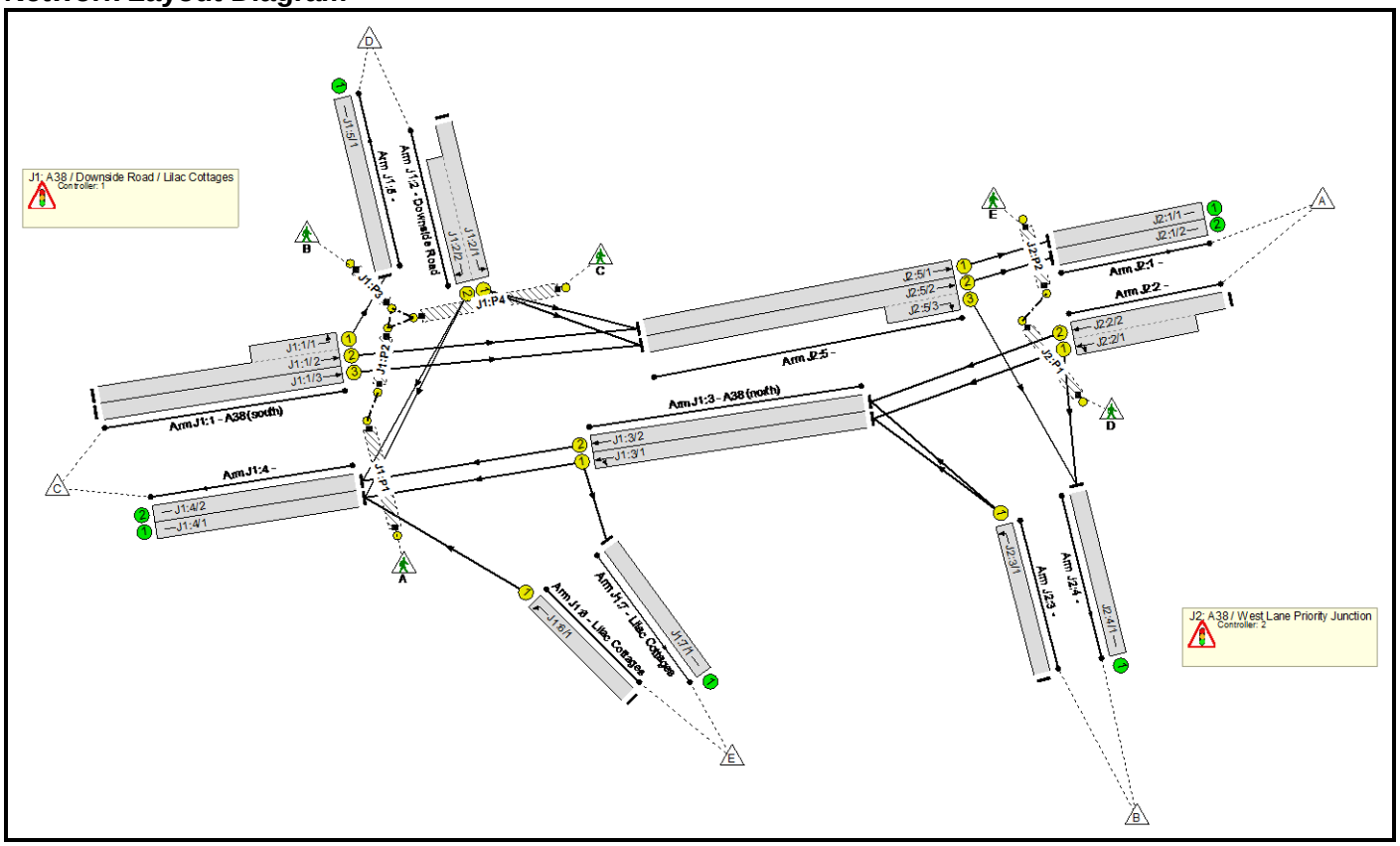
Appendix H Detailed Junction Assessments

Full Input Data And Results

User and Project Details

Project:	
Title:	
Location:	
File name:	A30 Improvement Scheme v2 with no peds.lsg3x
Author:	
Company:	
Address:	
Notes:	

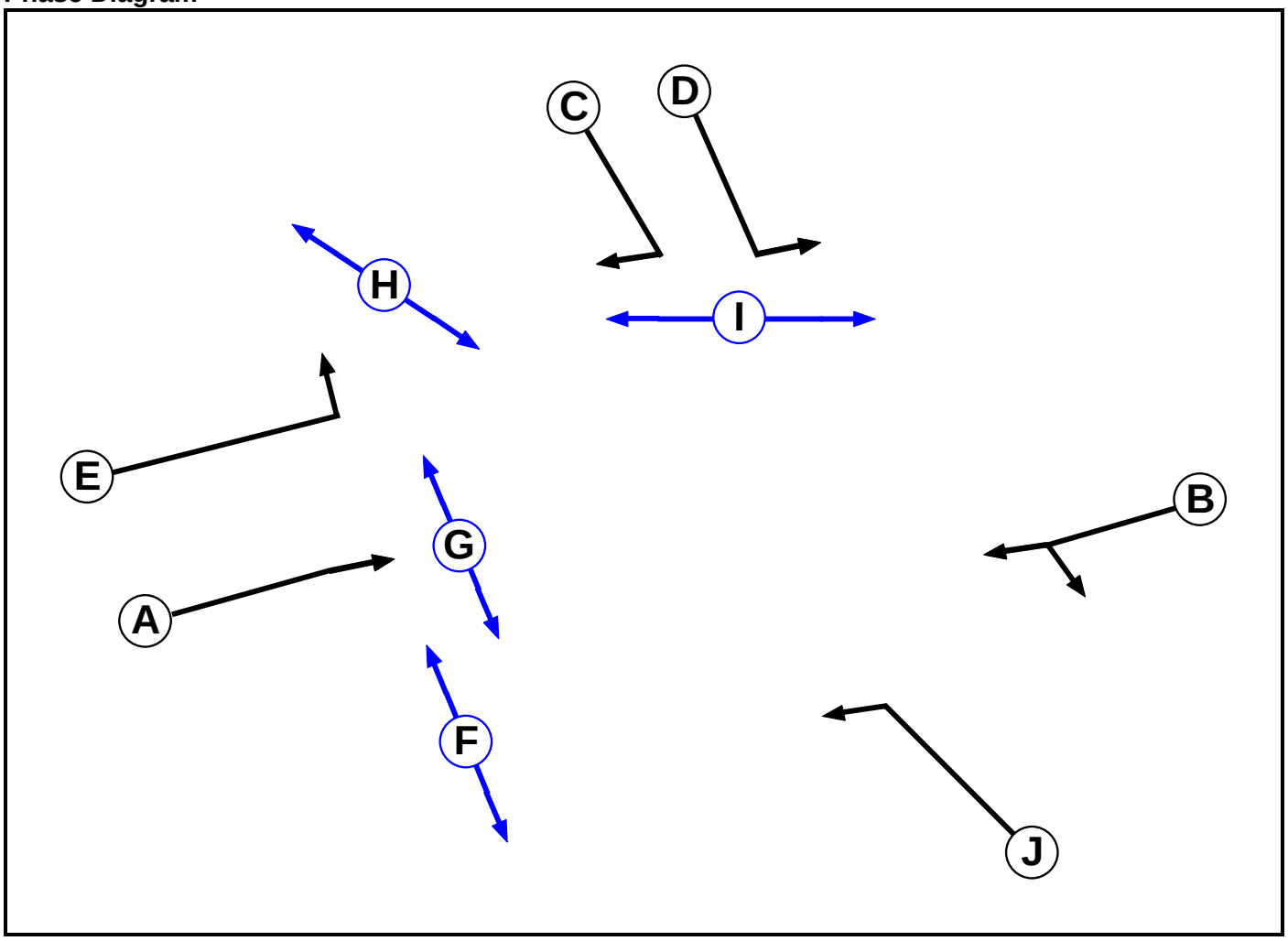
Network Layout Diagram



Full Input Data And Results

C1

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
J	Traffic		7	7

Full Input Data And Results

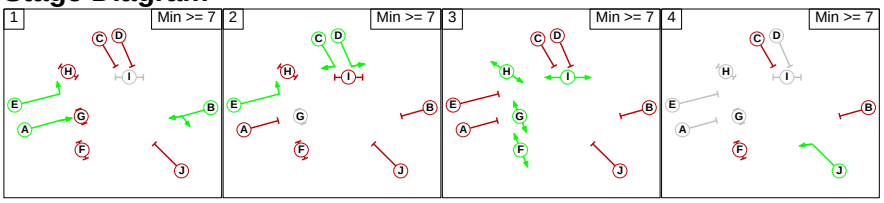
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J
A		-	5	5	-	-	5	-	-	-
B	-		5	-	-	8	-	-	-	5
C	5	6		-	-	7	-	-	5	5
D	5	-	-		-	-	-	-	5	-
E	-	-	-	-		-	-	5	-	-
F	-	10	10	-	-		-	-	-	7
G	10	-	-	-	-	-		-	-	-
H	-	-	-	-	10	-	-		-	-
I	-	-	10	10	-	-	-	-		-
J	-	5	5	-	-	10	-	-	-	

Phases in Stage

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

Stage Diagram



Phase Delays

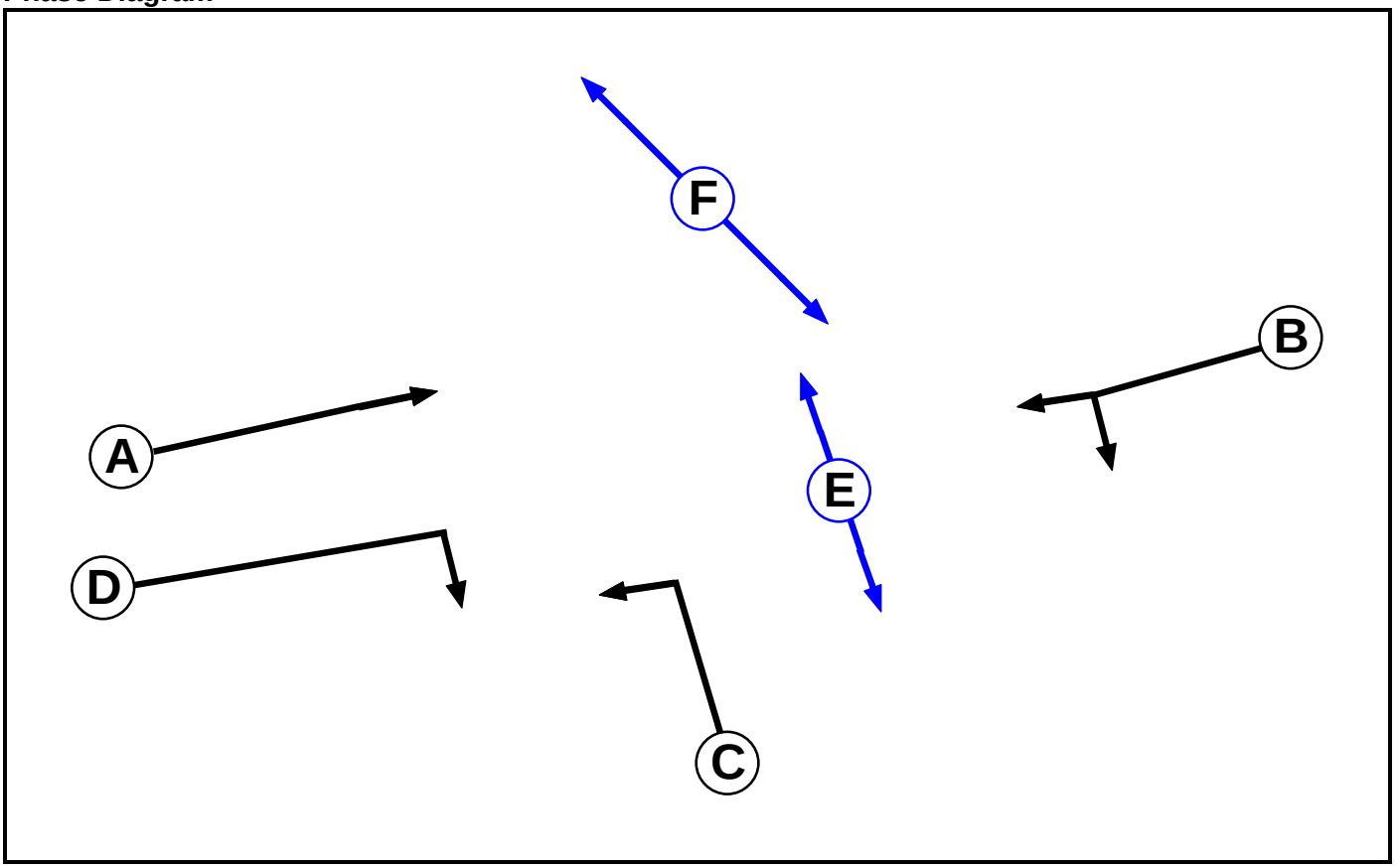
Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

From Stage \ To Stage	1	2	3	4
1		5	8	5
2	6		7	5
3	10	10		7
4	5	5	10	

C2

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	Pedestrian		10	10
F	Pedestrian		7	7

Full Input Data And Results

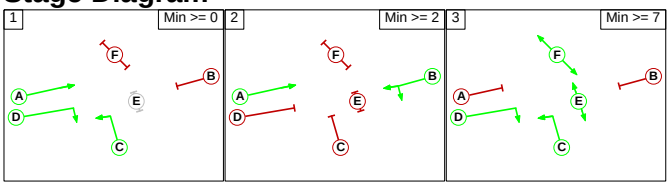
Phase Intergreens Matrix

Terminating Phase	Starting Phase					
	A	B	C	D	E	F
A		-	-	-	-	7
B	-		6	5	5	-
C	-	5		-	-	-
D	-	5	-		-	-
E	-	5	-	-		-
F	10	-	-	-	-	

Phases in Stage

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

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		5	7
2	6		7
3	10	10	

Full Input Data And Results

Give-Way Lane Input Data

Junction: J1: A38 / Downside Road / Lilac Cottages
There are no Opposed Lanes in this Junction

Junction: J2: A38 / West Lane Priority Junction
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: J1: A38 / Downside Road / Lilac Cottages												
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)**
J1:1/1 (A38 (south))	U	E	2	3	7.8	Geom	-	3.50	0.00	Y	Arm J1:5 Left	14.00
J1:1/2 (A38 (south))	U	A	2	3	34.8	Geom	-	3.50	0.00	Y	Arm J2:5 Ahead	Inf
J1:1/3 (A38 (south))	U	A	2	3	34.8	Geom	-	3.50	0.00	N	Arm J2:5 Ahead	Inf
J1:2/1 (Downside Road)	U	D	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J2:5 Left	15.00
J1:2/2 (Downside Road)	U	C	2	3	12.5	Geom	-	3.00	0.00	Y	Arm J1:4 Right	13.00
J1:3/1 (A38 (north))	U	B	2	3	20.3	Geom	-	3.25	6.00	Y	Arm J1:4 Ahead	Inf
											Arm J1:7 Left	2.00
J1:3/2 (A38 (north))	U	B	2	3	20.3	Geom	-	3.25	6.00	N	Arm J1:4 Ahead	Inf
J1:4/1	U		2	3	31.3	Geom	-	3.25	0.00	Y		
J1:4/2	U		2	3	31.3	Geom	-	3.25	0.00	N		
J1:5/1	U		2	3	60.0	Geom	-	3.50	0.00	Y		
J1:6/1 (Lilac Cottages)	U	J	2	3	9.6	Geom	-	3.25	0.00	Y	Arm J1:4 Left	5.00
J1:7/1 (Lilac Cottages)	U		2	3	9.6	Geom	-	3.25	0.00	Y		

Full Input Data And Results

Junction: J2: A38 / West Lane Priority 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)**
J2:1/1	U		2	3	60.0	Geom	-	3.10	0.00	Y		
J2:1/2	U		2	3	17.4	Geom	-	3.10	0.00	N		
J2:2/1	U	B	2	3	12.2	Geom	-	3.00	0.00	Y	Arm J1:3 Ahead Arm J2:4 Left	Inf 12.00
J2:2/2	U	B	2	3	60.0	Geom	-	3.00	0.00	N	Arm J1:3 Ahead	Inf
J2:3/1	U	C	2	3	60.0	Geom	-	3.80	6.00	Y	Arm J1:3 Left	10.00
J2:4/1	U		2	3	60.0	Geom	-	3.00	6.00	Y		
J2:5/1	U	A	2	3	20.9	Geom	-	3.00	6.00	Y	Arm J2:1 Ahead	Inf
J2:5/2	U	A	2	3	20.9	Geom	-	3.00	6.00	N	Arm J2:1 Ahead	Inf
J2:5/3	U	D	2	3	6.6	Geom	-	3.00	0.00	Y	Arm J2:4 Right	6.00

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2026 Test AM'	08:00	09:00	01:00	
2: '2026 Test Inter Peak'	13:00	14:00	01:00	
3: '2026 Test PM'	17:00	18:00	01:00	

Scenario 1: '2026 Test Case - AM' (FG1: '2026 Test AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	24	1044	0	0	1068
	B	0	0	289	0	0	289
	C	1211	228	0	304	0	1743
	D	289	55	70	0	0	414
	E	0	0	0	0	0	0
	Tot.	1500	307	1403	304	0	3514

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2026 Test Case - AM
Junction: J1: A38 / Downside Road / Lilac Cottages	
J1:1/1 (short)	304
J1:1/2 (with short)	1023(In) 719(Out)
J1:1/3	720
J1:2/1 (with short)	414(In) 344(Out)
J1:2/2 (short)	70
J1:3/1	655
J1:3/2	678
J1:4/1	690
J1:4/2	713
J1:5/1	304
J1:6/1	0
J1:7/1	0
Junction: J2: A38 / West Lane Priority Junction	
J2:1/1	864
J2:1/2	636
J2:2/1 (short)	534
J2:2/2 (with short)	1068(In) 534(Out)
J2:3/1	289
J2:4/1	307
J2:5/1	864
J2:5/2 (with short)	919(In) 636(Out)
J2:5/3 (short)	283

Full Input Data And Results

Lane Saturation Flows

Junction: J1: A38 / Downside Road / Lilac Cottages								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J1:1/1 (A38 (south))	3.50	0.00	Y	Arm J1:5 Left	14.00	100.0 %	1775	1775
J1:1/2 (A38 (south))	3.50	0.00	Y	Arm J2:5 Ahead	Inf	100.0 %	1965	1965
J1:1/3 (A38 (south))	3.50	0.00	N	Arm J2:5 Ahead	Inf	100.0 %	2105	2105
J1:2/1 (Downside Road)	3.00	0.00	Y	Arm J2:5 Left	15.00	100.0 %	1741	1741
J1:2/2 (Downside Road)	3.00	0.00	Y	Arm J1:4 Right	13.00	100.0 %	1717	1717
J1:3/1 (A38 (north))	3.25	6.00	Y	Arm J1:4 Ahead	Inf	100.0 %	1688	1688
				Arm J1:7 Left	2.00	0.0 %		
J1:3/2 (A38 (north))	3.25	6.00	N	Arm J1:4 Ahead	Inf	100.0 %	1828	1828
J1:4/1	3.25	0.00	Y				1940	1940
J1:4/2	3.25	0.00	N				2080	2080
J1:5/1	3.50	0.00	Y	Arm J1:4 Left	5.00	0.0 %	1965	1965
J1:6/1 (Lilac Cottages)	3.25	0.00	Y				1940	1940
J1:7/1 (Lilac Cottages)	3.25	0.00	Y				1940	1940

Junction: J2: A38 / West Lane Priority Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J2:1/1	3.10	0.00	Y				1925	1925
J2:1/2	3.10	0.00	N				2065	2065
J2:2/1	3.00	0.00	Y	Arm J1:3 Ahead	Inf	95.5 %	1904	1904
				Arm J2:4 Left	12.00	4.5 %		
J2:2/2	3.00	0.00	N	Arm J1:3 Ahead	Inf	100.0 %	2055	2055
J2:3/1	3.80	6.00	Y	Arm J1:3 Left	10.00	100.0 %	1516	1516
J2:4/1	3.00	6.00	Y				1663	1663
J2:5/1	3.00	6.00	Y	Arm J2:1 Ahead	Inf	100.0 %	1663	1663
J2:5/2	3.00	6.00	N	Arm J2:1 Ahead	Inf	100.0 %	1803	1803
J2:5/3	3.00	0.00	Y	Arm J2:4 Right	6.00	100.0 %	1532	1532

Full Input Data And Results

Scenario 2: '2026 Test Case - Inter Peak' (FG2: '2026 Test Inter Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	37	1217	0	0	1254
	B	0	0	279	0	0	279
	C	1353	258	0	229	0	1840
	D	238	46	127	0	0	411
	E	0	0	0	0	0	0
	Tot.	1591	341	1623	229	0	3784

Traffic Lane Flows

Lane	Scenario 2: 2026 Test Case - Inter Peak
Junction: J1: A38 / Downside Road / Lilac Cottages	
J1:1/1 (short)	229
J1:1/2 (with short)	1034(In) 805(Out)
J1:1/3	806
J1:2/1 (with short)	411(In) 284(Out)
J1:2/2 (short)	127
J1:3/1	730
J1:3/2	766
J1:4/1	794
J1:4/2	829
J1:5/1	229
J1:6/1	0
J1:7/1	0
Junction: J2: A38 / West Lane Priority Junction	
J2:1/1	924
J2:1/2	667
J2:2/1 (short)	627
J2:2/2 (with short)	1254(In) 627(Out)
J2:3/1	279
J2:4/1	341
J2:5/1	924
J2:5/2 (with short)	971(In) 667(Out)
J2:5/3 (short)	304

Full Input Data And Results

Lane Saturation Flows

Junction: J1: A38 / Downside Road / Lilac Cottages								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J1:1/1 (A38 (south))	3.50	0.00	Y	Arm J1:5 Left	14.00	100.0 %	1775	1775
J1:1/2 (A38 (south))	3.50	0.00	Y	Arm J2:5 Ahead	Inf	100.0 %	1965	1965
J1:1/3 (A38 (south))	3.50	0.00	N	Arm J2:5 Ahead	Inf	100.0 %	2105	2105
J1:2/1 (Downside Road)	3.00	0.00	Y	Arm J2:5 Left	15.00	100.0 %	1741	1741
J1:2/2 (Downside Road)	3.00	0.00	Y	Arm J1:4 Right	13.00	100.0 %	1717	1717
J1:3/1 (A38 (north))	3.25	6.00	Y	Arm J1:4 Ahead	Inf	100.0 %	1688	1688
				Arm J1:7 Left	2.00	0.0 %		
J1:3/2 (A38 (north))	3.25	6.00	N	Arm J1:4 Ahead	Inf	100.0 %	1828	1828
J1:4/1	3.25	0.00	Y				1940	1940
J1:4/2	3.25	0.00	N				2080	2080
J1:5/1	3.50	0.00	Y	Arm J1:4 Left	5.00	0.0 %	1965	1965
J1:6/1 (Lilac Cottages)	3.25	0.00	Y				1940	1940
J1:7/1 (Lilac Cottages)	3.25	0.00	Y				1940	1940

Junction: J2: A38 / West Lane Priority Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J2:1/1	3.10	0.00	Y				1925	1925
J2:1/2	3.10	0.00	N				2065	2065
J2:2/1	3.00	0.00	Y	Arm J1:3 Ahead	Inf	94.1 %	1901	1901
				Arm J2:4 Left	12.00	5.9 %		
J2:2/2	3.00	0.00	N	Arm J1:3 Ahead	Inf	100.0 %	2055	2055
J2:3/1	3.80	6.00	Y	Arm J1:3 Left	10.00	100.0 %	1516	1516
J2:4/1	3.00	6.00	Y				1663	1663
J2:5/1	3.00	6.00	Y	Arm J2:1 Ahead	Inf	100.0 %	1663	1663
J2:5/2	3.00	6.00	N	Arm J2:1 Ahead	Inf	100.0 %	1803	1803
J2:5/3	3.00	0.00	Y	Arm J2:4 Right	6.00	100.0 %	1532	1532

Full Input Data And Results

Scenario 3: '2026 Test Case - PM' (FG3: '2026 Test PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	13	1396	0	0	1409
	B	0	0	353	0	0	353
	C	1406	277	0	371	0	2054
	D	234	47	99	0	0	380
	E	0	0	0	0	0	0
	Tot.	1640	337	1848	371	0	4196

Traffic Lane Flows

Lane	Scenario 3: 2026 Test Case - PM
Junction: J1: A38 / Downside Road / Lilac Cottages	
J1:1/1 (short)	371
J1:1/2 (with short)	1212(In) 841(Out)
J1:1/3	842
J1:2/1 (with short)	380(In) 281(Out)
J1:2/2 (short)	99
J1:3/1	869
J1:3/2	880
J1:4/1	918
J1:4/2	930
J1:5/1	371
J1:6/1	0
J1:7/1	0
Junction: J2: A38 / West Lane Priority Junction	
J2:1/1	958
J2:1/2	682
J2:2/1 (short)	705
J2:2/2 (with short)	1409(In) 704(Out)
J2:3/1	353
J2:4/1	337
J2:5/1	958
J2:5/2 (with short)	1006(In) 682(Out)
J2:5/3 (short)	324

Full Input Data And Results

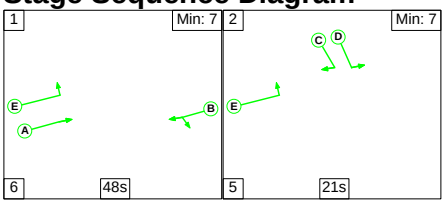
Lane Saturation Flows

Junction: J1: A38 / Downside Road / Lilac Cottages								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J1:1/1 (A38 (south))	3.50	0.00	Y	Arm J1:5 Left	14.00	100.0 %	1775	1775
J1:1/2 (A38 (south))	3.50	0.00	Y	Arm J2:5 Ahead	Inf	100.0 %	1965	1965
J1:1/3 (A38 (south))	3.50	0.00	N	Arm J2:5 Ahead	Inf	100.0 %	2105	2105
J1:2/1 (Downside Road)	3.00	0.00	Y	Arm J2:5 Left	15.00	100.0 %	1741	1741
J1:2/2 (Downside Road)	3.00	0.00	Y	Arm J1:4 Right	13.00	100.0 %	1717	1717
J1:3/1 (A38 (north))	3.25	6.00	Y	Arm J1:4 Ahead	Inf	100.0 %	1688	1688
				Arm J1:7 Left	2.00	0.0 %		
J1:3/2 (A38 (north))	3.25	6.00	N	Arm J1:4 Ahead	Inf	100.0 %	1828	1828
J1:4/1	3.25	0.00	Y				1940	1940
J1:4/2	3.25	0.00	N				2080	2080
J1:5/1	3.50	0.00	Y	Arm J1:4 Left	5.00	0.0 %	1965	1965
J1:6/1 (Lilac Cottages)	3.25	0.00	Y				1940	1940
J1:7/1 (Lilac Cottages)	3.25	0.00	Y				1940	1940

Junction: J2: A38 / West Lane Priority Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J2:1/1	3.10	0.00	Y				1925	1925
J2:1/2	3.10	0.00	N				2065	2065
J2:2/1	3.00	0.00	Y	Arm J1:3 Ahead	Inf	98.2 %	1911	1911
				Arm J2:4 Left	12.00	1.8 %		
J2:2/2	3.00	0.00	N	Arm J1:3 Ahead	Inf	100.0 %	2055	2055
J2:3/1	3.80	6.00	Y	Arm J1:3 Left	10.00	100.0 %	1516	1516
J2:4/1	3.00	6.00	Y				1663	1663
J2:5/1	3.00	6.00	Y	Arm J2:1 Ahead	Inf	100.0 %	1663	1663
J2:5/2	3.00	6.00	N	Arm J2:1 Ahead	Inf	100.0 %	1803	1803
J2:5/3	3.00	0.00	Y	Arm J2:4 Right	6.00	100.0 %	1532	1532

Full Input Data And Results

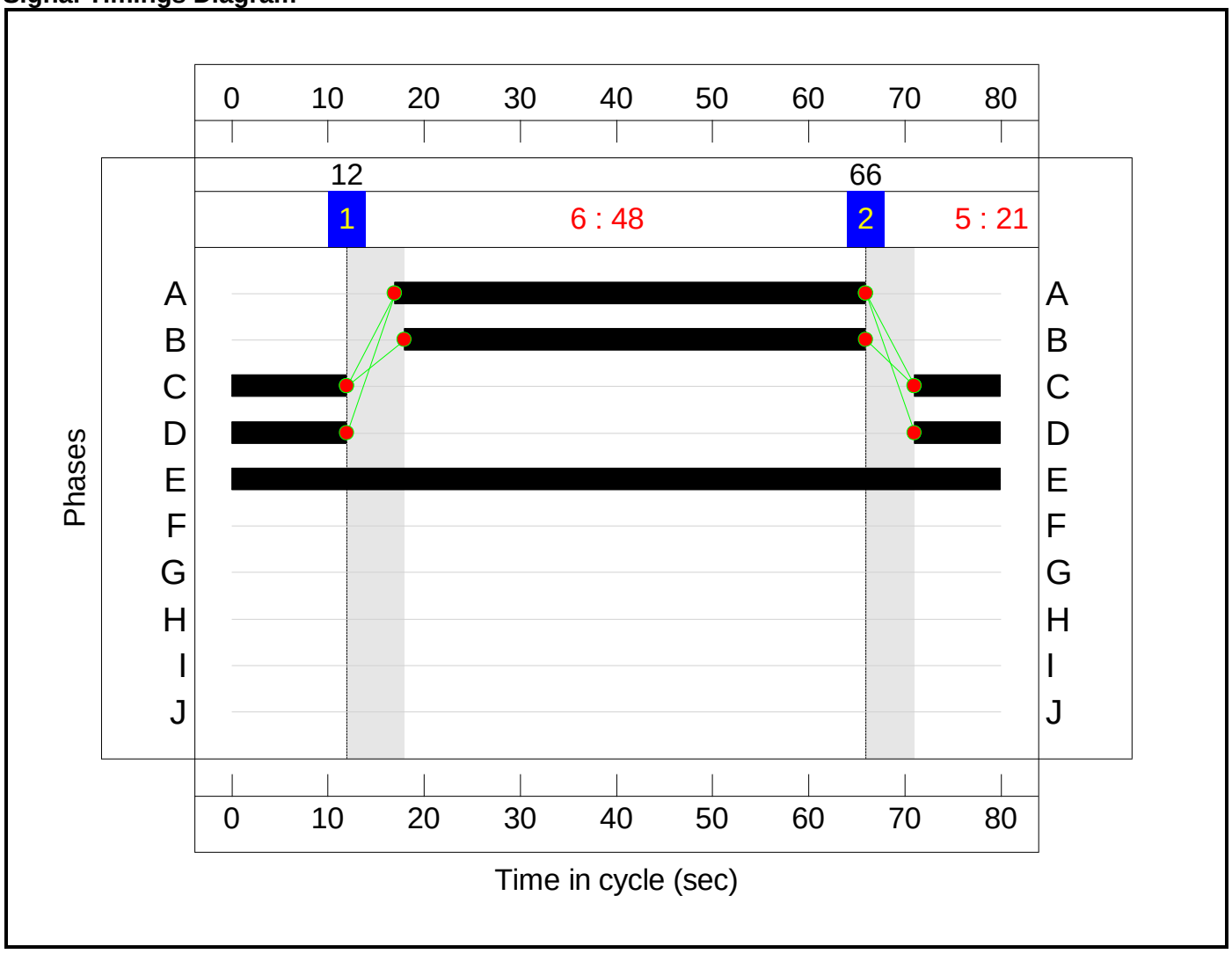
Scenario 1: '2026 Test Case - AM' (FG1: '2026 Test AM', Plan 1: 'Network Control Plan 1')
C1
Stage Sequence Diagram



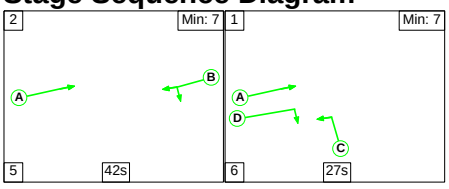
Stage Timings

Stage	1	2
Duration	48	21
Change Point	12	66

Signal Timings Diagram



C2
Stage Sequence Diagram

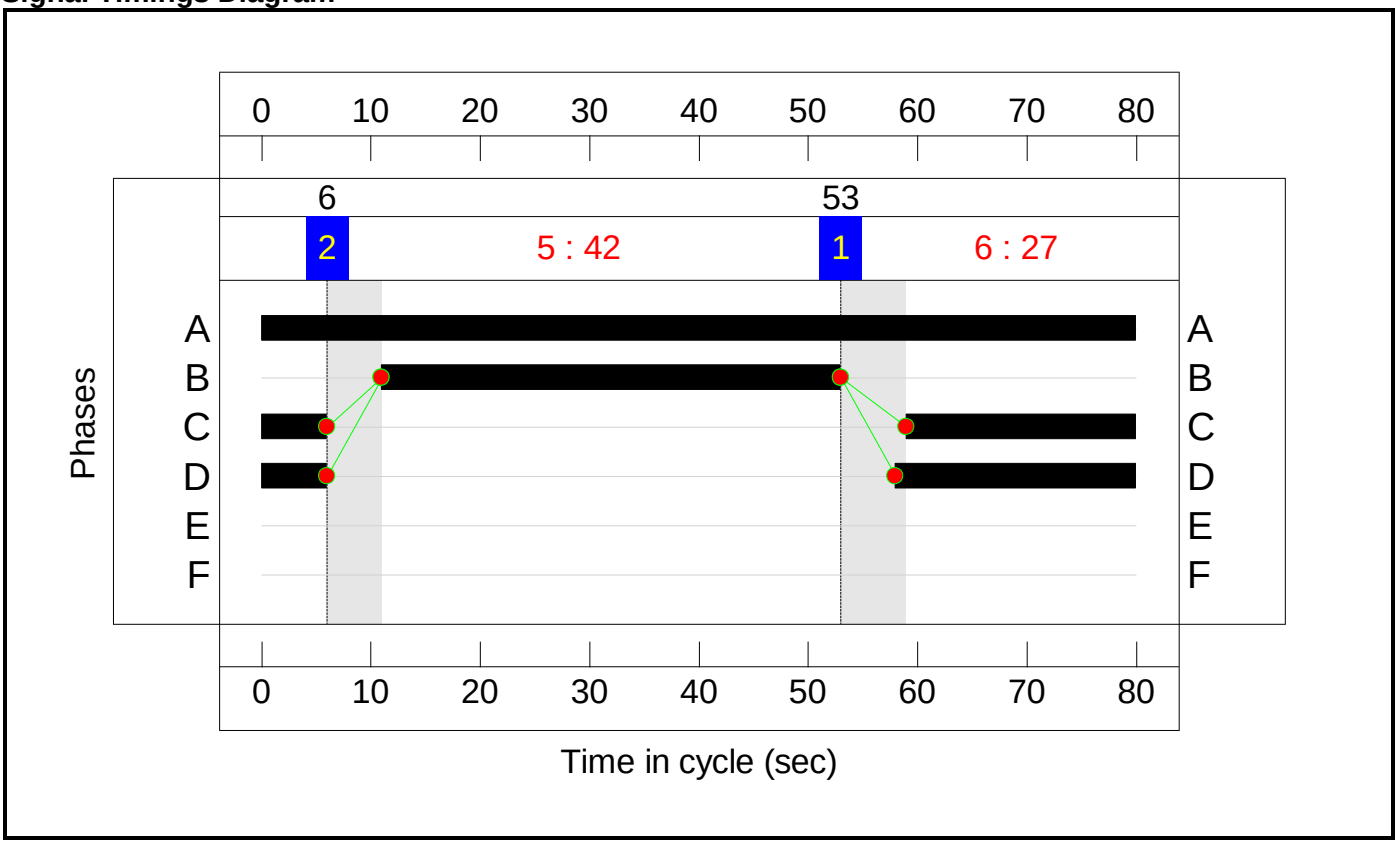


Full Input Data And Results

Stage Timings

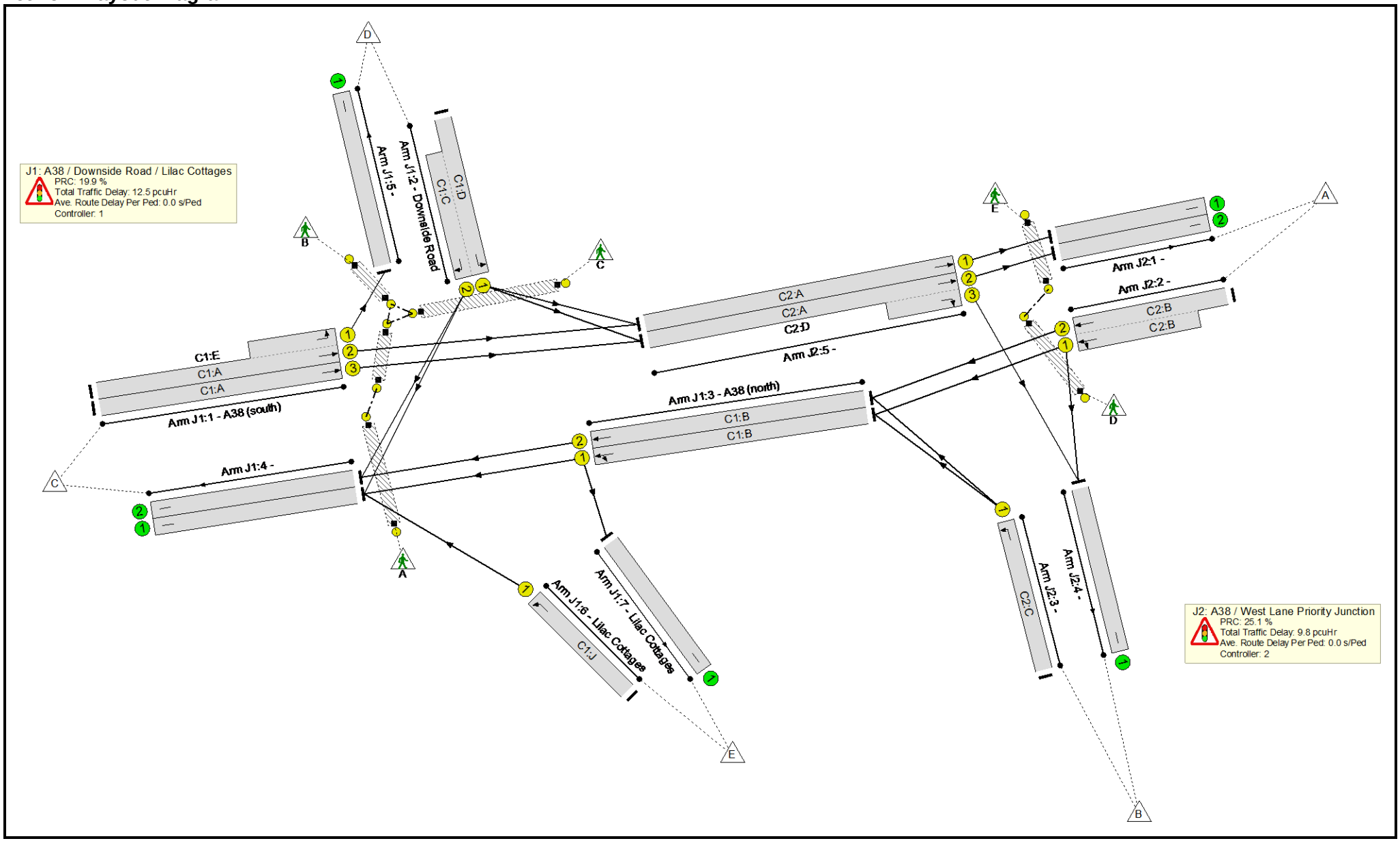
Stage	2	1
Duration	42	27
Change Point	6	53

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**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**75.1%**
J1: A38 / Downside Road / Lilac Cottages	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**75.1%**
1/2+1/1	A38 (south) Left Ahead	U	N/A	N/A	C1:A C1:E		1	49:80	-	1023	1965:1775	958+405	75.1 : 75.1%
1/3	A38 (south) Ahead	U	N/A	N/A	C1:A		1	49	-	720	2105	1316	54.7%
2/1+2/2	Downside Road Right Left	U	N/A	N/A	C1:D C1:C		1	21	-	414	1741:1717	479+97	71.9 : 71.9%
3/1	A38 (north) Ahead Left	U	N/A	N/A	C1:B		1	48	-	655	1688	1034	63.4%
3/2	A38 (north) Ahead	U	N/A	N/A	C1:B		1	48	-	678	1828	1120	60.6%
4/1		U	N/A	N/A	-		-	-	-	690	1940	1940	35.6%
4/2		U	N/A	N/A	-		-	-	-	713	2080	2080	34.3%
5/1		U	N/A	N/A	-		-	-	-	304	1965	1965	15.5%
6/1	Lilac Cottages Left	U	N/A	N/A	C1:J		0	0	-	0	1940	0	0.0%
7/1	Lilac Cottages	U	N/A	N/A	-		-	-	-	0	1940	1940	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	C1:F		0	0	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	C1:G		0	0	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	C1:H		0	0	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	C1:I		0	0	-	0	-	0	0.0%
J2: A38 / West Lane Priority Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**71.9%**
1/1		U	N/A	N/A	-		-	-	-	864	1925	1925	44.9%

Full Input Data And Results

1/2		U	N/A	N/A	-		-	-	-	636	2065	2065	30.8%
2/2+2/1	Ahead Left	U	N/A	N/A	C2:B		1	42	-	1068	2055:1904	795+795	67.2 : 67.2%
3/1	Left	U	N/A	N/A	C2:C		1	27	-	289	1516	531	54.5%
4/1		U	N/A	N/A	-		-	-	-	307	1663	1663	18.5%
5/1	Ahead	U	N/A	N/A	C2:A		1	80	-	864	1663	1663	52.0%
5/2+5/3	Ahead Right	U	N/A	N/A	C2:A C2:D		1	80:28	-	919	1803:1532	884+393	71.9 : 71.9%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	C2:E		0	0	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	C2:F		0	0	-	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**	**15.4**	**6.9**	**0.0**	**22.3**	**-**	**-**	**-**	**-**
J1: A38 / Downside Road / Lilac Cottages	**-**	**-**	**0**	**0**	**0**	**8.5**	**4.0**	**0.0**	**12.5**	**-**	**-**	**-**	**-**
1/2+1/1	1023	1023	-	-	-	1.8	1.5	-	3.3	11.6	10.9	1.5	12.4
1/3	720	720	-	-	-	1.7	0.6	-	2.3	11.6	9.0	0.6	9.6
2/1+2/2	414	414	-	-	-	2.9	1.3	-	4.2	36.4	6.9	1.3	8.1
3/1	655	655	-	-	-	1.0	0.0	-	1.0	5.7	4.3	0.0	4.3
3/2	678	678	-	-	-	1.0	0.0	-	1.0	5.4	4.1	0.0	4.1
4/1	690	690	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
4/2	713	713	-	-	-	0.0	0.3	-	0.3	1.3	0.0	0.3	0.3
5/1	304	304	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
6/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P2	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P3	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P4	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
J2: A38 / West Lane Priority Junction	**-**	**-**	**0**	**0**	**0**	**6.9**	**2.9**	**0.0**	**9.8**	**-**	**-**	**-**	**-**
1/1	864	864	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
1/2	636	636	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
2/2+2/1	1068	1068	-	-	-	3.5	1.0	-	4.5	15.2	7.6	1.0	8.6
3/1	289	289	-	-	-	1.7	0.6	-	2.3	28.3	5.1	0.6	5.7
4/1	307	307	-	-	-	0.0	0.1	-	0.1	1.3	0.0	0.1	0.1
5/1	864	864	-	-	-	0.0	0.5	-	0.6	2.4	6.0	0.5	6.6
5/2+5/3	919	919	-	-	-	1.7	0.0	-	1.7	6.7	14.7	0.0	14.7
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

Full Input Data And Results

Ped Link: P2	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

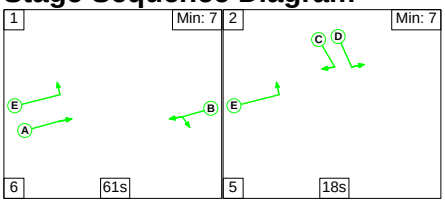
	C1	PRC for Signalled Lanes (%):	19.9	Total Delay for Signalled Lanes (pcuHr):	11.85	Cycle Time (s): 80
	C2	PRC for Signalled Lanes (%):	25.1	Total Delay for Signalled Lanes (pcuHr):	9.05	Cycle Time (s): 80
		PRC Over All Lanes (%):	19.9	Total Delay Over All Lanes(pcuHr):	22.27	

Full Input Data And Results

Scenario 2: '2026 Test Case - Inter Peak' (FG2: '2026 Test Inter Peak', Plan 1: 'Network Control Plan 1')

C1

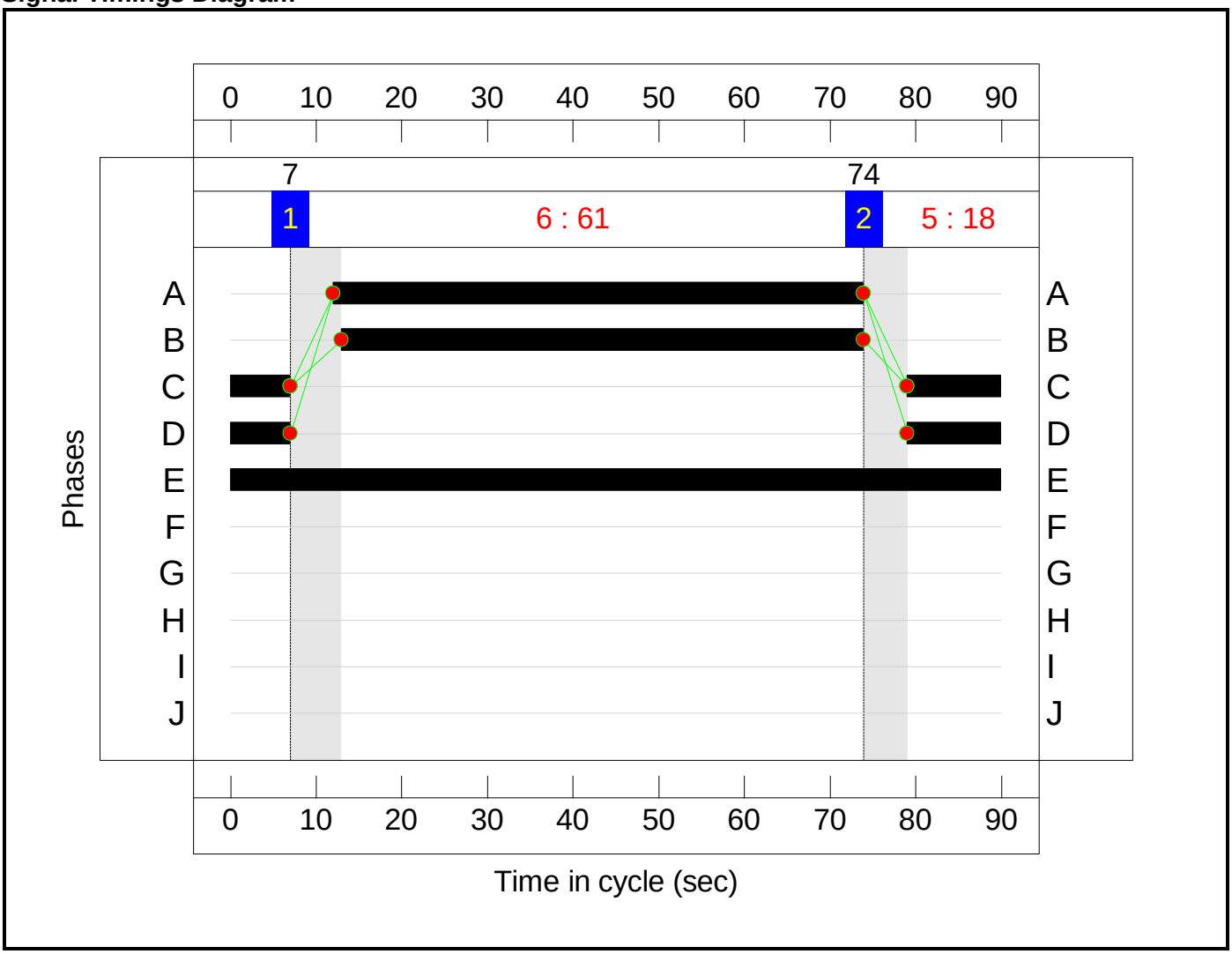
Stage Sequence Diagram



Stage Timings

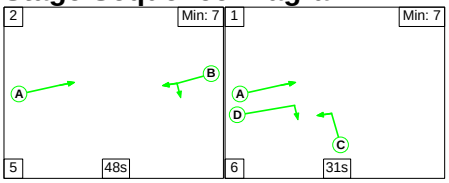
Stage	1	2
Duration	61	18
Change Point	7	74

Signal Timings Diagram



C2

Stage Sequence Diagram

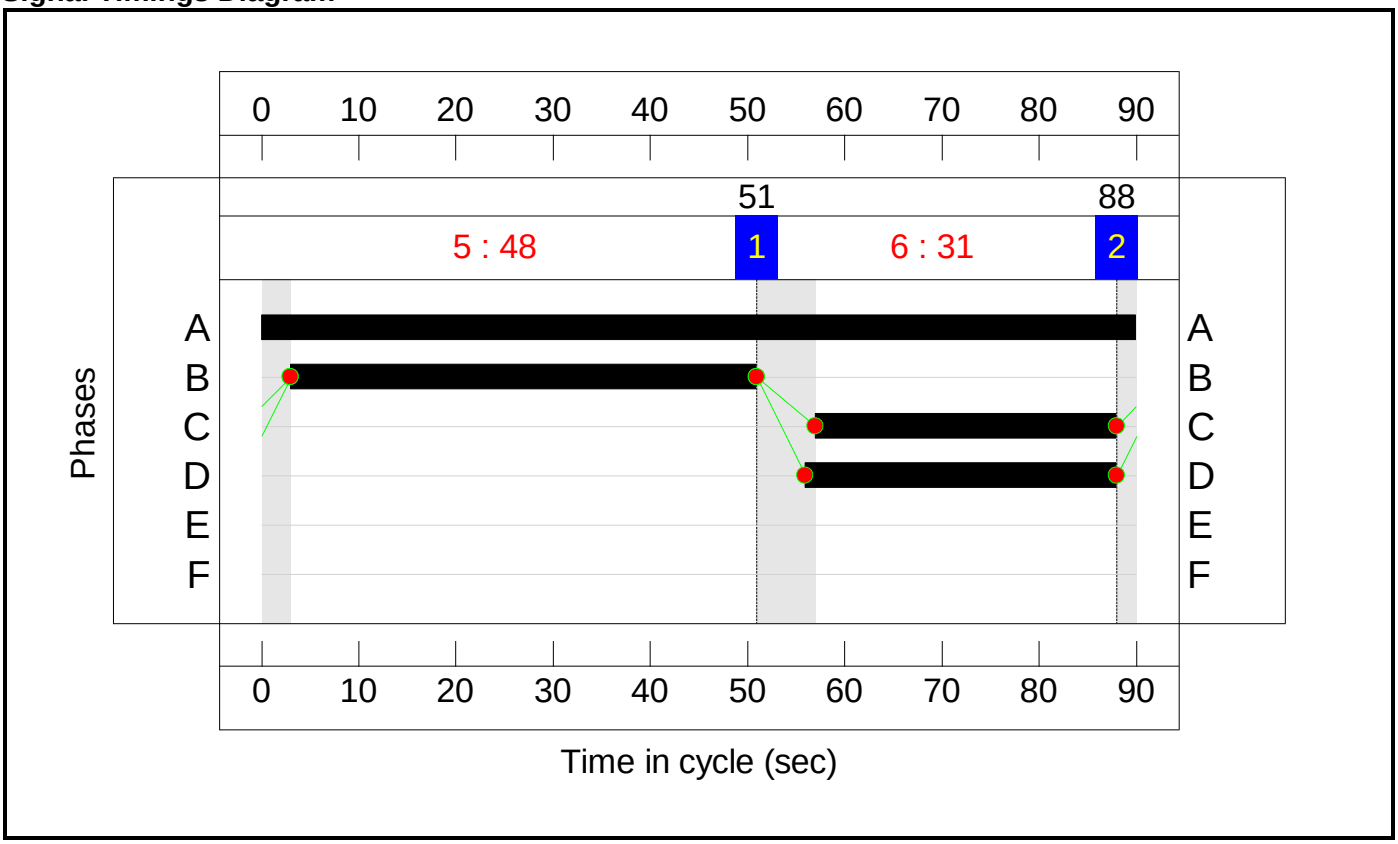


Full Input Data And Results

Stage Timings

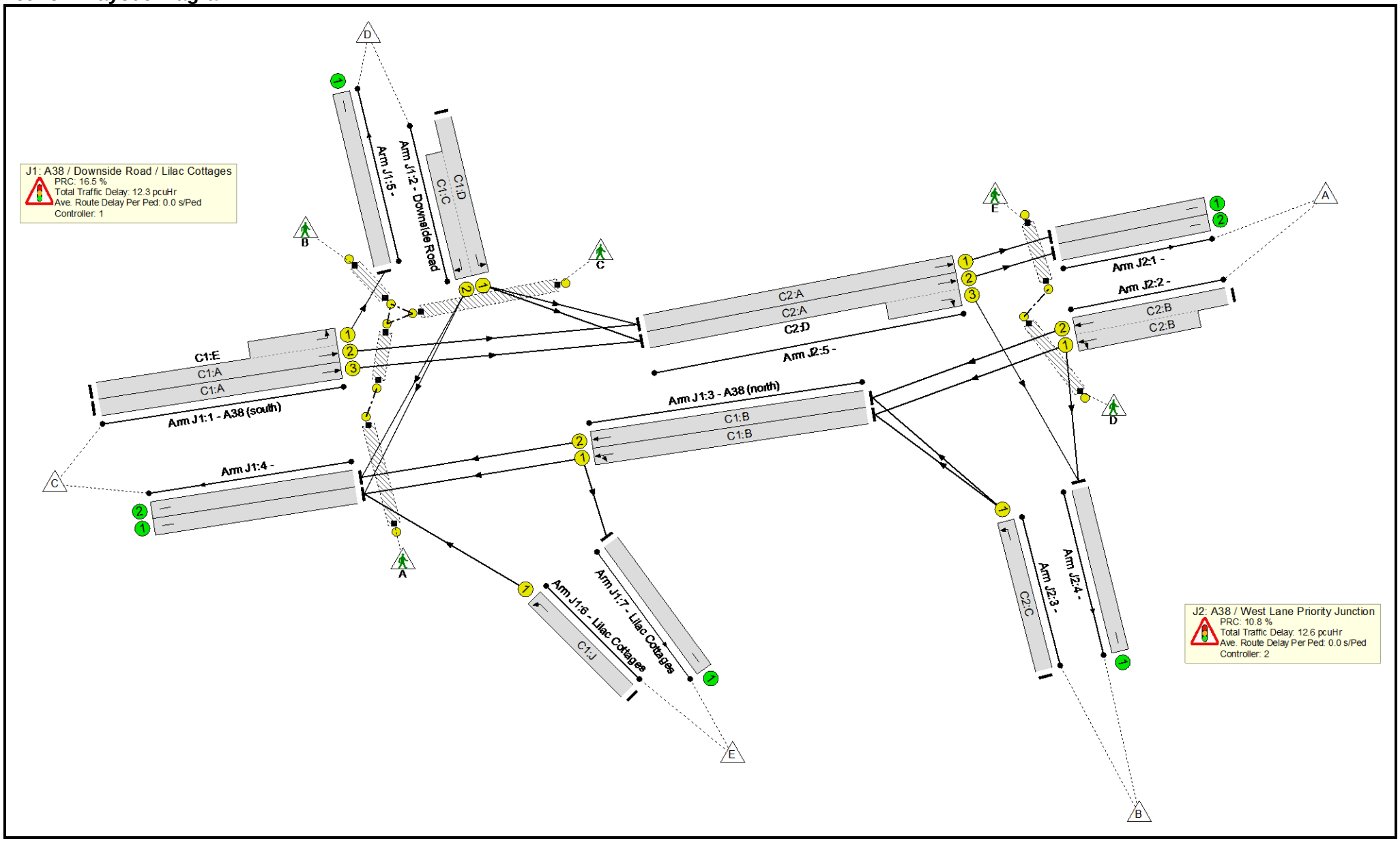
Stage	2	1
Duration	48	31
Change Point	88	51

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**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**81.2%**
J1: A38 / Downside Road / Lilac Cottages	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.3%**
1/2+1/1	A38 (south) Left Ahead	U	N/A	N/A	C1:A C1:E		1	62:90	-	1034	1965:1775	1130+321	71.3 : 71.3%
1/3	A38 (south) Ahead	U	N/A	N/A	C1:A		1	62	-	806	2105	1473	54.7%
2/1+2/2	Downside Road Right Left	U	N/A	N/A	C1:D C1:C		1	18	-	411	1741:1717	368+164	77.3 : 77.3%
3/1	A38 (north) Ahead Left	U	N/A	N/A	C1:B		1	61	-	730	1688	1163	62.8%
3/2	A38 (north) Ahead	U	N/A	N/A	C1:B		1	61	-	766	1828	1259	60.8%
4/1		U	N/A	N/A	-		-	-	-	794	1940	1940	40.9%
4/2		U	N/A	N/A	-		-	-	-	829	2080	2080	39.9%
5/1		U	N/A	N/A	-		-	-	-	229	1965	1965	11.7%
6/1	Lilac Cottages Left	U	N/A	N/A	C1:J		0	0	-	0	1940	0	0.0%
7/1	Lilac Cottages	U	N/A	N/A	-		-	-	-	0	1940	1940	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	C1:F		0	0	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	C1:G		0	0	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	C1:H		0	0	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	C1:I		0	0	-	0	-	0	0.0%
J2: A38 / West Lane Priority Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**81.2%**
1/1		U	N/A	N/A	-		-	-	-	924	1925	1925	48.0%

Full Input Data And Results

1/2		U	N/A	N/A	-		-	-	-	667	2065	2065	32.3%
2/2+2/1	Ahead Left	U	N/A	N/A	C2:B		1	48	-	1254	2055:1901	772+772	81.2 : 81.2%
3/1	Left	U	N/A	N/A	C2:C		1	31	-	279	1516	539	51.8%
4/1		U	N/A	N/A	-		-	-	-	341	1663	1663	20.5%
5/1	Ahead	U	N/A	N/A	C2:A		1	90	-	924	1663	1663	55.6%
5/2+5/3	Ahead Right	U	N/A	N/A	C2:A C2:D		1	90:32	-	971	1803:1532	822+375	81.1 : 81.1%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	C2:E		0	0	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	C2:F		0	0	-	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**	**16.6**	**8.4**	**0.0**	**24.9**	**-**	**-**	**-**	**-**
J1: A38 / Downside Road / Lilac Cottages	**-**	**-**	**0**	**0**	**0**	**8.1**	**4.2**	**0.0**	**12.3**	**-**	**-**	**-**	**-**
1/2+1/1	1034	1034	-	-	-	1.6	1.2	-	2.8	9.8	11.5	1.2	12.8
1/3	806	806	-	-	-	1.5	0.6	-	2.1	9.3	9.6	0.6	10.2
2/1+2/2	411	411	-	-	-	3.7	1.7	-	5.4	47.0	6.6	1.7	8.3
3/1	730	730	-	-	-	0.7	0.0	-	0.7	3.3	3.8	0.0	3.8
3/2	766	766	-	-	-	0.7	0.0	-	0.7	3.2	5.1	0.0	5.1
4/1	794	794	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3
4/2	829	829	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
5/1	229	229	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
6/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P2	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P3	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P4	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
J2: A38 / West Lane Priority Junction	**-**	**-**	**0**	**0**	**0**	**8.5**	**4.1**	**0.0**	**12.6**	**-**	**-**	**-**	**-**
1/1	924	924	-	-	-	0.0	0.5	-	0.5	1.8	0.0	0.5	0.5
1/2	667	667	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
2/2+2/1	1254	1254	-	-	-	4.8	2.1	-	6.9	19.8	10.6	2.1	12.8
3/1	279	279	-	-	-	1.8	0.5	-	2.3	29.8	5.5	0.5	6.0
4/1	341	341	-	-	-	0.0	0.1	-	0.1	1.4	0.0	0.1	0.1
5/1	924	924	-	-	-	0.0	0.6	-	0.7	2.6	7.0	0.6	7.6
5/2+5/3	971	971	-	-	-	1.9	0.0	-	1.9	7.0	15.7	0.0	15.7
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

Full Input Data And Results

Ped Link: P2	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

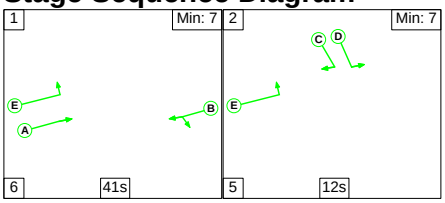
C1	PRC for Signalled Lanes (%):	16.5	Total Delay for Signalled Lanes (pcuHr):	11.58	Cycle Time (s):	90
C2	PRC for Signalled Lanes (%):	10.8	Total Delay for Signalled Lanes (pcuHr):	11.75	Cycle Time (s):	90
	PRC Over All Lanes (%):	10.8	Total Delay Over All Lanes(pcuHr):	24.91		

Full Input Data And Results

Scenario 3: '2026 Test Case - PM' (FG3: '2026 Test PM', Plan 1: 'Network Control Plan 1')

C1

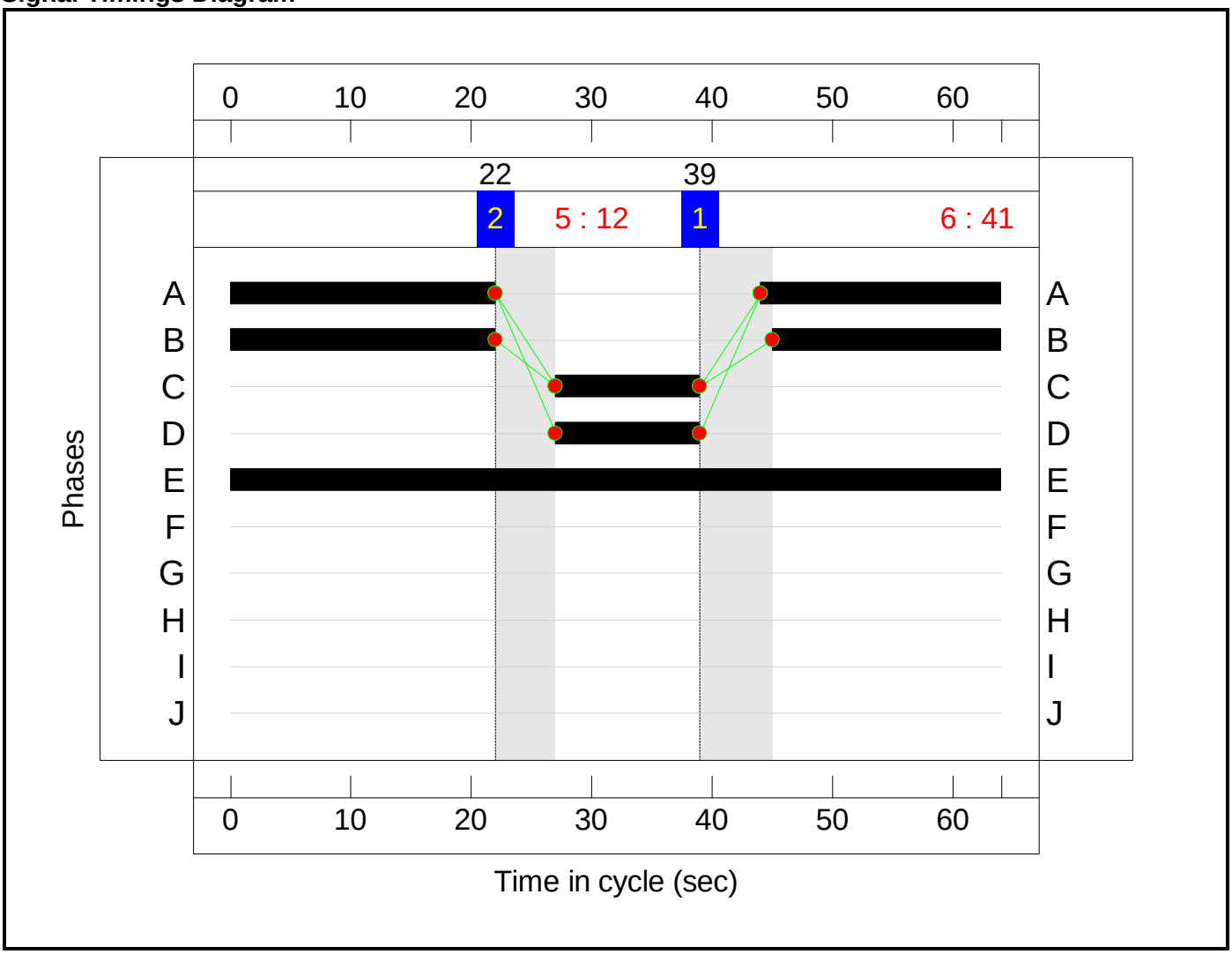
Stage Sequence Diagram



Stage Timings

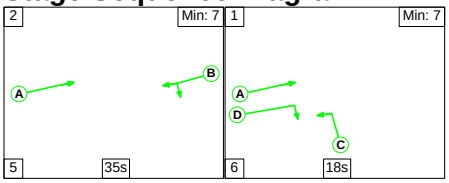
Stage	1	2
Duration	41	12
Change Point	39	22

Signal Timings Diagram



C2

Stage Sequence Diagram

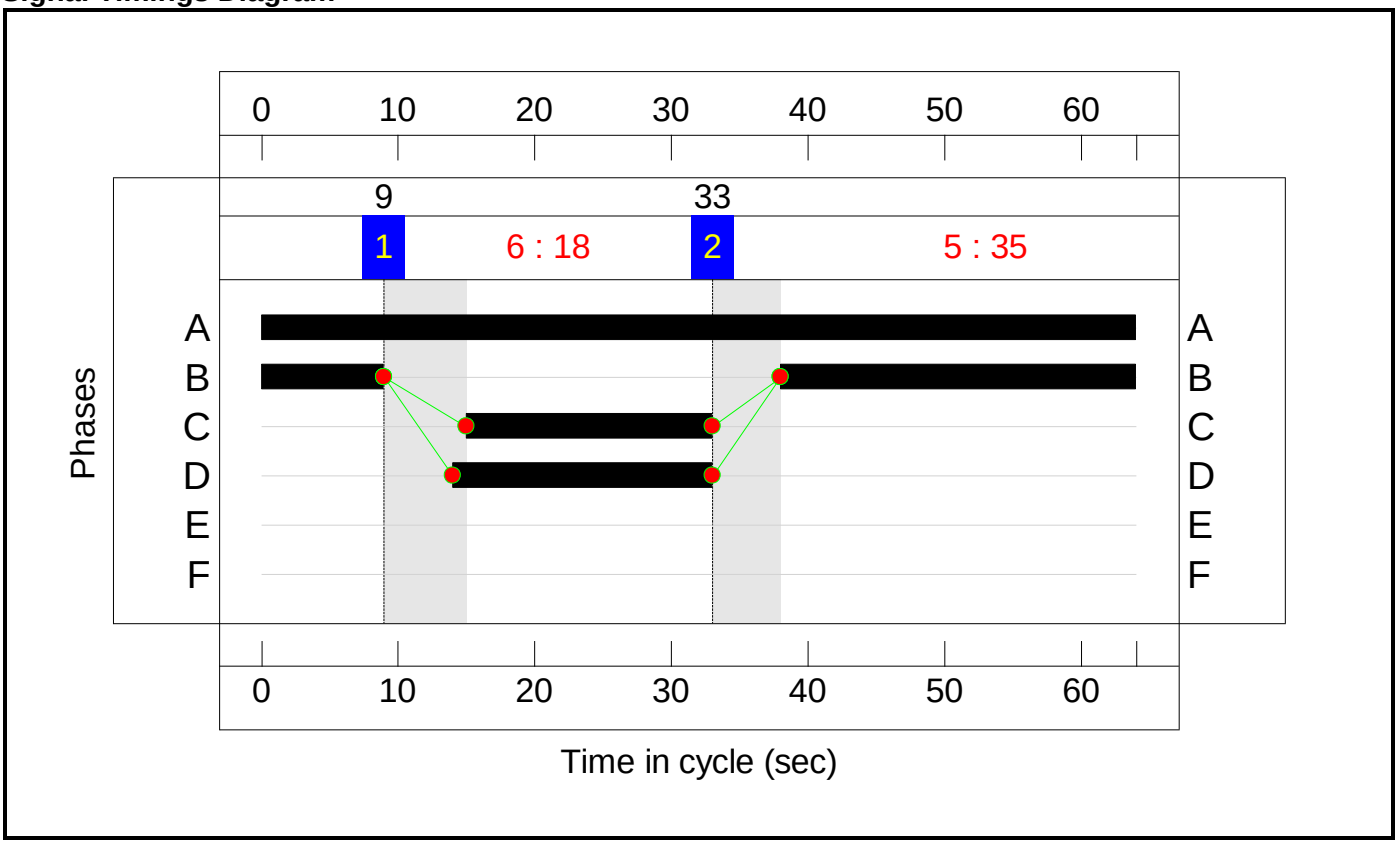


Full Input Data And Results

Stage Timings

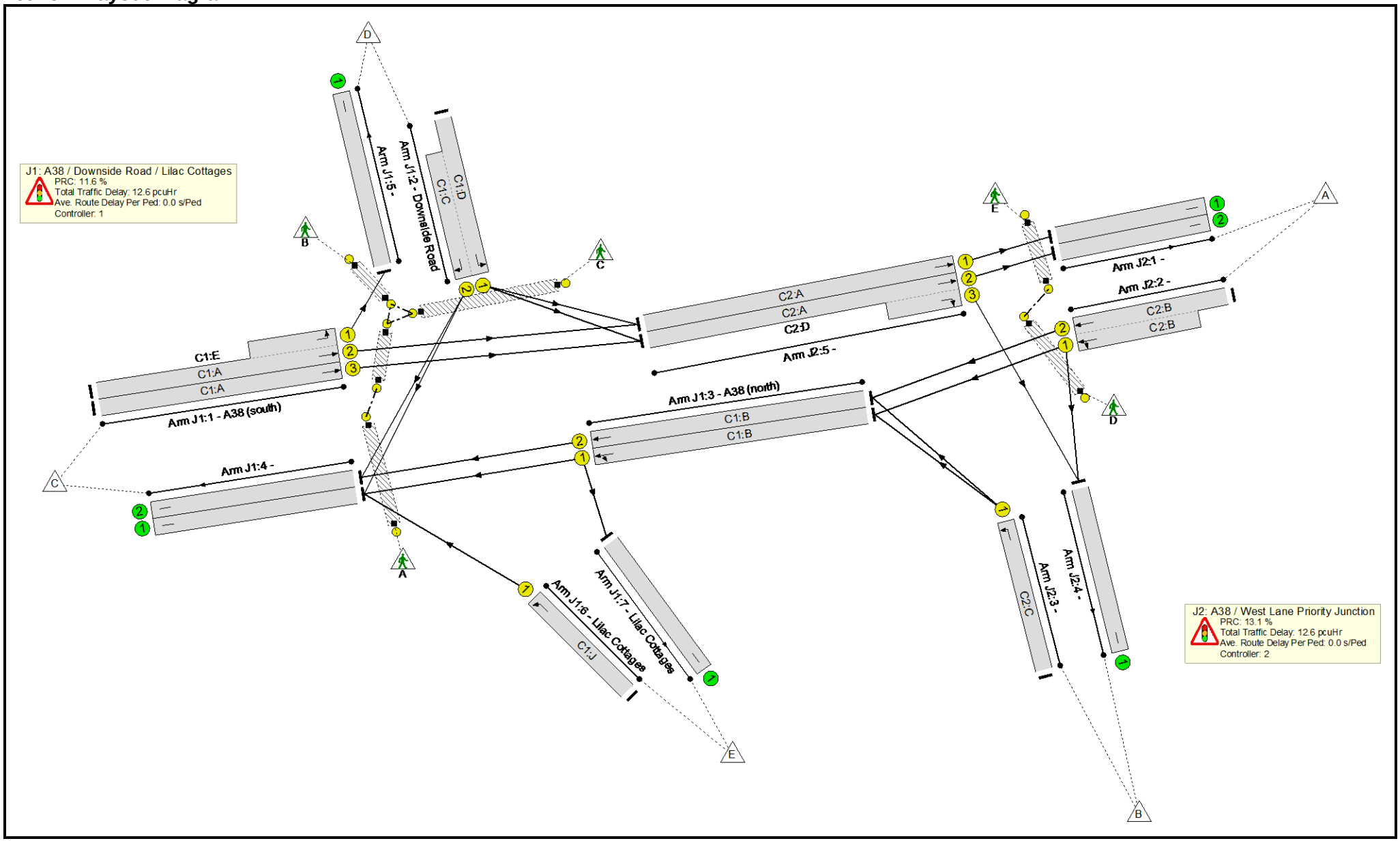
Stage	2	1
Duration	35	18
Change Point	33	9

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**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**80.7%**
J1: A38 / Downside Road / Lilac Cottages	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**80.7%**
1/2+1/1	A38 (south) Left Ahead	U	N/A	N/A	C1:A C1:E		1	42:64	-	1212	1965:1775	1043+460	80.7 : 80.7%
1/3	A38 (south) Ahead	U	N/A	N/A	C1:A		1	42	-	842	2105	1414	59.5%
2/1+2/2	Downside Road Right Left	U	N/A	N/A	C1:D C1:C		1	12	-	380	1741:1717	354+125	79.5 : 79.5%
3/1	A38 (north) Ahead Left	U	N/A	N/A	C1:B		1	41	-	869	1688	1108	78.4%
3/2	A38 (north) Ahead	U	N/A	N/A	C1:B		1	41	-	880	1828	1200	73.4%
4/1		U	N/A	N/A	-		-	-	-	918	1940	1940	47.3%
4/2		U	N/A	N/A	-		-	-	-	930	2080	2080	44.7%
5/1		U	N/A	N/A	-		-	-	-	371	1965	1965	18.9%
6/1	Lilac Cottages Left	U	N/A	N/A	C1:J		0	0	-	0	1940	0	0.0%
7/1	Lilac Cottages	U	N/A	N/A	-		-	-	-	0	1940	1940	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	C1:F		0	0	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	C1:G		0	0	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	C1:H		0	0	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	C1:I		0	0	-	0	-	0	0.0%
J2: A38 / West Lane Priority Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**79.6%**
1/1		U	N/A	N/A	-		-	-	-	958	1925	1925	49.8%

Full Input Data And Results

1/2		U	N/A	N/A	-		-	-	-	682	2065	2065	33.0%
2/2+2/1	Ahead Left	U	N/A	N/A	C2:B		1	35	-	1409	2055:1911	884+886	79.6 : 79.6%
3/1	Left	U	N/A	N/A	C2:C		1	18	-	353	1516	450	78.4%
4/1		U	N/A	N/A	-		-	-	-	337	1663	1663	20.3%
5/1	Ahead	U	N/A	N/A	C2:A		1	64	-	958	1663	1663	57.6%
5/2+5/3	Ahead Right	U	N/A	N/A	C2:A C2:D		1	64:19	-	1006	1803:1532	884+420	77.2 : 77.2%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	C2:E		0	0	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	C2:F		0	0	-	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**	**14.4**	**10.9**	**0.0**	**25.2**	**-**	**-**	**-**	**-**
J1: A38 / Downside Road / Lilac Cottages	**-**	**-**	**0**	**0**	**0**	**7.0**	**5.6**	**0.0**	**12.6**	**-**	**-**	**-**	**-**
1/2+1/1	1212	1212	-	-	-	1.4	2.1	-	3.5	10.3	9.1	2.1	11.2
1/3	842	842	-	-	-	1.3	0.7	-	2.1	8.9	8.0	0.7	8.7
2/1+2/2	380	380	-	-	-	2.5	1.9	-	4.3	41.2	4.7	1.9	6.5
3/1	869	869	-	-	-	0.9	0.0	-	0.9	3.7	4.8	0.0	4.8
3/2	880	880	-	-	-	0.9	0.0	-	0.9	3.6	4.3	0.0	4.3
4/1	918	918	-	-	-	0.0	0.4	-	0.4	1.8	0.0	0.4	0.4
4/2	930	930	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
5/1	371	371	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
6/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P2	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P3	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P4	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
J2: A38 / West Lane Priority Junction	**-**	**-**	**0**	**0**	**0**	**7.3**	**5.2**	**0.0**	**12.6**	**-**	**-**	**-**	**-**
1/1	958	958	-	-	-	0.0	0.5	-	0.5	1.9	0.0	0.5	0.5
1/2	682	682	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
2/2+2/1	1409	1409	-	-	-	3.7	1.9	-	5.7	14.4	8.6	1.9	10.5
3/1	353	353	-	-	-	2.0	1.8	-	3.8	38.5	5.7	1.8	7.4
4/1	337	337	-	-	-	0.0	0.1	-	0.1	1.4	0.0	0.1	0.1
5/1	958	958	-	-	-	0.0	0.7	-	0.7	2.7	5.6	0.7	6.3
5/2+5/3	1006	1006	-	-	-	1.6	0.0	-	1.6	5.6	13.8	0.0	13.8
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

Full Input Data And Results

Ped Link: P2	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

C1	PRC for Signalled Lanes (%):	11.6	Total Delay for Signalled Lanes (pcuHr):	11.67	Cycle Time (s):	64
C2	PRC for Signalled Lanes (%):	13.1	Total Delay for Signalled Lanes (pcuHr):	11.71	Cycle Time (s):	64
	PRC Over All Lanes (%):	11.6	Total Delay Over All Lanes(pcuHr):	25.22		

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.2.5947
© Copyright TRL Limited, 2017

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 770558 software@trl.co.uk www.trlsoftware.co.uk

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: A38 - Bristol Airport Roundabout - 2018 and 2026 Baseline - Exisitng Junction.j9
Path: \\pba.int\BRI\Projects\43321 Bristol Airport\Technical\Transport\Junction Assessments\ARCADY
Report generation date: 03-Dec-18 5:21:14 PM

»2018 Baseline, AM
»2018 Baseline, IP
»2018 Baseline, PM
»2026 Reference, AM
»2026 Reference, IP
»2026 Reference, PM
»2026 Test, AM
»2026 Test, IP
»2026 Test, PM

Summary of junction performance

	AM					IP					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2018 Baseline														
Arm A	0.9	2.90	0.46	A	47 % [Arm C]	0.9	3.00	0.46	A	66 % [Arm B]	1.4	3.75	0.59	A	38 % [Arm B]
Arm B	0.0	6.02	0.03	A		0.0	6.52	0.05	A		0.1	8.68	0.09	A	
Arm C	1.4	5.41	0.58	A		0.7	3.76	0.39	A		1.2	5.26	0.55	A	
Arm D	0.2	2.72	0.19	A		0.6	3.03	0.39	A		0.6	3.25	0.39	A	
	2026 Reference														
Arm A	1.3	3.64	0.57	A	22 % [Arm C]	1.6	4.35	0.62	A	26 % [Arm B]	2.7	5.78	0.73	A	13 % [Arm B]
Arm B	0.0	7.88	0.04	A		0.1	10.62	0.08	B		0.2	15.60	0.16	C	
Arm C	2.6	8.80	0.73	A		1.2	5.32	0.54	A		2.6	9.12	0.72	A	
Arm D	0.4	3.20	0.26	A		1.4	4.63	0.59	A		1.1	4.51	0.54	A	
	2026 Test														
Arm A	1.6	4.06	0.61	A	16 % [Arm C]	2.6	6.04	0.72	A	10 % [Arm B]	3.7	7.41	0.79	A	5 % [Arm B]
Arm B	0.0	8.97	0.05	A		0.1	17.41	0.12	C		0.3	22.95	0.22	C	
Arm C	3.3	10.93	0.77	B		1.8	7.36	0.64	A		3.7	12.66	0.79	B	
Arm D	0.4	3.41	0.31	A		2.7	7.07	0.73	A		1.6	5.49	0.62	A	

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	13-Apr-18
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CTAS\tony
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D1	2018 Baseline	AM	DIRECT	08:00	09:00	60	15
D2	2018 Baseline	IP	DIRECT	13:00	14:00	60	15
D3	2018 Baseline	PM	DIRECT	17:00	18:00	60	15
D4	2026 Reference	AM	DIRECT	08:00	09:00	60	15
D5	2026 Reference	IP	DIRECT	13:00	14:00	60	15
D6	2026 Reference	PM	DIRECT	17:00	18:00	60	15
D7	2026 Test	AM	DIRECT	08:00	09:00	60	15
D8	2026 Test	IP	DIRECT	13:00	14:00	60	15
D9	2026 Test	PM	DIRECT	17:00	18:00	60	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2018 Baseline, AM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	3.92	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	47	Arm C

Arms

Arms

Arm	Name	Description
A	A38 (NORTH)	
B	EASIRENT	
C	A38 (SOUTH)	
D	BRISTOL AIRPORT	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A	7.30	10.00	32.9	8.0	48.0	48.0	
B	3.00	5.82	7.2	18.4	48.0	39.0	
C	3.45	7.20	150.0	29.3	48.0	44.0	
D	7.13	9.14	25.7	18.7	48.0	59.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/TS)
A	0.725	617.862
B	0.519	310.595
C	0.670	507.018
D	0.716	592.985

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D1	2018 Baseline	AM	DIRECT	08:00	09:00	60	15

Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		✓	100.000
B		✓	100.000
C		✓	100.000
D		✓	100.000

Origin-Destination Data

08:00 - 08:15

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	46.00	1.00	155.00	56.00
	B	1.00	0.00	3.00	0.00
	C	207.00	0.00	0.00	25.00
	D	46.00	1.00	30.00	0.00

08:15 - 08:30

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	45.00	2.00	130.00	55.00
	B	0.00	0.00	0.00	1.00
	C	193.00	1.00	0.00	32.00
	D	42.00	0.00	31.00	0.00

08:30 - 08:45

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	54.00	0.00	148.00	69.00
	B	0.00	0.00	0.00	2.00
	C	184.00	0.00	0.00	40.00
	D	39.00	2.00	22.00	0.00

08:45 - 09:00

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	56.00	1.00	125.00	91.00
	B	1.00	0.00	1.00	3.00
	C	181.00	0.00	0.00	54.00
	D	38.00	2.00	28.00	1.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	1	0	5	4
	B	0	0	0	0
	C	3	0	0	1
	D	1	0	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
A	0.46	2.90	0.9	A
B	0.03	6.02	0.0	A
C	0.58	5.41	1.4	A
D	0.19	2.72	0.2	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	258.00	30.91	595.44	0.433	257.21	0.8	2.763	A
B	4.00	286.12	162.17	0.025	3.97	0.0	5.689	A
C	232.00	102.68	438.20	0.529	230.86	1.1	4.438	A
D	77.00	252.83	412.07	0.187	76.77	0.2	2.720	A

08:15 - 08:30

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	232.00	32.00	594.65	0.390	232.12	0.7	2.580	A
B	1.00	261.13	175.14	0.006	1.02	0.0	5.168	A
C	226.00	101.03	439.31	0.514	226.05	1.1	4.334	A
D	73.00	239.10	421.90	0.173	73.02	0.2	2.618	A

08:30 - 08:45

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	271.00	24.03	600.43	0.451	270.82	0.9	2.836	A
B	2.00	292.84	158.69	0.013	1.99	0.0	5.743	A
C	224.00	124.90	423.31	0.529	223.95	1.1	4.632	A
D	63.00	237.96	422.71	0.149	63.03	0.2	2.536	A

08:45 - 09:00

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	273.00	30.98	595.39	0.459	272.98	0.9	2.897	A
B	5.00	300.96	154.48	0.032	4.98	0.0	6.020	A
C	235.00	151.90	405.21	0.580	234.75	1.4	5.406	A
D	69.00	237.85	422.79	0.163	68.98	0.2	2.577	A

2018 Baseline, IP

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	3.23	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	66	Arm B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D2	2018 Baseline	IP	DIRECT	13:00	14:00	60	15

Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		✓	100.000
B		✓	100.000
C		✓	100.000
D		✓	100.000

Origin-Destination Data

13:00 - 13:15

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	38.00	3.00	105.00	98.00
	B	0.00	0.00	0.00	0.00
	C	111.00	1.00	0.00	40.00
	D	120.00	3.00	66.00	1.00

13:15 - 13:30

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	38.00	2.00	126.00	94.00
	B	2.00	0.00	0.00	2.00
	C	122.00	1.00	0.00	40.00
	D	105.00	0.00	67.00	0.00

Demand (PCU/TS)

13:30 - 13:45

		To			
		A	B	C	D
From	A	30.00	3.00	124.00	102.00
	B	1.00	0.00	0.00	2.00
	C	97.00	1.00	0.00	59.00
	D	98.00	0.00	48.00	1.00

Demand (PCU/TS)

13:45 - 14:00

		To			
		A	B	C	D
From	A	30.00	2.00	123.00	104.00
	B	1.00	0.00	0.00	6.00
	C	100.00	1.00	0.00	45.00
	D	116.00	0.00	46.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	6	0
	B	0	0	0	0
	C	5	0	0	8
	D	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
A	0.46	3.00	0.9	A
B	0.05	6.52	0.0	A
C	0.39	3.76	0.7	A
D	0.39	3.03	0.6	A

Main Results for each time segment

13:00 - 13:15

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	244.00	70.76	566.53	0.431	243.23	0.8	2.846	A
B	0.00	307.01	151.33	0.000	0.00	0.0	0.000	A
C	152.00	136.57	415.49	0.366	151.39	0.6	3.596	A
D	190.00	149.43	486.06	0.391	189.36	0.6	3.027	A

13:15 - 13:30

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	260.00	68.01	568.52	0.457	259.91	0.9	2.998	A
B	4.00	324.91	142.05	0.028	3.97	0.0	6.516	A
C	163.00	135.97	415.89	0.392	162.93	0.7	3.760	A
D	172.00	162.92	476.41	0.361	172.07	0.6	2.957	A

13:30 - 13:45

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	259.00	50.08	581.53	0.445	259.03	0.8	2.870	A
B	3.00	305.12	152.32	0.020	3.01	0.0	6.029	A
C	157.00	136.02	415.85	0.378	157.03	0.6	3.688	A
D	147.00	129.14	500.57	0.294	147.15	0.4	2.549	A

13:45 - 14:00

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	259.00	47.00	583.76	0.444	259.01	0.8	2.847	A
B	7.00	303.01	153.41	0.046	6.97	0.0	6.146	A
C	146.00	140.97	412.53	0.354	146.06	0.6	3.578	A
D	162.00	132.00	498.53	0.325	161.94	0.5	2.673	A

2018 Baseline, PM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	4.10	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	38	Arm B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D3	2018 Baseline	PM	DIRECT	17:00	18:00	60	15

Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		✓	100.000
B		✓	100.000
C		✓	100.000
D		✓	100.000

Origin-Destination Data

17:00 - 17:15

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	42.00	1.00	177.00	118.00
	B	0.00	0.00	0.00	2.00
	C	170.00	1.00	0.00	32.00
	D	109.00	1.00	41.00	0.00

17:15 - 17:30

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	34.00	2.00	177.00	131.00
	B	1.00	0.00	0.00	9.00
	C	177.00	0.00	0.00	39.00
	D	117.00	0.00	38.00	0.00

Demand (PCU/TS)

17:30 - 17:45

		To			
		A	B	C	D
From	A	39.00	2.00	179.00	125.00
	B	1.00	0.00	1.00	1.00
	C	159.00	0.00	0.00	19.00
	D	121.00	1.00	42.00	1.00

Demand (PCU/TS)

17:45 - 18:00

		To			
		A	B	C	D
From	A	39.00	1.00	182.00	121.00
	B	0.00	0.00	0.00	5.00
	C	157.00	1.00	0.00	43.00
	D	130.00	2.00	43.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	1	0
	B	0	0	0	0
	C	2	0	0	1
	D	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
A	0.59	3.75	1.4	A
B	0.09	8.68	0.1	A
C	0.55	5.26	1.2	A
D	0.39	3.25	0.6	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	338.00	42.85	586.78	0.576	336.65	1.4	3.598	A
B	2.00	376.51	115.28	0.017	1.98	0.0	7.942	A
C	203.00	161.34	398.88	0.509	201.96	1.0	4.630	A
D	151.00	211.95	441.32	0.342	150.48	0.5	3.089	A

17:15 - 17:30

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	344.00	38.02	590.28	0.583	343.96	1.4	3.672	A
B	10.00	379.97	113.49	0.088	9.92	0.1	8.684	A
C	216.00	174.89	389.80	0.554	215.79	1.2	5.259	A
D	155.00	211.88	441.38	0.351	154.98	0.5	3.142	A

17:30 - 17:45

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	345.00	43.98	585.96	0.589	344.97	1.4	3.753	A
B	3.00	385.95	110.39	0.027	3.07	0.0	8.390	A
C	178.00	167.06	395.05	0.451	178.41	0.8	4.242	A
D	165.00	199.25	450.41	0.366	164.96	0.6	3.152	A

17:45 - 18:00

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	343.00	45.99	584.50	0.587	343.00	1.4	3.748	A
B	5.00	384.99	110.88	0.045	4.98	0.0	8.497	A
C	201.00	164.99	396.44	0.507	200.81	1.0	4.677	A
D	175.00	196.95	452.06	0.387	174.95	0.6	3.247	A

2026 Reference, AM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	5.63	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	22	Arm C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D4	2026 Reference	AM	DIRECT	08:00	09:00	60	15

Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		✓	100.000
B		✓	100.000
C		✓	100.000
D		✓	100.000

Origin-Destination Data

Demand (PCU/TS)

08:00 - 08:15

		To			
		A	B	C	D
From	A	52.00	1.00	179.00	83.00
	B	1.00	0.00	3.00	0.00
	C	238.00	0.00	0.00	33.00
	D	64.00	1.00	37.00	0.00

Demand (PCU/TS)

08:15 - 08:30

		To			
		A	B	C	D
From	A	51.00	2.00	151.00	81.00
	B	0.00	0.00	0.00	1.00
	C	222.00	1.00	0.00	41.00
	D	60.00	0.00	38.00	0.00

Demand (PCU/TS)

08:30 - 08:45

		To			
		A	B	C	D
From	A	62.00	0.00	172.00	98.00
	B	0.00	0.00	0.00	2.00
	C	212.00	0.00	0.00	51.00
	D	56.00	2.00	28.00	0.00

Demand (PCU/TS)

08:45 - 09:00

		To			
		A	B	C	D
From	A	64.00	1.00	146.00	123.00
	B	1.00	0.00	1.00	3.00
	C	208.00	0.00	0.00	67.00
	D	55.00	2.00	35.00	1.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	1	0	5	4
	B	0	0	0	0
	C	3	0	0	1
	D	1	0	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
A	0.57	3.64	1.3	A
B	0.04	7.88	0.0	A
C	0.73	8.80	2.6	A
D	0.26	3.20	0.4	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	315.00	37.87	590.39	0.534	313.82	1.2	3.372	A
B	4.00	349.69	129.20	0.031	3.97	0.0	7.185	A
C	271.00	135.49	416.21	0.651	269.12	1.9	6.210	A
D	102.00	289.15	386.08	0.264	101.64	0.4	3.202	A

08:15 - 08:30

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	285.00	39.00	589.57	0.483	285.20	1.0	3.077	A
B	1.00	321.21	143.97	0.007	1.02	0.0	6.298	A
C	264.00	133.05	417.84	0.632	264.09	1.8	6.014	A
D	98.00	274.17	396.80	0.247	98.03	0.3	3.056	A

08:30 - 08:45

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	332.00	30.04	596.07	0.557	331.68	1.3	3.533	A
B	2.00	359.71	124.00	0.016	1.99	0.0	7.376	A
C	263.00	161.82	398.56	0.660	262.83	2.0	6.792	A
D	86.00	273.87	397.02	0.217	86.05	0.3	2.931	A

08:45 - 09:00

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	334.00	37.97	590.32	0.566	333.95	1.3	3.644	A
B	5.00	368.93	119.22	0.042	4.97	0.0	7.876	A
C	275.00	191.85	378.44	0.727	274.32	2.6	8.797	A
D	93.00	272.56	397.96	0.234	92.97	0.3	2.990	A

2026 Reference, IP

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	4.71	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	26	Arm B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D5	2026 Reference	IP	DIRECT	13:00	14:00	60	15

Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		✓	100.000
B		✓	100.000
C		✓	100.000
D		✓	100.000

Origin-Destination Data

13:00 - 13:15

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	44.00	3.00	126.00	151.00
	B	0.00	0.00	0.00	0.00
	C	134.00	1.00	0.00	56.00
	D	182.00	3.00	88.00	1.00

13:15 - 13:30

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	43.00	2.00	149.00	146.00
	B	2.00	0.00	0.00	2.00
	C	146.00	1.00	0.00	56.00
	D	165.00	0.00	90.00	0.00

13:30 - 13:45

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	34.00	3.00	147.00	155.00
	B	1.00	0.00	0.00	2.00
	C	118.00	1.00	0.00	78.00
	D	157.00	0.00	67.00	1.00

13:45 - 14:00

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	34.00	2.00	146.00	158.00
	B	1.00	0.00	0.00	7.00
	C	121.00	1.00	0.00	62.00
	D	177.00	0.00	65.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	6	0
	B	0	0	0	0
	C	5	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
A	0.62	4.35	1.6	A
B	0.08	10.62	0.1	B
C	0.54	5.32	1.2	A
D	0.59	4.63	1.4	A

Main Results for each time segment

13:00 - 13:15

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	324.00	92.52	550.74	0.588	322.55	1.4	4.009	A
B	0.00	408.11	98.89	0.000	0.00	0.0	0.000	A
C	191.00	195.12	376.24	0.508	189.95	1.1	4.971	A
D	274.00	178.06	465.57	0.589	272.59	1.4	4.631	A

13:15 - 13:30

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	340.00	91.02	551.83	0.616	339.82	1.6	4.349	A
B	4.00	427.82	88.67	0.045	3.95	0.0	10.618	B
C	203.00	192.92	377.72	0.537	202.87	1.2	5.324	A
D	255.00	191.85	455.70	0.560	255.13	1.3	4.491	A

13:30 - 13:45

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	339.00	69.19	567.67	0.597	339.09	1.5	4.039	A
B	3.00	404.28	100.88	0.030	3.02	0.0	9.197	A
C	197.00	193.06	377.62	0.522	197.06	1.1	5.134	A
D	225.00	154.24	482.62	0.466	225.40	0.9	3.506	A

13:45 - 14:00

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	340.00	66.00	569.99	0.597	340.01	1.5	4.011	A
B	8.00	403.00	101.54	0.079	7.95	0.1	9.611	A
C	184.00	199.95	373.01	0.493	184.12	1.0	4.921	A
D	242.00	157.01	480.63	0.504	241.87	1.0	3.767	A

2026 Reference, PM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	6.44	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	13	Arm B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D6	2026 Reference	PM	DIRECT	17:00	18:00	60	15

Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		✓	100.000
B		✓	100.000
C		✓	100.000
D		✓	100.000

Origin-Destination Data

17:00 - 17:15

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	48.00	1.00	206.00	159.00
	B	0.00	0.00	0.00	2.00
	C	198.00	1.00	0.00	44.00
	D	151.00	1.00	51.00	0.00

17:15 - 17:30

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	39.00	2.00	206.00	174.00
	B	1.00	0.00	0.00	10.00
	C	206.00	0.00	0.00	52.00
	D	159.00	0.00	48.00	0.00

Demand (PCU/TS)

17:30 - 17:45

		To			
		A	B	C	D
From	A	44.00	2.00	208.00	167.00
	B	1.00	0.00	1.00	1.00
	C	185.00	0.00	0.00	29.00
	D	163.00	1.00	53.00	1.00

Demand (PCU/TS)

17:45 - 18:00

		To			
		A	B	C	D
From	A	45.00	1.00	212.00	162.00
	B	0.00	0.00	0.00	6.00
	C	183.00	1.00	0.00	56.00
	D	174.00	2.00	54.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	1	0
	B	0	0	0	0
	C	2	0	0	1
	D	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
A	0.73	5.78	2.7	A
B	0.16	15.60	0.2	C
C	0.72	9.12	2.6	A
D	0.54	4.51	1.1	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	414.00	52.75	579.59	0.714	411.54	2.5	5.307	A
B	2.00	461.31	71.29	0.028	1.97	0.0	12.977	B
C	243.00	207.74	367.79	0.661	241.06	1.9	7.126	A
D	203.00	245.13	417.58	0.486	202.06	0.9	4.160	A

17:15 - 17:30

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	421.00	48.02	583.03	0.722	420.89	2.6	5.572	A
B	11.00	466.91	68.39	0.161	10.84	0.2	15.597	C
C	258.00	223.77	357.04	0.723	257.37	2.6	9.124	A
D	207.00	245.57	417.27	0.496	206.96	1.0	4.278	A

17:30 - 17:45

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	421.00	54.97	577.99	0.728	420.92	2.7	5.753	A
B	3.00	472.89	65.29	0.046	3.14	0.0	14.513	B
C	214.00	214.12	363.51	0.589	215.08	1.5	6.220	A
D	218.00	230.73	427.88	0.509	217.95	1.0	4.286	A

17:45 - 18:00

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	420.00	56.97	576.53	0.728	419.98	2.7	5.775	A
B	6.00	472.96	65.25	0.092	5.95	0.1	15.165	C
C	240.00	212.95	364.29	0.659	239.56	1.9	7.315	A
D	230.00	228.81	429.25	0.536	229.89	1.1	4.511	A

2026 Test, AM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	6.58	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	16	Arm C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D7	2026 Test	AM	DIRECT	08:00	09:00	60	15

Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		✓	100.000
B		✓	100.000
C		✓	100.000
D		✓	100.000

Origin-Destination Data

Demand (PCU/TS)

08:00 - 08:15

		To			
		A	B	C	D
From	A	52.00	1.00	183.00	103.00
	B	1.00	0.00	3.00	0.00
	C	240.00	0.00	0.00	39.00
	D	77.00	1.00	40.00	0.00

Demand (PCU/TS)

08:15 - 08:30

		To			
		A	B	C	D
From	A	51.00	2.00	154.00	102.00
	B	0.00	0.00	0.00	1.00
	C	224.00	1.00	0.00	47.00
	D	73.00	0.00	41.00	0.00

Demand (PCU/TS)

08:30 - 08:45

		To			
		A	B	C	D
From	A	62.00	0.00	175.00	119.00
	B	0.00	0.00	0.00	2.00
	C	214.00	0.00	0.00	57.00
	D	69.00	2.00	31.00	0.00

Demand (PCU/TS)

08:45 - 09:00

		To			
		A	B	C	D
From	A	64.00	1.00	149.00	144.00
	B	1.00	0.00	1.00	3.00
	C	210.00	0.00	0.00	72.00
	D	68.00	2.00	38.00	1.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	1	0	5	4
	B	0	0	0	0
	C	3	0	0	1
	D	1	0	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
A	0.61	4.06	1.6	A
B	0.05	8.97	0.0	A
C	0.77	10.93	3.3	B
D	0.31	3.41	0.4	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	339.00	40.85	588.23	0.576	337.60	1.4	3.715	A
B	4.00	376.45	115.31	0.035	3.96	0.0	8.080	A
C	279.00	155.35	402.90	0.692	276.75	2.3	7.206	A
D	118.00	290.84	384.87	0.307	117.55	0.4	3.405	A

08:15 - 08:30

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	309.00	42.00	587.39	0.526	309.24	1.2	3.365	A
B	1.00	348.24	129.95	0.008	1.03	0.0	6.981	A
C	272.00	154.07	403.76	0.674	272.10	2.2	7.026	A
D	114.00	276.19	395.36	0.288	114.03	0.4	3.244	A

08:30 - 08:45

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	356.00	33.04	593.89	0.599	355.62	1.5	3.920	A
B	2.00	386.66	110.02	0.018	1.99	0.0	8.331	A
C	271.00	182.78	384.51	0.705	270.77	2.4	8.094	A
D	102.00	275.82	395.62	0.258	102.06	0.4	3.105	A

08:45 - 09:00

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	358.00	40.97	588.14	0.609	357.94	1.6	4.059	A
B	5.00	395.91	105.22	0.048	4.97	0.0	8.974	A
C	282.00	212.83	364.38	0.774	281.04	3.3	10.929	B
D	109.00	274.37	396.66	0.275	108.97	0.4	3.169	A

2026 Test, IP

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	6.74	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	10	Arm B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D8	2026 Test	IP	DIRECT	13:00	14:00	60	15

Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		✓	100.000
B		✓	100.000
C		✓	100.000
D		✓	100.000

Origin-Destination Data

13:00 - 13:15

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	44.00	3.00	132.00	194.00
	B	0.00	0.00	0.00	0.00
	C	142.00	1.00	0.00	68.00
	D	232.00	3.00	102.00	1.00

13:15 - 13:30

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	43.00	2.00	156.00	189.00
	B	2.00	0.00	0.00	2.00
	C	154.00	1.00	0.00	68.00
	D	215.00	0.00	104.00	0.00

13:30 - 13:45

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	34.00	3.00	154.00	198.00
	B	1.00	0.00	0.00	2.00
	C	126.00	1.00	0.00	89.00
	D	207.00	0.00	81.00	1.00

13:45 - 14:00

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	34.00	2.00	153.00	201.00
	B	1.00	0.00	0.00	7.00
	C	128.00	1.00	0.00	73.00
	D	227.00	0.00	79.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	6	0
	B	0	0	0	0
	C	5	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
A	0.72	6.04	2.6	A
B	0.12	17.41	0.1	C
C	0.64	7.36	1.8	A
D	0.73	7.07	2.7	A

Main Results for each time segment

13:00 - 13:15

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	373.00	106.15	540.86	0.690	370.78	2.2	5.333	A
B	0.00	469.97	66.80	0.000	0.00	0.0	0.000	A
C	211.00	237.57	347.79	0.607	209.44	1.6	6.647	A
D	338.00	185.68	460.12	0.735	335.31	2.7	7.066	A

13:15 - 13:30

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	390.00	105.03	541.67	0.720	389.65	2.6	6.041	A
B	4.00	491.65	55.55	0.072	3.92	0.1	17.407	C
C	223.00	235.82	348.97	0.639	222.77	1.8	7.357	A
D	319.00	199.75	450.05	0.709	319.20	2.5	6.891	A

13:30 - 13:45

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	389.00	83.37	557.38	0.698	389.17	2.4	5.480	A
B	3.00	468.55	67.54	0.044	3.03	0.0	13.959	B
C	216.00	236.12	348.76	0.619	216.09	1.7	6.986	A
D	289.00	162.34	476.82	0.606	289.93	1.6	4.838	A

13:45 - 14:00

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	390.00	79.98	559.84	0.697	390.03	2.4	5.424	A
B	8.00	467.01	68.34	0.117	7.92	0.1	14.878	B
C	202.00	242.92	344.20	0.587	202.21	1.5	6.546	A
D	306.00	164.05	475.60	0.643	305.78	1.8	5.291	A

2026 Test, PM

Data Errors and Warnings

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

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	8.38	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	5	Arm B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D9	2026 Test	PM	DIRECT	17:00	18:00	60	15

Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		✓	100.000
B		✓	100.000
C		✓	100.000
D		✓	100.000

Origin-Destination Data

17:00 - 17:15

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	48.00	1.00	210.00	186.00
	B	0.00	0.00	0.00	2.00
	C	202.00	1.00	0.00	51.00
	D	179.00	1.00	56.00	0.00

17:15 - 17:30

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	39.00	2.00	210.00	201.00
	B	1.00	0.00	0.00	10.00
	C	210.00	0.00	0.00	59.00
	D	188.00	0.00	53.00	0.00

17:30 - 17:45

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	44.00	2.00	212.00	194.00
	B	1.00	0.00	1.00	1.00
	C	189.00	0.00	0.00	36.00
	D	192.00	1.00	58.00	1.00

17:45 - 18:00

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	45.00	1.00	216.00	189.00
	B	0.00	0.00	0.00	6.00
	C	187.00	1.00	0.00	64.00
	D	202.00	2.00	59.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	1	0
	B	0	0	0	0
	C	2	0	0	1
	D	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
A	0.79	7.41	3.7	A
B	0.22	22.95	0.3	C
C	0.79	12.66	3.7	B
D	0.62	5.49	1.6	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	445.00	57.68	576.02	0.773	441.70	3.3	6.579	A
B	2.00	496.40	53.09	0.038	1.96	0.0	17.588	C
C	254.00	234.22	350.04	0.726	251.41	2.6	9.065	A
D	236.00	248.57	415.12	0.569	234.70	1.3	4.953	A

17:15 - 17:30

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	452.00	53.02	579.40	0.780	451.83	3.5	7.071	A
B	11.00	502.84	49.75	0.221	10.76	0.3	22.952	C
C	269.00	250.65	339.02	0.793	267.91	3.7	12.664	B
D	241.00	249.23	414.65	0.581	240.93	1.4	5.178	A

17:30 - 17:45

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	452.00	59.96	574.37	0.787	451.86	3.6	7.365	A
B	3.00	508.82	46.65	0.064	3.20	0.1	20.805	C
C	225.00	241.16	345.39	0.651	226.74	1.9	7.835	A
D	252.00	235.19	424.69	0.593	251.93	1.4	5.206	A

17:45 - 18:00

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	451.00	61.97	572.91	0.787	450.96	3.7	7.407	A
B	6.00	508.94	46.59	0.129	5.93	0.1	22.094	C
C	252.00	239.92	346.22	0.728	251.32	2.6	9.573	A
D	263.00	232.69	426.48	0.617	262.86	1.6	5.493	A

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.2.5947
© Copyright TRL Limited, 2017

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 770558 software@trl.co.uk www.trlsoftware.co.uk

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: A38 - West Lane Junction - 2018 and 2026 - Existing Junction.j9
Path: \\pba.int\BRI\Projects\43321 Bristol Airport\Technical\Transport\Junction Assessments\PICADY
Report generation date: 03-Dec-18 4:12:09 PM

»2018 BASELINE, AM
»2018 BASELINE, IP
»2018 BASELINE, PM
»2026 Reference, AM
»2026 Reference, IP
»2026 Reference, PM
»2026 Test, AM
»2026 Test, IP
»2026 Test, PM

Summary of junction performance

	AM					IP					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2018 BASELINE														
Stream B-C	1.1	16.30	0.52	C	-5 % [Stream B-A]	0.7	12.88	0.40	B	2 % [Stream B-A]	4.3	57.10	0.84	F	-20 % [Stream B-A]
Stream B-A	0.2	43.23	0.15	E		0.2	32.91	0.15	D		0.7	287.44	0.47	F	
Stream C-AB	0.6	12.25	0.37	B		0.5	11.66	0.33	B		1.4	21.34	0.60	C	
	2026 Reference														
Stream B-C	3.1	42.46	0.78	E	-19 % [Stream B-A]	3.6	55.65	0.80	F	-23 % [Stream B-A]	59.5	628.42	1.43	F	-34 % [Stream B-A]
Stream B-A	0.9	238.38	0.55	F		5.9	1717.83	1.83	F		5.9	1804.55	9999999999.00	F	
Stream C-AB	1.0	16.62	0.49	C		1.2	20.01	0.54	C		6.1	46.62	0.86	E	
	2026 Test														
Stream B-C	9.8	121.48	0.97	F	-24 % [Stream B-A]	14.0	178.43	1.03	F	-33 % [Stream B-A]	87.4	1039.05	1.60	F	-38 % [Stream B-A]
Stream B-A	6.2	4413.46	3.48	F		11.7	1794.21	9999999999.00	F		10.1	3265.61	9999999999.00	F	
Stream C-AB	1.2	19.29	0.54	C		2.7	34.22	0.72	D		22.5	99.08	1.01	F	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	West Lane / A38 Junction
Location	Bristol Airport
Site number	
Date	23-Aug-18
Version	1.0
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CTAS\Caroline
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2018 BASELINE	AM	ONE HOUR	07:45	09:15	15
D2	2018 BASELINE	IP	ONE HOUR	12:45	14:15	15
D3	2018 BASELINE	PM	ONE HOUR	16:45	18:15	15
D4	2026 Reference	AM	ONE HOUR	07:45	09:15	15
D5	2026 Reference	IP	ONE HOUR	12:45	14:15	15
D6	2026 Reference	PM	ONE HOUR	16:45	18:15	15
D7	2026 Test	AM	ONE HOUR	07:45	09:15	15
D8	2026 Test	IP	ONE HOUR	12:45	14:15	15
D9	2026 Test	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2018 BASELINE, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	2.78	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-5	Stream B-A

Arms

Arms

Arm	Name	Description	Arm type
A	A38 (North)		Major
B	West Lane		Minor
C	A38 (South)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.40		✓	3.20	140.0	✓	13.50

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

Minor Arm Geometry

Arm	Minor arm type	Lane Width (Left) (m)	Lane Width (Right) (m)	Visibility to left (m)	Visibility to right (m)
B	Two lanes	3.80	2.20	21	49

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	468	0.080	0.202	0.127	0.289
1	B-C	707	0.102	0.257	-	-
1	C-B	726	0.264	0.264	-	-

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

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

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

Traffic Demand

Demand Set Details

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

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	822	100.000
B		✓	228	100.000
C		✓	1142	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	21	801
	B	13	0	215
	C	977	165	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	4	5
	B	0	0	1
	C	5	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.52	16.30	1.1	C
B-A	0.15	43.23	0.2	E
C-AB	0.37	12.25	0.6	B
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	162	544	0.298	160	0.4	9.432	A
B-A	10	215	0.046	10	0.0	17.512	C
C-AB	124	563	0.221	123	0.3	8.493	A
C-A	736			736			
A-B	16			16			
A-C	603			603			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	193	511	0.379	193	0.6	11.416	B
B-A	12	166	0.071	12	0.1	23.352	C
C-AB	148	531	0.279	148	0.4	9.761	A
C-A	878			878			
A-B	19			19			
A-C	720			720			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	237	460	0.515	235	1.0	16.038	C
B-A	14	98	0.146	14	0.2	42.798	E
C-AB	182	487	0.373	181	0.6	12.188	B
C-A	1076			1076			
A-B	23			23			
A-C	882			882			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	237	459	0.515	237	1.1	16.303	C
B-A	14	97	0.147	14	0.2	43.234	E
C-AB	182	487	0.373	182	0.6	12.252	B
C-A	1076			1076			
A-B	23			23			
A-C	882			882			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	193	510	0.379	195	0.6	11.599	B
B-A	12	165	0.071	12	0.1	23.549	C
C-AB	148	531	0.279	149	0.4	9.826	A
C-A	878			878			
A-B	19			19			
A-C	720			720			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	162	544	0.298	163	0.4	9.558	A
B-A	10	215	0.046	10	0.0	17.605	C
C-AB	124	563	0.221	125	0.3	8.555	A
C-A	736			736			
A-B	16			16			
A-C	603			603			

2018 BASELINE, IP

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	2.25	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	2	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2018 BASELINE	IP	ONE HOUR	12:45	14:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	801	100.000
B		✓	185	100.000
C		✓	989	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	31	770
	B	17	0	168
	C	841	148	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	4
	B	0	0	1
	C	3	7	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.40	12.88	0.7	B
B-A	0.15	32.91	0.2	D
C-AB	0.33	11.66	0.5	B
C-A				
A-B				
A-C				

Main Results for each time segment

12:45 - 13:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	126	548	0.231	125	0.3	8.578	A
B-A	13	236	0.054	13	0.1	16.109	C
C-AB	111	567	0.197	110	0.3	8.419	A
C-A	633			633			
A-B	23			23			
A-C	580			580			

13:00 - 13:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	151	515	0.293	151	0.4	9.954	A
B-A	15	191	0.080	15	0.1	20.514	C
C-AB	133	536	0.248	133	0.3	9.541	A
C-A	756			756			
A-B	28			28			
A-C	692			692			

13:15 - 13:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	185	467	0.396	184	0.6	12.786	B
B-A	19	128	0.146	18	0.2	32.679	D
C-AB	163	493	0.330	162	0.5	11.613	B
C-A	926			926			
A-B	34			34			
A-C	848			848			

13:30 - 13:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	185	467	0.396	185	0.7	12.882	B
B-A	19	128	0.146	19	0.2	32.912	D
C-AB	163	493	0.330	163	0.5	11.658	B
C-A	926			926			
A-B	34			34			
A-C	848			848			

13:45 - 14:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	151	515	0.293	152	0.4	10.039	B
B-A	15	190	0.080	16	0.1	20.650	C
C-AB	133	536	0.248	134	0.4	9.591	A
C-A	756			756			
A-B	28			28			
A-C	692			692			

14:00 - 14:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	126	548	0.231	127	0.3	8.650	A
B-A	13	235	0.054	13	0.1	16.190	C
C-AB	111	567	0.197	112	0.3	8.469	A
C-A	633			633			
A-B	23			23			
A-C	580			580			

2018 BASELINE, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	8.85	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-20	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2018 BASELINE	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1072	100.000
B		✓	274	100.000
C		✓	1198	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	11	1061
	B	9	0	265
	C	974	224	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	7	1
	B	0	0	1
	C	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.84	57.10	4.3	F
B-A	0.47	287.44	0.7	F
C-AB	0.60	21.34	1.4	C
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	200	496	0.403	197	0.7	12.071	B
B-A	7	163	0.041	7	0.0	22.924	C
C-AB	169	513	0.329	167	0.5	10.340	B
C-A	733			733			
A-B	8			8			
A-C	799			799			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	238	451	0.528	237	1.1	16.779	C
B-A	8	104	0.078	8	0.1	37.449	E
C-AB	201	472	0.427	200	0.7	13.222	B
C-A	876			876			
A-B	10			10			
A-C	954			954			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	292	358	0.815	282	3.5	43.253	E
B-A	10	22	0.450	8	0.5	238.164	F
C-AB	247	415	0.595	245	1.4	20.750	C
C-A	1072			1072			
A-B	12			12			
A-C	1168			1168			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	292	348	0.839	289	4.3	57.095	F
B-A	10	21	0.466	9	0.7	287.440	F
C-AB	247	415	0.595	247	1.4	21.340	C
C-A	1072			1072			
A-B	12			12			
A-C	1168			1168			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	238	449	0.531	251	1.2	19.412	C
B-A	8	103	0.079	10	0.1	39.797	E
C-AB	201	472	0.427	204	0.8	13.581	B
C-A	876			876			
A-B	10			10			
A-C	954			954			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	200	495	0.403	201	0.7	12.459	B
B-A	7	163	0.042	7	0.0	23.153	C
C-AB	169	513	0.329	170	0.5	10.519	B
C-A	733			733			
A-B	8			8			
A-C	799			799			

2026 Reference, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	6.87	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-19	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2026 Reference	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	974	100.000
B		✓	272	100.000
C		✓	1340	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	24	950
	B	15	0	257
	C	1142	198	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	4	5
	B	0	0	1
	C	5	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.78	42.46	3.1	E
B-A	0.55	238.38	0.9	F
C-AB	0.49	16.62	1.0	C
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	193	512	0.378	191	0.6	11.232	B
B-A	11	169	0.067	11	0.1	22.725	C
C-AB	149	533	0.280	147	0.4	9.684	A
C-A	860			860			
A-B	18			18			
A-C	715			715			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	231	470	0.492	230	0.9	15.035	C
B-A	13	111	0.122	13	0.1	36.810	E
C-AB	178	495	0.360	177	0.6	11.761	B
C-A	1027			1027			
A-B	22			22			
A-C	854			854			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	283	374	0.756	276	2.7	34.721	D
B-A	17	31	0.541	14	0.8	196.989	F
C-AB	218	443	0.492	216	1.0	16.405	C
C-A	1257			1257			
A-B	26			26			
A-C	1046			1046			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	283	364	0.777	281	3.1	42.455	E
B-A	17	30	0.550	16	0.9	238.384	F
C-AB	218	443	0.492	218	1.0	16.623	C
C-A	1257			1257			
A-B	26			26			
A-C	1046			1046			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	231	466	0.496	239	1.0	16.593	C
B-A	13	110	0.122	17	0.1	39.669	E
C-AB	178	495	0.360	180	0.6	11.930	B
C-A	1027			1027			
A-B	22			22			
A-C	854			854			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	193	512	0.378	195	0.6	11.529	B
B-A	11	168	0.067	12	0.1	22.987	C
C-AB	149	533	0.280	150	0.4	9.800	A
C-A	860			860			
A-B	18			18			
A-C	715			715			

2026 Reference, IP

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	19.33	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-23	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2026 Reference	IP	ONE HOUR	12:45	14:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1065	100.000
B		✓	245	100.000
C		✓	1327	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	37	1028
	B	20	0	225
	C	1123	204	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	4
	B	0	0	1
	C	3	7	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.80	55.65	3.6	F
B-A	1.83	1717.83	5.9	F
C-AB	0.54	20.01	1.2	C
C-A				
A-B				
A-C				

Main Results for each time segment

12:45 - 13:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	169	493	0.344	167	0.5	11.097	B
B-A	15	157	0.096	15	0.1	25.216	D
C-AB	154	514	0.299	152	0.4	10.572	B
C-A	845			845			
A-B	28			28			
A-C	774			774			

13:00 - 13:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	202	444	0.456	201	0.8	14.913	B
B-A	18	96	0.187	18	0.2	45.481	E
C-AB	183	473	0.387	183	0.7	13.207	B
C-A	1010			1010			
A-B	33			33			
A-C	924			924			

13:15 - 13:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	248	309	0.802	238	3.2	46.455	E
B-A	22	13	1.741	10	3.2	807.821	F
C-AB	225	417	0.539	223	1.2	19.613	C
C-A	1236			1236			
A-B	41			41			
A-C	1132			1132			

13:30 - 13:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	248	309	0.802	246	3.6	55.654	F
B-A	22	12	1.831	11	5.9	1717.825	F
C-AB	225	417	0.539	225	1.2	20.014	C
C-A	1236			1236			
A-B	41			41			
A-C	1132			1132			

13:45 - 14:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	202	415	0.487	213	1.0	18.784	C
B-A	18	95	0.189	41	0.3	88.000	F
C-AB	183	473	0.387	186	0.7	13.480	B
C-A	1010			1010			
A-B	33			33			
A-C	924			924			

14:00 - 14:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	169	492	0.344	171	0.5	11.395	B
B-A	15	156	0.096	16	0.1	25.700	D
C-AB	154	514	0.299	155	0.5	10.730	B
C-A	845			845			
A-B	28			28			
A-C	774			774			

2026 Reference, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	78.31	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-34	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2026 Reference	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1302	100.000
B		✓	342	100.000
C		✓	1445	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	13	1289
	B	10	0	332
	C	1173	272	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	7	1
	B	0	0	1
	C	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	1.43	628.42	59.5	F
B-A	9999999999.00	1804.55	5.9	F
C-AB	0.86	46.62	6.1	E
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	250	448	0.558	245	1.2	17.552	C
B-A	8	99	0.076	7	0.1	39.024	E
C-AB	205	467	0.438	202	0.8	13.410	B
C-A	883			883			
A-B	10			10			
A-C	970			970			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	298	372	0.802	290	3.3	40.577	E
B-A	9	27	0.335	8	0.4	180.586	F
C-AB	245	418	0.586	243	1.3	20.277	C
C-A	1054			1054			
A-B	12			12			
A-C	1159			1159			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	366	255	1.432	252	31.8	278.438	F
B-A	11	0	9999999999.000	0	3.1	1804.555	F
C-AB	449	520	0.864	434	5.0	37.540	E
C-A	1142			1142			
A-B	14			14			
A-C	1419			1419			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	366	255	1.432	255	59.5	619.602	F
B-A	11	0	9999999999.000	0	5.9	-3531.117	?
C-AB	449	521	0.862	445	6.1	46.615	E
C-A	1142			1142			
A-B	14			14			
A-C	1419			1419			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	298	306	0.976	300	59.0	628.421	F
B-A	9	22	0.411	19	3.5	911.067	F
C-AB	245	420	0.584	264	1.5	25.746	D
C-A	1054			1054			
A-B	12			12			
A-C	1159			1159			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	250	431	0.579	424	15.5	323.643	F
B-A	8	97	0.077	21	0.1	54.513	F
C-AB	205	467	0.438	208	0.8	14.006	B
C-A	883			883			
A-B	10			10			
A-C	970			970			

2026 Test, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	37.94	E

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-24	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2026 Test	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1044	100.000
B		✓	289	100.000
C		✓	1395	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	24	1020
	B	15	0	274
	C	1187	208	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	4	5
	B	0	0	1
	C	5	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.97	121.48	9.8	F
B-A	3.48	4413.46	6.2	F
C-AB	0.54	19.29	1.2	C
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	206	498	0.414	203	0.7	12.229	B
B-A	11	152	0.074	11	0.1	25.475	D
C-AB	157	519	0.302	155	0.4	10.244	B
C-A	894			894			
A-B	18			18			
A-C	768			768			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	246	451	0.546	244	1.2	17.437	C
B-A	13	90	0.149	13	0.2	46.453	E
C-AB	187	478	0.391	186	0.7	12.774	B
C-A	1067			1067			
A-B	22			22			
A-C	917			917			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	302	312	0.968	277	7.3	78.108	F
B-A	17	5	3.088	4	3.2	1256.678	F
C-AB	229	423	0.542	227	1.2	18.912	C
C-A	1307			1307			
A-B	26			26			
A-C	1123			1123			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	302	312	0.968	292	9.8	121.477	F
B-A	17	5	3.484	5	6.2	4413.463	F
C-AB	229	423	0.542	229	1.2	19.287	C
C-A	1307			1307			
A-B	26			26			
A-C	1123			1123			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	246	419	0.588	279	1.5	31.560	D
B-A	13	89	0.151	38	0.2	96.613	F
C-AB	187	478	0.391	189	0.7	13.034	B
C-A	1067			1067			
A-B	22			22			
A-C	917			917			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	206	498	0.415	210	0.7	12.759	B
B-A	11	151	0.075	12	0.1	25.880	D
C-AB	157	519	0.302	157	0.5	10.393	B
C-A	894			894			
A-B	18			18			
A-C	768			768			

2026 Test, IP

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	29.83	D

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-33	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2026 Test	IP	ONE HOUR	12:45	14:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1217	100.000
B		✓	279	100.000
C		✓	1542	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	37	1180
	B	20	0	259
	C	1299	243	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	4
	B	0	0	1
	C	3	7	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	1.03	178.43	14.0	F
B-A	9999999999.00	1794.21	11.7	F
C-AB	0.72	34.22	2.7	D
C-A				
A-B				
A-C				

Main Results for each time segment

12:45 - 13:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	195	459	0.425	192	0.7	13.475	B
B-A	15	109	0.139	14	0.2	38.025	E
C-AB	183	484	0.378	180	0.6	12.578	B
C-A	978			978			
A-B	28			28			
A-C	888			888			

13:00 - 13:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	233	378	0.616	230	1.5	23.971	C
B-A	18	38	0.471	16	0.7	151.411	F
C-AB	219	437	0.500	217	1.0	17.347	C
C-A	1168			1168			
A-B	33			33			
A-C	1061			1061			

13:15 - 13:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	285	276	1.031	254	9.4	103.937	F
B-A	22	0	9999999999.000	0	6.2	1794.213	F
C-AB	284	395	0.718	278	2.5	31.559	D
C-A	1414			1414			
A-B	41			41			
A-C	1299			1299			

13:30 - 13:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	285	276	1.031	267	14.0	178.434	F
B-A	22	0	9999999999.000	0	11.7	-2198.598	?
C-AB	284	394	0.719	283	2.7	34.215	D
C-A	1414			1414			
A-B	41			41			
A-C	1299			1299			

13:45 - 14:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	233	323	0.721	276	3.2	94.874	F
B-A	18	36	0.501	33	7.9	965.091	F
C-AB	219	437	0.500	225	1.1	18.611	C
C-A	1168			1168			
A-B	33			33			
A-C	1061			1061			

14:00 - 14:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	195	424	0.460	204	0.9	17.184	C
B-A	15	107	0.140	46	0.2	86.631	F
C-AB	183	484	0.378	185	0.7	12.939	B
C-A	978			978			
A-B	28			28			
A-C	888			888			

2026 Test, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	141.78	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-38	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2026 Test	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1396	100.000
B		✓	353	100.000
C		✓	1552	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	13	1383
	B	10	0	343
	C	1260	292	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	7	1
	B	0	0	1
	C	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	1.60	1039.05	87.4	F
B-A	9999999999.00	3265.61	10.1	F
C-AB	1.01	99.08	22.5	F
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	258	427	0.605	252	1.5	20.241	C
B-A	8	72	0.104	7	0.1	54.626	F
C-AB	220	449	0.490	216	0.9	15.256	C
C-A	949			949			
A-B	10			10			
A-C	1041			1041			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	308	289	1.065	270	11.2	113.650	F
B-A	9	0	9999999999.000	0	2.4	3265.609	F
C-AB	266	399	0.665	262	1.8	25.548	D
C-A	1130			1130			
A-B	12			12			
A-C	1243			1243			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	378	235	1.604	234	47.0	472.976	F
B-A	11	0	9999999999.000	0	5.1	2495.061	F
C-AB	1709	1698	1.006	1671	11.3	35.391	E
C-A	0			0			
A-B	14			14			
A-C	1523			1523			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	378	235	1.604	235	82.6	904.449	F
B-A	11	0	9999999999.000	0	7.9	1737.589	F
C-AB	1709	1702	1.004	1664	22.5	53.457	F
C-A	0			0			
A-B	14			14			
A-C	1523			1523			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	308	289	1.065	289	87.4	1039.047	F
B-A	9	0	9999999999.000	0	10.1	967.041	F
C-AB	266	405	0.656	346	2.3	99.082	F
C-A	1130			1130			
A-B	12			12			
A-C	1243			1243			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	258	363	0.712	358	62.4	754.290	F
B-A	8	70	0.108	47	0.1	262.668	F
C-AB	220	449	0.490	225	1.0	16.469	C
C-A	949			949			
A-B	10			10			
A-C	1041			1041			

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.2.5947
© Copyright TRL Limited, 2017

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 770558 software@trl.co.uk www.trlsoftware.co.uk

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Airport Rbt 2026 Reference and Test - Final.j9
Path: \\pba.int\BRI\Projects\43321 Bristol Airport\Technical\Transport\Junction Assessments\ARCADY
Report generation date: 03-Dec-18 5:34:56 PM

»2026 Test, AM
»2026 Test, IP
»2026 Test, PM

Summary of junction performance

	AM					IP					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2026 Test														
Arm A	1.4	3.70	0.57	A	22 % [Arm C]	1.7	4.43	0.62	A	26 % [Arm B]	3.8	7.66	0.79	A	5 % [Arm B]
Arm B	0.0	7.87	0.04	A		0.1	10.62	0.08	B		0.3	22.95	0.22	C	
Arm C	2.6	8.80	0.73	A		1.2	5.44	0.54	A		3.7	12.70	0.79	B	
Arm D	0.2	3.89	0.14	A		0.4	3.72	0.27	A		0.2	3.73	0.20	A	

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	13-Apr-18
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CTAS\tony
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D7	2026 Test	AM	DIRECT	08:00	09:00	60	15
D8	2026 Test	IP	DIRECT	13:00	14:00	60	15
D9	2026 Test	PM	DIRECT	17:00	18:00	60	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2026 Test, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm A - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm C - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm D - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	5.75	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	22	Arm C

Arms

Arms

Arm	Name	Description
A	A38 (North)	
B	Easirent Car Hire	
C	A38 (South)	
D	Bristol Airport	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A	7.30	9.90	32.9	8.0	48.0	48.0	
B	3.00	5.82	7.2	18.4	48.0	39.0	
C	3.45	7.20	150.0	29.3	48.0	44.0	
D	3.67	7.70	36.3	12.8	48.0	54.0	

Bypass

Arm	Arm has bypass	Bypass utilisation (%)
A		
B		
C		
D	✓	100

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/TS)
A	0.722	613.723
B	0.519	310.623
C	0.670	507.024
D	0.602	447.348

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D7	2026 Test	AM	DIRECT	08:00	09:00	60	15

Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		✓	100.000
B		✓	100.000
C		✓	100.000
D		✓	100.000

Origin-Destination Data

08:00 - 08:15

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	52.00	1.00	179.00	83.00
	B	1.00	0.00	3.00	0.00
	C	238.00	0.00	0.00	33.00
	D	64.00	1.00	37.00	0.00

08:15 - 08:30

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	51.00	2.00	151.00	81.00
	B	0.00	0.00	0.00	1.00
	C	222.00	1.00	0.00	41.00
	D	60.00	0.00	38.00	0.00

08:30 - 08:45

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	62.00	0.00	172.00	98.00
	B	0.00	0.00	0.00	2.00
	C	212.00	0.00	0.00	51.00
	D	56.00	2.00	28.00	0.00

08:45 - 09:00

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	64.00	1.00	146.00	123.00
	B	1.00	0.00	1.00	3.00
	C	208.00	0.00	0.00	67.00
	D	55.00	2.00	35.00	1.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	1	0	5	4
	B	0	0	0	0
	C	3	0	0	1
	D	1	0	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
A	0.57	3.70	1.4	A
B	0.04	7.87	0.0	A
C	0.73	8.80	2.6	A
D	0.14	3.89	0.2	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/TS)	Bypass demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	315.00	0.00	37.84	586.40	0.537	313.80	1.2	3.419	A
B	4.00	0.00	349.65	129.23	0.031	3.97	0.0	7.183	A
C	271.00	0.00	135.48	416.22	0.651	269.12	1.9	6.210	A
D	102.00	64.00	289.14	273.36	0.139	37.84	0.2	3.893	A

08:15 - 08:30

Arm	Total Demand (PCU/TS)	Bypass demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	285.00	0.00	39.00	585.56	0.487	285.21	1.0	3.115	A
B	1.00	0.00	321.21	143.98	0.007	1.02	0.0	6.295	A
C	264.00	0.00	133.05	417.85	0.632	264.09	1.8	6.016	A
D	98.00	60.00	274.17	282.37	0.135	38.00	0.2	3.755	A

08:30 - 08:45

Arm	Total Demand (PCU/TS)	Bypass demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	332.00	0.00	30.04	592.02	0.561	331.68	1.3	3.587	A
B	2.00	0.00	359.72	124.01	0.016	1.99	0.0	7.375	A
C	263.00	0.00	161.82	398.57	0.660	262.83	2.0	6.792	A
D	86.00	56.00	273.87	282.55	0.106	30.04	0.1	3.630	A

08:45 - 09:00

Arm	Total Demand (PCU/TS)	Bypass demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	334.00	0.00	37.96	586.30	0.570	333.95	1.4	3.702	A
B	5.00	0.00	368.92	119.23	0.042	4.97	0.0	7.875	A
C	275.00	0.00	191.85	378.44	0.727	274.32	2.6	8.796	A
D	93.00	55.00	272.56	283.34	0.134	37.96	0.2	3.734	A

2026 Test, IP

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm A - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm C - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm D - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	4.48	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	26	Arm B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D8	2026 Test	IP	DIRECT	13:00	14:00	60	15

Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		✓	100.000
B		✓	100.000
C		✓	100.000
D		✓	100.000

Origin-Destination Data

Demand (PCU/TS)

13:00 - 13:15

		To			
		A	B	C	D
From	A	44.00	3.00	126.00	151.00
	B	0.00	0.00	0.00	0.00
	C	134.00	1.00	0.00	56.00
	D	182.00	3.00	88.00	1.00

13:15 - 13:30

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	43.00	2.00	149.00	146.00
	B	2.00	0.00	0.00	2.00
	C	146.00	1.00	0.00	56.00
	D	165.00	0.00	90.00	0.00

13:30 - 13:45

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	34.00	3.00	147.00	155.00
	B	1.00	0.00	0.00	2.00
	C	118.00	1.00	0.00	78.00
	D	157.00	0.00	67.00	1.00

13:45 - 14:00

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	34.00	2.00	146.00	158.00
	B	1.00	0.00	0.00	7.00
	C	121.00	1.00	0.00	62.00
	D	177.00	0.00	65.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	6	0
	B	0	0	0	0
	C	5	0	0	8
	D	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
A	0.62	4.43	1.7	A
B	0.08	10.62	0.1	B
C	0.54	5.44	1.2	A
D	0.27	3.72	0.4	A

Main Results for each time segment

13:00 - 13:15

Arm	Total Demand (PCU/TS)	Bypass demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	324.00	0.00	92.63	546.82	0.593	322.53	1.5	4.078	A
B	0.00	0.00	408.19	98.86	0.000	0.00	0.0	0.000	A
C	191.00	0.00	195.11	376.25	0.508	189.92	1.1	5.081	A
D	274.00	182.00	178.04	340.21	0.270	91.63	0.4	3.616	A

13:15 - 13:30

Arm	Total Demand (PCU/TS)	Bypass demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	340.00	0.00	91.00	548.00	0.620	339.81	1.7	4.429	A
B	4.00	0.00	427.80	88.69	0.045	3.95	0.0	10.616	B
C	203.00	0.00	192.92	377.72	0.537	202.86	1.2	5.438	A
D	255.00	165.00	191.85	331.90	0.271	90.00	0.4	3.719	A

13:30 - 13:45

Arm	Total Demand (PCU/TS)	Bypass demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	339.00	0.00	69.13	563.79	0.601	339.10	1.6	4.109	A
B	3.00	0.00	404.23	100.91	0.030	3.02	0.0	9.194	A
C	197.00	0.00	193.06	377.63	0.522	197.05	1.2	5.291	A
D	225.00	157.00	154.24	354.53	0.192	68.13	0.2	3.143	A

13:45 - 14:00

Arm	Total Demand (PCU/TS)	Bypass demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	340.00	0.00	66.01	566.05	0.601	340.01	1.6	4.082	A
B	8.00	0.00	403.02	101.54	0.079	7.95	0.1	9.611	A
C	184.00	0.00	199.94	373.01	0.493	184.13	1.0	5.050	A
D	242.00	177.00	157.02	352.86	0.184	65.01	0.2	3.126	A

2026 Test, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm A - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm C - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm D - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A, B, C, D	8.05	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	5	Arm B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D9	2026 Test	PM	DIRECT	17:00	18:00	60	15

Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		✓	100.000
B		✓	100.000
C		✓	100.000
D		✓	100.000

Origin-Destination Data

Demand (PCU/TS)

17:00 - 17:15

		To			
		A	B	C	D
From	A	48.00	1.00	210.00	186.00
	B	0.00	0.00	0.00	2.00
	C	202.00	1.00	0.00	51.00
	D	179.00	1.00	56.00	0.00

17:15 - 17:30

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	39.00	2.00	210.00	201.00
	B	1.00	0.00	0.00	10.00
	C	210.00	0.00	0.00	59.00
	D	188.00	0.00	53.00	0.00

17:30 - 17:45

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	44.00	2.00	212.00	194.00
	B	1.00	0.00	1.00	1.00
	C	189.00	0.00	0.00	36.00
	D	192.00	1.00	58.00	1.00

17:45 - 18:00

Demand (PCU/TS)

		To			
		A	B	C	D
From	A	45.00	1.00	216.00	189.00
	B	0.00	0.00	0.00	6.00
	C	187.00	1.00	0.00	64.00
	D	202.00	2.00	59.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	1	0
	B	0	0	0	0
	C	2	0	0	1
	D	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
A	0.79	7.66	3.8	A
B	0.22	22.95	0.3	C
C	0.79	12.70	3.7	B
D	0.20	3.73	0.2	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/TS)	Bypass demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	445.00	0.00	57.75	572.01	0.778	441.59	3.4	6.777	A
B	2.00	0.00	496.37	53.11	0.038	1.96	0.0	17.582	C
C	254.00	0.00	234.17	350.08	0.726	251.40	2.6	9.089	A
D	236.00	179.00	248.55	297.78	0.191	56.76	0.2	3.731	A

17:15 - 17:30

Arm	Total Demand (PCU/TS)	Bypass demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	452.00	0.00	53.03	575.42	0.786	451.82	3.6	7.306	A
B	11.00	0.00	502.84	49.76	0.221	10.76	0.3	22.949	C
C	269.00	0.00	250.65	339.03	0.793	267.91	3.7	12.698	B
D	241.00	188.00	249.23	297.38	0.178	53.02	0.2	3.682	A

17:30 - 17:45

Arm	Total Demand (PCU/TS)	Bypass demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	452.00	0.00	59.98	570.41	0.792	451.85	3.7	7.619	A
B	3.00	0.00	508.83	46.65	0.064	3.20	0.1	20.808	C
C	225.00	0.00	241.16	345.39	0.651	226.74	2.0	7.861	A
D	252.00	192.00	235.19	305.82	0.196	59.98	0.2	3.660	A

17:45 - 18:00

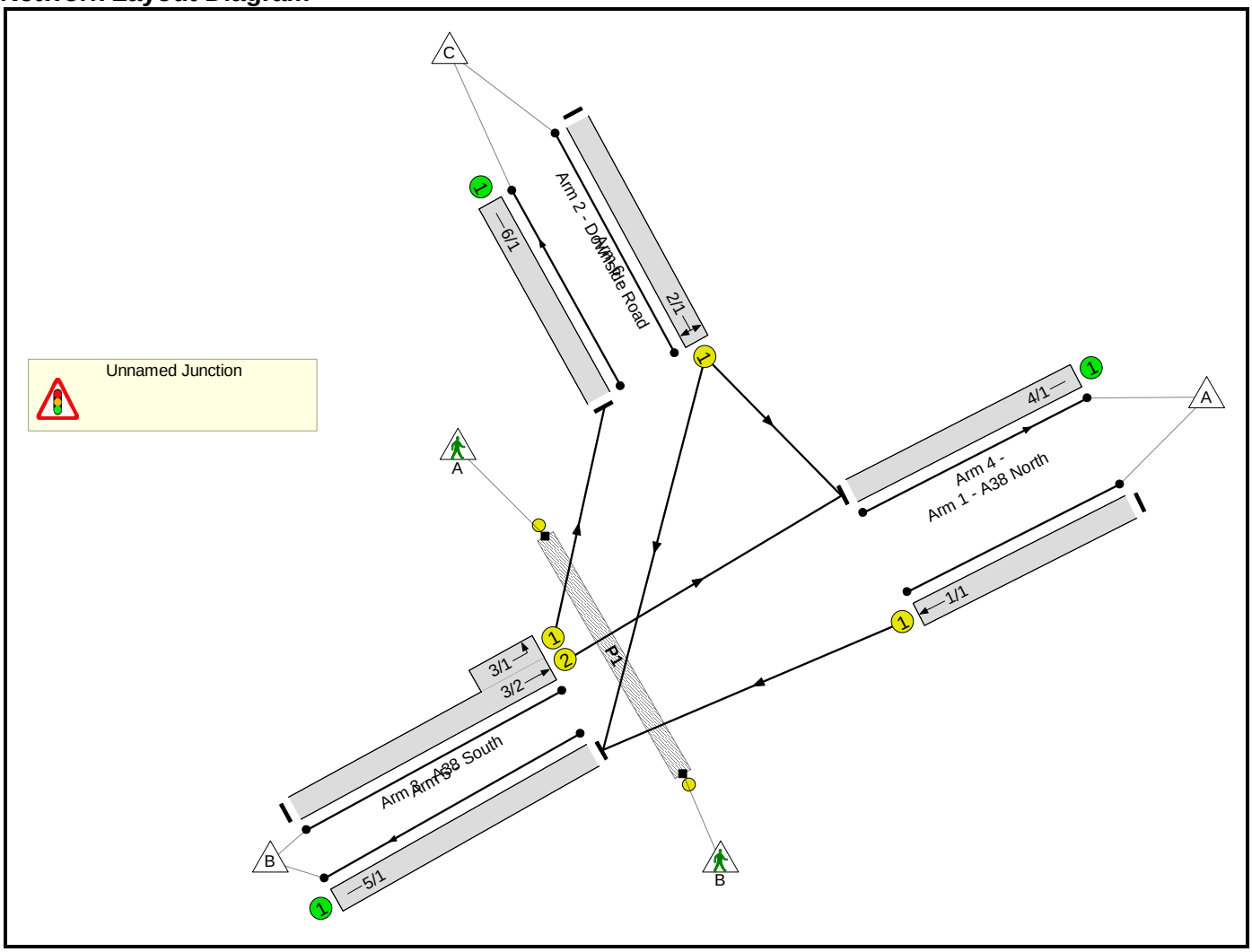
Arm	Total Demand (PCU/TS)	Bypass demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
A	451.00	0.00	61.99	568.95	0.793	450.96	3.8	7.664	A
B	6.00	0.00	508.95	46.58	0.129	5.93	0.1	22.097	C
C	252.00	0.00	239.91	346.23	0.728	251.32	2.6	9.598	A
D	263.00	202.00	232.69	307.33	0.198	61.00	0.2	3.652	A

Full Input Data And Results

User and Project Details

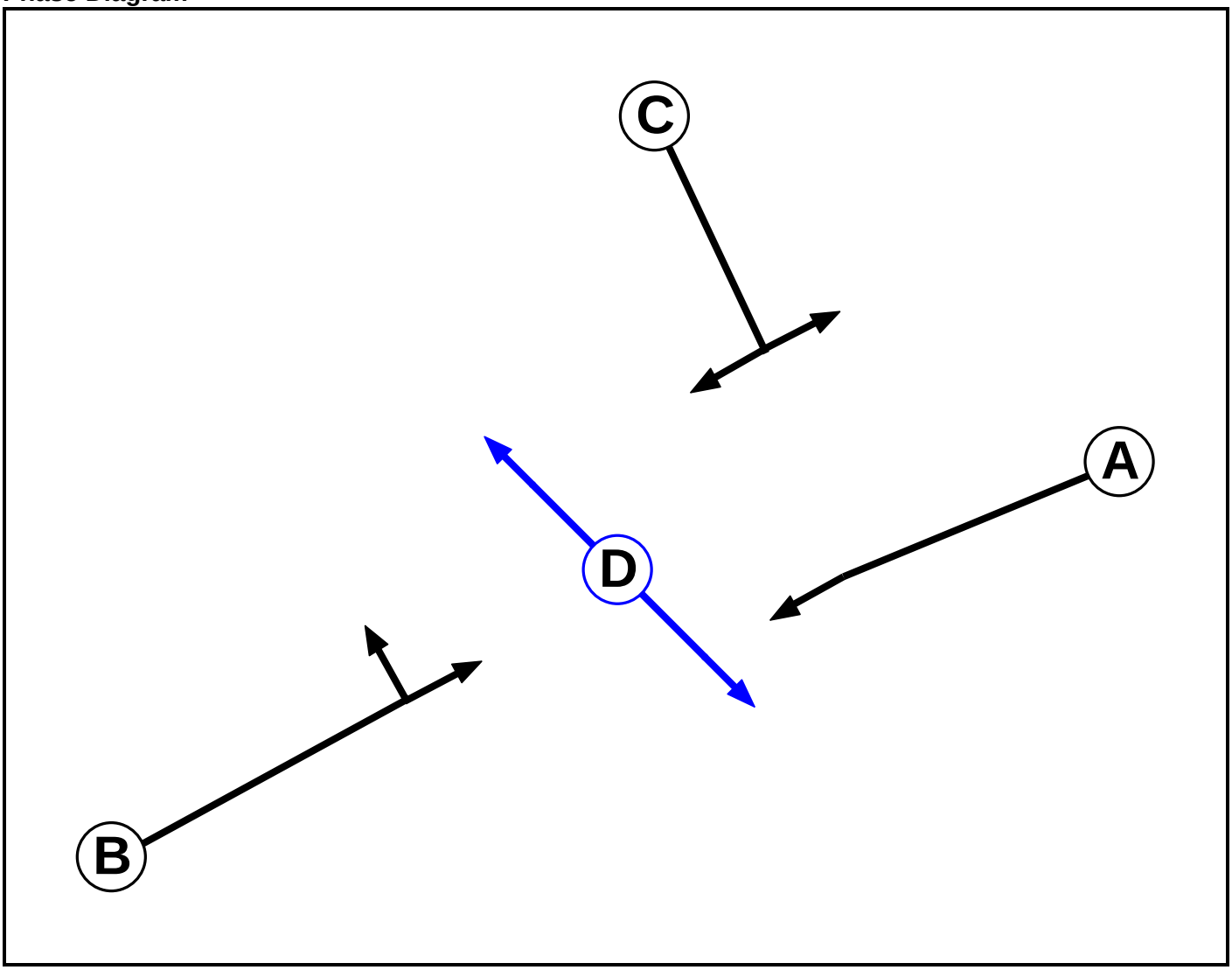
Project:	
Title:	
Location:	
File name:	Existing Layout Assessment.lsg3x
Author:	
Company:	
Address:	
Notes:	

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	Pedestrian		7	7

Full Input Data And Results

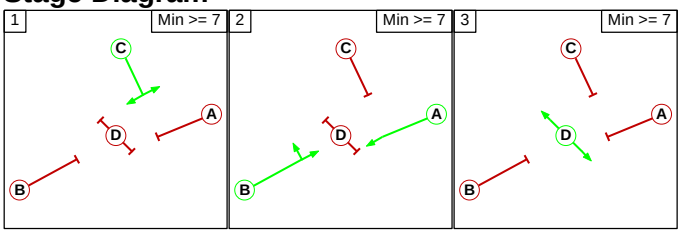
Phase Intergreens Matrix

Terminating Phase	Starting Phase				
		A	B	C	D
	A		-	5	7
	B	-		5	5
	C	5	5		7
	D	16	16	16	

Phases in Stage

Stage No.	Phases in Stage
1	C
2	A B
3	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		5	7
	2	5		7
	3	16	16	

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 (A38 North)	U	A	2	3	21.2	Geom	-	3.20	6.00	Y	Arm 5 Ahead	Inf
2/1 (Downside Road)	U	C	2	3	60.0	Geom	-	3.10	0.00	Y	Arm 4 Left Arm 5 Right	15.00 20.00
3/1 (A38 South)	U	B	2	3	4.3	Geom	-	3.10	0.00	Y	Arm 6 Left	10.00
3/2 (A38 South)	U	B	2	3	33.0	Geom	-	2.90	0.00	N	Arm 4 Ahead	Inf
4/1	U		2	3	21.2	Geom	-	3.25	0.00	Y		
5/1	U		2	3	33.0	Geom	-	3.40	0.00	Y		
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2018 Baseline AM Peak'	08:00	09:00	01:00	
2: '2018 Baseline Inter Peak'	13:00	14:00	01:00	
3: '2018 Baseline PM Peak'	17:00	18:00	01:00	
4: '2026 Reference AM Peak'	08:00	09:00	01:00	
5: '2026 Reference Inter Peak'	13:00	14:00	01:00	
6: '2026 Reference PM Peak'	17:00	18:00	01:00	
7: '2026 Test AM Peak'	08:00	09:00	01:00	
8: '2026 Test Inter Peak'	13:00	14:00	01:00	
9: '2026 Test PM Peak'	17:00	18:00	01:00	

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

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	984	0	984
	B	890	0	261	1151
	C	240	47	0	287
	Tot.	1130	1031	261	2422

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2018 Baseline AM Peak
Junction: Unnamed Junction	
1/1	984
2/1	287
3/1 (short)	261
3/2 (with short)	1151(In) 890(Out)
4/1	1130
5/1	1031
6/1	261

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 (A38 North)	3.20	6.00	Y	Arm 5 Ahead	Inf	100.0 %	1683	1683
2/1 (Downside Road)	3.10	0.00	Y	Arm 4 Left	15.00	83.6 %	1757	1757
				Arm 5 Right	20.00	16.4 %		
3/1 (A38 South)	3.10	0.00	Y	Arm 6 Left	10.00	100.0 %	1674	1674
3/2 (A38 South)	2.90	0.00	N	Arm 4 Ahead	Inf	100.0 %	2045	2045
4/1	3.25	0.00	Y				1940	1940
5/1	3.40	0.00	Y				1955	1955
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2018 Baseline Inter Peak' (FG2: '2018 Baseline Inter Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	931	0	931
	B	836	0	173	1009
	C	138	89	0	227
	Tot.	974	1020	173	2167

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2018 Baseline Inter Peak
Junction: Unnamed Junction	
1/1	931
2/1	227
3/1 (short)	173
3/2 (with short)	1009(In) 836(Out)
4/1	974
5/1	1020
6/1	173

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 (A38 North)	3.20	6.00	Y	Arm 5 Ahead	Inf	100.0 %	1683	1683
2/1 (Downside Road)	3.10	0.00	Y	Arm 4 Left	15.00	60.8 %	1766	1766
				Arm 5 Right	20.00	39.2 %		
3/1 (A38 South)	3.10	0.00	Y	Arm 6 Left	10.00	100.0 %	1674	1674
3/2 (A38 South)	2.90	0.00	N	Arm 4 Ahead	Inf	100.0 %	2045	2045
4/1	3.25	0.00	Y				1940	1940
5/1	3.40	0.00	Y				1955	1955
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 3: '2018 Baseline PM Peak' (FG3: '2018 Baseline PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	1308	0	1308
	B	1012	0	289	1301
	C	168	73	0	241
	Tot.	1180	1381	289	2850

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: 2018 Baseline PM Peak
Junction: Unnamed Junction	
1/1	1308
2/1	241
3/1 (short)	289
3/2 (with short)	1301(In) 1012(Out)
4/1	1180
5/1	1381
6/1	289

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 (A38 North)	3.20	6.00	Y	Arm 5 Ahead	Inf	100.0 %	1683	1683
2/1 (Downside Road)	3.10	0.00	Y	Arm 4 Left	15.00	69.7 %	1762	1762
				Arm 5 Right	20.00	30.3 %		
3/1 (A38 South)	3.10	0.00	Y	Arm 6 Left	10.00	100.0 %	1674	1674
3/2 (A38 South)	2.90	0.00	N	Arm 4 Ahead	Inf	100.0 %	2045	2045
4/1	3.25	0.00	Y				1940	1940
5/1	3.40	0.00	Y				1955	1955
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2026 Reference AM ' (FG4: '2026 Reference AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	1200	0	1200
	B	1065	0	300	1365
	C	274	61	0	335
	Tot.	1339	1261	300	2900

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: 2026 Reference AM
Junction: Unnamed Junction	
1/1	1200
2/1	335
3/1 (short)	300
3/2 (with short)	1365(In) 1065(Out)
4/1	1339
5/1	1261
6/1	300

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 (A38 North)	3.20	6.00	Y	Arm 5 Ahead	Inf	100.0 %	1683	1683
2/1 (Downside Road)	3.10	0.00	Y	Arm 4 Left	15.00	81.8 %	1757	1757
				Arm 5 Right	20.00	18.2 %		
3/1 (A38 South)	3.10	0.00	Y	Arm 6 Left	10.00	100.0 %	1674	1674
3/2 (A38 South)	2.90	0.00	N	Arm 4 Ahead	Inf	100.0 %	2045	2045
4/1	3.25	0.00	Y				1940	1940
5/1	3.40	0.00	Y				1955	1955
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 5: '2026 Reference Inter Peak' (FG5: '2026 Reference Inter Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	1249	0	1249
	B	1166	0	214	1380
	C	161	114	0	275
	Tot.	1327	1363	214	2904

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 5: 2026 Reference Inter Peak
Junction: Unnamed Junction	
1/1	1249
2/1	275
3/1 (short)	214
3/2 (with short)	1380(In) 1166(Out)
4/1	1327
5/1	1363
6/1	214

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 (A38 North)	3.20	6.00	Y	Arm 5 Ahead	Inf	100.0 %	1683	1683
2/1 (Downside Road)	3.10	0.00	Y	Arm 4 Left	15.00	58.5 %	1767	1767
				Arm 5 Right	20.00	41.5 %		
3/1 (A38 South)	3.10	0.00	Y	Arm 6 Left	10.00	100.0 %	1674	1674
3/2 (A38 South)	2.90	0.00	N	Arm 4 Ahead	Inf	100.0 %	2045	2045
4/1	3.25	0.00	Y				1940	1940
5/1	3.40	0.00	Y				1955	1955
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 6: '2026 Reference PM' (FG6: '2026 Reference PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	1598	0	1598
	B	1253	0	350	1603
	C	192	90	0	282
	Tot.	1445	1688	350	3483

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: 2026 Reference PM
Junction: Unnamed Junction	
1/1	1598
2/1	282
3/1 (short)	350
3/2 (with short)	1603(In) 1253(Out)
4/1	1445
5/1	1688
6/1	350

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 (A38 North)	3.20	6.00	Y	Arm 5 Ahead	Inf	100.0 %	1683	1683
2/1 (Downside Road)	3.10	0.00	Y	Arm 4 Left	15.00	68.1 %	1763	1763
				Arm 5 Right	20.00	31.9 %		
3/1 (A38 South)	3.10	0.00	Y	Arm 6 Left	10.00	100.0 %	1674	1674
3/2 (A38 South)	2.90	0.00	N	Arm 4 Ahead	Inf	100.0 %	2045	2045
4/1	3.25	0.00	Y				1940	1940
5/1	3.40	0.00	Y				1955	1955
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 7: '2026 Test AM Peak' (FG7: '2026 Test AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	1287	0	1287
	B	1120	0	304	1424
	C	274	70	0	344
	Tot.	1394	1357	304	3055

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 7: 2026 Test AM Peak
Junction: Unnamed Junction	
1/1	1287
2/1	344
3/1 (short)	304
3/2 (with short)	1424(In) 1120(Out)
4/1	1394
5/1	1357
6/1	304

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A38 North)	3.20	6.00	Y	Arm 5 Ahead	Inf	100.0 %	1683	1683
2/1 (Downside Road)	3.10	0.00	Y	Arm 4 Left	15.00	79.7 %	1758	1758
				Arm 5 Right	20.00	20.3 %		
3/1 (A38 South)	3.10	0.00	Y	Arm 6 Left	10.00	100.0 %	1674	1674
3/2 (A38 South)	2.90	0.00	N	Arm 4 Ahead	Inf	100.0 %	2045	2045
4/1	3.25	0.00	Y				1940	1940
5/1	3.40	0.00	Y				1955	1955
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 8: '2026 Test Inter Peak' (FG8: '2026 Test Inter Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	1435	5	1440
	B	1383	0	229	1612
	C	161	127	0	288
	Tot.	1544	1562	234	3340

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 8: 2026 Test Inter Peak
Junction: Unnamed Junction	
1/1	1435
2/1	288
3/1 (short)	229
3/2 (with short)	1612(In) 1383(Out)
4/1	1544
5/1	1562
6/1	229

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 (A38 North)	3.20	6.00	Y	Arm 5 Ahead	Inf	100.0 %	1683	1683
2/1 (Downside Road)	3.10	0.00	Y	Arm 4 Left	15.00	55.9 %	1768	1768
				Arm 5 Right	20.00	44.1 %		
3/1 (A38 South)	3.10	0.00	Y	Arm 6 Left	10.00	100.0 %	1674	1674
3/2 (A38 South)	2.90	0.00	N	Arm 4 Ahead	Inf	100.0 %	2045	2045
4/1	3.25	0.00	Y				1940	1940
5/1	3.40	0.00	Y				1955	1955
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 9: '2026 Test PM Peak' (FG9: '2026 Test PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	1713	0	1713
	B	1361	0	371	1732
	C	192	99	0	291
	Tot.	1553	1812	371	3736

Full Input Data And Results

Traffic Lane Flows

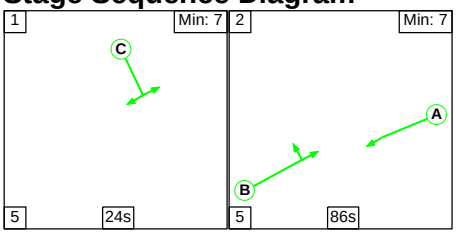
Lane	Scenario 9: 2026 Test PM Peak
Junction: Unnamed Junction	
1/1	1713
2/1	291
3/1 (short)	371
3/2 (with short)	1732(In) 1361(Out)
4/1	1553
5/1	1812
6/1	371

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 (A38 North)	3.20	6.00	Y	Arm 5 Ahead	Inf	100.0 %	1683	1683
2/1 (Downside Road)	3.10	0.00	Y	Arm 4 Left	15.00	66.0 %	1764	1764
				Arm 5 Right	20.00	34.0 %		
3/1 (A38 South)	3.10	0.00	Y	Arm 6 Left	10.00	100.0 %	1674	1674
3/2 (A38 South)	2.90	0.00	N	Arm 4 Ahead	Inf	100.0 %	2045	2045
4/1	3.25	0.00	Y				1940	1940
5/1	3.40	0.00	Y				1955	1955
6/1	Infinite Saturation Flow						Inf	Inf

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

Stage Sequence Diagram

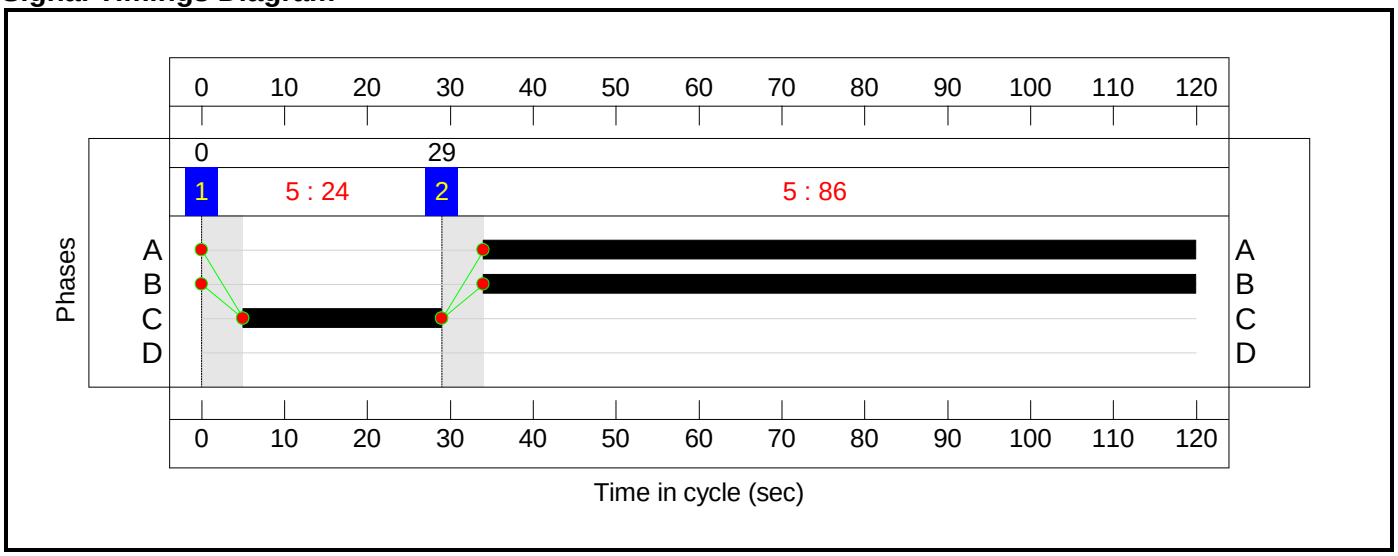


Stage Timings

Stage	1	2
Duration	24	86
Change Point	0	29

Full Input Data And Results

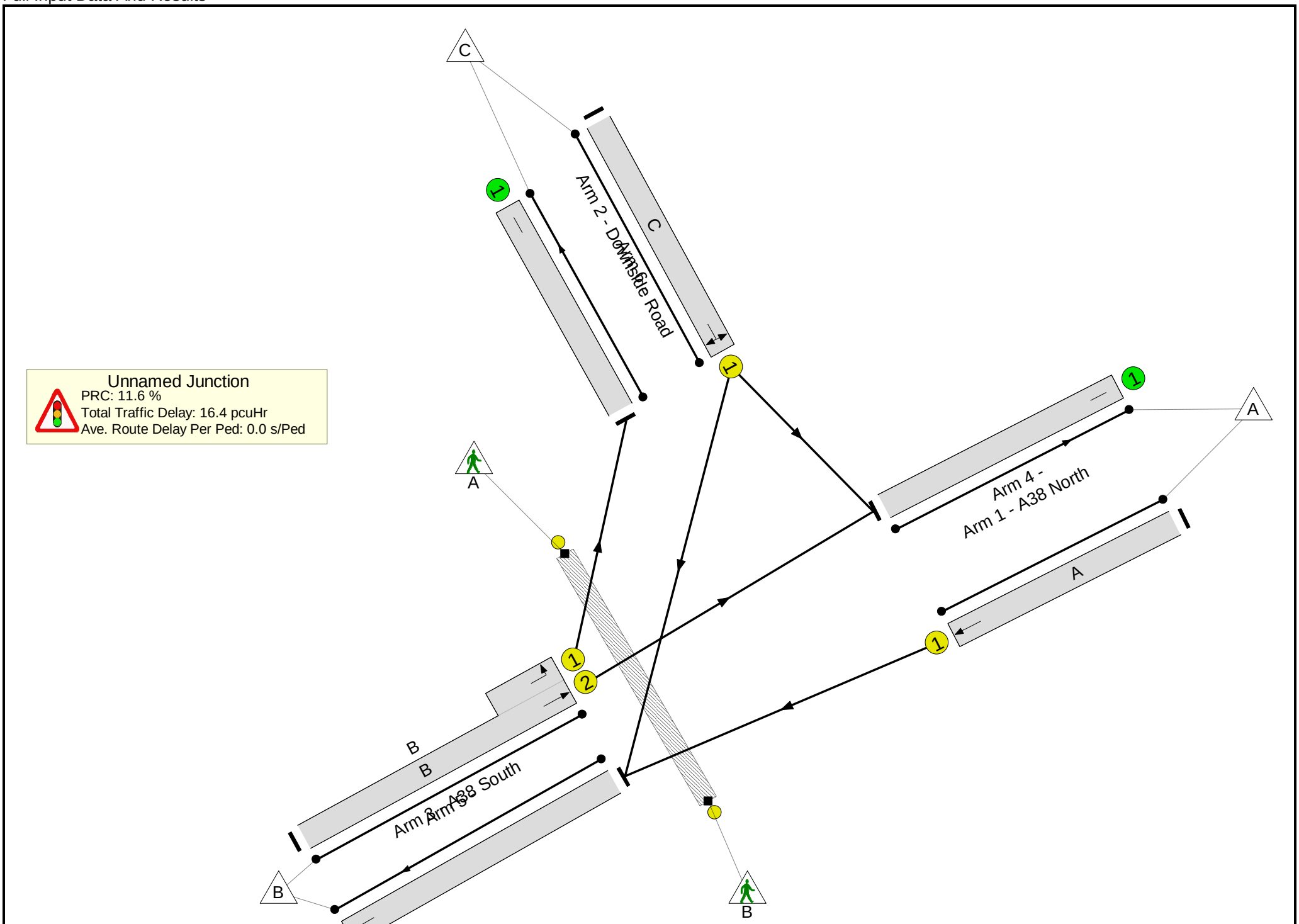
Signal Timings Diagram



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**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**80.6%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**80.6%**
1/1	A38 North Ahead	U	N/A	N/A	A		1	86	-	984	1683	1220	80.6%
2/1	Downside Road Left Right	U	N/A	N/A	C		1	24	-	287	1757	366	78.4%
3/2+3/1	A38 South Ahead Left	U	N/A	N/A	B		1	86	-	1151	2045:1674	1130+331	78.8 : 78.8%
4/1		U	N/A	N/A	-		-	-	-	1130	1940	1940	58.2%
5/1		U	N/A	N/A	-		-	-	-	1031	1955	1955	52.7%
6/1		U	N/A	N/A	-		-	-	-	261	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	D		0	0	-	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	**-**	**-**	**0**	**0**	**0**	**9.6**	**6.9**	**0.0**	**16.4**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**9.6**	**6.9**	**0.0**	**16.4**	**-**	**-**	**-**	**-**
1/1	984	984	-	-	-	3.0	2.0	-	5.0	18.4	21.6	2.0	23.6
2/1	287	287	-	-	-	3.6	1.7	-	5.3	66.8	9.0	1.7	10.7
3/2+3/1	1151	1151	-	-	-	3.0	1.8	-	4.8	15.1	22.1	1.8	23.9
4/1	1130	1130	-	-	-	0.0	0.7	-	0.7	2.2	2.2	0.7	2.9
5/1	1031	1031	-	-	-	0.0	0.6	-	0.6	1.9	0.0	0.6	0.6
6/1	261	261	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

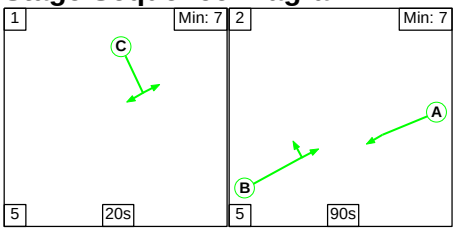
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	11.6	Total Delay for Signalled Lanes (pcuHr):	15.19	Cycle Time (s):	120
	PRC Over All Lanes (%):	11.6	Total Delay Over All Lanes(pcuHr):	16.44		

Full Input Data And Results

Scenario 2: '2018 Baseline Inter Peak' (FG2: '2018 Baseline Inter Peak', Plan 1: 'Network Control Plan 1')

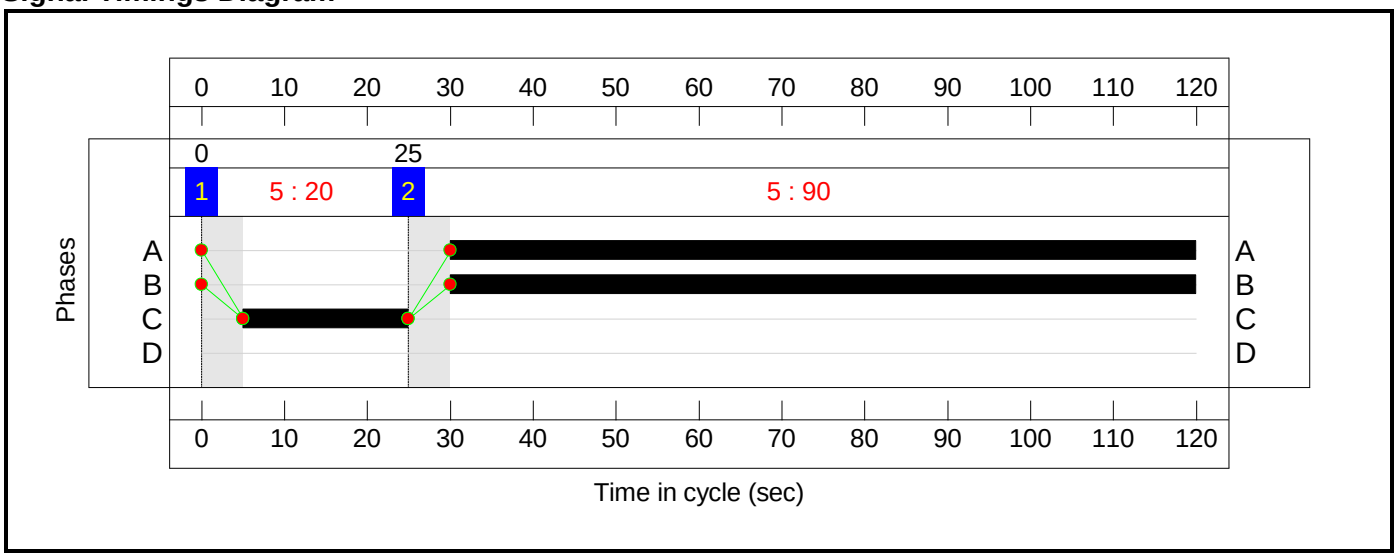
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	20	90
Change Point	0	25

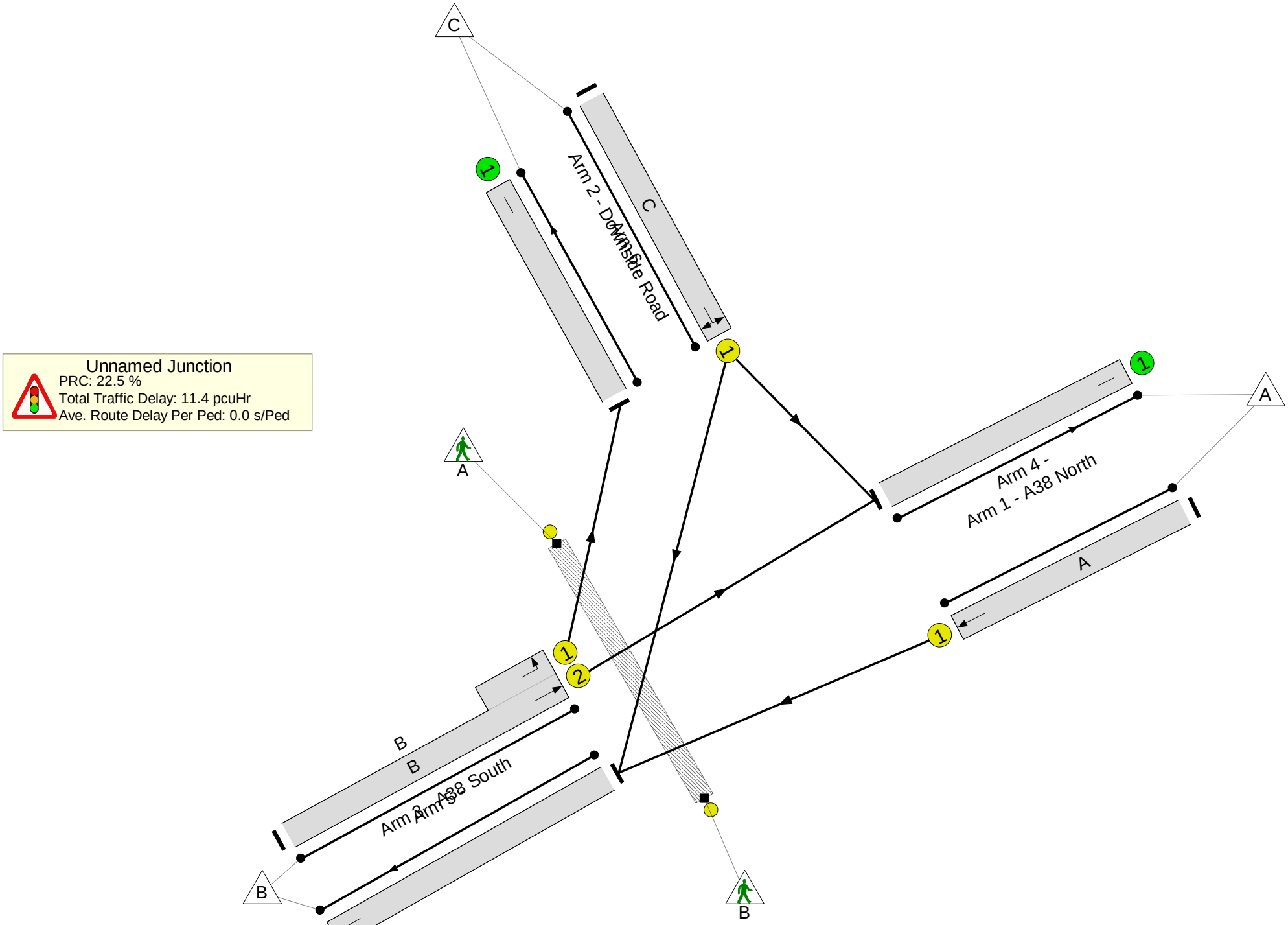
Signal Timings Diagram



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**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**73.5%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**73.5%**
1/1	A38 North Ahead	U	N/A	N/A	A		1	90	-	931	1683	1276	72.9%
2/1	Downside Road Left Right	U	N/A	N/A	C		1	20	-	227	1766	309	73.5%
3/2+3/1	A38 South Ahead Left	U	N/A	N/A	B		1	90	-	1009	2045:1674	1268+262	65.9 : 65.9%
4/1		U	N/A	N/A	-		-	-	-	974	1940	1940	50.2%
5/1		U	N/A	N/A	-		-	-	-	1020	1955	1955	52.2%
6/1		U	N/A	N/A	-		-	-	-	173	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	D		0	0	-	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	**-**	**-**	**0**	**0**	**0**	**6.7**	**4.7**	**0.0**	**11.4**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**6.7**	**4.7**	**0.0**	**11.4**	**-**	**-**	**-**	**-**
1/1	931	931	-	-	-	2.0	1.3	-	3.4	13.0	16.6	1.3	17.9
2/1	227	227	-	-	-	3.0	1.3	-	4.3	68.1	7.1	1.3	8.5
3/2+3/1	1009	1009	-	-	-	1.8	1.0	-	2.7	9.7	14.2	1.0	15.2
4/1	974	974	-	-	-	0.0	0.5	-	0.5	1.9	2.7	0.5	3.2
5/1	1020	1020	-	-	-	0.0	0.5	-	0.5	1.9	0.0	0.5	0.5
6/1	173	173	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

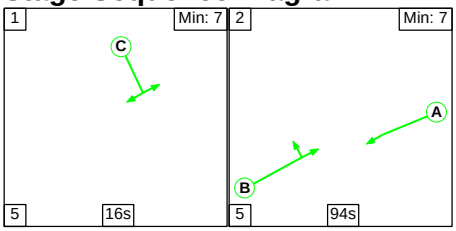
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	22.5	Total Delay for Signalled Lanes (pcuHr):	10.38	Cycle Time (s):	120
	PRC Over All Lanes (%):	22.5	Total Delay Over All Lanes(pcuHr):	11.43		

Full Input Data And Results

Scenario 3: '2018 Baseline PM Peak' (FG3: '2018 Baseline PM Peak', Plan 1: 'Network Control Plan 1')

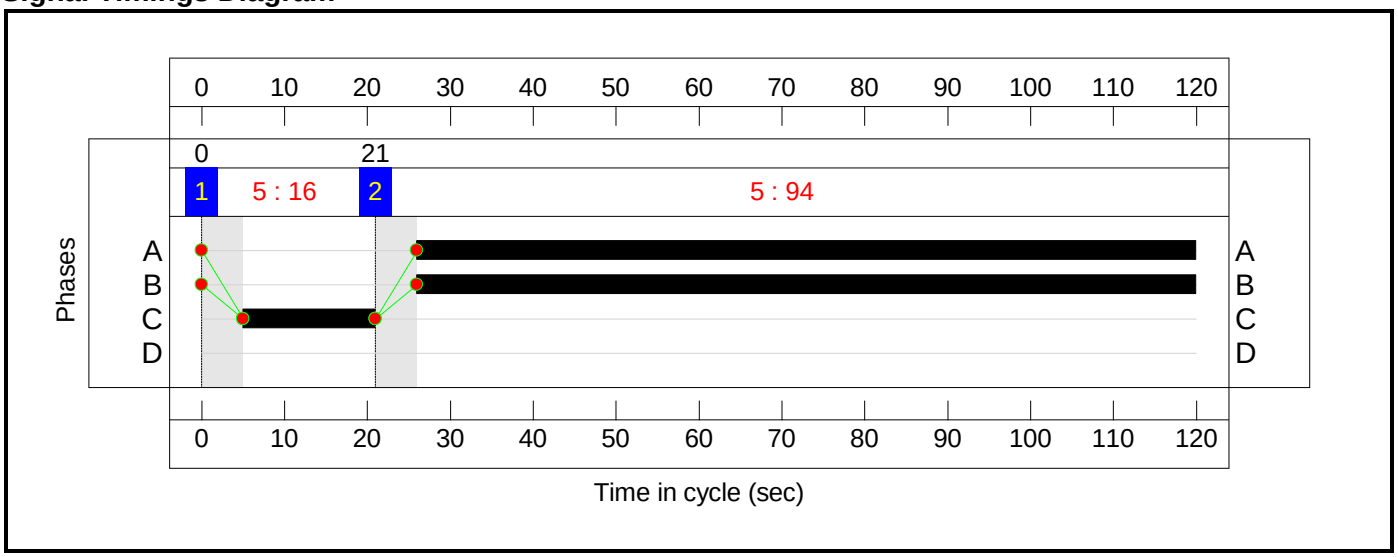
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	16	94
Change Point	0	21

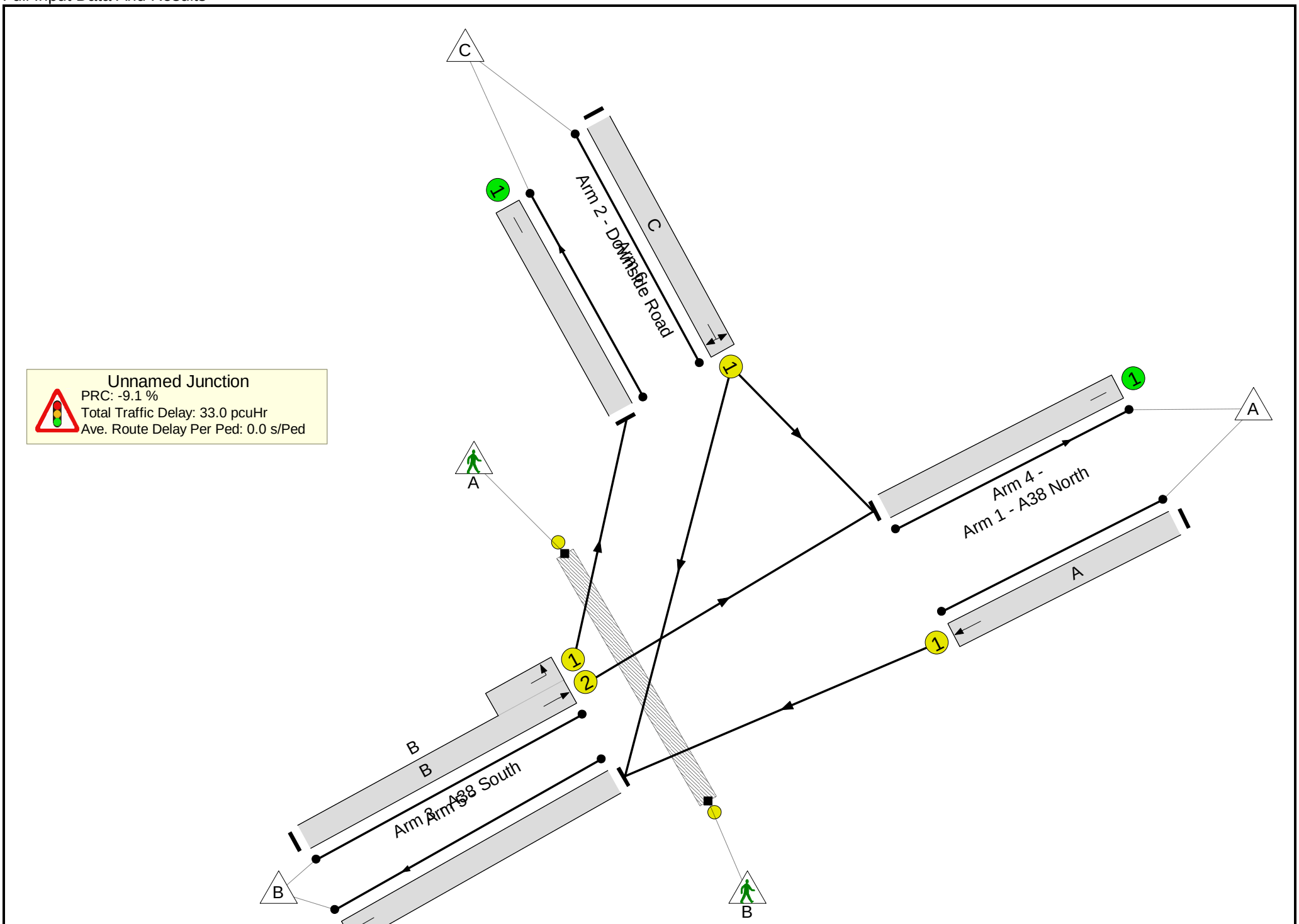
Signal Timings Diagram



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**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**98.2%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**98.2%**
1/1	A38 North Ahead	U	N/A	N/A	A		1	94	-	1308	1683	1332	98.2%
2/1	Downside Road Left Right	U	N/A	N/A	C		1	16	-	241	1762	250	96.5%
3/2+3/1	A38 South Ahead Left	U	N/A	N/A	B		1	94	-	1301	2045:1674	1238+353	81.8 : 81.8%
4/1		U	N/A	N/A	-		-	-	-	1180	1940	1940	60.8%
5/1		U	N/A	N/A	-		-	-	-	1381	1955	1955	70.6%
6/1		U	N/A	N/A	-		-	-	-	289	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	D		0	0	-	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	**-**	**-**	**0**	**0**	**0**	**9.9**	**23.1**	**0.0**	**33.0**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**9.9**	**23.1**	**0.0**	**33.0**	**-**	**-**	**-**	**-**
1/1	1308	1308	-	-	-	4.2	13.0	-	17.2	47.4	40.7	13.0	53.7
2/1	241	241	-	-	-	3.4	5.9	-	9.3	139.4	8.0	5.9	13.9
3/2+3/1	1301	1301	-	-	-	2.3	2.2	-	4.5	12.4	22.6	2.2	24.8
4/1	1180	1180	-	-	-	0.0	0.8	-	0.8	2.4	2.2	0.8	3.0
5/1	1381	1381	-	-	-	0.0	1.2	-	1.2	3.1	0.0	1.2	1.2
6/1	289	289	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

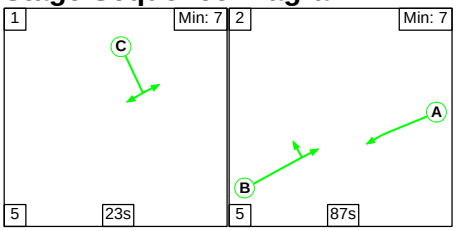
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	-9.1	Total Delay for Signalled Lanes (pcuHr):	31.04	Cycle Time (s):	120
	PRC Over All Lanes (%):	-9.1	Total Delay Over All Lanes(pcuHr):	33.01		

Full Input Data And Results

Scenario 4: '2026 Reference AM ' (FG4: '2026 Reference AM Peak', Plan 1: 'Network Control Plan 1')

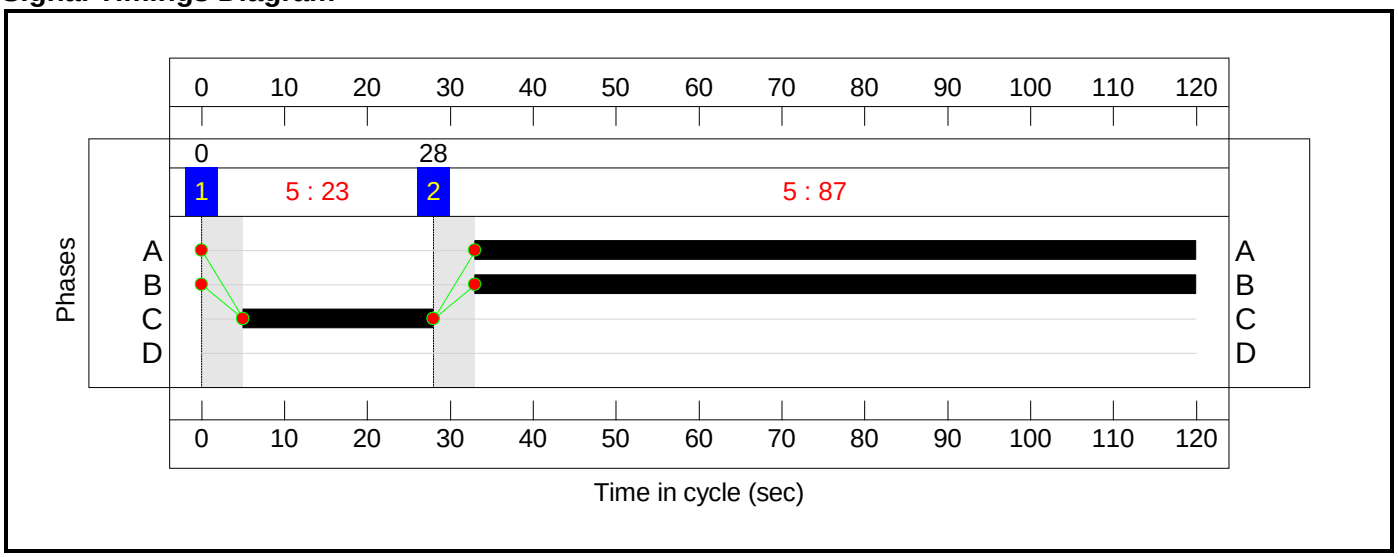
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	23	87
Change Point	0	28

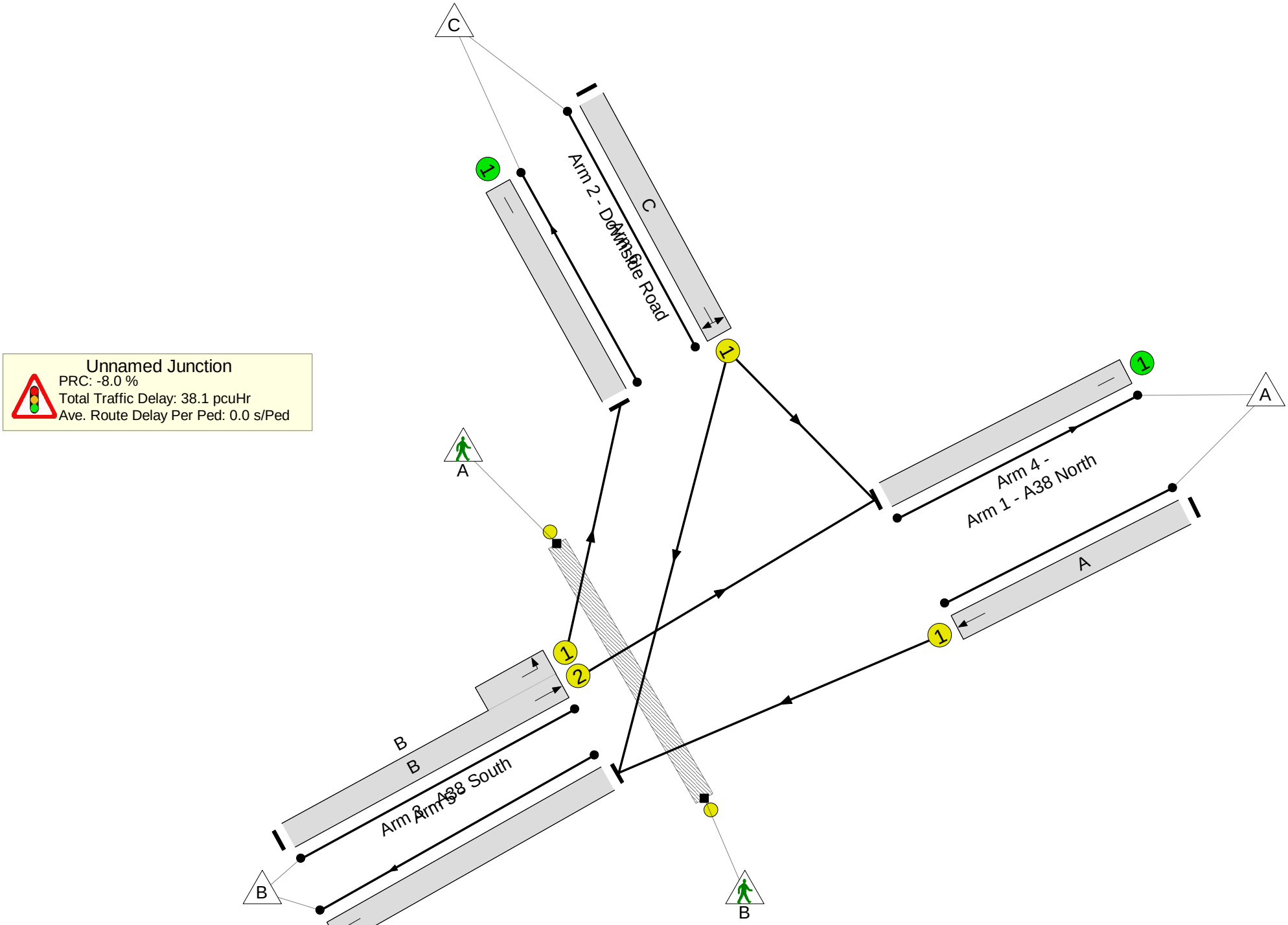
Signal Timings Diagram



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**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**97.2%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**97.2%**
1/1	A38 North Ahead	U	N/A	N/A	A		1	87	-	1200	1683	1234	97.2%
2/1	Downside Road Left Right	U	N/A	N/A	C		1	23	-	335	1757	351	95.3%
3/2+3/1	A38 South Ahead Left	U	N/A	N/A	B		1	87	-	1365	2045:1674	1153+325	92.4 : 92.4%
4/1		U	N/A	N/A	-		-	-	-	1339	1940	1940	69.0%
5/1		U	N/A	N/A	-		-	-	-	1261	1955	1955	64.5%
6/1		U	N/A	N/A	-		-	-	-	300	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	D		0	0	-	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	**-**	**-**	**0**	**0**	**0**	**13.9**	**24.2**	**0.0**	**38.1**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**13.9**	**24.2**	**0.0**	**38.1**	**-**	**-**	**-**	**-**
1/1	1200	1200	-	-	-	5.0	10.8	-	15.7	47.2	37.0	10.8	47.8
2/1	335	335	-	-	-	4.4	5.9	-	10.3	111.2	11.0	5.9	16.9
3/2+3/1	1365	1365	-	-	-	4.5	5.5	-	10.0	26.5	35.2	5.5	40.7
4/1	1339	1339	-	-	-	0.0	1.1	-	1.1	3.0	2.2	1.1	3.3
5/1	1261	1261	-	-	-	0.0	0.9	-	0.9	2.6	0.0	0.9	0.9
6/1	300	300	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

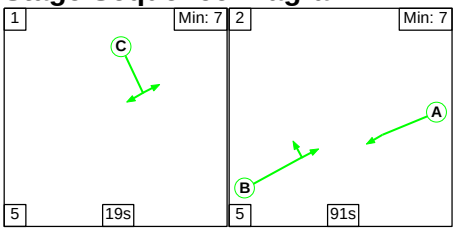
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	-8.0	Total Delay for Signalled Lanes (pcuHr):	36.11	Cycle Time (s):	120
	PRC Over All Lanes (%):	-8.0	Total Delay Over All Lanes(pcuHr):	38.13		

Full Input Data And Results

Scenario 5: '2026 Reference Inter Peak' (FG5: '2026 Reference Inter Peak', Plan 1: 'Network Control Plan 1')

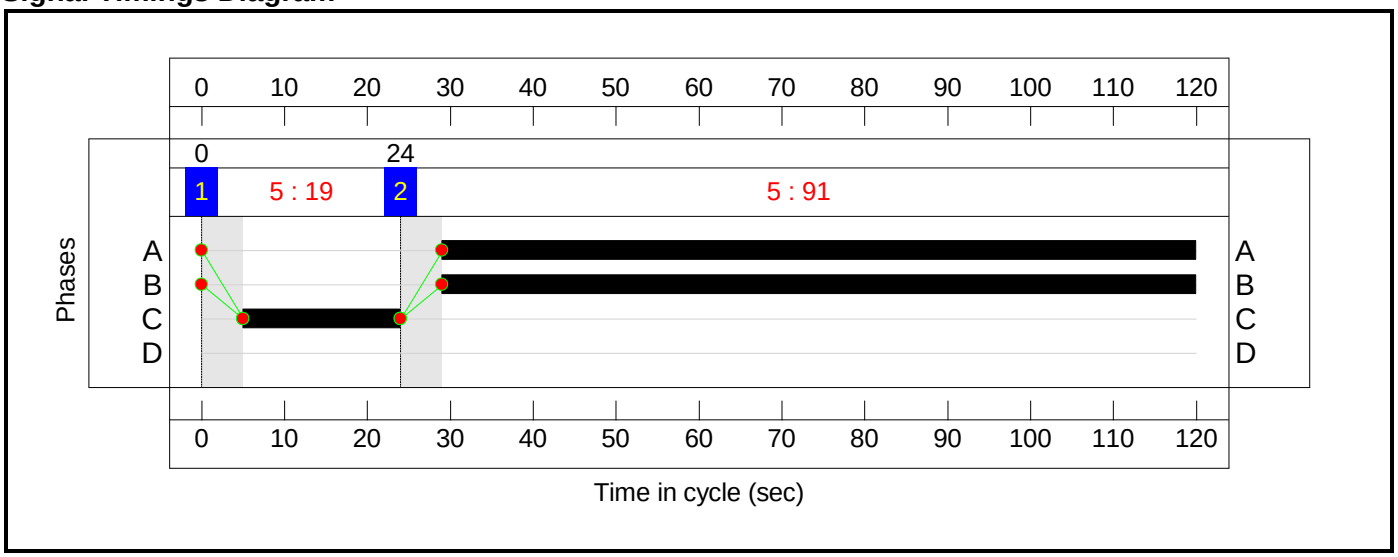
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	19	91
Change Point	0	24

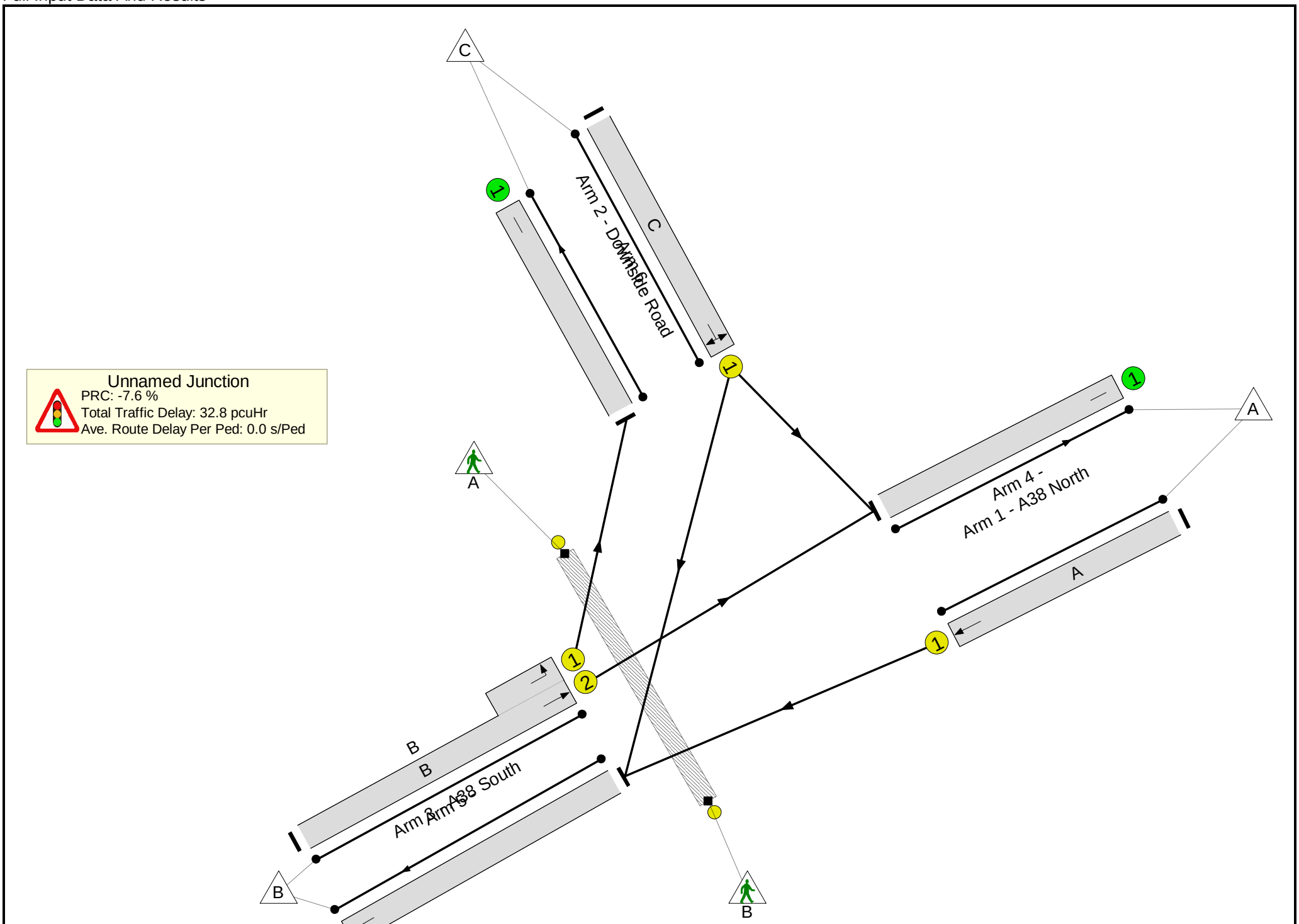
Signal Timings Diagram



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**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**96.8%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**96.8%**
1/1	A38 North Ahead	U	N/A	N/A	A		1	91	-	1249	1683	1290	96.8%
2/1	Downside Road Left Right	U	N/A	N/A	C		1	19	-	275	1767	294	93.4%
3/2+3/1	A38 South Ahead Left	U	N/A	N/A	B		1	91	-	1380	2045:1674	1309+240	89.1 : 89.1%
4/1		U	N/A	N/A	-		-	-	-	1327	1940	1940	68.4%
5/1		U	N/A	N/A	-		-	-	-	1363	1955	1955	69.7%
6/1		U	N/A	N/A	-		-	-	-	214	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	D		0	0	-	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	**-**	**-**	**0**	**0**	**0**	**11.8**	**21.0**	**0.0**	**32.8**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**11.8**	**21.0**	**0.0**	**32.8**	**-**	**-**	**-**	**-**
1/1	1249	1249	-	-	-	4.4	10.1	-	14.5	41.9	37.5	10.1	47.6
2/1	275	275	-	-	-	3.8	4.7	-	8.5	111.4	9.0	4.7	13.8
3/2+3/1	1380	1380	-	-	-	3.6	3.9	-	7.5	19.6	32.2	3.9	36.1
4/1	1327	1327	-	-	-	0.0	1.1	-	1.1	2.9	3.2	1.1	4.3
5/1	1363	1363	-	-	-	0.0	1.1	-	1.1	3.0	0.0	1.1	1.1
6/1	214	214	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

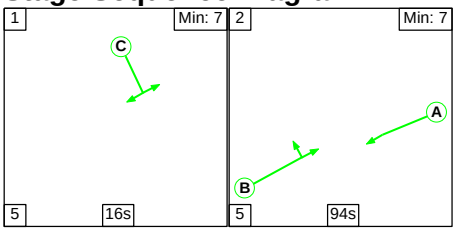
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	-7.6	Total Delay for Signalled Lanes (pcuHr):	30.58	Cycle Time (s):	120	
	PRC Over All Lanes (%):	-7.6	Total Delay Over All Lanes(pcuHr):	32.80			

Full Input Data And Results

Scenario 6: '2026 Reference PM' (FG6: '2026 Reference PM Peak', Plan 1: 'Network Control Plan 1')

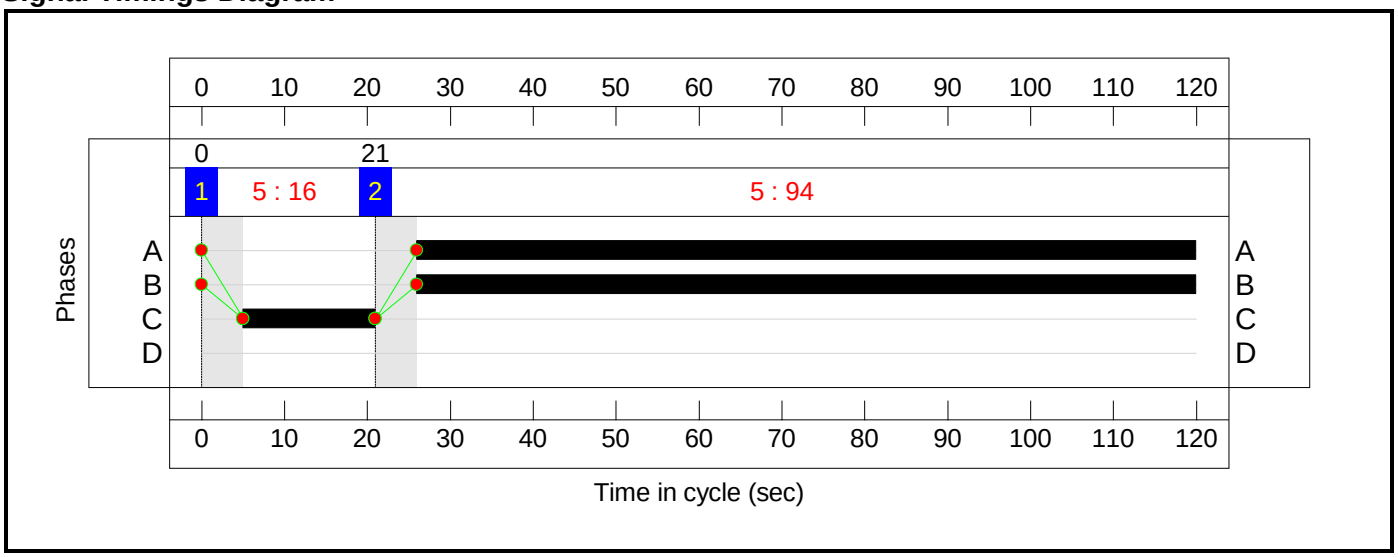
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	16	94
Change Point	0	21

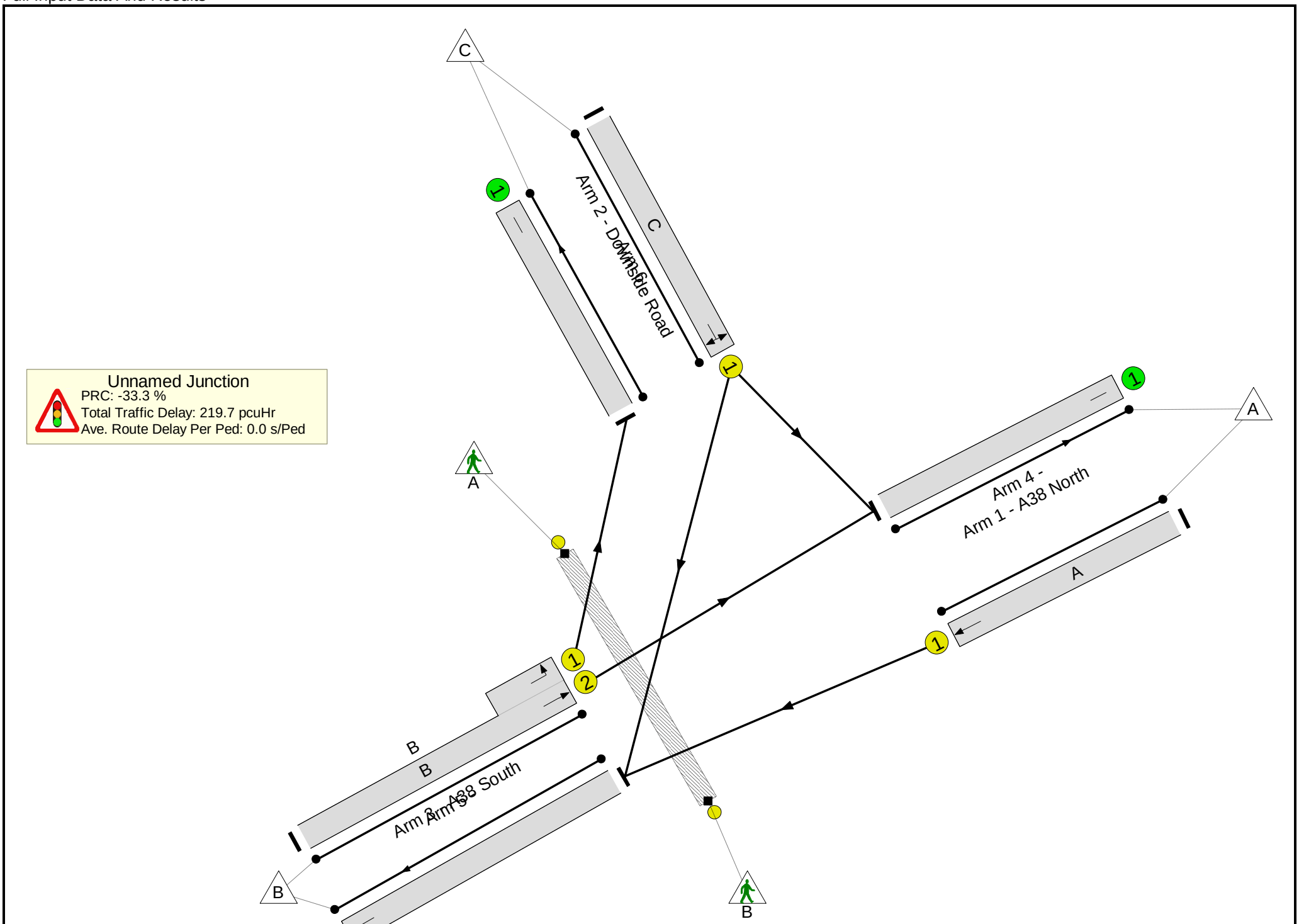
Signal Timings Diagram



Full Input Data And Results

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**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**119.9%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**119.9%**
1/1	A38 North Ahead	U	N/A	N/A	A		1	94	-	1598	1683	1332	119.9%
2/1	Downside Road Left Right	U	N/A	N/A	C		1	16	-	282	1763	250	112.9%
3/2+3/1	A38 South Ahead Left	U	N/A	N/A	B		1	94	-	1603	2045:1674	1244+347	100.7 : 100.7%
4/1		U	N/A	N/A	-		-	-	-	1445	1940	1940	72.9%
5/1		U	N/A	N/A	-		-	-	-	1688	1955	1955	72.2%
6/1		U	N/A	N/A	-		-	-	-	350	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	D		0	0	-	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	**-**	**-**	**0**	**0**	**0**	**38.5**	**181.2**	**0.0**	**219.7**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**38.5**	**181.2**	**0.0**	**219.7**	**-**	**-**	**-**	**-**
1/1	1598	1332	-	-	-	26.6	135.8	-	162.3	365.7	69.6	135.8	205.4
2/1	282	250	-	-	-	6.0	19.7	-	25.7	328.7	10.5	19.7	30.2
3/2+3/1	1603	1592	-	-	-	5.9	23.1	-	29.0	65.1	53.9	23.1	77.0
4/1	1414	1414	-	-	-	0.0	1.3	-	1.3	3.4	2.2	1.3	3.5
5/1	1412	1412	-	-	-	0.0	1.3	-	1.3	3.3	0.0	1.3	1.3
6/1	347	347	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

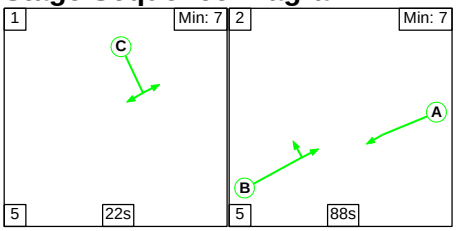
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	-33.3	Total Delay for Signalled Lanes (pcuHr):	217.08	Cycle Time (s):	120
	PRC Over All Lanes (%):	-33.3	Total Delay Over All Lanes(pcuHr):	219.71		

Full Input Data And Results

Scenario 7: '2026 Test AM Peak' (FG7: '2026 Test AM Peak', Plan 1: 'Network Control Plan 1')

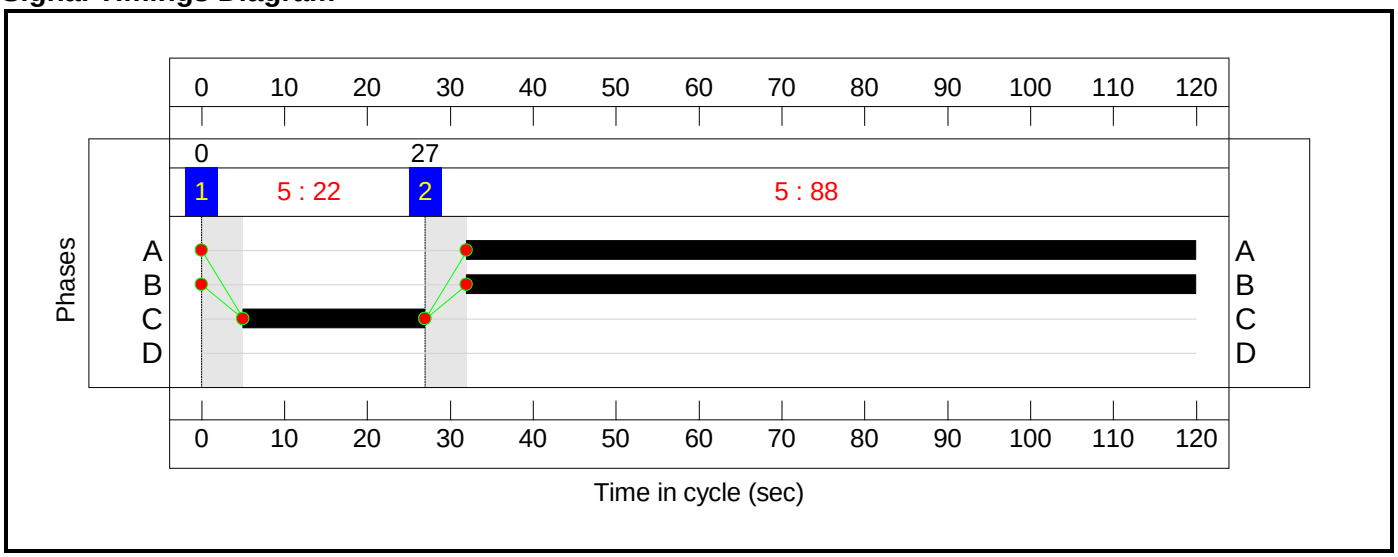
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	22	88
Change Point	0	27

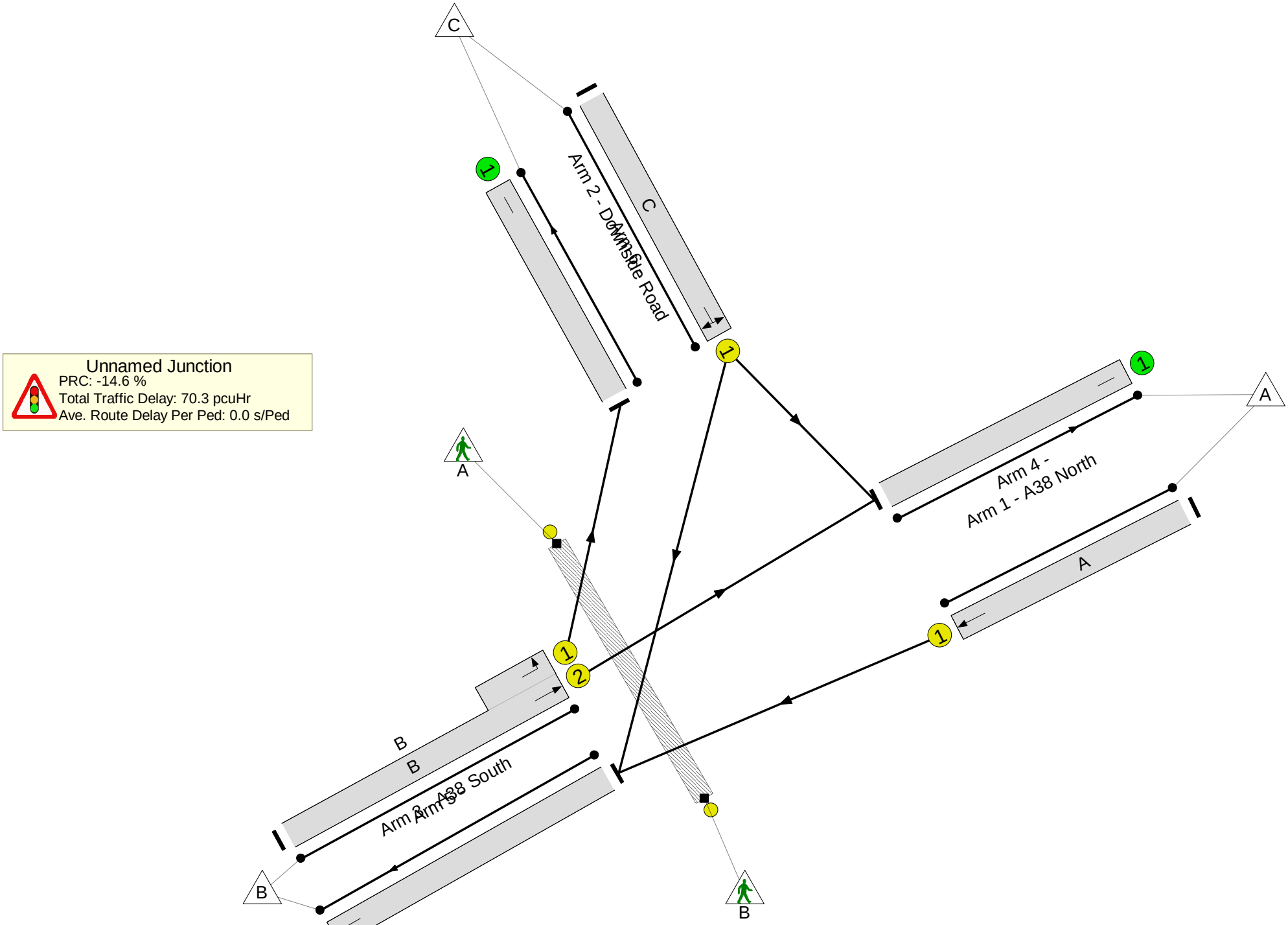
Signal Timings Diagram



Full Input Data And Results

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**	-	-		-	-	-	-	-	-	**103.1%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**103.1%**
1/1	A38 North Ahead	U	N/A	N/A	A		1	88	-	1287	1683	1248	103.1%
2/1	Downside Road Left Right	U	N/A	N/A	C		1	22	-	344	1758	337	102.1%
3/2+3/1	A38 South Ahead Left	U	N/A	N/A	B		1	88	-	1424	2045:1674	1175+319	95.3 : 95.3%
4/1		U	N/A	N/A	-		-	-	-	1394	1940	1940	71.6%
5/1		U	N/A	N/A	-		-	-	-	1357	1955	1955	67.4%
6/1		U	N/A	N/A	-		-	-	-	304	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	D		0	0	-	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	-	-	**0**	**0**	**0**	**18.6**	**51.8**	**0.0**	**70.3**	-	-	-	-
Unnamed Junction	-	-	**0**	**0**	**0**	**18.6**	**51.8**	**0.0**	**70.3**	-	-	-	-
1/1	1287	1248	-	-	-	8.6	30.1	-	38.7	108.1	44.4	30.1	74.5
2/1	344	337	-	-	-	5.1	11.2	-	16.3	170.3	11.7	11.2	22.9
3/2+3/1	1424	1424	-	-	-	4.9	8.2	-	13.1	33.1	40.0	8.2	48.2
4/1	1388	1388	-	-	-	0.0	1.3	-	1.3	3.3	2.2	1.3	3.5
5/1	1317	1317	-	-	-	0.0	1.0	-	1.0	2.8	0.0	1.0	1.0
6/1	304	304	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

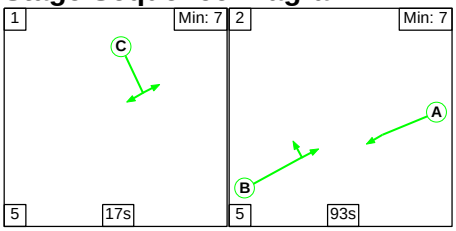
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	-14.6	Total Delay for Signalled Lanes (pcuHr):	68.04	Cycle Time (s):	120
	PRC Over All Lanes (%):	-14.6	Total Delay Over All Lanes(pcuHr):	70.33		

Full Input Data And Results

Scenario 8: '2026 Test Inter Peak' (FG8: '2026 Test Inter Peak', Plan 1: 'Network Control Plan 1')

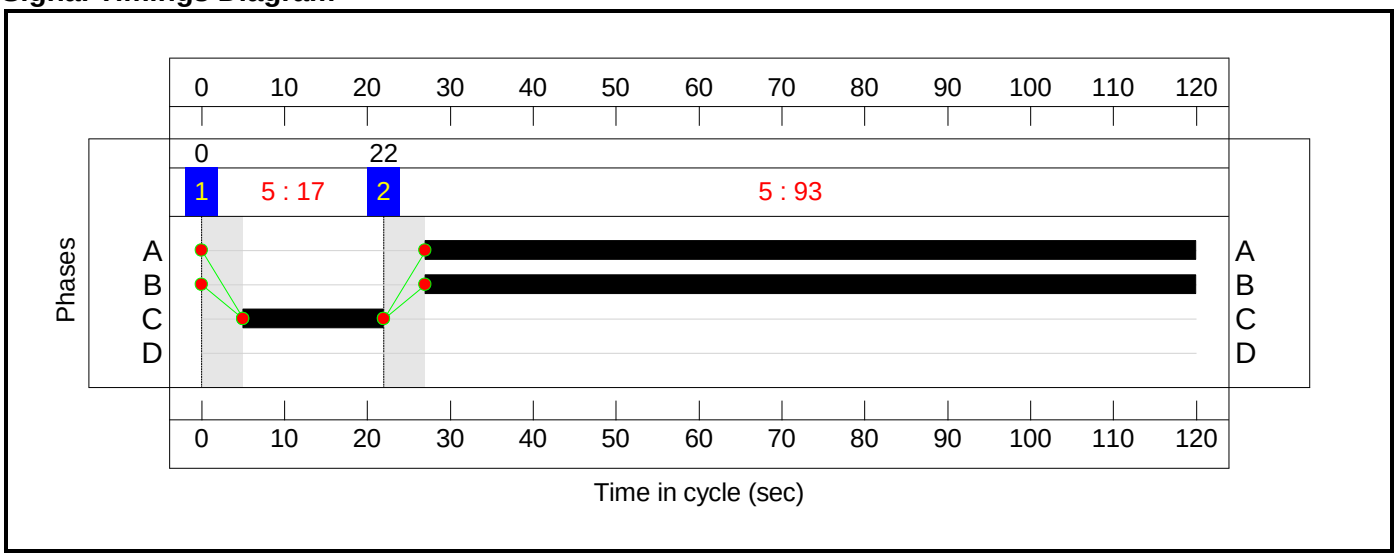
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	17	93
Change Point	0	22

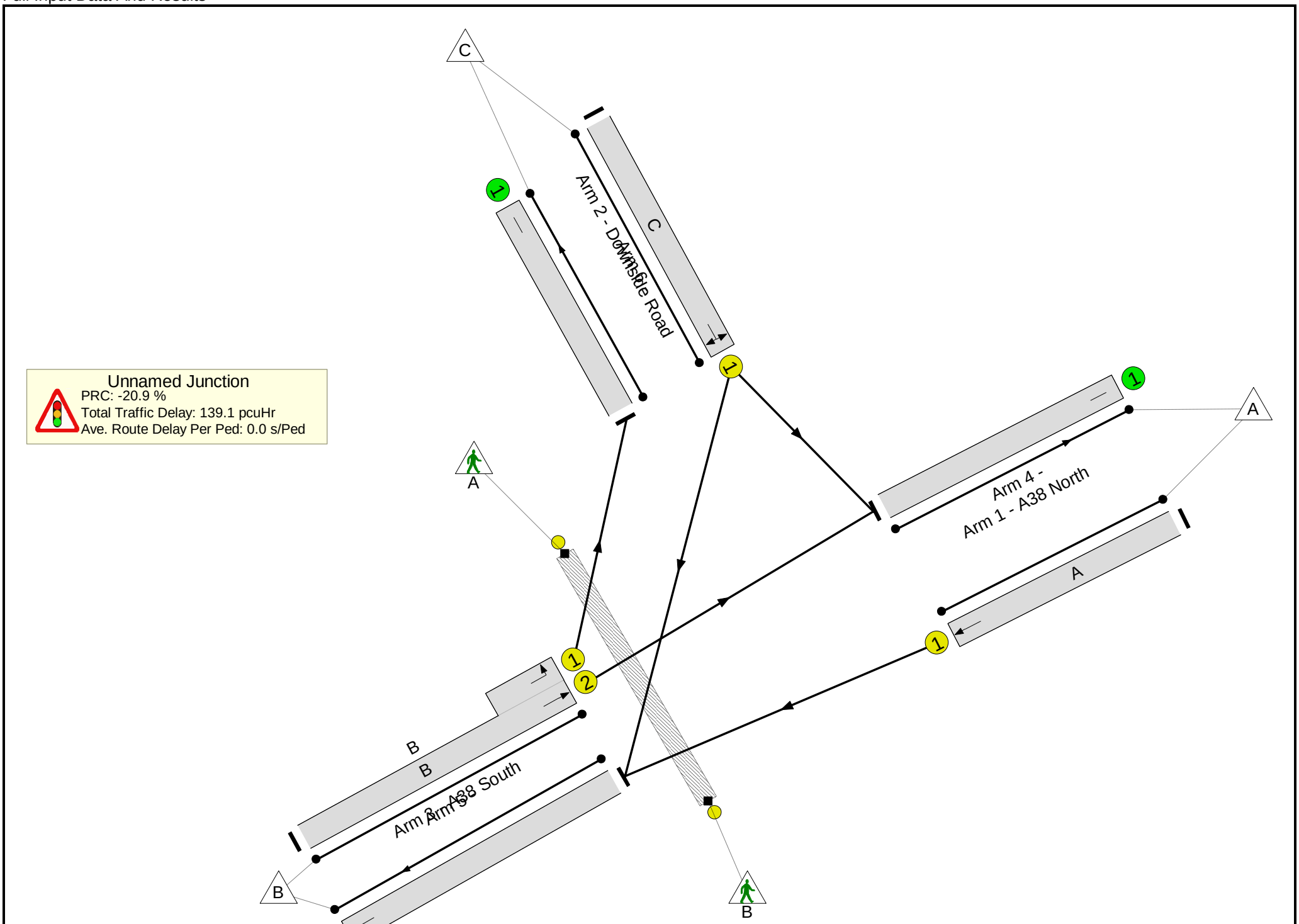
Signal Timings Diagram



Full Input Data And Results

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**	-	-		-	-	-	-	-	-	**108.8%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**108.8%**
1/1	A38 North Ahead	U	N/A	N/A	A		1	93	-	1435	1683	1318	108.8%
2/1	Downside Road Left Right	U	N/A	N/A	C		1	17	-	288	1768	265	108.6%
3/2+3/1	A38 South Ahead Left	U	N/A	N/A	B		1	93	-	1612	2045:1674	1358+225	101.8 : 101.8%
4/1		U	N/A	N/A	-		-	-	-	1544	1940	1940	77.7%
5/1		U	N/A	N/A	-		-	-	-	1562	1955	1955	73.4%
6/1		U	N/A	N/A	-		-	-	-	229	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	D		0	0	-	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	-	-	**0**	**0**	**0**	**27.6**	**111.4**	**0.0**	**139.1**	-	-	-	-
Unnamed Junction	-	-	**0**	**0**	**0**	**27.6**	**111.4**	**0.0**	**139.1**	-	-	-	-
1/1	1435	1318	-	-	-	14.4	63.9	-	78.3	196.5	54.4	63.9	118.4
2/1	288	265	-	-	-	5.5	15.9	-	21.4	267.8	10.4	15.9	26.3
3/2+3/1	1612	1583	-	-	-	7.7	28.5	-	36.2	80.8	55.3	28.5	83.8
4/1	1507	1507	-	-	-	0.0	1.7	-	1.7	4.1	3.3	1.7	5.0
5/1	1435	1435	-	-	-	0.0	1.4	-	1.4	3.4	0.0	1.4	1.4
6/1	225	225	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

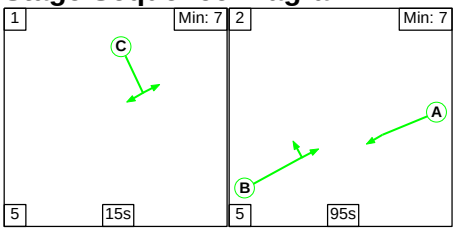
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	-20.9	Total Delay for Signalled Lanes (pcuHr):	135.95	Cycle Time (s):	120	
	PRC Over All Lanes (%):	-20.9	Total Delay Over All Lanes(pcuHr):	139.05			

Full Input Data And Results

Scenario 9: '2026 Test PM Peak' (FG9: '2026 Test PM Peak', Plan 1: 'Network Control Plan 1')

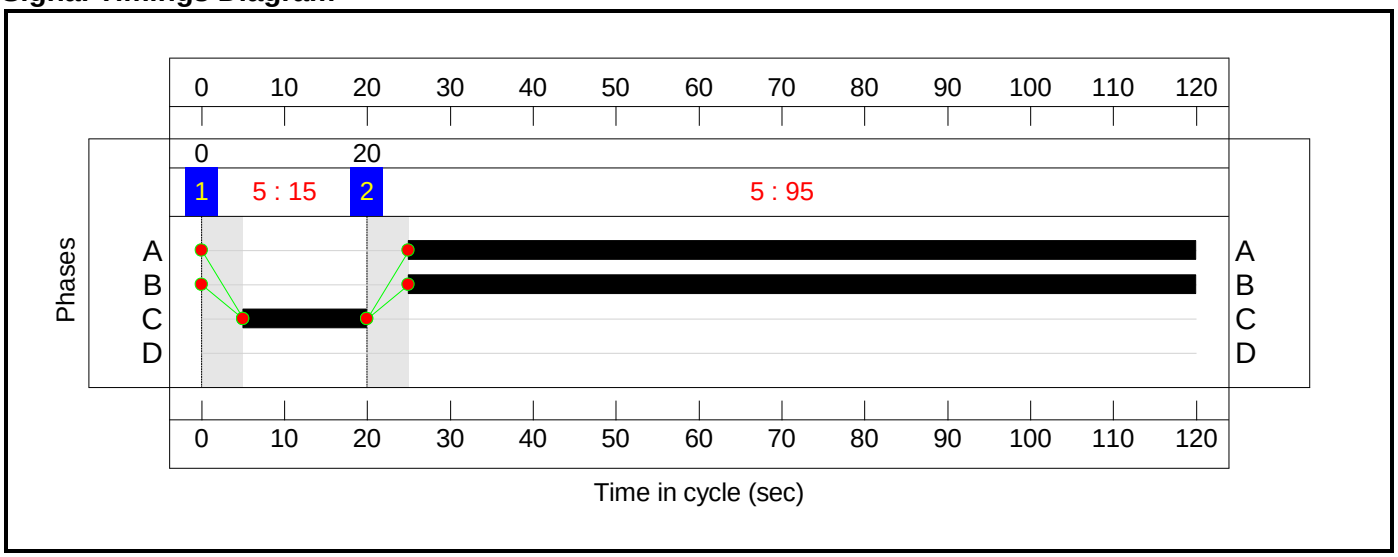
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	15	95
Change Point	0	20

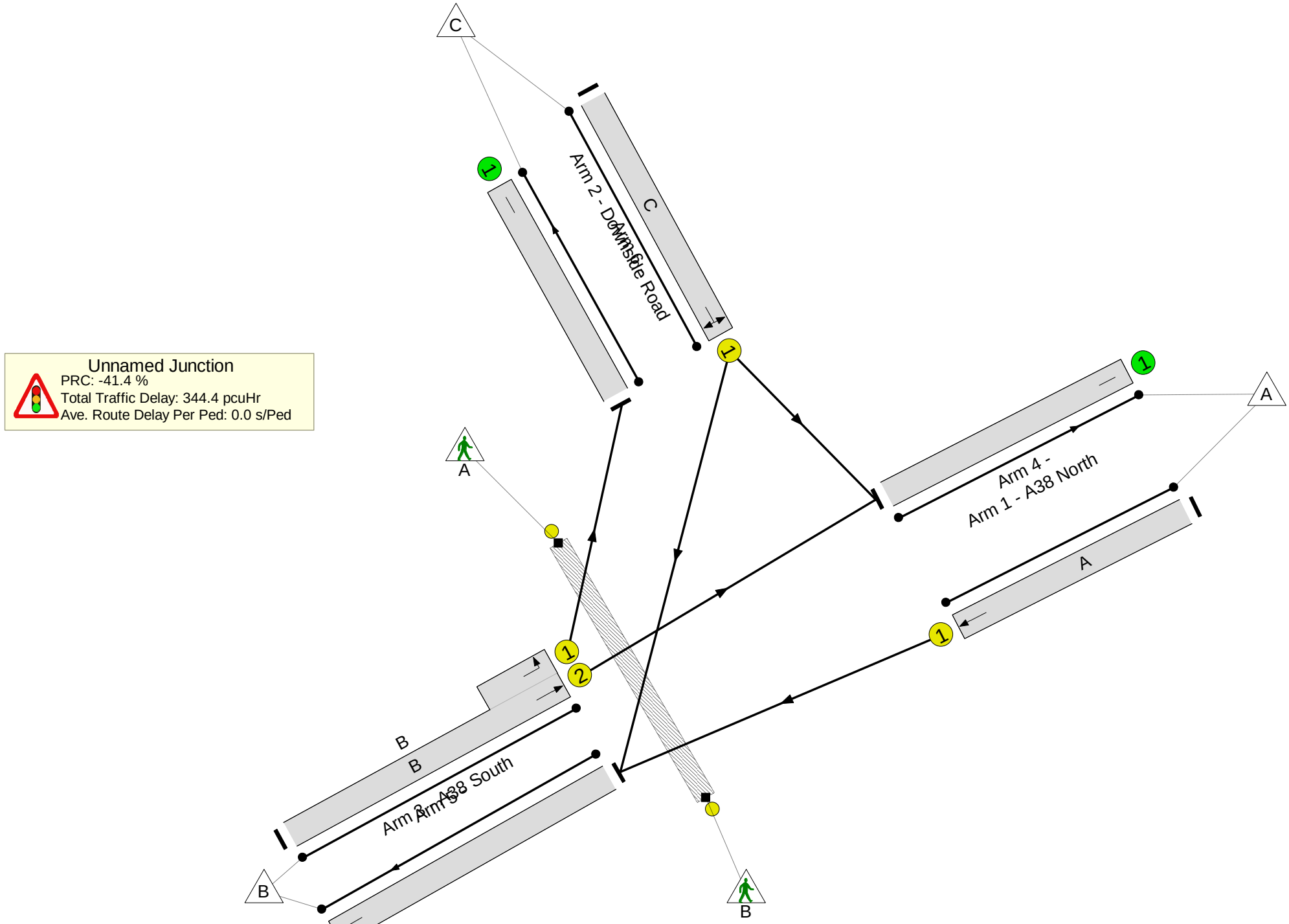
Signal Timings Diagram



Full Input Data And Results

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**	-	-		-	-	-	-	-	-	**127.2%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**127.2%**
1/1	A38 North Ahead	U	N/A	N/A	A		1	95	-	1713	1683	1346	127.2%
2/1	Downside Road Left Right	U	N/A	N/A	C		1	15	-	291	1764	235	123.7%
3/2+3/1	A38 South Ahead Left	U	N/A	N/A	B		1	95	-	1732	2045:1674	1264+344	107.7 : 107.7%
4/1		U	N/A	N/A	-		-	-	-	1553	1940	1940	73.1%
5/1		U	N/A	N/A	-		-	-	-	1812	1955	1955	73.0%
6/1		U	N/A	N/A	-		-	-	-	371	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	D		0	0	-	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	-	-	**0**	**0**	**0**	**57.5**	**286.9**	**0.0**	**344.4**	-	-	-	-
Unnamed Junction	-	-	**0**	**0**	**0**	**57.5**	**286.9**	**0.0**	**344.4**	-	-	-	-
1/1	1713	1346	-	-	-	34.8	185.6	-	220.4	463.2	80.1	185.6	265.7
2/1	291	235	-	-	-	7.7	30.3	-	38.0	470.1	11.6	30.3	41.9
3/2+3/1	1732	1608	-	-	-	15.0	68.3	-	83.3	173.1	63.4	68.3	131.6
4/1	1419	1419	-	-	-	0.0	1.4	-	1.4	3.4	2.2	1.4	3.6
5/1	1426	1426	-	-	-	0.0	1.3	-	1.3	3.4	0.0	1.3	1.3
6/1	344	344	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

Full Input Data And Results

C1	PRC for Signalled Lanes (%):	-41.4	Total Delay for Signalled Lanes (pcuHr):	341.69	Cycle Time (s):	120
	PRC Over All Lanes (%):	-41.4	Total Delay Over All Lanes(pcuHr):	344.39		

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.2.5947
© Copyright TRL Limited, 2017

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 770558 software@trl.co.uk www.trlsoftware.co.uk

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: J1_J2_North&South Airport Access Roundabouts - Existing.j9
Path: \\pba.int\BRI\Projects\43321 Bristol Airport\Technical\Transport\Junction Assessments\ARCADY
Report generation date: 03-Dec-18 3:40:47 PM

»2018 Baseline, AM
»2018 Baseline, IP
»2018 Baseline, PM
»2026 Reference Case, AM
»2026 Reference Case, IP
»2026 Reference Case, PM
»2026 Test Case, AM
»2026 Test Case, IP
»2026 Test Case, PM

Summary of junction performance

	AM				IP				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2018 Baseline											
Arm A	0.5	2.39	0.32	A	0.5	2.52	0.35	A	0.7	2.79	0.43	A
Arm B	0.8	3.05	0.45	A	0.3	2.24	0.23	A	0.5	2.52	0.34	A
Arm C	0.1	4.28	0.09	A	0.2	3.76	0.19	A	0.2	4.23	0.19	A
	2026 Reference Case											
Arm A	0.6	2.53	0.38	A	0.8	2.92	0.44	A	1.0	3.23	0.50	A
Arm B	1.2	3.59	0.53	A	0.4	2.43	0.30	A	0.7	2.77	0.41	A
Arm C	0.1	4.97	0.12	A	0.4	4.57	0.28	A	0.4	5.11	0.26	A
	2026 Test Case											
Arm A	0.6	2.59	0.39	A	1.0	3.18	0.49	A	1.1	3.38	0.52	A
Arm B	1.2	3.73	0.55	A	0.5	2.58	0.33	A	0.8	2.89	0.43	A
Arm C	0.2	5.14	0.14	A	0.5	5.04	0.33	A	0.4	5.45	0.29	A

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

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

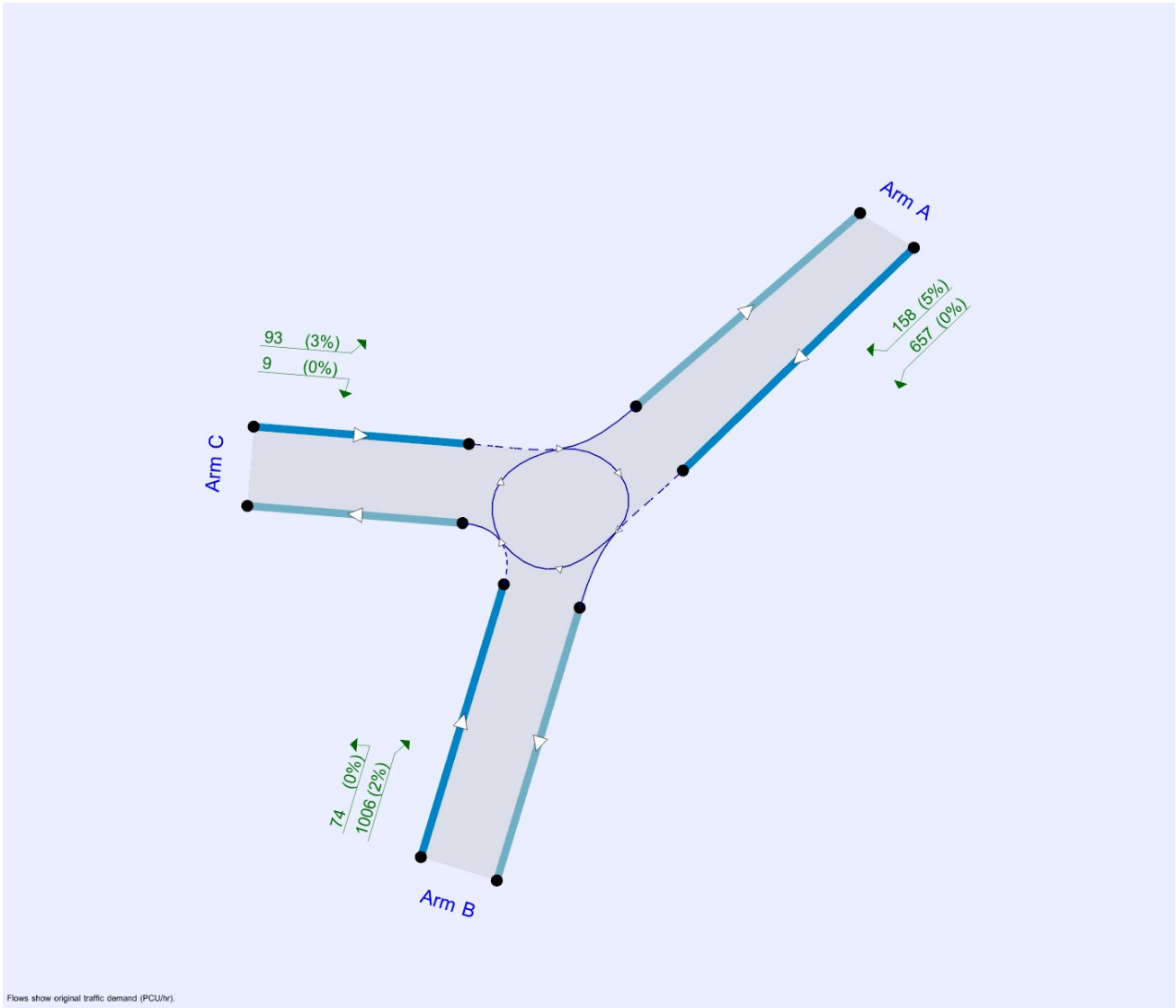
File summary

File Description

Title	North & South Airport Access Roundabouts
Location	Bristol
Site number	1/2
Date	20-Aug-18
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	43321
Enumerator	PBA\proose
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D2	2018 Baseline	IP	ONE HOUR	12:45	14:15	15	✓
D3	2018 Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D4	2026 Reference Case	AM	ONE HOUR	07:45	09:15	15	✓
D5	2026 Reference Case	IP	ONE HOUR	12:45	14:15	15	✓
D6	2026 Reference Case	PM	ONE HOUR	16:45	18:15	15	✓
D7	2026 Test Case	AM	ONE HOUR	07:45	09:15	15	✓
D8	2026 Test Case	IP	ONE HOUR	12:45	14:15	15	✓
D9	2026 Test Case	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2018 Baseline, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm A - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm B - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
2	untitled	Standard Roundabout	A, B, C	2.84	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	A38 North	
B	A38 South	
C	Bristol Airport Access	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A	4.30	7.10	87.9	40.1	40.0	4.0	
B	5.00	7.90	36.3	20.0	40.0	18.0	
C	4.50	5.30	4.0	12.0	40.0	24.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.799	2311
B	0.776	2307
C	0.597	1494

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

Traffic Demand

Demand Set Details

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

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	671	100.000
B		ONE HOUR	✓	902	100.000
C		ONE HOUR	✓	73	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	553	118
	B	845	1	56
	C	69	4	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	5	0
	B	3	0	0
	C	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.32	2.39	0.5	A	616	924
B	0.45	3.05	0.8	A	828	1242
C	0.09	4.28	0.1	A	67	100

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	505	126	4	2308	0.219	504	686	0.0	0.3	2.076	A
B	679	170	89	2238	0.303	677	419	0.0	0.4	2.369	A
C	55	14	635	1114	0.049	55	131	0.0	0.1	3.462	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	603	151	4	2307	0.261	603	821	0.3	0.4	2.198	A
B	811	203	106	2225	0.364	810	501	0.4	0.6	2.615	A
C	66	16	760	1040	0.063	66	156	0.1	0.1	3.764	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	739	185	5	2306	0.320	738	1005	0.4	0.5	2.390	A
B	993	248	130	2206	0.450	992	614	0.6	0.8	3.045	A
C	80	20	931	938	0.086	80	191	0.1	0.1	4.277	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	739	185	6	2306	0.320	739	1006	0.5	0.5	2.390	A
B	993	248	130	2206	0.450	993	614	0.8	0.8	3.050	A
C	80	20	931	937	0.086	80	192	0.1	0.1	4.279	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	603	151	5	2307	0.261	604	823	0.5	0.4	2.201	A
B	811	203	106	2225	0.364	812	502	0.8	0.6	2.620	A
C	66	16	761	1039	0.063	66	157	0.1	0.1	3.771	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	505	126	4	2308	0.219	505	689	0.4	0.3	2.080	A
B	679	170	89	2238	0.303	680	420	0.6	0.4	2.377	A
C	55	14	637	1113	0.049	55	131	0.1	0.1	3.466	A

2018 Baseline, IP

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm A - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm B - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
2	untitled	Standard Roundabout	A, B, C	2.61	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2018 Baseline	IP	ONE HOUR	12:45	14:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	712	100.000
B		ONE HOUR	✓	465	100.000
C		ONE HOUR	✓	210	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	2	582	128
	B	440	0	25
	C	156	54	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	4	1
	B	5	0	0
	C	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.35	2.52	0.5	A	653	980
B	0.23	2.24	0.3	A	427	640
C	0.19	3.76	0.2	A	193	289

Main Results for each time segment

12:45 - 13:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	536	134	41	2278	0.235	535	449	0.0	0.3	2.135	A
B	350	88	98	2231	0.157	349	478	0.0	0.2	2.002	A
C	158	40	332	1295	0.122	158	115	0.0	0.1	3.209	A

13:00 - 13:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	640	160	49	2272	0.282	640	537	0.3	0.4	2.281	A
B	418	105	117	2216	0.189	418	571	0.2	0.2	2.095	A
C	189	47	397	1256	0.150	189	137	0.1	0.2	3.421	A

13:15 - 13:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	784	196	59	2263	0.346	783	658	0.4	0.5	2.516	A
B	512	128	143	2196	0.233	512	700	0.2	0.3	2.238	A
C	231	58	486	1203	0.192	231	168	0.2	0.2	3.757	A

13:30 - 13:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	784	196	59	2263	0.346	784	658	0.5	0.5	2.516	A
B	512	128	143	2196	0.233	512	700	0.3	0.3	2.238	A
C	231	58	487	1203	0.192	231	168	0.2	0.2	3.758	A

13:45 - 14:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	640	160	49	2272	0.282	641	538	0.5	0.4	2.284	A
B	418	105	117	2216	0.189	418	572	0.3	0.2	2.096	A
C	189	47	398	1256	0.150	189	138	0.2	0.2	3.423	A

14:00 - 14:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	536	134	41	2278	0.235	536	451	0.4	0.3	2.138	A
B	350	88	98	2231	0.157	350	479	0.2	0.2	2.004	A
C	158	40	333	1295	0.122	158	115	0.2	0.1	3.214	A

2018 Baseline, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm A - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm B - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
2	untitled	Standard Roundabout	A, B, C	2.84	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2018 Baseline	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	876	100.000
B		ONE HOUR	✓	692	100.000
C		ONE HOUR	✓	182	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	2	786	88
	B	672	0	20
	C	130	52	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	1	0
	B	3	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.43	2.79	0.7	A	804	1206
B	0.34	2.52	0.5	A	635	952
C	0.19	4.23	0.2	A	167	251

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	659	165	39	2279	0.289	658	604	0.0	0.4	2.238	A
B	521	130	68	2255	0.231	520	629	0.0	0.3	2.135	A
C	137	34	506	1191	0.115	137	81	0.0	0.1	3.411	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	788	197	47	2273	0.346	787	722	0.4	0.5	2.444	A
B	622	156	81	2244	0.277	622	753	0.3	0.4	2.283	A
C	164	41	606	1132	0.145	163	97	0.1	0.2	3.716	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	964	241	57	2265	0.426	964	884	0.5	0.7	2.790	A
B	762	190	99	2230	0.342	761	922	0.4	0.5	2.522	A
C	200	50	742	1051	0.191	200	119	0.2	0.2	4.231	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	964	241	57	2265	0.426	964	885	0.7	0.7	2.792	A
B	762	190	99	2230	0.342	762	923	0.5	0.5	2.522	A
C	200	50	742	1050	0.191	200	119	0.2	0.2	4.234	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	788	197	47	2273	0.346	788	723	0.7	0.5	2.448	A
B	622	156	81	2244	0.277	623	754	0.5	0.4	2.286	A
C	164	41	606	1131	0.145	164	97	0.2	0.2	3.720	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	659	165	39	2279	0.289	660	606	0.5	0.4	2.243	A
B	521	130	68	2254	0.231	521	631	0.4	0.3	2.139	A
C	137	34	508	1190	0.115	137	81	0.2	0.1	3.420	A

2026 Reference Case, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm A - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm B - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
2	untitled	Standard Roundabout	A, B, C	3.22	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2026 Reference Case	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	790	100.000
B		ONE HOUR	✓	1055	100.000
C		ONE HOUR	✓	92	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	644	146
	B	985	1	69
	C	85	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	5
	B	2	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.38	2.53	0.6	A	725	1087
B	0.53	3.59	1.2	A	968	1452
C	0.12	4.97	0.1	A	84	127

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	595	149	6	2306	0.258	593	803	0.0	0.3	2.118	A
B	794	199	110	2222	0.357	792	490	0.0	0.6	2.557	A
C	69	17	740	1052	0.066	69	161	0.0	0.1	3.765	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	710	178	7	2305	0.308	710	961	0.3	0.4	2.277	A
B	948	237	131	2205	0.430	948	586	0.6	0.8	2.914	A
C	83	21	886	965	0.086	83	193	0.1	0.1	4.194	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	870	217	9	2304	0.378	869	1176	0.4	0.6	2.530	A
B	1162	290	161	2182	0.532	1160	717	0.8	1.1	3.582	A
C	101	25	1084	846	0.120	101	236	0.1	0.1	4.964	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	870	217	9	2304	0.378	870	1178	0.6	0.6	2.532	A
B	1162	290	161	2182	0.532	1162	718	1.1	1.2	3.591	A
C	101	25	1086	845	0.120	101	237	0.1	0.1	4.972	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	710	178	7	2305	0.308	711	963	0.6	0.5	2.278	A
B	948	237	131	2205	0.430	950	587	1.2	0.8	2.924	A
C	83	21	888	963	0.086	83	193	0.1	0.1	4.203	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	595	149	6	2306	0.258	595	806	0.5	0.4	2.124	A
B	794	199	110	2222	0.358	795	491	0.8	0.6	2.571	A
C	69	17	743	1050	0.066	69	162	0.1	0.1	3.772	A

2026 Reference Case, IP

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm A - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm B - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
2	untitled	Standard Roundabout	A, B, C	3.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2026 Reference Case	IP	ONE HOUR	12:45	14:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	903	100.000
B		ONE HOUR	✓	590	100.000
C		ONE HOUR	✓	284	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	2	728	173
	B	552	0	38
	C	210	74	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	1	4
	B	2	0	0
	C	5	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.44	2.92	0.8	A	829	1243
B	0.30	2.43	0.4	A	541	812
C	0.28	4.57	0.4	A	261	391

Main Results for each time segment

12:45 - 13:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	680	170	55	2266	0.300	678	574	0.0	0.4	2.300	A
B	444	111	131	2205	0.201	443	602	0.0	0.3	2.080	A
C	214	53	416	1245	0.172	213	158	0.0	0.2	3.611	A

13:00 - 13:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	812	203	66	2258	0.360	811	686	0.4	0.6	2.528	A
B	530	133	157	2185	0.243	530	720	0.3	0.3	2.215	A
C	255	64	498	1196	0.213	255	190	0.2	0.3	3.963	A

13:15 - 13:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	994	249	81	2246	0.443	993	840	0.6	0.8	2.918	A
B	650	162	192	2158	0.301	649	882	0.3	0.4	2.431	A
C	313	78	610	1130	0.277	312	232	0.3	0.4	4.564	A

13:30 - 13:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	994	249	81	2246	0.443	994	841	0.8	0.8	2.921	A
B	650	162	193	2158	0.301	650	883	0.4	0.4	2.431	A
C	313	78	610	1129	0.277	313	232	0.4	0.4	4.569	A

13:45 - 14:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	812	203	67	2257	0.360	813	688	0.8	0.6	2.533	A
B	530	133	158	2185	0.243	531	722	0.4	0.3	2.219	A
C	255	64	498	1196	0.213	256	190	0.4	0.3	3.970	A

14:00 - 14:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	680	170	56	2266	0.300	680	576	0.6	0.4	2.306	A
B	444	111	132	2205	0.201	444	604	0.3	0.3	2.083	A
C	214	53	417	1244	0.172	214	159	0.3	0.2	3.621	A

2026 Reference Case, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm A - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm B - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
2	untitled	Standard Roundabout	A, B, C	3.25	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2026 Reference Case	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1033	100.000
B		ONE HOUR	✓	823	100.000
C		ONE HOUR	✓	227	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	2	916	115
	B	795	0	28
	C	162	65	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	1
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.50	3.23	1.0	A	948	1422
B	0.41	2.77	0.7	A	755	1133
C	0.26	5.11	0.4	A	208	312

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	778	194	49	2272	0.342	776	720	0.0	0.5	2.406	A
B	620	155	88	2239	0.277	618	737	0.0	0.4	2.219	A
C	171	43	599	1136	0.150	170	107	0.0	0.2	3.804	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	929	232	58	2264	0.410	928	862	0.5	0.7	2.696	A
B	740	185	105	2225	0.332	739	881	0.4	0.5	2.422	A
C	204	51	716	1066	0.191	204	128	0.2	0.2	4.263	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	1137	284	71	2254	0.505	1136	1055	0.7	1.0	3.222	A
B	906	227	129	2207	0.411	905	1079	0.5	0.7	2.764	A
C	250	62	877	970	0.258	249	157	0.2	0.4	5.099	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	1137	284	72	2253	0.505	1137	1056	1.0	1.0	3.228	A
B	906	227	129	2207	0.411	906	1080	0.7	0.7	2.766	A
C	250	62	878	970	0.258	250	157	0.4	0.4	5.108	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	929	232	59	2264	0.410	930	863	1.0	0.7	2.703	A
B	740	185	105	2225	0.332	741	883	0.7	0.5	2.425	A
C	204	51	717	1065	0.192	205	129	0.4	0.2	4.273	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	778	194	49	2272	0.342	778	723	0.7	0.5	2.414	A
B	620	155	88	2239	0.277	620	739	0.5	0.4	2.226	A
C	171	43	600	1135	0.151	171	108	0.2	0.2	3.817	A

2026 Test Case, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm A - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm B - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
2	untitled	Standard Roundabout	A, B, C	3.34	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2026 Test Case	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	815	100.000
B		ONE HOUR	✓	1081	100.000
C		ONE HOUR	✓	102	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	657	158
	B	1006	1	74
	C	93	9	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	5
	B	2	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.39	2.59	0.6	A	748	1122
B	0.55	3.73	1.2	A	992	1488
C	0.14	5.14	0.2	A	94	140

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	614	153	7	2305	0.266	612	825	0.0	0.4	2.144	A
B	814	203	119	2215	0.367	811	501	0.0	0.6	2.608	A
C	77	19	756	1042	0.074	76	174	0.0	0.1	3.830	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	733	183	9	2303	0.318	732	987	0.4	0.5	2.312	A
B	972	243	142	2197	0.442	971	599	0.6	0.8	2.990	A
C	92	23	904	953	0.096	92	208	0.1	0.1	4.291	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	897	224	11	2302	0.390	897	1208	0.5	0.6	2.584	A
B	1190	298	174	2172	0.548	1189	734	0.8	1.2	3.721	A
C	112	28	1107	832	0.135	112	255	0.1	0.2	5.133	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	897	224	11	2302	0.390	897	1210	0.6	0.6	2.586	A
B	1190	298	174	2172	0.548	1190	734	1.2	1.2	3.733	A
C	112	28	1109	831	0.135	112	255	0.2	0.2	5.141	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	733	183	9	2303	0.318	733	990	0.6	0.5	2.316	A
B	972	243	142	2197	0.442	973	600	1.2	0.8	3.001	A
C	92	23	907	952	0.096	92	209	0.2	0.1	4.300	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	614	153	8	2305	0.266	614	828	0.5	0.4	2.149	A
B	814	203	119	2215	0.367	815	503	0.8	0.6	2.622	A
C	77	19	759	1040	0.074	77	175	0.1	0.1	3.838	A

2026 Test Case, IP

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm A - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm B - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
2	untitled	Standard Roundabout	A, B, C	3.29	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2026 Test Case	IP	ONE HOUR	12:45	14:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	985	100.000
B		ONE HOUR	✓	647	100.000
C		ONE HOUR	✓	325	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	2	784	199
	B	599	0	48
	C	240	85	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	1	4
	B	2	0	0
	C	5	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.49	3.18	1.0	A	904	1356
B	0.33	2.58	0.5	A	594	891
C	0.33	5.04	0.5	A	298	447

Main Results for each time segment

12:45 - 13:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	742	185	64	2260	0.328	740	631	0.0	0.5	2.402	A
B	487	122	151	2190	0.222	486	652	0.0	0.3	2.151	A
C	245	61	451	1224	0.200	244	185	0.0	0.3	3.803	A

13:00 - 13:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	885	221	76	2250	0.394	885	755	0.5	0.7	2.678	A
B	582	145	181	2167	0.268	581	781	0.3	0.4	2.312	A
C	292	73	540	1171	0.249	292	222	0.3	0.3	4.244	A

13:15 - 13:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	1085	271	93	2236	0.485	1083	925	0.7	1.0	3.170	A
B	712	178	221	2136	0.334	712	956	0.4	0.5	2.575	A
C	358	89	661	1099	0.326	357	272	0.3	0.5	5.028	A

13:30 - 13:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	1085	271	94	2236	0.485	1084	926	1.0	1.0	3.175	A
B	712	178	221	2135	0.334	712	957	0.5	0.5	2.576	A
C	358	89	662	1098	0.326	358	272	0.5	0.5	5.037	A

13:45 - 14:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	885	221	77	2249	0.394	887	757	1.0	0.7	2.687	A
B	582	145	181	2167	0.268	582	782	0.5	0.4	2.316	A
C	292	73	541	1171	0.250	293	222	0.5	0.3	4.254	A

14:00 - 14:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	742	185	64	2259	0.328	742	634	0.7	0.5	2.411	A
B	487	122	151	2190	0.222	487	655	0.4	0.3	2.154	A
C	245	61	453	1223	0.200	245	186	0.3	0.3	3.818	A

2026 Test Case, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm A - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm B - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
2	untitled	Standard Roundabout	A, B, C	3.42	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2026 Test Case	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1071	100.000
B		ONE HOUR	✓	860	100.000
C		ONE HOUR	✓	250	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	2	938	131
	B	826	0	34
	C	177	73	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	1
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.52	3.38	1.1	A	983	1474
B	0.43	2.89	0.8	A	789	1184
C	0.29	5.45	0.4	A	229	344

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	806	202	55	2267	0.356	804	754	0.0	0.6	2.461	A
B	647	162	100	2230	0.290	646	759	0.0	0.4	2.271	A
C	188	47	622	1122	0.168	187	124	0.0	0.2	3.929	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	963	241	66	2258	0.426	962	903	0.6	0.7	2.779	A
B	773	193	119	2214	0.349	773	908	0.4	0.5	2.497	A
C	225	56	744	1049	0.214	224	148	0.2	0.3	4.455	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	1179	295	80	2247	0.525	1178	1105	0.7	1.1	3.368	A
B	947	237	146	2194	0.432	946	1112	0.5	0.8	2.884	A
C	275	69	911	950	0.290	275	181	0.3	0.4	5.441	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	1179	295	80	2246	0.525	1179	1107	1.1	1.1	3.376	A
B	947	237	146	2193	0.432	947	1113	0.8	0.8	2.887	A
C	275	69	912	949	0.290	275	182	0.4	0.4	5.453	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	963	241	66	2258	0.426	964	905	1.1	0.7	2.790	A
B	773	193	120	2214	0.349	774	910	0.8	0.5	2.500	A
C	225	56	745	1049	0.214	225	149	0.4	0.3	4.467	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	806	202	55	2267	0.356	807	757	0.7	0.6	2.470	A
B	647	162	100	2229	0.290	648	762	0.5	0.4	2.276	A
C	188	47	624	1121	0.168	189	124	0.3	0.2	3.942	A