(Default Analysis Set) - 2021 Test Case with 300, 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	B430 / Minor Raod	T-Junction	Two-way	5.12	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
D23	2021 Test Case with 300	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - B430 Ardley Road (S)		ONE HOUR	✓	278	100.000
B - Minor Road		ONE HOUR	✓	351	100.000
C - B430 Ardley Road (N)		ONE HOUR	✓	844	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - B430 Ardley Road (S)	B - Minor Road	C - B430 Ardley Road (N)
From	A - B430 Ardley Road (S)	0	49	229
	B - Minor Road	87	0	264
	C - B430 Ardley Road (N)	584	260	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - B430 Ardley Road (S)	B - Minor Road	C - B430 Ardley Road (N)
From	A - B430 Ardley Road (S)	0	9	13
	B - Minor Road	0	0	5
	C - B430 Ardley Road (N)	4	8	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.49	12.09	1.0	B	242	363
B-A	0.31	16.55	0.4	C	80	120
C-AB	0.48	11.48	0.9	B	239	358
C-A					536	804
A-B					45	67
A-C					210	315

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	199	50	638	0.312	197	0.0	0.4	8.135	A
B-A	65	16	412	0.159	65	0.0	0.2	10.351	B
C-AB	196	49	624	0.314	194	0.0	0.5	8.345	A
C-A	440	110			440				
A-B	37	9			37				
A-C	172	43			172				

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	237	59	619	0.383	237	0.4	0.6	9.392	A
B-A	78	20	372	0.210	78	0.2	0.3	12.230	B
C-AB	234	58	614	0.381	233	0.5	0.6	9.446	A
C-A	525	131			525				
A-B	44	11			44				
A-C	206	51			206				

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	291	73	589	0.494	289	0.6	1.0	11.963	B
B-A	96	24	314	0.305	95	0.3	0.4	16.406	C
C-AB	286	72	600	0.477	285	0.6	0.9	11.395	B
C-A	643	161			643				
A-B	54	13			54				
A-C	252	63			252				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	291	73	588	0.494	291	1.0	1.0	12.090	B
B-A	96	24	313	0.306	96	0.4	0.4	16.551	C
C-AB	286	72	600	0.477	286	0.9	0.9	11.477	B
C-A	643	161			643				
A-B	54	13			54				
A-C	252	63			252				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	237	59	619	0.384	239	1.0	0.6	9.509	A
B-A	78	20	371	0.211	79	0.4	0.3	12.343	B
C-AB	234	58	614	0.381	235	0.9	0.6	9.533	A
C-A	525	131			525				
A-B	44	11			44				
A-C	206	51			206				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	199	50	637	0.312	199	0.6	0.5	8.236	A
B-A	65	16	411	0.159	66	0.3	0.2	10.443	B
C-AB	196	49	624	0.314	196	0.6	0.5	8.440	A
C-A	440	110			440				
A-B	37	9			37				
A-C	172	43			172				

(Default Analysis Set) - 2021 Test Case with 300, 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	B430 / Minor Raod	T-Junction	Two-way	4.47	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
D24	2021 Test Case with 300	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 (Veh/hr)	Scaling Factor (%)
A - B430 Ardley Road (S)		ONE HOUR	✓	459	100.000
B - Minor Road		ONE HOUR	✓	298	100.000
C - B430 Ardley Road (N)		ONE HOUR	✓	384	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - B430 Ardley Road (S)	B - Minor Road	C - B430 Ardley Road (N)
From	A - B430 Ardley Road (S)	0	62	397
	B - Minor Road	59	0	239
	C - B430 Ardley Road (N)	191	193	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - B430 Ardley Road (S)	B - Minor Road	C - B430 Ardley Road (N)
From	A - B430 Ardley Road (S)	0	0	3
	B - Minor Road	1	0	2
	C - B430 Ardley Road (N)	1	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.44	10.88	0.8	B	219	329
B-A	0.18	11.80	0.2	B	54	81
C-AB	0.36	9.42	0.6	A	177	266
C-A					175	263
A-B					57	85
A-C					364	546

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	180	45	641	0.281	178	0.0	0.4	7.752	A
B-A	44	11	446	0.100	44	0.0	0.1	8.937	A
C-AB	145	36	632	0.230	144	0.0	0.3	7.353	A
C-A	144	36			144				
A-B	47	12			47				
A-C	299	75			299				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	215	54	622	0.346	214	0.4	0.5	8.823	A
B-A	53	13	416	0.128	53	0.1	0.1	9.918	A
C-AB	174	43	617	0.281	173	0.3	0.4	8.112	A
C-A	172	43			172				
A-B	56	14			56				
A-C	357	89			357				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	263	66	594	0.443	262	0.5	0.8	10.812	B
B-A	65	16	370	0.175	65	0.1	0.2	11.770	B
C-AB	212	53	595	0.357	212	0.4	0.5	9.392	A
C-A	210	53			210				
A-B	68	17			68				
A-C	437	109			437				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	263	66	594	0.443	263	0.8	0.8	10.884	B
B-A	65	16	370	0.176	65	0.2	0.2	11.804	B
C-AB	212	53	595	0.357	212	0.5	0.6	9.423	A
C-A	210	53			210				
A-B	68	17			68				
A-C	437	109			437				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	215	54	622	0.346	216	0.8	0.5	8.893	A
B-A	53	13	415	0.128	53	0.2	0.1	9.958	A
C-AB	174	43	617	0.281	174	0.6	0.4	8.148	A
C-A	172	43			172				
A-B	56	14			56				
A-C	357	89			357				

18:00 - 18:15

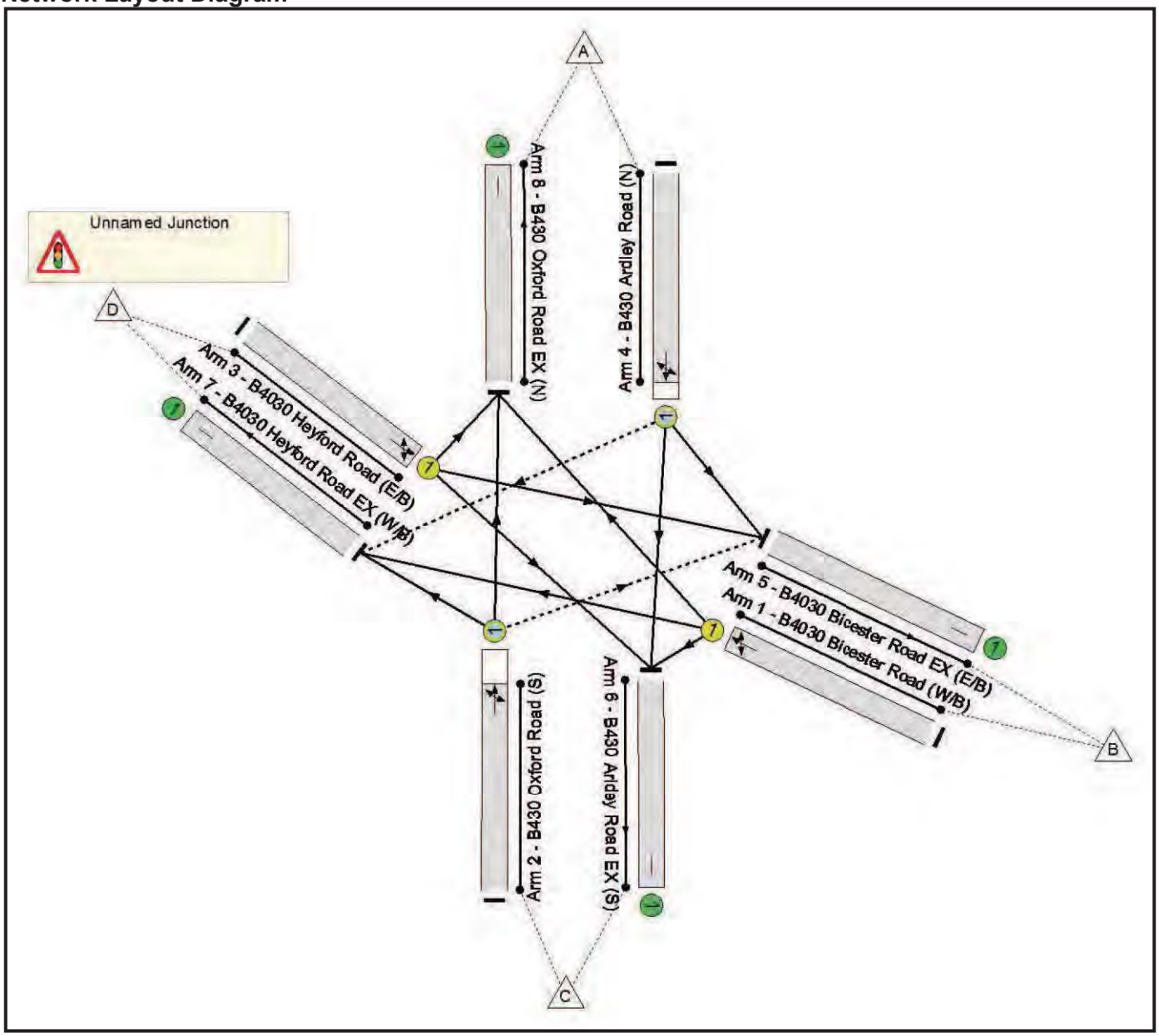
Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-C	180	45	641	0.281	180	0.5	0.4	7.826	A
B-A	44	11	446	0.100	45	0.1	0.1	8.977	A
C-AB	145	36	632	0.230	146	0.4	0.3	7.400	A
C-A	144	36			144				
A-B	47	12			47				
A-C	299	75			299				

Full Input Data And Results

User and Project Details

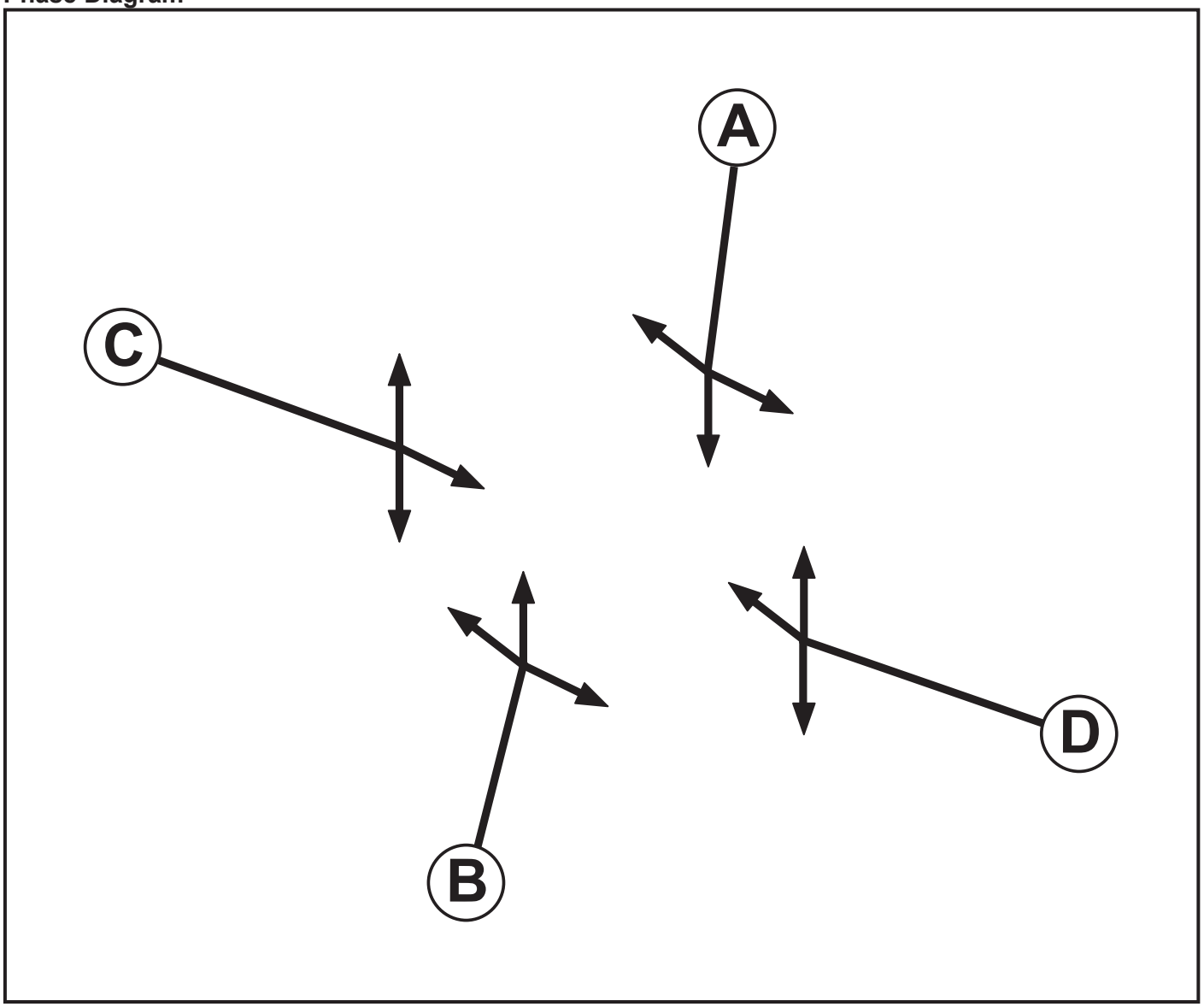
Project:	**Heyford Park**
Title:	**Middleton Stoney Junction**
Location:	
File name:	Phase 9 App_Middleton Stoney.lsg3x
Author:	ekeen
Company:	Peter Brett Associates
Address:	10 Queen Square
Notes:	Existing Layout

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

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

Full Input Data And Results

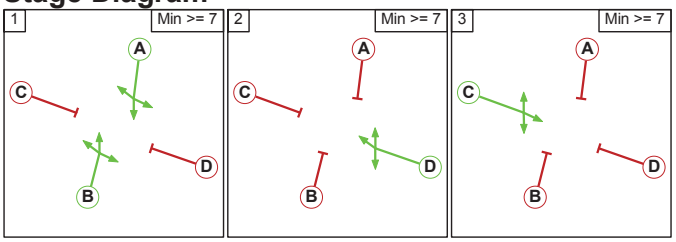
Phase Intergreens Matrix

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

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

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

Full Input Data And Results

Give-Way Lane Input Data

Junction: Unnamed Junction

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
2/1 (B430 Oxford Road (S))	5/1 (Right)	1439	0	4/1	1.09	To 5/1 (Left) To 6/1 (Ahead)	2.00	-	0.50	2	2.00
4/1 (B430 Ardley Road (N))	7/1 (Right)	1439	0	2/1	1.09	To 7/1 (Left) To 8/1 (Ahead)	1.00	-	0.50	1	1.00

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 (B4030 Bicester Road (W/B))	U	D	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 6 Left	13.00
											Arm 7 Ahead	Inf
											Arm 8 Right	15.00
2/1 (B430 Oxford Road (S))	O	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Right	15.00
											Arm 7 Left	30.00
											Arm 8 Ahead	Inf
3/1 (B4030 Heyford Road (E/B))	U	C	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Ahead	Inf
											Arm 6 Right	30.00
											Arm 8 Left	7.00
4/1 (B430 Ardley Road (N))	O	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Left	12.00
											Arm 6 Ahead	Inf
											Arm 7 Right	8.00
5/1 (B4030 Bicester Road EX (E/B))	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (B430 Arldey Road EX (S))	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (B4030 Heyford Road EX (W/B))	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (B430 Oxford Road EX (N))	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2013 Base AM'	07:30	08:30	01:00	
2: '2013 Base PM'	17:00	18:00	01:00	
3: '2016 Base AM'	07:30	08:30	01:00	
4: '2016 Base PM'	17:00	18:00	01:00	
5: '2021 Ref Case AM'	07:30	08:30	01:00	
6: '2021 Ref Case PM'	17:00	18:00	01:00	
7: '2021 Test Case AM'	07:30	08:30	01:00	
8: '2021 Test Case PM'	17:00	18:00	01:00	

Scenario 1: '2013 AM' (FG1: '2013 Base AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	32	448	6	486
	B	34	0	59	211	304
	C	162	21	0	38	221
	D	13	192	90	0	295
	Tot.	209	245	597	255	1306

Traffic Lane Flows

Lane	Scenario 1: 2013 AM
Junction: Unnamed Junction	
1/1	304
2/1	221
3/1	295
4/1	486
5/1	245
6/1	597
7/1	255
8/1	209

Full Input Data And Results

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 (B4030 Bicester Road (W/B))	3.00	0.00	Y	Arm 6 Left	13.00	19.4 %	1853	1853
				Arm 7 Ahead	Inf	69.4 %		
				Arm 8 Right	15.00	11.2 %		
2/1 (B430 Oxford Road (S))	3.50	0.00	Y	Arm 5 Right	15.00	9.5 %	1930	1930
				Arm 7 Left	30.00	17.2 %		
				Arm 8 Ahead	Inf	73.3 %		
3/1 (B4030 Heyford Road (E/B))	3.00	0.00	Y	Arm 5 Ahead	Inf	65.1 %	1869	1869
				Arm 6 Right	30.00	30.5 %		
				Arm 8 Left	7.00	4.4 %		
4/1 (B430 Ardley Road (N))	3.00	0.00	Y	Arm 5 Left	12.00	6.6 %	1895	1895
				Arm 6 Ahead	Inf	92.2 %		
				Arm 7 Right	8.00	1.2 %		
5/1 (B4030 Bicester Road EX (E/B) Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (B430 Arldey Road EX (S) Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (B4030 Heyford Road EX (W/B) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (B430 Oxford Road EX (N) Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2013 PM' (FG2: '2013 Base PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	45	207	6	258
	B	30	0	30	203	263
	C	327	70	0	56	453
	D	9	202	55	0	266
	Tot.	366	317	292	265	1240

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2013 PM
Junction: Unnamed Junction	
1/1	263
2/1	453
3/1	266
4/1	258
5/1	317
6/1	292
7/1	265
8/1	366

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 (B4030 Bicester Road (W/B))	3.00	0.00	Y	Arm 6 Left	13.00	11.4 %	1869	1869
				Arm 7 Ahead	Inf	77.2 %		
				Arm 8 Right	15.00	11.4 %		
2/1 (B430 Oxford Road (S))	3.50	0.00	Y	Arm 5 Right	15.00	15.5 %	1923	1923
				Arm 7 Left	30.00	12.4 %		
				Arm 8 Ahead	Inf	72.2 %		
3/1 (B4030 Heyford Road (E/B))	3.00	0.00	Y	Arm 5 Ahead	Inf	75.9 %	1882	1882
				Arm 6 Right	30.00	20.7 %		
				Arm 8 Left	7.00	3.4 %		
4/1 (B430 Ardley Road (N))	3.00	0.00	Y	Arm 5 Left	12.00	17.4 %	1866	1866
				Arm 6 Ahead	Inf	80.2 %		
				Arm 7 Right	8.00	2.3 %		
5/1 (B4030 Bicester Road EX (E/B) Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (B430 Arldey Road EX (S) Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (B4030 Heyford Road EX (W/B) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (B430 Oxford Road EX (N) Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: '2016 AM' (FG3: '2016 Base AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	34	466	6	506
	B	45	0	59	218	322
	C	170	21	0	45	236
	D	13	196	95	0	304
	Tot.	228	251	620	269	1368

Traffic Lane Flows

Lane	Scenario 3: 2016 AM
Junction: Unnamed Junction	
1/1	322
2/1	236
3/1	304
4/1	506
5/1	251
6/1	620
7/1	269
8/1	228

Full Input Data And Results

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 (B4030 Bicester Road (W/B))	3.00	0.00	Y	Arm 6 Left	13.00	18.3 %	1850	1850
				Arm 7 Ahead	Inf	67.7 %		
				Arm 8 Right	15.00	14.0 %		
2/1 (B430 Oxford Road (S))	3.50	0.00	Y	Arm 5 Right	15.00	8.9 %	1929	1929
				Arm 7 Left	30.00	19.1 %		
				Arm 8 Ahead	Inf	72.0 %		
3/1 (B4030 Heyford Road (E/B))	3.00	0.00	Y	Arm 5 Ahead	Inf	64.5 %	1869	1869
				Arm 6 Right	30.00	31.3 %		
				Arm 8 Left	7.00	4.3 %		
4/1 (B430 Ardley Road (N))	3.00	0.00	Y	Arm 5 Left	12.00	6.7 %	1895	1895
				Arm 6 Ahead	Inf	92.1 %		
				Arm 7 Right	8.00	1.2 %		
5/1 (B4030 Bicester Road EX (E/B) Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (B430 Arldey Road EX (S) Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (B4030 Heyford Road EX (W/B) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (B430 Oxford Road EX (N) Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2016 PM' (FG4: '2016 Base PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	54	219	6	279
	B	31	0	30	207	268
	C	341	71	0	60	472
	D	9	209	62	0	280
	Tot.	381	334	311	273	1299

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: 2016 PM
Junction: Unnamed Junction	
1/1	268
2/1	472
3/1	280
4/1	279
5/1	334
6/1	311
7/1	273
8/1	381

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 (B4030 Bicester Road (W/B))	3.00	0.00	Y	Arm 6 Left	13.00	11.2 %	1869	1869
				Arm 7 Ahead	Inf	77.2 %		
				Arm 8 Right	15.00	11.6 %		
2/1 (B430 Oxford Road (S))	3.50	0.00	Y	Arm 5 Right	15.00	15.0 %	1924	1924
				Arm 7 Left	30.00	12.7 %		
				Arm 8 Ahead	Inf	72.2 %		
3/1 (B4030 Heyford Road (E/B))	3.00	0.00	Y	Arm 5 Ahead	Inf	74.6 %	1881	1881
				Arm 6 Right	30.00	22.1 %		
				Arm 8 Left	7.00	3.2 %		
4/1 (B430 Ardley Road (N))	3.00	0.00	Y	Arm 5 Left	12.00	19.4 %	1862	1862
				Arm 6 Ahead	Inf	78.5 %		
				Arm 7 Right	8.00	2.2 %		
5/1 (B4030 Bicester Road EX (E/B) Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (B430 Arldey Road EX (S) Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (B4030 Heyford Road EX (W/B) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (B430 Oxford Road EX (N) Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 5: '2021 Ref Case AM' (FG5: '2021 Ref Case AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	36	517	6	559
	B	57	0	61	231	349
	C	189	22	0	55	266
	D	13	207	108	0	328
	Tot.	259	265	686	292	1502

Traffic Lane Flows

Lane	Scenario 5: 2021 Ref Case AM
Junction: Unnamed Junction	
1/1	349
2/1	266
3/1	328
4/1	559
5/1	265
6/1	686
7/1	292
8/1	259

Full Input Data And Results

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 (B4030 Bicester Road (W/B))	3.00	0.00	Y	Arm 6 Left	13.00	17.5 %	1848	1848
				Arm 7 Ahead	Inf	66.2 %		
				Arm 8 Right	15.00	16.3 %		
2/1 (B430 Oxford Road (S))	3.50	0.00	Y	Arm 5 Right	15.00	8.3 %	1929	1929
				Arm 7 Left	30.00	20.7 %		
				Arm 8 Ahead	Inf	71.1 %		
3/1 (B4030 Heyford Road (E/B))	3.00	0.00	Y	Arm 5 Ahead	Inf	63.1 %	1868	1868
				Arm 6 Right	30.00	32.9 %		
				Arm 8 Left	7.00	4.0 %		
4/1 (B430 Ardley Road (N))	3.00	0.00	Y	Arm 5 Left	12.00	6.4 %	1896	1896
				Arm 6 Ahead	Inf	92.5 %		
				Arm 7 Right	8.00	1.1 %		
5/1 (B4030 Bicester Road EX (E/B) Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (B430 Arldey Road EX (S) Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (B4030 Heyford Road EX (W/B) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (B430 Oxford Road EX (N) Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 6: '2021 Ref Case PM' (FG6: '2021 Ref Case PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	64	246	6	316
	B	32	0	31	216	279
	C	377	72	0	68	517
	D	9	222	73	0	304
	Tot.	418	358	350	290	1416

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: 2021 Ref Case PM
Junction: Unnamed Junction	
1/1	279
2/1	517
3/1	304
4/1	316
5/1	358
6/1	350
7/1	290
8/1	418

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 (B4030 Bicester Road (W/B))	3.00	0.00	Y	Arm 6 Left	13.00	11.1 %	1870	1870
				Arm 7 Ahead	Inf	77.4 %		
				Arm 8 Right	15.00	11.5 %		
2/1 (B430 Oxford Road (S))	3.50	0.00	Y	Arm 5 Right	15.00	13.9 %	1926	1926
				Arm 7 Left	30.00	13.2 %		
				Arm 8 Ahead	Inf	72.9 %		
3/1 (B4030 Heyford Road (E/B))	3.00	0.00	Y	Arm 5 Ahead	Inf	73.0 %	1880	1880
				Arm 6 Right	30.00	24.0 %		
				Arm 8 Left	7.00	3.0 %		
4/1 (B430 Ardley Road (N))	3.00	0.00	Y	Arm 5 Left	12.00	20.3 %	1861	1861
				Arm 6 Ahead	Inf	77.8 %		
				Arm 7 Right	8.00	1.9 %		
5/1 (B4030 Bicester Road EX (E/B) Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (B430 Arldey Road EX (S) Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (B4030 Heyford Road EX (W/B) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (B430 Oxford Road EX (N) Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 7: '2021 Test Case AM' (FG7: '2021 Test Case AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	36	543	6	585
	B	57	0	61	232	350
	C	197	22	0	57	276
	D	13	211	114	0	338
	Tot.	267	269	718	295	1549

Traffic Lane Flows

Lane	Scenario 7: 2021 Test Case AM
Junction: Unnamed Junction	
1/1	350
2/1	276
3/1	338
4/1	585
5/1	269
6/1	718
7/1	295
8/1	267

Full Input Data And Results

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 (B4030 Bicester Road (W/B))	3.00	0.00	Y	Arm 6 Left	13.00	17.4 %	1848	1848
				Arm 7 Ahead	Inf	66.3 %		
				Arm 8 Right	15.00	16.3 %		
2/1 (B430 Oxford Road (S))	3.50	0.00	Y	Arm 5 Right	15.00	8.0 %	1930	1930
				Arm 7 Left	30.00	20.7 %		
				Arm 8 Ahead	Inf	71.4 %		
3/1 (B4030 Heyford Road (E/B))	3.00	0.00	Y	Arm 5 Ahead	Inf	62.4 %	1868	1868
				Arm 6 Right	30.00	33.7 %		
				Arm 8 Left	7.00	3.8 %		
4/1 (B430 Ardley Road (N))	3.00	0.00	Y	Arm 5 Left	12.00	6.2 %	1897	1897
				Arm 6 Ahead	Inf	92.8 %		
				Arm 7 Right	8.00	1.0 %		
5/1 (B4030 Bicester Road EX (E/B) Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (B430 Arldey Road EX (S) Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (B4030 Heyford Road EX (W/B) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (B430 Oxford Road EX (N) Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 8: '2021 Test Case PM' (FG8: '2021 Test Case PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	64	258	6	328
	B	32	0	31	219	282
	C	395	72	0	73	540
	D	9	224	76	0	309
	Tot.	436	360	365	298	1459

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 8: 2021 Test Case PM
Junction: Unnamed Junction	
1/1	282
2/1	540
3/1	309
4/1	328
5/1	360
6/1	365
7/1	298
8/1	436

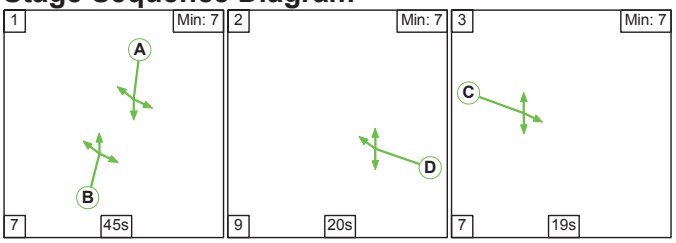
Lane Saturation Flows

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 (B4030 Bicester Road (W/B))	3.00	0.00	Y	Arm 6 Left	13.00	11.0 %	1870	1870
				Arm 7 Ahead	Inf	77.7 %		
				Arm 8 Right	15.00	11.3 %		
2/1 (B430 Oxford Road (S))	3.50	0.00	Y	Arm 5 Right	15.00	13.3 %	1926	1926
				Arm 7 Left	30.00	13.5 %		
				Arm 8 Ahead	Inf	73.1 %		
3/1 (B4030 Heyford Road (E/B))	3.00	0.00	Y	Arm 5 Ahead	Inf	72.5 %	1880	1880
				Arm 6 Right	30.00	24.6 %		
				Arm 8 Left	7.00	2.9 %		
4/1 (B430 Ardley Road (N))	3.00	0.00	Y	Arm 5 Left	12.00	19.5 %	1863	1863
				Arm 6 Ahead	Inf	78.7 %		
				Arm 7 Right	8.00	1.8 %		
5/1 (B4030 Bicester Road EX (E/B) Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (B430 Arldey Road EX (S) Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (B4030 Heyford Road EX (W/B) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (B430 Oxford Road EX (N) Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 1: '2013 AM' (FG1: '2013 Base AM', Plan 1: 'Network Control Plan 1')

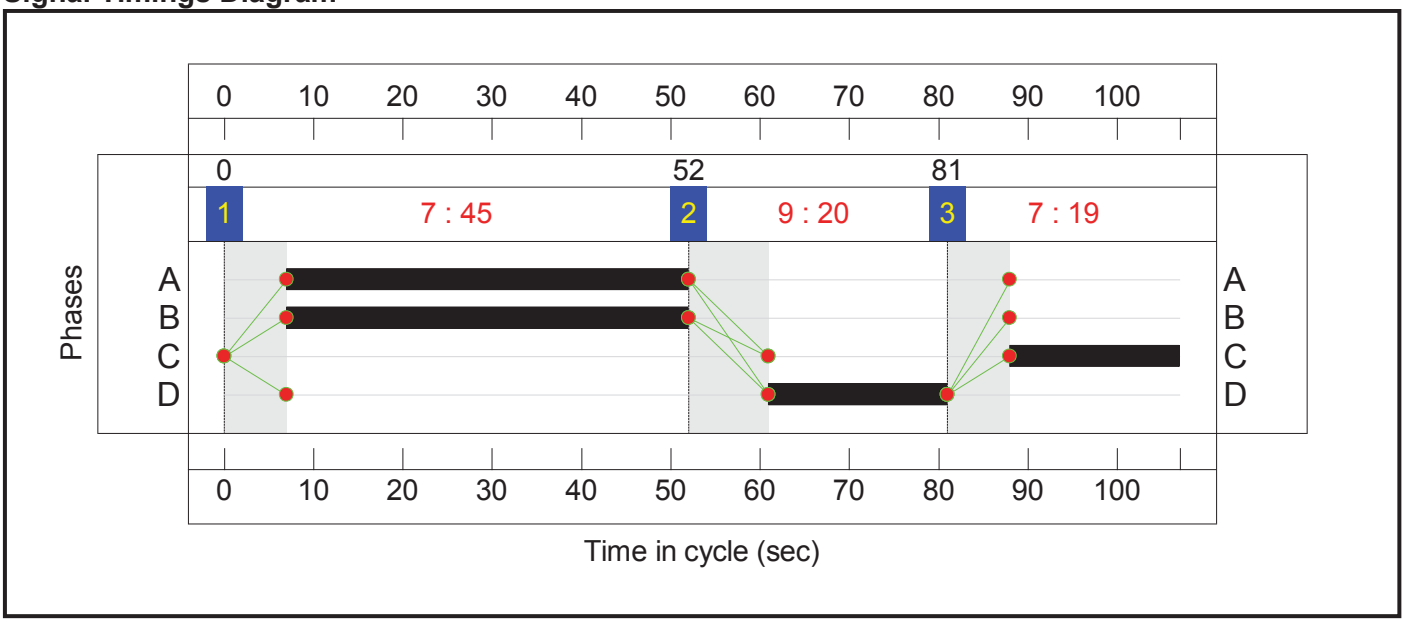
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	45	20	19
Change Point	0	52	81

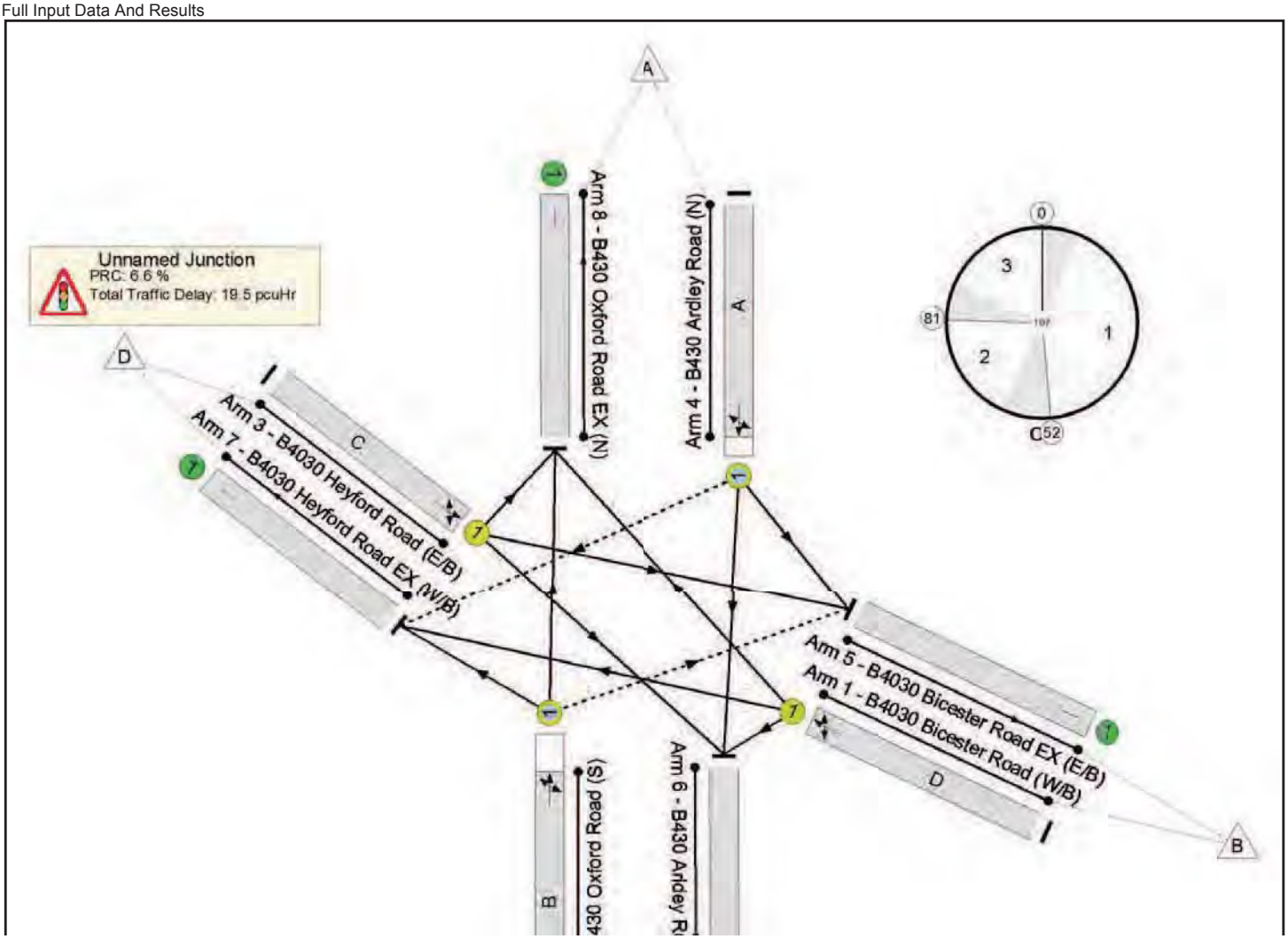
Signal Timings Diagram



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: Middleton Stoney Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**84.4%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**84.4%**
1/1	B4030 Bicester Road (W/B) Left Ahead Right	U	N/A	N/A	D		1	20	-	304	1853	364	83.6%
2/1	B430 Oxford Road (S) Right Left Ahead	O	N/A	N/A	B		1	45	-	221	1930	384	57.6%
3/1	B4030 Heyford Road (E/B) Ahead Right Left	U	N/A	N/A	C		1	19	-	295	1869	349	84.4%
4/1	B430 Ardley Road (N) Left Ahead Right	O	N/A	N/A	A		1	45	-	486	1895	612	79.4%
5/1	B4030 Bicester Road EX (E/B)	U	N/A	N/A	-		-	-	-	245	Inf	Inf	0.0%
6/1	B430 Arldey Road EX (S)	U	N/A	N/A	-		-	-	-	597	Inf	Inf	0.0%
7/1	B4030 Heyford Road EX (W/B)	U	N/A	N/A	-		-	-	-	255	Inf	Inf	0.0%
8/1	B430 Oxford Road EX (N)	U	N/A	N/A	-		-	-	-	209	Inf	Inf	0.0%

Full Input Data And Results

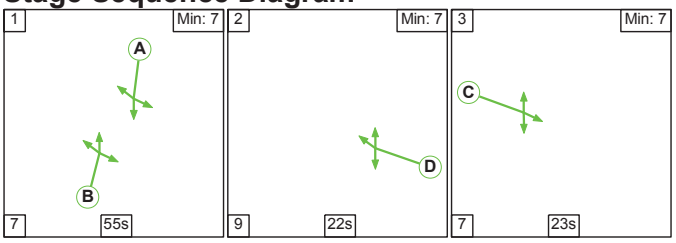
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Middleton Stoney Junction	**-**	**-**	**27**	**0**	**0**	**12.1**	**7.4**	**0.0**	**19.5**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**27**	**0**	**0**	**12.1**	**7.4**	**0.0**	**19.5**	**-**	**-**	**-**	**-**
1/1	304	304	-	-	-	3.5	2.4	-	5.9	69.3	8.6	2.4	11.0
2/1	221	221	21	0	0	1.2	0.7	0.0	1.9	31.4	4.4	0.7	5.0
3/1	295	295	-	-	-	3.4	2.5	-	5.9	72.3	8.4	2.5	10.9
4/1	486	486	6	0	0	4.0	1.9	0.0	5.8	43.1	12.7	1.9	14.6
5/1	245	245	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	597	597	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	255	255	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	209	209	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 6.6 Total Delay for Signalled Lanes (pcuHr): 19.53 Cycle Time (s): 107
PRC Over All Lanes (%): 6.6 Total Delay Over All Lanes(pcuHr): 19.53

Full Input Data And Results

Scenario 2: '2013 PM' (FG2: '2013 Base PM', Plan 1: 'Network Control Plan 1')

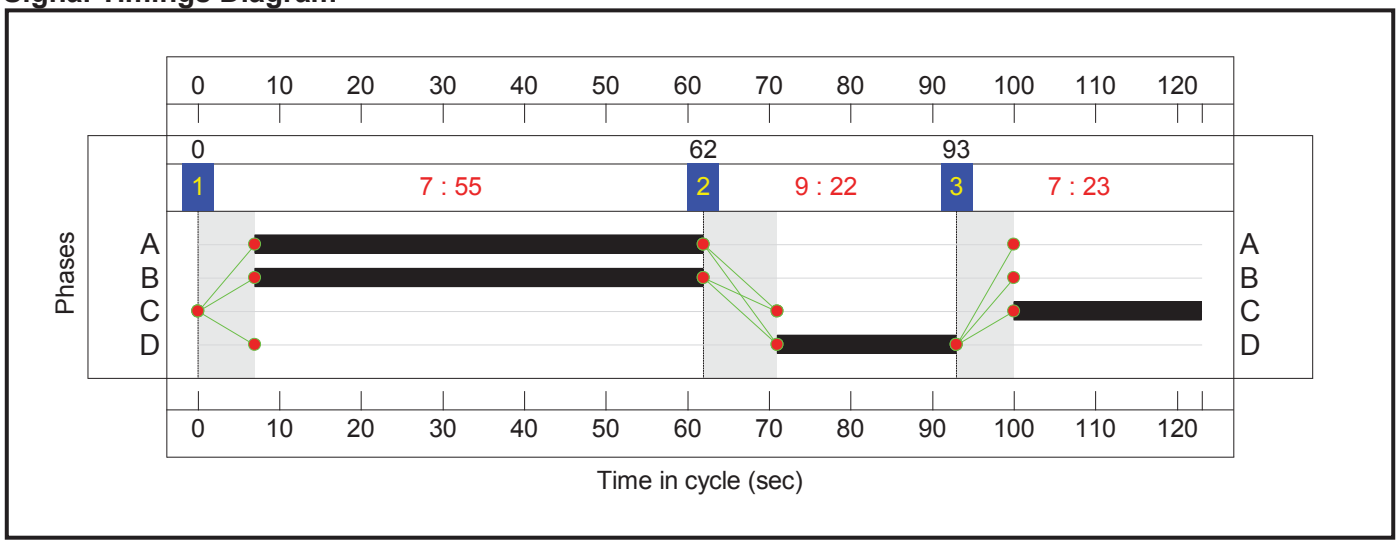
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	55	22	23
Change Point	0	62	93

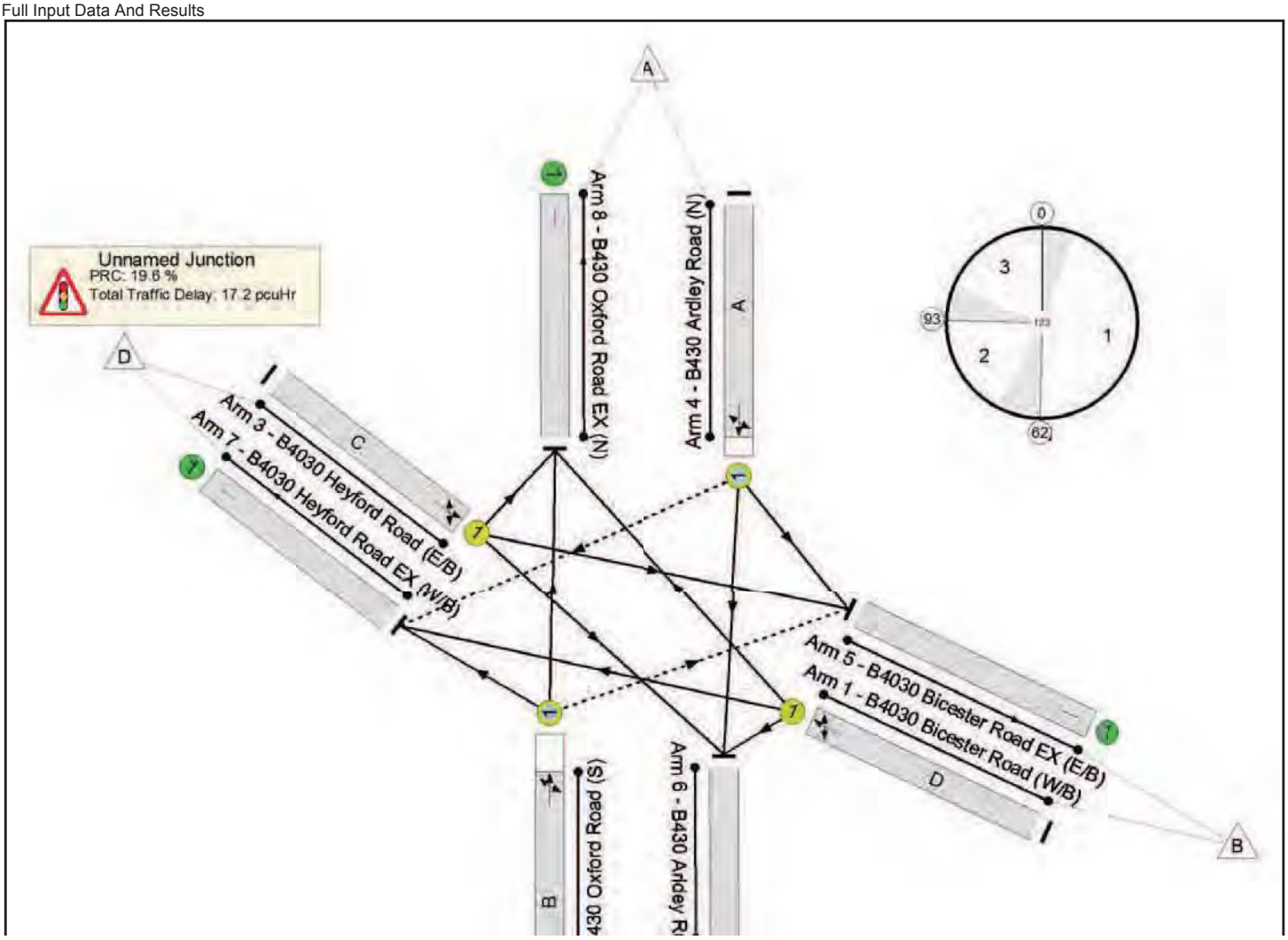
Signal Timings Diagram



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: Middleton Stoney Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**75.3%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**75.3%**
1/1	B4030 Bicester Road (W/B) Left Ahead Right	U	N/A	N/A	D		1	22	-	263	1869	349	75.3%
2/1	B430 Oxford Road (S) Right Left Ahead	O	N/A	N/A	B		1	55	-	453	1923	618	73.4%
3/1	B4030 Heyford Road (E/B) Ahead Right Left	U	N/A	N/A	C		1	23	-	266	1882	367	72.4%
4/1	B430 Ardley Road (N) Left Ahead Right	O	N/A	N/A	A		1	55	-	258	1866	420	61.4%
5/1	B4030 Bicester Road EX (E/B)	U	N/A	N/A	-		-	-	-	317	Inf	Inf	0.0%
6/1	B430 Arldey Road EX (S)	U	N/A	N/A	-		-	-	-	292	Inf	Inf	0.0%
7/1	B4030 Heyford Road EX (W/B)	U	N/A	N/A	-		-	-	-	265	Inf	Inf	0.0%
8/1	B430 Oxford Road EX (N)	U	N/A	N/A	-		-	-	-	366	Inf	Inf	0.0%

Full Input Data And Results

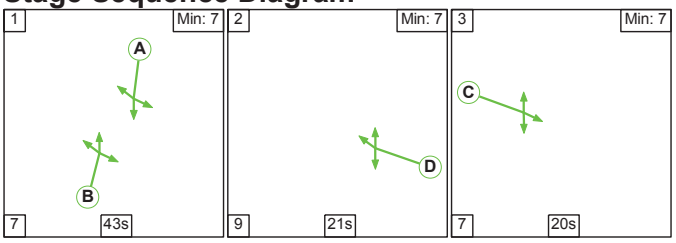
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Middleton Stoney Junction	**-**	**-**	**75**	**0**	**1**	**12.3**	**4.9**	**0.0**	**17.2**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**75**	**0**	**1**	**12.3**	**4.9**	**0.0**	**17.2**	**-**	**-**	**-**	**-**
1/1	263	263	-	-	-	3.5	1.5	-	4.9	67.4	8.5	1.5	9.9
2/1	453	453	69	0	1	3.2	1.4	0.0	4.5	36.1	11.3	1.4	12.7
3/1	266	266	-	-	-	3.4	1.3	-	4.7	63.7	8.5	1.3	9.8
4/1	258	258	6	0	0	2.2	0.8	0.0	3.0	42.3	7.5	0.8	8.3
5/1	317	317	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	292	292	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	265	265	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	366	366	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 19.6 Total Delay for Signalled Lanes (pcuHr): 17.22 Cycle Time (s): 123
PRC Over All Lanes (%): 19.6 Total Delay Over All Lanes(pcuHr): 17.22

Full Input Data And Results

Scenario 3: '2016 AM' (FG3: '2016 Base AM', Plan 1: 'Network Control Plan 1')

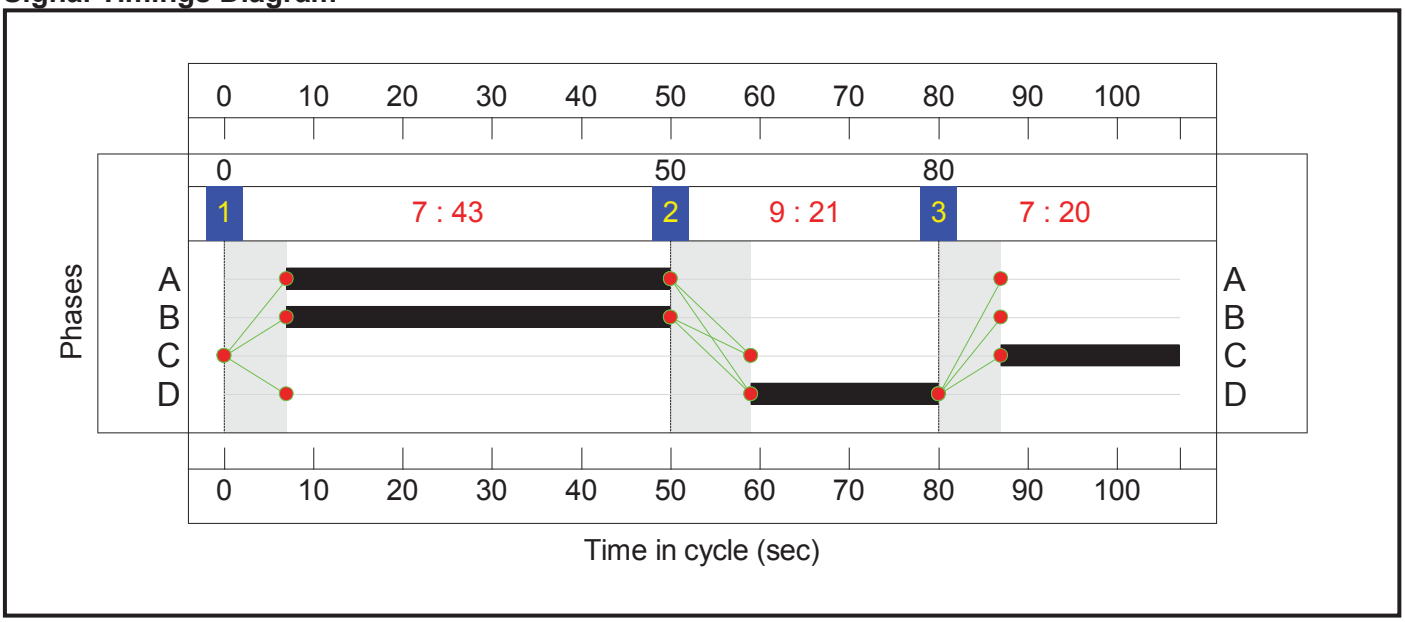
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	43	21	20
Change Point	0	50	80

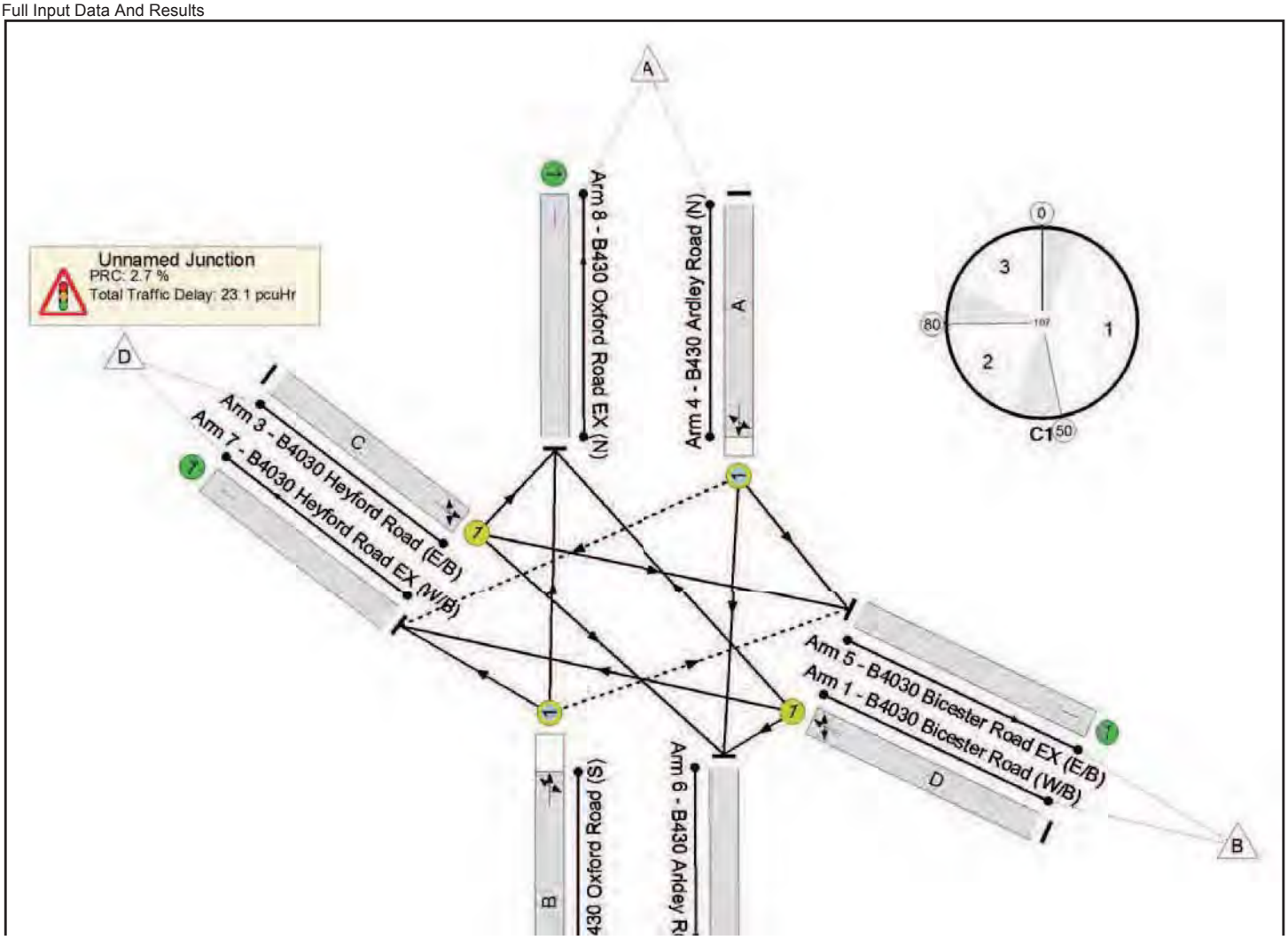
Signal Timings Diagram



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: Middleton Stoney Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**87.6%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**87.6%**
1/1	B4030 Bicester Road (W/B) Left Ahead Right	U	N/A	N/A	D		1	21	-	322	1850	380	84.7%
2/1	B430 Oxford Road (S) Right Left Ahead	O	N/A	N/A	B		1	43	-	236	1929	293	80.5%
3/1	B4030 Heyford Road (E/B) Ahead Right Left	U	N/A	N/A	C		1	20	-	304	1869	367	82.9%
4/1	B430 Ardley Road (N) Left Ahead Right	O	N/A	N/A	A		1	43	-	506	1895	577	87.6%
5/1	B4030 Bicester Road EX (E/B)	U	N/A	N/A	-		-	-	-	251	Inf	Inf	0.0%
6/1	B430 Arldey Road EX (S)	U	N/A	N/A	-		-	-	-	620	Inf	Inf	0.0%
7/1	B4030 Heyford Road EX (W/B)	U	N/A	N/A	-		-	-	-	269	Inf	Inf	0.0%
8/1	B430 Oxford Road EX (N)	U	N/A	N/A	-		-	-	-	228	Inf	Inf	0.0%

Full Input Data And Results

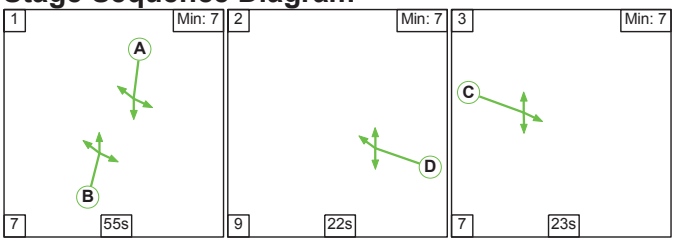
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Middleton Stoney Junction	**-**	**-**	**26**	**0**	**1**	**13.1**	**10.0**	**0.0**	**23.1**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**26**	**0**	**1**	**13.1**	**10.0**	**0.0**	**23.1**	**-**	**-**	**-**	**-**
1/1	322	322	-	-	-	3.7	2.5	-	6.2	69.2	9.1	2.5	11.7
2/1	236	236	21	0	0	1.4	1.9	0.0	3.4	51.6	4.9	1.9	6.8
3/1	304	304	-	-	-	3.5	2.3	-	5.7	68.0	8.6	2.3	10.9
4/1	506	506	6	0	0	4.5	3.3	0.0	7.8	55.5	13.9	3.3	17.2
5/1	251	251	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	620	620	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	269	269	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	228	228	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 2.7 Total Delay for Signalled Lanes (pcuHr): 23.11 Cycle Time (s): 107
PRC Over All Lanes (%): 2.7 Total Delay Over All Lanes(pcuHr): 23.11

Full Input Data And Results

Scenario 4: '2016 PM' (FG4: '2016 Base PM', Plan 1: 'Network Control Plan 1')

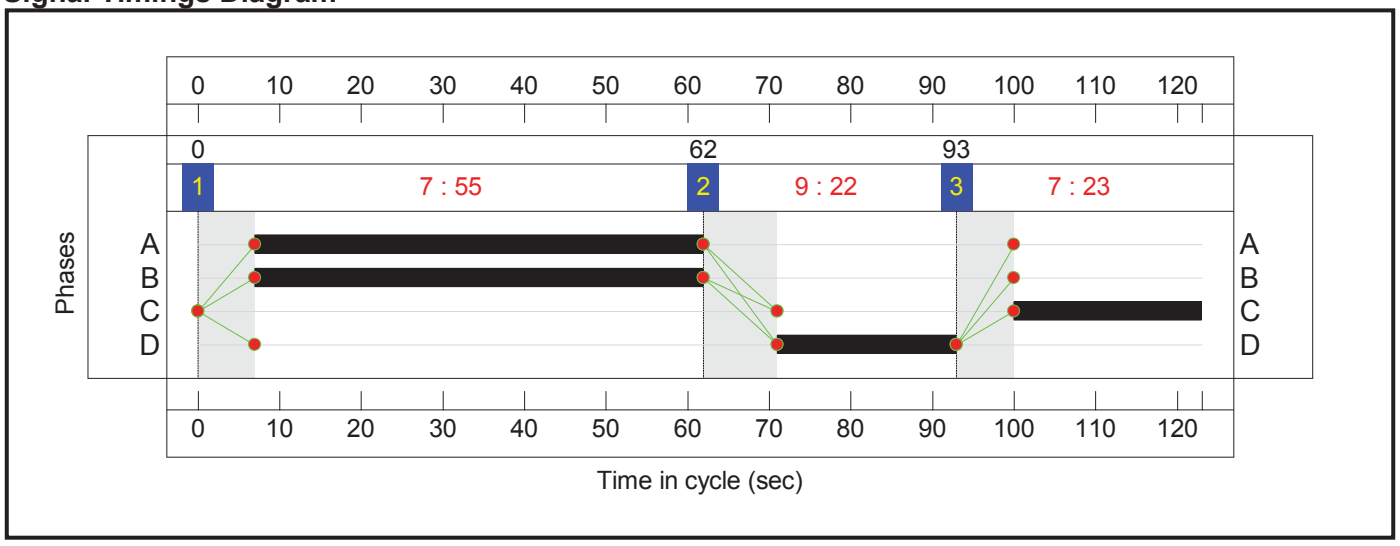
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	55	22	23
Change Point	0	62	93

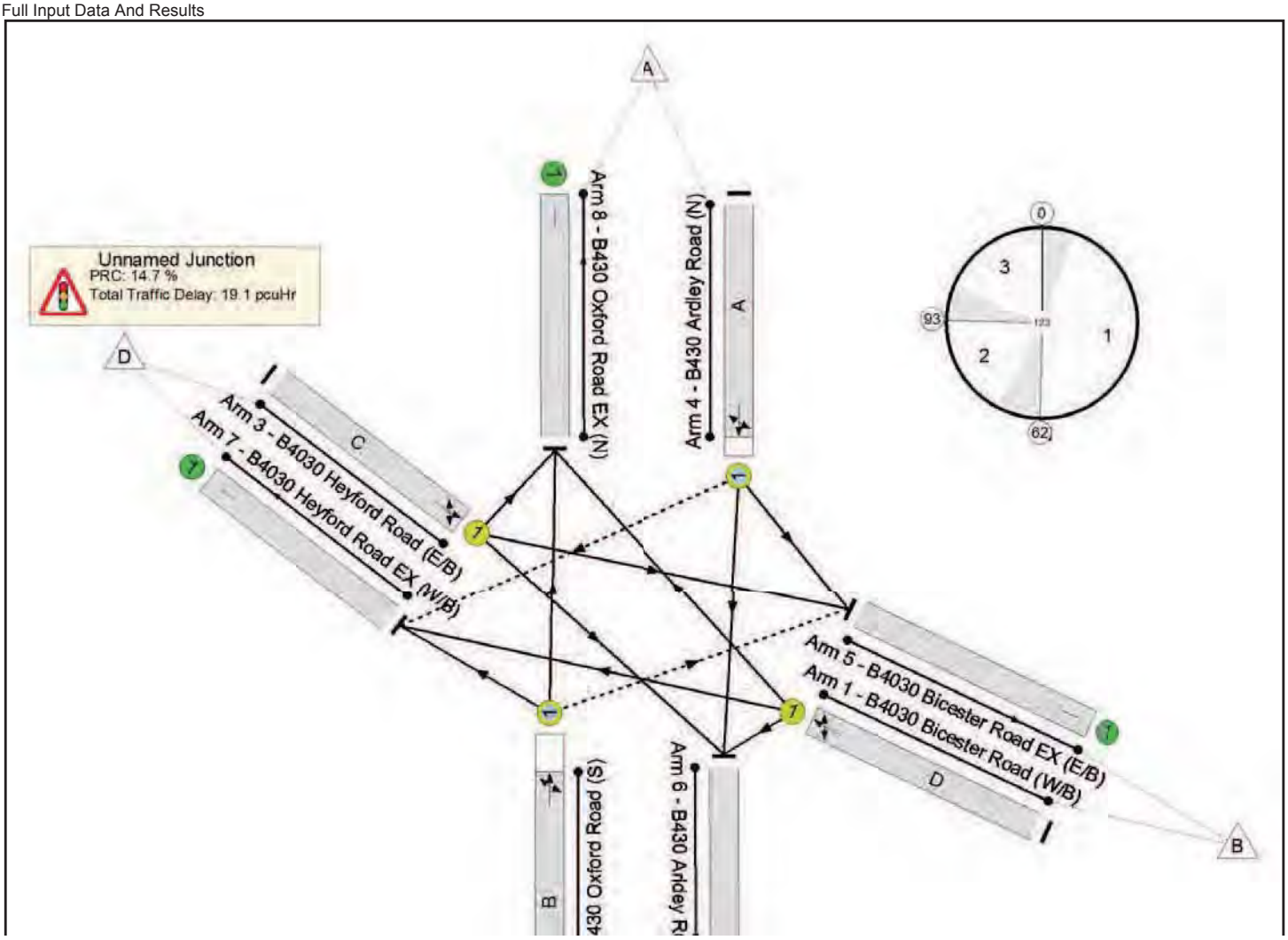
Signal Timings Diagram



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: Middleton Stoney Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**78.4%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**78.4%**
1/1	B4030 Bicester Road (W/B) Left Ahead Right	U	N/A	N/A	D		1	22	-	268	1869	349	76.7%
2/1	B430 Oxford Road (S) Right Left Ahead	O	N/A	N/A	B		1	55	-	472	1924	602	78.4%
3/1	B4030 Heyford Road (E/B) Ahead Right Left	U	N/A	N/A	C		1	23	-	280	1881	367	76.3%
4/1	B430 Ardley Road (N) Left Ahead Right	O	N/A	N/A	A		1	55	-	279	1862	402	69.4%
5/1	B4030 Bicester Road EX (E/B)	U	N/A	N/A	-		-	-	-	334	Inf	Inf	0.0%
6/1	B430 Arldey Road EX (S)	U	N/A	N/A	-		-	-	-	311	Inf	Inf	0.0%
7/1	B4030 Heyford Road EX (W/B)	U	N/A	N/A	-		-	-	-	273	Inf	Inf	0.0%
8/1	B430 Oxford Road EX (N)	U	N/A	N/A	-		-	-	-	381	Inf	Inf	0.0%

Full Input Data And Results

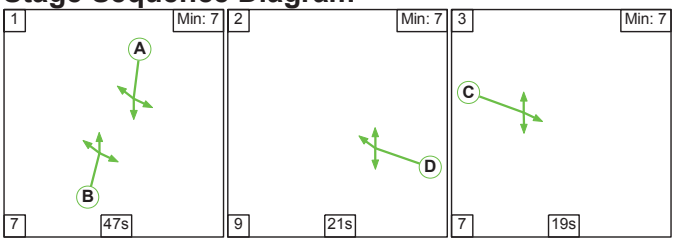
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Middleton Stoney Junction	**-**	**-**	**76**	**0**	**1**	**13.1**	**6.0**	**0.0**	**19.1**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**76**	**0**	**1**	**13.1**	**6.0**	**0.0**	**19.1**	**-**	**-**	**-**	**-**
1/1	268	268	-	-	-	3.5	1.6	-	5.1	68.7	8.6	1.6	10.2
2/1	472	472	70	0	1	3.3	1.8	0.0	5.1	39.3	11.9	1.8	13.7
3/1	280	280	-	-	-	3.6	1.6	-	5.2	66.8	9.0	1.6	10.6
4/1	279	279	6	0	0	2.6	1.1	0.0	3.7	47.4	8.4	1.1	9.5
5/1	334	334	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	311	311	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	273	273	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	381	381	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 14.7 Total Delay for Signalled Lanes (pcuHr): 19.13 Cycle Time (s): 123
PRC Over All Lanes (%): 14.7 Total Delay Over All Lanes(pcuHr): 19.13

Full Input Data And Results

Scenario 5: '2021 Ref Case AM' (FG5: '2021 Ref Case AM', Plan 1: 'Network Control Plan 1')

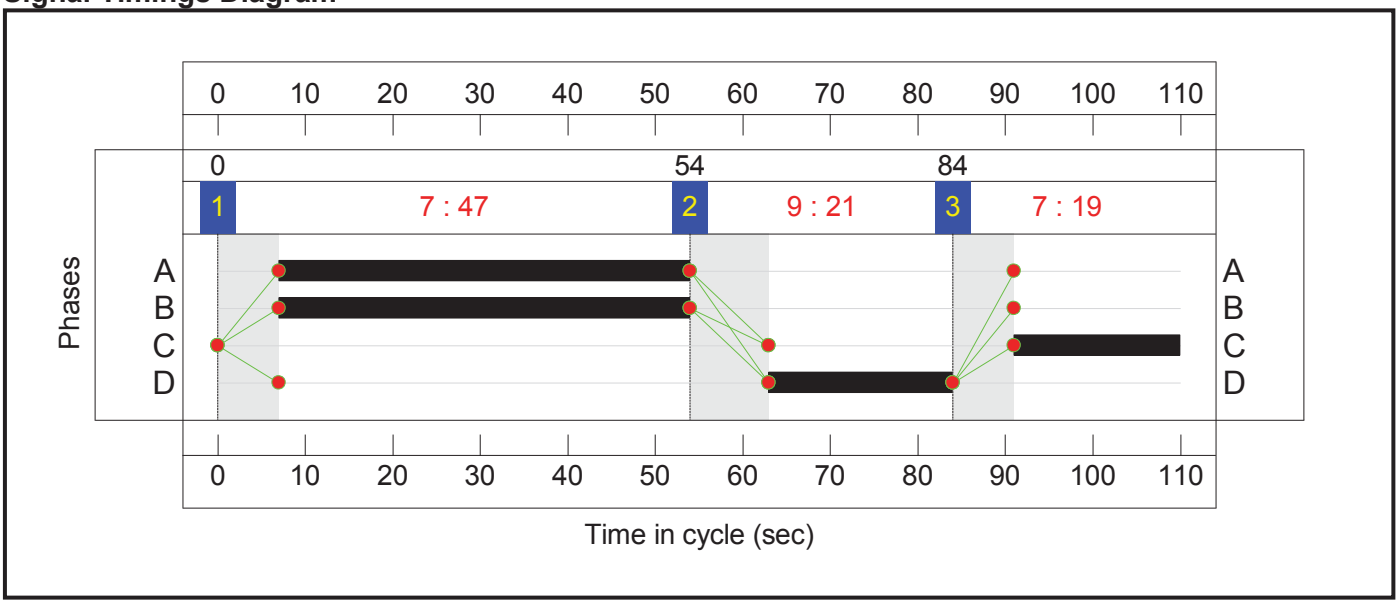
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	47	21	19
Change Point	0	54	84

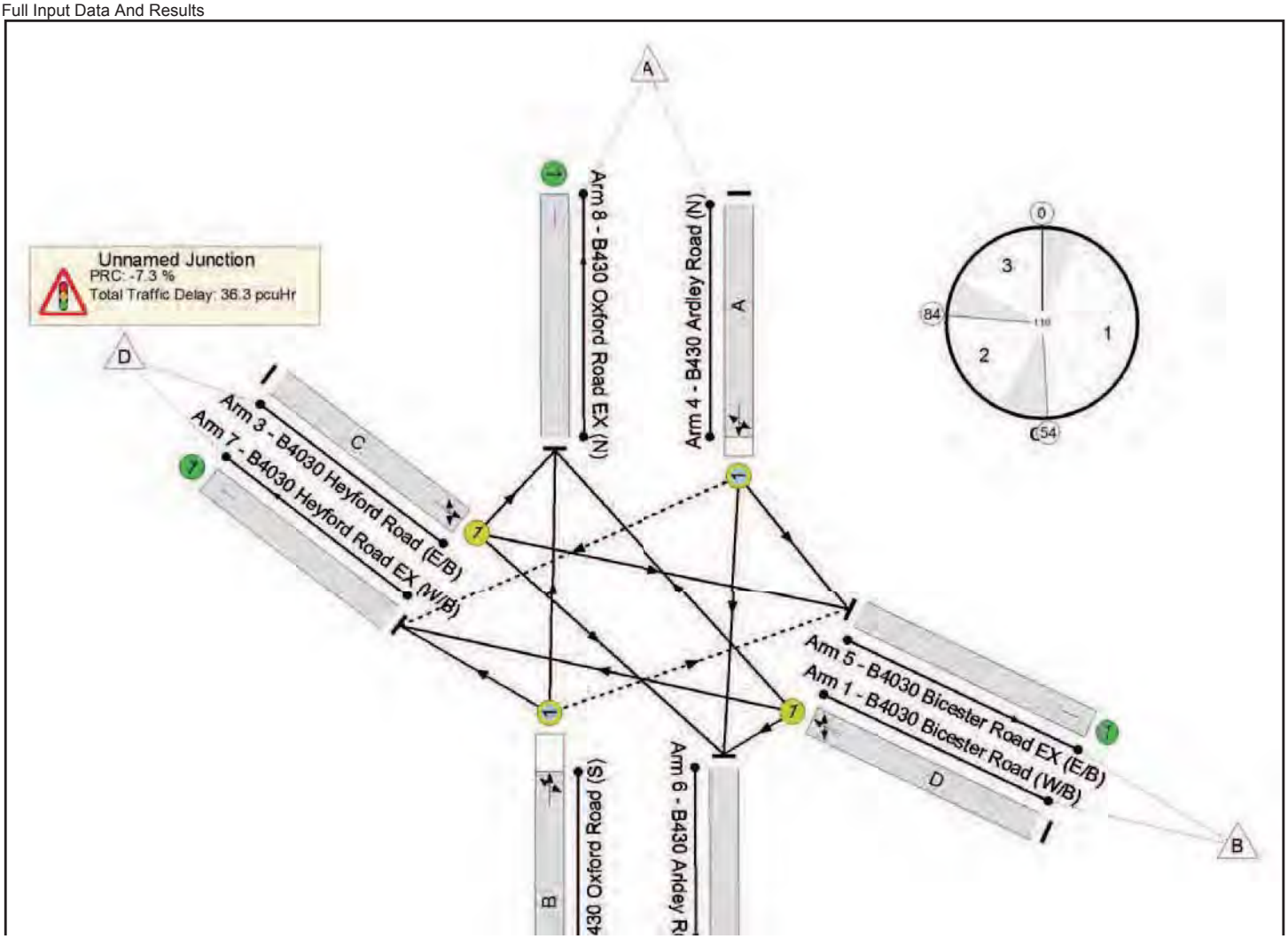
Signal Timings Diagram



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: Middleton Stoney Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**96.6%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**96.6%**
1/1	B4030 Bicester Road (W/B) Left Ahead Right	U	N/A	N/A	D		1	21	-	349	1848	370	94.4%
2/1	B430 Oxford Road (S) Right Left Ahead	O	N/A	N/A	B		1	47	-	266	1929	285	93.4%
3/1	B4030 Heyford Road (E/B) Ahead Right Left	U	N/A	N/A	C		1	19	-	328	1868	340	96.6%
4/1	B430 Ardley Road (N) Left Ahead Right	O	N/A	N/A	A		1	47	-	559	1896	614	91.1%
5/1	B4030 Bicester Road EX (E/B)	U	N/A	N/A	-		-	-	-	265	Inf	Inf	0.0%
6/1	B430 Arldey Road EX (S)	U	N/A	N/A	-		-	-	-	686	Inf	Inf	0.0%
7/1	B4030 Heyford Road EX (W/B)	U	N/A	N/A	-		-	-	-	292	Inf	Inf	0.0%
8/1	B430 Oxford Road EX (N)	U	N/A	N/A	-		-	-	-	259	Inf	Inf	0.0%

Full Input Data And Results

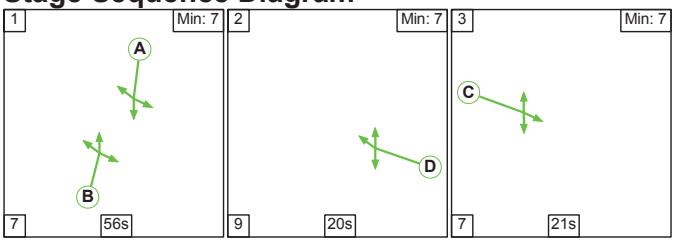
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Middleton Stoney Junction	**-**	**-**	**25**	**0**	**3**	**15.0**	**21.2**	**0.0**	**36.3**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**25**	**0**	**3**	**15.0**	**21.2**	**0.0**	**36.3**	**-**	**-**	**-**	**-**
1/1	349	349	-	-	-	4.2	5.5	-	9.7	100.3	10.5	5.5	16.0
2/1	266	266	19	0	3	1.6	4.7	0.0	6.3	85.2	5.5	4.7	10.2
3/1	328	328	-	-	-	4.1	6.6	-	10.7	117.1	9.9	6.6	16.5
4/1	559	559	6	0	0	5.2	4.4	0.0	9.6	61.9	16.3	4.4	20.7
5/1	265	265	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	686	686	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	292	292	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	259	259	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -7.3 Total Delay for Signalled Lanes (pcuHr): 36.31 Cycle Time (s): 110
PRC Over All Lanes (%): -7.3 Total Delay Over All Lanes(pcuHr): 36.31

Full Input Data And Results

Scenario 6: '2021 Ref Case PM' (FG6: '2021 Ref Case PM', Plan 1: 'Network Control Plan 1')

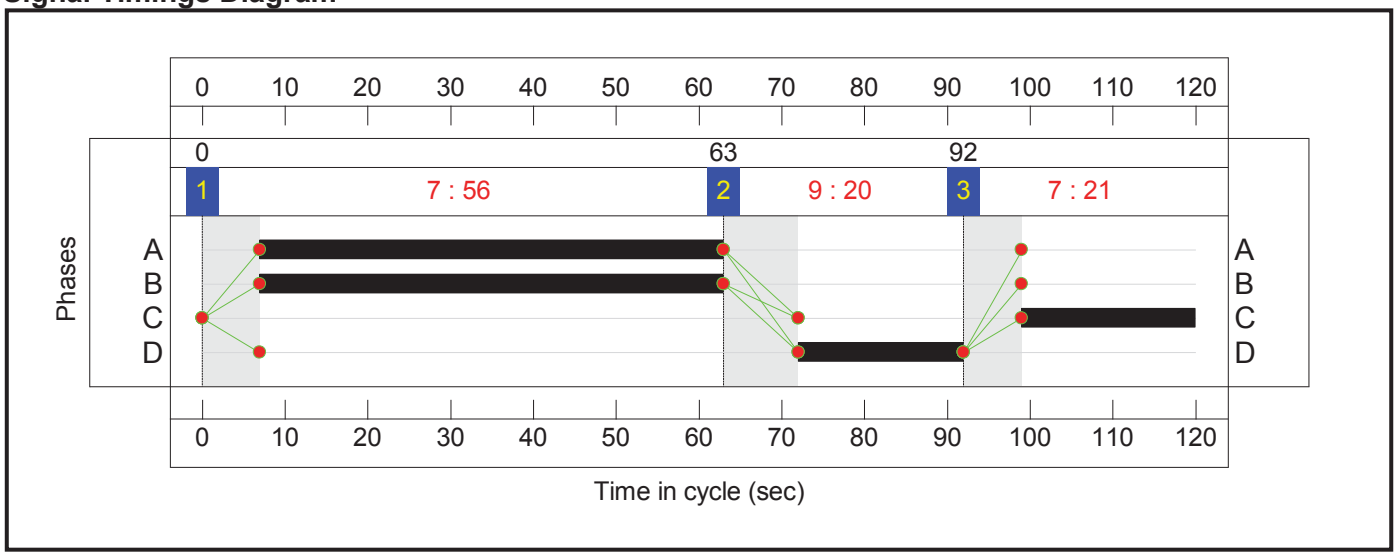
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	56	20	21
Change Point	0	63	92

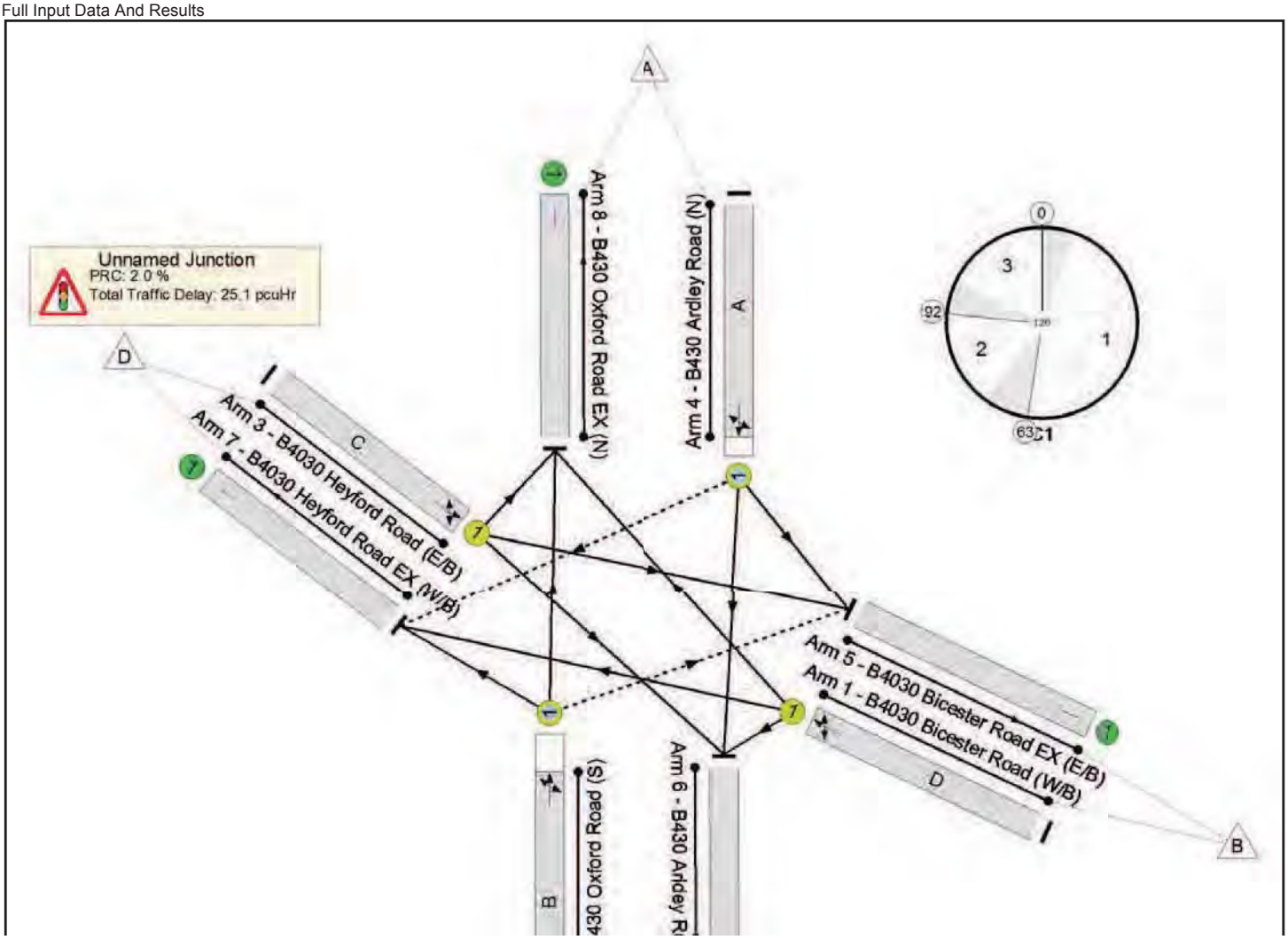
Signal Timings Diagram



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: Middleton Stoney Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**88.2%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**88.2%**
1/1	B4030 Bicester Road (W/B) Left Ahead Right	U	N/A	N/A	D		1	20	-	279	1870	327	85.3%
2/1	B430 Oxford Road (S) Right Left Ahead	O	N/A	N/A	B		1	56	-	517	1926	602	85.9%
3/1	B4030 Heyford Road (E/B) Ahead Right Left	U	N/A	N/A	C		1	21	-	304	1880	345	88.2%
4/1	B430 Ardley Road (N) Left Ahead Right	O	N/A	N/A	A		1	56	-	316	1861	382	82.7%
5/1	B4030 Bicester Road EX (E/B)	U	N/A	N/A	-		-	-	-	358	Inf	Inf	0.0%
6/1	B430 Arldey Road EX (S)	U	N/A	N/A	-		-	-	-	350	Inf	Inf	0.0%
7/1	B4030 Heyford Road EX (W/B)	U	N/A	N/A	-		-	-	-	290	Inf	Inf	0.0%
8/1	B430 Oxford Road EX (N)	U	N/A	N/A	-		-	-	-	418	Inf	Inf	0.0%

Full Input Data And Results

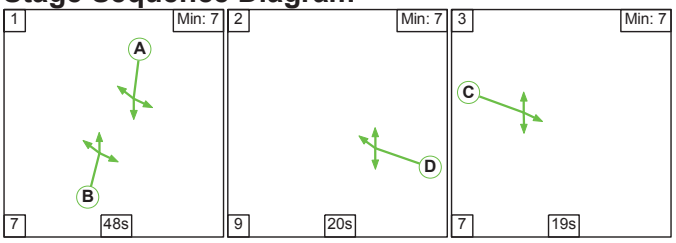
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Middleton Stoney Junction	**-**	**-**	**77**	**0**	**1**	**14.1**	**10.9**	**0.0**	**25.1**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**77**	**0**	**1**	**14.1**	**10.9**	**0.0**	**25.1**	**-**	**-**	**-**	**-**
1/1	279	279	-	-	-	3.7	2.6	-	6.3	81.7	9.0	2.6	11.6
2/1	517	517	71	0	1	3.5	2.9	0.0	6.4	44.3	12.8	2.9	15.6
3/1	304	304	-	-	-	4.0	3.2	-	7.3	85.9	9.8	3.2	13.0
4/1	316	316	6	0	0	2.9	2.2	0.0	5.1	58.3	9.4	2.2	11.6
5/1	358	358	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	350	350	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	290	290	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	418	418	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 2.0 Total Delay for Signalled Lanes (pcuHr): 25.06 Cycle Time (s): 120
PRC Over All Lanes (%): 2.0 Total Delay Over All Lanes(pcuHr): 25.06

Full Input Data And Results

Scenario 7: '2021 Test Case AM' (FG7: '2021 Test Case AM', Plan 1: 'Network Control Plan 1')

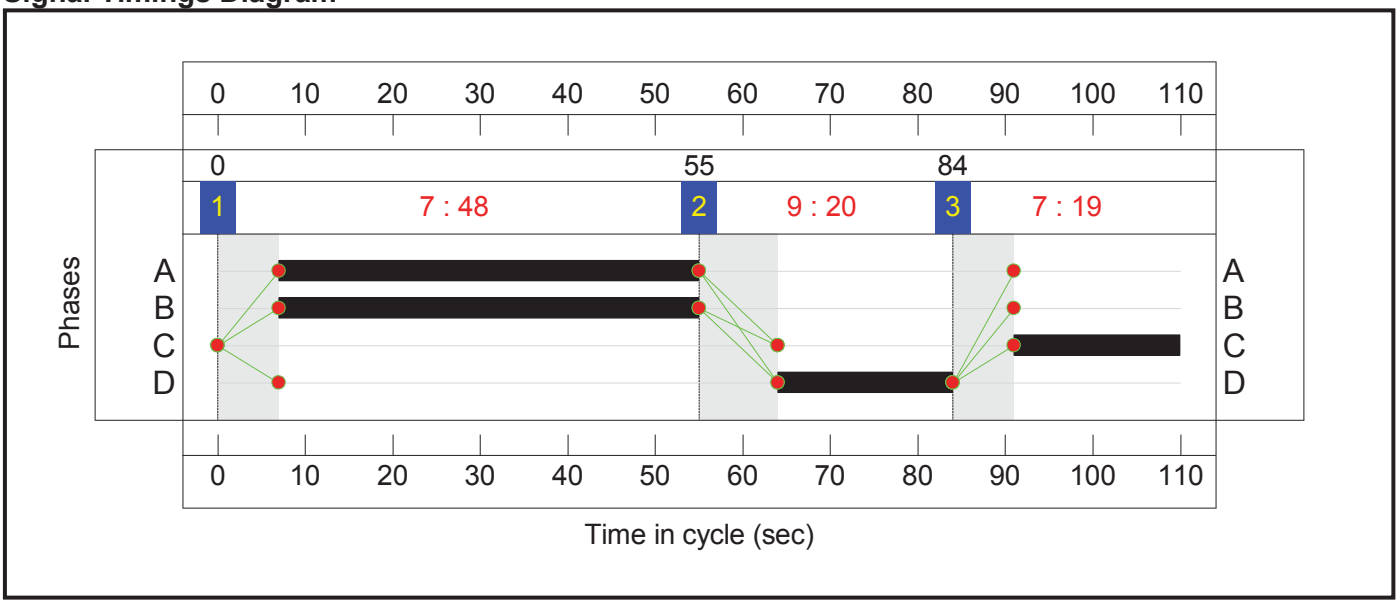
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	48	20	19
Change Point	0	55	84

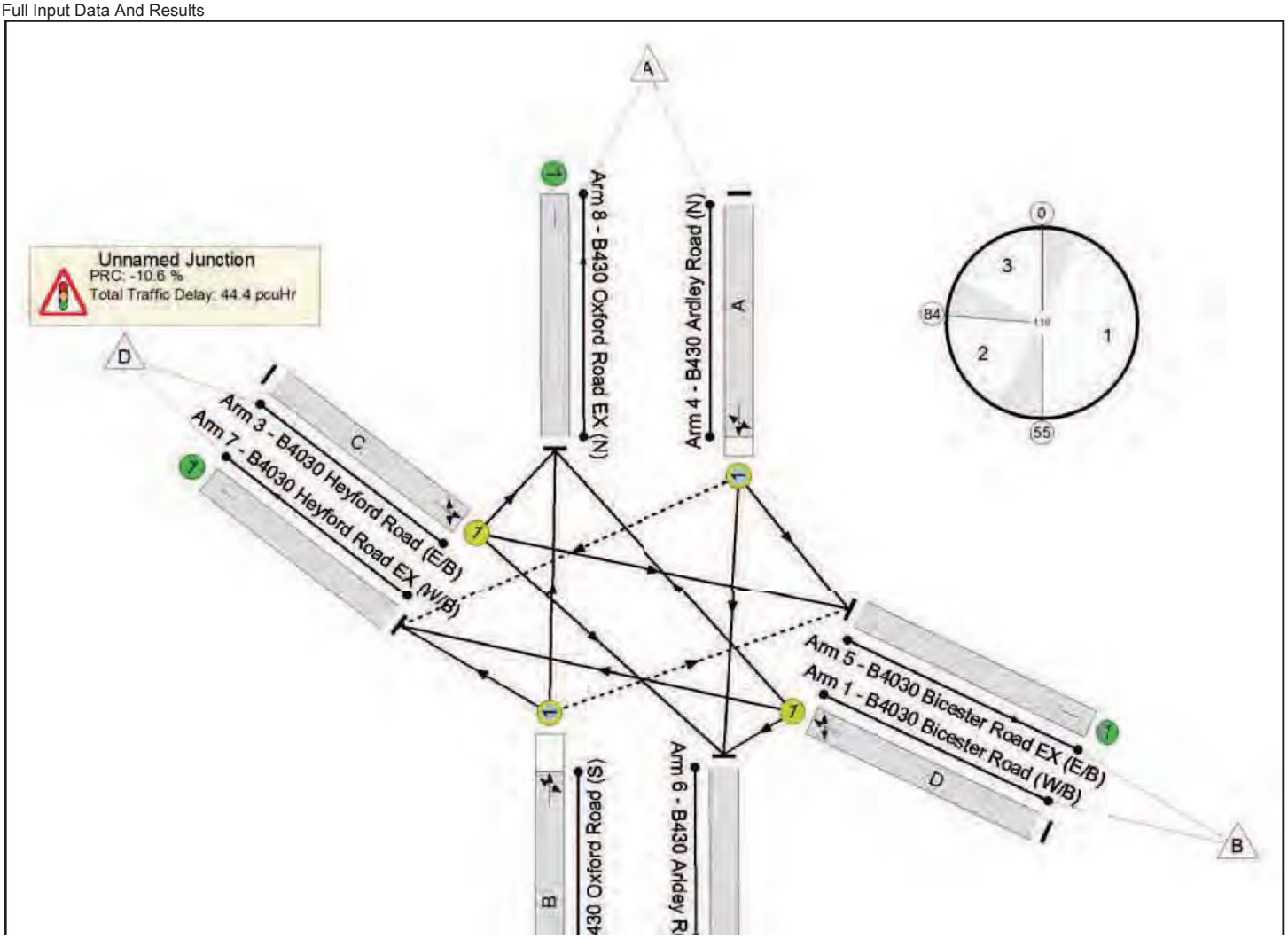
Signal Timings Diagram



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: Middleton Stoney Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**99.5%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**99.5%**
1/1	B4030 Bicester Road (W/B) Left Ahead Right	U	N/A	N/A	D		1	20	-	350	1848	353	99.2%
2/1	B430 Oxford Road (S) Right Left Ahead	O	N/A	N/A	B		1	48	-	276	1930	285	96.8%
3/1	B4030 Heyford Road (E/B) Ahead Right Left	U	N/A	N/A	C		1	19	-	338	1868	340	99.5%
4/1	B430 Ardley Road (N) Left Ahead Right	O	N/A	N/A	A		1	48	-	585	1897	634	92.2%
5/1	B4030 Bicester Road EX (E/B)	U	N/A	N/A	-		-	-	-	269	Inf	Inf	0.0%
6/1	B430 Arldey Road EX (S)	U	N/A	N/A	-		-	-	-	718	Inf	Inf	0.0%
7/1	B4030 Heyford Road EX (W/B)	U	N/A	N/A	-		-	-	-	295	Inf	Inf	0.0%
8/1	B430 Oxford Road EX (N)	U	N/A	N/A	-		-	-	-	267	Inf	Inf	0.0%

Full Input Data And Results

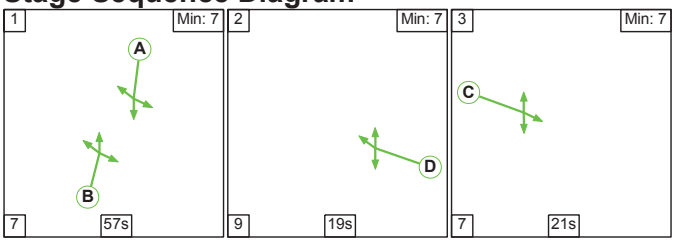
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Middleton Stoney Junction	**-**	**-**	**24**	**0**	**4**	**15.6**	**28.7**	**0.0**	**44.4**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**24**	**0**	**4**	**15.6**	**28.7**	**0.0**	**44.4**	**-**	**-**	**-**	**-**
1/1	350	350	-	-	-	4.3	8.7	-	13.0	133.7	10.6	8.7	19.3
2/1	276	276	18	0	4	1.7	6.3	0.0	8.1	105.2	5.8	6.3	12.2
3/1	338	338	-	-	-	4.2	8.8	-	13.0	138.6	10.2	8.8	19.0
4/1	585	585	6	0	0	5.4	4.9	0.0	10.3	63.7	17.1	4.9	22.0
5/1	269	269	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	718	718	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	295	295	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	267	267	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -10.6 Total Delay for Signalled Lanes (pcuHr): 44.42 Cycle Time (s): 110
PRC Over All Lanes (%): -10.6 Total Delay Over All Lanes(pcuHr): 44.42

Full Input Data And Results

Scenario 8: '2021 Test Case PM' (FG8: '2021 Test Case PM', Plan 1: 'Network Control Plan 1')

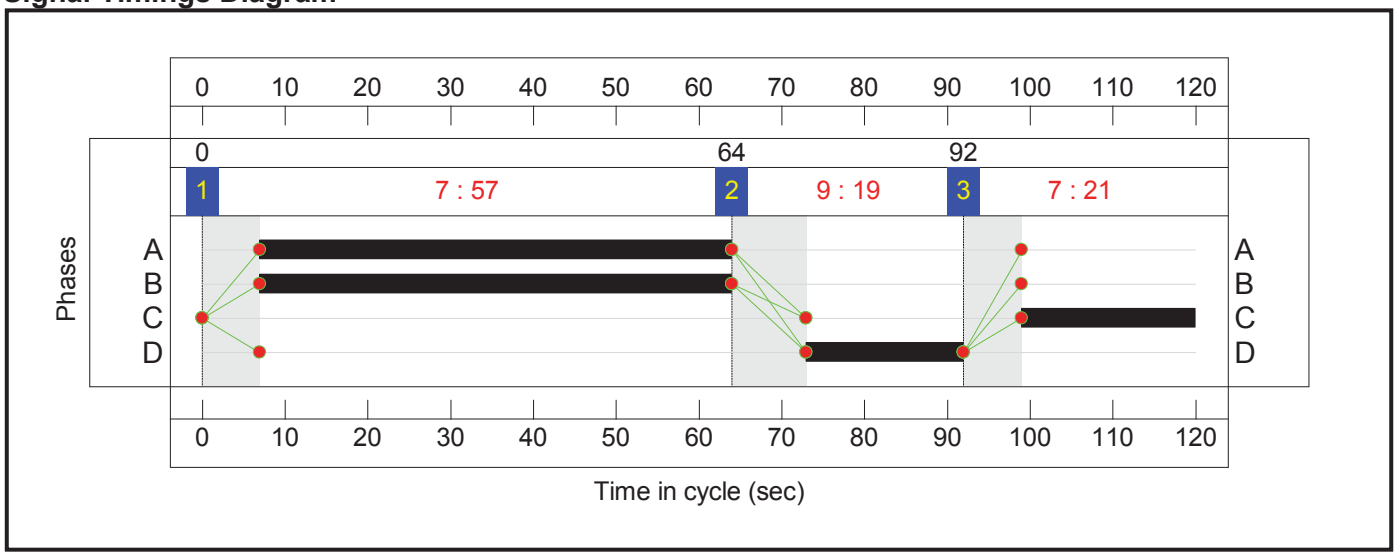
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	57	19	21
Change Point	0	64	92

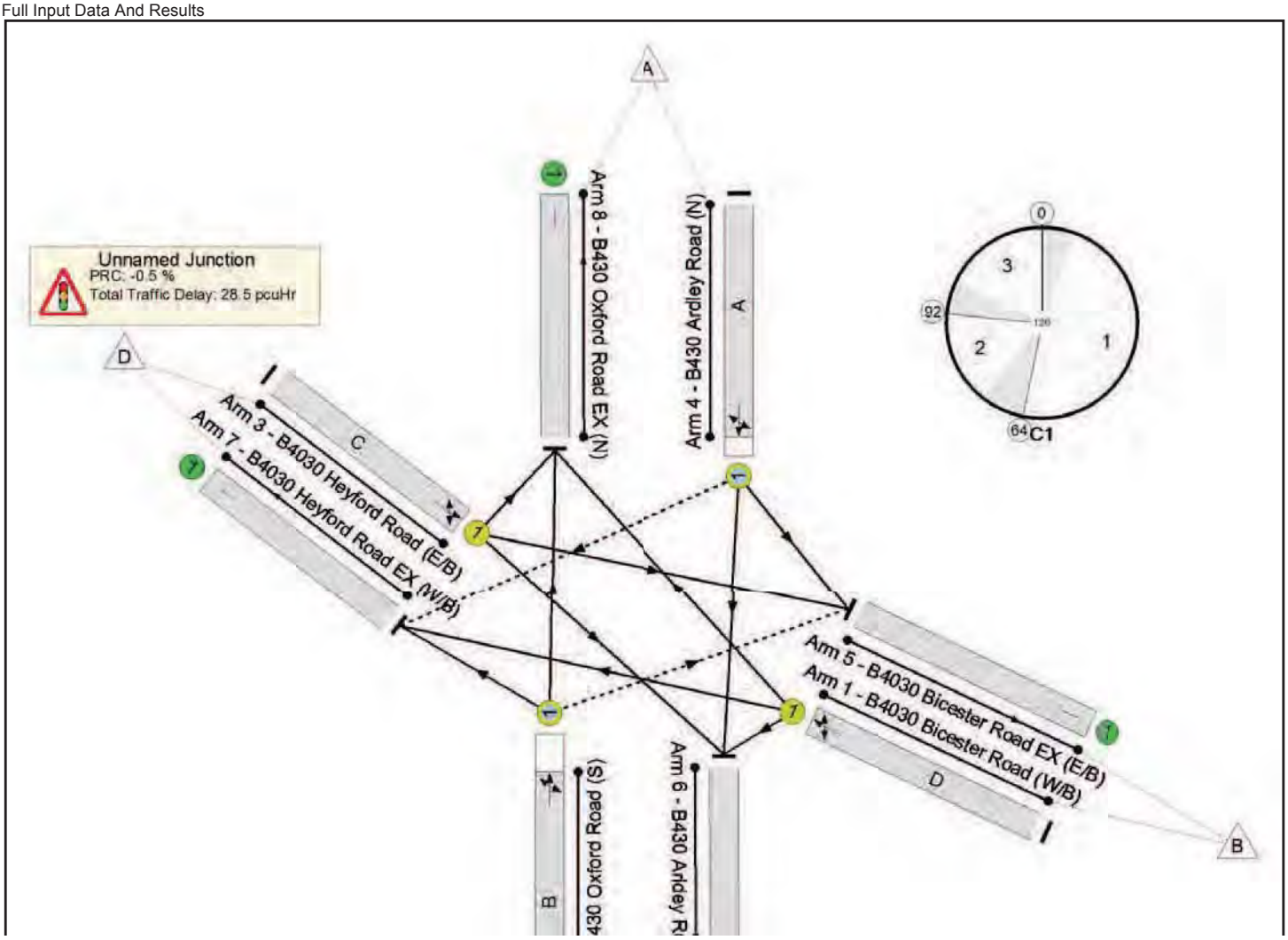
Signal Timings Diagram



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: Middleton Stoney Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**90.5%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**90.5%**
1/1	B4030 Bicester Road (W/B) Left Ahead Right	U	N/A	N/A	D		1	19	-	282	1870	312	90.5%
2/1	B430 Oxford Road (S) Right Left Ahead	O	N/A	N/A	B		1	57	-	540	1926	606	89.2%
3/1	B4030 Heyford Road (E/B) Ahead Right Left	U	N/A	N/A	C		1	21	-	309	1880	345	89.7%
4/1	B430 Ardley Road (N) Left Ahead Right	O	N/A	N/A	A		1	57	-	328	1863	380	86.2%
5/1	B4030 Bicester Road EX (E/B)	U	N/A	N/A	-		-	-	-	360	Inf	Inf	0.0%
6/1	B430 Arldey Road EX (S)	U	N/A	N/A	-		-	-	-	365	Inf	Inf	0.0%
7/1	B4030 Heyford Road EX (W/B)	U	N/A	N/A	-		-	-	-	298	Inf	Inf	0.0%
8/1	B430 Oxford Road EX (N)	U	N/A	N/A	-		-	-	-	436	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Middleton Stoney Junction	**-**	**-**	**76**	**0**	**2**	**14.5**	**13.9**	**0.0**	**28.5**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**76**	**0**	**2**	**14.5**	**13.9**	**0.0**	**28.5**	**-**	**-**	**-**	**-**
1/1	282	282	-	-	-	3.8	3.8	-	7.6	97.4	9.2	3.8	13.0
2/1	540	540	71	0	1	3.6	3.7	0.0	7.3	48.8	13.4	3.7	17.0
3/1	309	309	-	-	-	4.1	3.6	-	7.7	89.9	10.0	3.6	13.6
4/1	328	328	6	0	0	3.0	2.8	0.0	5.8	64.0	9.8	2.8	12.7
5/1	360	360	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	365	365	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	298	298	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	436	436	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

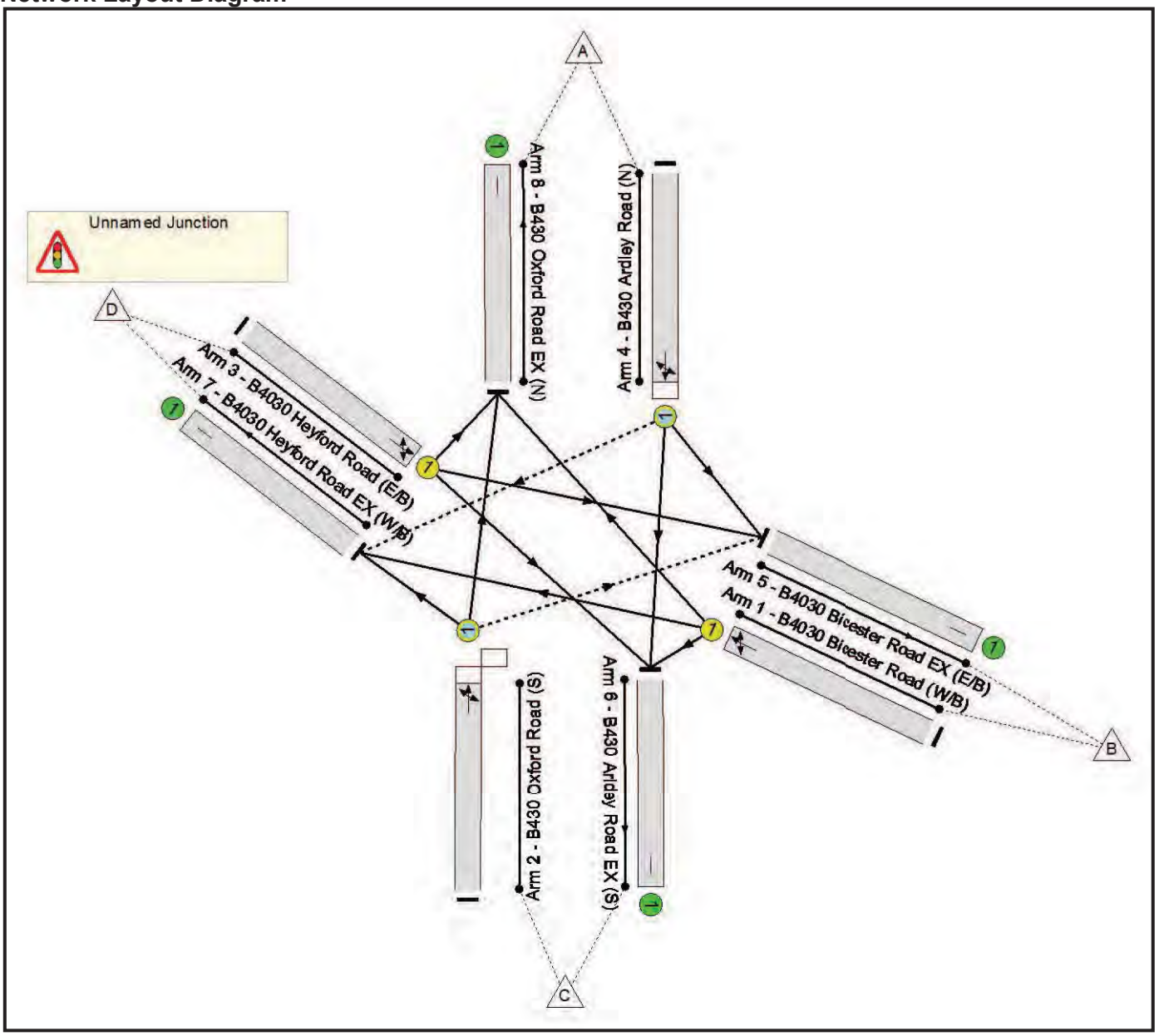
C1 PRC for Signalled Lanes (%): -0.5 Total Delay for Signalled Lanes (pcuHr): 28.49 Cycle Time (s): 120
PRC Over All Lanes (%): -0.5 Total Delay Over All Lanes(pcuHr): 28.49

Full Input Data And Results

User and Project Details

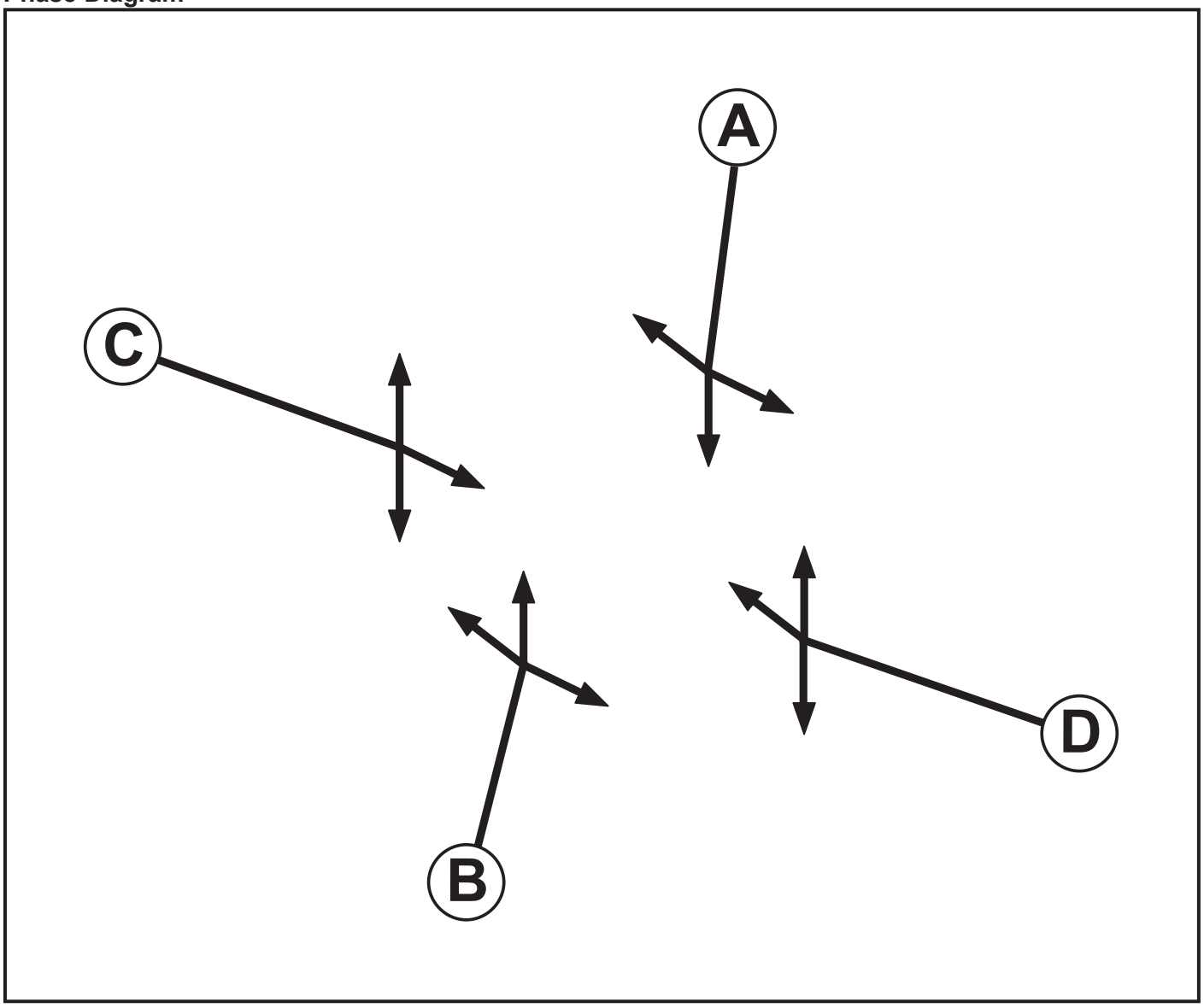
Project:	**Heyford Park**
Title:	**Middleton Stoney Junction**
Location:	
File name:	Phase 9 App_Middleton Stoney Mitigation v2.lsg3x
Author:	ekeen
Company:	Peter Brett Associates
Address:	10 Queen Square
Notes:	Existing Layout

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

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

Full Input Data And Results

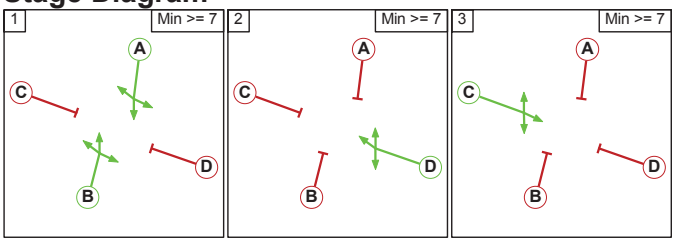
Phase Intergreens Matrix

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

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

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

Full Input Data And Results

Give-Way Lane Input Data

Junction: Unnamed Junction											
Lane	**Movement**	**Max Flow when Giving Way (PCU/Hr)**	**Min Flow when Giving Way (PCU/Hr)**	**Opposing Lane**	**Opp. Lane Coeff.**	**Opp. Mvmnts.**	**Right Turn Storage (PCU)**	**Non-Blocking Storage (PCU)**	**RTF**	**Right Turn Move up (s)**	**Max Turns in Intergreen (PCU)**
2/1 (B430 Oxford Road (S))	5/1 (Right)	1439	0	4/1	1.09	To 5/1 (Left) To 6/1 (Ahead)	2.00	1.00	0.50	2	2.00
4/1 (B430 Ardley Road (N))	7/1 (Right)	1439	0	2/1	1.09	To 7/1 (Left) To 8/1 (Ahead)	1.00	-	0.50	1	1.00

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 (B4030 Bicester Road (W/B))	U	D	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 6 Left	13.00
											Arm 7 Ahead	Inf
											Arm 8 Right	15.00
2/1 (B430 Oxford Road (S))	O	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Right	15.00
											Arm 7 Left	30.00
											Arm 8 Ahead	Inf
3/1 (B4030 Heyford Road (E/B))	U	C	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Ahead	Inf
											Arm 6 Right	30.00
											Arm 8 Left	7.00
4/1 (B430 Ardley Road (N))	O	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Left	12.00
											Arm 6 Ahead	Inf
											Arm 7 Right	Inf
5/1 (B4030 Bicester Road EX (E/B))	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (B430 Arldey Road EX (S))	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (B4030 Heyford Road EX (W/B))	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (B430 Oxford Road EX (N))	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2013 Base AM'	07:30	08:30	01:00	
2: '2013 Base PM'	17:00	18:00	01:00	
3: '2016 Base AM'	07:30	08:30	01:00	
4: '2016 Base PM'	17:00	18:00	01:00	
5: '2021 Ref Case AM'	07:30	08:30	01:00	
6: '2021 Ref Case PM'	17:00	18:00	01:00	
7: '2021 Test Case AM'	07:30	08:30	01:00	
8: '2021 Test Case PM'	17:00	18:00	01:00	

Scenario 1: '2021 Test Case AM' (FG7: '2021 Test Case AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	36	543	6	585
	B	57	0	61	232	350
	C	197	22	0	57	276
	D	13	211	114	0	338
	Tot.	267	269	718	295	1549

Traffic Lane Flows

Lane	Scenario 1: 2021 Test Case AM
Junction: Unnamed Junction	
1/1	350
2/1	276
3/1	338
4/1	585
5/1	269
6/1	718
7/1	295
8/1	267

Full Input Data And Results

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 (B4030 Bicester Road (W/B))	3.00	0.00	Y	Arm 6 Left	13.00	17.4 %	1848	1848
				Arm 7 Ahead	Inf	66.3 %		
				Arm 8 Right	15.00	16.3 %		
2/1 (B430 Oxford Road (S))	3.50	0.00	Y	Arm 5 Right	15.00	8.0 %	1930	1930
				Arm 7 Left	30.00	20.7 %		
				Arm 8 Ahead	Inf	71.4 %		
3/1 (B4030 Heyford Road (E/B))	3.00	0.00	Y	Arm 5 Ahead	Inf	62.4 %	1868	1868
				Arm 6 Right	30.00	33.7 %		
				Arm 8 Left	7.00	3.8 %		
4/1 (B430 Ardley Road (N))	3.00	0.00	Y	Arm 5 Left	12.00	6.2 %	1900	1900
				Arm 6 Ahead	Inf	92.8 %		
				Arm 7 Right	Inf	1.0 %		
5/1 (B4030 Bicester Road EX (E/B) Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (B430 Arldey Road EX (S) Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (B4030 Heyford Road EX (W/B) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (B430 Oxford Road EX (N) Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2021 Test Case PM' (FG8: '2021 Test Case PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	64	258	6	328
	B	32	0	31	219	282
	C	395	72	0	73	540
	D	9	224	76	0	309
	Tot.	436	360	365	298	1459

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2021 Test Case PM
Junction: Unnamed Junction	
1/1	282
2/1	540
3/1	309
4/1	328
5/1	360
6/1	365
7/1	298
8/1	436

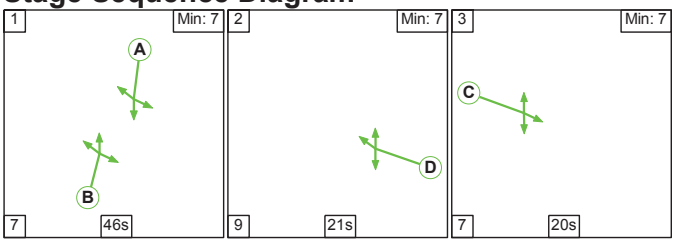
Lane Saturation Flows

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 (B4030 Bicester Road (W/B))	3.00	0.00	Y	Arm 6 Left	13.00	11.0 %	1870	1870
				Arm 7 Ahead	Inf	77.7 %		
				Arm 8 Right	15.00	11.3 %		
2/1 (B430 Oxford Road (S))	3.50	0.00	Y	Arm 5 Right	15.00	13.3 %	1926	1926
				Arm 7 Left	30.00	13.5 %		
				Arm 8 Ahead	Inf	73.1 %		
3/1 (B4030 Heyford Road (E/B))	3.00	0.00	Y	Arm 5 Ahead	Inf	72.5 %	1880	1880
				Arm 6 Right	30.00	24.6 %		
				Arm 8 Left	7.00	2.9 %		
4/1 (B430 Ardley Road (N))	3.00	0.00	Y	Arm 5 Left	12.00	19.5 %	1869	1869
				Arm 6 Ahead	Inf	78.7 %		
				Arm 7 Right	Inf	1.8 %		
5/1 (B4030 Bicester Road EX (E/B) Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (B430 Arldey Road EX (S) Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (B4030 Heyford Road EX (W/B) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (B430 Oxford Road EX (N) Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 1: '2021 Test Case AM' (FG7: '2021 Test Case AM', Plan 1: 'Network Control Plan 1')

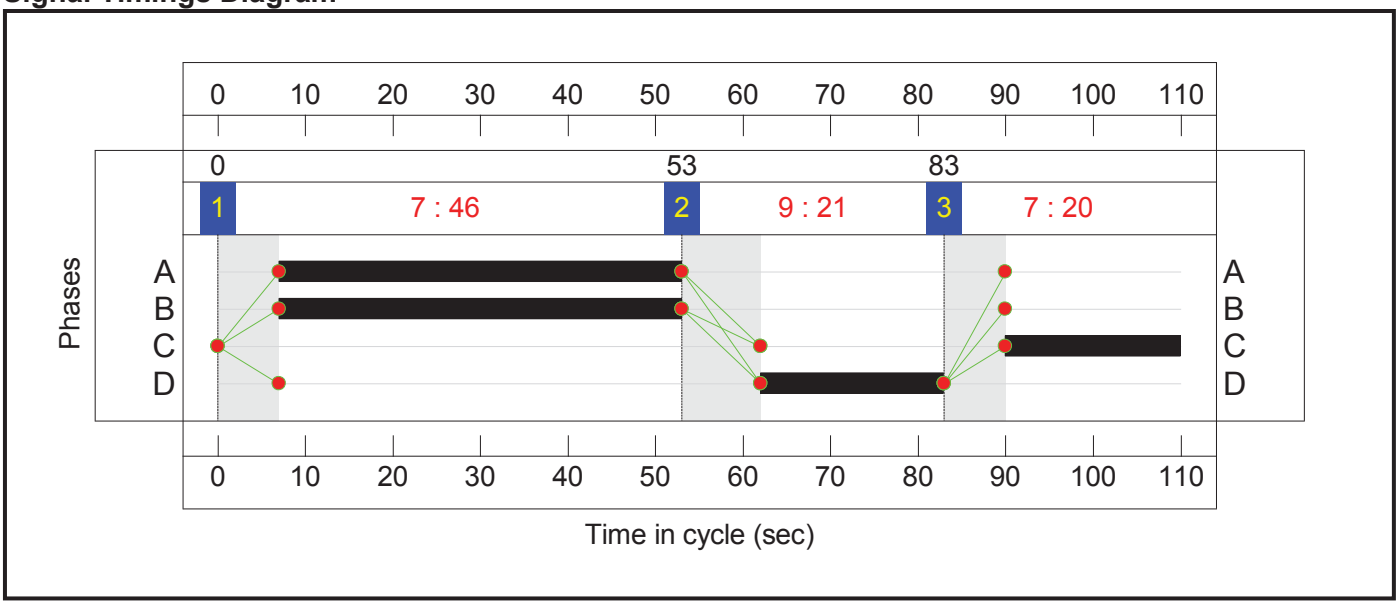
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	46	21	20
Change Point	0	53	83

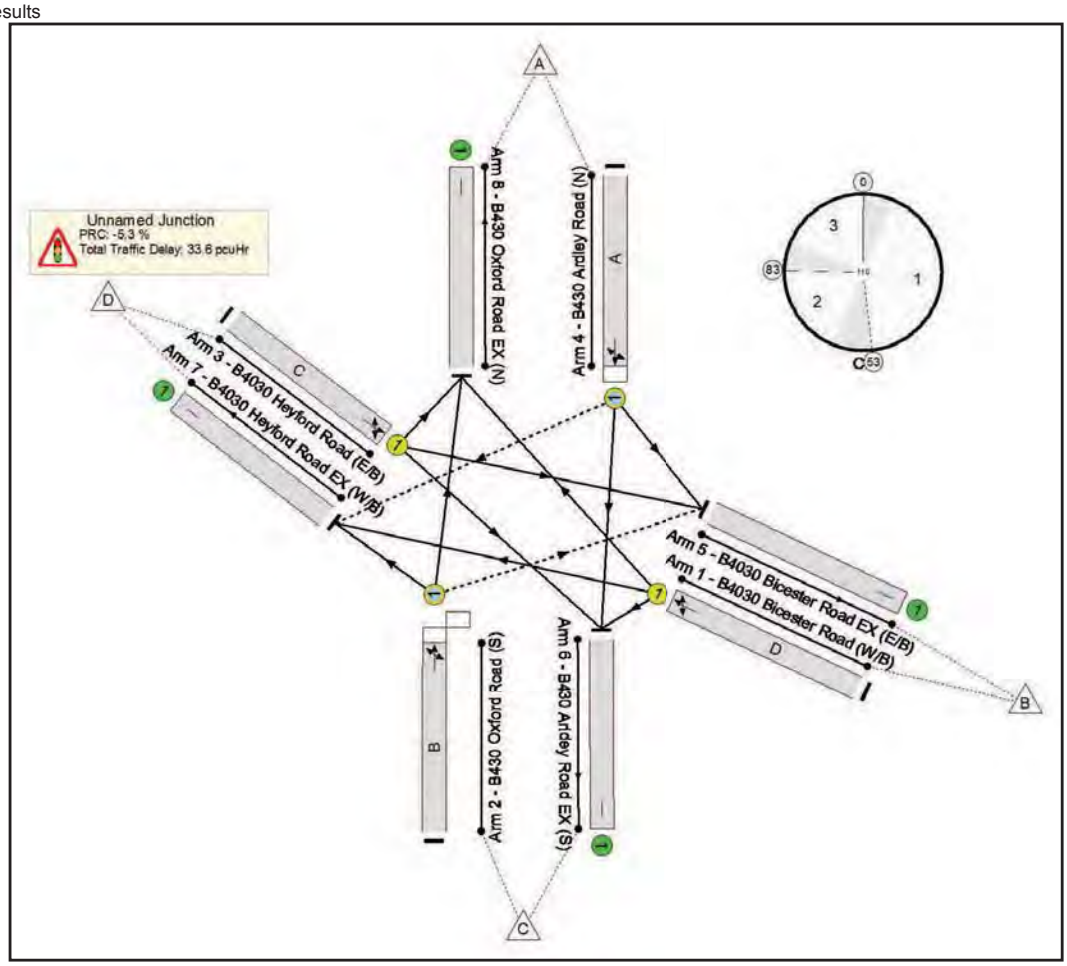
Signal Timings Diagram



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: Middleton Stoney Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**94.8%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**94.8%**
1/1	B4030 Bicester Road (W/B) Left Ahead Right	U	N/A	N/A	D		1	21	-	350	1848	370	94.7%
2/1	B430 Oxford Road (S) Right Left Ahead	O	N/A	N/A	B		1	46	-	276	1930	681	40.5%
3/1	B4030 Heyford Road (E/B) Ahead Right Left	U	N/A	N/A	C		1	20	-	338	1868	357	94.8%
4/1	B430 Ardley Road (N) Left Ahead Right	O	N/A	N/A	A		1	46	-	585	1900	619	94.5%
5/1	B4030 Bicester Road EX (E/B)	U	N/A	N/A	-		-	-	-	269	Inf	Inf	0.0%
6/1	B430 Arldey Road EX (S)	U	N/A	N/A	-		-	-	-	718	Inf	Inf	0.0%
7/1	B4030 Heyford Road EX (W/B)	U	N/A	N/A	-		-	-	-	295	Inf	Inf	0.0%
8/1	B430 Oxford Road EX (N)	U	N/A	N/A	-		-	-	-	267	Inf	Inf	0.0%

Full Input Data And Results

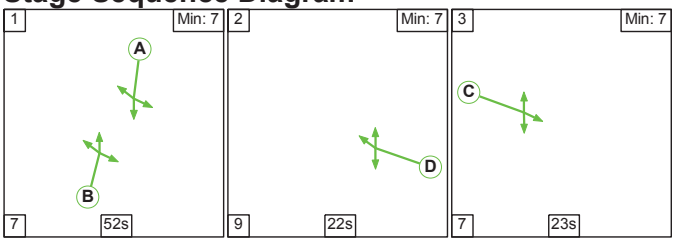
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Middleton Stoney Junction	**-**	**-**	**28**	**0**	**0**	**15.6**	**17.9**	**0.0**	**33.6**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**28**	**0**	**0**	**15.6**	**17.9**	**0.0**	**33.6**	**-**	**-**	**-**	**-**
1/1	350	350	-	-	-	4.2	5.7	-	9.9	101.6	10.5	5.7	16.2
2/1	276	276	22	0	0	1.6	0.3	0.0	2.0	25.9	5.6	0.3	5.9
3/1	338	338	-	-	-	4.1	5.6	-	9.8	104.1	10.1	5.6	15.8
4/1	585	585	6	0	0	5.7	6.3	0.0	12.0	73.7	17.4	6.3	23.7
5/1	269	269	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	718	718	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	295	295	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	267	267	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -5.3 Total Delay for Signalled Lanes (pcuHr): 33.62 Cycle Time (s): 110
PRC Over All Lanes (%): -5.3 Total Delay Over All Lanes(pcuHr): 33.62

Full Input Data And Results

Scenario 2: '2021 Test Case PM' (FG8: '2021 Test Case PM', Plan 1: 'Network Control Plan 1')

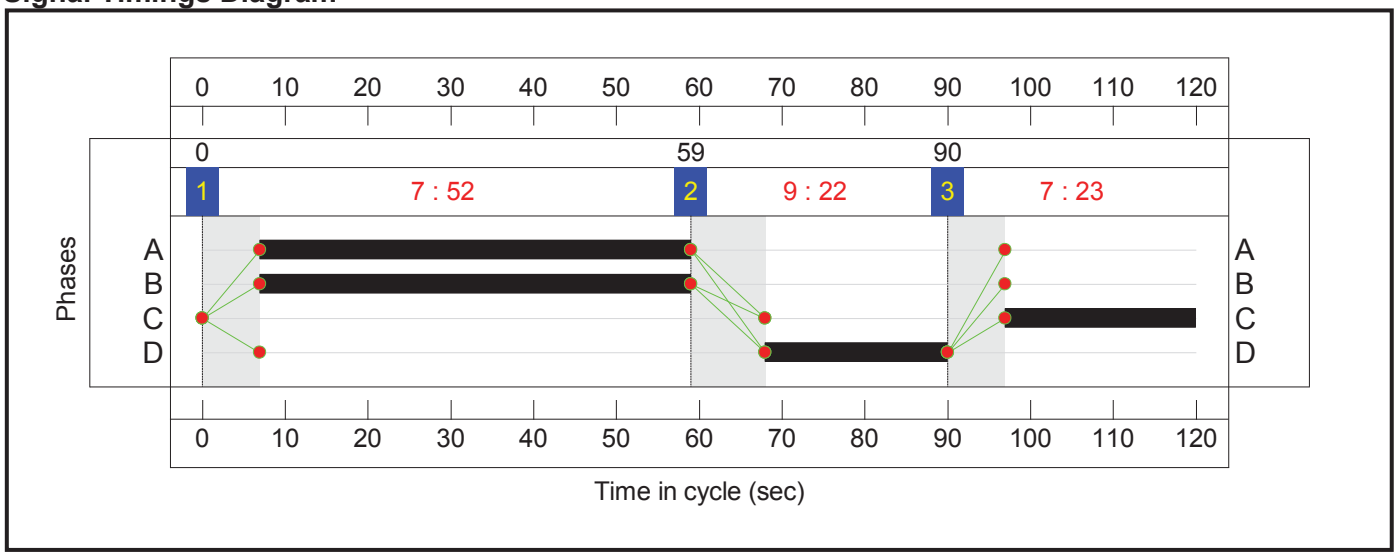
Stage Sequence Diagram



Stage Timings

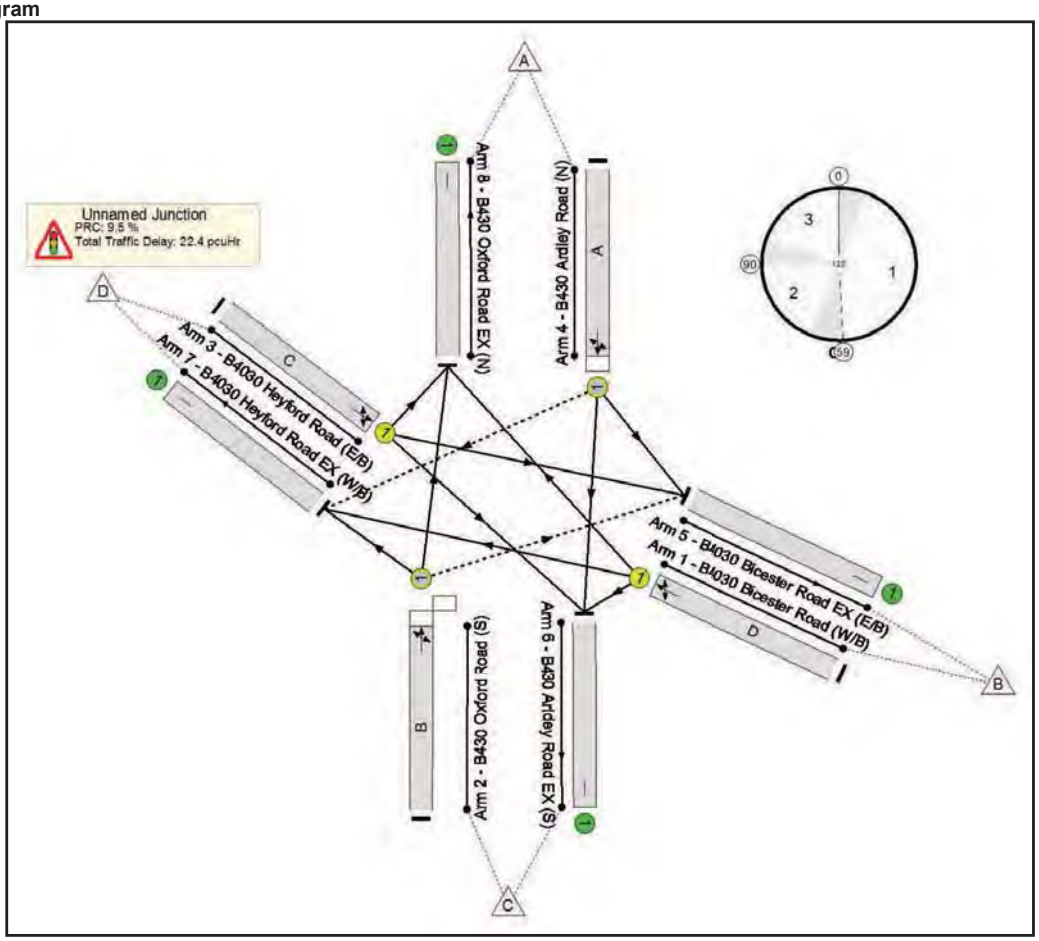
Stage	1	2	3
Duration	52	22	23
Change Point	0	59	90

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: Middleton Stoney Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**82.2%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**82.2%**
1/1	B4030 Bicester Road (W/B) Left Ahead Right	U	N/A	N/A	D		1	22	-	282	1870	358	78.7%
2/1	B430 Oxford Road (S) Right Left Ahead	O	N/A	N/A	B		1	52	-	540	1926	749	72.1%
3/1	B4030 Heyford Road (E/B) Ahead Right Left	U	N/A	N/A	C		1	23	-	309	1880	376	82.2%
4/1	B430 Ardley Road (N) Left Ahead Right	O	N/A	N/A	A		1	52	-	328	1869	403	81.4%
5/1	B4030 Bicester Road EX (E/B)	U	N/A	N/A	-		-	-	-	360	Inf	Inf	0.0%
6/1	B430 Arldey Road EX (S)	U	N/A	N/A	-		-	-	-	365	Inf	Inf	0.0%
7/1	B4030 Heyford Road EX (W/B)	U	N/A	N/A	-		-	-	-	298	Inf	Inf	0.0%
8/1	B430 Oxford Road EX (N)	U	N/A	N/A	-		-	-	-	436	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Middleton Stoney Junction	**-**	**-**	**77**	**0**	**1**	**15.1**	**7.3**	**0.0**	**22.4**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**77**	**0**	**1**	**15.1**	**7.3**	**0.0**	**22.4**	**-**	**-**	**-**	**-**
1/1	282	282	-	-	-	3.6	1.8	-	5.4	68.7	8.9	1.8	10.7
2/1	540	540	71	0	1	3.9	1.3	0.0	5.2	34.8	14.0	1.3	15.2
3/1	309	309	-	-	-	3.9	2.2	-	6.1	71.2	9.8	2.2	12.0
4/1	328	328	6	0	0	3.6	2.1	0.0	5.7	62.7	10.4	2.1	12.5
5/1	360	360	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	365	365	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	298	298	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	436	436	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 9.5 Total Delay for Signalled Lanes (pcuHr): 22.42 Cycle Time (s): 120
PRC Over All Lanes (%): 9.5 Total Delay Over All Lanes(pcuHr): 22.42

Junctions 9

ARCADY 9 - Roundabout Module

Filename: M40 roundabout base_2014 only.j9
Path: J:\33374 Heyford Park 400 dwelling application\Technical\Transport\Junction Assessments\ARCADY\2016 App
Report generation date: 31/10/2016 16:42:30

»(Default Analysis Set) - 2014 Base, AM
»(Default Analysis Set) - 2014 Base, PM

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
	A1 - 2014 Base							
1 - A43	0.9	3.42	0.47	A	0.5	2.64	0.35	A
2 - M40 off slip northbound	3.1	9.62	0.76	A	2.4	6.90	0.71	A
3 - B430	0.9	7.05	0.48	A	1.0	7.10	0.50	A

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	M40 slip lane junction
Location	Heyford
Site number	
Date	02/06/2015
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	33374
Enumerator	nkataria
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2016 Reference Case	AM	ONE HOUR	07:15	08:45	15	✓
D2	2016 Reference Case	PM	ONE HOUR	16:45	18:15	15	✓
D3	2021 Reference Case 1	AM	ONE HOUR	07:15	08:45	15	✓
D4	2021 Reference Case 1	PM	ONE HOUR	16:45	18:15	15	✓
D9	2031 Reference Case	AM	ONE HOUR	07:15	08:45	15	✓
D10	2031 Reference Case	PM	ONE HOUR	16:45	18:15	15	✓
D15	2014 Base	AM	ONE HOUR	07:15	08:45	15	✓
D16	2014 Base	PM	ONE HOUR	16:45	18:15	15	✓
D17	2021 Test Case	AM	ONE HOUR	07:15	08:45	15	✓
D18	2021 Test Case	PM	ONE HOUR	16:45	18:15	15	✓
D19	2021 Reference Case 2	AM	ONE HOUR	07:15	08:45	15	✓
D20	2021 Reference Case 2	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	(Default Analysis Set)	✓	✓	D15,D16	100.000	100.000

(Default Analysis Set) - 2014 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	(untitled)	Standard Roundabout	1,2,3	6.99	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A43	
2	M40 off slip northbound	
3	B430	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A43	7.29	7.79	2.9	29.2	71.5	37.0	
2 - M40 off slip northbound	7.14	7.34	0.2	55.0	71.5	36.0	
3 - B430	3.55	8.88	13.6	25.6	71.5	43.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A43	0.588	2285
2 - M40 off slip northbound	0.579	2199
3 - B430	0.496	1731

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
D15	2014 Base	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A43		ONE HOUR	✓	858	100.000
2 - M40 off slip northbound		ONE HOUR	✓	1080	100.000
3 - B430		ONE HOUR	✓	420	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - A43	2 - M40 off slip northbound	3 - B430
From	1 - A43	9	259	590
	2 - M40 off slip northbound	1042	1	37
	3 - B430	196	211	13

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A43	2 - M40 off slip northbound	3 - B430
From	1 - A43	22	11	5
	2 - M40 off slip northbound	14	0	22
	3 - B430	16	4	31

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A43	0.47	3.42	0.9	A	787	1181
2 - M40 off slip northbound	0.76	9.62	3.1	A	991	1487
3 - B430	0.48	7.05	0.9	A	385	578

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	646	161	169	2043	0.316	644	934	0.0	0.5	2.571	A
2 - M40 off slip northbound	813	203	459	1677	0.485	809	353	0.0	0.9	4.134	A
3 - B430	316	79	788	1163	0.272	315	480	0.0	0.4	4.239	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	771	193	202	2023	0.381	771	1119	0.5	0.6	2.872	A
2 - M40 off slip northbound	971	243	550	1628	0.596	969	423	0.9	1.5	5.440	A
3 - B430	378	94	944	1083	0.349	377	575	0.4	0.5	5.094	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	945	236	247	1997	0.473	944	1366	0.6	0.9	3.414	A
2 - M40 off slip northbound	1189	297	673	1563	0.761	1183	518	1.5	3.1	9.321	A
3 - B430	462	116	1152	976	0.474	461	704	0.5	0.9	6.968	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	945	236	248	1997	0.473	945	1373	0.9	0.9	3.421	A
2 - M40 off slip northbound	1189	297	674	1562	0.761	1189	519	3.1	3.1	9.624	A
3 - B430	462	116	1158	973	0.475	462	705	0.9	0.9	7.048	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	771	193	203	2023	0.381	772	1128	0.9	0.6	2.881	A
2 - M40 off slip northbound	971	243	551	1628	0.596	977	424	3.1	1.5	5.588	A
3 - B430	378	94	952	1079	0.350	379	576	0.9	0.5	5.156	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	646	161	170	2042	0.316	647	941	0.6	0.5	2.580	A
2 - M40 off slip northbound	813	203	461	1676	0.485	815	355	1.5	1.0	4.194	A
3 - B430	316	79	794	1160	0.273	317	482	0.5	0.4	4.275	A

(Default Analysis Set) - 2014 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	(untitled)	Standard Roundabout	1,2,3	5.73	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
D16	2014 Base	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 (Veh/hr)	Scaling Factor (%)
1 - A43		ONE HOUR	✓	656	100.000
2 - M40 off slip northbound		ONE HOUR	✓	1132	100.000
3 - B430		ONE HOUR	✓	458	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - A43	2 - M40 off slip northbound	3 - B430
From	1 - A43	10	325	321
	2 - M40 off slip northbound	1093	6	33
	3 - B430	317	140	1

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A43	2 - M40 off slip northbound	3 - B430
From	1 - A43	0	8	2
	2 - M40 off slip northbound	12	17	6
	3 - B430	4	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A43	0.35	2.64	0.5	A	602	903
2 - M40 off slip northbound	0.71	6.90	2.4	A	1039	1558
3 - B430	0.50	7.10	1.0	A	420	630

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	494	123	110	2115	0.234	493	1065	0.0	0.3	2.218	A
2 - M40 off slip northbound	852	213	249	1829	0.466	849	353	0.0	0.9	3.662	A
3 - B430	345	86	832	1220	0.283	343	267	0.0	0.4	4.098	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	590	147	132	2102	0.281	589	1274	0.3	0.4	2.379	A
2 - M40 off slip northbound	1018	254	298	1803	0.564	1016	423	0.9	1.3	4.565	A
3 - B430	412	103	995	1132	0.364	411	319	0.4	0.6	4.985	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	722	181	161	2085	0.346	722	1558	0.4	0.5	2.638	A
2 - M40 off slip northbound	1246	312	365	1768	0.705	1242	518	1.3	2.3	6.793	A
3 - B430	504	126	1217	1014	0.498	503	390	0.6	1.0	7.024	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	722	181	162	2085	0.346	722	1563	0.5	0.5	2.641	A
2 - M40 off slip northbound	1246	312	366	1768	0.705	1246	519	2.3	2.4	6.898	A
3 - B430	504	126	1221	1011	0.499	504	391	1.0	1.0	7.097	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	590	147	133	2102	0.281	590	1282	0.5	0.4	2.382	A
2 - M40 off slip northbound	1018	254	299	1803	0.564	1022	424	2.4	1.3	4.635	A
3 - B430	412	103	1001	1129	0.365	413	320	1.0	0.6	5.041	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	494	123	111	2114	0.234	494	1071	0.4	0.3	2.222	A
2 - M40 off slip northbound	852	213	250	1828	0.466	854	355	1.3	0.9	3.703	A
3 - B430	345	86	837	1217	0.283	346	267	0.6	0.4	4.132	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []

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

Filename: M40 roundabout base_ELS.j9
Path: J:\33374 Heyford Park 400 dwelling application\Technical\Transport\Junction Assessments\ARCADY\2016 App
Report generation date: 17/10/2016 14:23:17

»(Default Analysis Set) - 2016 Base, AM
»(Default Analysis Set) - 2016 Base, PM
»(Default Analysis Set) - 2014 Base, AM
»(Default Analysis Set) - 2014 Base, PM
»(Default Analysis Set) - 2021 Reference Case, AM
»(Default Analysis Set) - 2021 Reference Case, PM
»(Default Analysis Set) - 2021 Test Case with 300, AM
»(Default Analysis Set) - 2021 Test Case with 300, PM

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
A1 [Lane Simulation] - 2016 Base								
1 - A43	2.7	9.40		A	1.2	5.44		A
2 - M40 off slip northbound	15.0	41.31		E	10.0	26.82		D
3 - B430	2.4	16.33		C	3.9	23.87		C
A1 [Lane Simulation] - 2014 Base								
1 - A43	2.3	8.77		A	1.1	5.40		A
2 - M40 off slip northbound	14.9	42.11		E	8.9	24.56		C
3 - B430	2.1	15.08		C	3.0	20.63		C
A1 [Lane Simulation] - 2021 Reference Case								
1 - A43	3.3	11.27		B	1.4	5.82		A
2 - M40 off slip northbound	19.0	52.12		F	10.0	24.67		C
3 - B430	4.0	21.69		C	6.1	33.97		D
A1 [Lane Simulation] - 2021 Test Case with 300								
1 - A43	3.6	12.06		B	1.5	6.05		A
2 - M40 off slip northbound	20.6	54.16		F	13.3	34.28		D
3 - B430	4.7	26.37		D	8.6	43.97		E

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. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	M40 slip lane junction
Location	Heyford
Site number	
Date	02/06/2015
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	33374
Enumerator	nkataria
Description	

Units

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

Analysis Options

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

Lane Simulation options

Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Use crossings quick response	Last run random seed	Last run number of trials	Last run time taken (s)
1.00	100000	100000	-1	3	1	✓	750370410	715	91.20

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	2016 Base	AM	ONE HOUR	07:15	08:45	15	✓
D2	2016 Base	PM	ONE HOUR	16:45	18:15	15	✓
D15	2014 Base	AM	ONE HOUR	07:15	08:45	15	✓
D16	2014 Base	PM	ONE HOUR	16:45	18:15	15	✓
D19	2021 Reference Case	AM	ONE HOUR	07:15	08:45	15	✓
D20	2021 Reference Case	PM	ONE HOUR	16:45	18:15	15	✓
D21	2021 Test Case with 300	AM	ONE HOUR	07:15	08:45	15	✓
D22	2021 Test Case with 300	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	(Default Analysis Set)	✓	✓	100.000	100.000

(Default Analysis Set) - 2016 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	(untitled)	Standard Roundabout	1,2,3	25.57	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A43	
2	M40 off slip northbound	
3	B430	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A43	7.29	7.79	2.9	29.2	71.5	37.0	
2 - M40 off slip northbound	7.14	7.34	0.2	55.0	71.5	36.0	
3 - B430	3.55	8.88	13.6	25.6	71.5	43.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A43	0.588	2285
2 - M40 off slip northbound	0.579	2199
3 - B430	0.496	1731

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

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic Considering Secondary Lanes (%)
1 - A43	Evenly split	10.00
2 - M40 off slip northbound	Evenly split	37.00
3 - B430	Evenly split	10.00

Lanes

Arm	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)
1 - A43	1 [Give-way line]	1	2		Infinity	0	99999
		2	1,3		Infinity	33	99999
2 - M40 off slip northbound	1 [Give-way line]	1	(1),3		Infinity	0	99999
		2	1,2		Infinity	0	99999
3 - B430	1 [Give-way line]	1	1	✓	7.00	0	99999
		2	2,3	✓	7.00	0	99999
	2	2	(1,2,3)		Infinity		

Entry Lane slope and intercept

Arm	Lane level	Lane	Final slope	Final intercept (PCU/hr)
1 - A43	1 [Give-way line]	1	0.294	1143
		2	0.294	1143
2 - M40 off slip northbound	1 [Give-way line]	1	0.290	1100
		2	0.290	1100
3 - B430	1 [Give-way line]	1	0.248	866
		2	0.248	866

Lane Movements

Arm	Lane Level	Lane	Destination arm		
			A43	M40 off slip northbound	B430
1 - A43	1 [Give-way line]	1		✓	
		2	✓		✓
2 - M40 off slip northbound	1 [Give-way line]	1			✓
		2	✓	✓	
3 - B430	1 [Give-way line]	1	✓		
		2		✓	✓
	2	2	✓	✓	✓

Secondary Lane Movements

Arm	Lane Level	Lane	Destination arm		
			A43	M40 off slip northbound	B430
1 - A43	1 [Give-way line]	1			
		2			
2 - M40 off slip northbound	1 [Give-way line]	1	✓		
		2			
3 - B430	1 [Give-way line]	1			
		2			
	2	2			

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	2016 Base	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A43		ONE HOUR	✓	876	100.000
2 - M40 off slip northbound		ONE HOUR	✓	1096	100.000
3 - B430		ONE HOUR	✓	460	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - A43	2 - M40 off slip northbound	3 - B430
From	1 - A43	9	259	608
	2 - M40 off slip northbound	1044	1	51
	3 - B430	216	231	13

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A43	2 - M40 off slip northbound	3 - B430
From	1 - A43	22	11	5
	2 - M40 off slip northbound	14	0	17
	3 - B430	15	4	31

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A43	9.40	2.7	A	804	1206
2 - M40 off slip northbound	41.31	15.0	E	1008	1511
3 - B430	16.33	2.4	C	420	630

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	659	165	182	659	949	0.0	1.1	5.756	A
2 - M40 off slip northbound	818	205	473	820	368	0.0	2.2	9.368	A
3 - B430	342	85	789	342	505	0.0	0.8	8.360	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	782	196	219	783	1141	1.1	1.5	6.842	A
2 - M40 off slip northbound	991	248	563	988	440	2.2	4.1	13.990	B
3 - B430	413	103	949	411	601	0.8	1.3	10.734	B

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	962	241	266	963	1385	1.5	2.7	9.259	A
2 - M40 off slip northbound	1212	303	690	1196	539	4.1	12.8	30.518	D
3 - B430	502	126	1150	501	736	1.3	2.3	15.010	C

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	969	242	269	967	1388	2.7	2.6	9.404	A
2 - M40 off slip northbound	1213	303	697	1202	540	12.8	14.9	41.308	E
3 - B430	504	126	1155	503	744	2.3	2.3	16.327	C

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	793	198	222	791	1148	2.6	1.7	7.251	A
2 - M40 off slip northbound	987	247	570	995	442	14.9	4.4	22.791	C
3 - B430	411	103	957	412	607	2.3	1.3	12.162	B

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	657	164	188	658	953	1.7	1.1	5.906	A
2 - M40 off slip northbound	822	206	475	824	370	4.4	2.2	10.280	B
3 - B430	348	87	792	349	507	1.3	0.8	9.289	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	195	977	0.200	196	0.0	0.2	4.606	A
			2	1,3	464	1037	0.447	463	0.0	0.9	6.240	A
	Exit	1	1		949			949	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	252	832	0.302	252	0.0	0.4	5.557	A
			2	1,2	567	839	0.676	568	0.0	1.8	11.044	B
	Exit	1	1		368			368	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	161	559	0.287	161	0.0	0.4	8.767	A
			2	2,3	181	610	0.296	181	0.0	0.4	7.963	A
		2	2	(1,2,3)	342			342	0.0	0.0	0.020	A
	Exit	1	1		505			505	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	232	963	0.241	232	0.2	0.3	5.014	A
			2	1,3	551	1027	0.536	551	0.9	1.2	7.610	A
	Exit	1	1		1141			1141	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	328	810	0.405	327	0.4	0.7	6.880	A
			2	1,2	664	815	0.814	660	1.8	3.4	17.489	C
	Exit	1	1		440			440	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	193	519	0.372	193	0.4	0.6	11.027	B
			2	2,3	220	569	0.386	218	0.4	0.7	10.322	B
		2	2	(1,2,3)	413			413	0.0	0.0	0.080	A
	Exit	1	1		601			601	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	286	950	0.302	287	0.3	0.4	5.534	A
			2	1,3	676	1011	0.669	676	1.2	2.3	10.831	B
	Exit	1	1		1385			1385	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	453	778	0.583	452	0.7	1.5	10.707	B
			2	1,2	759	778	0.977	744	3.4	11.3	41.901	E
	Exit	1	1		539			539	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	237	471	0.503	236	0.6	1.1	15.045	C
			2	2,3	265	515	0.515	265	0.7	1.1	13.726	B
		2	2	(1,2,3)	502			502	0.0	0.1	0.644	A
	Exit	1	1		736			736	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	285	953	0.300	286	0.4	0.4	5.535	A
			2	1,3	683	1010	0.677	682	2.3	2.2	11.039	B
	Exit	1	1		1388			1388	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	456	774	0.590	455	1.5	1.5	11.278	B
			2	1,2	757	777	0.973	747	11.3	13.3	59.453	F
	Exit	1	1		540			540	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	235	471	0.498	234	1.1	1.1	16.159	C
			2	2,3	268	511	0.526	268	1.1	1.1	14.975	B
		2	2	(1,2,3)	504			503	0.1	0.1	0.796	A
	Exit	1	1		744			744	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	233	968	0.240	232	0.4	0.4	5.040	A
			2	1,3	560	1024	0.547	558	2.2	1.3	8.174	A
	Exit	1	1		1148			1148	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	333	804	0.414	332	1.5	0.7	7.844	A
			2	1,2	655	811	0.807	663	13.3	3.6	30.677	D
	Exit	1	1		442			442	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	191	518	0.369	191	1.1	0.6	12.449	B
			2	2,3	220	565	0.389	221	1.1	0.6	11.533	B
		2	2	(1,2,3)	411			411	0.1	0.0	0.218	A
	Exit	1	1		607			607	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	193	976	0.198	192	0.4	0.3	4.667	A
			2	1,3	465	1035	0.449	465	1.3	0.8	6.422	A
	Exit	1	1		953			953	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	254	834	0.305	255	0.7	0.4	5.801	A
			2	1,2	568	837	0.679	569	3.6	1.7	12.315	B
	Exit	1	1		370			370	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	162	559	0.289	162	0.6	0.4	9.720	A
			2	2,3	186	610	0.305	186	0.6	0.4	8.860	A
		2	2	(1,2,3)	348			348	0.0	0.0	0.041	A
	Exit	1	1		507			507	0.0	0.0	0.000	A

(Default Analysis Set) - 2016 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	(untitled)	Standard Roundabout	1,2,3	20.19	C

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	2016 Base	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 (Veh/hr)	Scaling Factor (%)
1 - A43		ONE HOUR	✓	677	100.000
2 - M40 off slip northbound		ONE HOUR	✓	1149	100.000
3 - B430		ONE HOUR	✓	495	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - A43	2 - M40 off slip northbound	3 - B430
From	1 - A43	10	340	327
	2 - M40 off slip northbound	1100	6	43
	3 - B430	336	158	1

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A43	2 - M40 off slip northbound	3 - B430
From	1 - A43	0	8	1
	2 - M40 off slip northbound	12	17	5
	3 - B430	4	3	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A43	5.44	1.2	A	620	930
2 - M40 off slip northbound	26.82	10.0	D	1055	1582
3 - B430	23.87	3.9	C	454	681

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	502	126	124	502	1088	0.0	0.6	4.456	A
2 - M40 off slip northbound	860	215	251	859	375	0.0	2.1	8.177	A
3 - B430	376	94	835	377	275	0.0	0.9	8.737	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	608	152	149	607	1301	0.6	0.9	4.922	A
2 - M40 off slip northbound	1035	259	302	1035	455	2.1	3.4	11.398	B
3 - B430	447	112	1006	444	330	0.9	1.5	11.847	B

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	738	185	182	737	1579	0.9	1.2	5.397	A
2 - M40 off slip northbound	1264	316	364	1255	555	3.4	8.9	21.696	C
3 - B430	542	135	1218	543	401	1.5	3.8	21.434	C

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	752	188	181	753	1599	1.2	1.1	5.444	A
2 - M40 off slip northbound	1271	318	372	1265	563	8.9	9.9	26.823	D
3 - B430	547	137	1232	548	405	3.8	3.6	23.866	C

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	606	151	149	605	1304	1.1	0.8	4.875	A
2 - M40 off slip northbound	1035	259	301	1037	454	9.9	3.2	14.287	B
3 - B430	444	111	1006	447	331	3.6	1.4	14.807	B

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	515	129	124	514	1085	0.8	0.6	4.497	A
2 - M40 off slip northbound	862	215	258	864	381	3.2	2.0	8.757	A
3 - B430	368	92	840	369	282	1.4	0.9	9.618	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	252	1020	0.247	252	0.0	0.3	4.684	A
			2	1,3	250	1094	0.229	250	0.0	0.3	4.225	A
	Exit	1	1		1088			1088	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	254	920	0.276	255	0.0	0.3	4.941	A
			2	1,2	606	916	0.662	604	0.0	1.7	9.547	A
	Exit	1	1		375			375	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	257	607	0.423	257	0.0	0.7	9.511	A
			2	2,3	120	613	0.195	120	0.0	0.3	6.981	A
		2	2	(1,2,3)	376			377	0.0	0.0	0.041	A
	Exit	1	1		275			275	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	308	1012	0.304	306	0.3	0.5	5.269	A
			2	1,3	301	1086	0.277	301	0.3	0.4	4.569	A
	Exit	1	1		1301			1301	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	334	907	0.369	334	0.3	0.5	5.794	A
			2	1,2	701	898	0.780	700	1.7	2.9	14.035	B
	Exit	1	1		455			455	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	302	561	0.539	300	0.7	1.2	13.153	B
			2	2,3	144	568	0.253	145	0.3	0.3	8.414	A
		2	2	(1,2,3)	447			447	0.0	0.0	0.220	A
	Exit	1	1		330			330	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	375	1006	0.373	374	0.5	0.7	5.788	A
			2	1,3	363	1077	0.337	363	0.4	0.5	5.005	A
	Exit	1	1		1579			1579	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	447	892	0.501	445	0.5	1.1	7.999	A
			2	1,2	817	882	0.927	809	2.9	7.7	29.122	D
	Exit	1	1		555			555	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	369	503	0.734	368	1.2	2.8	22.177	C
			2	2,3	174	512	0.338	175	0.3	0.4	10.344	B
		2	2	(1,2,3)	542			543	0.0	0.6	2.953	A
	Exit	1	1		401			401	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	383	1007	0.380	383	0.7	0.7	5.861	A
			2	1,3	369	1076	0.343	371	0.5	0.5	5.018	A
	Exit	1	1		1599			1599	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	451	890	0.507	452	1.1	1.0	8.160	A
			2	1,2	820	880	0.930	813	7.7	8.9	37.093	E
	Exit	1	1		563			563	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	374	501	0.747	374	2.8	2.6	23.866	C
			2	2,3	175	506	0.346	175	0.4	0.5	11.273	B
		2	2	(1,2,3)	547			550	0.6	0.5	4.052	A
	Exit	1	1		405			405	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	305	1013	0.301	305	0.7	0.4	5.194	A
			2	1,3	301	1087	0.277	300	0.5	0.4	4.552	A
	Exit	1	1		1304			1304	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	332	905	0.367	332	1.0	0.5	6.094	A
			2	1,2	702	902	0.779	705	8.9	2.7	18.245	C
	Exit	1	1		454			454	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	301	561	0.536	304	2.6	1.1	16.524	C
			2	2,3	143	570	0.251	143	0.5	0.3	8.904	A
		2	2	(1,2,3)	444			444	0.5	0.0	0.849	A
	Exit	1	1		331			331	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	257	1021	0.252	257	0.4	0.3	4.705	A
			2	1,3	257	1095	0.235	257	0.4	0.3	4.287	A
	Exit	1	1		1085			1085	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	257	913	0.281	257	0.5	0.4	5.143	A
			2	1,2	605	912	0.663	607	2.7	1.6	10.332	B
	Exit	1	1		381			381	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	248	605	0.411	249	1.1	0.6	10.645	B
			2	2,3	120	615	0.194	120	0.3	0.2	7.351	A
		2	2	(1,2,3)	368			368	0.0	0.0	0.049	A
	Exit	1	1		282			282	0.0	0.0	0.000	A

(Default Analysis Set) - 2014 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	(untitled)	Standard Roundabout	1,2,3	25.63	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D15	2014 Base	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A43		ONE HOUR	✓	858	100.000
2 - M40 off slip northbound		ONE HOUR	✓	1080	100.000
3 - B430		ONE HOUR	✓	420	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - A43	2 - M40 off slip northbound	3 - B430
From	1 - A43	9	259	590
	2 - M40 off slip northbound	1042	1	37
	3 - B430	196	211	13

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A43	2 - M40 off slip northbound	3 - B430
From	1 - A43	22	11	5
	2 - M40 off slip northbound	14	0	22
	3 - B430	16	4	31

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A43	8.77	2.3	A	787	1181
2 - M40 off slip northbound	42.11	14.9	E	991	1487
3 - B430	15.08	2.1	C	387	580

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	648	162	165	648	943	0.0	1.0	5.651	A
2 - M40 off slip northbound	820	205	467	818	345	0.0	2.4	9.387	A
3 - B430	311	78	799	310	486	0.0	0.9	8.249	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	775	194	199	772	1124	1.0	1.6	6.583	A
2 - M40 off slip northbound	972	243	549	971	422	2.4	4.1	14.214	B
3 - B430	379	95	944	378	575	0.9	1.1	10.118	B

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	944	236	253	947	1361	1.6	2.2	8.756	A
2 - M40 off slip northbound	1188	297	682	1181	518	4.1	12.5	31.944	D
3 - B430	466	116	1150	464	713	1.1	1.9	13.898	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	937	234	249	936	1364	2.2	2.3	8.772	A
2 - M40 off slip northbound	1192	298	668	1182	516	12.5	14.6	42.109	E
3 - B430	463	116	1148	464	702	1.9	1.8	15.078	C

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	776	194	200	777	1132	2.3	1.4	6.892	A
2 - M40 off slip northbound	964	241	556	977	421	14.6	3.9	23.062	C
3 - B430	382	96	950	382	582	1.8	1.1	11.375	B

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	647	162	166	651	945	1.4	1.0	5.767	A
2 - M40 off slip northbound	811	203	469	814	348	3.9	2.1	10.040	B
3 - B430	318	79	793	317	490	1.1	0.9	8.847	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	191	980	0.195	190	0.0	0.3	4.671	A
			2	1,3	457	1039	0.439	458	0.0	0.7	6.072	A
	Exit	1	1		943			943	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	247	827	0.298	247	0.0	0.4	5.575	A
			2	1,2	573	837	0.685	571	0.0	2.1	10.999	B
	Exit	1	1		345			345	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	146	548	0.266	146	0.0	0.5	8.758	A
			2	2,3	165	607	0.272	164	0.0	0.4	7.762	A
		2	2	(1,2,3)	311			310	0.0	0.0	0.019	A
	Exit	1	1		486			486	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	235	963	0.244	233	0.3	0.4	4.984	A
			2	1,3	540	1034	0.523	538	0.7	1.2	7.278	A
	Exit	1	1		1124			1124	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	312	810	0.385	312	0.4	0.6	6.828	A
			2	1,2	660	818	0.808	659	2.1	3.5	17.698	C
	Exit	1	1		422			422	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	180	510	0.351	180	0.5	0.5	10.599	B
			2	2,3	199	566	0.352	198	0.4	0.6	9.627	A
		2	2	(1,2,3)	379			379	0.0	0.0	0.030	A
	Exit	1	1		575			575	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	280	959	0.292	280	0.4	0.5	5.542	A
			2	1,3	664	1016	0.653	667	1.2	1.7	10.133	B
	Exit	1	1		1361			1361	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	431	776	0.557	431	0.6	1.3	9.821	A
			2	1,2	756	782	0.970	750	3.5	11.2	44.254	E
	Exit	1	1		518			518	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	215	465	0.463	212	0.5	0.9	13.667	B
			2	2,3	250	511	0.491	252	0.6	1.0	13.389	B
		2	2	(1,2,3)	466			465	0.0	0.1	0.374	A
	Exit	1	1		713			713	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	282	953	0.295	281	0.5	0.5	5.566	A
			2	1,3	655	1016	0.645	655	1.7	1.8	10.160	B
	Exit	1	1		1364			1364	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	441	779	0.565	440	1.3	1.3	10.445	B
			2	1,2	752	782	0.960	742	11.2	13.3	60.415	F
	Exit	1	1		516			516	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	216	461	0.468	217	0.9	0.9	14.971	B
			2	2,3	246	514	0.479	247	1.0	0.9	14.495	B
		2	2	(1,2,3)	463			463	0.1	0.0	0.364	A
	Exit	1	1		702			702	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	232	975	0.238	232	0.5	0.3	4.851	A
			2	1,3	544	1025	0.530	545	1.8	1.1	7.763	A
	Exit	1	1		1132			1132	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	317	807	0.393	318	1.3	0.6	7.598	A
			2	1,2	646	810	0.798	658	13.3	3.3	30.971	D
	Exit	1	1		421			421	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	182	513	0.355	183	0.9	0.5	11.653	B
			2	2,3	200	565	0.354	200	0.9	0.6	10.911	B
		2	2	(1,2,3)	382			382	0.0	0.0	0.122	A
	Exit	1	1		582			582	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	192	981	0.195	192	0.3	0.2	4.605	A
			2	1,3	456	1040	0.438	458	1.1	0.8	6.262	A
	Exit	1	1		945			945	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	239	835	0.287	239	0.6	0.4	5.692	A
			2	1,2	571	840	0.681	575	3.3	1.7	11.934	B
	Exit	1	1		348			348	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	152	555	0.274	152	0.5	0.5	9.185	A
			2	2,3	166	609	0.272	166	0.6	0.4	8.524	A
		2	2	(1,2,3)	318			318	0.0	0.0	0.014	A
	Exit	1	1		490			490	0.0	0.0	0.000	A

(Default Analysis Set) - 2014 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	(untitled)	Standard Roundabout	1,2,3	18.40	C

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
D16	2014 Base	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 (Veh/hr)	Scaling Factor (%)
1 - A43		ONE HOUR	✓	656	100.000
2 - M40 off slip northbound		ONE HOUR	✓	1132	100.000
3 - B430		ONE HOUR	✓	458	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - A43	2 - M40 off slip northbound	3 - B430
From	1 - A43	10	325	321
	2 - M40 off slip northbound	1093	6	33
	3 - B430	317	140	1

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A43	2 - M40 off slip northbound	3 - B430
From	1 - A43	0	8	2
	2 - M40 off slip northbound	12	17	6
	3 - B430	4	3	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A43	5.40	1.1	A	601	902
2 - M40 off slip northbound	24.56	8.9	C	1044	1566
3 - B430	20.63	3.0	C	421	631

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	500	125	108	498	1083	0.0	0.7	4.430	A
2 - M40 off slip northbound	872	218	252	868	354	0.0	2.4	8.183	A
3 - B430	341	85	851	341	269	0.0	0.9	8.467	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	580	145	133	580	1283	0.7	0.7	4.795	A
2 - M40 off slip northbound	1028	257	292	1021	421	2.4	3.8	11.548	B
3 - B430	414	104	1000	416	313	0.9	1.3	11.685	B

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	723	181	162	722	1532	0.7	1.0	5.367	A
2 - M40 off slip northbound	1240	310	366	1223	518	3.8	8.3	19.591	C
3 - B430	500	125	1196	498	394	1.3	2.7	17.864	C

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	711	178	162	714	1562	1.0	0.9	5.399	A
2 - M40 off slip northbound	1245	311	365	1243	511	8.3	8.7	24.560	C
3 - B430	506	126	1219	504	389	2.7	3.0	20.631	C

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	601	150	131	601	1282	0.9	0.7	4.891	A
2 - M40 off slip northbound	1014	253	306	1018	426	8.7	3.0	13.700	B
3 - B430	416	104	1000	413	324	3.0	1.4	13.040	B

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	491	123	109	490	1087	0.7	0.7	4.523	A
2 - M40 off slip northbound	864	216	249	866	351	3.0	2.1	8.616	A
3 - B430	346	87	849	348	266	1.4	0.8	9.421	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	246	1034	0.239	246	0.0	0.3	4.565	A
			2	1,3	253	1094	0.231	252	0.0	0.4	4.296	A
	Exit	1	1		1083			1083	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	258	919	0.281	257	0.0	0.4	4.993	A
			2	1,2	614	911	0.674	611	0.0	2.0	9.514	A
	Exit	1	1		354			354	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	238	604	0.394	237	0.0	0.7	9.256	A
			2	2,3	103	613	0.168	103	0.0	0.2	6.590	A
		2	2	(1,2,3)	341			341	0.0	0.0	0.026	A
	Exit	1	1		269			269	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	289	1014	0.285	289	0.3	0.4	5.124	A
			2	1,3	291	1084	0.269	292	0.4	0.3	4.474	A
	Exit	1	1		1283			1283	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	326	907	0.359	326	0.4	0.5	5.787	A
			2	1,2	702	901	0.780	696	2.0	3.3	14.191	B
	Exit	1	1		421			421	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	287	562	0.512	288	0.7	1.0	12.856	B
			2	2,3	127	573	0.221	128	0.2	0.2	8.091	A
		2	2	(1,2,3)	414			414	0.0	0.0	0.265	A
	Exit	1	1		313			313	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	357	1012	0.353	357	0.4	0.6	5.722	A
			2	1,3	365	1075	0.340	365	0.3	0.5	5.020	A
	Exit	1	1		1532			1532	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	427	887	0.481	425	0.5	1.0	7.513	A
			2	1,2	813	882	0.922	798	3.3	7.3	25.863	D
	Exit	1	1		518			518	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	343	509	0.674	342	1.0	2.1	19.372	C
			2	2,3	155	517	0.301	156	0.2	0.4	9.675	A
		2	2	(1,2,3)	500			499	0.0	0.3	1.434	A
	Exit	1	1		394			394	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	349	1008	0.346	350	0.6	0.5	5.725	A
			2	1,3	362	1078	0.336	364	0.5	0.5	5.080	A
	Exit	1	1		1562			1562	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	430	889	0.484	431	1.0	0.9	7.646	A
			2	1,2	814	887	0.921	812	7.3	7.7	33.599	D
	Exit	1	1		511			511	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	348	504	0.689	349	2.1	2.0	21.606	C
			2	2,3	156	511	0.304	156	0.4	0.4	10.741	B
		2	2	(1,2,3)	506			503	0.3	0.5	2.372	A
	Exit	1	1		389			389	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	296	1018	0.290	297	0.5	0.3	5.142	A
			2	1,3	305	1084	0.282	305	0.5	0.4	4.646	A
	Exit	1	1		1282			1282	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	321	898	0.358	320	0.9	0.6	5.979	A
			2	1,2	692	896	0.773	697	7.7	2.4	17.363	C
	Exit	1	1		426			426	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	290	562	0.517	288	2.0	1.2	14.447	B
			2	2,3	126	568	0.222	125	0.4	0.3	8.566	A
		2	2	(1,2,3)	416			416	0.5	0.0	0.494	A
	Exit	1	1		324			324	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	243	1020	0.239	242	0.3	0.4	4.806	A
			2	1,3	248	1090	0.227	248	0.4	0.3	4.242	A
	Exit	1	1		1087			1087	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	257	914	0.281	257	0.6	0.4	5.071	A
			2	1,2	607	917	0.661	609	2.4	1.7	10.105	B
	Exit	1	1		351			351	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	241	601	0.402	243	1.2	0.6	10.347	B
			2	2,3	105	610	0.172	105	0.3	0.2	7.250	A
		2	2	(1,2,3)	346			346	0.0	0.0	0.028	A
	Exit	1	1		266			266	0.0	0.0	0.000	A

(Default Analysis Set) - 2021 Reference Case, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	(untitled)	Standard Roundabout	1,2,3	31.83	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D19	2021 Reference Case	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A43		ONE HOUR	✓	929	100.000
2 - M40 off slip northbound		ONE HOUR	✓	1148	100.000
3 - B430		ONE HOUR	✓	556	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - A43	2 - M40 off slip northbound	3 - B430
From	1 - A43	9	266	654
	2 - M40 off slip northbound	1071	1	76
	3 - B430	265	278	13

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A43	2 - M40 off slip northbound	3 - B430
From	1 - A43	22	11	4
	2 - M40 off slip northbound	14	0	13
	3 - B430	13	3	31

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A43	11.27	3.3	B	855	1283
2 - M40 off slip northbound	52.12	19.0	F	1049	1574
3 - B430	21.69	4.0	C	511	767

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	699	175	219	698	1022	0.0	1.1	6.161	A
2 - M40 off slip northbound	871	218	510	871	408	0.0	2.5	9.680	A
3 - B430	421	105	821	420	560	0.0	1.3	9.006	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	839	210	264	843	1206	1.1	1.5	7.697	A
2 - M40 off slip northbound	1029	257	609	1027	498	2.5	4.9	15.964	C
3 - B430	501	125	966	504	670	1.3	1.6	12.437	B

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	1032	258	318	1031	1448	1.5	3.3	11.239	B
2 - M40 off slip northbound	1249	312	752	1229	597	4.9	14.8	35.358	E
3 - B430	611	153	1158	608	824	1.6	3.7	20.004	C

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	1024	256	316	1024	1473	3.3	3.2	11.272	B
2 - M40 off slip northbound	1249	312	745	1249	595	14.8	18.8	52.119	F
3 - B430	616	154	1177	612	816	3.7	4.0	21.689	C

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	842	211	261	843	1235	3.2	1.7	7.896	A
2 - M40 off slip northbound	1030	258	615	1055	489	18.8	5.4	30.193	D
3 - B430	502	126	995	502	676	4.0	1.8	14.818	B

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	695	174	217	697	1018	1.7	1.1	6.504	A
2 - M40 off slip northbound	867	217	508	873	407	5.4	2.4	11.439	B
3 - B430	417	104	820	415	561	1.8	1.3	10.047	B

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	198	961	0.206	198	0.0	0.2	4.707	A
			2	1,3	501	1030	0.486	500	0.0	0.9	6.749	A
	Exit	1	1		1022			1022	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	278	832	0.334	279	0.0	0.4	5.609	A
			2	1,2	593	827	0.716	592	0.0	2.1	11.603	B
	Exit	1	1		408			408	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	201	563	0.359	201	0.0	0.6	9.410	A
			2	2,3	220	610	0.360	219	0.0	0.6	8.511	A
		2	2	(1,2,3)	421			421	0.0	0.0	0.063	A
	Exit	1	1		560			560	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	245	955	0.257	246	0.2	0.3	5.147	A
			2	1,3	594	1020	0.582	598	0.9	1.2	8.727	A
	Exit	1	1		1206			1206	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	362	805	0.450	362	0.4	0.8	7.562	A
			2	1,2	667	798	0.836	665	2.1	4.1	20.441	C
	Exit	1	1		498			498	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	238	521	0.456	241	0.6	0.8	12.509	B
			2	2,3	263	568	0.463	263	0.6	0.9	11.915	B
		2	2	(1,2,3)	501			501	0.0	0.0	0.236	A
	Exit	1	1		670			670	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	294	941	0.312	293	0.3	0.5	5.714	A
			2	1,3	738	1003	0.735	737	1.2	2.9	13.436	B
	Exit	1	1		1448			1448	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	482	765	0.630	483	0.8	1.6	12.352	B
			2	1,2	768	762	1.006	747	4.1	13.1	49.597	E
	Exit	1	1		597			597	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	293	476	0.614	292	0.8	1.5	17.867	C
			2	2,3	315	516	0.611	317	0.9	1.6	17.471	C
		2	2	(1,2,3)	611			608	0.0	0.6	2.289	A
	Exit	1	1		824			824	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	292	939	0.311	291	0.5	0.5	5.837	A
			2	1,3	732	1004	0.730	732	2.9	2.6	13.478	B
	Exit	1	1		1473			1473	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	497	766	0.649	493	1.6	2.0	13.410	B
			2	1,2	752	767	0.981	756	13.1	16.8	77.223	F
	Exit	1	1		595			595	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	296	471	0.627	297	1.5	1.6	19.465	C
			2	2,3	319	512	0.623	315	1.6	1.9	18.455	C
		2	2	(1,2,3)	616			615	0.6	0.5	2.761	A
	Exit	1	1		816			816	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	239	959	0.250	240	0.5	0.3	5.178	A
			2	1,3	603	1019	0.592	603	2.6	1.4	8.979	A
	Exit	1	1		1235			1235	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	367	802	0.458	368	2.0	0.8	8.724	A
			2	1,2	663	797	0.833	687	16.8	4.6	42.639	E
	Exit	1	1		489			489	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	240	513	0.468	242	1.6	0.8	14.739	B
			2	2,3	262	560	0.467	261	1.9	0.9	13.553	B
		2	2	(1,2,3)	502			502	0.5	0.0	0.774	A
	Exit	1	1		676			676	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	198	967	0.204	199	0.3	0.2	4.976	A
			2	1,3	497	1031	0.482	499	1.4	0.9	7.115	A
	Exit	1	1		1018			1018	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	284	827	0.344	285	0.8	0.5	6.189	A
			2	1,2	583	826	0.706	589	4.6	1.9	14.030	B
	Exit	1	1		407			407	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	199	561	0.356	199	0.8	0.6	10.653	B
			2	2,3	218	605	0.360	216	0.9	0.6	9.374	A
		2	2	(1,2,3)	417			417	0.0	0.0	0.065	A
	Exit	1	1		561			561	0.0	0.0	0.000	A

(Default Analysis Set) - 2021 Reference Case, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	(untitled)	Standard Roundabout	1,2,3	21.33	C

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
D20	2021 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 (Veh/hr)	Scaling Factor (%)
1 - A43		ONE HOUR	✓	731	100.000
2 - M40 off slip northbound		ONE HOUR	✓	1196	100.000
3 - B430		ONE HOUR	✓	571	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - A43	2 - M40 off slip northbound	3 - B430
From	1 - A43	10	335	386
	2 - M40 off slip northbound	1126	6	64
	3 - B430	376	194	1

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A43	2 - M40 off slip northbound	3 - B430
From	1 - A43	0	8	1
	2 - M40 off slip northbound	8	17	3
	3 - B430	4	2	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A43	5.82	1.4	A	670	1005
2 - M40 off slip northbound	24.67	10.0	C	1100	1650
3 - B430	33.97	6.1	D	527	790

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	548	137	148	547	1134	0.0	0.7	4.622	A
2 - M40 off slip northbound	897	224	299	896	396	0.0	2.2	7.958	A
3 - B430	422	106	859	422	336	0.0	1.1	9.302	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	659	165	182	659	1375	0.7	1.0	5.102	A
2 - M40 off slip northbound	1085	271	359	1085	481	2.2	3.4	11.226	B
3 - B430	522	131	1036	521	408	1.1	2.2	13.685	B

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	808	202	220	807	1661	1.0	1.4	5.788	A
2 - M40 off slip northbound	1321	330	436	1315	591	3.4	8.8	21.103	C
3 - B430	635	159	1256	626	496	2.2	5.6	26.616	D

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	809	202	228	808	1651	1.4	1.4	5.819	A
2 - M40 off slip northbound	1317	329	440	1303	596	8.8	9.9	24.670	C
3 - B430	638	160	1243	636	499	5.6	6.1	33.973	D

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	648	162	183	649	1363	1.4	0.9	5.076	A
2 - M40 off slip northbound	1076	269	349	1079	484	9.9	3.3	13.809	B
3 - B430	516	129	1030	516	398	6.1	2.1	17.650	C

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	550	138	148	550	1146	0.9	0.7	4.657	A
2 - M40 off slip northbound	905	226	297	906	401	3.3	2.0	8.326	A
3 - B430	428	107	866	427	336	2.1	1.3	10.587	B

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	250	1010	0.247	249	0.0	0.4	4.749	A
			2	1,3	298	1086	0.274	298	0.0	0.4	4.516	A
	Exit	1	1		1134			1134	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	275	948	0.290	275	0.0	0.4	4.880	A
			2	1,2	622	939	0.662	621	0.0	1.8	9.334	A
	Exit	1	1		396			396	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	280	610	0.460	280	0.0	0.9	10.281	B
			2	2,3	142	625	0.226	142	0.0	0.3	7.082	A
		2	2	(1,2,3)	422			422	0.0	0.0	0.099	A
	Exit	1	1		336			336	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	300	1007	0.298	300	0.4	0.4	5.172	A
			2	1,3	359	1078	0.333	359	0.4	0.6	5.044	A
	Exit	1	1		1375			1375	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	360	930	0.388	359	0.4	0.7	5.918	A
			2	1,2	725	921	0.788	726	1.8	2.8	13.836	B
	Exit	1	1		481			481	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	347	564	0.614	346	0.9	1.6	15.341	C
			2	2,3	176	578	0.305	176	0.3	0.5	8.962	A
		2	2	(1,2,3)	522			523	0.0	0.1	0.496	A
	Exit	1	1		408			408	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	372	996	0.374	372	0.4	0.7	5.841	A
			2	1,3	436	1067	0.409	435	0.6	0.8	5.743	A
	Exit	1	1		1661			1661	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	484	909	0.533	484	0.7	1.1	7.890	A
			2	1,2	836	897	0.932	831	2.8	7.7	28.568	D
	Exit	1	1		591			591	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	414	507	0.815	412	1.6	3.1	24.928	C
			2	2,3	213	518	0.412	214	0.5	0.7	11.920	B
		2	2	(1,2,3)	635			627	0.1	1.8	5.928	A
	Exit	1	1		496			496	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	370	992	0.373	369	0.7	0.7	5.871	A
			2	1,3	438	1064	0.412	439	0.8	0.7	5.776	A
	Exit	1	1		1651			1651	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	479	905	0.529	478	1.1	1.2	8.281	A
			2	1,2	839	896	0.936	825	7.7	8.7	34.119	D
	Exit	1	1		596			596	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	416	510	0.815	416	3.1	3.3	28.718	D
			2	2,3	222	522	0.427	221	0.7	0.9	13.010	B
		2	2	(1,2,3)	638			638	1.8	1.9	10.677	B
	Exit	1	1		499			499	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	300	1003	0.299	301	0.7	0.4	5.270	A
			2	1,3	348	1078	0.322	348	0.7	0.5	4.910	A
	Exit	1	1		1363			1363	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	354	927	0.382	355	1.2	0.6	6.225	A
			2	1,2	722	926	0.779	724	8.7	2.7	17.679	C
	Exit	1	1		484			484	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	339	565	0.599	338	3.3	1.6	18.416	C
			2	2,3	177	578	0.306	178	0.9	0.4	9.721	A
		2	2	(1,2,3)	516			516	1.9	0.1	2.530	A
	Exit	1	1		398			398	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	254	1014	0.251	254	0.4	0.3	4.894	A
			2	1,3	296	1087	0.273	296	0.5	0.4	4.454	A
	Exit	1	1		1146			1146	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	278	948	0.293	278	0.6	0.3	4.936	A
			2	1,2	627	937	0.669	628	2.7	1.7	9.862	A
	Exit	1	1		401			401	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	284	608	0.467	284	1.6	1.0	11.930	B
			2	2,3	144	623	0.231	144	0.4	0.3	7.598	A
		2	2	(1,2,3)	428			428	0.1	0.0	0.153	A
	Exit	1	1		336			336	0.0	0.0	0.000	A

(Default Analysis Set) - 2021 Test Case with 300, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	(untitled)	Standard Roundabout	1,2,3	33.88	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D21	2021 Test Case with 300	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A43		ONE HOUR	✓	939	100.000
2 - M40 off slip northbound		ONE HOUR	✓	1154	100.000
3 - B430		ONE HOUR	✓	609	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - A43	2 - M40 off slip northbound	3 - B430
From	1 - A43	9	266	664
	2 - M40 off slip northbound	1071	1	82
	3 - B430	292	304	13

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A43	2 - M40 off slip northbound	3 - B430
From	1 - A43	22	11	4
	2 - M40 off slip northbound	14	0	12
	3 - B430	11	3	31

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A43	12.06	3.6	B	861	1292
2 - M40 off slip northbound	54.16	20.6	F	1058	1587
3 - B430	26.37	4.7	D	561	841

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	708	177	243	710	1033	0.0	1.2	6.399	A
2 - M40 off slip northbound	866	217	523	867	431	0.0	2.4	9.535	A
3 - B430	465	116	811	465	578	0.0	1.4	9.598	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	839	210	288	838	1232	1.2	1.9	7.761	A
2 - M40 off slip northbound	1032	258	618	1036	508	2.4	4.7	15.813	C
3 - B430	548	137	971	550	683	1.4	2.2	13.548	B

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	1032	258	351	1031	1482	1.9	3.4	11.436	B
2 - M40 off slip northbound	1276	319	757	1250	625	4.7	16.3	35.702	E
3 - B430	668	167	1165	668	841	2.2	4.4	22.242	C

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	1036	259	354	1034	1493	3.4	3.6	12.056	B
2 - M40 off slip northbound	1260	315	752	1250	635	16.3	20.5	54.161	F
3 - B430	672	168	1170	677	832	4.4	4.7	26.368	D

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	840	210	287	836	1253	3.6	2.1	8.203	A
2 - M40 off slip northbound	1038	260	614	1056	508	20.5	5.9	31.167	D
3 - B430	548	137	990	550	680	4.7	2.0	16.211	C

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	714	178	242	712	1044	2.1	1.3	6.548	A
2 - M40 off slip northbound	875	219	519	876	436	5.9	2.5	11.802	B
3 - B430	464	116	823	463	572	2.0	1.5	10.554	B

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	198	958	0.207	198	0.0	0.3	4.746	A
			2	1,3	509	1024	0.497	513	0.0	0.9	7.052	A
	Exit	1	1		1033			1033	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	280	828	0.338	281	0.0	0.5	5.903	A
			2	1,2	586	826	0.710	586	0.0	1.9	11.270	B
	Exit	1	1		431			431	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	223	572	0.390	222	0.0	0.6	9.891	A
			2	2,3	243	611	0.397	243	0.0	0.7	9.155	A
		2	2	(1,2,3)	465			465	0.0	0.0	0.090	A
	Exit	1	1		578			578	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	232	958	0.242	231	0.3	0.4	5.065	A
			2	1,3	608	1014	0.600	606	0.9	1.5	8.828	A
	Exit	1	1		1232			1232	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	368	802	0.459	367	0.5	0.9	7.546	A
			2	1,2	664	798	0.832	669	1.9	3.8	20.280	C
	Exit	1	1		508			508	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	262	533	0.491	262	0.6	1.0	13.304	B
			2	2,3	286	567	0.504	287	0.7	1.0	12.668	B
		2	2	(1,2,3)	548			548	0.0	0.1	0.549	A
	Exit	1	1		683			683	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	289	931	0.311	289	0.4	0.5	5.727	A
			2	1,3	742	994	0.747	742	1.5	2.9	13.700	B
	Exit	1	1		1482			1482	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	504	759	0.663	504	0.9	2.0	12.562	B
			2	1,2	773	762	1.013	746	3.8	14.3	50.270	F
	Exit	1	1		625			625	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	319	482	0.662	318	1.0	1.8	18.987	C
			2	2,3	350	513	0.681	350	1.0	1.9	18.796	C
		2	2	(1,2,3)	668			669	0.1	0.8	3.297	A
	Exit	1	1		841			841	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	295	932	0.317	295	0.5	0.4	5.788	A
			2	1,3	741	993	0.745	739	2.9	3.2	14.573	B
	Exit	1	1		1493			1493	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	502	765	0.657	502	2.0	2.1	14.110	B
			2	1,2	758	765	0.989	748	14.3	18.4	80.734	F
	Exit	1	1		635			635	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	326	484	0.673	324	1.8	2.0	21.710	C
			2	2,3	350	514	0.681	353	1.9	1.9	21.058	C
		2	2	(1,2,3)	672			676	0.8	0.8	4.993	A
	Exit	1	1		832			832	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	234	949	0.247	234	0.4	0.3	5.235	A
			2	1,3	606	1014	0.598	603	3.2	1.7	9.355	A
	Exit	1	1		1253			1253	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	370	802	0.461	371	2.1	0.8	9.336	A
			2	1,2	668	801	0.835	684	18.4	5.1	44.092	E
	Exit	1	1		508			508	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	264	525	0.502	264	2.0	1.0	15.523	C
			2	2,3	284	562	0.505	286	1.9	1.0	14.820	B
		2	2	(1,2,3)	548			548	0.8	0.1	1.165	A
	Exit	1	1		680			680	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	202	966	0.209	203	0.3	0.3	4.908	A
			2	1,3	512	1025	0.499	509	1.7	1.1	7.201	A
	Exit	1	1		1044			1044	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	288	832	0.346	288	0.8	0.4	6.341	A
			2	1,2	587	825	0.711	588	5.1	2.0	14.531	B
	Exit	1	1		436			436	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	222	568	0.390	221	1.0	0.7	10.700	B
			2	2,3	243	610	0.398	242	1.0	0.7	10.138	B
		2	2	(1,2,3)	464			464	0.1	0.0	0.160	A
	Exit	1	1		572			572	0.0	0.0	0.000	A

(Default Analysis Set) - 2021 Test Case with 300, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	(untitled)	Standard Roundabout	1,2,3	28.36	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D22	2021 Test Case with 300	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 (Veh/hr)	Scaling Factor (%)
1 - A43		ONE HOUR	✓	755	100.000
2 - M40 off slip northbound		ONE HOUR	✓	1209	100.000
3 - B430		ONE HOUR	✓	596	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - A43	2 - M40 off slip northbound	3 - B430
From	1 - A43	10	335	410
	2 - M40 off slip northbound	1126	6	77
	3 - B430	389	206	1

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A43	2 - M40 off slip northbound	3 - B430
From	1 - A43	0	8	1
	2 - M40 off slip northbound	12	17	3
	3 - B430	4	2	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A43	6.05	1.5	A	693	1040
2 - M40 off slip northbound	34.28	13.3	D	1113	1669
3 - B430	43.97	8.6	E	546	819

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	568	142	159	570	1158	0.0	0.7	4.759	A
2 - M40 off slip northbound	918	229	318	917	411	0.0	2.3	8.668	A
3 - B430	448	112	866	450	368	0.0	1.2	9.574	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	678	169	188	680	1377	0.7	0.9	5.131	A
2 - M40 off slip northbound	1079	270	381	1086	487	2.3	3.6	13.078	B
3 - B430	537	134	1027	538	440	1.2	2.2	14.682	B

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	830	208	232	830	1671	0.9	1.3	5.965	A
2 - M40 off slip northbound	1337	334	464	1330	598	3.6	11.4	25.969	D
3 - B430	656	164	1255	648	539	2.2	7.4	31.951	D

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	833	208	233	833	1672	1.3	1.4	6.051	A
2 - M40 off slip northbound	1331	333	464	1332	601	11.4	13.1	34.279	D
3 - B430	655	164	1257	647	539	7.4	8.5	43.965	E

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	678	169	193	680	1379	1.4	0.9	5.191	A
2 - M40 off slip northbound	1096	274	379	1100	495	13.1	4.0	18.303	C
3 - B430	532	133	1041	532	438	8.5	2.3	22.602	C

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	573	143	159	573	1154	0.9	0.8	4.796	A
2 - M40 off slip northbound	919	230	318	920	414	4.0	2.3	9.617	A
3 - B430	445	111	868	445	370	2.3	1.3	11.063	B

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	251	1014	0.248	253	0.0	0.3	4.823	A
			2	1,3	317	1084	0.292	317	0.0	0.4	4.707	A
	Exit	1	1		1158			1158	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	294	915	0.321	294	0.0	0.4	5.230	A
			2	1,2	623	896	0.694	622	0.0	1.9	10.266	B
	Exit	1	1		411			411	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	293	602	0.486	296	0.0	0.9	10.709	B
			2	2,3	155	614	0.253	155	0.0	0.4	7.182	A
		2	2	(1,2,3)	448			448	0.0	0.0	0.089	A
	Exit	1	1		368			368	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	300	1003	0.299	300	0.3	0.4	5.235	A
			2	1,3	378	1077	0.351	380	0.4	0.4	5.048	A
	Exit	1	1		1377			1377	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	373	896	0.416	373	0.4	0.6	6.498	A
			2	1,2	707	885	0.798	713	1.9	2.9	16.497	C
	Exit	1	1		487			487	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	353	559	0.632	355	0.9	1.6	16.350	C
			2	2,3	183	571	0.321	183	0.4	0.5	9.341	A
		2	2	(1,2,3)	537			537	0.0	0.2	0.735	A
	Exit	1	1		440			440	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	368	990	0.371	368	0.4	0.6	5.955	A
			2	1,3	463	1063	0.435	462	0.4	0.8	5.973	A
	Exit	1	1		1671			1671	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	507	872	0.582	507	0.6	1.4	9.444	A
			2	1,2	829	862	0.961	822	2.9	9.9	35.828	E
	Exit	1	1		598			598	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	424	498	0.852	422	1.6	3.8	27.661	D
			2	2,3	226	507	0.445	226	0.5	0.9	12.793	B
		2	2	(1,2,3)	656			650	0.2	2.7	9.165	A
	Exit	1	1		539			539	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	369	986	0.374	369	0.6	0.6	5.961	A
			2	1,3	463	1062	0.436	463	0.8	0.8	6.124	A
	Exit	1	1		1672			1672	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	511	873	0.585	511	1.4	1.5	9.911	A
			2	1,2	820	861	0.952	821	9.9	11.6	49.287	E
	Exit	1	1		601			601	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	420	496	0.846	421	3.8	3.8	32.521	D
			2	2,3	227	506	0.448	226	0.9	0.9	14.592	B
		2	2	(1,2,3)	655			647	2.7	3.8	17.672	C
	Exit	1	1		539			539	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	301	1001	0.301	302	0.6	0.4	5.218	A
			2	1,3	377	1073	0.351	378	0.8	0.5	5.170	A
	Exit	1	1		1379			1379	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	375	896	0.419	377	1.5	0.6	6.967	A
			2	1,2	721	884	0.815	724	11.6	3.4	24.452	C
	Exit	1	1		495			495	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	346	553	0.625	344	3.8	1.6	21.280	C
			2	2,3	188	566	0.333	188	0.9	0.6	10.539	B
		2	2	(1,2,3)	532			534	3.8	0.1	5.589	A
	Exit	1	1		438			438	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	256	1011	0.252	256	0.4	0.4	4.849	A
			2	1,3	317	1084	0.293	317	0.5	0.4	4.754	A
	Exit	1	1		1154			1154	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	(1),3	292	915	0.319	292	0.6	0.5	5.596	A
			2	1,2	627	898	0.698	627	3.4	1.9	11.544	B
	Exit	1	1		414			414	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	290	603	0.482	290	1.6	0.9	12.352	B
			2	2,3	154	614	0.252	154	0.6	0.4	8.126	A
		2	2	(1,2,3)	445			445	0.1	0.0	0.217	A
	Exit	1	1		370			370	0.0	0.0	0.000	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []

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

Filename: M40 roundabout base_ELS MITIGATION.j9
Path: J:\33374 Heyford Park 400 dwelling application\Technical\Transport\Junction Assessments\ARCADY\2016 App
Report generation date: 31/10/2016 16:38:15

»(Default Analysis Set) - 2021 Test Case with 300, AM
»(Default Analysis Set) - 2021 Test Case with 300, PM

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
	A1 [Lane Simulation] - 2021 Test Case with 300							
1 - A43	3.4	11.48		B	1.4	5.97		A
2 - M40 off slip northbound	6.4	17.06		C	4.5	11.54		B
3 - B430	5.3	26.27		D	3.4	16.64		C

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. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	M40 slip lane junction
Location	Heyford
Site number	
Date	02/06/2015
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	33374
Enumerator	nkataria
Description	

Units

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

Analysis Options

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

Lane Simulation options

Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Use crossings quick response	Last run random seed	Last run number of trials	Last run time taken (s)
1.00	100000	100000	-1	3	1	✓	647301523	318	49.75

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
D21	2021 Test Case with 300	AM	ONE HOUR	07:15	08:45	15	✓
D22	2021 Test Case with 300	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	(Default Analysis Set)	✓	✓	100.000	100.000

(Default Analysis Set) - 2021 Test Case with 300, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	(untitled)	Standard Roundabout	1,2,3	17.23	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A43	
2	M40 off slip northbound	
3	B430	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A43	7.29	7.79	2.9	29.2	71.5	37.0	
2 - M40 off slip northbound	7.14	7.34	0.2	55.0	71.5	36.0	
3 - B430	3.55	8.88	13.6	25.6	71.5	43.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A43	0.588	2285
2 - M40 off slip northbound	0.579	2199
3 - B430	0.496	1731

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

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic Considering Secondary Lanes (%)
1 - A43	Evenly split	10.00
2 - M40 off slip northbound	Evenly split	10.00
3 - B430	Evenly split	10.00

Lanes

Arm	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)
1 - A43	1 [Give-way line]	1	2		Infinity	0	99999
		2	1,3		Infinity	33	99999
2 - M40 off slip northbound	1 [Give-way line]	1	1,3		Infinity	0	99999
		2	1,2		Infinity	0	99999
3 - B430	1 [Give-way line]	1	1	✓	7.00	0	99999
		2	1,2,3	✓	7.00	0	99999
	2	2	(1,2,3)		Infinity		

Entry Lane slope and intercept

Arm	Lane level	Lane	Final slope	Final intercept (PCU/hr)
1 - A43	1 [Give-way line]	1	0.294	1143
		2	0.294	1143
2 - M40 off slip northbound	1 [Give-way line]	1	0.290	1100
		2	0.290	1100
3 - B430	1 [Give-way line]	1	0.248	866
		2	0.248	866

Lane Movements

Arm	Lane Level	Lane	Destination arm		
			A43	M40 off slip northbound	B430
1 - A43	1 [Give-way line]	1		✓	
		2	✓		✓
2 - M40 off slip northbound	1 [Give-way line]	1	✓		✓
		2	✓	✓	
3 - B430	1 [Give-way line]	1	✓		
		2	✓	✓	✓
	2	2	✓	✓	✓

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
D21	2021 Test Case with 300	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A43		ONE HOUR	✓	939	100.000
2 - M40 off slip northbound		ONE HOUR	✓	1154	100.000
3 - B430		ONE HOUR	✓	609	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - A43	2 - M40 off slip northbound	3 - B430
From	1 - A43	9	266	664
	2 - M40 off slip northbound	1071	1	82
	3 - B430	292	304	13

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A43	2 - M40 off slip northbound	3 - B430
From	1 - A43	22	11	4
	2 - M40 off slip northbound	14	0	12
	3 - B430	11	3	31

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A43	11.48	3.4	B	857	1285
2 - M40 off slip northbound	17.06	6.4	C	1056	1584
3 - B430	26.27	5.3	D	559	838

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	692	173	239	693	1036	0.0	1.2	6.253	A
2 - M40 off slip northbound	870	217	501	872	431	0.0	1.5	6.351	A
3 - B430	458	114	816	459	557	0.0	1.2	9.095	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	834	209	284	834	1228	1.2	1.9	7.886	A
2 - M40 off slip northbound	1027	257	610	1030	509	1.5	2.4	8.421	A
3 - B430	548	137	964	547	675	1.2	2.1	12.527	B

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	1024	256	341	1024	1496	1.9	3.3	11.479	B
2 - M40 off slip northbound	1259	315	750	1257	615	2.4	6.0	15.715	C
3 - B430	667	167	1181	656	826	2.1	5.2	22.216	C

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	1028	257	350	1028	1503	3.3	3.4	11.416	B
2 - M40 off slip northbound	1267	317	750	1262	628	6.0	6.3	17.065	C
3 - B430	670	168	1183	670	829	5.2	4.9	26.271	D

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	847	212	292	847	1235	3.4	1.9	8.283	A
2 - M40 off slip northbound	1039	260	619	1039	520	6.3	2.4	9.737	A
3 - B430	550	137	975	552	683	4.9	1.8	15.630	C

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	712	178	240	712	1036	1.9	1.3	6.649	A
2 - M40 off slip northbound	874	218	518	873	435	2.4	1.6	6.857	A
3 - B430	460	115	817	459	573	1.8	1.2	9.941	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	203	957	0.212	202	0.0	0.3	4.860	A
			2	1,3	489	1024	0.478	490	0.0	0.9	6.822	A
	Exit	1	1		1036			1036	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	1,3	450	833	0.541	450	0.0	0.9	6.489	A
			2	1,2	420	827	0.508	422	0.0	0.7	6.205	A
	Exit	1	1		431			431	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	145	567	0.256	145	0.0	0.3	7.119	A
			2	1,2,3	313	598	0.522	314	0.0	1.0	9.935	A
		2	2	(1,2,3)	458			458	0.0	0.0	0.042	A
	Exit	1	1		557			557	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	237	949	0.249	236	0.3	0.4	5.138	A
			2	1,3	598	1013	0.590	598	0.9	1.6	8.960	A
	Exit	1	1		1228			1228	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	1,3	525	804	0.653	526	0.9	1.3	8.568	A
			2	1,2	503	805	0.624	503	0.7	1.2	8.267	A
	Exit	1	1		509			509	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	184	536	0.342	184	0.3	0.5	9.012	A
			2	1,2,3	364	559	0.652	363	1.0	1.5	13.940	B
		2	2	(1,2,3)	548			548	0.0	0.1	0.212	A
	Exit	1	1		675			675	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	289	934	0.309	289	0.4	0.5	5.681	A
			2	1,3	736	996	0.739	735	1.6	2.9	13.736	B
	Exit	1	1		1496			1496	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	1,3	639	765	0.835	639	1.3	3.1	15.921	C
			2	1,2	619	761	0.813	618	1.2	2.9	15.504	C
	Exit	1	1		615			615	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	246	479	0.515	247	0.5	1.0	12.914	B
			2	1,2,3	412	504	0.816	409	1.5	3.0	22.259	C
		2	2	(1,2,3)	667			658	0.1	1.3	3.279	A
	Exit	1	1		826			826	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	292	932	0.313	291	0.5	0.5	5.729	A
			2	1,3	736	993	0.742	736	2.9	2.9	13.686	B
	Exit	1	1		1503			1503	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	1,3	644	768	0.840	643	3.1	3.2	17.209	C
			2	1,2	622	764	0.814	619	2.9	3.1	16.916	C
	Exit	1	1		628			628	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	252	476	0.528	251	1.0	1.0	14.887	B
			2	1,2,3	419	504	0.832	418	3.0	3.1	25.506	D
		2	2	(1,2,3)	670			671	1.3	0.8	4.769	A
	Exit	1	1		829			829	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	240	950	0.253	241	0.5	0.3	5.106	A
			2	1,3	607	1014	0.599	607	2.9	1.5	9.539	A
	Exit	1	1		1235			1235	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	1,3	531	799	0.666	532	3.2	1.2	9.850	A
			2	1,2	508	799	0.637	507	3.1	1.3	9.620	A
	Exit	1	1		520			520	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	185	527	0.351	186	1.0	0.4	10.379	B
			2	1,2,3	365	557	0.655	367	3.1	1.3	16.621	C
		2	2	(1,2,3)	550			550	0.8	0.1	1.244	A
	Exit	1	1		683			683	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	205	958	0.215	205	0.3	0.3	4.872	A
			2	1,3	507	1027	0.494	508	1.5	1.0	7.356	A
	Exit	1	1		1036			1036	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	1,3	449	827	0.543	449	1.2	0.8	6.950	A
			2	1,2	425	823	0.517	424	1.3	0.8	6.758	A
	Exit	1	1		435			435	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	145	570	0.254	145	0.4	0.3	7.565	A
			2	1,2,3	315	601	0.523	314	1.3	0.9	10.906	B
		2	2	(1,2,3)	460			460	0.1	0.0	0.113	A
	Exit	1	1		573			573	0.0	0.0	0.000	A

(Default Analysis Set) - 2021 Test Case with 300, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	(untitled)	Standard Roundabout	1,2,3	11.07	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D22	2021 Test Case with 300	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 (Veh/hr)	Scaling Factor (%)
1 - A43		ONE HOUR	✓	755	100.000
2 - M40 off slip northbound		ONE HOUR	✓	1209	100.000
3 - B430		ONE HOUR	✓	596	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - A43	2 - M40 off slip northbound	3 - B430
From	1 - A43	10	335	410
	2 - M40 off slip northbound	1126	6	77
	3 - B430	389	206	1

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A43	2 - M40 off slip northbound	3 - B430
From	1 - A43	0	8	1
	2 - M40 off slip northbound	12	17	3
	3 - B430	3	2	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A43	5.97	1.4	A	692	1038
2 - M40 off slip northbound	11.54	4.5	B	1110	1664
3 - B430	16.64	3.4	C	544	816

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	573	143	159	573	1153	0.0	0.7	4.670	A
2 - M40 off slip northbound	916	229	319	916	413	0.0	1.6	5.767	A
3 - B430	448	112	865	447	370	0.0	1.0	7.576	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	673	168	188	672	1373	0.7	1.0	5.202	A
2 - M40 off slip northbound	1091	273	375	1092	485	1.6	2.0	7.296	A
3 - B430	528	132	1033	528	434	1.0	1.5	9.763	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	828	207	236	830	1666	1.0	1.3	5.879	A
2 - M40 off slip northbound	1321	330	468	1322	598	2.0	4.0	11.075	B
3 - B430	652	163	1250	653	541	1.5	2.9	15.351	C

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	825	206	232	826	1685	1.3	1.3	5.967	A
2 - M40 off slip northbound	1336	334	456	1339	602	4.0	4.4	11.539	B
3 - B430	651	163	1265	652	529	2.9	3.3	16.639	C

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	684	171	185	684	1372	1.3	1.0	5.235	A
2 - M40 off slip northbound	1082	271	380	1085	489	4.4	2.2	7.477	A
3 - B430	532	133	1025	531	440	3.3	1.5	10.894	B

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	569	142	160	569	1155	1.0	0.8	4.740	A
2 - M40 off slip northbound	913	228	318	914	411	2.2	1.4	5.970	A
3 - B430	451	113	864	451	368	1.5	1.0	8.117	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	255	1010	0.252	255	0.0	0.3	4.732	A
			2	1,3	318	1086	0.293	319	0.0	0.4	4.620	A
	Exit	1	1		1153			1153	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	1,3	471	907	0.520	471	0.0	0.8	5.829	A
			2	1,2	445	897	0.496	445	0.0	0.8	5.701	A
	Exit	1	1		413			413	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	173	607	0.285	172	0.0	0.4	6.794	A
			2	1,2,3	275	610	0.452	275	0.0	0.7	8.066	A
		2	2	(1,2,3)	448			448	0.0	0.0	0.000	A
	Exit	1	1		370			370	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	298	1001	0.298	298	0.3	0.4	5.079	A
			2	1,3	375	1074	0.349	374	0.4	0.6	5.299	A
	Exit	1	1		1373			1373	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	1,3	557	896	0.622	558	0.8	1.1	7.444	A
			2	1,2	534	882	0.605	535	0.8	1.0	7.141	A
	Exit	1	1		485			485	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	214	562	0.381	215	0.4	0.5	8.396	A
			2	1,2,3	314	564	0.556	313	0.7	1.0	10.652	B
		2	2	(1,2,3)	528			528	0.0	0.0	0.023	A
	Exit	1	1		434			434	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	363	991	0.367	363	0.4	0.6	5.816	A
			2	1,3	465	1061	0.438	467	0.6	0.7	5.929	A
	Exit	1	1		1666			1666	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	1,3	677	868	0.780	678	1.1	2.1	11.136	B
			2	1,2	644	858	0.750	645	1.0	2.0	11.013	B
	Exit	1	1		598			598	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	279	502	0.556	279	0.5	1.0	12.919	B
			2	1,2,3	373	507	0.736	373	1.0	1.8	16.422	C
		2	2	(1,2,3)	652			652	0.0	0.1	0.416	A
	Exit	1	1		541			541	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	370	988	0.375	371	0.6	0.5	5.924	A
			2	1,3	455	1064	0.428	455	0.7	0.8	6.002	A
	Exit	1	1		1685			1685	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	1,3	683	874	0.781	684	2.1	2.3	11.631	B
			2	1,2	653	862	0.757	655	2.0	2.1	11.444	B
	Exit	1	1		602			602	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	282	500	0.564	283	1.0	1.2	13.697	B
			2	1,2,3	368	504	0.731	369	1.8	2.0	17.962	C
		2	2	(1,2,3)	651			650	0.1	0.2	0.499	A
	Exit	1	1		529			529	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	304	1007	0.302	305	0.5	0.4	5.274	A
			2	1,3	380	1077	0.353	379	0.8	0.6	5.204	A
	Exit	1	1		1372			1372	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	1,3	558	892	0.626	559	2.3	1.2	7.512	A
			2	1,2	524	883	0.594	526	2.1	1.1	7.441	A
	Exit	1	1		489			489	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	218	564	0.386	218	1.2	0.5	9.330	A
			2	1,2,3	314	569	0.552	313	2.0	1.0	11.845	B
		2	2	(1,2,3)	532			532	0.2	0.0	0.119	A
	Exit	1	1		440			440	0.0	0.0	0.000	A

18:00 - 18:15

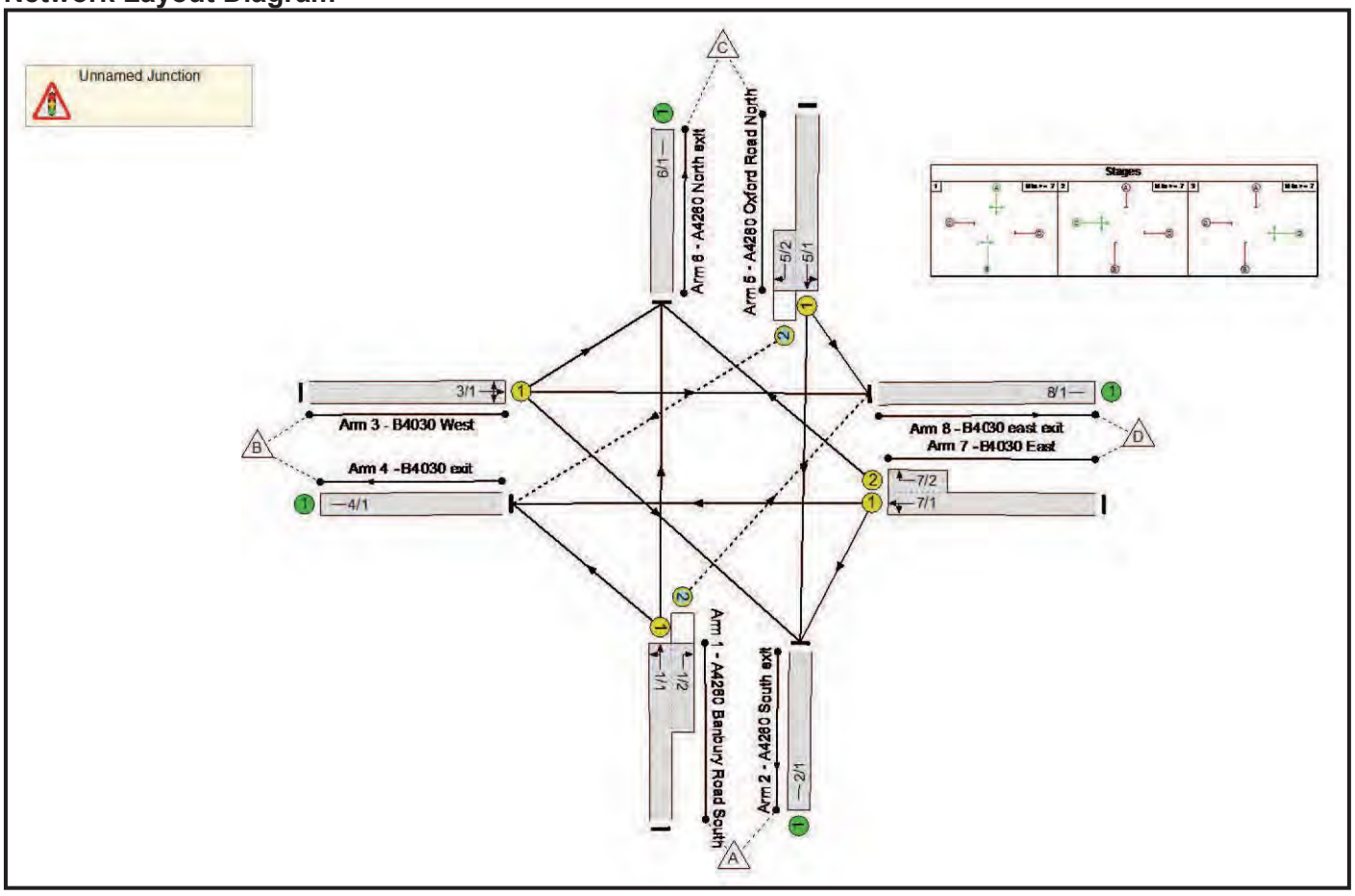
Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A43	Entry	1	1	2	251	1013	0.248	251	0.4	0.3	4.811	A
			2	1,3	318	1084	0.294	317	0.6	0.5	4.683	A
	Exit	1	1		1155			1155	0.0	0.0	0.000	A
2 - M40 off slip northbound	Entry	1	1	1,3	471	907	0.519	472	1.2	0.7	6.011	A
			2	1,2	442	896	0.493	442	1.1	0.7	5.926	A
	Exit	1	1		411			411	0.0	0.0	0.000	A
3 - B430	Entry	1	1	1	176	604	0.292	176	0.5	0.3	7.174	A
			2	1,2,3	275	612	0.449	275	1.0	0.7	8.697	A
		2	2	(1,2,3)	451			451	0.0	0.0	0.018	A
	Exit	1	1		368			368	0.0	0.0	0.000	A

Full Input Data And Results

User and Project Details

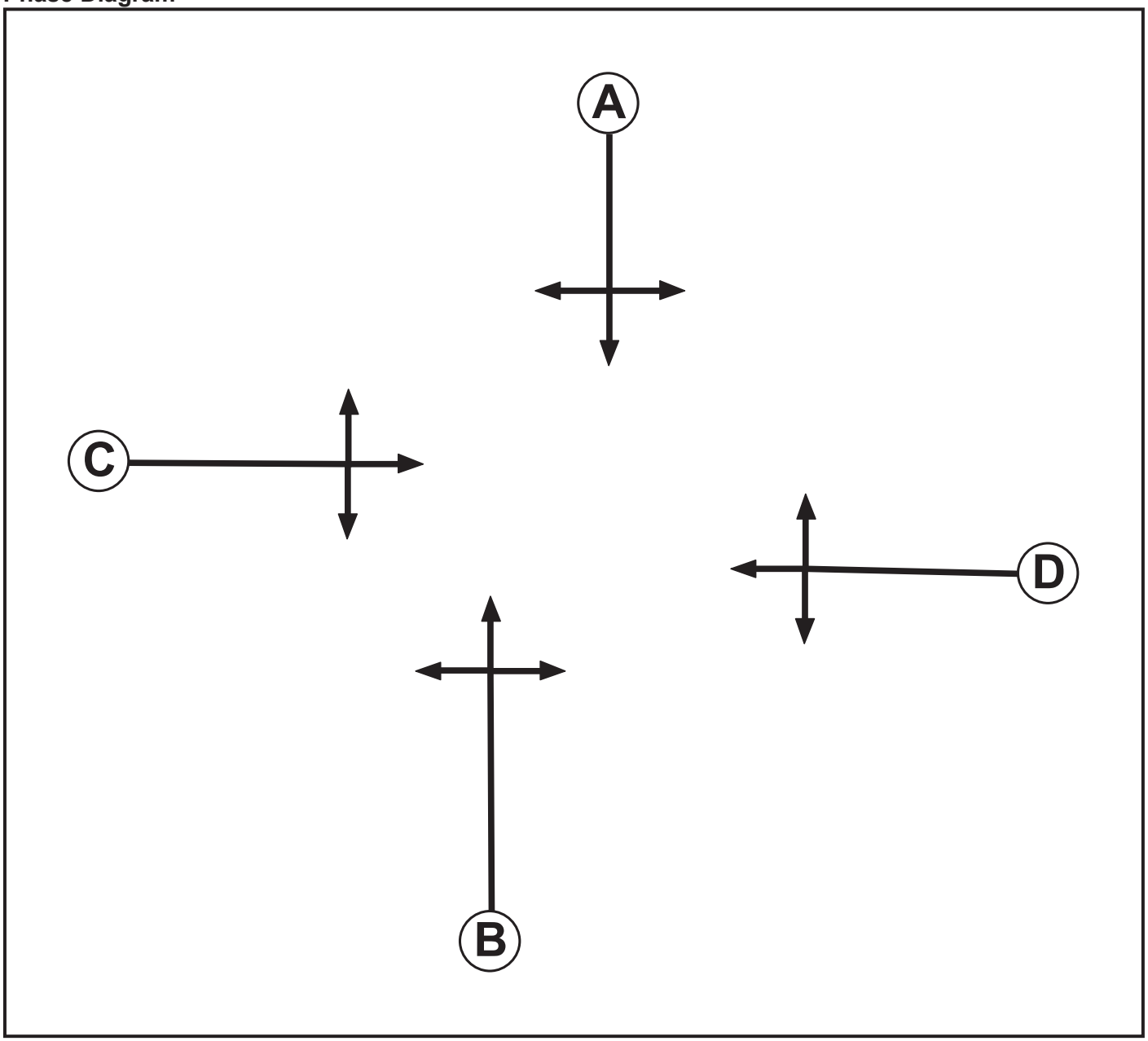
Project:	**Heyford Park**
Title:	**Hopscroft Holt junction**
Location:	
File name:	Phase 9 App_Hopcroft Holt.lsg3x
Author:	ekeen
Company:	Peter Brett Associates
Address:	10 Queen Square
Notes:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

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

Full Input Data And Results

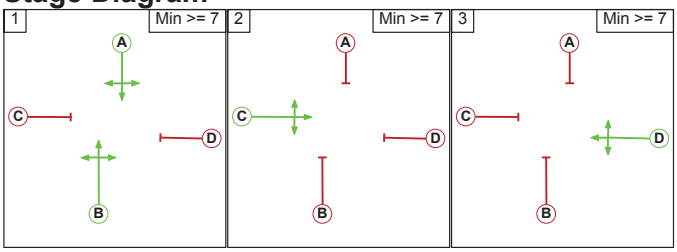
Phase Intergreens Matrix

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

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

	To Stage			
		1	2	3
From Stage	1		7	7
	2	7		7
	3	7	7	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Unnamed Junction											
Lane	**Movement**	**Max Flow when Giving Way (PCU/Hr)**	**Min Flow when Giving Way (PCU/Hr)**	**Opposing Lane**	**Opp. Lane Coeff.**	**Opp. Mvmnts.**	**Right Turn Storage (PCU)**	**Non-Blocking Storage (PCU)**	**RTF**	**Right Turn Move up (s)**	**Max Turns in Intergreen (PCU)**
1/2 (A4260 Banbury Road South)	8/1 (Right)	1439	0	5/1	1.09	All	2.00	-	0.50	2	2.00
5/2 (A4260 Oxford Road North)	4/1 (Right)	1439	0	1/1	1.09	All	2.00	-	0.50	2	2.00

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 (A4260 Banbury Road South)	U	B	2	3	60.0	Geom	-	2.50	0.00	Y	Arm 4 Left	20.00
											Arm 6 Ahead	Inf
1/2 (A4260 Banbury Road South)	O	B	2	3	6.0	Geom	-	2.50	0.00	Y	Arm 8 Right	10.00
2/1 (A4260 South exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
3/1 (B4030 West)	U	C	2	3	60.0	Geom	-	3.30	0.00	Y	Arm 2 Right	14.00
											Arm 6 Left	15.00
											Arm 8 Ahead	Inf
4/1 (B4030 exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (A4260 Oxford Road North)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 2 Ahead	Inf
											Arm 8 Left	20.00
5/2 (A4260 Oxford Road North)	O	A	2	3	4.0	Geom	-	3.00	0.00	Y	Arm 4 Right	10.00
6/1 (A4260 North exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (B4030 East)	U	D	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 2 Left	13.00
											Arm 4 Ahead	Inf
7/2 (B4030 East)	U	D	2	3	4.0	Geom	-	3.00	0.00	Y	Arm 6 Right	18.00
8/1 (B4030 east exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2016 Base AM'	07:30	08:30	01:00	
2: '2016 Base PM'	17:00	18:00	01:00	
3: '2013 Base AM'	07:30	08:30	01:00	
4: '2013 Base PM'	17:00	18:00	01:00	
5: '2021 Ref Case AM'	07:30	08:30	01:00	
6: '2021 Ref Case PM'	17:00	18:00	01:00	
7: '2021 Test Case AM'	07:30	08:30	01:00	
8: '2021 Test Case PM'	17:00	18:00	01:00	

Scenario 1: '2016 Base AM' (FG1: '2016 Base AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	22	335	31	388
	B	104	0	18	89	211
	C	709	43	0	47	799
	D	79	129	48	0	256
	Tot.	892	194	401	167	1654

Traffic Lane Flows

Lane	Scenario 1: 2016 Base AM
Junction: Unnamed Junction	
1/1 (with short)	388(In) 357(Out)
1/2 (short)	31
2/1	892
3/1	211
4/1	194
5/1 (with short)	799(In) 756(Out)
5/2 (short)	43
6/1	401
7/1 (with short)	256(In) 208(Out)
7/2 (short)	48
8/1	167

Full Input Data And Results

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 (A4260 Banbury Road South)	2.50	0.00	Y	Arm 4 Left	20.00	6.2 %	1856	1856
				Arm 6 Ahead	Inf	93.8 %		
1/2 (A4260 Banbury Road South)	2.50	0.00	Y	Arm 8 Right	10.00	100.0 %	1622	1622
2/1 (A4260 South exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (B4030 West)	3.30	0.00	Y	Arm 2 Right	14.00	49.3 %	1833	1833
				Arm 6 Left	15.00	8.5 %		
				Arm 8 Ahead	Inf	42.2 %		
4/1 (B4030 exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (A4260 Oxford Road North)	3.00	0.00	Y	Arm 2 Ahead	Inf	93.8 %	1906	1906
				Arm 8 Left	20.00	6.2 %		
5/2 (A4260 Oxford Road North)	3.00	0.00	Y	Arm 4 Right	10.00	100.0 %	1665	1665
6/1 (A4260 North exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (B4030 East)	3.00	0.00	Y	Arm 2 Left	13.00	38.0 %	1835	1835
				Arm 4 Ahead	Inf	62.0 %		
7/2 (B4030 East)	3.00	0.00	Y	Arm 6 Right	18.00	100.0 %	1768	1768
8/1 (B4030 east exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2016 Base PM' (FG2: '2016 Base PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	82	589	43	714
	B	23	0	31	100	154
	C	264	33	0	33	330
	D	32	105	72	0	209
	Tot.	319	220	692	176	1407

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2016 Base PM
Junction: Unnamed Junction	
1/1 (with short)	714(In) 671(Out)
1/2 (short)	43
2/1	319
3/1	154
4/1	220
5/1 (with short)	330(In) 297(Out)
5/2 (short)	33
6/1	692
7/1 (with short)	209(In) 137(Out)
7/2 (short)	72
8/1	176

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 (A4260 Banbury Road South)	2.50	0.00	Y	Arm 4 Left	20.00	12.2 %	1848	1848
				Arm 6 Ahead	Inf	87.8 %		
1/2 (A4260 Banbury Road South)	2.50	0.00	Y	Arm 8 Right	10.00	100.0 %	1622	1622
2/1 (A4260 South exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (B4030 West)	3.30	0.00	Y	Arm 2 Right	14.00	14.9 %	1877	1877
				Arm 6 Left	15.00	20.1 %		
				Arm 8 Ahead	Inf	64.9 %		
4/1 (B4030 exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (A4260 Oxford Road North)	3.00	0.00	Y	Arm 2 Ahead	Inf	88.9 %	1899	1899
				Arm 8 Left	20.00	11.1 %		
5/2 (A4260 Oxford Road North)	3.00	0.00	Y	Arm 4 Right	10.00	100.0 %	1665	1665
6/1 (A4260 North exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (B4030 East)	3.00	0.00	Y	Arm 2 Left	13.00	23.4 %	1865	1865
				Arm 4 Ahead	Inf	76.6 %		
7/2 (B4030 East)	3.00	0.00	Y	Arm 6 Right	18.00	100.0 %	1768	1768
8/1 (B4030 east exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: '2013 Base AM' (FG3: '2013 Base AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	22	334	29	385
	B	104	0	18	89	211
	C	708	43	0	47	798
	D	71	129	47	0	247
	Tot.	883	194	399	165	1641

Traffic Lane Flows

Lane	Scenario 3: 2013 Base AM
Junction: Unnamed Junction	
1/1 (with short)	385(In) 356(Out)
1/2 (short)	29
2/1	883
3/1	211
4/1	194
5/1 (with short)	798(In) 755(Out)
5/2 (short)	43
6/1	399
7/1 (with short)	247(In) 200(Out)
7/2 (short)	47
8/1	165

Full Input Data And Results

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 (A4260 Banbury Road South)	2.50	0.00	Y	Arm 4 Left	20.00	6.2 %	1856	1856
				Arm 6 Ahead	Inf	93.8 %		
1/2 (A4260 Banbury Road South)	2.50	0.00	Y	Arm 8 Right	10.00	100.0 %	1622	1622
2/1 (A4260 South exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (B4030 West)	3.30	0.00	Y	Arm 2 Right	14.00	49.3 %	1833	1833
				Arm 6 Left	15.00	8.5 %		
				Arm 8 Ahead	Inf	42.2 %		
4/1 (B4030 exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (A4260 Oxford Road North)	3.00	0.00	Y	Arm 2 Ahead	Inf	93.8 %	1906	1906
				Arm 8 Left	20.00	6.2 %		
5/2 (A4260 Oxford Road North)	3.00	0.00	Y	Arm 4 Right	10.00	100.0 %	1665	1665
6/1 (A4260 North exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (B4030 East)	3.00	0.00	Y	Arm 2 Left	13.00	35.5 %	1840	1840
				Arm 4 Ahead	Inf	64.5 %		
7/2 (B4030 East)	3.00	0.00	Y	Arm 6 Right	18.00	100.0 %	1768	1768
8/1 (B4030 east exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2013 Base PM' (FG4: '2013 Base PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	81	584	37	702
	B	23	0	31	99	153
	C	262	33	0	32	327
	D	28	104	71	0	203
	Tot.	313	218	686	168	1385

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: 2013 Base PM
Junction: Unnamed Junction	
1/1 (with short)	702(In) 665(Out)
1/2 (short)	37
2/1	313
3/1	153
4/1	218
5/1 (with short)	327(In) 294(Out)
5/2 (short)	33
6/1	686
7/1 (with short)	203(In) 132(Out)
7/2 (short)	71
8/1	168

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 (A4260 Banbury Road South)	2.50	0.00	Y	Arm 4 Left	20.00	12.2 %	1848	1848
				Arm 6 Ahead	Inf	87.8 %		
1/2 (A4260 Banbury Road South)	2.50	0.00	Y	Arm 8 Right	10.00	100.0 %	1622	1622
2/1 (A4260 South exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (B4030 West)	3.30	0.00	Y	Arm 2 Right	14.00	15.0 %	1877	1877
				Arm 6 Left	15.00	20.3 %		
				Arm 8 Ahead	Inf	64.7 %		
4/1 (B4030 exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (A4260 Oxford Road North)	3.00	0.00	Y	Arm 2 Ahead	Inf	89.1 %	1899	1899
				Arm 8 Left	20.00	10.9 %		
5/2 (A4260 Oxford Road North)	3.00	0.00	Y	Arm 4 Right	10.00	100.0 %	1665	1665
6/1 (A4260 North exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (B4030 East)	3.00	0.00	Y	Arm 2 Left	13.00	21.2 %	1869	1869
				Arm 4 Ahead	Inf	78.8 %		
7/2 (B4030 East)	3.00	0.00	Y	Arm 6 Right	18.00	100.0 %	1768	1768
8/1 (B4030 east exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 5: '2021 Ref Case AM' (FG5: '2021 Ref Case AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	23	343	37	403
	B	107	0	18	92	217
	C	727	44	0	50	821
	D	98	133	53	0	284
	Tot.	932	200	414	179	1725

Traffic Lane Flows

Lane	Scenario 5: 2021 Ref Case AM
Junction: Unnamed Junction	
1/1 (with short)	403(In) 366(Out)
1/2 (short)	37
2/1	932
3/1	217
4/1	200
5/1 (with short)	821(In) 777(Out)
5/2 (short)	44
6/1	414
7/1 (with short)	284(In) 231(Out)
7/2 (short)	53
8/1	179

Full Input Data And Results

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 (A4260 Banbury Road South)	2.50	0.00	Y	Arm 4 Left	20.00	6.3 %	1856	1856
				Arm 6 Ahead	Inf	93.7 %		
1/2 (A4260 Banbury Road South)	2.50	0.00	Y	Arm 8 Right	10.00	100.0 %	1622	1622
2/1 (A4260 South exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (B4030 West)	3.30	0.00	Y	Arm 2 Right	14.00	49.3 %	1833	1833
				Arm 6 Left	15.00	8.3 %		
				Arm 8 Ahead	Inf	42.4 %		
4/1 (B4030 exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (A4260 Oxford Road North)	3.00	0.00	Y	Arm 2 Ahead	Inf	93.6 %	1906	1906
				Arm 8 Left	20.00	6.4 %		
5/2 (A4260 Oxford Road North)	3.00	0.00	Y	Arm 4 Right	10.00	100.0 %	1665	1665
6/1 (A4260 North exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (B4030 East)	3.00	0.00	Y	Arm 2 Left	13.00	42.4 %	1826	1826
				Arm 4 Ahead	Inf	57.6 %		
7/2 (B4030 East)	3.00	0.00	Y	Arm 6 Right	18.00	100.0 %	1768	1768
8/1 (B4030 east exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 6: '2021 Ref Case PM' (FG6: '2021 Ref Case PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	84	603	56	743
	B	24	0	32	103	159
	C	270	34	0	36	340
	D	41	108	75	0	224
	Tot.	335	226	710	195	1466

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: 2021 Ref Case PM
Junction: Unnamed Junction	
1/1 (with short)	743(In) 687(Out)
1/2 (short)	56
2/1	335
3/1	159
4/1	226
5/1 (with short)	340(In) 306(Out)
5/2 (short)	34
6/1	710
7/1 (with short)	224(In) 149(Out)
7/2 (short)	75
8/1	195

Full Input Data And Results

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 (A4260 Banbury Road South)	2.50	0.00	Y	Arm 4 Left	20.00	12.2 %	1848	1848
				Arm 6 Ahead	Inf	87.8 %		
1/2 (A4260 Banbury Road South)	2.50	0.00	Y	Arm 8 Right	10.00	100.0 %	1622	1622
2/1 (A4260 South exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (B4030 West)	3.30	0.00	Y	Arm 2 Right	14.00	15.1 %	1877	1877
				Arm 6 Left	15.00	20.1 %		
				Arm 8 Ahead	Inf	64.8 %		
4/1 (B4030 exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (A4260 Oxford Road North)	3.00	0.00	Y	Arm 2 Ahead	Inf	88.2 %	1898	1898
				Arm 8 Left	20.00	11.8 %		
5/2 (A4260 Oxford Road North)	3.00	0.00	Y	Arm 4 Right	10.00	100.0 %	1665	1665
6/1 (A4260 North exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (B4030 East)	3.00	0.00	Y	Arm 2 Left	13.00	27.5 %	1856	1856
				Arm 4 Ahead	Inf	72.5 %		
7/2 (B4030 East)	3.00	0.00	Y	Arm 6 Right	18.00	100.0 %	1768	1768
8/1 (B4030 east exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 7: '2021 Test Case AM' (FG7: '2021 Test Case AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	23	343	41	407
	B	107	0	18	92	217
	C	727	44	0	50	821
	D	110	133	55	0	298
	Tot.	944	200	416	183	1743

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 7: 2021 Test Case AM
Junction: Unnamed Junction	
1/1 (with short)	407(In) 366(Out)
1/2 (short)	41
2/1	944
3/1	217
4/1	200
5/1 (with short)	821(In) 777(Out)
5/2 (short)	44
6/1	416
7/1 (with short)	298(In) 243(Out)
7/2 (short)	55
8/1	183

Full Input Data And Results

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 (A4260 Banbury Road South)	2.50	0.00	Y	Arm 4 Left	20.00	6.3 %	1856	1856
				Arm 6 Ahead	Inf	93.7 %		
1/2 (A4260 Banbury Road South)	2.50	0.00	Y	Arm 8 Right	10.00	100.0 %	1622	1622
2/1 (A4260 South exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (B4030 West)	3.30	0.00	Y	Arm 2 Right	14.00	49.3 %	1833	1833
				Arm 6 Left	15.00	8.3 %		
				Arm 8 Ahead	Inf	42.4 %		
4/1 (B4030 exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (A4260 Oxford Road North)	3.00	0.00	Y	Arm 2 Ahead	Inf	93.6 %	1906	1906
				Arm 8 Left	20.00	6.4 %		
5/2 (A4260 Oxford Road North)	3.00	0.00	Y	Arm 4 Right	10.00	100.0 %	1665	1665
6/1 (A4260 North exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (B4030 East)	3.00	0.00	Y	Arm 2 Left	13.00	45.3 %	1820	1820
				Arm 4 Ahead	Inf	54.7 %		
7/2 (B4030 East)	3.00	0.00	Y	Arm 6 Right	18.00	100.0 %	1768	1768
8/1 (B4030 east exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 8: '2021 Test Case PM' (FG8: '2021 Test Case PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	84	603	64	751
	B	24	0	32	103	159
	C	270	34	0	44	348
	D	46	108	76	0	230
	Tot.	340	226	711	211	1488

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 8: 2021 Test Case PM
Junction: Unnamed Junction	
1/1 (with short)	751(In) 687(Out)
1/2 (short)	64
2/1	340
3/1	159
4/1	226
5/1 (with short)	348(In) 314(Out)
5/2 (short)	34
6/1	711
7/1 (with short)	230(In) 154(Out)
7/2 (short)	76
8/1	211

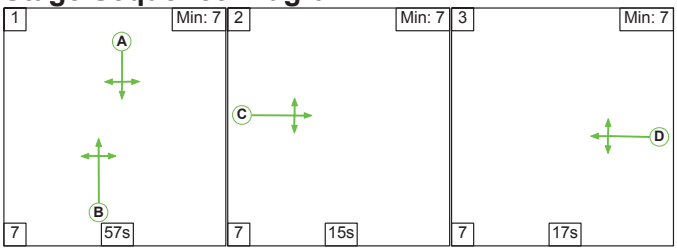
Full Input Data And Results

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 (A4260 Banbury Road South)	2.50	0.00	Y	Arm 4 Left	20.00	12.2 %	1848	1848
				Arm 6 Ahead	Inf	87.8 %		
1/2 (A4260 Banbury Road South)	2.50	0.00	Y	Arm 8 Right	10.00	100.0 %	1622	1622
2/1 (A4260 South exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (B4030 West)	3.30	0.00	Y	Arm 2 Right	14.00	15.1 %	1877	1877
				Arm 6 Left	15.00	20.1 %		
				Arm 8 Ahead	Inf	64.8 %		
4/1 (B4030 exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (A4260 Oxford Road North)	3.00	0.00	Y	Arm 2 Ahead	Inf	86.0 %	1895	1895
				Arm 8 Left	20.00	14.0 %		
5/2 (A4260 Oxford Road North)	3.00	0.00	Y	Arm 4 Right	10.00	100.0 %	1665	1665
6/1 (A4260 North exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (B4030 East)	3.00	0.00	Y	Arm 2 Left	13.00	29.9 %	1851	1851
				Arm 4 Ahead	Inf	70.1 %		
7/2 (B4030 East)	3.00	0.00	Y	Arm 6 Right	18.00	100.0 %	1768	1768
8/1 (B4030 east exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2016 Base AM' (FG1: '2016 Base AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

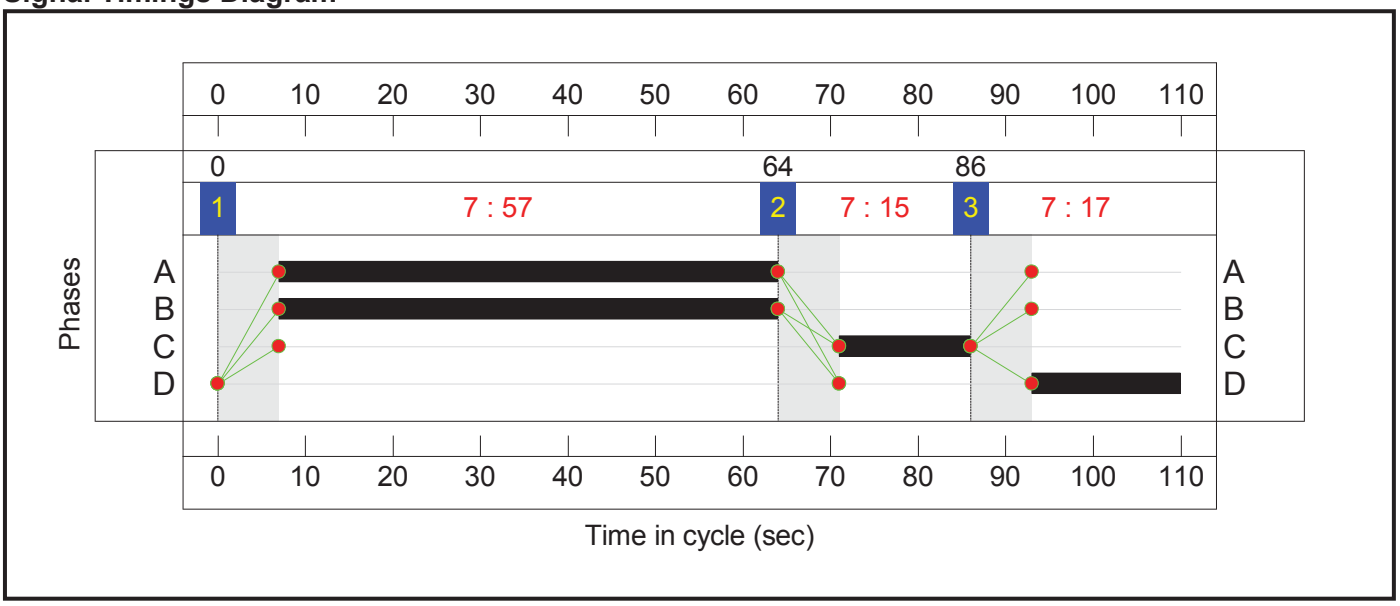


Stage Timings

Stage	1	2	3
Duration	57	15	17
Change Point	0	64	86

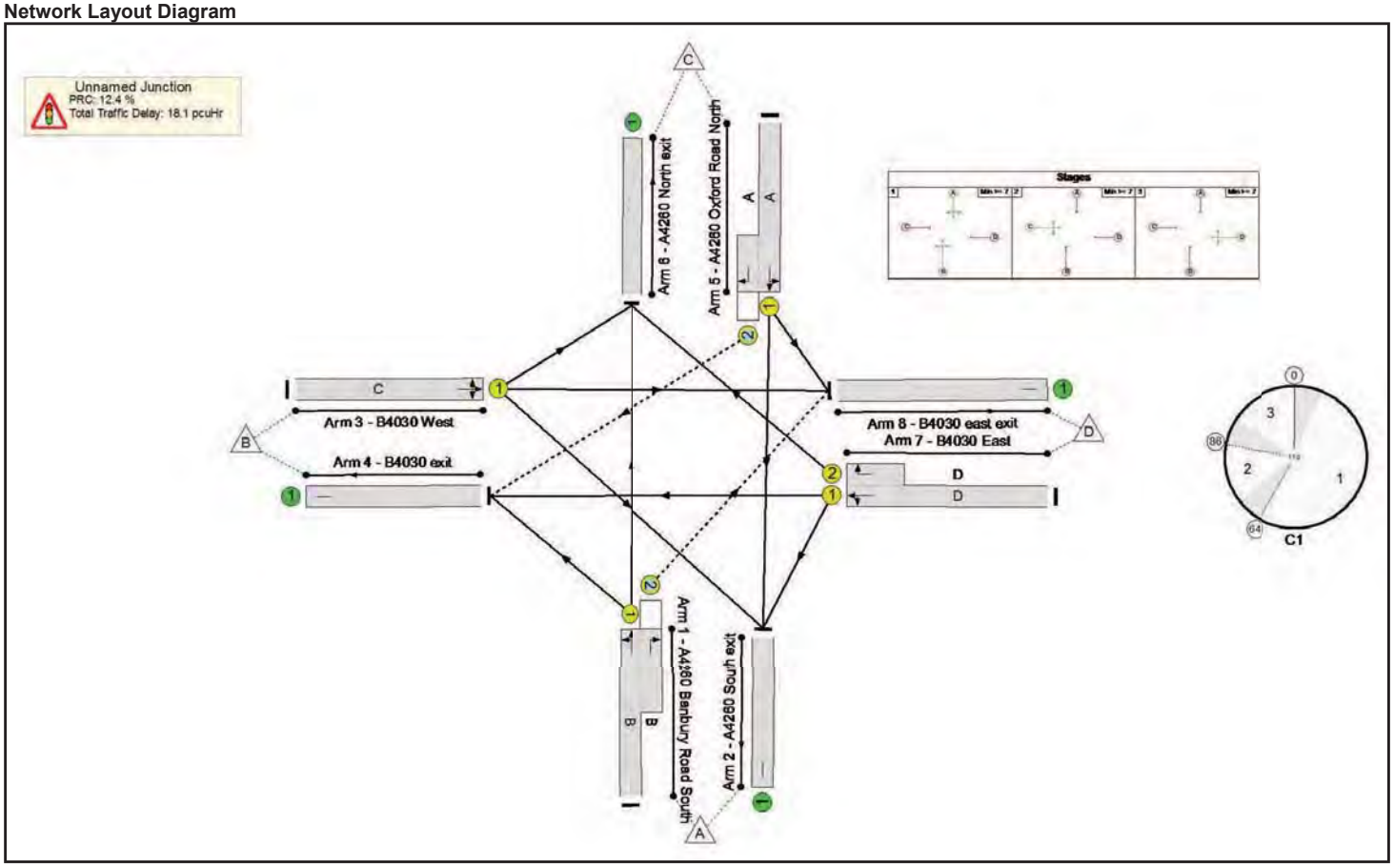
Full Input Data And Results

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: Hopscroft Holt junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**80.1%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**80.1%**
1/1+1/2	A4260 Banbury Road South Left Ahead Right	U+O	N/A	N/A	B		1	57	-	388	1856:1622	902+78	39.6 : 39.6%
2/1	A4260 South exit	U	N/A	N/A	-		-	-	-	892	Inf	Inf	0.0%
3/1	B4030 West Right Left Ahead	U	N/A	N/A	C		1	15	-	211	1833	267	79.1%
4/1	B4030 exit	U	N/A	N/A	-		-	-	-	194	Inf	Inf	0.0%
5/1+5/2	A4260 Oxford Road North Ahead Right Left	U+O	N/A	N/A	A		1	57	-	799	1906:1665	944+54	80.1 : 80.1%
6/1	A4260 North exit	U	N/A	N/A	-		-	-	-	401	Inf	Inf	0.0%
7/1+7/2	B4030 East Left Ahead Right	U	N/A	N/A	D		1	17	-	256	1835:1768	265+61	78.3 : 78.3%
8/1	B4030 east exit	U	N/A	N/A	-		-	-	-	167	Inf	Inf	0.0%

Full Input Data And Results

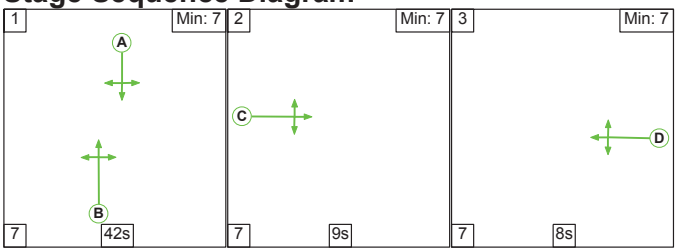
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Hopscroft Holt junction	**-**	**-**	**74**	**0**	**0**	**12.1**	**5.8**	**0.2**	**18.1**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**74**	**0**	**0**	**12.1**	**5.8**	**0.2**	**18.1**	**-**	**-**	**-**	**-**
1/1+1/2	388	388	31	0	0	1.6	0.3	0.2	2.1	19.9	6.4	0.3	6.8
2/1	892	892	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	211	211	-	-	-	2.7	1.8	-	4.4	75.8	6.2	1.8	8.0
4/1	194	194	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	799	799	43	0	0	4.7	2.0	0.0	6.7	30.2	19.5	2.0	21.5
6/1	401	401	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1+7/2	256	256	-	-	-	3.1	1.7	-	4.8	67.5	6.5	1.7	8.3
8/1	167	167	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 12.4 Total Delay for Signalled Lanes (pcuHr): 18.09 Cycle Time (s): 110
PRC Over All Lanes (%): 12.4 Total Delay Over All Lanes(pcuHr): 18.09

Full Input Data And Results

Scenario 2: '2016 Base PM' (FG2: '2016 Base PM', Plan 1: 'Network Control Plan 1')

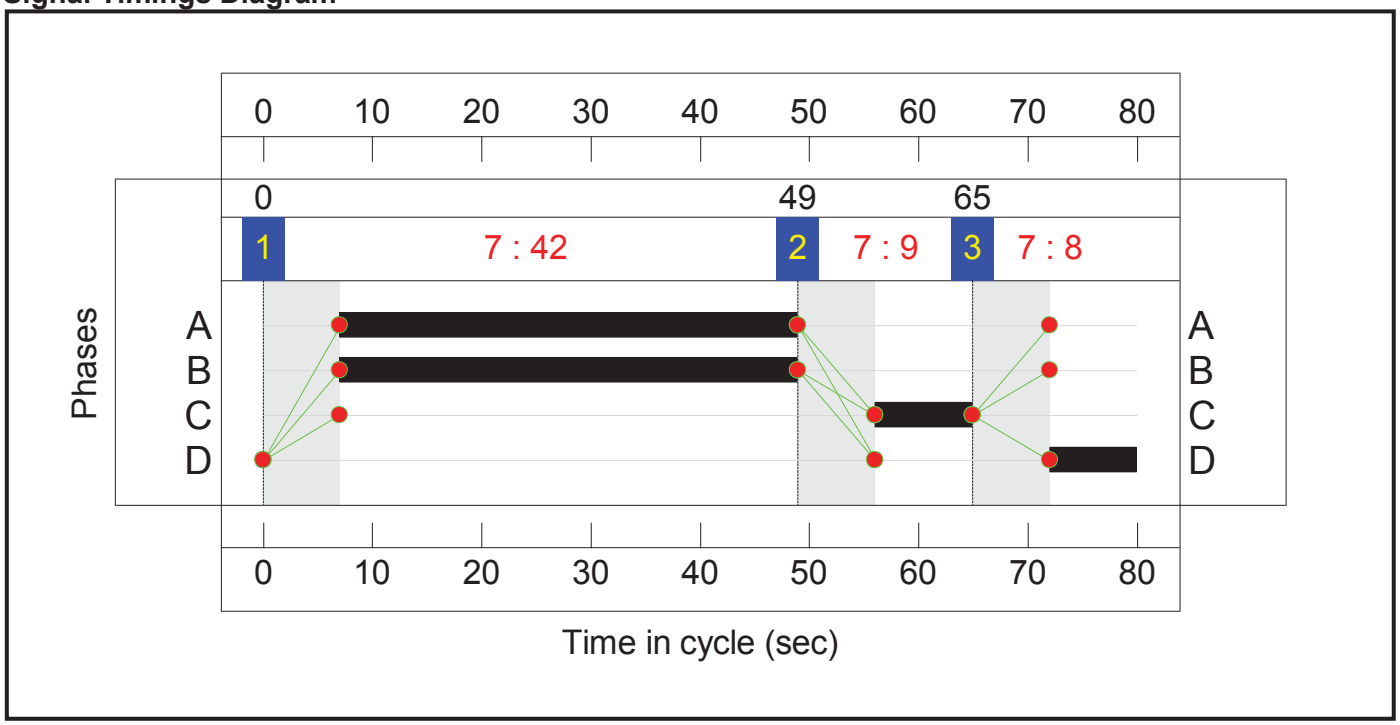
Stage Sequence Diagram



Stage Timings

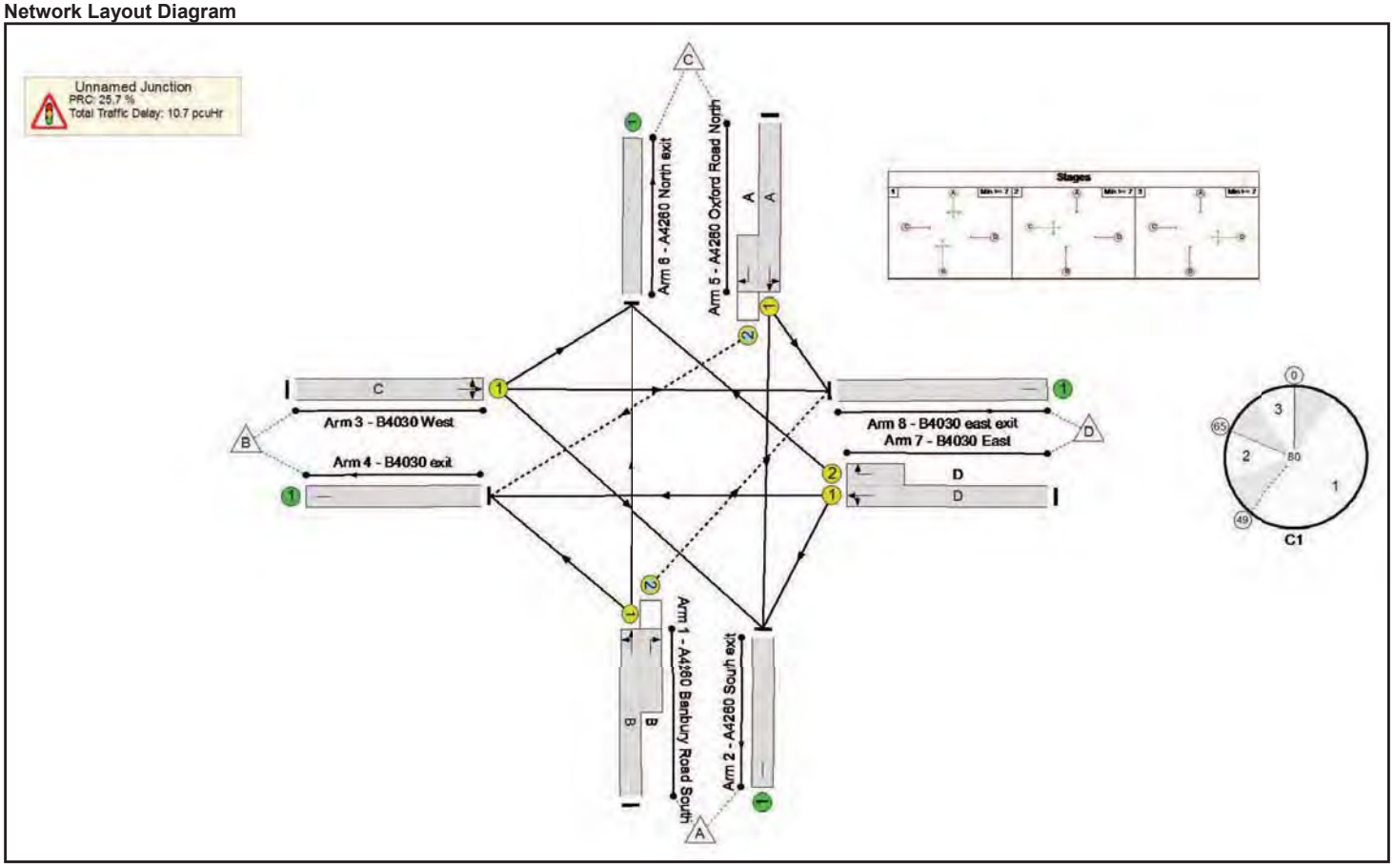
Stage	1	2	3
Duration	42	9	8
Change Point	0	49	65

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Hopscroft Holt junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**71.6%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**71.6%**
1/1+1/2	A4260 Banbury Road South Left Ahead Right	U+O	N/A	N/A	B		1	42	-	714	1848:1622	937+60	71.6 : 71.6%
2/1	A4260 South exit	U	N/A	N/A	-		-	-	-	319	Inf	Inf	0.0%
3/1	B4030 West Right Left Ahead	U	N/A	N/A	C		1	9	-	154	1877	235	65.6%
4/1	B4030 exit	U	N/A	N/A	-		-	-	-	220	Inf	Inf	0.0%
5/1+5/2	A4260 Oxford Road North Ahead Right Left	U+O	N/A	N/A	A		1	42	-	330	1899:1665	917+102	32.4 : 32.4%
6/1	A4260 North exit	U	N/A	N/A	-		-	-	-	692	Inf	Inf	0.0%
7/1+7/2	B4030 East Left Ahead Right	U	N/A	N/A	D		1	8	-	209	1865:1768	195+102	70.3 : 70.3%
8/1	B4030 east exit	U	N/A	N/A	-		-	-	-	176	Inf	Inf	0.0%

Full Input Data And Results

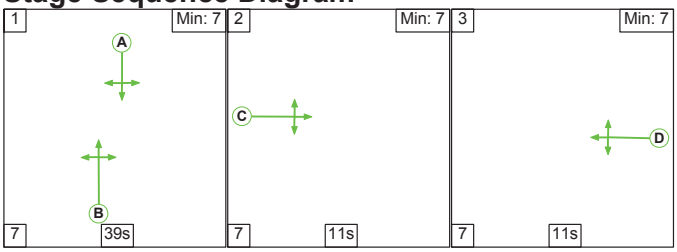
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Hopscroft Holt junction	**-**	**-**	**76**	**0**	**0**	**7.0**	**3.6**	**0.2**	**10.7**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**76**	**0**	**0**	**7.0**	**3.6**	**0.2**	**10.7**	**-**	**-**	**-**	**-**
1/1+1/2	714	714	43	0	0	2.7	1.2	0.0	4.0	20.0	11.3	1.2	12.6
2/1	319	319	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	154	154	-	-	-	1.4	0.9	-	2.4	55.2	3.3	0.9	4.2
4/1	220	220	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	330	330	33	0	0	0.9	0.2	0.1	1.3	14.1	3.5	0.2	3.8
6/1	692	692	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1+7/2	209	209	-	-	-	2.0	1.2	-	3.1	53.4	2.9	1.2	4.0
8/1	176	176	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 25.7 Total Delay for Signalled Lanes (pcuHr): 10.72 Cycle Time (s): 80
PRC Over All Lanes (%): 25.7 Total Delay Over All Lanes(pcuHr): 10.72

Full Input Data And Results

Scenario 3: '2013 Base AM' (FG3: '2013 Base AM', Plan 1: 'Network Control Plan 1')

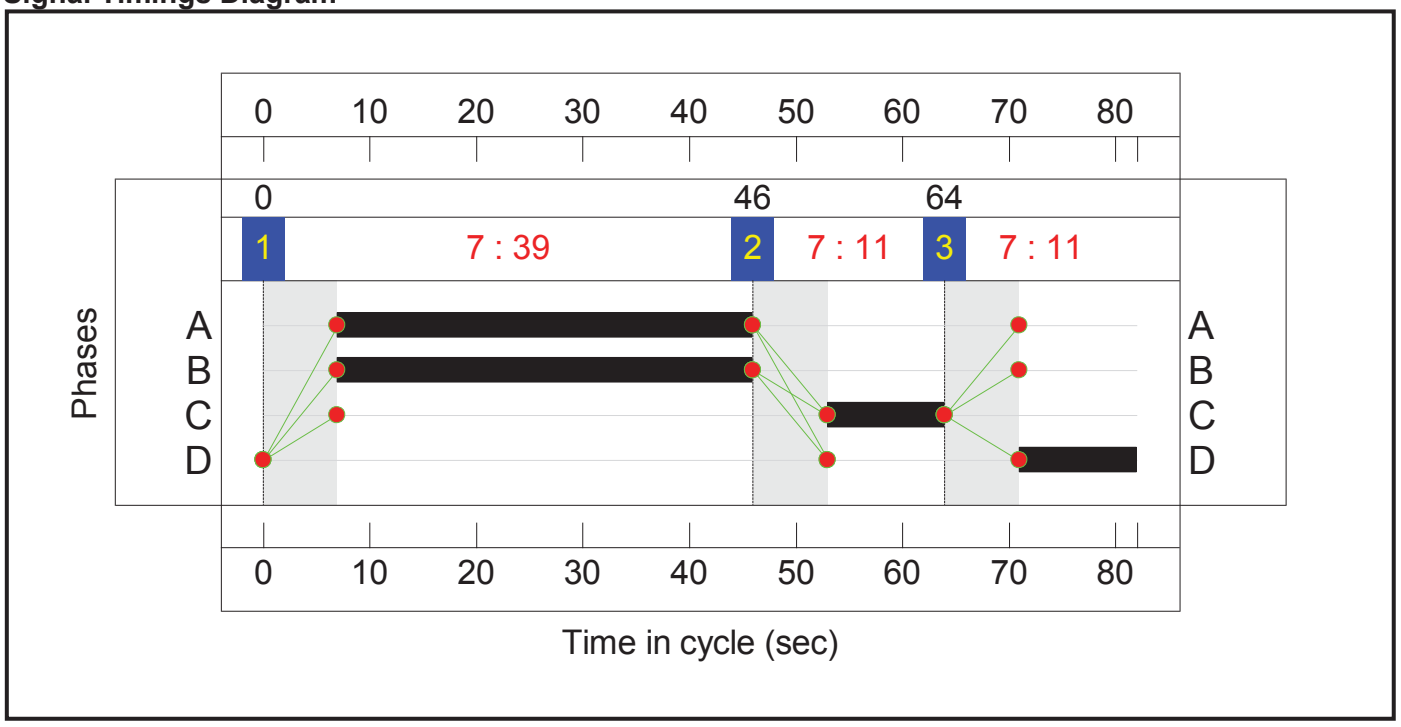
Stage Sequence Diagram



Stage Timings

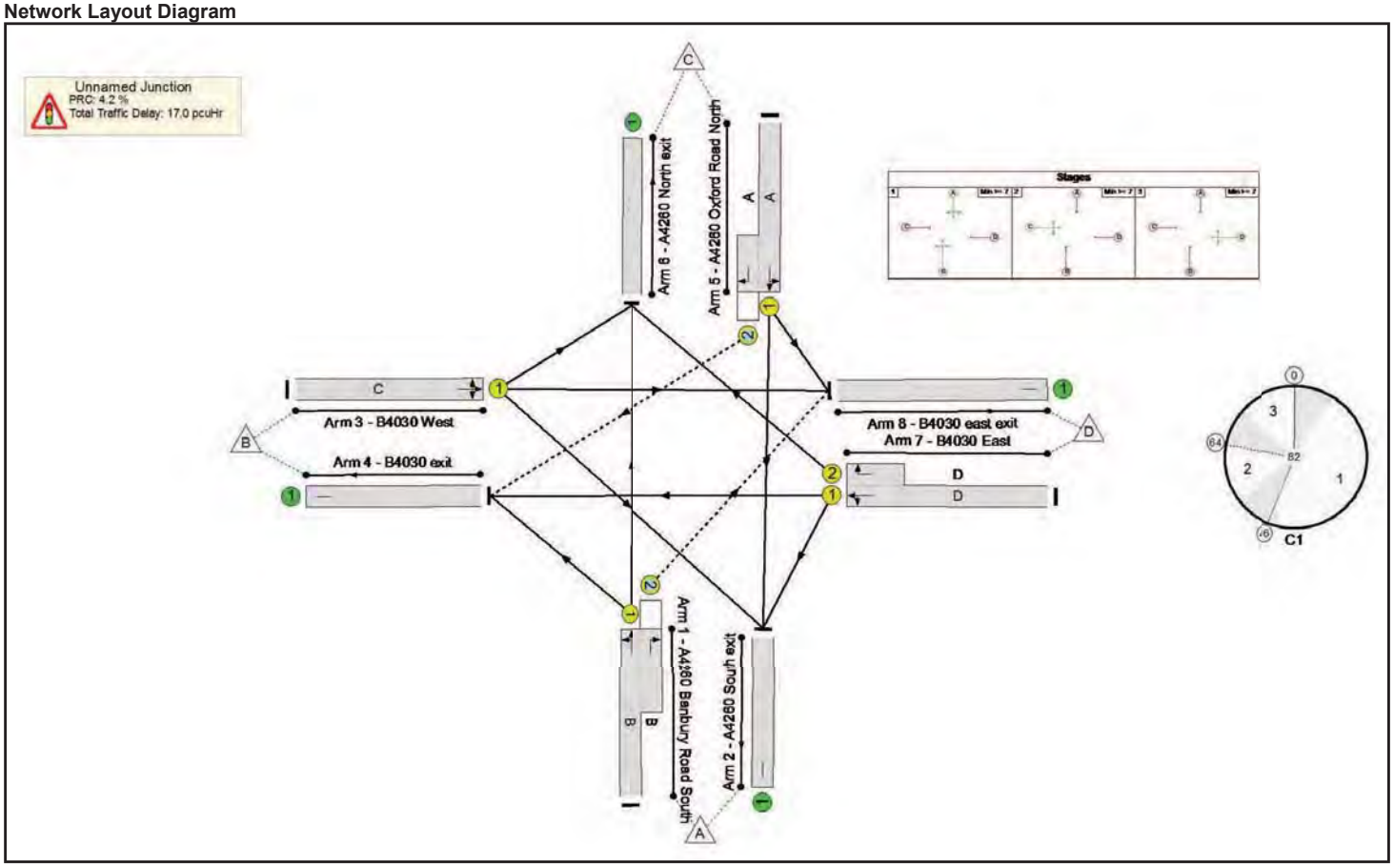
Stage	1	2	3
Duration	39	11	11
Change Point	0	46	64

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: Hopscroft Holt junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**86.4%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**86.4%**
1/1+1/2	A4260 Banbury Road South Left Ahead Right	U+O	N/A	N/A	B		1	39	-	385	1856:1622	843+69	42.2 : 42.2%
2/1	A4260 South exit	U	N/A	N/A	-		-	-	-	883	Inf	Inf	0.0%
3/1	B4030 West Right Left Ahead	U	N/A	N/A	C		1	11	-	211	1833	268	78.7%
4/1	B4030 exit	U	N/A	N/A	-		-	-	-	194	Inf	Inf	0.0%
5/1+5/2	A4260 Oxford Road North Ahead Right Left	U+O	N/A	N/A	A		1	39	-	798	1906:1665	874+50	86.4 : 86.4%
6/1	A4260 North exit	U	N/A	N/A	-		-	-	-	399	Inf	Inf	0.0%
7/1+7/2	B4030 East Left Ahead Right	U	N/A	N/A	D		1	11	-	247	1840:1768	248+58	80.7 : 80.7%
8/1	B4030 east exit	U	N/A	N/A	-		-	-	-	165	Inf	Inf	0.0%

Full Input Data And Results

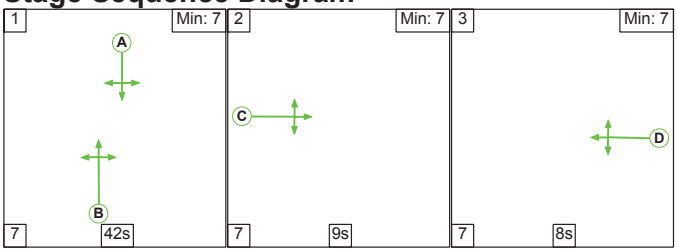
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Hopscroft Holt junction	**-**	**-**	**72**	**0**	**0**	**9.8**	**7.1**	**0.2**	**17.0**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**72**	**0**	**0**	**9.8**	**7.1**	**0.2**	**17.0**	**-**	**-**	**-**	**-**
1/1+1/2	385	385	29	0	0	1.4	0.4	0.2	1.9	18.0	5.0	0.4	5.4
2/1	883	883	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	211	211	-	-	-	2.0	1.7	-	3.7	63.4	4.6	1.7	6.4
4/1	194	194	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	798	798	43	0	0	4.1	3.0	0.0	7.2	32.3	15.7	3.0	18.8
6/1	399	399	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1+7/2	247	247	-	-	-	2.3	2.0	-	4.2	61.7	4.4	2.0	6.4
8/1	165	165	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 4.2 Total Delay for Signalled Lanes (pcuHr): 17.04 Cycle Time (s): 82
PRC Over All Lanes (%): 4.2 Total Delay Over All Lanes(pcuHr): 17.04

Full Input Data And Results

Scenario 4: '2013 Base PM' (FG4: '2013 Base PM', Plan 1: 'Network Control Plan 1')

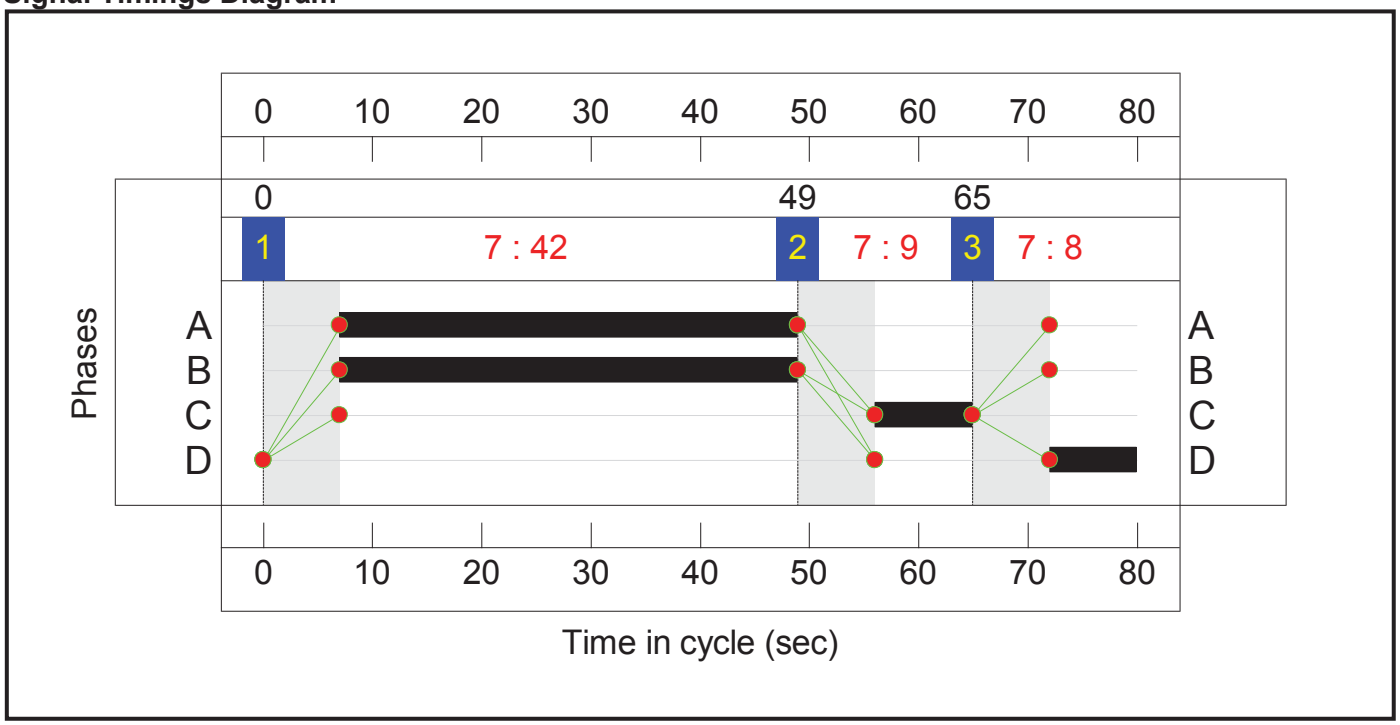
Stage Sequence Diagram



Stage Timings

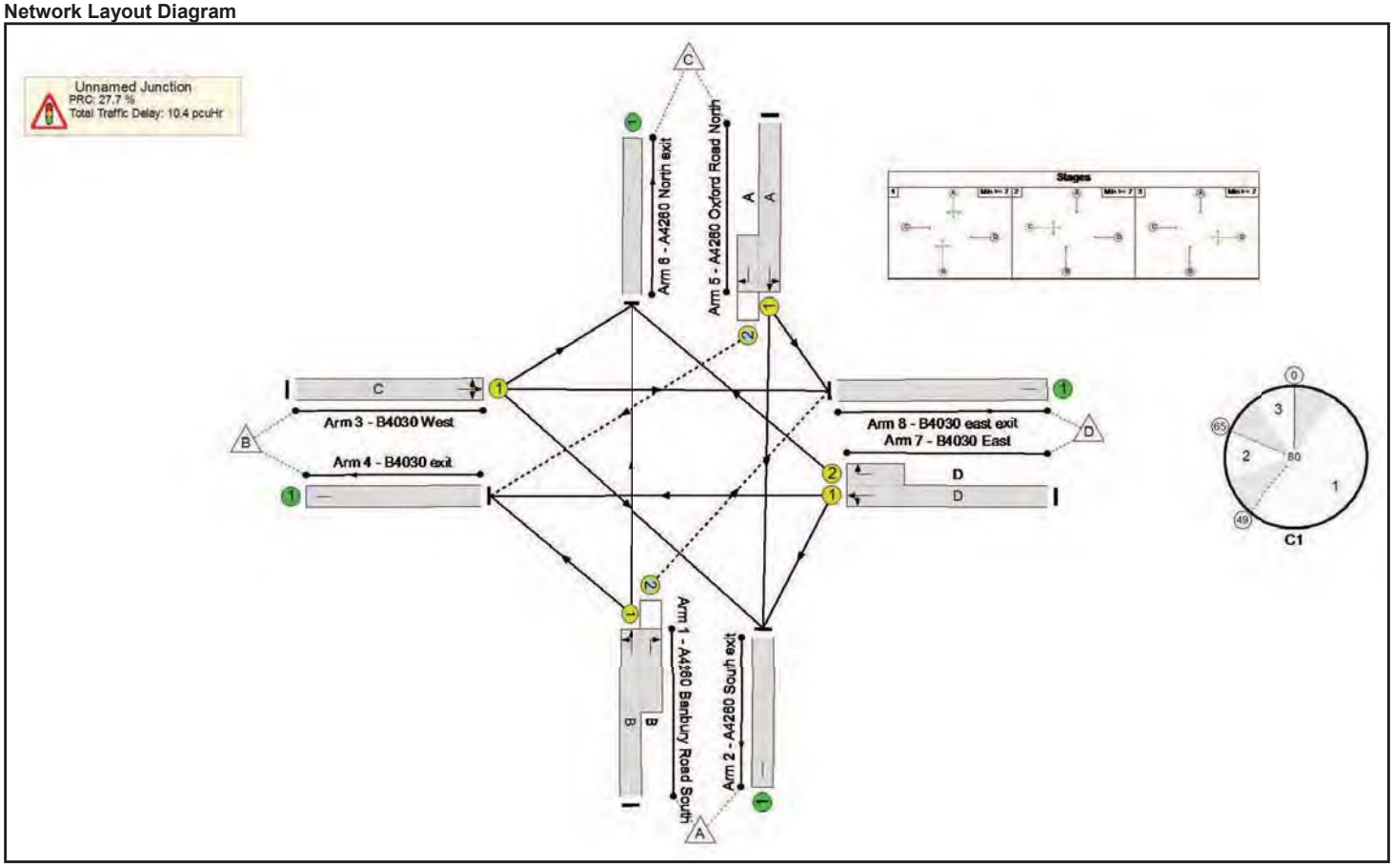
Stage	1	2	3
Duration	42	9	8
Change Point	0	49	65

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Hopscroft Holt junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**70.5%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**70.5%**
1/1+1/2	A4260 Banbury Road South Left Ahead Right	U+O	N/A	N/A	B		1	42	-	702	1848:1622	943+52	70.5 : 70.5%
2/1	A4260 South exit	U	N/A	N/A	-		-	-	-	313	Inf	Inf	0.0%
3/1	B4030 West Right Left Ahead	U	N/A	N/A	C		1	9	-	153	1877	235	65.2%
4/1	B4030 exit	U	N/A	N/A	-		-	-	-	218	Inf	Inf	0.0%
5/1+5/2	A4260 Oxford Road North Ahead Right Left	U+O	N/A	N/A	A		1	42	-	327	1899:1665	917+103	32.1 : 32.1%
6/1	A4260 North exit	U	N/A	N/A	-		-	-	-	686	Inf	Inf	0.0%
7/1+7/2	B4030 East Left Ahead Right	U	N/A	N/A	D		1	8	-	203	1869:1768	195+105	67.7 : 67.7%
8/1	B4030 east exit	U	N/A	N/A	-		-	-	-	168	Inf	Inf	0.0%

Full Input Data And Results

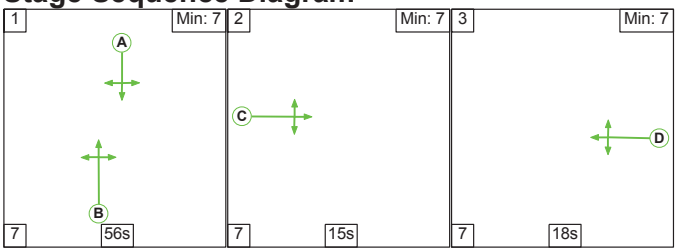
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Hopscroft Holt junction	**-**	**-**	**70**	**0**	**0**	**6.8**	**3.4**	**0.2**	**10.4**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**70**	**0**	**0**	**6.8**	**3.4**	**0.2**	**10.4**	**-**	**-**	**-**	**-**
1/1+1/2	702	702	37	0	0	2.6	1.2	0.0	3.8	19.7	11.2	1.2	12.4
2/1	313	313	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	153	153	-	-	-	1.4	0.9	-	2.3	54.9	3.2	0.9	4.1
4/1	218	218	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	327	327	33	0	0	0.9	0.2	0.1	1.3	14.0	3.5	0.2	3.7
6/1	686	686	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1+7/2	203	203	-	-	-	1.9	1.0	-	2.9	51.8	2.8	1.0	3.8
8/1	168	168	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 27.7 Total Delay for Signalled Lanes (pcuHr): 10.37 Cycle Time (s): 80
PRC Over All Lanes (%): 27.7 Total Delay Over All Lanes(pcuHr): 10.37

Full Input Data And Results

Scenario 5: '2021 Ref Case AM' (FG5: '2021 Ref Case AM', Plan 1: 'Network Control Plan 1')

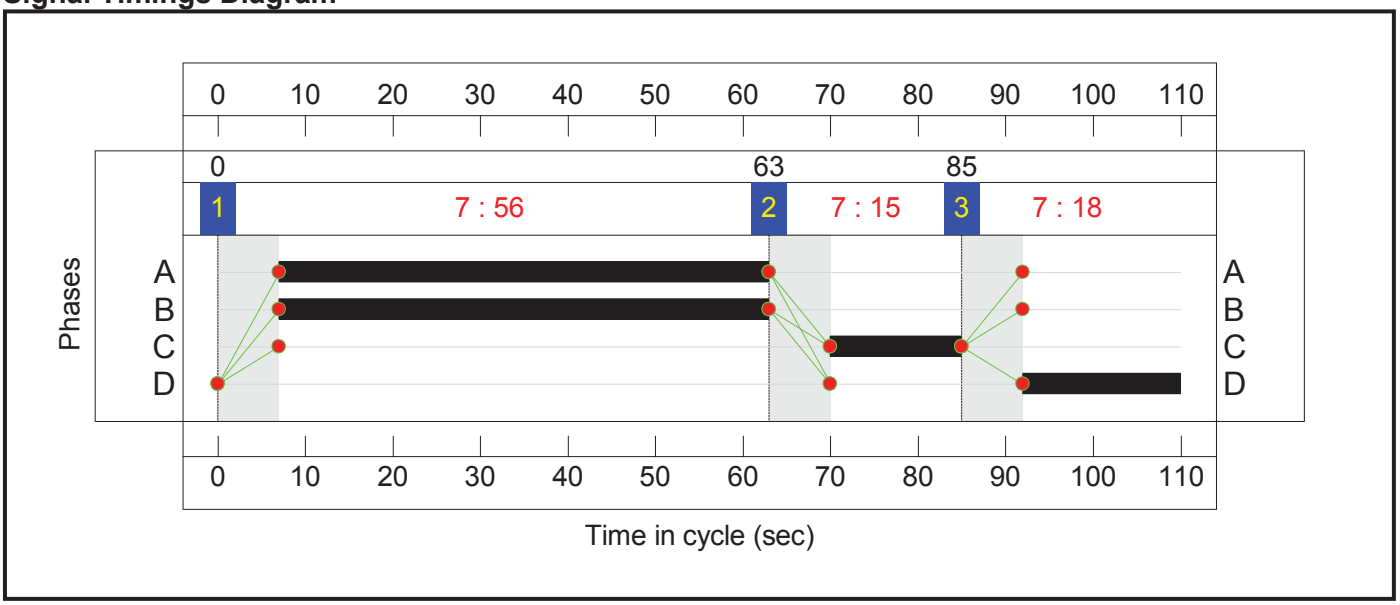
Stage Sequence Diagram



Stage Timings

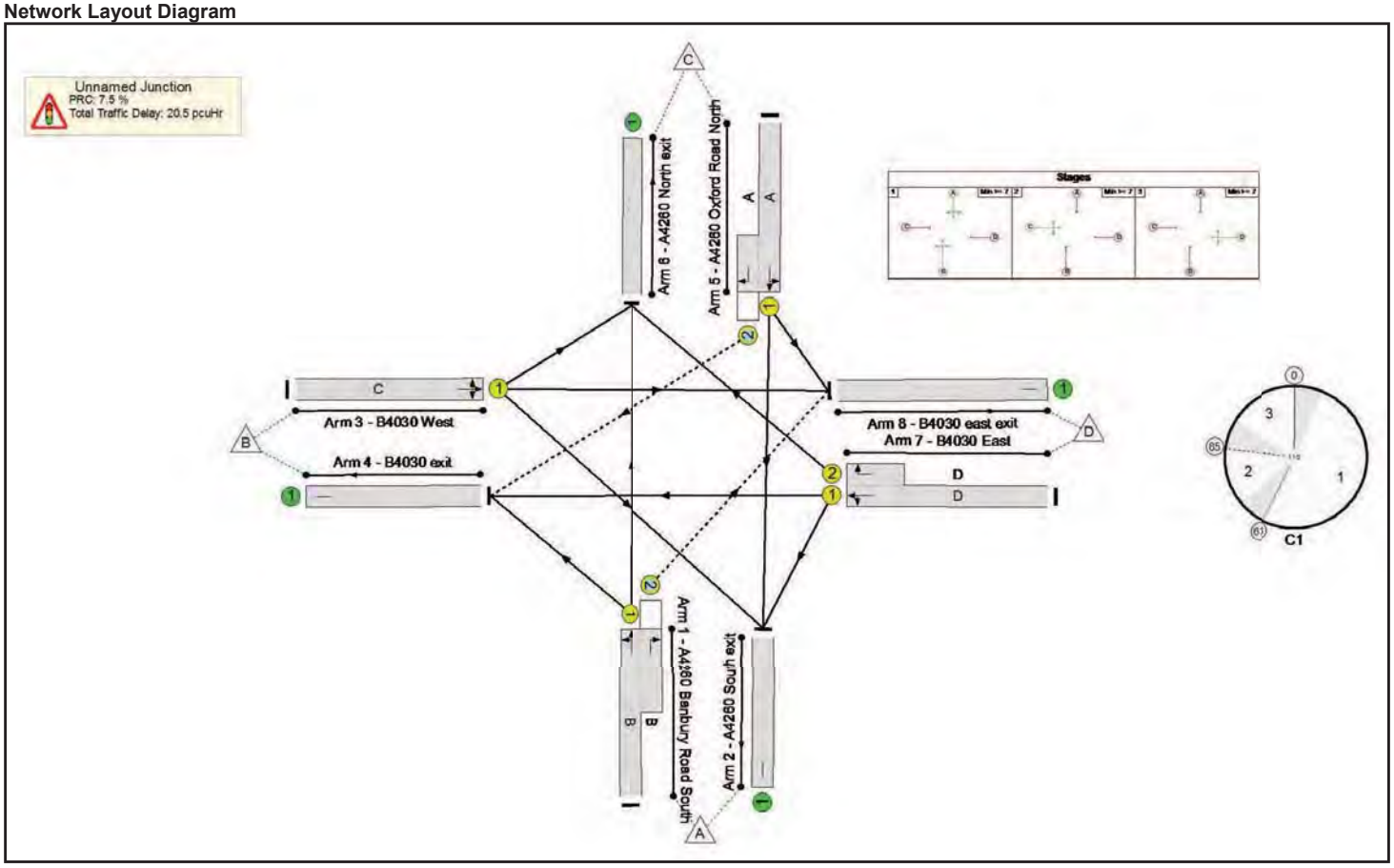
Stage	1	2	3
Duration	56	15	18
Change Point	0	63	85

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Hopscroft Holt junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**83.7%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**83.7%**
1/1+1/2	A4260 Banbury Road South Left Ahead Right	U+O	N/A	N/A	B		1	56	-	403	1856:1622	877+89	41.7 : 41.7%
2/1	A4260 South exit	U	N/A	N/A	-		-	-	-	932	Inf	Inf	0.0%
3/1	B4030 West Right Left Ahead	U	N/A	N/A	C		1	15	-	217	1833	267	81.4%
4/1	B4030 exit	U	N/A	N/A	-		-	-	-	200	Inf	Inf	0.0%
5/1+5/2	A4260 Oxford Road North Ahead Right Left	U+O	N/A	N/A	A		1	56	-	821	1906:1665	928+53	83.7 : 83.7%
6/1	A4260 North exit	U	N/A	N/A	-		-	-	-	414	Inf	Inf	0.0%
7/1+7/2	B4030 East Left Ahead Right	U	N/A	N/A	D		1	18	-	284	1826:1768	279+64	82.9 : 82.9%
8/1	B4030 east exit	U	N/A	N/A	-		-	-	-	179	Inf	Inf	0.0%

Full Input Data And Results

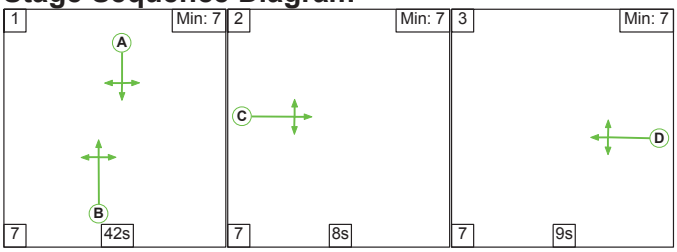
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Hopscroft Holt junction	**-**	**-**	**81**	**0**	**0**	**13.0**	**7.1**	**0.3**	**20.5**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**81**	**0**	**0**	**13.0**	**7.1**	**0.3**	**20.5**	**-**	**-**	**-**	**-**
1/1+1/2	403	403	37	0	0	1.8	0.4	0.3	2.4	21.4	6.8	0.4	7.1
2/1	932	932	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	217	217	-	-	-	2.7	2.0	-	4.8	79.1	6.4	2.0	8.4
4/1	200	200	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	821	821	44	0	0	5.1	2.5	0.0	7.7	33.6	21.0	2.5	23.5
6/1	414	414	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1+7/2	284	284	-	-	-	3.4	2.3	-	5.7	71.7	7.4	2.3	9.6
8/1	179	179	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 7.5 Total Delay for Signalled Lanes (pcuHr): 20.46 Cycle Time (s): 110
PRC Over All Lanes (%): 7.5 Total Delay Over All Lanes(pcuHr): 20.46

Full Input Data And Results

Scenario 6: '2021 Ref Case PM' (FG6: '2021 Ref Case PM', Plan 1: 'Network Control Plan 1')

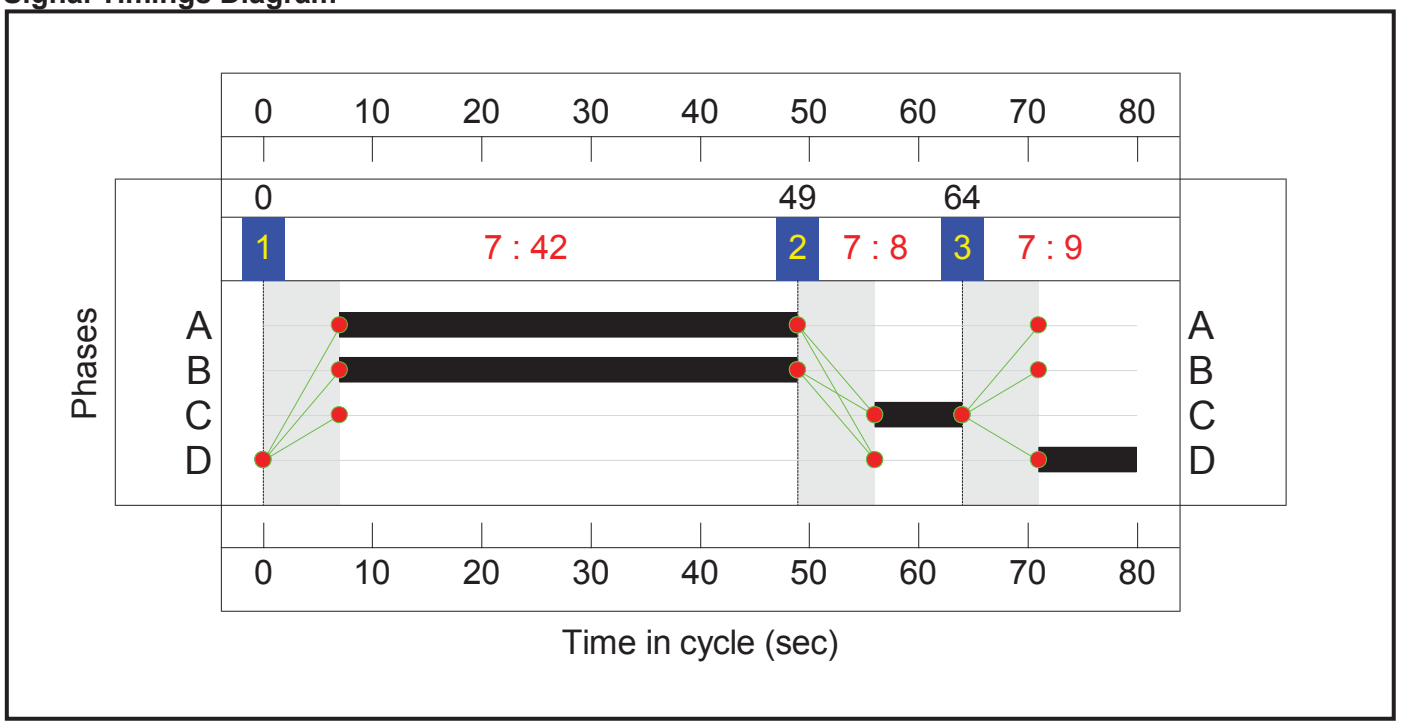
Stage Sequence Diagram



Stage Timings

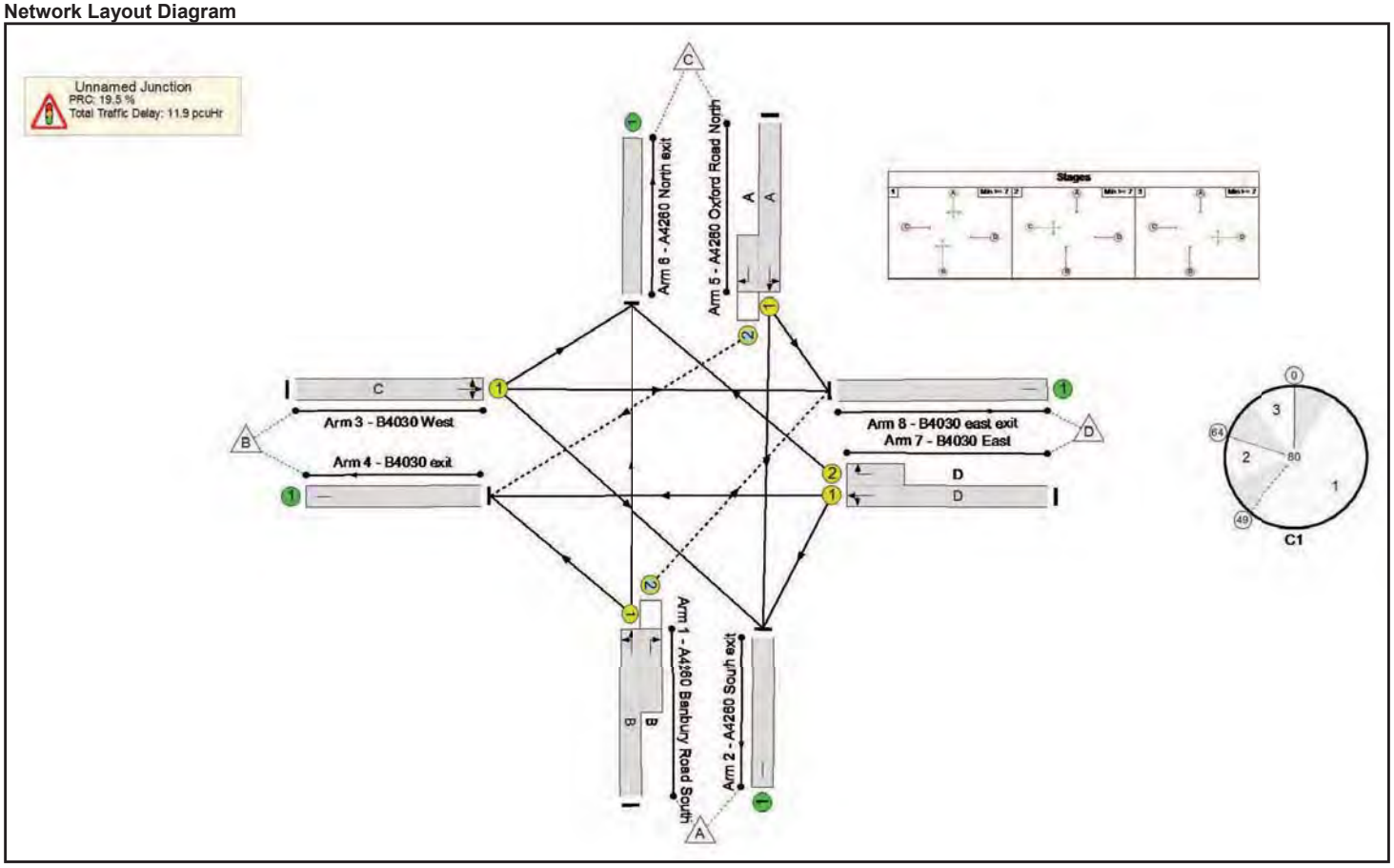
Stage	1	2	3
Duration	42	8	9
Change Point	0	49	64

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: Hopscroft Holt junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**75.3%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**75.3%**
1/1+1/2	A4260 Banbury Road South Left Ahead Right	U+O	N/A	N/A	B		1	42	-	743	1848:1622	925+75	74.3 : 74.3%
2/1	A4260 South exit	U	N/A	N/A	-		-	-	-	335	Inf	Inf	0.0%
3/1	B4030 West Right Left Ahead	U	N/A	N/A	C		1	8	-	159	1877	211	75.3%
4/1	B4030 exit	U	N/A	N/A	-		-	-	-	226	Inf	Inf	0.0%
5/1+5/2	A4260 Oxford Road North Ahead Right Left	U+O	N/A	N/A	A		1	42	-	340	1898:1665	917+102	33.4 : 33.4%
6/1	A4260 North exit	U	N/A	N/A	-		-	-	-	710	Inf	Inf	0.0%
7/1+7/2	B4030 East Left Ahead Right	U	N/A	N/A	D		1	9	-	224	1856:1768	210+106	70.8 : 70.8%
8/1	B4030 east exit	U	N/A	N/A	-		-	-	-	195	Inf	Inf	0.0%

Full Input Data And Results

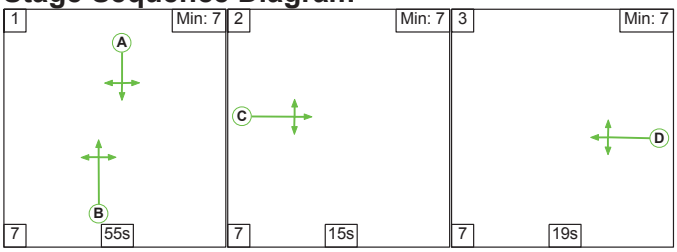
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Hopscroft Holt junction	**-**	**-**	**90**	**0**	**0**	**7.4**	**4.3**	**0.2**	**11.9**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**90**	**0**	**0**	**7.4**	**4.3**	**0.2**	**11.9**	**-**	**-**	**-**	**-**
1/1+1/2	743	743	56	0	0	2.8	1.4	0.0	4.3	20.9	12.1	1.4	13.5
2/1	335	335	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	159	159	-	-	-	1.5	1.4	-	3.0	67.1	3.4	1.4	4.8
4/1	226	226	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	340	340	34	0	0	1.0	0.3	0.1	1.3	14.3	3.7	0.3	4.0
6/1	710	710	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1+7/2	224	224	-	-	-	2.0	1.2	-	3.2	51.9	3.1	1.2	4.3
8/1	195	195	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 19.5 Total Delay for Signalled Lanes (pcuHr): 11.85 Cycle Time (s): 80
PRC Over All Lanes (%): 19.5 Total Delay Over All Lanes(pcuHr): 11.85

Full Input Data And Results

Scenario 7: '2021 Test Case AM' (FG7: '2021 Test Case AM', Plan 1: 'Network Control Plan 1')

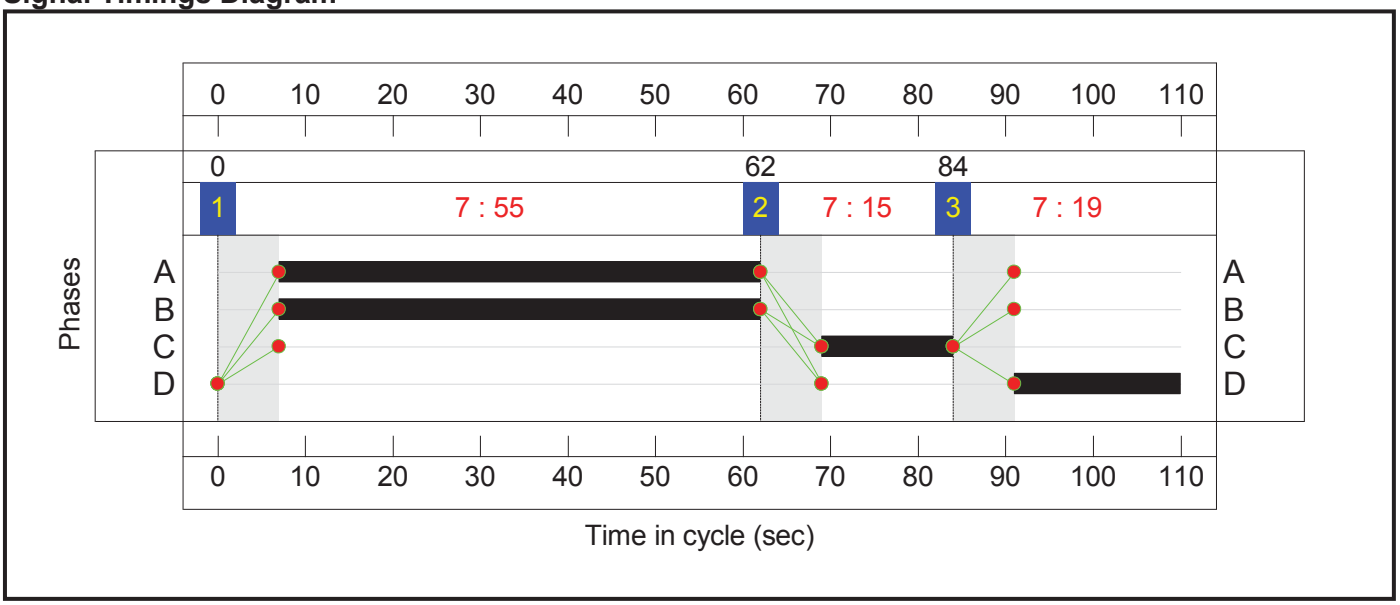
Stage Sequence Diagram



Stage Timings

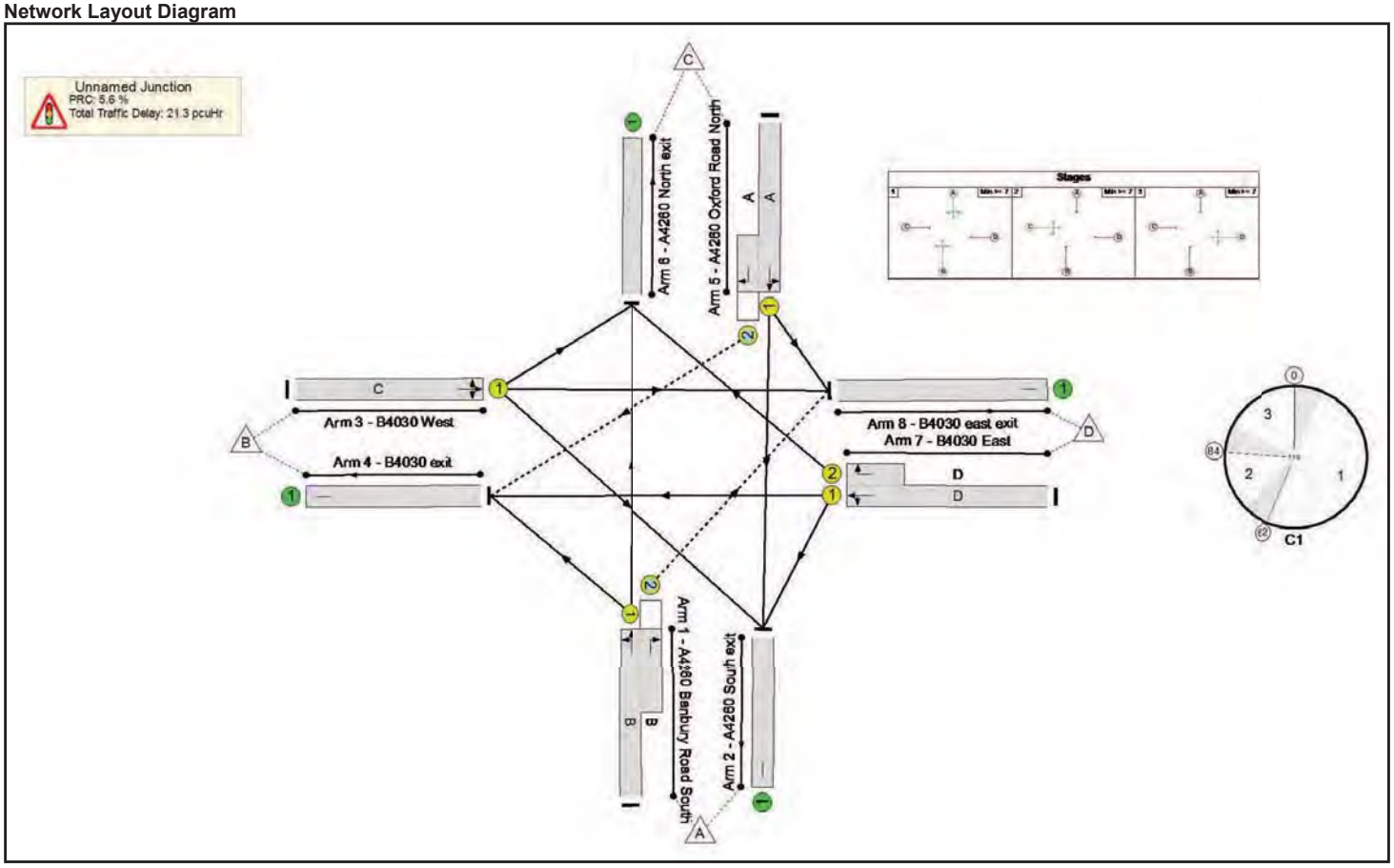
Stage	1	2	3
Duration	55	15	19
Change Point	0	62	84

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: Hopscroft Holt junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**85.2%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**85.2%**
1/1+1/2	A4260 Banbury Road South Left Ahead Right	U+O	N/A	N/A	B		1	55	-	407	1856:1622	854+96	42.8 : 42.8%
2/1	A4260 South exit	U	N/A	N/A	-		-	-	-	944	Inf	Inf	0.0%
3/1	B4030 West Right Left Ahead	U	N/A	N/A	C		1	15	-	217	1833	267	81.4%
4/1	B4030 exit	U	N/A	N/A	-		-	-	-	200	Inf	Inf	0.0%
5/1+5/2	A4260 Oxford Road North Ahead Right Left	U+O	N/A	N/A	A		1	55	-	821	1906:1665	912+52	85.2 : 85.2%
6/1	A4260 North exit	U	N/A	N/A	-		-	-	-	416	Inf	Inf	0.0%
7/1+7/2	B4030 East Left Ahead Right	U	N/A	N/A	D		1	19	-	298	1820:1768	292+66	83.2 : 83.2%
8/1	B4030 east exit	U	N/A	N/A	-		-	-	-	183	Inf	Inf	0.0%

Full Input Data And Results

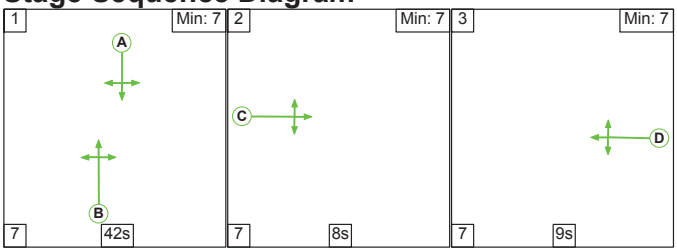
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Hopscroft Holt junction	**-**	**-**	**85**	**0**	**0**	**13.4**	**7.5**	**0.4**	**21.3**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**85**	**0**	**0**	**13.4**	**7.5**	**0.4**	**21.3**	**-**	**-**	**-**	**-**
1/1+1/2	407	407	41	0	0	1.8	0.4	0.3	2.5	22.4	6.9	0.4	7.3
2/1	944	944	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	217	217	-	-	-	2.7	2.0	-	4.8	79.1	6.4	2.0	8.4
4/1	200	200	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	821	821	44	0	0	5.3	2.8	0.0	8.1	35.6	21.4	2.8	24.2
6/1	416	416	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1+7/2	298	298	-	-	-	3.5	2.3	-	5.8	70.4	7.8	2.3	10.1
8/1	183	183	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 5.6 Total Delay for Signalled Lanes (pcuHr): 21.26 Cycle Time (s): 110
PRC Over All Lanes (%): 5.6 Total Delay Over All Lanes(pcuHr): 21.26

Full Input Data And Results

Scenario 8: '2021 Test Case PM' (FG8: '2021 Test Case PM', Plan 1: 'Network Control Plan 1')

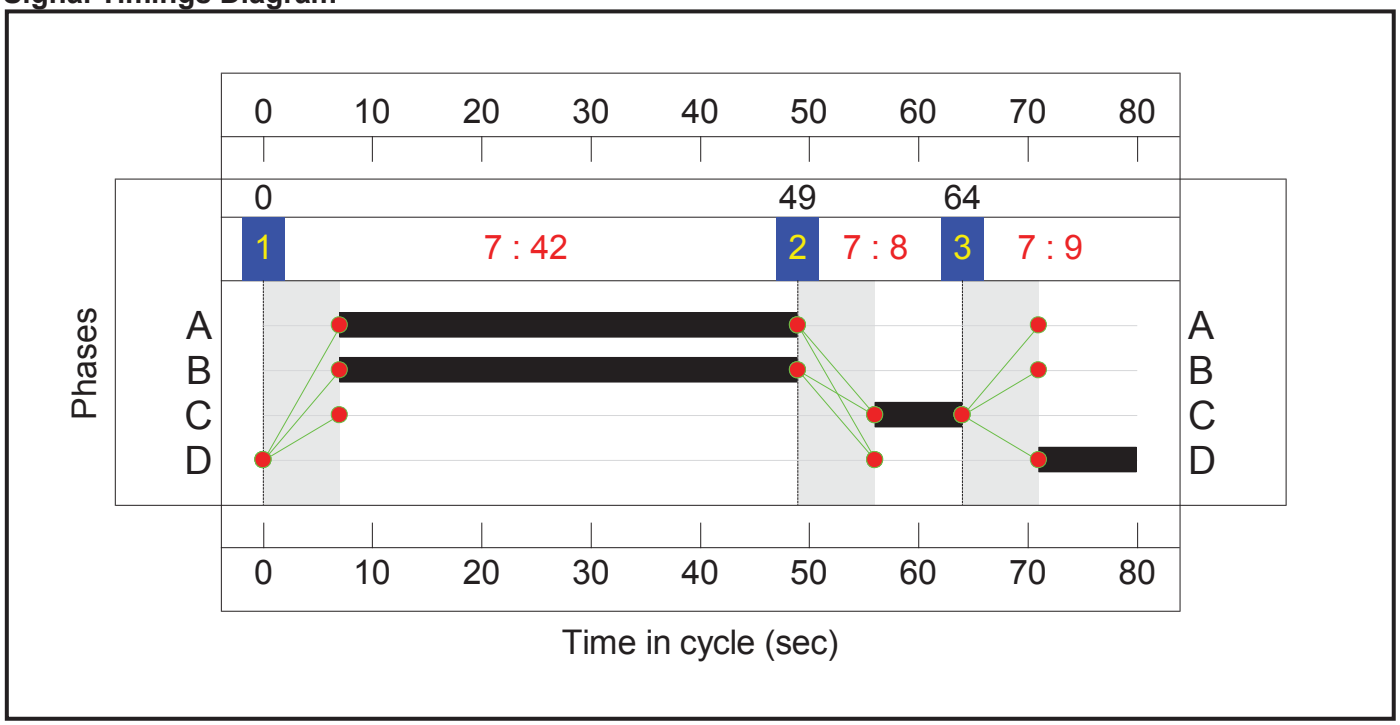
Stage Sequence Diagram



Stage Timings

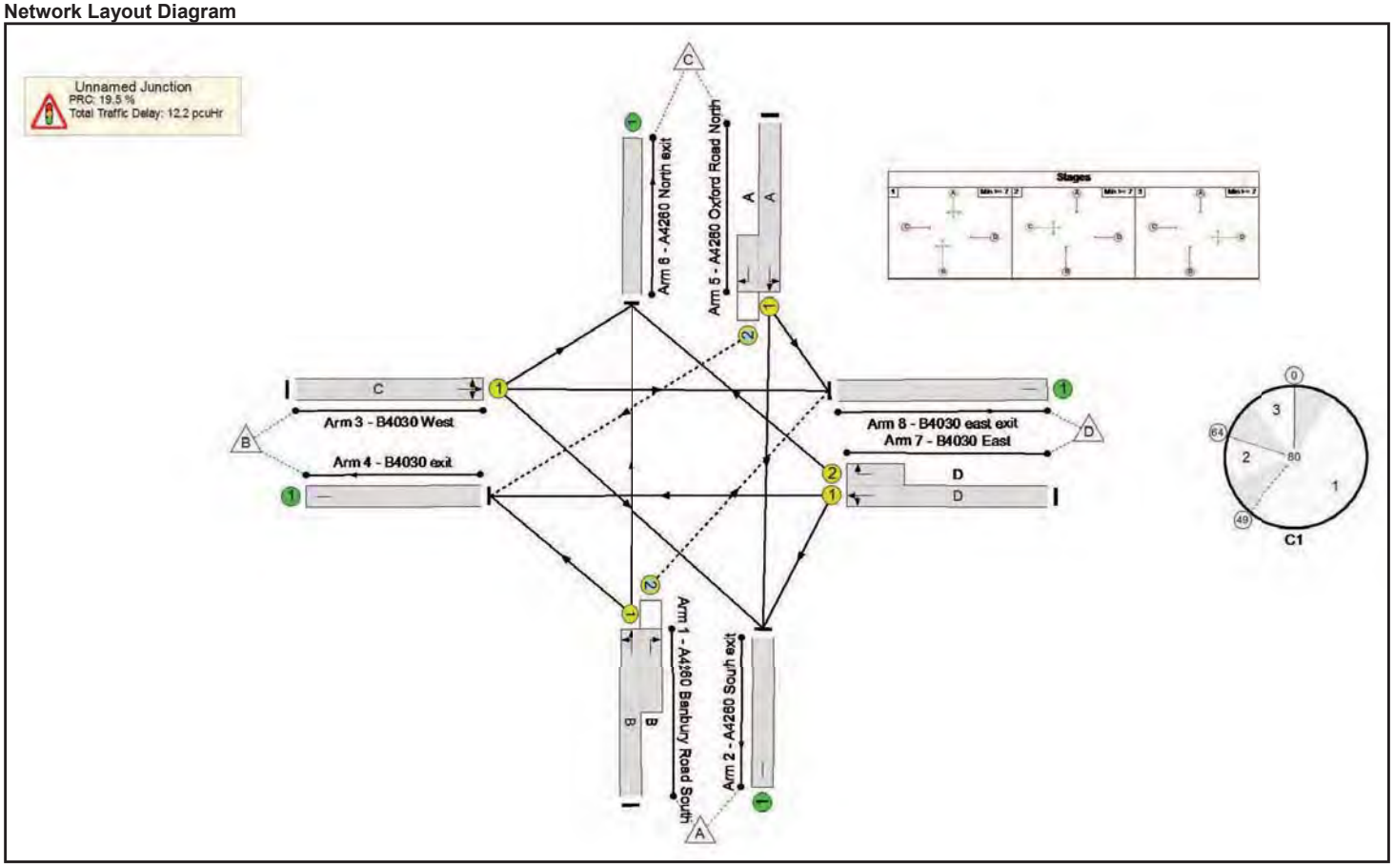
Stage	1	2	3
Duration	42	8	9
Change Point	0	49	64

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

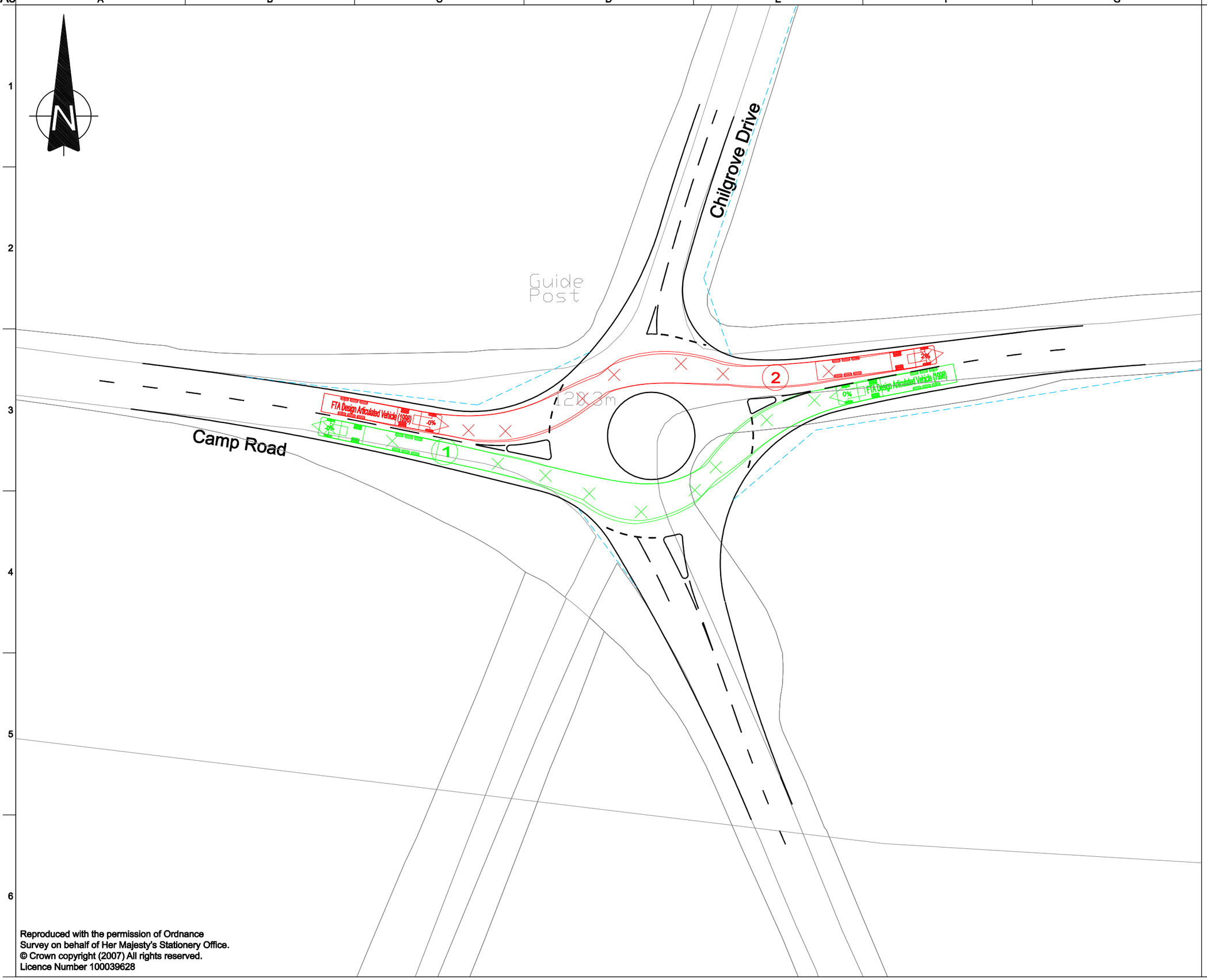
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Hopscroft Holt junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**75.3%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**75.3%**
1/1+1/2	A4260 Banbury Road South Left Ahead Right	U+O	N/A	N/A	B		1	42	-	751	1848:1622	917+85	74.9 : 74.9%
2/1	A4260 South exit	U	N/A	N/A	-		-	-	-	340	Inf	Inf	0.0%
3/1	B4030 West Right Left Ahead	U	N/A	N/A	C		1	8	-	159	1877	211	75.3%
4/1	B4030 exit	U	N/A	N/A	-		-	-	-	226	Inf	Inf	0.0%
5/1+5/2	A4260 Oxford Road North Ahead Right Left	U+O	N/A	N/A	A		1	42	-	348	1895:1665	918+99	34.2 : 34.2%
6/1	A4260 North exit	U	N/A	N/A	-		-	-	-	711	Inf	Inf	0.0%
7/1+7/2	B4030 East Left Ahead Right	U	N/A	N/A	D		1	9	-	230	1851:1768	211+104	73.2 : 73.2%
8/1	B4030 east exit	U	N/A	N/A	-		-	-	-	211	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Hopscroft Holt junction	**-**	**-**	**98**	**0**	**0**	**7.5**	**4.5**	**0.2**	**12.2**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**98**	**0**	**0**	**7.5**	**4.5**	**0.2**	**12.2**	**-**	**-**	**-**	**-**
1/1+1/2	751	751	64	0	0	2.9	1.5	0.1	4.4	21.1	12.2	1.5	13.6
2/1	340	340	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	159	159	-	-	-	1.5	1.4	-	3.0	67.1	3.4	1.4	4.8
4/1	226	226	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	348	348	34	0	0	1.0	0.3	0.1	1.4	14.3	3.8	0.3	4.1
6/1	711	711	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1+7/2	230	230	-	-	-	2.1	1.3	-	3.4	53.6	3.3	1.3	4.6
8/1	211	211	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 19.5 Total Delay for Signalled Lanes (pcuHr): 12.18 Cycle Time (s): 80
PRC Over All Lanes (%): 19.5 Total Delay Over All Lanes(pcuHr): 12.18

Appendix J Consented Site Access



Key:

Extent of Visibility Splays

Issue	Date	By	Chkd	Appd
01	30/06/08	NS	JR	JR
	First Issue			

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Client
North Oxfordshire Consortium

Job Title
Heyford Park
Transport Assessment

Drawing Title
Proposed Chilgrove Drive /
Camp Road Roundabout
- 28m ICD

Scale at A3 1:500

Plot ID

Drawing Status
Information

Job No	Drawing No	Issue
120669-00	Figure 7	01

J:\120000\120669-004 Internal Project Data\4-03 Drawings\Figure_7.dgn