

APPENDIX S

2024 Baseline With Full Development Sensitivity

As requested by LBH Highways, each of the junction assessed in Section 2 of this report have been re-assessed using the 2024 With Full Development Sensitivity traffic flows. The following paragraphs describe the results of these models under 2024 With Full Development Sensitivity flows.

Dawley Road/Blyth Road/Kestral Way/Betam Road Roundabout

ARM	AM Peak Base + Com		AM Peak		PM Peak Base + Com		PM Peak	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
Dawley Road (N)	0.769	3	0.790	4	0.604	2	0.608	2
Blyth Road	1.140	44	1.183	52	0.785	3	0.789	4
Dawley Road (S)	0.798	4	0.800	4	0.815	4	0.841	5
Kestral Way	0.105	0	0.105	0	0.306	0	0.318	1
Betam Road	0.064	0	0.064	0	0.163	0	0.168	0

In the morning peak, this junction operates at above capacity. When the impact of the Baseline with Full Development Sensitivity scenario is compared with the Baseline Sensitivity scenario, the impact from the proposed development is minimal. In the AM peak the Blyth Road approach's queue length increased by 8 pcus with the RFC increased by 0.043.

In the evening peak the junction operates within capacity.

Dawley Road/North Hyde Road/Millington Road/Bourne Avenue Roundabout

ARM	AM Peak Base + Com		AM Peak		PM Peak Base + Com		PM Peak	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
Dawley Road (N)	0.913	9	0.943	13	0.843	5	0.847	5
North Hyde Road	0.754	3	0.778	3	0.690	2	0.693	2
Millington Road	0.123	0	0.137	0	0.734	3	0.868	5
Dawley Road (S)	0.825	4	0.853	5	0.906	8	0.926	10
Bourne Avenue	0.859	5	0.889	6	0.629	2	0.652	2

This junction operates above capacity under anticipated 2024 Baseline with Full Development Sensitivity traffic flows. When the impact of the Baseline with Full Development Sensitivity scenario is compared with the Baseline Sensitivity scenario, the impact from the proposed development is minimal. In the AM peak the Dawley Road North approach's queue length increased by 4 pcus with the RFC increased by 0.03. In the evening peak, the Dawley Road South approach's queue length increased by 2 pcus with the RFC increased by 0.02.

Dawley Road/Station Road/Shepiston Lane mini-roundabout

ARM	AM Peak Base + Com		AM Peak		PM Peak Base + Com		PM Peak	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
Dawley Road (N)	0.793	4	0.797	4	0.757	3	0.777	3
Station Road	0.733	3	0.735	3	0.654	2	0.665	2
Shepiston Lane	0.662	2	0.688	2	0.807	4	0.813	4

This junction operates within capacity under anticipated 2024 Baseline With Full Development Sensitivity traffic flows.

North Hyde Road/Millington Road priority junction

ARM	AM Peak Base + Com		AM Peak		PM Peak Base + Com		PM Peak	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
Millington Road right turn	0.027	0	0.092	0	0.195	0	0.760	3
North Hyde Road (W) right turn	0.014	0	0.015	0	0.015	0	0.015	0

This junction operates within capacity under anticipated 2024 Baseline with Full Development Sensitivity traffic flows.

Station Road /Millington Road/ Bedwell Gardens priority junction

ARM	AM Peak Base + Com		AM Peak		PM Peak Base + Com		PM Peak	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
Millington Road right turn	0.258	0	0.267	0	0.891	6	0.944	9
Station Road (S) right turn	0.066	0	0.066	0	0.059	0	0.059	0
Bedwell Gardens right turn	0.520	1	0.520	1	0.292	0	0.293	0
Station Road (N) right turn	0.357	0	0.359	0	0.387	0	0.387	0

In the morning peak, this junction operates within capacity. In the evening peak the junction operates above capacity with Millington Road North arm operating at 0.944 RFC. When the impact of the Baseline with Full Development Sensitivity scenario is compared with the Baseline Sensitivity scenario, the impact from the proposed development is minimal. The Millington Road's queue length increased by 3 pcus with the RFC increased by 0.053.

North Hyde Road / Station Road signals junction

Link	ARM	AM Peak (82s) Base + Com		AM Peak (82s)		PM Peak (85s) Base + Com		PM Peak (85s)	
		DoS	Queue	DoS	Queue	DoS	Queue	DoS	Queue
1/1	Station Rd S Left Ahead	83.1	11.3	91.0	13.6	67.9	9.8	72.5	10.8
1/2	Station Rd S Right	92.8	6.9	92.8	7.0	125.9	45.1	125.9	45.1
2/1	Station Rd N Right	80.9	4.5	82.6	4.8	44.4	2.5	49.9	2.6
2/2	Station Rd N Left Ahead	113.5	55.7	124.3	78.9	72.8	11.5	72.8	11.5
3/1	N Hyde Rd W Ahead Left	72.4	8.5	69.5	8.5	105.9	26.1	139.7	89.8
3/2	N Hyde Rd W Right	46.1	1.8	46.1	1.8	41.3	1.7	41.3	1.7
4/1	N Hyde Rd E Left Ahead	118.5	88.7	127.4	130.4	123.3	87.6	127.1	99.3
4/2	N Hyde Rd E Right	36.1	2.5	33.1	2.4	96.5	11.0	38.6	1100
PRC		-31.7%		-41.6%		-39.9%		-55.2%	

This junction operates at above capacity in both the morning and evening peak. With the practical reserve capacity at -41.6% in the morning and -55.2% in the evening.

Link	ARM	AM Peak (82s) Base + Com		AM Peak (96s)		PM Peak (85s) Base + Com		PM Peak (96s)	
		DoS	Queue	DoS	Queue	DoS	Queue	DoS	Queue
1/1	Station Rd S Left Ahead	83.1	11.3	86.0	13.6	67.9	9.8	68.2	11.5
1/2	Station Rd S Right	92.8	6.9	108.7	14.3	125.9	45.1	119.8	39.8
2/1	Station Rd N Right	80.9	4.5	96.7	8.1	44.4	2.5	46.8	2.7
2/2	Station Rd N Left Ahead	113.5	55.7	117.6	67.5	72.8	11.5	68.5	12.0
3/1	N Hyde Rd W Ahead Left	72.4	8.5	59.2	8.8	105.9	26.1	121.9	64.3
3/2	N Hyde Rd W Right	46.1	1.8	54.0	2.1	41.3	1.7	46.7	1.9
4/1	N Hyde Rd E Left Ahead	118.5	88.7	117.2	101.3	123.3	87.6	120.4	85.7
4/2	N Hyde Rd E Right	36.1	2.5	30.8	2.5	96.5	11.0	109.0	20.0
PRC		-31.7%		-30.6%		-39.9%		-35.5%	

By increasing the cycle time of the junction to UTC/Scoot control compatible timing to 96 seconds with the 2024 With Full Development Sensitivity traffic in place would result in the junction performing better than under the 2024 Baseline Sensitivity traffic flows.

High Street / Station Road signals junction

LINK	ARM	AM Peak		PM Peak	
		DoS	Queue	DoS	Queue
1/1	Station Road (N) Ahead	76.4	10.0	55.2	5.8
1/2	Station Road (N) Right	66.5	4.9	64.6	4.7
2/1	High Street (S) Ahead Left	85.6	12.7	93.0	18.3
3/1	Station Road (W) Left Right	92.6	13.3	92.9	12.7
PRC		-2.8%		-3.3%	

This junction operates at above capacity in both the morning and evening peak. With the practical reserve capacity at -2.8% in the morning and -3.3% in the evening. It is considered with the 2024 With Full Development in place, the impact on this junction cannot be considered as severe.

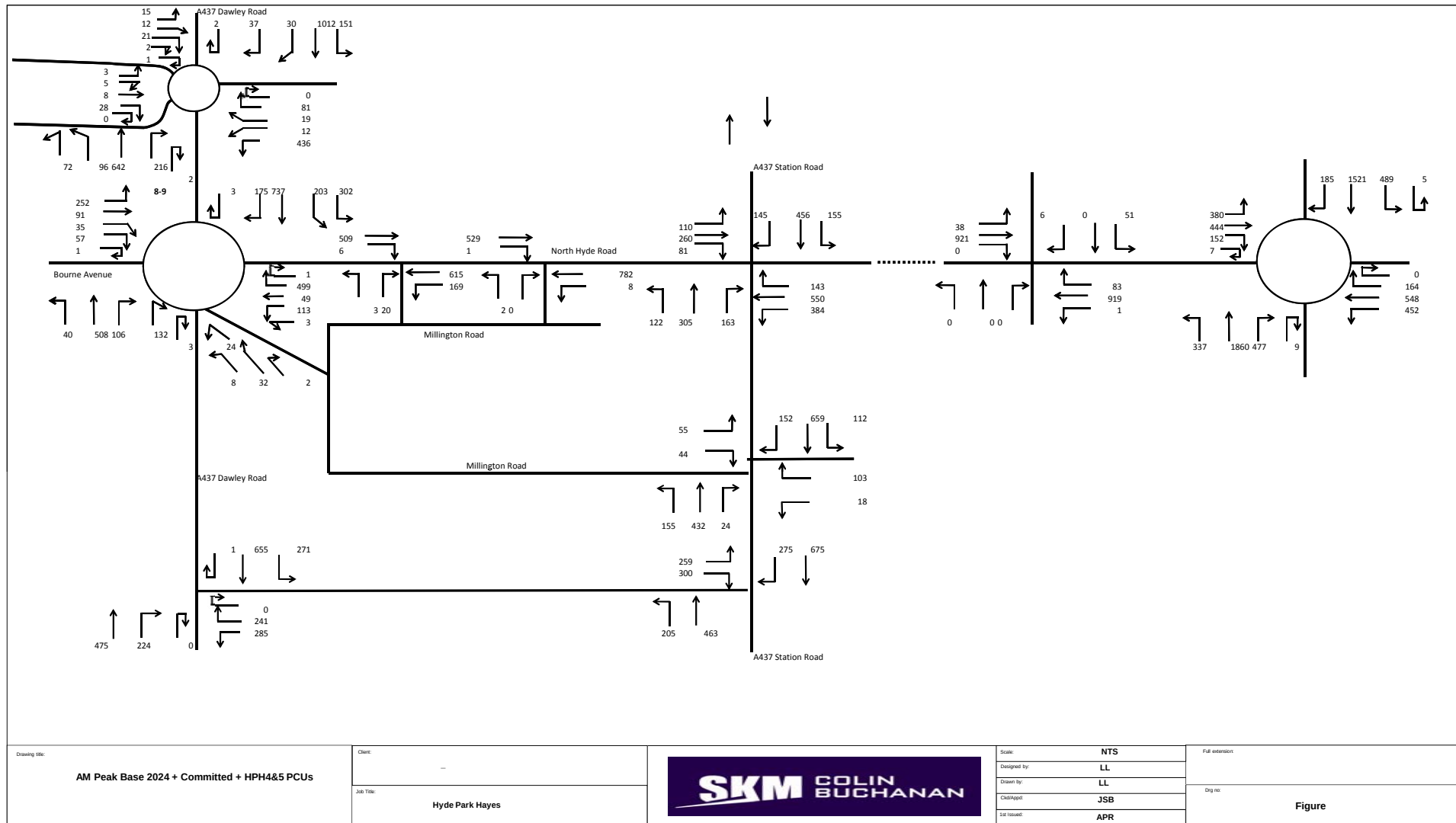
Transyt Results –North Hyde Gardens/North Hyde Road/Watersplash Lane & North Hyde Road / Hayes Bypass
/ Hayes Road signalised roundabout

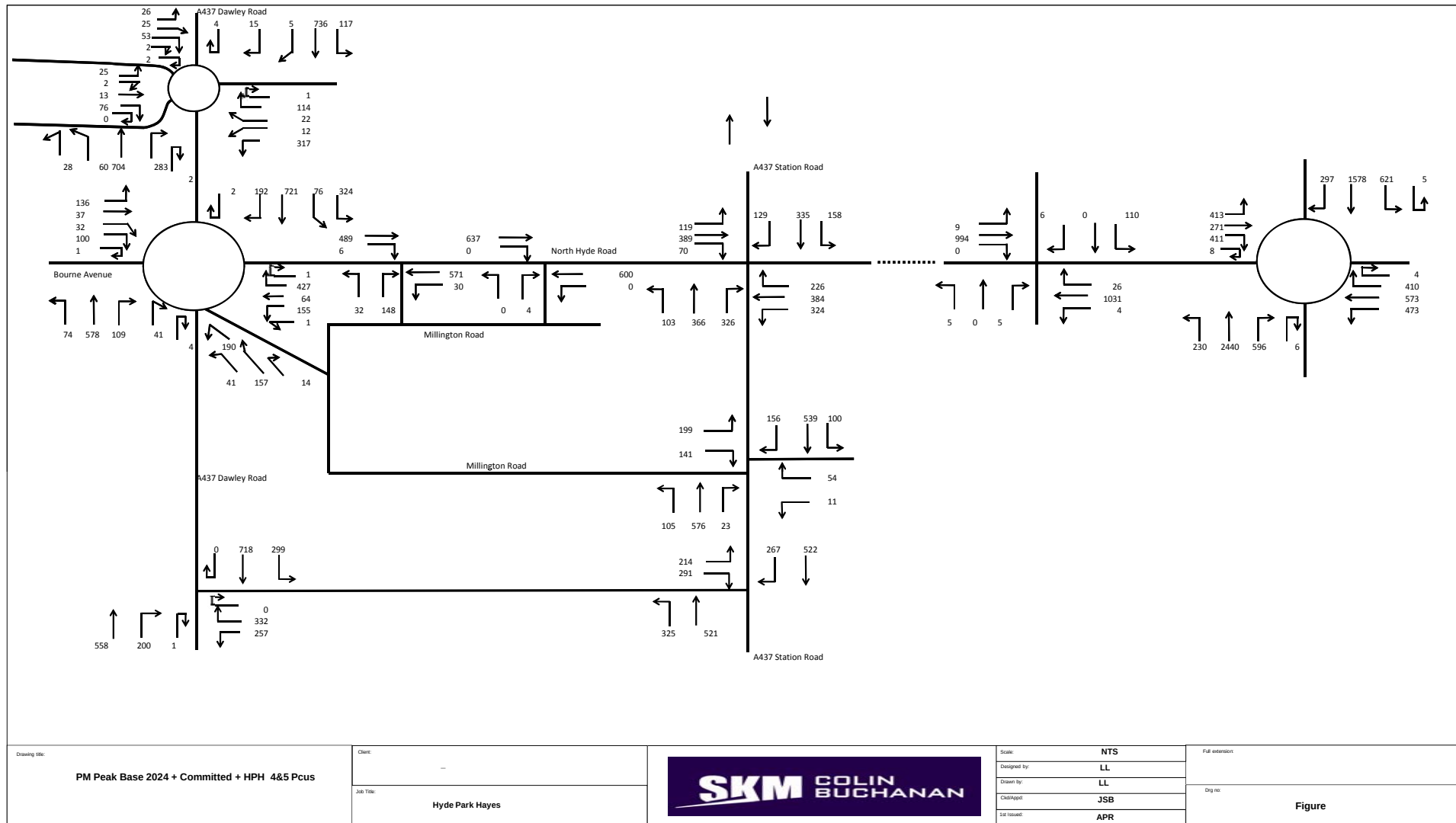
Approach	AM Peak		PM Peak	
	DoS %	Queue	DoS%	Queue
Bulls Bridge Roundabout				
Hayes Road Eastbound nearside	76	9	91	12
Hayes Road Eastbound lane 2	52	4	99	17
Hayes Road Eastbound lane 3	13	1	42	3
The Parkway Southbound nearside	87	16	90	18
The Parkway Southbound lane 2	87	15	91	18
The Parkway Southbound lane 3	86	14	92	18
Hayes Road Westbound nearside	78	6	86	10
Hayes Road Westbound lane 2	86	8	78	8
Hayes Road Westbound lane 3	90	10	67	6
Hayes Road Westbound lane 4	39	2	53	4
The Parkway Northbound nearside	39	4	97	25
The Parkway Northbound lane 2	90	16	103	38
The Parkway Northbound lane 3	89	17	94	22
The Parkway Northbound lane 4	90	17	65	9
North Hyde Rd/ North Hyde Gardens				
North Hyde Gardens Southbound	12	1	23	2
Watersplash Lane	9	0	9	0
North Hyde Rd Eastbound	87	18	88	19
North Hyde Rd Westbound nearside	61	11	64	9
North Hyde Rd Westbound Right turn	18	1	5	0
Internal Links				
Internal Eastbound nearside	42	4	35	4
Internal Eastbound lane 2	36	4	53	5
Internal Eastbound lane 3	41	4	57	5
Internal Eastbound lane 4	12	0	30	0
Internal southbound nearside	38	1	67	4
Internal southbound lane 2	48	2	64	3
Internal southbound lane 3	46	1	57	3
Internal southbound lane 4	16	0	29	0
Internal westbound nearside	49	4	89	11
Internal westbound lane 2	45	0	45	1
Internal westbound lane 3	20	0	38	1
Internal northbound nearside	88	5	71	4
Internal northbound lane 2	82	5	86	6
Internal northbound lane 3	58	4	90	7
Internal northbound lane 4	59	1	57	4

During the AM peak the network operates within capacity with all approaches operate at below 90% degree of saturation and all internal queues do not exceed 5PCUs. During the PM peak the network experiences capacity problems. The degree of saturation exceeds 90% on numerous approaches and internal queues on the Bulls Bridge Roundabout exceed 5PCUs on more than one approach.

Approach	AM Peak				PM Peak			
	Baseline		HPH 4&5		Baseline		HPH 4&5	
	DoS	Q	DoS	Q	DoS	Q	DoS	Q
Bulls Bridge Roundabout								
Hayes Road Eastbound nearside	76	10	0	-1	89	11	+2	+1
Hayes Road Eastbound lane 2	51	4	+1	0	92	11	+7	+6
Hayes Road Eastbound lane 3	13	1	0	0	37	2	+5	+1
The Parkway Southbound nearside	88	16	-1	0	89	18	+1	0
The Parkway Southbound lane 2	83	13	+4	+2	91	18	0	0
The Parkway Southbound lane 3	88	15	-2	-1	92	19	0	-1
Hayes Road Westbound nearside	78	6	0	0	86	11	0	-1
Hayes Road Westbound lane 2	86	8	0	0	70	7	+8	+1
Hayes Road Westbound lane 3	86	8	+4	+2	62	6	+5	0
Hayes Road Westbound lane 4	39	2	0	0	52	4	+1	0
The Parkway Northbound nearside	29	3	+10	+1	98	27	-1	-2
The Parkway Northbound lane 2	88	15	+2	+1	100	30	+3	+8
The Parkway Northbound lane 3	86	16	+3	+1	95	23	-1	-1
The Parkway Northbound lane 4	87	16	+3	+1	66	9	-1	0
North Hyde Rd/ North Hyde Gardens								
North Hyde Gardens Southbound	12	1	0	0	24	2	-1	0
Watersplash Lane	9	0	0	0	9	0	0	0
North Hyde Rd Eastbound	86	17	+1	+1	76	13	+12	+6
North Hyde Rd Westbound nearside	55	11	+6	0	63	7	+1	+2
North Hyde Rd Westbound Right turn	17	1	+1	0	5	0	0	0
Internal Links								
Internal Eastbound nearside	42	4	0	0	38	4	-3	0
Internal Eastbound lane 2	34	3	+2	+1	53	4	0	+1
Internal Eastbound lane 3	43	3	-2	+1	49	4	+8	+1
Internal Eastbound lane 4	12	0	0	0	25	0	+5	0
Internal southbound nearside	38	1	0	0	52	2	15	+2
Internal southbound lane 2	47	1	+1	+1	66	4	-2	-1
Internal southbound lane 3	47	1	-1	0	58	3	-1	0
Internal southbound lane 4	14	0	2	0	30	0	-1	0
Internal westbound nearside	48	3	+1	+1	89	11	0	0
Internal westbound lane 2	44	1	+1	-1	44	1	1	0
Internal westbound lane 3	21	0	-1	0	39	1	-1	0
Internal northbound nearside	88	5	0	0	68	3	+3	+1
Internal northbound lane 2	82	5	0	0	87	7	-1	-1
Internal northbound lane 3	58	4	0	0	88	6	2	+1
Internal northbound lane 4	59	1	0	0	55	4	2	0

When compare the difference in the degree of saturation between the 2024 Baseline Sensitivity and 2024 With Full Development scenarios, all links with a degree of saturation greater than 90% does not exceed 3%, except on the Hayes Road Eastbound Lane 2 nearside lane.





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PRT File

AM Base B24+Com+H4&5

1 T R A N S Y T 12

Traffic Network Study Tool

Analysis Program Release 3 (March 2004)
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THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:- "BULLS BRIDGE RABOUT_AM_ST.DAT" at 19:04 on 06/08/12

TRANSYT 12.0

PARAMETERS CONTROLLING DIMENSIONS OF PROBLEM :

NUMBER OF NODES = 8
NUMBER OF LINKS = 70
NUMBER OF OPTIMISED NODES = 8
MAXIMUM NUMBER OF GRAPHIC PLOTS = 0
NUMBER OF STEPS IN CYCLE = 65
MAXIMUM NUMBER OF SHARED STOPLINES = 2
MAXIMUM NUMBER OF TIMING POINTS = 3
MAXIMUM LINKS AT ANY NODE = 12

CORE REQUESTED = 14800 WORDS
CORE AVAILABLE = 72000 WORDS

DATA INPUT :-

CARD NO. CARD TYPE
(1)= TITLE:-
CARD NO. CARD TYPE CYCLE TIME NO. OF STEPS PERIOD DISPLACEMENTS SETTINGS CYCLE SCALE SCALE CARD32 0=NONE COPIES CLIMB VALUE VALUE
(SEC) PER 1-1200 START END 0=NO 1=EQUAL 10-200 50-200 0=TIMES 1=0/SET FINAL OUTPUT P PER P PER
CYCLE CYCLE MINS. (SEC) (SEC) 1=YES CYCLE % % 1=SPEEDS 2=FULL OUTPUT 1=FULL PCU-H 100
2)= 1 65 65 60 2 3 0 1 100 100 0 0 0 0 1420 260 100
CARD NO. CARD TYPE
3)= 2 146 126 127 128 129 130 131 132 0 0 0 0 0 0 0

LINKS HAVING SHARED STOPLINES
CARD NO. CARD TYPE FIRST SET..... SECOND SET..... THIRD SET.....
4)= 7 29 12602 0 0 0 0 0 0 0 0 0 0 0 0 0
5)= 7 31 58 0 0 0 0 0 0 0 0 0 0 0 0 0
6)= 7 36 37 0 0 0 0 0 0 0 0 0 0 0 0 0
7)= 7 38 39 0 0 0 0 0 0 0 0 0 0 0 0 0
8)= 7 40 41 0 0 0 0 0 0 0 0 0 0 0 0 0
9)= 7 42 62 0 0 0 0 0 0 0 0 0 0 0 0 0
10)= 7 52 53 0 0 0 0 0 0 0 0 0 0 0 0 0
11)= 7 54 56 0 0 0 0 0 0 0 0 0 0 0 0 0
12)= 7 1262 1261 0 0 0 0 0 0 0 0 0 0 0 0 0
13)= 7 1264 1263 0 0 0 0 0 0 0 0 0 0 0 0 0
14)= 7 1267 1266 0 0 0 0 0 0 0 0 0 0 0 0 0
15)= 7 1272 1271 0 0 0 0 0 0 0 0 0 0 0 0 0
16)= 7 1274 1273 0 0 0 0 0 0 0 0 0 0 0 0 0
17)= 7 1276 1275 0 0 0 0 0 0 0 0 0 0 0 0 0

NODE CARDS: MINIMUM STAGE TIMES (WORKING)
CARD NO. CARD TYPE NODE NO. S1 S2 S3 S4 S5 S6 S7 S8 S9 S10
18)= 10 126 7 7
19)= 10 127 7 7
20)= 10 128 7 7
21)= 10 129 7 7
22)= 10 130 7 7
23)= 10 131 7 7
24)= 10 132 7 7
25)= 10 146 7 7 7

NODE CARDS: PRECEDING INTERSTAGE TIMES (WORKING)
CARD NO. CARD TYPE NODE NO. S1 S2 S3 S4 S5 S6 S7 S8 S9 S10
26)= 11 126 6 6
27)= 11 127 5 5
28)= 11 128 6 6
29)= 11 129 5 5
30)= 11 130 6 6
31)= 11 131 5 5
32)= 11 132 5 6
33)= 11 146 7 8 8

NODE CARDS: STAGE CHANGE TIMES (WORKING)
CARD NO. CARD TYPE NODE NO. Sgl/Db1 Cycled S1 S2 S3 S4 S5 S6 S7 S8 S9 S10
34)= 12 126 1 0 33
35)= 12 127 1 62 31
36)= 12 128 1 17 4
37)= 12 129 1 34 54
38)= 12 130 1 33 20

39)= 12 131 1 63 32
40)= 12 132 1 34 21
41)= 12 146 1 10 45 60

LINK CARDS:										GIVEWAY DATA									
CARD NO.	CARD TYPE	LINK NO.	LINK1 NO.	LINK2 NO.	LINKS ONLY % FLOW	LINK1 GIVEWAY		LINK2 GIVEWAY		LINK LENGTH	STOP WT. X100	MAX FLOW	DELAY WT. X100	DISPSN X100					
						A1 X100	A2 X100	A1 X100	A2 X100										
42)=	30	1462	1465	0	0	50	0	0	0	0	0	0	0	0					
43)=	30	1466	1462	0	0	22	0	0	0	0	0	0	0	0					

CARD NO.		CARD TYPE	LINK NO.	EXIT NODE	LINK CARDS: FIRST GREEN				FIXED DATA: SECOND GREEN				LINK		STOP WT.X100	SAT FLOW	DELAY WT.X100	DISPSN X100
					STAGE	LAG	STAGE	LAG	STAGE	LAG	STAGE	LAG						
44)=	31	29	0	0	0	0	0	0	0	0	0	0	200	0	4000	0	0	
45)=	31	31	128	1	6	2	0	0	0	0	0	0	95	0	5591	0	0	
46)=	31	32	128	2	6	1	0	0	0	0	0	0	10	0	10000	0	0	
47)=	31	33	0	0	0	0	0	0	0	0	0	0	200	0	6000	0	0	
48)=	31	34	129	2	5	1	0	0	0	0	0	0	53	0	1806	0	0	
49)=	31	36	129	2	5	1	0	0	0	0	0	0	53	0	2047	0	0	
50)=	31	37	0	0	0	0	0	0	0	0	0	0	53	0	0	0	0	
51)=	31	38	129	2	5	1	0	0	0	0	0	0	53	0	2028	0	0	
52)=	31	39	0	0	0	0	0	0	0	0	0	0	53	0	0	0	0	
53)=	31	40	129	2	5	1	0	0	0	0	0	0	53	0	1867	0	0	
54)=	31	41	0	0	0	0	0	0	0	0	0	0	53	0	0	0	0	
55)=	31	42	132	1	5	2	0	0	0	0	0	0	58	0	2028	0	0	
56)=	31	43	132	2	6	1	0	0	0	0	0	0	10	0	10000	0	0	
57)=	31	44	129	1	5	2	0	0	0	0	0	0	45	0	1612	0	0	
58)=	31	45	129	1	5	2	0	0	0	0	0	0	45	0	1613	0	0	
59)=	31	46	130	1	6	2	0	0	0	0	0	0	200	0	4839	0	0	
60)=	31	47	130	2	6	1	0	0	0	0	0	0	10	0	10000	0	0	
61)=	31	48	131	2	5	1	0	0	0	0	0	0	63	0	1806	0	0	
62)=	31	50	131	2	5	1	0	0	0	0	0	0	63	0	1922	0	0	
63)=	31	52	131	2	5	1	0	0	0	0	0	0	63	0	1886	0	0	
64)=	31	53	0	0	0	0	0	0	0	0	0	0	63	0	0	0	0	
65)=	31	54	0	0	0	0	0	0	0	0	0	0	200	0	6000	0	0	
66)=	31	55	131	1	5	2	0	0	0	0	0	0	40	0	1855	0	0	
67)=	31	56	0	0	0	0	0	0	0	0	0	0	200	0	0	0	0	
68)=	31	57	131	1	5	2	0	0	0	0	0	0	40	0	1800	0	0	
69)=	31	58	0	0	0	0	0	0	0	0	0	0	95	0	0	0	0	
70)=	31	59	128	2	6	1	0	0	0	0	0	0	10	0	10000	0	0	
71)=	31	60	132	2	6	1	0	0	0	0	0	0	10	0	10000	0	0	
72)=	31	61	130	2	6	1	0	0	0	0	0	0	10	0	10000	0	0	
73)=	31	62	0	0	0	0	0	0	0	0	0	0	58	0	0	0	0	
74)=	31	63	0	0	0	0	0	0	0	0	0	0	10	0	3600	0	0	
75)=	31	64	129	1	5	2	0	0	0	0	0	0	45	0	1613	0	0	
76)=	31	65	129	1	5	2	0	0	0	0	0	0	45	0	1613	0	0	
77)=	31	66	131	1	5	2	0	0	0	0	0	0	40	0	1969	0	0	
78)=	31	67	131	1	5	2	0	0	0	0	0	0	40	0	1875	0	0	
79)=	31	68	0	0	0	0	0	0	0	0	0	0	200	0	3600	0	0	
80)=	31	1261	0	0	0	0	0	0	0	0	0	0	55	0	0	0	0	
81)=	31	1262	126	1	6	2	1	0	0	0	0	0	55	0	1905	0	0	
82)=	31	1263	0	0	0	0	0	0	0	0	0	0	55	0	0	0	0	
83)=	31	1264	126	1	6	2	1	0	0	0	0	0	55	0	2038	0	0	
84)=	31	1266	0	0	0	0	0	0	0	0	0	0	55	0	0	0	0	
85)=	31	1267	126	1	6	2	1	0	0	0	0	0	55	0	2019	0	0	
86)=	31	1269	126	1	6	2	1	0	0	0	0	0	55	0	1824	0	0	
87)=	31	1271	0	0	0	0	0	0	0	0	0	0	67	0	0	0	0	
88)=	31	1272	127	2	5	1	0	0	0	0	0	0	67	0	1876	0	0	
89)=	31	1273	0	0	0	0	0	0	0	0	0	0	67	0	0	0	0	
90)=	31	1274	127	2	5	1	0	0	0	0	0	0	67	0	2046	0	0	
91)=	31	1275	0	0	0	0	0	0	0	0	0	0	67	0	0	0	0	
92)=	31	1276	127	2	5	1	0	0	0	0	0	0	67	0	1973	0	0	
93)=	31	1278	127	2	5	1	0	0	0	0	0	0	67	0	1770	0	0	
94)=	31	1461	146	2	1	3	0	0	0	0	0	0	200	0	1860	0	0	
95)=	31	1462	146	1	0	3	0	0	0	0	0	0	130	0	1774	0	0	
96)=	31	1463	146	1	0	3	6	0	0	0	0	0	130	0	1833	0	0	
97)=	31	1464	146	3	8	1	0	0	0	0	0	0	200	0	1833	0	0	
98)=	31	1465	146	1	0	2	1	0	0	0	0	0	200	0	1926	0	0	
99)=	31	1467	0	0	0	0	0	0	0	0	0	0	200	0	2000	0	0	
100)=	31	1468	0	0	0	0	0	0	0	0	0	0	200	0	2000	0	0	
101)=	31	1469	0	0	0	0	0	0	0	0	0	0	200	0	2000	0	0	
102)=	31	12691	0	0	0	0	0	0	0	0	0	0	156	0	1800	0	0	
103)=	31	12692	0	0	0	0	0	0	0	0	0	0	200	0	0	0	0	
104)=	31	12693	126	1	6	2	0	0	0	0	0	0	10	0	10000	0	0	
105)=	31	12694	126	1	6	2	0	0	0	0	0	0	10	0	10000	0	0	
106)=	31	12695	126	2	6	1	0	0	0	0	0	0	20	0	1522	0	0	
107)=	31	12696	126	2	6	1	0	0	0	0	0	0	20	0	1640	0	0	
108)=	31	12697	126	2	6	1	0	0	0	0	0	0	20	0	1757	0	0	
109)=	31	12701	127	1	5	2	0	0	0	0	0	0	23	0	1777	0	0	
110)=	31	12702	127	1	5	2	0	0	0	0	0	0	23	0	1775	0	0	
111)=	31	12703	0	0	0	0	0	0	0	0	0	0	200	0	3600	0	0	
112)=	31	12704	127	1	5	2	0	0	0	0	0	0	23	0	1907	0	0	

LINK NUMBER	FLOW INTO LINK	SAT FLOW	DEGREE OF SAT	MEAN PER CRUISE	-----DELAY-----				---STOPS---		---QUEUE---		PERFORMANCE		EXIT NODE	GREEN START
					TIME (SEC)	RANDOM (H/H)	COST (\$/H)	STOPS /PCU	MEAN OF STOPS (\$/H)	MAX. AVERAGE EXCESS (PCU)	INDEX WEIGHTED SUM () VALUES (\$/H)					
(PCU/H)	(PCU/H)	(%)	(SEC)	(SEC)	(PCU-H/H)	(\$/H)	(%/PCU)	(\$/H)	(PCU)	(PCU)		1ST END	2ND END (SECONDS)			
1266	114	1267L	58	7.5	19.9	0.5 + 0.1	(8.7)	193	(1.3)	4	10.0	126	6	34		
1267	409	2019S	58	5.5	7.4	0.2 + 0.5	(11.2)	109	(1.6)	4	12.8	126	6	34		
1269	476	1824	59	5.5	7.8	0.3 + 0.7	(13.7)	14	(1.4)	1	15.1	126	6	34		
1271	159	1272L	42	8.5	16.3	0.5 + 0.2	(9.9)	92	(1.8)	4	11.8	127	36	62		
1272	171	1876S	42	6.5	11.9	0.4 + 0.2	(7.7)	28	(1.1)	4	8.7	127	36	62		
1273	159	1274L	36	8.5	15.1	0.5 + 0.1	(9.2)	89	(1.8)	4	11.0	127	36	62		
1274	149	2046S	36	6.5	10.9	0.3 + 0.1	(6.1)	26	(0.9)	4	7.0	127	36	62		
1275	159	1276L	41	8.5	15.9	0.5 + 0.2	(9.7)	91	(1.8)	4	11.5	127	36	62		
1276	181	1973S	41	6.5	11.4	0.4 + 0.2	(7.8)	27	(1.1)	4	8.8	127	36	62		
1278	92	1770	12	6.5	10.4	0.2 + 0.1	(3.6)	26	(0.5)	0	4.1	127	36	62		

1461	51	1860	12	18.5	25.1	0.3 + 0.1 (4.9)	81 (0.9)	1	5.8	146	46	60
1462	83	1774	18	13.5	26.5	0.5 + 0.1 (8.5)	95 (1.3)	1	9.9	146	10	60
1463	983	1833	61	13.5	6.7	0.9 + 0.8 (23.9)	47 (7.9)	11	31.9	146	10	1
1464	20	1833	9	18.5	34.7	0.1 + 0.0 (2.7)	96 (0.4)	0	3.1	146	3	10
1465	959	1926	87	18.5	25.0	3.2 + 3.3 (92.7)	94 (19.1)	18	111.9	146	10	46
1466	38	715	6	2.5	3.3	0.0 + 0.0 (0.4)	0 (0.0)	0	0.4			
1467	121	2000	6	18.5	1.5	0.0 + 0.0 (0.5)	1 (0.0)	0	0.5			
1468	19	2000	1	18.5	1.4	0.0 + 0.0 (0.1)	1 (0.0)	0	0.1			
1469	983	2000	49	18.5	2.3	0.0 + 0.5 (6.9)	3 (0.6)	0	7.4			
12601	976	1800	54	18.3	2.7	0.0 + 0.6 (8.4)	4 (0.8)	1	9.2			
12602	163	29L	60	18.5	1.7	0.0 + 0.1 (0.8)	6 (0.2)	28	1.0			
12603	10	10000	0	4.5	11.7	0.0 + 0.0 (0.4)	57 (0.0)	0	0.4	126	6	33
12604	10	10000	0	4.5	11.7	0.0 + 0.0 (0.4)	57 (0.0)	0	0.4	126	6	33
12605	330	1522	52	2.5	11.3	0.4 + 0.5 (14.1)	47 (2.6)	4	16.7	126	39	0
12606	92	1640	13	2.5	7.5	0.1 + 0.1 (2.5)	32 (0.5)	1	3.0	126	39	0
12607	556	1757	76	2.5	16.8	0.9 + 1.6 (35.7)	69 (6.6)	9	42.3	126	39	0
12701	720	1777	88	2.5	33.2	3.2 + 3.4 (92.8)	106 (17.9)	15	110.7	127	2	31
12702	702	1775	86	2.5	30.8	3.0 + 2.9 (83.9)	102 (16.8)	14	100.7	127	2	31
12703	2195	3600	61	18.5	1.8	0.0 + 0.8 (11.1)	2 (0.9)	1	12.0			
12704	768	1907	87	2.5	31.5	3.4 + 3.2 (93.9)	104 (18.7)	16	112.6	127	2	31

TOTAL DISTANCE TRAVELLED	TOTAL TIME SPENT	MEAN JOURNEY SPEED	TOTAL UNIFORM DELAY	TOTAL RANDOM+ OVERSAT DELAY	TOTAL COST OF STOPS	TOTAL COST OF STOPS	PENALTY FOR EXCESS QUEUES	TOTAL PERFORMANCE INDEX
(PCU-KM/H)	(PCU-H/H)	(KM/H)	(PCU-H/H)	(PCU-H/H)	(\$/H)	(\$/H)	(\$/H)	(\$/H)

3918.7 197.4 19.9 42.8 53.6 (1369.7) + (230.6) + (0.0) = 1600.3 TOTALS

ROUTE

	CRUISE LITRES PER HOUR	DELAY LITRES PER HOUR	STOPS LITRES PER HOUR	TOTALS LITRES PER HOUR
FUEL CONSUMPTION PREDICTIONS	218.4	+ 110.9	+ 105.1	= 434.5

NO. OF ENTRIES TO SUBPT = 1
NO. OF LINKS RECALCULATED= 70

PROGRAM TRANSYT FINISHED

<Enter Report 1 Title Here>

PRT File

PM Base B24+Com+H4&5

1 T R A N S Y T 12

Traffic Network Study Tool

Analysis Program Release 3 (March 2004)
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RG45 6AU, UK. Web: www.trlsoftware.co.uk

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:- "BULLS BRIDGE RABOUT_PM_MC_ST.DAT" at 19:05 on 06/08/12

TRANSYT 12.0

PARAMETERS CONTROLLING DIMENSIONS OF PROBLEM :

NUMBER OF NODES = 8
NUMBER OF LINKS = 70
NUMBER OF OPTIMISED NODES = 8
MAXIMUM NUMBER OF GRAPHIC PLOTS = 8
NUMBER OF STEPS IN CYCLE = 66
MAXIMUM NUMBER OF SHARED STOPLINES = 2
MAXIMUM NUMBER OF TIMING POINTS = 3
MAXIMUM LINKS AT ANY NODE = 12

CORE REQUESTED = 14914 WORDS
CORE AVAILABLE = 72000 WORDS

DATA INPUT :-

CARD NO. CARD TYPE
(1)= TITLE:-
CARD NO. CARD TYPE CYCLE TIME NO. OF STEPS PERIOD DISPLACEMENTS SETTINGS CYCLE SCALE SCALE CARD32 0=NONE COPIES CLIMB VALUE VALUE
(SEC) PER 1-1200 START END 0=NO 1=EQUAL 10-200 50-200 0=TIMES 1=0/SET FINAL OUTPUT P PER P PER
CYCLE MINS. (SEC) (SEC) 1=YES CYCLE % % 1=SPEEDS 2=FULL OUTPUT 1=FULL PCU-H 100
2)= 1 66 66 60 2 3 0 1 100 100 0 0 0 0 1420 260 100
CARD NO. CARD TYPE
3)= 2 146 126 127 128 129 130 131 132 0 0 0 0 0 0 0

LINKS HAVING SHARED STOPLINES
CARD NO. CARD TYPE FIRST SET..... SECOND SET..... THIRD SET.....
4)= 7 29 12602 0 0 0 0 0 0 0 0 0 0 0 0 0
5)= 7 31 58 0 0 0 0 0 0 0 0 0 0 0 0 0
6)= 7 36 37 0 0 0 0 0 0 0 0 0 0 0 0 0
7)= 7 38 39 0 0 0 0 0 0 0 0 0 0 0 0 0
8)= 7 40 41 0 0 0 0 0 0 0 0 0 0 0 0 0
9)= 7 42 62 0 0 0 0 0 0 0 0 0 0 0 0 0
10)= 7 52 53 0 0 0 0 0 0 0 0 0 0 0 0 0
11)= 7 54 56 0 0 0 0 0 0 0 0 0 0 0 0 0
12)= 7 1262 1261 0 0 0 0 0 0 0 0 0 0 0 0 0
13)= 7 1264 1263 0 0 0 0 0 0 0 0 0 0 0 0 0
14)= 7 1267 1266 0 0 0 0 0 0 0 0 0 0 0 0 0
15)= 7 1272 1271 0 0 0 0 0 0 0 0 0 0 0 0 0
16)= 7 1274 1273 0 0 0 0 0 0 0 0 0 0 0 0 0
17)= 7 1276 1275 0 0 0 0 0 0 0 0 0 0 0 0 0

NODE CARDS: MINIMUM STAGE TIMES (WORKING)
CARD NO. CARD TYPE NODE NO. S1 S2 S3 S4 S5 S6 S7 S8 S9 S10
18)= 10 126 7 7
19)= 10 127 7 7
20)= 10 128 7 7
21)= 10 129 7 7
22)= 10 130 7 7
23)= 10 131 7 7
24)= 10 132 7 7
25)= 10 146 7 7 7

NODE CARDS: PRECEDING INTERSTAGE TIMES (WORKING)
CARD NO. CARD TYPE NODE NO. S1 S2 S3 S4 S5 S6 S7 S8 S9 S10
26)= 11 126 6 6
27)= 11 127 5 5
28)= 11 128 6 6
29)= 11 129 5 5
30)= 11 130 6 6
31)= 11 131 5 5
32)= 11 132 5 6
33)= 11 146 7 8 8

NODE CARDS: STAGE CHANGE TIMES (WORKING)
CARD NO. CARD TYPE NODE NO. Sgl/Db1 Cycled S1 S2 S3 S4 S5 S6 S7 S8 S9 S10
34)= 12 126 1 32 8
35)= 12 127 1 35 6
36)= 12 128 1 55 42
37)= 12 129 1 10 35
38)= 12 130 1 4 57

CARD NO.	CARD TYPE	LINK NO.	PRIORITY LINKS		LINK1 LINK2		LINK1 ONLY		LINK1 GIVEWAY		COEFFS.		LINK LENGTH	STOP WT.X100	MAX FLOW	DELAY WT.X100	DISPSN X100
			LINK1 NO.	LINK2 NO.	% FLOW	A1 X100	A2 X100										
42)=	30	1462	1465	0	0	22	0	0	0	0	0	0	130	0	1000	0	0
43)=	30	1466	1462	0	0	50	0	0	0	0	0	0	31	0	715	0	0

CARD NO.		CARD TYPE	LINK NO.	EXIT NODE	FIRST GREEN		LINK CARDS:		FIXED DATA		SECOND GREEN		LINK		STOP WT.X100	SAT FLOW	DELAY WT.X100	DISPSN X100
					STAGE	LAG	STAGE	LAG	STAGE	LAG	STAGE	LAG	LINK LENGTH					
														START				
44)	31	29	0	0	0	0	0	0	0	0	0	200	0	4000	0	0	0	
45)	31	31	128	1	6	2	0	0	0	0	0	95	0	5591	0	0	0	
46)	31	32	128	2	6	1	0	0	0	0	0	10	0	10000	0	0	0	
47)	31	33	0	0	0	0	0	0	0	0	0	200	0	6000	0	0	0	
48)	31	34	129	2	5	1	0	0	0	0	0	53	0	1806	0	0	0	
49)	31	36	129	2	5	1	36	0	0	0	0	53	0	2047	0	0	0	
50)	31	37	0	0	0	0	0	0	0	0	0	53	0	0	0	0	0	
51)	31	38	129	2	5	1	0	0	0	0	0	53	0	2028	0	0	0	
52)	31	39	0	0	0	0	0	0	0	0	0	53	0	0	0	0	0	
53)	31	40	129	2	5	1	0	0	0	0	0	53	0	1867	0	0	0	
54)	31	41	0	0	0	0	0	0	0	0	0	53	0	0	0	0	0	
55)	31	42	132	1	5	2	0	0	0	0	0	58	0	2028	0	0	0	
56)	31	43	132	2	6	1	0	0	0	0	0	10	0	10000	0	0	0	
57)	31	44	129	1	5	2	0	0	0	0	0	45	0	1612	0	0	0	
58)	31	45	129	1	5	2	0	0	0	0	0	45	0	1613	0	0	0	
59)	31	46	130	1	6	2	0	0	0	0	0	200	0	4839	0	0	0	
60)	31	47	130	2	6	1	0	0	0	0	0	10	0	10000	0	0	0	
61)	31	48	131	2	5	1	0	0	0	0	0	63	0	1806	0	0	0	
62)	31	50	131	2	5	1	0	0	0	0	0	63	0	1922	0	0	0	
63)	31	52	131	2	1	52	0	0	0	0	0	63	0	1885	0	0	0	
64)	31	53	0	0	0	0	0	0	0	0	0	63	0	0	0	0	0	
65)	31	54	0	0	0	0	0	0	0	0	0	200	0	6000	0	0	0	
66)	31	55	131	1	5	2	0	0	0	0	0	40	0	1855	0	0	0	
67)	31	56	0	0	0	0	0	0	0	0	0	200	0	0	0	0	0	
68)	31	57	131	1	5	2	0	0	0	0	0	40	0	1800	0	0	0	
69)	31	58	0	0	0	0	0	0	0	0	0	95	0	0	0	0	0	
70)	31	59	128	2	6	1	0	0	0	0	0	10	0	10000	0	0	0	
71)	31	60	132	2	6	1	0	0	0	0	0	10	0	10000	0	0	0	
72)	31	61	130	2	6	1	0	0	0	0	0	10	0	10000	0	0	0	
73)	31	62	0	0	0	0	0	0	0	0	0	58	0	0	0	0	0	
74)	31	63	0	0	0	0	0	0	0	0	0	10	0	3600	0	0	0	
75)	31	64	129	1	5	2	0	0	0	0	0	45	0</					

[illegible]

LINK NUMBER	FLOW INTO LINK	SAT FLOW (PCU/H)	DEGREE OF SAT	MEAN PER CRUISE (SEC)	MEAN TIMES			-----DELTA-----			-----STOPS-----			-----QUEUE-----		PERFORMANCE		EXIT NODE	START END	GREEN 2N (SECONDS)											
					PER CRUISE (SEC)	TIMES (U+R+0=MEAN Q (PCU-H/H)	DELTA (SEC)	RANDOM+ OVERSAT OF (PCU-H/H)	COST (\$/H)	STOPS /PCU (%)	COST (\$/H)	MAX.	AVERAGE EXCESS (PCU)	WEIGHTED SUM ()	INDEX. ()	VALUES (\$/H)															
29	2420<	4000H	81	18.5	5.6	1.8	+	1.6	(48.4)	54	(27.8)	46			76.2																
31	471	5591S	34	9.5	2.4	0.2	+	0.1	(3.4)	8	(0.8)	5			4.2	128	61	42													
32	10	10000	1	4.5	27.9	0.1	+	0.0	(1.1)	89	(0.0)	0			1.1	128	48	55													
33	1307	6000S	23	18.0	0.0	0.0	+	0.2	(2.2)	1	(0.2)	0			0.3																
34	296	1806	29	5.5	3.6	0.1	+	0.0	(3.7)	6	(0.4)	0			4.0	129	40	10													
36	518	2047S	57	5.5	4.8	0.1	+	0.5	(8.7)	8	(0.8)	3			9.5	129	40	10													
37	135	36L	57	7.5	14.3	0.4	+	0.1	(7.4)	93	(1.3)	3			8.6	129	40	10													
38	601	2028S	64	5.5	5.5	0.1	+	0.7	(11.8)	9	(1.1)	3			12.8	129	40	10													
39	123	38L	64	7.5	14.6	0.3	+	0.1	(6.8)	90	(1.1)	3			8.0	129	40	10													
40	544	1867S	67	5.5	6.3	0.1	+	0.8	(12.4)	11	(1.2)	4			13.6	129	40	10													
41	153	40L	67	7.5	15.7	0.4	+	0.2	(9.2)	92	(1.4)	4			10.6	129	40	10													
42	803	2028S	73	5.5	7.5	0.6	+	1.0	(22.2)	50	(9.3)	12	+		31.5	132	62	44													
43	10	10000	1	4.5	27.9	0.1	+	0.0	(1.1)	89	(0.0)	0			1.1	132	50	57													
44	443	1612	86	4.5	41.3	2.1	+	2.9	(71.3)	113	(11.1)	10	+		82.4	129	15	35													
45	399	1613	78	4.5	32.2	1.8	+	1.7	(49.9)	97	(8.6)	8	+		58.5	129	15	35													
46	1456	4839	41	18.5	4.9	1.4	+	0.4	(25.2)	33	(10.3)	10			35.5	130	10	57													
47	10	10000	1	4.5	27.9	0.1	+	0.0	(1.1)	89	(0.0)	0			1.1	130	63	4													
48	271	1806	38	6.5	8.8	0.3	+	0.3	(8.8)	1	(9.9)	1			9.8	131	10	35													
50	344	1922	45	6.5	9.4	0.4	+	0.4	(12.1)	19	(1.2)	1			13.3	131	10	35													
52	369	1886S	89	6.5	27.3	0.6	+	2.1	(38.9)	50	(3.5)	11			42.4	131	10	35													
53	296	52L	89	8.5	36.8	1.3	+	1.7	(42.3)	124	(4.0)	11			46.3	131	10	35													
54	2105	6000S	42	18.5	1.0	0.0	+	0.3	(4.3)	1	(0.4)	0			4.7																
55	875	1855	97	4.5	57.8	4.0	+	9.9	(197.8)	141	(21.1)	25	+		218.9	131	40	5													
56	442	54L	42	18.5	1.0	0.0	+	0.1	(0.9)	1	(0.1)	0			1.0																
57	895	1800</																													

[illegible]

```

LINK      52  FED  BY      45      0      0      0  M.M.E.  1.30

      I
      I
      I
      I
2000+
      I      ^      ^
      I      ^      ^^
      I      ^^      ^^
      I      ^^      ^^
1500+
      I      ^^      ^^      00000000
      I      ^^      ^^      0000000000
      I      ^^      ^^      00000000000
      I      ^^      ^^      000000000000
      I      ^^      ^^      0000000000000
1000+
      I      ^^      0000000000000000
      I      ^^      10000000000000000
      I      ^^      100000000000000001
      I      ^^      100000000000000001
      I      ^^      1000000000000000011
500+
      I      ^^      110000000000000001111
      I      ^^      1100000000000000011111
      I      ^^      11000000000000000111111
      I      ^^      110000000000000001111111
      I      ^^      1100000000000000011111111
      I      ^^      11000000000000000111111111
+=====#.....1.....1.....==#=====##=====

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[illegible]

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Wokingham, Berks.	Web: www.trlsoftware.co.uk
RG40 3GA, UK	

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_BlythRd AM Sen.vai"
(drive-on-the-left) at 10:35:13 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Site 4 Base Model
LOCATION: Hayes and Harlington
DATE: 17/07/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - Blyth Road (E)
ARM C - Dawley Road (S)
ARM D - Kestral Way (SW)
ARM E - Betam Road (NW)

GEOMETRIC DATA

T5																			
I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I	
I	ARM	A	I	3.90	I	7.86	I	19.00	I	13.60	I	34.70	I	17.0	I	0.708	I	32.392	I
I	ARM	B	I	3.29	I	5.65	I	3.60	I	7.00	I	35.00	I	16.5	I	0.531	I	19.562	I
I	ARM	C	I	4.97	I	9.46	I	13.00	I	3.00	I	34.70	I	36.0	I	0.522	I	25.183	I
I	ARM	D	I	3.90	I	4.66	I	3.20	I	3.00	I	34.00	I	28.0	I	0.419	I	15.966	I
I	ARM	E	I	3.60	I	7.70	I	8.00	I	8.20	I	35.00	I	16.5	I	0.609	I	25.411	I

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

----- T13

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I
I	E	I	100	I

TIME PERIOD BEGINS(07.30)AND ENDS(09.00)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com+H4&5 2024

----- T15

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	RATE OF FLOW (VEH/MIN) BEFORE	I	AT TOP	I	AFTER	I
I		I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	15.40	I	23.10	I	15.40	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	6.85	I	10.27	I	6.85	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	12.85	I	19.28	I	12.85	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	0.55	I	0.83	I	0.55	I
I	ARM E	I	15.00	I	45.00	I	75.00	I	0.64	I	0.96	I	0.64	I

DEMAND SET TITLE: Base+Com+H4&5 2024

----- T33

I		I	TURNING PROPORTIONS					I						
I		I	TURNING COUNTS					I						
I		I	(PERCENTAGE OF H.V.S)					I						
I	TIME	I	FROM/T	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I	ARM E	I
I	07.30 - 09.00	I		I		I		I		I		I		I
I		I	ARM A	I	0.002	I	0.123	I	0.821	I	0.024	I	0.030	I
I		I		I	2.0	I	151.0	I	1012.0	I	30.0	I	37.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I		I		I
I		I	ARM B	I	0.148	I	0.000	I	0.796	I	0.022	I	0.035	I
I		I		I	81.0	I	0.0	I	436.0	I	12.0	I	19.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I		I		I
I		I	ARM C	I	0.625	I	0.210	I	0.002	I	0.070	I	0.093	I
I		I		I	642.0	I	216.0	I	2.0	I	72.0	I	96.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I		I		I
I		I	ARM D	I	0.068	I	0.182	I	0.636	I	0.000	I	0.114	I
I		I		I	3.0	I	8.0	I	28.0	I	0.0	I	5.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I		I		I
I		I	ARM E	I	0.294	I	0.235	I	0.412	I	0.039	I	0.020	I
I		I		I	15.0	I	12.0	I	21.0	I	2.0	I	1.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	1.1	*
08.00	1.7	**
08.15	3.6	****
08.30	3.7	****
08.45	1.7	**
09.00	1.1	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	1.3	*
08.00	3.2	***
08.15	28.5	*****
08.30	52.2	*****
08.45	21.4	*****
09.00	1.4	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	1.1	*
08.00	1.8	**
08.15	3.7	****
08.30	3.9	****
08.45	1.9	**
09.00	1.2	*

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.1	
08.00	0.1	
08.15	0.1	
08.30	0.1	
08.45	0.1	
09.00	0.1	

QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.0	
08.00	0.0	
08.15	0.1	
08.30	0.1	
08.45	0.0	
09.00	0.0	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75										
I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		I
I	I	I		I	* DELAY *	I	* DELAY *	I		I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)		I
I	A	I	1695.8	I 1130.5	I 187.3	I 0.11	I 187.3	I 0.11		I
I	B	I	754.3	I 502.9	I 1529.8	I 2.03	I 1529.9	I 2.03		I
I	C	I	1415.0	I 943.3	I 200.0	I 0.14	I 200.0	I 0.14		I
I	D	I	60.6	I 40.4	I 7.5	I 0.12	I 7.5	I 0.12		I
I	E	I	70.2	I 46.8	I 4.6	I 0.07	I 4.6	I 0.07		I
I	ALL	I	3995.8	I 2663.8	I 1929.3	I 0.48	I 1929.4	I 0.48		I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_BlythRd PM Sen.vai"
(drive-on-the-left) at 10:35:48 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Site 4 Base Model
LOCATION: Hayes and Harlington
DATE: 17/07/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - Blyth Road (E)
ARM C - Dawley Road (S)
ARM D - Kestral Way (SW)
ARM E - Betam Road (NW)

GEOMETRIC DATA

T5																			
I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I	
I	ARM	A	I	3.90	I	7.86	I	19.00	I	13.60	I	34.70	I	17.0	I	0.708	I	32.392	I
I	ARM	B	I	3.29	I	5.65	I	3.60	I	7.00	I	35.00	I	16.5	I	0.531	I	19.562	I
I	ARM	C	I	4.97	I	9.46	I	13.00	I	3.00	I	34.70	I	36.0	I	0.522	I	25.183	I
I	ARM	D	I	3.90	I	4.66	I	3.20	I	3.00	I	34.00	I	28.0	I	0.419	I	15.966	I
I	ARM	E	I	3.60	I	7.70	I	8.00	I	8.20	I	35.00	I	16.5	I	0.609	I	25.411	I

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13			
IARM	I	FLOW SCALE(%)	I
I A	I	100	I
I B	I	100	I
I C	I	100	I
I D	I	100	I
I E	I	100	I

TIME PERIOD BEGINS(16.15)AND ENDS(17.45)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com+H4&5 2024									T15	
I	NUMBER OF MINUTES FROM START WHEN				RATE OF FLOW (VEH/MIN)					
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I
I		I		I		I		I	AT TOP	I
I		I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I
I		I		I		I		I	OF PEAK	I
I	ARM	A	15.00	I	45.00	I	75.00	I	10.96	I
I	ARM	B	15.00	I	45.00	I	75.00	I	5.82	I
I	ARM	C	15.00	I	45.00	I	75.00	I	13.46	I
I	ARM	D	15.00	I	45.00	I	75.00	I	1.45	I
I	ARM	E	15.00	I	45.00	I	75.00	I	1.35	I

DEMAND SET TITLE: Base+Com+H4&5 2024

										T33				
I		I	TURNING PROPORTIONS						I					
I		I	TURNING COUNTS						I					
I		I	(PERCENTAGE OF H.V.S)						I					
I														
I	TIME	I	FROM/T	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I	ARM E	I
I	16.15 - 17.45	I		I		I		I		I		I		I
I		I	ARM A	I	0.005	I	0.133	I	0.839	I	0.006	I	0.017	I
I		I		I	4.0	I	117.0	I	736.0	I	5.0	I	15.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I		I		I
I		I	ARM B	I	0.245	I	0.002	I	0.680	I	0.026	I	0.047	I
I		I		I	114.0	I	1.0	I	317.0	I	12.0	I	22.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I		I		I
I		I	ARM C	I	0.654	I	0.263	I	0.002	I	0.026	I	0.056	I
I		I		I	704.0	I	283.0	I	2.0	I	28.0	I	60.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I		I		I
I		I	ARM D	I	0.216	I	0.112	I	0.655	I	0.000	I	0.017	I
I		I		I	25.0	I	13.0	I	76.0	I	0.0	I	2.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I		I		I
I		I	ARM E	I	0.241	I	0.231	I	0.491	I	0.019	I	0.019	I
I		I		I	26.0	I	25.0	I	53.0	I	2.0	I	2.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	0.6	*
16.45	0.9	*
17.00	1.5	**
17.15	1.5	**
17.30	0.9	*
17.45	0.6	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	0.7	*
16.45	1.2	*
17.00	3.3	***
17.15	3.5	****
17.30	1.3	*
17.45	0.8	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	1.3	*
16.45	2.1	**
17.00	4.8	*****
17.15	5.0	*****
17.30	2.2	**
17.45	1.3	*

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	0.2	
16.45	0.3	
17.00	0.4	
17.15	0.5	
17.30	0.3	
17.45	0.2	

QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	0.1	
16.45	0.1	
17.00	0.2	
17.15	0.2	
17.30	0.1	
17.45	0.1	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75											
I	ARM	I	TOTAL DEMAND		I	* QUEUEING *		I	* INCLUSIVE QUEUEING *		I
I		I			I	* DELAY *		I	* DELAY *		I
I		I			I			I			I
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	A	I	1207.1	I 804.8	I	91.5	I 0.08	I	91.5	I 0.08	I
I	B	I	641.4	I 427.6	I	156.5	I 0.24	I	156.5	I 0.24	I
I	C	I	1482.4	I 988.3	I	240.5	I 0.16	I	240.5	I 0.16	I
I	D	I	159.7	I 106.4	I	26.5	I 0.17	I	26.5	I 0.17	I
I	E	I	148.7	I 99.1	I	12.5	I 0.08	I	12.5	I 0.08	I
I	ALL	I	3639.3	I 2426.2	I	527.5	I 0.14	I	527.6	I 0.14	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

Printed at 10:36:03 on 05/08/2012]

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_NorthHydeRd AM Sen.vai"
(drive-on-the-left) at 11:30:42 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Base Model - Roundabout 1
LOCATION: North Hyde Road/Dawley Road
DATE: 23/04/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - North Hyde Road
ARM C - Millington Road
ARM D - Daweley Road (S)
ARM E - Bourne Avenue

GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I	T5
I	ARM A	I	3.65	I	9.50	I	13.00	I	22.00	I	75.00	I	20.0	I	0.526	I	31.736	I	
I	ARM B	I	3.50	I	8.00	I	16.00	I	10.00	I	72.00	I	40.0	I	0.467	I	27.158	I	
I	ARM C	I	4.00	I	6.00	I	8.00	I	22.00	I	54.00	I	36.0	I	0.553	I	25.388	I	
I	ARM D	I	3.50	I	5.50	I	12.00	I	20.00	I	76.00	I	46.0	I	0.422	I	22.915	I	
I	ARM E	I	3.65	I	4.50	I	3.00	I	32.00	I	56.00	I	35.0	I	0.497	I	20.704	I	

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

----- T13

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I
I	E	I	100	I

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com+H4&5 2024

----- T15

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	RATE OF FLOW (VEH/MIN) BEFORE	I	AT TOP	I	AFTER	I
I		I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	17.75	I	26.63	I	17.75	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	8.31	I	12.47	I	8.31	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	0.82	I	1.24	I	0.82	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	9.86	I	14.79	I	9.86	I
I	ARM E	I	15.00	I	45.00	I	75.00	I	5.45	I	8.17	I	5.45	I

DEMAND SET TITLE: Base+Com+H4&5 2024

----- T33

I	TIME	I	FROM/T	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I	ARM E	I
I	07.45 - 09.15	I	ARM A	I	0.002	I	0.213	I	0.143	I	0.519	I	0.123	I
I		I		I	3.0	I	302.0	I	203.0	I	737.0	I	175.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I	ARM B	I	0.750	I	0.002	I	0.005	I	0.170	I	0.074	I
I		I		I	499.0	I	1.0	I	3.0	I	113.0	I	49.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I	ARM C	I	0.485	I	0.030	I	0.000	I	0.364	I	0.121	I
I		I		I	32.0	I	2.0	I	0.0	I	24.0	I	8.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I	ARM D	I	0.644	I	0.134	I	0.167	I	0.004	I	0.051	I
I		I		I	508.0	I	106.0	I	132.0	I	3.0	I	40.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I	ARM E	I	0.578	I	0.209	I	0.080	I	0.131	I	0.002	I
I		I		I	252.0	I	91.0	I	35.0	I	57.0	I	1.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

 QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.6	**
08.15	2.9	***
08.30	10.9	*****
08.45	12.8	*****
09.00	3.2	***
09.15	1.6	**

 QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.8	*
08.15	1.3	*
08.30	3.1	***
08.45	3.3	***
09.00	1.4	*
09.15	0.8	*

 QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.1	
08.15	0.1	
08.30	0.2	
08.45	0.2	
09.00	0.1	
09.15	0.1	

 QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.1	*
08.15	1.8	**
08.30	4.9	*****
08.45	5.3	*****
09.00	2.0	**
09.15	1.1	*

 QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.7	*
08.15	1.4	*
08.30	5.2	*****
08.45	6.3	*****
09.00	1.5	**
09.15	0.8	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

											T75
I	ARM	I	TOTAL DEMAND		I	* QUEUEING *		I	* INCLUSIVE QUEUEING *		I
I		I			I	* DELAY *		I	* DELAY *		I
I		I			I			I			I
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	A	I	1954.5	I 1303.0	I	455.1	I 0.23	I	455.2	I 0.23	I
I	B	I	915.3	I 610.2	I	153.2	I 0.17	I	153.2	I 0.17	I
I	C	I	90.8	I 60.6	I	9.2	I 0.10	I	9.2	I 0.10	I
I	D	I	1086.0	I 724.0	I	233.2	I 0.21	I	233.3	I 0.21	I
I	E	I	600.1	I 400.1	I	220.5	I 0.37	I	220.5	I 0.37	I
I	ALL	I	4646.8	I 3097.9	I	1071.2	I 0.23	I	1071.3	I 0.23	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_NorthHydeRd PM Sen.vai"
(drive-on-the-left) at 11:31:50 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Base Model - Roundabout 1
LOCATION: North Hyde Road/Dawley Road
DATE: 23/04/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - North Hyde Road
ARM C - Millington Road
ARM D - Daweley Road (S)
ARM E - Bourne Avenue

GEOMETRIC DATA

T5																			
I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I	
I	ARM	A	I	3.65	I	9.50	I	13.00	I	22.00	I	75.00	I	20.0	I	0.526	I	31.736	I
I	ARM	B	I	3.50	I	8.00	I	16.00	I	10.00	I	72.00	I	40.0	I	0.467	I	27.158	I
I	ARM	C	I	4.00	I	6.00	I	8.00	I	22.00	I	54.00	I	36.0	I	0.553	I	25.388	I
I	ARM	D	I	3.50	I	5.50	I	12.00	I	20.00	I	76.00	I	46.0	I	0.422	I	22.915	I
I	ARM	E	I	3.65	I	4.50	I	3.00	I	32.00	I	56.00	I	35.0	I	0.497	I	20.704	I

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

----- T13

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I
I	E	I	100	I

TIME PERIOD BEGINS(17.00)AND ENDS(18.30)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com+H4&5 2024

----- T15

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	RATE OF FLOW (VEH/MIN) BEFORE	I	AT TOP	I	AFTER	I
I		I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	16.44	I	24.66	I	16.44	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	8.10	I	12.15	I	8.10	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	5.03	I	7.54	I	5.03	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	10.07	I	15.11	I	10.07	I
I	ARM E	I	15.00	I	45.00	I	75.00	I	3.83	I	5.74	I	3.83	I

DEMAND SET TITLE: Base+Com+H4&5 2024

----- T33

I	TIME	I	FROM/T	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I	ARM E	I
I	17.00 - 18.30	I	ARM A	I	0.002	I	0.246	I	0.058	I	0.548	I	0.146	I
I		I		I	2.0	I	324.0	I	76.0	I	721.0	I	192.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I	ARM B	I	0.659	I	0.002	I	0.002	I	0.239	I	0.099	I
I		I		I	427.0	I	1.0	I	1.0	I	155.0	I	64.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I	ARM C	I	0.391	I	0.035	I	0.000	I	0.473	I	0.102	I
I		I		I	157.0	I	14.0	I	0.0	I	190.0	I	41.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I	ARM D	I	0.717	I	0.135	I	0.051	I	0.005	I	0.092	I
I		I		I	578.0	I	109.0	I	41.0	I	4.0	I	74.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I	ARM E	I	0.444	I	0.121	I	0.105	I	0.327	I	0.003	I
I		I		I	136.0	I	37.0	I	32.0	I	100.0	I	1.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

											T70
I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.00-17.15										I
I	ARM A	16.50	29.52	0.559	- -	0.0	1.3	18.1	-	0.076	I
I	ARM B	8.13	20.35	0.400	- -	0.0	0.7	9.6	-	0.081	I
I	ARM C	5.04	13.89	0.363	- -	0.0	0.6	8.1	-	0.112	I
I	ARM D	10.11	18.19	0.556	- -	0.0	1.2	17.5	-	0.121	I
I	ARM E	3.84	12.45	0.308	- -	0.0	0.4	6.4	-	0.115	I

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	19.70	29.08	0.678	-	1.3	2.1	29.5	-	0.106
ARM B	9.71	19.01	0.511	-	0.7	1.0	14.9	-	0.107
ARM C	6.02	11.63	0.518	-	0.6	1.0	14.9	-	0.176
ARM D	12.08	17.26	0.700	-	1.2	2.2	31.3	-	0.188
ARM E	4.58	10.83	0.423	-	0.4	0.7	10.4	-	0.159

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	
17.30-17.45										
ARM A	24.13	28.52	0.846	-	2.1	5.0	67.2	-	0.209	
ARM B	11.89	17.24	0.690	-	1.0	2.1	29.9	-	0.182	
ARM C	7.38	8.62	0.856	-	1.0	4.6	55.3	-	0.601	
ARM D	14.79	16.05	0.922	-	2.2	8.0	94.5	-	0.517	
ARM E	5.62	8.80	0.638	-	0.7	1.7	22.9	-	0.302	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	24.13	28.48	0.847	-	5.0	5.3	77.9	-	0.226
ARM B	11.89	17.16	0.693	-	2.1	2.2	32.7	-	0.189
ARM C	7.38	8.50	0.868	-	4.6	5.4	76.3	-	0.788
ARM D	14.79	15.97	0.926	-	8.0	9.5	133.6	-	0.690
ARM E	5.62	8.61	0.652	-	1.7	1.8	26.4	-	0.331

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	19.70	28.99	0.680	-	5.3	2.2	34.9	-	0.113
ARM B	9.71	18.88	0.514	-	2.2	1.1	16.8	-	0.111
ARM C	6.02	11.45	0.526	-	5.4	1.1	20.5	-	0.205
ARM D	12.08	17.14	0.705	-	9.5	2.5	46.8	-	0.238
ARM E	4.58	10.48	0.437	-	1.8	0.8	12.6	-	0.173

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.15-18.30									
ARM A	16.50	29.48	0.560	-	2.2	1.3	20.0	-	0.078
ARM B	8.13	20.28	0.401	-	1.1	0.7	10.4	-	0.083
ARM C	5.04	13.79	0.366	-	1.1	0.6	9.1	-	0.115
ARM D	10.11	18.14	0.558	-	2.5	1.3	20.2	-	0.127
ARM E	3.84	12.34	0.311	-	0.8	0.5	7.1	-	0.118

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	1.3	*
17.30	2.1	**
17.45	5.0	*****
18.00	5.3	*****
18.15	2.2	**
18.30	1.3	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.7	*
17.30	1.0	*
17.45	2.1	**
18.00	2.2	**
18.15	1.1	*
18.30	0.7	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.6	*
17.30	1.0	*
17.45	4.6	*****
18.00	5.4	*****
18.15	1.1	*
18.30	0.6	*

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	1.2	*
17.30	2.2	**
17.45	8.0	*****
18.00	9.5	*****
18.15	2.5	**
18.30	1.3	*

QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.4	
17.30	0.7	*
17.45	1.7	**
18.00	1.8	**
18.15	0.8	*
18.30	0.5	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

											T75
I	ARM	I	TOTAL DEMAND		I	* QUEUEING *		I	* INCLUSIVE QUEUEING *		I
I		I			I	* DELAY *		I	* DELAY *		I
I		I			I			I			I
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	A	I	1810.0	I 1206.7	I	247.5	I 0.14	I	247.5	I 0.14	I
I	B	I	891.9	I 594.6	I	114.4	I 0.13	I	114.4	I 0.13	I
I	C	I	553.3	I 368.9	I	184.2	I 0.33	I	184.2	I 0.33	I
I	D	I	1109.4	I 739.6	I	344.0	I 0.31	I	344.0	I 0.31	I
I	E	I	421.2	I 280.8	I	85.7	I 0.20	I	85.7	I 0.20	I
I	ALL	I	4785.8	I 3190.6	I	975.9	I 0.20	I	976.0	I 0.20	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

Printed at 11:32:52 on 05/08/2012]

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_StationRd AM_Int Sen.vai"
(drive-on-the-left) at 13:37:27 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Dawley Road Station Road Site 2 Base Model
LOCATION: Dawley Road/Station Road
DATE: 16/07/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - Station Road (E)
ARM C - Shepiston Lane (S)

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL
ARM *HAS A CENTRAL ISLAND

ARM * HAS A ZEBRA CROSSING
ARM * HAS A ZEBRA CROSSING

																				T5
I	ARM	I	V (M)	I	E (M)	I	Lm(M)	I	Vm(M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT	I
I		I		I		I		I		I		I		I		I		I	(PCU/MIN)	I
I	ARM A	I	3.75	I	6.10	I	6.00	I	3.75	I	11.00	I	7.00	I	0.00	I	0.595	I	28.234*	I
I	ARM B	I	3.85	I	5.50	I	5.50	I	3.85	I	11.70	I	5.90	I	0.00	I	0.589	I	20.216*	I
I	ARM C	I	4.69	I	6.50	I	31.00	I	4.69	I	16.00	I	11.00	I	0.00	I	0.539	I	21.366	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m
WARNING One or more intercept values (flagged * in the table)
have been adjusted according to local input values
from a previous run and listed below -

----- T6

I		I	ADJUSTMENT TO	I
I		I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	11.000	I
I	ARM B	I	5.000	I

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13			
I ARM	I	FLOW SCALE(%)	I
I A	I	100	I
I B	I	100	I
I C	I	100	I

TIME PERIOD BEGINS(07.30)AND ENDS(09.00)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com+H4&5 2024

T15								
I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I
I		I	TO RISE	I	IS REACHED	I	FALLING	I
I		I		I		I	PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I
I	ARM B	I	15.00	I	45.00	I	75.00	I
I	ARM C	I	15.00	I	45.00	I	75.00	I

DEMAND SET TITLE: Base+Com+H4&5 2024

T33						
I	TURNING PROPORTIONS					I
I	TURNING COUNTS					I
I	(PERCENTAGE OF H.V.S)					I
I	TIME	I	FROM/T	I	ARM A	I
I	07.30 - 09.00	I		I		I
I		I	ARM A	I	0.001	I
I		I		I	1.0	I
I		I		I	(0.0)	I
I		I		I		I
I		I	ARM B	I	0.458	I
I		I		I	241.0	I
I		I		I	(0.0)	I
I		I		I		I
I		I	ARM C	I	0.680	I
I		I		I	475.0	I
I		I		I	(0.0)	I
I		I		I		I

PEDESTRIAN CROSSING DATA

PEDESTRIAN CROSSING USE:

ARM A: Frequency of use is distributed throughout the period in the s 90.0y as vehicular demand on the link. (= times per hour)
 ARM B: Frequency of use is distributed throughout the period in the s 30.0y as vehicular demand on the link. (= times per hour)

ZEBRA CROSSINGS

T40						
I	ARM	I	LENGTH OF CROSSING (M)	I	QUEUEING SPACE BETWEEN CROSSING AND JUNCTION (VEHS)	I
I		I	(ENTRY)	I	(EXIT)	I
I	A	I	4.50	I	0.0	I
I	B	I	3.70	I	3.8	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	T70
07.30-07.45									
ARM A	11.63	23.29	0.499	- -	1.2	0.0	14.2	0.085	
ARM B	6.60	15.39	0.429	- -	0.4	0.0	10.6	0.113	
ARM C	8.77	19.69	0.445	- -	-	0.0	11.5	0.091	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	
07.45-08.00									
ARM A	13.89	22.46	0.618	- -	1.5	1.0	22.8	0.115	
ARM B	7.88	14.44	0.546	- -	0.5	0.7	16.9	0.151	
ARM C	10.47	19.30	0.543	- -	-	0.8	16.9	0.113	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	
08.00-08.15									
ARM A	17.01	21.37	0.796	- -	1.8	1.6	49.4	0.216	
ARM B	9.65	13.18	0.732	- -	0.6	1.2	34.9	0.269	
ARM C	12.83	18.66	0.687	- -	-	1.2	29.9	0.168	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	
08.15-08.30									
ARM A	17.01	21.35	0.797	- -	1.8	3.7	55.9	0.229	
ARM B	9.65	13.13	0.735	- -	0.6	2.6	39.5	0.286	
ARM C	12.83	18.63	0.688	- -	-	2.1	32.3	0.172	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	
08.30-08.45									
ARM A	13.89	22.44	0.619	- -	1.5	3.8	26.4	0.121	
ARM B	7.88	14.37	0.549	- -	0.5	2.7	19.8	0.159	
ARM C	10.47	19.26	0.544	- -	-	2.2	19.0	0.116	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	
08.45-09.00									
ARM A	11.63	23.27	0.500	- -	1.2	1.7	15.7	0.087	
ARM B	6.60	15.35	0.430	- -	0.4	1.2	11.9	0.115	
ARM C	8.77	19.67	0.446	- -	-	1.2	12.6	0.092	

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	1.0 *
08.00	1.6 **
08.15	3.7 ****
08.30	3.8 ****
08.45	1.7 **
09.00	1.0 *

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.7	*
08.00	1.2	*
08.15	2.6	***
08.30	2.7	***
08.45	1.2	*
09.00	0.8	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.8	*
08.00	1.2	*
08.15	2.1	**
08.30	2.2	**
08.45	1.2	*
09.00	0.8	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75												
I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		I		
I		I		I	* DELAY *	I	* DELAY *	I		I		
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I	
I	A	I	1275.9	I	850.6	I	184.5	I	0.14	I	184.5	I
I	B	I	724.0	I	482.7	I	133.6	I	0.18	I	133.6	I
I	C	I	962.1	I	641.4	I	122.1	I	0.13	I	122.1	I
I	ALL	I	2962.1	I	1974.7	I	440.2	I	0.15	I	440.2	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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RG40 3GA,UK

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_StationRd PM_Int Sen.vai"
(drive-on-the-left) at 13:38:05 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Dawley Road Station Road Site 2 Base Model
LOCATION: Dawley Road/Station Road
DATE: 16/07/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - Station Road (E)
ARM C - Shepiston Lane (S)

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL
ARM *HAS A CENTRAL ISLAND

ARM * HAS A ZEBRA CROSSING
ARM * HAS A ZEBRA CROSSING

I	ARM	I	V (M)	I	E (M)	I	Lm(M)	I	Vm(M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT	I
I		I		I		I		I		I		I		I		I		I	(PCU/MIN)	I
I	ARM A	I	3.75	I	6.10	I	6.00	I	3.75	I	11.00	I	7.00	I	0.00	I	0.595	I	31.934*	I
I	ARM B	I	3.85	I	5.50	I	5.50	I	3.85	I	11.70	I	5.90	I	0.00	I	0.589	I	24.016*	I
I	ARM C	I	4.69	I	6.50	I	31.00	I	4.69	I	16.00	I	11.00	I	0.00	I	0.539	I	21.366	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m
WARNING One or more intercept values (flagged * in the table)
have been adjusted according to local input values
from a previous run and listed below -

T6

I		I	ADJUSTMENT TO	I
I		I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	14.700	I
I	ARM B	I	8.800	I

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13			
I ARM	I	FLOW SCALE(%)	I
I A	I	100	I
I B	I	100	I
I C	I	100	I

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com+H4&5 2024

T15								
I	I	NUMBER OF MINUTES FROM START WHEN				RATE OF FLOW (VEH/MIN)		
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	BEFORE	I
I		I		I	FLOW STOPS	I	AT TOP	I
I		I	TO RISE	I	IS REACHED	I	PEAK	I
I		I		I	FALLING	I	OF PEAK	I
I	ARM A	I	15.00	I	45.00	I	12.71	I
I	ARM B	I	15.00	I	45.00	I	7.36	I
I	ARM C	I	15.00	I	45.00	I	9.49	I

DEMAND SET TITLE: Base+Com+H4&5 2024

T33						
I	TURNING PROPORTIONS					I
I	TURNING COUNTS					I
I	(PERCENTAGE OF H.V.S)					I
I						I
I	TIME	I	FROM/T	I	ARM A	I
I		I		I	ARM B	I
I		I		I	ARM C	I
I	16.45 - 18.15	I		I		I
I		I	ARM A	I	0.000	I
I		I		I	0.294	I
I		I		I	0.0	I
I		I		I	299.0	I
I		I		I	718.0	I
I		I		I	(0.0)	I
I		I		I	(0.0)	I
I		I		I	(0.0)	I
I		I	ARM B	I	0.564	I
I		I		I	0.000	I
I		I		I	0.436	I
I		I		I	332.0	I
I		I		I	0.0	I
I		I		I	257.0	I
I		I		I	(0.0)	I
I		I		I	(0.0)	I
I		I		I	(0.0)	I
I		I	ARM C	I	0.735	I
I		I		I	0.264	I
I		I		I	0.001	I
I		I		I	558.0	I
I		I		I	200.0	I
I		I		I	1.0	I
I		I		I	(0.0)	I
I		I		I	(0.0)	I
I		I		I	(0.0)	I

PEDESTRIAN CROSSING DATA

PEDESTRIAN CROSSING USE:

ARM A: Frequency of use is distributed throughout the period
in the s 90.0y as vehicular demand on the link. (= times per hour)

ARM B: Frequency of use is distributed throughout the period
in the s 30.0y as vehicular demand on the link. (= times per hour)

ZEBRA CROSSINGS

T40						
I	ARM	I	LENGTH OF CROSSING	I	QUEUEING SPACE BETWEEN	I
I		I	(M)	I	CROSSING AND JUNCTION	I
I		I	(ENTRY)	I	BLOCKING BACK INTO	I
I		I	(EXIT)	I	JUNCTION (VEHS)	I
I		I		I		I
I	A	I	4.50	I	0.0	I
I	B	I	3.70	I	3.8	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	T70
16.45-17.00									
ARM A	12.76	26.22	0.487	-	1.2	0.0	13.6	0.074	
ARM B	7.39	18.73	0.395	-	0.4	0.0	9.4	0.088	
ARM C	9.52	19.00	0.501	-	-	0.0	14.2	0.104	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	
17.00-17.15									
ARM A	15.24	25.28	0.603	-	1.5	0.9	21.6	0.099	
ARM B	8.82	17.69	0.499	-	0.5	0.6	14.2	0.112	
ARM C	11.37	18.37	0.619	-	-	1.0	22.7	0.141	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	
17.15-17.30									
ARM A	18.66	24.05	0.776	-	1.8	1.5	45.3	0.178	
ARM B	10.81	16.29	0.663	-	0.6	1.0	26.8	0.178	
ARM C	13.93	17.18	0.811	-	-	1.6	51.7	0.282	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	
17.30-17.45									
ARM A	18.66	24.03	0.777	-	1.8	3.3	50.2	0.186	
ARM B	10.81	16.25	0.665	-	0.6	1.9	29.0	0.183	
ARM C	13.93	17.12	0.813	-	-	3.9	60.5	0.308	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	
17.45-18.00									
ARM A	15.24	25.25	0.603	-	1.5	3.4	24.4	0.102	
ARM B	8.82	17.62	0.501	-	0.5	1.9	16.0	0.115	
ARM C	11.37	18.32	0.621	-	-	4.1	27.2	0.151	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	
18.00-18.15									
ARM A	12.76	26.20	0.487	-	1.2	1.5	14.8	0.075	
ARM B	7.39	18.68	0.396	-	0.4	1.0	10.2	0.089	
ARM C	9.52	18.98	0.502	-	-	1.7	15.9	0.107	

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.9 *
17.15	1.5 *
17.30	3.3 ***
17.45	3.4 ***
18.00	1.5 **
18.15	1.0 *

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.6	*
17.15	1.0	*
17.30	1.9	**
17.45	1.9	**
18.00	1.0	*
18.15	0.7	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.0	*
17.15	1.6	**
17.30	3.9	****
17.45	4.1	****
18.00	1.7	**
18.15	1.0	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

										T75
I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		
I	I	I	I	I	* DELAY *	I	* DELAY *	I		I
I	I	I	I	I	I	I	I	I	I	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	I	
I	A	I	1399.8	I	933.2	I	169.9	I	0.12	I
I	B	I	810.7	I	540.5	I	105.5	I	0.13	I
I	C	I	1044.7	I	696.5	I	192.2	I	0.18	I
I	ALL	I	3255.2	I	2170.2	I	467.5	I	0.14	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

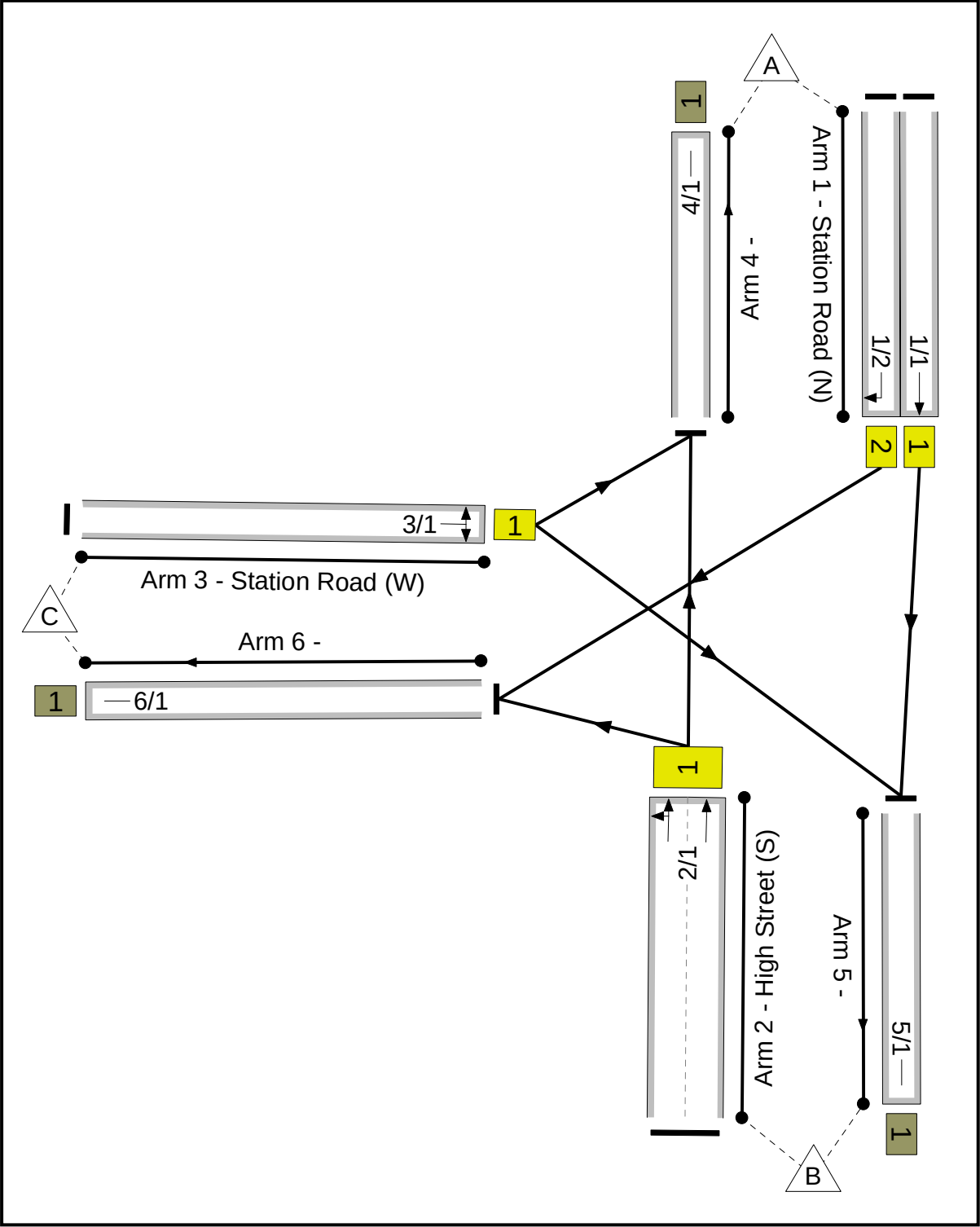
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Full Input Data And Results

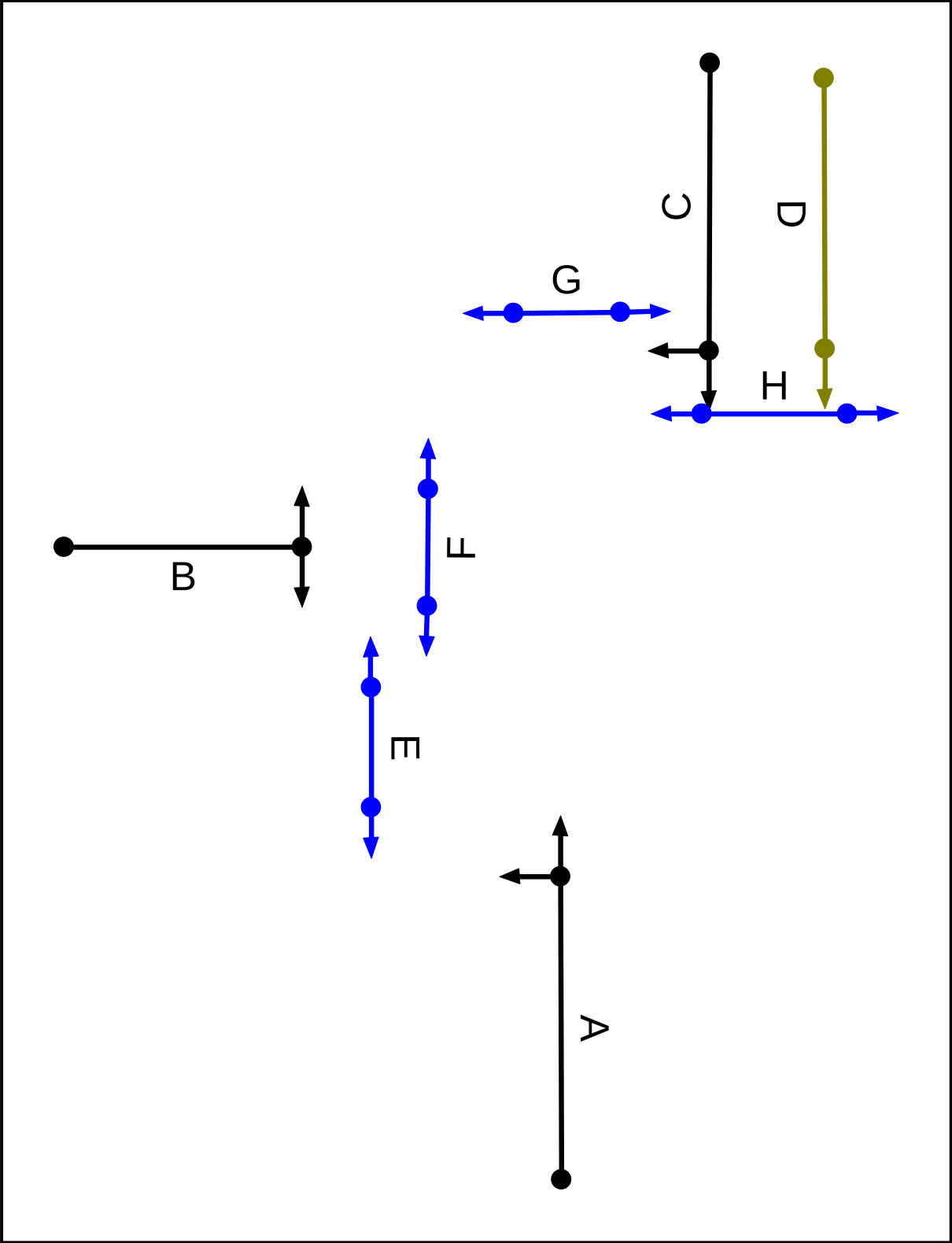
User and Project Details

Project:	
Title:	
Location:	
File name:	
Author:	Station Rd_High Street.lsgx
Company:	
Address:	Generic
Controller:	
SCN:	
Notes:	

Junction Layout Diagram



Phase Diagram



Phase Input Data

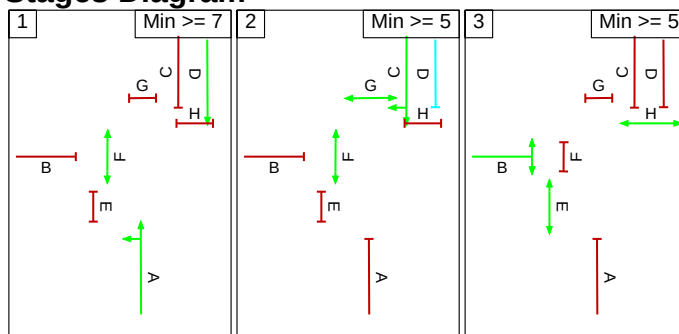
Phase Name	Phase type	Assoc Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Filter	C	4	0
E	Pedestrian		5	5
F	Pedestrian		5	5
G	Pedestrian		5	5
H	Pedestrian		5	5

Phase Intergreens Matrix

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

Phases in Stage

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

Stages Diagram

Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
2	3	C	Losing	3	3
3	1	B	Losing	3	3

Prohibited Stage Changes

From Stage	To Stage			
	1	2	3	
	1		8	X
	2	8		13
	3	8	8	

Link Input Data

Arm/ Link	Link Name	Link Type	Num Lanes	Phases	Start Disp.	End Disp.
1/1	Station Road (N) Ahead	U	1	C D	2	3
1/2	Station Road (N) Right	U	1	C	2	3
2/1	High Street (S) Ahead Left	U	2	A	2	3
3/1	Station Road (W) Left Right	U	1	B	2	3
4/1		U	1		2	3
5/1		U	1		2	3
6/1		U	1		2	3

Lane Input Data

Arm/ Lane	Link Num	Physic al Length (PCU)	Expecte d Usage (PCU)	Sat Flo w Typ e	User Saturatio n Flow (PCU/Hr)	Lane Widt h (m)	Gradie nt	Nearsid e Lane	Allowe d Turns	Turnin g Radius (m)
1/1 (Statio n Road (N) Lane 1)	Link 1 (Statio n Road (N) Ahead)	Inf	Inf	User	1766	3.25	0.00	Y	Arm 5 Ahead	Inf
1/2 (Statio n Road (N) Lane 2)	Link 2 (Statio n Road (N) Right)	Inf	Inf	User	1929	3.25	0.00	Y	Arm 6 Right	Inf
2/1 (High Street (S) Lane 1)	Link 1 (High Street (S) Ahead Left)	Inf	Inf	User	1763	3.25	0.00	Y	Arm 4 Ahead Arm 6 Left	Inf Inf
2/2 (High Street (S) Lane 2)	Link 1 (High Street (S) Ahead Left)	Inf	Inf	User	1877	3.25	0.00	Y	Arm 4 Ahead	Inf
3/1 (Statio n Road (W) Lane 1)	Link 1 (Statio n Road (W) Left Right)	Inf	Inf	User	1691	3.25	0.00	Y	Arm 4 Left Arm 5 Right	Inf Inf
4/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
5/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
6/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
25: 'Base + Com + H4 5 2024 AM Sensitivity'	08:00	09:00	01:00	
26: 'Base + Com + H4 5 2024 PM Sensitivity'	17:00	18:00	01:00	

Scenario 23: 'Base + Com + H4 5 2024 AM Sen'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 25: 'Base + Com + H4 5 2024 AM Sensitivity'

Traffic Flow Matrix

Desired Flow :

Origin	Destination				
		A	B	C	Tot.
	A	0	675	275	950
	B	463	0	205	668
	C	259	300	0	559
	Tot.	722	975	480	2177

Link Traffic Flows

Arm/Link	Flow Group 25: Base + Com + H4 5 2024 AM Sensitivity
1/1	675
1/2	275
2/1	668
3/1	559
4/1	722
5/1	975
6/1	480

Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Road (N) Lane 1)		This lane uses a directly entered Saturation Flow					1766
1/2 (Station Road (N) Lane 2)		This lane uses a directly entered Saturation Flow					1929
2/1 (High Street (S) Lane 1)		This lane uses a directly entered Saturation Flow					1763
2/2 (High Street (S) Lane 2)		This lane uses a directly entered Saturation Flow					1877
3/1 (Station Road (W) Lane 1)		This lane uses a directly entered Saturation Flow					1691
4/1		This lane uses a directly entered Saturation Flow					1800
5/1		This lane uses a directly entered Saturation Flow					1800
6/1		This lane uses a directly entered Saturation Flow					1800

Scenario 24: 'Base + Com + H4 5 2024 PM Sen'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 26: 'Base + Com + H4 5 2024 PM Sensitivity'

Traffic Flow Matrix

Desired Flow :

Origin	Destination				
		A	B	C	Tot.
	A	0	522	267	789
	B	521	0	325	846
	C	214	291	0	505
	Tot.	735	813	592	2140

Link Traffic Flows

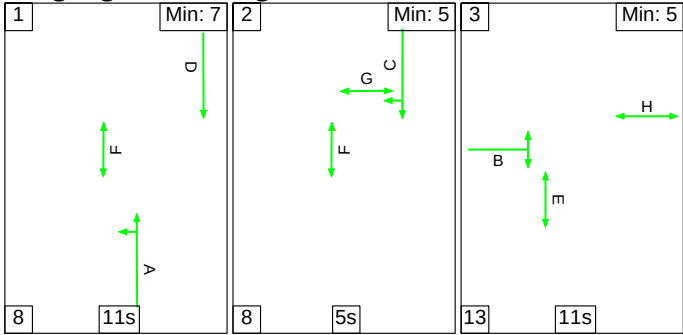
Arm/Link	Flow Group 26: Base + Com + H4 5 2024 PM Sensitivity
1/1	522
1/2	267
2/1	846
3/1	505
4/1	735
5/1	813
6/1	592

Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Road (N) Lane 1)	This lane uses a directly entered Saturation Flow						1766
1/2 (Station Road (N) Lane 2)	This lane uses a directly entered Saturation Flow						1929
2/1 (High Street (S) Lane 1)	This lane uses a directly entered Saturation Flow						1763
2/2 (High Street (S) Lane 2)	This lane uses a directly entered Saturation Flow						1877
3/1 (Station Road (W) Lane 1)	This lane uses a directly entered Saturation Flow						1691
4/1	This lane uses a directly entered Saturation Flow						1800
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800

Scenario 23: 'Base + Com + H4 5 2024 AM Sen'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 25: 'Base + Com + H4 5 2024 AM Sensitivity'

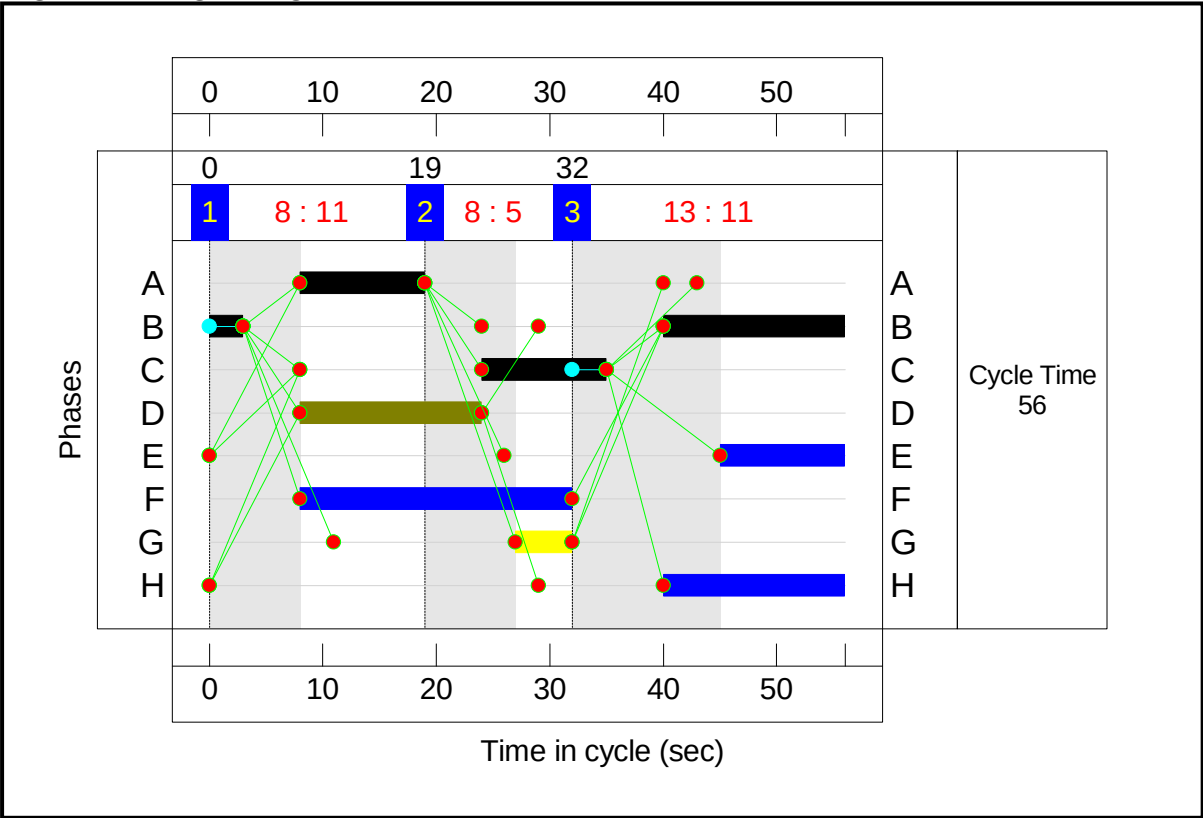
Staging Plan Diagram



Stage Timings

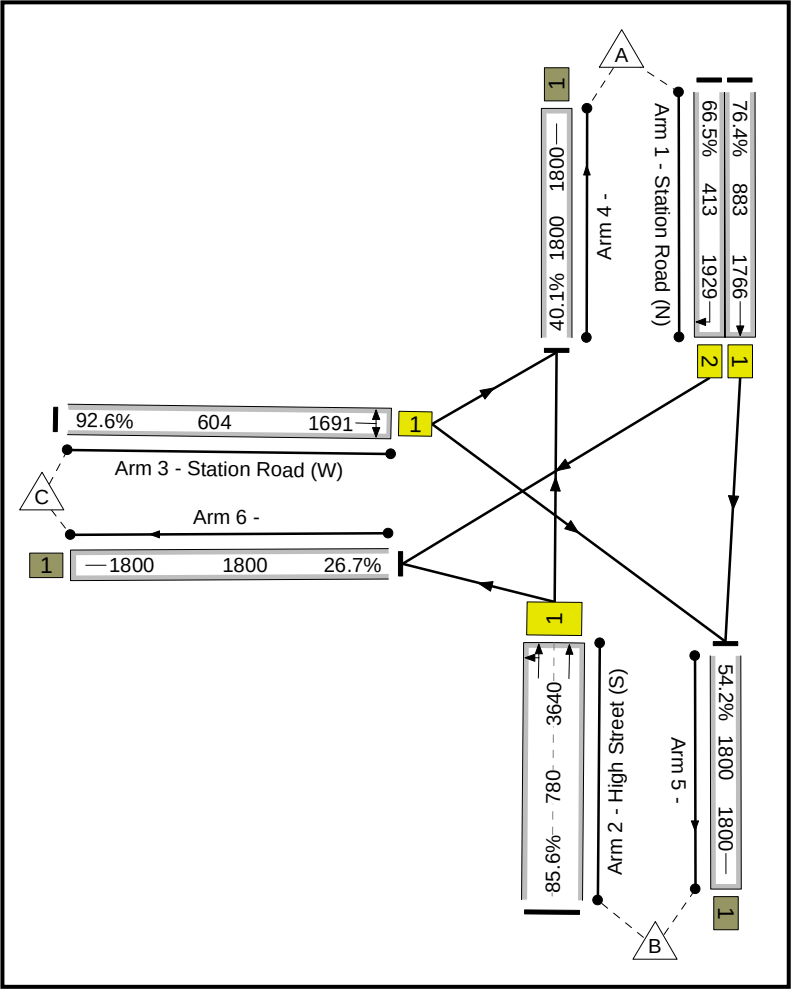
Stage	1	2	3
Duration	11	5	11
Change Point	0	19	32

Signal Timings Diagram



Full Input Data And Results

Junction Layout Diagram



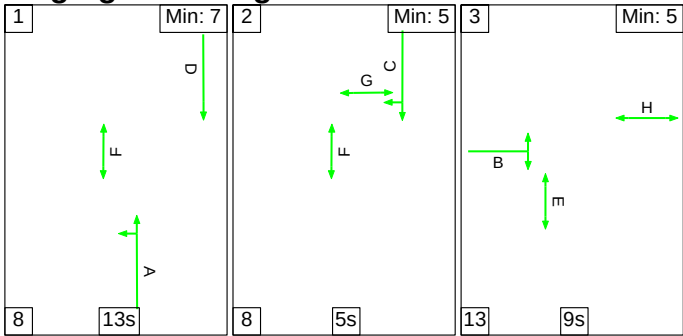
Link Results

Scenario 24: 'Base + Com + H4 5 2024 PM Sen'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 26: 'Base + Com + H4 5 2024 PM Sensitivity'

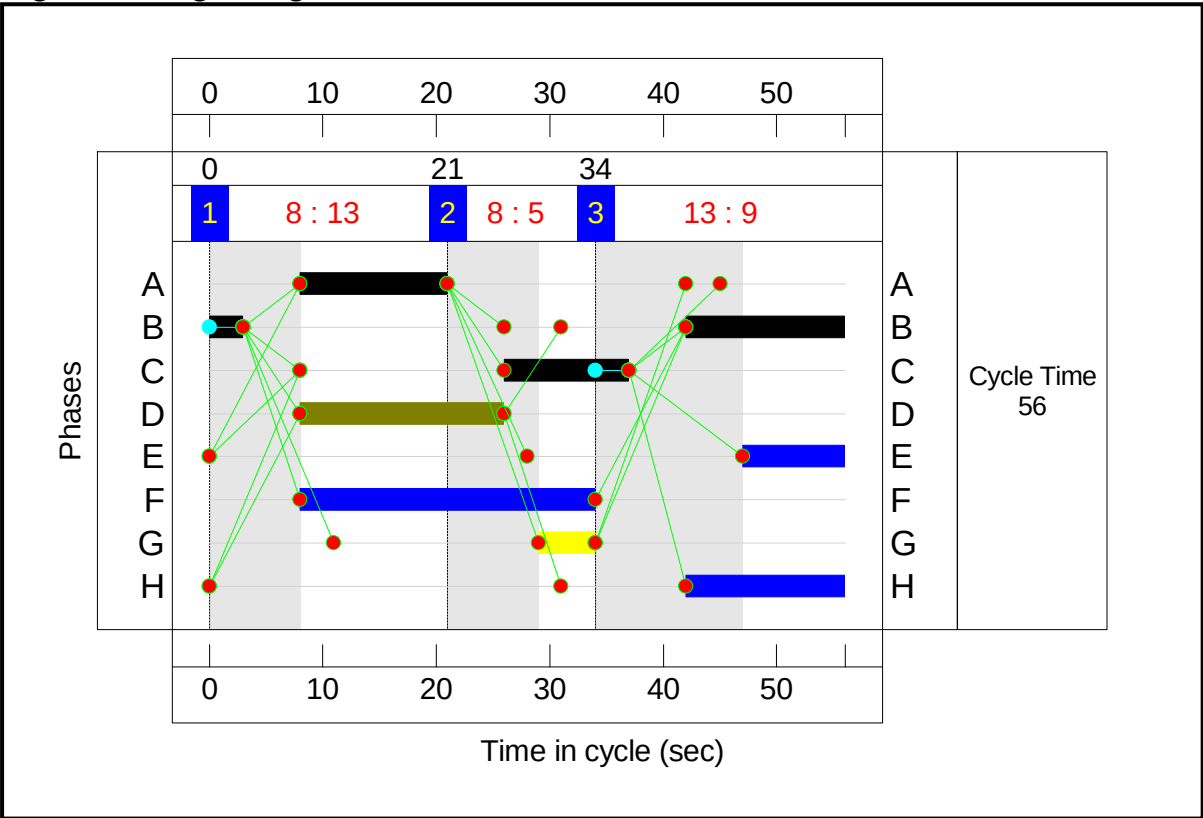
Staging Plan Diagram



Stage Timings

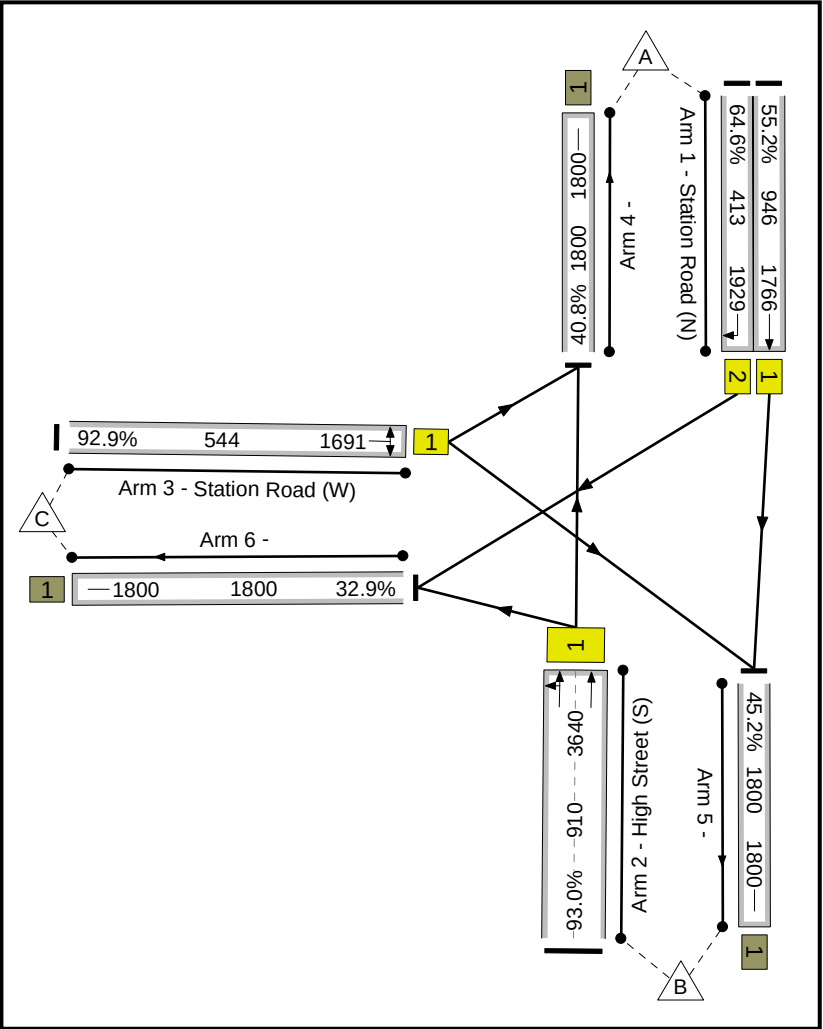
Stage	1	2	3
Duration	13	5	9
Change Point	0	21	34

Signal Timings Diagram



Full Input Data And Results

Junction Layout Diagram



Link Results

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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Run with file:-
"I:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\NorthHydeRd_MillingtonRd AM Sen.vpi"
(drive-on-the-left) at 12:25:52 on Sunday, 5 August 2012

RUN INFORMATION

RUN TITLE : Base Model Junction 2
LOCATION : North Hyde Road/Millington Road
DATE : 23/04/12
CLIENT :
ENUMERATOR : rhussain [IE-D00135]
JOB NUMBER : VN50026
STATUS : Draft 1
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS North Hyde Road (E)
ARM B IS Millington Road
ARM C IS North Hyde Road (W)

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 7.64 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 119.00 M.	I
I	- BLOCKS TRAFFIC (SPACES)	I	NO (0)	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 23.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 19.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 3.00 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM B-C		STREAM	A-C		STREAM	A-B		I
I	635.90		0.23			0.09			I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I			
I	STREAM	B-A		STREAM	A-C		STREAM	A-B		STREAM	C-A		STREAM	C-B	I
I	494.40		0.21			0.08			0.13			0.30			I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM C-B		STREAM	A-C		STREAM	A-B		I
I	642.88		0.23			0.23			I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

Demand set: Base+Com+H4&5 2024

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I		I	FLOW STARTS	I	BEFORE	I
I		I	TOP OF PEAK	I	AT TOP	I
I		I	TO RISE	I	PEAK	I
I		I	IS REACHED	I	OF PEAK	I
I		I	FALLING	I	PEAK	I
I	ARM A	I	15.00	I	9.80	I
I	ARM B	I	15.00	I	0.29	I
I	ARM C	I	15.00	I	6.44	I

Demand set: Base+Com+H4&5 2024

TIME	TURNING PROPORTIONS									
	TURNING COUNTS									
	(PERCENTAGE OF H.V.S)									
	FROM/TO	ARM	A	ARM	B	ARM	C			
07.45 - 09.15	ARM A		0.000		0.216		0.784			
			0.0		169.0		615.0			
			(0.0)		(0.0)		(0.0)			
	ARM B		0.870		0.000		0.130			
			20.0		0.0		3.0			
			(0.0)		(0.0)		(0.0)			
	ARM C		0.988		0.012		0.000			
			509.0		6.0		0.0			
			(0.0)		(0.0)		(0.0)			

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Base+Com+H4&5 2024
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
B-AC	0.29	5.83	0.049		0.00	0.05	0.7		0.18
C-A	6.39								
C-B	0.08	8.44	0.009		0.00	0.01	0.1		0.12
A-B	2.12								
A-C	7.72								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-AC	0.34	5.31	0.065		0.05	0.07	1.0		0.20
C-A	7.63								
C-B	0.09	8.00	0.011		0.01	0.01	0.2		0.13
A-B	2.53								
A-C	9.21								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-AC	0.42	4.58	0.092		0.07	0.10	1.4		0.24
C-A	9.34								
C-B	0.11	7.39	0.015		0.01	0.01	0.2		0.14
A-B	3.10								
A-C	11.29								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	0.42	4.58	0.092		0.10	0.10	1.5		0.24
C-A	9.34								
C-B	0.11	7.39	0.015		0.01	0.02	0.2		0.14
A-B	3.10								
A-C	11.29								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-AC	0.34	5.31	0.065		0.10	0.07	1.1		0.20
C-A	7.63								
C-B	0.09	8.00	0.011		0.02	0.01	0.2		0.13
A-B	2.53								
A-C	9.21								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-AC	0.29	5.83	0.049		0.07	0.05	0.8		0.18
C-A	6.39								
C-B	0.08	8.44	0.009		0.01	0.01	0.1		0.12
A-B	2.12								
A-C	7.72								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	DEMAND (VEH/H)	* QUEUEING * DELAY (MIN)	* INCLUSIVE QUEUEING * DELAY (MIN/VEH)
B-AC	31.7	21.1	6.6	0.21
C-A	700.6	467.1		
C-B	8.3	5.5	1.1	0.13
A-B	232.6	155.1		
A-C	846.5	564.3		
ALL	1819.6	1213.1	7.6	0.00

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
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Run with file:-
"I:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\NorthHydeRd_MillingtonRd PM Sen.vpi"
(drive-on-the-left) at 12:08:17 on Sunday, 12 August 2012

RUN INFORMATION

RUN TITLE : Base Model Junction 2
LOCATION : North Hyde Road/Millington Road
DATE : 23/04/12
CLIENT :
ENUMERATOR : rhussain [IE-D00135]
JOB NUMBER : VN50026
STATUS : Draft 1
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS North Hyde Road (E)
ARM B IS Millington Road
ARM C IS North Hyde Road (W)

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 7.64 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B)119.00 M.	I
I	- BLOCKS TRAFFIC (SPACES)	I	NO (0)	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 23.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 19.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 3.00 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept	For Slope	For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM A-B	I
I	635.90		0.23	0.09	I

I	Intercept	For Slope	For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	494.40		0.21	0.08	0.13	0.30	I

I	Intercept	For Slope	For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM A-B	I
I	642.88		0.23	0.23	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: Base+Com+H4&5 2024

TIME PERIOD BEGINS 17.00 AND ENDS 18.30

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I		I	TO RISE	I	I	I	I	I	I	I	I	I	I	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	7.51	I	11.27	I	7.51	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	2.25	I	3.38	I	2.25	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	6.19	I	9.28	I	6.19	I

Demand set: Base+Com+H4&5 2024

TIME	TURNING PROPORTIONS								
	TURNING COUNTS								
	(PERCENTAGE OF H.V.S)								
	FROM/TO	ARM	A	ARM	B	ARM	C		
17.00 - 18.30	ARM A		0.000	0.050	0.950				
			0.0	30.0	571.0				
			(0.0)	(0.0)	(0.0)				
	ARM B		0.822	0.000	0.178				
			148.0	0.0	32.0				
			(0.0)	(0.0)	(0.0)				
	ARM C		0.988	0.012	0.000				
			489.0	6.0	0.0				
			(0.0)	(0.0)	(0.0)				

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Base+Com+H4&5 2024
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	2.26	6.24	0.362		0.00	0.55	7.7		0.25
C-A	6.14								
C-B	0.08	8.97	0.008		0.00	0.01	0.1		0.11
A-B	0.38								
A-C	7.16								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	2.70	5.78	0.467		0.55	0.84	11.9		0.32
C-A	7.33								
C-B	0.09	8.63	0.010		0.01	0.01	0.2		0.12
A-B	0.45								
A-C	8.56								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	3.30	5.13	0.643		0.84	1.65	22.2		0.52
C-A	8.97								
C-B	0.11	8.16	0.013		0.01	0.01	0.2		0.12
A-B	0.55								
A-C	10.48								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	3.30	5.13	0.644		1.65	1.72	25.4		0.54
C-A	8.97								
C-B	0.11	8.16	0.013		0.01	0.01	0.2		0.12
A-B	0.55								
A-C	10.48								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-AC	2.70	5.78	0.467		1.72	0.91	14.7		0.34
C-A	7.33								
C-B	0.09	8.63	0.010		0.01	0.01	0.2		0.12
A-B	0.45								
A-C	8.56								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.15-18.30									
B-AC	2.26	6.24	0.362		0.91	0.58	9.2		0.25
C-A	6.14								
C-B	0.08	8.97	0.008		0.01	0.01	0.1		0.11
A-B	0.38								
A-C	7.16								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.6	*
17.30	0.8	*
17.45	1.7	**
18.00	1.7	**
18.15	0.9	*
18.30	0.6	*

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.0	
17.30	0.0	
17.45	0.0	
18.00	0.0	
18.15	0.0	
18.30	0.0	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	DEMAND (VEH/H)	QUEUEING DELAY (MIN)	QUEUEING DELAY (MIN/VEH)	INCLUSIVE QUEUEING DELAY (MIN)	INCLUSIVE QUEUEING DELAY (MIN/VEH)
B-AC	247.8	165.2	91.2	0.37	91.3	0.37
C-A	673.1	448.7				
C-B	8.3	5.5	1.0	0.12	1.0	0.12
A-B	41.3	27.5				
A-C	785.9	524.0				
ALL	1756.3	1170.9	92.2	0.05	92.2	0.05

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

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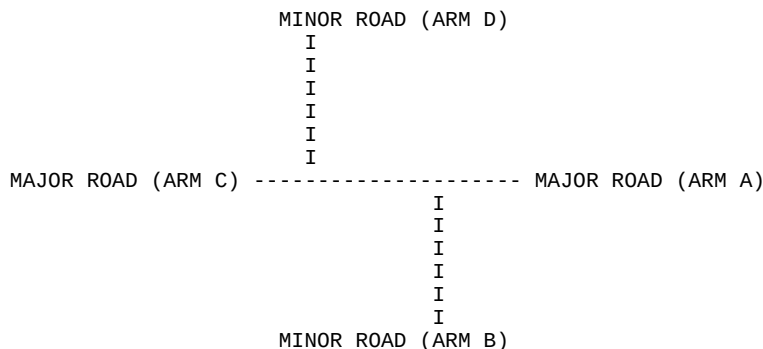
Run with file:-
"I:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\StationRd_MillingtonRd AM Sen.vpi"
(drive-on-the-left) at 12:53:49 on Sunday, 5 August 2012

RUN INFORMATION

RUN TITLE : Base Model Junction 4
LOCATION : Station Road/Millington Road
DATE : 23/04/12
CLIENT :
ENUMERATOR : rhussain [IE-D00135]
JOB NUMBER : VN50026
STATUS : Draft 1
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Station Road (S)
ARM B IS Millington Road
ARM C IS Station Road (N)
ARM D IS Bedwell Gardens

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I	MINOR ROAD D	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 8.25 M.	I	(W) 8.25 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I	(WCR) 0.00 M.	I
I		I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I	(WA-D) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 60.00 M.	I	(VA-D) 80.00 M.	I
I	- BLOCKS TRAFFIC (SPACES)	I	YES (2)	I	YES (2)	I
I		I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 29.0 M.	I	(VD-A) 31.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 41.0 M.	I	(VD-C) 26.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 5.00 M.	I	(WD-A) 3.52 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I	(WD-C) 0.00 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

STREAM B-A

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-D	STREAM A-B	STREAM C-A	I
I	608.68	0.25	0.25	0.10	0.16	I

I	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM D-A	STREAM C-B	STREAM D-B	STREAM C-A	I
I	0.16	0.36	0.36		I

STREAM D-C

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM D-C	STREAM C-A	STREAM C-B	STREAM C-D	STREAM A-C	I
I	526.46	0.22	0.22	0.09	0.14	I

I	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-D	STREAM B-D	STREAM C-D	I
I	0.14	0.31	0.31		I

STREAM CD-B

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM CD-B	STREAM A-B	STREAM A-C	STREAM A-D	STREAM C-B	I
I	620.29	0.21	0.21	0.25		I

STREAM AB-D

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM AB-D	STREAM C-D	STREAM C-A	STREAM C-B	STREAM A-B	I
I	620.29	0.22	0.22	0.22		I

STREAM B-CD

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-CD	STREAM A-C	STREAM A-D	STREAM A-B	STREAM C-D	I
I	779.85	0.27	0.27	0.11		I

STREAM D-AB

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM D-AB	STREAM C-A	STREAM C-B	STREAM C-D	STREAM A-B	I
I	673.64	0.24	0.24	0.09		I

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I
I	D	I	100		I

Demand set: Base+Com+H4&5 2024

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	7.64	I	11.46	I	7.64	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	1.24	I	1.86	I	1.24	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	11.54	I	17.31	I	11.54	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	1.51	I	2.27	I	1.51	I

Demand set: Base+Com+H4&5 2024

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I	ARM	D	I
I	07.45 - 09.15	I	ARM A	I	0.000	I	0.254	I	0.707	I	0.039	I				I
I		I		I	0.0	I	155.0	I	432.0	I	24.0	I				I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I				I
I		I	ARM B	I	0.444	I	0.000	I	0.556	I	0.000	I				I
I		I		I	44.0	I	0.0	I	55.0	I	0.0	I				I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I				I
I		I	ARM C	I	0.714	I	0.165	I	0.000	I	0.121	I				I
I		I		I	659.0	I	152.0	I	0.0	I	112.0	I				I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I				I
I		I	ARM D	I	0.149	I	0.000	I	0.851	I	0.000	I				I
I		I		I	18.0	I	0.0	I	103.0	I	0.0	I				I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I				I
I		I		I		I		I		I		I				I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
B-ACD	1.24	8.46	0.147		0.00	0.17	2.5		0.14
A-B	1.94								
A-C	5.42								
A-D	0.30								
AB-CD	(0.30)	7.83	0.038		0.00	0.04	0.6		0.13
AB-C	(6.10)								
D-ABC	1.52	5.81	0.261		0.00	0.35	4.9		0.23
C-D	1.41								
C-A	8.27								
C-B	1.91								
CD-AB	(1.91)	8.51	0.224		0.00	0.22	3.3		0.15
CD-A	(8.49)								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-ACD	1.48	7.79	0.190		0.17	0.23	3.4		0.16
A-B	2.32								
A-C	6.47								
A-D	0.36								
AB-CD	(0.36)	7.34	0.049		0.04	0.05	0.7		0.14
AB-C	(7.29)								
D-ABC	1.81	5.17	0.351		0.35	0.52	7.5		0.30
C-D	1.68								
C-A	9.87								
C-B	2.28								
CD-AB	(2.28)	8.20	0.278		0.22	0.28	4.2		0.17
CD-A	(10.14)								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-ACD	1.82	6.81	0.267		0.23	0.36	5.2		0.20
A-B	2.84								
A-C	7.93								
A-D	0.44								
AB-CD	(0.44)	6.67	0.066		0.05	0.07	1.0		0.16
AB-C	(8.93)								
D-ABC	2.22	4.27	0.519		0.52	1.02	13.9		0.47
C-D	2.06								
C-A	12.09								
C-B	2.79								
CD-AB	(2.79)	7.76	0.359		0.28	0.36	5.4		0.20
CD-A	(12.42)								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-ACD	1.82	6.81	0.267		0.36	0.36	5.4		0.20
A-B	2.84								
A-C	7.93								
A-D	0.44								
AB-CD	(0.44)	6.67	0.066		0.07	0.07	1.0		0.16
AB-C	(8.94)								
D-ABC	2.22	4.27	0.520		1.02	1.05	15.5		0.49
C-D	2.06								
C-A	12.09								
C-B	2.79								
CD-AB	(2.79)	7.76	0.359		0.36	0.36	5.4		0.20
CD-A	(12.42)								

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-ACD	1.48	7.79	0.190		0.36	0.24	3.7		0.16	I
I	A-B	2.32									I
I	A-C	6.47									I
I	A-D	0.36									I
I	AB-CD (	0.36)	7.34	0.049		0.07	0.05	0.7		0.14	I
I	AB-C (	7.30)									I
I	D-ABC	1.81	5.17	0.351		1.05	0.56	8.9		0.30	I
I	C-D	1.68									I
I	C-A	9.87									I
I	C-B	2.28									I
I	CD-AB (	2.28)	8.20	0.278		0.36	0.28	4.2		0.17	I
I	CD-A (	10.15)									I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	B-ACD	1.24	8.45	0.147		0.24	0.17	2.7		0.14	I
I	A-B	1.94									I
I	A-C	5.42									I
I	A-D	0.30									I
I	AB-CD (	0.30)	7.83	0.038		0.05	0.04	0.6		0.13	I
I	AB-C (	6.11)									I
I	D-ABC	1.52	5.81	0.261		0.56	0.36	5.7		0.23	I
I	C-D	1.41									I
I	C-A	8.27									I
I	C-B	1.91									I
I	CD-AB (	1.91)	8.51	0.224		0.28	0.23	3.4		0.15	I
I	CD-A (	8.50)									I
I											I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.2
08.15	0.2
08.30	0.4
08.45	0.4
09.00	0.2
09.15	0.2

QUEUE FOR STREAM AB-CD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.1
08.45	0.1
09.00	0.0
09.15	0.0

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.3	
08.15	0.5	*
08.30	1.0	*
08.45	1.0	*
09.00	0.6	*
09.15	0.4	

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.2
08.15	0.3
08.30	0.4
08.45	0.4
09.00	0.3
09.15	0.2

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	I	I	I	I	I	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-ACD	I	136.3	I 90.8	I 22.8	I 0.17	I 22.8	I 0.17
I	A-B	I	213.3	I 142.2	I	I	I	I
I	A-C	I	594.6	I 396.4	I	I	I	I
I	A-D	I	33.0	I 22.0	I	I	I	I
I	AB-CD	I	(33.0)	I(22.0)	I 4.6	I 0.14	I 4.6	I 0.14
I	AB-C	I	(670.2)	I(446.8)	I	I	I	I
I	D-ABC	I	166.5	I 111.0	I 56.4	I 0.34	I 56.4	I 0.34
I	C-D	I	154.2	I 102.8	I	I	I	I
I	C-A	I	907.1	I 604.7	I	I	I	I
I	C-B	I	209.2	I 139.5	I	I	I	I
I	CD-AB	I	(209.2)	I(139.5)	I 25.8	I 0.12	I 25.8	I 0.12
I	CD-A	I	(931.8)	I(621.2)	I	I	I	I
I	ALL	I	2414.3	I 1609.5	I 109.6	I 0.05	I 109.6	I 0.05

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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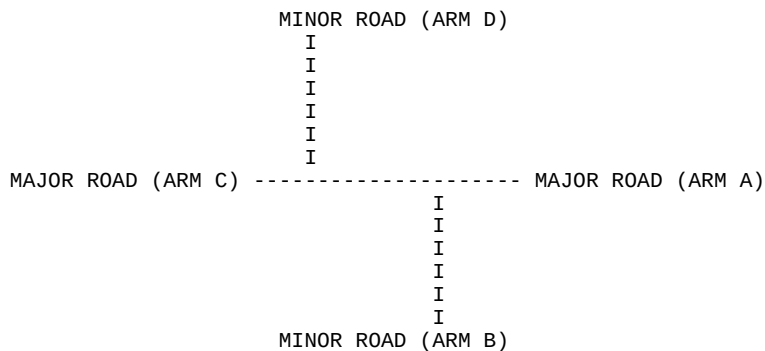
Run with file:-
"I:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\StationRd_MillingtonRd PM Sen.vpi"
(drive-on-the-left) at 12:55:12 on Sunday, 5 August 2012

RUN INFORMATION

RUN TITLE : Base Model Junction 4
LOCATION : Station Road/Millington Road
DATE : 23/04/12
CLIENT :
ENUMERATOR : rhussain [IE-D00135]
JOB NUMBER : VN50026
STATUS : Draft 1
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Station Road (S)
ARM B IS Millington Road
ARM C IS Station Road (N)
ARM D IS Bedwell Gardens

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I	MINOR ROAD D	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 8.25 M.	I	(W) 8.25 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I	(WCR) 0.00 M.	I
I		I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I	(WA-D) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 60.00 M.	I	(VA-D) 80.00 M.	I
I	- BLOCKS TRAFFIC (SPACES)	I	YES (2)	I	YES (2)	I
I		I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 29.0 M.	I	(VD-A) 31.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 41.0 M.	I	(VD-C) 26.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 5.00 M.	I	(WD-A) 3.52 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I	(WD-C) 0.00 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

STREAM B-A

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-D	STREAM A-B	STREAM C-A	I
I	608.68	0.25	0.25	0.10	0.16	I

I	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM D-A	STREAM C-B	STREAM D-B	STREAM C-A	I
I	0.16	0.36	0.36		I

STREAM D-C

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM D-C	STREAM C-A	STREAM C-B	STREAM C-D	STREAM A-C	I
I	526.46	0.22	0.22	0.09	0.14	I

I	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-D	STREAM B-D	STREAM C-D	I
I	0.14	0.31	0.31		I

STREAM CD-B

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM CD-B	STREAM A-B	STREAM A-C	STREAM A-D	STREAM C-B	I
I	620.29	0.21	0.21	0.25		I

STREAM AB-D

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM AB-D	STREAM C-D	STREAM C-A	STREAM C-B	STREAM A-B	I
I	620.29	0.22	0.22	0.22		I

STREAM B-CD

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-CD	STREAM A-C	STREAM A-D	STREAM A-B	STREAM C-D	I
I	779.85	0.27	0.27	0.11		I

STREAM D-AB

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM D-AB	STREAM C-A	STREAM C-B	STREAM C-D	STREAM A-B	I
I	673.64	0.24	0.24	0.09		I

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I
I	D	I	100		I

Demand set: Base+Com+H4&5 2024

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	8.80	I	13.20	I	8.80	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	4.25	I	6.38	I	4.25	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	9.94	I	14.91	I	9.94	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	0.81	I	1.22	I	0.81	I

Demand set: Base+Com+H4&5 2024

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I	ARM	D	I
I	16.45 - 18.15	I	ARM A	I	0.000	I	0.149	I	0.818	I	0.033	I				I
I		I		I	0.0	I	105.0	I	576.0	I	23.0	I				I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I				I
I		I	ARM B	I	0.415	I	0.000	I	0.585	I	0.000	I				I
I		I		I	141.0	I	0.0	I	199.0	I	0.0	I				I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I				I
I		I	ARM C	I	0.678	I	0.196	I	0.000	I	0.126	I				I
I		I		I	539.0	I	156.0	I	0.0	I	100.0	I				I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I				I
I		I	ARM D	I	0.169	I	0.000	I	0.831	I	0.000	I				I
I		I		I	11.0	I	0.0	I	54.0	I	0.0	I				I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I				I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-ACD	4.27	8.34	0.512		0.00	1.01	14.0		0.24
A-B	1.32								
A-C	7.23								
A-D	0.29								
AB-CD	(0.29)	8.18	0.035		0.00	0.04	0.5		0.13
AB-C	(9.68)								
D-ABC	0.82	5.73	0.142		0.00	0.16	2.3		0.20
C-D	1.25								
C-A	6.76								
C-B	1.96								
CD-AB	(1.96)	8.27	0.237		0.00	0.23	3.5		0.16
CD-A	(6.90)								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-ACD	5.09	7.64	0.667		1.01	1.87	25.5		0.38
A-B	1.57								
A-C	8.63								
A-D	0.34								
AB-CD	(0.34)	7.76	0.044		0.04	0.04	0.7		0.13
AB-C	(11.58)								
D-ABC	0.97	5.05	0.193		0.16	0.23	3.4		0.24
C-D	1.50								
C-A	8.08								
C-B	2.34								
CD-AB	(2.34)	7.90	0.296		0.23	0.29	4.4		0.18
CD-A	(8.24)								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-ACD	6.24	6.61	0.944		1.87	7.10	78.2		1.07
A-B	1.93								
A-C	10.57								
A-D	0.42								
AB-CD	(0.42)	7.18	0.059		0.04	0.06	0.9		0.15
AB-C	(14.02)								
D-ABC	1.19	4.10	0.291		0.23	0.40	5.6		0.34
C-D	1.84								
C-A	9.89								
C-B	2.86								
CD-AB	(2.86)	7.40	0.387		0.29	0.38	5.8		0.22
CD-A	(10.09)								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-ACD	6.24	6.61	0.944		7.10	9.00	122.2		1.53
A-B	1.93								
A-C	10.57								
A-D	0.42								
AB-CD	(0.42)	7.18	0.059		0.06	0.06	0.9		0.15
AB-C	(14.15)								
D-ABC	1.19	4.07	0.293		0.40	0.41	6.1		0.35
C-D	1.84								
C-A	9.89								
C-B	2.86								
CD-AB	(2.86)	7.40	0.387		0.38	0.39	5.8		0.22
CD-A	(10.09)								

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.45-18.00										I
I	B-ACD	5.09	7.63	0.667		9.00	2.17	47.8		0.56	I
I	A-B	1.57									I
I	A-C	8.63									I
I	A-D	0.34									I
I	AB-CD	(0.34)	7.76	0.044		0.06	0.04	0.7		0.13	I
I	AB-C	(11.88)									I
I	D-ABC	0.97	5.01	0.194		0.41	0.25	3.9		0.25	I
I	C-D	1.50									I
I	C-A	8.08									I
I	C-B	2.34									I
I	CD-AB	(2.34)	7.90	0.296		0.39	0.30	4.5		0.18	I
I	CD-A	(8.24)									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	B-ACD	4.27	8.34	0.512		2.17	1.08	17.5		0.25	I
I	A-B	1.32									I
I	A-C	7.23									I
I	A-D	0.29									I
I	AB-CD	(0.29)	8.18	0.035		0.04	0.04	0.5		0.13	I
I	AB-C	(9.77)									I
I	D-ABC	0.82	5.72	0.143		0.25	0.17	2.6		0.20	I
I	C-D	1.25									I
I	C-A	6.76									I
I	C-B	1.96									I
I	CD-AB	(1.96)	8.27	0.237		0.30	0.24	3.6		0.16	I
I	CD-A	(6.90)									I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.0	*
17.15	1.9	**
17.30	7.1	*****
17.45	9.0	*****
18.00	2.2	**
18.15	1.1	*

QUEUE FOR STREAM AB-CD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.1
17.45	0.1
18.00	0.0
18.15	0.0

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.2
17.30	0.4
17.45	0.4
18.00	0.2
18.15	0.2

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.2

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I	(VEH)	I	(MIN)	I	(MIN)	I
I		I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-ACD	I	468.0	I	312.0	I	305.2	I
I	A-B	I	144.5	I	96.3	I		I
I	A-C	I	792.8	I	528.5	I		I
I	A-D	I	31.7	I	21.1	I		I
I	AB-CD	I	(31.7)	I	(21.1)	I	4.1	I
I	AB-C	I	(1066.1)	I	(710.7)	I		I
I	D-ABC	I	89.5	I	59.6	I	23.9	I
I	C-D	I	137.6	I	91.8	I		I
I	C-A	I	741.9	I	494.6	I		I
I	C-B	I	214.7	I	143.1	I		I
I	CD-AB	I	(214.7)	I	(143.1)	I	27.5	I
I	CD-A	I	(757.0)	I	(504.7)	I		I
I	ALL	I	2620.7	I	1747.1	I	360.7	I
							0.14	
							360.8	
							0.14	

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

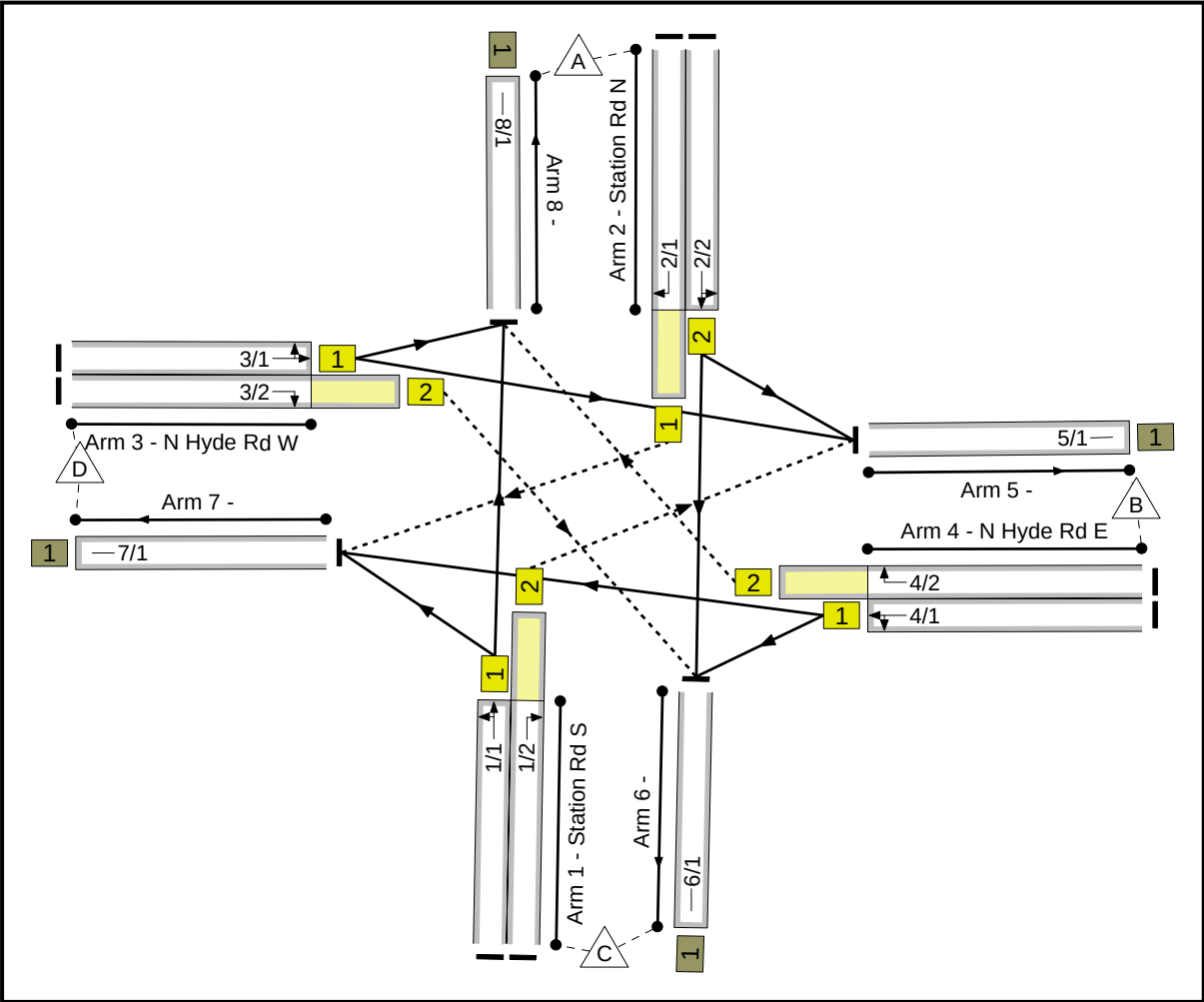
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Full Input Data And Results

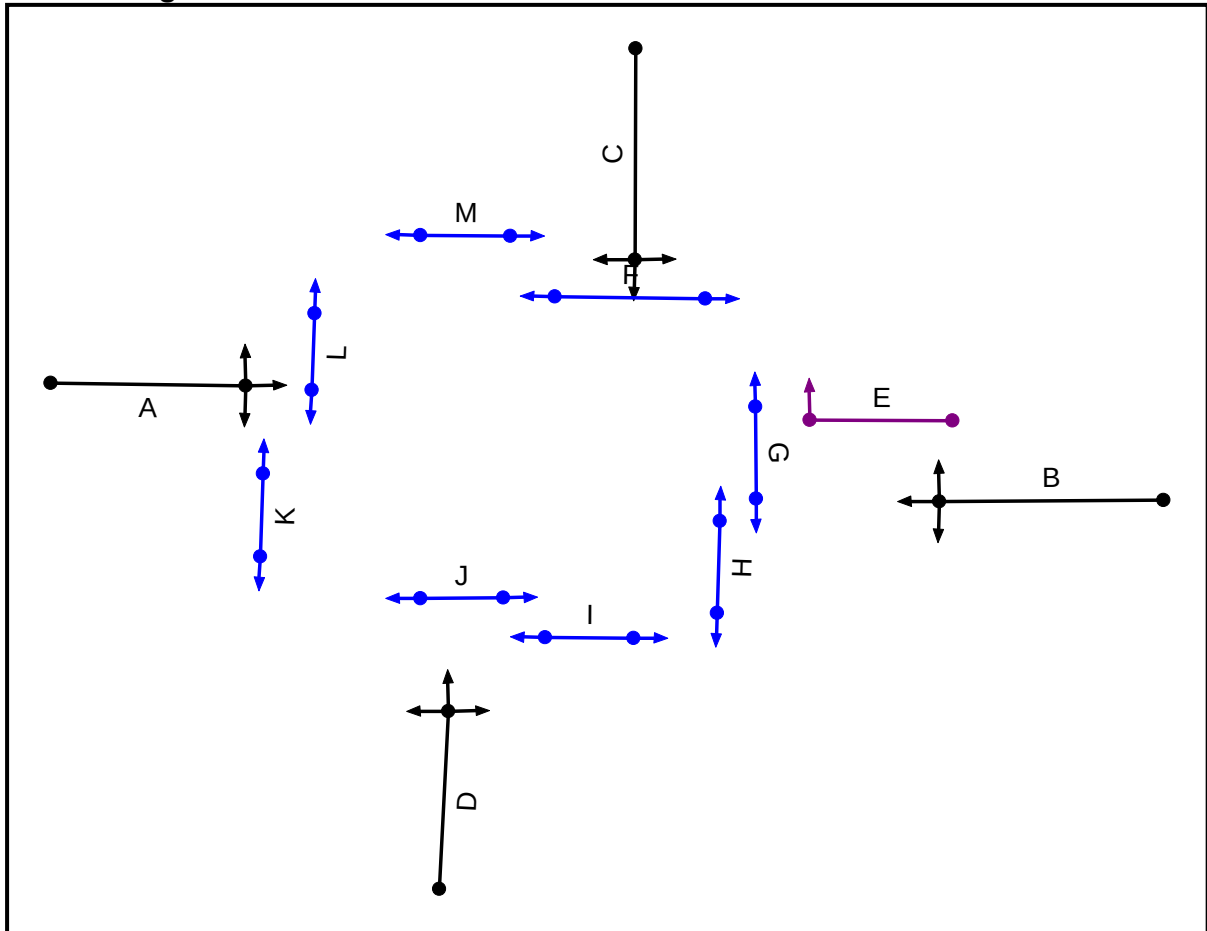
User and Project Details

Project:	
Title:	
Location:	
File name:	26_10AM_LL.lsgx
Author:	
Company:	
Address:	
Controller:	Generic
SCN:	
Notes:	

Junction Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase type	Assoc Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Ind. Arrow	B	4	4
F	Pedestrian		1	1
G	Pedestrian		1	1
H	Pedestrian		1	1
I	Pedestrian		4	4
J	Pedestrian		1	1
K	Pedestrian		4	4
L	Pedestrian		1	1
M	Pedestrian		4	4

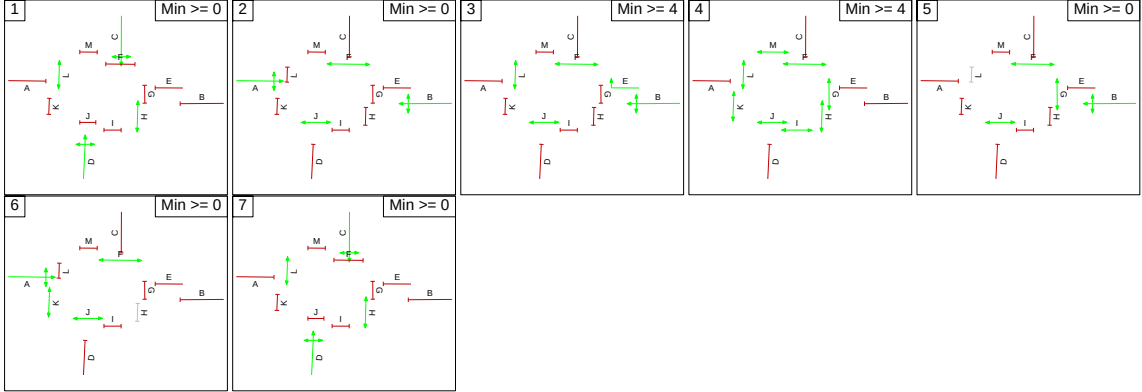
Phase Intergreens Matrix

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

Phases in Stage

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

Stages Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	2	C	Losing	3	3
1	2	D	Losing	3	3
2	1	A	Losing	3	3
2	1	B	Losing	3	3

Prohibited Stage Changes

From Stage	To Stage						
	1	2	3	4	5	6	7
	1	10	10	10	10	10	0
	2	9	10	5	10	9	10
	3	9	9	10	5	10	9
	4	9	10	10	10	9	9
	5	9	8	8	10	10	9
	6	9	8	10	9	10	9
	7	0	10	10	10	10	10

Link Input Data

Arm/ Link	Link Name	Link Type	Num Lanes	Phases	Start Disp.	End Disp.
1/1	Station Rd S Left Ahead	U	1	D	2	3
1/2	Station Rd S Right	O	1	D	2	3
2/1	Station Rd N Right	O	1	C	2	3
2/2	Station Rd N Left Ahead	U	1	C	2	3
3/1	N Hyde Rd W Ahead Left	U	1	A	2	3
3/2	N Hyde Rd W Right	O	1	A	2	3
4/1	N Hyde Rd E Left Ahead	U	1	B	2	3
4/2	N Hyde Rd E Right	O	1	B E	2	3
5/1		U	1		2	3
6/1		U	1		2	3
7/1		U	1		2	3
8/1		U	1		2	3

Full Input Data And Results

Give-Way Link Input Data

Arm/ Link	Link Name	Movement	Max Flow when Giving Way (PCU/Hr)	Opposing Link	Opp. Link Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	RTF	Right Turn Move up time (s)	Max Turns in Intergreen (PCU)
1/2	Station Rd S Right	1/2 to 5/1	1440	2/2	1.09	2/2	4.00	0.50	4	4.00
2/1	Station Rd N Right	2/1 to 7/1	1440	1/1	1.09	1/1	4.00	0.50	4	2.00
3/2	N Hyde Rd W Right	3/2 to 6/1	1440	4/1	1.09	4/1	4.00	0.50	4	4.00
4/2	N Hyde Rd E Right	4/2 to 8/1	1440	3/1	1.09	3/1	4.00	0.50	4	4.00

Lane Input Data

Arm/ Lane	Link Num	Physical Length (PCU)	Expected Usage (PCU)	Sat Flow Type	User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)
1/1 (Station Rd S Lane 1)	Link 1 (Station Rd S Left Ahead)	Inf	Inf	User	1833	3.25	0.00	Y	Arm 7 Left Arm 8 Ahead	Inf Inf
1/2 (Station Rd S Lane 2)	Link 2 (Station Rd S Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 5 Right	15.00
2/1 (Station Rd N Lane 1)	Link 2 (Station Rd N Left Ahead)	Inf	Inf	User	1919	3.25	0.00	Y	Arm 5 Left Arm 6 Ahead	Inf Inf
2/2 (Station Rd N Lane 2)	Link 1 (Station Rd N Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 7 Right	14.00
3/1 (N Hyde Rd W Lane 1)	Link 1 (N Hyde Rd W Ahead Left)	Inf	Inf	User	1818	3.25	0.00	Y	Arm 5 Ahead Arm 8 Left	Inf Inf
3/2 (N Hyde Rd W Lane 2)	Link 2 (N Hyde Rd W Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 6 Right	17.00
4/1 (N Hyde Rd E Lane 1)	Link 1 (N Hyde Rd E Left Ahead)	Inf	Inf	User	1821	3.25	0.00	Y	Arm 6 Left Arm 7 Ahead	Inf Inf
4/2 (N Hyde Rd E Lane 2)	Link 2 (N Hyde Rd E Right)	Inf	Inf	Geom	1800	3.60	0.00	Y	Arm 8 Right	17.00
5/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
6/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
7/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		

8/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
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Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
26: 'Base + Com + H4 5 2024 AM Sen'	08:00	09:00	01:00	
26: 'Base + Com + H4 5 2024 AM Sen'	08:00	09:00	01:00	

Scenario 20: 'Base + Com +H 4 5 2024 AM Sen'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 26: 'Base + Com + H4 5 2024 AM Sen'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	155	456	145	756
	B	143	0	384	550	1077
	C	305	163	0	122	590
	D	110	260	81	0	451
	Tot.	558	578	921	817	2874

Link Traffic Flows

Arm/Link	Flow Group 26: Base + Com + H4 5 2024 AM Sen
1/1	427
1/2	163
2/1	145
2/2	611
3/1	370
3/2	81
4/1	934
4/2	143
5/1	578
6/1	921
7/1	817
8/1	558

Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Rd S Lane 1)	This lane uses a directly entered Saturation Flow						1833
1/2 (Station Rd S Lane 2)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741
2/1 (Station Rd N Lane 1)	This lane uses a directly entered Saturation Flow						1919
2/2 (Station Rd N Lane 2)	3.00	0.00	Y	Arm 7 Right	14.00	100.0 %	1730
3/1 (N Hyde Rd W Lane 1)	This lane uses a directly entered Saturation Flow						1818
3/2 (N Hyde Rd W Lane 2)	3.00	0.00	Y	Arm 6 Right	17.00	100.0 %	1760
4/1 (N Hyde Rd E Lane 1)	This lane uses a directly entered Saturation Flow						1821
4/2 (N Hyde Rd E Lane 2)	3.60	0.00	Y	Arm 8 Right	17.00	100.0 %	1815
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800
7/1	This lane uses a directly entered Saturation Flow						1800
8/1	This lane uses a directly entered Saturation Flow						1800

Scenario 21: 'Base + Com +H 4 5 2024 AM Sen'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 26: 'Base + Com + H4 5 2024 AM Sen'

Traffic Flow Matrix**Desired Flow :**

	Destination					
		A	B	C	D	Tot.
Origin	A	0	155	456	145	756
	B	143	0	384	550	1077
	C	305	163	0	122	590
	D	110	260	81	0	451
	Tot.	558	578	921	817	2874

Link Traffic Flows

Arm/Link	Flow Group 26: Base + Com + H4 5 2024 AM Sen
1/1	427
1/2	163
2/1	145
2/2	611
3/1	370
3/2	81
4/1	934
4/2	143
5/1	578
6/1	921
7/1	817
8/1	558

Lane Saturation Flows

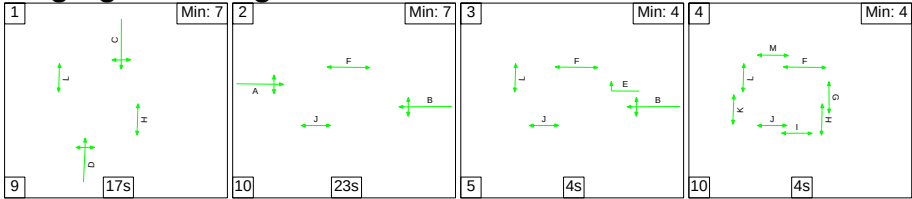
Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Rd S Lane 1)	This lane uses a directly entered Saturation Flow						1833
1/2 (Station Rd S Lane 2)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741
2/1 (Station Rd N Lane 1)	This lane uses a directly entered Saturation Flow						1919
2/2 (Station Rd N Lane 2)	3.00	0.00	Y	Arm 7 Right	14.00	100.0 %	1730
3/1 (N Hyde Rd W Lane 1)	This lane uses a directly entered Saturation Flow						1818
3/2 (N Hyde Rd W Lane 2)	3.00	0.00	Y	Arm 6 Right	17.00	100.0 %	1760
4/1 (N Hyde Rd E Lane 1)	This lane uses a directly entered Saturation Flow						1821
4/2 (N Hyde Rd E Lane 2)	3.60	0.00	Y	Arm 8 Right	17.00	100.0 %	1815
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800
7/1	This lane uses a directly entered Saturation Flow						1800
8/1	This lane uses a directly entered Saturation Flow						1800

Scenario 20: 'Base + Com +H 4 5 2024 AM Sen'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 26: 'Base + Com + H4 5 2024 AM Sen'

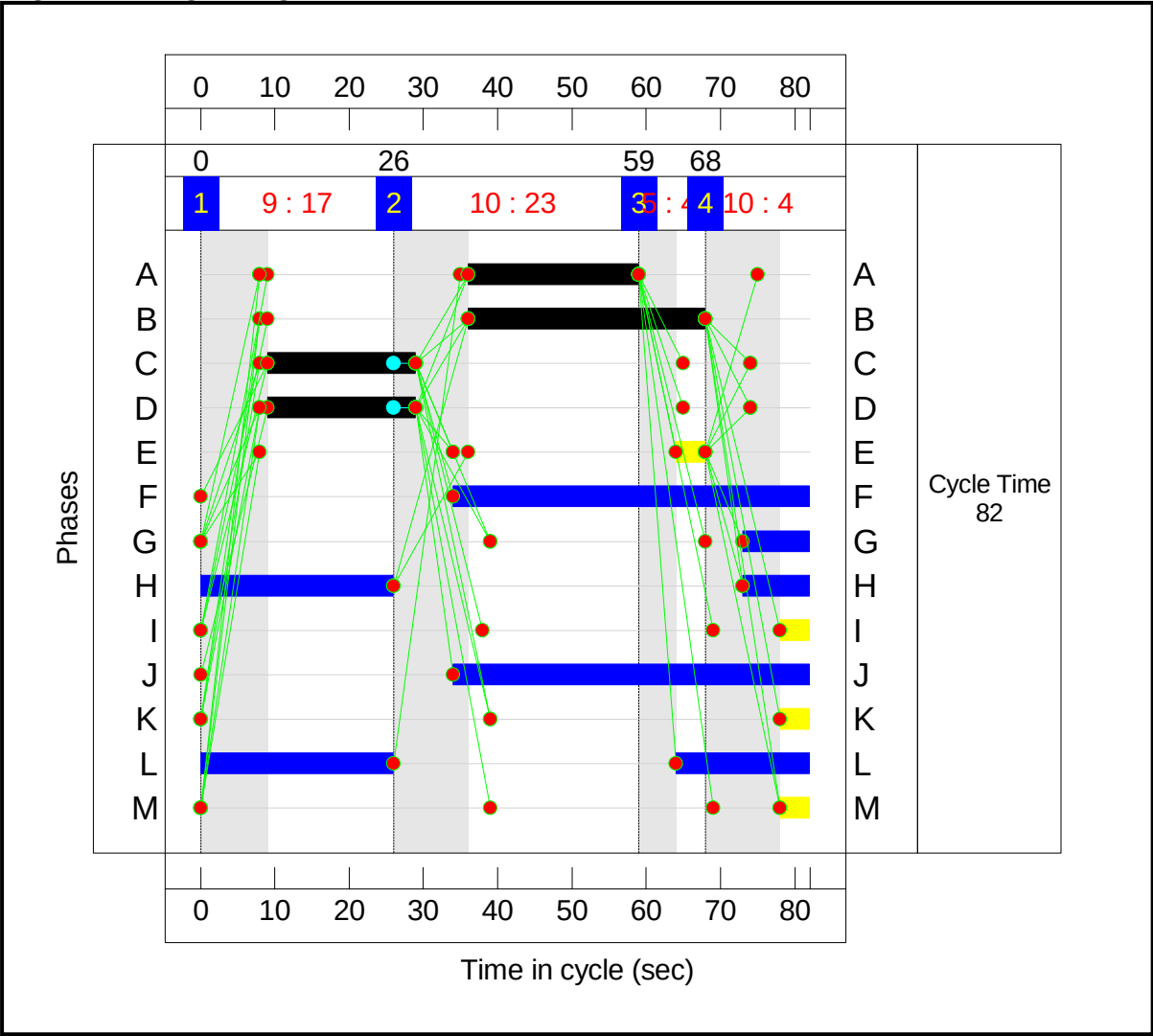
Staging Plan Diagram



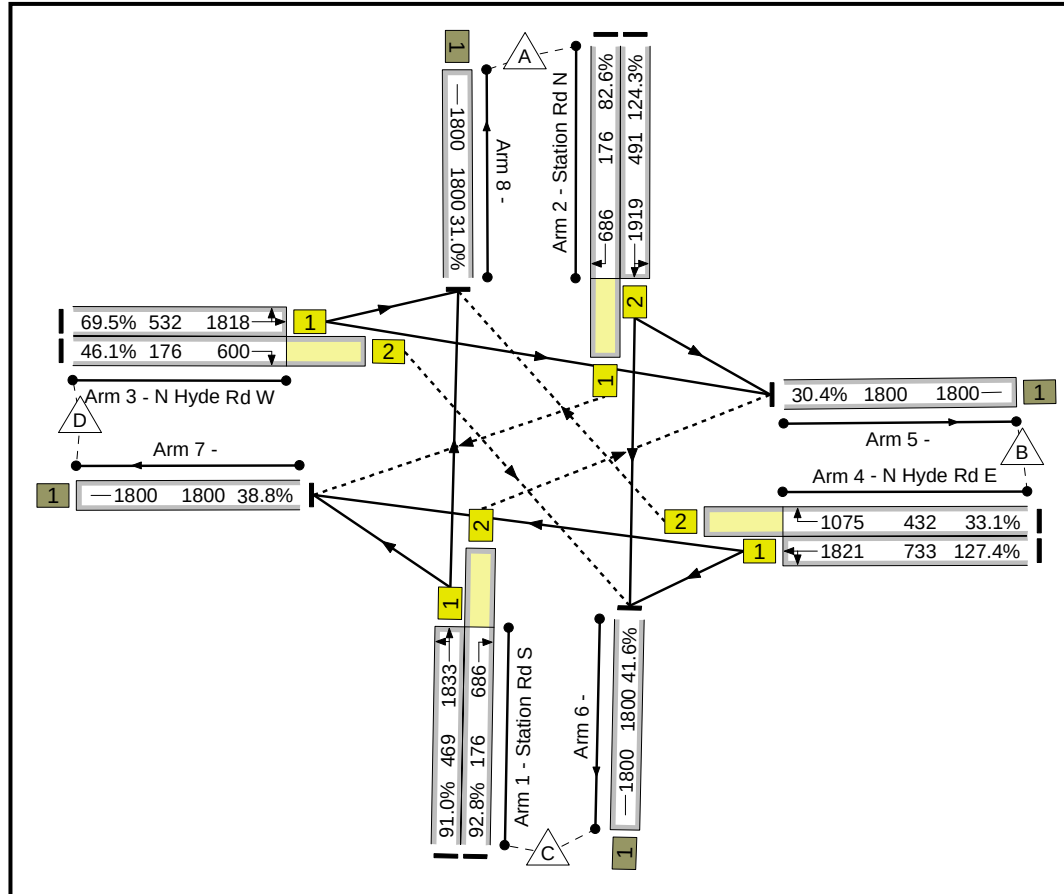
Stage Timings

Stage	1	2	3	4
Duration	17	23	4	4
Change Point	0	26	59	68

Signal Timings Diagram



Junction Layout Diagram



Full Input Data And Results

Link Results

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Rd S Left Ahead	U	N/A	N/A	D		1	20	-	427	1833	1833	469	91.0
1/2	Station Rd S Right	O	N/A	N/A	D		1	20	-	163	1741	686	176	92.8
2/1	Station Rd N Right	O	N/A	N/A	C		1	20	-	145	1730	686	176	82.6
2/2	Station Rd N Left Ahead	U	N/A	N/A	C		1	20	-	611	1919	1919	491	124.3
3/1	N Hyde Rd W Ahead Left	U	N/A	N/A	A		1	23	-	370	1818	1818	532	69.5
3/2	N Hyde Rd W Right	O	N/A	N/A	A		1	23	-	81	1760	600	176	46.1
4/1	N Hyde Rd E Left Ahead	U	N/A	N/A	B		1	32	-	934	1821	1821	733	127.4
4/2	N Hyde Rd E Right	O	N/A	N/A	B	E	1	32	4	143	1815	1075	432	33.1
5/1		U	N/A	N/A	-		-	-	-	578	1800	1800	1800	30.4
6/1		U	N/A	N/A	-		-	-	-	921	1800	1800	1800	41.6
7/1		U	N/A	N/A	-		-	-	-	817	1800	1800	1800	38.8
8/1		U	N/A	N/A	-		-	-	-	558	1800	1800	1800	31.0

Full Input Data And Results

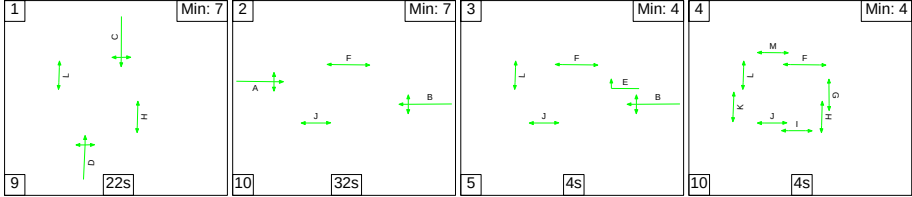
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Scenario 21: 'Base + Com +H 4 5 2024 AM Sen'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 26: 'Base + Com + H4 5 2024 AM Sen'

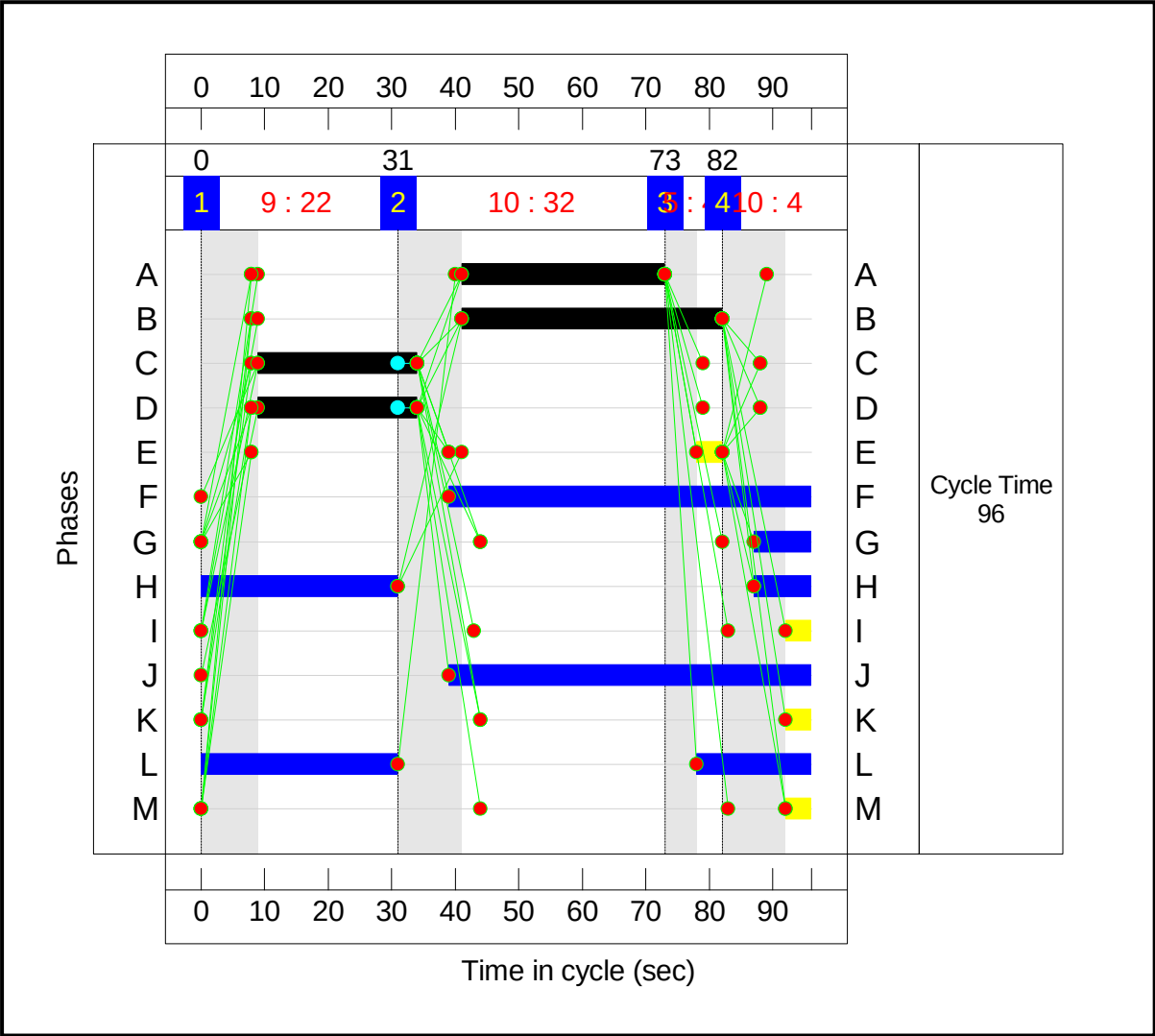
Staging Plan Diagram



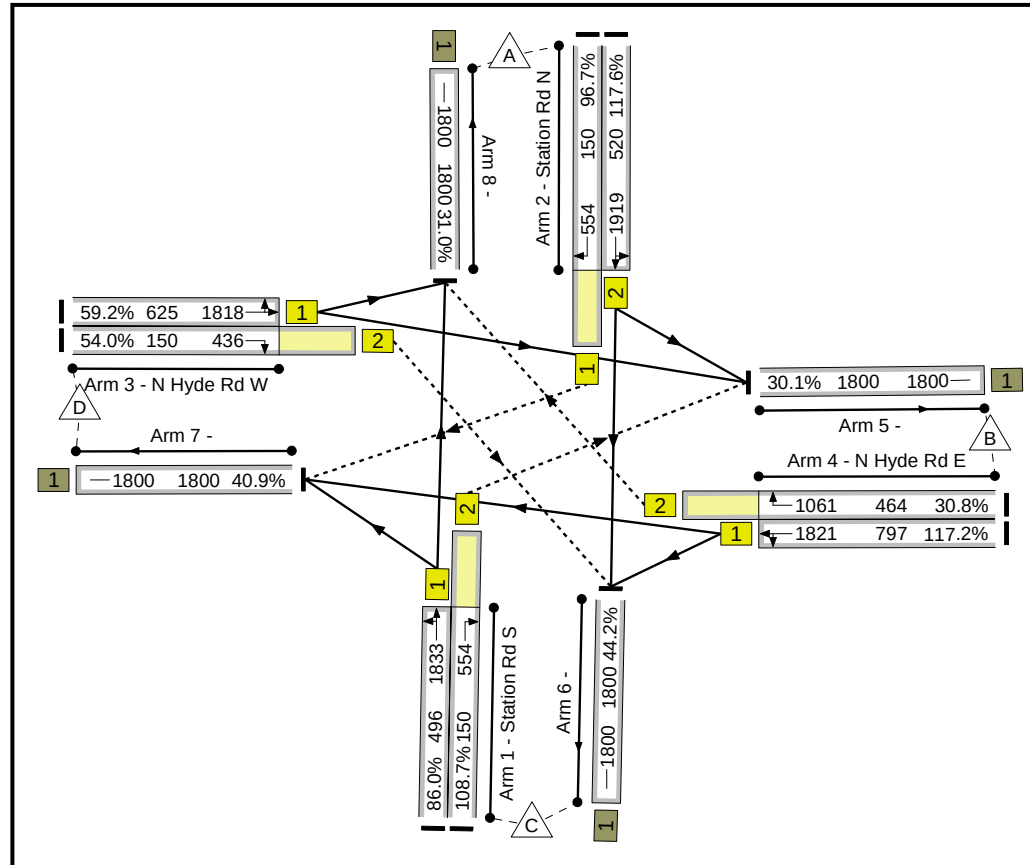
Stage Timings

Stage	1	2	3	4
Duration	22	32	4	4
Change Point	0	31	73	82

Signal Timings Diagram



Junction Layout Diagram



Full Input Data And Results

Link Results

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Rd S Left Ahead	U	N/A	N/A	D		1	25	-	427	1833	1833	496	86.0
1/2	Station Rd S Right	O	N/A	N/A	D		1	25	-	163	1741	554	150	108.7
2/1	Station Rd N Right	O	N/A	N/A	C		1	25	-	145	1730	554	150	96.7
2/2	Station Rd N Left Ahead	U	N/A	N/A	C		1	25	-	611	1919	1919	520	117.6
3/1	N Hyde Rd W Ahead Left	U	N/A	N/A	A		1	32	-	370	1818	1818	625	59.2
3/2	N Hyde Rd W Right	O	N/A	N/A	A		1	32	-	81	1760	436	150	54.0
4/1	N Hyde Rd E Left Ahead	U	N/A	N/A	B		1	41	-	934	1821	1821	797	117.2
4/2	N Hyde Rd E Right	O	N/A	N/A	B	E	1	41	4	143	1815	1061	464	30.8
5/1		U	N/A	N/A	-		-	-	-	578	1800	1800	1800	30.1
6/1		U	N/A	N/A	-		-	-	-	921	1800	1800	1800	44.2
7/1		U	N/A	N/A	-		-	-	-	817	1800	1800	1800	40.9
8/1		U	N/A	N/A	-		-	-	-	558	1800	1800	1800	31.0

Full Input Data And Results

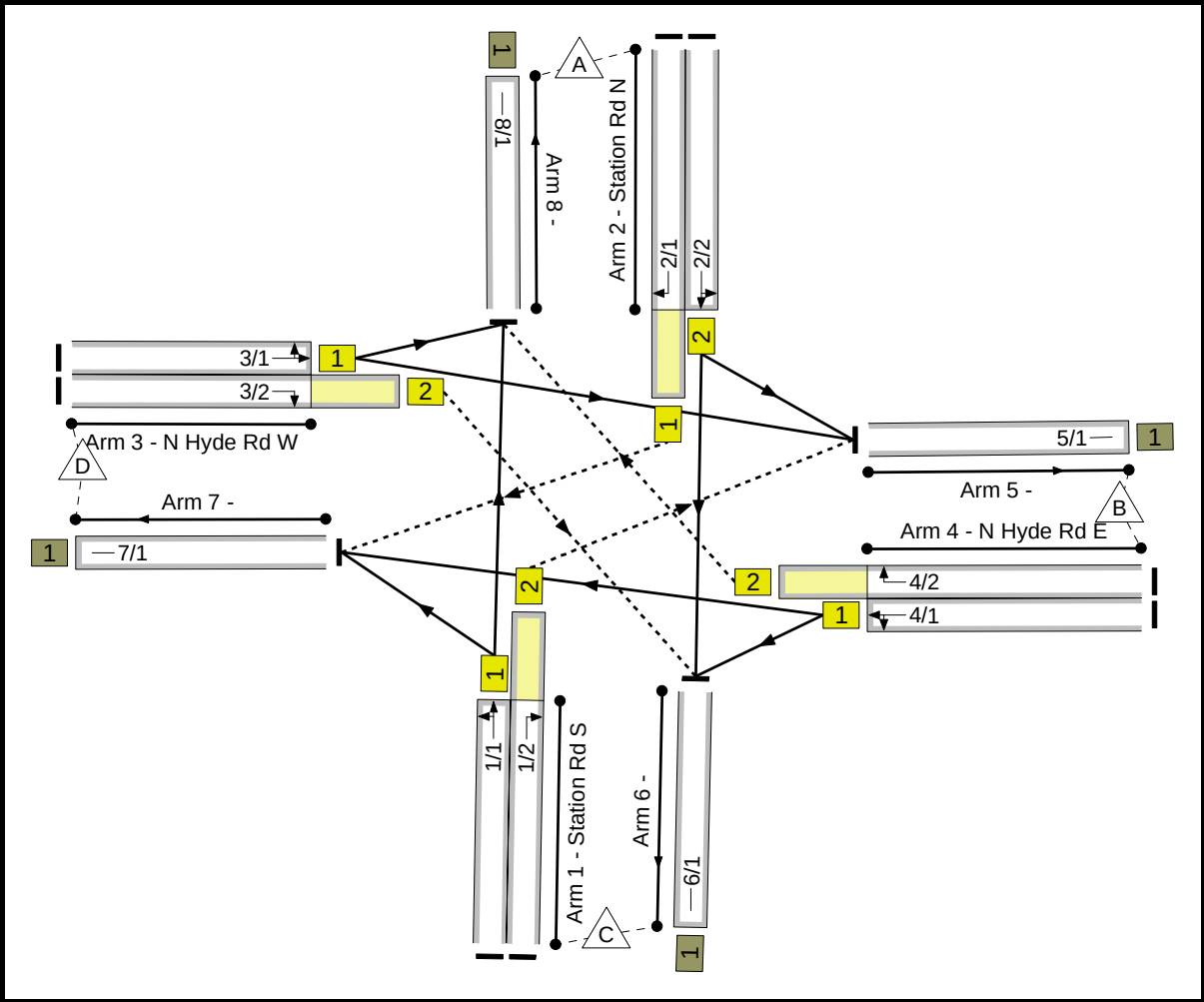
Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
1/1	427	427	-	-	-	3.9	2.8	-	6.8	57.2	10.8	2.8	13.6	
1/2	163	150	0	0	150	1.8	10.4	1.0	13.2	292.4	3.9	10.4	14.3	
2/1	145	145	47	0	98	1.2	4.9	0.8	6.9	171.8	3.2	4.9	8.1	
2/2	611	520	-	-	-	10.2	48.8	-	59.0	347.5	18.7	48.8	67.5	
3/1	370	370	-	-	-	2.7	0.7	-	3.4	33.0	8.1	0.7	8.8	
3/2	81	81	0	0	81	0.5	0.6	0.8	1.9	82.9	1.5	0.6	2.1	
4/1	934	797	-	-	-	12.7	71.9	-	84.6	326.1	29.4	71.9	101.3	
4/2	143	143	127	10	6	0.7	0.2	0.5	1.3	33.7	2.3	0.2	2.5	
5/1	542	542	-	-	-	0.1	0.2	-	0.3	1.7	6.5	0.2	6.7	
6/1	796	796	-	-	-	0.0	0.4	-	0.4	1.5	0.0	0.4	0.4	
7/1	736	736	-	-	-	0.0	0.3	-	0.3	1.5	1.0	0.3	1.4	
8/1	558	558	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2	
PRC for Signalled Links (%):			-30.6	Total Delay for Signalled Links (pcuHr):			177.13							
PRC Over All Links (%):			-30.6	Total Delay Over All Links(pcuHr):			178.37	Cycle Time (s):	96					

Full Input Data And Results

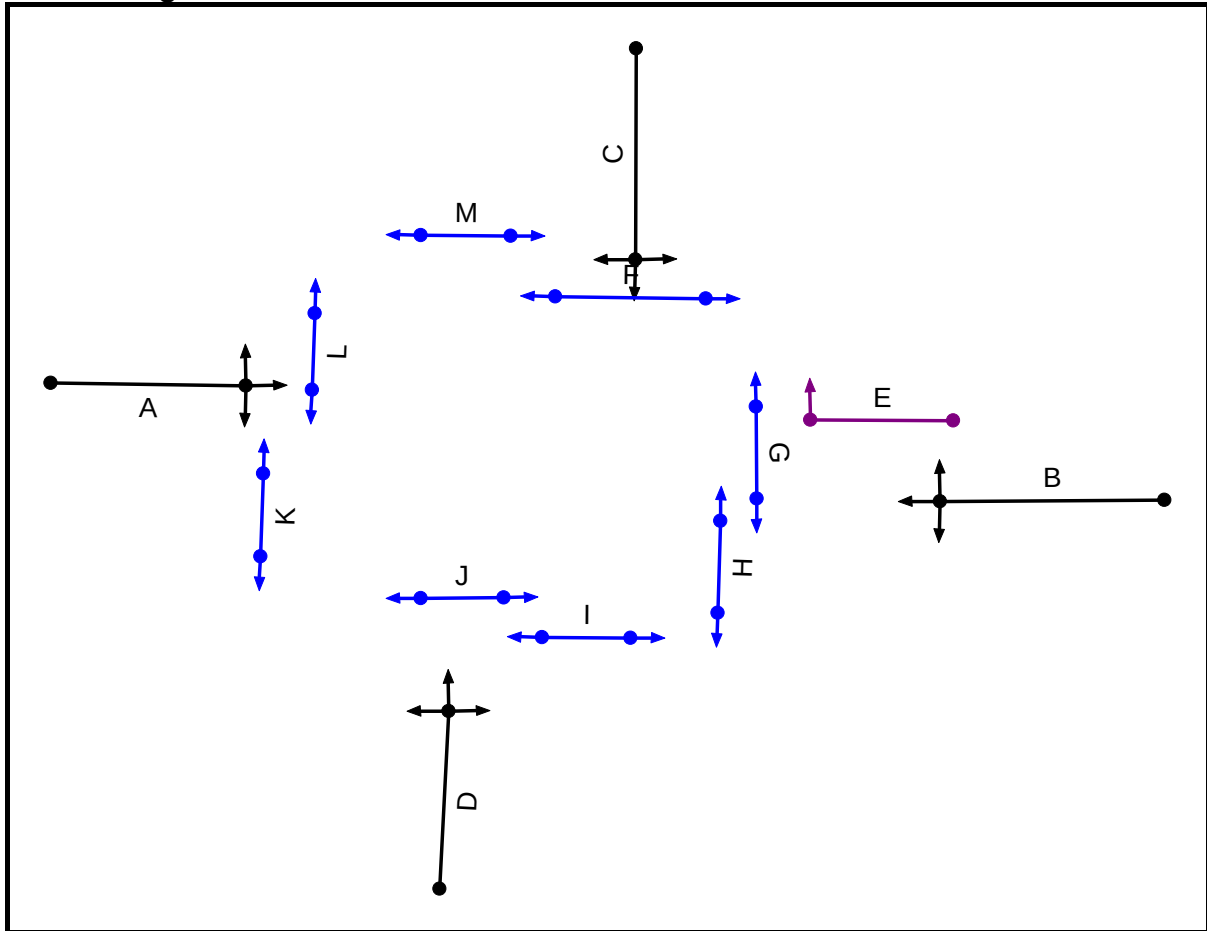
User and Project Details

Project:	
Title:	
Location:	
File name:	26_10PM_LL.lsgx
Author:	
Company:	
Address:	
Controller:	Generic
SCN:	
Notes:	

Junction Layout Diagram



Phase Diagram



Phase Input Data

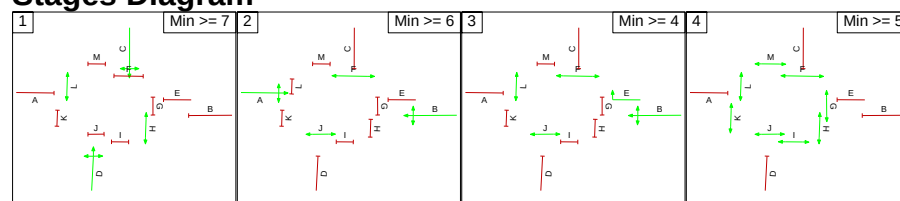
Phase Name	Phase type	Assoc Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Ind. Arrow	B	4	4
F	Pedestrian		5	5
G	Pedestrian		5	5
H	Pedestrian		5	5
I	Pedestrian		5	5
J	Pedestrian		5	5
K	Pedestrian		5	5
L	Pedestrian		5	5
M	Pedestrian		5	5

Phase Intergreens Matrix

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

Phases in Stage

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

Stages Diagram**Phase Delays**

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	2	C	Losing	3	3
1	2	D	Losing	3	3
2	1	A	Losing	3	3
2	1	B	Losing	3	3

Prohibited Stage Changes

	To Stage				
From Stage		1	2	3	4
	1		10	10	10
	2	9		5	10
	3	9	9		10
	4	9	10	10	

Link Input Data

Arm/ Link	Link Name	Link Type	Num Lanes	Phases	Start Disp.	End Disp.
1/1	Station Rd S Left Ahead	U	1	D	2	3
1/2	Station Rd S Right	O	1	D	2	3
2/1	Station Rd N Right	O	1	C	2	3
2/2	Station Rd N Left Ahead	U	1	C	2	3
3/1	N Hyde Rd W Ahead Left	U	1	A	2	3
3/2	N Hyde Rd W Right	O	1	A	2	3
4/1	N Hyde Rd E Left Ahead	U	1	B	2	3
4/2	N Hyde Rd E Right	O	1	B E	2	3
5/1		U	1		2	3
6/1		U	1		2	3
7/1		U	1		2	3
8/1		U	1		2	3

Full Input Data And Results

Give-Way Link Input Data

Arm/ Link	Link Name	Movement	Max Flow when Giving Way (PCU/Hr)	Opposing Link	Opp. Link Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	RTF	Right Turn Move up time (s)	Max Turns in Intergreen (PCU)
1/2	Station Rd S Right	1/2 to 5/1	1440	2/2	1.09	2/2	4.00	0.50	4	4.00
2/1	Station Rd N Right	2/1 to 7/1	1440	1/1	1.09	1/1	4.00	0.50	4	2.00
3/2	N Hyde Rd W Right	3/2 to 6/1	1440	4/1	1.09	4/1	4.00	0.50	4	4.00
4/2	N Hyde Rd E Right	4/2 to 8/1	1440	3/1	1.09	3/1	4.00	0.50	4	4.00

Lane Input Data

Arm/ Lane	Link Num	Physical Length (PCU)	Expected Usage (PCU)	Sat Flow Type	User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)
1/1 (Station Rd S Lane 1)	Link 1 (Station Rd S Left Ahead)	Inf	Inf	User	1833	3.25	0.00	Y	Arm 7 Left	Inf
									Arm 8 Ahead	Inf
1/2 (Station Rd S Lane 2)	Link 2 (Station Rd S Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 5 Right	15.00
2/1 (Station Rd N Lane 1)	Link 2 (Station Rd N Left Ahead)	Inf	Inf	User	1919	3.25	0.00	Y	Arm 5 Left	Inf
									Arm 6 Ahead	Inf
2/2 (Station Rd N Lane 2)	Link 1 (Station Rd N Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 7 Right	14.00
3/1 (N Hyde Rd W Lane 1)	Link 1 (N Hyde Rd W Ahead Left)	Inf	Inf	User	1818	3.25	0.00	Y	Arm 5 Ahead	Inf
									Arm 8 Left	Inf
3/2 (N Hyde Rd W Lane 2)	Link 2 (N Hyde Rd W Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 6 Right	17.00
4/1 (N Hyde Rd E Lane 1)	Link 1 (N Hyde Rd E Left Ahead)	Inf	Inf	User	1821	3.25	0.00	Y	Arm 6 Left	Inf
									Arm 7 Ahead	Inf
4/2 (N Hyde Rd E Lane 2)	Link 2 (N Hyde Rd E Right)	Inf	Inf	Geom	1800	3.60	0.00	Y	Arm 8 Right	17.00
5/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
6/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
7/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
8/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
26: 'Base + Com + H4 5 2024 PM Sen'	17:30	18:30	01:00	
26: 'Base + Com + H4 5 2024 PM Sen'	17:30	18:30	01:00	

Scenario 20: 'Base + Com +H 4 5 2024 PM Sen'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 26: 'Base + Com + H4 5 2024 PM Sen'

Traffic Flow Matrix**Desired Flow :**

	Destination					
		A	B	C	D	Tot.
Origin	A	0	158	335	129	622
	B	226	0	324	384	934
	C	366	326	0	103	795
	D	119	389	70	0	578
	Tot.	711	873	729	616	2929

Link Traffic Flows

Arm/Link	Flow Group 26: Base + Com + H4 5 2024 PM Sen
1/1	469
1/2	326
2/1	129
2/2	493
3/1	508
3/2	70
4/1	708
4/2	226
5/1	873
6/1	729
7/1	616
8/1	711

Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Rd S Lane 1)	This lane uses a directly entered Saturation Flow						1833
1/2 (Station Rd S Lane 2)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741
2/1 (Station Rd N Lane 1)	This lane uses a directly entered Saturation Flow						1919
2/2 (Station Rd N Lane 2)	3.00	0.00	Y	Arm 7 Right	14.00	100.0 %	1730
3/1 (N Hyde Rd W Lane 1)	This lane uses a directly entered Saturation Flow						1818
3/2 (N Hyde Rd W Lane 2)	3.00	0.00	Y	Arm 6 Right	17.00	100.0 %	1760
4/1 (N Hyde Rd E Lane 1)	This lane uses a directly entered Saturation Flow						1821
4/2 (N Hyde Rd E Lane 2)	3.60	0.00	Y	Arm 8 Right	17.00	100.0 %	1815
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800
7/1	This lane uses a directly entered Saturation Flow						1800
8/1	This lane uses a directly entered Saturation Flow						1800

Scenario 21: 'Base + Com +H 4 5 2024 PM Sen'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 26: 'Base + Com + H4 5 2024 PM Sen'

Traffic Flow Matrix**Desired Flow :**

	Destination					
		A	B	C	D	Tot.
Origin	A	0	158	335	129	622
	B	226	0	324	384	934
	C	366	326	0	103	795
	D	119	389	70	0	578
	Tot.	711	873	729	616	2929

Link Traffic Flows

Arm/Link	Flow Group 26: Base + Com + H4 5 2024 PM Sen
1/1	469
1/2	326
2/1	129
2/2	493
3/1	508
3/2	70
4/1	708
4/2	226
5/1	873
6/1	729
7/1	616
8/1	711

Lane Saturation Flows

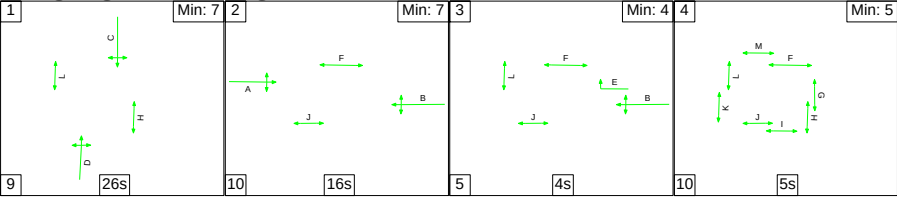
Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Rd S Lane 1)	This lane uses a directly entered Saturation Flow						1833
1/2 (Station Rd S Lane 2)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741
2/1 (Station Rd N Lane 1)	This lane uses a directly entered Saturation Flow						1919
2/2 (Station Rd N Lane 2)	3.00	0.00	Y	Arm 7 Right	14.00	100.0 %	1730
3/1 (N Hyde Rd W Lane 1)	This lane uses a directly entered Saturation Flow						1818
3/2 (N Hyde Rd W Lane 2)	3.00	0.00	Y	Arm 6 Right	17.00	100.0 %	1760
4/1 (N Hyde Rd E Lane 1)	This lane uses a directly entered Saturation Flow						1821
4/2 (N Hyde Rd E Lane 2)	3.60	0.00	Y	Arm 8 Right	17.00	100.0 %	1815
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800
7/1	This lane uses a directly entered Saturation Flow						1800
8/1	This lane uses a directly entered Saturation Flow						1800

Scenario 20: 'Base + Com +H 4 5 2024 PM Sen'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 26: 'Base + Com + H4 5 2024 PM Sen'

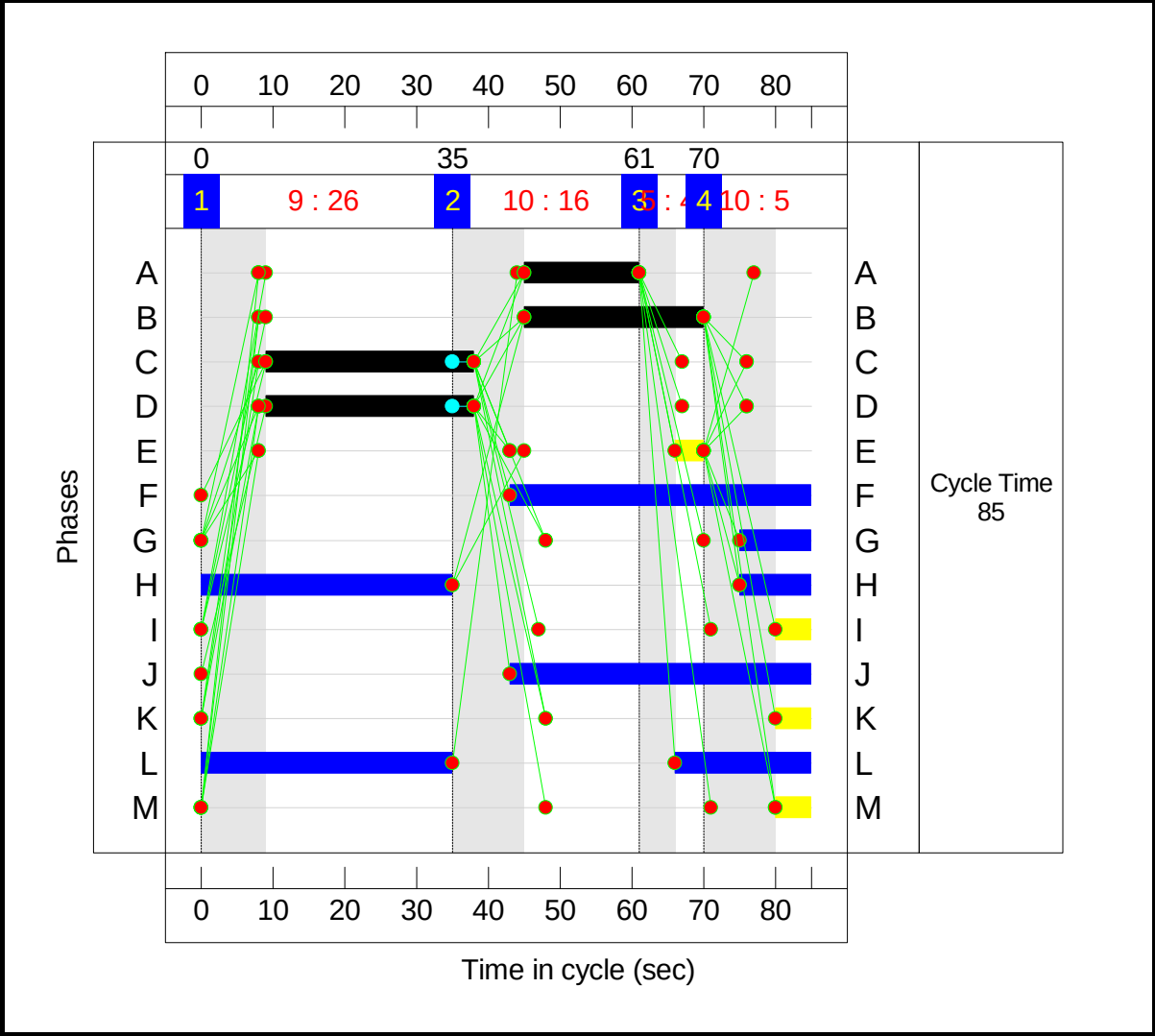
Staging Plan Diagram



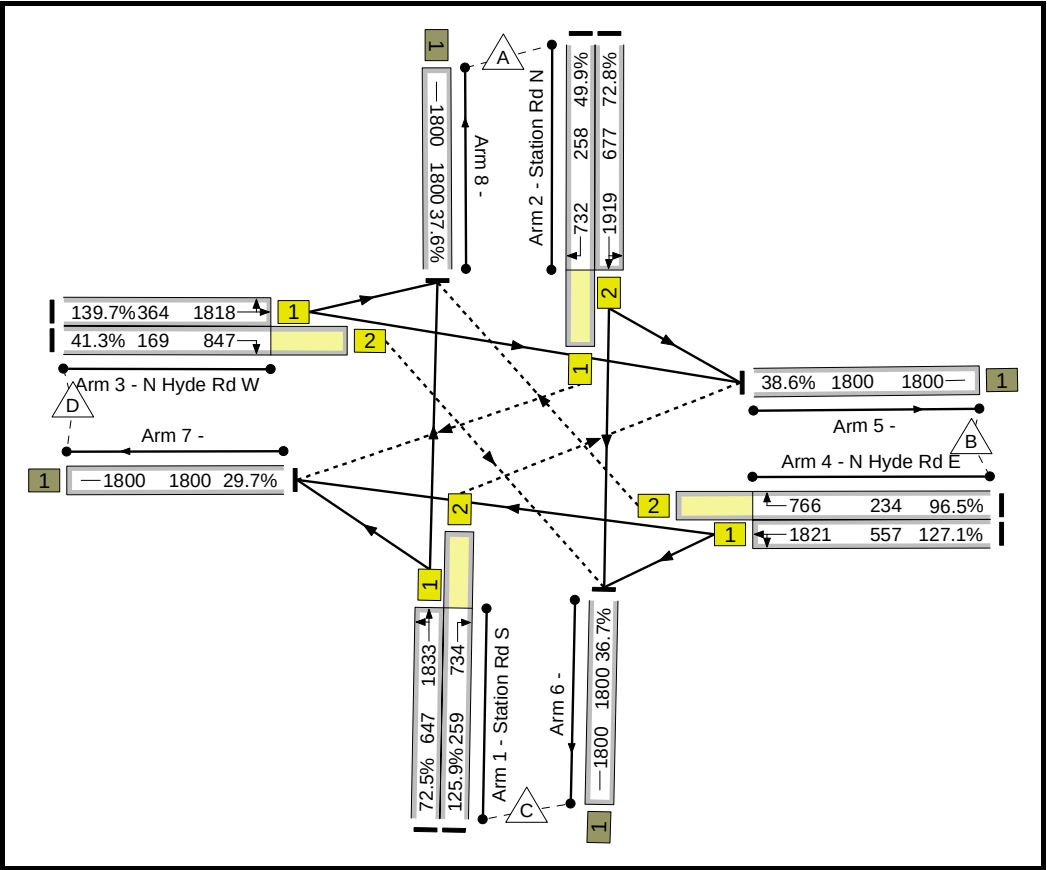
Stage Timings

Stage	1	2	3	4
Duration	26	16	4	5
Change Point	0	35	61	70

Signal Timings Diagram



Junction Layout Diagram



Full Input Data And Results

Link Results

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Rd S Left Ahead	U	N/A	N/A	D		1	29	-	469	1833	1833	647	72.5
1/2	Station Rd S Right	O	N/A	N/A	D		1	29	-	326	1741	734	259	125.9
2/1	Station Rd N Right	O	N/A	N/A	C		1	29	-	129	1730	732	258	49.9
2/2	Station Rd N Left Ahead	U	N/A	N/A	C		1	29	-	493	1919	1919	677	72.8
3/1	N Hyde Rd W Ahead Left	U	N/A	N/A	A		1	16	-	508	1818	1818	364	139.7
3/2	N Hyde Rd W Right	O	N/A	N/A	A		1	16	-	70	1760	847	169	41.3
4/1	N Hyde Rd E Left Ahead	U	N/A	N/A	B		1	25	-	708	1821	1821	557	127.1
4/2	N Hyde Rd E Right	O	N/A	N/A	B	E	1	25	4	226	1815	766	234	96.5
5/1		U	N/A	N/A	-		-	-	-	873	1800	1800	1800	38.6
6/1		U	N/A	N/A	-		-	-	-	729	1800	1800	1800	36.7
7/1		U	N/A	N/A	-		-	-	-	616	1800	1800	1800	29.7
8/1		U	N/A	N/A	-		-	-	-	711	1800	1800	1800	37.6

Full Input Data And Results

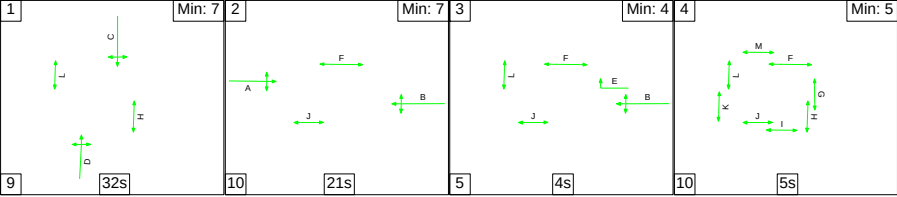
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Scenario 21: 'Base + Com +H 4 5 2024 PM Sen'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 26: 'Base + Com + H4 5 2024 PM Sen'

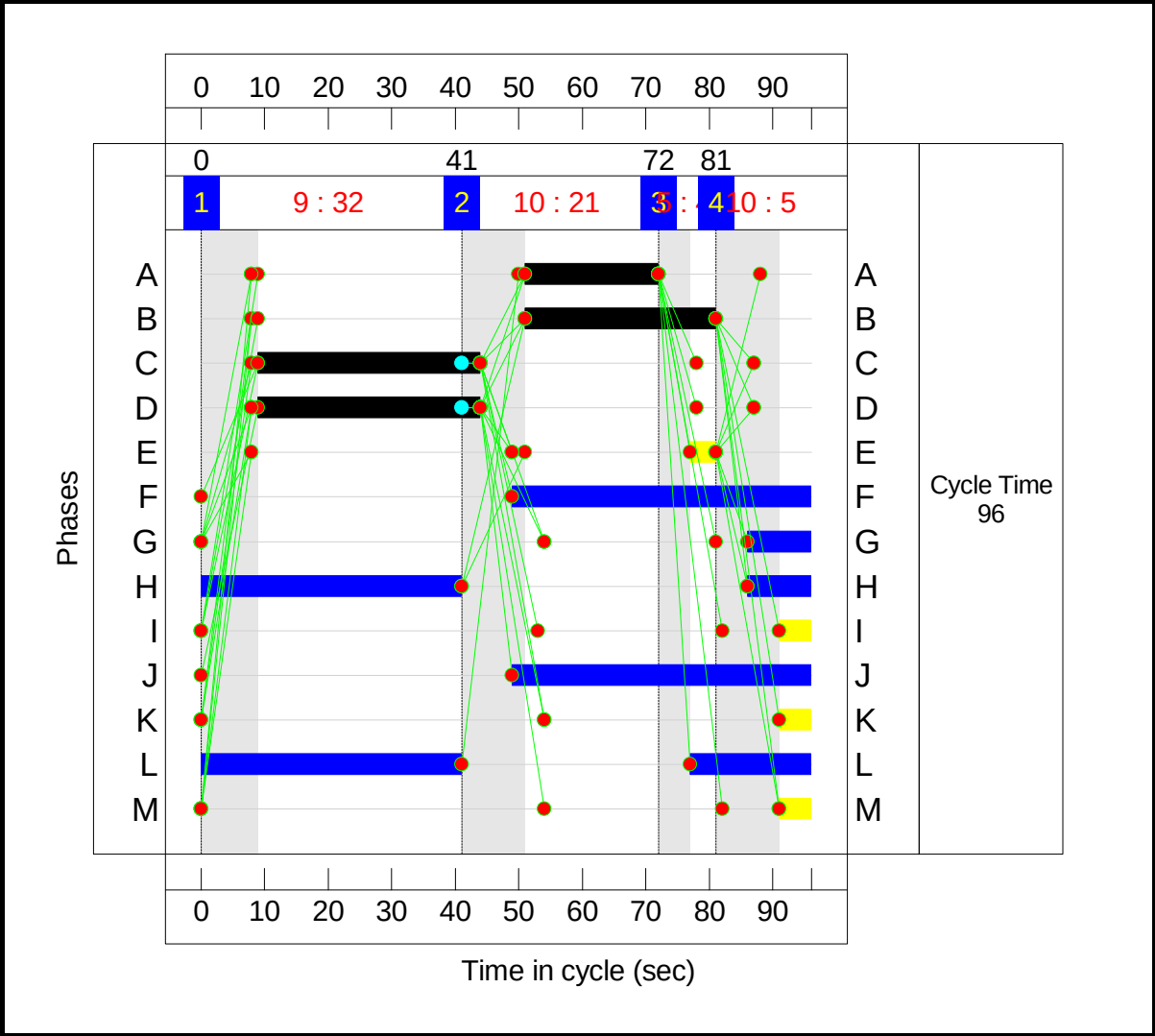
Staging Plan Diagram



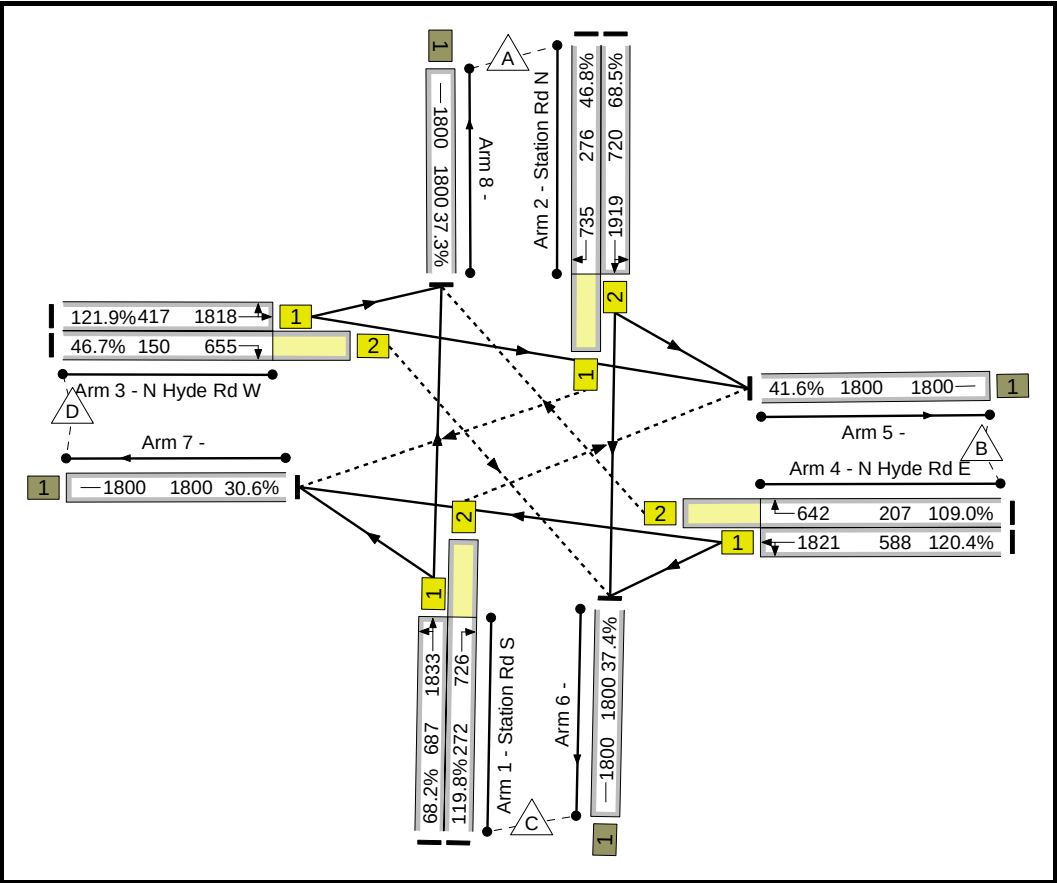
Stage Timings

Stage	1	2	3	4
Duration	32	21	4	5
Change Point	0	41	72	81

Signal Timings Diagram



Junction Layout Diagram



Full Input Data And Results

Link Results

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Rd S Left Ahead	U	N/A	N/A	D		1	35	-	469	1833	1833	687	68.2
1/2	Station Rd S Right	O	N/A	N/A	D		1	35	-	326	1741	726	272	119.8
2/1	Station Rd N Right	O	N/A	N/A	C		1	35	-	129	1730	735	276	46.8
2/2	Station Rd N Left Ahead	U	N/A	N/A	C		1	35	-	493	1919	1919	720	68.5
3/1	N Hyde Rd W Ahead Left	U	N/A	N/A	A		1	21	-	508	1818	1818	417	121.9
3/2	N Hyde Rd W Right	O	N/A	N/A	A		1	21	-	70	1760	655	150	46.7
4/1	N Hyde Rd E Left Ahead	U	N/A	N/A	B		1	30	-	708	1821	1821	588	120.4
4/2	N Hyde Rd E Right	O	N/A	N/A	B	E	1	30	4	226	1815	642	207	109.0
5/1		U	N/A	N/A	-		-	-	-	873	1800	1800	1800	41.6
6/1		U	N/A	N/A	-		-	-	-	729	1800	1800	1800	37.4
7/1		U	N/A	N/A	-		-	-	-	616	1800	1800	1800	30.6
8/1		U	N/A	N/A	-		-	-	-	711	1800	1800	1800	37.3

Full Input Data And Results

[illegible]

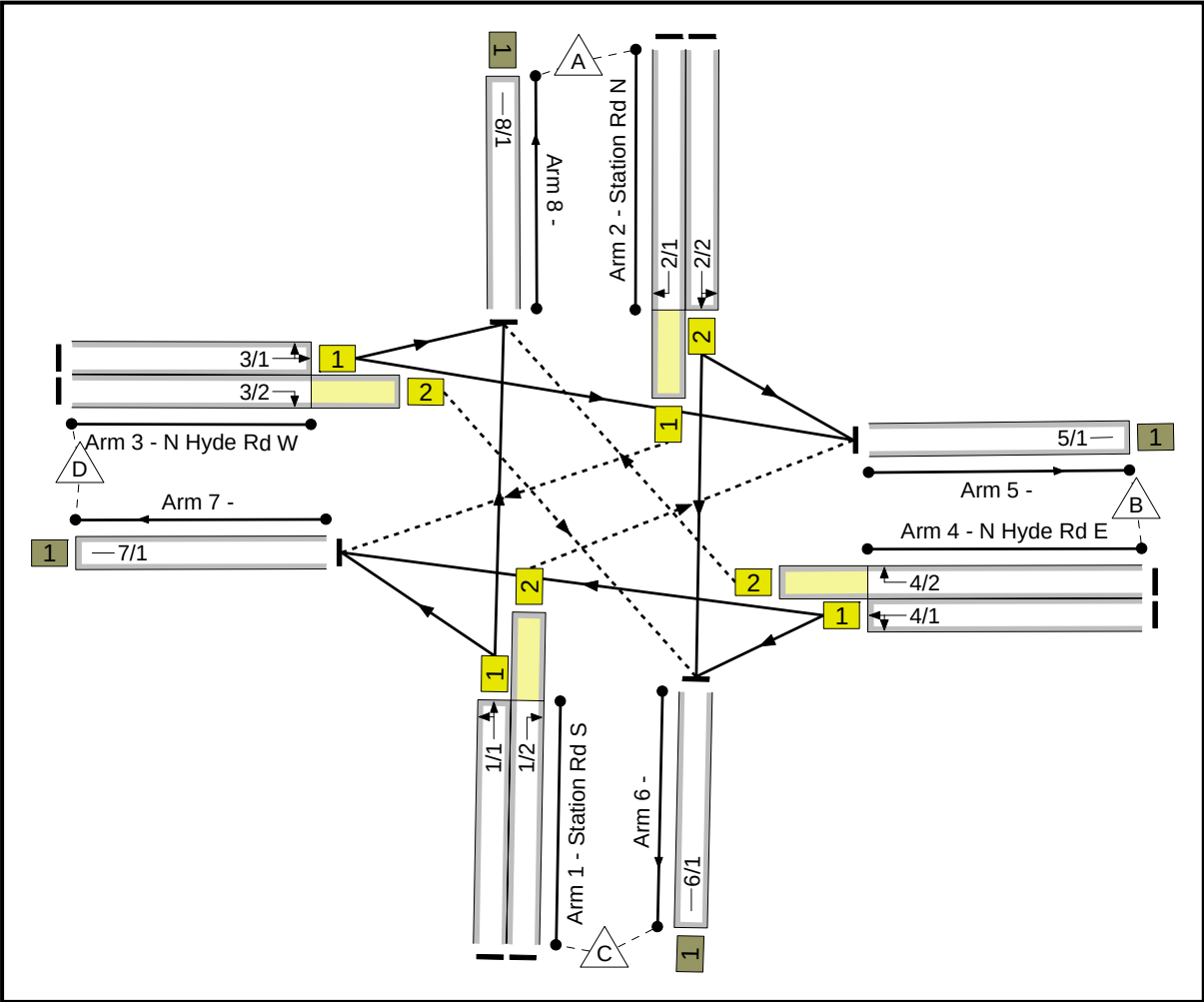
APPENDIX T

Full Input Data And Results

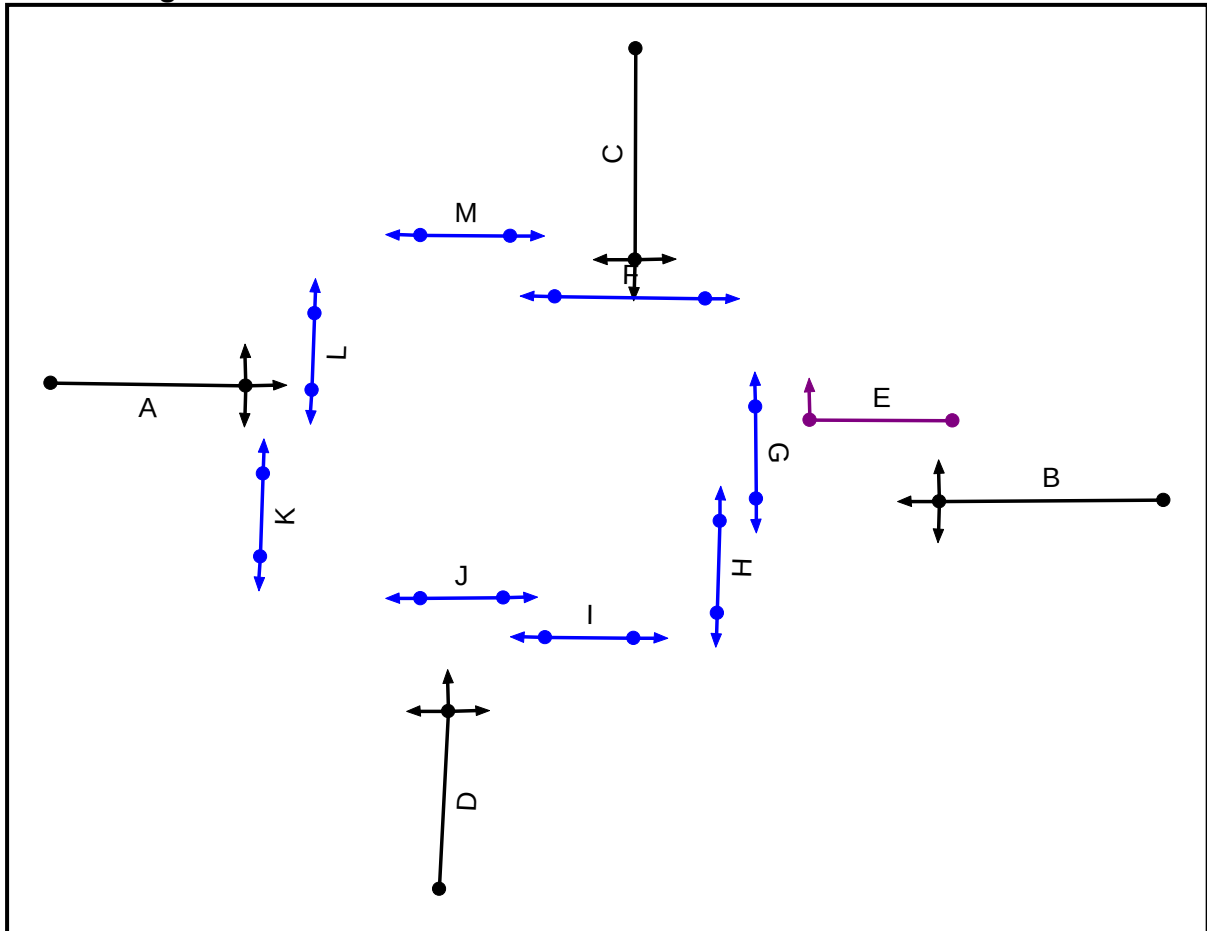
User and Project Details

Project:	
Title:	
Location:	
File name:	26_10AM_LL.lsgx
Author:	
Company:	
Address:	
Controller:	Generic
SCN:	
Notes:	

Junction Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase type	Assoc Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Ind. Arrow	B	4	4
F	Pedestrian		1	1
G	Pedestrian		1	1
H	Pedestrian		1	1
I	Pedestrian		4	4
J	Pedestrian		1	1
K	Pedestrian		4	4
L	Pedestrian		1	1
M	Pedestrian		4	4

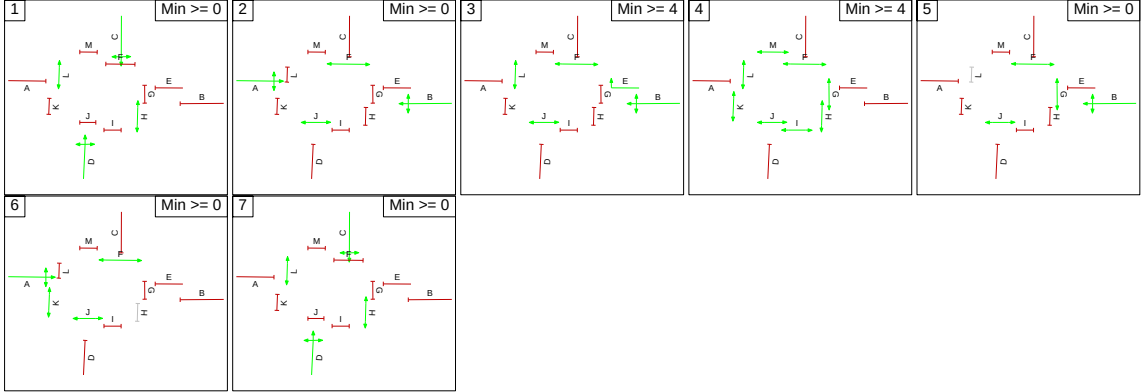
Phase Intergreens Matrix

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

Phases in Stage

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

Stages Diagram



Full Input Data And Results

Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	2	C	Losing	3	3
1	2	D	Losing	3	3
2	1	A	Losing	3	3
2	1	B	Losing	3	3

Prohibited Stage Changes

From Stage	To Stage						
	1	2	3	4	5	6	7
	1	10	10	10	10	10	0
	2	9	10	5	10	9	10
	3	9	9	10	5	10	9
	4	9	10	10	10	9	9
	5	9	8	8	10	10	9
	6	9	8	10	9	10	9
	7	0	10	10	10	10	10

Link Input Data

Arm/ Link	Link Name	Link Type	Num Lanes	Phases	Start Disp.	End Disp.
1/1	Station Rd S Left Ahead	U	1	D	2	3
1/2	Station Rd S Right	O	1	D	2	3
2/1	Station Rd N Right	O	1	C	2	3
2/2	Station Rd N Left Ahead	U	1	C	2	3
3/1	N Hyde Rd W Ahead Left	U	1	A	2	3
3/2	N Hyde Rd W Right	O	1	A	2	3
4/1	N Hyde Rd E Left Ahead	U	1	B	2	3
4/2	N Hyde Rd E Right	O	1	B E	2	3
5/1		U	1		2	3
6/1		U	1		2	3
7/1		U	1		2	3
8/1		U	1		2	3

Full Input Data And Results

Give-Way Link Input Data

Arm/ Link	Link Name	Movement	Max Flow when Giving Way (PCU/Hr)	Opposing Link	Opp. Link Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	RTF	Right Turn Move up time (s)	Max Turns in Intergreen (PCU)
1/2	Station Rd S Right	1/2 to 5/1	1440	2/2	1.09	2/2	4.00	0.50	4	4.00
2/1	Station Rd N Right	2/1 to 7/1	1440	1/1	1.09	1/1	4.00	0.50	4	2.00
3/2	N Hyde Rd W Right	3/2 to 6/1	1440	4/1	1.09	4/1	4.00	0.50	4	4.00
4/2	N Hyde Rd E Right	4/2 to 8/1	1440	3/1	1.09	3/1	4.00	0.50	4	4.00

Lane Input Data

Arm/ Lane	Link Num	Physical Length (PCU)	Expected Usage (PCU)	Sat Flow Type	User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)
1/1 (Station Rd S Lane 1)	Link 1 (Station Rd S Left Ahead)	Inf	Inf	User	1833	3.25	0.00	Y	Arm 7 Left Arm 8 Ahead	Inf Inf
1/2 (Station Rd S Lane 2)	Link 2 (Station Rd S Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 5 Right	15.00
2/1 (Station Rd N Lane 1)	Link 2 (Station Rd N Left Ahead)	Inf	Inf	User	1919	3.25	0.00	Y	Arm 5 Left Arm 6 Ahead	Inf Inf
2/2 (Station Rd N Lane 2)	Link 1 (Station Rd N Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 7 Right	14.00
3/1 (N Hyde Rd W Lane 1)	Link 1 (N Hyde Rd W Ahead Left)	Inf	Inf	User	1818	3.25	0.00	Y	Arm 5 Ahead Arm 8 Left	Inf Inf
3/2 (N Hyde Rd W Lane 2)	Link 2 (N Hyde Rd W Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 6 Right	17.00
4/1 (N Hyde Rd E Lane 1)	Link 1 (N Hyde Rd E Left Ahead)	Inf	Inf	User	1821	3.25	0.00	Y	Arm 6 Left Arm 7 Ahead	Inf Inf
4/2 (N Hyde Rd E Lane 2)	Link 2 (N Hyde Rd E Right)	Inf	Inf	Geom	1800	3.60	0.00	Y	Arm 8 Right	17.00
5/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
6/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
7/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		

Full Input Data And Results

8/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
-----	--------	-----	-----	------	------	------	------	---	--	--

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
9: 'Base + Com + H4 5 2014 AM'	08:00	09:00	01:00	
17: 'Base + Com + H4 5 2024 AM'	08:00	09:00	01:00	

Scenario 8: 'Base + Com +H 4 5 2014 AM'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 9: 'Base + Com + H4 5 2014 AM'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	134	372	134	640
	B	120	0	289	458	867
	C	263	142	0	102	507
	D	98	235	69	0	402
	Tot.	481	511	730	694	2416

Link Traffic Flows

Arm/Link	Flow Group 9: Base + Com + H4 5 2014 AM
1/1	365
1/2	142
2/1	134
2/2	506
3/1	333
3/2	69
4/1	747
4/2	120
5/1	511
6/1	730
7/1	694
8/1	481

Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Rd S Lane 1)	This lane uses a directly entered Saturation Flow						1833
1/2 (Station Rd S Lane 2)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741
2/1 (Station Rd N Lane 1)	This lane uses a directly entered Saturation Flow						1919
2/2 (Station Rd N Lane 2)	3.00	0.00	Y	Arm 7 Right	14.00	100.0 %	1730
3/1 (N Hyde Rd W Lane 1)	This lane uses a directly entered Saturation Flow						1818
3/2 (N Hyde Rd W Lane 2)	3.00	0.00	Y	Arm 6 Right	17.00	100.0 %	1760
4/1 (N Hyde Rd E Lane 1)	This lane uses a directly entered Saturation Flow						1821
4/2 (N Hyde Rd E Lane 2)	3.60	0.00	Y	Arm 8 Right	17.00	100.0 %	1815
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800
7/1	This lane uses a directly entered Saturation Flow						1800
8/1	This lane uses a directly entered Saturation Flow						1800

Scenario 15: 'Base + Com + H4 5 2024 AM'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 17: 'Base + Com + H4 5 2024 AM'

Traffic Flow Matrix**Desired Flow :**

	Destination					
		A	B	C	D	Tot.
Origin	A	0	151	426	146	723
	B	145	0	331	513	989
	C	305	163	0	118	586
	D	110	268	79	0	457
	Tot.	560	582	836	777	2755

Link Traffic Flows

Arm/Link	Flow Group 17: Base + Com + H4 5 2024 AM
1/1	423
1/2	163
2/1	146
2/2	577
3/1	378
3/2	79
4/1	844
4/2	145
5/1	582
6/1	836
7/1	777
8/1	560

Lane Saturation Flows

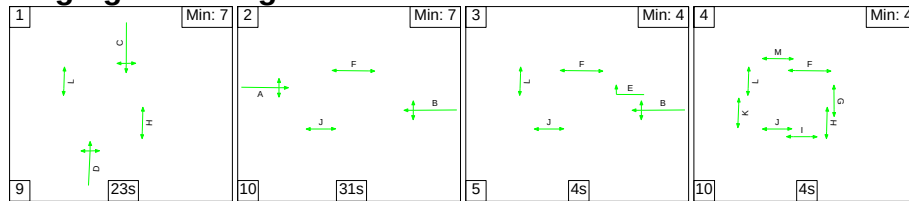
Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Rd S Lane 1)	This lane uses a directly entered Saturation Flow						1833
1/2 (Station Rd S Lane 2)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741
2/1 (Station Rd N Lane 1)	This lane uses a directly entered Saturation Flow						1919
2/2 (Station Rd N Lane 2)	3.00	0.00	Y	Arm 7 Right	14.00	100.0 %	1730
3/1 (N Hyde Rd W Lane 1)	This lane uses a directly entered Saturation Flow						1818
3/2 (N Hyde Rd W Lane 2)	3.00	0.00	Y	Arm 6 Right	17.00	100.0 %	1760
4/1 (N Hyde Rd E Lane 1)	This lane uses a directly entered Saturation Flow						1821
4/2 (N Hyde Rd E Lane 2)	3.60	0.00	Y	Arm 8 Right	17.00	100.0 %	1815
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800
7/1	This lane uses a directly entered Saturation Flow						1800
8/1	This lane uses a directly entered Saturation Flow						1800

Scenario 8: 'Base + Com +H 4 5 2014 AM'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 9: 'Base + Com + H4 5 2014 AM'

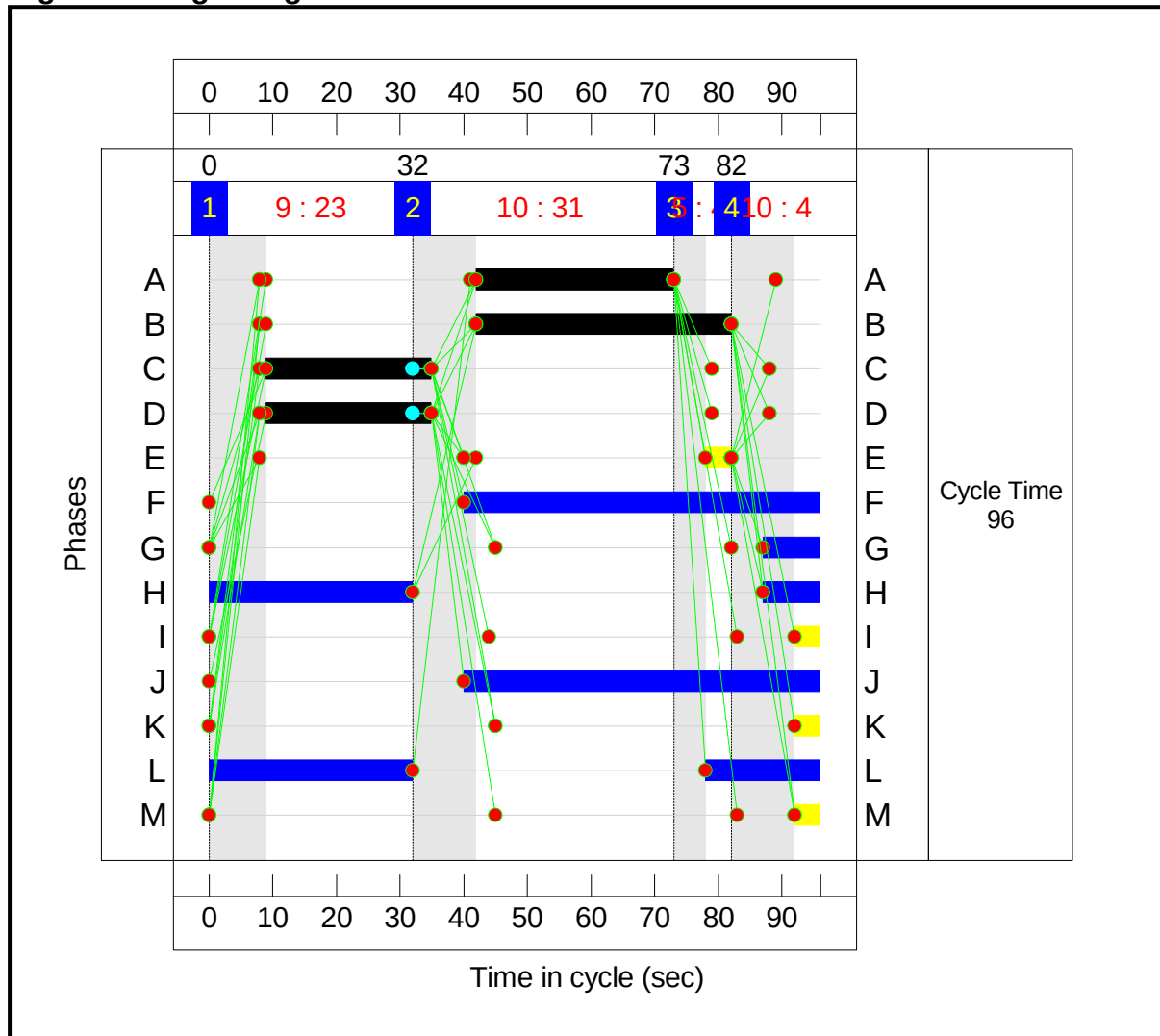
Staging Plan Diagram



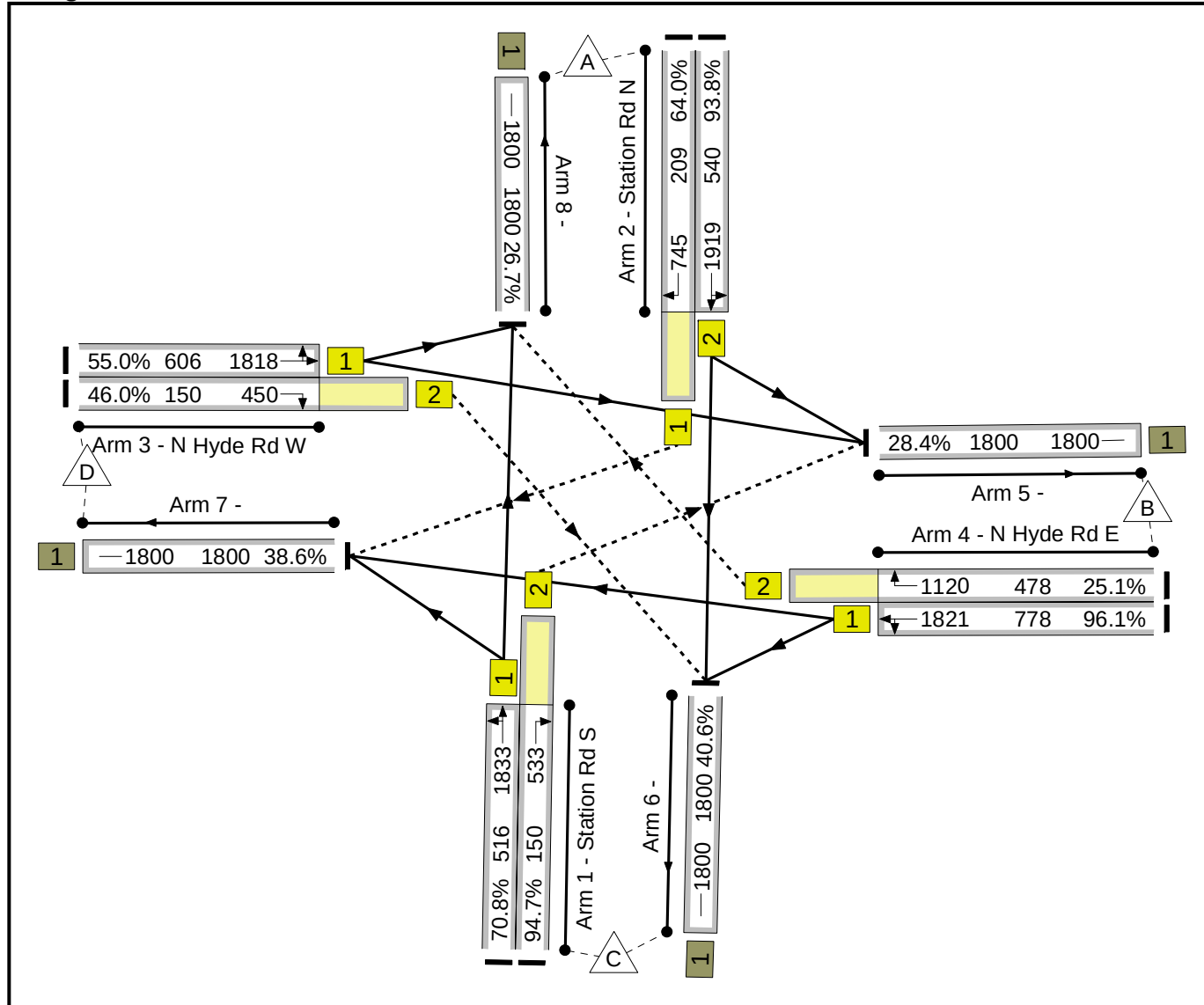
Stage Timings

Stage	1	2	3	4
Duration	23	31	4	4
Change Point	0	32	73	82

Signal Timings Diagram



Junction Layout Diagram



Full Input Data And Results

Link Results

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Rd S Left Ahead	U	N/A	N/A	D		1	26	-	365	1833	1833	516	70.8
1/2	Station Rd S Right	O	N/A	N/A	D		1	26	-	142	1741	533	150	94.7
2/1	Station Rd N Right	O	N/A	N/A	C		1	26	-	134	1730	745	209	64.0
2/2	Station Rd N Left Ahead	U	N/A	N/A	C		1	26	-	506	1919	1919	540	93.8
3/1	N Hyde Rd W Ahead Left	U	N/A	N/A	A		1	31	-	333	1818	1818	606	55.0
3/2	N Hyde Rd W Right	O	N/A	N/A	A		1	31	-	69	1760	450	150	46.0
4/1	N Hyde Rd E Left Ahead	U	N/A	N/A	B		1	40	-	747	1821	1821	778	96.1
4/2	N Hyde Rd E Right	O	N/A	N/A	B	E	1	40	4	120	1815	1120	478	25.1
5/1		U	N/A	N/A	-		-	-	-	511	1800	1800	1800	28.4
6/1		U	N/A	N/A	-		-	-	-	730	1800	1800	1800	40.6
7/1		U	N/A	N/A	-		-	-	-	694	1800	1800	1800	38.6
8/1		U	N/A	N/A	-		-	-	-	481	1800	1800	1800	26.7

Full Input Data And Results

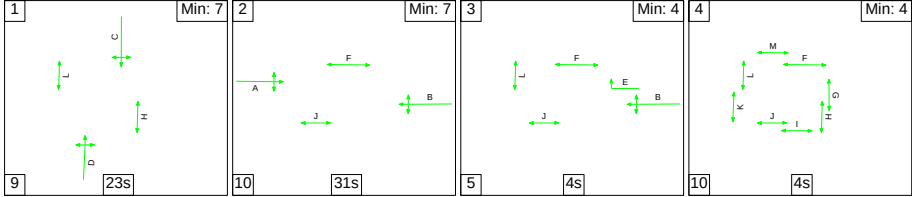
Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
1/1	365	365	-	-	-	3.1	1.2	-	4.3	42.7	8.7	1.2	9.9	
1/2	142	142	19	0	123	1.1	4.3	0.9	6.2	157.5	3.0	4.3	7.2	
2/1	134	134	106	0	28	1.0	0.9	0.6	2.4	65.6	2.8	0.9	3.6	
2/2	506	506	-	-	-	4.7	5.6	-	10.4	73.7	13.1	5.6	18.7	
3/1	333	333	-	-	-	2.4	0.6	-	3.0	32.7	7.2	0.6	7.8	
3/2	69	69	16	0	53	0.4	0.4	0.6	1.5	77.8	1.3	0.4	1.7	
4/1	747	747	-	-	-	5.5	8.0	-	13.5	65.2	19.3	8.0	27.3	
4/2	120	120	106	9	5	0.6	0.2	0.3	1.1	31.7	1.9	0.2	2.1	
5/1	511	511	-	-	-	0.0	0.2	-	0.2	1.5	4.5	0.2	4.7	
6/1	730	730	-	-	-	0.0	0.3	-	0.3	1.7	0.0	0.3	0.3	
7/1	694	694	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3	
8/1	481	481	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2	
PRC for Signalled Links (%):				-6.7	Total Delay for Signalled Links (pcuHr):			42.46						
PRC Over All Links (%):				-6.7	Total Delay Over All Links(pcuHr):			43.51	Cycle Time (s): 96					

Scenario 15: 'Base + Com + H4 5 2024 AM'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 17: 'Base + Com + H4 5 2024 AM'

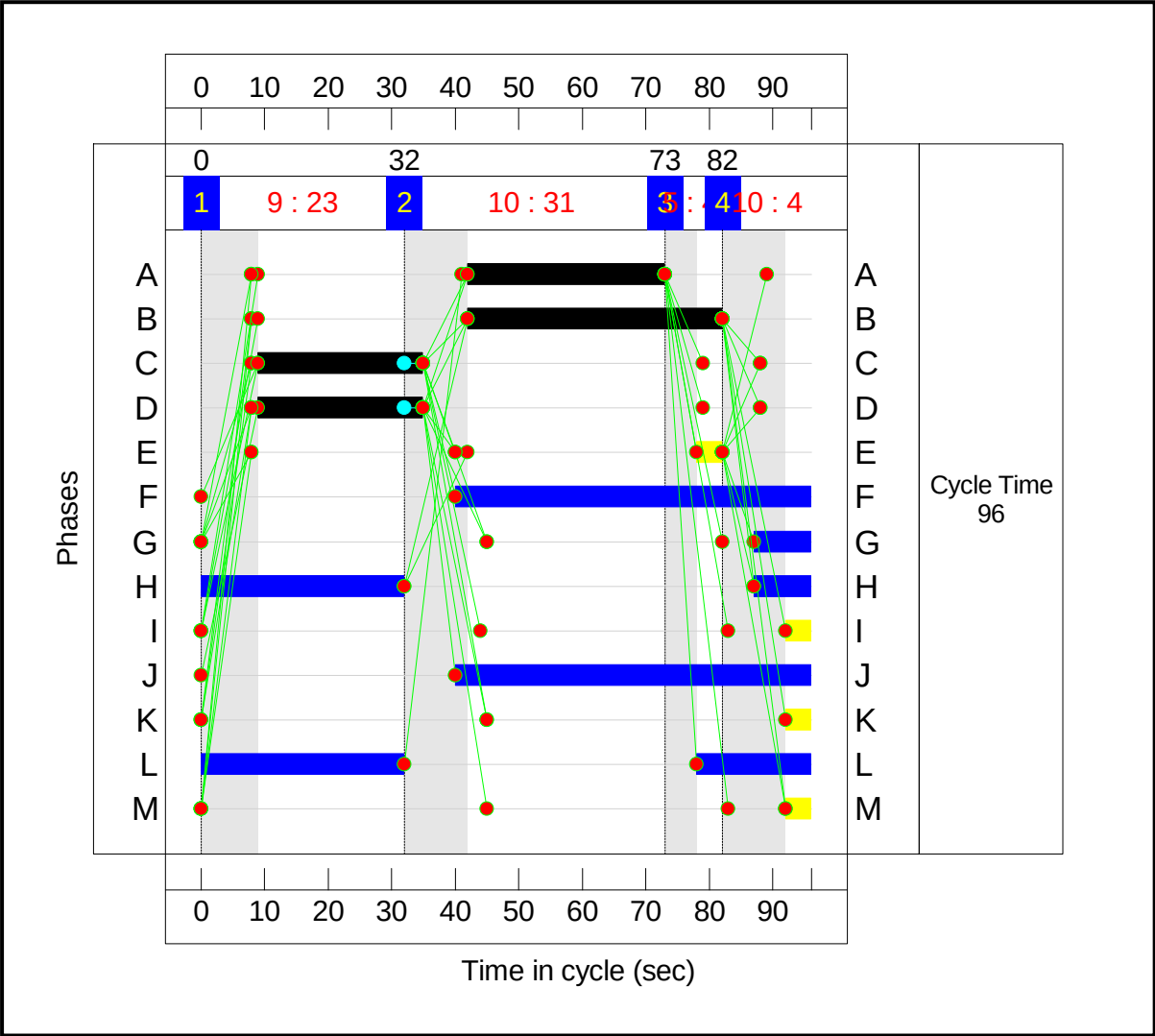
Staging Plan Diagram



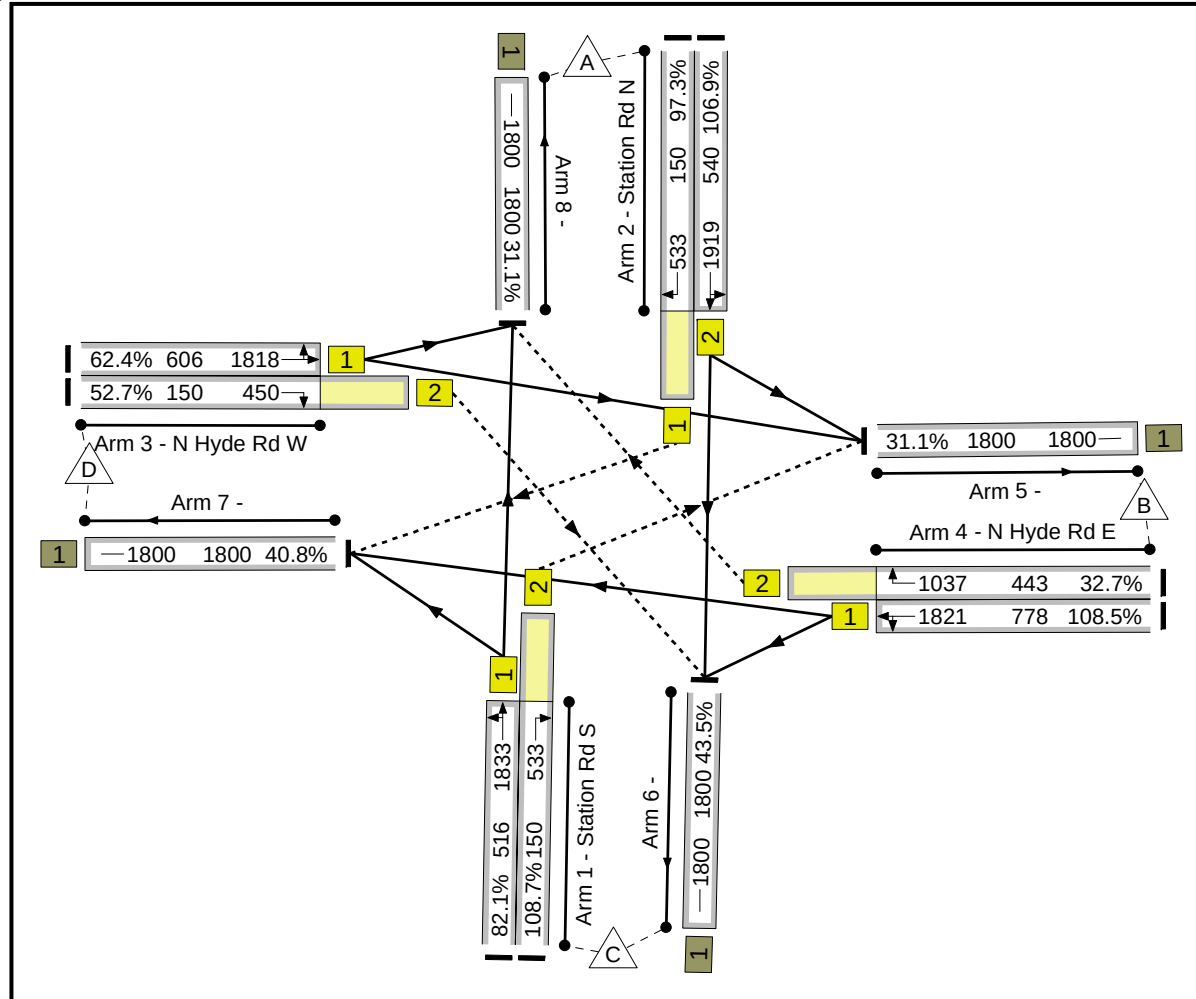
Stage Timings

Stage	1	2	3	4
Duration	23	31	4	4
Change Point	0	32	73	82

Signal Timings Diagram



Junction Layout Diagram



Full Input Data And Results

Link Results

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Rd S Left Ahead	U	N/A	N/A	D		1	26	-	423	1833	1833	516	82.1
1/2	Station Rd S Right	O	N/A	N/A	D		1	26	-	163	1741	533	150	108.7
2/1	Station Rd N Right	O	N/A	N/A	C		1	26	-	146	1730	533	150	97.3
2/2	Station Rd N Left Ahead	U	N/A	N/A	C		1	26	-	577	1919	1919	540	106.9
3/1	N Hyde Rd W Ahead Left	U	N/A	N/A	A		1	31	-	378	1818	1818	606	62.4
3/2	N Hyde Rd W Right	O	N/A	N/A	A		1	31	-	79	1760	450	150	52.7
4/1	N Hyde Rd E Left Ahead	U	N/A	N/A	B		1	40	-	844	1821	1821	778	108.5
4/2	N Hyde Rd E Right	O	N/A	N/A	B	E	1	40	4	145	1815	1037	443	32.7
5/1		U	N/A	N/A	-		-	-	-	582	1800	1800	1800	31.1
6/1		U	N/A	N/A	-		-	-	-	836	1800	1800	1800	43.5
7/1		U	N/A	N/A	-		-	-	-	777	1800	1800	1800	40.8
8/1		U	N/A	N/A	-		-	-	-	560	1800	1800	1800	31.1

Full Input Data And Results

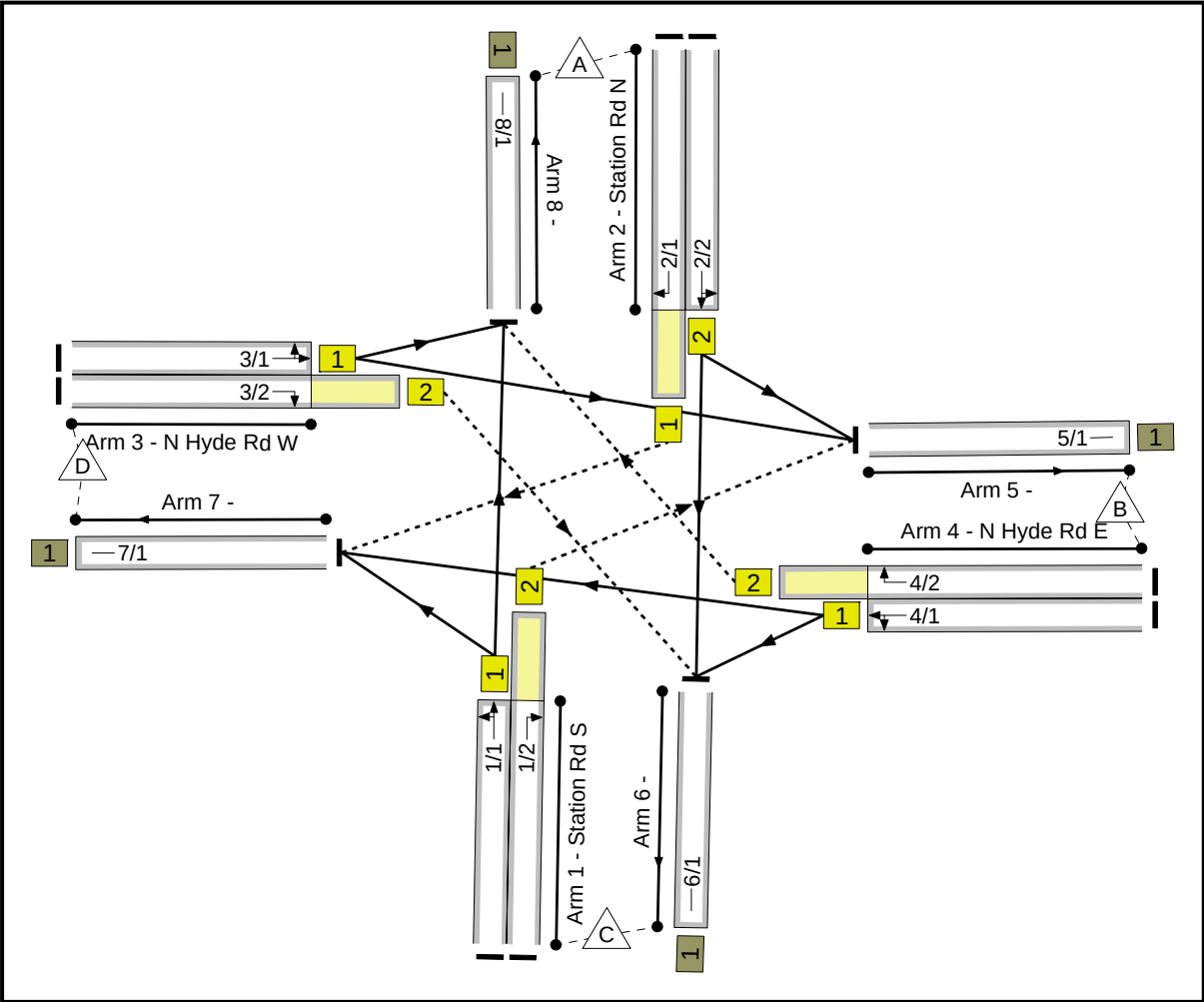
Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
1/1	423	423	-	-	-	3.8	2.2	-	6.0	50.8	10.5	2.2	12.6	
1/2	163	150	0	0	150	1.8	10.4	1.0	13.2	292.3	3.8	10.4	14.2	
2/1	146	144	61	0	83	1.2	5.1	0.8	7.1	175.9	3.1	5.1	8.3	
2/2	577	540	-	-	-	7.3	24.5	-	31.8	198.4	16.4	24.5	40.9	
3/1	378	378	-	-	-	2.8	0.8	-	3.7	34.8	8.4	0.8	9.2	
3/2	79	79	0	0	79	0.5	0.5	0.8	1.8	82.1	1.5	0.5	2.0	
4/1	844	778	-	-	-	8.8	38.6	-	47.4	202.2	24.3	38.6	62.9	
4/2	145	145	128	11	6	0.7	0.2	0.5	1.4	35.8	2.4	0.2	2.6	
5/1	559	559	-	-	-	0.1	0.2	-	0.3	1.7	6.6	0.2	6.8	
6/1	782	782	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4	
7/1	735	735	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3	
8/1	560	560	-	-	-	0.0	0.2	-	0.2	1.5	0.0	0.2	0.2	
PRC for Signalled Links (%):				-20.7	Total Delay for Signalled Links (pcuHr):			112.43						
PRC Over All Links (%):				-20.7	Total Delay Over All Links(pcuHr):			113.67	Cycle Time (s):		96			

Full Input Data And Results

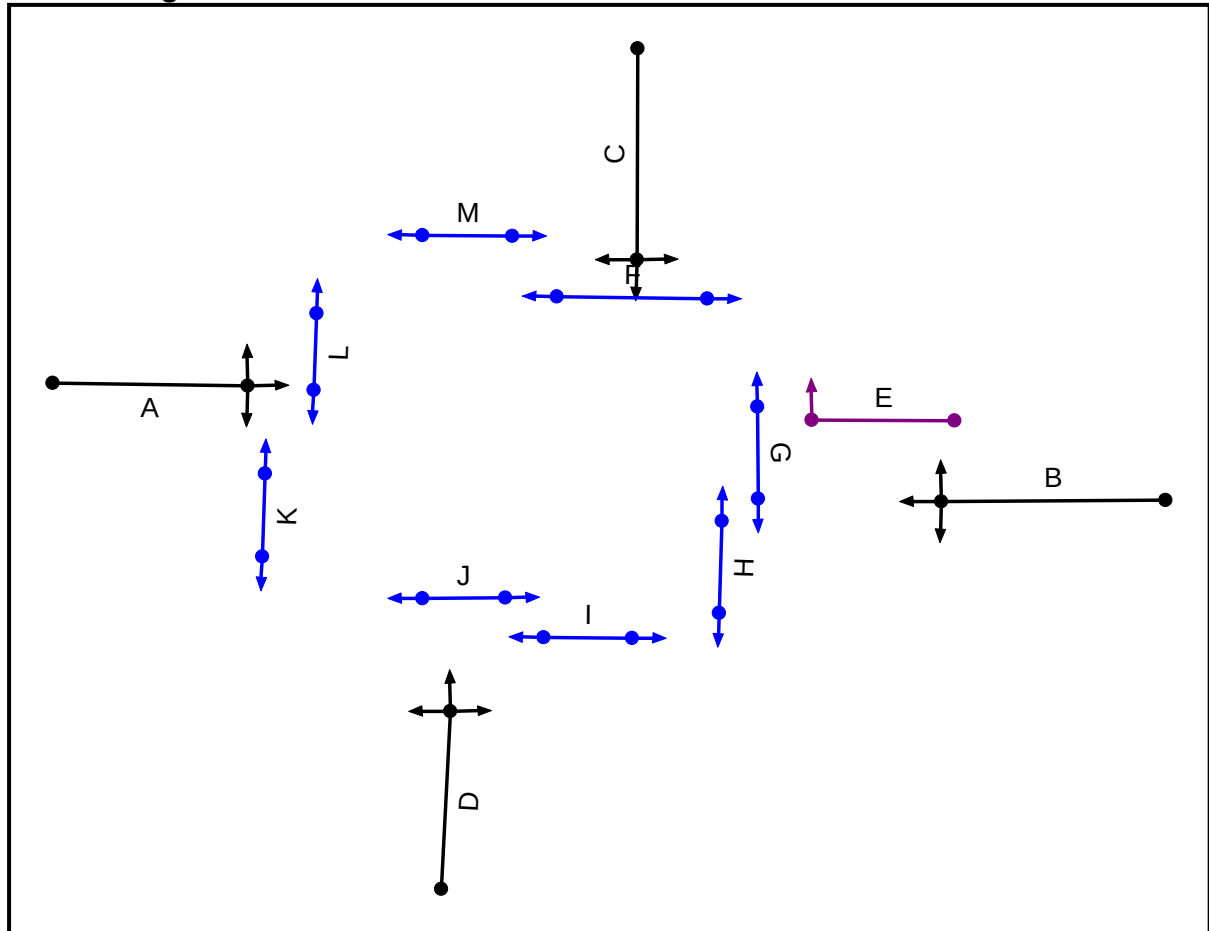
User and Project Details

Project:	
Title:	
Location:	
File name:	26_10PM_LL.lsgx
Author:	
Company:	
Address:	
Controller:	Generic
SCN:	
Notes:	

Junction Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase type	Assoc Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Ind. Arrow	B	4	4
F	Pedestrian		5	5
G	Pedestrian		5	5
H	Pedestrian		5	5
I	Pedestrian		5	5
J	Pedestrian		5	5
K	Pedestrian		5	5
L	Pedestrian		5	5
M	Pedestrian		5	5

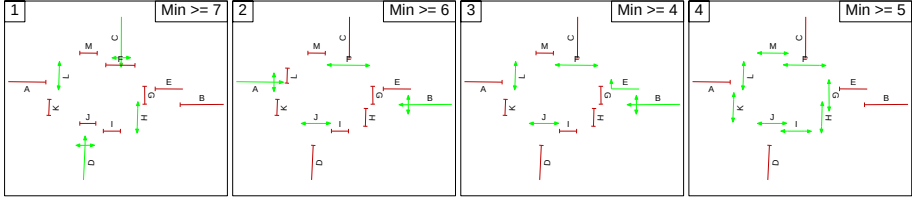
Phase Intergreens Matrix

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

Phases in Stage

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

Stages Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	2	C	Losing	3	3
1	2	D	Losing	3	3
2	1	A	Losing	3	3
2	1	B	Losing	3	3

Prohibited Stage Changes

	To Stage				
From Stage		1	2	3	4
	1		10	10	10
	2	9		5	10
	3	9	9		10
	4	9	10	10	

Link Input Data

Arm/ Link	Link Name	Link Type	Num Lanes	Phases	Start Disp.	End Disp.
1/1	Station Rd S Left Ahead	U	1	D	2	3
1/2	Station Rd S Right	O	1	D	2	3
2/1	Station Rd N Right	O	1	C	2	3
2/2	Station Rd N Left Ahead	U	1	C	2	3
3/1	N Hyde Rd W Ahead Left	U	1	A	2	3
3/2	N Hyde Rd W Right	O	1	A	2	3
4/1	N Hyde Rd E Left Ahead	U	1	B	2	3
4/2	N Hyde Rd E Right	O	1	B E	2	3
5/1		U	1		2	3
6/1		U	1		2	3
7/1		U	1		2	3
8/1		U	1		2	3

Full Input Data And Results

Give-Way Link Input Data

Arm/ Link	Link Name	Movement	Max Flow when Giving Way (PCU/Hr)	Opposing Link	Opp. Link Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	RTF	Right Turn Move up time (s)	Max Turns in Intergreen (PCU)
1/2	Station Rd S Right	1/2 to 5/1	1440	2/2	1.09	2/2	4.00	0.50	4	4.00
2/1	Station Rd N Right	2/1 to 7/1	1440	1/1	1.09	1/1	4.00	0.50	4	2.00
3/2	N Hyde Rd W Right	3/2 to 6/1	1440	4/1	1.09	4/1	4.00	0.50	4	4.00
4/2	N Hyde Rd E Right	4/2 to 8/1	1440	3/1	1.09	3/1	4.00	0.50	4	4.00

Lane Input Data

Arm/ Lane	Link Num	Physical Length (PCU)	Expected Usage (PCU)	Sat Flow Type	User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)
1/1 (Station Rd S Lane 1)	Link 1 (Station Rd S Left Ahead)	Inf	Inf	User	1833	3.25	0.00	Y	Arm 7 Left Arm 8 Ahead	Inf Inf
1/2 (Station Rd S Lane 2)	Link 2 (Station Rd S Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 5 Right	15.00
2/1 (Station Rd N Lane 1)	Link 2 (Station Rd N Left Ahead)	Inf	Inf	User	1919	3.25	0.00	Y	Arm 5 Left Arm 6 Ahead	Inf Inf
2/2 (Station Rd N Lane 2)	Link 1 (Station Rd N Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 7 Right	14.00
3/1 (N Hyde Rd W Lane 1)	Link 1 (N Hyde Rd W Ahead Left)	Inf	Inf	User	1818	3.25	0.00	Y	Arm 5 Ahead Arm 8 Left	Inf Inf
3/2 (N Hyde Rd W Lane 2)	Link 2 (N Hyde Rd W Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 6 Right	17.00
4/1 (N Hyde Rd E Lane 1)	Link 1 (N Hyde Rd E Left Ahead)	Inf	Inf	User	1821	3.25	0.00	Y	Arm 6 Left Arm 7 Ahead	Inf Inf
4/2 (N Hyde Rd E Lane 2)	Link 2 (N Hyde Rd E Right)	Inf	Inf	Geom	1800	3.60	0.00	Y	Arm 8 Right	17.00
5/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
6/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
7/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		

Full Input Data And Results

8/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
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Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
10: 'Base + Com + H4 5 2014 PM'	17:30	18:30	01:00	
18: 'Base + Com + H4 5 2024 PM'	17:30	18:30	01:00	

Scenario 8: 'Base + Com +H 4 5 2014 PM'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 10: 'Base + Com + H4 5 2014 PM'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	162	320	117	599
	B	203	0	238	346	787
	C	280	225	0	79	584
	D	112	328	48	0	488
	Tot.	595	715	606	542	2458

Link Traffic Flows

Arm/Link	Flow Group 10: Base + Com + H4 5 2014 PM
1/1	359
1/2	225
2/1	117
2/2	482
3/1	440
3/2	48
4/1	584
4/2	203
5/1	715
6/1	606
7/1	542
8/1	595

Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Rd S Lane 1)	This lane uses a directly entered Saturation Flow						1833
1/2 (Station Rd S Lane 2)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741
2/1 (Station Rd N Lane 1)	This lane uses a directly entered Saturation Flow						1919
2/2 (Station Rd N Lane 2)	3.00	0.00	Y	Arm 7 Right	14.00	100.0 %	1730
3/1 (N Hyde Rd W Lane 1)	This lane uses a directly entered Saturation Flow						1818
3/2 (N Hyde Rd W Lane 2)	3.00	0.00	Y	Arm 6 Right	17.00	100.0 %	1760
4/1 (N Hyde Rd E Lane 1)	This lane uses a directly entered Saturation Flow						1821
4/2 (N Hyde Rd E Lane 2)	3.60	0.00	Y	Arm 8 Right	17.00	100.0 %	1815
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800
7/1	This lane uses a directly entered Saturation Flow						1800
8/1	This lane uses a directly entered Saturation Flow						1800

Scenario 15: 'Base + Com + H4 5 2024 PM'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 18: 'Base + Com + H4 5 2024 PM'

Traffic Flow Matrix**Desired Flow :**

	Destination					
		A	B	C	D	Tot.
Origin	A	0	187	372	132	691
	B	229	0	275	396	900
	C	323	259	0	92	674
	D	122	364	56	0	542
	Tot.	674	810	703	620	2807

Link Traffic Flows

Arm/Link	Flow Group 18: Base + Com + H4 5 2024 PM
1/1	415
1/2	259
2/1	132
2/2	559
3/1	486
3/2	56
4/1	671
4/2	229
5/1	810
6/1	703
7/1	620
8/1	674

Lane Saturation Flows

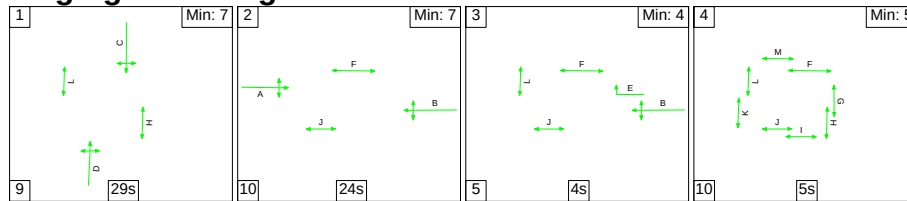
Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Rd S Lane 1)	This lane uses a directly entered Saturation Flow						1833
1/2 (Station Rd S Lane 2)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741
2/1 (Station Rd N Lane 1)	This lane uses a directly entered Saturation Flow						1919
2/2 (Station Rd N Lane 2)	3.00	0.00	Y	Arm 7 Right	14.00	100.0 %	1730
3/1 (N Hyde Rd W Lane 1)	This lane uses a directly entered Saturation Flow						1818
3/2 (N Hyde Rd W Lane 2)	3.00	0.00	Y	Arm 6 Right	17.00	100.0 %	1760
4/1 (N Hyde Rd E Lane 1)	This lane uses a directly entered Saturation Flow						1821
4/2 (N Hyde Rd E Lane 2)	3.60	0.00	Y	Arm 8 Right	17.00	100.0 %	1815
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800
7/1	This lane uses a directly entered Saturation Flow						1800
8/1	This lane uses a directly entered Saturation Flow						1800

Scenario 8: 'Base + Com +H 4 5 2014 PM'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 10: 'Base + Com + H4 5 2014 PM'

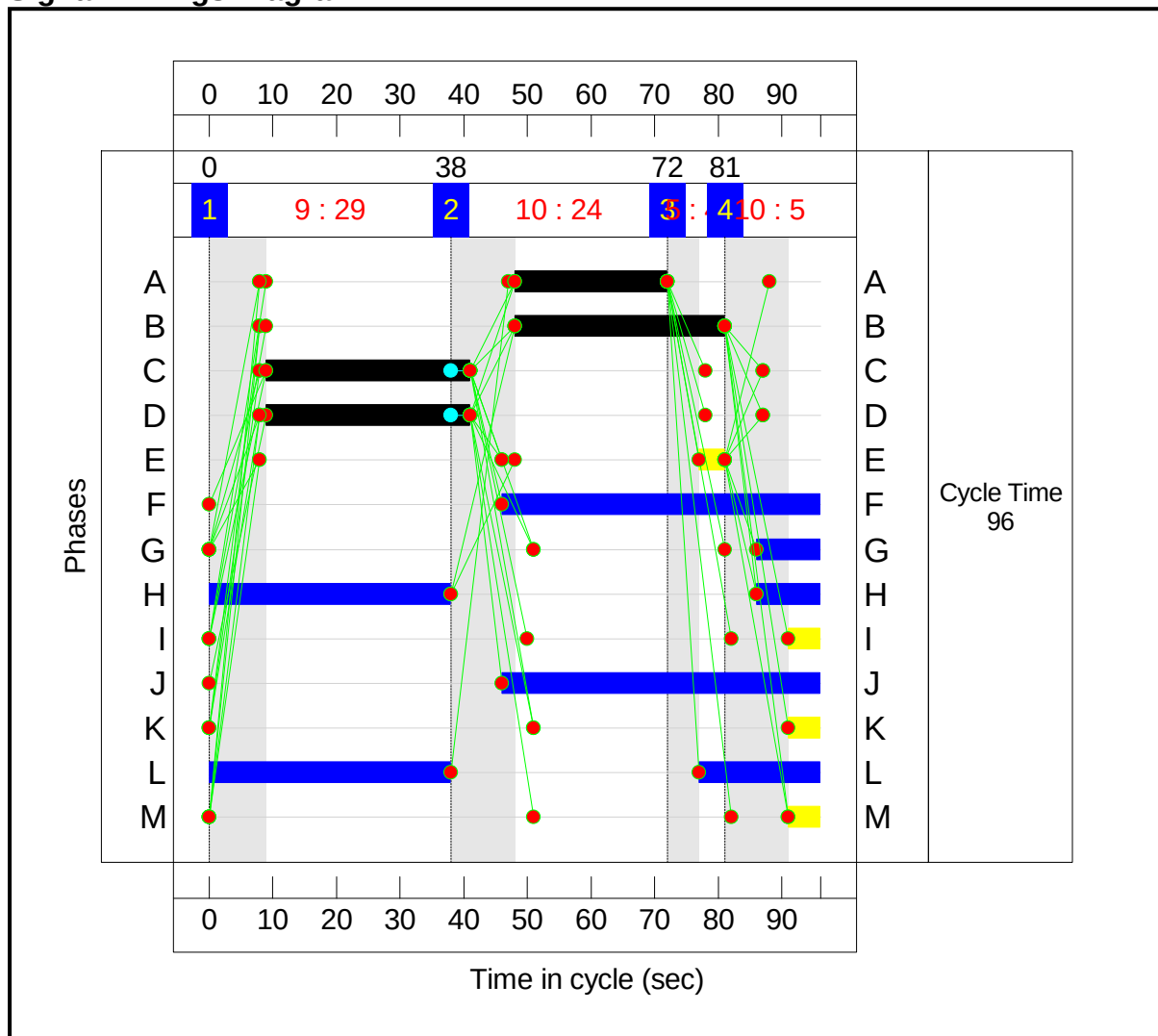
Staging Plan Diagram



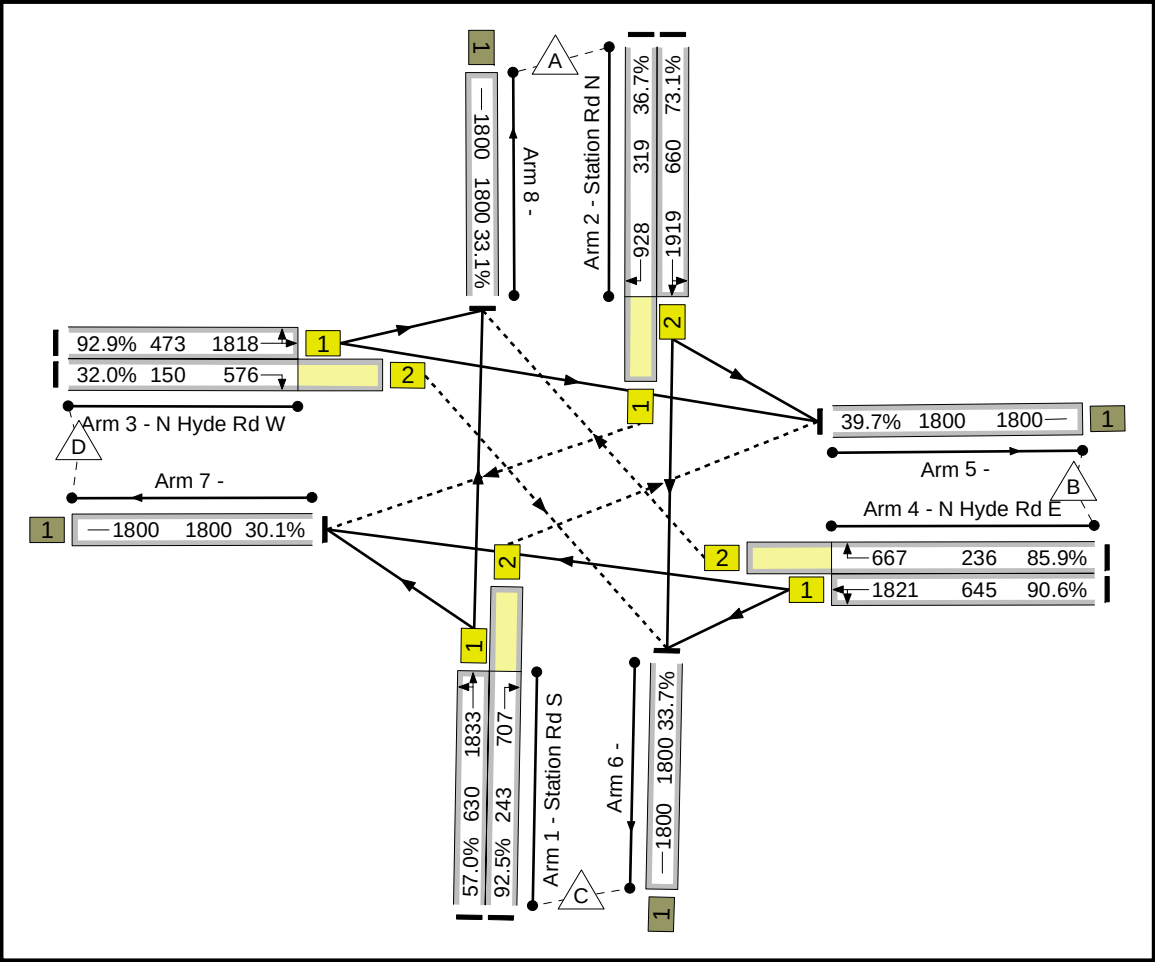
Stage Timings

Stage	1	2	3	4
Duration	29	24	4	5
Change Point	0	38	72	81

Signal Timings Diagram



Junction Layout Diagram



Full Input Data And Results

Link Results

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Rd S Left Ahead	U	N/A	N/A	D		1	32	-	359	1833	1833	630	57.0
1/2	Station Rd S Right	O	N/A	N/A	D		1	32	-	225	1741	707	243	92.5
2/1	Station Rd N Right	O	N/A	N/A	C		1	32	-	117	1730	928	319	36.7
2/2	Station Rd N Left Ahead	U	N/A	N/A	C		1	32	-	482	1919	1919	660	73.1
3/1	N Hyde Rd W Ahead Left	U	N/A	N/A	A		1	24	-	440	1818	1818	473	92.9
3/2	N Hyde Rd W Right	O	N/A	N/A	A		1	24	-	48	1760	576	150	32.0
4/1	N Hyde Rd E Left Ahead	U	N/A	N/A	B		1	33	-	584	1821	1821	645	90.6
4/2	N Hyde Rd E Right	O	N/A	N/A	B	E	1	33	4	203	1815	667	236	85.9
5/1		U	N/A	N/A	-		-	-	-	715	1800	1800	1800	39.7
6/1		U	N/A	N/A	-		-	-	-	606	1800	1800	1800	33.7
7/1		U	N/A	N/A	-		-	-	-	542	1800	1800	1800	30.1
8/1		U	N/A	N/A	-		-	-	-	595	1800	1800	1800	33.1

Full Input Data And Results

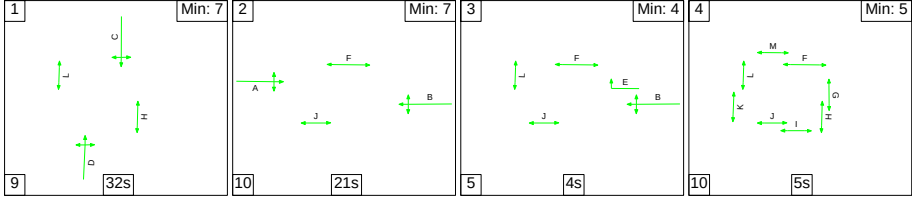
Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
1/1	359	359	-	-	-	2.6	0.7	-	3.2	32.3	7.8	0.7	8.4	
1/2	225	225	112	0	113	1.7	4.2	1.1	7.0	112.3	5.9	4.2	10.1	
2/1	117	117	115	0	2	0.7	0.3	0.4	1.4	43.2	2.2	0.3	2.5	
2/2	482	482	-	-	-	3.7	1.3	-	5.0	37.6	11.2	1.3	12.6	
3/1	440	440	-	-	-	4.2	5.1	-	9.3	76.0	11.4	5.1	16.4	
3/2	48	48	38	0	10	0.4	0.2	0.4	0.9	70.8	1.0	0.2	1.2	
4/1	584	584	-	-	-	4.8	4.2	-	9.0	55.4	14.8	4.2	19.0	
4/2	203	203	20	132	51	1.4	2.6	0.9	5.0	88.0	3.9	2.6	6.5	
5/1	715	715	-	-	-	0.0	0.3	-	0.3	1.7	4.1	0.3	4.4	
6/1	606	606	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3	
7/1	542	542	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2	
8/1	595	595	-	-	-	0.0	0.2	-	0.2	1.5	0.0	0.2	0.2	
PRC for Signalled Links (%):				-3.3	Total Delay for Signalled Links (pcuHr):			40.87						
PRC Over All Links (%):				-3.3	Total Delay Over All Links(pcuHr):			41.93	Cycle Time (s): 96					

Scenario 15: 'Base + Com + H4 5 2024 PM'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 18: 'Base + Com + H4 5 2024 PM'

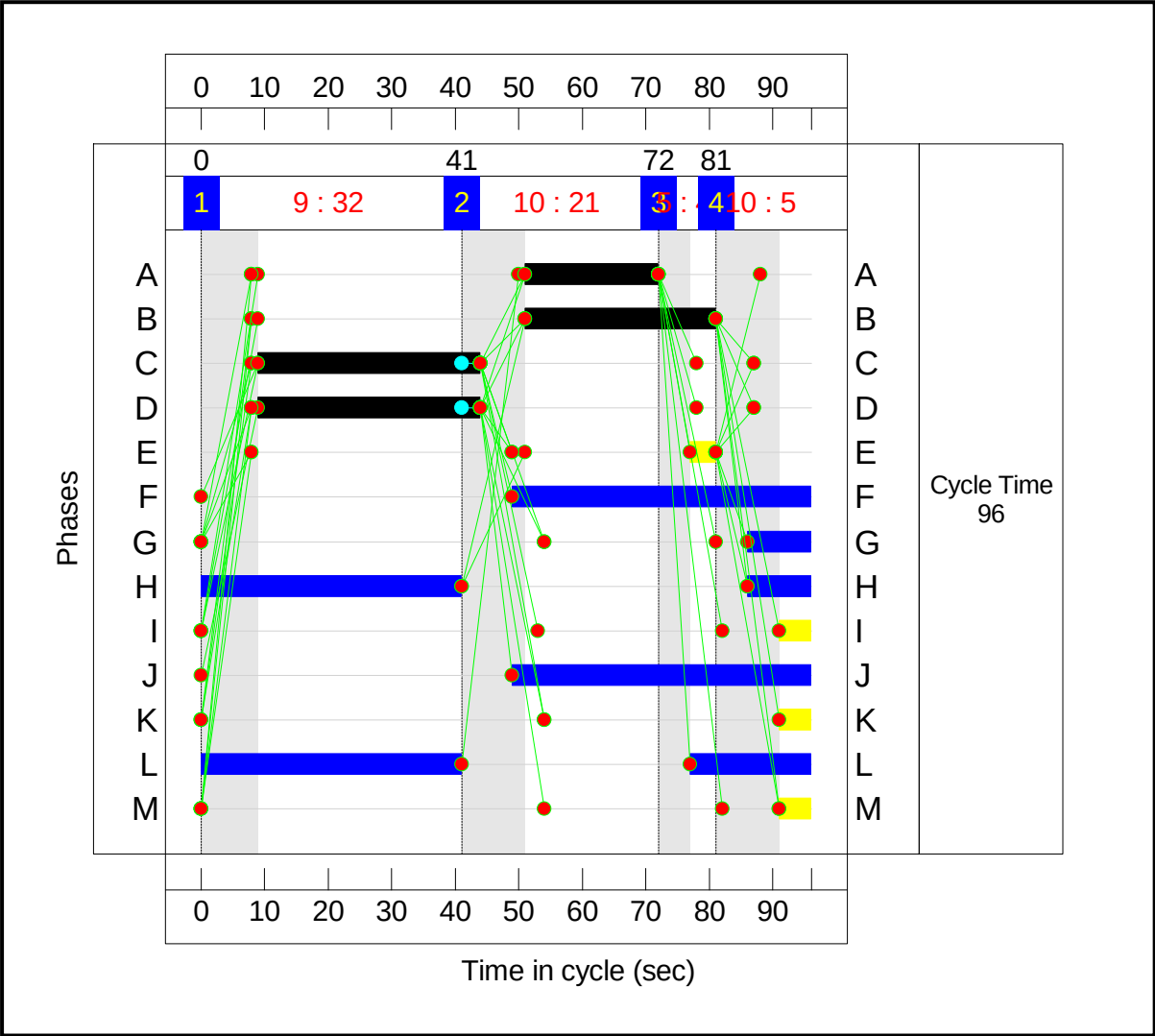
Staging Plan Diagram



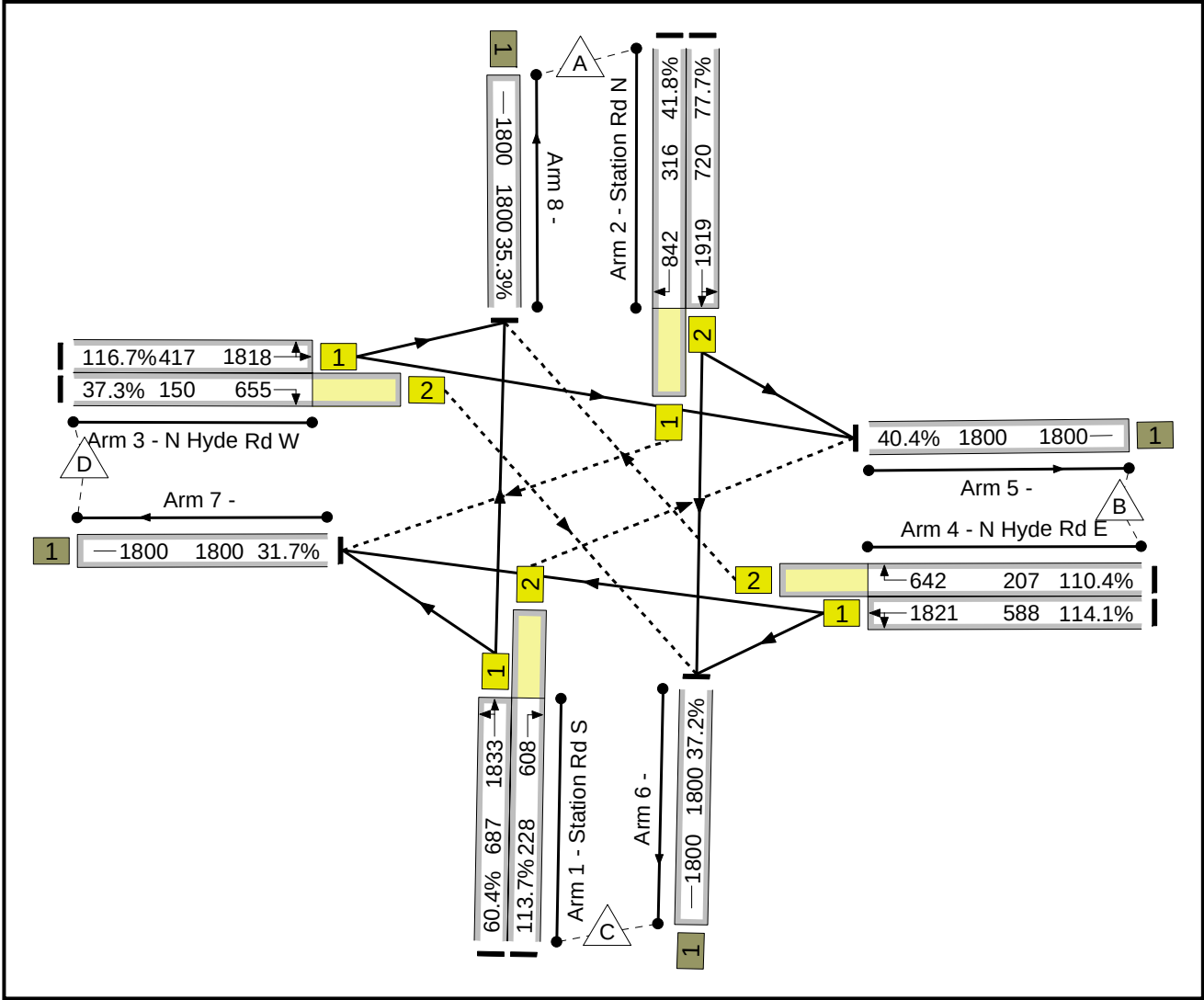
Stage Timings

Stage	1	2	3	4
Duration	32	21	4	5
Change Point	0	41	72	81

Signal Timings Diagram



Junction Layout Diagram



Full Input Data And Results

Link Results

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Rd S Left Ahead	U	N/A	N/A	D		1	35	-	415	1833	1833	687	60.4
1/2	Station Rd S Right	O	N/A	N/A	D		1	35	-	259	1741	608	228	113.7
2/1	Station Rd N Right	O	N/A	N/A	C		1	35	-	132	1730	842	316	41.8
2/2	Station Rd N Left Ahead	U	N/A	N/A	C		1	35	-	559	1919	1919	720	77.7
3/1	N Hyde Rd W Ahead Left	U	N/A	N/A	A		1	21	-	486	1818	1818	417	116.7
3/2	N Hyde Rd W Right	O	N/A	N/A	A		1	21	-	56	1760	655	150	37.3
4/1	N Hyde Rd E Left Ahead	U	N/A	N/A	B		1	30	-	671	1821	1821	588	114.1
4/2	N Hyde Rd E Right	O	N/A	N/A	B	E	1	30	4	229	1815	642	207	110.4
5/1		U	N/A	N/A	-		-	-	-	810	1800	1800	1800	40.4
6/1		U	N/A	N/A	-		-	-	-	703	1800	1800	1800	37.2
7/1		U	N/A	N/A	-		-	-	-	620	1800	1800	1800	31.7
8/1		U	N/A	N/A	-		-	-	-	674	1800	1800	1800	35.3

Full Input Data And Results

[illegible]