.028	A
A611 North	2030.28	2029.19	123.28	0.00	2327.01	0.872	6.51	11.972	B

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Annesley Road	1125.52	1201.00	977.64	0.00	1507.09	0.747	3.09	14.591	B
A611 South	813.58	817.62	998.59	0.00	1514.95	0.537	1.17	5.191	A
A611 North	1657.72	1673.87	101.19	0.00	2340.49	0.708	2.48	5.526	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Annesley Road	942.57	949.08	813.20	0.00	1596.28	0.590	1.46	5.618	A
A611 South	681.33	683.14	789.13	0.00	1631.47	0.418	0.72	3.805	A
A611 North	1388.26	1392.34	84.54	0.00	2350.64	0.591	1.46	3.774	A

(Default Analysis Set) - 2032 Development Scenario Evening Peak, 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
(Default Analysis Set)	ARCADY			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
2032 Development Scenario Evening Peak, PM	2032 Development Scenario Evening Peak	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3			310.38	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
Annesley Road	1	Annesley Road	
A611 South	2	A611 South	
A611 North	3	A611 North	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)

Annesley Road	0.00	99999.00
A611 South	0.00	99999.00
A611 North	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Annesley Road	5.22	8.00	22.60	22.20	70.00	51.00	
A611 South	5.50	7.50	22.50	53.80	70.00	48.00	
A611 North	7.20	8.30	18.80	46.00	70.00	45.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Annesley Road		(calculated)	(calculated)	0.542	2037.376
A611 South		(calculated)	(calculated)	0.556	2070.433
A611 North		(calculated)	(calculated)	0.610	2402.229

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Annesley Road	ONE HOUR	✓	1378.00	100.000
A611 South	ONE HOUR	✓	1538.00	100.000
A611 North	ONE HOUR	✓	2478.00	100.000

Turning Proportions

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

	To

		Annesley Road	A611 South	A611 North
From	Annesley Road	0.000	155.000	1223.000
	A611 South	136.000	0.000	1402.000
	A611 North	1165.000	1313.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

	To			
From		Annesley Road	A611 South	A611 North
	Annesley Road	0.00	0.11	0.89
	A611 South	0.09	0.00	0.91
	A611 North	0.47	0.53	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

	To			
From		Annesley Road	A611 South	A611 North
	Annesley Road	1.000	1.000	1.000

	A611 South	1.000	1.000	1.000
	A611 North	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
		Annesley Road	**A611 South**	**A611 North**
From	**Annesley Road**	0.0	0.0	0.0
	A611 South	0.0	0.0	0.0
	A611 North	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Annesley Road	1.11	188.01	84.85	F
A611 South	1.21	405.56	159.39	F
A611 North	1.17	319.35	216.41	F

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Annesley Road	1037.43	1028.80	980.49	0.00	1505.54	0.689	2.16	7.424	A
A611 South	1157.89	1146.85	913.08	0.00	1562.52	0.741	2.76	8.451	A
A611 North	1865.57	1850.46	101.41	0.00	2340.35	0.797	3.78	7.143	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Annesley Road	1238.79	1222.42	1158.73	0.00	1408.86	0.879	6.25	17.920	C
A611 South	1382.63	1350.93	1084.92	0.00	1466.93	0.943	10.68	25.940	D
A611 North	2227.67	2186.86	119.46	0.00	2329.34	0.956	13.98	20.946	C

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Annesley Road	1517.21	1353.87	1229.59	0.00	1370.42	1.107	47.08	81.724	F

A611 South	1693.37	1396.49	1201.59	0.00	1402.04	1.208	84.90	132.345	F
A611 North	2728.33	2320.58	123.49	0.00	2326.88	1.173	115.92	107.302	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Annesley Road	1517.21	1366.15	1232.65	0.00	1368.76	1.108	84.85	181.724	F
A611 South	1693.37	1395.45	1212.48	0.00	1395.98	1.213	159.39	320.718	F
A611 North	2728.33	2326.36	123.39	0.00	2326.94	1.173	216.41	261.170	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Annesley Road	1238.79	1355.65	1227.37	0.00	1371.63	0.903	55.63	188.010	F
A611 South	1382.63	1392.43	1203.16	0.00	1401.16	0.987	156.94	405.555	F
A611 North	2227.67	2316.40	123.13	0.00	2327.10	0.957	194.23	319.351	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Annesley Road	1037.43	1246.24	1225.20	0.00	1372.80	0.756	3.43	58.691	F
A611 South	1157.89	1445.96	1106.06	0.00	1455.17	0.796	84.92	302.471	F

A611 North	1865.57	2312.31	127.86	0.00	2324.21	0.803	82.55	216.811	F

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]
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Filename: Junction 22 2016.arc8
Path: J:\MID\4300\MID4354 - Ashfield Junction Assessments\CALCULATIONS\DATA\Ashfield_Junction_Assessment_Information\Junction 22 - A611 and Wood Lane ARCADY
Report generation date: 01/09/2016 16:13:35

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - Reference Case Morning Peak			

Wood Lane East	1.64	17.14	0.63	C
A611 South	1.10	4.87	0.52	A
Wood Lane West	2.91	16.35	0.75	C
A611 North	8.31	17.97	0.90	C

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

"D1 - Reference Case Morning Peak, AM " model duration: 07:45 - 09:15
"D2 - Reference Case Evening Peak, PM" model duration: 16:45 - 18:15
"D3 - 2032 Development Scenario Morning Peak, AM" model duration: 07:45 - 09:15
"D4 - 2032 Development Scenario Evening Peak, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.4.487 at 01/09/2016 16:13:30

File summary

Title	(untitled)
Location	
Site Number	
Date	22/06/2016
Version	
Status	(new file)

Identifier	
Client	
Jobnumber	
Enumerator	noram
Description	

Analysis Options

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

Units

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

(Default Analysis Set) - Reference Case Morning Peak, 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
(Default Analysis Set)	ARCADY			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
Reference Case Morning Peak, AM	Reference Case Morning Peak	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	2,3,4,1			14.60	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
Wood Lane East	2	Wood Lane East	
A611 South	3	A611 South	
Wood Lane West	4	Wood Lane West	
A611 North	1	A611 North	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
Wood Lane East	0.00	99999.00
A611 South	0.00	99999.00
Wood Lane West	0.00	99999.00
A611 North	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Wood Lane East	3.60	7.90	6.70	31.60	50.00	50.00	

A611 South	5.80	7.60	26.30	28.70	50.00	42.00	
Wood Lane West	3.75	6.30	8.70	37.00	50.00	58.00	
A611 North	5.50	7.70	18.40	21.50	50.00	47.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Wood Lane East		(calculated)	(calculated)	0.544	1439.386
A611 South		(calculated)	(calculated)	0.685	2145.686
Wood Lane West		(calculated)	(calculated)	0.534	1420.299
A611 North		(calculated)	(calculated)	0.655	2029.215

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

Traffic Flows

Demand Set Data Options

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

		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Wood Lane East	ONE HOUR	✓	322.00	100.000
A611 South	ONE HOUR	✓	742.00	100.000
Wood Lane West	ONE HOUR	✓	600.00	100.000
A611 North	ONE HOUR	✓	1593.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	**Wood Lane East**	242.42	242.42		
07:45-08:00	**A611 South**	558.62	558.62		

07:45-08:00	**Wood Lane West**	451.71	451.71		
07:45-08:00	**A611 North**	1199.29	1199.29		
08:00-08:15	**Wood Lane East**	289.47	289.47		
08:00-08:15	**A611 South**	667.04	667.04		
08:00-08:15	**Wood Lane West**	539.39	539.39		
08:00-08:15	**A611 North**	1432.07	1432.07		
08:15-08:30	**Wood Lane East**	354.53	354.53		
08:15-08:30	**A611 South**	816.96	816.96		
08:15-08:30	**Wood Lane West**	660.61	660.61		
08:15-08:30	**A611 North**	1753.93	1753.93		
08:30-08:45	**Wood Lane East**	354.53	354.53		
08:30-08:45	**A611 South**	816.96	816.96		
08:30-08:45	**Wood Lane West**	660.61	660.61		

08:30-08:45	**A611 North**	1753.93	1753.93		
08:45-09:00	**Wood Lane East**	289.47	289.47		
08:45-09:00	**A611 South**	667.04	667.04		
08:45-09:00	**Wood Lane West**	539.39	539.39		
08:45-09:00	**A611 North**	1432.07	1432.07		
09:00-09:15	**Wood Lane East**	242.42	242.42		
09:00-09:15	**A611 South**	558.62	558.62		
09:00-09:15	**Wood Lane West**	451.71	451.71		
09:00-09:15	**A611 North**	1199.29	1199.29		

Turning Proportions

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

	To				
From		**Wood Lane East**	**A611 South**	**Wood Lane West**	**A611 North**

	Wood Lane East	0.000	52.000	80.000	190.000
	A611 South	17.000	0.000	12.000	713.000
	Wood Lane West	81.000	17.000	0.000	502.000
	A611 North	147.000	934.000	512.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To			
From		**Wood Lane East**	**A611 South**	**Wood Lane West**	**A611 North**
	Wood Lane East	0.00	0.16	0.25	0.59
	A611 South	0.02	0.00	0.02	0.96
	Wood Lane West	0.14	0.03	0.00	0.84
	A611 North	0.09	0.59	0.32	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To			
From		**Wood Lane East**	**A611 South**	**Wood Lane West**	**A611 North**

	Wood Lane East	1.000	1.000	1.000	1.000
	A611 South	1.000	1.000	1.000	1.000
	Wood Lane West	1.000	1.000	1.000	1.000
	A611 North	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To			
		Wood Lane East	**A611 South**	**Wood Lane West**	**A611 North**
From	**Wood Lane East**	0.0	0.0	0.0	0.0
	A611 South	0.0	0.0	0.0	0.0
	Wood Lane West	0.0	0.0	0.0	0.0
	A611 North	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Wood Lane East	0.63	17.14	1.64	C

A611 South	0.52	4.87	1.10	A
Wood Lane West	0.75	16.35	2.91	C
A611 North	0.90	17.97	8.31	C

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Wood Lane East	242.42	240.82	1095.78	0.00	842.78	0.288	0.40	5.965	A
A611 South	558.62	556.74	585.42	0.00	1744.55	0.320	0.47	3.021	A
Wood Lane West	451.71	448.74	689.84	0.00	1051.80	0.429	0.74	5.942	A
A611 North	1199.29	1193.17	86.05	0.00	1972.86	0.608	1.53	4.582	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Wood Lane East	289.47	288.46	1311.15	0.00	725.52	0.399	0.65	8.224	A

A611 South	667.04	666.26	700.73	0.00	1665.54	0.401	0.66	3.597	A
Wood Lane West	539.39	537.55	825.69	0.00	979.23	0.551	1.20	8.117	A
A611 North	1432.07	1427.66	103.07	0.00	1961.72	0.730	2.63	6.684	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Wood Lane East	354.53	350.93	1592.11	0.00	572.54	0.619	1.55	15.991	C
A611 South	816.96	815.28	851.43	0.00	1562.28	0.523	1.08	4.808	A
Wood Lane West	660.61	654.20	1009.16	0.00	881.23	0.750	2.81	15.436	C
A611 North	1753.93	1733.55	125.53	0.00	1947.00	0.901	7.73	15.562	C

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Wood Lane East	354.53	354.18	1608.65	0.00	563.54	0.629	1.64	17.138	C
A611 South	816.96	816.91	859.95	0.00	1556.44	0.525	1.10	4.867	A
Wood Lane West	660.61	660.19	1012.68	0.00	879.34	0.751	2.91	16.347	C
A611 North	1753.93	1751.58	126.55	0.00	1946.34	0.901	8.31	17.971	C

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Wood Lane East	289.47	293.26	1335.48	0.00	712.27	0.406	0.70	8.666	A
A611 South	667.04	668.72	713.29	0.00	1656.93	0.403	0.68	3.648	A
Wood Lane West	539.39	546.00	830.94	0.00	976.43	0.552	1.26	8.488	A
A611 North	1432.07	1454.20	104.50	0.00	1960.78	0.730	2.78	7.399	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Wood Lane East	242.42	243.55	1105.88	0.00	837.28	0.290	0.41	6.076	A
A611 South	558.62	559.43	591.24	0.00	1740.56	0.321	0.47	3.049	A
Wood Lane West	451.71	453.69	694.10	0.00	1049.53	0.430	0.76	6.063	A
A611 North	1199.29	1204.14	86.92	0.00	1972.29	0.608	1.57	4.717	A

(Default Analysis Set) - Reference Case Evening Peak, 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
(Default Analysis Set)	ARCADY			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
Reference Case Evening Peak, PM	Reference Case Evening Peak	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	2,3,4,1			5.48	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
Wood Lane East	2	Wood Lane East	
A611 South	3	A611 South	
Wood Lane West	4	Wood Lane West	
A611 North	1	A611 North	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
Wood Lane East	0.00	99999.00
A611 South	0.00	99999.00
Wood Lane West	0.00	99999.00
A611 North	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Wood Lane East	3.60	7.90	6.70	31.60	50.00	50.00	

A611 South	5.80	7.60	26.30	28.70	50.00	42.00	
Wood Lane West	3.75	6.30	8.70	37.00	50.00	58.00	
A611 North	5.50	7.70	18.40	21.50	50.00	47.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Wood Lane East		(calculated)	(calculated)	0.544	1439.386
A611 South		(calculated)	(calculated)	0.685	2145.686
Wood Lane West		(calculated)	(calculated)	0.534	1420.299
A611 North		(calculated)	(calculated)	0.655	2029.215

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

Traffic Flows

Demand Set Data Options

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

		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Wood Lane East	ONE HOUR	✓	184.00	100.000
A611 South	ONE HOUR	✓	684.00	100.000
Wood Lane West	ONE HOUR	✓	493.00	100.000
A611 North	ONE HOUR	✓	1134.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	**Wood Lane East**	138.52	138.52		
16:45-17:00	**A611 South**	514.95	514.95		

16:45-17:00	**Wood Lane West**	371.16	371.16		
16:45-17:00	**A611 North**	853.73	853.73		
17:00-17:15	**Wood Lane East**	165.41	165.41		
17:00-17:15	**A611 South**	614.90	614.90		
17:00-17:15	**Wood Lane West**	443.20	443.20		
17:00-17:15	**A611 North**	1019.44	1019.44		
17:15-17:30	**Wood Lane East**	202.59	202.59		
17:15-17:30	**A611 South**	753.10	753.10		
17:15-17:30	**Wood Lane West**	542.80	542.80		
17:15-17:30	**A611 North**	1248.56	1248.56		
17:30-17:45	**Wood Lane East**	202.59	202.59		
17:30-17:45	**A611 South**	753.10	753.10		
17:30-17:45	**Wood Lane West**	542.80	542.80		

17:30-17:45	**A611 North**	1248.56	1248.56		
17:45-18:00	**Wood Lane East**	165.41	165.41		
17:45-18:00	**A611 South**	614.90	614.90		
17:45-18:00	**Wood Lane West**	443.20	443.20		
17:45-18:00	**A611 North**	1019.44	1019.44		
18:00-18:15	**Wood Lane East**	138.52	138.52		
18:00-18:15	**A611 South**	514.95	514.95		
18:00-18:15	**Wood Lane West**	371.16	371.16		
18:00-18:15	**A611 North**	853.73	853.73		

Turning Proportions

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

	To				
From		**Wood Lane East**	**A611 South**	**Wood Lane West**	**A611 North**

	Wood Lane East	0.000	23.000	54.000	107.000
	A611 South	15.000	0.000	14.000	655.000
	Wood Lane West	63.000	11.000	0.000	419.000
	A611 North	104.000	561.000	469.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To			
From		**Wood Lane East**	**A611 South**	**Wood Lane West**	**A611 North**
	Wood Lane East	0.00	0.13	0.29	0.58
	A611 South	0.02	0.00	0.02	0.96
	Wood Lane West	0.13	0.02	0.00	0.85
	A611 North	0.09	0.49	0.41	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To			
From		**Wood Lane East**	**A611 South**	**Wood Lane West**	**A611 North**

	Wood Lane East	1.000	1.000	1.000	1.000
	A611 South	1.000	1.000	1.000	1.000
	Wood Lane West	1.000	1.000	1.000	1.000
	A611 North	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To			
		Wood Lane East	**A611 South**	**Wood Lane West**	**A611 North**
From	**Wood Lane East**	0.0	0.0	0.0	0.0
	A611 South	0.0	0.0	0.0	0.0
	Wood Lane West	0.0	0.0	0.0	0.0
	A611 North	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Wood Lane East	0.25	5.87	0.33	A

A611 South	0.45	3.92	0.82	A
Wood Lane West	0.56	8.56	1.28	A
A611 North	0.64	5.02	1.73	A

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Wood Lane East	138.52	137.90	780.95	0.00	1014.19	0.137	0.16	4.106	A
A611 South	514.95	513.38	472.51	0.00	1821.92	0.283	0.39	2.747	A
Wood Lane West	371.16	369.16	583.06	0.00	1108.84	0.335	0.50	4.854	A
A611 North	853.73	850.74	66.67	0.00	1985.55	0.430	0.75	3.165	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Wood Lane East	165.41	165.18	934.71	0.00	930.48	0.178	0.21	4.703	A

A611 South	614.90	614.33	565.65	0.00	1758.10	0.350	0.54	3.145	A
Wood Lane West	443.20	442.29	697.81	0.00	1047.54	0.423	0.73	5.939	A
A611 North	1019.44	1018.22	79.86	0.00	1976.91	0.516	1.06	3.750	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Wood Lane East	202.59	202.14	1143.71	0.00	816.68	0.248	0.33	5.854	A
A611 South	753.10	751.98	692.16	0.00	1671.41	0.451	0.81	3.910	A
Wood Lane West	542.80	540.66	854.14	0.00	964.03	0.563	1.26	8.463	A
A611 North	1248.56	1245.91	97.64	0.00	1965.27	0.635	1.72	4.987	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Wood Lane East	202.59	202.58	1146.11	0.00	815.37	0.248	0.33	5.874	A
A611 South	753.10	753.08	693.61	0.00	1670.41	0.451	0.82	3.924	A
Wood Lane West	542.80	542.75	855.47	0.00	963.32	0.563	1.28	8.557	A
A611 North	1248.56	1248.51	97.98	0.00	1965.04	0.635	1.73	5.024	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Wood Lane East	165.41	165.86	938.27	0.00	928.54	0.178	0.22	4.724	A
A611 South	614.90	616.01	567.83	0.00	1756.60	0.350	0.54	3.161	A
Wood Lane West	443.20	445.33	699.85	0.00	1046.46	0.424	0.74	6.009	A
A611 North	1019.44	1022.06	80.35	0.00	1976.59	0.516	1.07	3.783	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Wood Lane East	138.52	138.76	784.88	0.00	1012.05	0.137	0.16	4.124	A
A611 South	514.95	515.53	475.02	0.00	1820.20	0.283	0.40	2.762	A
Wood Lane West	371.16	372.10	585.67	0.00	1107.45	0.335	0.51	4.903	A
A611 North	853.73	854.99	67.16	0.00	1985.23	0.430	0.76	3.188	A

(Default Analysis Set) - 2032 Development Scenario Morning Peak, 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
(Default Analysis Set)	ARCADY			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
2032 Development Scenario Morning Peak, AM	2032 Development Scenario Morning Peak	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	2,3,4,1			17.91	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
Wood Lane East	2	Wood Lane East	
A611 South	3	A611 South	
Wood Lane West	4	Wood Lane West	
A611 North	1	A611 North	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
Wood Lane East	0.00	99999.00
A611 South	0.00	99999.00
Wood Lane West	0.00	99999.00
A611 North	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only

Wood Lane East	3.60	7.90	6.70	31.60	50.00	50.00	
A611 South	5.80	7.60	26.30	28.70	50.00	42.00	
Wood Lane West	3.75	6.30	8.70	37.00	50.00	58.00	
A611 North	5.50	7.70	18.40	21.50	50.00	47.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Wood Lane East		(calculated)	(calculated)	0.544	1439.386
A611 South		(calculated)	(calculated)	0.685	2145.686
Wood Lane West		(calculated)	(calculated)	0.534	1420.299
A611 North		(calculated)	(calculated)	0.655	2029.215

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

Traffic Flows

Demand Set Data Options

Default Vehicle	Vehicle Mix Varies Over	Vehicle Mix Varies Over	Vehicle Mix Varies Over	Vehicle Mix	PCU Factor for a HV	Default Turning	Estimate from entry/exit	Turning Proportions Vary	Turning Proportions Vary	Turning Proportions Vary

Mix	Time	Turn	Entry	Source	(PCU)	Proportions	counts	Over Time	Over Turn	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 (%)
Wood Lane East	ONE HOUR	✓	321.00	100.000
A611 South	ONE HOUR	✓	780.00	100.000
Wood Lane West	ONE HOUR	✓	602.00	100.000
A611 North	ONE HOUR	✓	1641.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	**Wood Lane East**	241.67	241.67		

07:45-08:00	**A611 South**	587.22	587.22		
07:45-08:00	**Wood Lane West**	453.22	453.22		
07:45-08:00	**A611 North**	1235.43	1235.43		
08:00-08:15	**Wood Lane East**	288.57	288.57		
08:00-08:15	**A611 South**	701.20	701.20		
08:00-08:15	**Wood Lane West**	541.19	541.19		
08:00-08:15	**A611 North**	1475.23	1475.23		
08:15-08:30	**Wood Lane East**	353.43	353.43		
08:15-08:30	**A611 South**	858.80	858.80		
08:15-08:30	**Wood Lane West**	662.81	662.81		
08:15-08:30	**A611 North**	1806.77	1806.77		
08:30-08:45	**Wood Lane East**	353.43	353.43		
08:30-08:45	**A611 South**	858.80	858.80		

08:30-08:45	**Wood Lane West**	662.81	662.81		
08:30-08:45	**A611 North**	1806.77	1806.77		
08:45-09:00	**Wood Lane East**	288.57	288.57		
08:45-09:00	**A611 South**	701.20	701.20		
08:45-09:00	**Wood Lane West**	541.19	541.19		
08:45-09:00	**A611 North**	1475.23	1475.23		
09:00-09:15	**Wood Lane East**	241.67	241.67		
09:00-09:15	**A611 South**	587.22	587.22		
09:00-09:15	**Wood Lane West**	453.22	453.22		
09:00-09:15	**A611 North**	1235.43	1235.43		

Turning Proportions

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

	To

		Wood Lane East	A611 South	Wood Lane West	A611 North
From	Wood Lane East	0.000	52.000	80.000	189.000
	A611 South	18.000	0.000	13.000	749.000
	Wood Lane West	81.000	17.000	0.000	504.000
	A611 North	148.000	970.000	523.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To			
		Wood Lane East	A611 South	Wood Lane West	A611 North
From	Wood Lane East	0.00	0.16	0.25	0.59
	A611 South	0.02	0.00	0.02	0.96
	Wood Lane West	0.13	0.03	0.00	0.84
	A611 North	0.09	0.59	0.32	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

	To

		Wood Lane East	A611 South	Wood Lane West	A611 North
From	Wood Lane East	1.000	1.000	1.000	1.000
	A611 South	1.000	1.000	1.000	1.000
	Wood Lane West	1.000	1.000	1.000	1.000
	A611 North	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

	To				
		Wood Lane East	A611 South	Wood Lane West	A611 North
From	Wood Lane East	0.0	0.0	0.0	0.0
	A611 South	0.0	0.0	0.0	0.0
	Wood Lane West	0.0	0.0	0.0	0.0
	A611 North	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS

Wood Lane East	0.66	19.50	1.85	C
A611 South	0.55	5.21	1.23	A
Wood Lane West	0.77	18.24	3.24	C
A611 North	0.93	23.52	11.09	C

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Wood Lane East	241.67	240.02	1130.71	0.00	823.76	0.293	0.41	6.150	A
A611 South	587.22	585.20	592.77	0.00	1739.51	0.338	0.51	3.113	A
Wood Lane West	453.22	450.15	716.76	0.00	1037.42	0.437	0.77	6.098	A
A611 North	1235.43	1228.82	86.78	0.00	1972.38	0.626	1.65	4.800	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS

Wood Lane East	288.57	287.47	1352.71	0.00	702.89	0.411	0.69	8.642	A
A611 South	701.20	700.33	709.43	0.00	1659.58	0.423	0.73	3.749	A
Wood Lane West	541.19	539.21	857.91	0.00	962.02	0.563	1.26	8.461	A
A611 North	1475.23	1470.06	103.94	0.00	1961.14	0.752	2.94	7.254	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Wood Lane East	353.43	349.29	1636.90	0.00	548.16	0.645	1.72	17.746	C
A611 South	858.80	856.84	859.63	0.00	1556.66	0.552	1.22	5.129	A
Wood Lane West	662.81	655.44	1048.21	0.00	860.36	0.770	3.10	16.986	C
A611 North	1806.77	1778.82	126.47	0.00	1946.39	0.928	9.93	18.945	C

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Wood Lane East	353.43	352.90	1658.29	0.00	536.51	0.659	1.85	19.505	C
A611 South	858.80	858.73	870.08	0.00	1549.50	0.554	1.23	5.211	A
Wood Lane West	662.81	662.26	1052.19	0.00	858.24	0.772	3.24	18.239	C
A611 North	1806.77	1802.12	127.63	0.00	1945.63	0.929	11.09	23.517	C

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Wood Lane East	288.57	293.02	1386.61	0.00	684.43	0.422	0.74	9.297	A
A611 South	701.20	703.15	725.85	0.00	1648.33	0.425	0.75	3.815	A
Wood Lane West	541.19	548.87	863.96	0.00	958.79	0.564	1.32	8.941	A
A611 North	1475.23	1507.02	105.58	0.00	1960.07	0.753	3.14	8.470	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Wood Lane East	241.67	242.94	1142.12	0.00	817.55	0.296	0.42	6.280	A
A611 South	587.22	588.15	599.16	0.00	1735.13	0.338	0.51	3.142	A
Wood Lane West	453.22	455.36	721.39	0.00	1034.95	0.438	0.79	6.235	A
A611 North	1235.43	1241.20	87.70	0.00	1971.78	0.627	1.70	4.967	A

(Default Analysis Set) - 2032 Development Scenario Evening Peak, 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
(Default Analysis Set)	ARCADY			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
2032 Development Scenario Evening Peak, PM	2032 Development Scenario Evening Peak	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	2,3,4,1			5.95	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
Wood Lane East	2	Wood Lane East	
A611 South	3	A611 South	
Wood Lane West	4	Wood Lane West	
A611 North	1	A611 North	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
Wood Lane East	0.00	99999.00
A611 South	0.00	99999.00
Wood Lane West	0.00	99999.00
A611 North	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only

Wood Lane East	3.60	7.90	6.70	31.60	50.00	50.00	
A611 South	5.80	7.60	26.30	28.70	50.00	42.00	
Wood Lane West	3.75	6.30	8.70	37.00	50.00	58.00	
A611 North	5.50	7.70	18.40	21.50	50.00	47.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Wood Lane East		(calculated)	(calculated)	0.544	1439.386
A611 South		(calculated)	(calculated)	0.685	2145.686
Wood Lane West		(calculated)	(calculated)	0.534	1420.299
A611 North		(calculated)	(calculated)	0.655	2029.215

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

Traffic Flows

Demand Set Data Options

Default Vehicle	Vehicle Mix Varies Over	Vehicle Mix Varies Over	Vehicle Mix Varies Over	Vehicle Mix	PCU Factor for a HV	Default Turning	Estimate from entry/exit	Turning Proportions Vary	Turning Proportions Vary	Turning Proportions Vary

Mix	Time	Turn	Entry	Source	(PCU)	Proportions	counts	Over Time	Over Turn	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 (%)
Wood Lane East	ONE HOUR	✓	187.00	100.000
A611 South	ONE HOUR	✓	721.00	100.000
Wood Lane West	ONE HOUR	✓	506.00	100.000
A611 North	ONE HOUR	✓	1194.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	**Wood Lane East**	140.78	140.78		

16:45-17:00	**A611 South**	542.81	542.81		
16:45-17:00	**Wood Lane West**	380.94	380.94		
16:45-17:00	**A611 North**	898.91	898.91		
17:00-17:15	**Wood Lane East**	168.11	168.11		
17:00-17:15	**A611 South**	648.16	648.16		
17:00-17:15	**Wood Lane West**	454.88	454.88		
17:00-17:15	**A611 North**	1073.38	1073.38		
17:15-17:30	**Wood Lane East**	205.89	205.89		
17:15-17:30	**A611 South**	793.84	793.84		
17:15-17:30	**Wood Lane West**	557.12	557.12		
17:15-17:30	**A611 North**	1314.62	1314.62		
17:30-17:45	**Wood Lane East**	205.89	205.89		
17:30-17:45	**A611 South**	793.84	793.84		

17:30-17:45	**Wood Lane West**	557.12	557.12		
17:30-17:45	**A611 North**	1314.62	1314.62		
17:45-18:00	**Wood Lane East**	168.11	168.11		
17:45-18:00	**A611 South**	648.16	648.16		
17:45-18:00	**Wood Lane West**	454.88	454.88		
17:45-18:00	**A611 North**	1073.38	1073.38		
18:00-18:15	**Wood Lane East**	140.78	140.78		
18:00-18:15	**A611 South**	542.81	542.81		
18:00-18:15	**Wood Lane West**	380.94	380.94		
18:00-18:15	**A611 North**	898.91	898.91		

Turning Proportions

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

	To

		Wood Lane East	A611 South	Wood Lane West	A611 North
From	Wood Lane East	0.000	25.000	54.000	108.000
	A611 South	15.000	0.000	14.000	692.000
	Wood Lane West	64.000	12.000	0.000	430.000
	A611 North	104.000	614.000	476.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To			
		Wood Lane East	A611 South	Wood Lane West	A611 North
From	Wood Lane East	0.00	0.13	0.29	0.58
	A611 South	0.02	0.00	0.02	0.96
	Wood Lane West	0.13	0.02	0.00	0.85
	A611 North	0.09	0.51	0.40	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

	To

		Wood Lane East	A611 South	Wood Lane West	A611 North
From	Wood Lane East	1.000	1.000	1.000	1.000
	A611 South	1.000	1.000	1.000	1.000
	Wood Lane West	1.000	1.000	1.000	1.000
	A611 North	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

	To				
		Wood Lane East	A611 South	Wood Lane West	A611 North
From	Wood Lane East	0.0	0.0	0.0	0.0
	A611 South	0.0	0.0	0.0	0.0
	Wood Lane West	0.0	0.0	0.0	0.0
	A611 North	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS

Wood Lane East	0.26	6.28	0.36	A
A611 South	0.48	4.13	0.91	A
Wood Lane West	0.59	9.37	1.43	A
A611 North	0.67	5.54	2.01	A

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Wood Lane East	140.78	140.12	826.59	0.00	989.34	0.142	0.17	4.239	A
A611 South	542.81	541.11	478.44	0.00	1817.86	0.299	0.42	2.816	A
Wood Lane West	380.94	378.82	611.53	0.00	1093.63	0.348	0.53	5.021	A
A611 North	898.91	895.62	68.16	0.00	1984.58	0.453	0.82	3.296	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS

Wood Lane East	168.11	167.86	989.35	0.00	900.72	0.187	0.23	4.911	A
A611 South	648.16	647.53	572.76	0.00	1753.22	0.370	0.58	3.254	A
Wood Lane West	454.88	453.87	731.90	0.00	1029.33	0.442	0.78	6.244	A
A611 North	1073.38	1071.96	81.64	0.00	1975.75	0.543	1.18	3.976	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Wood Lane East	205.89	205.38	1210.30	0.00	780.42	0.264	0.36	6.255	A
A611 South	793.84	792.56	700.72	0.00	1665.55	0.477	0.90	4.118	A
Wood Lane West	557.12	554.59	895.78	0.00	941.79	0.592	1.41	9.237	A
A611 North	1314.62	1311.38	99.79	0.00	1963.86	0.669	1.99	5.490	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Wood Lane East	205.89	205.88	1213.26	0.00	778.82	0.264	0.36	6.282	A
A611 South	793.84	793.82	702.41	0.00	1664.39	0.477	0.91	4.135	A
Wood Lane West	557.12	557.04	897.31	0.00	940.98	0.592	1.43	9.372	A
A611 North	1314.62	1314.55	100.18	0.00	1963.60	0.669	2.01	5.544	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Wood Lane East	168.11	168.61	993.68	0.00	898.37	0.187	0.23	4.936	A
A611 South	648.16	649.43	575.27	0.00	1751.51	0.370	0.59	3.269	A
Wood Lane West	454.88	457.40	734.20	0.00	1028.10	0.442	0.80	6.334	A
A611 North	1073.38	1076.60	82.21	0.00	1975.37	0.543	1.20	4.019	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Wood Lane East	140.78	141.04	831.01	0.00	986.93	0.143	0.17	4.258	A
A611 South	542.81	543.46	481.13	0.00	1816.01	0.299	0.43	2.829	A
Wood Lane West	380.94	382.00	614.36	0.00	1092.12	0.349	0.54	5.078	A
A611 North	898.91	900.38	68.68	0.00	1984.23	0.453	0.83	3.325	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]
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Filename: Junction 23 2016.arc8
Path: J:\MID\4300\MID4354 - Ashfield Junction Assessments\CALCULATIONS\DATA\Ashfield_Junction_Assessment_Information\Junction 23 - A611 and Watnall road ARCADY
Report generation date: 01/09/2016 16:33:00

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - Reference Case Morning Peak			

B6009 Watnall Road East	35.68	147.01	1.08	F
A611 South	4.93	12.86	0.84	B
B6009 Watnall Road West	14.57	43.59	0.96	E
A611 North	6.43	23.80	0.88	C

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

"D1 - Reference Case Morning Peak, AM " model duration: 07:45 - 09:15
"D2 - Reference Case Evening Peak, PM" model duration: 16:45 - 18:15
"D3 - 2032 Development Scenario Morning Peak, AM" model duration: 07:45 - 09:15
"D4 - 2032 Development Scenario Evening Peak, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.4.487 at 01/09/2016 16:32:52

File summary

Title	(untitled)
Location	
Site Number	
Date	22/06/2016
Version	
Status	(new file)

Identifier	
Client	
Jobnumber	
Enumerator	noram
Description	

Analysis Options

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

Units

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

(Default Analysis Set) - Reference Case Morning Peak, 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
(Default Analysis Set)	ARCADY			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
Reference Case Morning Peak, AM	Reference Case Morning Peak	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	2,3,4,1			47.60	E

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
B6009 Watnall Road East	2	B6009 Watnall Road East	
A611 South	3	A611 South	
B6009 Watnall Road West	4	B6009 Watnall Road West	
A611 North	1	A611 North	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
B6009 Watnall Road East	0.00	99999.00
A611 South	0.00	99999.00
B6009 Watnall Road West	0.00	99999.00
A611 North	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
B6009 Watnall Road East	4.17	8.10	7.60	48.00	50.00	30.00	

A611 South	5.95	8.25	8.90	48.00	50.00	30.00	
B6009 Watnall Road West	4.02	8.25	8.90	27.00	50.00	30.00	
A611 North	5.39	9.19	6.40	50.00	50.00	30.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
B6009 Watnall Road East		(calculated)	(calculated)	0.628	1760.900
A611 South		(calculated)	(calculated)	0.720	2246.609
B6009 Watnall Road West		(calculated)	(calculated)	0.621	1748.374
A611 North		(calculated)	(calculated)	0.691	2089.771

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

Traffic Flows

Demand Set Data Options

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

		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
B6009 Watnall Road East	ONE HOUR	✓	724.00	100.000
A611 South	ONE HOUR	✓	1297.00	100.000
B6009 Watnall Road West	ONE HOUR	✓	1157.00	100.000
A611 North	ONE HOUR	✓	936.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	**B6009 Watnall Road East**	545.07	545.07		
07:45-08:00	**A611 South**	976.45	976.45		

07:45-08:00	**B6009 Watnall Road West**	871.05	871.05		
07:45-08:00	**A611 North**	704.67	704.67		
08:00-08:15	**B6009 Watnall Road East**	650.86	650.86		
08:00-08:15	**A611 South**	1165.98	1165.98		
08:00-08:15	**B6009 Watnall Road West**	1040.12	1040.12		
08:00-08:15	**A611 North**	841.44	841.44		
08:15-08:30	**B6009 Watnall Road East**	797.14	797.14		
08:15-08:30	**A611 South**	1428.02	1428.02		
08:15-08:30	**B6009 Watnall Road West**	1273.88	1273.88		
08:15-08:30	**A611 North**	1030.56	1030.56		
08:30-08:45	**B6009 Watnall Road East**	797.14	797.14		
08:30-08:45	**A611 South**	1428.02	1428.02		
08:30-08:45	**B6009 Watnall Road West**	1273.88	1273.88		

08:30-08:45	**A611 North**	1030.56	1030.56		
08:45-09:00	**B6009 Watnall Road East**	650.86	650.86		
08:45-09:00	**A611 South**	1165.98	1165.98		
08:45-09:00	**B6009 Watnall Road West**	1040.12	1040.12		
08:45-09:00	**A611 North**	841.44	841.44		
09:00-09:15	**B6009 Watnall Road East**	545.07	545.07		
09:00-09:15	**A611 South**	976.45	976.45		
09:00-09:15	**B6009 Watnall Road West**	871.05	871.05		
09:00-09:15	**A611 North**	704.67	704.67		

Turning Proportions

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

	To				
From		**B6009 Watnall Road East**	**A611 South**	**B6009 Watnall Road West**	**A611 North**

	B6009 Watnall Road East	0.000	260.000	417.000	47.000
	A611 South	209.000	0.000	728.000	360.000
	B6009 Watnall Road West	376.000	630.000	0.000	151.000
	A611 North	83.000	596.000	257.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To			
From		**B6009 Watnall Road East**	**A611 South**	**B6009 Watnall Road West**	**A611 North**
	B6009 Watnall Road East	0.00	0.36	0.58	0.06
	A611 South	0.16	0.00	0.56	0.28
	B6009 Watnall Road West	0.32	0.54	0.00	0.13
	A611 North	0.09	0.64	0.27	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To			
From		**B6009 Watnall Road East**	**A611 South**	**B6009 Watnall Road West**	**A611 North**

	B6009 Watnall Road East	1.000	1.000	1.000	1.000
	A611 South	1.000	1.000	1.000	1.000
	B6009 Watnall Road West	1.000	1.000	1.000	1.000
	A611 North	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To			
		B6009 Watnall Road East	**A611 South**	**B6009 Watnall Road West**	**A611 North**
From	**B6009 Watnall Road East**	0.0	0.0	0.0	0.0
	A611 South	0.0	0.0	0.0	0.0
	B6009 Watnall Road West	0.0	0.0	0.0	0.0
	A611 North	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B6009 Watnall Road East	1.08	147.01	35.68	F

A611 South	0.84	12.86	4.93	B
B6009 Watnall Road West	0.96	43.59	14.57	E
A611 North	0.88	23.80	6.43	C

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6009 Watnall Road East	545.07	540.93	1109.96	0.00	1063.57	0.512	1.03	6.836	A
A611 South	976.45	972.06	539.14	0.00	1858.33	0.525	1.10	4.043	A
B6009 Watnall Road West	871.05	865.25	461.56	0.00	1461.59	0.596	1.45	5.981	A
A611 North	704.67	700.99	908.96	0.00	1461.92	0.482	0.92	4.709	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS

B6009 Watnall Road East	650.86	645.98	1327.70	0.00	926.77	0.702	2.25	12.606	B
A611 South	1165.98	1162.94	644.23	0.00	1782.65	0.654	1.86	5.780	A
B6009 Watnall Road West	1040.12	1034.97	552.12	0.00	1405.32	0.740	2.74	9.587	A
A611 North	841.44	838.50	1087.29	0.00	1338.75	0.629	1.66	7.153	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6009 Watnall Road East	797.14	726.70	1598.77	0.00	756.47	1.054	19.87	70.306	F
A611 South	1428.02	1416.71	744.36	0.00	1710.54	0.835	4.69	11.818	B
B6009 Watnall Road West	1273.88	1237.77	668.69	0.00	1332.90	0.956	11.77	30.294	D
A611 North	1030.56	1014.78	1304.52	0.00	1188.70	0.867	5.60	19.193	C

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6009 Watnall Road East	797.14	733.87	1623.69	0.00	740.82	1.076	35.68	147.008	F

A611 South	1428.02	1427.06	752.38	0.00	1704.76	0.838	4.93	12.860	B
B6009 Watnall Road West	1273.88	1262.67	673.70	0.00	1329.78	0.958	14.57	43.591	E
A611 North	1030.56	1027.24	1327.83	0.00	1172.60	0.879	6.43	23.802	C

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6009 Watnall Road East	650.86	781.88	1374.94	0.00	897.09	0.726	2.93	55.961	F
A611 South	1165.98	1177.01	737.16	0.00	1715.72	0.680	2.17	6.816	A
B6009 Watnall Road West	1040.12	1086.16	567.12	0.00	1396.01	0.745	3.06	13.218	B
A611 North	841.44	859.75	1134.07	0.00	1306.43	0.644	1.85	8.376	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6009 Watnall Road East	545.07	552.44	1123.15	0.00	1055.28	0.517	1.09	7.262	A
A611 South	976.45	980.62	548.52	0.00	1851.57	0.527	1.13	4.154	A

B6009 Watnall Road West	871.05	877.26	466.06	0.00	1458.79	0.597	1.51	6.256	A
A611 North	704.67	708.28	920.79	0.00	1453.76	0.485	0.95	4.851	A

(Default Analysis Set) - Reference Case Evening Peak, 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
(Default Analysis Set)	ARCADY			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
Reference Case Evening Peak, PM	Reference Case Evening Peak	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	2,3,4,1			180.76	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
B6009 Watnall Road East	2	B6009 Watnall Road East	
A611 South	3	A611 South	
B6009 Watnall Road West	4	B6009 Watnall Road West	
A611 North	1	A611 North	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
B6009 Watnall Road East	0.00	99999.00

A611 South	0.00	99999.00
B6009 Watnall Road West	0.00	99999.00
A611 North	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
B6009 Watnall Road East	4.17	8.10	7.60	48.00	50.00	30.00	
A611 South	5.95	8.25	8.90	48.00	50.00	30.00	
B6009 Watnall Road West	4.02	8.25	8.90	27.00	50.00	30.00	
A611 North	5.39	9.19	6.40	50.00	50.00	30.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
B6009 Watnall Road East		(calculated)	(calculated)	0.628	1760.900
A611 South		(calculated)	(calculated)	0.720	2246.609

B6009 Watnall Road West		(calculated)	(calculated)	0.621	1748.374
A611 North		(calculated)	(calculated)	0.691	2089.771

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
B6009 Watnall Road East	ONE HOUR	✓	582.00	100.000
A611 South	ONE HOUR	✓	1510.00	100.000
B6009 Watnall Road West	ONE HOUR	✓	1382.00	100.000

A611 North	ONE HOUR	✓	590.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	**B6009 Watnall Road East**	438.16	438.16		
16:45-17:00	**A611 South**	1136.81	1136.81		
16:45-17:00	**B6009 Watnall Road West**	1040.44	1040.44		
16:45-17:00	**A611 North**	444.18	444.18		
17:00-17:15	**B6009 Watnall Road East**	523.21	523.21		
17:00-17:15	**A611 South**	1357.46	1357.46		
17:00-17:15	**B6009 Watnall Road West**	1242.39	1242.39		
17:00-17:15	**A611 North**	530.40	530.40		
17:15-17:30	**B6009 Watnall Road**	640.79	640.79		

	East				
17:15-17:30	**A611 South**	1662.54	1662.54		
17:15-17:30	**B6009 Watnall Road West**	1521.61	1521.61		
17:15-17:30	**A611 North**	649.60	649.60		
17:30-17:45	**B6009 Watnall Road East**	640.79	640.79		
17:30-17:45	**A611 South**	1662.54	1662.54		
17:30-17:45	**B6009 Watnall Road West**	1521.61	1521.61		
17:30-17:45	**A611 North**	649.60	649.60		
17:45-18:00	**B6009 Watnall Road East**	523.21	523.21		
17:45-18:00	**A611 South**	1357.46	1357.46		
17:45-18:00	**B6009 Watnall Road West**	1242.39	1242.39		
17:45-18:00	**A611 North**	530.40	530.40		
18:00-18:15	**B6009 Watnall Road East**	438.16	438.16		

18:00-18:15	**A611 South**	1136.81	1136.81		
18:00-18:15	**B6009 Watnall Road West**	1040.44	1040.44		
18:00-18:15	**A611 North**	444.18	444.18		

Turning Proportions

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

		To			
		B6009 Watnall Road East	**A611 South**	**B6009 Watnall Road West**	**A611 North**
From	**B6009 Watnall Road East**	0.000	222.000	308.000	52.000
	A611 South	247.000	0.000	728.000	535.000
	B6009 Watnall Road West	438.000	722.000	0.000	222.000
	A611 North	55.000	390.000	145.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To			
		B6009 Watnall Road East	**A611 South**	**B6009 Watnall Road West**	**A611 North**
From	**B6009 Watnall Road East**	0.00	0.38	0.53	0.09

	A611 South	0.16	0.00	0.48	0.35
	B6009 Watnall Road West	0.32	0.52	0.00	0.16
	A611 North	0.09	0.66	0.25	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To			
		B6009 Watnall Road East	**A611 South**	**B6009 Watnall Road West**	**A611 North**
From	**B6009 Watnall Road East**	1.000	1.000	1.000	1.000
	A611 South	1.000	1.000	1.000	1.000
	B6009 Watnall Road West	1.000	1.000	1.000	1.000
	A611 North	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To			
		B6009 Watnall Road East	**A611 South**	**B6009 Watnall Road West**	**A611 North**
From	**B6009 Watnall Road East**	0.0	0.0	0.0	0.0

	A611 South	0.0	0.0	0.0	0.0
	B6009 Watnall Road West	0.0	0.0	0.0	0.0
	A611 North	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B6009 Watnall Road East	0.64	9.90	1.74	A
A611 South	0.90	18.76	8.22	C
B6009 Watnall Road West	1.29	504.18	183.82	F
A611 North	0.53	6.32	1.13	A

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6009 Watnall Road East	438.16	435.79	938.13	0.00	1171.52	0.374	0.59	4.877	A
A611 South	1136.81	1131.44	378.25	0.00	1974.20	0.576	1.34	4.244	A
B6009 Watnall Road West	1040.44	1028.06	624.89	0.00	1360.11	0.765	3.10	10.484	B
A611 North	444.18	442.27	1047.99	0.00	1365.89	0.325	0.48	3.890	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6009 Watnall Road East	523.21	521.76	1108.28	0.00	1064.62	0.491	0.95	6.614	A
A611 South	1357.46	1353.41	452.84	0.00	1920.49	0.707	2.36	6.303	A
B6009 Watnall Road West	1242.39	1202.60	747.52	0.00	1283.92	0.968	13.04	34.019	D
A611 North	530.40	529.35	1230.80	0.00	1239.62	0.428	0.74	5.061	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS

B6009 Watnall Road East	640.79	637.75	1205.04	0.00	1003.83	0.638	1.72	9.751	A
A611 South	1662.54	1641.57	553.75	0.00	1847.81	0.900	7.60	16.049	C
B6009 Watnall Road West	1521.61	1181.75	907.12	0.00	1184.75	1.284	98.01	178.498	F
A611 North	649.60	648.07	1260.44	0.00	1219.14	0.533	1.12	6.288	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6009 Watnall Road East	640.79	640.70	1204.63	0.00	1004.09	0.638	1.74	9.899	A
A611 South	1662.54	1660.06	555.95	0.00	1846.23	0.901	8.22	18.761	C
B6009 Watnall Road West	1521.61	1178.37	916.96	0.00	1178.64	1.291	183.82	426.040	F
A611 North	649.60	649.57	1260.63	0.00	1219.02	0.533	1.13	6.321	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6009 Watnall Road East	523.21	526.06	1144.64	0.00	1041.78	0.502	1.02	7.020	A

A611 South	1357.46	1380.41	456.08	0.00	1918.15	0.708	2.48	6.969	A
B6009 Watnall Road West	1242.39	1268.09	761.89	0.00	1274.99	0.974	177.39	504.182	F
A611 North	530.40	531.72	1290.19	0.00	1198.60	0.443	0.80	5.408	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6009 Watnall Road East	438.16	439.43	1108.31	0.00	1064.60	0.412	0.71	5.771	A
A611 South	1136.81	1141.22	381.16	0.00	1972.10	0.576	1.38	4.356	A
B6009 Watnall Road West	1040.44	1349.16	630.28	0.00	1356.76	0.767	100.21	371.641	F
A611 North	444.18	444.95	1319.11	0.00	1178.62	0.377	0.61	4.911	A

(Default Analysis Set) - 2032 Development Scenario Morning Peak, 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
(Default Analysis Set)	ARCADY			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
2032 Development Scenario Morning Peak, AM	2032 Development Scenario Morning Peak	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	2,3,4,1			98.65	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
B6009 Watnall Road East	2	B6009 Watnall Road East	
A611 South	3	A611 South	
B6009 Watnall Road West	4	B6009 Watnall Road West	
A611 North	1	A611 North	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
B6009 Watnall Road East	0.00	99999.00
A611 South	0.00	99999.00
B6009 Watnall Road West	0.00	99999.00
A611 North	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only

B6009 Watnall Road East	4.17	8.10	7.60	48.00	50.00	30.00	
A611 South	5.95	8.25	8.90	48.00	50.00	30.00	
B6009 Watnall Road West	4.02	8.25	8.90	27.00	50.00	30.00	
A611 North	5.39	9.19	6.40	50.00	50.00	30.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
B6009 Watnall Road East		(calculated)	(calculated)	0.628	1760.900
A611 South		(calculated)	(calculated)	0.720	2246.609
B6009 Watnall Road West		(calculated)	(calculated)	0.621	1748.374
A611 North		(calculated)	(calculated)	0.691	2089.771

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

Traffic Flows

Demand Set Data Options

Default Vehicle	Vehicle Mix Varies Over	Vehicle Mix Varies Over	Vehicle Mix Varies Over	Vehicle Mix	PCU Factor for a HV	Default Turning	Estimate from entry/exit	Turning Proportions Vary	Turning Proportions Vary	Turning Proportions Vary

Mix	Time	Turn	Entry	Source	(PCU)	Proportions	counts	Over Time	Over Turn	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 (%)
B6009 Watnall Road East	ONE HOUR	✓	756.00	100.000
A611 South	ONE HOUR	✓	1466.00	100.000
B6009 Watnall Road West	ONE HOUR	✓	1210.00	100.000
A611 North	ONE HOUR	✓	990.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	**B6009 Watnall Road East**	569.16	569.16		

07:45-08:00	**A611 South**	1103.68	1103.68		
07:45-08:00	**B6009 Watnall Road West**	910.95	910.95		
07:45-08:00	**A611 North**	745.32	745.32		
08:00-08:15	**B6009 Watnall Road East**	679.63	679.63		
08:00-08:15	**A611 South**	1317.90	1317.90		
08:00-08:15	**B6009 Watnall Road West**	1087.77	1087.77		
08:00-08:15	**A611 North**	889.99	889.99		
08:15-08:30	**B6009 Watnall Road East**	832.37	832.37		
08:15-08:30	**A611 South**	1614.10	1614.10		
08:15-08:30	**B6009 Watnall Road West**	1332.23	1332.23		
08:15-08:30	**A611 North**	1090.01	1090.01		
08:30-08:45	**B6009 Watnall Road East**	832.37	832.37		
08:30-08:45	**A611 South**	1614.10	1614.10		

08:30-08:45	**B6009 Watnall Road West**	1332.23	1332.23		
08:30-08:45	**A611 North**	1090.01	1090.01		
08:45-09:00	**B6009 Watnall Road East**	679.63	679.63		
08:45-09:00	**A611 South**	1317.90	1317.90		
08:45-09:00	**B6009 Watnall Road West**	1087.77	1087.77		
08:45-09:00	**A611 North**	889.99	889.99		
09:00-09:15	**B6009 Watnall Road East**	569.16	569.16		
09:00-09:15	**A611 South**	1103.68	1103.68		
09:00-09:15	**B6009 Watnall Road West**	910.95	910.95		
09:00-09:15	**A611 North**	745.32	745.32		

Turning Proportions

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

	To

		B6009 Watnall Road East	A611 South	B6009 Watnall Road West	A611 North
From	B6009 Watnall Road East	0.000	310.000	399.000	47.000
	A611 South	269.000	0.000	791.000	406.000
	B6009 Watnall Road West	388.000	685.000	0.000	137.000
	A611 North	88.000	670.000	232.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

	To				
From		B6009 Watnall Road East	A611 South	B6009 Watnall Road West	A611 North
	B6009 Watnall Road East	0.00	0.41	0.53	0.06
	A611 South	0.18	0.00	0.54	0.28
	B6009 Watnall Road West	0.32	0.57	0.00	0.11
	A611 North	0.09	0.68	0.23	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

	To

		B6009 Watnall Road East	A611 South	B6009 Watnall Road West	A611 North
From	B6009 Watnall Road East	1.000	1.000	1.000	1.000
	A611 South	1.000	1.000	1.000	1.000
	B6009 Watnall Road West	1.000	1.000	1.000	1.000
	A611 North	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

	To				
		B6009 Watnall Road East	A611 South	B6009 Watnall Road West	A611 North
From	B6009 Watnall Road East	0.0	0.0	0.0	0.0
	A611 South	0.0	0.0	0.0	0.0
	B6009 Watnall Road West	0.0	0.0	0.0	0.0
	A611 North	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS

B6009 Watnall Road East	1.19	269.47	67.69	F
A611 South	0.91	21.88	9.25	C
B6009 Watnall Road West	1.06	120.08	48.57	F
A611 North	0.97	55.69	16.29	F

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6009 Watnall Road East	569.16	564.16	1186.64	0.00	1015.39	0.561	1.25	7.893	A
A611 South	1103.68	1098.08	506.43	0.00	1881.89	0.586	1.40	4.562	A
B6009 Watnall Road West	910.95	903.84	540.67	0.00	1412.44	0.645	1.78	6.984	A
A611 North	745.32	740.81	1003.00	0.00	1396.97	0.534	1.13	5.450	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6009 Watnall Road East	679.63	671.52	1417.54	0.00	870.33	0.781	3.28	17.439	C
A611 South	1317.90	1313.13	603.62	0.00	1811.90	0.727	2.59	7.150	A
B6009 Watnall Road West	1087.77	1079.23	646.36	0.00	1346.77	0.808	3.91	13.051	B
A611 North	889.99	885.27	1197.98	0.00	1262.29	0.705	2.31	9.431	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6009 Watnall Road East	832.37	706.74	1656.83	0.00	719.99	1.156	34.69	112.169	F
A611 South	1614.10	1590.73	663.47	0.00	1768.79	0.913	8.44	18.224	C
B6009 Watnall Road West	1332.23	1233.57	776.37	0.00	1265.99	1.052	28.58	59.166	F
A611 North	1090.01	1052.00	1385.79	0.00	1132.56	0.962	11.81	34.762	D

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS

B6009 Watnall Road East	832.37	700.36	1685.71	0.00	701.85	1.186	67.69	269.468	F
A611 South	1614.10	1610.82	664.41	0.00	1768.11	0.913	9.25	21.883	C
B6009 Watnall Road West	1332.23	1252.25	785.22	0.00	1260.49	1.057	48.57	120.082	F
A611 North	1090.01	1072.09	1406.04	0.00	1118.58	0.974	16.29	55.687	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6009 Watnall Road East	679.63	762.99	1570.46	0.00	774.26	0.878	46.85	265.171	F
A611 South	1317.90	1342.69	670.47	0.00	1763.75	0.747	3.06	9.020	A
B6009 Watnall Road West	1087.77	1260.79	665.66	0.00	1334.78	0.815	5.32	68.219	F
A611 North	889.99	940.29	1364.41	0.00	1147.33	0.776	3.72	20.898	C

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6009 Watnall Road East	569.16	751.07	1211.75	0.00	999.61	0.569	1.37	30.932	D

A611 South	1103.68	1109.49	620.13	0.00	1800.00	0.613	1.61	5.257	A
B6009 Watnall Road West	910.95	924.63	557.54	0.00	1401.96	0.650	1.90	7.749	A
A611 North	745.32	755.46	1023.53	0.00	1382.79	0.539	1.19	5.828	A

(Default Analysis Set) - 2032 Development Scenario Evening Peak, 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
(Default Analysis Set)	ARCADY			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
2032 Development Scenario Evening Peak, PM	2032 Development Scenario Evening Peak	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	2,3,4,1			266.96	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
B6009 Watnall Road East	2	B6009 Watnall Road East	
A611 South	3	A611 South	
B6009 Watnall Road West	4	B6009 Watnall Road West	
A611 North	1	A611 North	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
B6009 Watnall Road East	0.00	99999.00
A611 South	0.00	99999.00
B6009 Watnall Road West	0.00	99999.00
A611 North	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
B6009 Watnall Road East	4.17	8.10	7.60	48.00	50.00	30.00	
A611 South	5.95	8.25	8.90	48.00	50.00	30.00	
B6009 Watnall Road West	4.02	8.25	8.90	27.00	50.00	30.00	
A611 North	5.39	9.19	6.40	50.00	50.00	30.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)

B6009 Watnall Road East		(calculated)	(calculated)	0.628	1760.900
A611 South		(calculated)	(calculated)	0.720	2246.609
B6009 Watnall Road West		(calculated)	(calculated)	0.621	1748.374
A611 North		(calculated)	(calculated)	0.691	2089.771

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
B6009 Watnall Road East	ONE HOUR	✓	638.00	100.000

A611 South	ONE HOUR	✓	1689.00	100.000
B6009 Watnall Road West	ONE HOUR	✓	1408.00	100.000
A611 North	ONE HOUR	✓	642.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	**B6009 Watnall Road East**	480.32	480.32		
16:45-17:00	**A611 South**	1271.57	1271.57		
16:45-17:00	**B6009 Watnall Road West**	1060.02	1060.02		
16:45-17:00	**A611 North**	483.33	483.33		
17:00-17:15	**B6009 Watnall Road East**	573.55	573.55		
17:00-17:15	**A611 South**	1518.38	1518.38		
17:00-17:15	**B6009 Watnall Road West**	1265.76	1265.76		

17:00-17:15	**A611 North**	577.14	577.14		
17:15-17:30	**B6009 Watnall Road East**	702.45	702.45		
17:15-17:30	**A611 South**	1859.62	1859.62		
17:15-17:30	**B6009 Watnall Road West**	1550.24	1550.24		
17:15-17:30	**A611 North**	706.86	706.86		
17:30-17:45	**B6009 Watnall Road East**	702.45	702.45		
17:30-17:45	**A611 South**	1859.62	1859.62		
17:30-17:45	**B6009 Watnall Road West**	1550.24	1550.24		
17:30-17:45	**A611 North**	706.86	706.86		
17:45-18:00	**B6009 Watnall Road East**	573.55	573.55		
17:45-18:00	**A611 South**	1518.38	1518.38		
17:45-18:00	**B6009 Watnall Road West**	1265.76	1265.76		
17:45-18:00	**A611 North**	577.14	577.14		

18:00-18:15	**B6009 Watnall Road East**	480.32	480.32		
18:00-18:15	**A611 South**	1271.57	1271.57		
18:00-18:15	**B6009 Watnall Road West**	1060.02	1060.02		
18:00-18:15	**A611 North**	483.33	483.33		

Turning Proportions

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

		To			
		B6009 Watnall Road East	**A611 South**	**B6009 Watnall Road West**	**A611 North**
From	**B6009 Watnall Road East**	0.000	281.000	304.000	53.000
	A611 South	303.000	0.000	787.000	599.000
	B6009 Watnall Road West	424.000	788.000	0.000	196.000
	A611 North	57.000	453.000	132.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

	To

		B6009 Watnall Road East	A611 South	B6009 Watnall Road West	A611 North
From	B6009 Watnall Road East	0.00	0.44	0.48	0.08
	A611 South	0.18	0.00	0.47	0.35
	B6009 Watnall Road West	0.30	0.56	0.00	0.14
	A611 North	0.09	0.71	0.21	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To			
		B6009 Watnall Road East	A611 South	B6009 Watnall Road West	A611 North
From	B6009 Watnall Road East	1.000	1.000	1.000	1.000
	A611 South	1.000	1.000	1.000	1.000
	B6009 Watnall Road West	1.000	1.000	1.000	1.000
	A611 North	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

	To

		B6009 Watnall Road East	A611 South	B6009 Watnall Road West	A611 North
From	B6009 Watnall Road East	0.0	0.0	0.0	0.0
	A611 South	0.0	0.0	0.0	0.0
	B6009 Watnall Road West	0.0	0.0	0.0	0.0
	A611 North	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B6009 Watnall Road East	0.73	13.57	2.59	B
A611 South	1.00	58.12	30.23	F
B6009 Watnall Road West	1.40	750.75	265.58	F
A611 North	0.59	7.22	1.41	A

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6009 Watnall Road East	480.32	477.34	1022.57	0.00	1118.47	0.429	0.74	5.590	A
A611 South	1271.57	1264.53	366.00	0.00	1983.02	0.641	1.76	4.964	A
B6009 Watnall Road West	1060.02	1043.97	714.97	0.00	1304.14	0.813	4.01	13.129	B
A611 North	483.33	481.02	1125.49	0.00	1312.36	0.368	0.58	4.318	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6009 Watnall Road East	573.55	571.44	1185.92	0.00	1015.84	0.565	1.27	8.062	A
A611 South	1518.38	1511.30	438.15	0.00	1931.07	0.786	3.53	8.434	A
B6009 Watnall Road West	1265.76	1181.52	854.57	0.00	1217.40	1.040	25.07	56.626	F
A611 North	577.14	575.80	1288.17	0.00	1199.99	0.481	0.92	5.754	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6009 Watnall Road East	702.45	697.34	1267.93	0.00	964.32	0.728	2.55	13.233	B
A611 South	1859.62	1788.79	535.14	0.00	1861.21	0.999	21.24	33.987	D
B6009 Watnall Road West	1550.24	1117.80	1013.22	0.00	1118.83	1.386	133.18	263.729	F
A611 North	706.86	704.93	1283.10	0.00	1203.50	0.587	1.40	7.198	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6009 Watnall Road East	702.45	702.27	1263.55	0.00	967.08	0.726	2.59	13.566	B
A611 South	1859.62	1823.67	538.29	0.00	1858.94	1.000	30.23	58.120	F
B6009 Watnall Road West	1550.24	1106.89	1032.26	0.00	1107.00	1.400	244.02	603.305	F
A611 North	706.86	706.82	1279.96	0.00	1205.66	0.586	1.41	7.216	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS

B6009 Watnall Road East	573.55	578.62	1187.67	0.00	1014.75	0.565	1.33	8.348	A
A611 South	1518.38	1623.61	442.80	0.00	1927.71	0.788	3.92	15.835	C
B6009 Watnall Road West	1265.76	1179.53	915.14	0.00	1179.77	1.073	265.58	750.748	F
A611 North	577.14	578.94	1306.60	0.00	1187.26	0.486	0.96	5.937	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6009 Watnall Road East	480.32	482.07	1165.43	0.00	1028.72	0.467	0.89	6.606	A
A611 South	1271.57	1279.96	369.32	0.00	1980.63	0.642	1.82	5.197	A
B6009 Watnall Road West	1060.02	1293.91	723.60	0.00	1298.78	0.816	207.11	658.080	F
A611 North	483.33	484.28	1343.41	0.00	1161.84	0.416	0.72	5.320	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]
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Filename: Junction 24 2016.arc8
Path: J:\MID\4300\MID4354 - Ashfield Junction Assessments\CALCULATIONS\DATA\Ashfield_Junction_Assessment_Information\Junction 24 - A611 and Nottingham Road ARCADY
Report generation date: 01/09/2016 16:56:17

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS

	A1 - Reference Case Morning Peak			
Nottingham Road	2.63	14.31	0.73	B
A611 South	17.93	32.92	0.96	D
A611 North	43.07	81.78	1.03	F

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

"D1 - Reference Case Morning Peak, AM " model duration: 07:45 - 09:15
"D2 - 2032 Development Scenario Morning Peak, AM" model duration: 07:45 - 09:15
"D3 - Reference Case Evening Peak, PM" model duration: 16:45 - 18:15
"D4 - 2032 Development Scenario Evening Peak, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.4.487 at 01/09/2016 16:56:13

File summary

Title	(untitled)
Location	
Site Number	
Date	23/06/2016
Version	
Status	(new file)

Identifier	
Client	
Jobnumber	
Enumerator	noram
Description	

Analysis Options

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

Units

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

(Default Analysis Set) - Reference Case Morning Peak, 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
(Default Analysis Set)	ARCADY			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
Reference Case Morning Peak, AM	Reference Case Morning Peak	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	A611/Nottingham Road Roundabout	Roundabout	1,2,3			49.26	E

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
Nottingham Road	1	Nottingham Road	
A611 South	2	A611 South	
A611 North	3	A611 North	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
Nottingham Road	0.00	99999.00
A611 South	0.00	99999.00
A611 North	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Nottingham Road	4.50	7.00	30.00	17.00	50.00	30.00	
A611 South	5.00	9.00	17.00	30.00	50.00	30.00	
A611 North	4.50	8.00	29.00	65.00	50.00	30.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Nottingham Road		(calculated)	(calculated)	0.652	1944.600
A611 South		(calculated)	(calculated)	0.716	2242.374
A611 North		(calculated)	(calculated)	0.713	2200.596

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)

Nottingham Road	ONE HOUR	✓	619.00	100.000
A611 South	ONE HOUR	✓	1884.00	100.000
A611 North	ONE HOUR	✓	1611.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	**Nottingham Road**	466.02	466.02		
07:45-08:00	**A611 South**	1418.37	1418.37		
07:45-08:00	**A611 North**	1212.85	1212.85		
08:00-08:15	**Nottingham Road**	556.47	556.47		
08:00-08:15	**A611 South**	1693.68	1693.68		
08:00-08:15	**A611 North**	1448.26	1448.26		
08:15-08:30	**Nottingham Road**	681.53	681.53		

08:15-08:30	**A611 South**	2074.32	2074.32		
08:15-08:30	**A611 North**	1773.74	1773.74		
08:30-08:45	**Nottingham Road**	681.53	681.53		
08:30-08:45	**A611 South**	2074.32	2074.32		
08:30-08:45	**A611 North**	1773.74	1773.74		
08:45-09:00	**Nottingham Road**	556.47	556.47		
08:45-09:00	**A611 South**	1693.68	1693.68		
08:45-09:00	**A611 North**	1448.26	1448.26		
09:00-09:15	**Nottingham Road**	466.02	466.02		
09:00-09:15	**A611 South**	1418.37	1418.37		
09:00-09:15	**A611 North**	1212.85	1212.85		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - A611/ Nottingham Road Roundabout (for whole period)

	To

		Nottingham Road	A611 South	A611 North
From	Nottingham Road	0.000	505.000	114.000
	A611 South	609.000	0.000	1275.000
	A611 North	146.000	1465.000	0.000

Turning Proportions (PCU) - A611/ Nottingham Road Roundabout (for whole period)

	To			
From		Nottingham Road	A611 South	A611 North
	Nottingham Road	0.00	0.82	0.18
	A611 South	0.32	0.00	0.68
	A611 North	0.09	0.91	0.00

Vehicle Mix

Average PCU Per Vehicle - A611/ Nottingham Road Roundabout (for whole period)

	To			
From		Nottingham Road	A611 South	A611 North
	Nottingham Road	1.000	1.000	1.000

	A611 South	1.000	1.000	1.000
	A611 North	1.000	1.000	1.000

Heavy Vehicle Percentages - A611/ Nottingham Road Roundabout (for whole period)

		To		
		Nottingham Road	**A611 South**	**A611 North**
From	**Nottingham Road**	0.0	0.0	0.0
	A611 South	0.0	0.0	0.0
	A611 North	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Nottingham Road	0.73	14.31	2.63	B
A611 South	0.96	32.92	17.93	D
A611 North	1.03	81.78	43.07	F

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Nottingham Road	466.02	463.59	1096.38	0.00	1229.36	0.379	0.61	4.672	A
A611 South	1418.37	1411.05	85.38	0.00	2181.25	0.650	1.83	4.631	A
A611 North	1212.85	1205.64	456.12	0.00	1875.38	0.647	1.80	5.320	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Nottingham Road	556.47	554.78	1309.77	0.00	1090.16	0.510	1.03	6.702	A
A611 South	1693.68	1687.26	102.17	0.00	2169.23	0.781	3.44	7.371	A
A611 North	1448.26	1440.30	545.40	0.00	1811.72	0.799	3.79	9.492	A

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

Name	Total Demand	Entry Flow	Circulating Flow	Pedestrian Demand	Capacity	RFC	End Queue	Delay	LOS

	(PCU/hr)	(PCU/hr)	(PCU/hr)	(Ped/hr)	(PCU/hr)		(PCU)	(s)	
Nottingham Road	681.53	675.86	1529.43	0.00	946.86	0.720	2.44	13.021	B
A611 South	2074.32	2028.84	124.47	0.00	2153.27	0.963	14.81	23.263	C
A611 North	1773.74	1681.85	655.82	0.00	1733.00	1.024	26.76	42.526	E

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Nottingham Road	681.53	680.80	1553.68	0.00	931.04	0.732	2.63	14.311	B
A611 South	2074.32	2061.84	125.38	0.00	2152.62	0.964	17.93	32.925	D
A611 North	1773.74	1708.52	666.49	0.00	1725.39	1.028	43.07	81.783	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Nottingham Road	556.47	561.79	1457.20	0.00	993.98	0.560	1.30	8.430	A
A611 South	1693.68	1750.53	103.46	0.00	2168.31	0.781	3.71	9.726	A
A611 North	1448.26	1602.42	565.86	0.00	1797.14	0.806	4.53	30.488	D

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Nottingham Road	466.02	468.71	1112.59	0.00	1218.79	0.382	0.62	4.816	A
A611 South	1418.37	1425.68	86.32	0.00	2180.58	0.650	1.89	4.813	A
A611 North	1212.85	1223.47	460.85	0.00	1872.01	0.648	1.87	5.638	A

(Default Analysis Set) - 2032 Development Scenario Morning Peak, 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
(Default Analysis Set)	ARCADY			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
2032 Development Scenario Morning Peak,	2032 Development	AM		ONE	07:45	09:15	90	15		

AM	Scenario Morning Peak			HOUR						

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	A611/Nottingham Road Roundabout	Roundabout	1,2,3			139.96	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
Nottingham Road	1	Nottingham Road	
A611 South	2	A611 South	
A611 North	3	A611 North	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
Nottingham Road	0.00	99999.00
A611 South	0.00	99999.00
A611 North	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Nottingham Road	4.50	7.00	30.00	17.00	50.00	30.00	
A611 South	5.00	9.00	17.00	30.00	50.00	30.00	
A611 North	4.50	8.00	29.00	65.00	50.00	30.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Nottingham Road		(calculated)	(calculated)	0.652	1944.600
A611 South		(calculated)	(calculated)	0.716	2242.374

A611 North		(calculated)	(calculated)	0.713	2200.596

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Nottingham Road	ONE HOUR	✓	662.00	100.000
A611 South	ONE HOUR	✓	1958.00	100.000
A611 North	ONE HOUR	✓	1838.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	Nottingham Road	498.39	498.39		
07:45-08:00	A611 South	1474.09	1474.09		
07:45-08:00	A611 North	1383.74	1383.74		
08:00-08:15	Nottingham Road	595.12	595.12		
08:00-08:15	A611 South	1760.20	1760.20		
08:00-08:15	A611 North	1652.32	1652.32		
08:15-08:30	Nottingham Road	728.88	728.88		
08:15-08:30	A611 South	2155.80	2155.80		
08:15-08:30	A611 North	2023.68	2023.68		
08:30-08:45	Nottingham Road	728.88	728.88		
08:30-08:45	A611 South	2155.80	2155.80		
08:30-08:45	A611 North	2023.68	2023.68		

08:45-09:00	**Nottingham Road**	595.12	595.12		
08:45-09:00	**A611 South**	1760.20	1760.20		
08:45-09:00	**A611 North**	1652.32	1652.32		
09:00-09:15	**Nottingham Road**	498.39	498.39		
09:00-09:15	**A611 South**	1474.09	1474.09		
09:00-09:15	**A611 North**	1383.74	1383.74		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - A611/ Nottingham Road Roundabout (for whole period)

		To		
		Nottingham Road	**A611 South**	**A611 North**
From	**Nottingham Road**	0.000	497.000	165.000
	A611 South	585.000	0.000	1373.000
	A611 North	212.000	1626.000	0.000

Turning Proportions (PCU) - A611/ Nottingham Road Roundabout (for whole period)

	To			
From		Nottingham Road	A611 South	A611 North
	Nottingham Road	0.00	0.75	0.25
	A611 South	0.30	0.00	0.70
	A611 North	0.12	0.88	0.00

Vehicle Mix

Average PCU Per Vehicle - A611/ Nottingham Road Roundabout (for whole period)

	To			
From		Nottingham Road	A611 South	A611 North
	Nottingham Road	1.000	1.000	1.000
	A611 South	1.000	1.000	1.000
	A611 North	1.000	1.000	1.000

Heavy Vehicle Percentages - A611/ Nottingham Road Roundabout (for whole period)

	To			
From		Nottingham Road	A611 South	A611 North

	Nottingham Road	0.0	0.0	0.0
	A611 South	0.0	0.0	0.0
	A611 North	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Nottingham Road	0.78	17.52	3.43	C
A611 South	1.02	71.39	45.21	F
A611 North	1.15	257.10	143.34	F

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS

Nottingham Road	498.39	495.37	1214.71	0.00	1152.17	0.433	0.75	5.456	A
A611 South	1474.09	1465.57	123.47	0.00	2153.99	0.684	2.13	5.168	A
A611 North	1383.74	1373.08	437.87	0.00	1888.39	0.733	2.66	6.851	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Nottingham Road	595.12	592.44	1443.28	0.00	1003.06	0.593	1.43	8.710	A
A611 South	1760.20	1751.01	147.66	0.00	2136.67	0.824	4.43	9.121	A
A611 North	1652.32	1631.46	523.16	0.00	1827.59	0.904	7.88	16.807	C

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Nottingham Road	728.88	721.42	1549.54	0.00	933.74	0.781	3.29	16.402	C
A611 South	2155.80	2056.75	179.81	0.00	2113.65	1.020	29.19	38.254	E
A611 North	2023.68	1751.58	614.50	0.00	1762.46	1.148	75.91	94.612	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Nottingham Road	728.88	728.32	1551.65	0.00	932.37	0.782	3.43	17.521	C
A611 South	2155.80	2091.70	181.53	0.00	2112.42	1.021	45.21	71.385	F
A611 North	2023.68	1753.96	624.95	0.00	1755.01	1.153	143.34	229.766	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Nottingham Road	595.12	601.22	1573.85	0.00	917.88	0.648	1.91	11.579	B
A611 South	1760.20	1920.57	149.85	0.00	2135.10	0.824	5.12	27.005	D
A611 North	1652.32	1779.05	573.82	0.00	1791.46	0.922	111.65	257.099	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Nottingham Road	498.39	500.88	1607.73	0.00	895.78	0.556	1.28	9.175	A
A611 South	1474.09	1485.72	124.84	0.00	2153.00	0.685	2.21	5.485	A

A611 North	1383.74	1817.34	443.90	0.00	1884.10	0.734	3.25	104.012	F

(Default Analysis Set) - Reference Case Evening Peak, 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
(Default Analysis Set)	ARCADY			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
Reference Case Evening Peak, PM	Reference Case Evening Peak	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	A611/Nottingham Road Roundabout	Roundabout	1,2,3			111.70	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
Nottingham Road	1	Nottingham Road	
A611 South	2	A611 South	
A611 North	3	A611 North	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
Nottingham Road	0.00	99999.00
A611 South	0.00	99999.00
A611 North	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Nottingham Road	4.50	7.00	30.00	17.00	50.00	30.00	
A611 South	5.00	9.00	17.00	30.00	50.00	30.00	
A611 North	4.50	8.00	29.00	65.00	50.00	30.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Nottingham Road		(calculated)	(calculated)	0.652	1944.600
A611 South		(calculated)	(calculated)	0.716	2242.374
A611 North		(calculated)	(calculated)	0.713	2200.596

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

Traffic Flows

Demand Set Data Options

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

		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Nottingham Road	ONE HOUR	✓	965.00	100.000
A611 South	ONE HOUR	✓	2047.00	100.000
A611 North	ONE HOUR	✓	1554.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	**Nottingham Road**	726.50	726.50		
16:45-17:00	**A611 South**	1541.09	1541.09		
16:45-17:00	**A611 North**	1169.93	1169.93		

17:00-17:15	**Nottingham Road**	867.52	867.52		
17:00-17:15	**A611 South**	1840.21	1840.21		
17:00-17:15	**A611 North**	1397.01	1397.01		
17:15-17:30	**Nottingham Road**	1062.48	1062.48		
17:15-17:30	**A611 South**	2253.79	2253.79		
17:15-17:30	**A611 North**	1710.99	1710.99		
17:30-17:45	**Nottingham Road**	1062.48	1062.48		
17:30-17:45	**A611 South**	2253.79	2253.79		
17:30-17:45	**A611 North**	1710.99	1710.99		
17:45-18:00	**Nottingham Road**	867.52	867.52		
17:45-18:00	**A611 South**	1840.21	1840.21		
17:45-18:00	**A611 North**	1397.01	1397.01		
18:00-18:15	**Nottingham Road**	726.50	726.50		

18:00-18:15	**A611 South**	1541.09	1541.09		
18:00-18:15	**A611 North**	1169.93	1169.93		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - A611/ Nottingham Road Roundabout (for whole period)

		To		
		Nottingham Road	**A611 South**	**A611 North**
From	**Nottingham Road**	0.000	845.000	120.000
	A611 South	646.000	0.000	1401.000
	A611 North	89.000	1465.000	0.000

Turning Proportions (PCU) - A611/ Nottingham Road Roundabout (for whole period)

		To		
		Nottingham Road	**A611 South**	**A611 North**
From	**Nottingham Road**	0.00	0.88	0.12
	A611 South	0.32	0.00	0.68
	A611 North	0.06	0.94	0.00

Vehicle Mix

Average PCU Per Vehicle - A611/ Nottingham Road Roundabout (for whole period)

		To		
		Nottingham Road	**A611 South**	**A611 North**
From	**Nottingham Road**	1.000	1.000	1.000
	A611 South	1.000	1.000	1.000
	A611 North	1.000	1.000	1.000

Heavy Vehicle Percentages - A611/ Nottingham Road Roundabout (for whole period)

		To		
		Nottingham Road	**A611 South**	**A611 North**
From	**Nottingham Road**	0.0	0.0	0.0
	A611 South	0.0	0.0	0.0
	A611 North	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Nottingham Road	1.16	238.68	78.23	F
A611 South	1.04	93.34	64.38	F
A611 North	1.00	57.05	27.08	F

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Nottingham Road	726.50	720.83	1096.60	0.00	1229.22	0.591	1.42	7.006	A
A611 South	1541.09	1531.61	89.64	0.00	2178.21	0.708	2.37	5.490	A
A611 North	1169.93	1163.22	483.35	0.00	1855.97	0.630	1.68	5.148	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS

Nottingham Road	867.52	858.74	1310.47	0.00	1089.70	0.796	3.61	15.045	C
A611 South	1840.21	1828.66	106.79	0.00	2165.93	0.850	5.26	10.330	B
A611 North	1397.01	1390.08	577.09	0.00	1789.13	0.781	3.41	8.868	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Nottingham Road	1062.48	915.97	1554.08	0.00	930.78	1.142	40.24	99.343	F
A611 South	2253.79	2120.27	113.90	0.00	2160.83	1.043	38.64	46.059	E
A611 North	1710.99	1648.49	669.12	0.00	1723.51	0.993	19.04	33.780	D

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Nottingham Road	1062.48	910.51	1582.68	0.00	912.12	1.165	78.23	238.680	F
A611 South	2253.79	2150.83	113.22	0.00	2161.32	1.043	64.38	93.337	F
A611 North	1710.99	1678.83	678.77	0.00	1716.64	0.997	27.08	57.050	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Nottingham Road	867.52	1016.74	1402.39	0.00	1029.74	0.842	40.93	211.295	F
A611 South	1840.21	2068.77	126.43	0.00	2151.86	0.855	7.24	57.331	F
A611 North	1397.01	1487.58	652.87	0.00	1735.10	0.805	4.43	19.198	C

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Nottingham Road	726.50	884.13	1113.05	0.00	1218.49	0.596	1.52	17.621	C
A611 South	1541.09	1559.91	109.94	0.00	2163.67	0.712	2.53	6.140	A
A611 North	1169.93	1180.67	492.28	0.00	1849.60	0.633	1.75	5.465	A

(Default Analysis Set) - 2032 Development Scenario Evening Peak, 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
(Default Analysis Set)	ARCADY			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
2032 Development Scenario Evening Peak, PM	2032 Development Scenario Evening Peak	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	A611/Nottingham Road Roundabout	Roundabout	1,2,3			227.73	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
Nottingham Road	1	Nottingham Road	
A611 South	2	A611 South	
A611 North	3	A611 North	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
Nottingham Road	0.00	99999.00
A611 South	0.00	99999.00
A611 North	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Nottingham Road	4.50	7.00	30.00	17.00	50.00	30.00	
A611 South	5.00	9.00	17.00	30.00	50.00	30.00	

A611 North	4.50	8.00	29.00	65.00	50.00	30.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Nottingham Road		(calculated)	(calculated)	0.652	1944.600
A611 South		(calculated)	(calculated)	0.716	2242.374
A611 North		(calculated)	(calculated)	0.713	2200.596

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Nottingham Road	ONE HOUR	✓	990.00	100.000
A611 South	ONE HOUR	✓	2174.00	100.000
A611 North	ONE HOUR	✓	1724.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	**Nottingham Road**	745.32	745.32		
16:45-17:00	**A611 South**	1636.70	1636.70		
16:45-17:00	**A611 North**	1297.92	1297.92		
17:00-17:15	**Nottingham Road**	889.99	889.99		
17:00-17:15	**A611 South**	1954.38	1954.38		
17:00-17:15	**A611 North**	1549.84	1549.84		

17:15-17:30	**Nottingham Road**	1090.01	1090.01		
17:15-17:30	**A611 South**	2393.62	2393.62		
17:15-17:30	**A611 North**	1898.16	1898.16		
17:30-17:45	**Nottingham Road**	1090.01	1090.01		
17:30-17:45	**A611 South**	2393.62	2393.62		
17:30-17:45	**A611 North**	1898.16	1898.16		
17:45-18:00	**Nottingham Road**	889.99	889.99		
17:45-18:00	**A611 South**	1954.38	1954.38		
17:45-18:00	**A611 North**	1549.84	1549.84		
18:00-18:15	**Nottingham Road**	745.32	745.32		
18:00-18:15	**A611 South**	1636.70	1636.70		
18:00-18:15	**A611 North**	1297.92	1297.92		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - A611/ Nottingham Road Roundabout (for whole period)

		To		
From		Nottingham Road	A611 South	A611 North
	Nottingham Road	0.000	812.000	178.000
	A611 South	638.000	0.000	1536.000
	A611 North	134.000	1590.000	0.000

Turning Proportions (PCU) - A611/ Nottingham Road Roundabout (for whole period)

		To		
From		Nottingham Road	A611 South	A611 North
	Nottingham Road	0.00	0.82	0.18
	A611 South	0.29	0.00	0.71
	A611 North	0.08	0.92	0.00

Vehicle Mix

Average PCU Per Vehicle - A611/ Nottingham Road Roundabout (for whole period)

	To

		Nottingham Road	A611 South	A611 North
From	Nottingham Road	1.000	1.000	1.000
	A611 South	1.000	1.000	1.000
	A611 North	1.000	1.000	1.000

Heavy Vehicle Percentages - A611/ Nottingham Road Roundabout (for whole period)

	To			
From		Nottingham Road	A611 South	A611 North
	Nottingham Road	0.0	0.0	0.0
	A611 South	0.0	0.0	0.0
	A611 North	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Nottingham Road	1.22	406.53	104.80	F
A611 South	1.13	215.16	145.63	F

A611 North	1.08	140.89	83.38	F

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Nottingham Road	745.32	738.47	1188.72	0.00	1169.13	0.638	1.71	8.235	A
A611 South	1636.70	1624.28	132.77	0.00	2147.32	0.762	3.11	6.732	A
A611 North	1297.92	1288.90	476.67	0.00	1860.73	0.698	2.25	6.203	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Nottingham Road	889.99	874.09	1416.73	0.00	1020.38	0.872	5.69	22.534	C
A611 South	1954.38	1930.36	157.16	0.00	2129.87	0.918	9.11	16.358	C
A611 North	1549.84	1536.13	566.50	0.00	1796.68	0.863	5.68	13.167	B

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Nottingham Road	1090.01	893.52	1599.23	0.00	901.33	1.209	54.81	134.589	F
A611 South	2393.62	2114.77	160.65	0.00	2127.37	1.125	78.82	82.643	F
A611 North	1898.16	1734.01	620.62	0.00	1758.10	1.080	46.72	63.949	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Nottingham Road	1090.01	890.05	1615.38	0.00	890.79	1.224	104.80	330.889	F
A611 South	2393.62	2126.39	160.03	0.00	2127.81	1.125	145.63	195.166	F
A611 North	1898.16	1751.52	624.03	0.00	1755.66	1.081	83.38	140.895	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Nottingham Road	889.99	890.05	1602.51	0.00	899.19	0.990	104.79	406.532	F
A611 South	1954.38	2113.30	160.03	0.00	2127.81	0.918	105.90	215.163	F

A611 North	1549.84	1737.56	620.19	0.00	1758.40	0.881	36.45	126.620	F

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

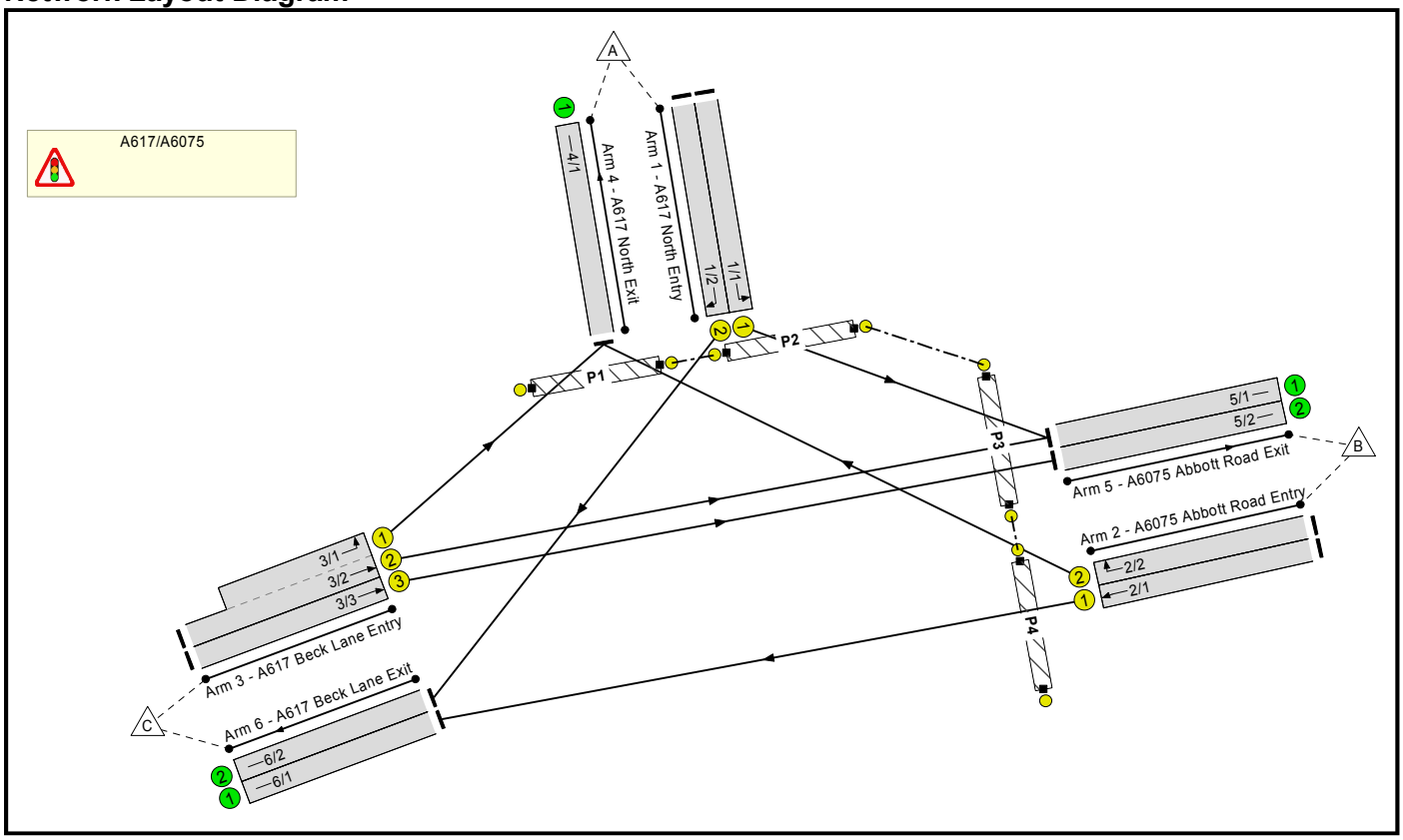
Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Nottingham Road	745.32	1072.59	1321.01	0.00	1082.83	0.688	22.97	218.292	F
A611 South	1636.70	2043.29	192.85	0.00	2104.32	0.778	4.25	91.312	F
A611 North	1297.92	1432.34	599.64	0.00	1773.05	0.732	2.84	15.271	C

Full Input Data And Results

User and Project Details

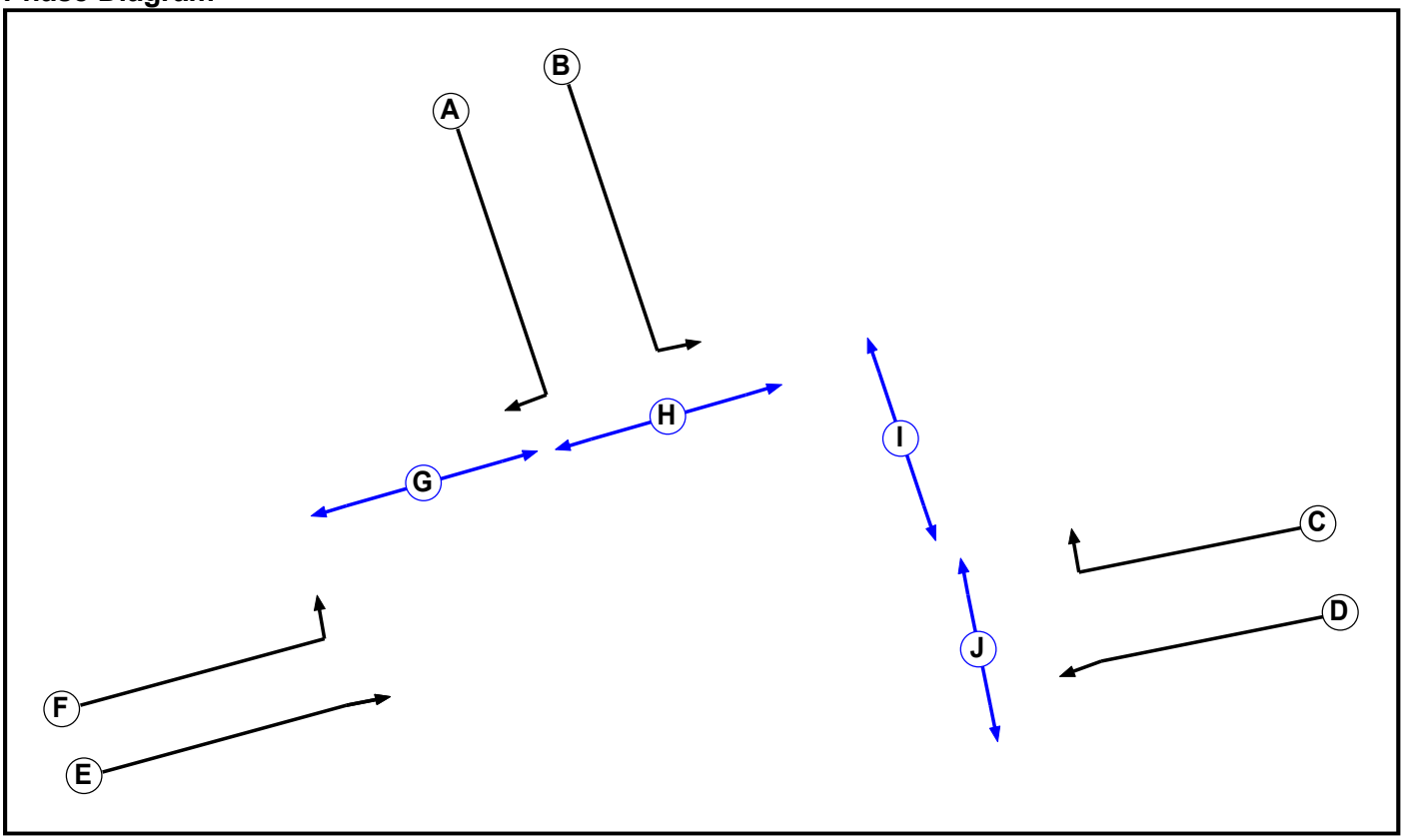
Project:	
Title:	
Location:	
File name:	2016-08-17 J25 JMP.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

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
I	Pedestrian		7	7
J	Pedestrian		7	7

Full Input Data And Results

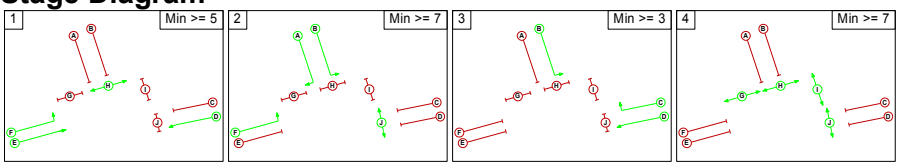
Phase Intergreens Matrix

Terminating Phase	Starting Phase									
	A	B	C	D	E	F	G	H	I	J
A		-	8	12	8	-	-	5	-	-
B	-		-	-	10	-	-	5	9	-
C	9	-		-	9	11	11	-	-	5
D	11	-	-		-	-	-	-	-	5
E	8	11	8	-		-	-	-	11	-
F	-	-	8	-	-		8	-	-	-
G	-	-	3	-	-	3		-	-	-
H	3	3	-	-	-	-	-		-	-
I	-	3	-	-	3	-	-	-		-
J	-	-	3	3	-	-	-	-	-	

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

From Stage	To Stage			
	1	2	3	4
1		11	11	11
2	12		12	9
3	11	11		11
4	3	3	3	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A617/A6075
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: A617/A6075												
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 (A617 North Entry)	U	B	2	3	15.0	User	1800	-	-	-	-	-
1/2 (A617 North Entry)	U	A	2	3	60.0	User	1800	-	-	-	-	-
2/1 (A6075 Abbott Road Entry)	U	D	2	3	60.0	User	1900	-	-	-	-	-
2/2 (A6075 Abbott Road Entry)	U	C	2	3	18.0	User	1800	-	-	-	-	-
3/1 (A617 Beck Lane Entry)	U	F	2	3	10.0	User	1800	-	-	-	-	-
3/2 (A617 Beck Lane Entry)	U	E	2	3	20.0	User	1900	-	-	-	-	-
3/3 (A617 Beck Lane Entry)	U	E	2	3	60.0	User	1900	-	-	-	-	-
4/1 (A617 North Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (A6075 Abbott Road Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/2 (A6075 Abbott Road Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (A617 Beck Lane Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/2 (A617 Beck Lane Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM Reference Case Morning Peak'	08:00	09:00	01:00	
2: 'AM Development Case Morning Peak'	08:00	09:00	01:00	
3: 'PM Reference Case Evening Peak'	17:00	18:00	01:00	
4: 'PM Development Case Evening Peak'	17:00	18:00	01:00	

Scenario 1: 'AM Reference Case' (FG1: 'AM Reference Case Morning Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	97	661	758
	B	2	0	1003	1005
	C	375	707	0	1082
	Tot.	377	804	1664	2845

Traffic Lane Flows

Lane	Scenario 1: AM Reference Case
Junction: A617/A6075	
1/1	97
1/2	661
2/1	1003
2/2	2
3/1 (short)	375
3/2 (with short)	734(In) 359(Out)
3/3	348
4/1	377
5/1	456
5/2	348
6/1	1003
6/2	661

Full Input Data And Results

Lane Saturation Flows

Junction: A617/A6075								
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 (A617 North Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (A617 North Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A6075 Abbott Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/2 (A6075 Abbott Road Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A617 Beck Lane Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (A617 Beck Lane Entry Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
3/3 (A617 Beck Lane Entry Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (A617 North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (A6075 Abbott Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A6075 Abbott Road Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (A617 Beck Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A617 Beck Lane Exit Lane 2)	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'PM Reference Case' (FG3: 'PM Reference Case Evening Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	74	408	482
	B	19	0	1014	1033
	C	659	1005	0	1664
	Tot.	678	1079	1422	3179

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM Reference Case
Junction: A617/A6075	
1/1	74
1/2	408
2/1	1014
2/2	19
3/1 (short)	659
3/2 (with short)	1163(In) 504(Out)
3/3	501
4/1	678
5/1	578
5/2	501
6/1	1014
6/2	408

Lane Saturation Flows

Junction: A617/A6075								
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 (A617 North Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (A617 North Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A6075 Abbott Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/2 (A6075 Abbott Road Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A617 Beck Lane Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (A617 Beck Lane Entry Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
3/3 (A617 Beck Lane Entry Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (A617 North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (A6075 Abbott Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A6075 Abbott Road Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (A617 Beck Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A617 Beck Lane Exit Lane 2)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: 'AM Development Scenario' (FG2: 'AM Development Case Morning Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	34	771	805
	B	1	0	1065	1066
	C	384	768	0	1152
	Tot.	385	802	1836	3023

Traffic Lane Flows

Lane	Scenario 3: AM Development Scenario
Junction: A617/A6075	
1/1	34
1/2	771
2/1	1065
2/2	1
3/1 (short)	384
3/2 (with short)	765(In) 381(Out)
3/3	387
4/1	385
5/1	415
5/2	387
6/1	1065
6/2	771

Full Input Data And Results

Lane Saturation Flows

Junction: A617/A6075								
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 (A617 North Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (A617 North Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A6075 Abbott Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/2 (A6075 Abbott Road Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A617 Beck Lane Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (A617 Beck Lane Entry Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
3/3 (A617 Beck Lane Entry Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (A617 North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (A6075 Abbott Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A6075 Abbott Road Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (A617 Beck Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A617 Beck Lane Exit Lane 2)	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'PM Development Scenario' (FG4: 'PM Development Case Evening Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	13	508	521
	B	3	0	1043	1046
	C	694	999	0	1693
	Tot.	697	1012	1551	3260

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: PM Development Scenario
Junction: A617/A6075	
1/1	13
1/2	508
2/1	1043
2/2	3
3/1 (short)	694
3/2 (with short)	1195(In) 501(Out)
3/3	498
4/1	697
5/1	514
5/2	498
6/1	1043
6/2	508

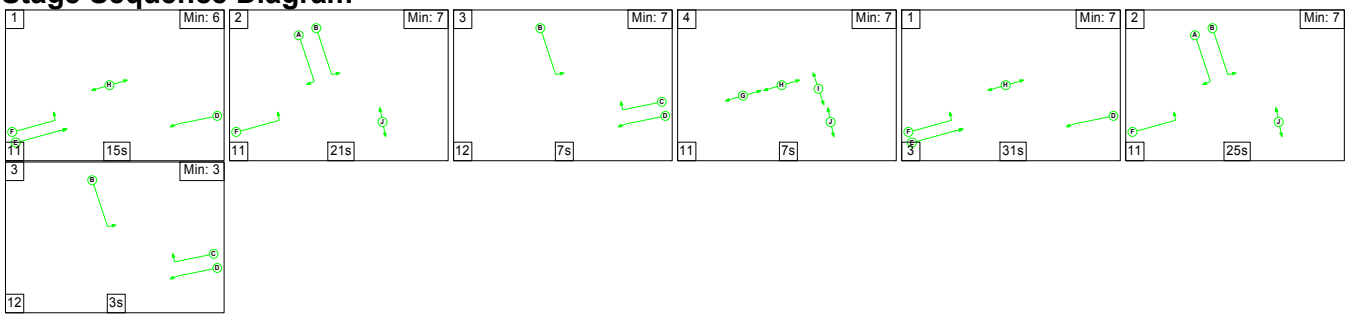
Lane Saturation Flows

Junction: A617/A6075								
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 (A617 North Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (A617 North Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (A6075 Abbott Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/2 (A6075 Abbott Road Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A617 Beck Lane Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (A617 Beck Lane Entry Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
3/3 (A617 Beck Lane Entry Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (A617 North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (A6075 Abbott Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A6075 Abbott Road Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (A617 Beck Lane Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A617 Beck Lane Exit Lane 2)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 1: 'AM Reference Case' (FG1: 'AM Reference Case Morning Peak', Plan 1: 'Network Control Plan 1')

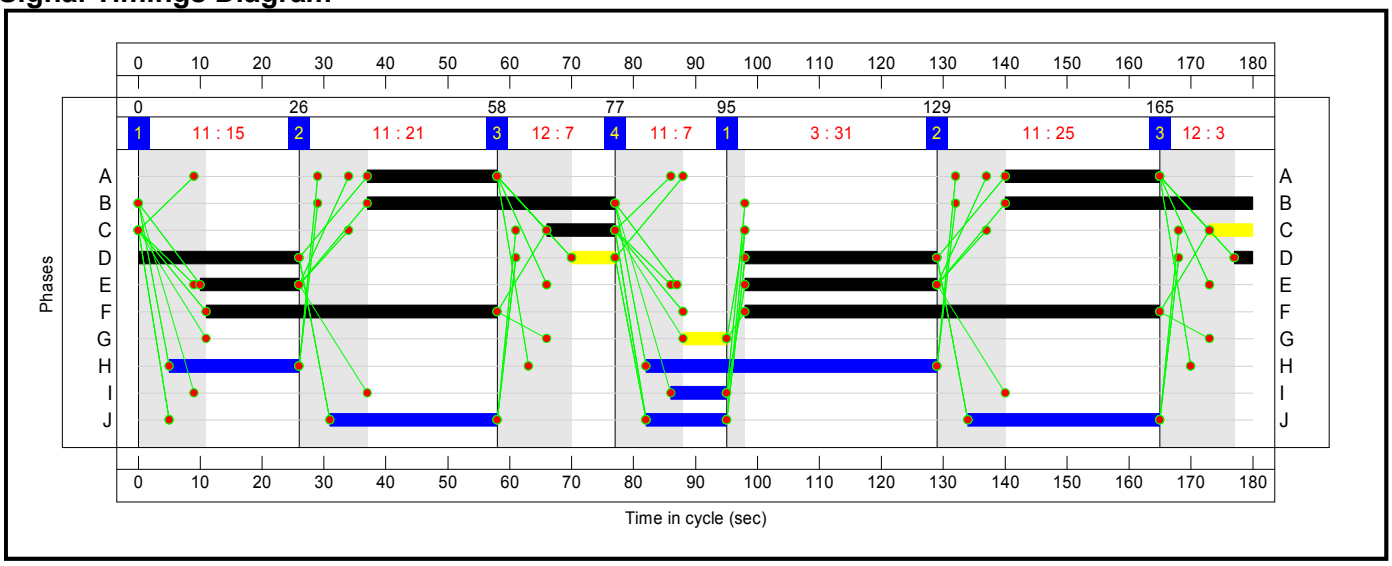
Stage Sequence Diagram



Stage Timings

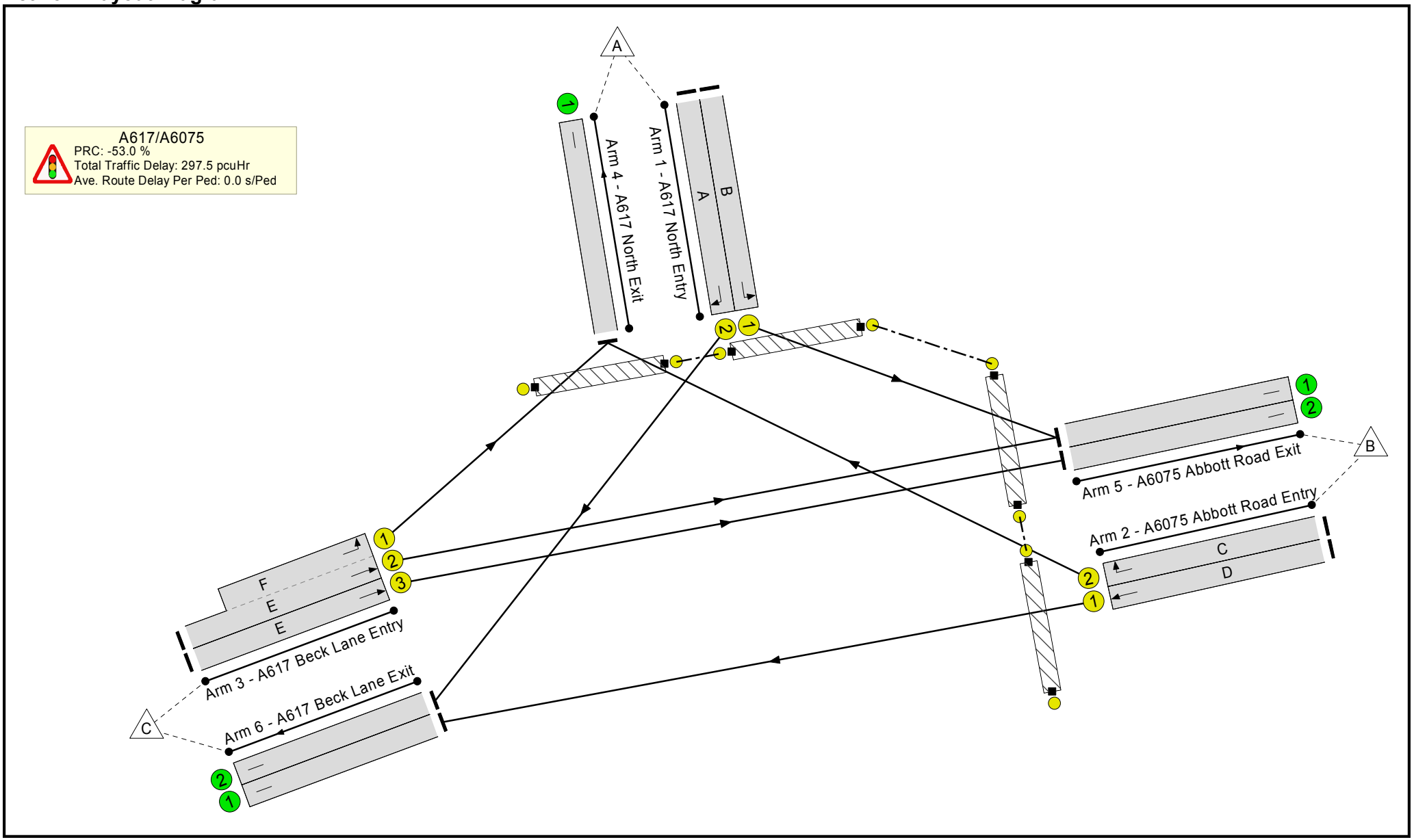
Stage	1	2	3	4	1	2	3
Duration	15	21	7	7	31	25	3
Change Point	0	26	58	77	95	129	165

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**137.7%**
A617/A6075	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**137.7%**
1/1	A617 North Entry Left	U	N/A	N/A	B		2	80	-	97	1800	820	11.8%
1/2	A617 North Entry Right	U	N/A	N/A	A		2	46	-	661	1800	480	137.7%
2/1	A6075 Abbott Road Entry Ahead	U	N/A	N/A	D		3	67	-	1003	1900	739	135.7%
2/2	A6075 Abbott Road Entry Right	U	N/A	N/A	C		2	18	-	2	1800	200	1.0%
3/2+3/1	A617 Beck Lane Entry Left Ahead	U	N/A	N/A	E F		2	47:114	-	734	1900:1800	445+465	80.7 : 80.7%
3/3	A617 Beck Lane Entry Ahead	U	N/A	N/A	E		2	47	-	348	1900	517	67.3%
4/1	A617 North Exit	U	N/A	N/A	-		-	-	-	377	Inf	Inf	0.0%
5/1	A6075 Abbott Road Exit	U	N/A	N/A	-		-	-	-	456	Inf	Inf	0.0%
5/2	A6075 Abbott Road Exit	U	N/A	N/A	-		-	-	-	348	Inf	Inf	0.0%
6/1	A617 Beck Lane Exit	U	N/A	N/A	-		-	-	-	1003	Inf	Inf	0.0%
6/2	A617 Beck Lane Exit	U	N/A	N/A	-		-	-	-	661	Inf	Inf	0.0%
Ped Link: P1	A617 North Exit Crossing	-	N/A	-	G		1	7	-	0	-	0	0.0%
Ped Link: P2	A617 North Entry Crossing	-	N/A	-	H		2	68	-	0	-	0	0.0%
Ped Link: P3	A6075 Exit Crossing	-	N/A	-	I		1	9	-	0	-	0	0.0%
Ped Link: P4	A6075 Entry Crossing	-	N/A	-	J		3	71	-	0	-	0	0.0%

Full Input Data And Results

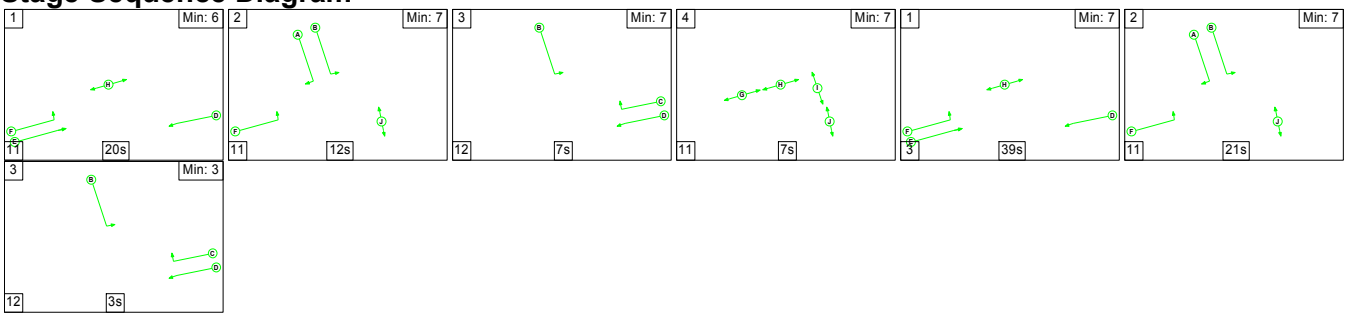
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**68.1**	**229.4**	**0.0**	**297.5**	**-**	**-**	**-**	**-**
A617/A6075	**-**	**-**	**0**	**0**	**0**	**68.1**	**229.4**	**0.0**	**297.5**	**-**	**-**	**-**	**-**
1/1	97	97	-	-	-	0.4	0.1	-	0.5	17.6	1.8	0.1	1.8
1/2	661	480	-	-	-	24.9	92.3	-	117.2	638.3	37.9	92.3	130.2
2/1	1003	739	-	-	-	36.2	133.9	-	170.2	610.7	50.9	133.9	184.8
2/2	2	2	-	-	-	0.0	0.0	-	0.0	46.3	0.1	0.0	0.1
3/2+3/1	734	734	-	-	-	3.7	2.0	-	5.8	28.4	8.7	2.0	10.7
3/3	348	348	-	-	-	2.8	1.0	-	3.9	39.9	8.3	1.0	9.3
4/1	377	377	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	456	456	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	348	348	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	739	739	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	480	480	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -53.0 Total Delay for Signalled Lanes (pcuHr): 297.49 Cycle Time (s): 180
PRC Over All Lanes (%): -53.0 Total Delay Over All Lanes(pcuHr): 297.49

Full Input Data And Results

Scenario 2: 'PM Reference Case' (FG3: 'PM Reference Case Evening Peak', Plan 1: 'Network Control Plan 1')

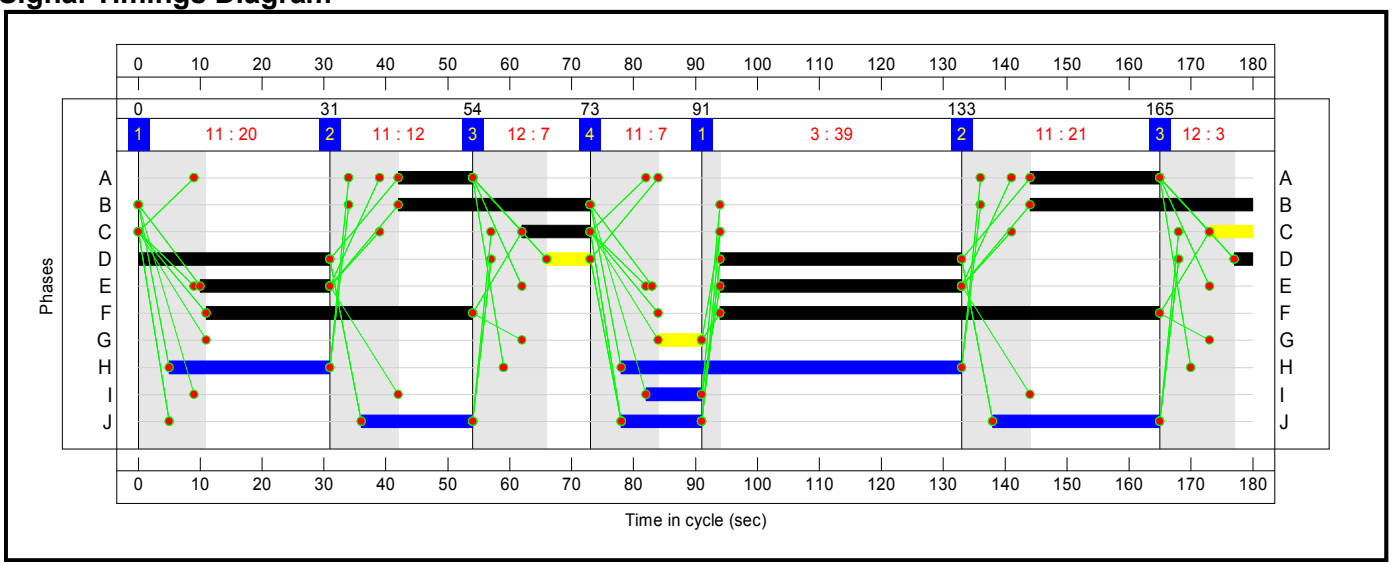
Stage Sequence Diagram



Stage Timings

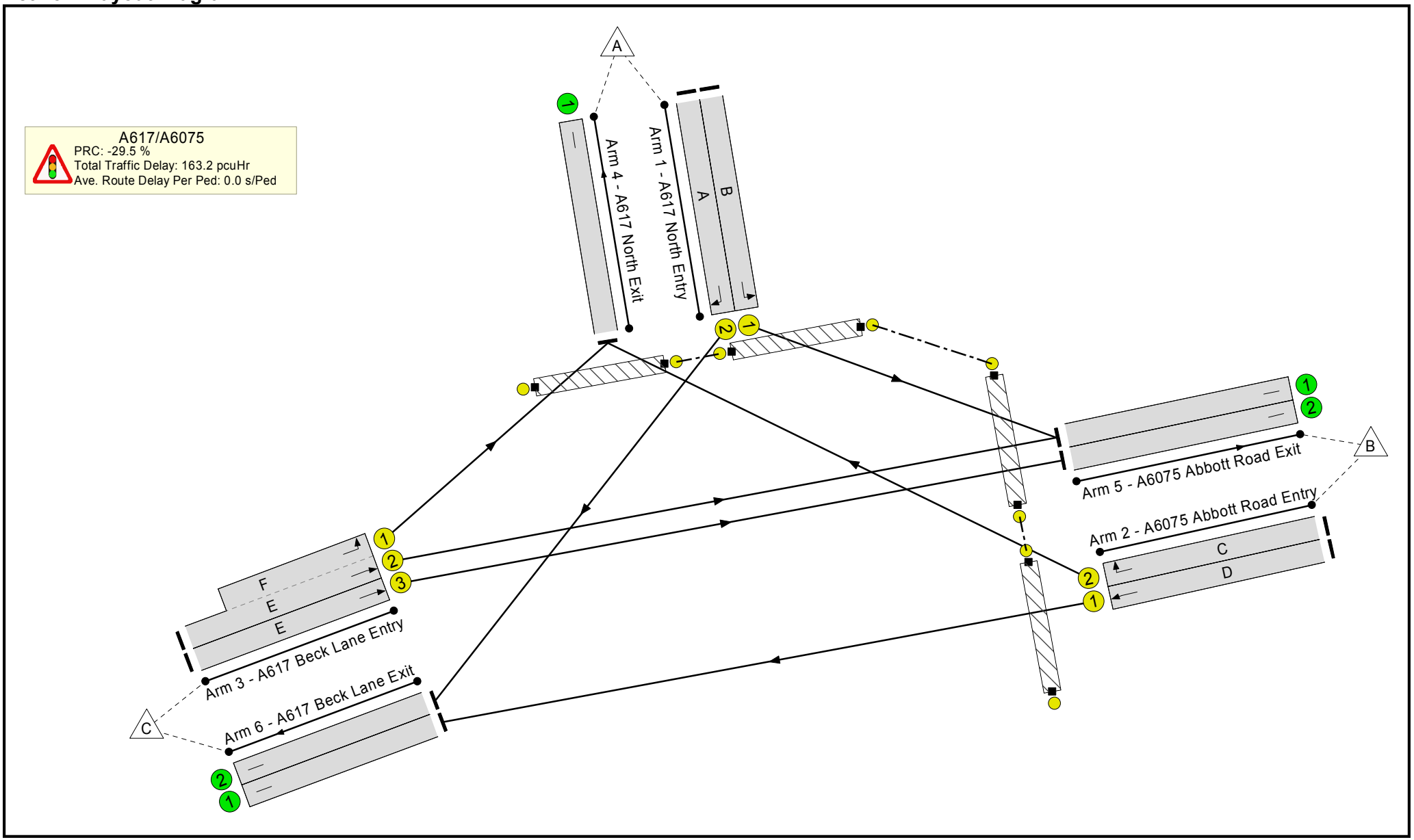
Stage	1	2	3	4	1	2	3
Duration	20	12	7	7	39	21	3
Change Point	0	31	54	73	91	133	165

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**116.6%**
A617/A6075	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**116.6%**
1/1	A617 North Entry Left	U	N/A	N/A	B		2	67	-	74	1800	690	10.7%
1/2	A617 North Entry Right	U	N/A	N/A	A		2	33	-	408	1800	350	116.6%
2/1	A6075 Abbott Road Entry Ahead	U	N/A	N/A	D		3	80	-	1014	1900	876	115.7%
2/2	A6075 Abbott Road Entry Right	U	N/A	N/A	C		2	18	-	19	1800	200	9.5%
3/2+3/1	A617 Beck Lane Entry Left Ahead	U	N/A	N/A	E F		2	60:114	-	1163	1900:1800	506+662	99.5 : 99.5%
3/3	A617 Beck Lane Entry Ahead	U	N/A	N/A	E		2	60	-	501	1900	654	76.6%
4/1	A617 North Exit	U	N/A	N/A	-		-	-	-	678	Inf	Inf	0.0%
5/1	A6075 Abbott Road Exit	U	N/A	N/A	-		-	-	-	578	Inf	Inf	0.0%
5/2	A6075 Abbott Road Exit	U	N/A	N/A	-		-	-	-	501	Inf	Inf	0.0%
6/1	A617 Beck Lane Exit	U	N/A	N/A	-		-	-	-	1014	Inf	Inf	0.0%
6/2	A617 Beck Lane Exit	U	N/A	N/A	-		-	-	-	408	Inf	Inf	0.0%
Ped Link: P1	A617 North Exit Crossing	-	N/A	-	G		1	7	-	0	-	0	0.0%
Ped Link: P2	A617 North Entry Crossing	-	N/A	-	H		2	81	-	0	-	0	0.0%
Ped Link: P3	A6075 Exit Crossing	-	N/A	-	I		1	9	-	0	-	0	0.0%
Ped Link: P4	A6075 Entry Crossing	-	N/A	-	J		3	58	-	0	-	0	0.0%

Full Input Data And Results

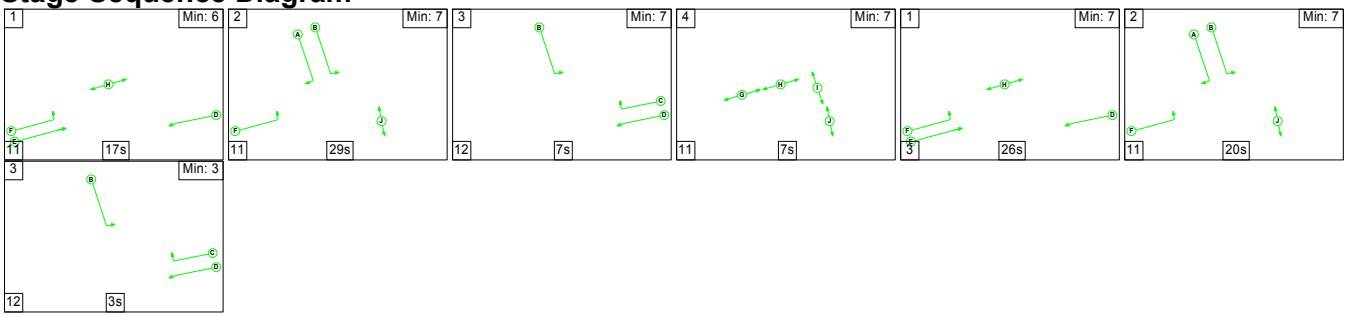
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**41.2**	**122.0**	**0.0**	**163.2**	**-**	**-**	**-**	**-**
A617/A6075	**-**	**-**	**0**	**0**	**0**	**41.2**	**122.0**	**0.0**	**163.2**	**-**	**-**	**-**	**-**
1/1	74	74	-	-	-	0.4	0.1	-	0.5	22.0	1.5	0.1	1.6
1/2	408	350	-	-	-	10.0	32.2	-	42.1	371.8	18.4	32.2	50.6
2/1	1014	876	-	-	-	21.2	72.4	-	93.7	332.6	38.3	72.4	110.7
2/2	19	19	-	-	-	0.2	0.1	-	0.3	48.0	0.5	0.1	0.6
3/2+3/1	1163	1163	-	-	-	5.7	15.7	-	21.4	66.4	19.8	15.7	35.5
3/3	501	501	-	-	-	3.7	1.6	-	5.3	37.8	11.7	1.6	13.3
4/1	678	678	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	578	578	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	501	501	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	876	876	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	350	350	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -29.5 Total Delay for Signalled Lanes (pcuHr): 163.23 Cycle Time (s): 180
PRC Over All Lanes (%): -29.5 Total Delay Over All Lanes(pcuHr): 163.23

Full Input Data And Results

Scenario 3: 'AM Development Scenario' (FG2: 'AM Development Case Morning Peak', Plan 1: 'Network Control Plan 1')

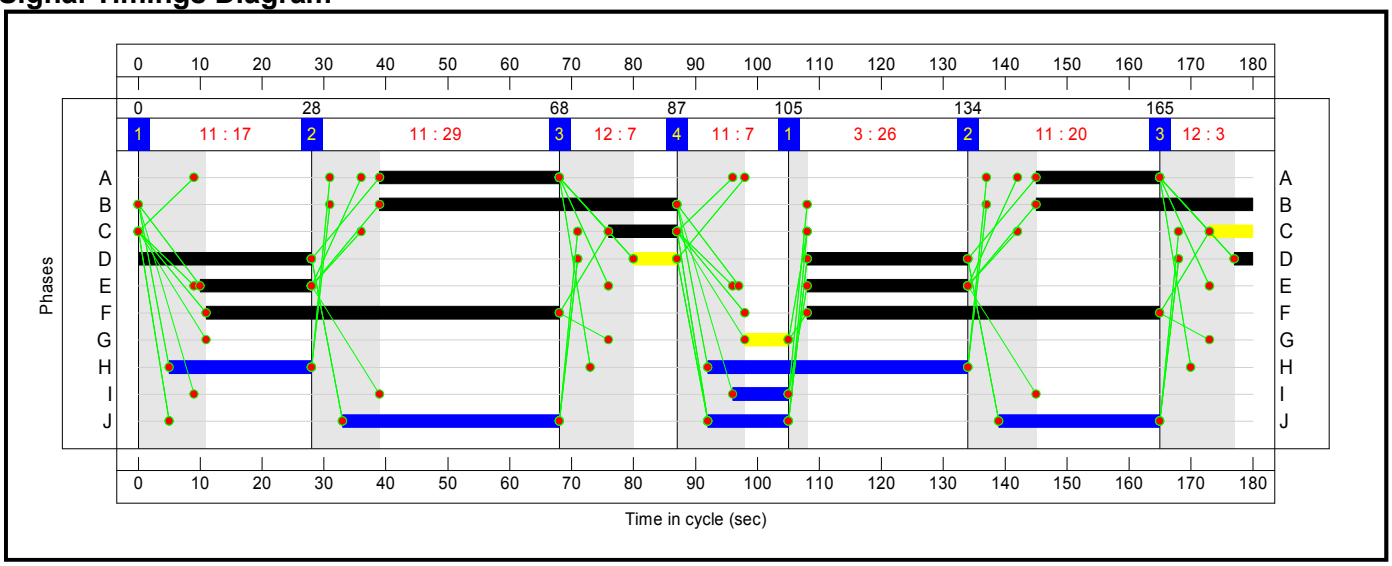
Stage Sequence Diagram



Stage Timings

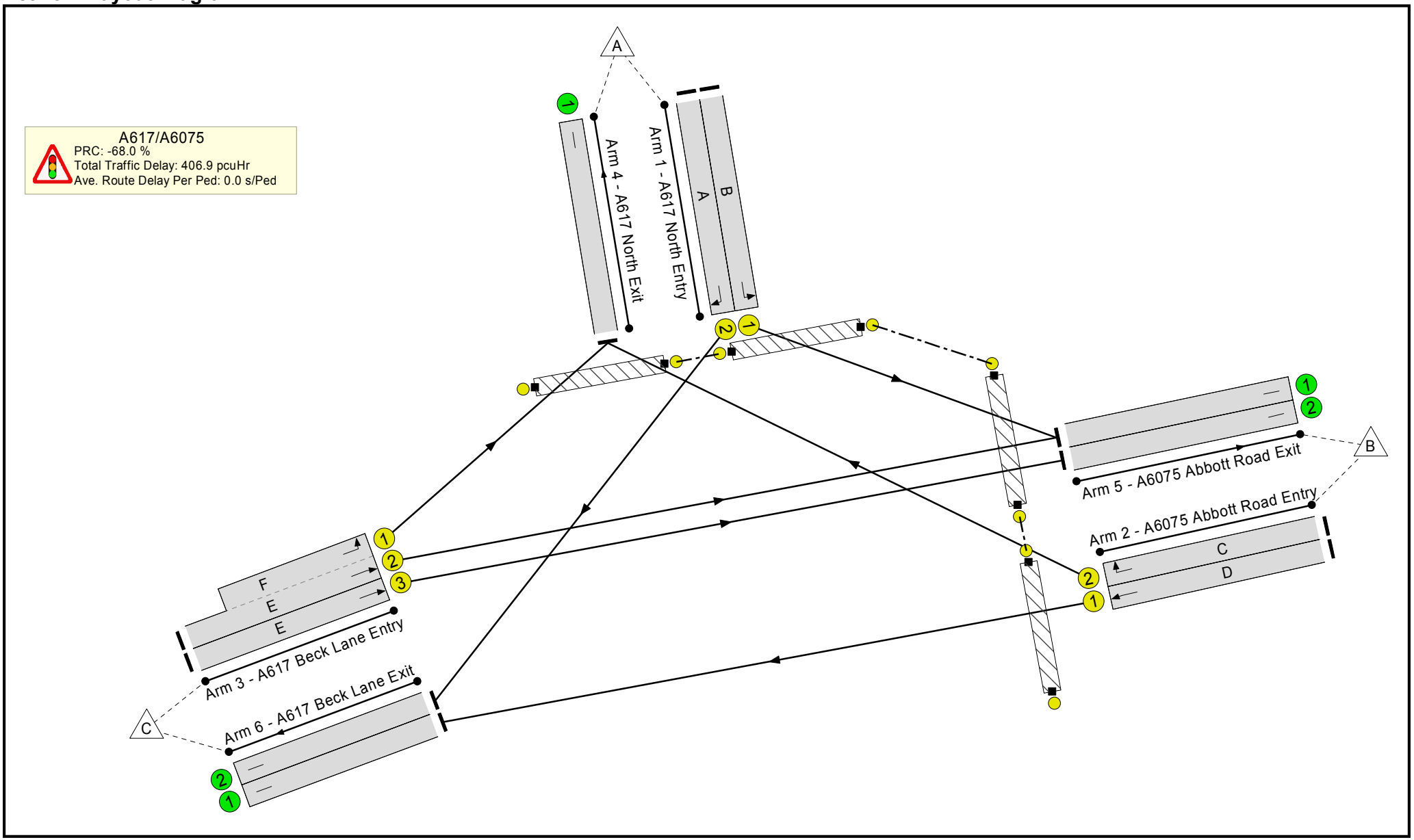
Stage	1	2	3	4	1	2	3
Duration	17	29	7	7	26	20	3
Change Point	0	28	68	87	105	134	165

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**151.2%**
A617/A6075	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**151.2%**
1/1	A617 North Entry Left	U	N/A	N/A	B		2	83	-	34	1800	850	4.0%
1/2	A617 North Entry Right	U	N/A	N/A	A		2	49	-	771	1800	510	151.2%
2/1	A6075 Abbott Road Entry Ahead	U	N/A	N/A	D		3	64	-	1065	1900	707	150.6%
2/2	A6075 Abbott Road Entry Right	U	N/A	N/A	C		2	18	-	1	1800	200	0.5%
3/2+3/1	A617 Beck Lane Entry Left Ahead	U	N/A	N/A	E F		2	44:114	-	765	1900:1800	441+444	86.4 : 86.4%
3/3	A617 Beck Lane Entry Ahead	U	N/A	N/A	E		2	44	-	387	1900	486	79.7%
4/1	A617 North Exit	U	N/A	N/A	-		-	-	-	385	Inf	Inf	0.0%
5/1	A6075 Abbott Road Exit	U	N/A	N/A	-		-	-	-	415	Inf	Inf	0.0%
5/2	A6075 Abbott Road Exit	U	N/A	N/A	-		-	-	-	387	Inf	Inf	0.0%
6/1	A617 Beck Lane Exit	U	N/A	N/A	-		-	-	-	1065	Inf	Inf	0.0%
6/2	A617 Beck Lane Exit	U	N/A	N/A	-		-	-	-	771	Inf	Inf	0.0%
Ped Link: P1	A617 North Exit Crossing	-	N/A	-	G		1	7	-	0	-	0	0.0%
Ped Link: P2	A617 North Entry Crossing	-	N/A	-	H		2	65	-	0	-	0	0.0%
Ped Link: P3	A6075 Exit Crossing	-	N/A	-	I		1	9	-	0	-	0	0.0%
Ped Link: P4	A6075 Entry Crossing	-	N/A	-	J		3	74	-	0	-	0	0.0%

Full Input Data And Results

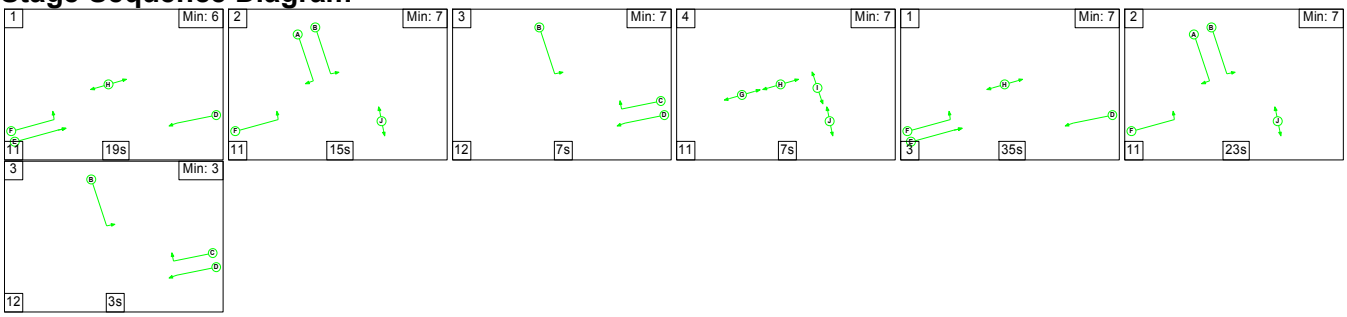
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**89.6**	**317.3**	**0.0**	**406.9**	**-**	**-**	**-**	**-**
A617/A6075	**-**	**-**	**0**	**0**	**0**	**89.6**	**317.3**	**0.0**	**406.9**	**-**	**-**	**-**	**-**
1/1	34	34	-	-	-	0.1	0.0	-	0.1	15.5	0.5	0.0	0.6
1/2	771	510	-	-	-	33.8	132.0	-	165.7	773.8	47.1	132.0	179.0
2/1	1065	707	-	-	-	48.0	180.4	-	228.4	772.0	62.9	180.4	243.3
2/2	1	1	-	-	-	0.0	0.0	-	0.0	45.2	0.0	0.0	0.0
3/2+3/1	765	765	-	-	-	4.2	3.0	-	7.3	34.1	11.3	3.0	14.3
3/3	387	387	-	-	-	3.5	1.9	-	5.4	49.9	10.6	1.9	12.5
4/1	385	385	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	415	415	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	387	387	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	707	707	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	510	510	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -68.0 Total Delay for Signalled Lanes (pcuHr): 406.88 Cycle Time (s): 180
PRC Over All Lanes (%): -68.0 Total Delay Over All Lanes(pcuHr): 406.88

Full Input Data And Results

Scenario 4: 'PM Development Scenario' (FG4: 'PM Development Case Evening Peak', Plan 1: 'Network Control Plan 1')

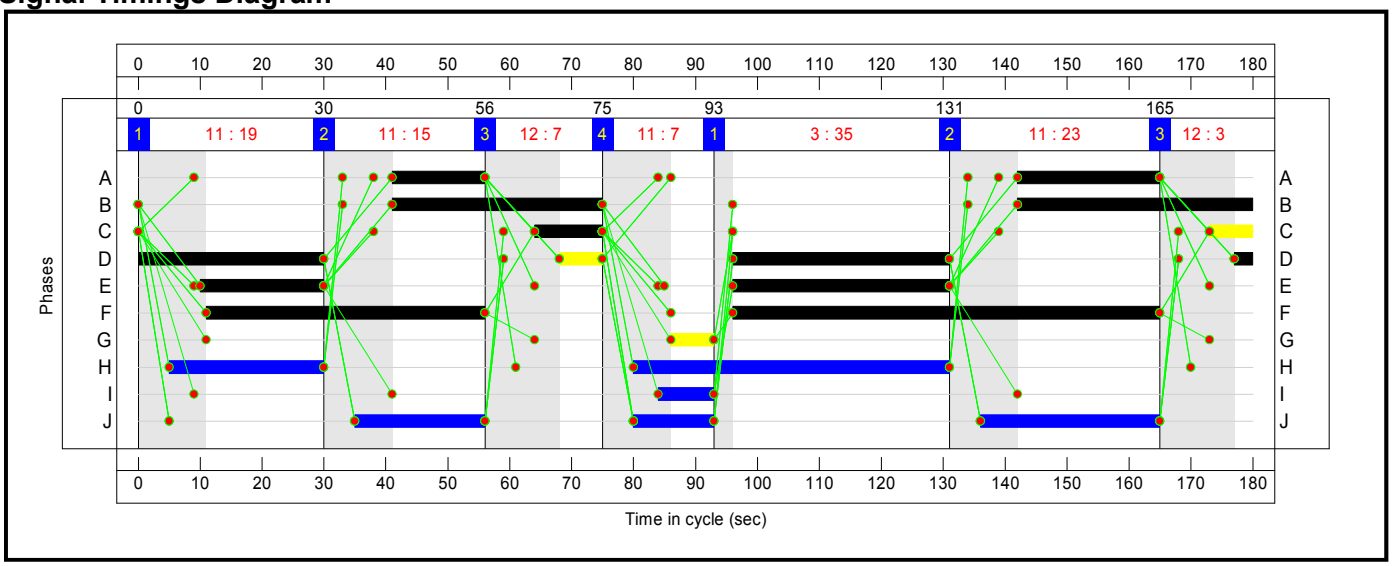
Stage Sequence Diagram



Stage Timings

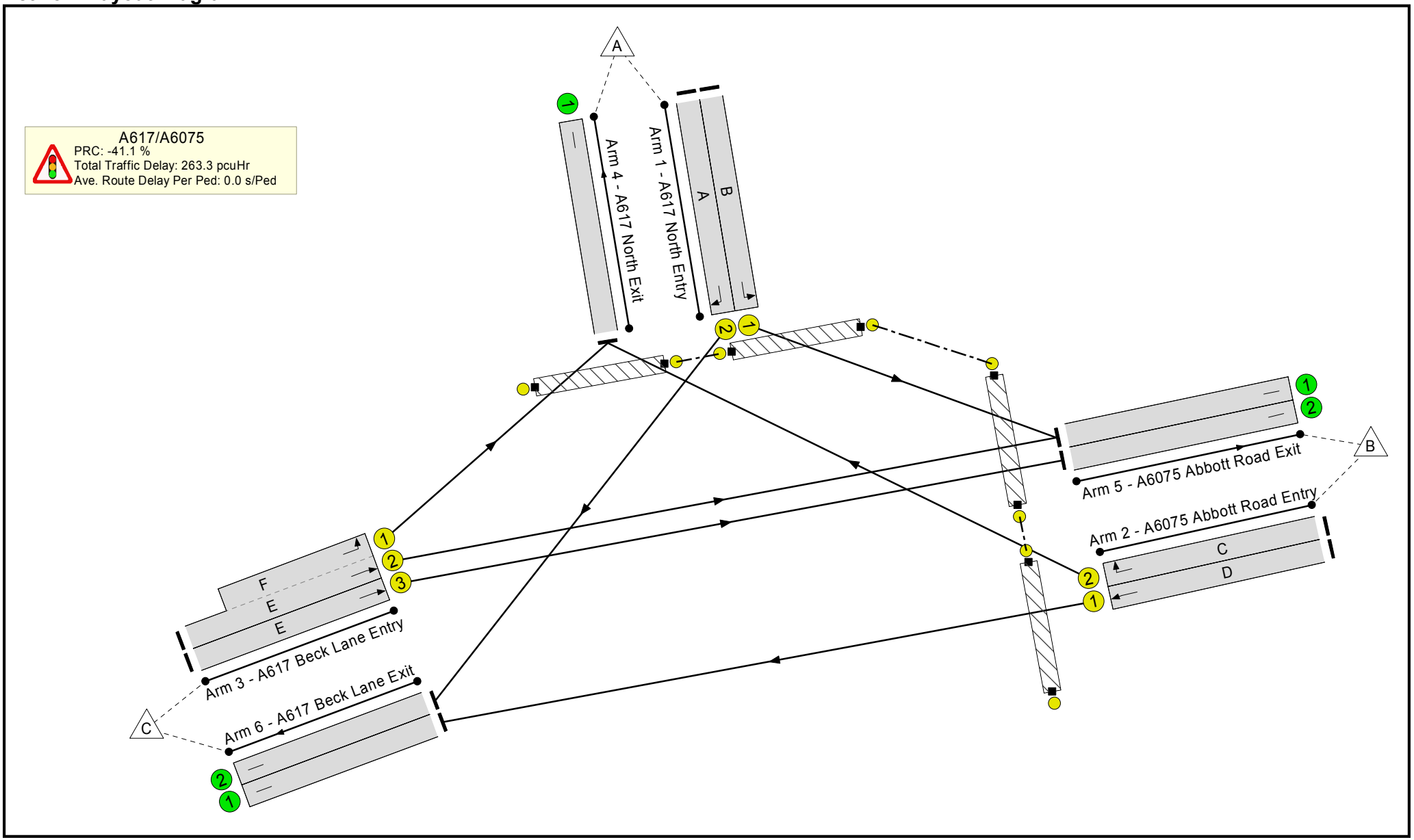
Stage	1	2	3	4	1	2	3
Duration	19	15	7	7	35	23	3
Change Point	0	30	56	75	93	131	165

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**127.0%**
A617/A6075	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**127.0%**
1/1	A617 North Entry Left	U	N/A	N/A	B		2	72	-	13	1800	740	1.8%
1/2	A617 North Entry Right	U	N/A	N/A	A		2	38	-	508	1800	400	127.0%
2/1	A6075 Abbott Road Entry Ahead	U	N/A	N/A	D		3	75	-	1043	1900	823	126.7%
2/2	A6075 Abbott Road Entry Right	U	N/A	N/A	C		2	18	-	3	1800	200	1.5%
3/2+3/1	A617 Beck Lane Entry Left Ahead	U	N/A	N/A	E F		2	55:114	-	1195	1900:1800	481+667	104.1 : 104.1%
3/3	A617 Beck Lane Entry Ahead	U	N/A	N/A	E		2	55	-	498	1900	602	82.8%
4/1	A617 North Exit	U	N/A	N/A	-		-	-	-	697	Inf	Inf	0.0%
5/1	A6075 Abbott Road Exit	U	N/A	N/A	-		-	-	-	514	Inf	Inf	0.0%
5/2	A6075 Abbott Road Exit	U	N/A	N/A	-		-	-	-	498	Inf	Inf	0.0%
6/1	A617 Beck Lane Exit	U	N/A	N/A	-		-	-	-	1043	Inf	Inf	0.0%
6/2	A617 Beck Lane Exit	U	N/A	N/A	-		-	-	-	508	Inf	Inf	0.0%
Ped Link: P1	A617 North Exit Crossing	-	N/A	-	G		1	7	-	0	-	0	0.0%
Ped Link: P2	A617 North Entry Crossing	-	N/A	-	H		2	76	-	0	-	0	0.0%
Ped Link: P3	A6075 Exit Crossing	-	N/A	-	I		1	9	-	0	-	0	0.0%
Ped Link: P4	A6075 Entry Crossing	-	N/A	-	J		3	63	-	0	-	0	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	**-**	**-**	**0**	**0**	**0**	**60.1**	**203.2**	**0.0**	**263.3**	**-**	**-**	**-**	**-**
A617/A6075	**-**	**-**	**0**	**0**	**0**	**60.1**	**203.2**	**0.0**	**263.3**	**-**	**-**	**-**	**-**
1/1	13	13	-	-	-	0.1	0.0	-	0.1	19.3	0.2	0.0	0.2
1/2	508	400	-	-	-	16.2	56.3	-	72.4	513.3	26.5	56.3	82.8
2/1	1043	823	-	-	-	30.9	112.2	-	143.0	493.7	47.0	112.2	159.2
2/2	3	3	-	-	-	0.0	0.0	-	0.0	46.7	0.1	0.0	0.1
3/2+3/1	1195	1175	-	-	-	9.0	32.5	-	41.5	124.9	34.6	32.5	67.1
3/3	498	498	-	-	-	4.0	2.3	-	6.3	45.2	12.2	2.3	14.5
4/1	697	697	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	494	494	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	498	498	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	823	823	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	400	400	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -41.1 Total Delay for Signalled Lanes (pcuHr): 263.29 Cycle Time (s): 180
PRC Over All Lanes (%): -41.1 Total Delay Over All Lanes(pcuHr): 263.29

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]
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Filename: 2016-08-17 J26 JMP.arc8
Path: J:\MID\4300\MID4354 - Ashfield Junction Assessments\CALCULATIONS\DATA\Ashfield_Junction_Assessment_Information\Junction 26 - B6014 Fackley Road and B6028 Stoneyford Road ARCADY
Report generation date: 01/09/2016 17:40:12

Summary of junction performance

	AM		PM	
	Queue (PCU)	RFC	Queue (PCU)	RFC

	A1 - 2032 Development Scenario Evening Peak			
B6014 Fackley Road			82.54	1.13
B6014 Mansfield Road			44.75	1.11
B6028 Stoneyford Road			133.55	1.18
	A1 - 2032 Development Scenario Morning Peak			
B6014 Fackley Road	98.41	1.15		
B6014 Mansfield Road	136.51	1.36		
B6028 Stoneyford Road	11.45	0.94		
	A1 - Reference Case Evening Peak			
B6014 Fackley Road			26.43	1.01
B6014 Mansfield Road			18.21	1.01
B6028 Stoneyford Road			56.27	1.06
	A1 - Reference Case Morning Peak			
B6014 Fackley Road	48.14	1.06		
B6014 Mansfield Road	41.65	1.12		
B6028 Stoneyford Road	6.00	0.87		

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

"D1 - Reference Case Morning Peak, AM " model duration: 07:45 - 09:15
"D2 - 2032 Development Scenario Morning Peak, AM" model duration: 07:45 - 09:15
"D3 - Reference Case Evening Peak, PM" model duration: 16:45 - 18:15
"D4 - 2032 Development Scenario Evening Peak, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.4.487 at 01/09/2016 17:40:08

File summary

Title	(untitled)
Location	
Site Number	
Date	20/07/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	noram

Description	

Analysis Options

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

Units

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

(Default Analysis Set) - Reference Case Morning Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B6014 Fackley Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	B6028 Stoneyford Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors

(Default Analysis Set)	ARCADY			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
Reference Case Morning Peak, AM	Reference Case Morning Peak	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3			107.70	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
B6014 Fackley Road	1	B6014 Fackley Road	
B6014 Mansfield Road	2	B6014 Mansfield Road	
B6028 Stoneyford Road	3	B6028 Stoneyford Road	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
B6014 Fackley Road	0.00	99999.00
B6014 Mansfield Road	0.00	99999.00
B6028 Stoneyford Road	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
B6014 Fackley Road	3.51	5.74	36.00	11.62	16.00	62.00	
B6014 Mansfield Road	4.00	4.00	0.00	12.00	16.00	51.00	
B6028 Stoneyford Road	3.00	6.00	42.00	23.00	16.00	42.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
B6014 Fackley Road		(calculated)	(calculated)	0.556	1389.337
B6014 Mansfield Road		(calculated)	(calculated)	0.505	1084.170
B6028 Stoneyford Road		(calculated)	(calculated)	0.632	1590.741

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)

B6014 Fackley Road	ONE HOUR	✓	1153.00	100.000
B6014 Mansfield Road	ONE HOUR	✓	584.00	100.000
B6028 Stoneyford Road	ONE HOUR	✓	1105.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	**B6014 Fackley Road**	868.04	868.04		
07:45-08:00	**B6014 Mansfield Road**	439.67	439.67		
07:45-08:00	**B6028 Stoneyford Road**	831.90	831.90		
08:00-08:15	**B6014 Fackley Road**	1036.52	1036.52		
08:00-08:15	**B6014 Mansfield Road**	525.00	525.00		
08:00-08:15	**B6028 Stoneyford Road**	993.37	993.37		
08:15-08:30	**B6014 Fackley Road**	1269.48	1269.48		

08:15-08:30	**B6014 Mansfield Road**	643.00	643.00		
08:15-08:30	**B6028 Stoneyford Road**	1216.63	1216.63		
08:30-08:45	**B6014 Fackley Road**	1269.48	1269.48		
08:30-08:45	**B6014 Mansfield Road**	643.00	643.00		
08:30-08:45	**B6028 Stoneyford Road**	1216.63	1216.63		
08:45-09:00	**B6014 Fackley Road**	1036.52	1036.52		
08:45-09:00	**B6014 Mansfield Road**	525.00	525.00		
08:45-09:00	**B6028 Stoneyford Road**	993.37	993.37		
09:00-09:15	**B6014 Fackley Road**	868.04	868.04		
09:00-09:15	**B6014 Mansfield Road**	439.67	439.67		
09:00-09:15	**B6028 Stoneyford Road**	831.90	831.90		

Turning Proportions

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

		To		
		B6014 Fackley Road	B6014 Mansfield Road	B6028 Stoneyford Road
From	B6014 Fackley Road	0.000	174.000	979.000
	B6014 Mansfield Road	301.000	0.000	283.000
	B6028 Stoneyford Road	795.000	310.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To		
		B6014 Fackley Road	B6014 Mansfield Road	B6028 Stoneyford Road
From	B6014 Fackley Road	0.00	0.15	0.85
	B6014 Mansfield Road	0.52	0.00	0.48
	B6028 Stoneyford Road	0.72	0.28	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

	To

		B6014 Fackley Road	B6014 Mansfield Road	B6028 Stoneyford Road
From	B6014 Fackley Road	1.000	1.000	1.000
	B6014 Mansfield Road	1.000	1.000	1.000
	B6028 Stoneyford Road	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

	To			
From		B6014 Fackley Road	B6014 Mansfield Road	B6028 Stoneyford Road
	B6014 Fackley Road	0.0	0.0	0.0
	B6014 Mansfield Road	0.0	0.0	0.0
	B6028 Stoneyford Road	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B6014 Fackley Road	1.06	125.88	48.14	F
B6014 Mansfield Road	1.12	240.39	41.65	F

B6028 Stoneyford Road	0.87	18.60	6.00	C

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6014 Fackley Road	868.04	859.47	231.90	0.00	1260.51	0.689	2.14	8.799	A
B6014 Mansfield Road	439.67	433.52	729.76	0.00	715.53	0.614	1.54	12.511	B
B6028 Stoneyford Road	831.90	826.59	223.44	0.00	1449.51	0.574	1.33	5.732	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6014 Fackley Road	1036.52	1026.29	277.65	0.00	1235.09	0.839	4.70	16.466	C
B6014 Mansfield Road	525.00	515.87	871.41	0.00	643.98	0.815	3.82	26.386	D
B6028 Stoneyford Road	993.37	989.69	265.89	0.00	1422.68	0.698	2.25	8.242	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6014 Fackley Road	1269.48	1173.04	337.51	0.00	1201.84	1.056	28.81	63.606	F
B6014 Mansfield Road	643.00	565.18	996.02	0.00	581.03	1.107	23.27	104.706	F
B6028 Stoneyford Road	1216.63	1203.05	291.30	0.00	1406.62	0.865	5.64	16.660	C

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6014 Fackley Road	1269.48	1192.15	340.91	0.00	1199.95	1.058	48.14	125.877	F
B6014 Mansfield Road	643.00	569.50	1012.25	0.00	572.83	1.122	41.65	220.691	F
B6028 Stoneyford Road	1216.63	1215.19	293.53	0.00	1405.21	0.866	6.00	18.602	C

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6014 Fackley Road	1036.52	1199.19	282.66	0.00	1232.31	0.841	7.47	87.137	F
B6014 Mansfield Road	525.00	556.45	1018.22	0.00	569.81	0.921	33.79	240.393	F

B6028 Stoneyford Road	993.37	1007.53	286.80	0.00	1409.46	0.705	2.46	9.254	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6014 Fackley Road	868.04	888.76	234.49	0.00	1259.07	0.689	2.29	10.232	B
B6014 Mansfield Road	439.67	567.65	754.64	0.00	702.96	0.625	1.79	53.041	F
B6028 Stoneyford Road	831.90	835.86	292.57	0.00	1405.82	0.592	1.47	6.358	A

(Default Analysis Set) - 2032 Development Scenario Morning Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B6014 Fackley Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	B6028 Stoneyford Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			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
2032 Development Scenario Morning Peak, AM	2032 Development Scenario Morning Peak	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3			310.89	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
B6014 Fackley Road	1	B6014 Fackley Road	
B6014 Mansfield Road	2	B6014 Mansfield Road	
B6028 Stoneyford Road	3	B6028 Stoneyford Road	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
B6014 Fackley Road	0.00	99999.00
B6014 Mansfield Road	0.00	99999.00
B6028 Stoneyford Road	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
B6014 Fackley Road	3.51	5.74	36.00	11.62	16.00	62.00	
B6014 Mansfield Road	4.00	4.00	0.00	12.00	16.00	51.00	

B6028 Stoneyford Road	3.00	6.00	42.00	23.00	16.00	42.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
B6014 Fackley Road		(calculated)	(calculated)	0.556	1389.337
B6014 Mansfield Road		(calculated)	(calculated)	0.505	1084.170
B6028 Stoneyford Road		(calculated)	(calculated)	0.632	1590.741

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
B6014 Fackley Road	ONE HOUR	✓	1231.00	100.000
B6014 Mansfield Road	ONE HOUR	✓	709.00	100.000
B6028 Stoneyford Road	ONE HOUR	✓	1200.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	**B6014 Fackley Road**	926.76	926.76		
07:45-08:00	**B6014 Mansfield Road**	533.77	533.77		
07:45-08:00	**B6028 Stoneyford Road**	903.42	903.42		
08:00-08:15	**B6014 Fackley Road**	1106.64	1106.64		
08:00-08:15	**B6014 Mansfield Road**	637.38	637.38		
08:00-08:15	**B6028 Stoneyford**	1078.78	1078.78		

	Road				
08:15-08:30	**B6014 Fackley Road**	1355.36	1355.36		
08:15-08:30	**B6014 Mansfield Road**	780.62	780.62		
08:15-08:30	**B6028 Stoneyford Road**	1321.22	1321.22		
08:30-08:45	**B6014 Fackley Road**	1355.36	1355.36		
08:30-08:45	**B6014 Mansfield Road**	780.62	780.62		
08:30-08:45	**B6028 Stoneyford Road**	1321.22	1321.22		
08:45-09:00	**B6014 Fackley Road**	1106.64	1106.64		
08:45-09:00	**B6014 Mansfield Road**	637.38	637.38		
08:45-09:00	**B6028 Stoneyford Road**	1078.78	1078.78		
09:00-09:15	**B6014 Fackley Road**	926.76	926.76		
09:00-09:15	**B6014 Mansfield Road**	533.77	533.77		
09:00-09:15	**B6028 Stoneyford**	903.42	903.42		

	Road				

Turning Proportions

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

		To		
		B6014 Fackley Road	B6014 Mansfield Road	B6028 Stoneyford Road
From	B6014 Fackley Road	0.000	177.000	1054.000
	B6014 Mansfield Road	348.000	0.000	361.000
	B6028 Stoneyford Road	853.000	347.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To		
		B6014 Fackley Road	B6014 Mansfield Road	B6028 Stoneyford Road
From	B6014 Fackley Road	0.00	0.14	0.86
	B6014 Mansfield Road	0.49	0.00	0.51
	B6028 Stoneyford Road	0.71	0.29	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
		B6014 Fackley Road	B6014 Mansfield Road	B6028 Stoneyford Road
From	B6014 Fackley Road	1.000	1.000	1.000
	B6014 Mansfield Road	1.000	1.000	1.000
	B6028 Stoneyford Road	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
		B6014 Fackley Road	B6014 Mansfield Road	B6028 Stoneyford Road
From	B6014 Fackley Road	0.0	0.0	0.0
	B6014 Mansfield Road	0.0	0.0	0.0
	B6028 Stoneyford Road	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B6014 Fackley Road	1.15	261.14	98.41	F
B6014 Mansfield Road	1.36	867.06	136.51	F
B6028 Stoneyford Road	0.94	33.33	11.45	D

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6014 Fackley Road	926.76	915.65	259.29	0.00	1245.29	0.744	2.78	10.592	B
B6014 Mansfield Road	533.77	521.28	783.99	0.00	688.14	0.776	3.12	20.294	C
B6028 Stoneyford Road	903.42	896.69	255.86	0.00	1429.02	0.632	1.68	6.682	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS

B6014 Fackley Road	1106.64	1086.89	310.29	0.00	1216.96	0.909	7.71	24.568	C
B6014 Mansfield Road	637.38	586.04	930.62	0.00	614.07	1.038	15.96	76.330	F
B6028 Stoneyford Road	1078.78	1073.04	287.65	0.00	1408.93	0.766	3.12	10.537	B

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6014 Fackley Road	1355.36	1171.28	374.14	0.00	1181.49	1.147	53.74	105.784	F
B6014 Mansfield Road	780.62	575.98	1002.86	0.00	577.57	1.352	67.12	274.444	F
B6028 Stoneyford Road	1321.22	1293.84	282.71	0.00	1412.05	0.936	9.96	25.881	D

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6014 Fackley Road	1355.36	1176.66	380.33	0.00	1178.05	1.151	98.41	239.457	F
B6014 Mansfield Road	780.62	574.99	1007.47	0.00	575.25	1.357	118.53	595.611	F
B6028 Stoneyford Road	1321.22	1315.26	282.23	0.00	1412.36	0.935	11.45	33.327	D

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6014 Fackley Road	1106.64	1198.66	321.30	0.00	1210.85	0.914	75.40	261.140	F
B6014 Mansfield Road	637.38	565.46	1026.31	0.00	565.73	1.127	136.51	825.202	F
B6028 Stoneyford Road	1078.78	1111.13	277.54	0.00	1415.31	0.762	3.37	12.963	B

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6014 Fackley Road	926.76	1212.72	263.06	0.00	1243.20	0.745	3.92	117.773	F
B6014 Mansfield Road	533.77	555.58	1038.35	0.00	559.65	0.954	131.06	867.058	F
B6028 Stoneyford Road	903.42	909.73	272.70	0.00	1418.38	0.637	1.79	7.161	A

(Default Analysis Set) - Reference Case Evening Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B6014 Fackley Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Warning	Geometry	B6028 Stoneyford Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			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
Reference Case Evening Peak, PM	Reference Case Evening Peak	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3			104.36	F

Junction Network Options

Driving Side	Lighting

Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
B6014 Fackley Road	1	B6014 Fackley Road	
B6014 Mansfield Road	2	B6014 Mansfield Road	
B6028 Stoneyford Road	3	B6028 Stoneyford Road	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
B6014 Fackley Road	0.00	99999.00
B6014 Mansfield Road	0.00	99999.00
B6028 Stoneyford Road	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only

B6014 Fackley Road	3.51	5.74	36.00	11.62	16.00	62.00	
B6014 Mansfield Road	4.00	4.00	0.00	12.00	16.00	51.00	
B6028 Stoneyford Road	3.00	6.00	42.00	23.00	16.00	42.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
B6014 Fackley Road		(calculated)	(calculated)	0.556	1389.337
B6014 Mansfield Road		(calculated)	(calculated)	0.505	1084.170
B6028 Stoneyford Road		(calculated)	(calculated)	0.632	1590.741

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
B6014 Fackley Road	ONE HOUR	✓	1054.00	100.000
B6014 Mansfield Road	ONE HOUR	✓	606.00	100.000
B6028 Stoneyford Road	ONE HOUR	✓	1336.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	**B6014 Fackley Road**	793.51	793.51		
16:45-17:00	**B6014 Mansfield Road**	456.23	456.23		
16:45-17:00	**B6028 Stoneyford Road**	1005.81	1005.81		
17:00-17:15	**B6014 Fackley Road**	947.52	947.52		
17:00-17:15	**B6014 Mansfield**	544.78	544.78		

	Road				
17:00-17:15	**B6028 Stoneyford Road**	1201.04	1201.04		
17:15-17:30	**B6014 Fackley Road**	1160.48	1160.48		
17:15-17:30	**B6014 Mansfield Road**	667.22	667.22		
17:15-17:30	**B6028 Stoneyford Road**	1470.96	1470.96		
17:30-17:45	**B6014 Fackley Road**	1160.48	1160.48		
17:30-17:45	**B6014 Mansfield Road**	667.22	667.22		
17:30-17:45	**B6028 Stoneyford Road**	1470.96	1470.96		
17:45-18:00	**B6014 Fackley Road**	947.52	947.52		
17:45-18:00	**B6014 Mansfield Road**	544.78	544.78		
17:45-18:00	**B6028 Stoneyford Road**	1201.04	1201.04		
18:00-18:15	**B6014 Fackley Road**	793.51	793.51		
18:00-18:15	**B6014 Mansfield**	456.23	456.23		

	Road				
18:00-18:15	B6028 Stoneyford Road	1005.81	1005.81		

Turning Proportions

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

		To		
		B6014 Fackley Road	B6014 Mansfield Road	B6028 Stoneyford Road
From	B6014 Fackley Road	0.000	275.000	779.000
	B6014 Mansfield Road	308.000	0.000	298.000
	B6028 Stoneyford Road	918.000	418.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To		
		B6014 Fackley Road	B6014 Mansfield Road	B6028 Stoneyford Road
From	B6014 Fackley Road	0.00	0.26	0.74
	B6014 Mansfield Road	0.51	0.00	0.49
	B6028 Stoneyford Road	0.69	0.31	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
		B6014 Fackley Road	B6014 Mansfield Road	B6028 Stoneyford Road
From	B6014 Fackley Road	1.000	1.000	1.000
	B6014 Mansfield Road	1.000	1.000	1.000
	B6028 Stoneyford Road	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
		B6014 Fackley Road	B6014 Mansfield Road	B6028 Stoneyford Road
From	B6014 Fackley Road	0.0	0.0	0.0
	B6014 Mansfield Road	0.0	0.0	0.0
	B6028 Stoneyford Road	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B6014 Fackley Road	1.01	81.06	26.43	F
B6014 Mansfield Road	1.01	98.47	18.21	F
B6028 Stoneyford Road	1.06	125.41	56.27	F

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6014 Fackley Road	793.51	786.19	311.91	0.00	1216.06	0.653	1.83	8.241	A
B6014 Mansfield Road	456.23	450.92	581.07	0.00	790.65	0.577	1.33	10.442	B
B6028 Stoneyford Road	1005.81	996.93	229.18	0.00	1445.88	0.696	2.22	7.871	A

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS

B6014 Fackley Road	947.52	939.87	372.28	0.00	1182.53	0.801	3.74	14.390	B
B6014 Mansfield Road	544.78	539.34	694.65	0.00	733.27	0.743	2.69	18.063	C
B6028 Stoneyford Road	1201.04	1189.87	274.12	0.00	1417.48	0.847	5.01	15.108	C

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6014 Fackley Road	1160.48	1103.32	425.42	0.00	1153.01	1.006	18.03	47.382	E
B6014 Mansfield Road	667.22	629.23	815.45	0.00	672.24	0.993	12.19	58.000	F
B6028 Stoneyford Road	1470.96	1359.71	319.81	0.00	1388.60	1.059	32.83	61.322	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6014 Fackley Road	1160.48	1126.87	430.89	0.00	1149.97	1.009	26.43	81.062	F
B6014 Mansfield Road	667.22	643.13	832.85	0.00	663.45	1.006	18.21	98.474	F
B6028 Stoneyford Road	1470.96	1377.18	326.87	0.00	1384.14	1.063	56.27	125.413	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6014 Fackley Road	947.52	1031.88	429.62	0.00	1150.67	0.823	5.34	40.847	E
B6014 Mansfield Road	544.78	601.44	762.65	0.00	698.92	0.779	4.04	47.991	E
B6028 Stoneyford Road	1201.04	1373.13	305.68	0.00	1397.53	0.859	13.25	96.266	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6014 Fackley Road	793.51	806.99	328.29	0.00	1206.96	0.657	1.97	9.287	A
B6014 Mansfield Road	456.23	466.65	596.44	0.00	782.88	0.583	1.44	11.736	B
B6028 Stoneyford Road	1005.81	1049.26	237.18	0.00	1440.83	0.698	2.39	10.182	B

(Default Analysis Set) - 2032 Development Scenario Evening Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description

Warning	Geometry	B6014 Fackley Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	B6028 Stoneyford Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			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
2032 Development Scenario Evening Peak, PM	2032 Development Scenario Evening Peak	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3			274.17	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
B6014 Fackley Road	1	B6014 Fackley Road	
B6014 Mansfield Road	2	B6014 Mansfield Road	
B6028 Stoneyford Road	3	B6028 Stoneyford Road	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
B6014 Fackley Road	0.00	99999.00
B6014 Mansfield Road	0.00	99999.00
B6028 Stoneyford Road	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
B6014 Fackley Road	3.51	5.74	36.00	11.62	16.00	62.00	
B6014 Mansfield Road	4.00	4.00	0.00	12.00	16.00	51.00	
B6028 Stoneyford Road	3.00	6.00	42.00	23.00	16.00	42.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
B6014 Fackley Road		(calculated)	(calculated)	0.556	1389.337
B6014 Mansfield Road		(calculated)	(calculated)	0.505	1084.170
B6028 Stoneyford Road		(calculated)	(calculated)	0.632	1590.741

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

Traffic Flows

Demand Set Data Options

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

		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
B6014 Fackley Road	ONE HOUR	✓	1161.00	100.000
B6014 Mansfield Road	ONE HOUR	✓	667.00	100.000
B6028 Stoneyford Road	ONE HOUR	✓	1480.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	**B6014 Fackley Road**	874.06	874.06		
16:45-17:00	**B6014 Mansfield Road**	502.15	502.15		
16:45-17:00	**B6028 Stoneyford**	1114.22	1114.22		

	Road				
17:00-17:15	**B6014 Fackley Road**	1043.72	1043.72		
17:00-17:15	**B6014 Mansfield Road**	599.62	599.62		
17:00-17:15	**B6028 Stoneyford Road**	1330.49	1330.49		
17:15-17:30	**B6014 Fackley Road**	1278.28	1278.28		
17:15-17:30	**B6014 Mansfield Road**	734.38	734.38		
17:15-17:30	**B6028 Stoneyford Road**	1629.51	1629.51		
17:30-17:45	**B6014 Fackley Road**	1278.28	1278.28		
17:30-17:45	**B6014 Mansfield Road**	734.38	734.38		
17:30-17:45	**B6028 Stoneyford Road**	1629.51	1629.51		
17:45-18:00	**B6014 Fackley Road**	1043.72	1043.72		
17:45-18:00	**B6014 Mansfield Road**	599.62	599.62		
17:45-18:00	**B6028 Stoneyford**	1330.49	1330.49		

	Road				
18:00-18:15	B6014 Fackley Road	874.06	874.06		
18:00-18:15	B6014 Mansfield Road	502.15	502.15		
18:00-18:15	B6028 Stoneyford Road	1114.22	1114.22		

Turning Proportions

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

		To		
From		B6014 Fackley Road	B6014 Mansfield Road	B6028 Stoneyford Road
	B6014 Fackley Road	0.000	305.000	856.000
	B6014 Mansfield Road	327.000	0.000	340.000
	B6028 Stoneyford Road	991.000	489.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To		
From		B6014 Fackley Road	B6014 Mansfield Road	B6028 Stoneyford Road

	B6014 Fackley Road	0.00	0.26	0.74
	B6014 Mansfield Road	0.49	0.00	0.51
	B6028 Stoneyford Road	0.67	0.33	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
		B6014 Fackley Road	**B6014 Mansfield Road**	**B6028 Stoneyford Road**
From	**B6014 Fackley Road**	1.000	1.000	1.000
	B6014 Mansfield Road	1.000	1.000	1.000
	B6028 Stoneyford Road	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

		To		
		B6014 Fackley Road	**B6014 Mansfield Road**	**B6028 Stoneyford Road**
From	**B6014 Fackley Road**	0.0	0.0	0.0
	B6014 Mansfield Road	0.0	0.0	0.0

	B6028 Stoneyford Road	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B6014 Fackley Road	1.13	234.13	82.54	F
B6014 Mansfield Road	1.11	213.61	44.75	F
B6028 Stoneyford Road	1.18	332.87	133.55	F

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6014 Fackley Road	874.06	863.40	363.82	0.00	1187.23	0.736	2.67	10.789	B
B6014 Mansfield Road	502.15	494.76	636.58	0.00	762.60	0.658	1.85	13.108	B

B6028 Stoneyford Road	1114.22	1101.12	242.56	0.00	1437.43	0.775	3.27	10.339	B

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6014 Fackley Road	1043.72	1024.40	429.63	0.00	1150.66	0.907	7.49	25.298	D
B6014 Mansfield Road	599.62	587.83	755.29	0.00	702.64	0.853	4.79	28.764	D
B6028 Stoneyford Road	1330.49	1300.33	288.19	0.00	1408.59	0.945	10.82	27.618	D

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6014 Fackley Road	1278.28	1123.45	456.71	0.00	1135.62	1.126	46.20	98.022	F
B6014 Mansfield Road	734.38	650.32	828.32	0.00	665.75	1.103	25.81	101.723	F
B6028 Stoneyford Road	1629.51	1382.28	318.82	0.00	1389.22	1.173	72.62	118.343	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS

B6014 Fackley Road	1278.28	1132.94	457.88	0.00	1134.97	1.126	82.54	213.193	F
B6014 Mansfield Road	734.38	658.64	835.31	0.00	662.21	1.109	44.75	206.430	F
B6028 Stoneyford Road	1629.51	1385.81	322.90	0.00	1386.65	1.175	133.55	274.117	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6014 Fackley Road	1043.72	1122.70	455.48	0.00	1136.31	0.919	62.79	234.131	F
B6014 Mansfield Road	599.62	651.47	827.76	0.00	666.03	0.900	31.78	213.606	F
B6028 Stoneyford Road	1330.49	1378.55	319.38	0.00	1388.87	0.958	121.53	332.873	F

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

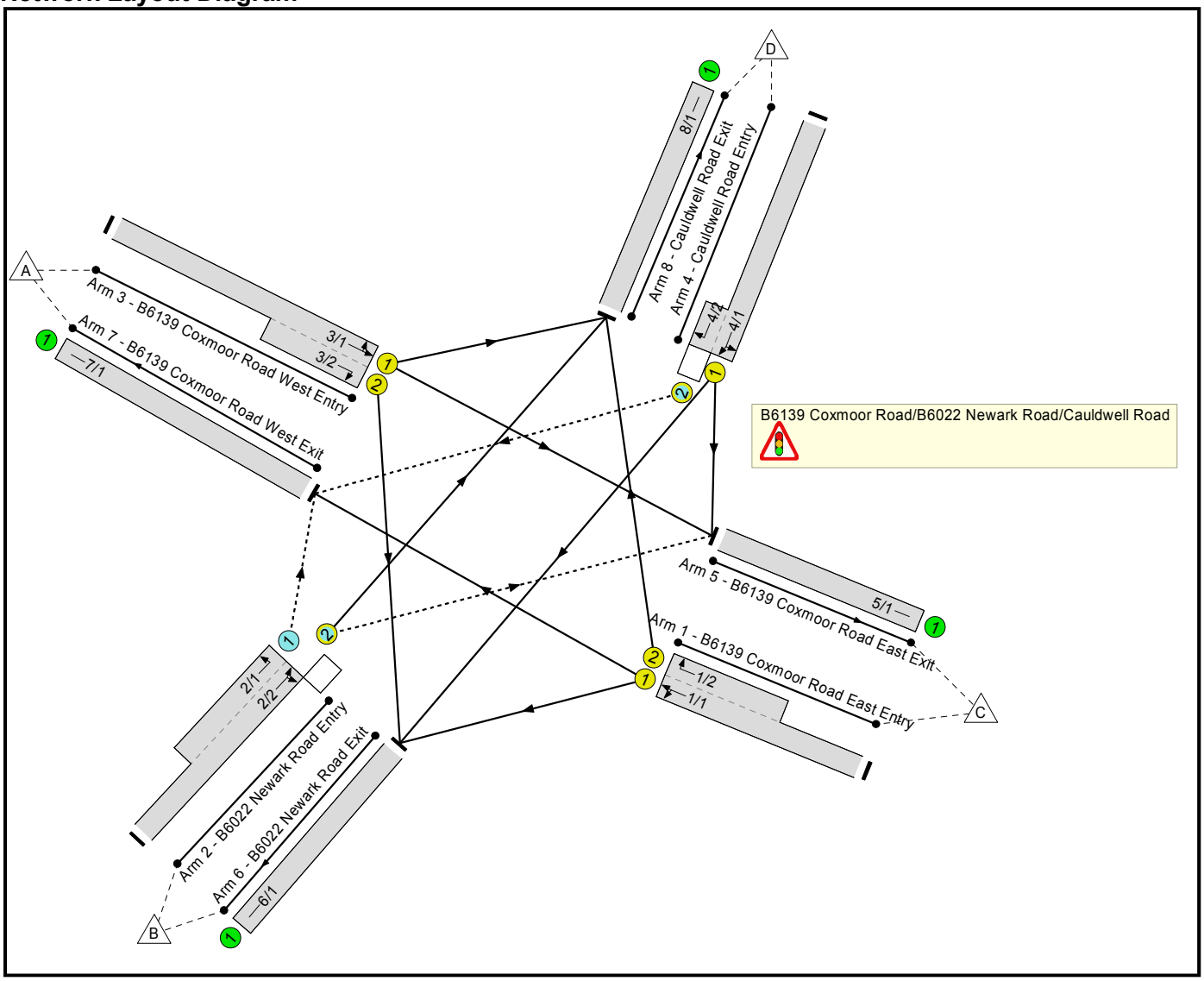
Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6014 Fackley Road	874.06	1106.64	458.84	0.00	1134.44	0.770	4.65	111.916	F
B6014 Mansfield Road	502.15	615.04	815.92	0.00	672.01	0.747	3.56	88.977	F
B6028 Stoneyford Road	1114.22	1388.73	301.53	0.00	1400.15	0.796	52.91	228.225	F

Full Input Data And Results

User and Project Details

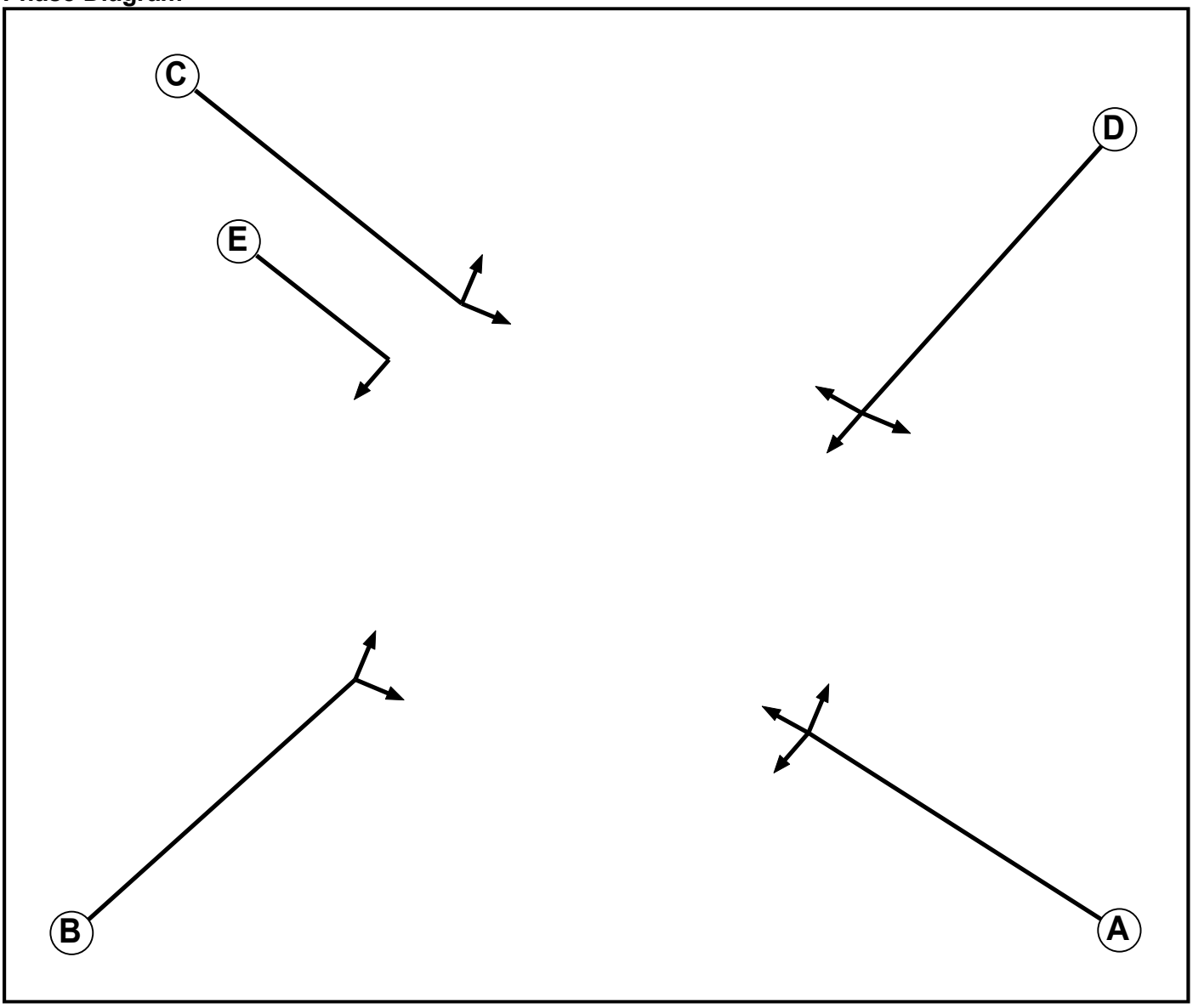
Project:	
Title:	
Location:	
File name:	2016-08-17 J27 JMP.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

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

Full Input Data And Results

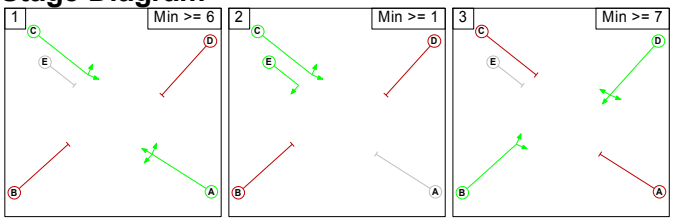
Phase Intergreens Matrix

Terminating Phase	Starting Phase					
		A	B	C	D	E
	A		8	-	8	-
	B	7		8	-	-
	C	-	8		8	-
	D	7	-	8		-
	E	-	-	-	-	

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

From Stage	To Stage		
	1	2	3
1		2	8
2	2		8
3	8	8	

Full Input Data And Results

Give-Way Lane Input Data

Junction: B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road

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)
2/1 (B6022 Newark Road Entry)	7/1 (Left)	1439	0	4/2	1.09	All	-	-	-	-	-
2/2 (B6022 Newark Road Entry)	5/1 (Right)	1439	0	4/1	1.09	All	2.00	2.00	0.50	2	2.00
4/2 (Cauldwell Road Entry)	7/1 (Right)	1439	0	2/2	1.09	To 8/1 (Ahead)	2.00	-	0.50	2	2.00

Full Input Data And Results

Lane Input Data

Junction: B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road												
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 (B6139 Coxmoor Road East Entry)	U	A	2	3	60.0	User	1800	-	-	-	-	-
1/2 (B6139 Coxmoor Road East Entry)	U	A	2	3	8.0	User	1800	-	-	-	-	-
2/1 (B6022 Newark Road Entry)	O		2	3	9.0	User	1800	-	-	-	-	-
2/2 (B6022 Newark Road Entry)	O	B	2	3	60.0	User	1800	-	-	-	-	-
3/1 (B6139 Coxmoor Road West Entry)	U	C	2	3	60.0	User	1800	-	-	-	-	-
3/2 (B6139 Coxmoor Road West Entry)	U	E	2	3	7.0	User	1800	-	-	-	-	-
4/1 (Cauldwell Road Entry)	U	D	2	3	60.0	User	1800	-	-	-	-	-
4/2 (Cauldwell Road Entry)	O	D	2	3	3.0	User	1800	-	-	-	-	-
5/1 (B6139 Coxmoor Road East Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (B6022 Newark Road Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (B6139 Coxmoor Road West Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (Cauldwell Road Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'Reference Case AM'	08:00	09:00	01:00	
2: 'Development Case AM'	08:00	09:00	01:00	
3: 'Reference Case PM'	17:00	18:00	01:00	
4: 'Development Case PM'	17:00	18:00	01:00	

Scenario 1: 'AM Ref' (FG1: 'Reference Case AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	454	754	0	1208
	B	640	0	304	0	944
	C	814	228	0	0	1042
	D	0	0	0	0	0
	Tot.	1454	682	1058	0	3194

Traffic Lane Flows

Lane	Scenario 1: AM Ref
Junction: B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road	
1/1 (with short)	1042(In) 1042(Out)
1/2 (short)	0
2/1 (short)	640
2/2 (with short)	944(In) 304(Out)
3/1 (with short)	1208(In) 754(Out)
3/2 (short)	454
4/1 (with short)	0(In) 0(Out)
4/2 (short)	0
5/1	1058
6/1	682
7/1	1454
8/1	0

Full Input Data And Results

Lane Saturation Flows

Junction: B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road								
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 (B6139 Coxmoor Road East Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (B6139 Coxmoor Road East Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (B6022 Newark Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (B6022 Newark Road Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (B6139 Coxmoor Road West Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (B6139 Coxmoor Road West Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Cauldwell Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (Cauldwell Road Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (B6139 Coxmoor Road East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (B6022 Newark Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (B6139 Coxmoor Road West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Cauldwell Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'PM Ref' (FG3: 'Reference Case PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	449	759	0	1208
	B	645	0	299	0	944
	C	810	232	0	0	1042
	D	0	0	0	0	0
	Tot.	1455	681	1058	0	3194

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM Ref
Junction: B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road	
1/1 (with short)	1042(In) 1042(Out)
1/2 (short)	0
2/1 (short)	645
2/2 (with short)	944(In) 299(Out)
3/1 (with short)	1208(In) 759(Out)
3/2 (short)	449
4/1 (with short)	0(In) 0(Out)
4/2 (short)	0
5/1	1058
6/1	681
7/1	1455
8/1	0

Full Input Data And Results

Lane Saturation Flows

Junction: B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road								
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 (B6139 Coxmoor Road East Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (B6139 Coxmoor Road East Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (B6022 Newark Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (B6022 Newark Road Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (B6139 Coxmoor Road West Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (B6139 Coxmoor Road West Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Cauldwell Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (Cauldwell Road Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (B6139 Coxmoor Road East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (B6022 Newark Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (B6139 Coxmoor Road West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Cauldwell Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 3: 'AM Mit 2032' (FG2: 'Development Case AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	517	752	0	1269
	B	369	0	167	0	536
	C	886	271	0	0	1157
	D	0	0	0	0	0
	Tot.	1255	788	919	0	2962

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: AM Mit 2032
Junction: B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road	
1/1 (with short)	1157(In) 1157(Out)
1/2 (short)	0
2/1 (short)	369
2/2 (with short)	536(In) 167(Out)
3/1 (with short)	1269(In) 752(Out)
3/2 (short)	517
4/1 (with short)	0(In) 0(Out)
4/2 (short)	0
5/1	919
6/1	788
7/1	1255
8/1	0

Full Input Data And Results

Lane Saturation Flows

Junction: B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road								
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 (B6139 Coxmoor Road East Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (B6139 Coxmoor Road East Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (B6022 Newark Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (B6022 Newark Road Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (B6139 Coxmoor Road West Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (B6139 Coxmoor Road West Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Cauldwell Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (Cauldwell Road Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (B6139 Coxmoor Road East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (B6022 Newark Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (B6139 Coxmoor Road West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Cauldwell Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'PM mit 2032' (FG4: 'Development Case PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	480	761	0	1241
	B	673	0	390	0	1063
	C	796	304	0	0	1100
	D	0	0	0	0	0
	Tot.	1469	784	1151	0	3404

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: PM mit 2032
Junction: B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road	
1/1 (with short)	1100(In) 1100(Out)
1/2 (short)	0
2/1 (short)	673
2/2 (with short)	1063(In) 390(Out)
3/1 (with short)	1241(In) 761(Out)
3/2 (short)	480
4/1 (with short)	0(In) 0(Out)
4/2 (short)	0
5/1	1151
6/1	784
7/1	1469
8/1	0

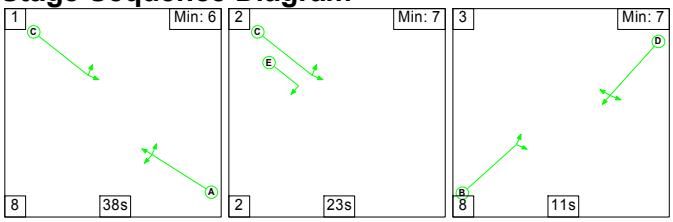
Full Input Data And Results

Lane Saturation Flows

Junction: B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road								
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 (B6139 Coxmoor Road East Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (B6139 Coxmoor Road East Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (B6022 Newark Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (B6022 Newark Road Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (B6139 Coxmoor Road West Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (B6139 Coxmoor Road West Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Cauldwell Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (Cauldwell Road Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (B6139 Coxmoor Road East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (B6022 Newark Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (B6139 Coxmoor Road West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Cauldwell Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'AM Ref' (FG1: 'Reference Case AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

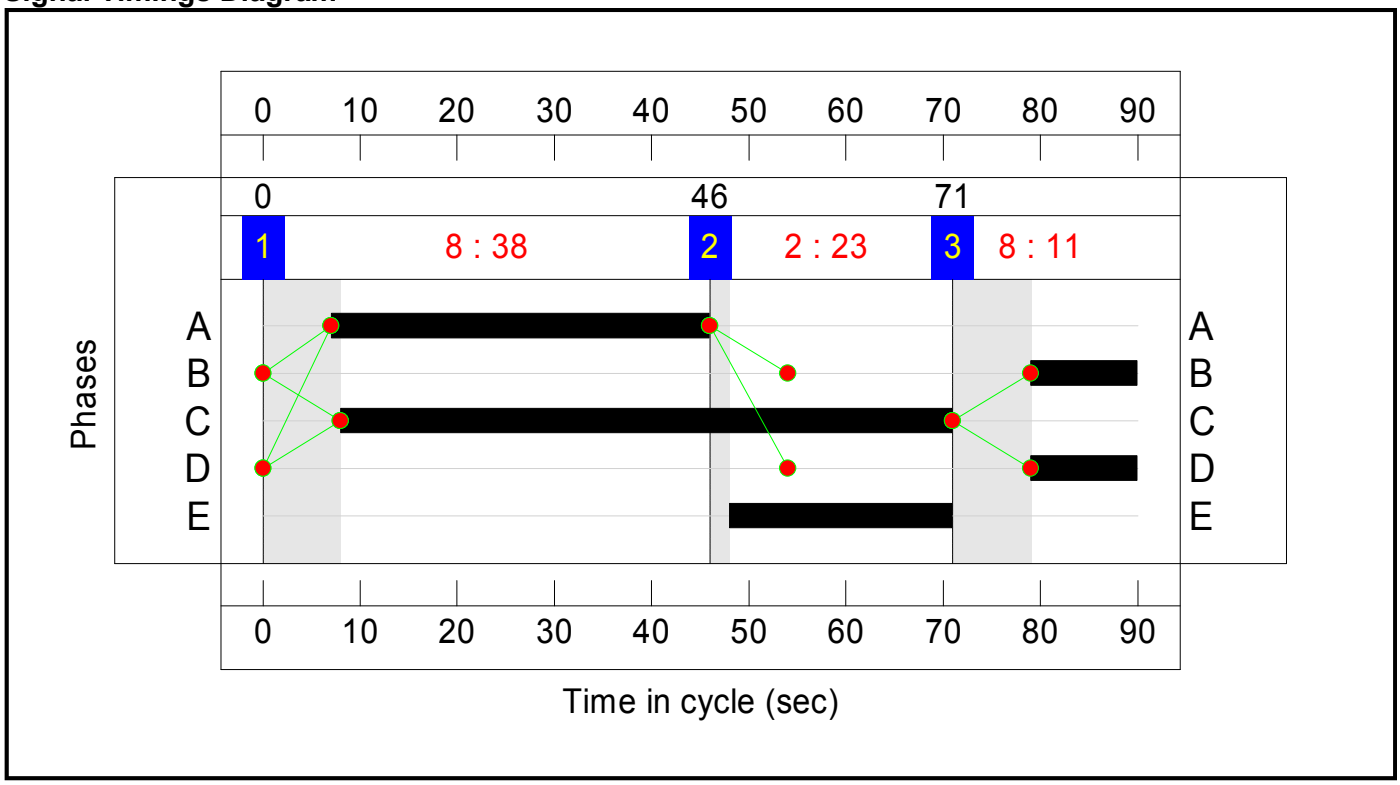


Stage Timings

Stage	1	2	3
Duration	38	23	11
Change Point	0	46	71

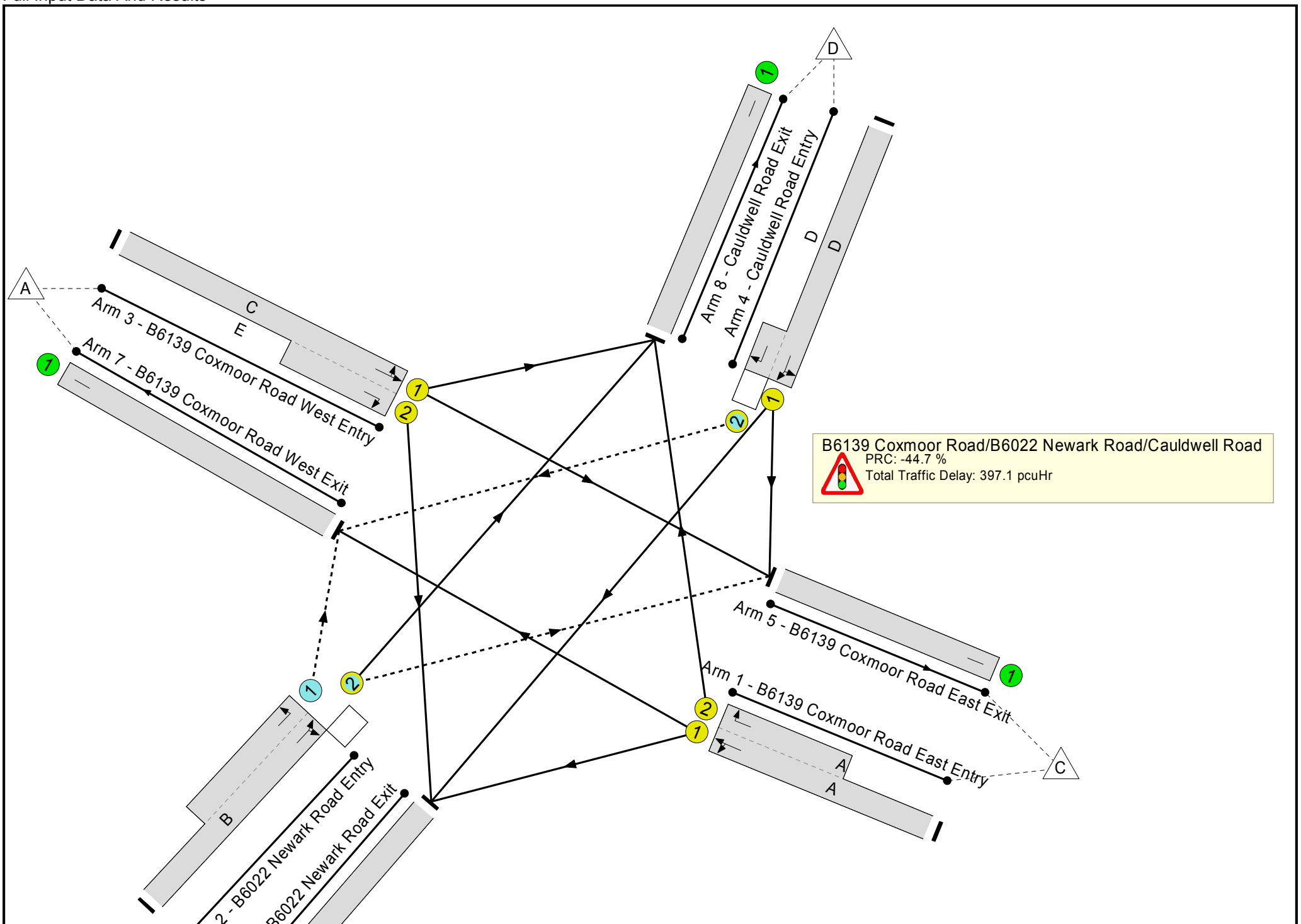
Full Input Data And Results

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**130.3%**
B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**130.3%**
1/1+1/2	B6139 Coxmoor Road East Entry Left Ahead Right	U	N/A	N/A	A		1	39	-	1042	1800:1800	800+0	130.3 : 0.0%
2/2+2/1	B6022 Newark Road Entry Right Left Ahead	O	N/A	N/A	B -		1	11	-	944	1800:1800	240+505	126.7 : 126.7%
3/1+3/2	B6139 Coxmoor Road West Entry Ahead Right Left	U	N/A	N/A	C E		1	63:23	-	1208	1800:1800	590+355	127.8 : 127.8%
4/1+4/2	Cauldwell Road Entry Left Ahead Right	U+O	N/A	N/A	D		1	11	-	0	1800:1800	192+128	0.0 : 0.0%
5/1	B6139 Coxmoor Road East Exit	U	N/A	N/A	-		-	-	-	1058	Inf	Inf	0.0%
6/1	B6022 Newark Road Exit	U	N/A	N/A	-		-	-	-	682	Inf	Inf	0.0%
7/1	B6139 Coxmoor Road West Exit	U	N/A	N/A	-		-	-	-	1454	Inf	Inf	0.0%
8/1	Cauldwell Road Exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%

Full Input Data And Results

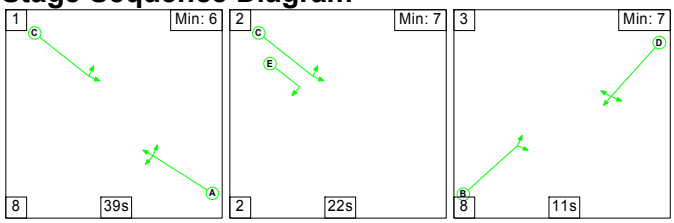
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**455**	**1010**	**119**	**38.3**	**358.7**	**0.1**	**397.1**	**-**	**-**	**-**	**-**
B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road	**-**	**-**	**455**	**1010**	**119**	**38.3**	**358.7**	**0.1**	**397.1**	**-**	**-**	**-**	**-**
1/1+1/2	1042	800	-	-	-	17.4	123.1	-	140.5	485.5	34.4	123.1	157.5
2/2+2/1	944	792	455	1010	119	6.2	101.9	0.1	108.2	412.6	12.4	101.9	114.3
3/1+3/2	1208	945	-	-	-	14.7	133.7	-	148.4	442.3	34.9	133.7	168.7
4/1+4/2	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5/1	830	830	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	530	530	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1177	1177	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -44.7 Total Delay for Signalled Lanes (pcuHr): 397.14 Cycle Time (s): 90
PRC Over All Lanes (%): -44.7 Total Delay Over All Lanes(pcuHr): 397.14

Full Input Data And Results

Scenario 2: 'PM Ref' (FG3: 'Reference Case PM', Plan 1: 'Network Control Plan 1')

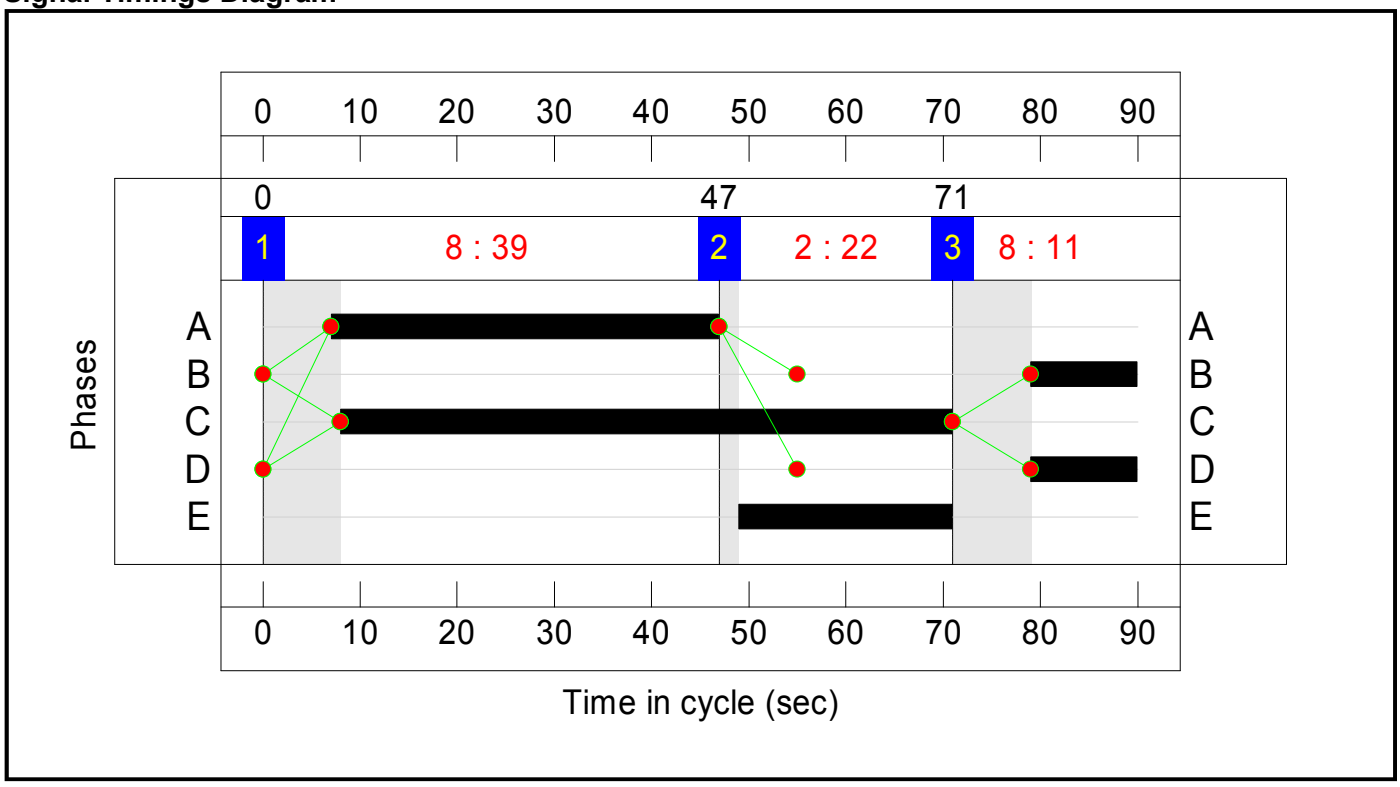
Stage Sequence Diagram



Stage Timings

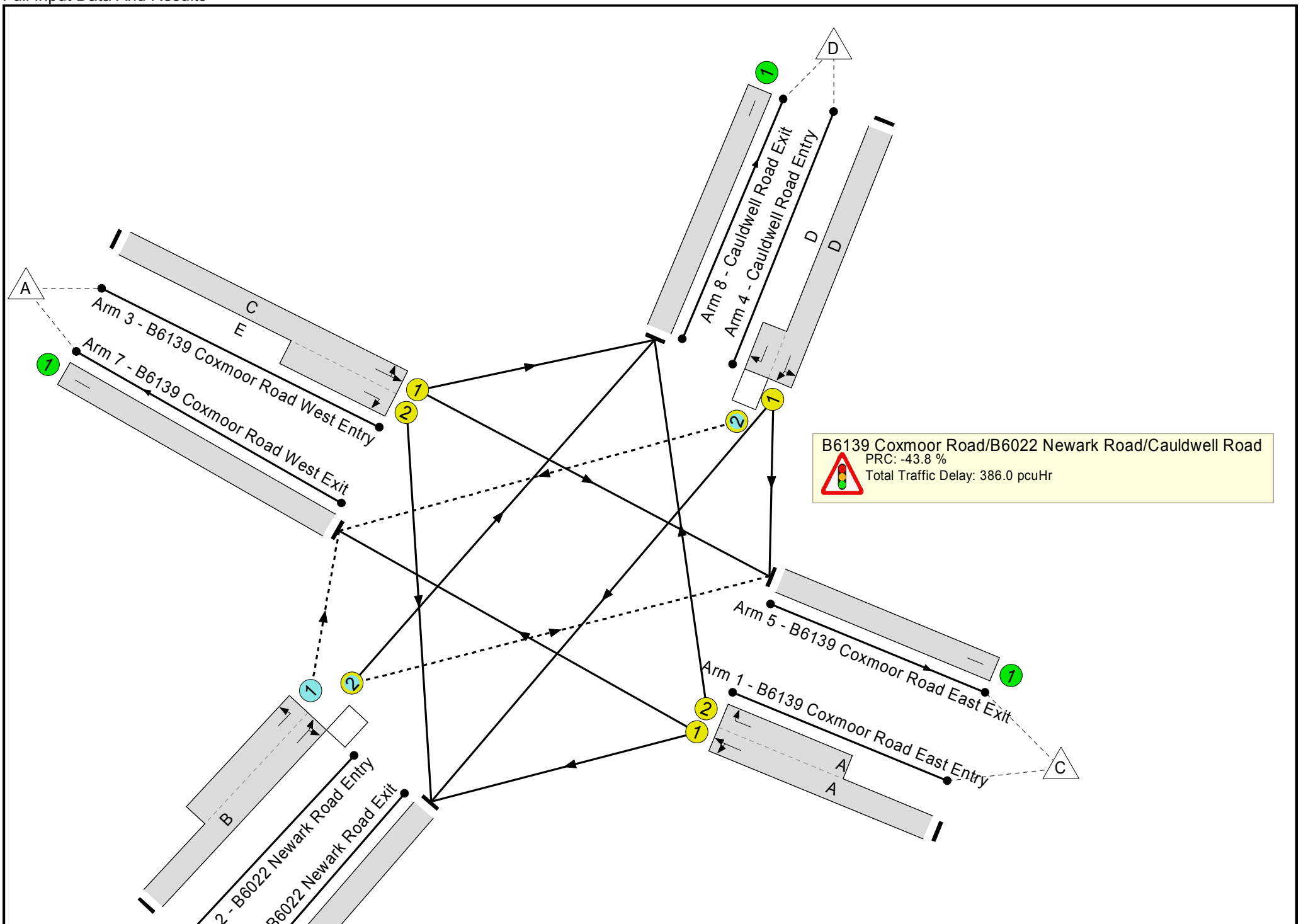
Stage	1	2	3
Duration	39	22	11
Change Point	0	47	71

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**129.4%**
B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**129.4%**
1/1+1/2	B6139 Coxmoor Road East Entry Left Ahead Right	U	N/A	N/A	A		1	40	-	1042	1800:1800	820+0	127.1 : 0.0%
2/2+2/1	B6022 Newark Road Entry Right Left Ahead	O	N/A	N/A	B -		1	11	-	944	1800:1800	240+517	124.6 : 124.6%
3/1+3/2	B6139 Coxmoor Road West Entry Ahead Right Left	U	N/A	N/A	C E		1	63:22	-	1208	1800:1800	586+347	129.4 : 129.4%
4/1+4/2	Cauldwell Road Entry Left Ahead Right	U+O	N/A	N/A	D		1	11	-	0	1800:1800	200+100	0.0 : 0.0%
5/1	B6139 Coxmoor Road East Exit	U	N/A	N/A	-		-	-	-	1058	Inf	Inf	0.0%
6/1	B6022 Newark Road Exit	U	N/A	N/A	-		-	-	-	681	Inf	Inf	0.0%
7/1	B6139 Coxmoor Road West Exit	U	N/A	N/A	-		-	-	-	1455	Inf	Inf	0.0%
8/1	Cauldwell Road Exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%

Full Input Data And Results

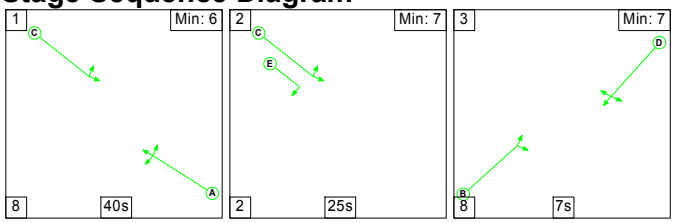
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**466**	**1046**	**139**	**37.3**	**348.6**	**0.1**	**386.0**	**-**	**-**	**-**	**-**
B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road	**-**	**-**	**466**	**1046**	**139**	**37.3**	**348.6**	**0.1**	**386.0**	**-**	**-**	**-**	**-**
1/1+1/2	1042	820	-	-	-	16.4	113.3	-	129.7	448.1	33.9	113.3	147.2
2/2+2/1	944	826	466	1046	139	5.8	95.8	0.1	101.7	387.9	11.4	95.8	107.2
3/1+3/2	1208	933	-	-	-	15.1	139.5	-	154.6	460.6	35.3	139.5	174.8
4/1+4/2	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5/1	826	826	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	529	529	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1223	1223	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -43.8 Total Delay for Signalled Lanes (pcuHr): 385.98 Cycle Time (s): 90
PRC Over All Lanes (%): -43.8 Total Delay Over All Lanes(pcuHr): 385.98

Full Input Data And Results

Scenario 3: 'AM Mit 2032' (FG2: 'Development Case AM', Plan 1: 'Network Control Plan 1')

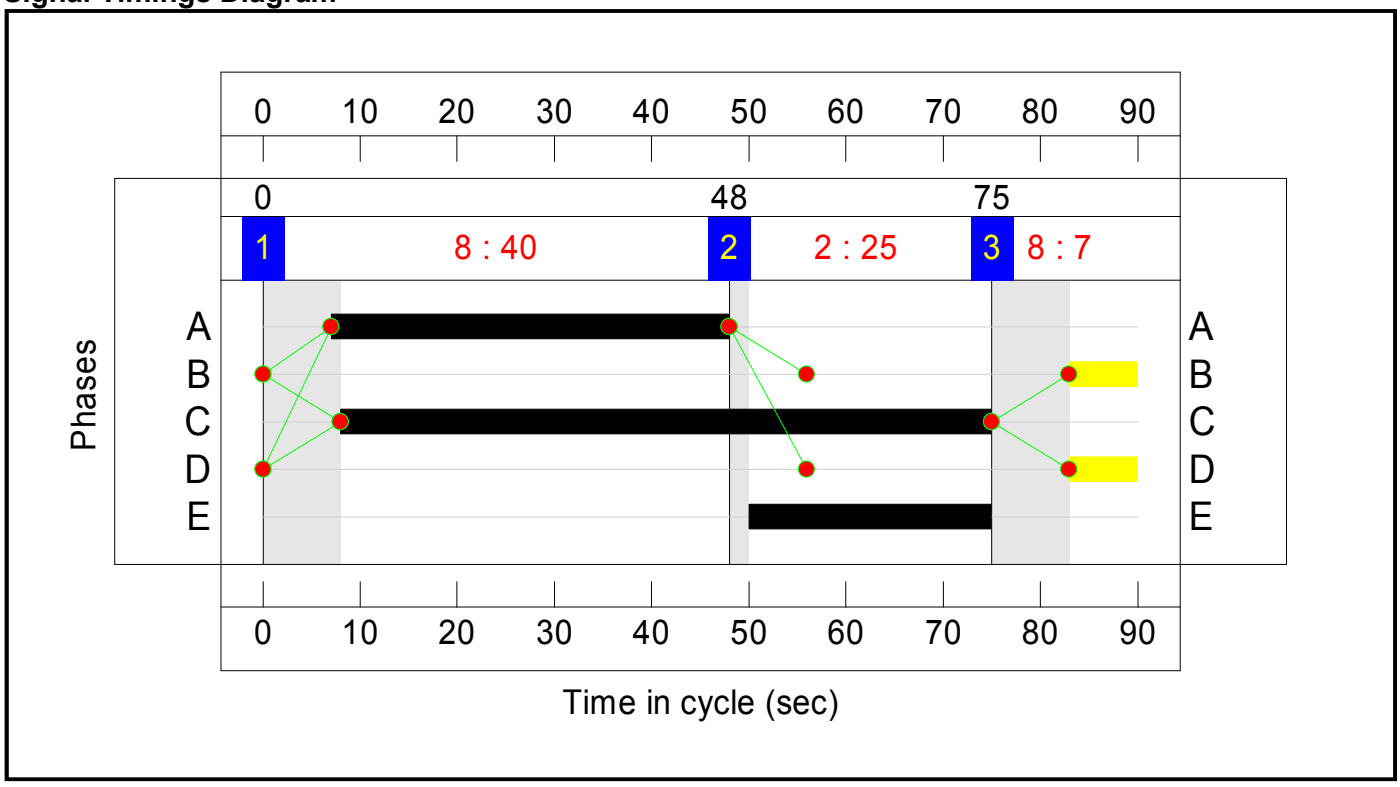
Stage Sequence Diagram



Stage Timings

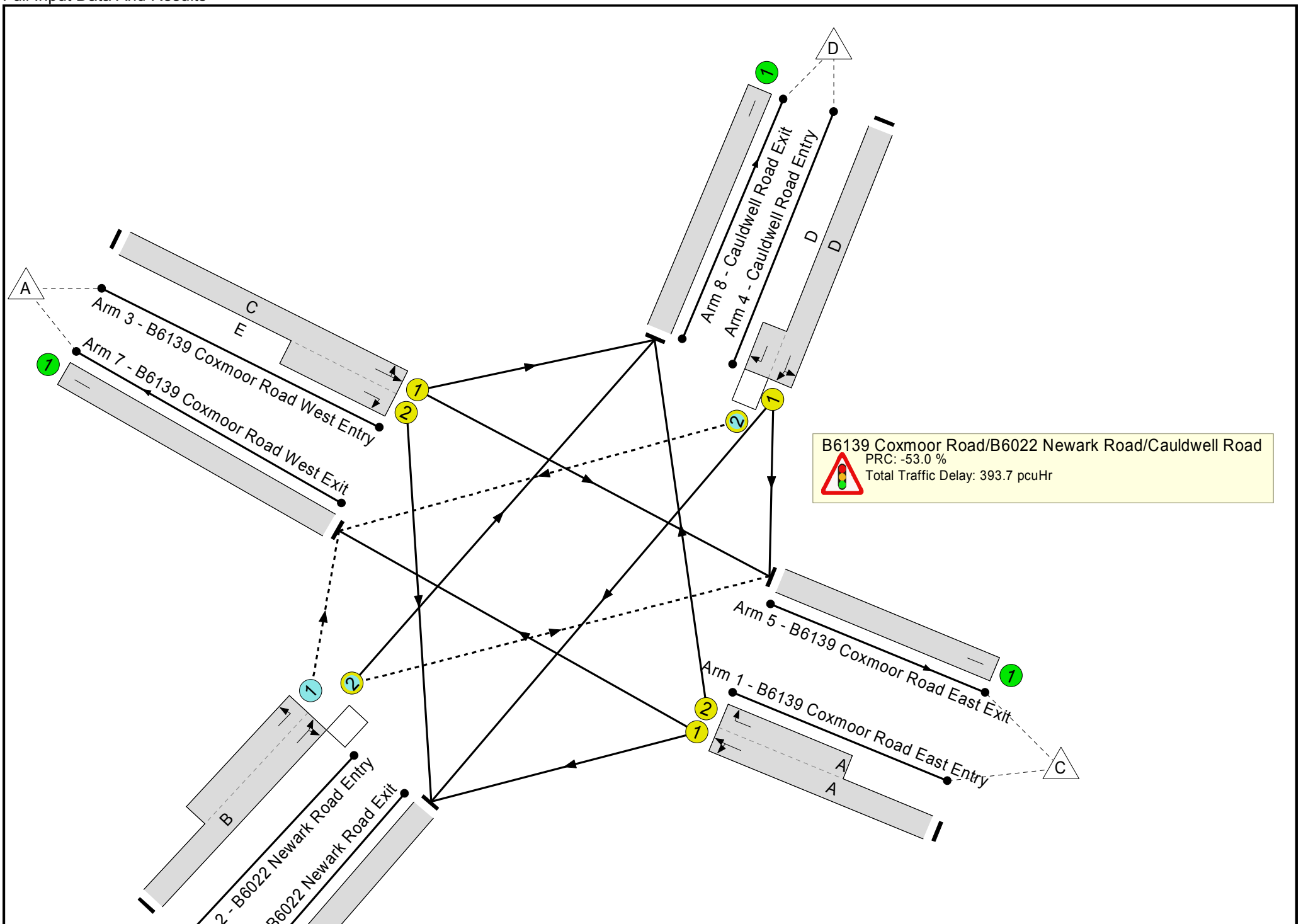
Stage	1	2	3
Duration	40	25	7
Change Point	0	48	75

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**137.7%**
B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**137.7%**
1/1+1/2	B6139 Coxmoor Road East Entry Left Ahead Right	U	N/A	N/A	A		1	41	-	1157	1800:1800	840+0	137.7 : 0.0%
2/2+2/1	B6022 Newark Road Entry Right Left Ahead	O	N/A	N/A	B -		1	7	-	536	1800:1800	160+354	104.4 : 104.4%
3/1+3/2	B6139 Coxmoor Road West Entry Ahead Right Left	U	N/A	N/A	C E		1	67:25	-	1269	1800:1800	549+378	136.9 : 136.9%
4/1+4/2	Cauldwell Road Entry Left Ahead Right	U+O	N/A	N/A	D		1	7	-	0	1800:1800	147+73	0.0 : 0.0%
5/1	B6139 Coxmoor Road East Exit	U	N/A	N/A	-		-	-	-	919	Inf	Inf	0.0%
6/1	B6022 Newark Road Exit	U	N/A	N/A	-		-	-	-	788	Inf	Inf	0.0%
7/1	B6139 Coxmoor Road West Exit	U	N/A	N/A	-		-	-	-	1255	Inf	Inf	0.0%
8/1	Cauldwell Road Exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%

Full Input Data And Results

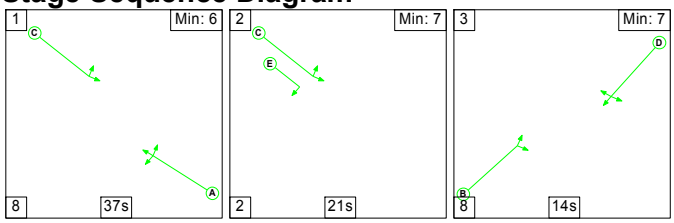
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**338**	**640**	**81**	**42.1**	**351.5**	**0.0**	**393.7**	**-**	**-**	**-**	**-**
B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road	**-**	**-**	**338**	**640**	**81**	**42.1**	**351.5**	**0.0**	**393.7**	**-**	**-**	**-**	**-**
1/1+1/2	1157	840	-	-	-	21.0	160.3	-	181.3	564.0	39.4	160.3	199.7
2/2+2/1	536	529	338	640	81	2.1	18.5	0.0	20.6	138.4	4.2	18.5	22.7
3/1+3/2	1269	927	-	-	-	19.1	172.7	-	191.8	544.1	39.8	172.7	212.5
4/1+4/2	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5/1	709	709	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	575	575	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1012	1012	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -53.0 Total Delay for Signalled Lanes (pcuHr): 393.68 Cycle Time (s): 90
PRC Over All Lanes (%): -53.0 Total Delay Over All Lanes(pcuHr): 393.68

Full Input Data And Results

Scenario 4: 'PM mit 2032' (FG4: 'Development Case PM', Plan 1: 'Network Control Plan 1')

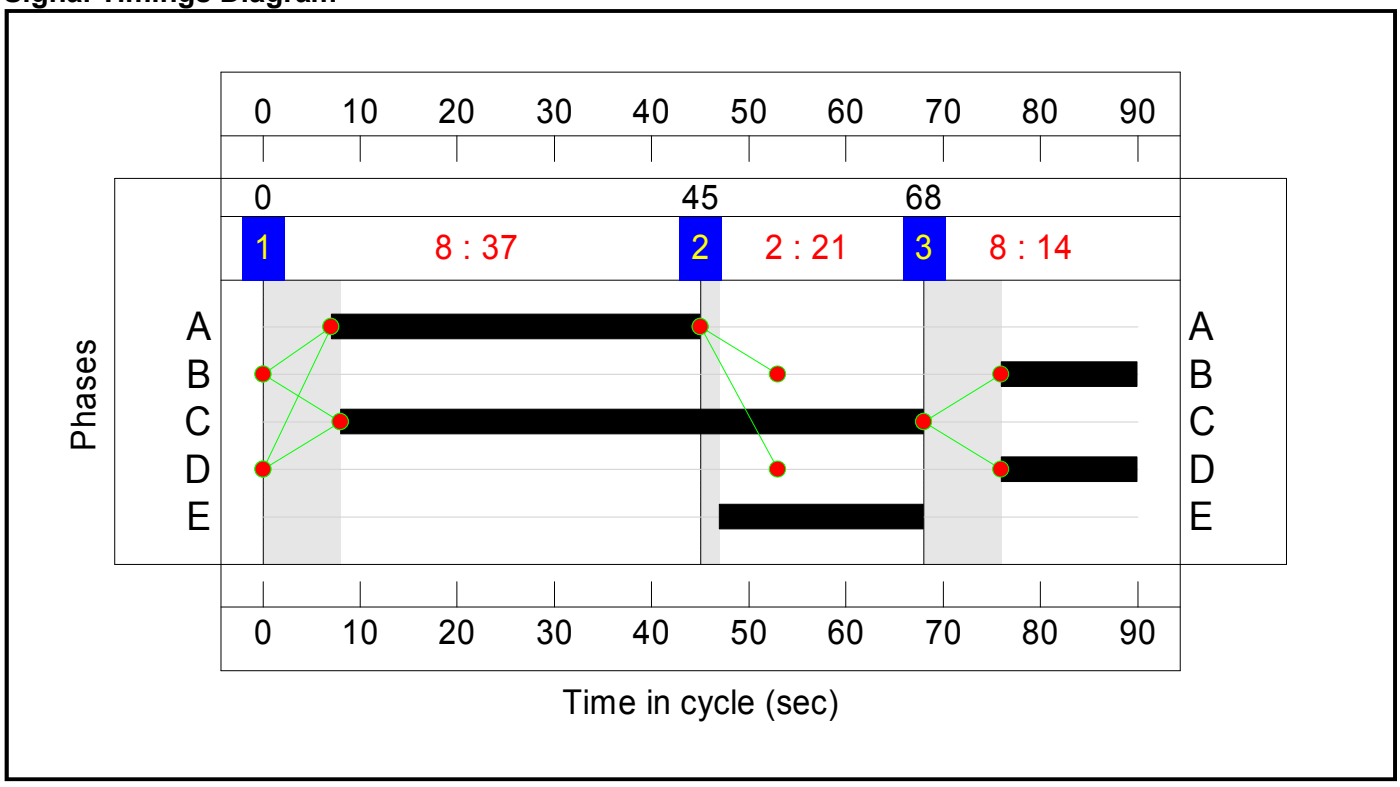
Stage Sequence Diagram



Stage Timings

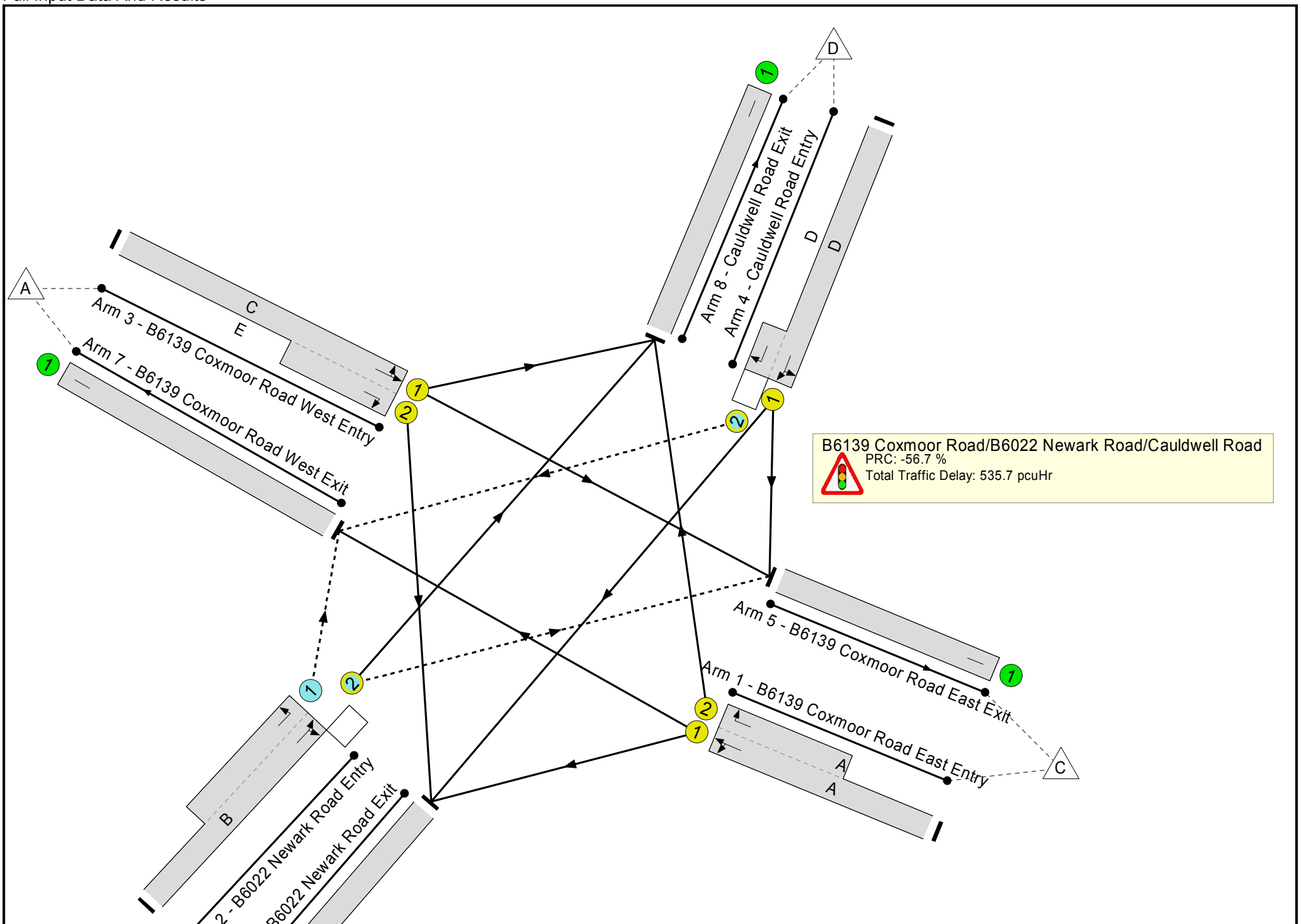
Stage	1	2	3
Duration	37	21	14
Change Point	0	45	68

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**141.0%**
B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**141.0%**
1/1+1/2	B6139 Coxmoor Road East Entry Left Ahead Right	U	N/A	N/A	A		1	38	-	1100	1800:1800	780+0	141.0 : 0.0%
2/2+2/1	B6022 Newark Road Entry Right Left Ahead	O	N/A	N/A	B -		1	14	-	1063	1800:1800	288+497	135.5 : 135.5%
3/1+3/2	B6139 Coxmoor Road West Entry Ahead Right Left	U	N/A	N/A	C E		1	60:21	-	1241	1800:1800	542+342	140.4 : 140.4%
4/1+4/2	Cauldwell Road Entry Left Ahead Right	U+O	N/A	N/A	D		1	14	-	0	1800:1800	210+210	0.0 : 0.0%
5/1	B6139 Coxmoor Road East Exit	U	N/A	N/A	-		-	-	-	1151	Inf	Inf	0.0%
6/1	B6022 Newark Road Exit	U	N/A	N/A	-		-	-	-	784	Inf	Inf	0.0%
7/1	B6139 Coxmoor Road West Exit	U	N/A	N/A	-		-	-	-	1469	Inf	Inf	0.0%
8/1	Cauldwell Road Exit	U	N/A	N/A	-		-	-	-	0	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	**-**	**-**	**480**	**943**	**147**	**52.5**	**483.1**	**0.1**	**535.7**	**-**	**-**	**-**	**-**
B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road	**-**	**-**	**480**	**943**	**147**	**52.5**	**483.1**	**0.1**	**535.7**	**-**	**-**	**-**	**-**
1/1+1/2	1100	780	-	-	-	21.3	161.7	-	183.0	598.9	37.9	161.7	199.6
2/2+2/1	1063	785	480	943	147	12.2	141.1	0.1	153.5	519.7	42.4	141.1	183.5
3/1+3/2	1241	884	-	-	-	19.0	180.3	-	199.3	578.0	37.9	180.3	218.2
4/1+4/2	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5/1	830	830	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	557	557	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1061	1061	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -56.7 Total Delay for Signalled Lanes (pcuHr): 535.72 Cycle Time (s): 90
PRC Over All Lanes (%): -56.7 Total Delay Over All Lanes(pcuHr): 535.72

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]
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Filename: Junction 28 2016 v2.arc8
Path: J:\MID\4300\MID4354 - Ashfield Junction Assessments\CALCULATIONS\DATA\Ashfield_Junction_Assessment_Information\Junction 28 - B6022 and B6021 Kirkby Folly Road ARCADY
Report generation date: 02/09/2016 14:11:35

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC

	A1 - 2032 Development Scenario Evening Peak					
B6022 Newark Road				3.30	21.71	0.78
B6021 Kirkby Folly Road				389.82	1919.14	1.72
B6022 Station Road				189.04	656.27	1.29
	A1 - 2032 Development Scenario Morning Peak					
B6022 Newark Road	2.42	17.11	0.71			
B6021 Kirkby Folly Road	450.31	2346.38	1.89			
B6022 Station Road	69.57	219.63	1.12			
	A1 - Reference Case Evening Peak					
B6022 Newark Road				1.74	13.63	0.64
B6021 Kirkby Folly Road				280.18	1309.79	1.52
B6022 Station Road				91.30	310.47	1.16
	A1 - Reference Case Morning Peak					
B6022 Newark Road	1.42	11.98	0.59			
B6021 Kirkby Folly Road	223.22	1113.41	1.50			
B6022 Station Road	57.82	174.84	1.09			

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

"D1 - Reference Case Morning Peak, AM " model duration: 07:45 - 09:15
"D2 - 2032 Development Scenario Morning Peak, AM" model duration: 07:45 - 09:15
"D3 - Reference Case Evening Peak, PM" model duration: 16:45 - 18:15
"D4 - 2032 Development Scenario Evening Peak, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.4.487 at 02/09/2016 14:11:28

File summary

Title	(untitled)
Location	
Site Number	
Date	23/06/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	noram

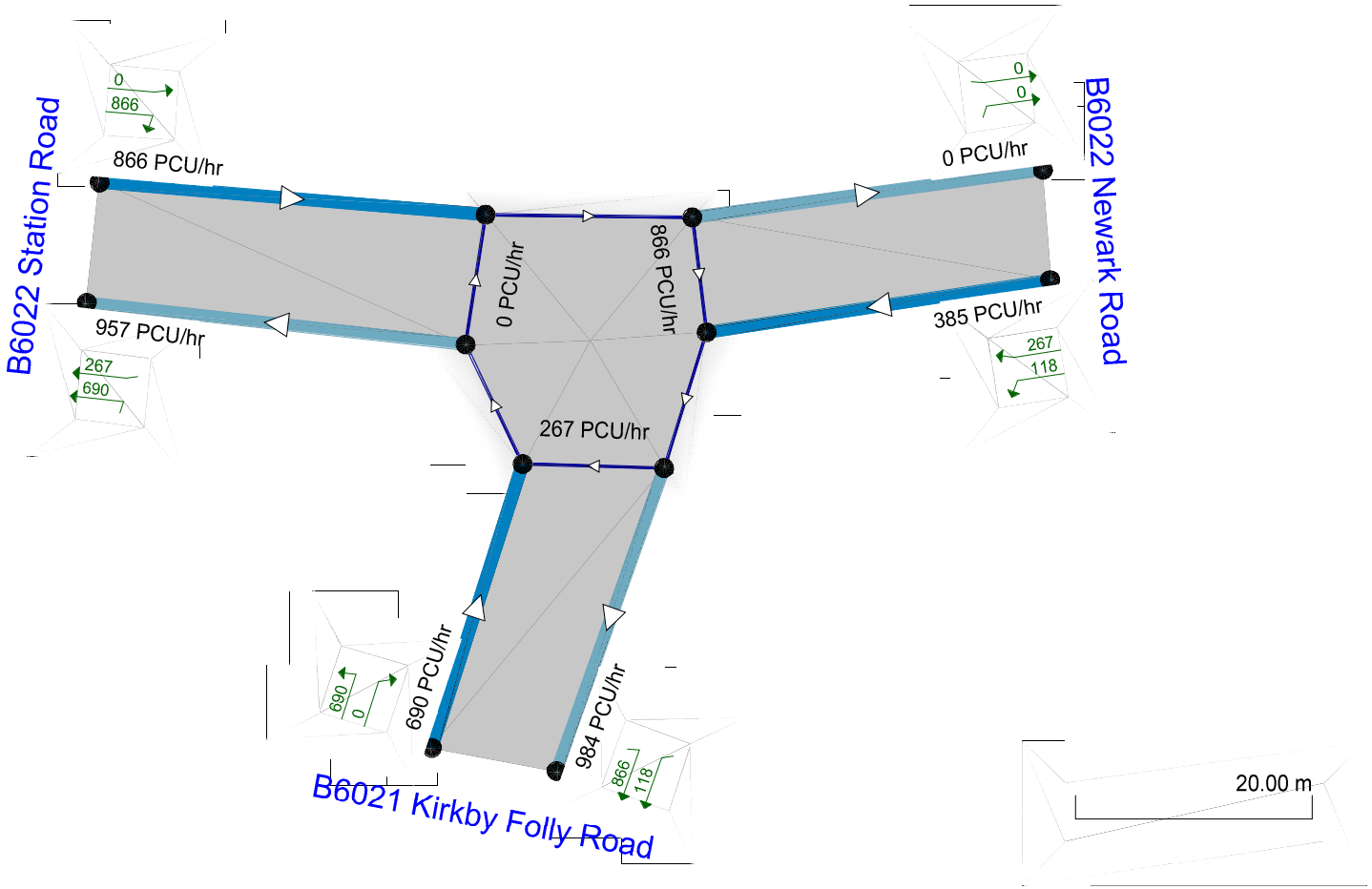
Description	

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 modelled flow through junction (PCU/hr).

Time Segment: (07:45-08:00)

Showing Analysis Set "A1 "; Demand Set "D1 - Reference Case Morning Peak, AM "

The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - Reference Case Morning Peak, 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
(Default Analysis Set)	ARCADY			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
Reference Case Morning Peak, AM	Reference Case Morning Peak	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	B6022 Newark Road/B6021 Kirkby Folly Road	Mini-roundabout	1,2,3	507.99	F

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Name	Arm	Name	Description
B6022 Newark Road	1	B6022 Newark Road	
B6021 Kirkby Folly Road	2	B6021 Kirkby Folly Road	
B6022 Station Road	3	B6022 Station Road	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
B6022 Newark Road	0.00	99999.00
B6021 Kirkby Folly Road	0.00	99999.00
B6022 Station Road	0.00	99999.00

Mini Roundabout Geometry

Name	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
B6022 Newark Road	6.00	6.00	6.00	0.00	5.00	13.42	0.00	✓
B6021 Kirkby Folly Road	3.00	3.00	3.00	0.00	5.00	8.57	0.00	
B6022 Station Road	3.00	3.00	3.00	0.00	5.00	17.19	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
B6022 Newark Road		(calculated)	(calculated)	0.544	1278.811
B6021 Kirkby Folly Road		(calculated)	(calculated)	0.506	857.727
B6022 Station Road		(calculated)	(calculated)	0.646	1006.601

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

Traffic Flows

Demand Set Data Options

Default Vehicle	Vehicle Mix Varies Over	Vehicle Mix Varies Over	Vehicle Mix Varies Over	Vehicle Mix Source	PCU Factor for a HV	Default Turning Proportions	Estimate from entry/exit	Turning Proportions Vary	Turning Proportions Vary	Turning Proportions Vary

Mix	Time	Turn	Entry		(PCU)		counts	Over Time	Over Turn	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 (%)
B6022 Newark Road	ONE HOUR	✓	394.00	100.000
B6021 Kirkby Folly Road	ONE HOUR	✓	872.00	100.000
B6022 Station Road	ONE HOUR	✓	998.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	**B6022 Newark Road**	296.62	296.62		
07:45-08:00	**B6021 Kirkby Folly Road**	656.49	656.49		

07:45-08:00	**B6022 Station Road**	751.35	751.35		
08:00-08:15	**B6022 Newark Road**	354.20	354.20		
08:00-08:15	**B6021 Kirkby Folly Road**	783.91	783.91		
08:00-08:15	**B6022 Station Road**	897.18	897.18		
08:15-08:30	**B6022 Newark Road**	433.80	433.80		
08:15-08:30	**B6021 Kirkby Folly Road**	960.09	960.09		
08:15-08:30	**B6022 Station Road**	1098.82	1098.82		
08:30-08:45	**B6022 Newark Road**	433.80	433.80		
08:30-08:45	**B6021 Kirkby Folly Road**	960.09	960.09		
08:30-08:45	**B6022 Station Road**	1098.82	1098.82		
08:45-09:00	**B6022 Newark Road**	354.20	354.20		
08:45-09:00	**B6021 Kirkby Folly Road**	783.91	783.91		
08:45-09:00	**B6022 Station Road**	897.18	897.18		
09:00-09:15	**B6022 Newark Road**	296.62	296.62		

09:00-09:15	**B6021 Kirkby Folly Road**	656.49	656.49		
09:00-09:15	**B6022 Station Road**	751.35	751.35		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - B6022 Newark Road/ B6021 Kirkby Folly Road (for whole period)

		To		
		B6022 Newark Road	**B6021 Kirkby Folly Road**	**B6022 Station Road**
From	**B6022 Newark Road**	0.000	0.000	394.000
	B6021 Kirkby Folly Road	0.000	0.000	872.000
	B6022 Station Road	0.000	998.000	0.000

Turning Proportions (PCU) - B6022 Newark Road/ B6021 Kirkby Folly Road (for whole period)

		To		
		B6022 Newark Road	**B6021 Kirkby Folly Road**	**B6022 Station Road**
From	**B6022 Newark Road**	0.00	0.00	1.00
	B6021 Kirkby Folly Road	0.00	0.00	1.00
	B6022 Station Road	0.00	1.00	0.00

Vehicle Mix

Average PCU Per Vehicle - B6022 Newark Road/ B6021 Kirkby Folly Road (for whole period)

	To			
From		B6022 Newark Road	B6021 Kirkby Folly Road	B6022 Station Road
	B6022 Newark Road	1.000	1.000	1.000
	B6021 Kirkby Folly Road	1.000	1.000	1.000
	B6022 Station Road	1.000	1.000	1.000

Heavy Vehicle Percentages - B6022 Newark Road/ B6021 Kirkby Folly Road (for whole period)

	To			
From		B6022 Newark Road	B6021 Kirkby Folly Road	B6022 Station Road
	B6022 Newark Road	0.0	0.0	0.0
	B6021 Kirkby Folly Road	0.0	0.0	0.0
	B6022 Station Road	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B6022 Newark Road	0.59	11.98	1.42	B
B6021 Kirkby Folly Road	1.50	1113.41	223.22	F
B6022 Station Road	1.09	174.84	57.82	F

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6022 Newark Road	296.62	294.60	740.23	0.00	876.50	0.338	0.51	6.166	A
B6021 Kirkby Folly Road	656.49	626.15	294.60	0.00	708.69	0.926	7.59	35.795	E
B6022 Station Road	751.35	740.23	0.00	0.00	1006.60	0.746	2.78	13.025	B

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS

B6022 Newark Road	354.20	353.09	882.20	0.00	799.33	0.443	0.78	8.047	A
B6021 Kirkby Folly Road	783.91	670.70	353.09	0.00	679.10	1.154	35.89	134.144	F
B6022 Station Road	897.18	882.20	0.00	0.00	1006.60	0.891	6.52	26.148	D

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6022 Newark Road	433.80	431.45	989.77	0.00	740.87	0.586	1.37	11.546	B
B6021 Kirkby Folly Road	960.09	639.04	431.45	0.00	639.46	1.501	116.15	439.356	F
B6022 Station Road	1098.82	989.77	0.00	0.00	1006.60	1.092	33.79	86.696	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6022 Newark Road	433.80	433.62	1002.68	0.00	733.86	0.591	1.42	11.976	B
B6021 Kirkby Folly Road	960.09	638.28	433.62	0.00	638.36	1.504	196.60	863.309	F
B6022 Station Road	1098.82	1002.68	0.00	0.00	1006.60	1.092	57.82	174.838	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6022 Newark Road	354.20	356.13	989.49	0.00	741.02	0.478	0.93	9.401	A
B6021 Kirkby Folly Road	783.91	677.45	356.13	0.00	677.56	1.157	223.22	1113.411	F
B6022 Station Road	897.18	989.49	0.00	0.00	1006.60	0.891	34.74	170.870	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6022 Newark Road	296.62	297.98	877.33	0.00	801.98	0.370	0.59	7.163	A
B6021 Kirkby Folly Road	656.49	703.83	297.98	0.00	706.98	0.929	211.38	1111.652	F
B6022 Station Road	751.35	877.33	0.00	0.00	1006.60	0.746	3.25	47.563	E

(Default Analysis Set) - 2032 Development Scenario Morning Peak, 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
(Default Analysis Set)	ARCADY			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
2032 Development Scenario Morning Peak, AM	2032 Development Scenario Morning Peak	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	B6022 Newark Road/B6021 Kirkby Folly Road	Mini-roundabout	1,2,3	1041.95	F

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Name	Arm	Name	Description
B6022 Newark Road	1	B6022 Newark Road	
B6021 Kirkby Folly Road	2	B6021 Kirkby Folly Road	
B6022 Station Road	3	B6022 Station Road	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
B6022 Newark Road	0.00	99999.00
B6021 Kirkby Folly Road	0.00	99999.00
B6022 Station Road	0.00	99999.00

Mini Roundabout Geometry

Name	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
B6022 Newark Road	6.00	6.00	6.00	0.00	5.00	13.42	0.00	✓
B6021 Kirkby	3.00	3.00	3.00	0.00	5.00	8.57	0.00	

Folly Road								
B6022 Station Road	3.00	3.00	3.00	0.00	5.00	17.19	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
B6022 Newark Road		(calculated)	(calculated)	0.544	1278.811
B6021 Kirkby Folly Road		(calculated)	(calculated)	0.506	857.727
B6022 Station Road		(calculated)	(calculated)	0.646	1006.601

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
B6022 Newark Road	ONE HOUR	✓	476.00	100.000
B6021 Kirkby Folly Road	ONE HOUR	✓	1017.00	100.000
B6022 Station Road	ONE HOUR	✓	1020.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	**B6022 Newark Road**	358.36	358.36		
07:45-08:00	**B6021 Kirkby Folly Road**	765.65	765.65		
07:45-08:00	**B6022 Station Road**	767.91	767.91		
08:00-08:15	**B6022 Newark Road**	427.91	427.91		
08:00-08:15	**B6021 Kirkby Folly Road**	914.26	914.26		

08:00-08:15	**B6022 Station Road**	916.96	916.96		
08:15-08:30	**B6022 Newark Road**	524.09	524.09		
08:15-08:30	**B6021 Kirkby Folly Road**	1119.74	1119.74		
08:15-08:30	**B6022 Station Road**	1123.04	1123.04		
08:30-08:45	**B6022 Newark Road**	524.09	524.09		
08:30-08:45	**B6021 Kirkby Folly Road**	1119.74	1119.74		
08:30-08:45	**B6022 Station Road**	1123.04	1123.04		
08:45-09:00	**B6022 Newark Road**	427.91	427.91		
08:45-09:00	**B6021 Kirkby Folly Road**	914.26	914.26		
08:45-09:00	**B6022 Station Road**	916.96	916.96		
09:00-09:15	**B6022 Newark Road**	358.36	358.36		
09:00-09:15	**B6021 Kirkby Folly Road**	765.65	765.65		
09:00-09:15	**B6022 Station Road**	767.91	767.91		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - B6022 Newark Road/ B6021 Kirkby Folly Road (for whole period)

	To			
From		B6022 Newark Road	B6021 Kirkby Folly Road	B6022 Station Road
	B6022 Newark Road	0.000	0.000	476.000
	B6021 Kirkby Folly Road	0.000	0.000	1017.000
	B6022 Station Road	0.000	1020.000	0.000

Turning Proportions (PCU) - B6022 Newark Road/ B6021 Kirkby Folly Road (for whole period)

	To			
From		B6022 Newark Road	B6021 Kirkby Folly Road	B6022 Station Road
	B6022 Newark Road	0.00	0.00	1.00
	B6021 Kirkby Folly Road	0.00	0.00	1.00
	B6022 Station Road	0.00	1.00	0.00

Vehicle Mix

Average PCU Per Vehicle - B6022 Newark Road/ B6021 Kirkby Folly Road (for whole period)

	To			
From		B6022 Newark Road	B6021 Kirkby Folly Road	B6022 Station Road
	B6022 Newark Road	1.000	1.000	1.000
	B6021 Kirkby Folly Road	1.000	1.000	1.000
	B6022 Station Road	1.000	1.000	1.000

Heavy Vehicle Percentages - B6022 Newark Road/ B6021 Kirkby Folly Road (for whole period)

	To			
From		B6022 Newark Road	B6021 Kirkby Folly Road	B6022 Station Road
	B6022 Newark Road	0.0	0.0	0.0
	B6021 Kirkby Folly Road	0.0	0.0	0.0
	B6022 Station Road	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B6022 Newark Road	0.71	17.11	2.42	C

B6021 Kirkby Folly Road	1.89	2346.38	450.31	F
B6022 Station Road	1.12	219.63	69.57	F

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6022 Newark Road	358.36	355.58	755.85	0.00	868.01	0.413	0.69	6.988	A
B6021 Kirkby Folly Road	765.65	654.33	355.58	0.00	677.84	1.130	27.83	90.738	F
B6022 Station Road	767.91	755.85	0.00	0.00	1006.60	0.763	3.01	13.767	B

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6022 Newark Road	427.91	426.07	898.82	0.00	790.30	0.541	1.15	9.837	A
B6021 Kirkby Folly Road	914.26	641.48	426.07	0.00	642.18	1.424	96.03	368.631	F

B6022 Station Road	916.96	898.82	0.00	0.00	1006.60	0.911	7.55	29.268	D

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6022 Newark Road	524.09	519.48	993.95	0.00	738.60	0.710	2.31	16.093	C
B6021 Kirkby Folly Road	1119.74	594.87	519.48	0.00	594.92	1.882	227.24	983.737	F
B6022 Station Road	1123.04	993.95	0.00	0.00	1006.60	1.116	39.82	98.905	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6022 Newark Road	524.09	523.65	1004.07	0.00	733.10	0.715	2.42	17.107	C
B6021 Kirkby Folly Road	1119.74	592.80	523.65	0.00	592.81	1.889	358.98	1787.579	F
B6022 Station Road	1123.04	1004.07	0.00	0.00	1006.60	1.116	69.57	205.871	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6022 Newark Road	427.91	431.92	992.34	0.00	739.48	0.579	1.41	11.854	B

B6021 Kirkby Folly Road	914.26	639.20	431.92	0.00	639.22	1.430	427.74	2151.314	F
B6022 Station Road	916.96	992.34	0.00	0.00	1006.60	0.911	50.72	219.626	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6022 Newark Road	358.36	360.37	954.94	0.00	759.80	0.472	0.91	9.057	A
B6021 Kirkby Folly Road	765.65	675.38	360.37	0.00	675.41	1.134	450.31	2346.380	F
B6022 Station Road	767.91	954.94	0.00	0.00	1006.60	0.763	3.97	95.180	F

(Default Analysis Set) - Reference Case Evening Peak, 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
(Default Analysis Set)	ARCADY			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
Reference Case Evening Peak, PM	Reference Case Evening Peak	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	B6022 Newark Road/B6021 Kirkby Folly Road	Mini-roundabout	1,2,3	664.21	F

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Name	Arm	Name	Description
B6022 Newark Road	1	B6022 Newark Road	

B6021 Kirkby Folly Road	2	B6021 Kirkby Folly Road	
B6022 Station Road	3	B6022 Station Road	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
B6022 Newark Road	0.00	99999.00
B6021 Kirkby Folly Road	0.00	99999.00
B6022 Station Road	0.00	99999.00

Mini Roundabout Geometry

Name	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
B6022 Newark Road	6.00	6.00	6.00	0.00	5.00	13.42	0.00	✓
B6021 Kirkby Folly Road	3.00	3.00	3.00	0.00	5.00	8.57	0.00	
B6022 Station Road	3.00	3.00	3.00	0.00	5.00	17.19	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
B6022 Newark Road		(calculated)	(calculated)	0.544	1278.811
B6021 Kirkby Folly Road		(calculated)	(calculated)	0.506	857.727
B6022 Station Road		(calculated)	(calculated)	0.646	1006.601

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
B6022 Newark Road	ONE HOUR	✓	426.00	100.000

B6021 Kirkby Folly Road	ONE HOUR	✓	1009.00	100.000
B6022 Station Road	ONE HOUR	✓	1058.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	**B6022 Newark Road**	320.72	320.72		
16:45-17:00	**B6021 Kirkby Folly Road**	759.63	759.63		
16:45-17:00	**B6022 Station Road**	796.52	796.52		
17:00-17:15	**B6022 Newark Road**	382.97	382.97		
17:00-17:15	**B6021 Kirkby Folly Road**	907.07	907.07		
17:00-17:15	**B6022 Station Road**	951.12	951.12		
17:15-17:30	**B6022 Newark Road**	469.03	469.03		
17:15-17:30	**B6021 Kirkby Folly Road**	1110.93	1110.93		

17:15-17:30	**B6022 Station Road**	1164.88	1164.88		
17:30-17:45	**B6022 Newark Road**	469.03	469.03		
17:30-17:45	**B6021 Kirkby Folly Road**	1110.93	1110.93		
17:30-17:45	**B6022 Station Road**	1164.88	1164.88		
17:45-18:00	**B6022 Newark Road**	382.97	382.97		
17:45-18:00	**B6021 Kirkby Folly Road**	907.07	907.07		
17:45-18:00	**B6022 Station Road**	951.12	951.12		
18:00-18:15	**B6022 Newark Road**	320.72	320.72		
18:00-18:15	**B6021 Kirkby Folly Road**	759.63	759.63		
18:00-18:15	**B6022 Station Road**	796.52	796.52		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - B6022 Newark Road/ B6021 Kirkby Folly Road (for whole period)

	To			
From		**B6022 Newark Road**	**B6021 Kirkby Folly Road**	**B6022 Station Road**

	B6022 Newark Road	0.000	197.000	229.000
	B6021 Kirkby Folly Road	0.000	0.000	1009.000
	B6022 Station Road	0.000	1058.000	0.000

Turning Proportions (PCU) - B6022 Newark Road/ B6021 Kirkby Folly Road (for whole period)

		To		
From		**B6022 Newark Road**	**B6021 Kirkby Folly Road**	**B6022 Station Road**
	B6022 Newark Road	0.00	0.46	0.54
	B6021 Kirkby Folly Road	0.00	0.00	1.00
	B6022 Station Road	0.00	1.00	0.00

Vehicle Mix

Average PCU Per Vehicle - B6022 Newark Road/ B6021 Kirkby Folly Road (for whole period)

		To		
From		**B6022 Newark Road**	**B6021 Kirkby Folly Road**	**B6022 Station Road**
	B6022 Newark Road	1.000	1.000	1.000
	B6021 Kirkby Folly Road	1.000	1.000	1.000

	B6022 Station Road	1.000	1.000	1.000

Heavy Vehicle Percentages - B6022 Newark Road/ B6021 Kirkby Folly Road (for whole period)

		To		
		B6022 Newark Road	**B6021 Kirkby Folly Road**	**B6022 Station Road**
From	**B6022 Newark Road**	0.0	0.0	0.0
	B6021 Kirkby Folly Road	0.0	0.0	0.0
	B6022 Station Road	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B6022 Newark Road	0.64	13.63	1.74	B
B6021 Kirkby Folly Road	1.52	1309.79	280.18	F
B6022 Station Road	1.16	310.47	91.30	F

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6022 Newark Road	320.72	318.34	782.55	0.00	853.50	0.376	0.59	6.698	A
B6021 Kirkby Folly Road	759.63	711.73	171.12	0.00	771.16	0.985	11.98	44.816	E
B6022 Station Road	796.52	782.55	0.00	0.00	1006.60	0.791	3.49	15.243	C

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6022 Newark Road	382.97	381.52	925.39	0.00	775.86	0.494	0.96	9.096	A
B6021 Kirkby Folly Road	907.07	749.49	205.09	0.00	753.97	1.203	51.37	167.217	F
B6022 Station Road	951.12	925.39	0.00	0.00	1006.60	0.945	9.92	35.987	E

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS

B6022 Newark Road	469.03	466.09	998.95	0.00	735.88	0.637	1.69	13.197	B
B6021 Kirkby Folly Road	1110.93	730.71	250.55	0.00	730.97	1.520	146.43	496.497	F
B6022 Station Road	1164.88	998.95	0.00	0.00	1006.60	1.157	51.41	122.921	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6022 Newark Road	469.03	468.84	1005.31	0.00	732.42	0.640	1.74	13.635	B
B6021 Kirkby Folly Road	1110.93	730.17	252.03	0.00	730.23	1.521	241.62	947.377	F
B6022 Station Road	1164.88	1005.31	0.00	0.00	1006.60	1.157	91.30	264.271	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6022 Newark Road	382.97	385.51	995.69	0.00	737.65	0.519	1.10	10.297	B
B6021 Kirkby Folly Road	907.07	752.82	207.23	0.00	752.89	1.205	280.18	1246.039	F
B6022 Station Road	951.12	995.69	0.00	0.00	1006.60	0.945	80.15	310.474	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6022 Newark Road	320.72	322.01	994.20	0.00	738.46	0.434	0.78	8.672	A
B6021 Kirkby Folly Road	759.63	767.42	173.10	0.00	770.16	0.986	278.23	1309.787	F
B6022 Station Road	796.52	994.20	0.00	0.00	1006.60	0.791	30.73	204.203	F

(Default Analysis Set) - 2032 Development Scenario Evening Peak, 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
(Default Analysis Set)	ARCADY			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
2032 Development Scenario Evening Peak,	2032 Development Scenario Evening Peak	PM		ONE HOUR	16:45	18:15	90	15		

PM										

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	B6022 Newark Road/B6021 Kirkby Folly Road	Mini-roundabout	1,2,3	1013.26	F

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Name	Arm	Name	Description
B6022 Newark Road	1	B6022 Newark Road	
B6021 Kirkby Folly Road	2	B6021 Kirkby Folly Road	
B6022 Station Road	3	B6022 Station Road	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
B6022 Newark Road	0.00	99999.00
B6021 Kirkby Folly Road	0.00	99999.00
B6022 Station Road	0.00	99999.00

Mini Roundabout Geometry

Name	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
B6022 Newark Road	6.00	6.00	6.00	0.00	5.00	13.42	0.00	✓
B6021 Kirkby Folly Road	3.00	3.00	3.00	0.00	5.00	8.57	0.00	
B6022 Station Road	3.00	3.00	3.00	0.00	5.00	17.19	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
B6022 Newark Road		(calculated)	(calculated)	0.544	1278.811
B6021 Kirkby Folly Road		(calculated)	(calculated)	0.506	857.727

B6022 Station Road		(calculated)	(calculated)	0.646	1006.601

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
B6022 Newark Road	ONE HOUR	✓	516.00	100.000
B6021 Kirkby Folly Road	ONE HOUR	✓	1031.00	100.000
B6022 Station Road	ONE HOUR	✓	1183.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	B6022 Newark Road	388.47	388.47		
16:45-17:00	B6021 Kirkby Folly Road	776.19	776.19		
16:45-17:00	B6022 Station Road	890.62	890.62		
17:00-17:15	B6022 Newark Road	463.87	463.87		
17:00-17:15	B6021 Kirkby Folly Road	926.85	926.85		
17:00-17:15	B6022 Station Road	1063.49	1063.49		
17:15-17:30	B6022 Newark Road	568.13	568.13		
17:15-17:30	B6021 Kirkby Folly Road	1135.15	1135.15		
17:15-17:30	B6022 Station Road	1302.51	1302.51		
17:30-17:45	B6022 Newark Road	568.13	568.13		
17:30-17:45	B6021 Kirkby Folly Road	1135.15	1135.15		
17:30-17:45	B6022 Station Road	1302.51	1302.51		

17:45-18:00	**B6022 Newark Road**	463.87	463.87		
17:45-18:00	**B6021 Kirkby Folly Road**	926.85	926.85		
17:45-18:00	**B6022 Station Road**	1063.49	1063.49		
18:00-18:15	**B6022 Newark Road**	388.47	388.47		
18:00-18:15	**B6021 Kirkby Folly Road**	776.19	776.19		
18:00-18:15	**B6022 Station Road**	890.62	890.62		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - B6022 Newark Road/ B6021 Kirkby Folly Road (for whole period)

		To		
		B6022 Newark Road	**B6021 Kirkby Folly Road**	**B6022 Station Road**
From	**B6022 Newark Road**	0.000	158.000	358.000
	B6021 Kirkby Folly Road	0.000	0.000	1031.000
	B6022 Station Road	0.000	1183.000	0.000

Turning Proportions (PCU) - B6022 Newark Road/ B6021 Kirkby Folly Road (for whole period)

	To			
From		B6022 Newark Road	B6021 Kirkby Folly Road	B6022 Station Road
	B6022 Newark Road	0.00	0.31	0.69
	B6021 Kirkby Folly Road	0.00	0.00	1.00
	B6022 Station Road	0.00	1.00	0.00

Vehicle Mix

Average PCU Per Vehicle - B6022 Newark Road/ B6021 Kirkby Folly Road (for whole period)

	To			
From		B6022 Newark Road	B6021 Kirkby Folly Road	B6022 Station Road
	B6022 Newark Road	1.000	1.000	1.000
	B6021 Kirkby Folly Road	1.000	1.000	1.000
	B6022 Station Road	1.000	1.000	1.000

Heavy Vehicle Percentages - B6022 Newark Road/ B6021 Kirkby Folly Road (for whole period)

	To			
From		B6022 Newark Road	B6021 Kirkby Folly Road	B6022 Station Road

	B6022 Newark Road	0.0	0.0	0.0
	B6021 Kirkby Folly Road	0.0	0.0	0.0
	B6022 Station Road	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B6022 Newark Road	0.78	21.71	3.30	C
B6021 Kirkby Folly Road	1.72	1919.14	389.82	F
B6022 Station Road	1.29	656.27	189.04	F

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS

B6022 Newark Road	388.47	384.84	865.99	0.00	808.15	0.481	0.91	8.435	A
B6021 Kirkby Folly Road	776.19	690.44	267.00	0.00	722.65	1.074	21.44	70.473	F
B6022 Station Road	890.62	865.99	0.00	0.00	1006.60	0.885	6.16	22.683	C

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6022 Newark Road	463.87	461.13	982.74	0.00	744.69	0.623	1.59	12.573	B
B6021 Kirkby Folly Road	926.85	694.55	319.93	0.00	695.87	1.332	79.51	277.915	F
B6022 Station Road	1063.49	982.74	0.00	0.00	1006.60	1.057	26.35	73.062	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6022 Newark Road	568.13	561.89	1005.22	0.00	732.47	0.776	3.15	20.368	C
B6021 Kirkby Folly Road	1135.15	660.41	389.84	0.00	660.51	1.719	198.20	765.936	F
B6022 Station Road	1302.51	1005.22	0.00	0.00	1006.60	1.294	100.67	236.881	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6022 Newark Road	568.13	567.55	1006.37	0.00	731.85	0.776	3.30	21.712	C
B6021 Kirkby Folly Road	1135.15	658.50	393.77	0.00	658.52	1.724	317.36	1416.403	F
B6022 Station Road	1302.51	1006.37	0.00	0.00	1006.60	1.294	174.70	499.113	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6022 Newark Road	463.87	469.88	1006.13	0.00	731.98	0.634	1.80	14.034	B
B6021 Kirkby Folly Road	926.85	692.78	326.00	0.00	692.80	1.338	375.88	1772.775	F
B6022 Station Road	1063.49	1006.13	0.00	0.00	1006.60	1.057	189.04	656.270	F

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

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B6022 Newark Road	388.47	391.06	1001.30	0.00	734.60	0.529	1.15	10.558	B
B6021 Kirkby Folly Road	776.19	720.40	271.32	0.00	720.47	1.077	389.82	1919.138	F

B6022 Station Road	890.62	1001.30	0.00	0.00	1006.60	0.885	161.37	630.381	F

Appendix D – Potential Mitigation Junction Assessment Outputs

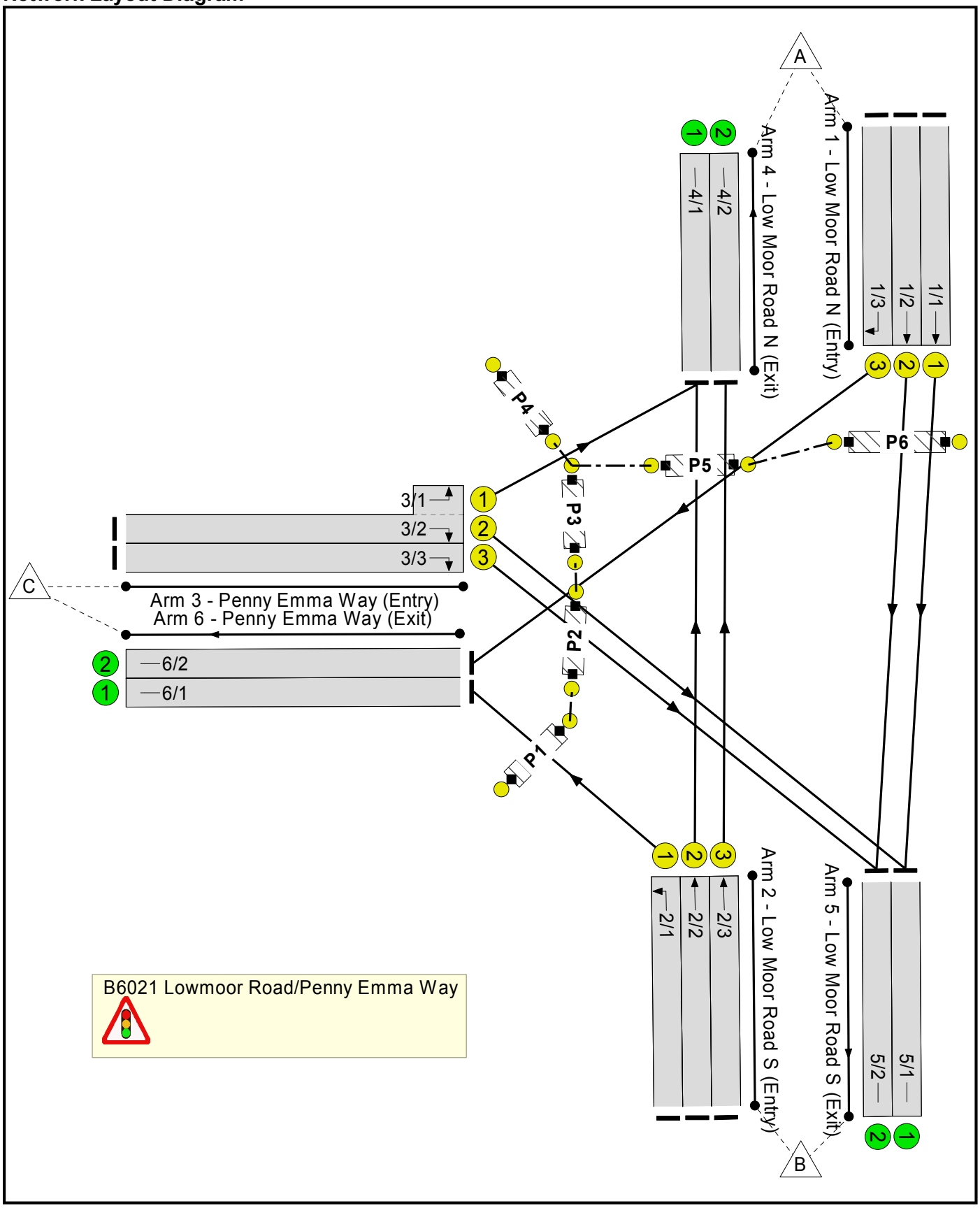
Full Input Data And Results

User and Project Details

Project:	
Title:	
Location:	
File name:	Junction 11 2016 Mitigation.lsg3x
Author:	
Company:	
Address:	
Notes:	

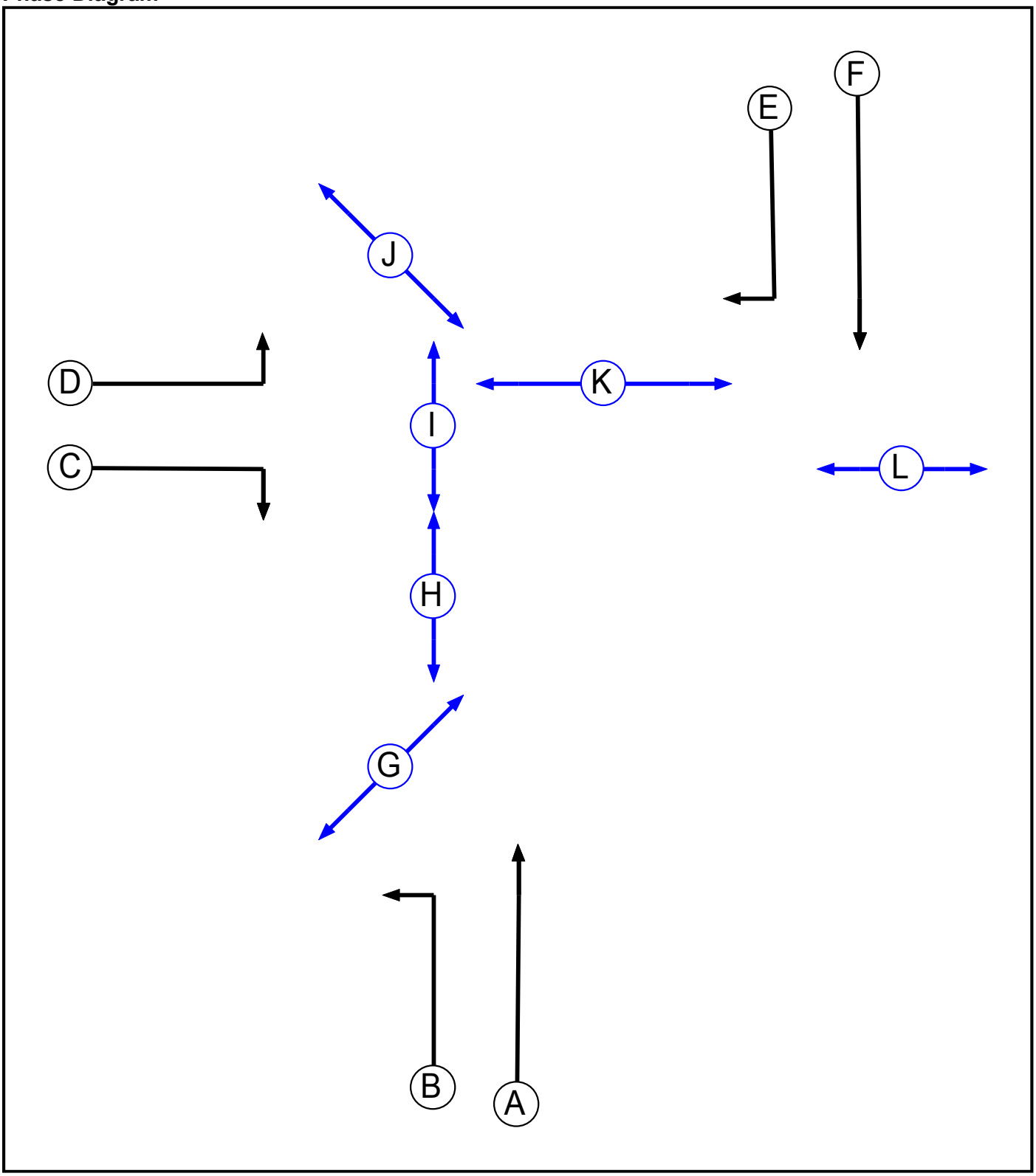
Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

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
I	Pedestrian		7	7
J	Pedestrian		7	7
K	Pedestrian		7	7
L	Pedestrian		7	7

Phase Intergreens Matrix

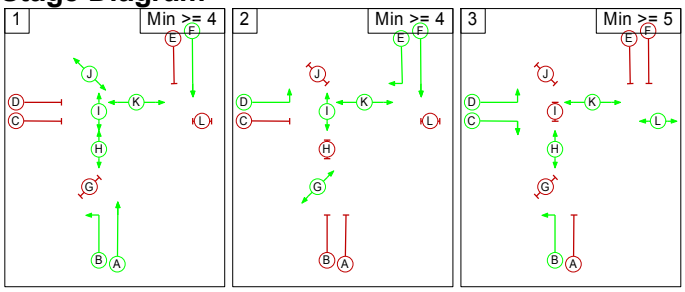
		Starting Phase											
		A	B	C	D	E	F	G	H	I	J	K	L
Terminating Phase	A		-	8	11	7	-	-	-	-	-	-	-
	B	-		-	-	8	-	5	-	-	-	-	-
	C	7	-		-	8	9	-	-	5	-	-	-
	D	8	-	-		-	-	-	-	-	5	-	-
	E	8	11	8	-		-	-	9	-	-	-	-
	F	-	-	9	-	-		-	-	-	-	-	5
	G	-	3	-	-	-	-		-	-	-	-	-
	H	-	-	-	-	3	-	-		-	-	-	-
	I	-	-	3	-	-	-	-	-		-	-	-
	J	-	-	-	3	-	-	-	-	-		-	-
	K	-	-	-	-	-	-	-	-	-	-		-
	L	-	-	-	-	-	3	-	-	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A B F H I J K
2	D E F G I K
3	B C D H K L

Full Input Data And Results

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
From Stage	1		11	11
	2	11		11
	3	9	9	

Full Input Data And Results

Give-Way Lane Input Data

Junction: B6021 Lowmoor Road/Penny Emma Way
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: B6021 Lowmoor Road/Penny Emma 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 (Low Moor Road N (Entry))	U	F	2	3	60.0	User	1800	-	-	-	-	-
1/2 (Low Moor Road N (Entry))	U	F	2	3	60.0	User	1800	-	-	-	-	-
1/3 (Low Moor Road N (Entry))	U	E	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 6 Right	Inf
2/1 (Low Moor Road S (Entry))	U	B	2	3	60.0	User	1800	-	-	-	-	-
2/2 (Low Moor Road S (Entry))	U	A	2	3	60.0	User	1800	-	-	-	-	-
2/3 (Low Moor Road S (Entry))	U	A	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 4 Ahead	Inf
3/1 (Penny Emma Way (Entry))	U	D	2	3	2.6	User	1900	-	-	-	-	-
3/2 (Penny Emma Way (Entry))	U	C	2	3	6.1	User	1800	-	-	-	-	-
3/3 (Penny Emma Way (Entry))	U	C	2	3	60.0	User	1800	-	-	-	-	-
4/1 (Low Moor Road N (Exit))	U		2	3	60.0	User	1800	-	-	-	-	-
4/2 (Low Moor Road N (Exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Low Moor Road S (Exit))	U		2	3	60.0	User	1800	-	-	-	-	-
5/2 (Low Moor Road S (Exit))	U		2	3	60.0	User	1800	-	-	-	-	-

6/1 (Penny Emma Way (Exit))	U		2	3	60.0	User	1800	-	-	-	-	-
6/2 (Penny Emma Way (Exit))	U		2	3	60.0	User	1800	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2032 Reference Case Morning Peak'	08:00	09:00	01:00	
2: '2032 Mitigation Morning Peak'	08:00	09:00	01:00	
3: '2032 Reference Case Evening Peak'	17:00	18:00	01:00	
4: '2032 Mitigation Evening Peak'	17:00	18:00	01:00	

Scenario 1: 'AM Mit 2032' (FG2: '2032 Mitigation Morning Peak', Plan 1: 'Signal Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	1011	227	1238
	B	896	0	506	1402
	C	80	294	0	374
	Tot.	976	1305	733	3014

Traffic Lane Flows

Lane	Scenario 1: AM Mit 2032
Junction: B6021 Lowmoor Road/Penny Emma Way	
1/1	217
1/2	794
1/3	227
2/1	506
2/2	237
2/3	659
3/1 (short)	80
3/2 (with short)	225(In) 145(Out)
3/3	149
4/1	317
4/2	659
5/1	362
5/2	943
6/1	506
6/2	227

Full Input Data And Results

Lane Saturation Flows

Junction: B6021 Lowmoor Road/Penny Emma 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 (Low Moor Road N (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (Low Moor Road N (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
1/3 (Low Moor Road N (Entry))	3.25	0.00	Y	Arm 6 Right	Inf	100.0 %	1940	1940
2/1 (Low Moor Road S (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (Low Moor Road S (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/3 (Low Moor Road S (Entry))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/1 (Penny Emma Way (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (Penny Emma Way (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/3 (Penny Emma Way (Entry) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Low Moor Road N (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (Low Moor Road N (Exit) Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (Low Moor Road S (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/2 (Low Moor Road S (Exit) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (Penny Emma Way (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (Penny Emma Way (Exit) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 2: 'PM Mit 2032' (FG4: '2032 Mitigation Evening Peak', Plan 1: 'Signal Plan No. 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	1127	348	1475
	B	1042	0	756	1798
	C	237	351	0	588
	Tot.	1279	1478	1104	3861

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM Mit 2032
Junction: B6021 Lowmoor Road/Penny Emma Way	
1/1	309
1/2	818
1/3	348
2/1	756
2/2	363
2/3	679
3/1 (short)	237
3/2 (with short)	394(In) 157(Out)
3/3	194
4/1	600
4/2	679
5/1	466
5/2	1012
6/1	756
6/2	348

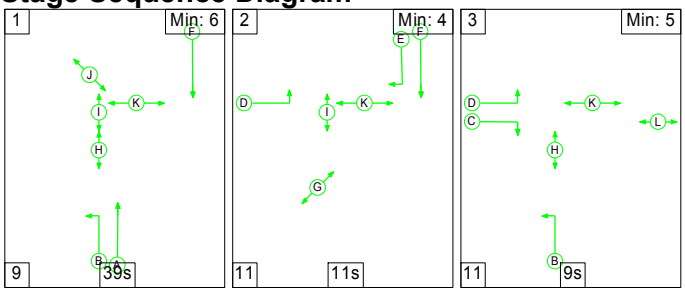
Full Input Data And Results

Lane Saturation Flows

Junction: B6021 Lowmoor Road/Penny Emma 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 (Low Moor Road N (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (Low Moor Road N (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
1/3 (Low Moor Road N (Entry))	3.25	0.00	Y	Arm 6 Right	Inf	100.0 %	1940	1940
2/1 (Low Moor Road S (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (Low Moor Road S (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/3 (Low Moor Road S (Entry))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/1 (Penny Emma Way (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (Penny Emma Way (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/3 (Penny Emma Way (Entry) Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Low Moor Road N (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (Low Moor Road N (Exit) Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (Low Moor Road S (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/2 (Low Moor Road S (Exit) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (Penny Emma Way (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (Penny Emma Way (Exit) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 1: 'AM Mit 2032' (FG2: '2032 Mitigation Morning Peak', Plan 1: 'Signal Plan No. 1')

Stage Sequence Diagram

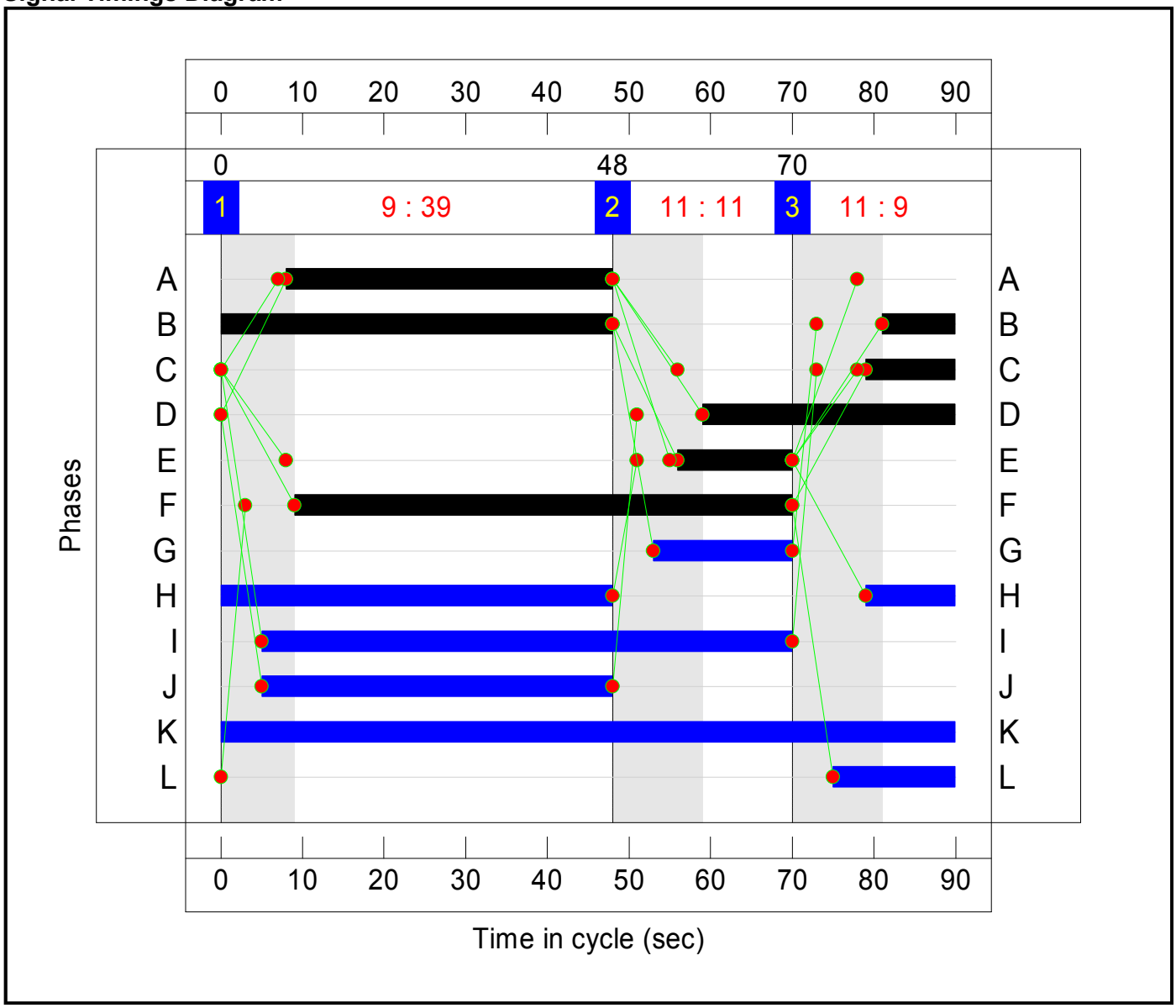


Full Input Data And Results

Stage Timings

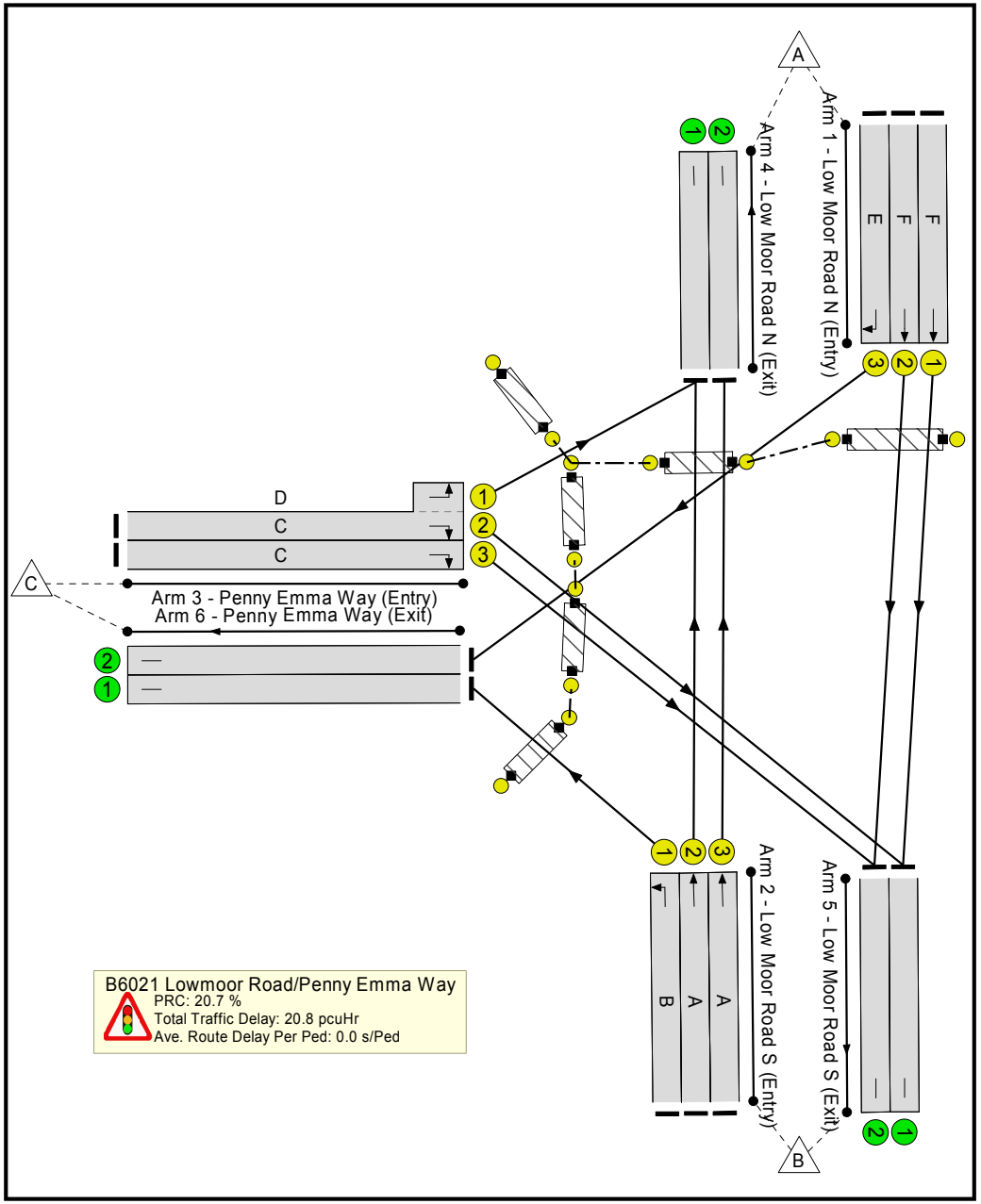
Stage	1	2	3
Duration	39	11	9
Change Point	0	48	70

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**74.6%**
B6021 Lowmoor Road/Penny Emma Way	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**74.6%**
1/1	Low Moor Road N (Entry) Ahead	U	N/A	N/A	F		1	61	-	217	1800	1240	17.5%
1/2	Low Moor Road N (Entry) Ahead	U	N/A	N/A	F		1	61	-	794	1800	1240	64.0%
1/3	Low Moor Road N (Entry) Right	U	N/A	N/A	E		1	14	-	227	1940	323	70.2%
2/1	Low Moor Road S (Entry) Left	U	N/A	N/A	B		1	57	-	506	1800	1160	43.6%
2/2	Low Moor Road S (Entry) Ahead	U	N/A	N/A	A		1	40	-	237	1800	820	28.9%
2/3	Low Moor Road S (Entry) Ahead	U	N/A	N/A	A		1	40	-	659	1940	884	74.6%
3/2+3/1	Penny Emma Way (Entry) Left Right	U	N/A	N/A	C D		1	11:31	-	225	1800:1900	314	71.6%
3/3	Penny Emma Way (Entry) Right	U	N/A	N/A	C		1	11	-	149	1800	240	62.1%
4/1	Low Moor Road N (Exit)	U	N/A	N/A	-		-	-	-	317	1800	1800	17.6%
4/2	Low Moor Road N (Exit)	U	N/A	N/A	-		-	-	-	659	Inf	Inf	0.0%
5/1	Low Moor Road S (Exit)	U	N/A	N/A	-		-	-	-	362	1800	1800	20.1%
5/2	Low Moor Road S (Exit)	U	N/A	N/A	-		-	-	-	943	1800	1800	52.4%
6/1	Penny Emma Way (Exit)	U	N/A	N/A	-		-	-	-	506	1800	1800	28.1%
6/2	Penny Emma Way (Exit)	U	N/A	N/A	-		-	-	-	227	1800	1800	12.6%

Full Input Data And Results

Ped Link: P1	Low Moor Road Left Turn Crossing	-	N/A	-	G		1	17	-	0	-	0	0.0%
Ped Link: P2	Penny Emma Way Entry Crossing	-	N/A	-	H		1	59	-	0	-	0	0.0%
Ped Link: P3	Penny Emma Way Exit Crossing	-	N/A	-	I		1	65	-	0	-	0	0.0%
Ped Link: P4	Penny Emma Way Left Turn Crossing	-	N/A	-	J		1	43	-	0	-	0	0.0%
Ped Link: P5	Low Moor Road Northbound Crossing	-	N/A	-	K		1	90	-	0	-	0	0.0%
Ped Link: P6	Low Moor Road Southbound Crossing	-	N/A	-	L		1	15	-	0	-	0	0.0%

Full Input Data And Results

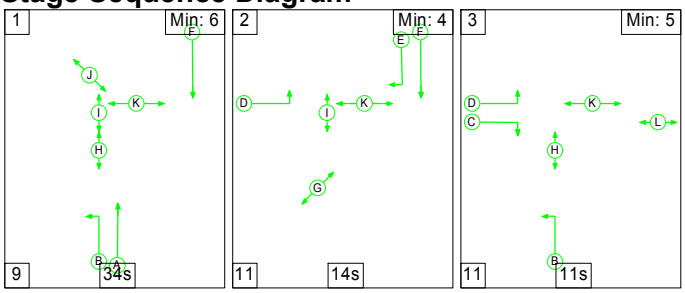
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**13.6**	**7.3**	**0.0**	**20.8**	**-**	**-**	**-**	**-**
B6021 Lowmoor Road/Penny Emma Way	**-**	**-**	**0**	**0**	**0**	**13.6**	**7.3**	**0.0**	**20.8**	**-**	**-**	**-**	**-**
1/1	217	217	-	-	-	0.3	0.1	-	0.4	6.7	1.9	0.1	2.0
1/2	794	794	-	-	-	1.7	0.9	-	2.6	11.8	11.0	0.9	11.9
1/3	227	227	-	-	-	2.2	1.2	-	3.4	53.6	5.3	1.2	6.4
2/1	506	506	-	-	-	1.1	0.4	-	1.5	10.7	6.2	0.4	6.6
2/2	237	237	-	-	-	1.0	0.2	-	1.2	18.5	3.7	0.2	3.9
2/3	659	659	-	-	-	3.7	1.4	-	5.1	28.1	13.5	1.4	15.0
3/2+3/1	225	225	-	-	-	2.0	1.2	-	3.2	51.0	3.9	1.2	5.1
3/3	149	149	-	-	-	1.5	0.8	-	2.3	56.3	3.5	0.8	4.3
4/1	317	317	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
4/2	659	659	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	362	362	-	-	-	0.0	0.1	-	0.1	1.3	0.0	0.1	0.1
5/2	943	943	-	-	-	0.0	0.5	-	0.5	2.1	5.5	0.5	6.1
6/1	506	506	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
6/2	227	227	-	-	-	0.0	0.1	-	0.1	1.2	3.1	0.1	3.2
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 20.7 Total Delay for Signalled Lanes (pcuHr): 19.77 Cycle Time (s): 90
PRC Over All Lanes (%): 20.7 Total Delay Over All Lanes(pcuHr): 20.82

Full Input Data And Results

Scenario 2: 'PM Mit 2032' (FG4: '2032 Mitigation Evening Peak', Plan 1: 'Signal Plan No. 1')

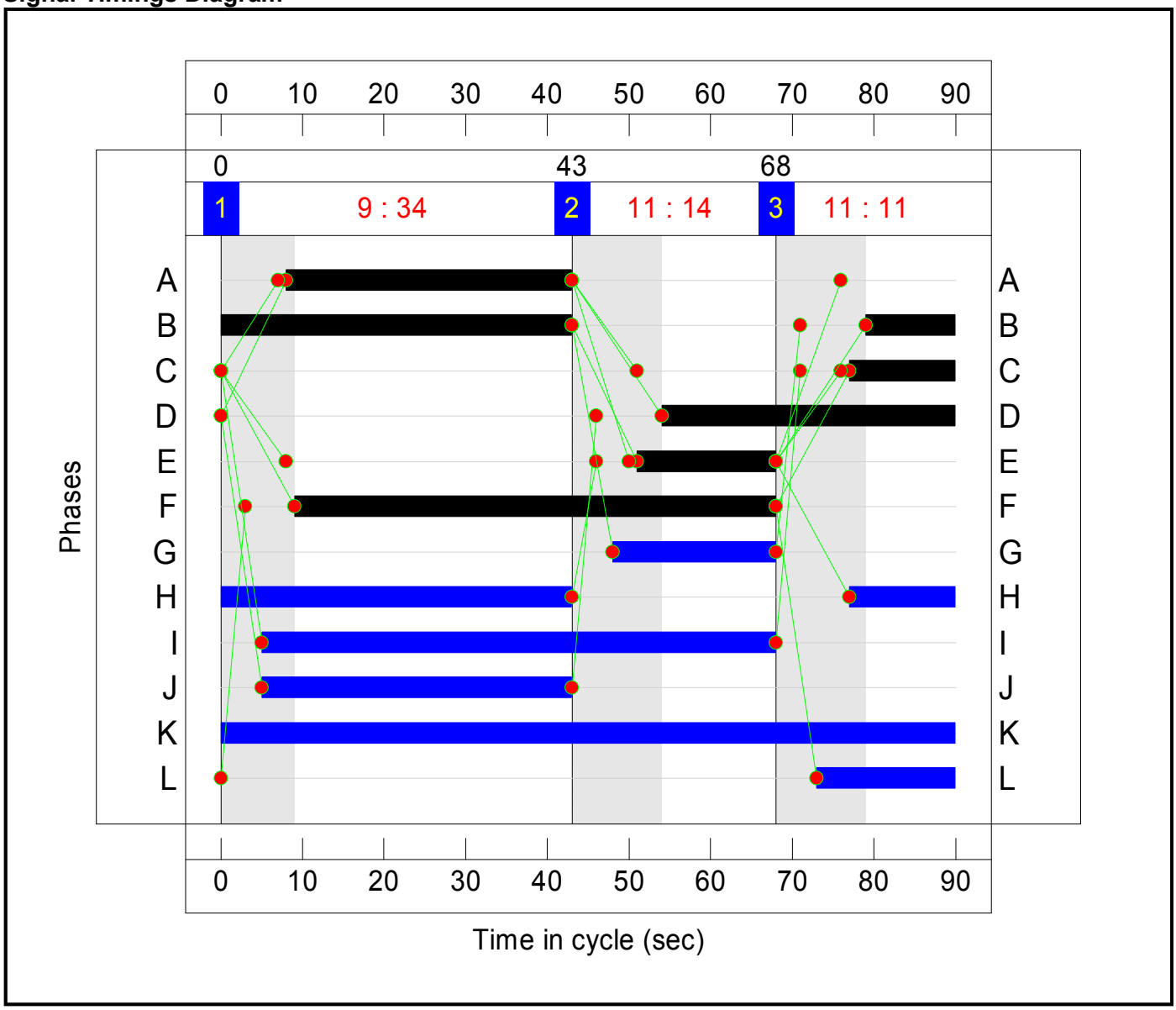
Stage Sequence Diagram



Stage Timings

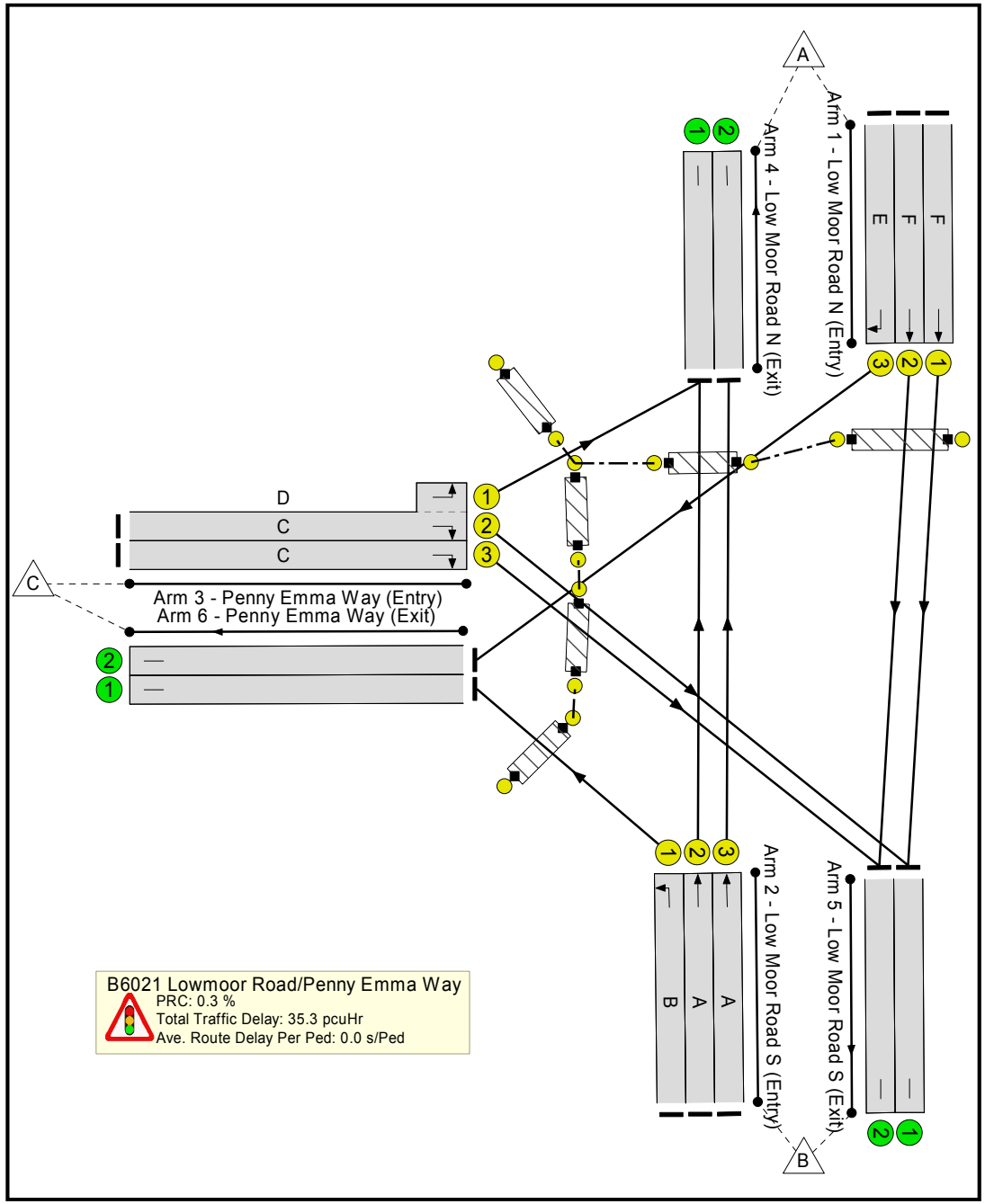
Stage	1	2	3
Duration	34	14	11
Change Point	0	43	68

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**89.7%**
B6021 Lowmoor Road/Penny Emma Way	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**89.7%**
1/1	Low Moor Road N (Entry) Ahead	U	N/A	N/A	F		1	59	-	309	1800	1200	25.8%
1/2	Low Moor Road N (Entry) Ahead	U	N/A	N/A	F		1	59	-	818	1800	1200	68.2%
1/3	Low Moor Road N (Entry) Right	U	N/A	N/A	E		1	17	-	348	1940	388	89.7%
2/1	Low Moor Road S (Entry) Left	U	N/A	N/A	B		1	54	-	756	1800	1100	68.7%
2/2	Low Moor Road S (Entry) Ahead	U	N/A	N/A	A		1	35	-	363	1800	720	50.4%
2/3	Low Moor Road S (Entry) Ahead	U	N/A	N/A	A		1	35	-	679	1940	776	87.5%
3/2+3/1	Penny Emma Way (Entry) Left Right	U	N/A	N/A	C D		1	13:36	-	394	1800:1900	460	85.7%
3/3	Penny Emma Way (Entry) Right	U	N/A	N/A	C		1	13	-	194	1800	280	69.3%
4/1	Low Moor Road N (Exit)	U	N/A	N/A	-		-	-	-	600	1800	1800	33.3%
4/2	Low Moor Road N (Exit)	U	N/A	N/A	-		-	-	-	679	Inf	Inf	0.0%
5/1	Low Moor Road S (Exit)	U	N/A	N/A	-		-	-	-	466	1800	1800	25.9%
5/2	Low Moor Road S (Exit)	U	N/A	N/A	-		-	-	-	1012	1800	1800	56.2%
6/1	Penny Emma Way (Exit)	U	N/A	N/A	-		-	-	-	756	1800	1800	42.0%
6/2	Penny Emma Way (Exit)	U	N/A	N/A	-		-	-	-	348	1800	1800	19.3%

Full Input Data And Results

Ped Link: P1	Low Moor Road Left Turn Crossing	-	N/A	-	G		1	20	-	0	-	0	0.0%
Ped Link: P2	Penny Emma Way Entry Crossing	-	N/A	-	H		1	56	-	0	-	0	0.0%
Ped Link: P3	Penny Emma Way Exit Crossing	-	N/A	-	I		1	63	-	0	-	0	0.0%
Ped Link: P4	Penny Emma Way Left Turn Crossing	-	N/A	-	J		1	38	-	0	-	0	0.0%
Ped Link: P5	Low Moor Road Northbound Crossing	-	N/A	-	K		1	90	-	0	-	0	0.0%
Ped Link: P6	Low Moor Road Southbound Crossing	-	N/A	-	L		1	17	-	0	-	0	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	**-**	**-**	**0**	**0**	**0**	**20.1**	**15.2**	**0.0**	**35.3**	**-**	**-**	**-**	**-**
B6021 Lowmoor Road/Penny Emma Way	**-**	**-**	**0**	**0**	**0**	**20.1**	**15.2**	**0.0**	**35.3**	**-**	**-**	**-**	**-**
1/1	309	309	-	-	-	0.5	0.2	-	0.7	8.1	3.1	0.2	3.3
1/2	818	818	-	-	-	2.1	1.1	-	3.1	13.9	12.3	1.1	13.3
1/3	348	348	-	-	-	3.4	3.7	-	7.1	73.1	8.4	3.7	12.1
2/1	756	756	-	-	-	2.5	1.1	-	3.6	16.9	12.6	1.1	13.7
2/2	363	363	-	-	-	2.0	0.5	-	2.6	25.3	6.8	0.5	7.3
2/3	679	679	-	-	-	4.7	3.3	-	8.0	42.3	15.7	3.3	18.9
3/2+3/1	394	394	-	-	-	2.9	2.8	-	5.7	52.0	7.6	2.8	10.3
3/3	194	194	-	-	-	1.9	1.1	-	3.0	56.4	4.6	1.1	5.7
4/1	600	600	-	-	-	0.0	0.2	-	0.2	1.5	0.0	0.2	0.2
4/2	679	679	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	466	466	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
5/2	1012	1012	-	-	-	0.0	0.6	-	0.6	2.3	7.5	0.6	8.1
6/1	756	756	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
6/2	348	348	-	-	-	0.0	0.1	-	0.1	1.5	6.7	0.1	6.8
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 0.3 Total Delay for Signalled Lanes (pcuHr): 33.73 Cycle Time (s): 90
PRC Over All Lanes (%): 0.3 Total Delay Over All Lanes(pcuHr): 35.30

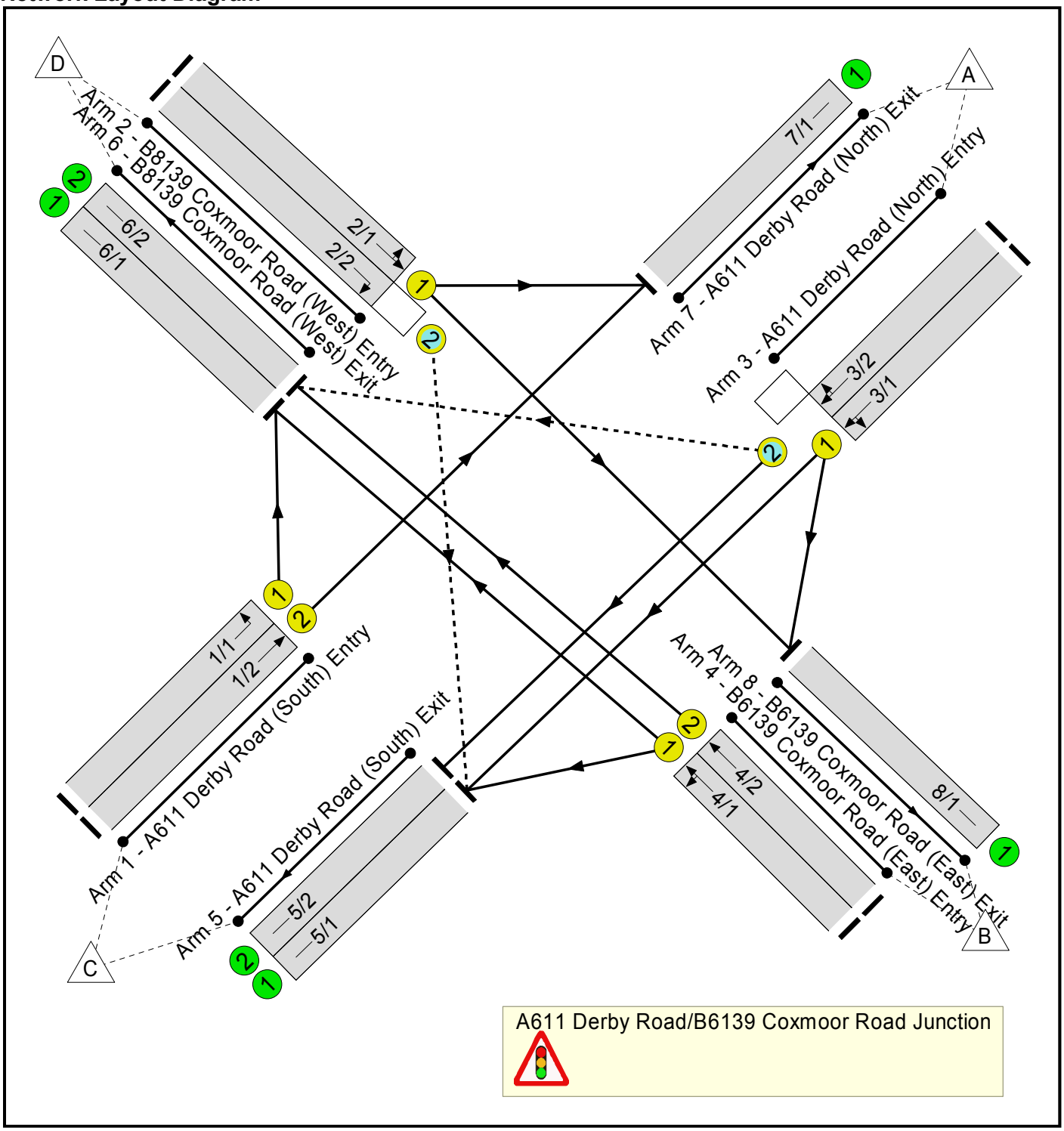
Full Input Data And Results

User and Project Details

Project:	
Title:	
Location:	
File name:	Junction 12 2016 Mitigation.lsg3x
Author:	
Company:	
Address:	
Notes:	

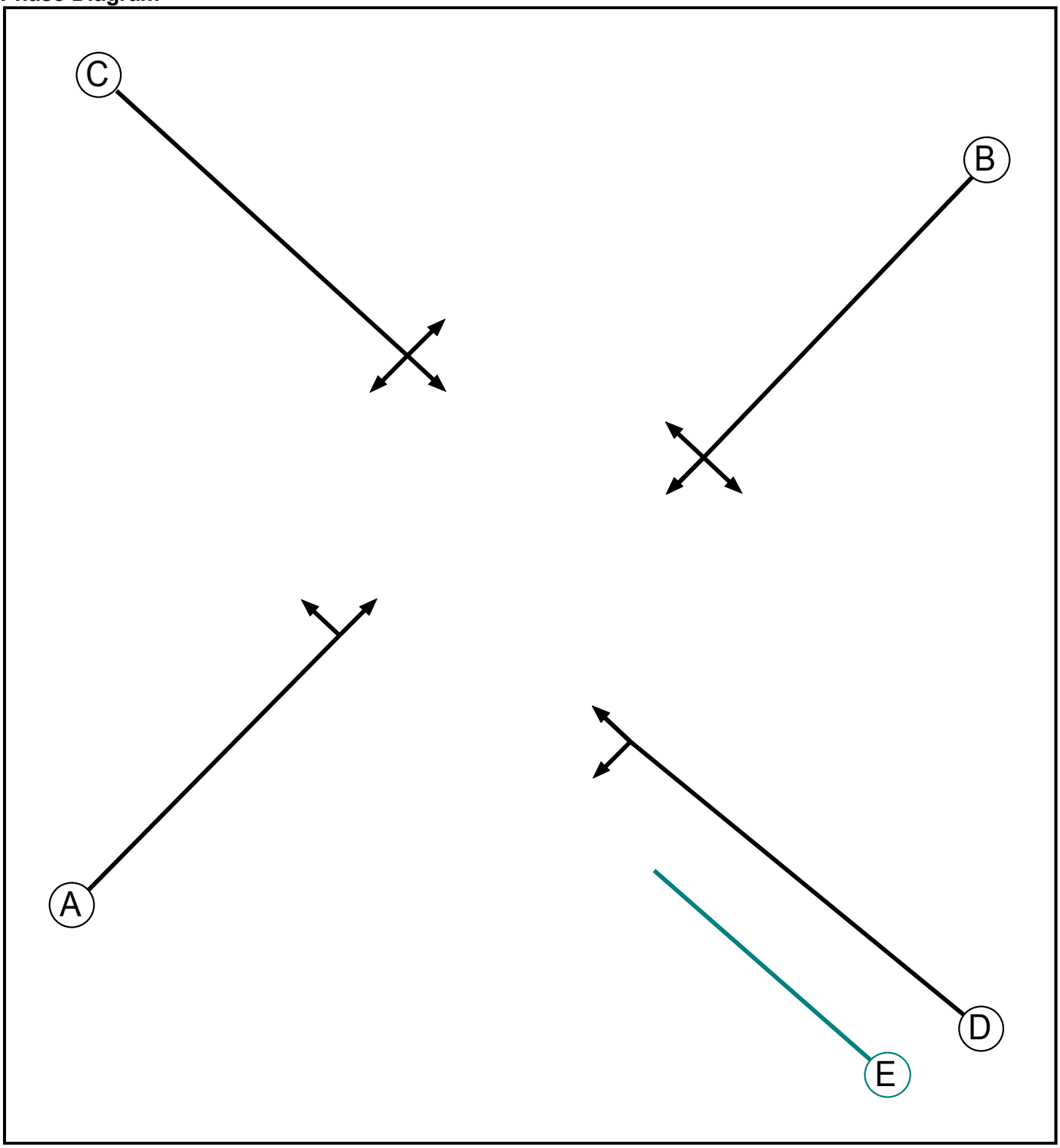
Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

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	Dummy		7	7

Full Input Data And Results

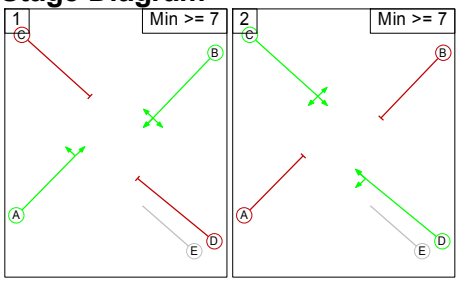
Phase Intergreens Matrix

Terminating Phase	Starting Phase					
		A	B	C	D	E
	A		-	8	8	-
	B	-		8	8	-
	C	8	8		-	-
	D	8	8	-		-
	E	-	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A B
2	C 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		8
	2	8	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A611 Derby Road/B6139 Coxmoor Road Junction

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)
2/2 (B8139 Coxmoor Road (West) Entry)	5/1 (Right)	1439	0	4/1	1.09	All	2.00	-	0.50	2	2.00
				4/2	1.09	All					
3/2 (A611 Derby Road (North) Entry)	6/2 (Right)	1439	0	1/2	1.09	All	2.00	2.00	0.50	2	2.00

Full Input Data And Results

Lane Input Data

Junction: A611 Derby Road/B6139 Coxmoor Road Junction												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A611 Derby Road (South) Entry)	U	A	2	3	60.0	User	1800	-	-	-	-	-
1/2 (A611 Derby Road (South) Entry)	U	A	2	3	60.0	User	1900	-	-	-	-	-
2/1 (B8139 Coxmoor Road (West) Entry)	U	C	2	3	60.0	User	1900	-	-	-	-	-
2/2 (B8139 Coxmoor Road (West) Entry)	O	C	2	3	11.5	User	1800	-	-	-	-	-
3/1 (A611 Derby Road (North) Entry)	U	B	2	3	60.0	User	1900	-	-	-	-	-
3/2 (A611 Derby Road (North) Entry)	O	B	2	3	15.7	User	1800	-	-	-	-	-
4/1 (B6139 Coxmoor Road (East) Entry)	U	D	2	3	60.0	User	1900	-	-	-	-	-
4/2 (B6139 Coxmoor Road (East) Entry)	U	D	2	3	10.4	User	1800	-	-	-	-	-
5/1 (A611 Derby Road (South) Exit)	U		2	3	60.0	User	1900	-	-	-	-	-
5/2 (A611 Derby Road (South) Exit)	U		2	3	60.0	User	1800	-	-	-	-	-
6/1 (B8139 Coxmoor Road (West) Exit)	U		2	3	60.0	User	1800	-	-	-	-	-
6/2 (B8139 Coxmoor Road (West) Exit)	U		2	3	60.0	User	1900	-	-	-	-	-
7/1 (A611 Derby Road (North) Exit)	U		2	3	60.0	User	1900	-	-	-	-	-

8/1 (B6139 Coxmoor Road (East) Exit)	U		2	3	60.0	User	1900	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2032 Reference Case Morning Peak'	08:00	09:00	01:00	
2: '2032 Mitigation Morning Peak'	08:00	09:00	01:00	
3: '2032 Reference Case Evening Peak'	17:00	18:00	01:00	
4: '2032 Mitigation Evening Peak'	17:00	18:00	01:00	

Scenario 1: 'AM Mit 2032' (FG2: '2032 Mitigation Morning Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	1	952	0	953
	B	1	0	16	332	349
	C	872	32	0	456	1360
	D	9	312	278	0	599
	Tot.	882	345	1246	788	3261

Traffic Lane Flows

Lane	Scenario 1: AM Mit 2032
Junction: A611 Derby Road/B6139 Coxmoor Road Junction	
1/1	456
1/2	872
2/1	321
2/2	278
3/1	487
3/2	466
4/1	175
4/2	173
5/1	780
5/2	466
6/1	615
6/2	173
7/1	881
8/1	313

Full Input Data And Results

Lane Saturation Flows

Junction: A611 Derby Road/B6139 Coxmoor Road Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A611 Derby Road (South) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (A611 Derby Road (South) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (B8139 Coxmoor Road (West) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/2 (B8139 Coxmoor Road (West) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A611 Derby Road (North) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (A611 Derby Road (North) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (B6139 Coxmoor Road (East) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (B6139 Coxmoor Road (East) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A611 Derby Road (South) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/2 (A611 Derby Road (South) Exit Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (B8139 Coxmoor Road (West) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (B8139 Coxmoor Road (West) Exit Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (A611 Derby Road (North) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (B6139 Coxmoor Road (East) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900

Full Input Data And Results

Scenario 2: 'PM Mit 2032' (FG4: '2032 Mitigation Evening Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	3	1058	0	1061
	B	3	0	6	371	380
	C	839	5	0	550	1394
	D	354	360	433	0	1147
	Tot.	1196	368	1497	921	3982

Traffic Lane Flows

Lane	Scenario 2: PM Mit 2032
Junction: A611 Derby Road/B6139 Coxmoor Road Junction	
1/1	550
1/2	839
2/1	714
2/2	433
3/1	543
3/2	518
4/1	182
4/2	195
5/1	979
5/2	518
6/1	726
6/2	195
7/1	1193
8/1	363

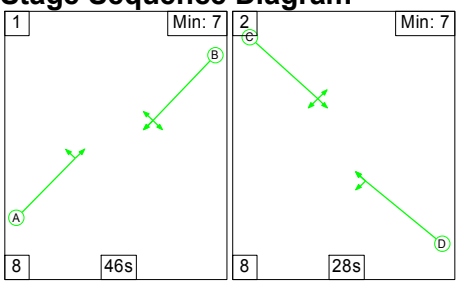
Full Input Data And Results

Lane Saturation Flows

Junction: A611 Derby Road/B6139 Coxmoor Road Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A611 Derby Road (South) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (A611 Derby Road (South) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (B8139 Coxmoor Road (West) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/2 (B8139 Coxmoor Road (West) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A611 Derby Road (North) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (A611 Derby Road (North) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (B6139 Coxmoor Road (East) Entry Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (B6139 Coxmoor Road (East) Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A611 Derby Road (South) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
5/2 (A611 Derby Road (South) Exit Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (B8139 Coxmoor Road (West) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (B8139 Coxmoor Road (West) Exit Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (A611 Derby Road (North) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (B6139 Coxmoor Road (East) Exit Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900

Scenario 1: 'AM Mit 2032' (FG2: '2032 Mitigation Morning Peak', Plan 1: 'Staging Plan No. 1')

Stage Sequence Diagram

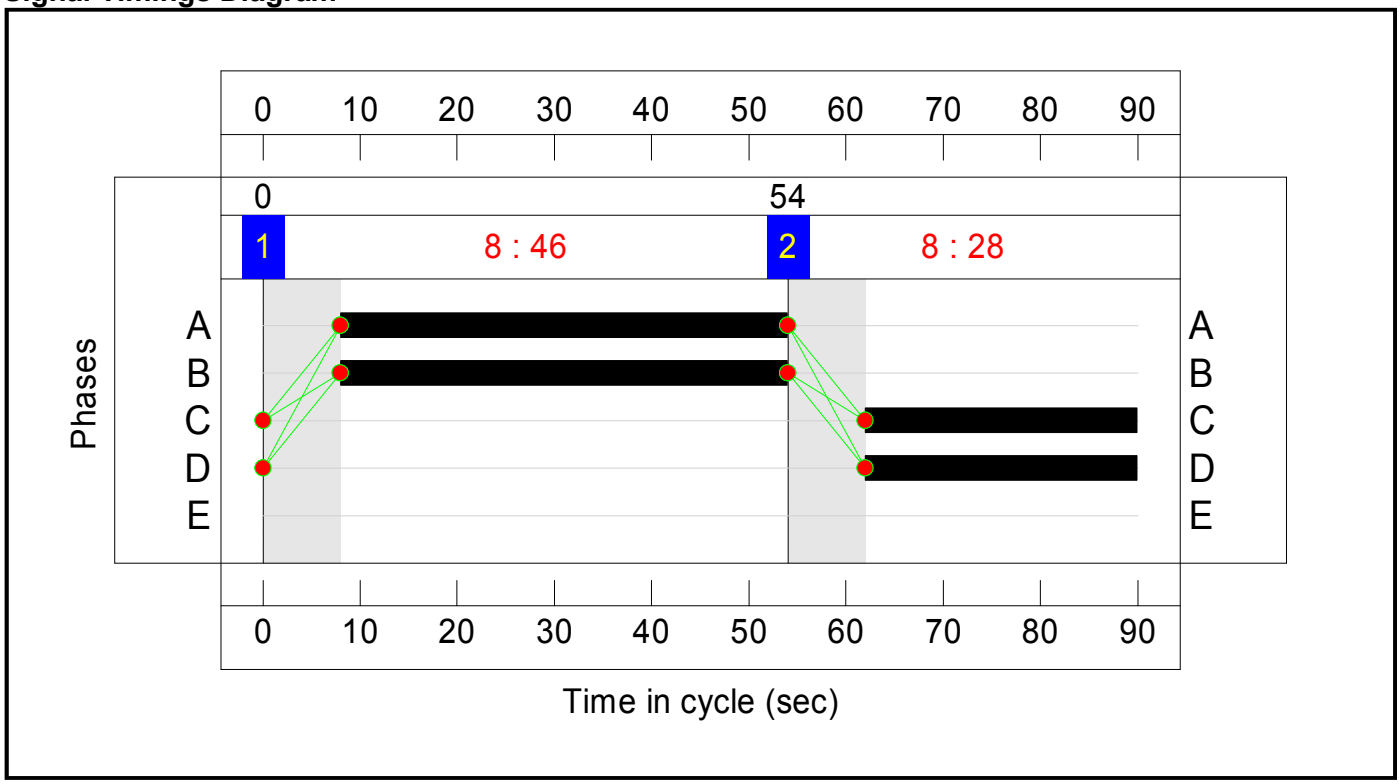


Full Input Data And Results

Stage Timings

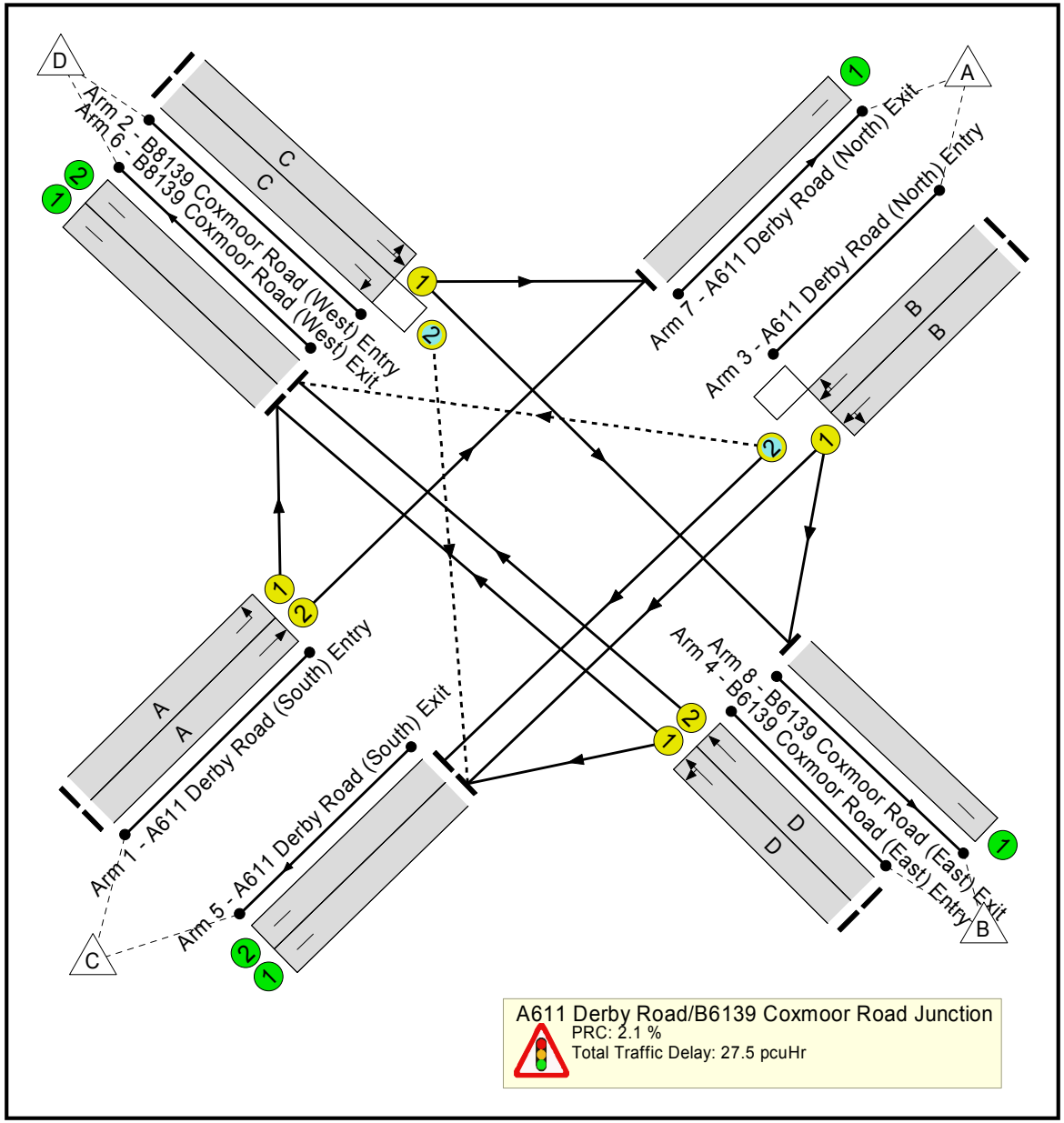
Stage	1	2
Duration	46	28
Change Point	0	54

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**88.1%**
A611 Derby Road/B6139 Coxmoor Road Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**88.1%**
1/1	A611 Derby Road (South) Entry Left	U	N/A	N/A	A		1	46	-	456	1800	940	48.5%
1/2	A611 Derby Road (South) Entry Ahead	U	N/A	N/A	A		1	46	-	872	1900	992	87.9%
2/1	B8139 Coxmoor Road (West) Entry Left Ahead	U	N/A	N/A	C		1	28	-	321	1900	612	52.4%
2/2	B8139 Coxmoor Road (West) Entry Right	O	N/A	N/A	C		1	28	-	278	1800	315	88.1%
3/1	A611 Derby Road (North) Entry Ahead Left	U	N/A	N/A	B		1	46	-	487	1900	992	49.1%
3/2	A611 Derby Road (North) Entry Ahead Right	O	N/A	N/A	B		1	46	-	466	1800	940	49.6%
4/1	B6139 Coxmoor Road (East) Entry Left Ahead	U	N/A	N/A	D		1	28	-	175	1900	612	28.6%
4/2	B6139 Coxmoor Road (East) Entry Ahead	U	N/A	N/A	D		1	28	-	173	1800	580	29.8%
5/1	A611 Derby Road (South) Exit	U	N/A	N/A	-		-	-	-	780	1900	1900	41.1%
5/2	A611 Derby Road (South) Exit	U	N/A	N/A	-		-	-	-	466	1800	1800	25.9%
6/1	B8139 Coxmoor Road (West) Exit	U	N/A	N/A	-		-	-	-	615	1800	1800	34.2%
6/2	B8139 Coxmoor Road (West) Exit	U	N/A	N/A	-		-	-	-	173	1900	1900	9.1%

Full Input Data And Results

7/1	A611 Derby Road (North) Exit	U	N/A	N/A	-		-	-	-	881	1900	1900	46.4%
8/1	B6139 Coxmoor Road (East) Exit	U	N/A	N/A	-		-	-	-	313	1900	1900	16.5%

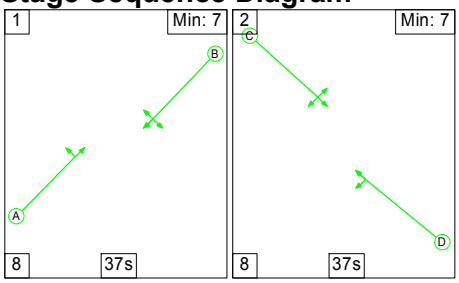
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**259**	**0**	**19**	**16.7**	**10.4**	**0.4**	**27.5**	**-**	**-**	**-**	**-**
A611 Derby Road/B6139 Coxmoor Road Junction	**-**	**-**	**259**	**0**	**19**	**16.7**	**10.4**	**0.4**	**27.5**	**-**	**-**	**-**	**-**
1/1	456	456	-	-	-	1.7	0.5	-	2.2	17.5	7.2	0.5	7.7
1/2	872	872	-	-	-	4.6	3.4	-	8.0	33.2	19.1	3.4	22.6
2/1	321	321	-	-	-	2.2	0.5	-	2.8	31.0	6.5	0.5	7.1
2/2	278	278	259	0	19	2.3	3.2	0.4	5.9	75.9	6.6	3.2	9.7
3/1	487	487	-	-	-	1.9	0.5	-	2.3	17.4	7.7	0.5	8.2
3/2	466	466	0	0	0	1.8	0.5	0.0	2.3	17.7	7.5	0.5	8.0
4/1	175	175	-	-	-	1.1	0.2	-	1.3	26.9	3.3	0.2	3.5
4/2	173	173	-	-	-	1.1	0.2	-	1.3	27.3	3.2	0.2	3.4
5/1	780	780	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3
5/2	466	466	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
6/1	615	615	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
6/2	173	173	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
7/1	881	881	-	-	-	0.0	0.4	-	0.4	1.8	0.0	0.4	0.4
8/1	313	313	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1

C1 PRC for Signalled Lanes (%): 2.1 Total Delay for Signalled Lanes (pcuHr): 26.12 Cycle Time (s): 90
PRC Over All Lanes (%): 2.1 Total Delay Over All Lanes(pcuHr): 27.49

Full Input Data And Results

Scenario 2: 'PM Mit 2032' (FG4: '2032 Mitigation Evening Peak', Plan 1: 'Staging Plan No. 1')

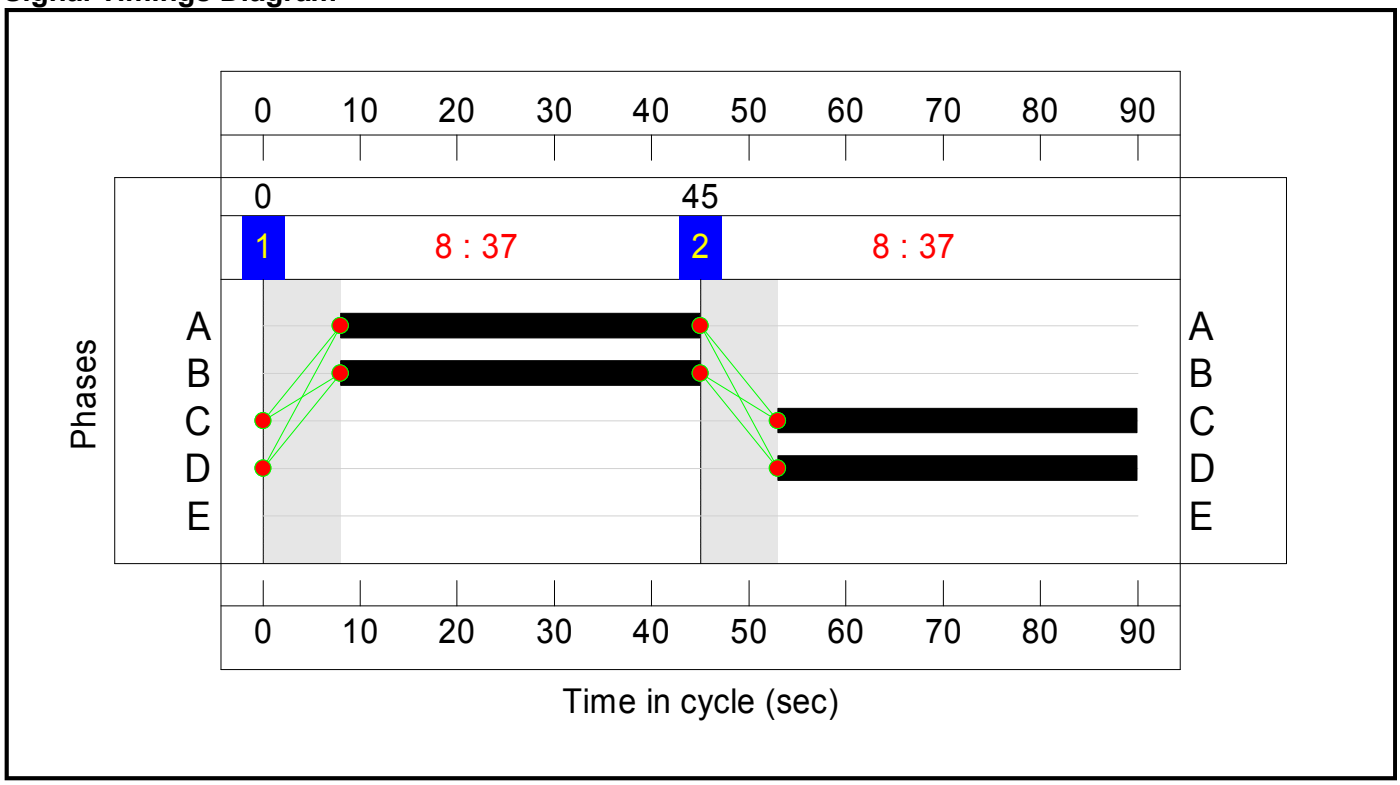
Stage Sequence Diagram



Stage Timings

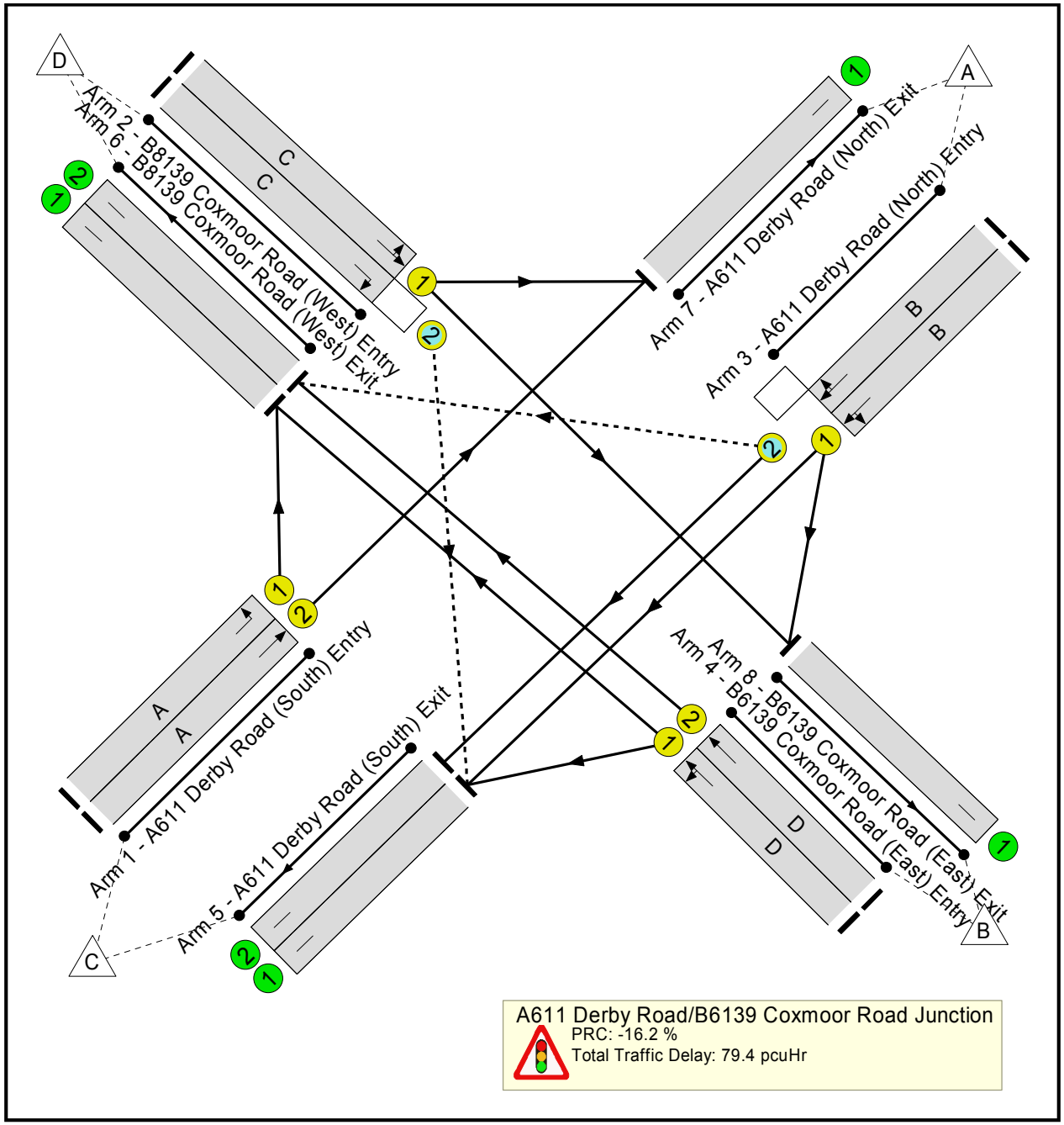
Stage	1	2
Duration	37	37
Change Point	0	45

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**104.6%**
A611 Derby Road/B6139 Coxmoor Road Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**104.6%**
1/1	A611 Derby Road (South) Entry Left	U	N/A	N/A	A		1	37	-	550	1800	760	72.4%
1/2	A611 Derby Road (South) Entry Ahead	U	N/A	N/A	A		1	37	-	839	1900	802	104.6%
2/1	B8139 Coxmoor Road (West) Entry Left Ahead	U	N/A	N/A	C		1	37	-	714	1900	802	89.0%
2/2	B8139 Coxmoor Road (West) Entry Right	O	N/A	N/A	C		1	37	-	433	1800	416	104.0%
3/1	A611 Derby Road (North) Entry Ahead Left	U	N/A	N/A	B		1	37	-	543	1900	802	67.7%
3/2	A611 Derby Road (North) Entry Ahead Right	O	N/A	N/A	B		1	37	-	518	1800	760	68.2%
4/1	B6139 Coxmoor Road (East) Entry Left Ahead	U	N/A	N/A	D		1	37	-	182	1900	802	22.7%
4/2	B6139 Coxmoor Road (East) Entry Ahead	U	N/A	N/A	D		1	37	-	195	1800	760	25.7%
5/1	A611 Derby Road (South) Exit	U	N/A	N/A	-		-	-	-	979	1900	1900	50.7%
5/2	A611 Derby Road (South) Exit	U	N/A	N/A	-		-	-	-	518	1800	1800	28.8%
6/1	B8139 Coxmoor Road (West) Exit	U	N/A	N/A	-		-	-	-	726	1800	1800	40.3%
6/2	B8139 Coxmoor Road (West) Exit	U	N/A	N/A	-		-	-	-	195	1900	1900	10.3%

Full Input Data And Results

7/1	A611 Derby Road (North) Exit	U	N/A	N/A	-		-	-	-	1193	1900	1900	60.9%
8/1	B6139 Coxmoor Road (East) Exit	U	N/A	N/A	-		-	-	-	363	1900	1900	19.1%

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	**-**	**-**	**359**	**0**	**57**	**27.7**	**51.1**	**0.6**	**79.4**	**-**	**-**	**-**	**-**
A611 Derby Road/B6139 Coxmoor Road Junction	**-**	**-**	**359**	**0**	**57**	**27.7**	**51.1**	**0.6**	**79.4**	**-**	**-**	**-**	**-**
1/1	550	550	-	-	-	3.3	1.3	-	4.6	30.1	11.3	1.3	12.6
1/2	839	802	-	-	-	7.6	26.3	-	34.0	145.7	21.9	26.3	48.2
2/1	714	714	-	-	-	4.8	3.7	-	8.5	42.9	16.5	3.7	20.2
2/2	433	416	359	0	57	4.1	15.3	0.6	20.0	166.3	11.3	15.3	26.6
3/1	543	543	-	-	-	3.2	1.0	-	4.2	27.9	10.9	1.0	11.9
3/2	518	518	0	0	0	3.0	1.1	0.0	4.1	28.5	10.5	1.1	11.6
4/1	182	182	-	-	-	0.8	0.1	-	1.0	19.5	2.9	0.1	3.0
4/2	195	195	-	-	-	0.9	0.2	-	1.1	20.0	3.1	0.2	3.3
5/1	962	962	-	-	-	0.0	0.5	-	0.5	1.9	0.0	0.5	0.5
5/2	518	518	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
6/1	726	726	-	-	-	0.0	0.3	-	0.3	1.7	0.0	0.3	0.3
6/2	195	195	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
7/1	1156	1156	-	-	-	0.0	0.8	-	0.8	2.4	0.0	0.8	0.8
8/1	363	363	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1

C1 PRC for Signalled Lanes (%): -16.2 Total Delay for Signalled Lanes (pcuHr): 77.44 Cycle Time (s): 90
PRC Over All Lanes (%): -16.2 Total Delay Over All Lanes(pcuHr): 79.44

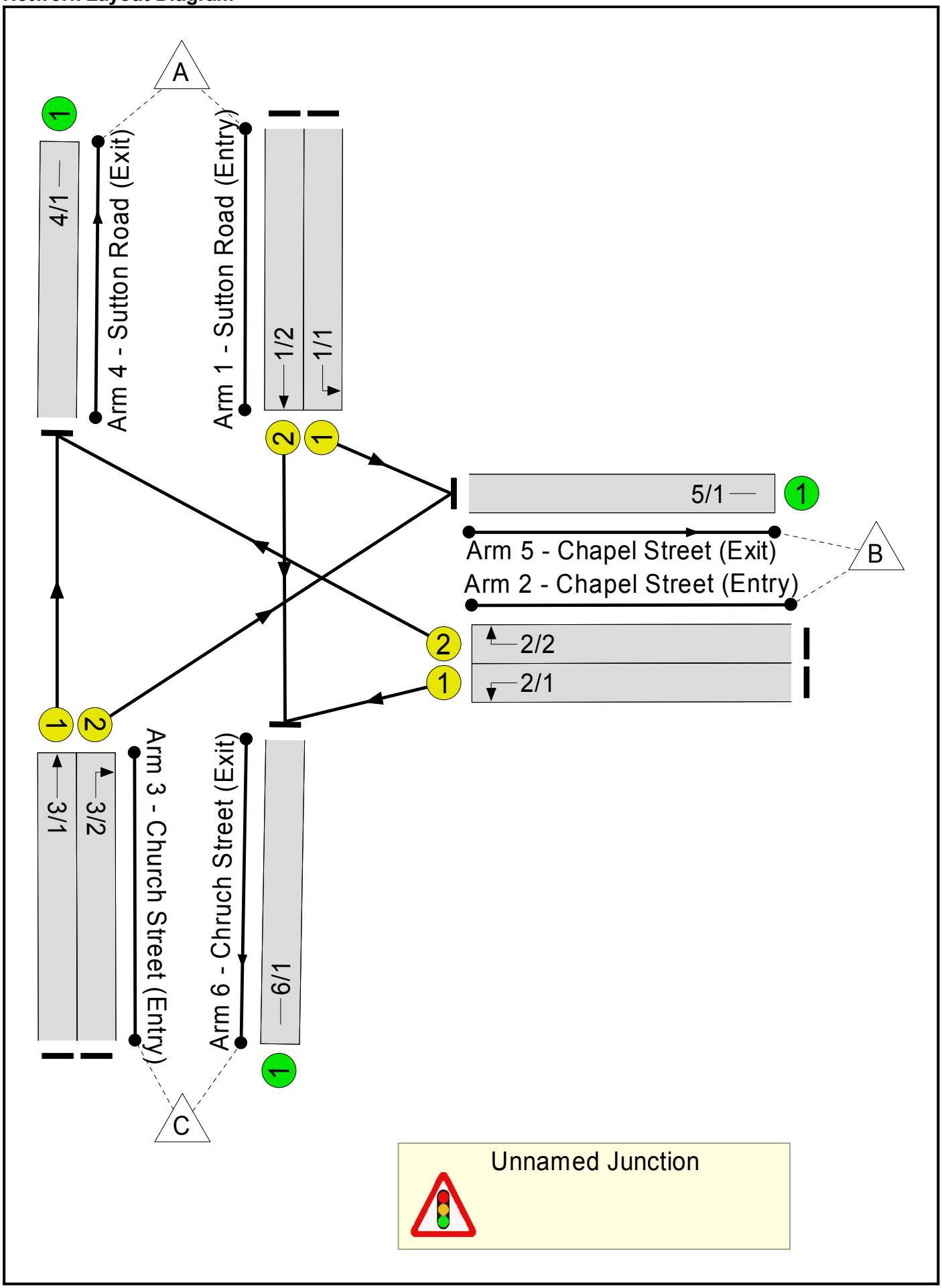
Full Input Data And Results

User and Project Details

Project:	
Title:	
Location:	
File name:	2016-08-15 Junciton 13.lsg3x
Author:	
Company:	
Address:	
Notes:	

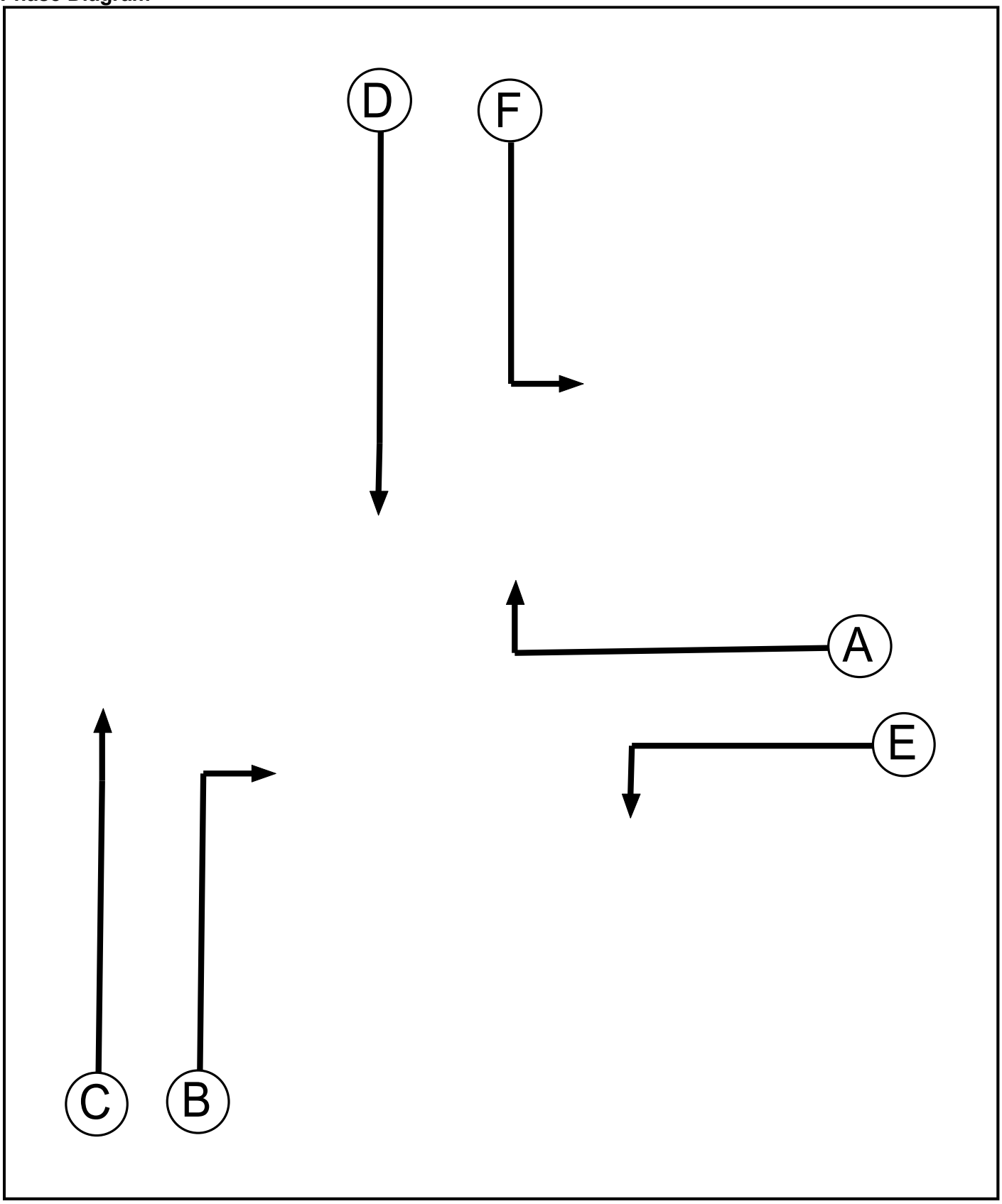
Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

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

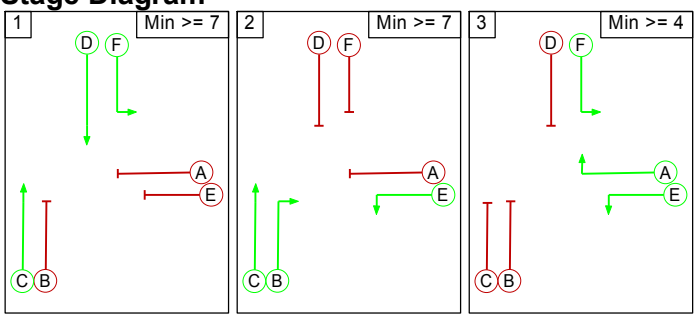
Phase Intergreens Matrix

		Starting Phase					
		A	B	C	D	E	F
Terminating Phase	A		-	5	5	-	-
	B	5		-	-	-	5
	C	-	-		-	-	-
	D	-	3	-		5	-
	E	-	-	-	5		-
	F	-	5	-	-	-	

Phases in Stage

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

Stage Diagram



Phase Delays

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

Full Input Data And Results

Prohibited Stage Change

		To Stage		
		1	2	3
From Stage	1		5	5
	2	5		5
	3	5	5	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Unnamed Junction
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Unnamed Junction												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Sutton Road (Entry))	U	F	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 5 Left	Inf
1/2 (Sutton Road (Entry))	U	D	2	3	60.0	User	1800	-	-	-	-	-
2/1 (Chapel Street (Entry))	U	E	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 6 Left	Inf
2/2 (Chapel Street (Entry))	U	A	2	3	60.0	User	1800	-	-	-	-	-
3/1 (Church Street (Entry))	U	C	2	3	60.0	User	1800	-	-	-	-	-
3/2 (Church Street (Entry))	U	B	2	3	60.0	User	1800	-	-	-	-	-
4/1 (Sutton Road (Exit))	U		2	3	60.0	User	1800	-	-	-	-	-
5/1 (Chapel Street (Exit))	U		2	3	60.0	User	1800	-	-	-	-	-
6/1 (Chruch Street (Exit))	U		2	3	60.0	User	1800	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM Ref 2023'	08:00	09:00	01:00	
2: 'PM Ref 2023'	17:00	18:00	01:00	
3: 'AM Mit 2032'	08:00	09:00	01:00	
4: 'PM Mit 2032'	17:00	18:00	01:00	

Scenario 1: 'AM With Mitigation 2032' (FG3: 'AM Mit 2032', Plan 1: 'Signal Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	604	863	1467
	B	493	0	374	867
	C	809	403	0	1212
	Tot.	1302	1007	1237	3546

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: AM With Mitigation 2032
Junction: Unnamed Junction	
1/1	604
1/2	863
2/1	374
2/2	493
3/1	809
3/2	403
4/1	1302
5/1	1007
6/1	1237

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Sutton Road (Entry))	3.25	0.00	Y	Arm 5 Left	Inf	100.0 %	1940	1940
1/2 (Sutton Road (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Chapel Street (Entry))	3.25	0.00	Y	Arm 6 Left	Inf	100.0 %	1940	1940
2/2 (Chapel Street (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (Church Street (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (Church Street (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Sutton Road (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (Chapel Street (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (Chruch Street (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 2: 'PM With Mitigation 2032' (FG4: 'PM Mit 2032', Plan 1: 'Signal Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	629	989	1618
	B	626	0	328	954
	C	879	310	0	1189
	Tot.	1505	939	1317	3761

Full Input Data And Results

Traffic Lane Flows

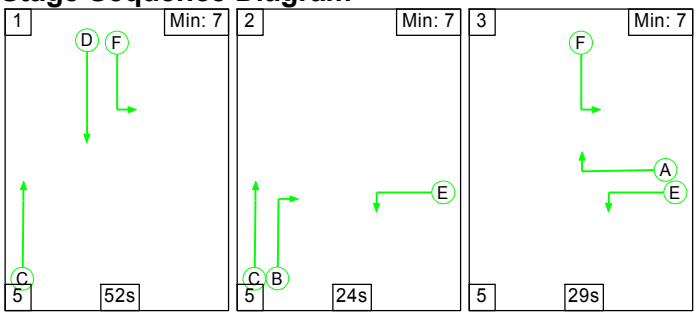
Lane	Scenario 2: PM With Mitigation 2032
Junction: Unnamed Junction	
1/1	629
1/2	989
2/1	328
2/2	626
3/1	879
3/2	310
4/1	1505
5/1	939
6/1	1317

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Sutton Road (Entry))	3.25	0.00	Y	Arm 5 Left	Inf	100.0 %	1940	1940
1/2 (Sutton Road (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Chapel Street (Entry))	3.25	0.00	Y	Arm 6 Left	Inf	100.0 %	1940	1940
2/2 (Chapel Street (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (Church Street (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (Church Street (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Sutton Road (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (Chapel Street (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (Chruch Street (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 1: 'AM With Mitigation 2032' (FG3: 'AM Mit 2032', Plan 1: 'Signal Plan No. 1')

Stage Sequence Diagram

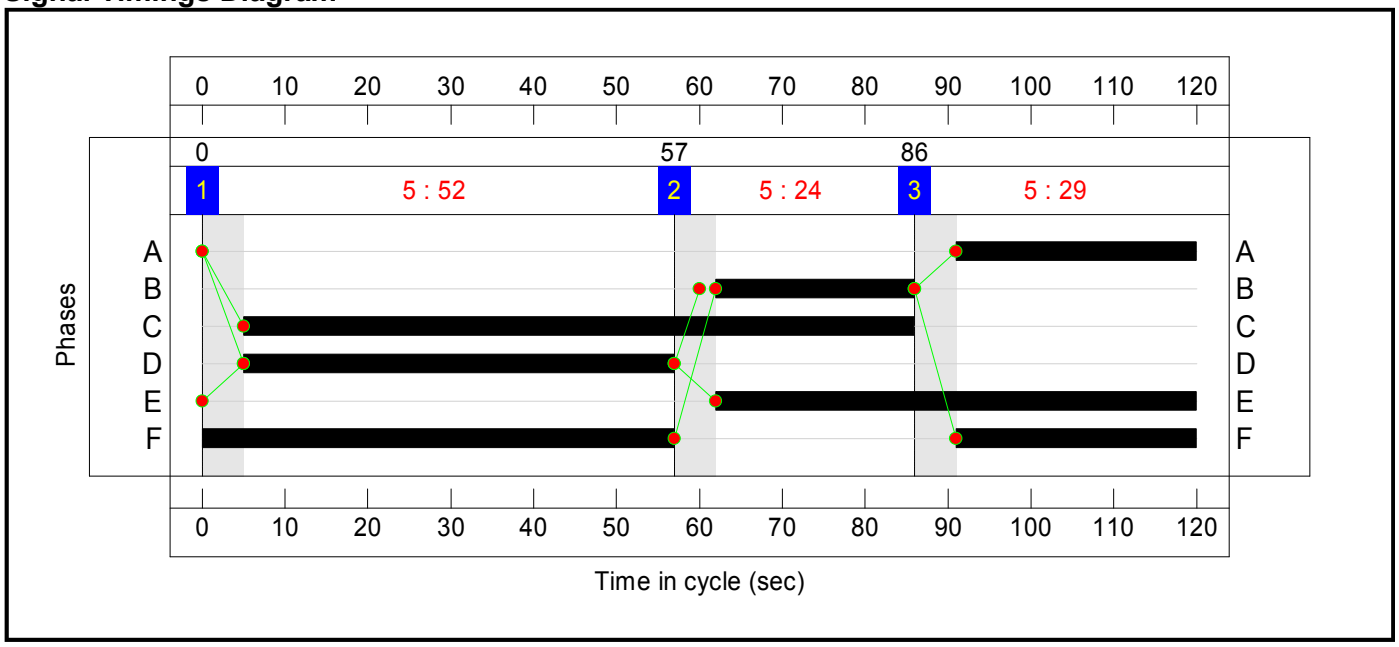


Full Input Data And Results

Stage Timings

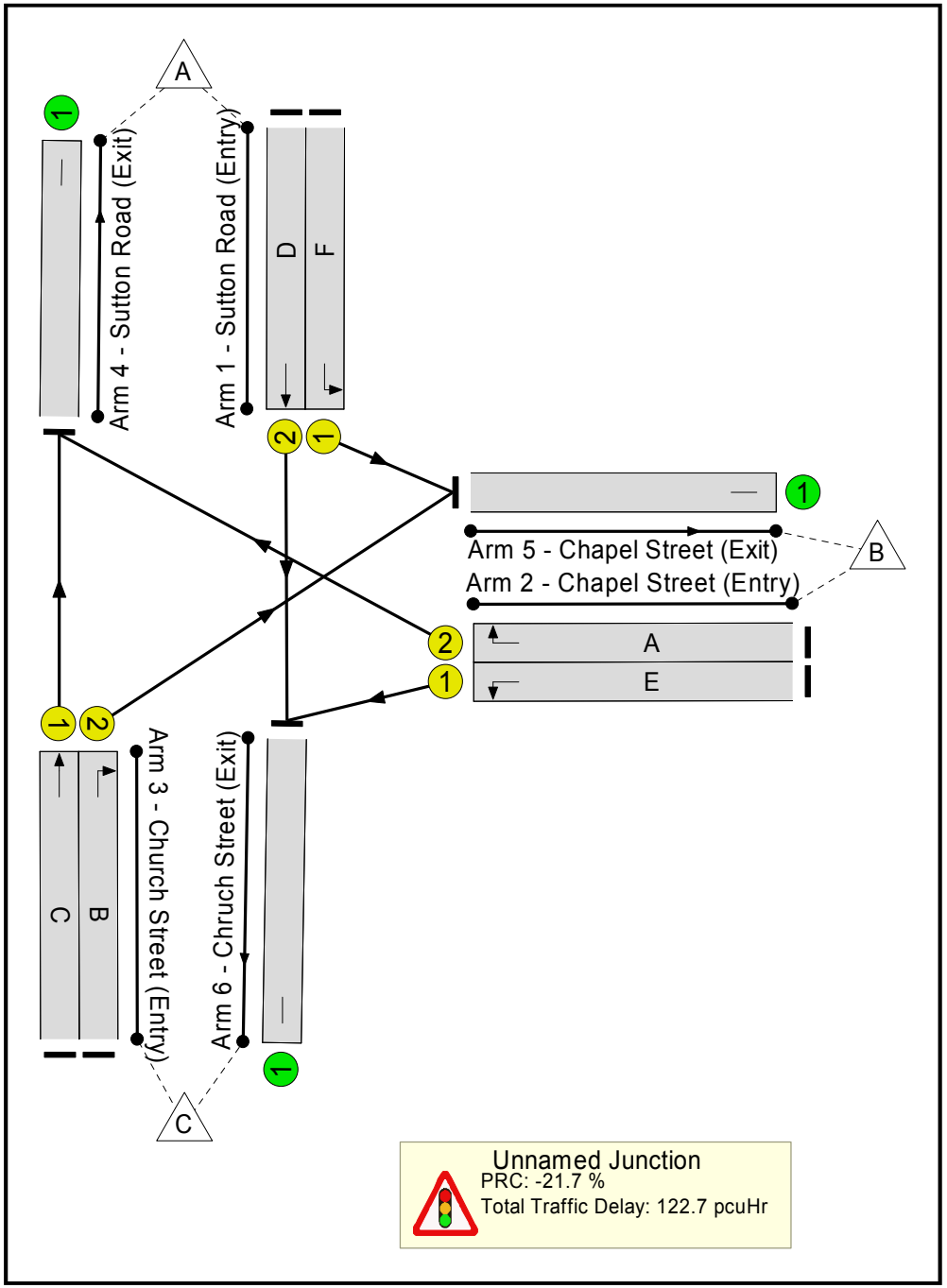
Stage	1	2	3
Duration	52	24	29
Change Point	0	57	86

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**109.6%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**109.6%**
1/1	Sutton Road (Entry) Left	U	N/A	N/A	F		1	86	-	604	1940	1407	42.9%
1/2	Sutton Road (Entry) Ahead	U	N/A	N/A	D		1	52	-	863	1800	795	108.6%
2/1	Chapel Street (Entry) Left	U	N/A	N/A	E		1	58	-	374	1940	954	39.2%
2/2	Chapel Street (Entry) Right	U	N/A	N/A	A		1	29	-	493	1800	450	109.6%
3/1	Church Street (Entry) Ahead	U	N/A	N/A	C		1	81	-	809	1800	1230	65.8%
3/2	Church Street (Entry) Right	U	N/A	N/A	B		1	24	-	403	1800	375	107.5%
4/1	Sutton Road (Exit)	U	N/A	N/A	-		-	-	-	1302	1800	1800	69.9%
5/1	Chapel Street (Exit)	U	N/A	N/A	-		-	-	-	1007	1800	1800	54.4%
6/1	Chruch Street (Exit)	U	N/A	N/A	-		-	-	-	1237	1800	1800	64.9%

Full Input Data And Results

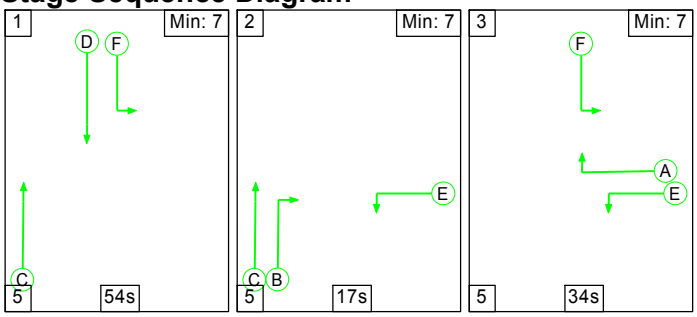
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**33.5**	**89.2**	**0.0**	**122.7**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**33.5**	**89.2**	**0.0**	**122.7**	**-**	**-**	**-**	**-**
1/1	604	604	-	-	-	1.1	0.4	-	1.5	8.8	7.9	0.4	8.3
1/2	863	795	-	-	-	11.9	39.5	-	51.4	214.4	31.0	39.5	70.5
2/1	374	374	-	-	-	2.0	0.3	-	2.3	22.3	7.8	0.3	8.1
2/2	493	450	-	-	-	9.2	26.2	-	35.4	258.4	18.9	26.2	45.1
3/1	809	809	-	-	-	2.5	1.0	-	3.4	15.2	15.5	1.0	16.5
3/2	403	375	-	-	-	6.6	19.2	-	25.8	230.7	14.4	19.2	33.6
4/1	1259	1259	-	-	-	0.0	1.2	-	1.2	3.3	0.0	1.2	1.2
5/1	979	979	-	-	-	0.1	0.6	-	0.7	2.6	10.0	0.6	10.6
6/1	1169	1169	-	-	-	0.1	0.9	-	1.0	3.2	9.5	0.9	10.4

C1 PRC for Signalled Lanes (%): -21.7 Total Delay for Signalled Lanes (pcuHr): 119.83 Cycle Time (s): 120
PRC Over All Lanes (%): -21.7 Total Delay Over All Lanes(pcuHr): 122.74

Full Input Data And Results

Scenario 2: 'PM With Mitigation 2032' (FG4: 'PM Mit 2032', Plan 1: 'Signal Plan No. 1')

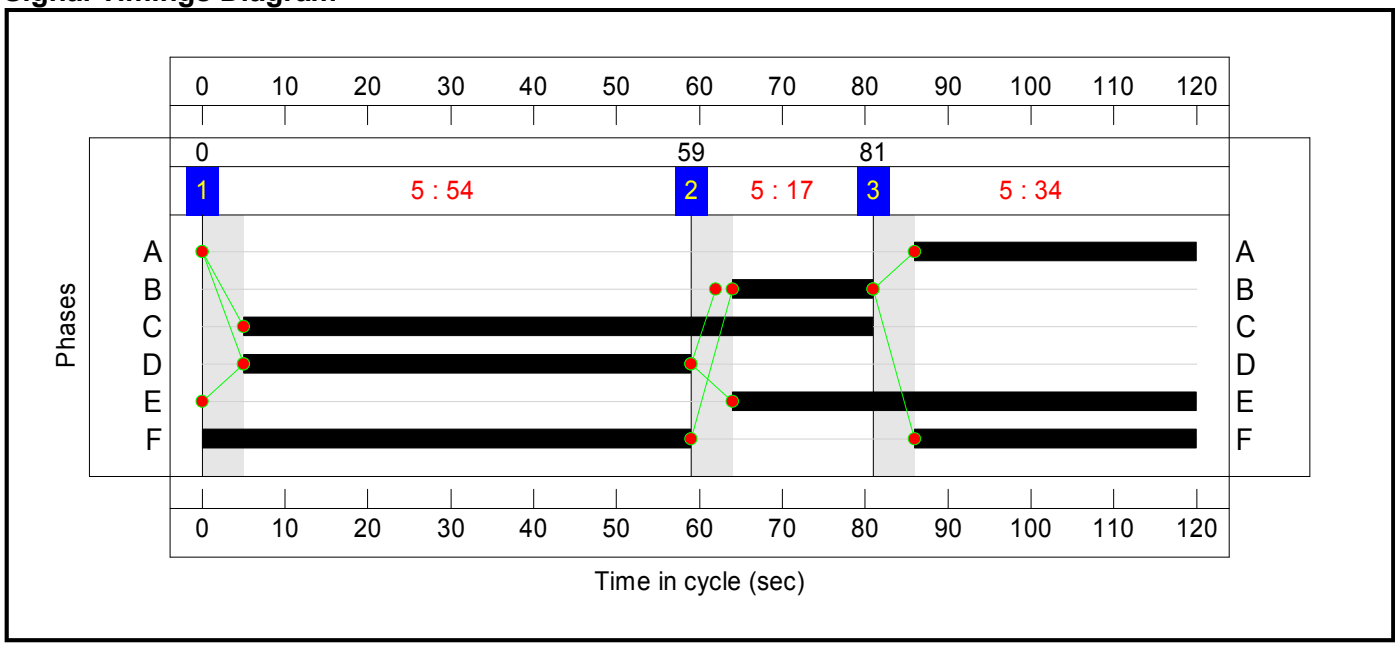
Stage Sequence Diagram



Stage Timings

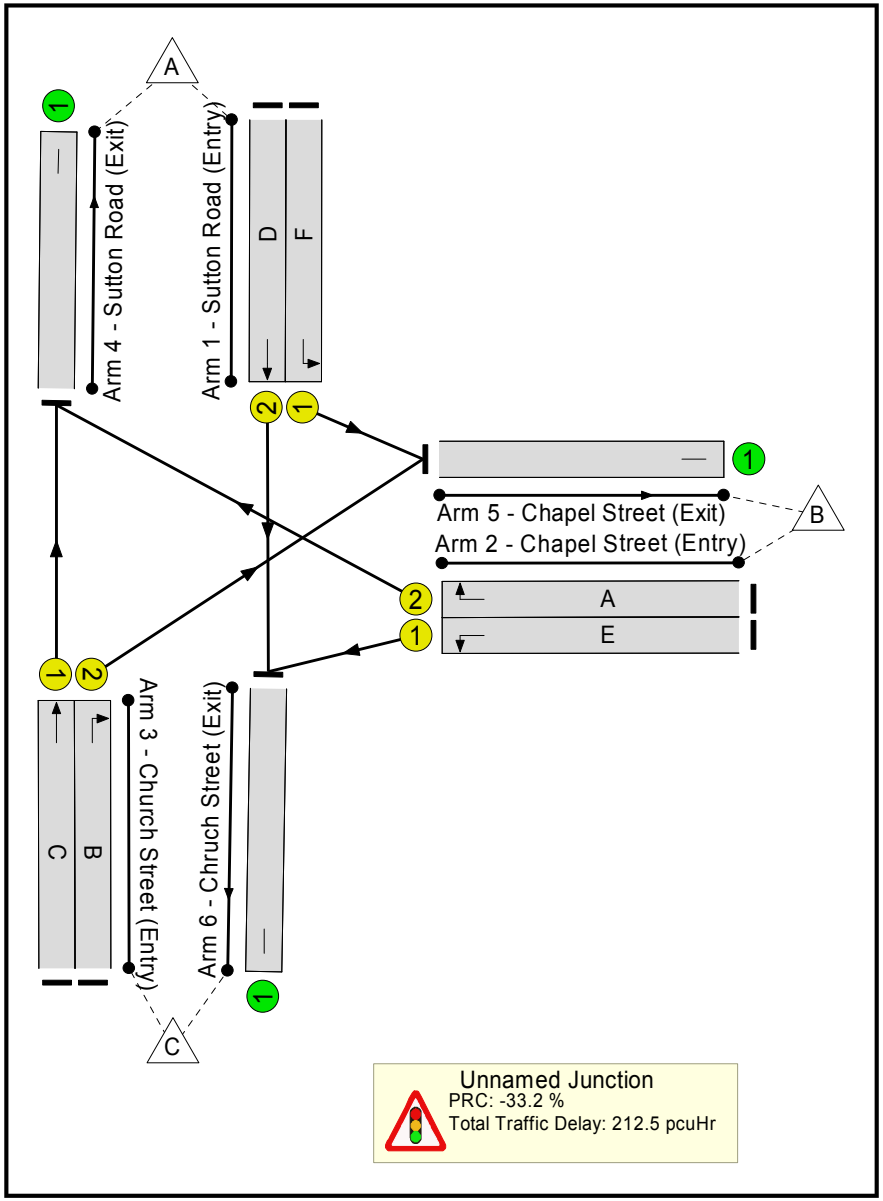
Stage	1	2	3
Duration	54	17	34
Change Point	0	59	81

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**119.9%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**119.9%**
1/1	Sutton Road (Entry) Left	U	N/A	N/A	F		1	93	-	629	1940	1520	41.4%
1/2	Sutton Road (Entry) Ahead	U	N/A	N/A	D		1	54	-	989	1800	825	119.9%
2/1	Chapel Street (Entry) Left	U	N/A	N/A	E		1	56	-	328	1940	921	35.6%
2/2	Chapel Street (Entry) Right	U	N/A	N/A	A		1	34	-	626	1800	525	119.2%
3/1	Church Street (Entry) Ahead	U	N/A	N/A	C		1	76	-	879	1800	1155	76.1%
3/2	Church Street (Entry) Right	U	N/A	N/A	B		1	17	-	310	1800	270	114.8%
4/1	Sutton Road (Exit)	U	N/A	N/A	-		-	-	-	1505	1800	1800	78.0%
5/1	Chapel Street (Exit)	U	N/A	N/A	-		-	-	-	939	1800	1800	49.9%
6/1	Chruch Street (Exit)	U	N/A	N/A	-		-	-	-	1317	1800	1800	64.1%

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	**-**	**-**	**0**	**0**	**0**	**45.5**	**167.0**	**0.0**	**212.5**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**45.5**	**167.0**	**0.0**	**212.5**	**-**	**-**	**-**	**-**
1/1	629	629	-	-	-	0.7	0.4	-	1.1	6.2	6.6	0.4	7.0
1/2	989	825	-	-	-	18.3	84.9	-	103.2	375.7	38.4	84.9	123.3
2/1	328	328	-	-	-	1.8	0.3	-	2.1	22.9	6.8	0.3	7.1
2/2	626	525	-	-	-	14.5	53.4	-	68.0	390.9	27.1	53.4	80.5
3/1	879	879	-	-	-	3.7	1.6	-	5.3	21.5	20.5	1.6	22.1
3/2	310	270	-	-	-	6.2	23.3	-	29.6	343.2	11.7	23.3	35.0
4/1	1404	1404	-	-	-	0.0	1.8	-	1.8	4.5	0.0	1.8	1.8
5/1	899	899	-	-	-	0.1	0.5	-	0.6	2.4	8.6	0.5	9.1
6/1	1153	1153	-	-	-	0.1	0.9	-	1.0	3.1	8.3	0.9	9.2

C1 PRC for Signalled Lanes (%): -33.2 Total Delay for Signalled Lanes (pcuHr): 209.17 Cycle Time (s): 120
PRC Over All Lanes (%): -33.2 Total Delay Over All Lanes(pcuHr): 212.50

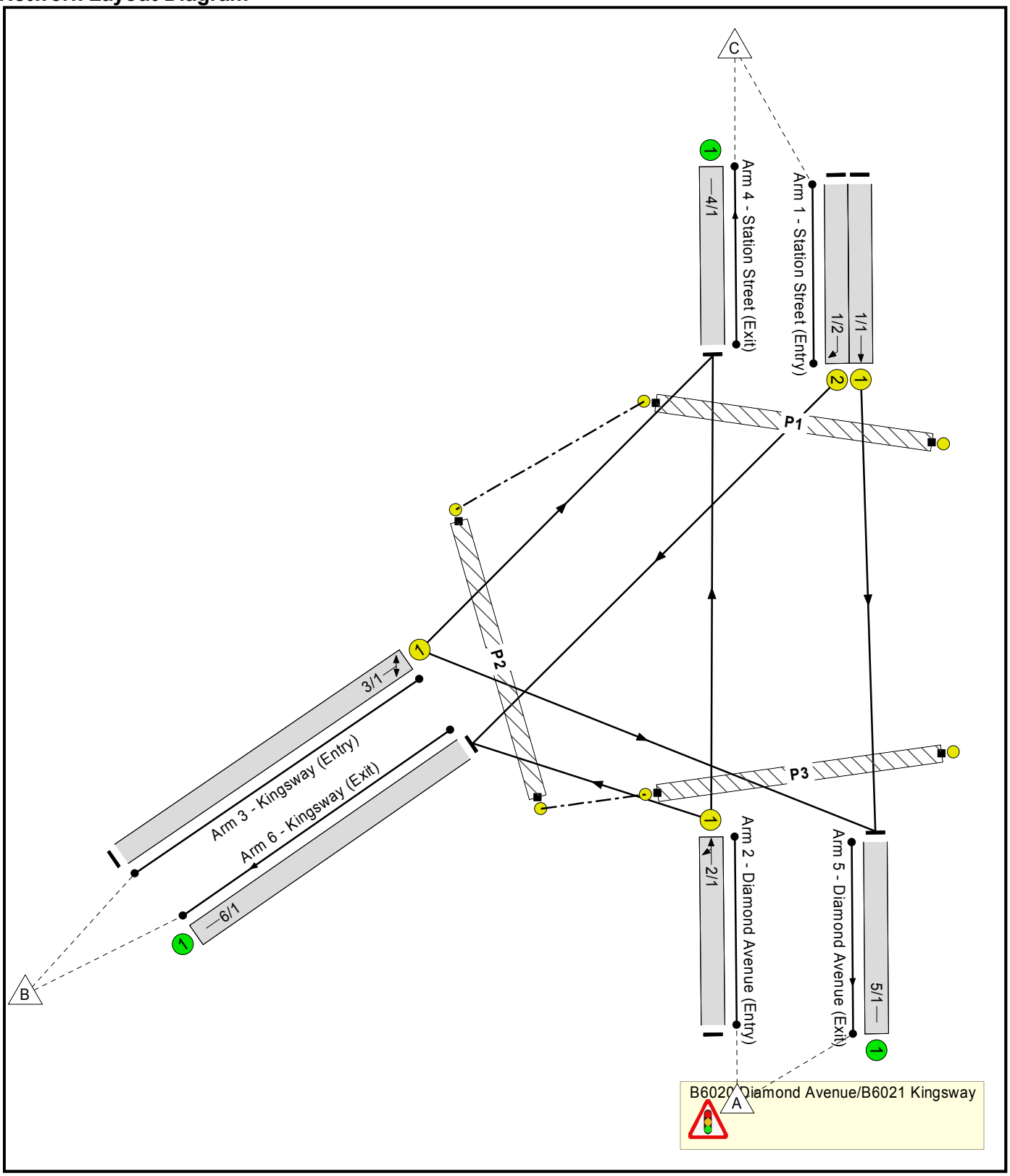
Full Input Data And Results

User and Project Details

Project:	
Title:	
Location:	
File name:	Junction 14 2016.lsg3x
Author:	
Company:	
Address:	
Notes:	

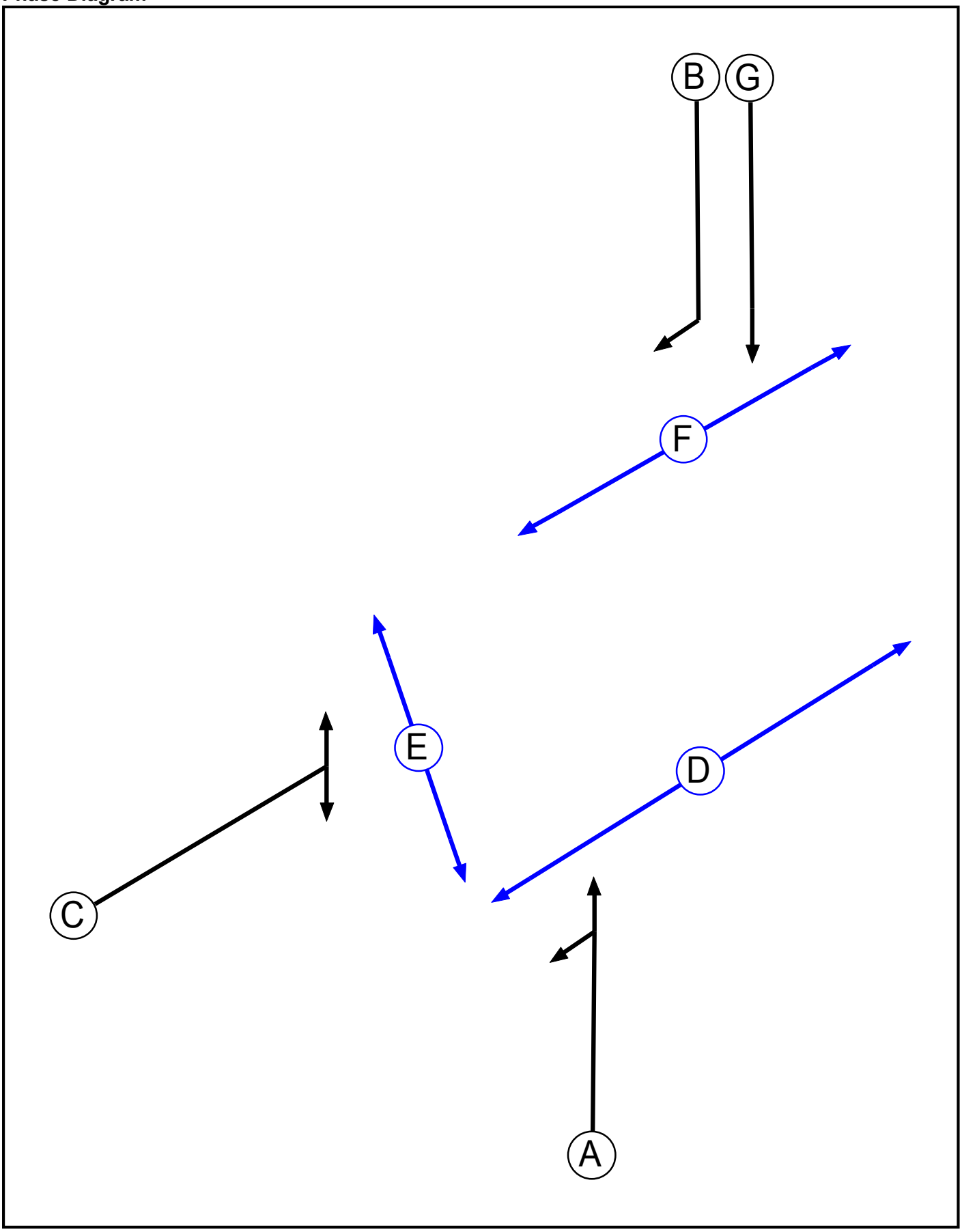
Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

Phase Input Data

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

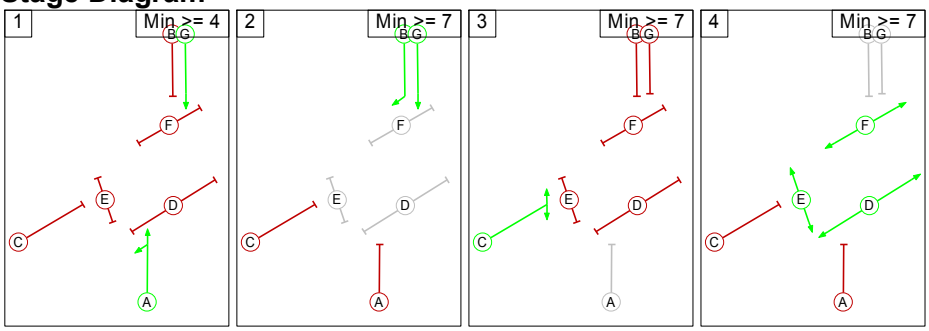
Phase Intergreens Matrix

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

Phases in Stage

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

Stage Diagram



Phase Delays

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

Full Input Data And Results

Prohibited Stage Change

		To Stage			
		1	2	3	4
From Stage	1		5	5	5
	2	2		5	0
	3	5	5		5
	4	5	2	7	

Full Input Data And Results

Give-Way Lane Input Data

Junction: B6020 Diamond Avenue/B6021 Kingsway
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: B6020 Diamond Avenue/B6021 Kingsway												
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 (Station Street (Entry))	U	G	2	3	60.0	User	2000	-	-	-	-	-
1/2 (Station Street (Entry))	U	B	2	3	15.7	User	1800	-	-	-	-	-
2/1 (Diamond Avenue (Entry))	U	A	2	3	60.0	User	1950	-	-	-	-	-
3/1 (Kingsway (Entry))	U	C	2	3	60.0	User	1800	-	-	-	-	-
4/1 (Station Street (Exit))	U		2	3	60.0	User	1800	-	-	-	-	-
5/1 (Diamond Avenue (Exit))	U		2	3	60.0	User	1800	-	-	-	-	-
6/1 (Kingsway (Exit))	U		2	3	60.0	User	1800	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2032 Reference Case Morning Peak'	08:00	09:00	01:00	
2: '2032 Development Case Morning Peak'	08:00	09:00	01:00	
3: '2032 Reference Case Evening Peak'	17:00	18:00	01:00	
4: '2032 Development Case Evening Peak'	17:00	18:00	01:00	

Scenario 1: 'AM Reference Case' (FG1: '2032 Reference Case Morning Peak', Plan 1: 'Signal Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	105	609	714
	B	160	0	308	468
	C	1006	371	0	1377
	Tot.	1166	476	917	2559

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: AM Reference Case
Junction: B6020 Diamond Avenue/B6021 Kingsway	
1/1	1006
1/2	371
2/1	714
3/1	468
4/1	917
5/1	1166
6/1	476

Lane Saturation Flows

Junction: B6020 Diamond Avenue/B6021 Kingsway								
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 (Station Street (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
1/2 (Station Street (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Diamond Avenue (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
3/1 (Kingsway (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Station Street (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (Diamond Avenue (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (Kingsway (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case Evening Peak', Plan 1: 'Signal Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	61	708	769
	B	116	0	482	598
	C	921	330	0	1251
	Tot.	1037	391	1190	2618

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM Reference Case
Junction: B6020 Diamond Avenue/B6021 Kingsway	
1/1	921
1/2	330
2/1	769
3/1	598
4/1	1190
5/1	1037
6/1	391

Lane Saturation Flows

Junction: B6020 Diamond Avenue/B6021 Kingsway								
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 (Station Street (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
1/2 (Station Street (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Diamond Avenue (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
3/1 (Kingsway (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Station Street (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (Diamond Avenue (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (Kingsway (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Signal Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	125	777	902
	B	178	0	338	516
	C	1090	373	0	1463
	Tot.	1268	498	1115	2881

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: AM Development Scenario
Junction: B6020 Diamond Avenue/B6021 Kingsway	
1/1	1090
1/2	373
2/1	902
3/1	516
4/1	1115
5/1	1268
6/1	498

Lane Saturation Flows

Junction: B6020 Diamond Avenue/B6021 Kingsway								
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 (Station Street (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
1/2 (Station Street (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Diamond Avenue (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
3/1 (Kingsway (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Station Street (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (Diamond Avenue (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (Kingsway (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Signal Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	83	821	904
	B	150	0	490	640
	C	1083	360	0	1443
	Tot.	1233	443	1311	2987

Full Input Data And Results

Traffic Lane Flows

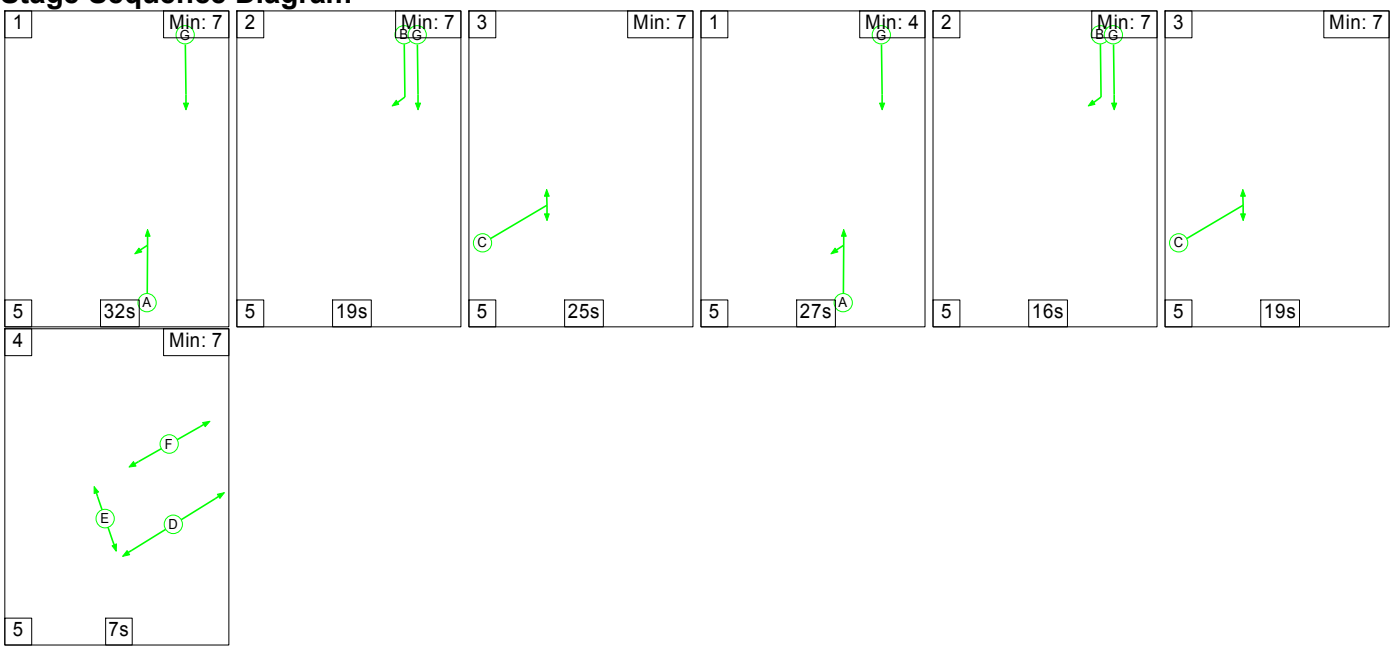
Lane	Scenario 4: PM Development Scenario
Junction: B6020 Diamond Avenue/B6021 Kingsway	
1/1	1083
1/2	360
2/1	904
3/1	640
4/1	1311
5/1	1233
6/1	443

Lane Saturation Flows

Junction: B6020 Diamond Avenue/B6021 Kingsway								
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 (Station Street (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
1/2 (Station Street (Entry) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Diamond Avenue (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
3/1 (Kingsway (Entry) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Station Street (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (Diamond Avenue (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (Kingsway (Exit) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 1: 'AM Reference Case' (FG1: '2032 Reference Case Morning Peak', Plan 1: 'Signal Plan No. 1')

Stage Sequence Diagram

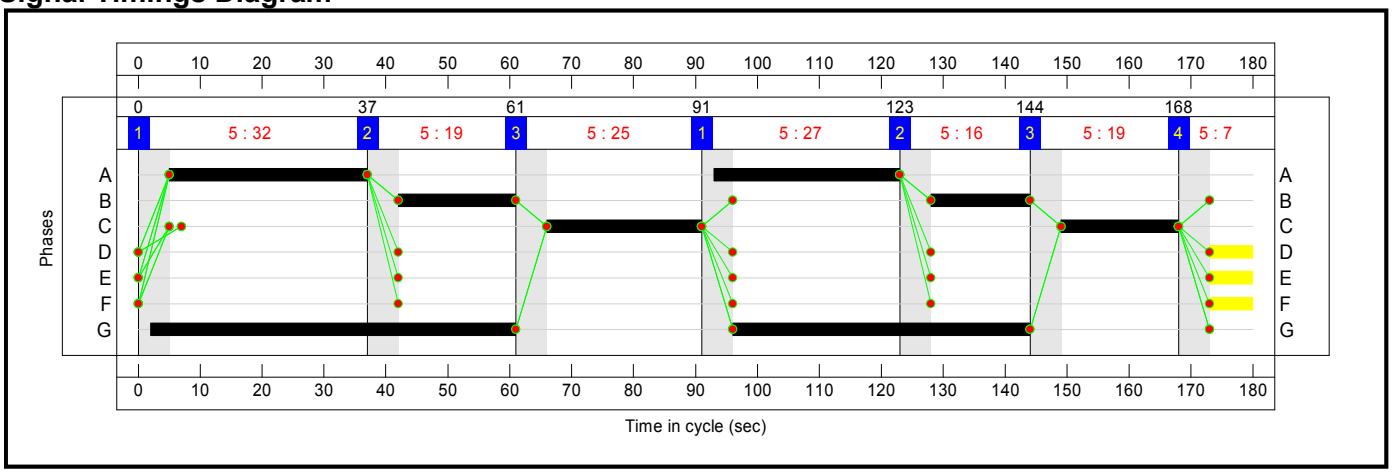


Full Input Data And Results

Stage Timings

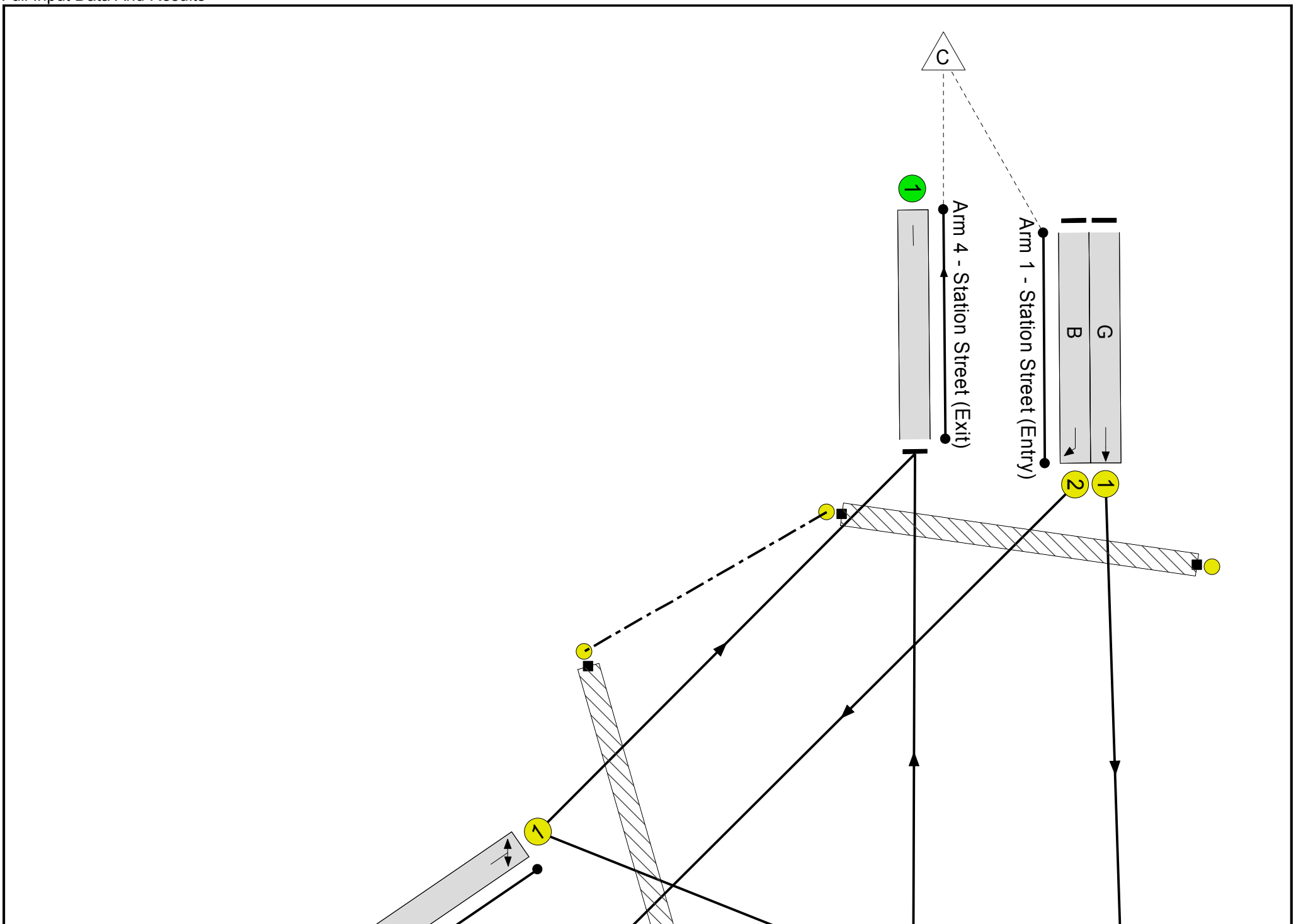
Stage	1	2	3	1	2	3	4
Duration	32	19	25	27	16	19	7
Change Point	0	37	61	91	123	144	168

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**103.0%**
B6020 Diamond Avenue/B6021 Kingsway	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**103.0%**
1/1	Station Street (Entry) Ahead	U	N/A	N/A	G		2	107	-	1006	2000	1211	83.1%
1/2	Station Street (Entry) Right	U	N/A	N/A	B		2	35	-	371	1800	370	100.3%
2/1	Diamond Avenue (Entry) Ahead Left	U	N/A	N/A	A		2	62	-	714	1950	693	103.0%
3/1	Kingsway (Entry) Left Right	U	N/A	N/A	C		2	44	-	468	1800	460	101.7%
4/1	Station Street (Exit)	U	N/A	N/A	-		-	-	-	917	1800	1800	49.7%
5/1	Diamond Avenue (Exit)	U	N/A	N/A	-		-	-	-	1166	1800	1800	64.6%
6/1	Kingsway (Exit)	U	N/A	N/A	-		-	-	-	476	1800	1800	26.2%
Ped Link: P1	Station Street Crossing	-	N/A	-	F		1	7	-	0	-	0	0.0%
Ped Link: P2	Kingsway Crossing	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P3	Diamond Avenue Crossing	-	N/A	-	D		1	7	-	0	-	0	0.0%

Full Input Data And Results

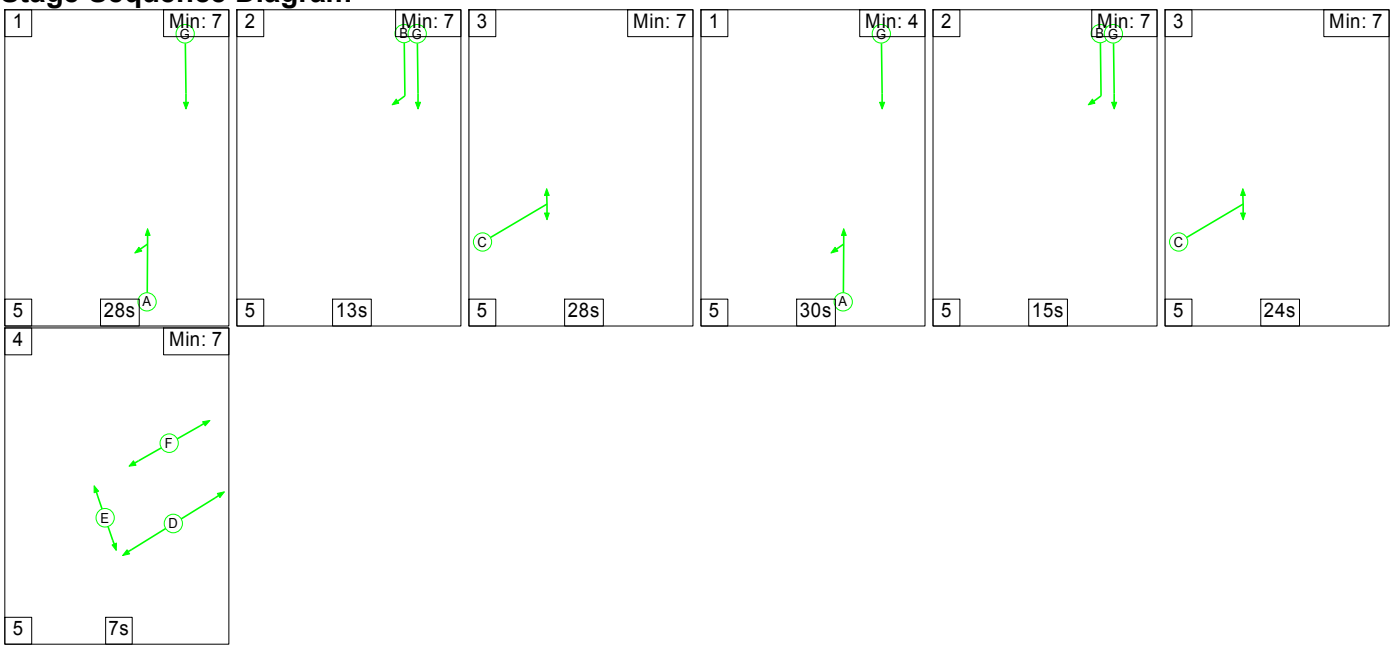
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**21.0**	**46.4**	**0.0**	**67.3**	**-**	**-**	**-**	**-**
B6020 Diamond Avenue/B6021 Kingsway	**-**	**-**	**0**	**0**	**0**	**21.0**	**46.4**	**0.0**	**67.3**	**-**	**-**	**-**	**-**
1/1	1006	1006	-	-	-	3.9	2.4	-	6.3	22.7	20.7	2.4	23.1
1/2	371	370	-	-	-	3.8	9.9	-	13.7	133.0	10.1	9.9	20.0
2/1	714	693	-	-	-	7.8	19.5	-	27.3	137.8	19.9	19.5	39.4
3/1	468	460	-	-	-	5.1	13.0	-	18.1	139.0	13.8	13.0	26.8
4/1	894	894	-	-	-	0.0	0.5	-	0.5	2.0	0.0	0.5	0.5
5/1	1163	1163	-	-	-	0.3	0.9	-	1.2	3.8	20.1	0.9	21.0
6/1	472	472	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -14.4 Total Delay for Signalled Lanes (pcuHr): 65.45 Cycle Time (s): 180
PRC Over All Lanes (%): -14.4 Total Delay Over All Lanes(pcuHr): 67.33

Full Input Data And Results

Scenario 2: 'PM Reference Case' (FG3: '2032 Reference Case Evening Peak', Plan 1: 'Signal Plan No. 1')

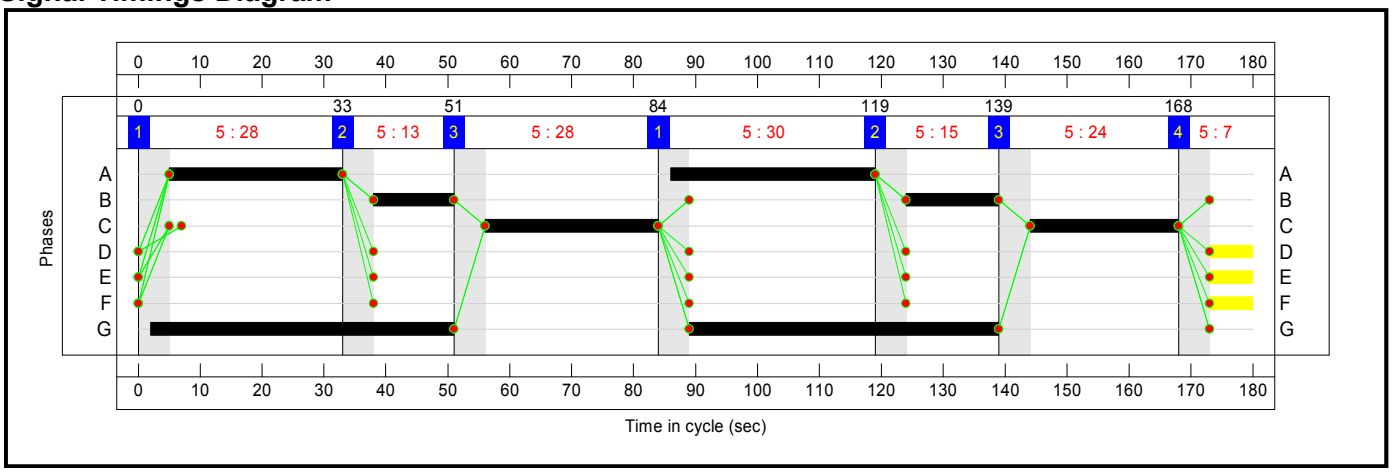
Stage Sequence Diagram



Stage Timings

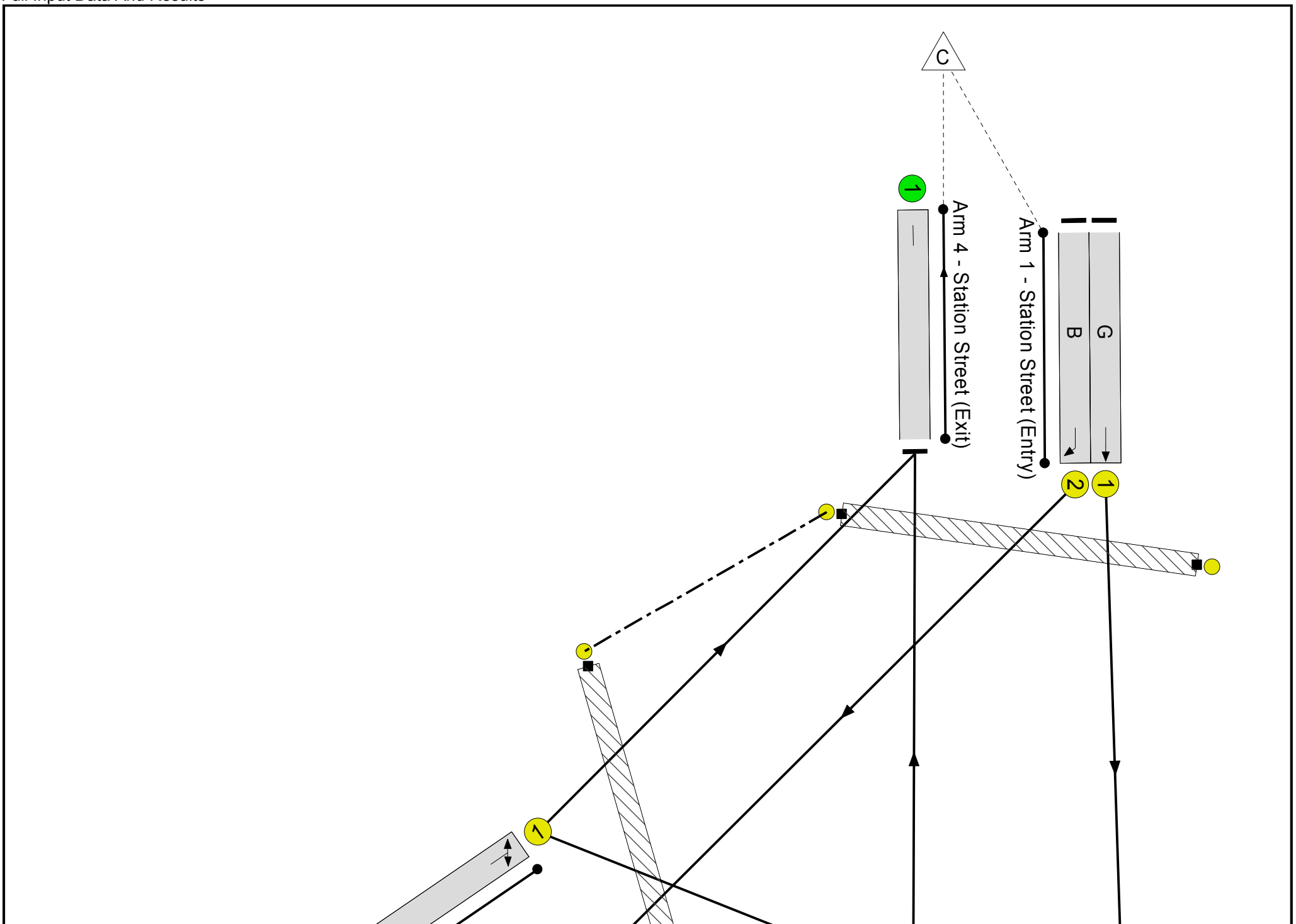
Stage	1	2	3	1	2	3	4
Duration	28	13	28	30	15	24	7
Change Point	0	33	51	84	119	139	168

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**112.7%**
B6020 Diamond Avenue/B6021 Kingsway	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**112.7%**
1/1	Station Street (Entry) Ahead	U	N/A	N/A	G		2	99	-	921	2000	1122	82.1%
1/2	Station Street (Entry) Right	U	N/A	N/A	B		2	28	-	330	1800	300	110.0%
2/1	Diamond Avenue (Entry) Ahead Left	U	N/A	N/A	A		2	61	-	769	1950	682	112.7%
3/1	Kingsway (Entry) Left Right	U	N/A	N/A	C		2	52	-	598	1800	540	110.7%
4/1	Station Street (Exit)	U	N/A	N/A	-		-	-	-	1190	1800	1800	59.1%
5/1	Diamond Avenue (Exit)	U	N/A	N/A	-		-	-	-	1037	1800	1800	57.0%
6/1	Kingsway (Exit)	U	N/A	N/A	-		-	-	-	391	1800	1800	19.7%
Ped Link: P1	Station Street Crossing	-	N/A	-	F		1	7	-	0	-	0	0.0%
Ped Link: P2	Kingsway Crossing	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P3	Diamond Avenue Crossing	-	N/A	-	D		1	7	-	0	-	0	0.0%

Full Input Data And Results

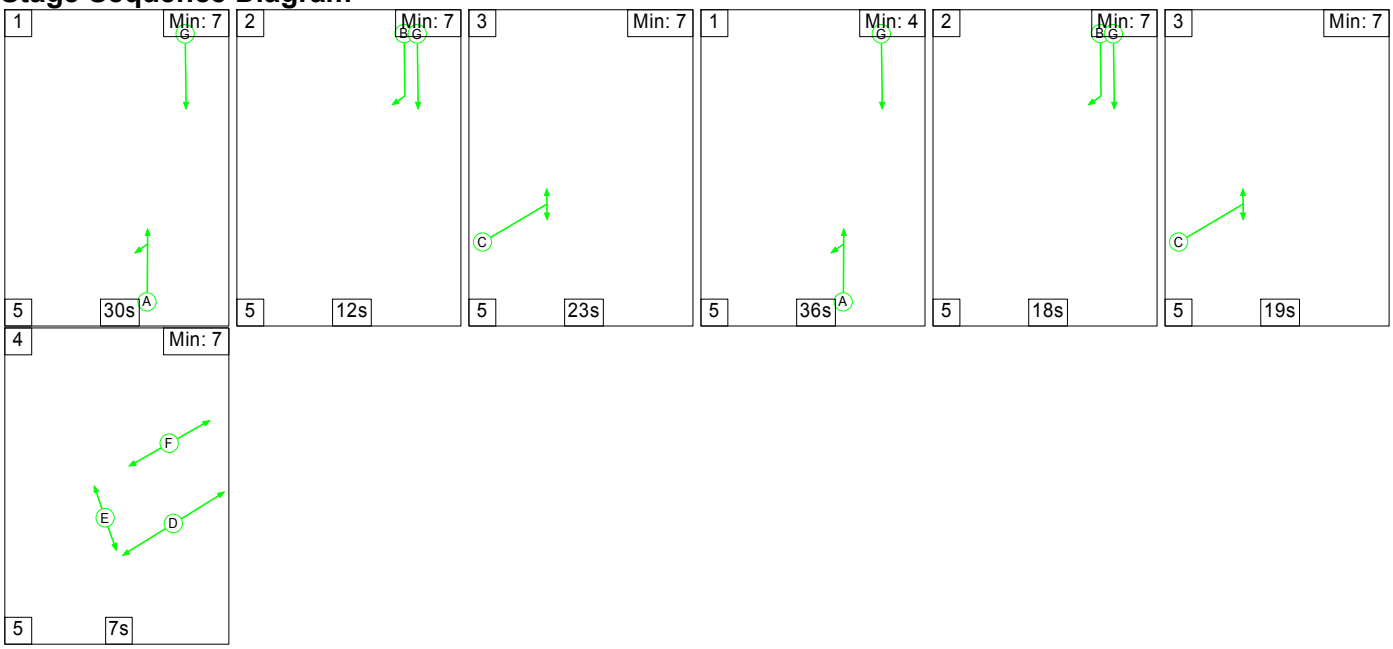
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**35.6**	**103.8**	**0.0**	**139.4**	**-**	**-**	**-**	**-**
B6020 Diamond Avenue/B6021 Kingsway	**-**	**-**	**0**	**0**	**0**	**35.6**	**103.8**	**0.0**	**139.4**	**-**	**-**	**-**	**-**
1/1	921	921	-	-	-	4.1	2.2	-	6.4	24.9	19.7	2.2	21.9
1/2	330	300	-	-	-	6.1	19.3	-	25.4	276.7	11.1	19.3	30.3
2/1	769	683	-	-	-	14.4	47.3	-	61.8	289.1	27.1	47.3	74.4
3/1	598	540	-	-	-	10.7	33.5	-	44.1	265.6	20.3	33.5	53.8
4/1	1064	1064	-	-	-	0.0	0.7	-	0.7	2.4	0.0	0.7	0.7
5/1	1026	1026	-	-	-	0.3	0.7	-	0.9	3.2	18.7	0.7	19.4
6/1	354	354	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -25.2 Total Delay for Signalled Lanes (pcuHr): 137.61 Cycle Time (s): 180
PRC Over All Lanes (%): -25.2 Total Delay Over All Lanes(pcuHr): 139.37

Full Input Data And Results

Scenario 3: 'AM Development Scenario' (FG2: '2032 Development Case Morning Peak', Plan 1: 'Signal Plan No. 1')

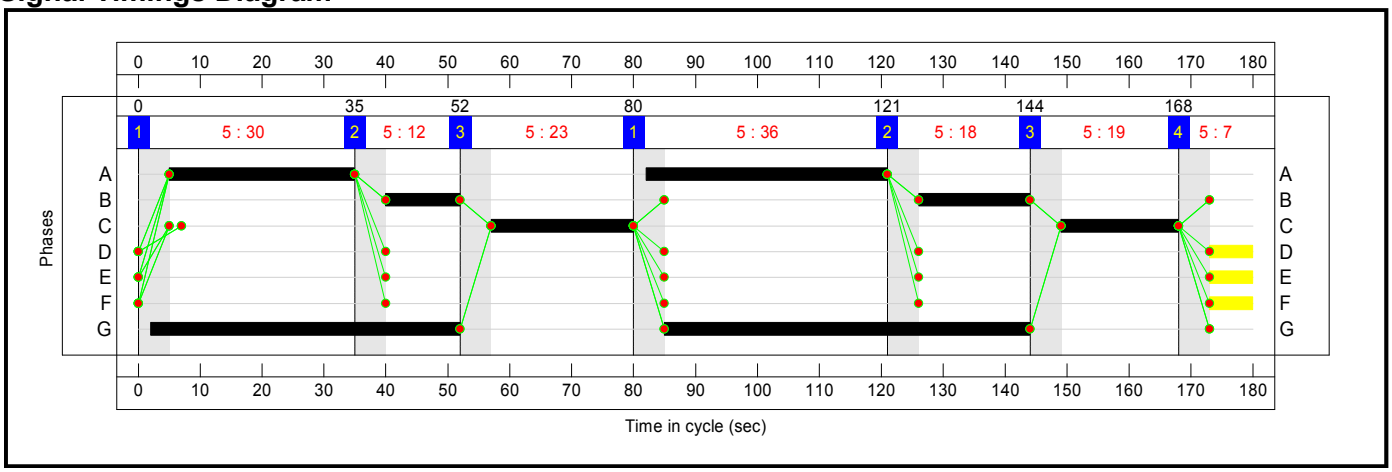
Stage Sequence Diagram



Stage Timings

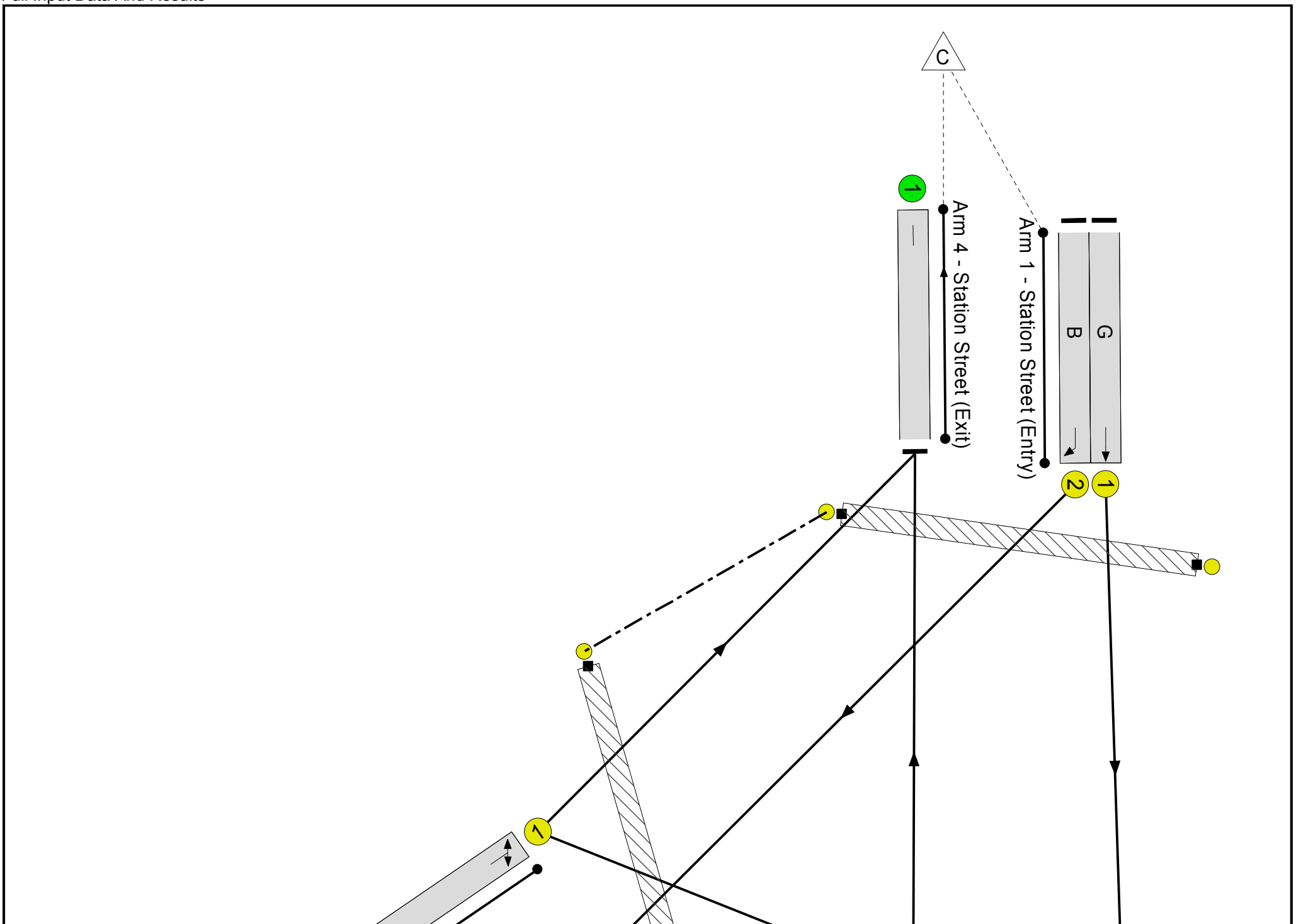
Stage	1	2	3	1	2	3	4
Duration	30	12	23	36	18	19	7
Change Point	0	35	52	80	121	144	168

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**117.3%**
B6020 Diamond Avenue/B6021 Kingsway	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**117.3%**
1/1	Station Street (Entry) Ahead	U	N/A	N/A	G		2	109	-	1090	2000	1233	88.4%
1/2	Station Street (Entry) Right	U	N/A	N/A	B		2	30	-	373	1800	320	116.6%
2/1	Diamond Avenue (Entry) Ahead Left	U	N/A	N/A	A		2	69	-	902	1950	769	117.3%
3/1	Kingsway (Entry) Left Right	U	N/A	N/A	C		2	42	-	516	1800	440	117.3%
4/1	Station Street (Exit)	U	N/A	N/A	-		-	-	-	1115	1800	1800	52.8%
5/1	Diamond Avenue (Exit)	U	N/A	N/A	-		-	-	-	1268	1800	1800	69.0%
6/1	Kingsway (Exit)	U	N/A	N/A	-		-	-	-	498	1800	1800	23.7%
Ped Link: P1	Station Street Crossing	-	N/A	-	F		1	7	-	0	-	0	0.0%
Ped Link: P2	Kingsway Crossing	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P3	Diamond Avenue Crossing	-	N/A	-	D		1	7	-	0	-	0	0.0%

Full Input Data And Results

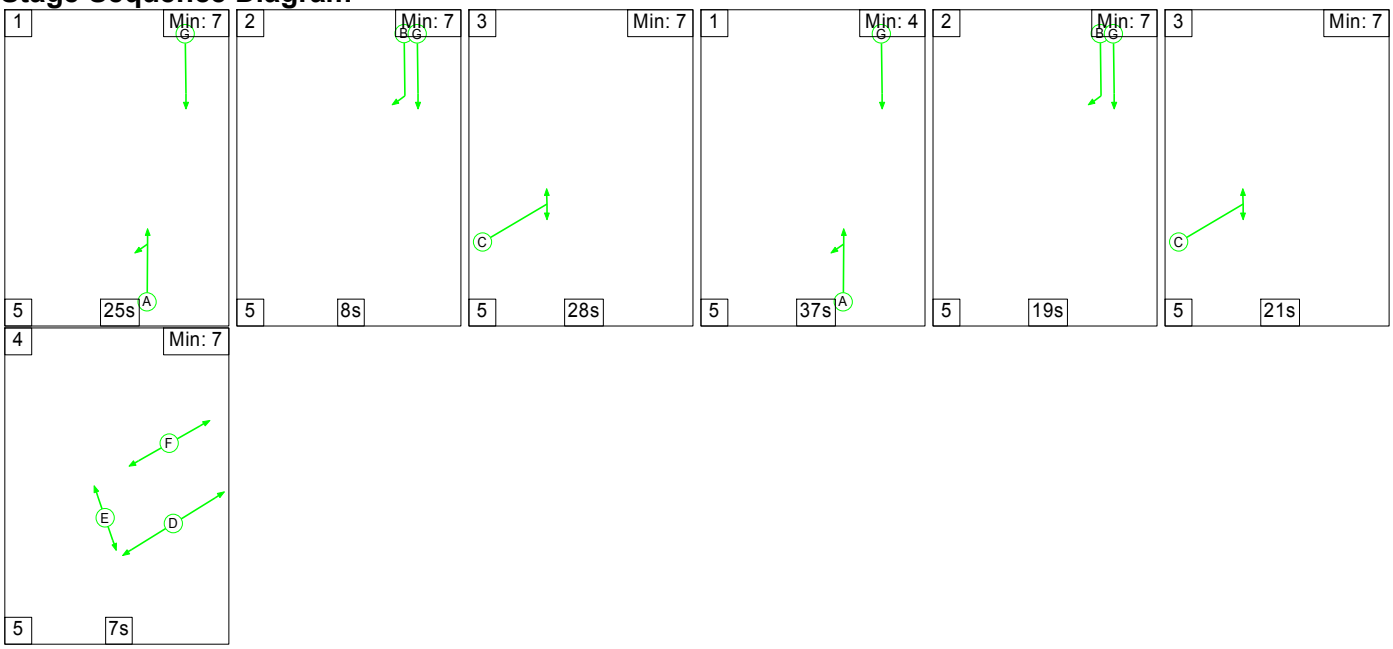
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**45.0**	**145.9**	**0.0**	**190.9**	**-**	**-**	**-**	**-**
B6020 Diamond Avenue/B6021 Kingsway	**-**	**-**	**0**	**0**	**0**	**45.0**	**145.9**	**0.0**	**190.9**	**-**	**-**	**-**	**-**
1/1	1090	1090	-	-	-	4.4	3.6	-	8.0	26.6	24.5	3.6	28.1
1/2	373	320	-	-	-	8.4	29.6	-	38.1	367.6	14.8	29.6	44.5
2/1	902	769	-	-	-	19.4	69.7	-	89.1	355.4	35.0	69.7	104.6
3/1	516	440	-	-	-	12.3	41.1	-	53.4	372.8	20.2	41.1	61.3
4/1	951	951	-	-	-	0.0	0.6	-	0.6	2.1	0.0	0.6	0.6
5/1	1242	1242	-	-	-	0.4	1.1	-	1.5	4.5	23.8	1.1	24.9
6/1	427	427	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -30.3 Total Delay for Signalled Lanes (pcuHr): 188.61 Cycle Time (s): 180
PRC Over All Lanes (%): -30.3 Total Delay Over All Lanes(pcuHr): 190.88

Full Input Data And Results

Scenario 4: 'PM Development Scenario' (FG4: '2032 Development Case Evening Peak', Plan 1: 'Signal Plan No. 1')

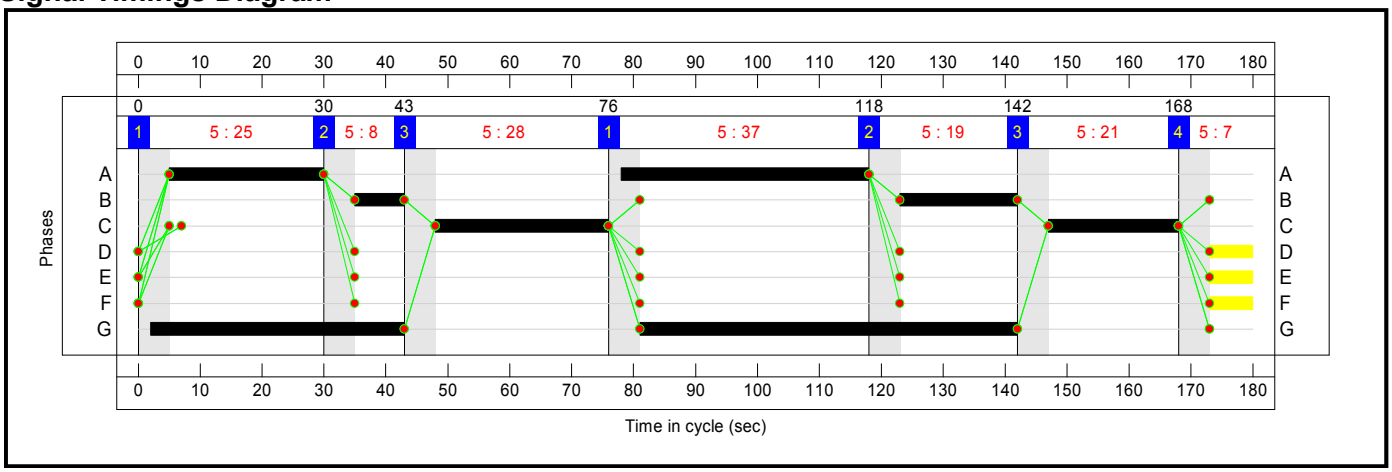
Stage Sequence Diagram



Stage Timings

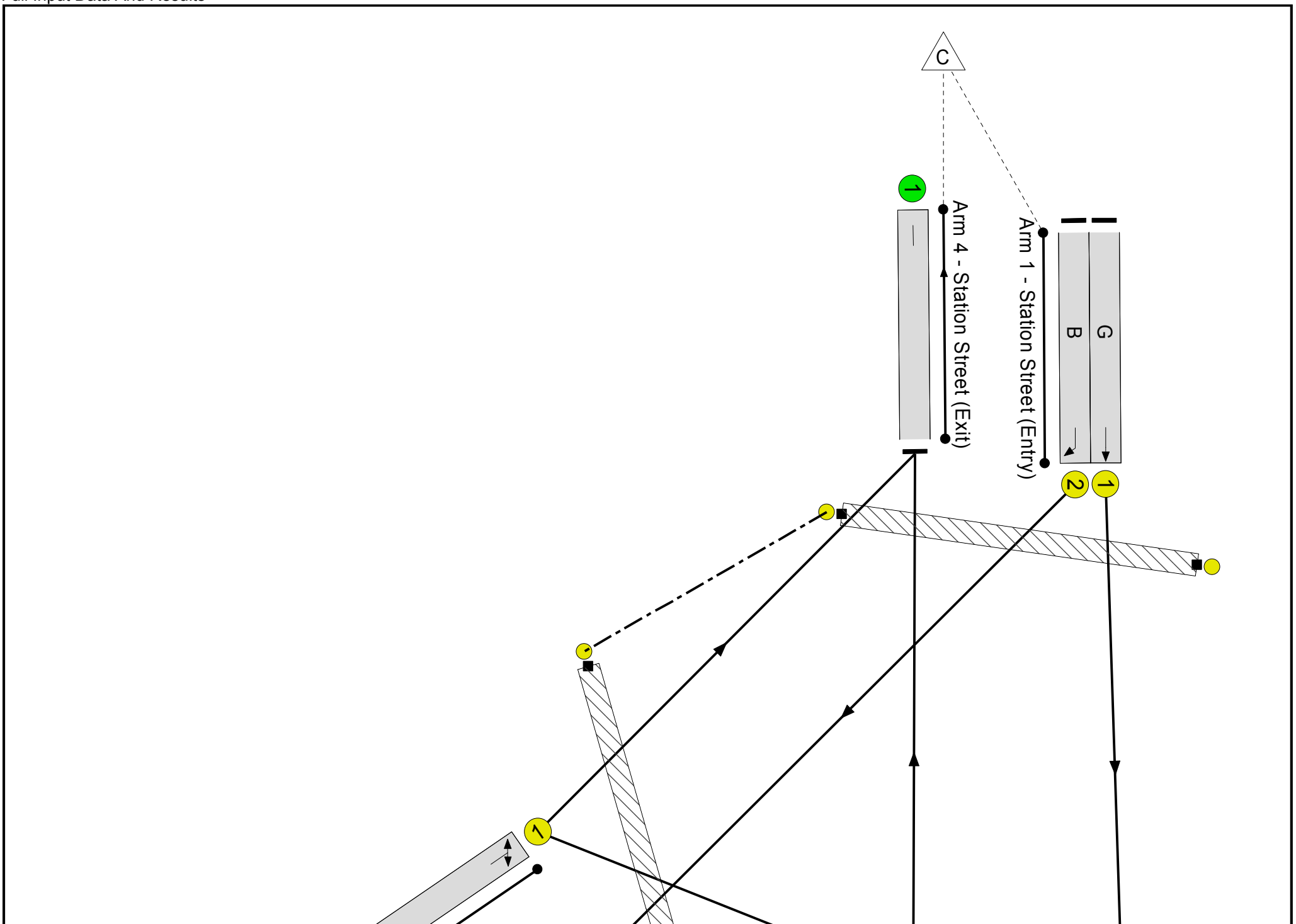
Stage	1	2	3	1	2	3	4
Duration	25	8	28	37	19	21	7
Change Point	0	30	43	76	118	142	168

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**125.5%**
B6020 Diamond Avenue/B6021 Kingsway	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**125.5%**
1/1	Station Street (Entry) Ahead	U	N/A	N/A	G		2	102	-	1083	2000	1156	93.7%
1/2	Station Street (Entry) Right	U	N/A	N/A	B		2	27	-	360	1800	290	124.1%
2/1	Diamond Avenue (Entry) Ahead Left	U	N/A	N/A	A		2	65	-	904	1950	726	124.5%
3/1	Kingsway (Entry) Left Right	U	N/A	N/A	C		2	49	-	640	1800	510	125.5%
4/1	Station Street (Exit)	U	N/A	N/A	-		-	-	-	1311	1800	1800	58.3%
5/1	Diamond Avenue (Exit)	U	N/A	N/A	-		-	-	-	1233	1800	1800	66.8%
6/1	Kingsway (Exit)	U	N/A	N/A	-		-	-	-	443	1800	1800	19.8%
Ped Link: P1	Station Street Crossing	-	N/A	-	F		1	7	-	0	-	0	0.0%
Ped Link: P2	Kingsway Crossing	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P3	Diamond Avenue Crossing	-	N/A	-	D		1	7	-	0	-	0	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	**-**	**-**	**0**	**0**	**0**	**59.3**	**204.5**	**0.0**	**263.8**	**-**	**-**	**-**	**-**
B6020 Diamond Avenue/B6021 Kingsway	**-**	**-**	**0**	**0**	**0**	**59.3**	**204.5**	**0.0**	**263.8**	**-**	**-**	**-**	**-**
1/1	1083	1083	-	-	-	5.7	6.4	-	12.1	40.2	26.3	6.4	32.7
1/2	360	290	-	-	-	10.0	37.4	-	47.5	474.5	17.0	37.4	54.4
2/1	904	726	-	-	-	24.0	91.6	-	115.6	460.2	40.0	91.6	131.6
3/1	640	510	-	-	-	18.9	67.4	-	86.3	485.6	29.4	67.4	96.7
4/1	1050	1050	-	-	-	0.0	0.7	-	0.7	2.4	0.0	0.7	0.7
5/1	1203	1203	-	-	-	0.5	1.0	-	1.5	4.5	27.2	1.0	28.2
6/1	357	357	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

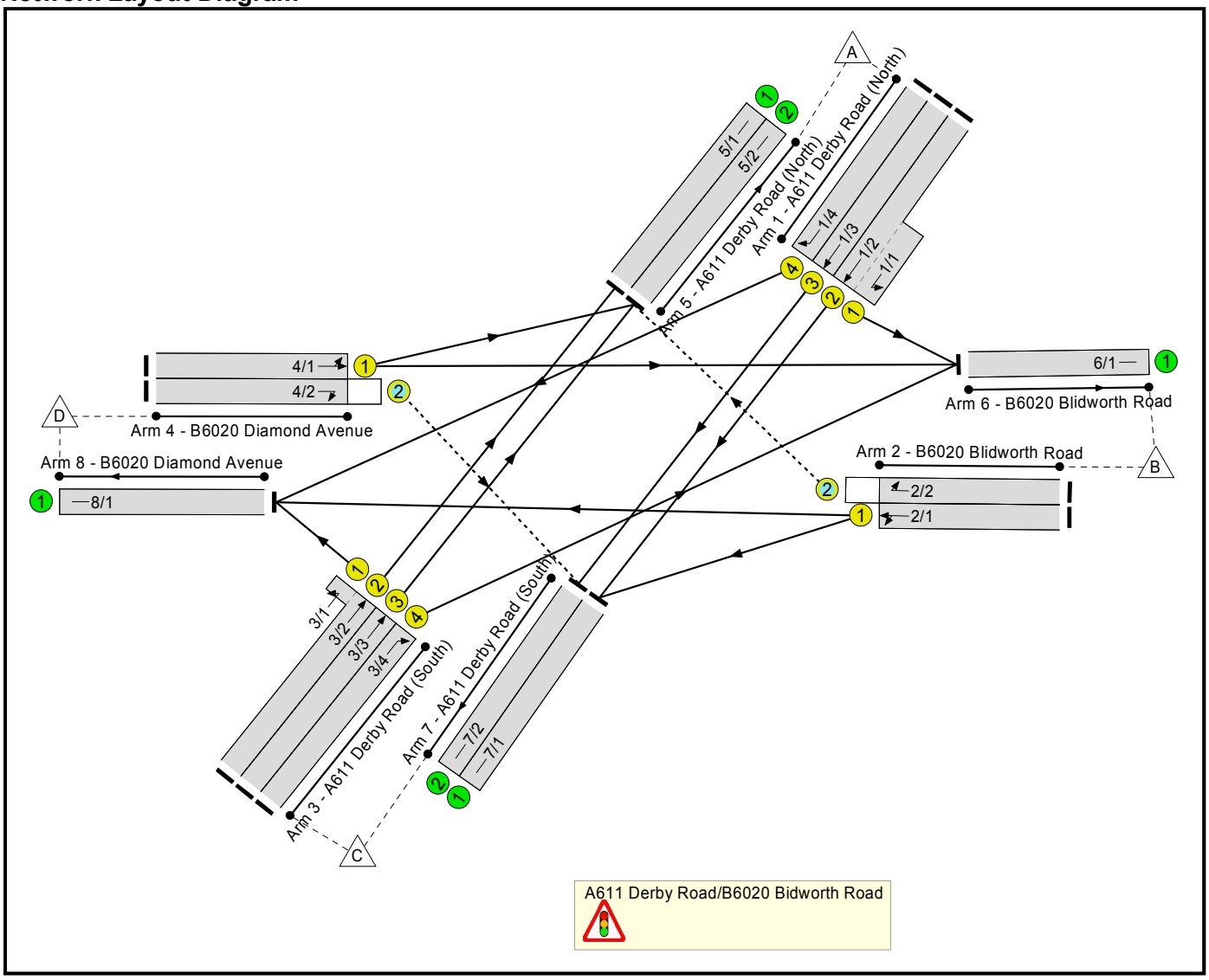
C1 PRC for Signalled Lanes (%): -39.4 Total Delay for Signalled Lanes (pcuHr): 261.43 Cycle Time (s): 180
PRC Over All Lanes (%): -39.4 Total Delay Over All Lanes(pcuHr): 263.77

Full Input Data And Results

User and Project Details

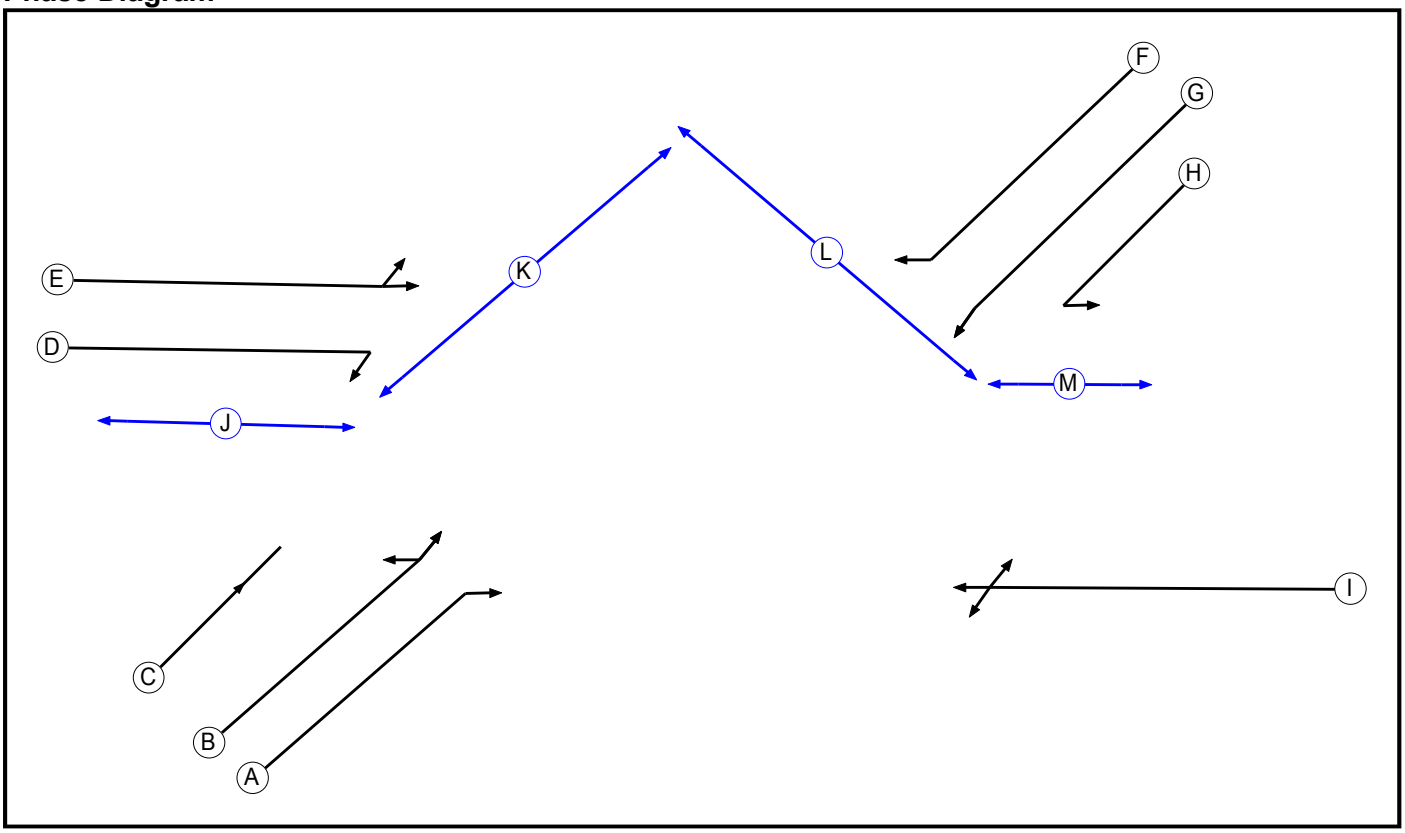
Project:	
Title:	
Location:	
File name:	2016-08-15 J15 JMP.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

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	Traffic		7	7
H	Traffic		7	7
I	Traffic		7	7
J	Pedestrian		7	7
K	Pedestrian		7	7
L	Pedestrian		7	7
M	Pedestrian		7	7

Full Input Data And Results

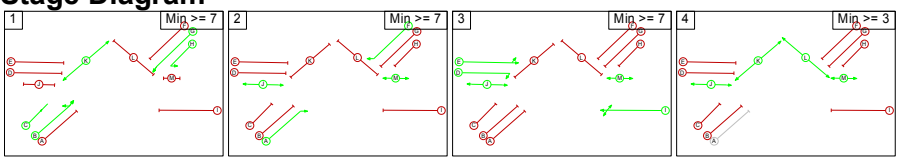
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K	L	M
A		-	-	7	9	-	7	10	7	-	-	-	-
B	-		-	7	8	6	-	-	6	-	-	9	-
C	-	-		-	-	7	-	-	7	5	-	-	-
D	7	6	-		-	7	8	-	-	-	5	-	-
E	8	7	-	-		7	7	10	-	-	5	7	-
F	-	8	11	8	7		-	-	9	-	9	5	-
G	6	-	-	7	6	-		-	7	-	-	5	-
H	6	-	-	-	6	-	-		-	-	-	-	5
I	7	8	11	-	-	7	6	-		-	7	8	-
J	-	-	3	-	-	-	-	-	-		-	-	-
K	-	-	-	3	3	3	-	-	3	-		-	-
L	-	3	-	-	3	3	3	-	3	-	-		-
M	-	-	-	-	-	-	-	3	-	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	B C G H K
2	A F J M
3	D E I J M
4	J K L M

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	2	B	Losing	4	4

Prohibited Stage Change

From Stage \ To Stage	1	2	3	4
1		10	8	9
2	11		9	9
3	11	8		8
4	3	3	3	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A611 Derby Road/B6020 Bidworth Road

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)
2/2 (B6020 Blidworth Road)	5/2 (Right)	1440	0	4/2	1.09	None	2.00	-	0.50	2	2.00
				4/1	1.09	All					
4/2 (B6020 Diamond Avenue)	7/2 (Right)	1440	0	2/2	1.09	None	2.00	-	0.50	2	2.00

Full Input Data And Results

Lane Input Data

Junction: A611 Derby Road/B6020 Bidworth Road												
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 (A611 Derby Road (North))	U	H	2	3	5.0	Geom	-	3.25	0.00	Y	Arm 6 Left	Inf
1/2 (A611 Derby Road (North))	U	G	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 7 Ahead	Inf
1/3 (A611 Derby Road (North))	U	G	2	3	60.0	User	1900	-	-	-	-	-
1/4 (A611 Derby Road (North))	U	F	2	3	7.0	User	1800	-	-	-	-	-
2/1 (B6020 Blidworth Road)	U	I	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 7 Left	Inf
											Arm 8 Ahead	Inf
2/2 (B6020 Blidworth Road)	O	I	2	3	60.0	User	1800	-	-	-	-	-
3/1 (A611 Derby Road (South))	U	B	2	3	1.0	Geom	-	3.25	0.00	Y	Arm 8 Left	Inf
3/2 (A611 Derby Road (South))	U	B	2	3	60.0	User	1900	-	-	-	-	-
3/3 (A611 Derby Road (South))	U	B	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 5 Ahead	Inf
3/4 (A611 Derby Road (South))	U	A	2	3	7.0	User	1800	-	-	-	-	-
4/1 (B6020 Diamond Avenue)	U	E	2	3	60.0	User	1900	-	-	-	-	-
4/2 (B6020 Diamond Avenue)	O	D	2	3	7.0	User	1800	-	-	-	-	-
5/1 (A611 Derby Road (North))	U		2	3	60.0	Inf	-	-	-	-	-	-
5/2 (A611 Derby Road (North))	U		2	3	60.0	User	1900	-	-	-	-	-
6/1 (B6020 Blidworth Road)	U		2	3	60.0	User	1900	-	-	-	-	-

7/1 (A611 Derby Road (South))	U		2	3	60.0	Inf	-	-	-	-	-	-
7/2 (A611 Derby Road (South))	U		2	3	60.0	User	1900	-	-	-	-	-
8/1 (B6020 Diamond Avenue)	U		2	3	60.0	User	1900	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2032 Reference Case Morning Peak'	08:00	09:00	01:00	
2: '2032 Mitigation Morning Peak'	08:00	09:00	01:00	
3: '2032 Reference Case Evening Peak'	17:00	18:00	01:00	
4: '2032 Mitigation Evening Peak'	17:00	18:00	01:00	

Scenario 1: 'AM Mit 2032' (FG2: '2032 Mitigation Morning Peak', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	0	988	263	1251
	B	253	0	153	267	673
	C	1053	412	0	1	1466
	D	75	274	1	0	350
	Tot.	1381	686	1142	531	3740

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: AM Mit 2032
Junction: A611 Derby Road/B6020 Bidworth Road	
1/1 (short)	0
1/2 (with short)	501(In) 501(Out)
1/3	487
1/4	263
2/1	420
2/2	253
3/1 (short)	1
3/2 (with short)	524(In) 523(Out)
3/3	530
3/4	412
4/1	349
4/2	1
5/1	523
5/2	858
6/1	686
7/1	654
7/2	488
8/1	531

Full Input Data And Results

Lane Saturation Flows

Junction: A611 Derby Road/B6020 Bidworth Road								
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 (A611 Derby Road (North))	3.25	0.00	Y	Arm 6 Left	Inf	0.0 %	1940	1940
1/2 (A611 Derby Road (North))	3.25	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1940	1940
1/3 (A611 Derby Road (North) Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
1/4 (A611 Derby Road (North) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (B6020 Blidworth Road)	3.25	0.00	Y	Arm 7 Left	Inf	36.4 %	1940	1940
				Arm 8 Ahead	Inf	63.6 %		
2/2 (B6020 Blidworth Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A611 Derby Road (South))	3.25	0.00	Y	Arm 8 Left	Inf	100.0 %	1940	1940
3/2 (A611 Derby Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
3/3 (A611 Derby Road (South))	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
3/4 (A611 Derby Road (South) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (B6020 Diamond Avenue Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (B6020 Diamond Avenue Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A611 Derby Road (North) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A611 Derby Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (B6020 Blidworth Road Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (A611 Derby Road (South) Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (A611 Derby Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (B6020 Diamond Avenue Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900

Full Input Data And Results

Scenario 2: 'PM Mit 2032' (FG4: '2032 Mitigation Evening Peak', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	278	964	47	1289
	B	191	0	337	136	664
	C	1035	191	0	1	1227
	D	146	299	5	0	450
	Tot.	1372	768	1306	184	3630

Traffic Lane Flows

Lane	Scenario 2: PM Mit 2032
Junction: A611 Derby Road/B6020 Bidworth Road	
1/1 (short)	278
1/2 (with short)	701(In) 423(Out)
1/3	541
1/4	47
2/1	473
2/2	191
3/1 (short)	1
3/2 (with short)	522(In) 521(Out)
3/3	514
3/4	191
4/1	445
4/2	5
5/1	521
5/2	851
6/1	768
7/1	760
7/2	546
8/1	184

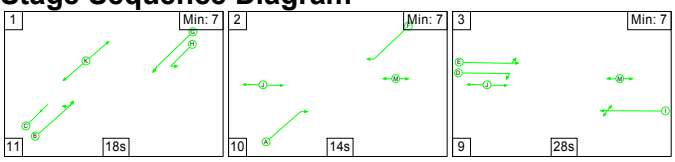
Full Input Data And Results

Lane Saturation Flows

Junction: A611 Derby Road/B6020 Bidworth Road								
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 (A611 Derby Road (North))	3.25	0.00	Y	Arm 6 Left	Inf	100.0 %	1940	1940
1/2 (A611 Derby Road (North))	3.25	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1940	1940
1/3 (A611 Derby Road (North) Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
1/4 (A611 Derby Road (North) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (B6020 Blidworth Road)	3.25	0.00	Y	Arm 7 Left	Inf	71.2 %	1940	1940
				Arm 8 Ahead	Inf	28.8 %		
2/2 (B6020 Blidworth Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A611 Derby Road (South))	3.25	0.00	Y	Arm 8 Left	Inf	100.0 %	1940	1940
3/2 (A611 Derby Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
3/3 (A611 Derby Road (South))	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
3/4 (A611 Derby Road (South) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (B6020 Diamond Avenue Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (B6020 Diamond Avenue Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A611 Derby Road (North) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A611 Derby Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (B6020 Blidworth Road Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/1 (A611 Derby Road (South) Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (A611 Derby Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (B6020 Diamond Avenue Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900

Scenario 1: 'AM Mit 2032' (FG2: '2032 Mitigation Morning Peak', Plan 2: 'Network Control Plan 2')

Stage Sequence Diagram

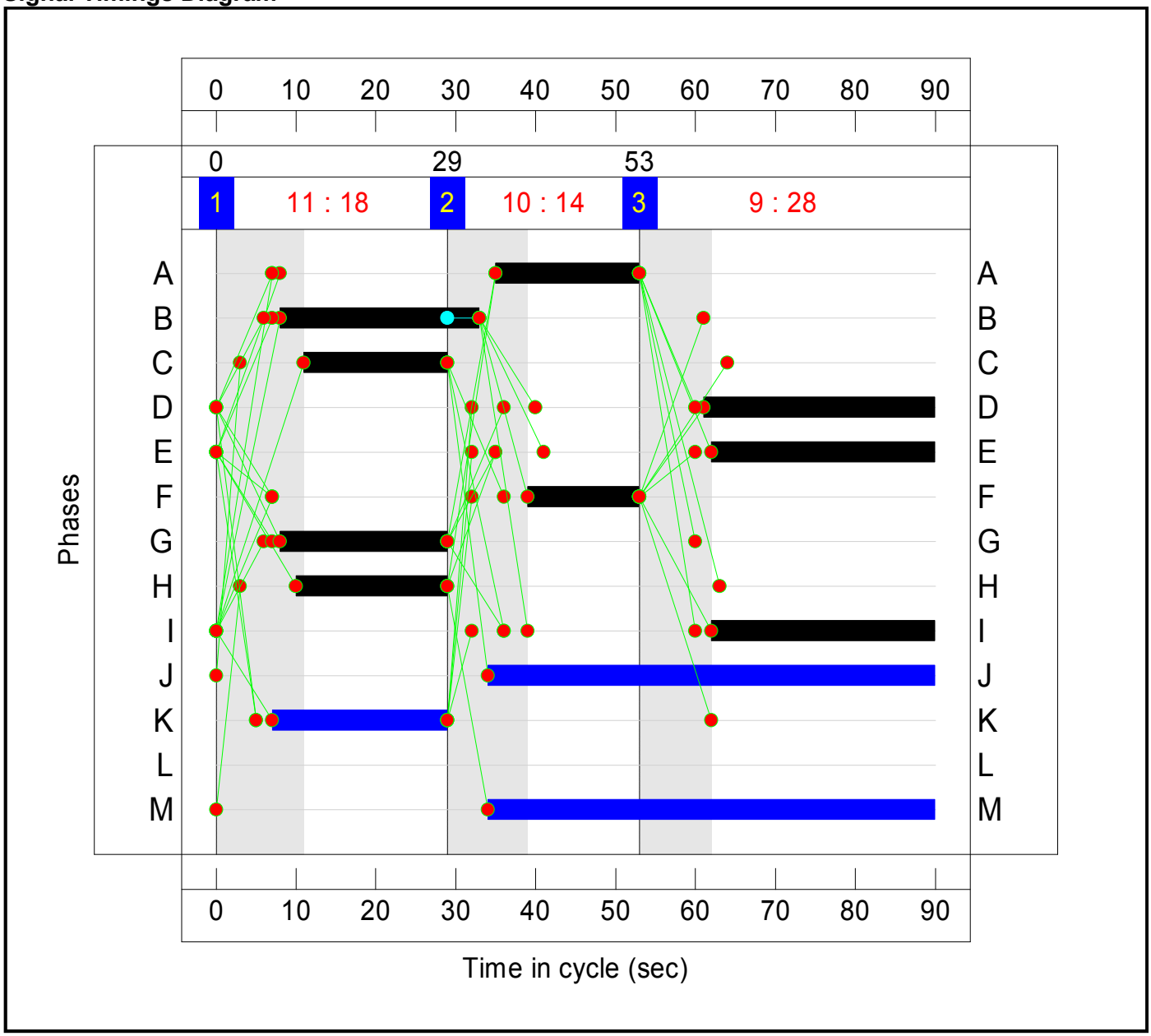


Full Input Data And Results

Stage Timings

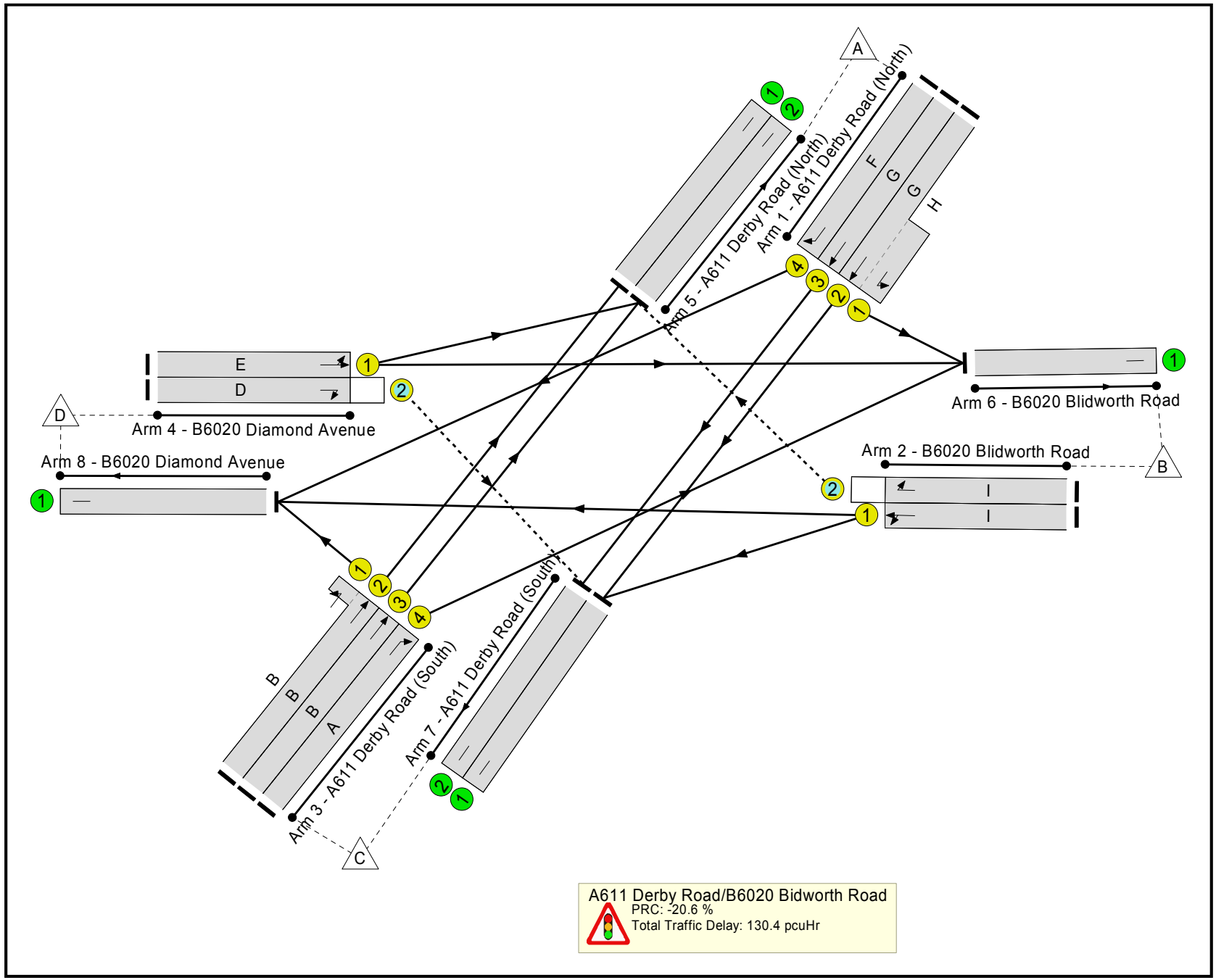
Stage	1	2	3
Duration	18	14	28
Change Point	0	29	53

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**108.6%**
A611 Derby Road/B6020 Bidworth Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**108.6%**
1/2+1/1	A611 Derby Road (North) Left Ahead	U	N/A	N/A	G H		1	21:19	-	501	1940:1940	474	105.6%
1/3	A611 Derby Road (North) Ahead	U	N/A	N/A	G		1	21	-	487	1900	464	104.9%
1/4	A611 Derby Road (North) Right	U	N/A	N/A	F		1	14	-	263	1800	300	87.7%
2/1	B6020 Blidworth Road Left Ahead	U	N/A	N/A	I		1	28	-	420	1940	625	67.2%
2/2	B6020 Blidworth Road Right	O	N/A	N/A	I		1	28	-	253	1800	233	108.6%
3/2+3/1	A611 Derby Road (South) Ahead Left	U	N/A	N/A	B		1	25	-	524	1900:1940	547	95.8%
3/3	A611 Derby Road (South) Ahead	U	N/A	N/A	B		1	25	-	530	1940	560	94.6%
3/4	A611 Derby Road (South) Right	U	N/A	N/A	A		1	18	-	412	1800	380	108.4%
4/1	B6020 Diamond Avenue Left Ahead	U	N/A	N/A	E		1	28	-	349	1900	612	57.0%
4/2	B6020 Diamond Avenue Right	O	N/A	N/A	D		1	29	-	1	1800	600	0.2%
5/1	A611 Derby Road (North)	U	N/A	N/A	-		-	-	-	523	Inf	Inf	0.0%
5/2	A611 Derby Road (North)	U	N/A	N/A	-		-	-	-	858	1900	1900	44.1%
6/1	B6020 Blidworth Road	U	N/A	N/A	-		-	-	-	686	1900	1900	34.4%

Full Input Data And Results

7/1	A611 Derby Road (South)	U	N/A	N/A	-		-	-	-	654	Inf	Inf	0.0%
7/2	A611 Derby Road (South)	U	N/A	N/A	-		-	-	-	488	1900	1900	24.5%
8/1	B6020 Diamond Avenue	U	N/A	N/A	-		-	-	-	531	1900	1900	27.9%

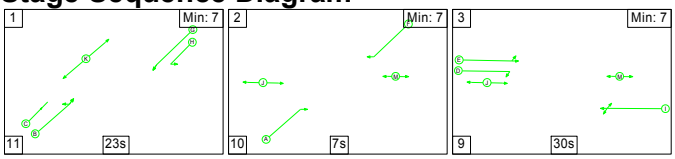
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**177**	**1**	**56**	**37.8**	**92.1**	**0.5**	**130.4**	**-**	**-**	**-**	**-**
A611 Derby Road/B6020 Bidworth Road	**-**	**-**	**177**	**1**	**56**	**37.8**	**92.1**	**0.5**	**130.4**	**-**	**-**	**-**	**-**
1/2+1/1	501	474	-	-	-	5.9	19.7	-	25.7	184.3	13.5	19.7	33.2
1/3	487	464	-	-	-	5.6	18.0	-	23.6	174.7	12.7	18.0	30.8
1/4	263	263	-	-	-	2.7	3.1	-	5.7	78.4	6.4	3.1	9.4
2/1	420	420	-	-	-	3.1	1.0	-	4.1	35.1	9.0	1.0	10.0
2/2	253	233	177	0	56	3.3	14.4	0.5	18.2	258.6	7.1	14.4	21.5
3/2+3/1	524	524	-	-	-	4.6	7.1	-	11.7	80.2	12.8	7.1	19.9
3/3	530	530	-	-	-	4.6	6.2	-	10.8	73.3	13.0	6.2	19.1
3/4	412	380	-	-	-	5.3	20.9	-	26.2	228.7	11.1	20.9	32.0
4/1	349	349	-	-	-	2.5	0.7	-	3.1	32.1	7.2	0.7	7.8
4/2	1	1	0	1	0	0.0	0.0	0.0	0.0	23.3	0.0	0.0	0.0
5/1	523	523	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	838	838	-	-	-	0.3	0.4	-	0.7	3.1	15.0	0.4	15.4
6/1	654	654	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
7/1	627	627	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	465	465	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
8/1	531	531	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2

C1 PRC for Signalled Lanes (%): -20.6 Total Delay for Signalled Lanes (pcuHr): 129.05 Cycle Time (s): 90
PRC Over All Lanes (%): -20.6 Total Delay Over All Lanes(pcuHr): 130.39

Full Input Data And Results

Scenario 2: 'PM Mit 2032' (FG4: '2032 Mitigation Evening Peak', Plan 2: 'Network Control Plan 2')

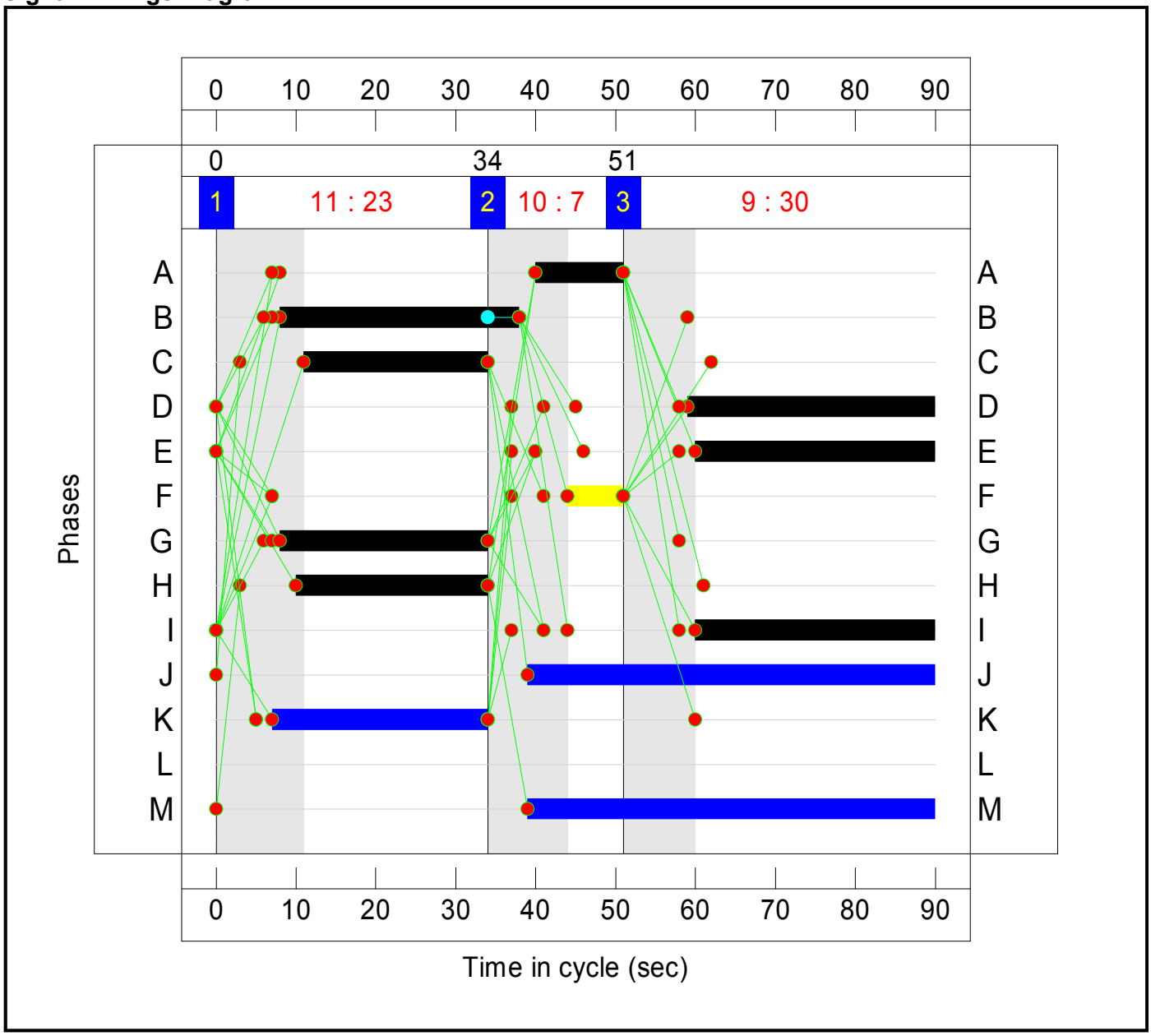
Stage Sequence Diagram



Stage Timings

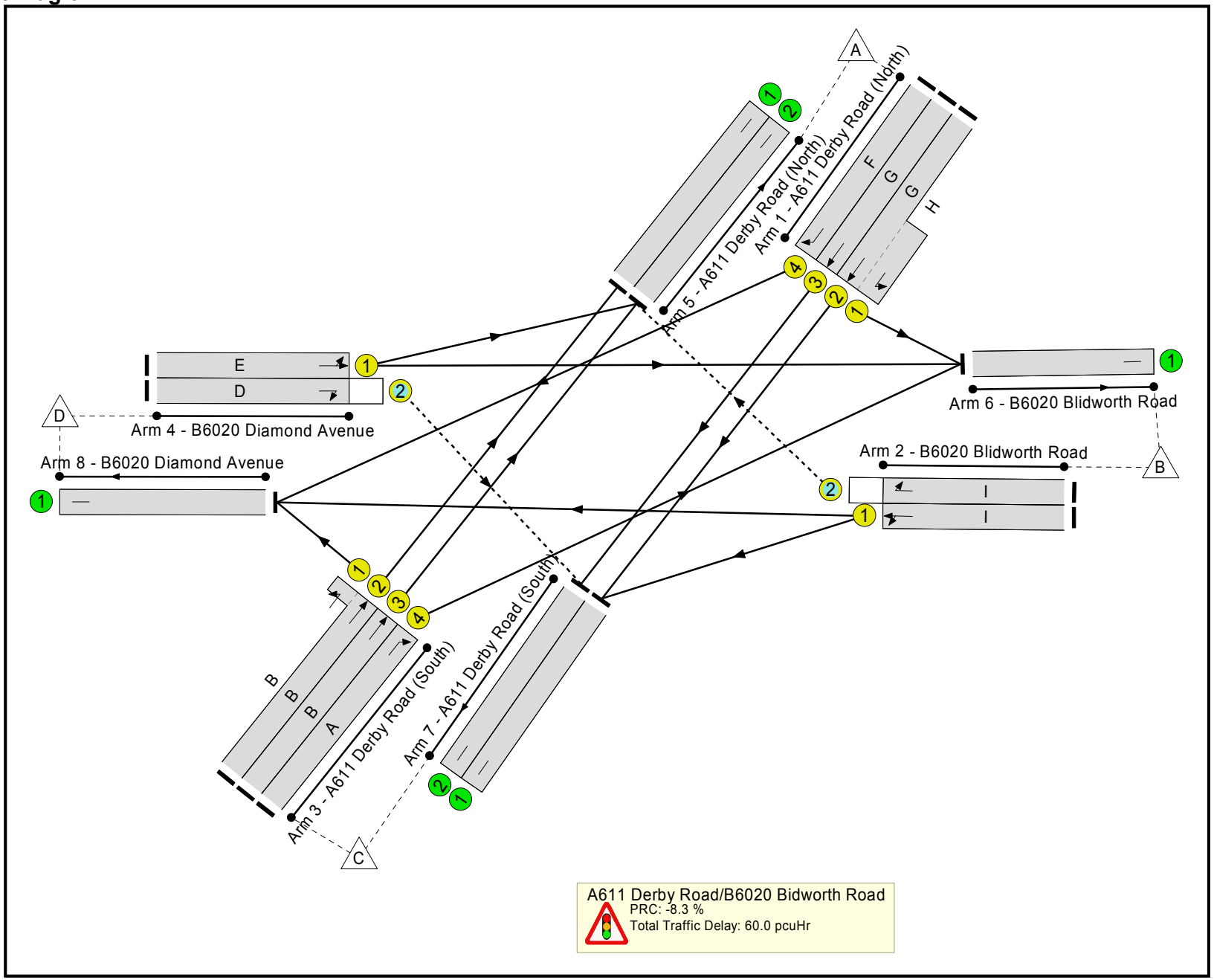
Stage	1	2	3
Duration	23	7	30
Change Point	0	34	51

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**97.5%**
A611 Derby Road/B6020 Bidworth Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**97.5%**
1/2+1/1	A611 Derby Road (North) Left Ahead	U	N/A	N/A	G H		1	26:24	-	701	1940:1940	719	97.4%
1/3	A611 Derby Road (North) Ahead	U	N/A	N/A	G		1	26	-	541	1900	570	94.9%
1/4	A611 Derby Road (North) Right	U	N/A	N/A	F		1	7	-	47	1800	160	29.4%
2/1	B6020 Blidworth Road Left Ahead	U	N/A	N/A	I		1	30	-	473	1940	668	70.8%
2/2	B6020 Blidworth Road Right	O	N/A	N/A	I		1	30	-	191	1800	196	97.5%
3/2+3/1	A611 Derby Road (South) Ahead Left	U	N/A	N/A	B		1	30	-	522	1900:1940	652	80.0%
3/3	A611 Derby Road (South) Ahead	U	N/A	N/A	B		1	30	-	514	1940	668	76.9%
3/4	A611 Derby Road (South) Right	U	N/A	N/A	A		1	11	-	191	1800	240	79.6%
4/1	B6020 Diamond Avenue Left Ahead	U	N/A	N/A	E		1	30	-	445	1900	654	68.0%
4/2	B6020 Diamond Avenue Right	O	N/A	N/A	D		1	31	-	5	1800	640	0.8%
5/1	A611 Derby Road (North)	U	N/A	N/A	-		-	-	-	521	Inf	Inf	0.0%
5/2	A611 Derby Road (North)	U	N/A	N/A	-		-	-	-	851	1900	1900	44.8%
6/1	B6020 Blidworth Road	U	N/A	N/A	-		-	-	-	768	1900	1900	40.4%

Full Input Data And Results

7/1	A611 Derby Road (South)	U	N/A	N/A	-		-	-	-	760	Inf	Inf	0.0%
7/2	A611 Derby Road (South)	U	N/A	N/A	-		-	-	-	546	1900	1900	28.7%
8/1	B6020 Diamond Avenue	U	N/A	N/A	-		-	-	-	184	1900	1900	9.7%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**137**	**5**	**54**	**28.9**	**30.5**	**0.6**	**60.0**	**-**	**-**	**-**	**-**
A611 Derby Road/B6020 Bidworth Road	**-**	**-**	**137**	**5**	**54**	**28.9**	**30.5**	**0.6**	**60.0**	**-**	**-**	**-**	**-**
1/2+1/1	701	701	-	-	-	5.8	9.4	-	15.2	77.9	13.8	9.4	23.3
1/3	541	541	-	-	-	4.6	6.5	-	11.1	73.8	13.2	6.5	19.7
1/4	47	47	-	-	-	0.5	0.2	-	0.7	54.3	1.1	0.2	1.3
2/1	473	473	-	-	-	3.4	1.2	-	4.6	34.7	10.2	1.2	11.4
2/2	191	191	137	0	54	1.6	5.8	0.6	7.9	149.8	4.7	5.8	10.5
3/2+3/1	522	522	-	-	-	3.9	1.9	-	5.8	40.2	11.7	1.9	13.7
3/3	514	514	-	-	-	3.8	1.6	-	5.4	37.7	11.4	1.6	13.1
3/4	191	191	-	-	-	2.0	1.8	-	3.8	72.0	4.6	1.8	6.4
4/1	445	445	-	-	-	3.1	1.1	-	4.2	33.8	9.5	1.1	10.6
4/2	5	5	0	5	0	0.0	0.0	0.0	0.0	21.8	0.1	0.0	0.1
5/1	521	521	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	851	851	-	-	-	0.3	0.4	-	0.7	2.8	13.5	0.4	13.9
6/1	768	768	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3
7/1	760	760	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	546	546	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
8/1	184	184	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1

C1 PRC for Signalled Lanes (%): -8.3 Total Delay for Signalled Lanes (pcuHr): 58.70 Cycle Time (s): 90
PRC Over All Lanes (%): -8.3 Total Delay Over All Lanes(pcuHr): 59.96

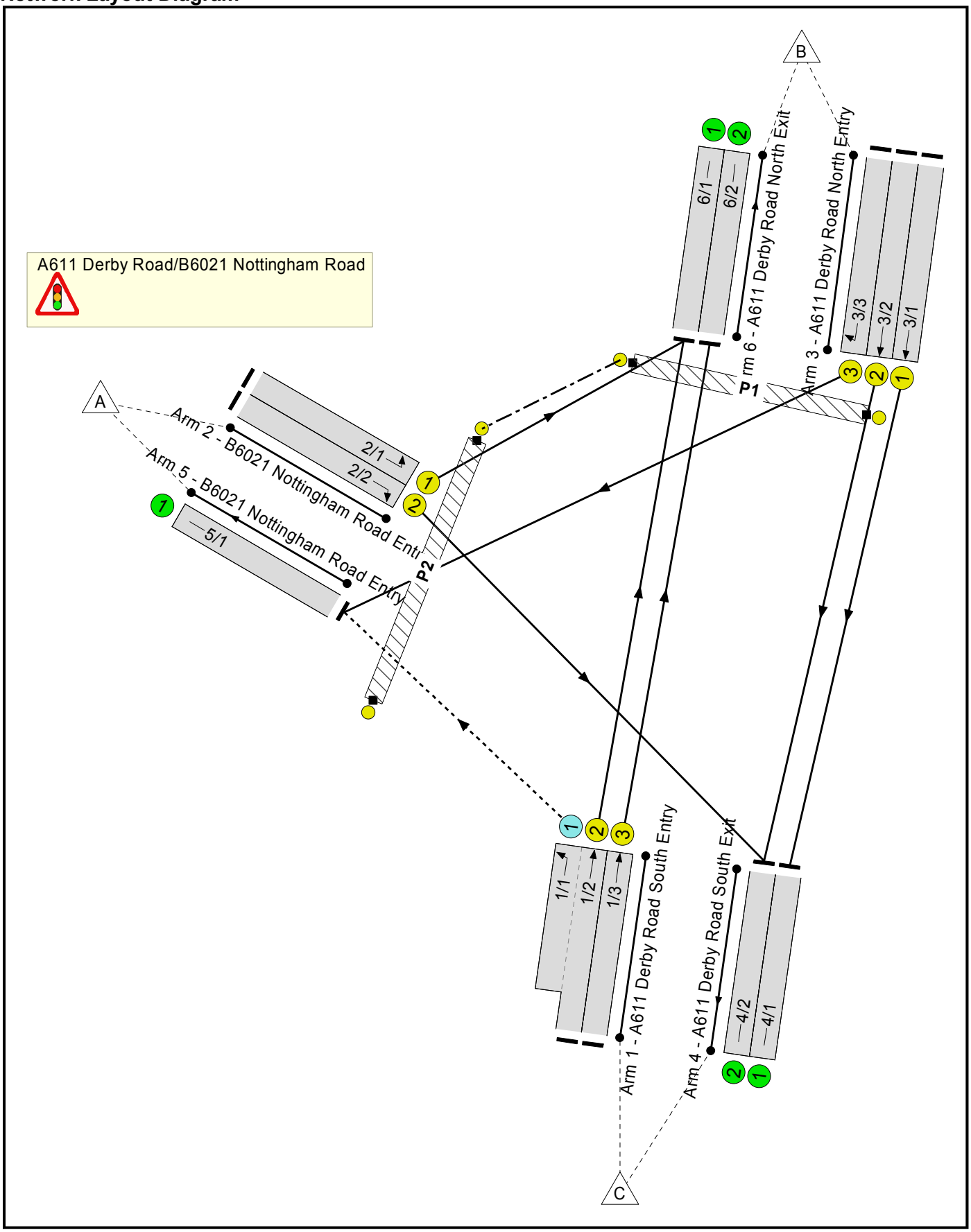
Full Input Data And Results

User and Project Details

Project:	
Title:	
Location:	
File name:	2016-08-15 J16 JMP.lsg3x
Author:	
Company:	
Address:	
Notes:	

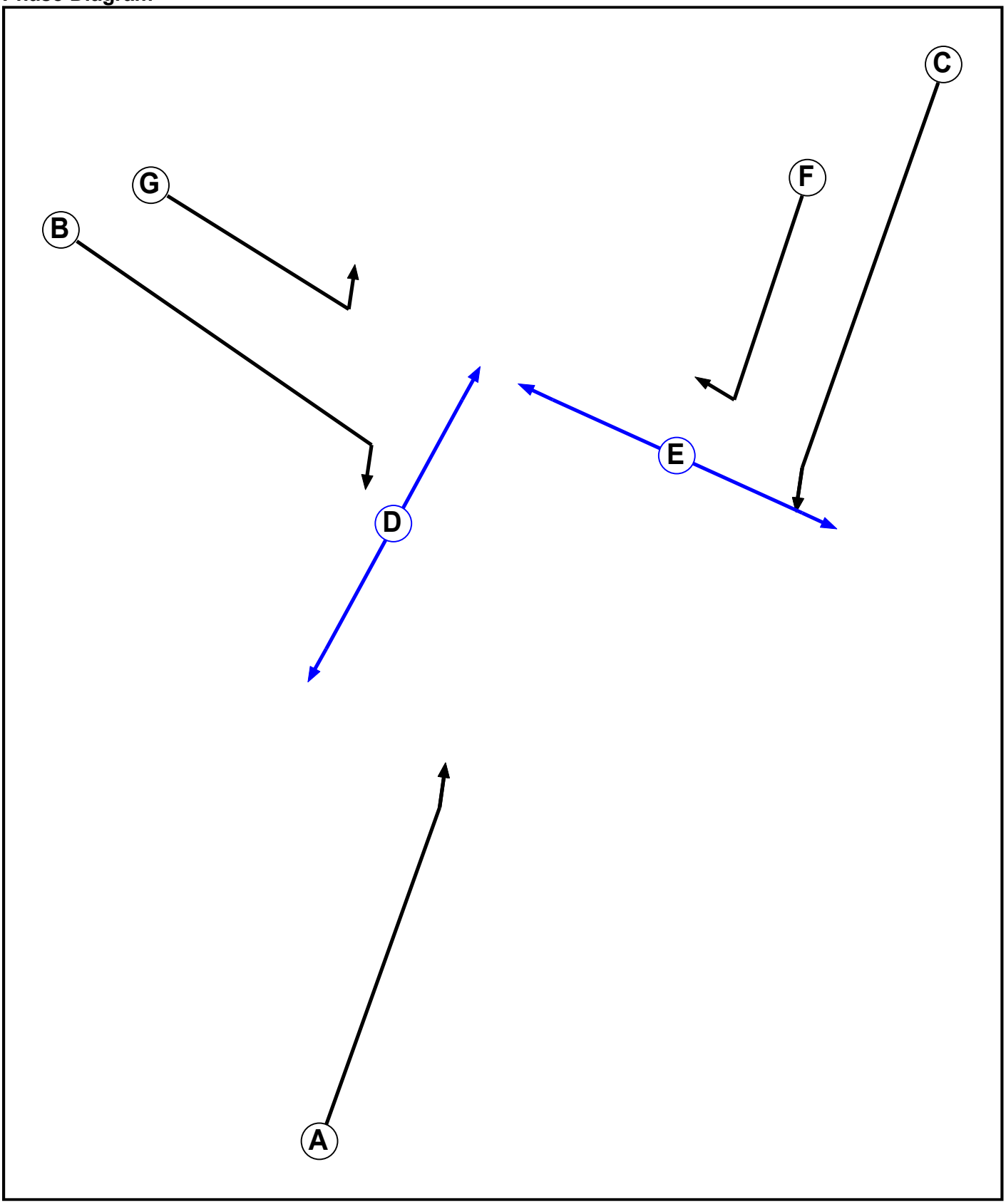
Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

Phase Input Data

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

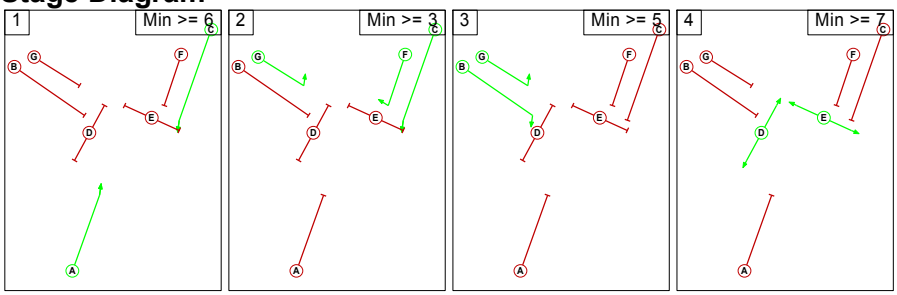
Phase Intergreens Matrix

		Starting Phase						
		A	B	C	D	E	F	G
Terminating Phase	A		11	-	9	10	5	5
	B	8		9	5	7	5	-
	C	-	9		-	5	-	-
	D	3	3	-		-	-	5
	E	3	3	3	-		3	5
	F	5	5	-	-	3		-
	G	5	-	-	5	5	-	

Phases in Stage

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

Stage Diagram



Phase Delays

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

Full Input Data And Results

Prohibited Stage Change

		To Stage			
		1	2	3	4
From Stage	1		5	11	10
	2	5		9	5
	3	9	9		7
	4	3	5	5	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A611 Derby Road/B6021 Nottingham Road											
Lane	**Movement**	**Max Flow when Giving Way (PCU/Hr)**	**Min Flow when Giving Way (PCU/Hr)**	**Opposing Lane**	**Opp. Lane Coeff.**	**Opp. Mvmnts.**	**Right Turn Storage (PCU)**	**Non-Blocking Storage (PCU)**	**RTF**	**Right Turn Move up (s)**	**Max Turns in Intergreen (PCU)**
1/1 (A611 Derby Road South Entry)	5/1 (Left)	1439	0	3/3	1.09	All	-	-	-	-	-

Full Input Data And Results

Lane Input Data

Junction: A611 Derby Road/B6021 Nottingham Road												
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 (A611 Derby Road South Entry)	O		2	3	17.4	User	1800	-	-	-	-	-
1/2 (A611 Derby Road South Entry)	U	A	2	3	60.0	User	1800	-	-	-	-	-
1/3 (A611 Derby Road South Entry)	U	A	2	3	60.0	User	1900	-	-	-	-	-
2/1 (B6021 Nottingham Road Entry)	U	G	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 6 Left	Inf
2/2 (B6021 Nottingham Road Entry)	U	B	2	3	60.0	User	1900	-	-	-	-	-
3/1 (A611 Derby Road North Entry)	U	C	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 4 Ahead	Inf
3/2 (A611 Derby Road North Entry)	U	C	2	3	60.0	User	1800	-	-	-	-	-
3/3 (A611 Derby Road North Entry)	U	F	2	3	60.0	User	1900	-	-	-	-	-
4/1 (A611 Derby Road South Exit)	U		2	3	17.4	User	1800	-	-	-	-	-
4/2 (A611 Derby Road South Exit)	U		2	3	60.0	User	1900	-	-	-	-	-
5/1 (B6021 Nottingham Road Entry)	U		2	3	60.0	User	1800	-	-	-	-	-
6/1 (A611 Derby Road North Exit)	U		2	3	17.4	User	1800	-	-	-	-	-
6/2 (A611 Derby Road North Exit)	U		2	3	60.0	User	1900	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'Reference Case Morning Peak'	08:00	09:00	01:00	
2: '2032 Mitigation Morning Peak'	08:00	09:00	01:00	
3: 'Reference Case Evening Peak'	17:00	18:00	01:00	
4: '2032 Mitigation Evening Peak'	17:00	18:00	01:00	

Scenario 1: 'AM Mit 2032' (FG2: '2032 Mitigation Morning Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	301	223	524
	B	227	0	1300	1527
	C	583	1095	0	1678
	Tot.	810	1396	1523	3729

Traffic Lane Flows

Lane	Scenario 1: AM Mit 2032
Junction: A611 Derby Road/B6021 Nottingham Road	
1/1 (short)	583
1/2 (with short)	1147(In) 564(Out)
1/3	531
2/1	301
2/2	223
3/1	679
3/2	621
3/3	227
4/1	679
4/2	844
5/1	810
6/1	865
6/2	531

Full Input Data And Results

Lane Saturation Flows

Junction: A611 Derby Road/B6021 Nottingham Road								
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 (A611 Derby Road South Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (A611 Derby Road South Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
1/3 (A611 Derby Road South Entry Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (B6021 Nottingham Road Entry)	3.25	0.00	Y	Arm 6 Left	Inf	100.0 %	1940	1940
2/2 (B6021 Nottingham Road Entry Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
3/1 (A611 Derby Road North Entry)	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (A611 Derby Road North Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/3 (A611 Derby Road North Entry Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (A611 Derby Road South Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A611 Derby Road South Exit Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
5/1 (B6021 Nottingham Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (A611 Derby Road North Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (A611 Derby Road North Exit Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900

Scenario 2: 'PM Mit 2032' (FG4: '2032 Mitigation Evening Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	89	521	610
	B	33	0	1303	1336
	C	622	829	0	1451
	Tot.	655	918	1824	3397

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM Mit 2032
Junction: A611 Derby Road/B6021 Nottingham Road	
1/1 (short)	622
1/2 (with short)	1065(In) 443(Out)
1/3	386
2/1	89
2/2	521
3/1	681
3/2	622
3/3	33
4/1	681
4/2	1143
5/1	655
6/1	532
6/2	386

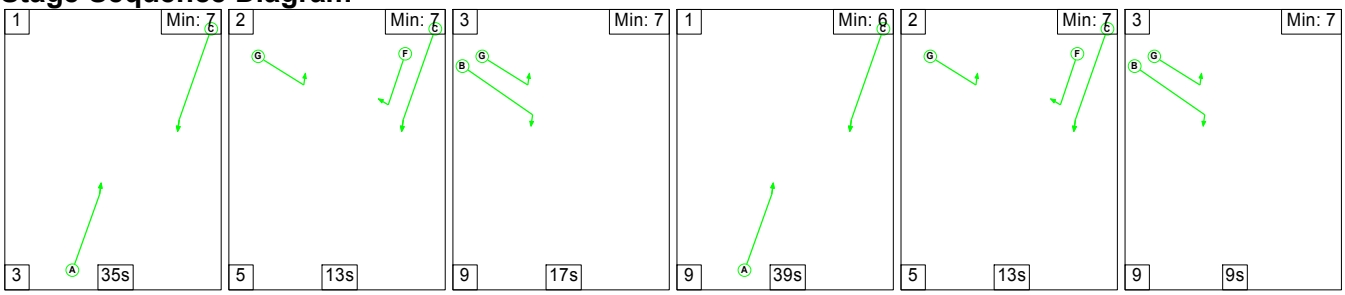
Full Input Data And Results

Lane Saturation Flows

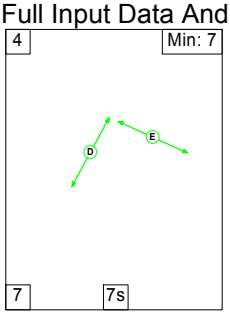
Junction: A611 Derby Road/B6021 Nottingham Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A611 Derby Road South Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (A611 Derby Road South Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
1/3 (A611 Derby Road South Entry Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (B6021 Nottingham Road Entry)	3.25	0.00	Y	Arm 6 Left	Inf	100.0 %	1940	1940
2/2 (B6021 Nottingham Road Entry Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
3/1 (A611 Derby Road North Entry)	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (A611 Derby Road North Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/3 (A611 Derby Road North Entry Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (A611 Derby Road South Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A611 Derby Road South Exit Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
5/1 (B6021 Nottingham Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/1 (A611 Derby Road North Exit Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (A611 Derby Road North Exit Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900

Scenario 1: 'AM Mit 2032' (FG2: '2032 Mitigation Morning Peak', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram



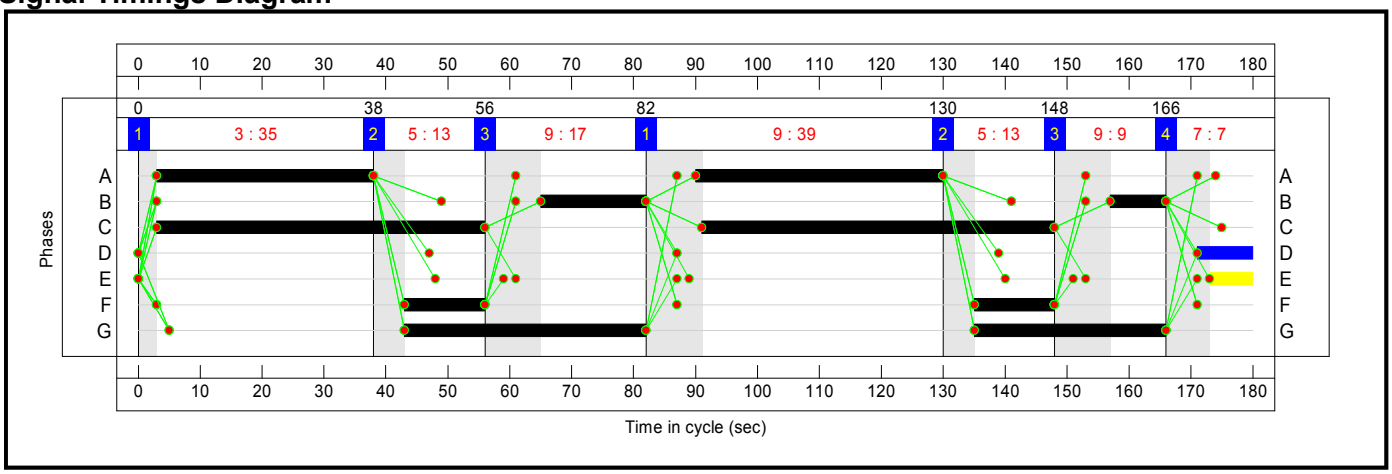
Full Input Data And Results



Stage Timings

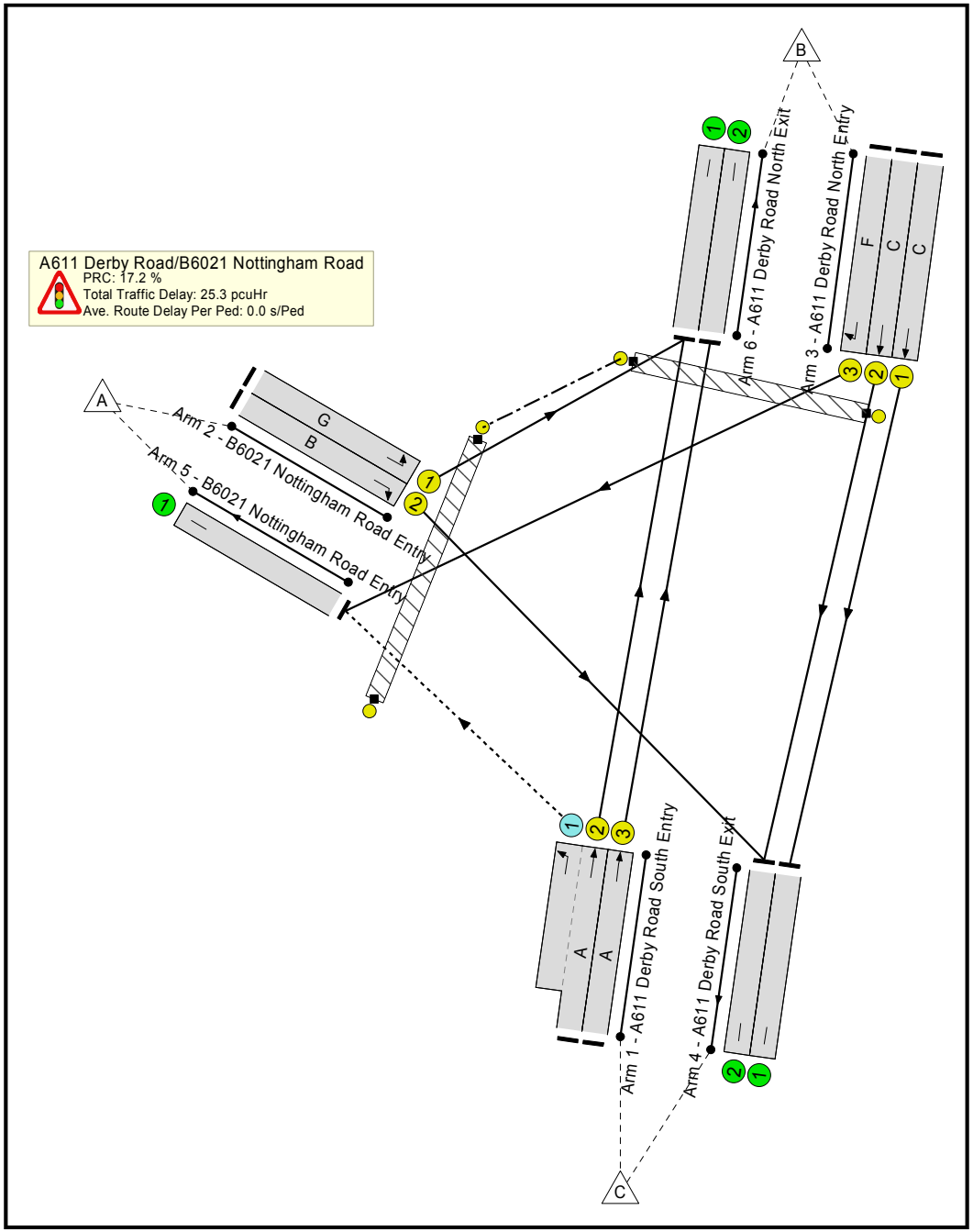
Stage	1	2	3	1	2	3	4
Duration	35	13	17	39	13	9	7
Change Point	0	38	56	82	130	148	166

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**76.8%**
A611 Derby Road/B6021 Nottingham Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**76.8%**
1/2+1/1	A611 Derby Road South Entry Left Ahead	U+O	N/A	N/A	A -		2	75	-	1147	1800:1800	738+763	76.4 : 76.4%
1/3	A611 Derby Road South Entry Ahead	U	N/A	N/A	A		2	75	-	531	1900	813	65.3%
2/1	B6021 Nottingham Road Entry Left	U	N/A	N/A	G		2	70	-	301	1940	776	38.8%
2/2	B6021 Nottingham Road Entry Right	U	N/A	N/A	B		2	26	-	223	1900	296	75.5%
3/1	A611 Derby Road North Entry Ahead	U	N/A	N/A	C		2	110	-	679	1940	1207	56.3%
3/2	A611 Derby Road North Entry Ahead	U	N/A	N/A	C		2	110	-	621	1800	1120	55.4%
3/3	A611 Derby Road North Entry Right	U	N/A	N/A	F		2	26	-	227	1900	296	76.8%
4/1	A611 Derby Road South Exit	U	N/A	N/A	-		-	-	-	679	1800	1800	37.7%
4/2	A611 Derby Road South Exit	U	N/A	N/A	-		-	-	-	844	1900	1900	44.4%
5/1	B6021 Nottingham Road Entry	U	N/A	N/A	-		-	-	-	810	1800	1800	45.0%
6/1	A611 Derby Road North Exit	U	N/A	N/A	-		-	-	-	865	1800	1800	48.1%
6/2	A611 Derby Road North Exit	U	N/A	N/A	-		-	-	-	531	1900	1900	27.9%

Full Input Data And Results

Ped Link: P1	A611 North Crossing	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P2	B6021 Nottingham Road Crossing	-	N/A	-	D		1	9	-	0	-	0	0.0%

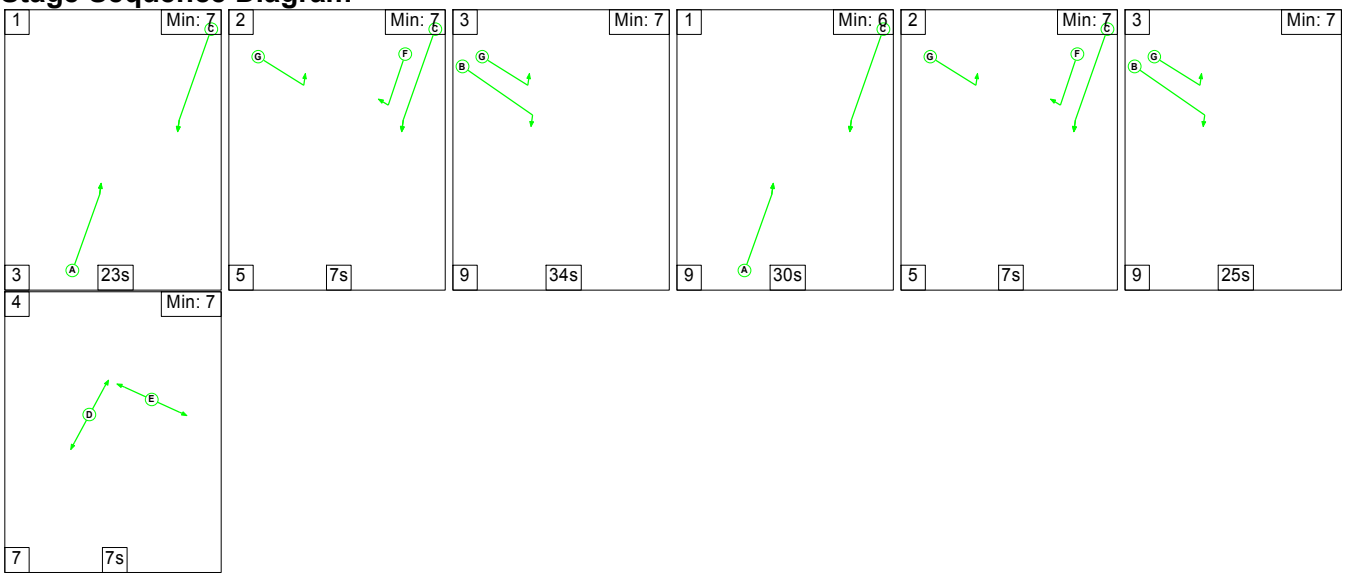
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**47**	**536**	**0**	**16.3**	**8.9**	**0.0**	**25.3**	**-**	**-**	**-**	**-**
A611 Derby Road/B6021 Nottingham Road	**-**	**-**	**47**	**536**	**0**	**16.3**	**8.9**	**0.0**	**25.3**	**-**	**-**	**-**	**-**
1/2+1/1	1147	1147	47	536	0	3.5	1.6	-	5.1	16.1	11.8	1.6	13.4
1/3	531	531	-	-	-	3.0	0.9	-	4.0	26.8	10.6	0.9	11.6
2/1	301	301	-	-	-	1.6	0.3	-	1.9	23.0	5.5	0.3	5.8
2/2	223	223	-	-	-	2.3	1.5	-	3.7	60.2	5.5	1.5	6.9
3/1	679	679	-	-	-	1.9	0.6	-	2.5	13.3	9.8	0.6	10.4
3/2	621	621	-	-	-	1.7	0.6	-	2.3	13.4	8.8	0.6	9.4
3/3	227	227	-	-	-	2.3	1.6	-	3.9	61.6	5.5	1.6	7.1
4/1	679	679	-	-	-	0.0	0.3	-	0.3	1.8	8.5	0.3	8.8
4/2	844	844	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
5/1	810	810	-	-	-	0.0	0.4	-	0.4	1.9	5.2	0.4	5.6
6/1	865	865	-	-	-	0.0	0.5	-	0.5	1.9	3.6	0.5	4.0
6/2	531	531	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 17.2 Total Delay for Signalled Lanes (pcuHr): 23.45 Cycle Time (s): 180
PRC Over All Lanes (%): 17.2 Total Delay Over All Lanes(pcuHr): 25.27

Full Input Data And Results

Scenario 2: 'PM Mit 2032' (FG4: '2032 Mitigation Evening Peak', Plan 1: 'Network Control Plan 1')

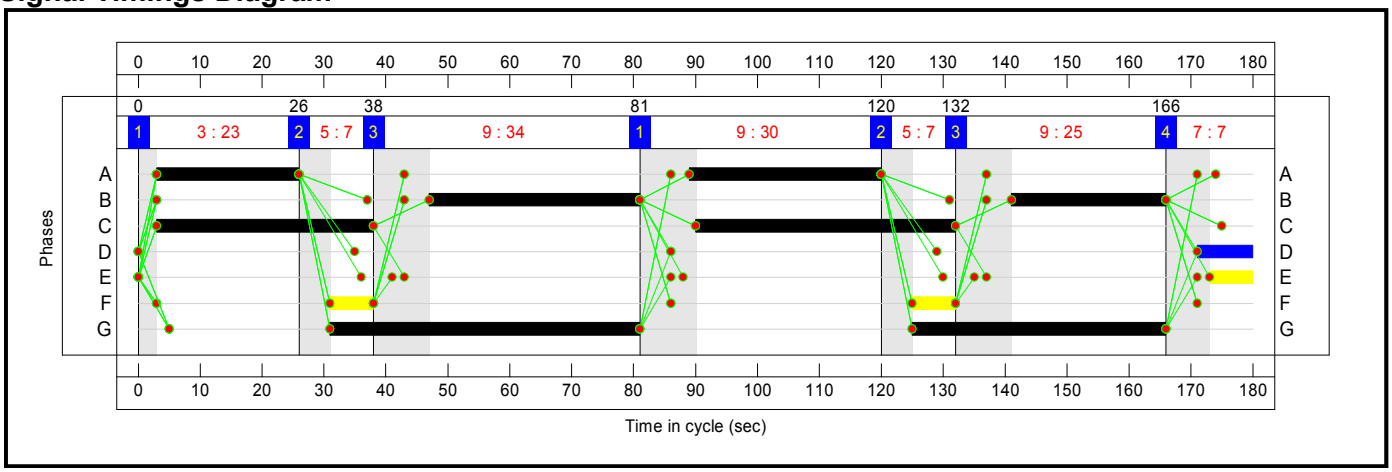
Stage Sequence Diagram



Stage Timings

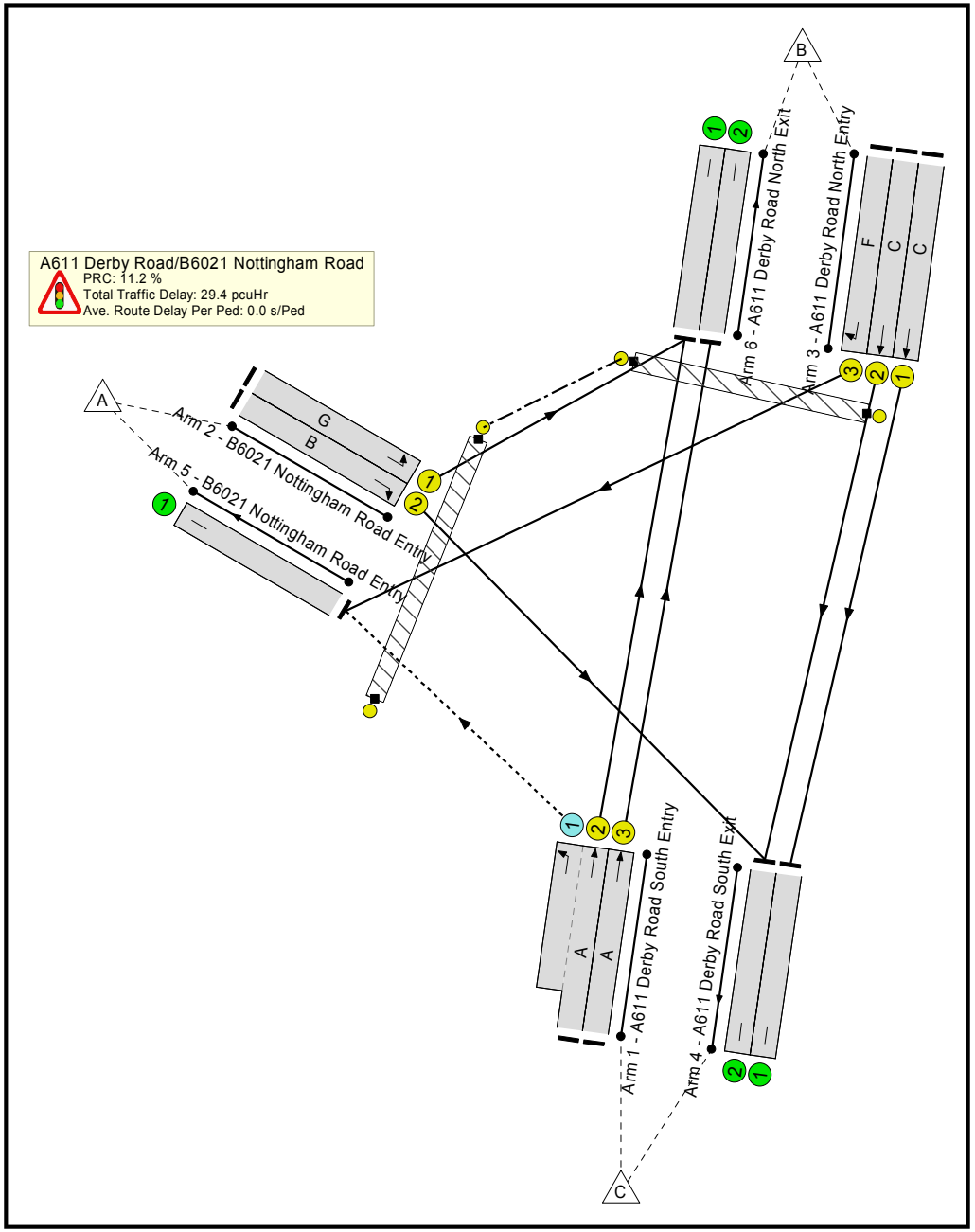
Stage	1	2	3	1	2	3	4
Duration	23	7	34	30	7	25	7
Change Point	0	26	38	81	120	132	166

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**80.9%**
A611 Derby Road/B6021 Nottingham Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**80.9%**
1/2+1/1	A611 Derby Road South Entry Left Ahead	U+O	N/A	N/A	A -		2	54	-	1065	1800:1800	560+786	79.1 : 79.1%
1/3	A611 Derby Road South Entry Ahead	U	N/A	N/A	A		2	54	-	386	1900	591	65.3%
2/1	B6021 Nottingham Road Entry Left	U	N/A	N/A	G		2	91	-	89	1940	1002	8.9%
2/2	B6021 Nottingham Road Entry Right	U	N/A	N/A	B		2	59	-	521	1900	644	80.9%
3/1	A611 Derby Road North Entry Ahead	U	N/A	N/A	C		2	77	-	681	1940	851	80.0%
3/2	A611 Derby Road North Entry Ahead	U	N/A	N/A	C		2	77	-	622	1800	790	78.7%
3/3	A611 Derby Road North Entry Right	U	N/A	N/A	F		2	14	-	33	1900	169	19.5%
4/1	A611 Derby Road South Exit	U	N/A	N/A	-		-	-	-	681	1800	1800	37.8%
4/2	A611 Derby Road South Exit	U	N/A	N/A	-		-	-	-	1143	1900	1900	60.2%
5/1	B6021 Nottingham Road Entry	U	N/A	N/A	-		-	-	-	655	1800	1800	36.4%
6/1	A611 Derby Road North Exit	U	N/A	N/A	-		-	-	-	532	1800	1800	29.6%
6/2	A611 Derby Road North Exit	U	N/A	N/A	-		-	-	-	386	1900	1900	20.3%

Full Input Data And Results

Ped Link: P1	A611 North Crossing	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P2	B6021 Nottingham Road Crossing	-	N/A	-	D		1	9	-	0	-	0	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**55**	**567**	**0**	**18.9**	**10.5**	**0.0**	**29.4**	**-**	**-**	**-**	**-**
A611 Derby Road/B6021 Nottingham Road	**-**	**-**	**55**	**567**	**0**	**18.9**	**10.5**	**0.0**	**29.4**	**-**	**-**	**-**	**-**
1/2+1/1	1065	1065	55	567	0	3.5	1.9	-	5.4	18.1	10.1	1.9	12.0
1/3	386	386	-	-	-	2.9	0.9	-	3.8	35.5	8.3	0.9	9.2
2/1	89	89	-	-	-	0.3	0.0	-	0.3	13.0	1.1	0.0	1.2
2/2	521	521	-	-	-	3.9	2.1	-	6.0	41.3	11.9	2.1	13.9
3/1	681	681	-	-	-	4.1	2.0	-	6.1	32.2	14.8	2.0	16.7
3/2	622	622	-	-	-	3.7	1.8	-	5.6	32.1	13.3	1.8	15.1
3/3	33	33	-	-	-	0.4	0.1	-	0.5	51.4	0.8	0.1	0.9
4/1	681	681	-	-	-	0.1	0.3	-	0.4	2.2	13.7	0.3	14.0
4/2	1143	1143	-	-	-	0.0	0.8	-	0.8	2.4	0.0	0.8	0.8
5/1	655	655	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3
6/1	532	532	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
6/2	386	386	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

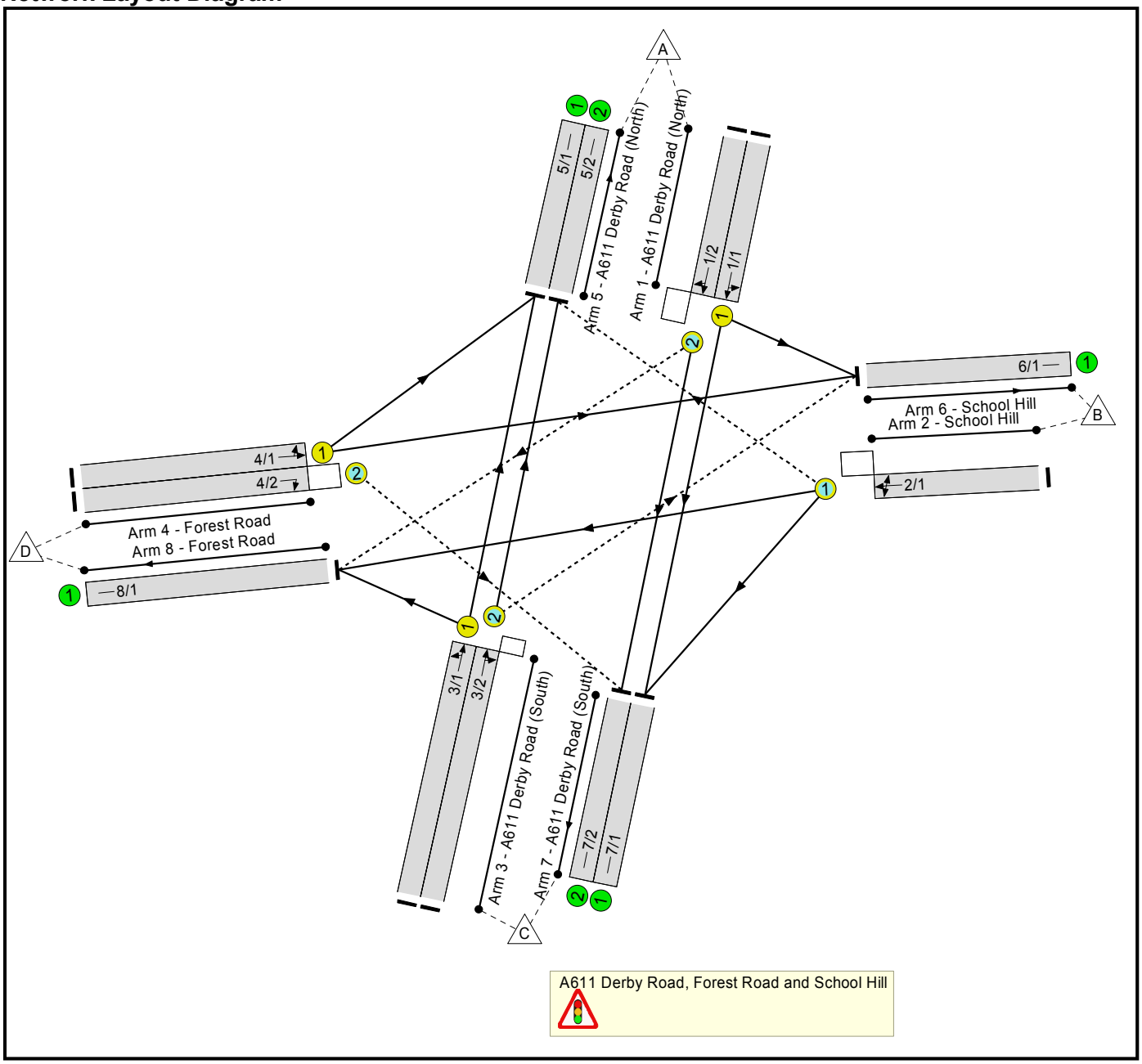
C1 PRC for Signalled Lanes (%): 11.2 Total Delay for Signalled Lanes (pcuHr): 27.57 Cycle Time (s): 180
PRC Over All Lanes (%): 11.2 Total Delay Over All Lanes(pcuHr): 29.37

Full Input Data And Results

User and Project Details

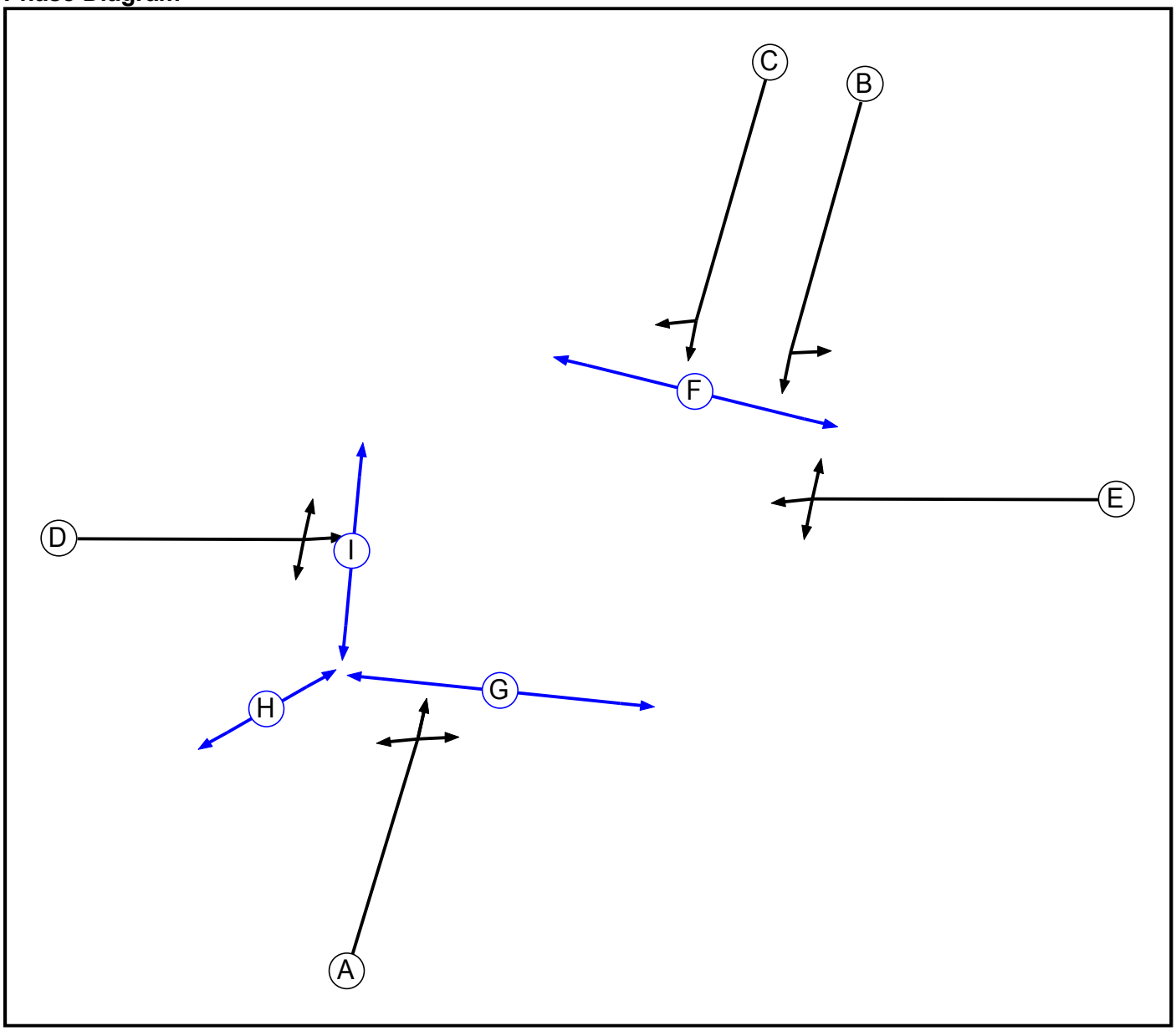
Project:	
Title:	
Location:	
File name:	2016-08-16 J17 JMP.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

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	Pedestrian		7	7
G	Pedestrian		7	7
H	Pedestrian		7	7
I	Pedestrian		7	7

Full Input Data And Results

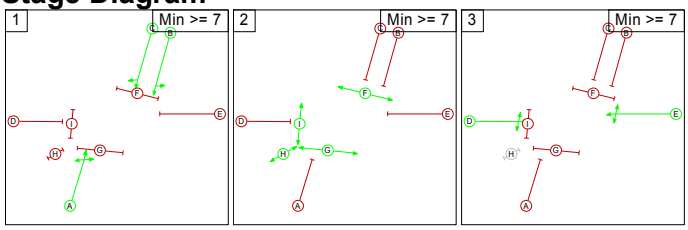
Phase Intergreens Matrix

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

Phases in Stage

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

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
From Stage	1		10	8
	2	10		10
	3	7	9	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A611 Derby Road, Forest Road and School Hill

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 (A611 Derby Road (North))	8/1 (Right)	1439	0	3/1	1.09	All	2.00	2.00	0.50	2	2.00
				3/2	1.09	All					
2/1 (School Hill)	5/2 (Right)	1440	0	4/1	1.09	All	2.00	2.00	0.50	2	2.00
3/2 (A611 Derby Road (South))	6/1 (Right)	1440	0	1/1	1.09	All	1.00	1.00	0.50	1	2.00
4/2 (Forest Road)	7/2 (Right)	1440	0	2/1	1.09	To 8/1 (Ahead)	2.00	-	0.50	2	2.00

Full Input Data And Results

Lane Input Data

Junction: A611 Derby Road, Forest Road and School Hill												
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 (A611 Derby Road (North))	U	B	2	3	60.0	User	1900	-	-	-	-	-
1/2 (A611 Derby Road (North))	O	C	2	3	17.0	User	1800	-	-	-	-	-
2/1 (School Hill)	O	E	2	3	60.0	User	1800	-	-	-	-	-
3/1 (A611 Derby Road (South))	U	A	2	3	12.0	User	1900	-	-	-	-	-
3/2 (A611 Derby Road (South))	O	A	2	3	60.0	User	1800	-	-	-	-	-
4/1 (Forest Road)	U	D	2	3	60.0	User	1900	-	-	-	-	-
4/2 (Forest Road)	O	D	2	3	9.6	User	1800	-	-	-	-	-
5/1 (A611 Derby Road (North))	U		2	3	60.0	Inf	-	-	-	-	-	-
5/2 (A611 Derby Road (North))	U		2	3	60.0	User	1900	-	-	-	-	-
6/1 (School Hill)	U		2	3	60.0	User	1800	-	-	-	-	-
7/1 (A611 Derby Road (South))	U		2	3	60.0	Inf	-	-	-	-	-	-
7/2 (A611 Derby Road (South))	U		2	3	60.0	User	1900	-	-	-	-	-
8/1 (Forest Road)	U		2	3	60.0	User	1900	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2032 Reference Case Morning Peak'	08:00	09:00	01:00	
2: '2032 Mitigation Morning Peak'	08:00	09:00	01:00	
3: '2032 Reference Evening Peak'	17:00	18:00	01:00	
4: '2032 Mitigation Evening Peak '	17:00	18:00	01:00	

Scenario 1: 'AM Mit 2032' (FG2: '2032 Mitigation Morning Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	0	1840	1	1841
	B	0	0	0	0	0
	C	1608	0	0	607	2215
	D	2	0	489	0	491
	Tot.	1610	0	2329	608	4547

Traffic Lane Flows

Lane	Scenario 1: AM Mit 2032
Junction: A611 Derby Road, Forest Road and School Hill	
1/1	950
1/2	891
2/1	0
3/1	1140
3/2	1075
4/1	2
4/2	489
5/1	535
5/2	1075
6/1	0
7/1	950
7/2	1379
8/1	608

Full Input Data And Results

Lane Saturation Flows

Junction: A611 Derby Road, Forest Road and School Hill								
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 (A611 Derby Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
1/2 (A611 Derby Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (School Hill Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A611 Derby Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (A611 Derby Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Forest Road Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (Forest Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A611 Derby Road (North) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A611 Derby Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (School Hill Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
7/1 (A611 Derby Road (South) Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (A611 Derby Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (Forest Road Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900

Scenario 2: 'PM Mit 2032' (FG4: '2032 Mitigation Evening Peak ', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	0	2111	18	2129
	B	0	0	0	0	0
	C	1609	0	0	206	1815
	D	45	0	364	0	409
	Tot.	1654	0	2475	224	4353

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM Mit 2032
Junction: A611 Derby Road, Forest Road and School Hill	
1/1	1096
1/2	1033
2/1	0
3/1	942
3/2	873
4/1	45
4/2	364
5/1	781
5/2	873
6/1	0
7/1	1096
7/2	1379
8/1	224

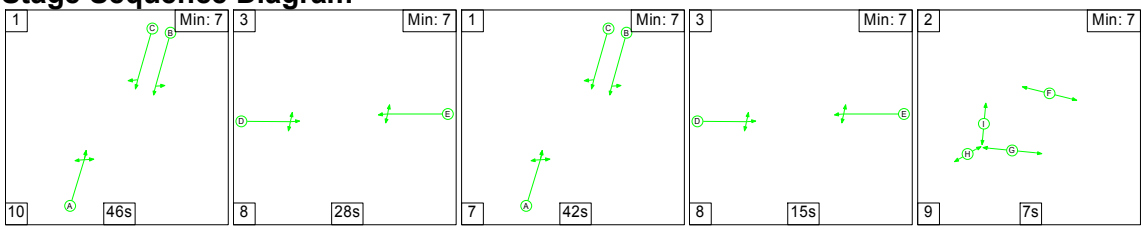
Lane Saturation Flows

Junction: A611 Derby Road, Forest Road and School Hill								
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 (A611 Derby Road (North) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
1/2 (A611 Derby Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (School Hill Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A611 Derby Road (South) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (A611 Derby Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Forest Road Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (Forest Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (A611 Derby Road (North) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A611 Derby Road (North) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
6/1 (School Hill Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
7/1 (A611 Derby Road (South) Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (A611 Derby Road (South) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
8/1 (Forest Road Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900

Full Input Data And Results

Scenario 1: 'AM Mit 2032' (FG2: '2032 Mitigation Morning Peak', Plan 1: 'Staging Plan No. 1')

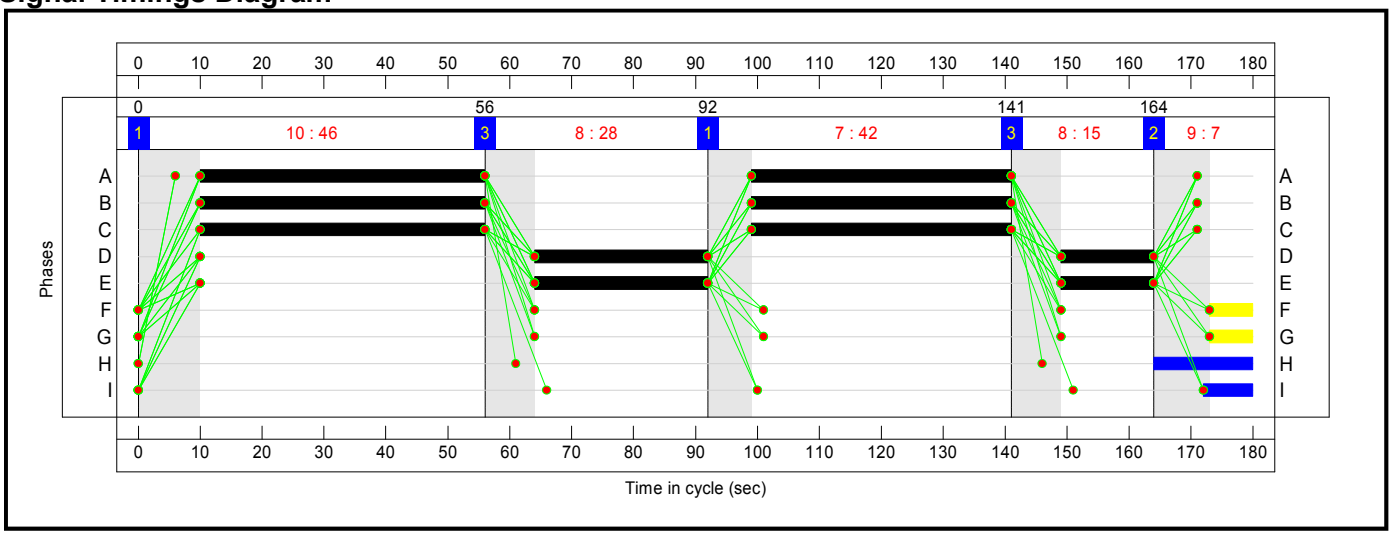
Stage Sequence Diagram



Stage Timings

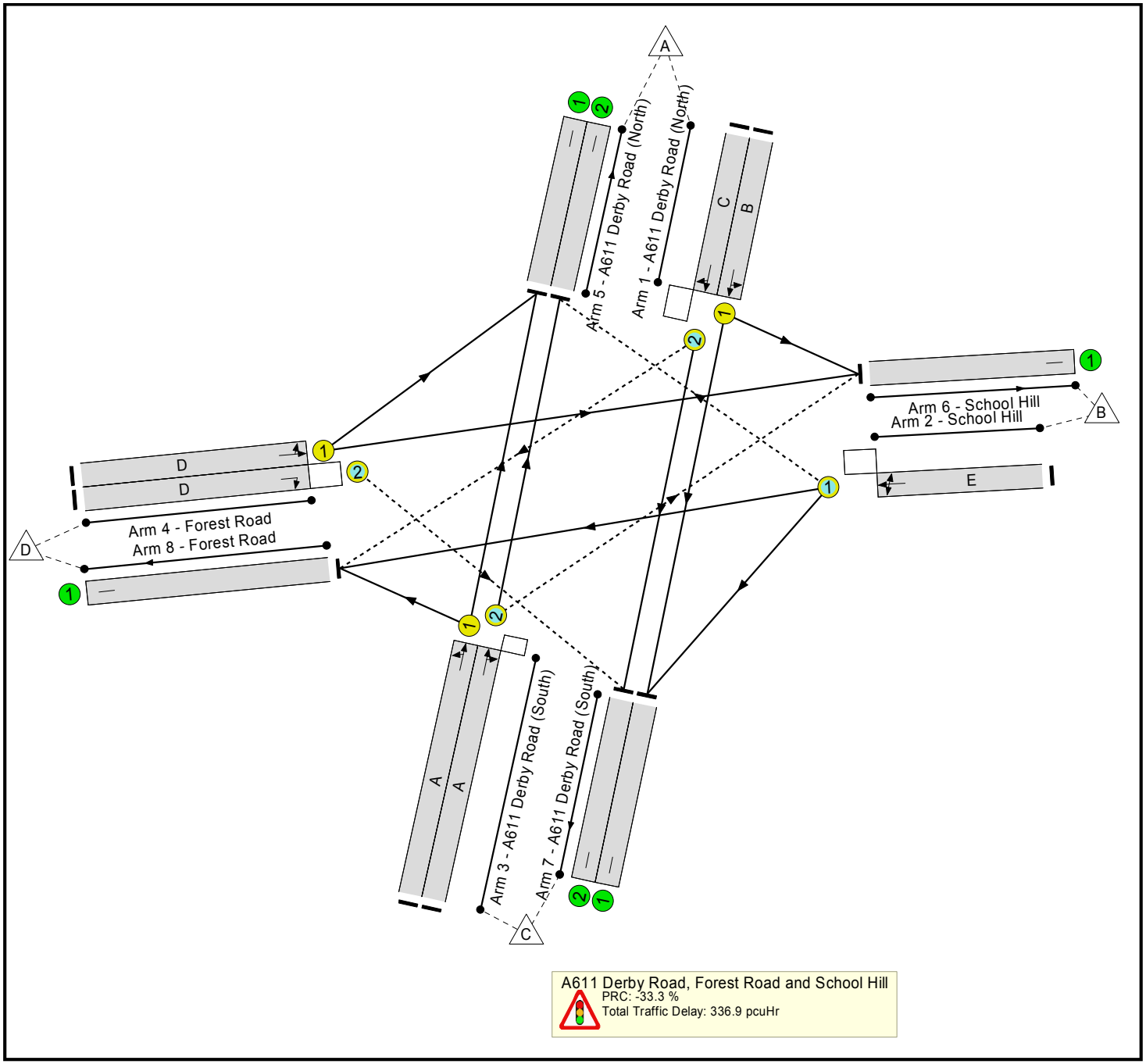
Stage	1	3	1	3	2
Duration	46	28	42	15	7
Change Point	0	56	92	141	164

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**120.0%**
A611 Derby Road, Forest Road and School Hill	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**120.0%**
1/1	A611 Derby Road (North) Left Ahead	U	N/A	N/A	B		2	88	-	950	1900	950	100.0%
1/2	A611 Derby Road (North) Ahead Right	O	N/A	N/A	C		2	88	-	891	1800	900	99.0%
2/1	School Hill Right Left Ahead	O	N/A	N/A	E		2	43	-	0	1800	450	0.0%
3/1	A611 Derby Road (South) Ahead Left	U	N/A	N/A	A		2	88	-	1140	1900	950	120.0%
3/2	A611 Derby Road (South) Ahead Right	O	N/A	N/A	A		2	88	-	1075	1800	900	119.4%
4/1	Forest Road Left Ahead	U	N/A	N/A	D		2	43	-	2	1900	475	0.4%
4/2	Forest Road Right	O	N/A	N/A	D		2	43	-	489	1800	408	119.9%
5/1	A611 Derby Road (North)	U	N/A	N/A	-		-	-	-	535	Inf	Inf	0.0%
5/2	A611 Derby Road (North)	U	N/A	N/A	-		-	-	-	1075	1900	1900	47.4%
6/1	School Hill	U	N/A	N/A	-		-	-	-	0	1800	1800	0.0%
7/1	A611 Derby Road (South)	U	N/A	N/A	-		-	-	-	950	Inf	Inf	0.0%
7/2	A611 Derby Road (South)	U	N/A	N/A	-		-	-	-	1379	1900	1900	68.3%
8/1	Forest Road	U	N/A	N/A	-		-	-	-	608	1900	1900	26.7%

Full Input Data And Results

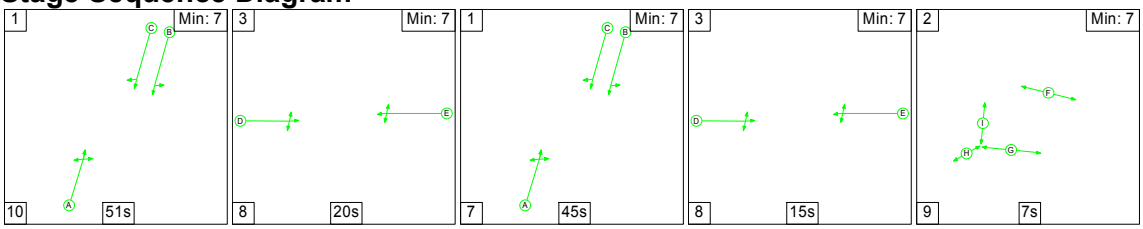
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**360**	**0**	**49**	**75.0**	**261.7**	**0.2**	**336.9**	**-**	**-**	**-**	**-**
A611 Derby Road, Forest Road and School Hill	**-**	**-**	**360**	**0**	**49**	**75.0**	**261.7**	**0.2**	**336.9**	**-**	**-**	**-**	**-**
1/1	950	950	-	-	-	6.1	15.4	-	21.5	81.5	25.1	15.4	40.5
1/2	891	891	0	0	1	5.5	12.8	0.0	18.4	74.3	23.5	12.8	36.4
2/1	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/1	1140	950	-	-	-	26.5	97.9	-	124.4	392.8	45.9	97.9	143.8
3/2	1075	900	0	0	0	24.5	90.5	0.0	115.0	385.2	42.9	90.5	133.4
4/1	2	2	-	-	-	0.0	0.0	-	0.0	30.2	0.0	0.0	0.0
4/2	489	408	360	0	48	12.3	43.3	0.2	55.9	411.3	21.0	43.3	64.3
5/1	446	446	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	900	900	-	-	-	0.0	0.4	-	0.4	1.8	0.0	0.4	0.4
6/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	950	950	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	1298	1298	-	-	-	0.0	1.1	-	1.1	3.0	0.0	1.1	1.1
8/1	507	507	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2

C1 PRC for Signalled Lanes (%): -33.3 Total Delay for Signalled Lanes (pcuHr): 335.19 Cycle Time (s): 180
PRC Over All Lanes (%): -33.3 Total Delay Over All Lanes(pcuHr): 336.89

Full Input Data And Results

Scenario 2: 'PM Mit 2032' (FG4: '2032 Mitigation Evening Peak ', Plan 1: 'Staging Plan No. 1')

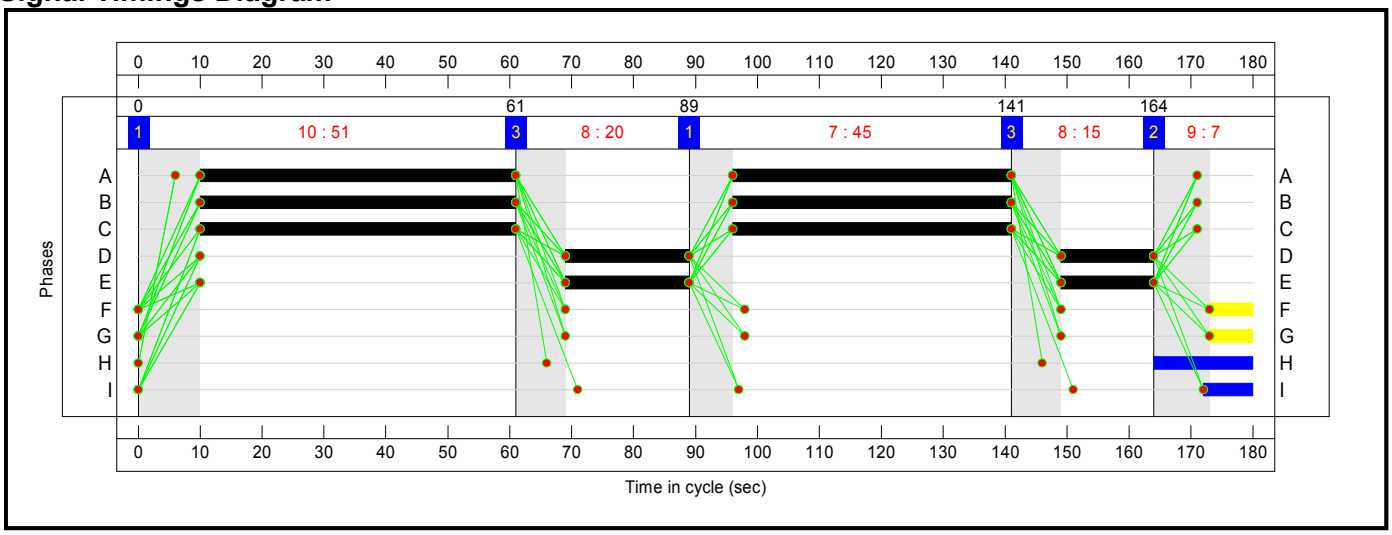
Stage Sequence Diagram



Stage Timings

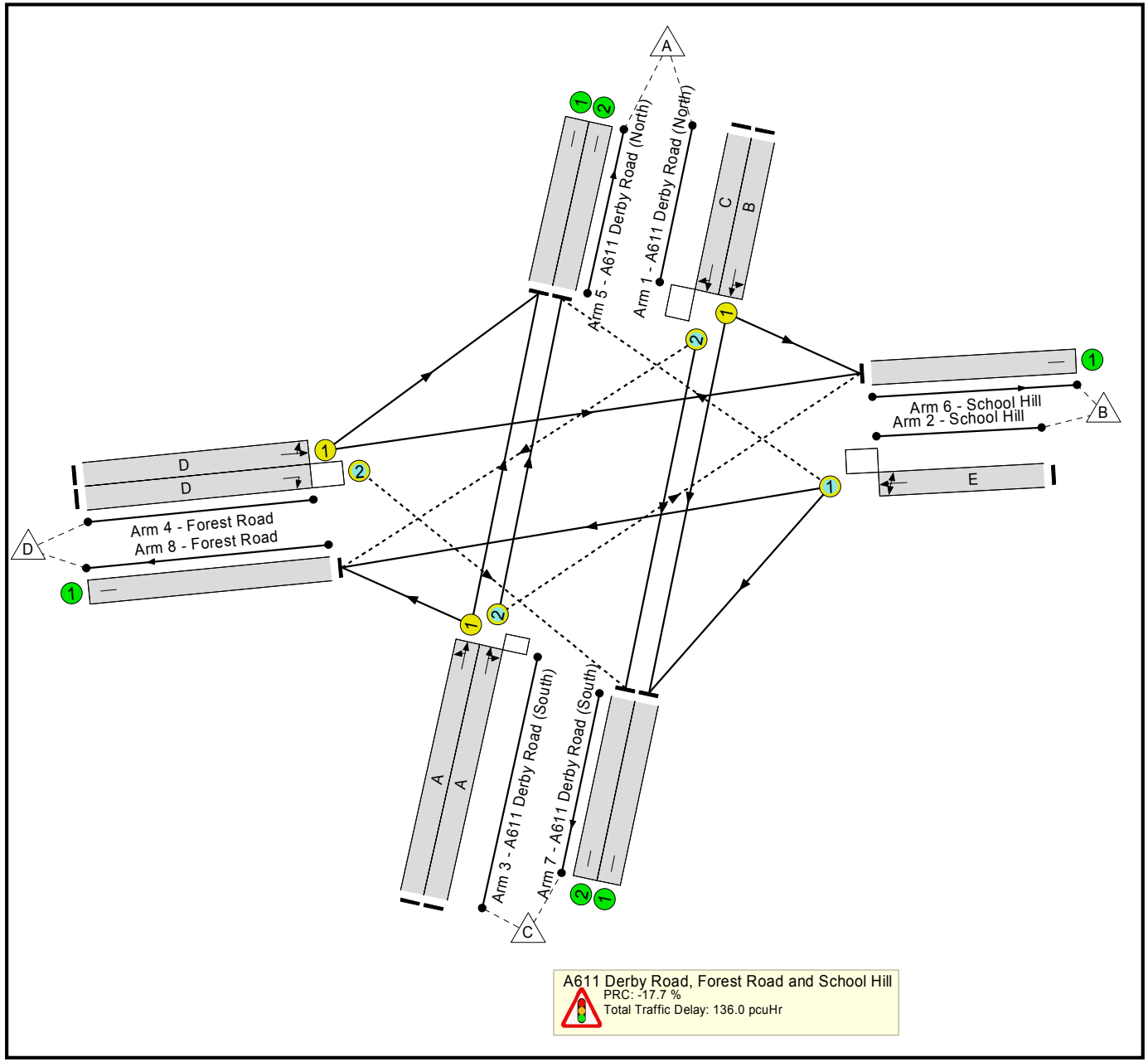
Stage	1	3	1	3	2
Duration	51	20	45	15	7
Change Point	0	61	89	141	164

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**106.0%**
A611 Derby Road, Forest Road and School Hill	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**106.0%**
1/1	A611 Derby Road (North) Left Ahead	U	N/A	N/A	B		2	96	-	1096	1900	1034	106.0%
1/2	A611 Derby Road (North) Ahead Right	O	N/A	N/A	C		2	96	-	1033	1800	980	105.4%
2/1	School Hill Right Left Ahead	O	N/A	N/A	E		2	35	-	0	1800	370	0.0%
3/1	A611 Derby Road (South) Ahead Left	U	N/A	N/A	A		2	96	-	942	1900	1034	91.1%
3/2	A611 Derby Road (South) Ahead Right	O	N/A	N/A	A		2	96	-	873	1800	980	89.1%
4/1	Forest Road Left Ahead	U	N/A	N/A	D		2	35	-	45	1900	391	11.5%
4/2	Forest Road Right	O	N/A	N/A	D		2	35	-	364	1800	344	105.8%
5/1	A611 Derby Road (North)	U	N/A	N/A	-		-	-	-	781	Inf	Inf	0.0%
5/2	A611 Derby Road (North)	U	N/A	N/A	-		-	-	-	873	1900	1900	45.9%
6/1	School Hill	U	N/A	N/A	-		-	-	-	0	1800	1800	0.0%
7/1	A611 Derby Road (South)	U	N/A	N/A	-		-	-	-	1096	Inf	Inf	0.0%
7/2	A611 Derby Road (South)	U	N/A	N/A	-		-	-	-	1379	1900	1900	68.8%
8/1	Forest Road	U	N/A	N/A	-		-	-	-	224	1900	1900	11.7%

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	**-**	**-**	**296**	**0**	**65**	**37.8**	**97.9**	**0.3**	**136.0**	**-**	**-**	**-**	**-**
A611 Derby Road, Forest Road and School Hill	**-**	**-**	**296**	**0**	**65**	**37.8**	**97.9**	**0.3**	**136.0**	**-**	**-**	**-**	**-**
1/1	1096	1034	-	-	-	11.9	38.0	-	49.9	163.9	33.6	38.0	71.6
1/2	1033	980	0	0	17	10.8	34.1	0.1	45.0	156.7	31.3	34.1	65.4
2/1	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/1	942	942	-	-	-	5.0	4.6	-	9.6	36.8	24.9	4.6	29.5
3/2	873	873	0	0	0	4.5	3.8	0.0	8.3	34.4	22.6	3.8	26.4
4/1	45	45	-	-	-	0.4	0.1	-	0.4	35.2	1.1	0.1	1.1
4/2	364	344	296	0	48	5.2	15.8	0.2	21.2	209.5	11.6	15.8	27.4
5/1	781	781	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	873	873	-	-	-	0.0	0.4	-	0.4	1.8	0.0	0.4	0.4
6/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1034	1034	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	1307	1307	-	-	-	0.0	1.1	-	1.1	3.0	0.0	1.1	1.1
8/1	223	223	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1

C1 PRC for Signalled Lanes (%): -17.7 Total Delay for Signalled Lanes (pcuHr): 134.45 Cycle Time (s): 180
PRC Over All Lanes (%): -17.7 Total Delay Over All Lanes(pcuHr): 136.04

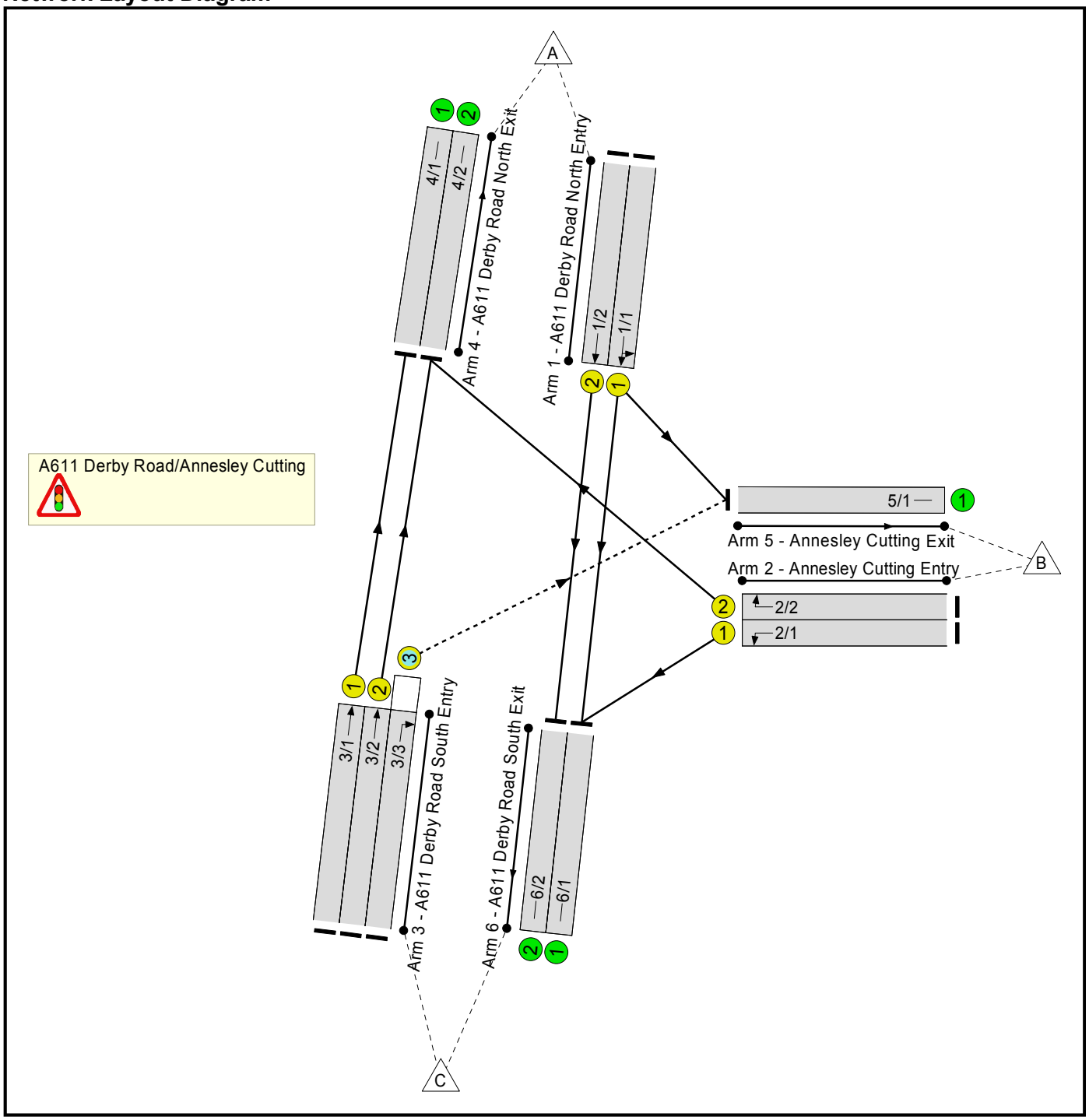
Full Input Data And Results

User and Project Details

Project:	
Title:	
Location:	
File name:	2016-08-18 J18 JMP Mitigation 2.lsg3x
Author:	
Company:	
Address:	
Notes:	

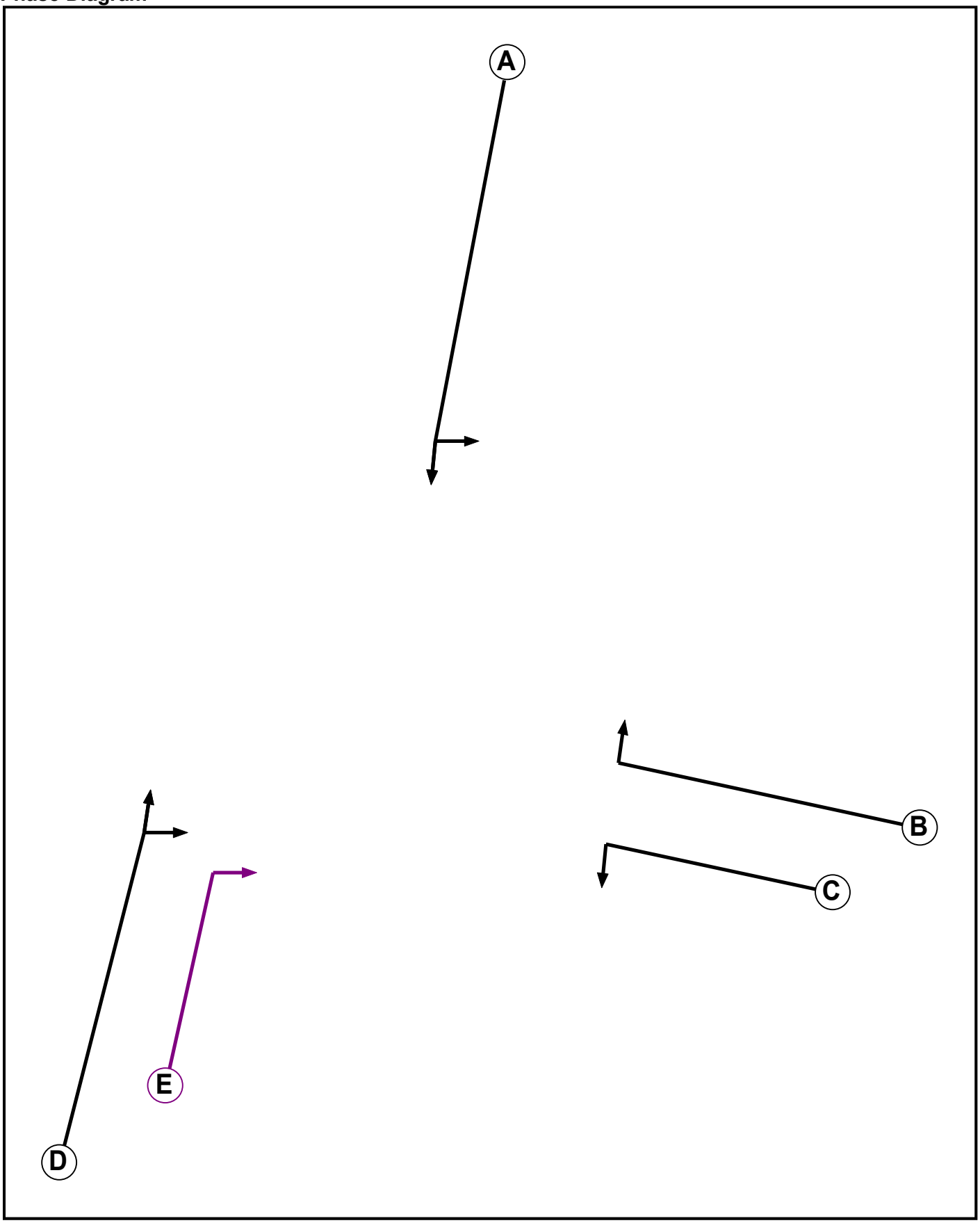
Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

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	Ind. Arrow	D	4	4

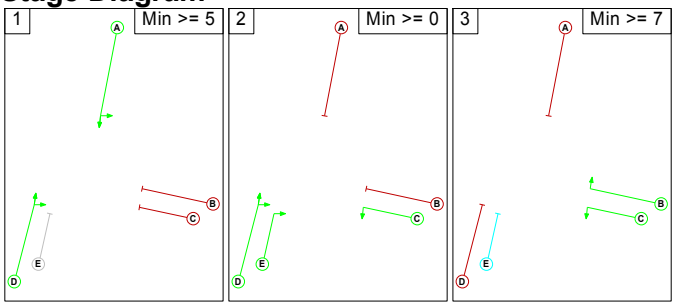
Phase Intergreens Matrix

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

Phases in Stage

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

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
From Stage	1		6	7
	2	5		7
	3	7	X	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A611 Derby Road/Annesley Cutting

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)
3/3 (A611 Derby Road South Entry)	5/1 (Right)	1439	0	1/1	1.09	All	2.00	-	0.50	2	2.00
				1/2	1.09	All					

Full Input Data And Results

Lane Input Data

Junction: A611 Derby Road/Annesley Cutting												
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 (A611 Derby Road North Entry)	U	A	2	3	8.7	Geom	-	3.25	0.00	Y	Arm 5 Left	Inf
											Arm 6 Ahead	Inf
1/2 (A611 Derby Road North Entry)	U	A	2	3	60.0	User	2500	-	-	-	-	-
2/1 (Annesley Cutting Entry)	U	C	2	3	5.2	Geom	-	3.25	0.00	Y	Arm 6 Left	Inf
2/2 (Annesley Cutting Entry)	U	B	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 4 Right	Inf
3/1 (A611 Derby Road South Entry)	U	D	2	3	60.0	User	1800	-	-	-	-	-
3/2 (A611 Derby Road South Entry)	U	D	2	3	60.0	User	2500	-	-	-	-	-
3/3 (A611 Derby Road South Entry)	O	D E	2	3	8.7	Geom	-	3.25	0.00	Y	Arm 5 Right	Inf
4/1 (A611 Derby Road North Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
4/2 (A611 Derby Road North Exit)	U		2	3	60.0	Geom	-	3.25	0.00	Y		
5/1 (Annesley Cutting Exit)	U		2	3	60.0	Geom	-	3.25	0.00	Y		
6/1 (A611 Derby Road South Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/2 (A611 Derby Road South Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM 2032 Junction Mitigation'	08:00	09:00	01:00	
2: 'PM 2032 Junction Mitigation'	17:00	18:00	01:00	

Full Input Data And Results

Scenario 1: 'AM 2032 Junction Mitigation' (FG1: 'AM 2032 Junction Mitigation', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	307	2064	2371
	B	100	0	649	749
	C	2634	308	0	2942
	Tot.	2734	615	2713	6062

Traffic Lane Flows

Lane	Scenario 1: AM 2032 Junction Mitigation
Junction: A611 Derby Road/Annesley Cutting	
1/1	1035
1/2	1336
2/1	649
2/2	100
3/1	1204
3/2	1430
3/3	308
4/1	1204
4/2	1530
5/1	615
6/1	1377
6/2	1336

Full Input Data And Results

Lane Saturation Flows

Junction: A611 Derby Road/Annesley Cutting								
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 (A611 Derby Road North Entry)	3.25	0.00	Y	Arm 5 Left	Inf	29.7 %	1940	1940
				Arm 6 Ahead	Inf	70.3 %		
1/2 (A611 Derby Road North Entry Lane 2)	This lane uses a directly entered Saturation Flow						2500	2500
2/1 (Annesley Cutting Entry)	3.25	0.00	Y	Arm 6 Left	Inf	100.0 %	1940	1940
2/2 (Annesley Cutting Entry)	3.25	0.00	Y	Arm 4 Right	Inf	100.0 %	1940	1940
3/1 (A611 Derby Road South Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (A611 Derby Road South Entry Lane 2)	This lane uses a directly entered Saturation Flow						2500	2500
3/3 (A611 Derby Road South Entry)	3.25	0.00	Y	Arm 5 Right	Inf	100.0 %	1940	1940
4/1 (A611 Derby Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (A611 Derby Road North Exit)	3.25	0.00	Y				1940	1940
5/1 (Annesley Cutting Exit)	3.25	0.00	Y				1940	1940
6/1 (A611 Derby Road South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A611 Derby Road South Exit Lane 2)	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'PM 2032 Junction Mitigation' (FG2: 'PM 2032 Junction Mitigation', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	344	1407	1751
	B	259	0	302	561
	C	1452	35	0	1487
	Tot.	1711	379	1709	3799

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM 2032 Junction Mitigation
Junction: A611 Derby Road/Annesley Cutting	
1/1	764
1/2	987
2/1	302
2/2	259
3/1	699
3/2	753
3/3	35
4/1	699
4/2	1012
5/1	379
6/1	722
6/2	987

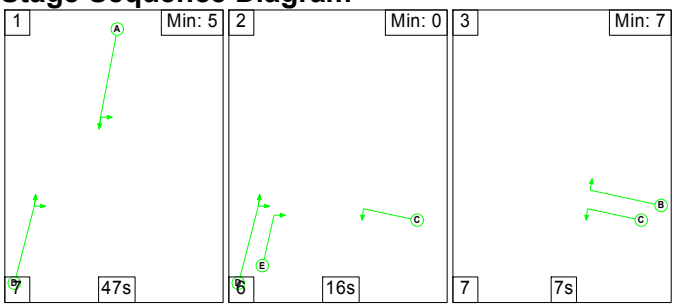
Full Input Data And Results

Lane Saturation Flows

Junction: A611 Derby Road/Annesley Cutting								
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 (A611 Derby Road North Entry)	3.25	0.00	Y	Arm 5 Left	Inf	45.0 %	1940	1940
				Arm 6 Ahead	Inf	55.0 %		
1/2 (A611 Derby Road North Entry Lane 2)	This lane uses a directly entered Saturation Flow						2500	2500
2/1 (Annesley Cutting Entry)	3.25	0.00	Y	Arm 6 Left	Inf	100.0 %	1940	1940
2/2 (Annesley Cutting Entry)	3.25	0.00	Y	Arm 4 Right	Inf	100.0 %	1940	1940
3/1 (A611 Derby Road South Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (A611 Derby Road South Entry Lane 2)	This lane uses a directly entered Saturation Flow						2500	2500
3/3 (A611 Derby Road South Entry)	3.25	0.00	Y	Arm 5 Right	Inf	100.0 %	1940	1940
4/1 (A611 Derby Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (A611 Derby Road North Exit)	3.25	0.00	Y				1940	1940
5/1 (Annesley Cutting Exit)	3.25	0.00	Y				1940	1940
6/1 (A611 Derby Road South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A611 Derby Road South Exit Lane 2)	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'AM 2032 Junction Mitigation' (FG1: 'AM 2032 Junction Mitigation', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

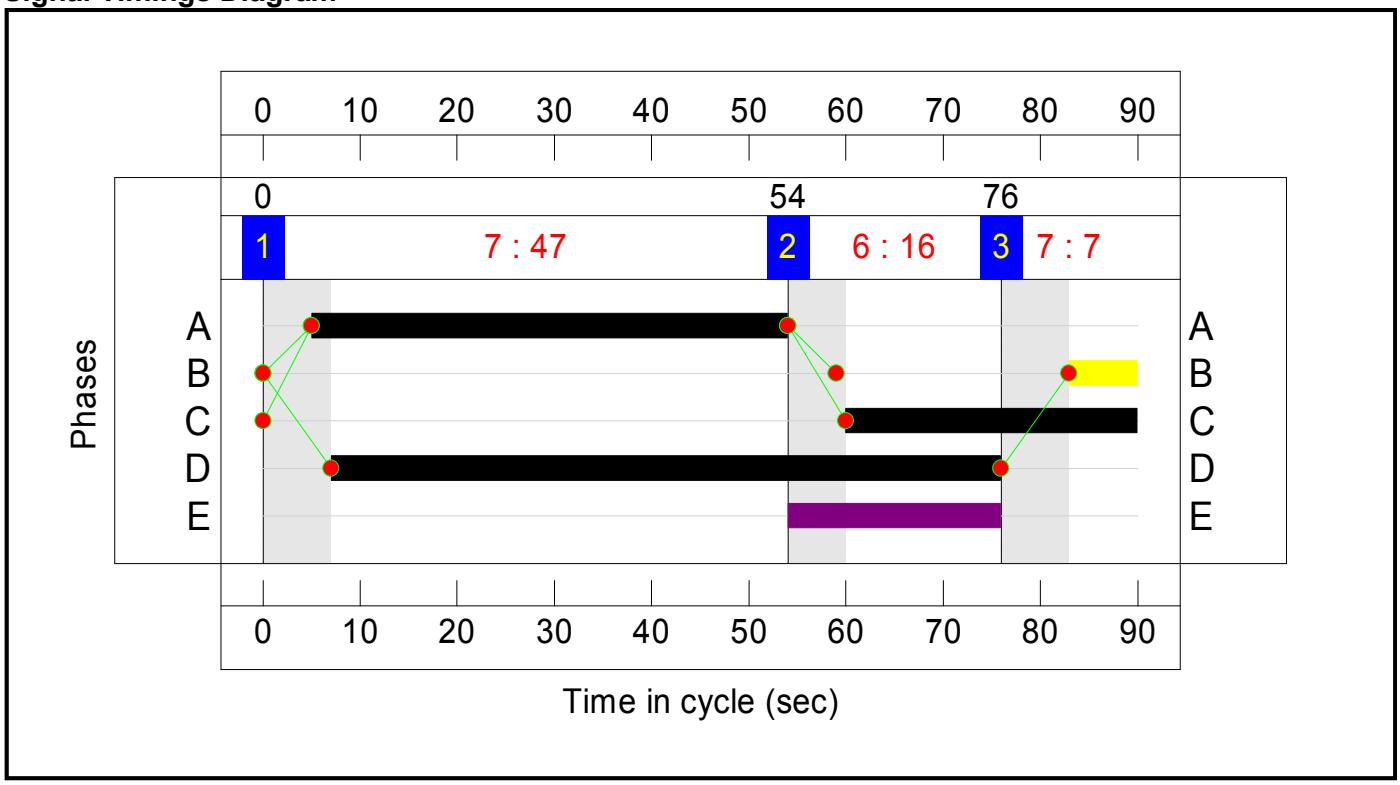


Stage Timings

Stage	1	2	3
Duration	47	16	7
Change Point	0	54	76

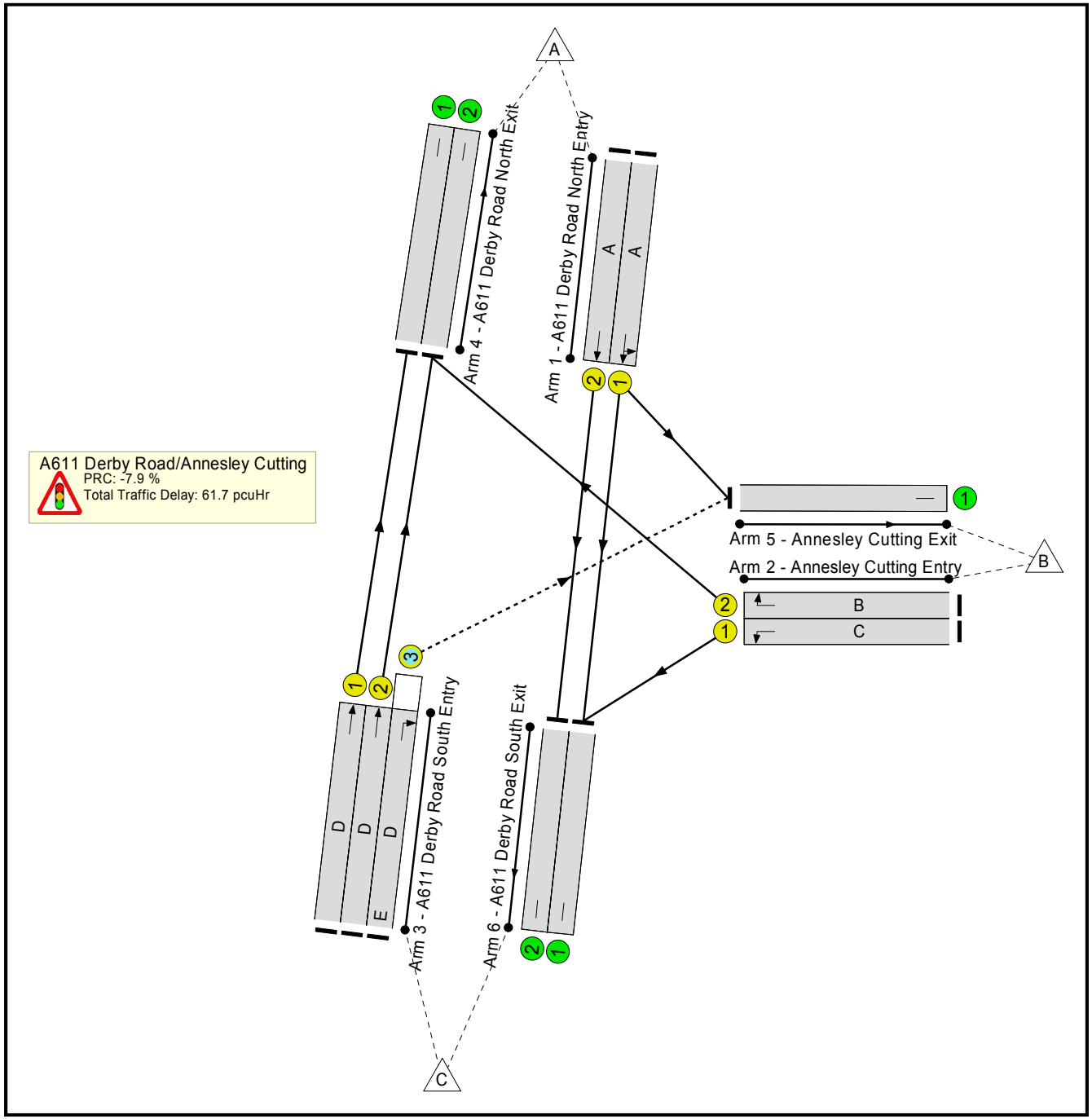
Full Input Data And Results

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**97.1%**
A611 Derby Road/Annesley Cutting	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**97.1%**
1/1	A611 Derby Road North Entry Left Ahead	U	N/A	N/A	A		1	49	-	1035	1940	1078	96.0%
1/2	A611 Derby Road North Entry Ahead	U	N/A	N/A	A		1	49	-	1336	2500	1389	96.2%
2/1	Annesley Cutting Entry Left	U	N/A	N/A	C		1	30	-	649	1940	668	97.1%
2/2	Annesley Cutting Entry Right	U	N/A	N/A	B		1	7	-	100	1940	172	58.0%
3/1	A611 Derby Road South Entry Ahead	U	N/A	N/A	D		1	69	-	1204	1800	1400	86.0%
3/2	A611 Derby Road South Entry Ahead	U	N/A	N/A	D		1	69	-	1430	2500	1944	73.5%
3/3	A611 Derby Road South Entry Right	O	N/A	N/A	D	E	1	69	22	308	1940	468	65.8%
4/1	A611 Derby Road North Exit	U	N/A	N/A	-		-	-	-	1204	Inf	Inf	0.0%
4/2	A611 Derby Road North Exit	U	N/A	N/A	-		-	-	-	1530	1940	1940	78.9%
5/1	Annesley Cutting Exit	U	N/A	N/A	-		-	-	-	615	1940	1940	31.7%
6/1	A611 Derby Road South Exit	U	N/A	N/A	-		-	-	-	1377	Inf	Inf	0.0%
6/2	A611 Derby Road South Exit	U	N/A	N/A	-		-	-	-	1336	Inf	Inf	0.0%

Full Input Data And Results

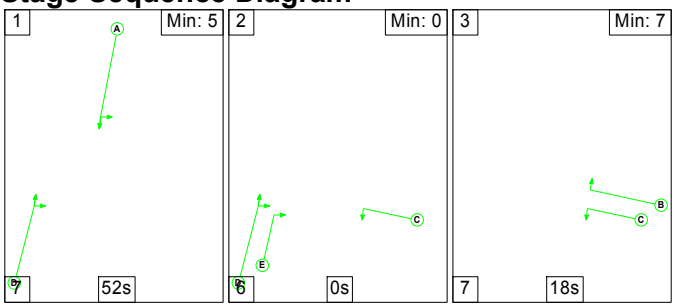
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**301**	**7**	**25.8**	**34.8**	**1.1**	**61.7**	**-**	**-**	**-**	**-**
A611 Derby Road/Annesley Cutting	**-**	**-**	**0**	**301**	**7**	**25.8**	**34.8**	**1.1**	**61.7**	**-**	**-**	**-**	**-**
1/1	1035	1035	-	-	-	5.5	8.6	-	14.1	49.0	24.4	8.6	33.1
1/2	1336	1336	-	-	-	7.1	9.3	-	16.4	44.2	31.5	9.3	40.9
2/1	649	649	-	-	-	5.2	8.8	-	14.0	77.9	15.9	8.8	24.7
2/2	100	100	-	-	-	1.1	0.7	-	1.8	63.8	2.4	0.7	3.1
3/1	1204	1204	-	-	-	2.2	3.0	-	5.2	15.6	20.1	3.0	23.0
3/2	1430	1430	-	-	-	2.1	1.4	-	3.4	8.7	18.3	1.4	19.7
3/3	308	308	0	301	7	1.6	1.0	1.1	3.6	41.9	6.9	1.0	7.9
4/1	1204	1204	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	1530	1530	-	-	-	1.0	1.8	-	2.9	6.8	28.1	1.8	29.9
5/1	615	615	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
6/1	1377	1377	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	1336	1336	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -7.9 Total Delay for Signalled Lanes (pcuHr): 58.59 Cycle Time (s): 90
PRC Over All Lanes (%): -7.9 Total Delay Over All Lanes(pcuHr): 61.72

Full Input Data And Results

Scenario 2: 'PM 2032 Junction Mitigation' (FG2: 'PM 2032 Junction Mitigation', Plan 1: 'Network Control Plan 1')

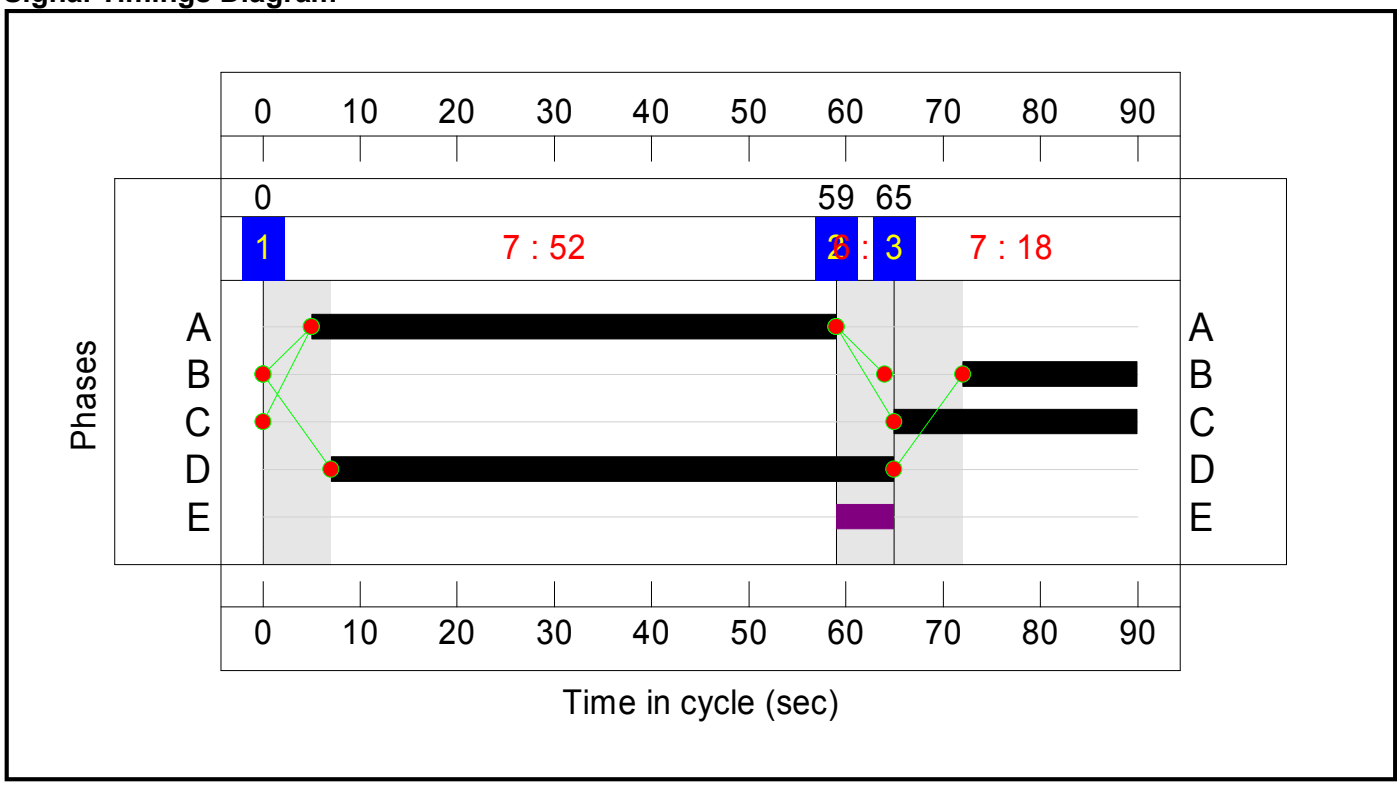
Stage Sequence Diagram



Stage Timings

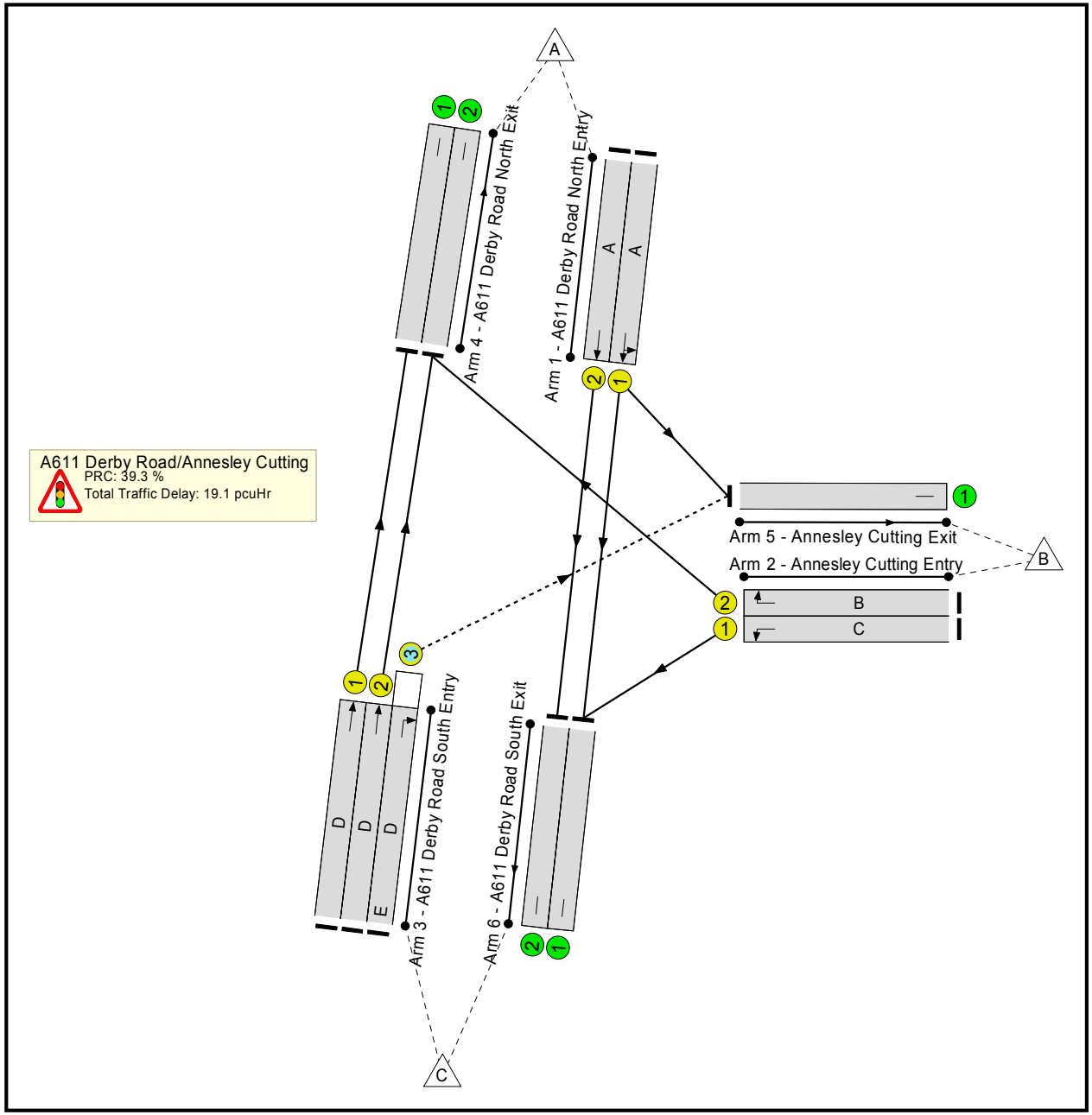
Stage	1	2	3
Duration	52	0	18
Change Point	0	59	65

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**64.6%**
A611 Derby Road/Annesley Cutting	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**64.6%**
1/1	A611 Derby Road North Entry Left Ahead	U	N/A	N/A	A		1	54	-	764	1940	1186	64.4%
1/2	A611 Derby Road North Entry Ahead	U	N/A	N/A	A		1	54	-	987	2500	1528	64.6%
2/1	Annesley Cutting Entry Left	U	N/A	N/A	C		1	25	-	302	1940	560	53.9%
2/2	Annesley Cutting Entry Right	U	N/A	N/A	B		1	18	-	259	1940	410	63.2%
3/1	A611 Derby Road South Entry Ahead	U	N/A	N/A	D		1	58	-	699	1800	1180	59.2%
3/2	A611 Derby Road South Entry Ahead	U	N/A	N/A	D		1	58	-	753	2500	1639	45.9%
3/3	A611 Derby Road South Entry Right	O	N/A	N/A	D	E	1	58	6	35	1940	123	28.4%
4/1	A611 Derby Road North Exit	U	N/A	N/A	-		-	-	-	699	Inf	Inf	0.0%
4/2	A611 Derby Road North Exit	U	N/A	N/A	-		-	-	-	1012	1940	1940	52.2%
5/1	Annesley Cutting Exit	U	N/A	N/A	-		-	-	-	379	1940	1940	19.5%
6/1	A611 Derby Road South Exit	U	N/A	N/A	-		-	-	-	722	Inf	Inf	0.0%
6/2	A611 Derby Road South Exit	U	N/A	N/A	-		-	-	-	987	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	**-**	**-**	**0**	**34**	**1**	**13.5**	**5.3**	**0.3**	**19.1**	**-**	**-**	**-**	**-**
A611 Derby Road/Annesley Cutting	**-**	**-**	**0**	**34**	**1**	**13.5**	**5.3**	**0.3**	**19.1**	**-**	**-**	**-**	**-**
1/1	764	764	-	-	-	2.4	0.9	-	3.3	15.5	12.1	0.9	13.0
1/2	987	987	-	-	-	3.1	0.9	-	4.0	14.6	15.6	0.9	16.5
2/1	302	302	-	-	-	2.3	0.6	-	2.8	33.9	6.3	0.6	6.9
2/2	259	259	-	-	-	2.3	0.9	-	3.2	44.1	5.8	0.9	6.7
3/1	699	699	-	-	-	1.7	0.7	-	2.4	12.5	9.7	0.7	10.4
3/2	753	753	-	-	-	1.6	0.4	-	2.0	9.7	9.2	0.4	9.6
3/3	35	35	0	34	1	0.1	0.2	0.3	0.6	60.3	0.3	0.2	0.5
4/1	699	699	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	1012	1012	-	-	-	0.1	0.5	-	0.7	2.4	9.4	0.5	9.9
5/1	379	379	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
6/1	722	722	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	987	987	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 39.3 Total Delay for Signalled Lanes (pcuHr): 18.33 Cycle Time (s): 90
PRC Over All Lanes (%): 39.3 Total Delay Over All Lanes(pcuHr): 19.13

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]
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Filename: Extra Capacity 2016-08-18 J21 JMP.arc8
Path: J:\MID\4300\MID4354 - Ashfield Junction Assessments\CALCULATIONS\DATA\Ashfield_Junction_Assessment_Information\Junction 21 - A611 and Annesley Road ARCADY
Report generation date: 02/09/2016 17:01:30

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS

	A1 - 2032 Mitigation			
Annesley Road	1.73	5.47	0.64	A
A611 South	0.08	2.48	0.08	A
A611 North	1.63	2.90	0.62	A

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

"D5 - 2032 Mitigation, AM " model duration: 07:45 - 09:15
"D6 - 2032, Mitigation PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.4.487 at 02/09/2016 17:01:28

File summary

Title	(untitled)
Location	
Site Number	
Date	22/06/2016
Version	
Status	(new file)

Identifier	
Client	
Jobnumber	
Enumerator	noram
Description	

Analysis Options

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

Units

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

(Default Analysis Set) - 2032 Mitigation, AM

Data Errors and Warnings

Severity	Area	Item	Description

Warning	Geometry	A611 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	A611 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

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

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2032 Mitigation, AM	2032 Mitigation	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS

1	(untitled)	Roundabout	1,2,3				3.61	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
Annesley Road	1	Annesley Road	
A611 South	2	A611 South	
A611 North	3	A611 North	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
Annesley Road	0.00	99999.00		0.00
A611 South	0.00	99999.00		0.00
A611 North	0.00	99999.00		0.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Annesley Road	9.00	9.00	0.00	22.20	70.00	51.00	
A611 South	5.50	8.00	50.00	53.80	70.00	48.00	
A611 North	7.20	12.60	75.00	55.00	70.00	51.00	

Bypass

Name	Arm Has Bypass	Bypass Utilisation (%)
Annesley Road	✓	100
A611 South	✓	100
A611 North		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Annesley Road		(calculated)	(calculated)	0.622	2541.498
A611 South		(calculated)	(calculated)	0.584	2245.899

A611 North		(calculated)	(calculated)	0.757	3364.804

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

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Annesley Road	ONE HOUR	✓	1252.00	100.000
A611 South	ONE HOUR	✓	905.00	100.000
A611 North	ONE HOUR	✓	1844.00	100.000

Turning Proportions

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

		To		
From		Annesley Road	A611 South	A611 North
	Annesley Road	0.000	211.000	1041.000
	A611 South	112.000	0.000	793.000
	A611 North	767.000	1077.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To		
From		Annesley Road	A611 South	A611 North
	Annesley Road	0.00	0.17	0.83
	A611 South	0.12	0.00	0.88
	A611 North	0.42	0.58	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

	To

		Annesley Road	A611 South	A611 North
From	Annesley Road	1.000	1.000	1.000
	A611 South	1.000	1.000	1.000
	A611 North	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

	To			
		Annesley Road	A611 South	A611 North
From	Annesley Road	0.0	0.0	0.0
	A611 South	0.0	0.0	0.0
	A611 North	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
Annesley Road	0.64	5.47	1.73	A	1148.86	1432.86	97.25	4.07	1.08	97.26	4.07

A611 South	0.08	2.48	0.08	A	830.44	154.16	5.90	2.29	0.07	5.90	2.29
A611 North	0.62	2.90	1.63	A	1692.09	2538.13	100.43	2.37	1.12	100.44	2.37

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Junction Demand (PCU/hr)	Junction Arrivals (PCU)	Bypass Demand (PCU/hr)	Bypass Exit Flow (PCU/hr)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
Annesley Road	942.57	783.72	195.93	158.85	0.00	781.23	660.36	809.13	0.00	2038.47	1669.37	0.384	0.00	0.62	2.857	A
A611 South	681.33	84.32	21.08	597.01	158.85	84.12	809.13	781.23	0.00	1789.78	1271.24	0.047	0.00	0.05	2.110	A
A611 North	1388.26	1388.26	347.06	0.00	597.01	1385.37	781.23	84.12	0.00	3301.09	2401.94	0.421	0.00	0.72	1.878	A

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

Name	Total Demand (PCU/hr)	Junction Demand (PCU/hr)	Junction Arrivals (PCU)	Bypass Demand (PCU/hr)	Bypass Exit Flow (PCU/hr)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS

Annesley Road	1125.52	935.84	233.96	189.68	0.00	934.62	789.67	967.53	0.00	1940.00	1669.37	0.482	0.62	0.92	3.575	A
A611 South	813.58	100.69	25.17	712.89	189.68	100.63	967.53	934.62	0.00	1700.22	1271.24	0.059	0.05	0.06	2.250	A
A611 North	1657.72	1657.72	414.43	0.00	712.89	1656.56	934.62	100.63	0.00	3288.58	2401.94	0.504	0.72	1.01	2.205	A

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

Name	Total Demand (PCU/hr)	Junction Demand (PCU/hr)	Junction Arrivals (PCU)	Bypass Demand (PCU/hr)	Bypass Exit Flow (PCU/hr)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
Annesley Road	1378.48	1146.16	286.54	232.32	0.00	1143.02	966.69	1184.37	0.00	1805.19	1669.41	0.635	0.92	1.71	5.410	A
A611 South	996.42	123.31	30.83	873.11	232.32	123.23	1184.37	1143.02	0.00	1578.55	1271.21	0.078	0.06	0.08	2.473	A
A611 North	2030.28	2030.28	507.57	0.00	873.11	2027.84	1143.02	123.23	0.00	3271.47	2401.96	0.621	1.01	1.62	2.888	A

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

Name	Total Demand (PCU/hr)	Junction Demand (PCU/hr)	Junction Arrivals (PCU)	Bypass Demand (PCU/hr)	Bypass Exit Flow (PCU/hr)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
Annesley Road	1378.48	1146.16	286.54	232.32	0.00	1146.10	967.78	1185.78	0.00	1804.31	1669.41	0.635	1.71	1.73	5.469	A

A611 South	996.42	123.31	30.83	873.11	232.32	123.31	1185.78	1146.10	0.00	1576.75	1271.21	0.078	0.08	0.08	2.476	A
A611 North	2030.28	2030.28	507.57	0.00	873.11	2030.25	1146.10	123.31	0.00	3271.40	2401.96	0.621	1.62	1.63	2.899	A

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

Name	Total Demand (PCU/hr)	Junction Demand (PCU/hr)	Junction Arrivals (PCU)	Bypass Demand (PCU/hr)	Bypass Exit Flow (PCU/hr)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
Annesley Road	1125.52	935.84	233.96	189.68	0.00	938.98	791.30	969.62	0.00	1938.70	1669.37	0.483	1.73	0.94	3.614	A
A611 South	813.58	100.69	25.17	712.89	189.68	100.77	969.62	938.98	0.00	1697.67	1271.24	0.059	0.08	0.06	2.255	A
A611 North	1657.72	1657.72	414.43	0.00	712.89	1660.15	938.98	100.77	0.00	3288.48	2401.94	0.504	1.63	1.02	2.215	A

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

Name	Total Demand (PCU/hr)	Junction Demand (PCU/hr)	Junction Arrivals (PCU)	Bypass Demand (PCU/hr)	Bypass Exit Flow (PCU/hr)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
Annesley Road	942.57	783.72	195.93	158.85	0.00	784.97	662.30	811.51	0.00	2036.99	1669.37	0.385	0.94	0.63	2.877	A
A611 South	681.33	84.32	21.08	597.01	158.85	84.37	811.51	784.97	0.00	1787.60	1271.24	0.047	0.06	0.05	2.113	A

A611 North	1388.26	1388.26	347.06	0.00	597.01	1389.43	784.97	84.37	0.00	3300.90	2401.94	0.421	1.02	0.73	1.883	A

Queueing Delay Results for each time segment

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

Name	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
Annesley Road	9.12	0.61	2.857	A	A
A611 South	0.73	0.05	2.110	A	A
A611 North	10.67	0.71	1.878	A	A

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

Name	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
Annesley Road	13.57	0.90	3.575	A	A
A611 South	0.93	0.06	2.250	A	A
A611 North	14.94	1.00	2.205	A	A

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

Name	Queueing Total Delay (PCU-	Queueing Rate Of Delay (PCU-	Average Delay Per Arriving Vehicle	Unsignalised Level Of	Signalised Level Of

	min)	min/min)	(s)	Service	Service
Annesley Road	24.65	1.64	5.410	A	A
A611 South	1.25	0.08	2.473	A	A
A611 North	23.75	1.58	2.888	A	A

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

Name	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
Annesley Road	25.81	1.72	5.469	A	A
A611 South	1.27	0.08	2.476	A	A
A611 North	24.40	1.63	2.899	A	A

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

Name	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
Annesley Road	14.49	0.97	3.614	A	A
A611 South	0.96	0.06	2.255	A	A
A611 North	15.60	1.04	2.215	A	A

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

Name	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
Annesley Road	9.60	0.64	2.877	A	A
A611 South	0.75	0.05	2.113	A	A
A611 North	11.07	0.74	1.883	A	A

(Default Analysis Set) - 2032, Mitigation PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A611 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	A611 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

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

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2032, Mitigation PM	2032	Mitigation PM		ONE HOUR	16:45	18:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3				11.38	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
Annesley Road	1	Annesley Road	
A611 South	2	A611 South	
A611 North	3	A611 North	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
Annesley Road	0.00	99999.00		0.00
A611 South	0.00	99999.00		0.00
A611 North	0.00	99999.00		0.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Annesley Road	9.00	9.00	0.00	22.20	70.00	51.00	
A611 South	5.50	8.00	50.00	53.80	70.00	48.00	
A611 North	7.20	12.60	75.00	55.00	70.00	51.00	

Bypass

Name	Arm Has Bypass	Bypass Utilisation (%)
Annesley Road	✓	100
A611 South	✓	100
A611 North		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Annesley Road		(calculated)	(calculated)	0.622	2541.498
A611 South		(calculated)	(calculated)	0.584	2245.899
A611 North		(calculated)	(calculated)	0.757	3364.804

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

Traffic Flows

Demand Set Data Options

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

				Percentages						

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Annesley Road	ONE HOUR	✓	1512.00	100.000
A611 South	ONE HOUR	✓	1526.00	100.000
A611 North	ONE HOUR	✓	2622.00	100.000

Turning Proportions

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

		To		
		Annesley Road	**A611 South**	**A611 North**
From	**Annesley Road**	0.000	155.000	1357.000
	A611 South	137.000	0.000	1389.000
	A611 North	1307.000	1315.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To		
		Annesley Road	A611 South	A611 North
From	Annesley Road	0.00	0.10	0.90
	A611 South	0.09	0.00	0.91
	A611 North	0.50	0.50	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (for whole period)

		To		
		Annesley Road	A611 South	A611 North
From	Annesley Road	1.000	1.000	1.000
	A611 South	1.000	1.000	1.000
	A611 North	1.000	1.000	1.000

Heavy Vehicle Percentages - (untitled) (for whole period)

	To

		Annesley Road	A611 South	A611 North
From	Annesley Road	0.0	0.0	0.0
	A611 South	0.0	0.0	0.0
	A611 North	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
Annesley Road	0.91	22.66	8.86	C	1387.44	1867.81	325.09	10.44	3.61	325.11	10.44
A611 South	0.11	2.94	0.12	A	1400.28	188.57	8.27	2.63	0.09	8.27	2.63
A611 North	0.89	9.78	7.58	A	2405.99	3608.99	332.41	5.53	3.69	332.43	5.53

Main Results for each time segment

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

Name	Total Demand (PCU/hr)	Junction Demand (PCU/hr)	Junction Arrivals (PCU)	Bypass Demand (PCU/hr)	Bypass Exit Flow (PCU/hr)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
Annesley Road	1138.31	1021.62	255.41	116.69	0.00	1017.15	1083.88	987.01	0.00	1927.89	1777.66	0.530	0.00	1.12	3.934	A
A611 South	1148.85	103.14	25.79	1045.71	116.69	102.88	987.01	1017.15	0.00	1652.03	1208.01	0.062	0.00	0.07	2.323	A
A611 North	1973.98	1973.98	493.49	0.00	1045.71	1968.01	1017.15	102.88	0.00	3286.88	2449.83	0.601	0.00	1.49	2.717	A

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

Name	Total Demand (PCU/hr)	Junction Demand (PCU/hr)	Junction Arrivals (PCU)	Bypass Demand (PCU/hr)	Bypass Exit Flow (PCU/hr)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
Annesley Road	1359.26	1219.92	304.98	139.34	0.00	1216.25	1295.96	1180.06	0.00	1807.87	1777.67	0.675	1.12	2.03	6.048	A
A611 South	1371.84	123.16	30.79	1248.68	139.34	123.08	1180.06	1216.25	0.00	1535.79	1208.01	0.080	0.07	0.09	2.547	A
A611 North	2357.12	2357.12	589.28	0.00	1248.68	2352.94	1216.25	123.08	0.00	3271.58	2449.83	0.720	1.49	2.54	3.901	A

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

Name	Total Demand (PCU/hr)	Junction Demand (PCU/hr)	Junction Arrivals (PCU)	Bypass Demand (PCU/hr)	Bypass Exit Flow (PCU/hr)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS

Annesley Road	1664.74	1494.08	373.52	170.66	0.00	1470.47	1580.27	1438.32	0.00	1647.31	1777.72	0.907	2.03	7.94	18.354	C
A611 South	1680.16	150.84	37.71	1529.32	170.66	150.70	1438.32	1470.47	0.00	1387.37	1207.98	0.109	0.09	0.12	2.910	A
A611 North	2886.88	2886.88	721.72	0.00	1529.32	2867.89	1470.47	150.70	0.00	3250.66	2449.86	0.888	2.54	7.28	8.990	A

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

Name	Total Demand (PCU/hr)	Junction Demand (PCU/hr)	Junction Arrivals (PCU)	Bypass Demand (PCU/hr)	Bypass Exit Flow (PCU/hr)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
Annesley Road	1664.74	1494.08	373.52	170.66	0.00	1490.39	1589.27	1447.24	0.00	1641.76	1777.72	0.910	7.94	8.86	22.662	C
A611 South	1680.16	150.84	37.71	1529.32	170.66	150.83	1447.24	1490.39	0.00	1375.73	1207.98	0.110	0.12	0.12	2.938	A
A611 North	2886.88	2886.88	721.72	0.00	1529.32	2885.68	1490.39	150.83	0.00	3250.56	2449.86	0.888	7.28	7.58	9.782	A

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

Name	Total Demand (PCU/hr)	Junction Demand (PCU/hr)	Junction Arrivals (PCU)	Bypass Demand (PCU/hr)	Bypass Exit Flow (PCU/hr)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
Annesley Road	1359.26	1219.92	304.98	139.34	0.00	1246.77	1308.16	1192.12	0.00	1800.37	1777.67	0.678	8.86	2.15	6.809	A

A611 South	1371.84	123.16	30.79	1248.68	139.34	123.30	1192.12	1246.77	0.00	1517.98	1208.01	0.081	0.12	0.09	2.583	A
A611 North	2357.12	2357.12	589.28	0.00	1248.68	2376.98	1246.77	123.30	0.00	3271.42	2449.83	0.721	7.58	2.62	4.113	A

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

Name	Total Demand (PCU/hr)	Junction Demand (PCU/hr)	Junction Arrivals (PCU)	Bypass Demand (PCU/hr)	Bypass Exit Flow (PCU/hr)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
Annesley Road	1138.31	1021.62	255.41	116.69	0.00	1025.64	1089.40	992.21	0.00	1924.65	1777.66	0.531	2.15	1.14	4.021	A
A611 South	1148.85	103.14	25.79	1045.71	116.69	103.23	992.21	1025.64	0.00	1647.08	1208.01	0.063	0.09	0.07	2.333	A
A611 North	1973.98	1973.98	493.49	0.00	1045.71	1978.39	1025.64	103.23	0.00	3286.62	2449.83	0.601	2.62	1.52	2.760	A

Queueing Delay Results for each time segment

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

Name	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
Annesley Road	16.21	1.08	3.934	A	A
A611 South	0.98	0.07	2.323	A	A

A611 North	21.76	1.45	2.717	A	A

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

Name	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
Annesley Road	29.12	1.94	6.048	A	A
A611 South	1.29	0.09	2.547	A	A
A611 North	36.69	2.45	3.901	A	A

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

Name	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
Annesley Road	97.84	6.52	18.354	C	B
A611 South	1.80	0.12	2.910	A	A
A611 North	96.68	6.45	8.990	A	A

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

Name	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
Annesley	127.26	8.48	22.662	C	C

Road					
A611 South	1.84	0.12	2.938	A	A
A611 North	111.95	7.46	9.782	A	A

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

Name	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
Annesley Road	36.99	2.47	6.809	A	A
A611 South	1.34	0.09	2.583	A	A
A611 North	42.01	2.80	4.113	A	A

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

Name	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
Annesley Road	17.67	1.18	4.021	A	A
A611 South	1.02	0.07	2.333	A	A
A611 North	23.32	1.55	2.760	A	A

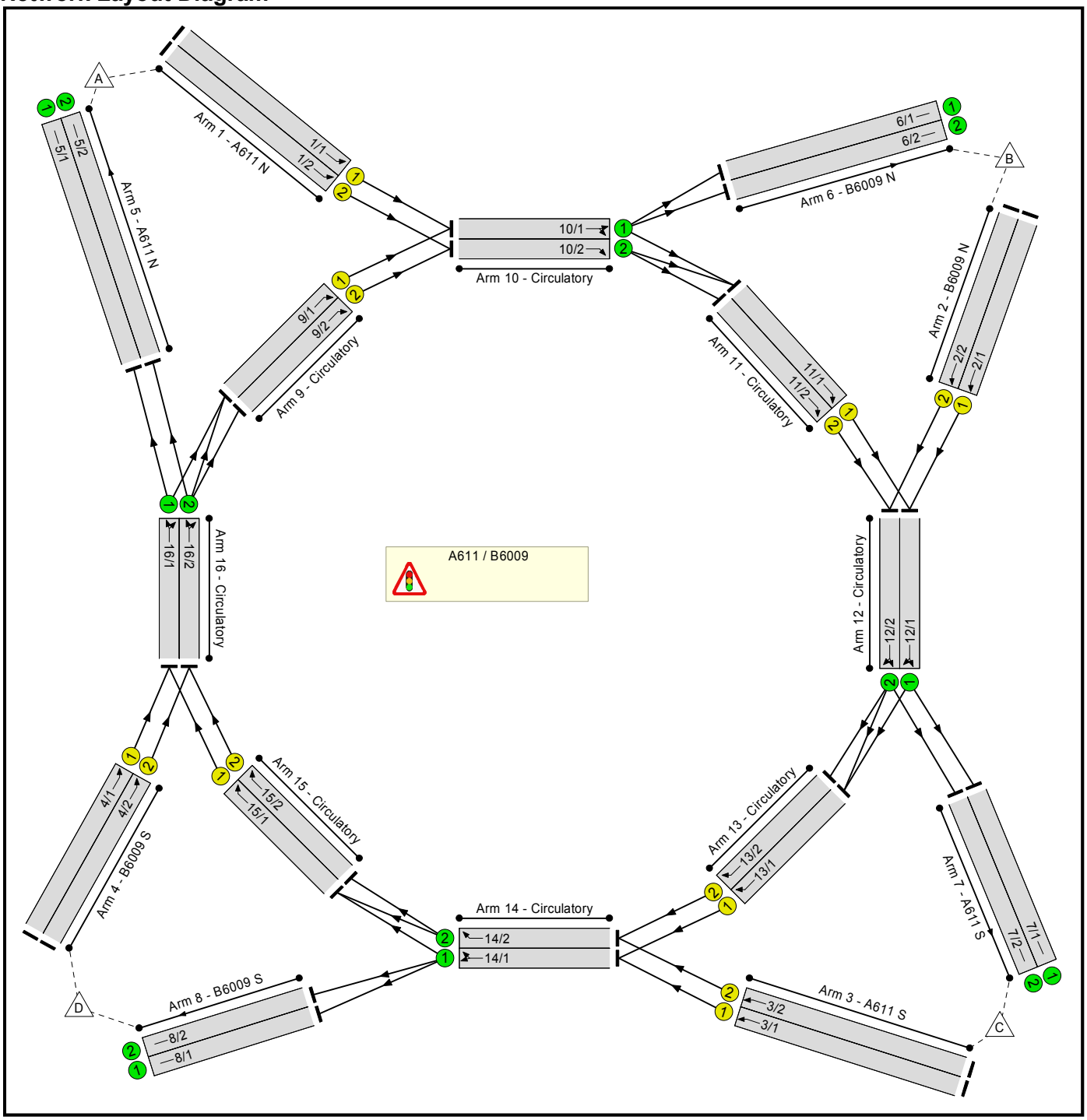
Full Input Data And Results

User and Project Details

Project:	
Title:	
Location:	
File name:	2016-08-16 Junction 23 Signals option.lsg3x
Author:	
Company:	
Address:	
Notes:	

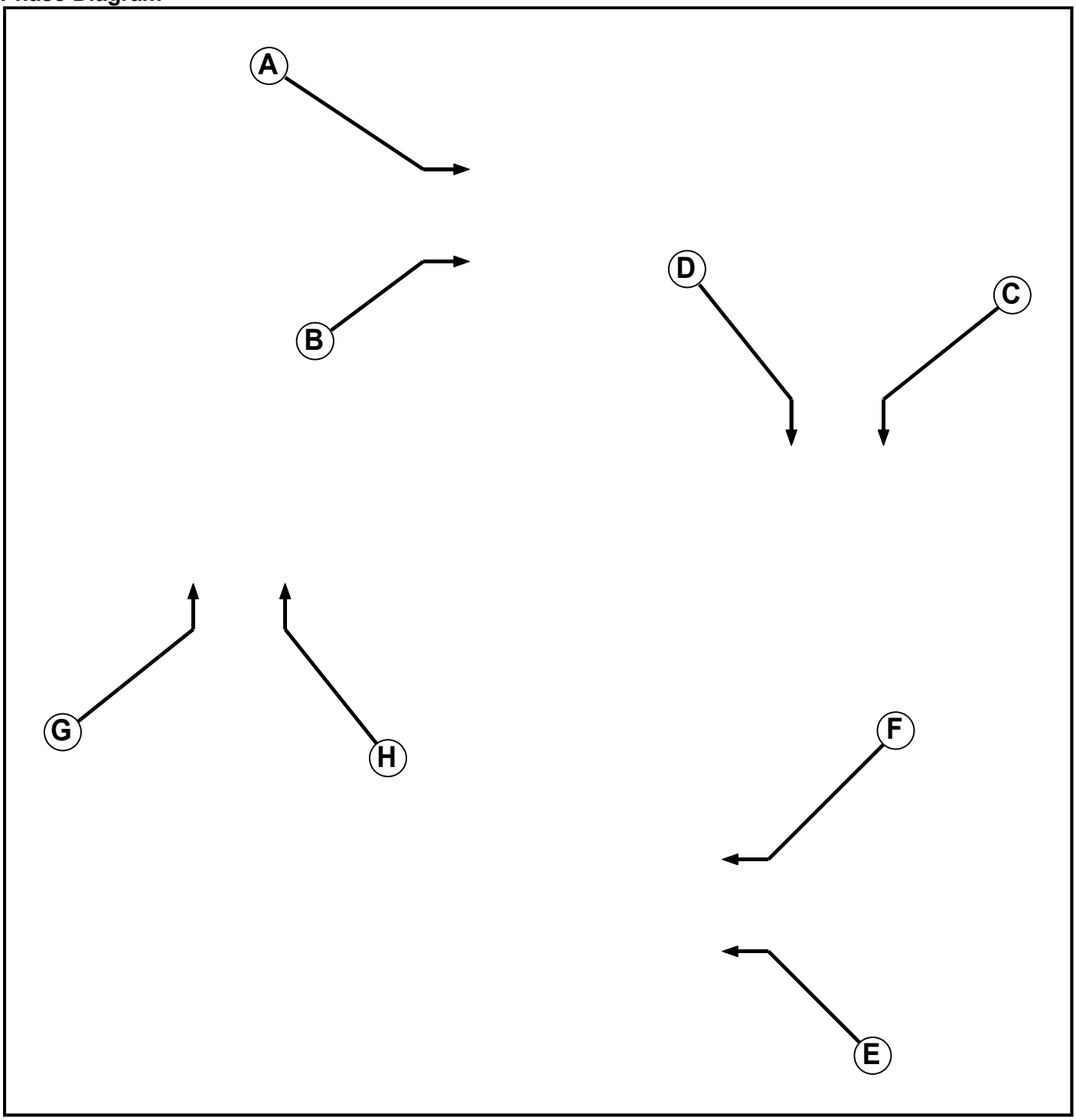
Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

Phase Input Data

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

Phase Intergreens Matrix

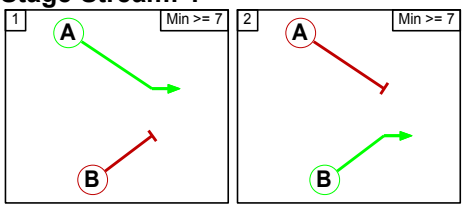
		Starting Phase							
		A	B	C	D	E	F	G	H
Terminating Phase	A		5	-	-	-	-	-	-
	B	5		-	-	-	-	-	-
	C	-	-		5	-	-	-	-
	D	-	-	5		-	-	-	-
	E	-	-	-	-		5	-	-
	F	-	-	-	-	5		-	-
	G	-	-	-	-	-	-		5
	H	-	-	-	-	-	-	5	

Phases in Stage

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

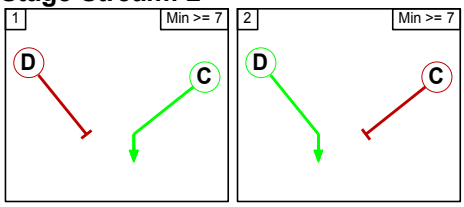
Stage Diagram

Stage Stream: 1

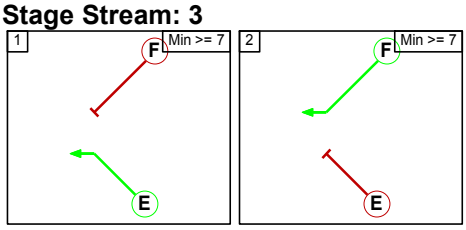


Full Input Data And Results

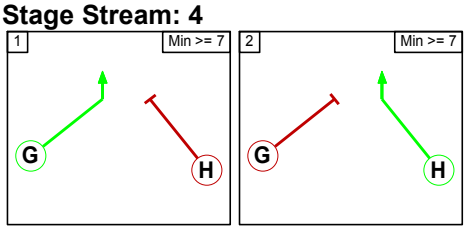
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Phase Delays

Stage Stream: 1

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

Stage Stream: 2

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

Stage Stream: 3

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

Stage Stream: 4

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

Prohibited Stage Change

Stage Stream: 1

		To Stage	
		1	2
From Stage	1		5
	2	5	

Full Input Data And Results

Stage Stream: 2

	To Stage		
From Stage		1	2
	1		5
	2	5	

Stage Stream: 3

	To Stage		
From Stage		1	2
	1		5
	2	5	

Stage Stream: 4

	To Stage		
From Stage		1	2
	1		5
	2	5	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A611 / B6009
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: A611 / B6009												
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 (A611 N)	U	A	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 10 Ahead	Inf
1/2 (A611 N)	U	A	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 10 Ahead	Inf
2/1 (B6009 N)	U	C	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 12 Ahead	Inf
2/2 (B6009 N)	U	C	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 12 Ahead	Inf
3/1 (A611 S)	U	E	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 14 Ahead	Inf
3/2 (A611 S)	U	E	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 14 Ahead	Inf
4/1 (B6009 S)	U	G	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 16 Ahead	Inf
4/2 (B6009 S)	U	G	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 16 Ahead	Inf
5/1 (A611 N)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/2 (A611 N)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (B6009 N)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/2 (B6009 N)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (A611 S)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/2 (A611 S)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (B6009 S)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/2 (B6009 S)	U		2	3	60.0	Inf	-	-	-	-	-	-
9/1 (Circulatory)	U	B	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 10 Right	Inf
9/2 (Circulatory)	U	B	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 10 Right	Inf
10/1 (Circulatory)	U		2	3	60.0	Inf	-	-	-	-	-	-
10/2 (Circulatory)	U		2	3	60.0	Inf	-	-	-	-	-	-
11/1 (Circulatory)	U	D	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 12 Ahead	Inf
11/2 (Circulatory)	U	D	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 12 Ahead	Inf
12/1 (Circulatory)	U		2	3	60.0	Inf	-	-	-	-	-	-

12/2 (Circulatory)	U		2	3	60.0	Inf	-	-	-	-	-	-
13/1 (Circulatory)	U	F	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 14 Right	Inf
13/2 (Circulatory)	U	F	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 14 Right	Inf
14/1 (Circulatory)	U		2	3	60.0	Inf	-	-	-	-	-	-
14/2 (Circulatory)	U		2	3	60.0	Inf	-	-	-	-	-	-
15/1 (Circulatory)	U	H	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 16 Right	Inf
15/2 (Circulatory)	U	H	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 16 Right	Inf
16/1 (Circulatory)	U		2	3	60.0	Inf	-	-	-	-	-	-
16/2 (Circulatory)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'WD AM Ref'	08:00	09:00	01:00	
2: 'WD PM Ref'	17:00	18:00	01:00	
3: 'WD AM Mit'	08:00	09:00	01:00	
4: 'WD PM Mit'	17:00	18:00	01:00	

Scenario 1: 'WD AM Mit' (FG3: 'WD AM Mit', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	88	670	232	990
	B	47	0	310	399	756
	C	406	269	0	791	1466
	D	137	388	685	0	1210
	Tot.	590	745	1665	1422	4422

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: WD AM Mit
Junction: A611 / B6009	
1/1	493
1/2	497
2/1	378
2/2	378
3/1	791
3/2	675
4/1	534
4/2	676
5/1	322
5/2	268
6/1	373
6/2	372
7/1	895
7/2	770
8/1	711
8/2	711
9/1	666
9/2	676
10/1	1159
10/2	1173
11/1	794
11/2	793
12/1	1172
12/2	1171
13/1	641
13/2	37
14/1	1432
14/2	712
15/1	356
15/2	366
16/1	890
16/2	1042

Full Input Data And Results

Lane Saturation Flows

Junction: A611 / B6009								
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 (A611 N)	3.25	0.00	Y	Arm 10 Ahead	Inf	100.0 %	1940	1940
1/2 (A611 N)	3.25	0.00	Y	Arm 10 Ahead	Inf	100.0 %	1940	1940
2/1 (B6009 N)	3.25	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1940	1940
2/2 (B6009 N)	3.25	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1940	1940
3/1 (A611 S)	3.25	0.00	Y	Arm 14 Ahead	Inf	100.0 %	1940	1940
3/2 (A611 S)	3.25	0.00	Y	Arm 14 Ahead	Inf	100.0 %	1940	1940
4/1 (B6009 S)	3.25	0.00	Y	Arm 16 Ahead	Inf	100.0 %	1940	1940
4/2 (B6009 S)	3.25	0.00	Y	Arm 16 Ahead	Inf	100.0 %	1940	1940
5/1 (A611 N Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A611 N Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (B6009 N Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (B6009 N Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (A611 S Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (A611 S Lane 2)	Infinite Saturation Flow						Inf	Inf
8/1 (B6009 S Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (B6009 S Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (Circulatory)	3.25	0.00	Y	Arm 10 Right	Inf	100.0 %	1940	1940
9/2 (Circulatory)	3.25	0.00	Y	Arm 10 Right	Inf	100.0 %	1940	1940
10/1 (Circulatory Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (Circulatory Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (Circulatory)	3.25	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1940	1940
11/2 (Circulatory)	3.25	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1940	1940
12/1 (Circulatory Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

12/2 (Circulatory Lane 2)	Infinite Saturation Flow						Inf	Inf
13/1 (Circulatory)	3.25	0.00	Y	Arm 14 Right	Inf	100.0 %	1940	1940
13/2 (Circulatory)	3.25	0.00	Y	Arm 14 Right	Inf	100.0 %	1940	1940
14/1 (Circulatory Lane 1)	Infinite Saturation Flow						Inf	Inf
14/2 (Circulatory Lane 2)	Infinite Saturation Flow						Inf	Inf
15/1 (Circulatory)	3.25	0.00	Y	Arm 16 Right	Inf	100.0 %	1940	1940
15/2 (Circulatory)	3.25	0.00	Y	Arm 16 Right	Inf	100.0 %	1940	1940
16/1 (Circulatory Lane 1)	Infinite Saturation Flow						Inf	Inf
16/2 (Circulatory Lane 2)	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'WD PM Mit' (FG4: 'WD PM Mit', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	57	453	132	642
	B	53	0	281	304	638
	C	599	303	0	787	1689
	D	196	424	782	0	1402
	Tot.	848	784	1516	1223	4371

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: WD PM Mit
Junction: A611 / B6009	
1/1	319
1/2	323
2/1	318
2/2	320
3/1	845
3/2	844
4/1	665
4/2	737
5/1	546
5/2	302
6/1	391
6/2	393
7/1	762
7/2	754
8/1	611
8/2	612
9/1	774
9/2	735
10/1	1093
10/2	1058
11/1	684
11/2	683
12/1	1002
12/2	1003
13/1	436
13/2	53
14/1	1281
14/2	897
15/1	474
15/2	481
16/1	1139
16/2	1218

Full Input Data And Results

Lane Saturation Flows

Junction: A611 / B6009								
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 (A611 N)	3.25	0.00	Y	Arm 10 Ahead	Inf	100.0 %	1940	1940
1/2 (A611 N)	3.25	0.00	Y	Arm 10 Ahead	Inf	100.0 %	1940	1940
2/1 (B6009 N)	3.25	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1940	1940
2/2 (B6009 N)	3.25	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1940	1940
3/1 (A611 S)	3.25	0.00	Y	Arm 14 Ahead	Inf	100.0 %	1940	1940
3/2 (A611 S)	3.25	0.00	Y	Arm 14 Ahead	Inf	100.0 %	1940	1940
4/1 (B6009 S)	3.25	0.00	Y	Arm 16 Ahead	Inf	100.0 %	1940	1940
4/2 (B6009 S)	3.25	0.00	Y	Arm 16 Ahead	Inf	100.0 %	1940	1940
5/1 (A611 N Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A611 N Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (B6009 N Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (B6009 N Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (A611 S Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (A611 S Lane 2)	Infinite Saturation Flow						Inf	Inf
8/1 (B6009 S Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (B6009 S Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (Circulatory)	3.25	0.00	Y	Arm 10 Right	Inf	100.0 %	1940	1940
9/2 (Circulatory)	3.25	0.00	Y	Arm 10 Right	Inf	100.0 %	1940	1940
10/1 (Circulatory Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (Circulatory Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (Circulatory)	3.25	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1940	1940
11/2 (Circulatory)	3.25	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1940	1940
12/1 (Circulatory Lane 1)	Infinite Saturation Flow						Inf	Inf

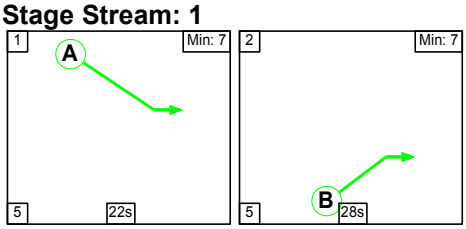
Full Input Data And Results

12/2 (Circulatory Lane 2)	Infinite Saturation Flow						Inf	Inf
13/1 (Circulatory)	3.25	0.00	Y	Arm 14 Right	Inf	100.0 %	1940	1940
13/2 (Circulatory)	3.25	0.00	Y	Arm 14 Right	Inf	100.0 %	1940	1940
14/1 (Circulatory Lane 1)	Infinite Saturation Flow						Inf	Inf
14/2 (Circulatory Lane 2)	Infinite Saturation Flow						Inf	Inf
15/1 (Circulatory)	3.25	0.00	Y	Arm 16 Right	Inf	100.0 %	1940	1940
15/2 (Circulatory)	3.25	0.00	Y	Arm 16 Right	Inf	100.0 %	1940	1940
16/1 (Circulatory Lane 1)	Infinite Saturation Flow						Inf	Inf
16/2 (Circulatory Lane 2)	Infinite Saturation Flow						Inf	Inf

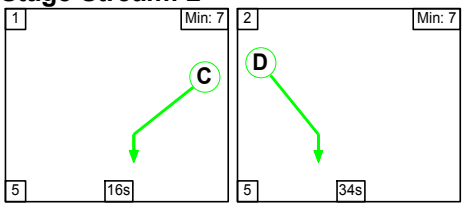
Scenario 1: 'WD AM Mit' (FG3: 'WD AM Mit', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

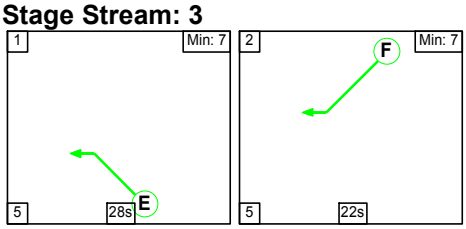
Stage Stream: 1



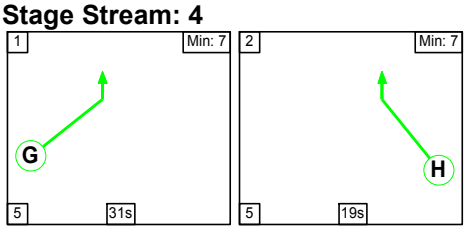
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Full Input Data And Results

Stage Timings

Stage Stream: 1

Stage	1	2
Duration	22	28
Change Point	0	27

Stage Stream: 2

Stage	1	2
Duration	16	34
Change Point	28	49

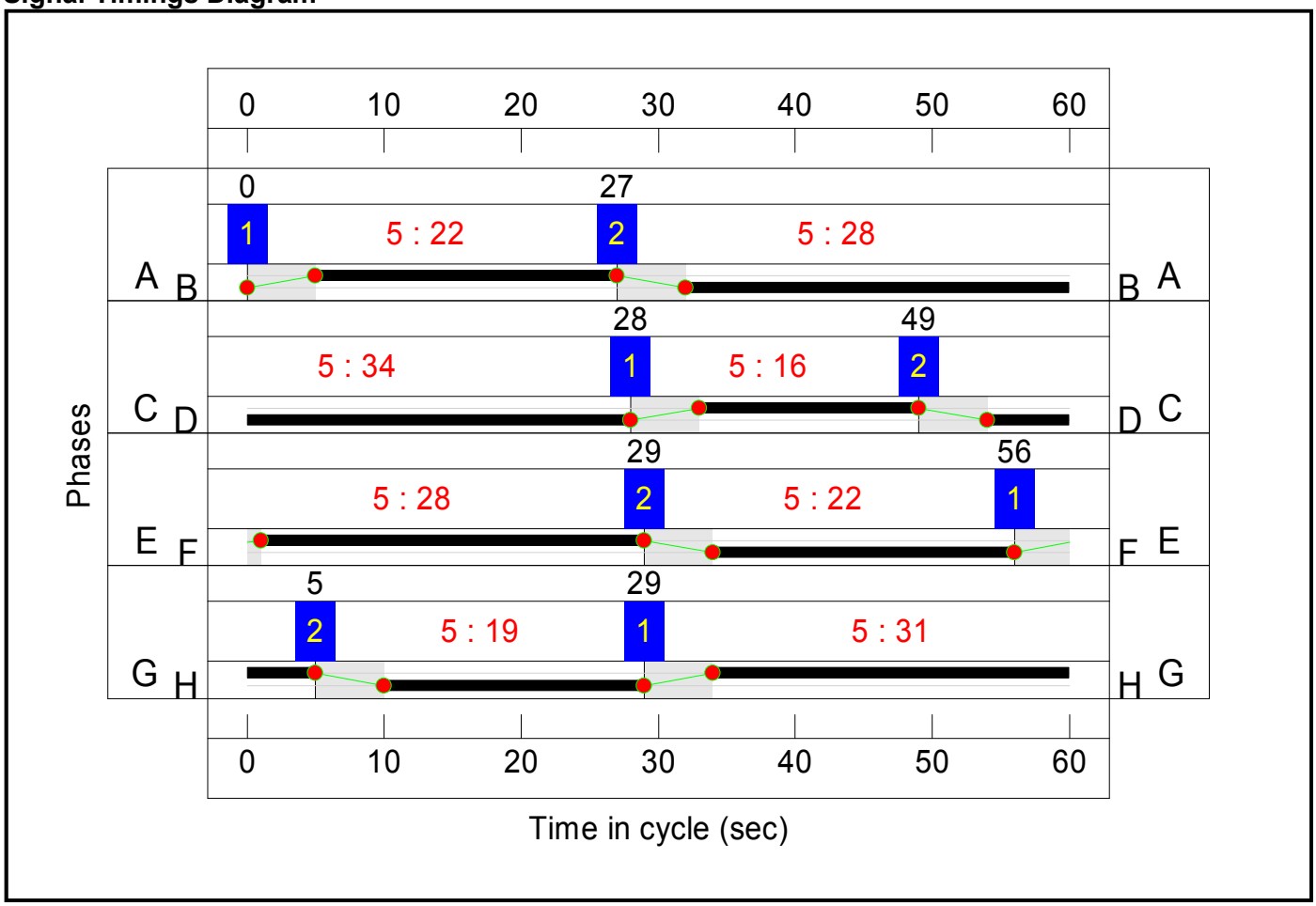
Stage Stream: 3

Stage	1	2
Duration	28	22
Change Point	56	29

Stage Stream: 4

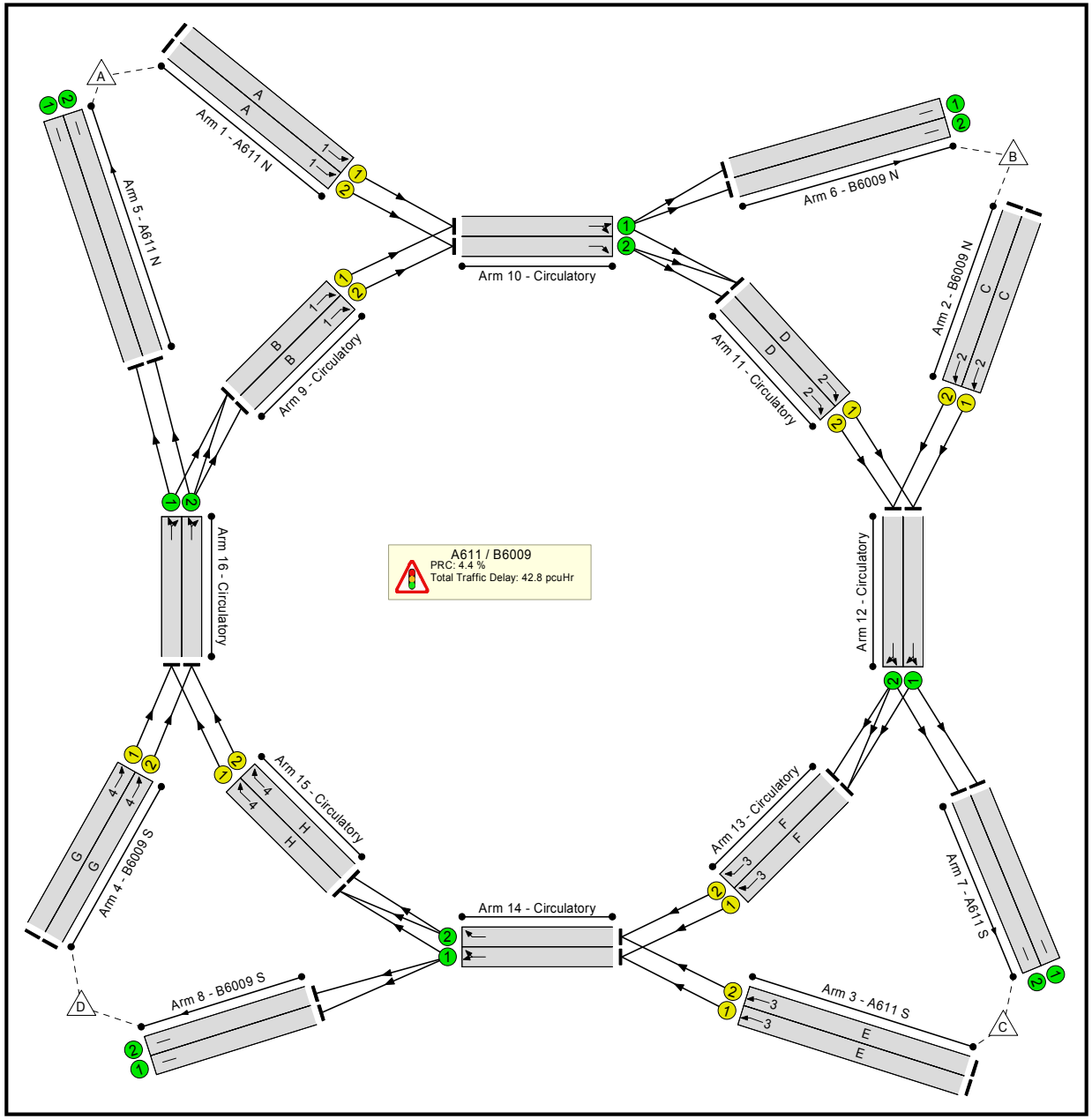
Stage	1	2
Duration	31	19
Change Point	29	5

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**86.2%**
A611 / B6009	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**86.2%**
1/1	A611 N Ahead	U	1	N/A	A		1	22	-	493	1940	744	66.3%
1/2	A611 N Ahead	U	1	N/A	A		1	22	-	497	1940	744	66.8%
2/1	B6009 N Ahead	U	2	N/A	C		1	16	-	378	1940	550	68.8%
2/2	B6009 N Ahead	U	2	N/A	C		1	16	-	378	1940	550	68.8%
3/1	A611 S Ahead	U	3	N/A	E		1	28	-	791	1940	938	84.4%
3/2	A611 S Ahead	U	3	N/A	E		1	28	-	675	1940	938	72.0%
4/1	B6009 S Ahead	U	4	N/A	G		1	31	-	534	1940	1035	51.6%
4/2	B6009 S Ahead	U	4	N/A	G		1	31	-	676	1940	1035	65.3%
5/1	A611 N	U	N/A	N/A	-		-	-	-	322	Inf	Inf	0.0%
5/2	A611 N	U	N/A	N/A	-		-	-	-	268	Inf	Inf	0.0%
6/1	B6009 N	U	N/A	N/A	-		-	-	-	373	Inf	Inf	0.0%
6/2	B6009 N	U	N/A	N/A	-		-	-	-	372	Inf	Inf	0.0%
7/1	A611 S	U	N/A	N/A	-		-	-	-	895	Inf	Inf	0.0%
7/2	A611 S	U	N/A	N/A	-		-	-	-	770	Inf	Inf	0.0%
8/1	B6009 S	U	N/A	N/A	-		-	-	-	711	Inf	Inf	0.0%
8/2	B6009 S	U	N/A	N/A	-		-	-	-	711	Inf	Inf	0.0%
9/1	Circulatory Right	U	1	N/A	B		1	28	-	666	1940	938	71.0%
9/2	Circulatory Right	U	1	N/A	B		1	28	-	676	1940	938	72.1%
10/1	Circulatory Ahead Right	U	N/A	N/A	-		-	-	-	1159	Inf	Inf	0.0%
10/2	Circulatory Right	U	N/A	N/A	-		-	-	-	1173	Inf	Inf	0.0%

Full Input Data And Results

11/1	Circulatory Ahead	U	2	N/A	D		1	34	-	794	1940	1132	70.2%
11/2	Circulatory Ahead	U	2	N/A	D		1	34	-	793	1940	1132	70.1%
12/1	Circulatory Ahead Right	U	N/A	N/A	-		-	-	-	1172	Inf	Inf	0.0%
12/2	Circulatory Ahead Right	U	N/A	N/A	-		-	-	-	1171	Inf	Inf	0.0%
13/1	Circulatory Right	U	3	N/A	F		1	22	-	641	1940	744	86.2%
13/2	Circulatory Right	U	3	N/A	F		1	22	-	37	1940	744	5.0%
14/1	Circulatory Ahead Ahead2	U	N/A	N/A	-		-	-	-	1432	Inf	Inf	0.0%
14/2	Circulatory Ahead	U	N/A	N/A	-		-	-	-	712	Inf	Inf	0.0%
15/1	Circulatory Right	U	4	N/A	H		1	19	-	356	1940	647	55.1%
15/2	Circulatory Right	U	4	N/A	H		1	19	-	366	1940	647	56.6%
16/1	Circulatory Ahead Right	U	N/A	N/A	-		-	-	-	890	Inf	Inf	0.0%
16/2	Circulatory Ahead Right	U	N/A	N/A	-		-	-	-	1042	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	**-**	**-**	**0**	**0**	**0**	**24.2**	**18.6**	**0.0**	**42.8**	**-**	**-**	**-**	**-**
A611 / B6009	**-**	**-**	**0**	**0**	**0**	**24.2**	**18.6**	**0.0**	**42.8**	**-**	**-**	**-**	**-**
1/1	493	493	-	-	-	2.1	1.0	-	3.1	22.4	6.7	1.0	7.7
1/2	497	497	-	-	-	2.1	1.0	-	3.1	22.6	6.8	1.0	7.8
2/1	378	378	-	-	-	2.0	1.1	-	3.1	29.5	5.6	1.1	6.7
2/2	378	378	-	-	-	2.0	1.1	-	3.1	29.5	5.6	1.1	6.7
3/1	791	791	-	-	-	3.0	2.6	-	5.6	25.4	11.4	2.6	14.0
3/2	675	675	-	-	-	2.3	1.3	-	3.6	19.1	8.8	1.3	10.1
4/1	534	534	-	-	-	1.3	0.5	-	1.9	12.6	5.6	0.5	6.2
4/2	676	676	-	-	-	1.9	0.9	-	2.8	15.0	7.9	0.9	8.8
5/1	322	322	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	268	268	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	373	373	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	372	372	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	895	895	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	770	770	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	711	711	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	711	711	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	666	666	-	-	-	1.5	1.2	-	2.7	14.6	6.3	1.2	7.5
9/2	676	676	-	-	-	1.4	1.3	-	2.7	14.2	3.2	1.3	4.5
10/1	1159	1159	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	1173	1173	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	794	794	-	-	-	1.0	1.2	-	2.2	9.8	5.1	1.2	6.3
11/2	793	793	-	-	-	1.0	1.2	-	2.2	9.8	5.5	1.2	6.7
12/1	1172	1172	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	1171	1171	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

13/1	641	641	-	-	-	1.1	3.0	-	4.0	22.6	4.5	3.0	7.4
13/2	37	37	-	-	-	0.0	0.0	-	0.1	5.5	0.1	0.0	0.1
14/1	1432	1432	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/2	712	712	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
15/1	356	356	-	-	-	0.8	0.6	-	1.4	14.2	2.4	0.6	3.0
15/2	366	366	-	-	-	0.7	0.6	-	1.4	13.6	1.8	0.6	2.4
16/1	890	890	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
16/2	1042	1042	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

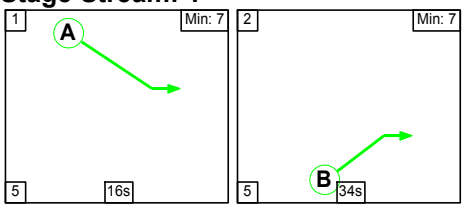
C1	Stream: 1	PRC for Signalled Lanes (%):	24.8	Total Delay for Signalled Lanes (pcuHr):	11.56	Cycle Time (s):	60
C1	Stream: 2	PRC for Signalled Lanes (%):	28.3	Total Delay for Signalled Lanes (pcuHr):	10.53	Cycle Time (s):	60
C1	Stream: 3	PRC for Signalled Lanes (%):	4.4	Total Delay for Signalled Lanes (pcuHr):	13.24	Cycle Time (s):	60
C1	Stream: 4	PRC for Signalled Lanes (%):	37.8	Total Delay for Signalled Lanes (pcuHr):	7.47	Cycle Time (s):	60
		PRC Over All Lanes (%):	4.4	Total Delay Over All Lanes(pcuHr):	42.79		

Full Input Data And Results

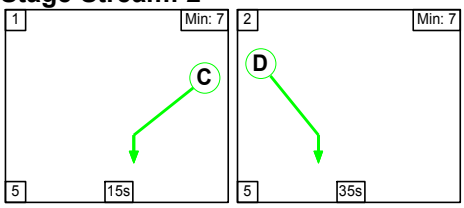
Scenario 2: 'WD PM Mit' (FG4: 'WD PM Mit', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

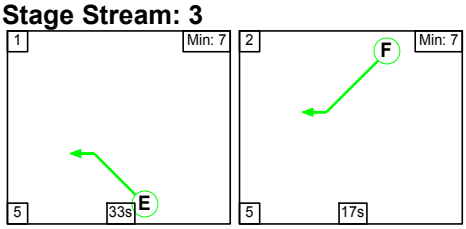
Stage Stream: 1



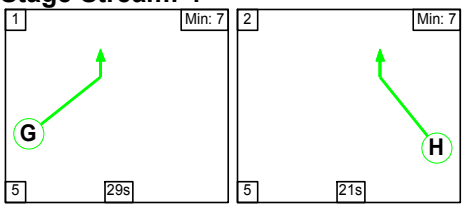
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	16	34
Change Point	0	21

Stage Stream: 2

Stage	1	2
Duration	15	35
Change Point	2	22

Stage Stream: 3

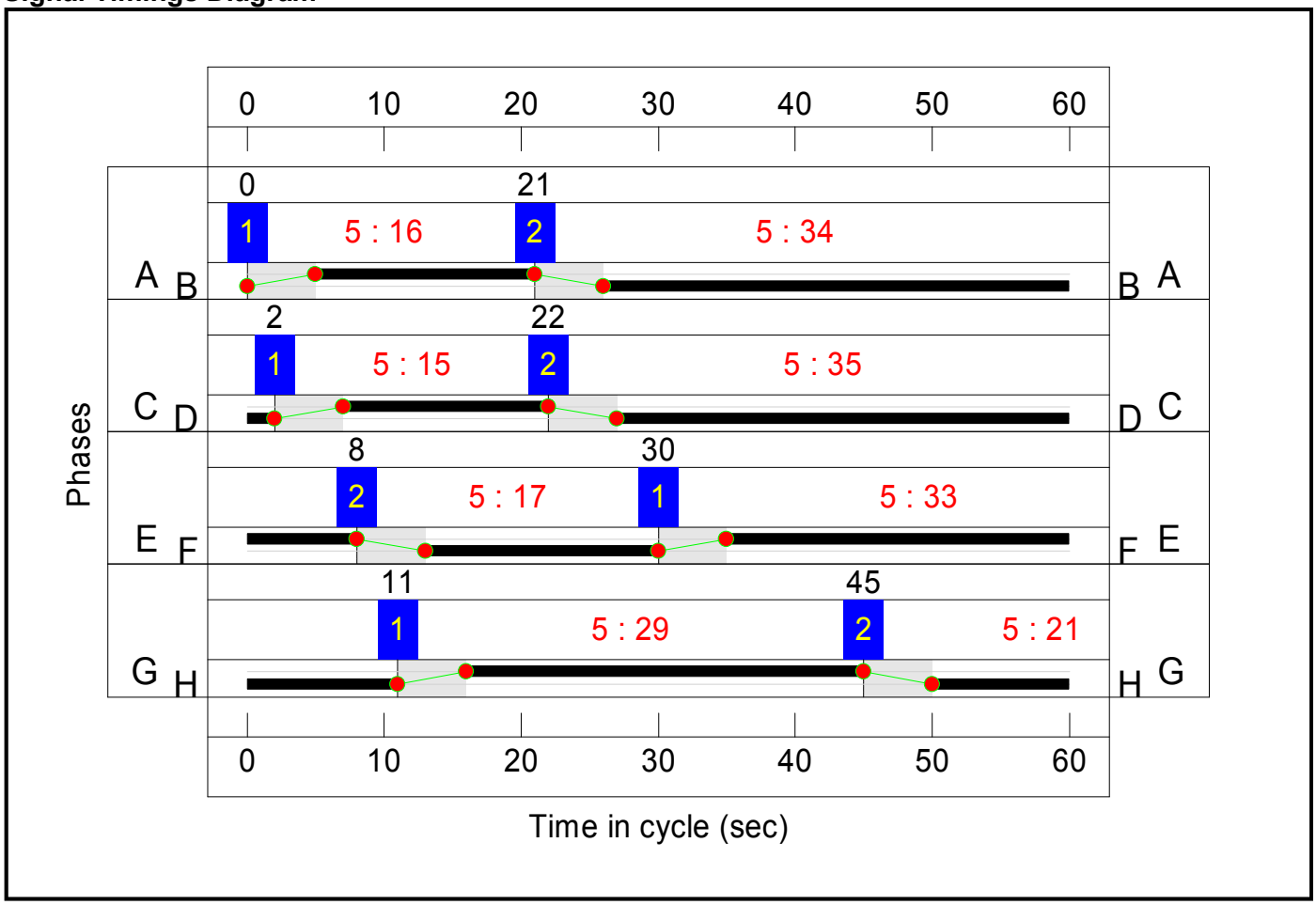
Stage	1	2
Duration	33	17
Change Point	30	8

Stage Stream: 4

Stage	1	2
Duration	29	21
Change Point	11	45

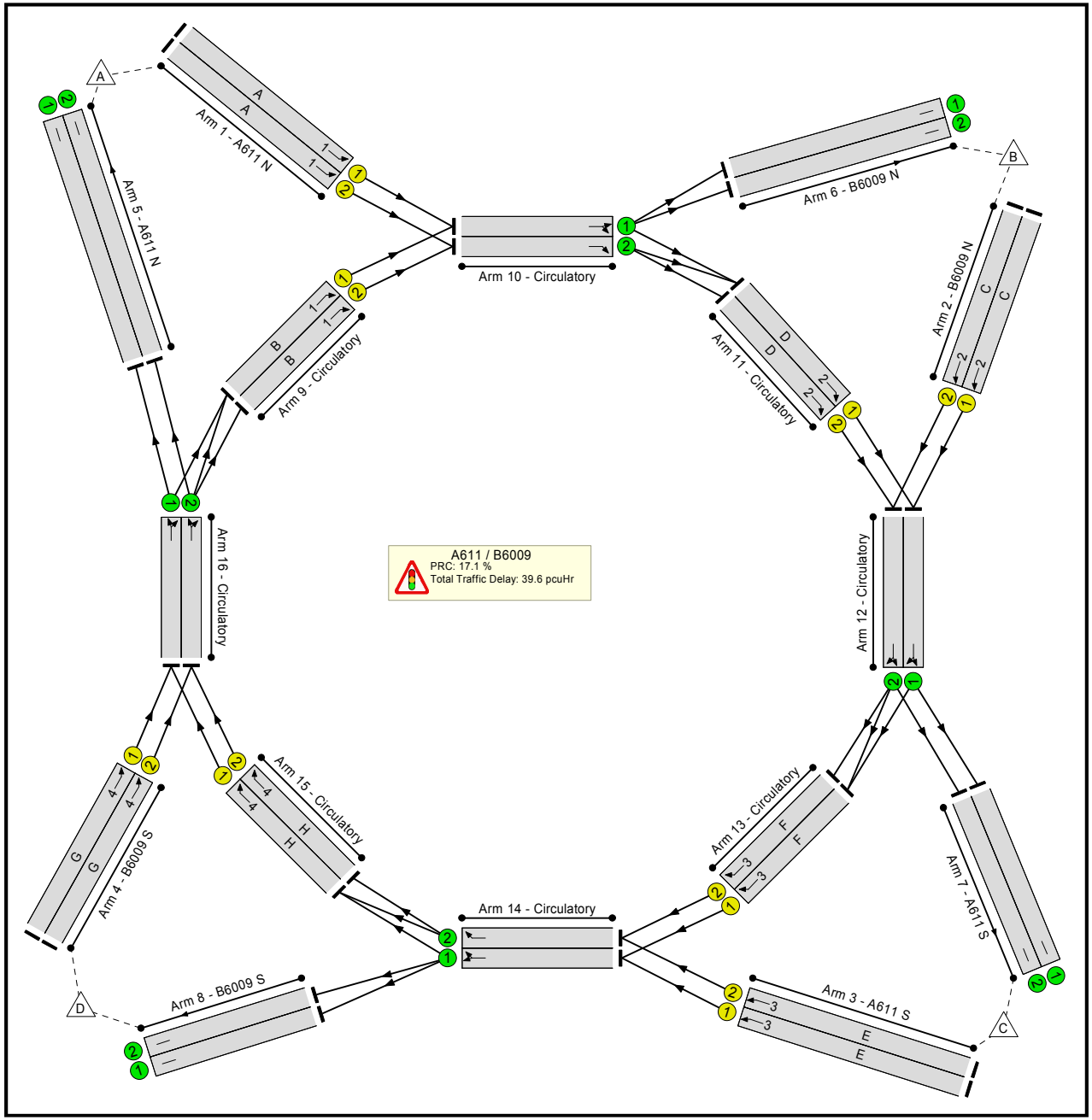
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**76.9%**
A611 / B6009	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**76.9%**
1/1	A611 N Ahead	U	1	N/A	A		1	16	-	319	1940	550	58.0%
1/2	A611 N Ahead	U	1	N/A	A		1	16	-	323	1940	550	58.8%
2/1	B6009 N Ahead	U	2	N/A	C		1	15	-	318	1940	517	61.5%
2/2	B6009 N Ahead	U	2	N/A	C		1	15	-	320	1940	517	61.9%
3/1	A611 S Ahead	U	3	N/A	E		1	33	-	845	1940	1099	76.9%
3/2	A611 S Ahead	U	3	N/A	E		1	33	-	844	1940	1099	76.8%
4/1	B6009 S Ahead	U	4	N/A	G		1	29	-	665	1940	970	68.6%
4/2	B6009 S Ahead	U	4	N/A	G		1	29	-	737	1940	970	76.0%
5/1	A611 N	U	N/A	N/A	-		-	-	-	546	Inf	Inf	0.0%
5/2	A611 N	U	N/A	N/A	-		-	-	-	302	Inf	Inf	0.0%
6/1	B6009 N	U	N/A	N/A	-		-	-	-	391	Inf	Inf	0.0%
6/2	B6009 N	U	N/A	N/A	-		-	-	-	393	Inf	Inf	0.0%
7/1	A611 S	U	N/A	N/A	-		-	-	-	762	Inf	Inf	0.0%
7/2	A611 S	U	N/A	N/A	-		-	-	-	754	Inf	Inf	0.0%
8/1	B6009 S	U	N/A	N/A	-		-	-	-	611	Inf	Inf	0.0%
8/2	B6009 S	U	N/A	N/A	-		-	-	-	612	Inf	Inf	0.0%
9/1	Circulatory Right	U	1	N/A	B		1	34	-	774	1940	1132	68.4%
9/2	Circulatory Right	U	1	N/A	B		1	34	-	735	1940	1132	64.9%
10/1	Circulatory Ahead Right	U	N/A	N/A	-		-	-	-	1093	Inf	Inf	0.0%
10/2	Circulatory Right	U	N/A	N/A	-		-	-	-	1058	Inf	Inf	0.0%

Full Input Data And Results

11/1	Circulatory Ahead	U	2	N/A	D		1	35	-	684	1940	1164	58.8%
11/2	Circulatory Ahead	U	2	N/A	D		1	35	-	683	1940	1164	58.7%
12/1	Circulatory Ahead Right	U	N/A	N/A	-		-	-	-	1002	Inf	Inf	0.0%
12/2	Circulatory Ahead Right	U	N/A	N/A	-		-	-	-	1003	Inf	Inf	0.0%
13/1	Circulatory Right	U	3	N/A	F		1	17	-	436	1940	582	74.9%
13/2	Circulatory Right	U	3	N/A	F		1	17	-	53	1940	582	9.1%
14/1	Circulatory Ahead Ahead2	U	N/A	N/A	-		-	-	-	1281	Inf	Inf	0.0%
14/2	Circulatory Ahead	U	N/A	N/A	-		-	-	-	897	Inf	Inf	0.0%
15/1	Circulatory Right	U	4	N/A	H		1	21	-	474	1940	711	66.6%
15/2	Circulatory Right	U	4	N/A	H		1	21	-	481	1940	711	67.6%
16/1	Circulatory Ahead Right	U	N/A	N/A	-		-	-	-	1139	Inf	Inf	0.0%
16/2	Circulatory Ahead Right	U	N/A	N/A	-		-	-	-	1218	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	**-**	**-**	**0**	**0**	**0**	**23.8**	**15.9**	**0.0**	**39.6**	**-**	**-**	**-**	**-**
A611 / B6009	**-**	**-**	**0**	**0**	**0**	**23.8**	**15.9**	**0.0**	**39.6**	**-**	**-**	**-**	**-**
1/1	319	319	-	-	-	1.6	0.7	-	2.3	26.2	4.5	0.7	5.2
1/2	323	323	-	-	-	1.7	0.7	-	2.4	26.4	4.6	0.7	5.3
2/1	318	318	-	-	-	1.7	0.8	-	2.5	28.3	4.6	0.8	5.4
2/2	320	320	-	-	-	1.7	0.8	-	2.5	28.4	4.6	0.8	5.4
3/1	845	845	-	-	-	2.3	1.6	-	4.0	17.0	10.8	1.6	12.4
3/2	844	844	-	-	-	2.3	1.6	-	4.0	16.9	10.8	1.6	12.4
4/1	665	665	-	-	-	2.1	1.1	-	3.2	17.3	8.3	1.1	9.4
4/2	737	737	-	-	-	2.5	1.6	-	4.0	19.7	9.8	1.6	11.4
5/1	546	546	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	302	302	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	391	391	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	393	393	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	762	762	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	754	754	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	611	611	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	612	612	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	774	774	-	-	-	2.2	1.1	-	3.3	15.3	11.1	1.1	12.2
9/2	735	735	-	-	-	0.0	0.9	-	0.9	4.6	0.6	0.9	1.5
10/1	1093	1093	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	1058	1058	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	684	684	-	-	-	1.2	0.7	-	1.9	10.2	6.3	0.7	7.0
11/2	683	683	-	-	-	1.0	0.7	-	1.7	8.8	5.0	0.7	5.7
12/1	1002	1002	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	1003	1003	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

13/1	436	436	-	-	-	1.4	1.5	-	2.9	23.6	3.8	1.5	5.3
13/2	53	53	-	-	-	0.0	0.1	-	0.1	5.7	0.1	0.1	0.1
14/1	1281	1281	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/2	897	897	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
15/1	474	474	-	-	-	1.0	1.0	-	2.0	15.1	5.5	1.0	6.5
15/2	481	481	-	-	-	0.9	1.0	-	2.0	14.9	5.5	1.0	6.6
16/1	1139	1139	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
16/2	1218	1218	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

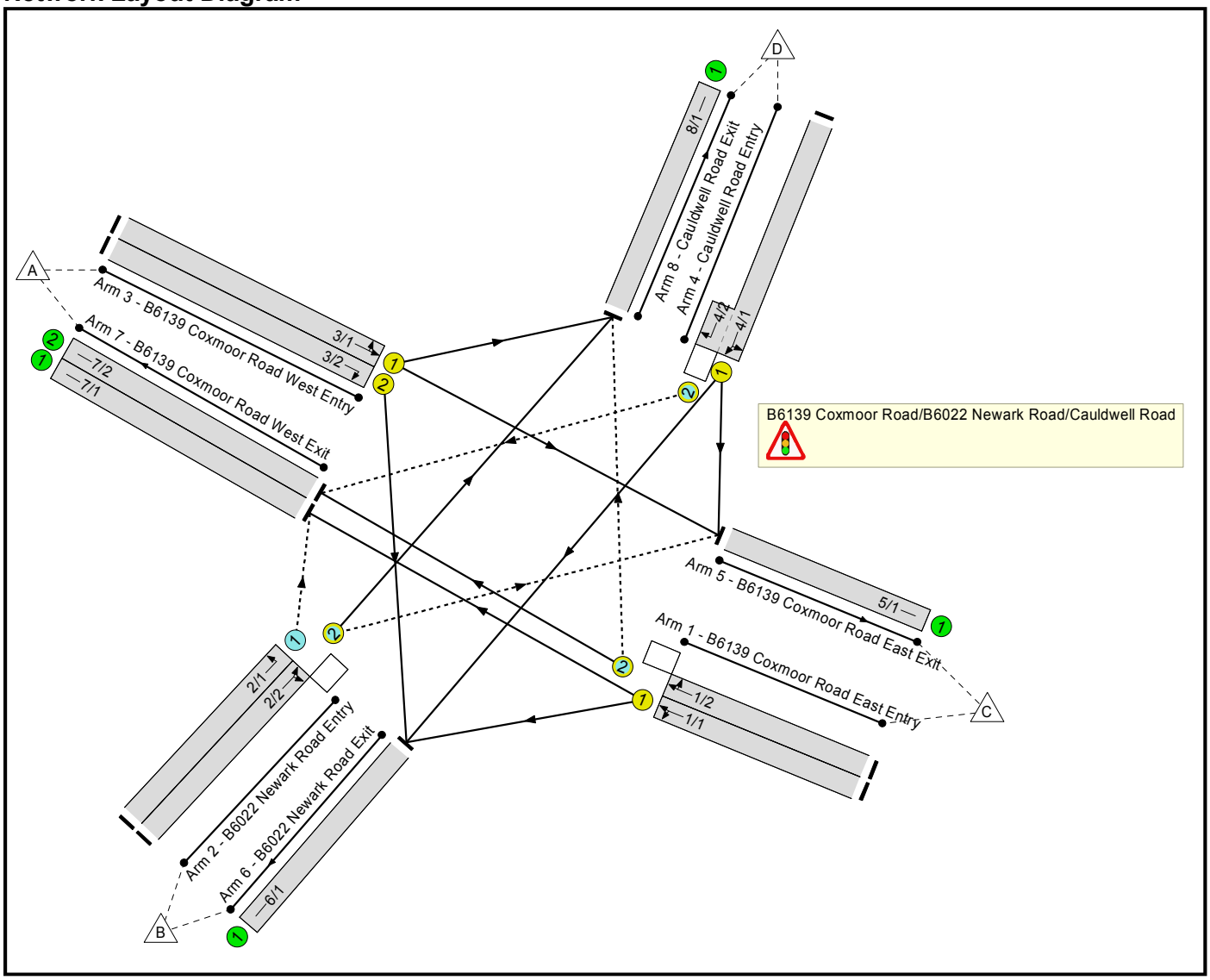
C1	Stream: 1	PRC for Signalled Lanes (%):	31.6	Total Delay for Signalled Lanes (pcuHr):	8.91	Cycle Time (s):	60
C1	Stream: 2	PRC for Signalled Lanes (%):	45.5	Total Delay for Signalled Lanes (pcuHr):	8.64	Cycle Time (s):	60
C1	Stream: 3	PRC for Signalled Lanes (%):	17.1	Total Delay for Signalled Lanes (pcuHr):	10.90	Cycle Time (s):	60
C1	Stream: 4	PRC for Signalled Lanes (%):	18.5	Total Delay for Signalled Lanes (pcuHr):	11.20	Cycle Time (s):	60
		PRC Over All Lanes (%):	17.1	Total Delay Over All Lanes(pcuHr):	39.65		

Full Input Data And Results

User and Project Details

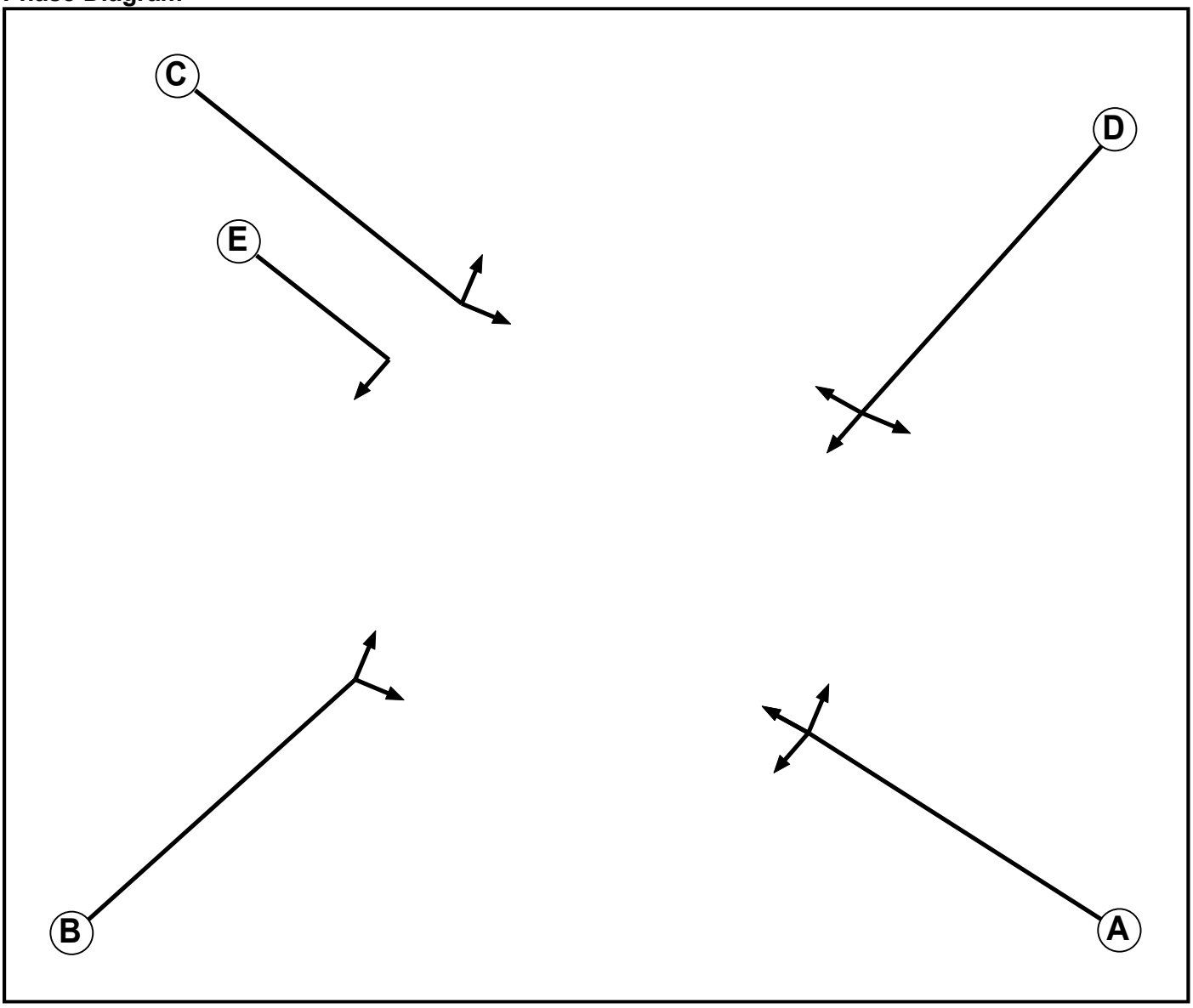
Project:	
Title:	
Location:	
File name:	2016-08-17 J27 JMP Mitigation.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

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

Full Input Data And Results

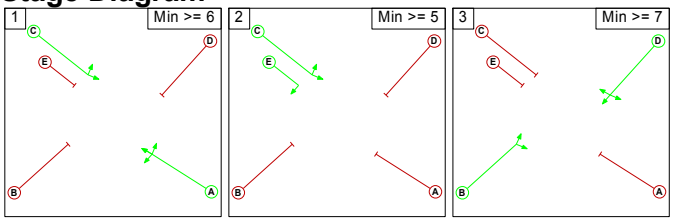
Phase Intergreens Matrix

Terminating Phase	Starting Phase					
		A	B	C	D	E
	A		8	-	8	6
	B	7		8	-	6
	C	-	8		8	-
	D	7	-	8		-
	E	6	6	-	-	

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

From Stage	To Stage		
	1	2	3
1		6	8
2	6		8
3	8	8	

Full Input Data And Results

Give-Way Lane Input Data

Junction: B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road

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 (B6139 Coxmoor Road East Entry)	8/1 (Right)	1439	0	3/1	1.09	All	2.00	2.00	0.50	2	2.00
2/1 (B6022 Newark Road Entry)	7/1 (Left)	1439	0	8/1	1.09	All	-	-	-	-	-
				1/1	1.09	To 7/1 (Ahead)					
2/2 (B6022 Newark Road Entry)	5/1 (Right)	1439	0	4/1	1.09	All	2.00	2.00	0.50	2	2.00
4/2 (Cauldwell Road Entry)	7/2 (Right)	1439	0	2/2	1.09	To 8/1 (Ahead)	2.00	-	0.50	2	2.00

Full Input Data And Results

Lane Input Data

Junction: B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road												
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 (B6139 Coxmoor Road East Entry)	U	A	2	3	60.0	User	1800	-	-	-	-	-
1/2 (B6139 Coxmoor Road East Entry)	O	A	2	3	60.0	User	1800	-	-	-	-	-
2/1 (B6022 Newark Road Entry)	O		2	3	60.0	User	1800	-	-	-	-	-
2/2 (B6022 Newark Road Entry)	O	B	2	3	60.0	User	1800	-	-	-	-	-
3/1 (B6139 Coxmoor Road West Entry)	U	C	2	3	60.0	User	1800	-	-	-	-	-
3/2 (B6139 Coxmoor Road West Entry)	U	E	2	3	60.0	User	1800	-	-	-	-	-
4/1 (Cauldwell Road Entry)	U	D	2	3	60.0	User	1800	-	-	-	-	-
4/2 (Cauldwell Road Entry)	O	D	2	3	3.0	User	1800	-	-	-	-	-
5/1 (B6139 Coxmoor Road East Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (B6022 Newark Road Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (B6139 Coxmoor Road West Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/2 (B6139 Coxmoor Road West Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (Cauldwell Road Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'Reference Case AM'	08:00	09:00	01:00	
2: 'Development Case AM'	08:00	09:00	01:00	
3: 'Reference Case PM'	17:00	18:00	01:00	
4: 'Development Case PM'	17:00	18:00	01:00	

Scenario 1: 'AM Ref' (FG1: 'Reference Case AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	454	754	5	1213
	B	640	0	304	7	951
	C	814	228	0	4	1046
	D	8	9	1	0	18
	Tot.	1462	691	1059	16	3228

Traffic Lane Flows

Lane	Scenario 1: AM Ref
Junction: B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road	
1/1	523
1/2	523
2/1	640
2/2	311
3/1	759
3/2	454
4/1 (with short)	18(In) 10(Out)
4/2 (short)	8
5/1	1059
6/1	691
7/1	935
7/2	527
8/1	16

Full Input Data And Results

Lane Saturation Flows

Junction: B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road								
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 (B6139 Coxmoor Road East Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (B6139 Coxmoor Road East Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (B6022 Newark Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (B6022 Newark Road Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (B6139 Coxmoor Road West Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (B6139 Coxmoor Road West Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Cauldwell Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (Cauldwell Road Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (B6139 Coxmoor Road East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (B6022 Newark Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (B6139 Coxmoor Road West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (B6139 Coxmoor Road West Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
8/1 (Cauldwell Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'PM Ref' (FG3: 'Reference Case PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	449	759	6	1214
	B	645	0	299	11	955
	C	810	232	0	2	1044
	D	8	8	2	0	18
	Tot.	1463	689	1060	19	3231

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM Ref
Junction: B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road	
1/1	522
1/2	522
2/1	645
2/2	310
3/1	765
3/2	449
4/1 (with short)	18(In) 10(Out)
4/2 (short)	8
5/1	1060
6/1	689
7/1	935
7/2	528
8/1	19

Full Input Data And Results

Lane Saturation Flows

Junction: B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road								
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 (B6139 Coxmoor Road East Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (B6139 Coxmoor Road East Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (B6022 Newark Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (B6022 Newark Road Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (B6139 Coxmoor Road West Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (B6139 Coxmoor Road West Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Cauldwell Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (Cauldwell Road Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (B6139 Coxmoor Road East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (B6022 Newark Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (B6139 Coxmoor Road West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (B6139 Coxmoor Road West Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
8/1 (Cauldwell Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 3: 'AM Mit 2032' (FG2: 'Development Case AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	517	752	5	1274
	B	369	0	167	7	543
	C	886	271	0	4	1161
	D	8	9	1	0	18
	Tot.	1263	797	920	16	2996

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: AM Mit 2032
Junction: B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road	
1/1	581
1/2	580
2/1	369
2/2	174
3/1	757
3/2	517
4/1 (with short)	18(In) 10(Out)
4/2 (short)	8
5/1	920
6/1	797
7/1	679
7/2	584
8/1	16

Full Input Data And Results

Lane Saturation Flows

Junction: B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road								
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 (B6139 Coxmoor Road East Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (B6139 Coxmoor Road East Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (B6022 Newark Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (B6022 Newark Road Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (B6139 Coxmoor Road West Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (B6139 Coxmoor Road West Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Cauldwell Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (Cauldwell Road Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (B6139 Coxmoor Road East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (B6022 Newark Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (B6139 Coxmoor Road West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (B6139 Coxmoor Road West Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
8/1 (Cauldwell Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'PM mit 2032' (FG4: 'Development Case PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	480	761	6	1247
	B	673	0	390	11	1074
	C	796	304	0	2	1102
	D	8	8	2	0	18
	Tot.	1477	792	1153	19	3441

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: PM mit 2032
Junction: B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road	
1/1	551
1/2	551
2/1	673
2/2	401
3/1	767
3/2	480
4/1 (with short)	18(In) 10(Out)
4/2 (short)	8
5/1	1153
6/1	792
7/1	920
7/2	557
8/1	19

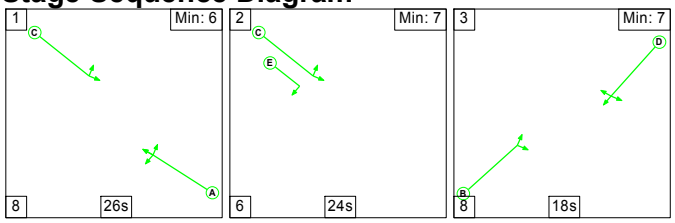
Full Input Data And Results

Lane Saturation Flows

Junction: B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road								
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 (B6139 Coxmoor Road East Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (B6139 Coxmoor Road East Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (B6022 Newark Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (B6022 Newark Road Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (B6139 Coxmoor Road West Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (B6139 Coxmoor Road West Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Cauldwell Road Entry Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (Cauldwell Road Entry Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1 (B6139 Coxmoor Road East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (B6022 Newark Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (B6139 Coxmoor Road West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (B6139 Coxmoor Road West Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
8/1 (Cauldwell Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'AM Ref' (FG1: 'Reference Case AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

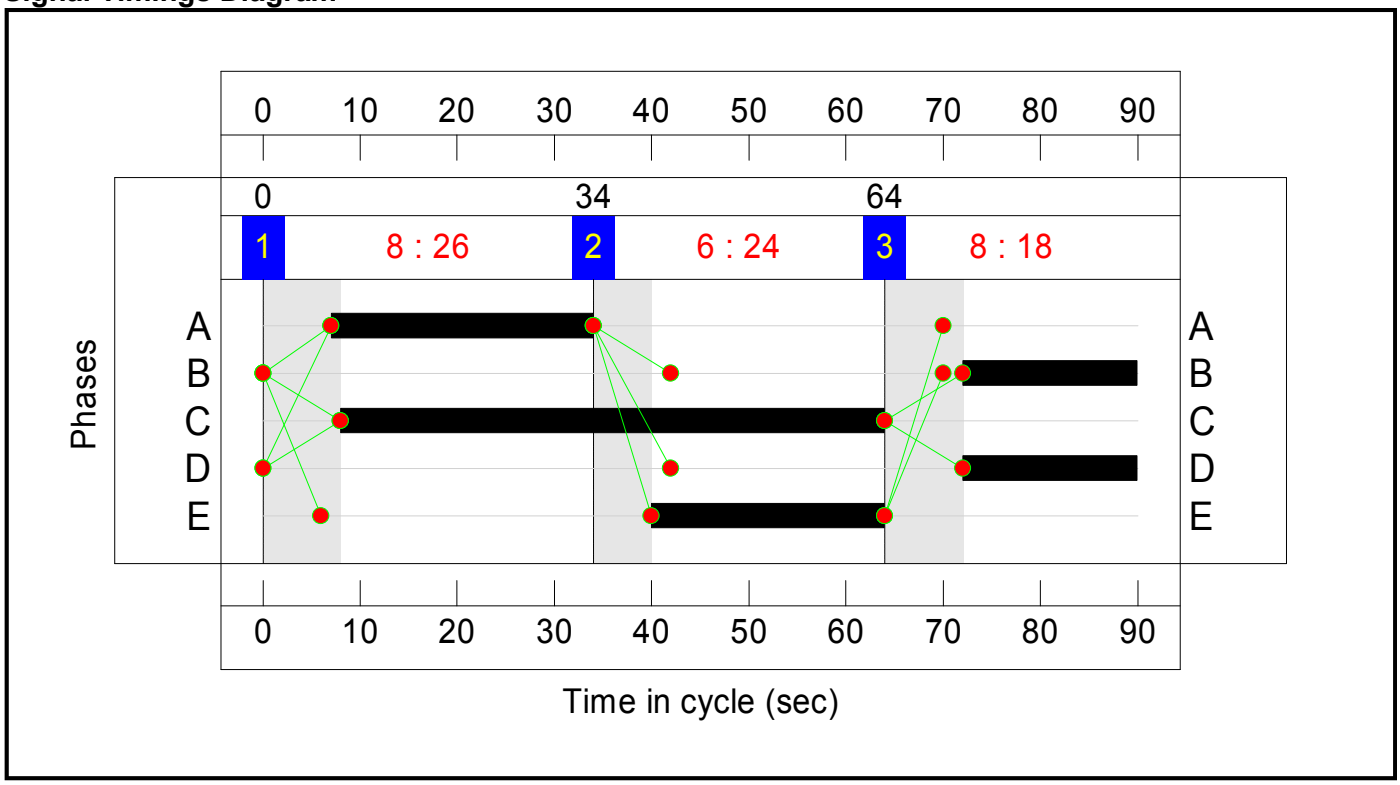


Stage Timings

Stage	1	2	3
Duration	26	24	18
Change Point	0	34	64

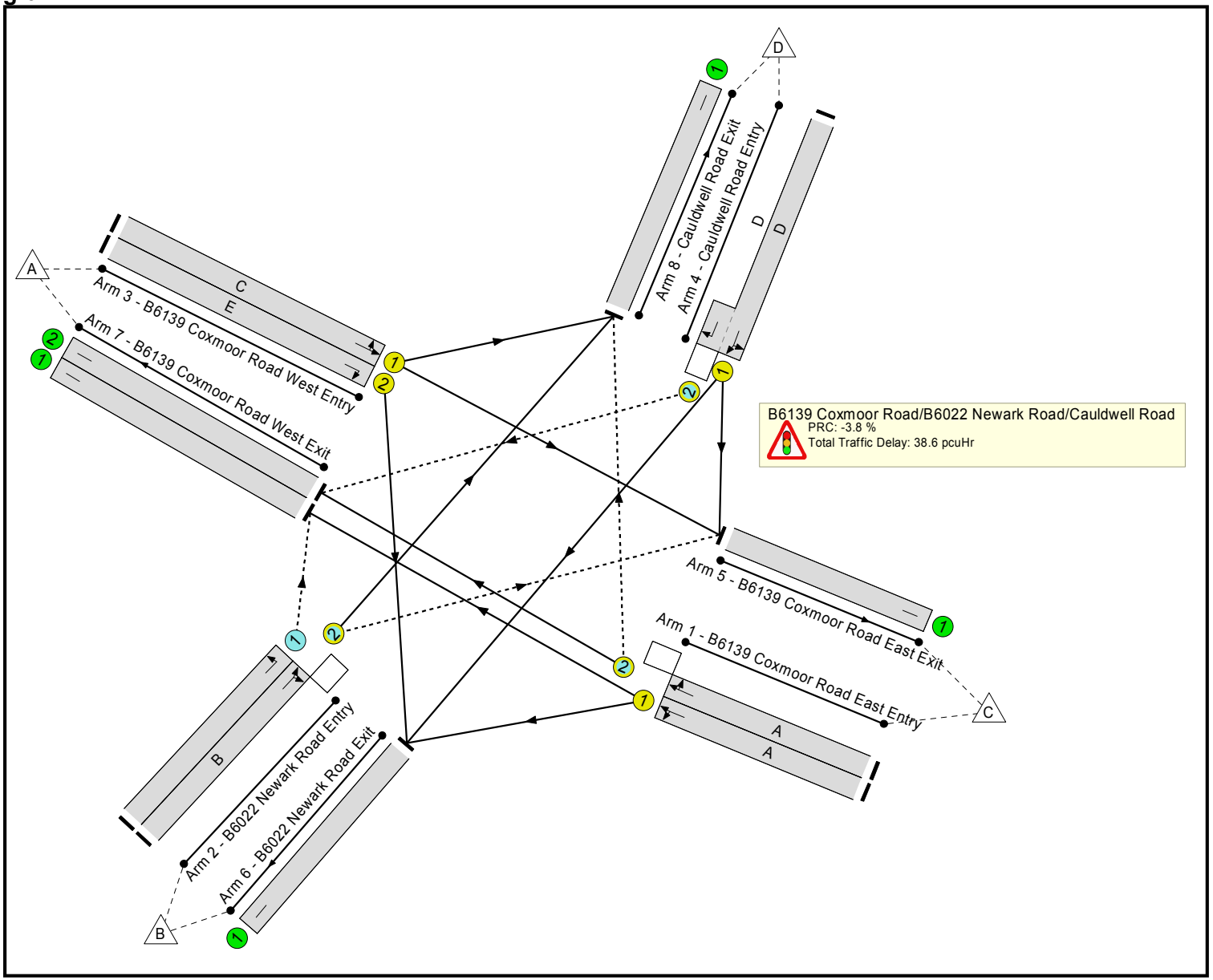
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**93.4%**
B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**93.4%**
1/1	B6139 Coxmoor Road East Entry Left Ahead	U	N/A	N/A	A		1	27	-	523	1800	560	93.4%
1/2	B6139 Coxmoor Road East Entry Ahead Right	O	N/A	N/A	A		1	27	-	523	1800	560	93.4%
2/1	B6022 Newark Road Entry Left	O	N/A	N/A	-		-	-	-	640	1800	1366	46.8%
2/2	B6022 Newark Road Entry Right Ahead	O	N/A	N/A	B		1	18	-	311	1800	349	89.2%
3/1	B6139 Coxmoor Road West Entry Ahead Left	U	N/A	N/A	C		1	56	-	759	1800	1140	66.6%
3/2	B6139 Coxmoor Road West Entry Right	U	N/A	N/A	E		1	24	-	454	1800	500	90.8%
4/1+4/2	Cauldwell Road Entry Left Ahead Right	U+O	N/A	N/A	D		1	18	-	18	1800:1800	264+212	3.8 : 3.8%
5/1	B6139 Coxmoor Road East Exit	U	N/A	N/A	-		-	-	-	1059	Inf	Inf	0.0%
6/1	B6022 Newark Road Exit	U	N/A	N/A	-		-	-	-	691	Inf	Inf	0.0%
7/1	B6139 Coxmoor Road West Exit	U	N/A	N/A	-		-	-	-	935	Inf	Inf	0.0%
7/2	B6139 Coxmoor Road West Exit	U	N/A	N/A	-		-	-	-	527	Inf	Inf	0.0%
8/1	Cauldwell Road Exit	U	N/A	N/A	-		-	-	-	16	Inf	Inf	0.0%

Full Input Data And Results

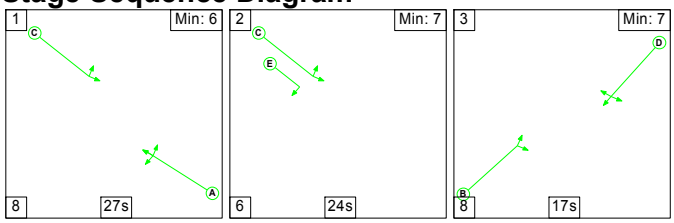
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**431**	**514**	**11**	**18.4**	**20.0**	**0.2**	**38.6**	**-**	**-**	**-**	**-**
B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road	**-**	**-**	**431**	**514**	**11**	**18.4**	**20.0**	**0.2**	**38.6**	**-**	**-**	**-**	**-**
1/1	523	523	-	-	-	4.4	5.5	-	9.8	67.7	12.6	5.5	18.1
1/2	523	523	4	0	0	4.4	5.5	0.0	9.8	67.8	12.6	5.5	18.1
2/1	640	640	126	514	0	0.4	0.4	-	0.9	4.8	5.9	0.4	6.3
2/2	311	311	293	0	11	2.9	3.5	0.2	6.6	76.4	7.5	3.5	11.0
3/1	759	759	-	-	-	2.2	1.0	-	3.2	15.2	12.0	1.0	13.0
3/2	454	454	-	-	-	4.0	4.2	-	8.1	64.5	10.8	4.2	15.0
4/1+4/2	18	18	8	0	0	0.1	0.0	0.0	0.2	32.3	0.2	0.0	0.2
5/1	1059	1059	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	691	691	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	935	935	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	527	527	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	16	16	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -3.8 Total Delay for Signalled Lanes (pcuHr): 37.77 Cycle Time (s): 90
PRC Over All Lanes (%): -3.8 Total Delay Over All Lanes(pcuHr): 38.63

Full Input Data And Results

Scenario 2: 'PM Ref' (FG3: 'Reference Case PM', Plan 1: 'Network Control Plan 1')

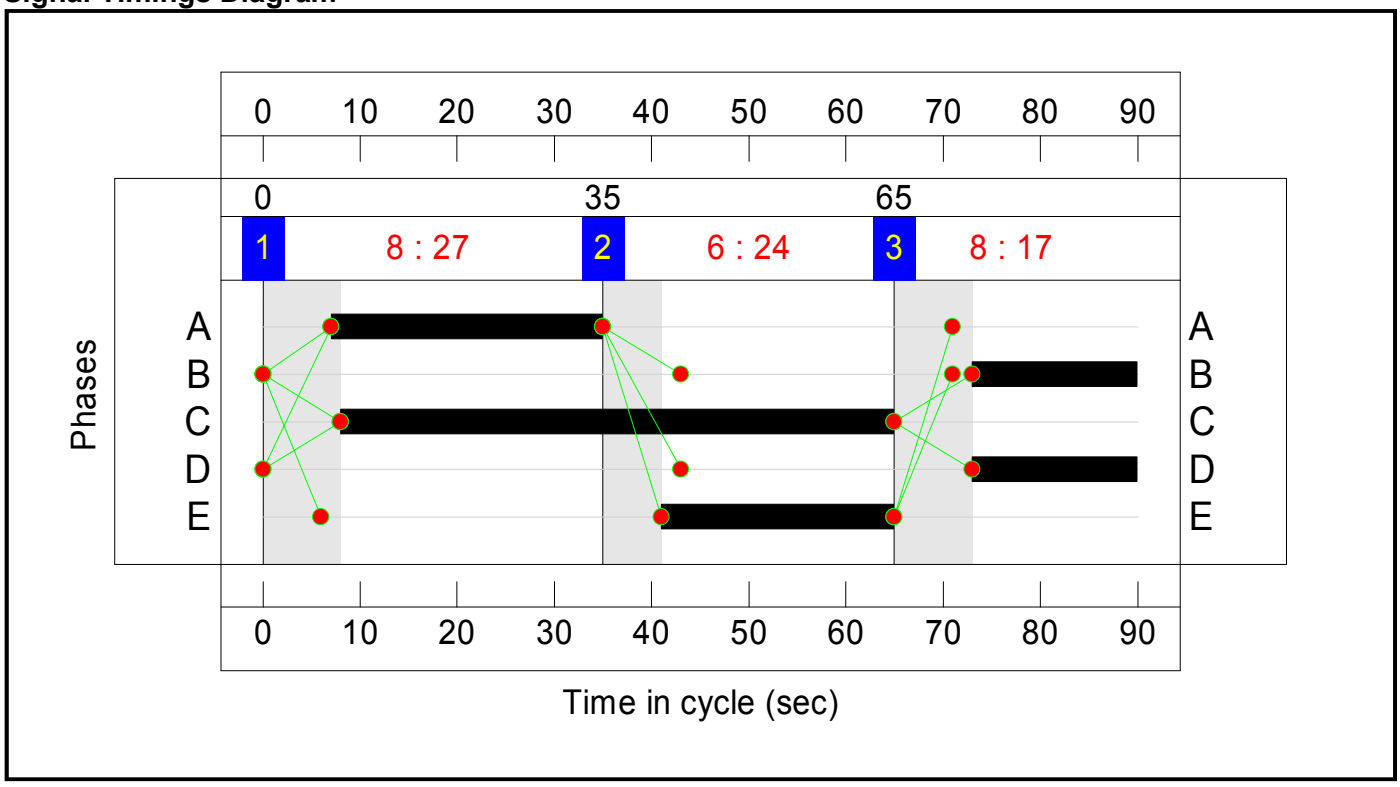
Stage Sequence Diagram



Stage Timings

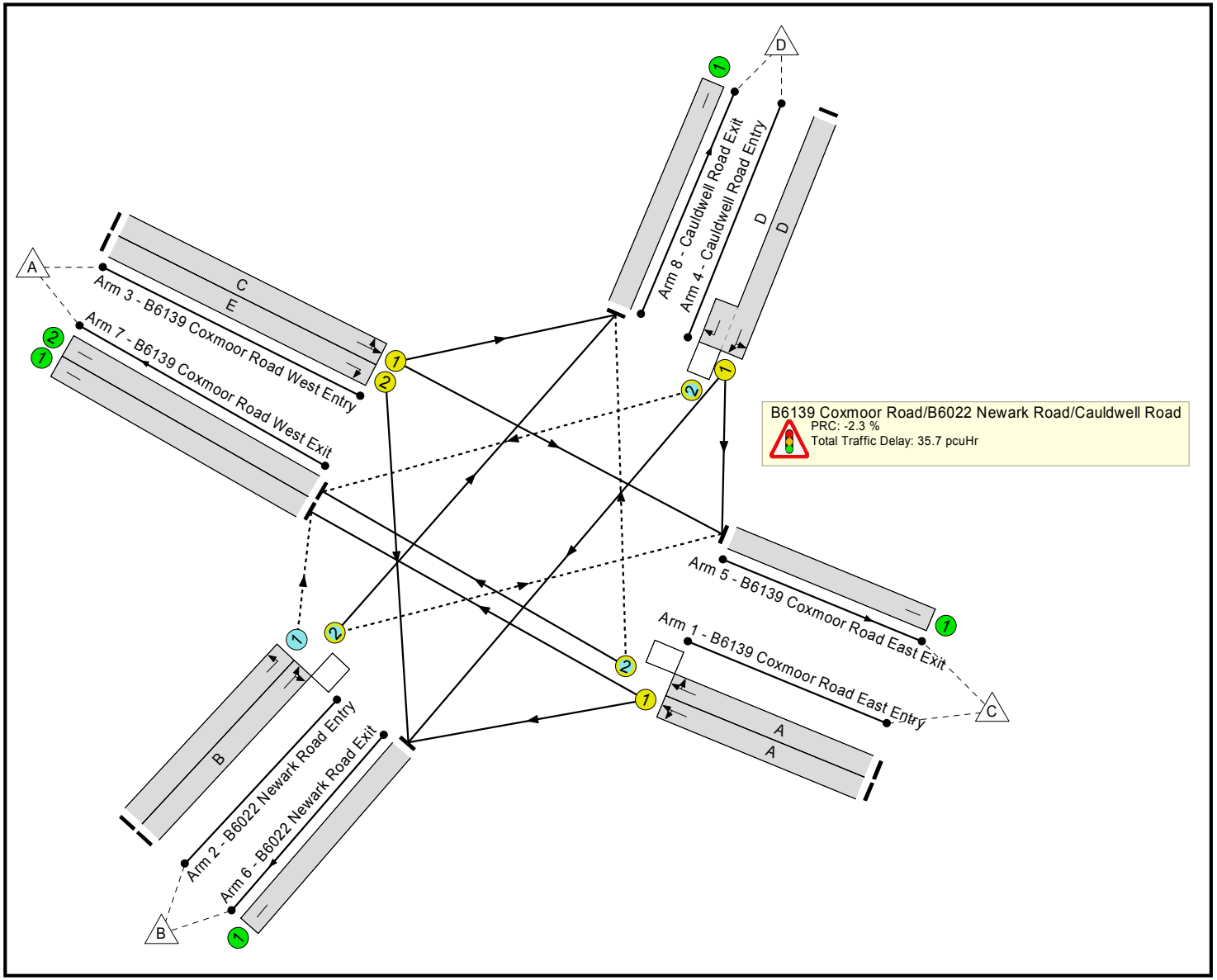
Stage	1	2	3
Duration	27	24	17
Change Point	0	35	65

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**92.1%**
B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**92.1%**
1/1	B6139 Coxmoor Road East Entry Left Ahead	U	N/A	N/A	A		1	28	-	522	1800	580	90.0%
1/2	B6139 Coxmoor Road East Entry Ahead Right	O	N/A	N/A	A		1	28	-	522	1800	580	90.0%
2/1	B6022 Newark Road Entry Left	O	N/A	N/A	-		-	-	-	645	1800	1368	47.2%
2/2	B6022 Newark Road Entry Right Ahead	O	N/A	N/A	B		1	17	-	310	1800	337	92.1%
3/1	B6139 Coxmoor Road West Entry Ahead Left	U	N/A	N/A	C		1	57	-	765	1800	1160	65.9%
3/2	B6139 Coxmoor Road West Entry Right	U	N/A	N/A	E		1	24	-	449	1800	500	89.8%
4/1+4/2	Cauldwell Road Entry Left Ahead Right	U+O	N/A	N/A	D		1	17	-	18	1800:1800	253+203	3.9 : 3.9%
5/1	B6139 Coxmoor Road East Exit	U	N/A	N/A	-		-	-	-	1060	Inf	Inf	0.0%
6/1	B6022 Newark Road Exit	U	N/A	N/A	-		-	-	-	689	Inf	Inf	0.0%
7/1	B6139 Coxmoor Road West Exit	U	N/A	N/A	-		-	-	-	935	Inf	Inf	0.0%
7/2	B6139 Coxmoor Road West Exit	U	N/A	N/A	-		-	-	-	528	Inf	Inf	0.0%
8/1	Cauldwell Road Exit	U	N/A	N/A	-		-	-	-	19	Inf	Inf	0.0%

Full Input Data And Results

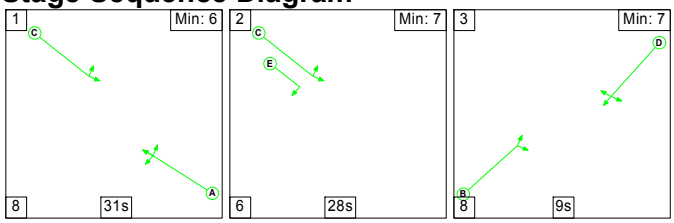
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**434**	**497**	**22**	**18.0**	**17.6**	**0.2**	**35.7**	**-**	**-**	**-**	**-**
B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road	**-**	**-**	**434**	**497**	**22**	**18.0**	**17.6**	**0.2**	**35.7**	**-**	**-**	**-**	**-**
1/1	522	522	-	-	-	4.2	4.0	-	8.2	56.4	12.3	4.0	16.3
1/2	522	522	2	0	0	4.2	4.0	0.0	8.2	56.5	12.3	4.0	16.3
2/1	645	645	148	497	0	0.4	0.4	-	0.8	4.7	5.9	0.4	6.4
2/2	310	310	277	0	22	3.0	4.4	0.2	7.6	87.8	7.5	4.4	11.9
3/1	765	765	-	-	-	2.1	1.0	-	3.1	14.4	11.7	1.0	12.7
3/2	449	449	-	-	-	3.9	3.8	-	7.7	62.0	10.7	3.8	14.6
4/1+4/2	18	18	8	0	0	0.1	0.0	0.0	0.2	33.3	0.2	0.0	0.2
5/1	1060	1060	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	689	689	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	935	935	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	528	528	-	-	-	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 (%): -2.3 Total Delay for Signalled Lanes (pcuHr): 34.89 Cycle Time (s): 90
PRC Over All Lanes (%): -2.3 Total Delay Over All Lanes(pcuHr): 35.74

Full Input Data And Results

Scenario 3: 'AM Mit 2032' (FG2: 'Development Case AM', Plan 1: 'Network Control Plan 1')

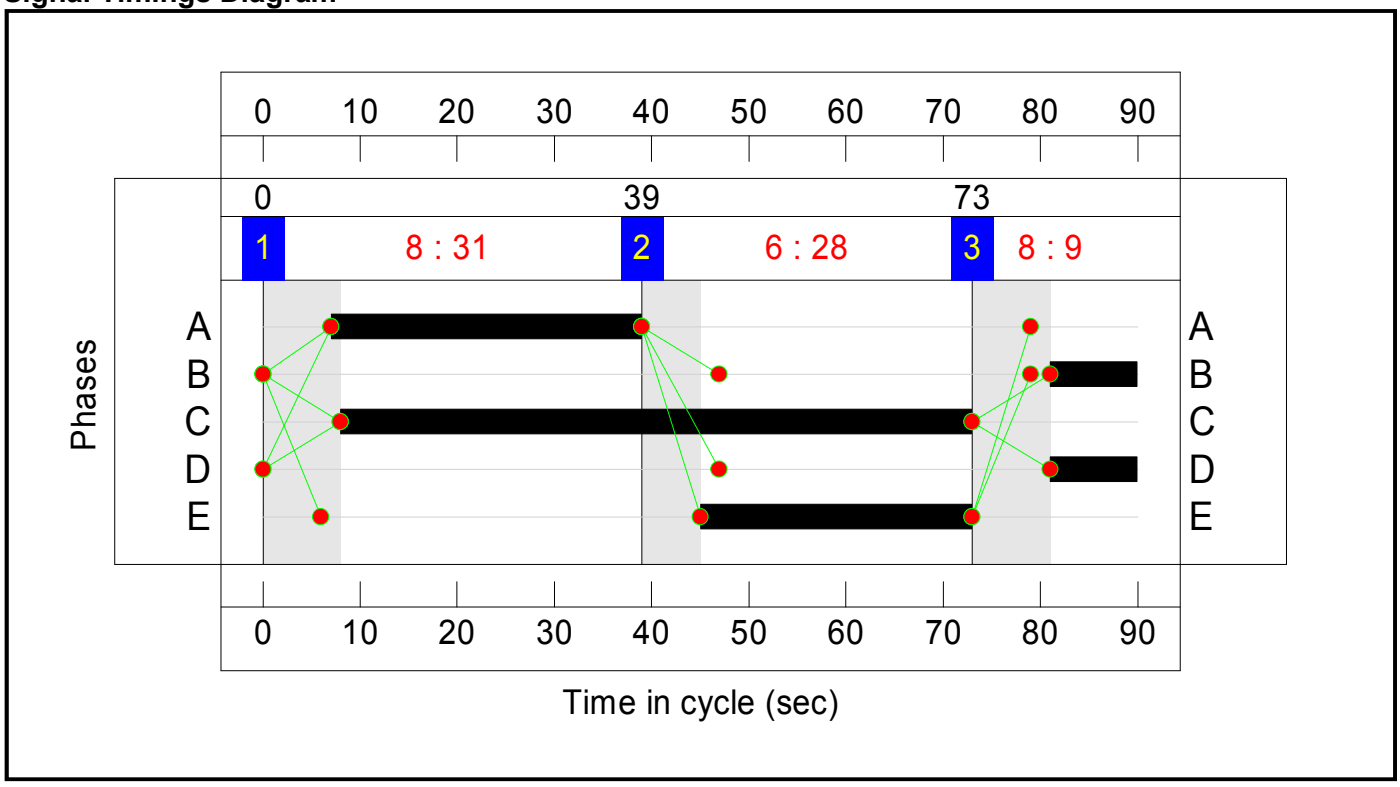
Stage Sequence Diagram



Stage Timings

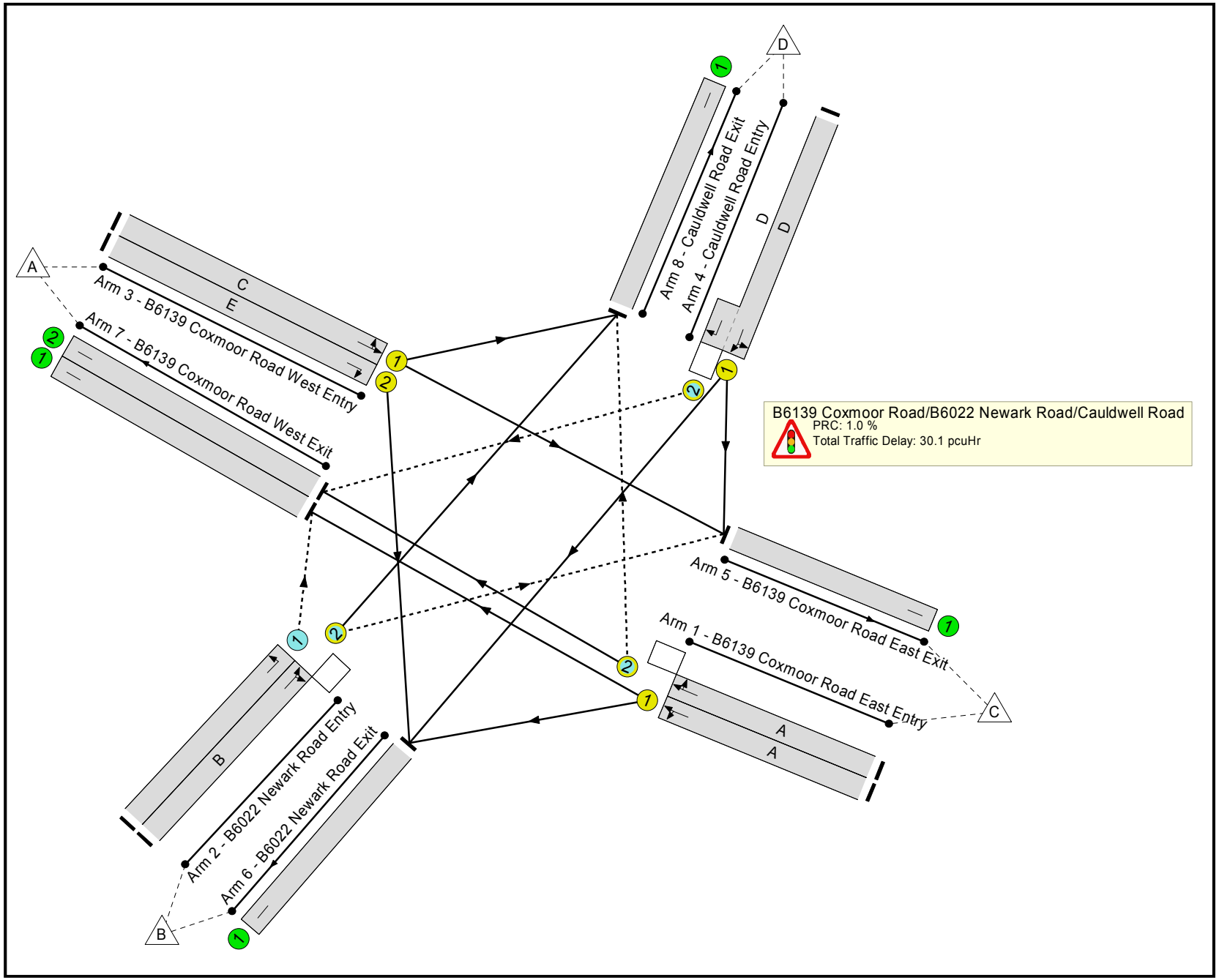
Stage	1	2	3
Duration	31	28	9
Change Point	0	39	73

Signal Timings Diagram



Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**89.1%**
B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**89.1%**
1/1	B6139 Coxmoor Road East Entry Left Ahead	U	N/A	N/A	A		1	32	-	581	1800	660	88.0%
1/2	B6139 Coxmoor Road East Entry Ahead Right	O	N/A	N/A	A		1	32	-	580	1800	660	87.9%
2/1	B6022 Newark Road Entry Left	O	N/A	N/A	-		-	-	-	369	1800	1330	27.8%
2/2	B6022 Newark Road Entry Right Ahead	O	N/A	N/A	B		1	9	-	174	1800	200	87.0%
3/1	B6139 Coxmoor Road West Entry Ahead Left	U	N/A	N/A	C		1	65	-	757	1800	1320	57.3%
3/2	B6139 Coxmoor Road West Entry Right	U	N/A	N/A	E		1	28	-	517	1800	580	89.1%
4/1+4/2	Cauldwell Road Entry Left Ahead Right	U+O	N/A	N/A	D		1	9	-	18	1800:1800	164+132	6.1 : 6.1%
5/1	B6139 Coxmoor Road East Exit	U	N/A	N/A	-		-	-	-	920	Inf	Inf	0.0%
6/1	B6022 Newark Road Exit	U	N/A	N/A	-		-	-	-	797	Inf	Inf	0.0%
7/1	B6139 Coxmoor Road West Exit	U	N/A	N/A	-		-	-	-	679	Inf	Inf	0.0%
7/2	B6139 Coxmoor Road West Exit	U	N/A	N/A	-		-	-	-	584	Inf	Inf	0.0%
8/1	Cauldwell Road Exit	U	N/A	N/A	-		-	-	-	16	Inf	Inf	0.0%

Full Input Data And Results

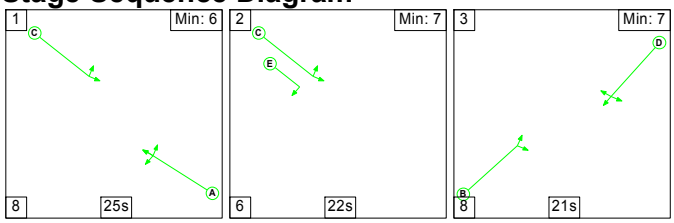
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**296**	**234**	**18**	**16.0**	**14.1**	**0.1**	**30.1**	**-**	**-**	**-**	**-**
B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road	**-**	**-**	**296**	**234**	**18**	**16.0**	**14.1**	**0.1**	**30.1**	**-**	**-**	**-**	**-**
1/1	581	581	-	-	-	4.3	3.4	-	7.7	47.6	13.6	3.4	16.9
1/2	580	580	4	0	0	4.3	3.3	0.0	7.6	47.4	13.5	3.3	16.9
2/1	369	369	135	234	0	0.0	0.2	-	0.2	1.9	0.0	0.2	0.2
2/2	174	174	149	0	18	1.9	2.8	0.1	4.7	97.9	4.3	2.8	7.0
3/1	757	757	-	-	-	1.2	0.7	-	1.8	8.7	8.6	0.7	9.3
3/2	517	517	-	-	-	4.2	3.7	-	7.8	54.6	12.2	3.7	15.9
4/1+4/2	18	18	8	0	0	0.2	0.0	0.0	0.2	42.5	0.2	0.0	0.3
5/1	920	920	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	797	797	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	679	679	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	584	584	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	16	16	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 1.0 Total Delay for Signalled Lanes (pcuHr): 29.95 Cycle Time (s): 90
PRC Over All Lanes (%): 1.0 Total Delay Over All Lanes(pcuHr): 30.14

Full Input Data And Results

Scenario 4: 'PM mit 2032' (FG4: 'Development Case PM', Plan 1: 'Network Control Plan 1')

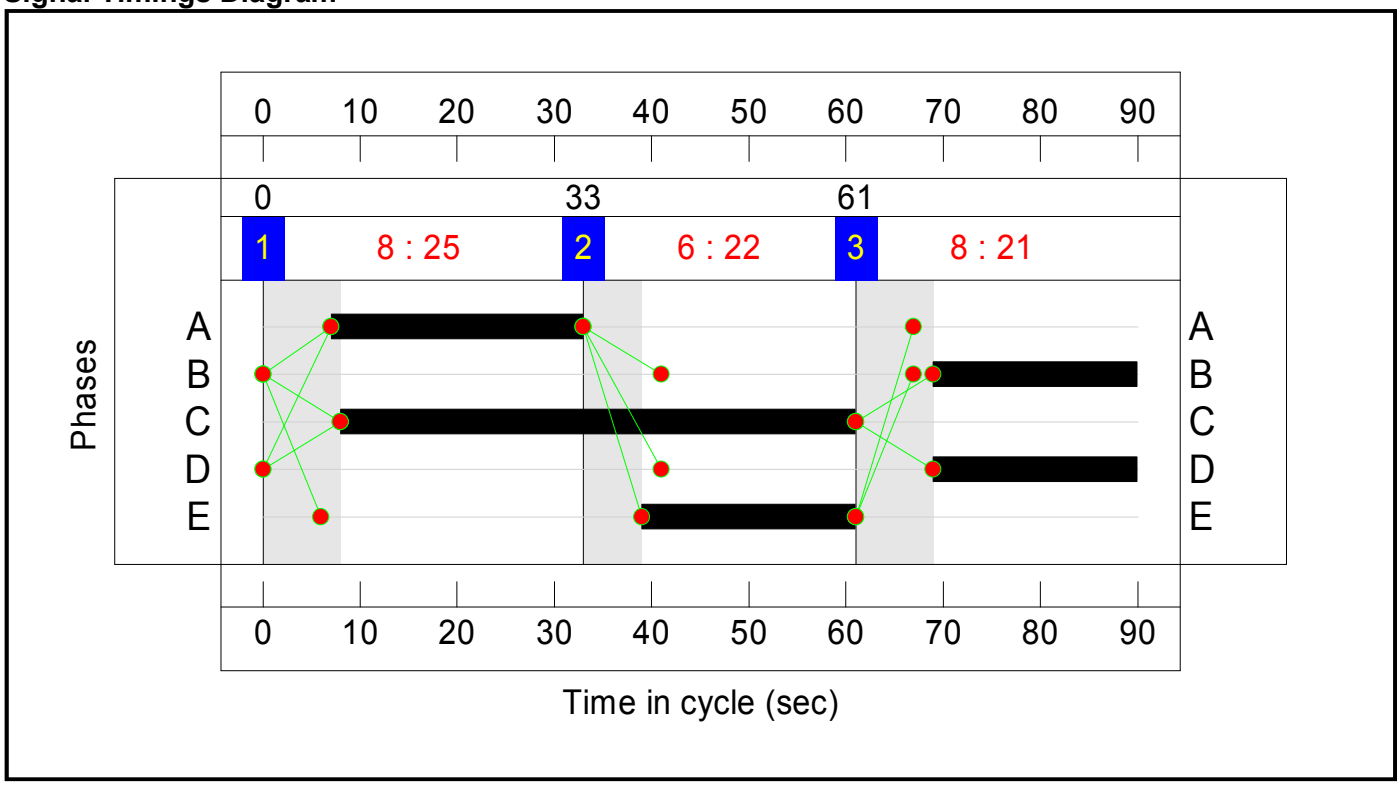
Stage Sequence Diagram



Stage Timings

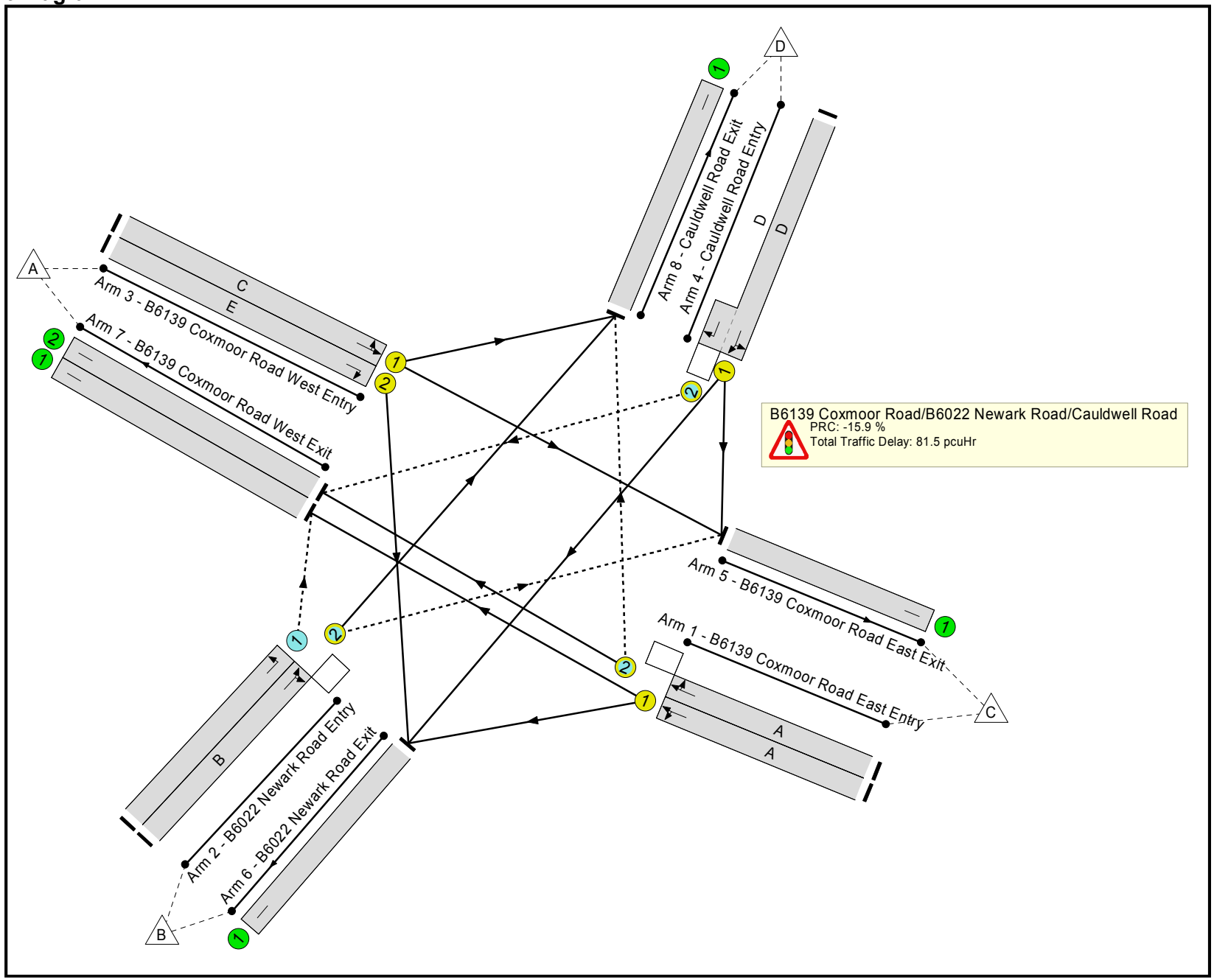
Stage	1	2	3
Duration	25	22	21
Change Point	0	33	61

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**104.3%**
B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**104.3%**
1/1	B6139 Coxmoor Road East Entry Left Ahead	U	N/A	N/A	A		1	26	-	551	1800	540	102.0%
1/2	B6139 Coxmoor Road East Entry Ahead Right	O	N/A	N/A	A		1	26	-	551	1800	540	102.0%
2/1	B6022 Newark Road Entry Left	O	N/A	N/A	-		-	-	-	673	1800	1428	47.1%
2/2	B6022 Newark Road Entry Right Ahead	O	N/A	N/A	B		1	21	-	401	1800	400	100.3%
3/1	B6139 Coxmoor Road West Entry Ahead Left	U	N/A	N/A	C		1	53	-	767	1800	1080	71.0%
3/2	B6139 Coxmoor Road West Entry Right	U	N/A	N/A	E		1	22	-	480	1800	460	104.3%
4/1+4/2	Cauldwell Road Entry Left Ahead Right	U+O	N/A	N/A	D		1	21	-	18	1800:1800	298+238	3.4 : 3.4%
5/1	B6139 Coxmoor Road East Exit	U	N/A	N/A	-		-	-	-	1153	Inf	Inf	0.0%
6/1	B6022 Newark Road Exit	U	N/A	N/A	-		-	-	-	792	Inf	Inf	0.0%
7/1	B6139 Coxmoor Road West Exit	U	N/A	N/A	-		-	-	-	920	Inf	Inf	0.0%
7/2	B6139 Coxmoor Road West Exit	U	N/A	N/A	-		-	-	-	557	Inf	Inf	0.0%
8/1	Cauldwell Road Exit	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	**-**	**-**	**519**	**505**	**48**	**22.5**	**58.7**	**0.3**	**81.5**	**-**	**-**	**-**	**-**
B6139 Coxmoor Road/B6022 Newark Road/Cauldwell Road	**-**	**-**	**519**	**505**	**48**	**22.5**	**58.7**	**0.3**	**81.5**	**-**	**-**	**-**	**-**
1/1	551	540	-	-	-	5.3	14.8	-	20.1	131.4	14.1	14.8	28.9
1/2	551	540	2	0	0	5.3	14.8	0.0	20.1	131.4	14.1	14.8	28.9
2/1	673	673	168	505	0	0.1	0.4	-	0.6	3.1	5.4	0.4	5.9
2/2	401	400	341	0	48	3.8	10.3	0.2	14.4	129.1	10.1	10.3	20.4
3/1	767	767	-	-	-	2.7	1.2	-	3.9	18.3	13.2	1.2	14.4
3/2	480	460	-	-	-	5.2	17.0	-	22.2	166.6	12.5	17.0	29.5
4/1+4/2	18	18	8	0	0	0.1	0.0	0.0	0.1	29.5	0.2	0.0	0.2
5/1	1152	1152	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	766	766	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	915	915	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	546	546	-	-	-	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

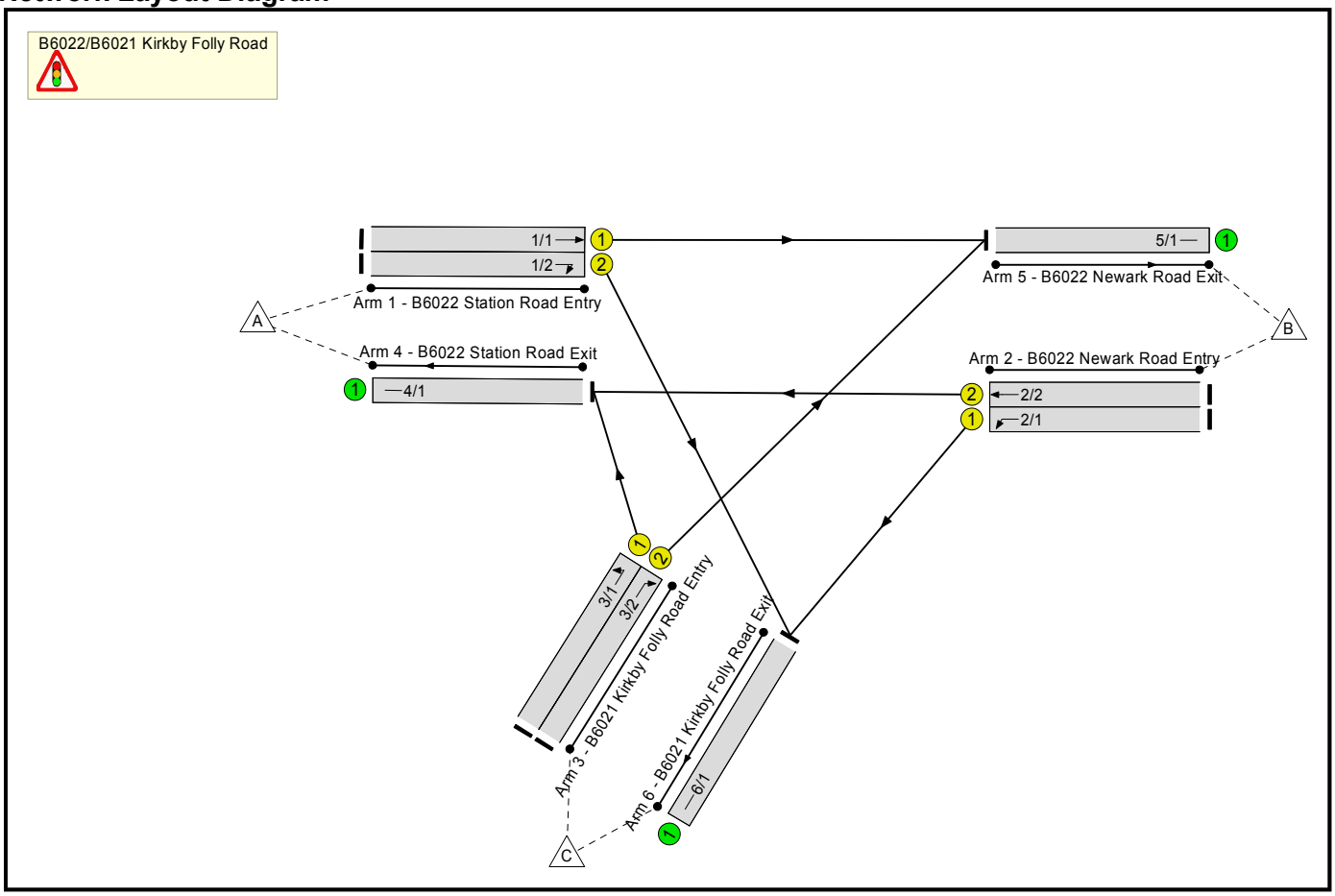
C1 PRC for Signalled Lanes (%): -15.9 Total Delay for Signalled Lanes (pcuHr): 80.86 Cycle Time (s): 90
PRC Over All Lanes (%): -15.9 Total Delay Over All Lanes(pcuHr): 81.45

Full Input Data And Results

User and Project Details

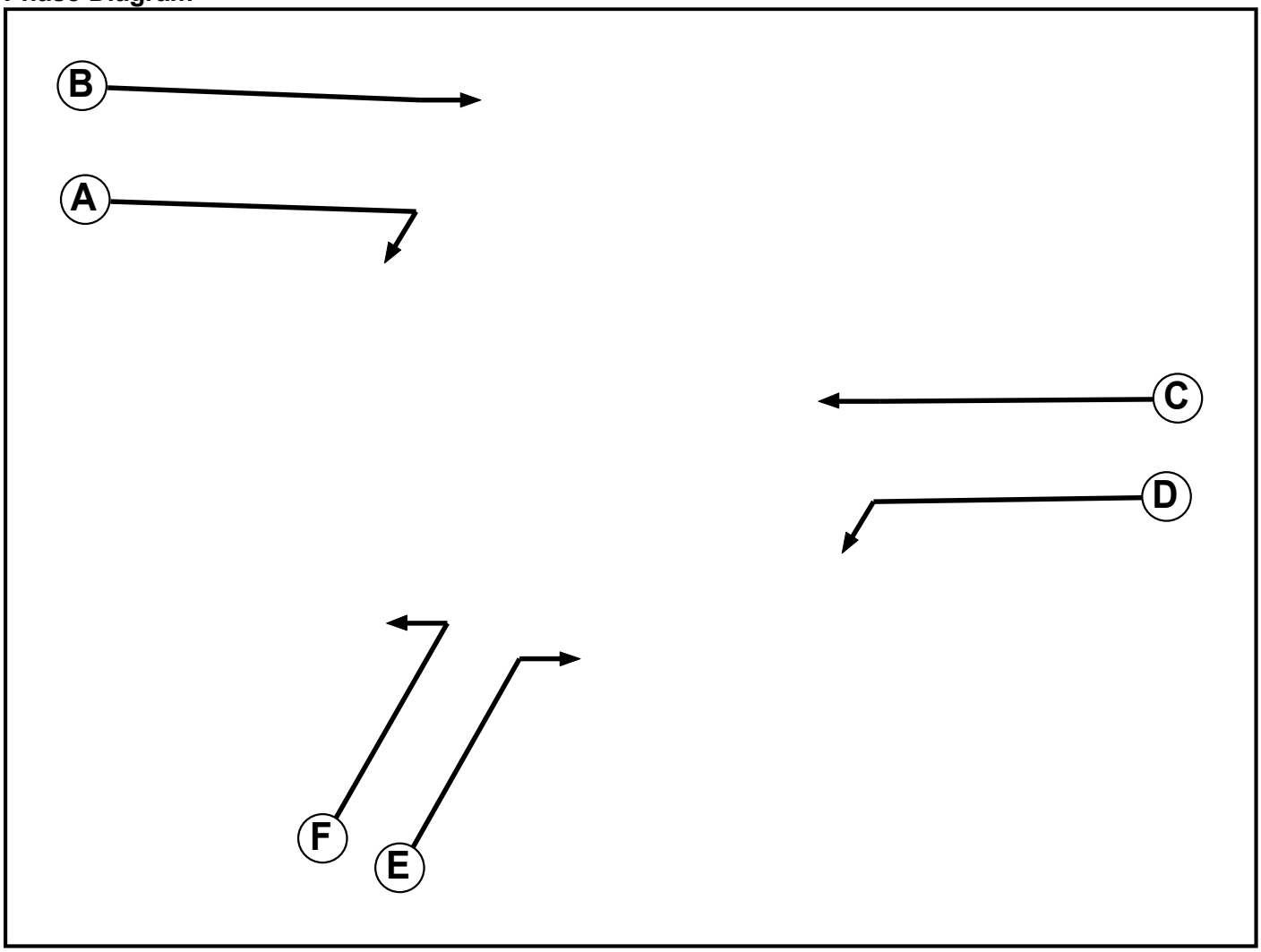
Project:	
Title:	
Location:	
File name:	2016-08-17 J28 JMP Mitigation.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

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

Full Input Data And Results

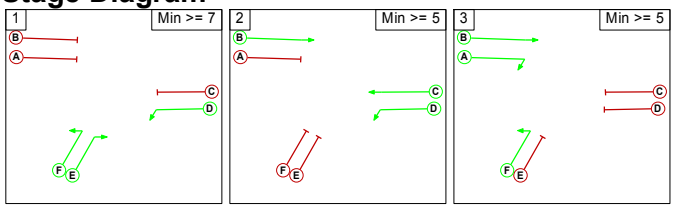
Phase Intergreens Matrix

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

Phases in Stage

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

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
From Stage	1		7	7
	2	7		6
	3	7	7	

Full Input Data And Results

Give-Way Lane Input Data

Junction: B6022/B6021 Kirkby Folly Road
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: B6022/B6021 Kirkby Folly Road												
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 (B6022 Station Road Entry)	U	B	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 5 Ahead	Inf
1/2 (B6022 Station Road Entry)	U	A	2	3	12.2	Geom	-	3.25	0.00	Y	Arm 6 Right	Inf
2/1 (B6022 Newark Road Entry)	U	D	2	3	10.4	Geom	-	3.25	0.00	Y	Arm 6 Left	Inf
2/2 (B6022 Newark Road Entry)	U	C	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 4 Ahead	Inf
3/1 (B6021 Kirkby Folly Road Entry)	U	F	2	3	3.5	Geom	-	3.25	0.00	Y	Arm 4 Left	Inf
3/2 (B6021 Kirkby Folly Road Entry)	U	E	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 5 Right	Inf
4/1 (B6022 Station Road Exit)	U		2	3	60.0	Geom	-	3.25	0.00	Y		
5/1 (B6022 Newark Road Exit)	U		2	3	60.0	Geom	-	3.25	0.00	Y		
6/1 (B6021 Kirkby Folly Road Exit)	U		2	3	60.0	Geom	-	3.25	0.00	Y		

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM 2032 Mit'	08:00	09:00	01:00	
2: 'PM 2032 Mit'	17:00	18:00	01:00	

Full Input Data And Results

Scenario 1: 'AM 2032 Junction Mitigation' (FG1: 'AM 2032 Mit', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	0	476	476
	B	0	0	1017	1017
	C	0	1020	0	1020
	Tot.	0	1020	1493	2513

Traffic Lane Flows

Lane	Scenario 1: AM 2032 Junction Mitigation
Junction: B6022/B6021 Kirkby Folly Road	
1/1	0
1/2	476
2/1	1017
2/2	0
3/1	0
3/2	1020
4/1	0
5/1	1020
6/1	1493

Lane Saturation Flows

Junction: B6022/B6021 Kirkby Folly Road								
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 (B6022 Station Road Entry)	3.25	0.00	Y	Arm 5 Ahead	Inf	0.0 %	1940	1940
1/2 (B6022 Station Road Entry)	3.25	0.00	Y	Arm 6 Right	Inf	100.0 %	1940	1940
2/1 (B6022 Newark Road Entry)	3.25	0.00	Y	Arm 6 Left	Inf	100.0 %	1940	1940
2/2 (B6022 Newark Road Entry)	3.25	0.00	Y	Arm 4 Ahead	Inf	0.0 %	1940	1940
3/1 (B6021 Kirkby Folly Road Entry)	3.25	0.00	Y	Arm 4 Left	Inf	0.0 %	1940	1940
3/2 (B6021 Kirkby Folly Road Entry)	3.25	0.00	Y	Arm 5 Right	Inf	100.0 %	1940	1940
4/1 (B6022 Station Road Exit)	3.25	0.00	Y				1940	1940
5/1 (B6022 Newark Road Exit)	3.25	0.00	Y				1940	1940
6/1 (B6021 Kirkby Folly Road Exit)	3.25	0.00	Y				1940	1940

Full Input Data And Results

Scenario 2: 'PM 2032 Junction Mitigation' (FG2: 'PM 2032 Mit', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	158	358	516
	B	0	0	1031	1031
	C	0	1183	0	1183
	Tot.	0	1341	1389	2730

Traffic Lane Flows

Lane	Scenario 2: PM 2032 Junction Mitigation
Junction: B6022/B6021 Kirkby Folly Road	
1/1	158
1/2	358
2/1	1031
2/2	0
3/1	0
3/2	1183
4/1	0
5/1	1341
6/1	1389

Lane Saturation Flows

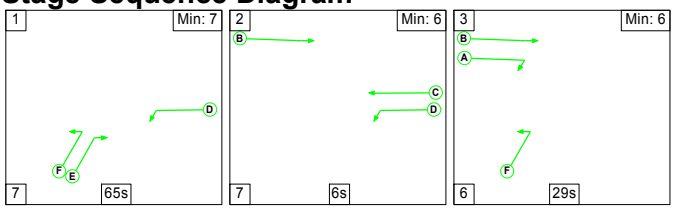
Junction: B6022/B6021 Kirkby Folly Road

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 (B6022 Station Road Entry)	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
1/2 (B6022 Station Road Entry)	3.25	0.00	Y	Arm 6 Right	Inf	100.0 %	1940	1940
2/1 (B6022 Newark Road Entry)	3.25	0.00	Y	Arm 6 Left	Inf	100.0 %	1940	1940
2/2 (B6022 Newark Road Entry)	3.25	0.00	Y	Arm 4 Ahead	Inf	0.0 %	1940	1940
3/1 (B6021 Kirkby Folly Road Entry)	3.25	0.00	Y	Arm 4 Left	Inf	0.0 %	1940	1940
3/2 (B6021 Kirkby Folly Road Entry)	3.25	0.00	Y	Arm 5 Right	Inf	100.0 %	1940	1940
4/1 (B6022 Station Road Exit)	3.25	0.00	Y				1940	1940
5/1 (B6022 Newark Road Exit)	3.25	0.00	Y				1940	1940
6/1 (B6021 Kirkby Folly Road Exit)	3.25	0.00	Y				1940	1940

Full Input Data And Results

Scenario 1: 'AM 2032 Junction Mitigation' (FG1: 'AM 2032 Mit', Plan 1: 'Network Control Plan 1')

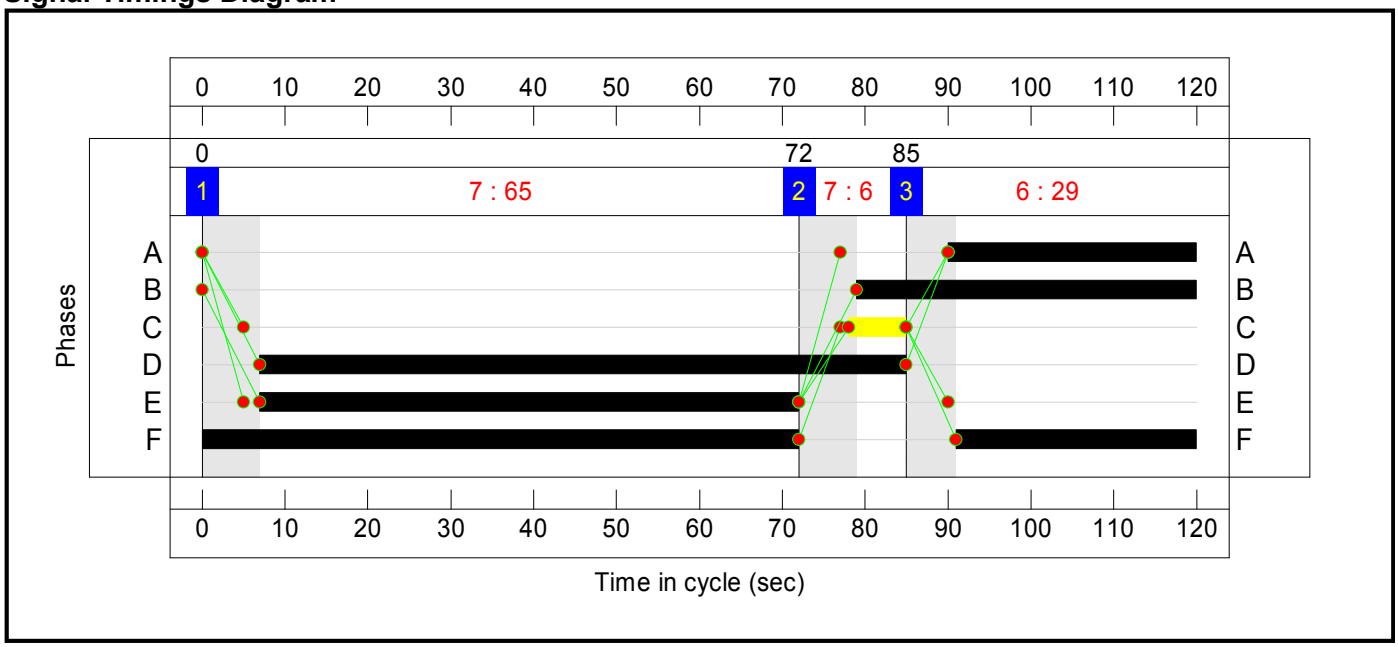
Stage Sequence Diagram



Stage Timings

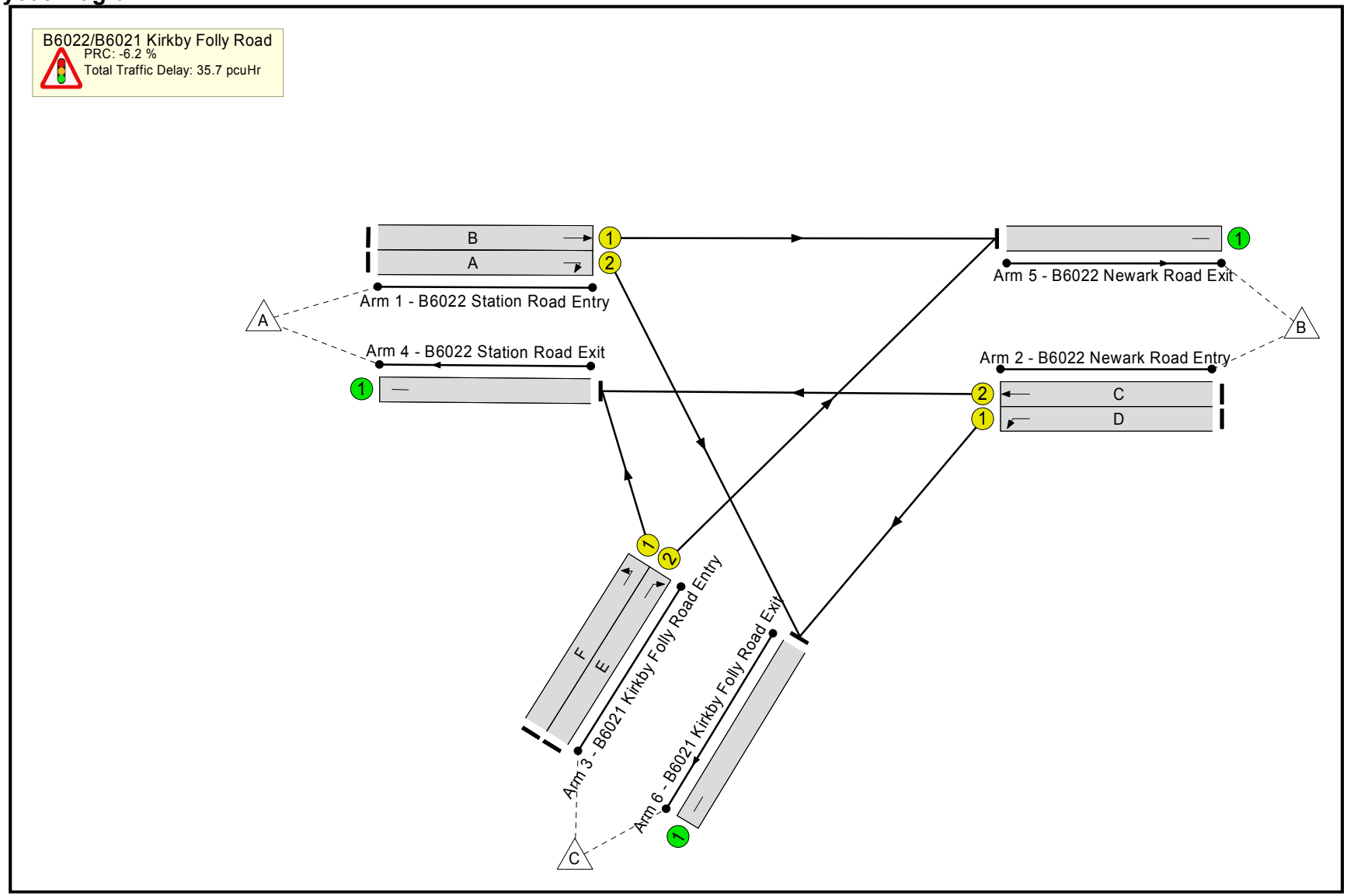
Stage	1	2	3
Duration	65	6	29
Change Point	0	72	85

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**95.6%**
B6022/B6021 Kirkby Folly Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**95.6%**
1/1	B6022 Station Road Entry Ahead	U	N/A	N/A	B		1	41	-	0	1940	679	0.0%
1/2	B6022 Station Road Entry Right	U	N/A	N/A	A		1	30	-	476	1940	501	95.0%
2/1	B6022 Newark Road Entry Left	U	N/A	N/A	D		1	78	-	1017	1940	1277	79.6%
2/2	B6022 Newark Road Entry Ahead	U	N/A	N/A	C		1	7	-	0	1940	129	0.0%
3/1	B6021 Kirkby Folly Road Entry Left	U	N/A	N/A	F		1	101	-	0	1940	1649	0.0%
3/2	B6021 Kirkby Folly Road Entry Right	U	N/A	N/A	E		1	65	-	1020	1940	1067	95.6%
4/1	B6022 Station Road Exit	U	N/A	N/A	-		-	-	-	0	1940	1940	0.0%
5/1	B6022 Newark Road Exit	U	N/A	N/A	-		-	-	-	1020	1940	1940	52.6%
6/1	B6021 Kirkby Folly Road Exit	U	N/A	N/A	-		-	-	-	1493	1940	1940	77.0%

Full Input Data And Results

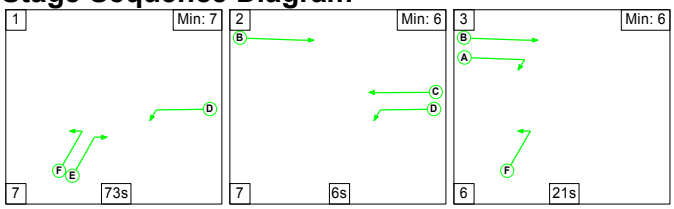
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**17.2**	**18.5**	**0.0**	**35.7**	**-**	**-**	**-**	**-**
B6022/B6021 Kirkby Folly Road	**-**	**-**	**0**	**0**	**0**	**17.2**	**18.5**	**0.0**	**35.7**	**-**	**-**	**-**	**-**
1/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
1/2	476	476	-	-	-	5.8	6.3	-	12.1	91.4	15.5	6.3	21.8
2/1	1017	1017	-	-	-	4.2	1.9	-	6.1	21.5	24.3	1.9	26.2
2/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	1020	1020	-	-	-	7.3	8.1	-	15.3	54.1	32.0	8.1	40.1
4/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	1020	1020	-	-	-	0.0	0.6	-	0.6	2.0	12.4	0.6	12.9
6/1	1493	1493	-	-	-	0.0	1.7	-	1.7	4.0	4.9	1.7	6.5

C1 PRC for Signalled Lanes (%): -6.2 Total Delay for Signalled Lanes (pcuHr): 33.50 Cycle Time (s): 120
PRC Over All Lanes (%): -6.2 Total Delay Over All Lanes(pcuHr): 35.72

Full Input Data And Results

Scenario 2: 'PM 2032 Junction Mitigation' (FG2: 'PM 2032 Mit', Plan 1: 'Network Control Plan 1')

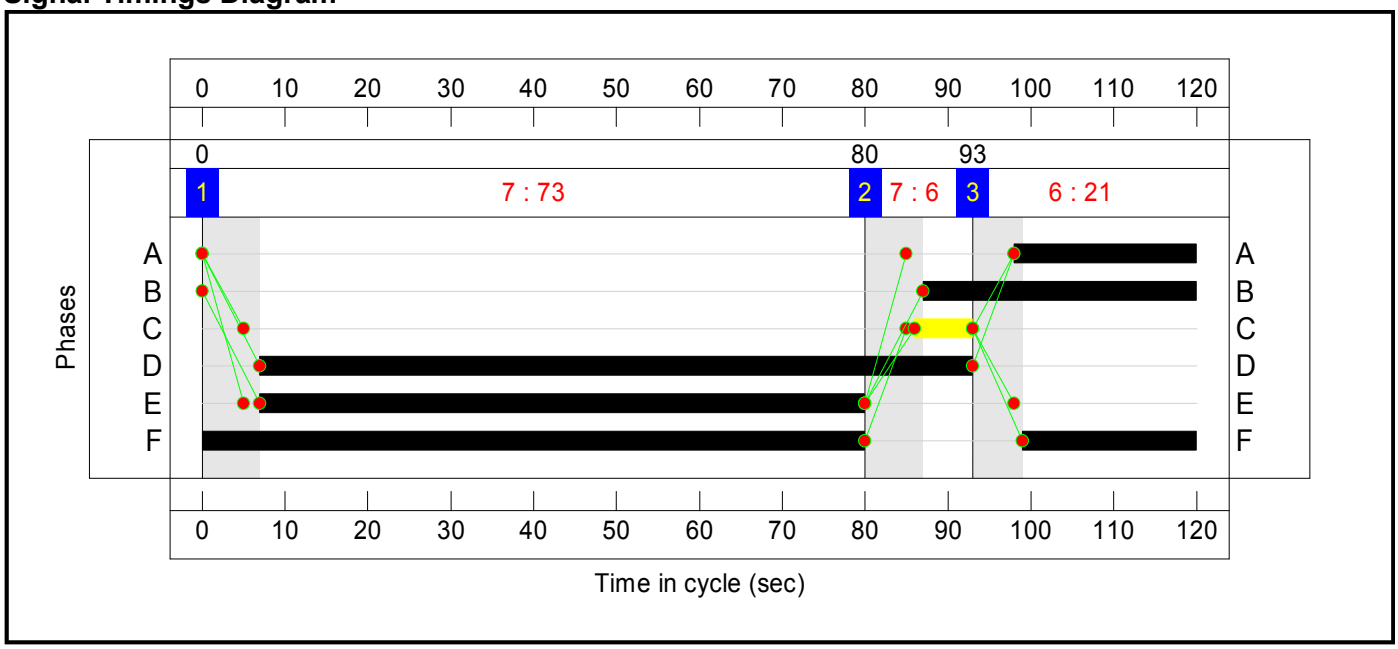
Stage Sequence Diagram



Stage Timings

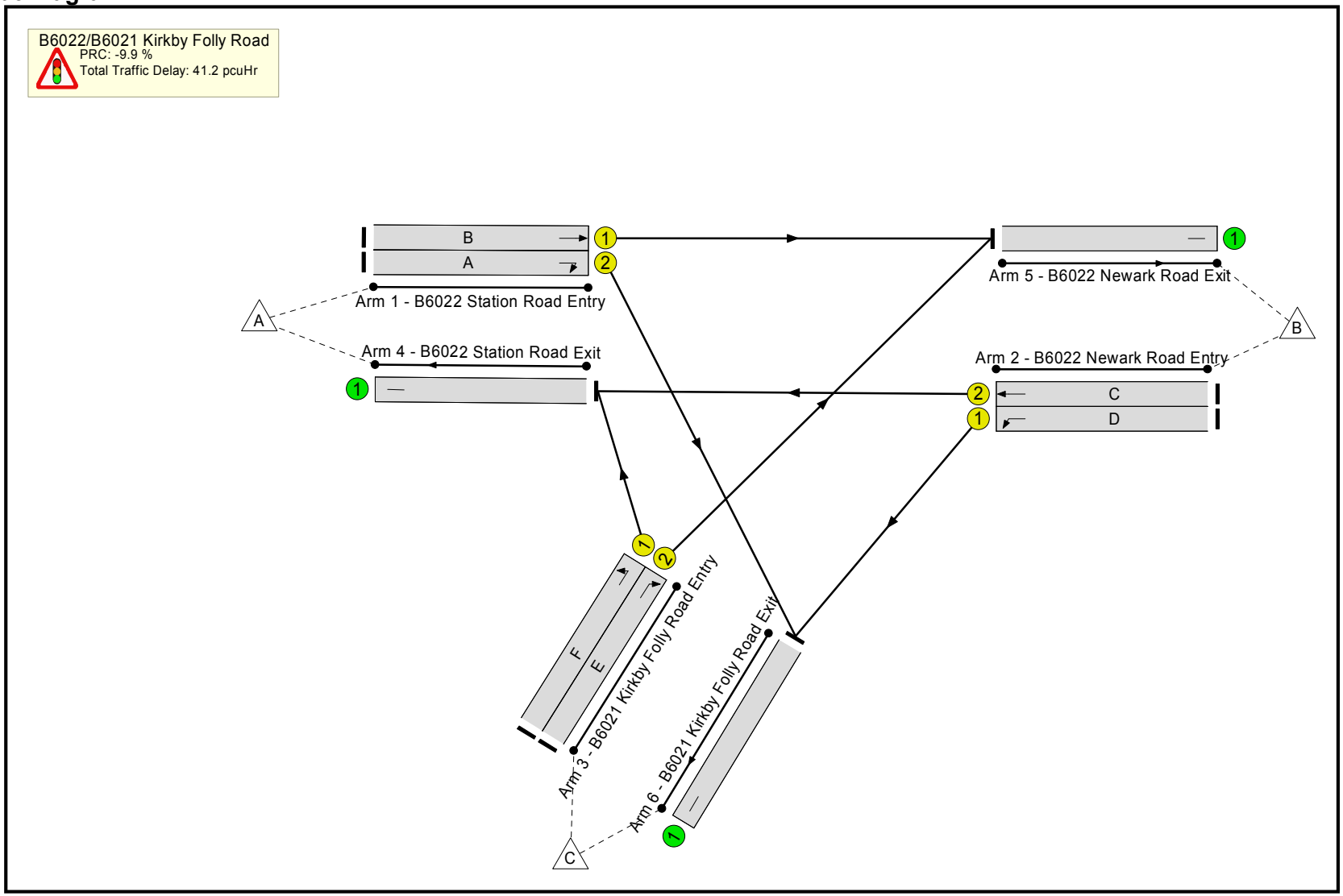
Stage	1	2	3
Duration	73	6	21
Change Point	0	80	93

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**98.9%**
B6022/B6021 Kirkby Folly Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**98.9%**
1/1	B6022 Station Road Entry Ahead	U	N/A	N/A	B		1	33	-	158	1940	550	28.7%
1/2	B6022 Station Road Entry Right	U	N/A	N/A	A		1	22	-	358	1940	372	96.3%
2/1	B6022 Newark Road Entry Left	U	N/A	N/A	D		1	86	-	1031	1940	1407	73.3%
2/2	B6022 Newark Road Entry Ahead	U	N/A	N/A	C		1	7	-	0	1940	129	0.0%
3/1	B6021 Kirkby Folly Road Entry Left	U	N/A	N/A	F		1	101	-	0	1940	1649	0.0%
3/2	B6021 Kirkby Folly Road Entry Right	U	N/A	N/A	E		1	73	-	1183	1940	1196	98.9%
4/1	B6022 Station Road Exit	U	N/A	N/A	-		-	-	-	0	1940	1940	0.0%
5/1	B6022 Newark Road Exit	U	N/A	N/A	-		-	-	-	1341	1940	1940	69.1%
6/1	B6021 Kirkby Folly Road Exit	U	N/A	N/A	-		-	-	-	1389	1940	1940	71.6%

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	**-**	**-**	**0**	**0**	**0**	**16.5**	**24.7**	**0.0**	**41.2**	**-**	**-**	**-**	**-**
B6022/B6021 Kirkby Folly Road	**-**	**-**	**0**	**0**	**0**	**16.5**	**24.7**	**0.0**	**41.2**	**-**	**-**	**-**	**-**
1/1	158	158	-	-	-	1.5	0.2	-	1.7	38.2	4.1	0.2	4.3
1/2	358	358	-	-	-	4.8	6.6	-	11.4	114.6	11.7	6.6	18.3
2/1	1031	1031	-	-	-	2.8	1.4	-	4.1	14.4	20.0	1.4	21.4
2/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	1183	1183	-	-	-	7.4	14.2	-	21.6	65.8	38.4	14.2	52.6
4/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	1341	1341	-	-	-	0.0	1.1	-	1.1	3.0	18.9	1.1	20.0
6/1	1389	1389	-	-	-	0.0	1.3	-	1.3	3.3	0.5	1.3	1.8

C1 PRC for Signalled Lanes (%): -9.9 Total Delay for Signalled Lanes (pcuHr): 38.82 Cycle Time (s): 120
PRC Over All Lanes (%): -9.9 Total Delay Over All Lanes(pcuHr): 41.19